Auburn Planning Board
AGENDA

The Planning Board Meeting will be held at 6:30 PM on July 7, 2026 at
Council Chambers, Memorial City Hall, 24 South Street, Auburn, NY 13021

Accommodations: Requests for accommodations for individuals with disabilities may be made with prior notice of at least three work days in advance of the meeting by calling (315) 255-4100 or e-mailing disabilityaccess@auburnny.gov. As much advance notice as possible is needed to assure that appropriate services can be acquired

July 7, 2026 6:30 PM

1. Approval of Meeting Minutes

2. Site Plan Applications

2.1. Major Site Plan Review of 281 Grant Ave

2.2. Major Site Plan Review of 143 & 147 North St., 23 Perrine St., and 1 West Park Ave

3. Special Use Permit

3.1. Special Use Permit for 10 Seminary St. to develop an existing four-unit into a five-unit multifamily residential building

3.2. Special Use Permit for 6 Seminary Ave to operate an auto detailing service in the Downtown District

4. Subdivision

5. Adjournment

ZONING ANALYSIS TABLE

N/A - NOT APPLICABLE
N/S - NOT SPECIFIED
(V) - VARIANCE REQUESTED
(W) - WAIVER REQUESTED
(E) - EXIST. NON-CONFORMANCE
(O) - VARIANCE OBTAINED

ZONING DISTRICT	HC, HIGHWAY COMMERCIAL DISTRICT
SITE USE	QUICK SERVE RESTAURANT WITH DRIVE THRU
REQUIRED PERMIT	SITE PLAN REVIEW

ZONE CRITERIA	REQUIRED	EXISTING	PROPOSED
MIN. LOT AREA	30,000 SQ. FT.	±77,444 SQ. FT.	±97,245 SQ. FT.
MIN. LOT WIDTH	100.0 FT.	±225.0 FT.	±293.0 FT.
MIN. FRONT SETBACK	30.0 FT.	164.1 FT.	36.9 FT.
MIN. SIDE SETBACK	10.0 FT.	29.6 FT.	90.7 FT.
MIN. REAR SETBACK	30.0 FT.	90.6 FT.	75.7 FT.
MAX. BUILDING HEIGHT	40.0 FT.	N/S	±22.0 FT.
MAXIMUM IMPERVIOUS %	80%	59% (±57,719 SQ. FT.)*	51% (±50,007 SQ. FT.)
MINIMUM GREEN SPACE %	20%	41% (±39,526 SQ. FT.)*	49% (±47,238 SQ. FT.)
PARKING STALL SIZE MIN.	9.0 FT.x 18.0 FT.	9.0 FT.x 18.0 FT.	9.0 FT.x 18.0 FT.
MINIMUM DRIVE AISLE	24.0 FT.	24.0 FT.	24.0 FT.
ACCESS. PARKING STALLS	2 SPACES	2 SPACES	3 SPACES
REQUIRED PARKING STALLS	33 SPACES	66 SPACES	59 SPACES
PARKING STALL CRITERIA	USE/CATEGORY: RESTAURANT, QUICK SERVICE REQUIRED PARKING: 7 PER 1,000 SQ. FT. CALCULATION: (4,620 SQ. FT. / 1,000 SQ. FT.) (7) = 33 SPACES		

*OF PROPOSED LOT AREA

LANDS N/F OF
AMERICU CREDIT UNION
BK. 1699, PG. 205
SECTION 109.49 BLOCK 1 LOT 70

LANDS N/F OF
WAL-MART REAL ESTATE
BUSINESS TRUST
BK. 963, PG. 27
SECTION 109.48 BLOCK 1 LOT 3.115

TAX ID 109.48-1-3.12
& 109.48-1-3.2
AREA: ±2.23 ACRES

JOHN WALSH BOULEVARD

GRANT AVENUE / N.Y.S ROUTE 5

1985 HIGHWAY BOUNDARY

FEE MAP 422, PARCEL 466 (BOOK 920, PAGE 32)

FEE MAP 419, PARCEL 461 (BOOK 920, PAGE 225)

SAM-SE - 4,620 S.F.
80 SEATS (Interior)
16 SEATS (Exterior)
59 PARKING STALLS

ALL ON-SITE CURB SHALL BE CONCRETE, ALL CURB IN THE STREET ROW SHALL BE GRANITE

SITE NOTES

(REV. 5/2024)

1. WHEN APPLICABLE, OWNER/ OPERATOR MUST FILE THE NOI FOR SPDES PERMITS AT APPROPRIATE AND/OR REQUIRED TIME FRAMES BASED UPON THE DESIRED START OF CONSTRUCTION. LAND DISTURBING ACTIVITIES MUST NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED FROM GOVERNING AUTHORITIES (INCLUDING STORMWATER POLLUTION PREVENTION PLAN). THE CONTRACTOR MUST STRICTLY ADHERE TO THE APPROVED SWPPP PLAN DURING CONSTRUCTION OPERATIONS (IF PROVIDED).
2. ALL CONCRETE MUST BE AIR ENTRAINED AND INCLUDE THE MINIMUM COMPRESSIVE STRENGTH OF JURISDICTIONAL STANDARD PSI AT 28 DAYS (OR 4,000 PSI) UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT. IF THERE ARE ANY DISCREPANCIES BETWEEN THE PLANS, DETAILS AND GEOTECHNICAL REPORT THEN THE GEOTECHNICAL REPORT SHALL GOVERN.
3. THE CONTRACTOR MUST FILE SITE SIGNAGE APPLICATION OR PERMIT UNDER SEPARATE APPLICATION UNLESS DONE SO AS PART OF JURISDICTIONAL PERMITTING PROCEDURES.
4. THE CONTRACTOR MUST REPAIR OR REPLACE, AT THE CONTRACTOR'S SOLE COST AND EXPENSE, ALL SIDEWALKS, CURBS, PAVEMENT MARKINGS, AND PAVEMENT DAMAGED BY CONSTRUCTION ACTIVITIES WHETHER SPECIFIED ON THIS PLAN OR NOT.
5. WORK WITHIN THE RIGHT-OF-WAY MUST BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS AND STANDARDS OF THE DEPARTMENT OF PUBLIC WORKS, ENGINEERING DEPARTMENT, HIGHWAY DIVISION, AND/OR STATE DOT HIGHWAY DEPARTMENT.
6. CONTRACTOR IS CAUTIONED OF EXISTING UTILITY SERVICES TO REMAIN IN PROXIMITY TO PROPOSED BOLLARDS AND SIGNS. CONTRACTOR SHALL PROVIDE FIELD MODIFICATION LOCATIONS OF BOLLARDS AND BOLLARDS WITH SIGNAGE AS NEEDED TO AVOID CONFLICTS WITH EXISTING UTILITY SERVICES TO REMAIN.

REFER TO DETAIL SHEET C-502 FOR NYSDOT NUMBERS, NOTES AND DETAILS

REFER TO SITE DATA ZONING TABLE ON SHEET C-201 FOR MORE INFO

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

20 10 5 0 20
1"= 20'

GENERAL NOTE:
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT. WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.

P:\MA2025\NYB250120.00\CAD\DRAWINGS\PLAN SETS\P-CIVIL_SITE-NYB250120-SA------3-LAYOUT_C-200 SITE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia 30349-2998

BOHLER
17 COMPUTER DRIVE WEST
ALBANY, NY 12205
Phone: (518) 438-9900
Fax: (508) 480-9080
www.BohlerEngineering.com

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CHICK-FIL-A
AUBURN (NY) FSU
281 GRANT AVENUE / NY-5
AUBURN, NY 13021
CAYUGA COUNTY

FSU#06315

BUILDING TYPE / SIZE: P15-SAM-SE
RELEASE: -

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

PRELIMINARY

CONSULTANT PROJECT #	NYB250120
PRINTED FOR	
DATE	04/13/2026
DRAWN BY	WAB
CHECKED BY	RLB

Information contained on this drawing and in all digital files produced for above named project may not be reproduced in any manner without express written or verbal consent from authorized project representatives.

SHEET
SITE PLAN

SHEET NUMBER
C-200

[redacted]
Albany, NY 12205
518.438.9900

[redacted]
Rochester, NY 14625
585.866.1100

Via Overnight Delivery
April 13, 2026.

City of Auburn
24 South Street
Auburn, New York 13021

Attention: Stephan Selvek, Director

RE: Application for Site Plan Review
Proposed Chick-fil-A Restaurant
[redacted] Auburn, NY 13021
City of Auburn, Cayuga County
Tax Account [redacted]

Dear Mr. Selvek,

On behalf of Chick-fil-A, Inc., we are pleased to submit the enclosed documents for Site Plan review. Enclosed please find the following items in support of our application:

A. (1) Copy of the Letter of Intent, prepared by Bohler, dated 4/13/26
B. (1) Copy of the Site Plan Application, prepared by Bohler, dated 4/13/26
C. (1) Copy of the Short Form EAF, prepared by Bohler, dated 4/13/26
D. (1) Copy of the Stormwater Narrative, prepared by Bohler, dated 4/13/26
E. (1) Copy of the Signage Package, prepared by Anchor Signs, dated 3/30/26
F. (3) Full-size copies of Building Elevations & Floor Plan, prepared by HFA, dated 4/13/26
G. (3) Full-size copies of Site Development Plan Drawings, prepared by Bohler, dated 4/13/26
H. Check in the amount of $250 for PB application
I. Email with PDF's of submitted documents.

Introduction:
The applicant, Chick-fil-A, Inc. ("CFA") is proposing to redevelop a proposed ±2.22-acre parcel along Grant Avenue/ NYS Route 5 with a quick serve restaurant with drive thru. The Project site is located in the City of Auburn as part of tax map parcel numbers [redacted]. Access to the proposed site will be via the rebuilt access drives on Grant Avenue/NYS Route 5 as well as John Walsh Bouelvard. CFA will own the property.

Existing Conditions:
The existing ±2.22-acre project area is currently developed with a vacant medical office and associated access drives and parking areas, which will be demolished. There are existing water and sanitary sewer laterals that serve the site. The topography of the project area slopes east to west and drains towards the Walmart property..

Proposed Project
CFA proposes to develop the site with a new ±4,620 sq. ft. restaurant with a two-lane drive through, outdoor patio area and detached meal ordering canopy and attached meal delivery canopy over the drive through lanes. In addition, there will be new asphalt parking, concrete curbing\sidewalk, utilities, lighting, landscaping, signage and a dumpster enclosure\shed are proposed as depicted on the accompanying Site Plan drawings.

Zoning
The parcel is zoned HC Highway Commercial and a restaurant with drive through is permitted. The proposed layout is compliant with the applicable bulk requirements of the City of Auburn zoning code requirements. The Code requires (33) parking spaces where there are (66) spaces existing and (58) proposed.

Building Architectural Design
The proposed building façade will consist of brick veneer wainscot and EIFS on the upper portions with two neutral color palettes with bronze trim work at the doors, windows and parapet wall. The detached canopy will be constructed with a slim canopy profile with metal columns finished in a bronze color that matches the trim of the building. The height of the canopies will be approx. 9-10'. The dumpster enclosure\shed will be constructed with the same material as the building.

Site Access
The proposed project includes the closure of southernmost access drive on Grant Avenue (NYS Route 5) and reconstructing the northern access drive to be right-in/right-out only, in addition to reconstructing the existing two-way access drive on to John Walsh Boulevard. The delivery trucks will utilize the John Walsh Boulverd access drive for ingress and egress. Bohler will obtain approval from NYSDOT and the City for the proposed driveway modifications.

Stormwater
The project will disturb ±2.2 acres of land, therefore a SWPPP and Notice of Intent will be required. The project will decrease green space by ±8,087 sq. ft. The intent is to direct stormwater runoff to new onsite catch basins and then into a hydro dynamic structure to address water quality which will discharge to the existing ditch at the rear of the site. Bohler will file an eNOI with NYSDEC to obtain coverage for stormwater discharge and the proposed land disturbance.

Water Service
We anticipate that there is an existing watermain along Grant Avenue. Proposed is a new 6" combined fire\domestic water line to serve the new building. Meter and backflow protection would be located inside the building. Bohler will coordinate with the City of Auburn Water department to obtain approval for the new water service and backflow prevention.

Sanitary Sewer
The exact location of the existing sanitary sewer main is still being confirmed with the city. Proposed is (2) new 4" lines exiting the building (greywater and grease lines) and a new 1,000-gallon grease trap. We are anticipating the need for a pump station based on the existing site. Bohler will coordinate with the City sewer department to obtain approval for the new sanitary sewer lateral connection.

Lighting & Landscaping
New pole mounted dark sky compliant LED site lighting fixtures are proposed to illuminate the site to provide consistent lighting levels for the parking and drive lanes. The layout will minimize light spills at the property lines. New plantings will be provided consisting of trees and shrubs throughout the site area.

Signage
Proposed signage will consist of a new CFA road sign, building signage and menu boards. A detailed Sign Summary is included with this submission.

Chick-fil-A Operations:
Chick-fil-A is proposing to invest ±$2.5 million in the City of Auburn and support the construction industry by hiring over 12 construction trades to develop the project site. After supporting 60-80 part time construction jobs for a ±24-week construction duration, Chick-fil-A will be hiring 100 to 125 local team members to operate the facility. Chick-fil-A, Inc. will select an operator to manage the facility who resides locally.

The facility will be open ±6:30 am to ±10:00 pm Monday through Saturday and closed on Sundays. A typical shift will include approximately 15 team members with a 3-shift rotation throughout the day. During peak hours, the operator will staff the Drive Thru with team members to help take orders, process payment, direct traffic, hand deliver meals to vehicles to expedite the Drive Thru operations and to enhance customer experience. A local waste hauling company will be utilized for trash removal and pick-up, which is limited to times outside peak hours. Deliveries are typically provided (5) times a week or as needed during off-peak hours as well.

During Grand Opening, Chick-fil-A will bring in an experienced grand opening team to provide support to the local operator and new team members. Approximately 20 trainers, 5 marketing professionals, and several coordinators will stay locally within the Town to support the new facility and taper off over a ±4-week period as the team members become trained and the initial excitement of the residents of the Town stabilizes.

Chick-fil-A takes pride in the cleanliness of their facilities. Team members routinely clean both the restaurant and project site. Landscaping and the aesthetics of their property is a high priority for Chick-fil-A to create a great experience for their guests. Furthermore, Chick-fil-A is very active in local Chamber of Commerce, they partner with local charities of the operator's choice and provide extensive leadership training and opportunities to their team members and community.

Schedule
The intent would be to start construction in the Spring\summer of 2027 once all municipal and agency approvals and permits have been obtained. It is estimated that the duration of construction will be approximately 6 months.

We look forward to working with Town staff on this project. If you have any questions, please do not hesitate to contact our office.

Sincerely,
BOHLER ENGINEERING NY, PLLC

Randy Bebout

Cc:
Zach Middlebrooks, CFA Cop, Inc.
Jeff Nance, Cushman & Wakefield

CITY OF AUBURN, NY

"History's Hometown"

SITE PLAN REVIEW

APPLICATION

Return completed application, all required materials to, and the applicable fee to:
Code Enforcement Office ● Memorial City Hall ● 24 South Street ● Auburn, New York 13021

For assistance call the Office of Planning and Economic Development at (315) 255-4118.

Submission Checklist

Office Use	☐ **MINOR** SITE PLAN REVIEW REQUIREMENTS:
☐ ☐ ☐ ☐ ☐ ☐ ☐	1) Fee: $100.00 2) One (1) copy of the application 3) One (1) copy of the Environmental Assessment Form. Please utilize the NYS Dept. of Environmental Conservation EAF Mapper tool available at https://gisservices.dec.ny.gov/eafmapper/ 4) One (1) copy of an original Instrument Survey Map that show current site conditions. 5) Three (3) copies of a scaled site plan (see attached Site Plan Checklist). 6) One (1) copy of scaled elevations of proposed structures, or façade renovation to existing structures, as applicable. 7) Digital versions of all documents in portable document format (PDF) files via email or file transfer.
Office Use	☐ **MAJOR** SITE PLAN REVIEW REQUIREMENTS:
☐ ☐ ☐ ☐	**All of the above documents, 2-7, plus:** 1) Fee: $250.00 2) One (1) copy of scaled floor plans for all proposed buildings. 3) Color renderings or other type of visual aids depicting the proposed development in its built condition. 4) Stormwater drainage report, including calculations, or Stormwater Pollution Prevention Plan, as applicable.

IMPORTANT

All above materials must be submitted by the appropriate due date to be included on the Planning Board Agenda (see schedule below). Certain plans may have to be stamped by a design professional licensed in the State of New York. The City, as needed for review purposes, may require additional information regarding a project.

[For Office Use Only]

Address:_____ Project Name:_____

Date Submitted:_____ Fee:_____ Received By:_____

CITY OF AUBURN, NY

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SITE PLAN REVIEW

Project Information

(Please Type or Print)

1. Applicant: Zach Middlebrooks Company Name: Chick-fil-A, Inc.

   Address: [redacted] City/State: Atlanta, GA Zip: 30349

   Email: [redacted] Phone: 404-456-2448

   Interest in Property: ☒ Owner ☐ Lessee ☐ Other, Explain

2. Project Name: Chick-fil-A Restaurant

3. Project Address(es): [redacted] Auburn, NY 13021

4. Tax Map Number(s): [redacted]

5. Present Zoning District: HC - Highway Commercial

6. Property within Historic District: ☐ Yes ☒ No

7. Property within Flood Zone: ☐ X ☐ A ☒ AE ☐ Other, Explain

8. Detailed Project Description (Please attach separately): Refer to Letter of Intent

   A detailed project description shall include, but not be limited to, the following information: Project acreage; existing and proposed uses and their hours of operation; total square footage; square footage of individual project components; square footage of existing and proposed impervious surface; existing and proposed dwelling units; height of existing and proposed structure(s) in feet and stories; and the number of existing and proposed parking spaces; façade renovations; and identifying how the site is accessed.

9. Anticipated Construction Period: 3/27 to 9/27

Consultant Contact Information

1. Plan Preparer*: Bohler Engineering NY, PLLC

   *A New York State Licensed Design Professional, i.e. Landscape Architect (RLA), Engineer (PE), and/or Architect (RA) must prepare all plans for Major Site Plan Review.

   Address: [redacted] City/State: Rochester, NY Zip: 14625

   Email: [redacted] Phone: 585-866-1100

2. Surveyor: Ausfeld & Waldruff Land Surveyors LLP

   Address: [redacted] City/State: Schenectady, NY Zip: 12305

   Email: [redacted] Phone: 518-346-1595

3. Attorney: N/A

   Address: _____ City/State: _____ Zip: _____

   Email: _____ Phone: _____

4. Other: N/A Role: _____

   Address: _____ City/State: _____ Zip: _____

   Email: _____ Phone: _____

Certification / Authorization

APPLICANT: I certify that the information supplied on this application is complete and accurate, and that the project described, if approved, will be completed in accordance with the terms and conditions of said approval.

Signature: Zach Middlebrooks Digitally signed by Zach Middlebrooks Date: 2026.04.10 16:10:01 -04'00' Date: _____

OWNER (if other than applicant): I have read and familiarized myself with the contents of this application and do hereby consent to its submission and processing.

Signature: _____ Date: _____

City of Auburn Planning Board 2026 Master Schedule

Meetings: 1st Tuesday of Every Month at 6:30pm
Except where noted

Completed applications are due on the 2nd Tuesday of the month prior to the next month's Planning Board Meeting.

Planning Board Meeting	Completed Application Deadline
January 6, 2026	December 9, 2025
February 3, 2026	January 13, 2026
March 3, 2026	February 10, 2026
April 7, 2026	March 10, 2026
May 5, 2026	April 14, 2026
June 2, 2026	May 12, 2026
July 7, 2026	June 9, 2026
August 4, 2026	July 11, 2026
September 1, 2026	August 11, 2026
October 6, 2026	September 8, 2026
November 3, 2026	October 13, 2026
December 1, 2026	November 10, 2026

CITY OF AUBURN, NY

"History's Hometown"

SITE PLAN REVIEW

INFORMATION and INSTRUCTIONS

The following minimum information is required as part of the site plan application, unless specifically waived by the Planning Board. Items marked by an asterisk (*) may be waived on applications for minor site plan review as determined by the Design Review Committee.

1. Survey of the property signed by a New York State Licensed Surveyor and which includes the following items:
    - A. Property lines with metes and bounds and with North arrow indicated
    - B. Centerline and edge of pavement
    - C. Street right of way
    - D. Location of all existing trees of greater than a five (5) inch caliper*
    - E. Proposed and existing contour lines at one (1) foot intervals (Identify all slopes in excess of 10%. Contours to be to USGS Datum.*
    - F. Location of Federal Floodway or Federal Floodplain*
    - G. All existing easements
    - H. All existing structures
    - I. All existing Utilities: electric, gas, telephone, cable, water, sewer, etc.*

2. Layout plan with:
    - A. Dimensions of all proposed structure(s) and/or those to be modified.
        1) Show distances from front side and rear property lines
    - B. Parking areas with dimensions, including:
        1) Size of proposed spaces
        2) Proposal of striping
        3) Number of existing and proposed spaces
        4) Number of existing and proposed handicapped spaces
        5) Loading areas*
        6) Aisles
        7) Extent and type of curbing
        8) Location of curb cuts, exits and entrances
        9) Proposal for snow storage*
    - C. Sidewalks and provisions for pedestrian access
    - D. All existing or proposed outside storage, including:
        1) Location of any outside trash receptacles, recycling containers, and proposed screening
        2) Location, size and type of all proposed utilities*
    - E. Proposed signage to include signage both on the building and any existing or proposed freestanding signage and the type of illumination proposed, including all directional signs to be used on site*
    - F. Location of any outside equipment including generators, HVAC and the like*
    - G. Location of closest fire hydrant*
    - H. Detail drawings sufficient to provide complete information on all planned new or modified elements of the site including:
        1. Fence details*
        2. Curbing sizes and types*
        3. Paving materials, thicknesses, etc.*
        4. Under ground and above ground utility structures*

3. Landscaping plan with:
    - A. All existing and/or proposed landscaping and planters*
    - B. Planting schedules with number, type and sizes*

4. Drainage plan including all existing and proposed drainage structures.
   A. Show inverts and pipe sizes*
   B. Details of proposed structures*

5. Storm water management plan (meeting NYS Phase II SPDES) including erosion and sedimentation control*
   A. Storm water management structures*

6. Lighting plan with all existing and/or proposed site lighting, both on the building and on the site.
   A. Include pole types and pole height*
   B. Fixture and lamp type and wattage*

7. Photometric plan with foot-candle levels when light extends to ten (10) feet onto adjacent property*

8. Elevations to scale of all sides of structure(s) to be added or modified including:
   A. Building materials and colors
   B. Any rooftop HVAC or other equipment
   C. Height of building from lowest grade

9. Attach a Short Environmental Assessment Form (EAF). (Type I and some unlisted actions will require a long form.)

Short Environmental Assessment Form
Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information

Name of Action or Project:
Chick-fil-A Restaurant

Project Location (describe, and attach a location map):
[redacted] NY 13021

Brief Description of Proposed Action:
The existing ±2.22-acre project area is currently developed with a vacant building and associated access drives and parking areas, which will be demolished to allow for the construction of a new ±4,620 sq. ft. Chick-fil-A restaurant with a (2) lane drive through, outdoor patio area and detached meal ordering canopy and attached delivery canopy over the drive through lanes. In addition, there will be new asphalt parking, concrete curbing\sidewalk, utilities, lighting, landscaping, signage and a dumpster enclosure\shed.

Name of Applicant or Sponsor:	Telephone: [redacted]2448
Chick-fil-A, Inc.	E-Mail: [redacted]com

Address:
[redacted] Buffington Road

City/PO:	State:	Zip Code:
Atlanta	GA	30349

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☐	☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: NYDOT permit	☐	☑

3. a. Total acreage of the site of the proposed action? 2.22 acres
   b. Total acreage to be physically disturbed? 2.22 acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 2.22 acres

4. Check all land uses that occur on, are adjoining or near the proposed action:

5. ☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☑ Commercial ☐ Residential (suburban)
   ☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):
   ☐ Parkland

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☑	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐

	NO	YES
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	☐	☑

	NO	YES
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?		
If Yes, identify: _____	☑	☐

	NO	YES
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	☑	☐
b. Are public transportation services available at or near the site of the proposed action?	☑	☐
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☐	☑

	NO	YES
9. Does the proposed action meet or exceed the state energy code requirements?		
If the proposed action will exceed requirements, describe design features and technologies:	☐	☑

	NO	YES
10. Will the proposed action connect to an existing public/private water supply?		
If No, describe method for providing potable water: _____	☐	☑

	NO	YES
11. Will the proposed action connect to existing wastewater utilities?		
If No, describe method for providing wastewater treatment: _____	☐	☑

	NO	YES
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	☑	☐
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☐	☑

	NO	YES
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	☐	☑
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☑	☐
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____		

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:

☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional

☐ Wetland ☐ Urban ☑ Suburban

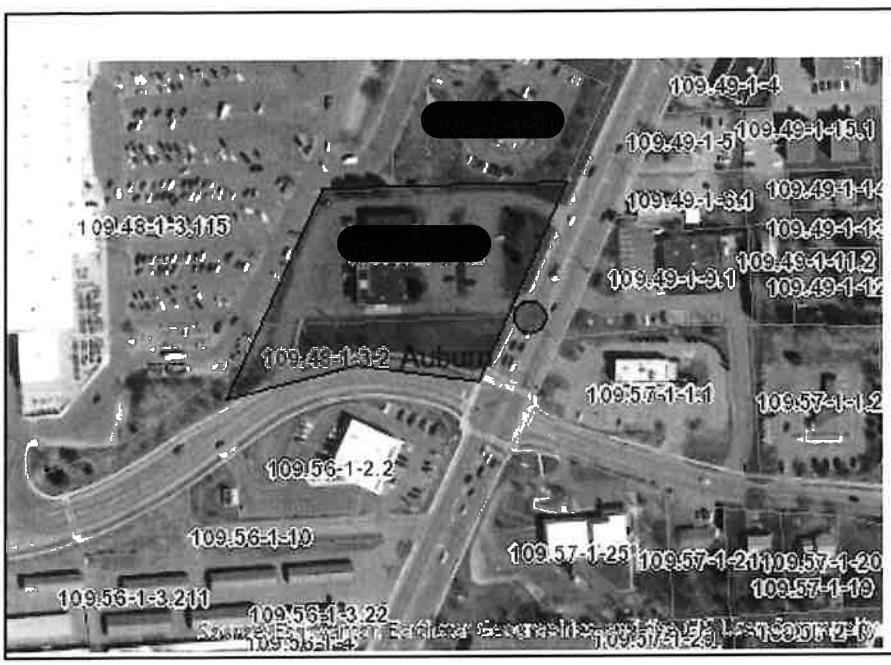
	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	☑	☐
16. Is the project site located in the 100-year flood plan?	☐	☑
17. Will the proposed action create storm water discharge, either from point or non-point sources?	☐	☑
If Yes,		
a. Will storm water discharges flow to adjacent properties?	☐	☑
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	☐	☑
If Yes, briefly describe: Existing culvert / drainage swale, New on-site catch basins and underground storm water mitigation system will connect into the existing plaza storm sewer system		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:	☑	☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	☑	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe:	☑	☐

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: Bohler Engineering NY, PLLC Date: 04/13/2026

Signature: _____ Title: Sr. Project Manager

PRINT FORM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources to confirm data provided by the Mapper or to obtain data not provided by the Mapper.

Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local, New York State, and federal wetlands and waterbodies is known to be incomplete. Refer to the EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 Year Flood Plain]	Yes
Part 1 / Question 20 [Remediation Site]	No

GTS Consulting
1396 White Bridge Road
Chittenango, NY 13037
Tel: (315) 391-5110

June 17, 2026

Bohler Engineering
17 Computer Drive West
Albany, NY 12205

Attn: Mr. Timothy Freitag, P.E.

Re: Drive Through Queue Review – Proposed Chick-fil-A Development
281 Grant Avenue, Auburn, NY

Dear Mr. Freitag:

I have reviewed the attached site plan for the proposed Chick-fil-A development at 281 Grant Avenue in Auburn with regards to available queuing in the drive through.

The proposed plan includes a single lane entrance to the drive through which immediately opens to two lanes circulating around the south and east sides of the building. Total available stacking space provided within the designated drive through area is approximately 645 feet with 355 feet of space in the outside lane and 290 feet of space in the inside lane. Assuming 25 feet per vehicle in the queue, the designated drive through area can accommodate approximately 25 vehicles stacking.

GTS Consulting has completed queuing reviews for the existing Chick-fil-A sites in Greece, Cicero, and Clay, NY in 2018, 2021, and 2022. Maximum queueing demands were reviewed at the Greece, NY and Cicero, NY sites in 2018 with maximum total queues observed of 18-19 vehicles in the drive throughs. 2021 reviews at the Cicero, NY and Clay, NY sites yielded maximum total queues of 17-25 vehicles. A 2022 review of the Clay, NY site had maximum observed total queues of 22 vehicles.

The proposed 25 total vehicle stacking capacity for the proposed Chick-fil-A development in Auburn meets or exceeds the historically observed queues at three similar sites in Greece, Cicero, and Clay, NY. There is additional stacking space for 2-3 more vehicles immediately outside the drive through area without impacting site circulation.

There are no concerns with available drive through stacking for the proposed Chick-fil-A development at 281 Grant Avenue in Auburn, NY.

If you have any questions or need additional information, please call.

Sincerely,

Gordon T. Stansbury, P.E., P.T.O.E.
GTS Consulting

Attachment – Site Plan

ZONING ANALYSIS TABLE

N/A - NOT APPLICABLE
N/S - NOT SPECIFIED
(V) - VARIANCE REQUESTED
(W) - WAIVER REQUESTED
(E) - EXIST. NON-CONFORMANCE
(O) - VARIANCE OBTAINED

ZONING DISTRICT	HC, HIGHWAY COMMERCIAL DISTRICT
SITE USE	QUICK SERVE RESTAURANT WITH DRIVE THRU
REQUIRED PERMIT	SITE PLAN REVIEW

ZONE CRITERIA	REQUIRED	EXISTING	PROPOSED
MIN. LOT AREA	30,000 SQ. FT.	±77,444 SQ. FT.	±97,245 SQ. FT.
MIN. LOT WIDTH	100.0 FT.	±225.0 FT.	±293.0 FT.
MIN. FRONT SETBACK	30.0 FT.	164.1 FT.	36.9 FT.
MIN. SIDE SETBACK	10.0 FT.	29.6 FT.	90.7 FT.
MIN. REAR SETBACK	30.0 FT.	90.6 FT.	75.7 FT.
MAX. BUILDING HEIGHT	40.0 FT.	N/S	±22.0 FT.
MAXIMUM IMPERVIOUS %	80%	59% (±57,719 SQ. FT.)*	51% (±50,007 SQ. FT.)
MINIMUM GREEN SPACE %	20%	41% (±39,526 SQ. FT.)*	49% (±47,238 SQ. FT.)
PARKING STALL SIZE MIN.	9.0 FT.x 18.0 FT.	9.0 FT.x 18.0 FT.	9.0 FT.x 18.0 FT.
MINIMUM DRIVE AISLE	24.0 FT.	24.0 FT.	24.0 FT.
ACCESS. PARKING STALLS	2 SPACES	2 SPACES	3 SPACES
REQUIRED PARKING STALLS	33 SPACES	66 SPACES	59 SPACES
PARKING STALL CRITERIA	USE/CATEGORY: RESTAURANT, QUICK SERVICE REQUIRED PARKING: 7 PER 1,000 SQ. FT. CALCULATION: (4,620 SQ. FT. / 1,000 SQ. FT.) (7) = 33 SPACES		

*OF PROPOSED LOT AREA

LANDS N/F OF
AMERICU CREDIT UNION
BK. 1699, PG. 205
SECTION 109.49 BLOCK 1 LOT 70

LANDS N/F OF
WAL-MART REAL ESTATE
BUSINESS TRUST
BK. 963, PG. 27
SECTION 109.48 BLOCK 1 LOT 3.115

TAX ID 109.48-1-3.12
& 109.48-1-3.2
AREA: ±2.23 ACRES

JOHN WALSH BOULEVARD

GRANT AVENUE / N.Y.S ROUTE 5

1985 HIGHWAY BOUNDARY

FEE MAP 422, PARCEL 466 (BOOK 920, PAGE 32)

FEE MAP 419, PARCEL 461 (BOOK 920, PAGE 225)

ALL ON-SITE CURB SHALL BE CONCRETE, ALL CURB IN THE STREET ROW SHALL BE GRANITE

SITE NOTES

(REV. 5/2024)

1. WHEN APPLICABLE, OWNER/ OPERATOR MUST FILE THE NOI FOR SPEDES PERMITS AT APPROPRIATE AND/OR REQUIRED TIME FRAMES BASED UPON THE DESIRED START OF CONSTRUCTION. LAND DISTURBING ACTIVITIES MUST NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED FROM GOVERNING AUTHORITIES (INCLUDING STORMWATER POLLUTION PREVENTION PLAN). THE CONTRACTOR MUST STRICTLY ADHERE TO THE APPROVED SWPPP PLAN DURING CONSTRUCTION OPERATIONS (IF PROVIDED).
2. ALL CONCRETE MUST BE AIR ENTRAINED AND INCLUDE THE MINIMUM COMPRESSIVE STRENGTH OF JURISDICTIONAL STANDARD PSI AT 28 DAYS (OR 4,000 PSI) UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT. IF THERE ARE ANY DISCREPANCIES BETWEEN THE PLANS, DETAILS AND GEOTECHNICAL REPORT THEN THE GEOTECHNICAL REPORT SHALL GOVERN.
3. THE CONTRACTOR MUST FILE SITE SIGNAGE APPLICATION OR PERMIT UNDER SEPARATE APPLICATION UNLESS DONE SO AS PART OF JURISDICTIONAL PERMITTING PROCEDURES.
4. THE CONTRACTOR MUST REPAIR OR REPLACE, AT THE CONTRACTOR'S SOLE COST AND EXPENSE, ALL SIDEWALKS, CURBS, PAVEMENT MARKINGS, AND PAVEMENT DAMAGED BY CONSTRUCTION ACTIVITIES WHETHER SPECIFIED ON THIS PLAN OR NOT.
5. WORK WITHIN THE RIGHT-OF-WAY MUST BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS AND STANDARDS OF THE DEPARTMENT OF PUBLIC WORKS, ENGINEERING DEPARTMENT, HIGHWAY DIVISION, AND/OR STATE DOT HIGHWAY DEPARTMENT.
6. CONTRACTOR IS CAUTIONED OF EXISTING UTILITY SERVICES TO REMAIN IN PROXIMITY TO PROPOSED BOLLARDS AND SIGNS. CONTRACTOR SHALL PROVIDE FIELD MODIFICATION LOCATIONS OF BOLLARDS AND BOLLARDS WITH SIGNAGE AS NEEDED TO AVOID CONFLICTS WITH EXISTING UTILITY SERVICES TO REMAIN.

REFER TO DETAIL SHEET C-502 FOR NYSDOT NUMBERS, NOTES AND DETAILS

REFER TO SITE DATA ZONING TABLE ON SHEET C-201 FOR MORE INFO

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

20 10 5 0 20
1"= 20'

GENERAL NOTE:
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT. WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.

P:\MA\2025\NYB250120.00\CAD\DRAWINGS\PLAN SETS\P-CIVIL_SITE-NYB250120-SA------3.LAYOUT_C-200 SITE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia 30349-2998

BOHLER
17 COMPUTER DRIVE WEST
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CHICK-FIL-A
AUBURN (NY) FSU
281 GRANT AVENUE / NY-5
AUBURN, NY 13021
CAYUGA COUNTY

FSU#06315

BUILDING TYPE / SIZE: P15-SAM-SE
RELEASE: -

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

PRELIMINARY

CONSULTANT PROJECT #	NYB250120
PRINTED FOR	
DATE	04/13/2026
DRAWN BY	WAB
CHECKED BY	RLB

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SHEET
SITE PLAN

SHEET NUMBER
C-200

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia 30349-2998

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CHICK-FIL-A
AUBURN (NY) FSU
281 GRANT AVENUE / NY-5
AUBURN, NY 13021
CAYUGA COUNTY

FSU#06315

BUILDING TYPE / SIZE: P15-SAM-SE
RELEASE: -

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

PRELIMINARY

CONSULTANT PROJECT #	NYB250120
PRINTED FOR	
DATE	04/13/2026
DRAWN BY	WAB
CHECKED BY	RLB

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SHEET
OVERALL SITE RENDER

SHEET NUMBER
C-200A

C:\BOHLERCAD_USERDATA\TEMP\ACPUBLISH_9172\P-CIV_-RENDR-NYB250120_00-SA---3A.LAYOUT: C-200A OVERALL RENDER

GTS Consulting
1396 White Bridge Road
Chittenango, NY 13037
Tel: (315) 391-5110

January 8, 2026

Bohler Engineering
17 Computer Drive West
Albany, NY 12205

Attn: Mr. Timothy Freitag, P.E.

Re: Traffic Impact Assessment – Proposed Chick-fil-A Development
281 Grant Avenue, Auburn, NY

Dear Mr. Freitag:

I have completed my review of traffic operations associated with the proposed Chick-fil-A development at 281 Grant Avenue in Auburn, NY. This letter summarizes the work completed in this review as well as my findings.

Project Understanding

The project site is located on the northwest corner of the signalized Grant Avenue (NYS Route 5) intersection with John Walsh Boulevard/Brookside Drive in Auburn, NY. The site is currently occupied by an 11,507 SF medical office building which will be removed. The proposed development includes a 5,183 Chick-fil-A restaurant with drive through operations. Existing access to the site includes one full access driveway to John Walsh Boulevard located approximately 300 feet to the west of Grant Avenue, and two full access driveways to Grant Avenue located 110 and 260 feet to the north of John Walsh Boulevard. The southern Grant Avenue access will be closed and the northern Grant Avenue access will be converted to a right in/right out only driveway.

A site plan developed by Bohler Engineering has been attached.

Data Collection

Site visits were conducted on Thursday, November 20th, and Saturday, November 22nd, 2025 to collect the following:

- Existing Traffic Volume Counts – Traffic turning movement counts were collected at the following 5 study area intersections during the weekday morning (7-9am), weekday midday (11am-1pm), weekday evening (4-6pm), and Saturday midday (11am-1pm) peak travel periods to ensure that actual peak hours of the adjacent street were captured.
    - Grant Avenue @ Mutton Hill Road / BJ's Wholesale Club
    - Grant Avenue @ Walmart / Verizon
    - Grant Avenue @ John Walsh Boulevard / Brookside Drive
    - Grant Avenue @ McIntosh Drive
    - Grant Avenue @ Standart Avenue / N Seward Avenue

Re: Traffic Impact Assessment – Proposed Chick-fil-A Development
281 Grant Avenue, Auburn, NY

The traffic counts included separate heavy vehicle counts on each approach and pedestrians. There were minor pedestrian volumes during the traffic count periods. All area schools were in session.

- Grant Avenue Southbound Gap Data – Gap data was collected in the southbound direction on Grant Avenue passing the proposed right in/right out access driveway to assess the ability for vehicles to turn right out of the site. These gaps in traffic were observed and timed on Grant Avenue during each of the traffic count periods. The gaps were then converted to a number of vehicles that could turn right out of the site during each gap and then totaled for the peak hour. For example, one vehicle can turn into the driveway with a 6-9 second gap in traffic, two can turn with a 10-13 second gap, 3 with a 14-17 second gap, 4 with an 18-19 second gap, etc.

- Speed Measurements – Spot speed measurements were collected on Grant Avenue southbound passing the site in order to properly identify average and 85th percentile operating speeds in the area. The data was collected during off-peak times, the roadway was dry, and the weather was clear.

- Sight Distance Measurements – Sight lines looking north along Grant Avenue from the proposed right in/right out access driveway were collected for comparison to design standards.

- Operational Data - Other data needed to evaluate traffic operations, such as intersection geometry, control, and speeds limits were also collected. Existing signal timing data was obtained from NYSDOT to ensure that the signalized intersections along Grant Avenue were properly modeled.

Existing Operations

Grant Avenue is classified as a principal urban arterial roadway and has two through lanes in each direction through the study area with left turn lanes in both directions at all of the study area intersections. The posted speed limit on Grant Avenue is 30 mph through the study area and 45 mph to the north of Mutton Hill Road.

The intersection of Grant Avenue with Mutton Hill Road and the BJ's Wholesale driveway is controlled by a fully actuated coordinated traffic signal under the jurisdiction of NYSDOT (Signal #1029). The signal operation includes permitted left turn phasing on all four approaches. There is one lane on the Mutton Hill Road approach and two lanes on the BJ's approach (a shared left/through lane and a right turn lane).

The intersection of Grant Avenue with the Walmart and Verizon driveways is controlled by a fully actuated coordinated traffic signal under the jurisdiction of NYSDOT (Signal #1924). The signal operation includes protected/permitted north/south left turn phasing with eastbound overlap right turn

phasing. There is one lane on the Verizon approach and two lanes on the Walmart approach (a shared left/through lane and a right turn lane).

The intersection of Grant Avenue with John Walsh Boulevard and Brookside Drive is controlled by a fully actuated coordinated traffic signal under the jurisdiction of NYSDOT (Signal #1925). The signal operation includes protected/permitted north/south left turn phasing. There are auxiliary left turn lanes on the east/west approaches.

The intersection of Grant Avenue with McIntosh Drive and McDonalds is controlled by a fully actuated uncoordinated traffic signal under the jurisdiction of NYSDOT (Signal #1922). The signal operation includes protected/permitted north/south left turn phasing with eastbound overlap right turn phasing. There is one lane on the McDonalds approach and two lanes on the McIntosh Drive approach (a shared left/through lane and a right turn lane).

The intersection of Grant Avenue with Standart Avenue and N Seward Avenue is controlled by a fully actuated uncoordinated traffic signal under the jurisdiction of NYSDOT (Signal #1902). The signal operation includes protected/permitted left turn phasing on all approaches. There are auxiliary left turn lanes on the east/west approaches.

Based on the November 2025 traffic counts collected, the peak hours were identified as follows:

Weekday Morning Peak Hour – 8:00am to 9:00am
Weekday Midday Peak hour – 12:00pm-1:00pm
Weekday Evening Peak Hour – 4:00pm to 5:00pm
Saturday Midday Peak Hour – 11:45am-12:45pm

The 2025 existing traffic volumes collected in November are shown in the attached Figure 1 for the weekday peak hours, and in Figure 2 for the Saturday midday peak hour.

The November 2025 traffic counts for the three weekday peak hours were reviewed and compared to historical traffic count data in the area to determine if any adjustments were necessary. Specifically, the November traffic counts were compared to average traffic counts on Grant Avenue to the north of McIntosh Drive that were collected on October 25th-26th, 2023. The historical counts were taken from the NYSDOT Traffic Data Viewer website.

Based on the October 2023 data, Grant Avenue had 633 vehicles northbound/559 vehicles southbound to the north of McIntosh Drive during the morning peak hour, 944 vehicles northbound/976 vehicles southbound during the midday peak hour, and 984 vehicles northbound/965 vehicles southbound during the evening peak hour. The existing traffic volumes collected for this study have 637 vehicles northbound/605 vehicles southbound during the morning peak hour, 1014 vehicles northbound/953 vehicles southbound during the midday peak hour, and 1044 vehicles northbound/990 vehicles southbound during the evening peak hour. The combined 2025 traffic counts are 4% higher than the

historical counts during the morning peak hour, 2% higher than the historical counts during the midday peak hour, and 4% higher than the historical counts during the evening peak hour.

Since the 2025 volumes are higher than the historical count data on Grant Avenue during all three peak hours, there were no adjustments applied to the 2025 traffic counts collected for this study. Both the historical count data and the count data for this study have been attached.

The gap data collected indicates that there were sufficient gaps in traffic to accommodate over 250 vehicles turning right onto Grant Avenue from the right in/right out only access on Grant Avenue during each of the peak hours. The existing gaps observed can easily accommodate the volume of traffic that is projected to be accessing the proposed Chick-fil-A development. The gap calculations have been attached.

The posted speed limit on Grant Avenue passing the site 30 mph. The average southbound speeds collected on Grant Avenue were 29 mph in the southbound direction with an 85th percentile operating speed of 34 mph. With an operating speed of 35 mph, the recommended sight distance looking north along Grant Avenue for traffic turning right out of the site is 335 feet. There are adequate sight lines of over 1,200 feet looking to the north when waiting to turn right out of the site driveway onto Grant Avenue. There are no concerns with sight lines for traffic exiting the site onto Grant Avenue. The speed data has been attached.

Capacity analysis of the existing traffic operations was completed using Synchro12, an industry accepted standard for the analysis of both signalized and unsignalized intersections that is based on methodologies developed in the Highway Capacity Manual. Intersection and individual movement operations are graded in terms of Level of Service ranging from A to F, as described in the HCM. For example, an unsignalized intersection movement with an average delay of 5 seconds per vehicle is considered a Level of Service A while an average delay per vehicle of 20 seconds is considered a C. A Level of Service D or better is generally considered acceptable for a signalized intersection while a Level of Service E or better is generally considered acceptable for an unsignalized intersection.

The results of the Synchro capacity analysis indicate that all of the signalized intersections along Grant Avenue are operating at acceptable overall Levels of Service C or better during all four peak hours. All individual traffic movements area operating at acceptable Levels of Service D or better during the four peak hours with the exception of the eastbound left/through movement exiting Walmart during the weekday midday, weekday evening, and Saturday midday peak hours. This movement has a longer delay with Level of Service E. These longer delays are not indicative of a capacity concern, but are more a function of the signal coordination holding green time on Grant Avenue. All volume to capacity ratios in the study area are 0.83 or lower during all four peak hours.

The detailed Level of Service summary, queue summary and capacity analysis printouts have been attached.

Re: Traffic Impact Assessment – Proposed Chick-fil-A Development
281 Grant Avenue, Auburn, NY

Accident Analysis

Accident data was obtained from NYSDOT for the study area for a three year period from March 2022 through February 2025. Over the three year period, there were 157 total accidents in the study area.

The Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments spreadsheet provided by NYSDOT was used to calculated the LOSS for each intersection and road segment in the study area based on the estimated AADT volumes and observed number of accidents at each location.

Of the 3 accidents that occurred at the Grant Avenue/Mutton Hill Road/BJ's Wholesale intersection, 1 was a sideswipe accident, 1 was a left turn accident, and 1 was a backing accident. Based on intersection geometry and annual average daily traffic volumes, the predicted NYSDOT Safety Performance Function is 3.85 total accidents per year and 1.59 injury/fatality accidents per year. The calculated number of total accidents per year were 1.00. The calculated number of injury/fatality accidents per year were 0.00. This intersection has been identified to have a LOSS 2 rating based on total accident history and LOSS 2 rating based on injury accident history. This is not considered a High Potential Location for Safety Improvement.

Of the 4 accidents that occurred at the Grant Avenue/Walmart/Verizon intersection, 2 were rearend accidents, 1 was a right turn accident, and 1 was a backing accident. Based on intersection geometry and annual average daily traffic volumes, the predicted NYSDOT Safety Performance Function is 4.55 total accidents per year and 1.90 injury/fatality accidents per year. The calculated number of total accidents per year were 1.33. The calculated number of injury/fatality accidents per year were 0.00. This intersection has been identified to have a LOSS 2 rating based on total accident history and LOSS 2 rating based on injury accident history. This is not considered a High Potential Location for Safety Improvement.

Of the 18 accidents that occurred at the Grant Avenue/John Walsh Boulevard/Brookside Drive intersection, 12 were rearend accidents, 2 were sideswipe accidents, 2 were left turn accidents, 1 was a right turn accident, and 1 was a bicyclist accident. Based on intersection geometry and annual average daily traffic volumes, the predicted NYSDOT Safety Performance Function is 4.14 total accidents per year and 1.73 injury/fatality accidents per year. The calculated number of total accidents per year were 6.00. The calculated number of injury/fatality accidents per year were 1.00. This intersection has been identified to have a LOSS 3 rating based on total accident history and LOSS 2 rating based on injury accident history. This is not considered a High Potential Location for Safety Improvement.

Of the 26 accidents that occurred at the Grant Avenue/McIntosh Drive/McDonalds intersection, 13 were rearend accidents, 6 were left turn accidents, 2 were sideswipe intersections, 1 was a right angle accident, 1 was a bicyclist accident, 1 was a pedestrian accident, 1 was a fixed object accident, and 1 was an animal related accident. Based on intersection geometry and annual average daily traffic volumes, the predicted NYSDOT Safety Performance Function is 5.08 total accidents per year and 1.81 injury/fatality accidents per year. The calculated number of total accidents per year were 8.66.

The calculated number of injury/fatality accidents per year were 2.33. This intersection has been identified to have a LOSS 3 rating based on total accident history and LOSS 3 rating based on injury accident history. This is not considered a High Potential Location for Safety Improvement.

Of the 32 accidents that occurred at the Grant Avenue/Standart Avenue/N Seward Avenue intersection, 19 were rearend accidents, 3 were left turn accidents, 3 were right turn accidents, 3 were sideswipe accidents, 2 were right angle accidents, 1 was a bicyclist accident, and 1 was an animal related accident. Based on intersection geometry and annual average daily traffic volumes, the predicted NYSDOT Safety Performance Function is 5.83 total accidents per year and 2.45 injury/fatality accidents per year. The calculated number of total accidents per year were 10.66. The calculated number of injury/fatality accidents per year were 1.00. This intersection has been identified to have a LOSS 3 rating based on total accident history and LOSS 2 rating based on injury accident history. This is not considered a High Potential Location for Safety Improvement.

There were 49 midblock accidents along Grant Avenue including 11 left turn accidents, 11 sideswipe accidents, 8 right turn accidents, 7 rearend accidents, 5 right angle accidents, 4 animal related accidents, 2 bicyclist accidents, a 1 non-collision accident. Based on roadway geometry and annual average daily traffic volumes, the predicted NYSDOT Safety Performance Function is 18.47 total accidents per year and 3.72 injury/fatality accidents per year. The calculated number of total accidents per year were 16.33. The calculated number of injury/fatality accidents per year were 2.66. This roadway has been identified to have a LOSS 2 rating based on total accident history and LOSS 2 rating based on injury accident history. This roadway is not considered a High Potential Location for Safety Improvement.

There 2 accidents along N Seward Avenue, 1 accident along McIntosh Drive, and 22 accidents in area parking lots included in the data.

Overall, 133 (85%) of the accidents were property damage only accidents, 24 involved injuries, and there were no fatality accidents.

The detailed accident summary has been attached.

2027 Background Operations

The proposed Chick-fil-A development is expected to be completed in 2026 or 2027, therefore 2027 was used as the design year for this study to allow for 2 years growth in traffic. In order to fully understand the impacts of the development on the adjacent roadway system, analysis of the operations immediately before the assumed project opening must first be completed. The existing traffic volumes were adjusted by a growth rate to account for any unknown development that may occur prior to completion of the project.

Historical traffic volumes along Grant Avenue between Standart Avenue and the northern City line, along Standart Avenue between Grant Avenue and North Street, and along N Seward Avenue between

Re: Traffic Impact Assessment – Proposed Chick-fil-A Development
281 Grant Avenue, Auburn, NY

Grant Avenue and Franklin Street, were taken from the NYSDOT Traffic Data Viewer website and reviewed in order to identify an appropriate background growth rate. Long term growth rates in the area have been negative at -3.7% per year on Grant Avenue, negative at -0.6% per year on Standart Avenue, and positive at +1.0% per year on N Seward Avenue between 2015 and 2024. In order to maintain a conservative analysis, a positive +1.0% per year growth was chosen and used to grow the 2025 existing traffic volumes to the 2027 background condition.

Approved development trips associated with the planned 7 Brew development on Grant Avenue near Standart Avenue were taken from the October 7th, 2025 traffic study completed by GTS Consulting for the weekday morning, weekday evening, and Saturday midday peak hours. Trips generated during the weekday midday peak hour were extrapolated based on ITE time of day distributions for the coffee shop land use.

The 2027 base traffic volumes with 1% growth per year (2% total) are shown in Figures 3-4. The approved development trips associated with the 7 Brew development are shown in Figures 5-6, and the 2027 background traffic volumes with growth and approved development are shown in the attached Figures 7 and 8. The background growth rate calculations have also been attached.

The Synchro capacity analysis of the 2027 background condition shows minimal increases in delays from the existing condition. All Levels of Service and queues are generally maintained at the study area intersections during all four peak hours with the following minor exceptions:

- Grant Avenue @ Walmart/Verizon
  - Overall Intersection – LOS B to C (+1 second average delay) – Saturday Peak Hour

- Grant Avenue @ Standart Avenue/N Seward Avenue
  - WB Left – LOS B to C (+1 second average delay) – Morning Peak Hour
  - NB Left – LOS B to C (+3 seconds average delay) – Evening Peak Hour
  - NB Left – LOS B to C (+6 seconds average delay) – Saturday Peak Hour

The detailed Level of Service summary, queue summary and capacity analysis printouts have been attached.

Trip Generation Estimate and Distribution

The proposed Chick-fil-A development includes a 5,183 SF restaurant with a two lane drive through operation. Trips generated by the proposed development were estimated using both the ITE Trip Generation, 11th Edition, as well as using actual Chick-fil-A rates developed based on traffic counts at 6 existing locations in Syracuse, Rochester, and Buffalo, NY. Trips generated by the proposed development were based on the existing site counts as they provided the worst case (highest) estimates during the busier weekday midday, weekday evening and Saturday peak hours.

Re: Traffic Impact Assessment – Proposed Chick-fil-A Development
281 Grant Avenue, Auburn, NY

A significant portion of the traffic generated by the development will be drawn from traffic already passing the site on Grant Avenue or John Walsh Boulevard, and is referred to as pass-by trips. Pass-by trips are vehicles that are already traveling through the study area but will now stop at the development on their way to another destination, such as stopping on their way to or from work or school. Based on data from the ITE Trip Generation, the average pass-by trip percentage for a fast food restaurant is 49% during the morning peak hour and 50% during the evening peak hour. A 50% pass-by trip percentage was used for the development during the weekday morning, weekday evening, and Saturday midday peak hours. A reduced 35% pass-by trip percentage was used during the weekday midday peak hour to account for increased direct trips as people run out to lunch from work.

The following table summarizes the trip generation estimate for the proposed Chick-fil-A development at 281 Grant Avenue in Auburn, NY.

Trip Generation Summary

	Morning Peak		Midday Peak		Evening Peak	
	Entering	**Exiting**	**Entering**	**Exiting**	**Entering**	**Exiting**
Proposed Chick-fil-A – 5,183 SF	28	24	172	165	141	119
Pass-by Trips – AM/PM-50% Midday – 35%	*-13*	*-13*	*-59*	*-59*	*-65*	*-65*
Total New Trips Generated	**15**	**11**	**113**	**106**	**76**	**54**

	Saturday Peak	
	Entering	**Exiting**
Proposed Chick-fil-A – 5,183 SF	195	187
Pass-by Trips - 50%	*-95*	*-95*
Total New Trips Generated	**100**	**92**

Overall the proposed development is expected to generate approximately 24-28 total trips entering and exiting during the weekday morning peak hour, 165-172 total trips entering and exiting during the midday peak hour, 119-141 total trips entering and exiting during the evening peak hour, and 187-195 total trips entering and exiting during the Saturday peak hour. Approximately half of this traffic will be drawn from traffic already traveling through the study area.

The detailed trip generation estimate has been attached.

Based on existing traffic patterns and population centers in the area, 35% of the new trips generated are expected to travel to/from south via Grant Avenue, 30% is expected to travel to/from the north via Grant Avenue, 10% is expected to travel to from the west via Standart Avenue, 10% is expected to travel to/from the east via N Seward Avenue, 10% is expected to travel to/from the north via Mutton Hill Road, and 5% is expected to travel to/from the east via Brookside Drive. Separate pass-by trip distributions were developed for each peak hour based on the existing splits of traffic passing the site on Grant Avenue and John Walsh Boulevard.

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281 Grant Avenue, Auburn, NY

The anticipated arrival/departure distributions for each peak hour are shown in Figures 9-12 and the resulting trips generated during each peak hour are shown in Figures 13-16. The resultant full build traffic volumes expected when the development is complete are shown in Figures 17-18.

Build Operations

Capacity analysis of the build condition with the proposed Chick-fil-A development indicates that the development will generally have only minor impacts on overall traffic operations at the adjacent intersections in the study area. There are higher increases in delay at the Grant Avenue / John Walsh Boulevard / Brookside Drive intersection which are associated with the increased use of currently underutilized west leg of the intersection with the Chick-fil-A development, however all Level of Service remain within acceptable ranges. The following drops in Level of Service are noted:

- Grant Avenue @ Mutton Hill Road / BJ's Wholesale
  - WB Left/Through – LOS B to C (+3 seconds average delay) – Midday Peak Hour
  - WB Left/Through – LOS C to D (+3 seconds average delay) – Saturday Peak Hour

- Grant Avenue @ Walmart/Verizon
  - NB Through/Right – LOS A to B (+3 second average delay) – Saturday Peak Hour

- Grant Avenue @ John Walsh Boulevard / Brookside Drive
  - EB Left – LOS B to C (+1 second average delay) – Morning Peak Hour
  - EB Left – LOS C to D (+12 seconds average delay) – Midday Peak Hour
  - EB Left – LOS C to D (+27 seconds average delay) – Saturday Peak Hour
  - NB Left – LOS A to B (+4 seconds average delay) – Evening Peak Hour
  - NB Left – LOS A to C (+15 seconds average delay) – Saturday Peak Hour
  - SB Through/Right – LOS B to C (+2 seconds average delay) – Saturday Peak Hour

- Grant Avenue @ McIntosh Drive / McDonalds
  - NB Left – LOS D to E (+11 seconds average delay) – Saturday Peak Hour

- Grant Avenue @ Standart Avenue/N Seward Avenue
  - Overall Intersection – LOS C to D (+2 seconds average delay) – Evening Peak Hour
  - Overall Intersection – LOS C to D (+3 seconds average delay) – Saturday Peak Hour
  - NB Through/Right – LOS C to D (+3 seconds average delay) – Midday Peak Hour
  - SB Left – LOS C to D (+4 seconds average delay) – Evening Peak Hour
  - SB Left – LOS C to D (+4 seconds average delay) – Saturday Peak Hour
  - SB Through/Right – LOS C to D (+2 seconds average delay) – Saturday Peak Hour

There are no concerns with projected traffic operations at the proposed site driveways with all movements projected to operate at Level of Service B or better during all four peak hours.

Re: Traffic Impact Assessment – Proposed Chick-fil-A Development
281 Grant Avenue, Auburn, NY

The detailed Level of Service, queue summary and capacity analysis printouts have been attached.

Conclusions

The additional traffic generated by the proposed Chick-fil-A development will have no notable or significant impact on traffic operations on the Grant Avenue corridor. There will be some noted increases in delay for the currently underutilized eastbound and northbound left turn movements at the Grant Avenue/John Walsh Boulevard/Brookside Drive intersections, however all delays are well within acceptable levels. There are more than sufficient gaps in traffic and good sight lines to provide access at the proposed driveway locations. There are no off-site mitigation improvements recommended.

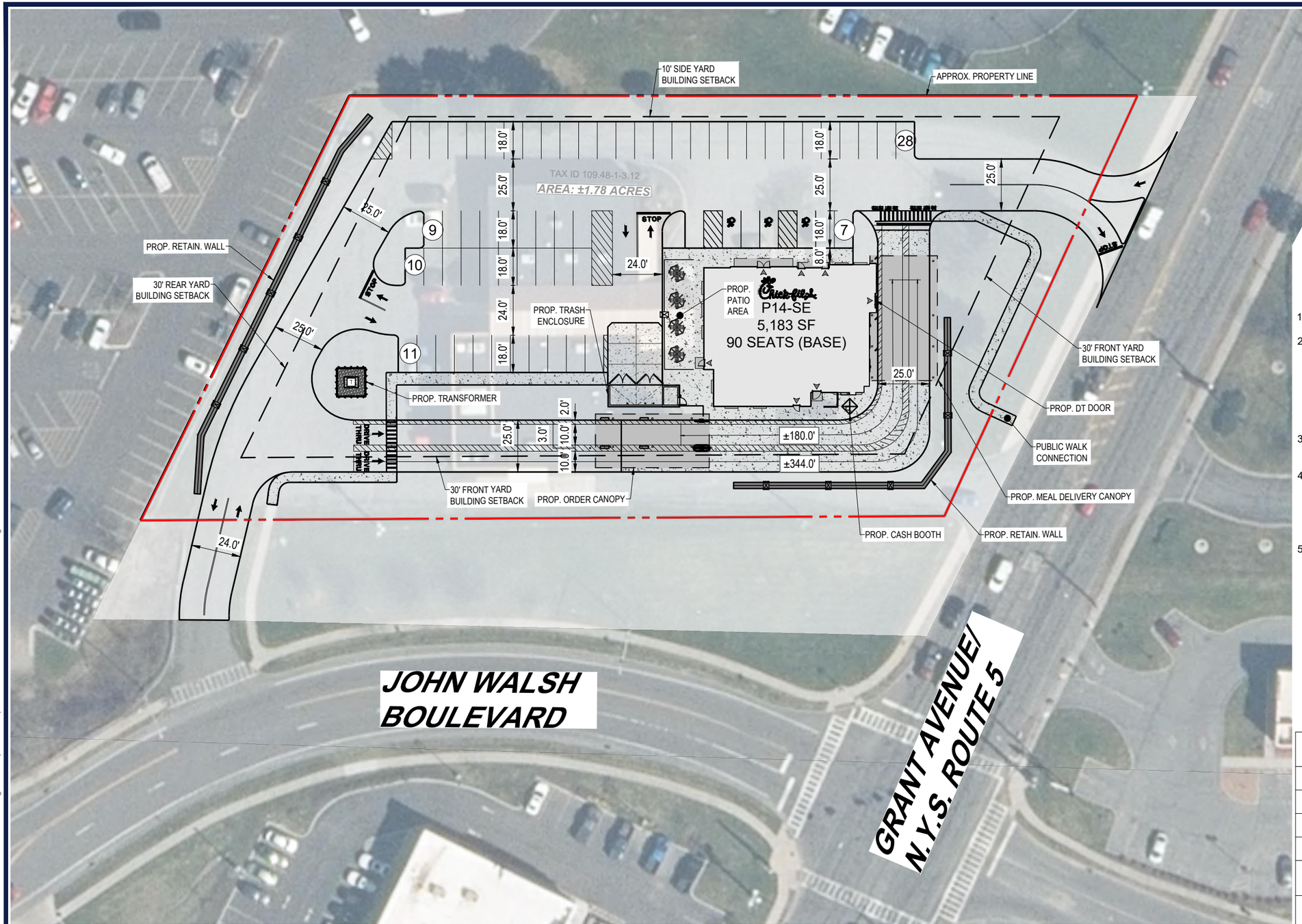
If you have any questions or need additional information, please call.

Sincerely,

Gordon T. Stansbury, P.E., P.T.O.E.
GTS Consulting

Attachments –

- Site Plan
- Traffic Volume Figures 1-18
- Growth Rate Calculations
- Accident Analyses
- Speed Data
- Capacity Printouts
- Level of Service & Queue Summary
- Gap Data
- Trip Generation Estimate
- Historical Count Data
- 2025 Count Data



CONCEPT PLAN NOTES

1. THIS CONCEPT WAS PREPARED STRICTLY AND SOLELY BASED UPON INFORMATION IDENTIFIED IN THE PLAN REFERENCES.
2. THE CONCEPT DEPICTED HEREIN IDENTIFIES A DESIGN CONCEPT RESULTING SOLELY FROM LAYOUT PREFERENCES AND GUIDANCE DICTATED AND IDENTIFIED SOLELY BY THE CLIENT. THE FEASIBILITY WITH RESPECT TO OBTAINING LOCAL, COUNTY, STATE, AND OTHER APPLICABLE APPROVALS IS NOT WARRANTED, AND CAN ONLY BE ASSESSED AFTER FURTHER EXAMINATION AND VERIFICATION OF APPLICABLE REQUIREMENTS AND AFTER THE PROCUREMENT OF ALL NECESSARY JURISDICTIONAL APPROVALS.
3. THIS CONCEPTUAL PLAN IS PREPARED FOR CONCEPTUAL PRESENTATION PURPOSES, ONLY, AND IS NOT INTENDED TO AND SHOULD NOT BE UTILIZED AS A ZONING OR CONSTRUCTION DOCUMENT.
4. THE EXISTING CONDITIONS SHOWN HEREON ARE BASED UPON INFORMATION THAT WAS PROVIDED TO THE ENGINEER, AT THE TIME OF THE ENGINEER'S PREPARATION OF THIS CONCEPT PLAN, BY THE OWNER AND OTHERS NOT UNDER ENGINEER'S CONTROL, AND IS SUBJECT TO CHANGE AFTER PERFORMANCE OF ADDITIONAL DUE DILIGENCE, FIELD SURVEY, OR BOTH.
5. IT IS STRONGLY RECOMMENDED THAT A ZONING CONFORMANCE ANALYSIS BE PERFORMED TO DETERMINE AND EVALUATE IF THERE ARE ANY RESTRICTIONS AND/OR ZONING ISSUES, CONCERNS OR RESTRICTION THAT MAY OR COULD IMPACT THE FEASIBILITY OF THIS PROJECT, AS THE OWNER HAS DESCRIBED IT.

PARKING REQUIREMENTS

PARKING: 7 PARKING SPACES FOR EVERY 1,000 SQ. FT. OF BUILDING

PARKING REQUIRED (5,183 SQ. FT. / 1,000) 7 STALLS = 36.3 =37 SPACES

PARKING PROVIDED: 65 SPACES
ADA SPACES INCLUDED: 3 SPACES

FSU STANDARDS

	MINIMUM	MAXIMUM	PROPOSED
DRIVE-THRU APPROACH	100 FT	N/A	±170 FT
DRIVE-THRU LENGTH	560 FT	840 FT	±700.0 FT
OFF-STREET PARKING	65 SPACES	80 SPACES	65 SPACES
ORDERING CANOPY DISTANCE	120 FT	200 FT	±180.0 FT
ESTIMATED DRIVE THRU STACKING	28 CARS	42 CARS	35 CARS

AUBURN (NY) FSU - CONCEPT A

281 GRANT AVENUE / NY-5, AUBURN, NY 13021

BOHLER
17 COMPUTER DRIVE WEST
ALBANY, NY 12205
Phone: (518) 438-9900
Fax: (508) 480-9080
www.BohlerEngineering.com

50 25 12.5 0 50
1"= 50'

DATE: 10/07/2025

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Proposed Chick-fil-A Development – 281 Grant Avenue – Auburn, NY
Intersection Level of Service & Queue Summary
Weekday Morning Peak Hour

Intersection	Available Storage	2025 Existing				2027 Background				2027 Build			
		LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue
Grant Avenue @ Mutton Hill Road / BJ's		**B**	**18**			**B**	**18**			**B**	**18**		
EB Left/Through/Right	-	A	7	0.12	37	A	7	0.13	38	A	7	0.13	38
WB Left/Through	-	B	12	0.12	36	B	13	0.12	38	B	13	0.12	38
WB Right	-	A	2	0.04	1	A	2	0.05	2	A	2	0.05	2
NB Left	200	C	21	0.13	39	C	21	0.14	41	C	21	0.14	42
NB Through/Right	890	C	23	0.49	145	C	23	0.49	150	C	23	0.49	151
SB Left	200	B	13	0.13	19	B	13	0.13	19	B	13	0.13	19
SB Through/Right	-	B	17	0.43	74	B	16	0.43	74	B	16	0.43	74
Grant Avenue @ Walmart / Verizon		**A**	**4**			**A**	**4**			**A**	**5**		
EB Left/Through	-	C	26	0.18	30	C	26	0.19	31	C	26	0.19	31
EB Right	-	A	8	0.42	29	A	9	0.44	33	A	10	0.44	34
WB Left/Through/Right	-	A	0	0.00	0	A	0	0.00	0	A	0	0.00	0
NB Left	300	A	2	0.17	9	A	2	0.17	10	A	2	0.18	11
NB Through/Right	650	A	2	0.22	21	A	2	0.23	21	A	3	0.23	25
SB Left	100	A	0	0.00	0	A	0	0.00	0	A	0	0.00	0
SB Through/Right	890	A	4	0.25	50	A	4	0.26	54	A	4	0.26	55
Grant Avenue @ John Walsh Boulevard / Brookside Drive		**B**	**13**			**B**	**13**			**B**	**13**		
EB Left	320	B	20	0.02	5	B	20	0.01	5	C	21	0.08	14
EB Through/Right	320	A	9	0.19	16	A	9	0.19	16	A	9	0.21	17
WB Left	115	C	28	0.40	51	C	28	0.41	52	C	28	0.41	52
WB Through/Right	-	B	12	0.24	28	B	12	0.24	28	B	12	0.25	29
NB Left	250	A	5	0.08	18	A	5	0.09	18	A	6	0.12	22
NB Through/Right	2040	A	9	0.30	133	A	9	0.31	139	A	9	0.31	137
SB Left	120	A	10	0.05	23	A	10	0.05	23	A	10	0.05	23
SB Through/Right	315	B	17	0.30	163	B	17	0.31	168	B	17	0.31	170
Grant Avenue @ McIntosh Drive / McDonald's		**A**	**9**			**A**	**9**			**A**	**9**		
EB Left/Through	-	C	32	0.41	64	C	32	0.41	65	C	32	0.41	65
EB Right	160	A	6	0.12	19	A	6	0.12	19	A	6	0.12	19
WB Left/Through/Right	-	C	21	0.38	33	C	21	0.39	33	C	21	0.39	33
NB Left	250	A	4	0.05	11	A	4	0.06	11	A	4	0.06	11
NB Through/Right	1515	A	5	0.26	117	A	5	0.27	122	A	5	0.27	123
SB Left	190	A	4	0.03	7	A	4	0.03	7	A	4	0.03	7
SB Through/Right	2040	A	8	0.29	116	A	8	0.30	122	A	8	0.31	123

Proposed Chick-fil-A Development – 281 Grant Avenue – Auburn, NY
Intersection Level of Service & Queue Summary
Weekday Morning Peak Hour

Intersection	Available Storage	2025 Existing				2027 Background				2027 Build			
		LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue
Grant Avenue @ Standart Avenue / N Seward Avenue		**C**	**23**			**C**	**24**			**C**	**24**		
EB Left	175	C	21	0.27	77	C	22	0.33	93	C	22	0.33	94
EB Through/Right	-	C	27	0.27	123	C	28	0.29	133	C	28	0.29	133
WB Left	150	B	20	0.14	53	C	21	0.15	54	C	21	0.15	54
WB Through/Right	-	C	29	0.49	187	C	32	0.52	200	C	32	0.52	201
NB Left	95	B	15	0.07	23	B	16	0.13	37	B	16	0.14	37
NB Through/Right	-	C	24	0.38	172	C	24	0.37	175	C	24	0.37	178
SB Left	260	B	15	0.18	50	B	16	0.18	53	B	16	0.19	53
SB Through/Right	1515	C	21	0.40	203	C	23	0.43	218	C	23	0.44	221
Grant Avenue @ Site Access													
EB Right	-	-	-	-	-	-	-	-	-	b	11	0.015	0
NB Through	315	-	-	-	-	-	-	-	-	a	0	-	0
SB Through	330	-	-	-	-	-	-	-	-	a	0	-	0
John Walsh Boulevard @ Site Access													
EB Left/Through	-	-	-	-	-	-	-	-	-	a	0	0.00	0
WB Through/Right	320	-	-	-	-	-	-	-	-	a	0	-	0
SB Left/Right	-	-	-	-	-	-	-	-	-	a	9	0.019	3

LOS – A (Signalized), a (Unsignalized) – Synchro12
Delay – Average Delay per Vehicle in Seconds – Synchro12
V/C – Volume to Capacity Ratio – Synchro12
Queue – 95th Percentile Queue – Synchro12

Proposed Chick-fil-A Development – 281 Grant Avenue – Auburn, NY
Intersection Level of Service & Queue Summary
Weekday Midday Peak Hour

Intersection	Available Storage	2025 Existing				2027 Background				2027 Build			
		LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue
Grant Avenue @ Mutton Hill Road / BJ's		**B**	**18**			**B**	**17**			**B**	**15**		
EB Left/Through/Right	-	A	7	0.19	57	A	7	0.20	60	A	8	0.23	65
WB Left/Through	-	B	18	0.34	151	B	19	0.35	156	C	22	0.38	167
WB Right	-	A	6	0.08	25	A	6	0.08	25	A	6	0.08	27
NB Left	200	B	20	0.23	29	B	19	0.23	28	B	15	0.26	23
NB Through/Right	890	B	18	0.57	108	B	17	0.56	97	B	13	0.55	67
SB Left	200	C	23	0.36	25	C	22	0.35	42	B	20	0.33	38
SB Through/Right	-	C	21	0.45	119	C	21	0.44	110	B	19	0.44	106
Grant Avenue @ Walmart / Verizon		**B**	**15**			**B**	**15**			**B**	**16**		
EB Left/Through	-	E	63	0.79	130	E	64	0.79	133	E	64	0.79	133
EB Right	-	C	24	0.64	144	C	24	0.65	148	C	25	0.65	153
WB Left/Through/Right	-	C	24	0.06	9	C	24	0.06	9	C	24	0.06	9
NB Left	300	B	11	0.45	97	B	12	0.47	103	B	12	0.48	103
NB Through/Right	650	A	7	0.35	64	A	7	0.36	66	A	9	0.39	88
SB Left	100	A	3	0.00	1	A	0	0.00	0	A	0	0.00	0
SB Through/Right	890	A	9	0.45	139	A	9	0.46	145	A	10	0.49	156
Grant Avenue @ John Walsh Boulevard / Brookside Drive		**B**	**15**			**B**	**15**			**B**	**17**		
EB Left	320	C	29	0.08	20	C	29	0.08	20	D	41	0.51	81
EB Through/Right	320	B	13	0.38	42	B	13	0.38	43	B	14	0.45	51
WB Left	115	D	44	0.56	97	D	44	0.57	100	D	48	0.62	99
WB Through/Right	-	B	15	0.32	54	B	15	0.32	54	B	17	0.35	62
NB Left	250	A	6	0.23	37	A	7	0.24	38	B	11	0.50	68
NB Through/Right	2040	B	12	0.48	240	B	12	0.49	248	B	12	0.48	240
SB Left	120	A	9	0.16	30	A	9	0.17	29	A	9	0.16	26
SB Through/Right	315	B	18	0.40	198	B	17	0.41	200	B	19	0.48	206
Grant Avenue @ McIntosh Drive / McDonald's		**B**	**17**			**B**	**17**			**B**	**18**		
EB Left/Through	-	D	40	0.74	183	D	41	0.74	186	D	41	0.74	186
EB Right	160	B	13	0.37	96	B	13	0.38	100	B	14	0.38	105
WB Left/Through/Right	-	B	16	0.29	53	B	16	0.29	54	B	16	0.29	54
NB Left	250	B	15	0.59	109	B	17	0.61	128	B	19	0.65	147
NB Through/Right	1515	B	11	0.40	238	B	11	0.41	250	B	11	0.45	274
SB Left	190	A	8	0.03	11	A	8	0.03	11	A	8	0.04	11
SB Through/Right	2040	B	18	0.59	285	B	18	0.61	298	B	19	0.64	324

Proposed Chick-fil-A Development – 281 Grant Avenue – Auburn, NY
Intersection Level of Service & Queue Summary
Weekday Midday Peak Hour

Intersection	Available Storage	2025 Existing				2027 Background				2027 Build			
		LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue
Grant Avenue @ Standart Avenue / N Seward Avenue		**C**	**29**			**C**	**29**			**C**	**31**		
EB Left	175	C	23	0.40	103	C	24	0.45	116	C	25	0.49	123
EB Through/Right	-	C	27	0.21	100	C	27	0.23	106	C	27	0.22	106
WB Left	150	C	21	0.17	58	C	21	0.17	60	C	21	0.17	60
WB Through/Right	-	C	28	0.57	200	C	29	0.60	211	C	30	0.62	219
NB Left	95	B	17	0.13	27	B	18	0.20	35	B	19	0.22	35
NB Through/Right	-	C	33	0.70	337	C	34	0.71	345	D	37	0.76	396
SB Left	260	C	23	0.54	97	C	24	0.56	99	C	27	0.63	108
SB Through/Right	1515	C	28	0.67	375	C	29	0.69	393	C	30	0.73	420
Grant Avenue @ Site Access													
EB Right	-	-	-	-	-	-	-	-	-	b	13	0.134	13
NB Through	315	-	-	-	-	-	-	-	-	a	0	0	0
SB Through	330	-	-	-	-	-	-	-	-	a	0	0	0
John Walsh Boulevard @ Site Access													
EB Left/Through	-	-	-	-	-	-	-	-	-	a	1	0.003	0
WB Through/Right	320	-	-	-	-	-	-	-	-	a	0	-	0
SB Left/Right	-	-	-	-	-	-	-	-	-	b	11	0.163	15

LOS – A (Signalized), a (Unsignalized) – Synchro12
Delay – Average Delay per Vehicle in Seconds – Synchro12
V/C – Volume to Capacity Ratio – Synchro12
Queue – 95th Percentile Queue – Synchro12

Proposed Chick-fil-A Development – 281 Grant Avenue – Auburn, NY
Intersection Level of Service & Queue Summary
Weekday Evening Peak Hour

Intersection	Available Storage	2025 Existing				2027 Background				2027 Build			
		LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue
Grant Avenue @ Mutton Hill Road / BJ's		**B**	**15**			**B**	**14**			**B**	**14**		
EB Left/Through/Right	-	B	12	0.28	80	B	13	0.30	85	B	13	0.31	86
WB Left/Through	-	C	25	0.36	163	C	26	0.38	176	C	27	0.40	178
WB Right	-	A	7	0.09	29	A	7	0.10	30	A	8	0.10	30
NB Left	200	B	13	0.26	18	B	12	0.26	18	B	11	0.29	18
NB Through/Right	890	B	13	0.54	43	B	12	0.54	42	B	11	0.54	41
SB Left	200	B	14	0.21	25	B	14	0.21	25	B	13	0.22	25
SB Through/Right	-	B	16	0.37	90	B	15	0.37	91	B	15	0.38	95
Grant Avenue @ Walmart / Verizon		**B**	**13**			**B**	**14**			**B**	**14**		
EB Left/Through	-	E	61	0.77	162	E	62	0.78	167	E	62	0.78	167
EB Right	-	C	22	0.60	163	C	23	0.60	167	C	23	0.61	171
WB Left/Through/Right	-	C	25	0.06	10	C	25	0.06	10	C	25	0.06	10
NB Left	300	A	9	0.42	78	A	10	0.43	85	A	10	0.44	84
NB Through/Right	650	A	7	0.38	72	A	7	0.40	74	A	8	0.41	91
SB Left	100	A	3	0.00	1	A	3	0.00	1	A	3	0.00	1
SB Through/Right	890	A	8	0.40	106	A	9	0.42	110	A	9	0.43	120
Grant Avenue @ John Walsh Boulevard / Brookside Drive		**B**	**16**			**B**	**16**			**B**	**17**		
EB Left	320	C	28	0.06	17	C	28	0.06	17	C	33	0.33	61
EB Through/Right	320	B	11	0.35	42	B	11	0.35	43	B	12	0.39	49
WB Left	115	D	46	0.63	96	D	46	0.64	98	D	49	0.67	97
WB Through/Right	-	B	14	0.31	39	B	13	0.31	39	B	15	0.34	45
NB Left	250	A	7	0.24	37	A	7	0.25	38	B	11	0.47	62
NB Through/Right	2040	B	13	0.51	252	B	13	0.52	262	B	13	0.51	252
SB Left	120	A	10	0.22	34	A	10	0.23	33	A	10	0.22	32
SB Through/Right	315	B	17	0.43	191	B	17	0.44	193	B	19	0.49	201
Grant Avenue @ McIntosh Drive / McDonald's		**B**	**16**			**B**	**16**			**B**	**16**		
EB Left/Through	-	D	37	0.65	148	D	37	0.66	151	D	37	0.66	151
EB Right	160	B	14	0.32	97	B	15	0.32	101	B	15	0.32	102
WB Left/Through/Right	-	C	21	0.24	45	C	21	0.24	46	C	21	0.24	46
NB Left	250	B	15	0.60	115	B	17	0.63	131	B	19	0.65	141
NB Through/Right	1515	A	9	0.41	230	A	10	0.42	240	A	10	0.44	255
SB Left	190	A	6	0.04	11	A	6	0.04	11	A	6	0.04	11
SB Through/Right	2040	B	17	0.63	298	B	17	0.65	312	B	18	0.67	326

Proposed Chick-fil-A Development – 281 Grant Avenue – Auburn, NY
Intersection Level of Service & Queue Summary
Weekday Evening Peak Hour

Intersection	Available Storage	2025 Existing				2027 Background				2027 Build			
		LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue
Grant Avenue @ Standart Avenue / N Seward Avenue		**C**	**32**			**C**	**34**			**D**	**36**		
EB Left	175	C	26	0.46	106	C	27	0.50	114	C	28	0.53	122
EB Through/Right	-	C	29	0.27	133	C	29	0.28	140	C	29	0.28	141
WB Left	150	C	21	0.17	59	C	22	0.18	60	C	22	0.18	61
WB Through/Right	-	D	39	0.74	290	D	42	0.78	311	D	43	0.79	326
NB Left	95	B	18	0.21	36	C	21	0.31	46	C	21	0.33	46
NB Through/Right	-	D	37	0.77	403	D	37	0.76	415	D	39	0.79	444
SB Left	260	C	29	0.68	142	C	32	0.71	152	D	36	0.75	166
SB Through/Right	1515	C	28	0.69	401	C	31	0.75	425	C	32	0.77	440
Grant Avenue @ Site Access													
EB Right	-	-	-	-	-	-	-	-	-	b	13	0.094	8
NB Through	315	-	-	-	-	-	-	-	-	a	0	-	0
SB Through	330	-	-	-	-	-	-	-	-	a	0	-	0
John Walsh Boulevard @ Site Access													
EB Left/Through	-	-	-	-	-	-	-	-	-	a	1	0.003	0
WB Through/Right	320	-	-	-	-	-	-	-	-	a	0	-	0
SB Left/Right	-	-	-	-	-	-	-	-	-	b	11	0.115	10

LOS – A (Signalized), a (Unsignalized) – Synchro12
Delay – Average Delay per Vehicle in Seconds – Synchro12
V/C – Volume to Capacity Ratio – Synchro12
Queue – 95th Percentile Queue – Synchro12

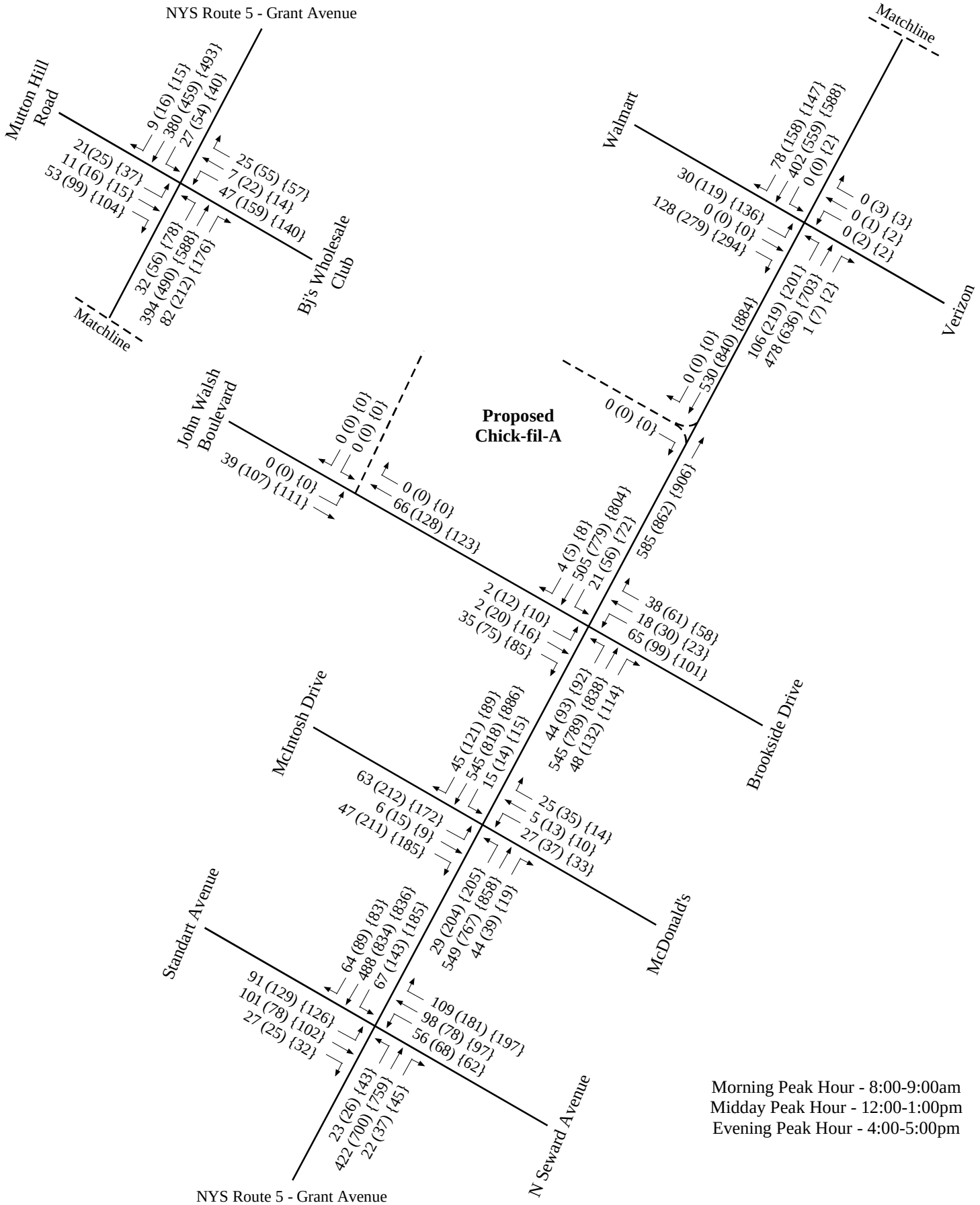
Proposed Chick-fil-A Development – 281 Grant Avenue – Auburn, NY
Intersection Level of Service & Queue Summary
Saturday Midday Peak Hour

Intersection	Available Storage	2025 Existing				2027 Background				2027 Build			
		LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue
Grant Avenue @ Mutton Hill Road / BJ's		**B**	**14**			**B**	**14**			**B**	**14**		
EB Left/Through/Right	-	B	13	0.27	82	B	13	0.29	86	B	14	0.32	89
WB Left/Through	-	C	30	0.57	231	C	33	0.61	241	D	36	0.66	245
WB Right	-	A	6	0.17	26	A	6	0.18	26	A	6	0.19	26
NB Left	200	A	9	0.14	14	A	9	0.15	16	A	8	0.17	21
NB Through/Right	890	A	10	0.56	71	A	10	0.57	83	A	9	0.56	97
SB Left	200	B	17	0.30	34	B	16	0.30	35	B	15	0.30	35
SB Through/Right	-	B	16	0.36	93	B	15	0.36	97	B	14	0.37	103
Grant Avenue @ Walmart / Verizon		**B**	**20**			**C**	**21**			**C**	**22**		
EB Left/Through	-	E	56	0.80	192	E	56	0.81	198	E	56	0.81	198
EB Right	-	C	25	0.69	209	C	25	0.69	214	C	25	0.69	216
WB Left/Through/Right	-	C	22	0.05	12	C	22	0.05	12	C	22	0.05	12
NB Left	300	C	27	0.65	165	C	30	0.67	174	C	31	0.69	184
NB Through/Right	650	A	9	0.46	135	A	9	0.48	157	B	12	0.51	221
SB Left	100	A	5	0.00	0	A	5	0.00	0	A	5	0.00	0
SB Through/Right	890	B	16	0.59	298	B	17	0.63	333	B	18	0.66	363
Grant Avenue @ John Walsh Boulevard / Brookside Drive		**B**	**16**			**B**	**16**			**B**	**19**		
EB Left	320	C	29	0.05	13	C	28	0.05	13	D	55	0.67	88
EB Through/Right	320	B	11	0.36	39	B	11	0.36	40	B	12	0.43	49
WB Left	115	D	44	0.56	84	D	44	0.58	87	D	47	0.61	86
WB Through/Right	-	B	13	0.48	47	B	12	0.48	47	B	14	0.50	55
NB Left	250	A	9	0.39	50	A	9	0.42	51	C	24	0.71	149
NB Through/Right	2040	B	12	0.49	247	B	13	0.51	260	B	13	0.50	246
SB Left	120	A	10	0.18	34	A	10	0.19	34	A	10	0.18	32
SB Through/Right	315	B	19	0.50	308	B	19	0.52	322	C	21	0.57	336
Grant Avenue @ McIntosh Drive / McDonald's		**C**	**23**			**C**	**24**			**C**	**26**		
EB Left/Through	-	D	42	0.79	222	D	43	0.80	229	D	43	0.80	229
EB Right	160	B	14	0.34	116	B	14	0.35	119	B	14	0.35	122
WB Left/Through/Right	-	B	16	0.26	61	B	16	0.27	62	B	16	0.27	62
NB Left	250	D	39	0.83	236	D	49	0.88	255	E	60	0.93	270
NB Through/Right	1515	B	17	0.48	286	B	17	0.50	301	B	18	0.53	324
SB Left	190	A	10	0.09	23	A	10	0.09	24	A	10	0.10	24
SB Through/Right	2040	C	22	0.70	375	C	23	0.72	394	C	24	0.76	428

Proposed Chick-fil-A Development – 281 Grant Avenue – Auburn, NY
Intersection Level of Service & Queue Summary
Saturday Midday Peak Hour

Intersection	Available Storage	2025 Existing				2027 Background				2027 Build			
		LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue
Grant Avenue @ Standart Avenue / N Seward Avenue		**C**	**31**			**C**	**33**			**D**	**36**		
EB Left	175	C	23	0.37	92	C	25	0.49	124	C	26	0.52	131
EB Through/Right	-	C	27	0.23	109	C	27	0.26	124	C	27	0.26	124
WB Left	150	C	21	0.15	53	C	21	0.15	55	C	21	0.16	55
WB Through/Right	-	C	25	0.58	195	C	29	0.63	219	C	29	0.65	225
NB Left	95	B	16	0.14	25	C	22	0.37	50	C	22	0.38	50
NB Through/Right	-	D	37	0.81	427	D	38	0.80	435	D	41	0.84	475
SB Left	260	C	31	0.66	118	C	32	0.68	124	D	36	0.72	138
SB Through/Right	1515	C	29	0.72	413	C	34	0.80	462	D	36	0.83	515
Grant Avenue @ Site Access													
EB Right	-	-	-	-	-	-	-	-	-	b	14	0.161	15
NB Through	315	-	-	-	-	-	-	-	-	a	0	-	0
SB Through	330	-	-	-	-	-	-	-	-	a	0	-	0
John Walsh Boulevard @ Site Access													
EB Left/Through	-	-	-	-	-	-	-	-	-	a	1	0.004	0
WB Through/Right	320	-	-	-	-	-	-	-	-	a	0	-	0
SB Left/Right	-	-	-	-	-	-	-	-	-	b	12	0.196	18

LOS – A (Signalized), a (Unsignalized) – Synchro12
Delay – Average Delay per Vehicle in Seconds – Synchro12
V/C – Volume to Capacity Ratio – Synchro12
Queue – 95th Percentile Queue – Synchro12



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

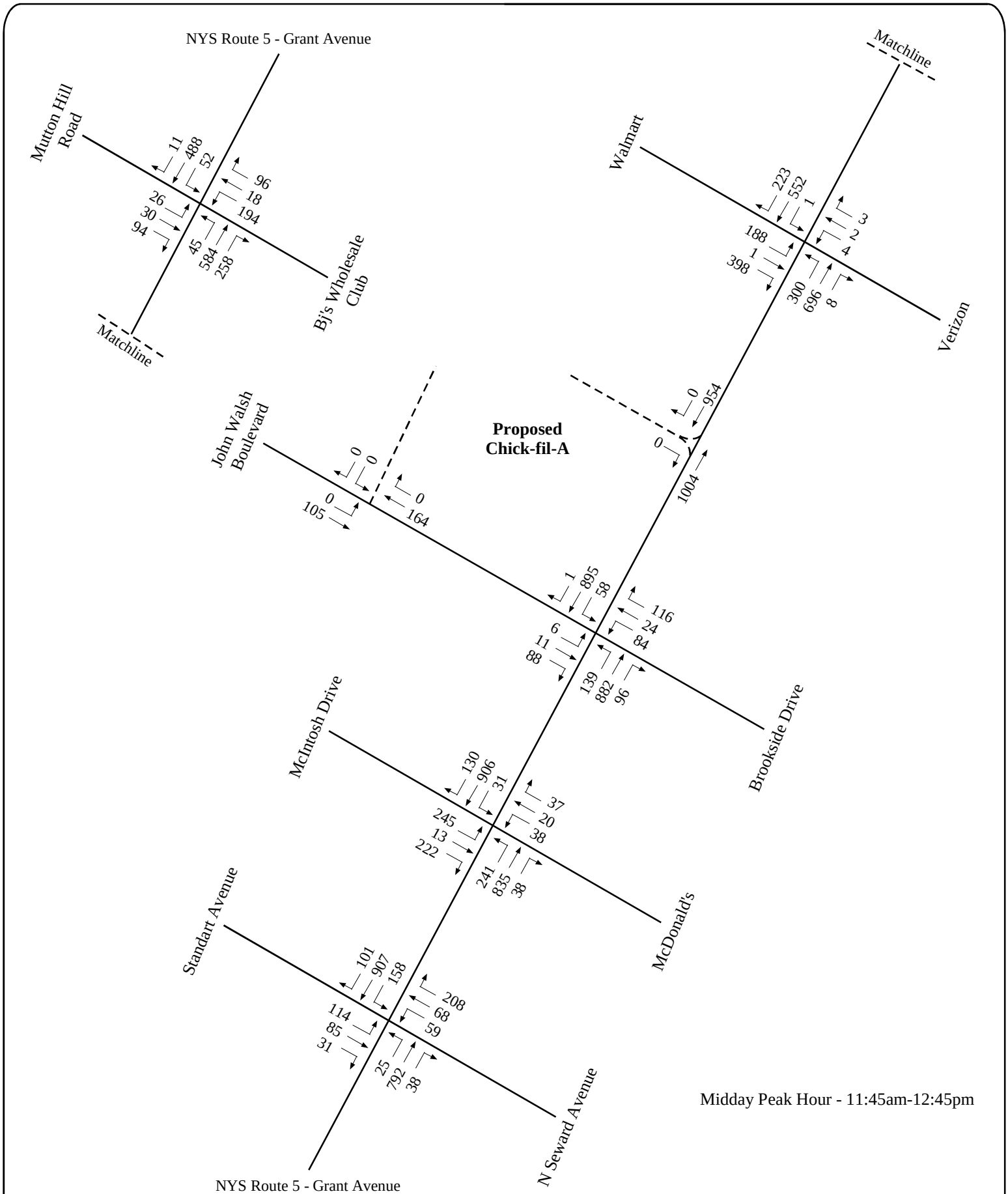
2025 Existing Weekday Traffic Volumes - Collected November 20th , 2025
Morning (Midday) {Evening} Peak Hour

Figure 1

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

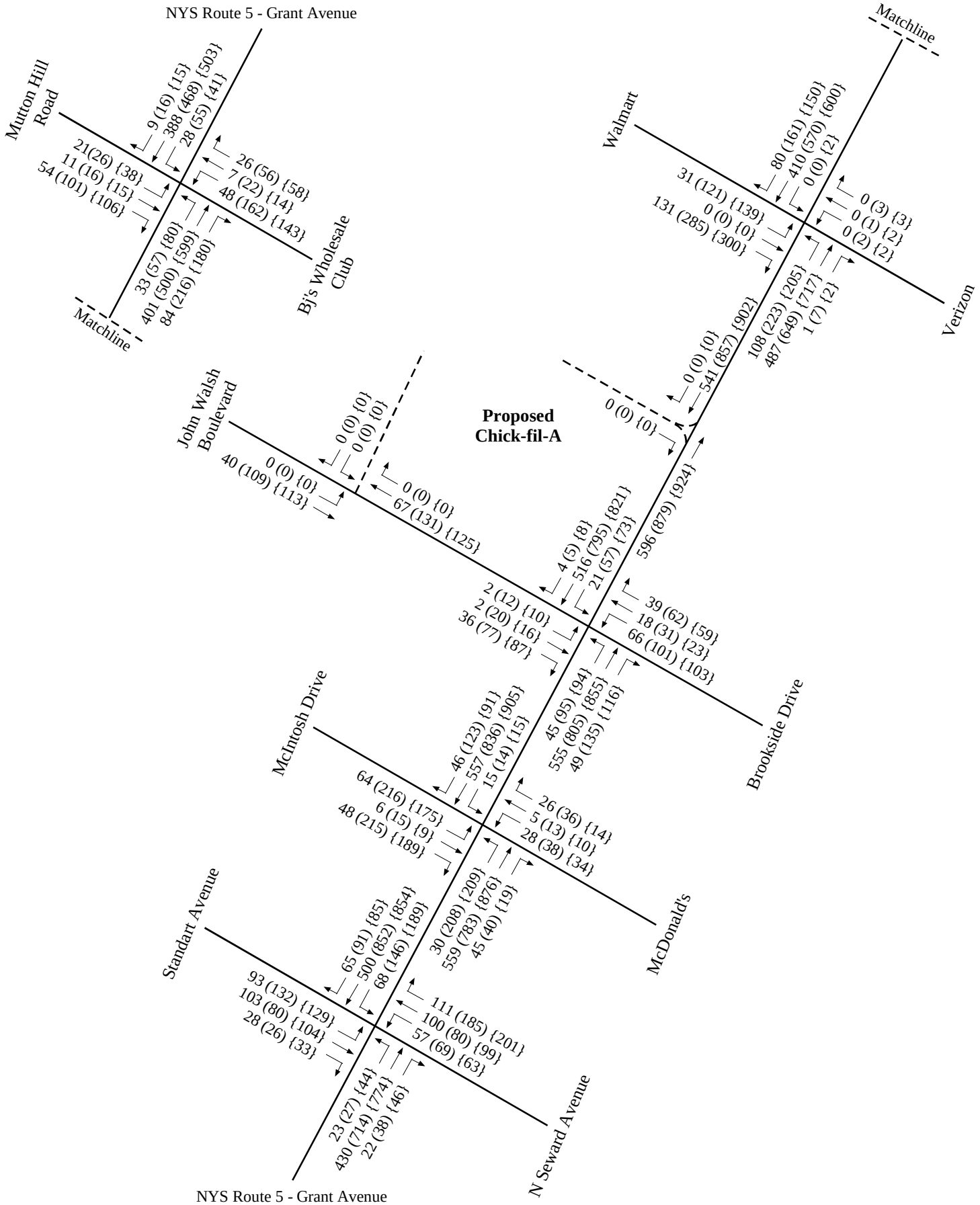
2025 Existing Saturday Traffic Volumes - Collected November 22, 2025
Midday Peak Hour

Figure 2

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

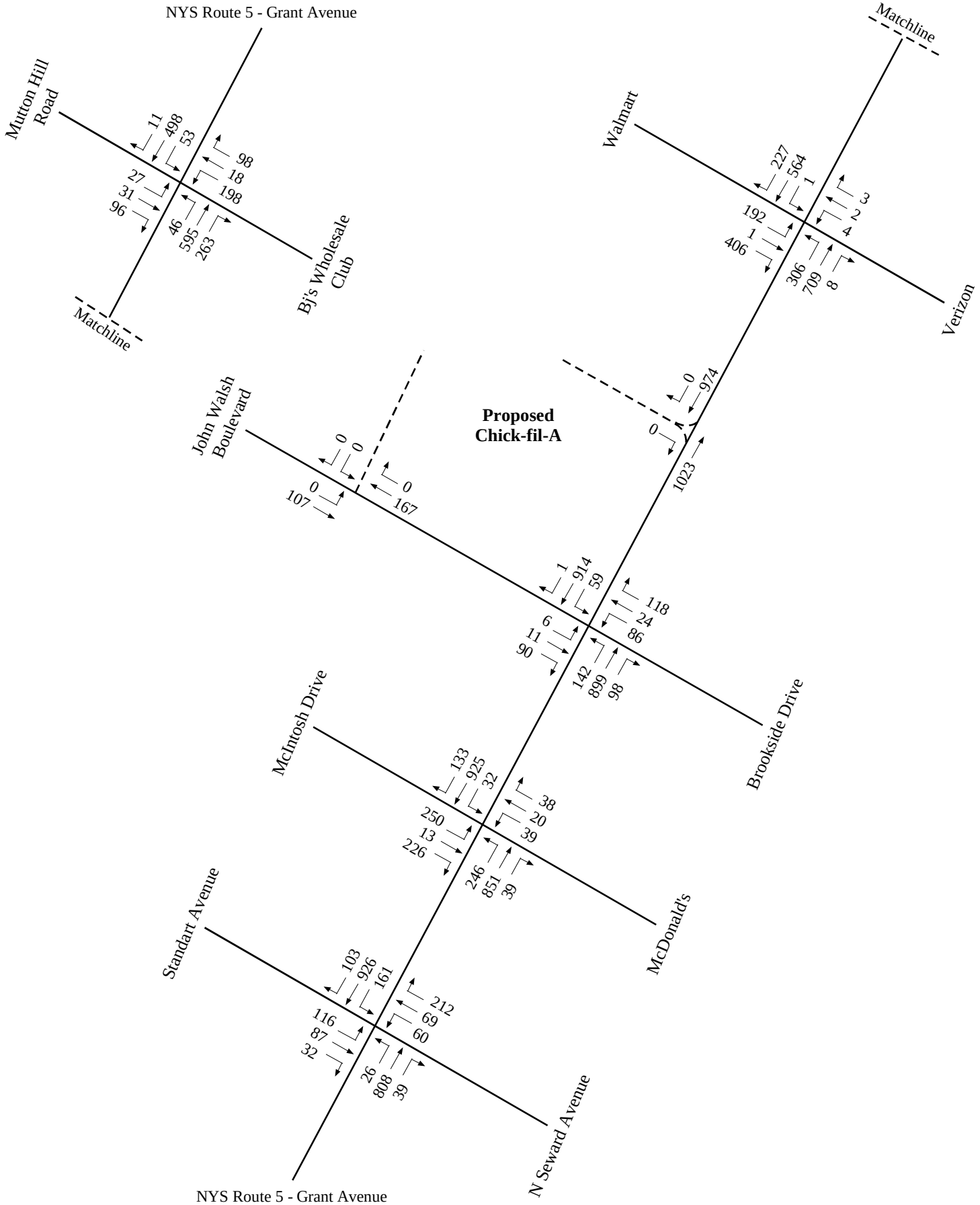
2027 Base Weekday Traffic Volumes - With 1% Growth per Year (2% Total)
Morning (Midday) {Evening} Peak Hour

Figure 3

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

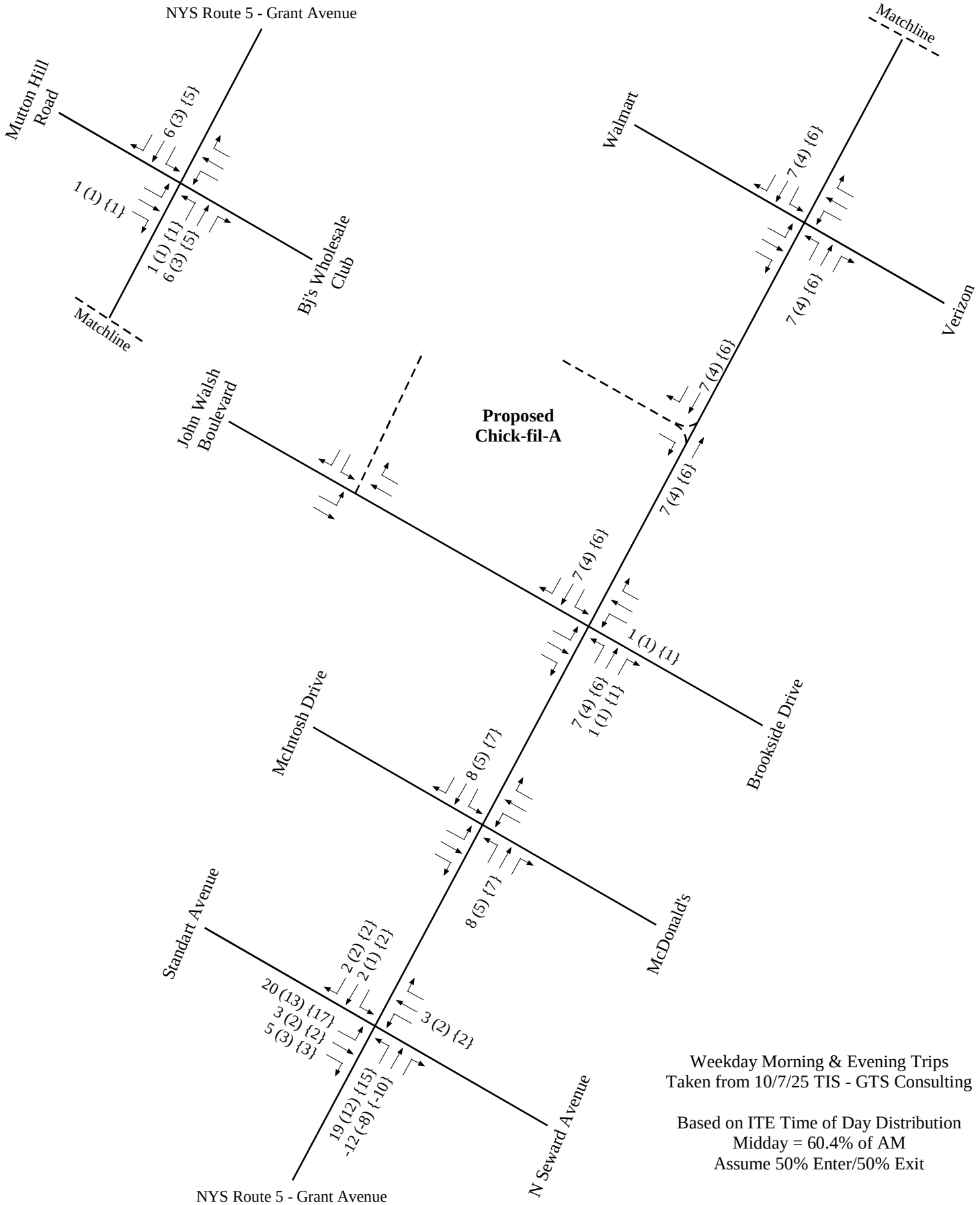
2027 Base Saturday Traffic Volumes - With 1% Growth per Year (2% Total)
Midday Peak Hour

Figure 4

Not to Scale

N
W E

GTS Consulting



Weekday Morning & Evening Trips
Taken from 10/7/25 TIS - GTS Consulting

Based on ITE Time of Day Distribution
Midday = 60.4% of AM
Assume 50% Enter/50% Exit

Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

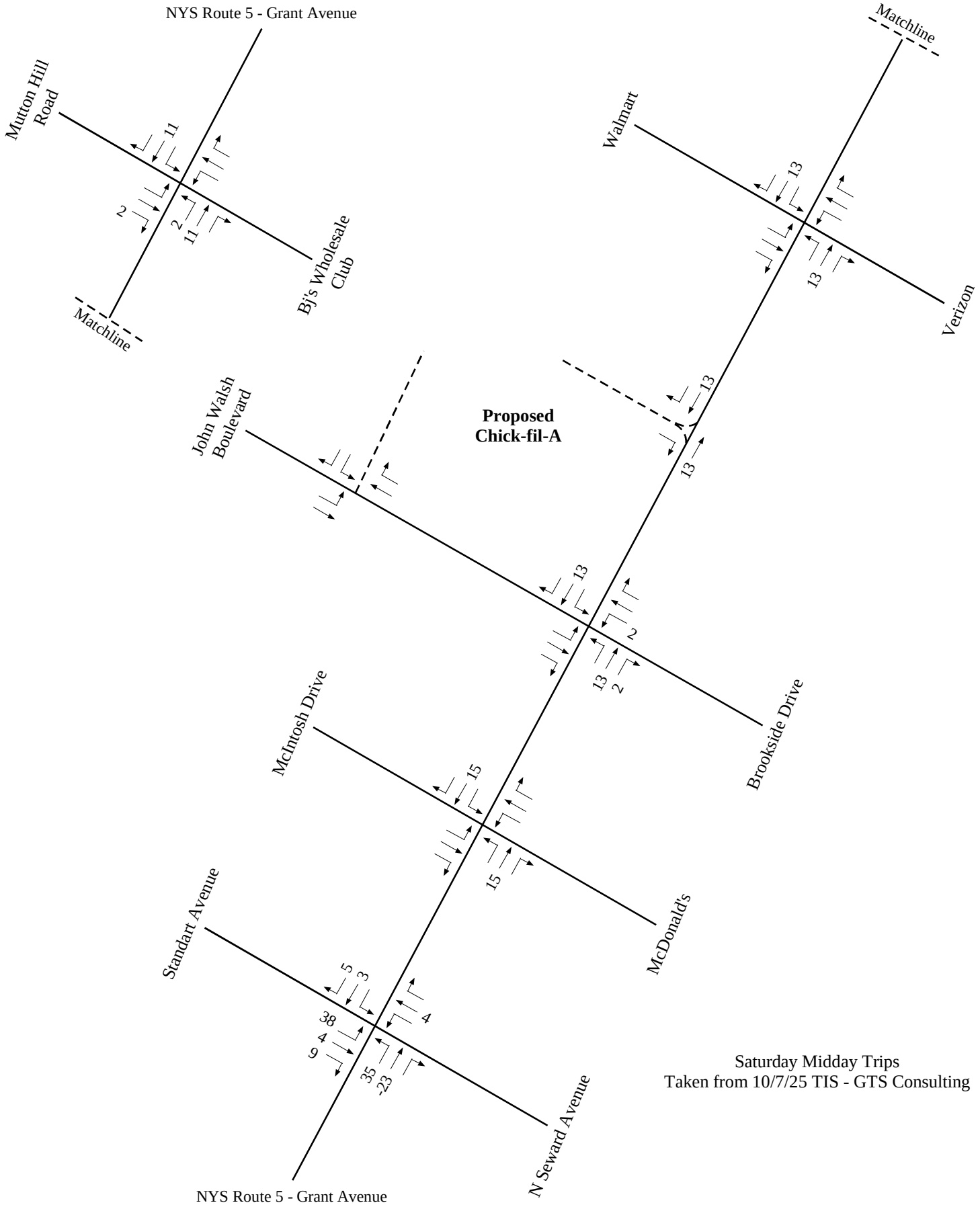
Approved 7 Brew Development Trips - Weekday
Morning (Midday) {Evening} Peak Hour

Figure 5

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

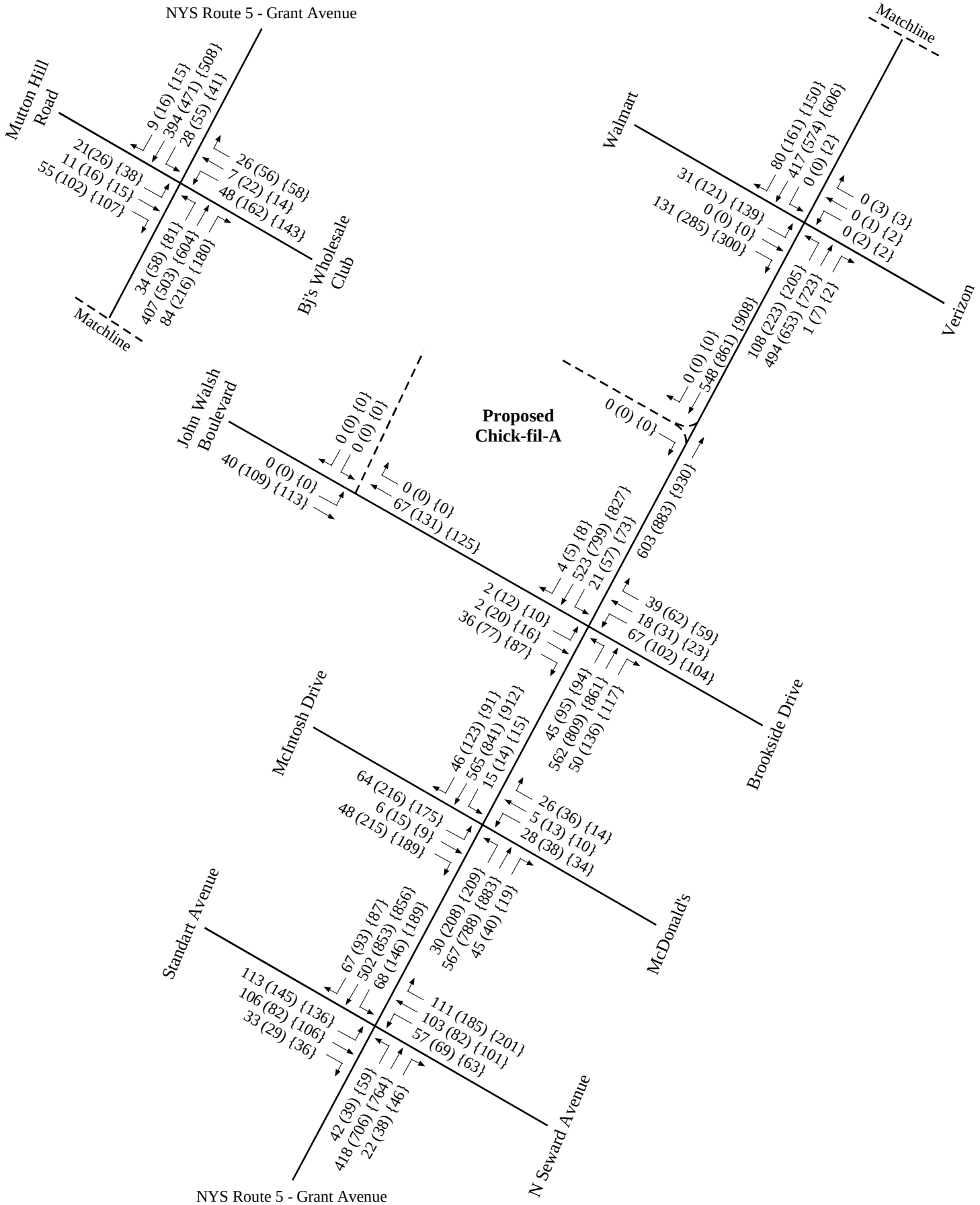
Approved 7 Brew Development Trips - Saturday Midday Peak Hour

Figure 6

Not to Scale

N
W E

GTS Consulting



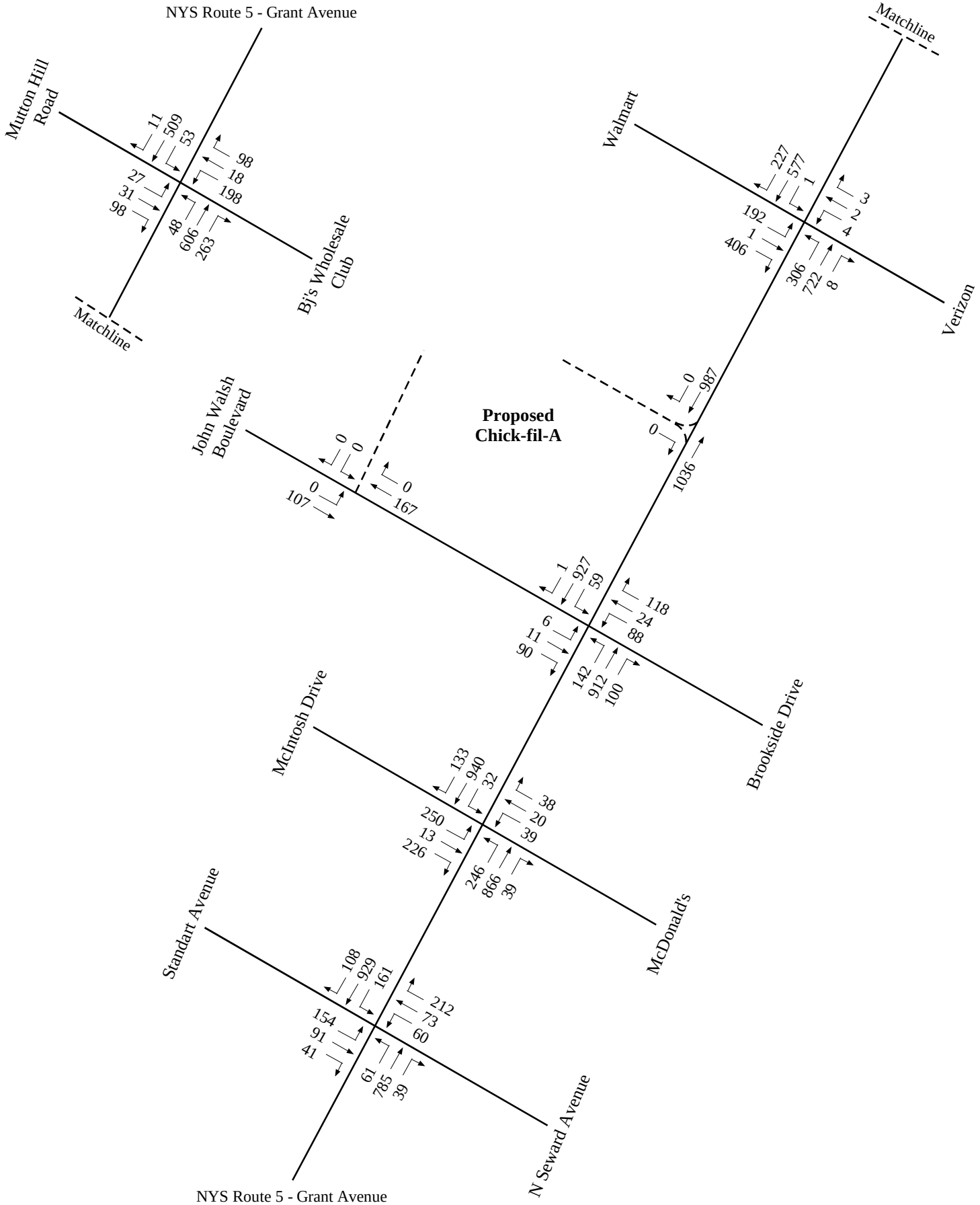
Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

2027 Background Weekday Traffic Volumes - With Growth & Approved Development
Morning (Midday) {Evening} Peak Hour

Figure 7 Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

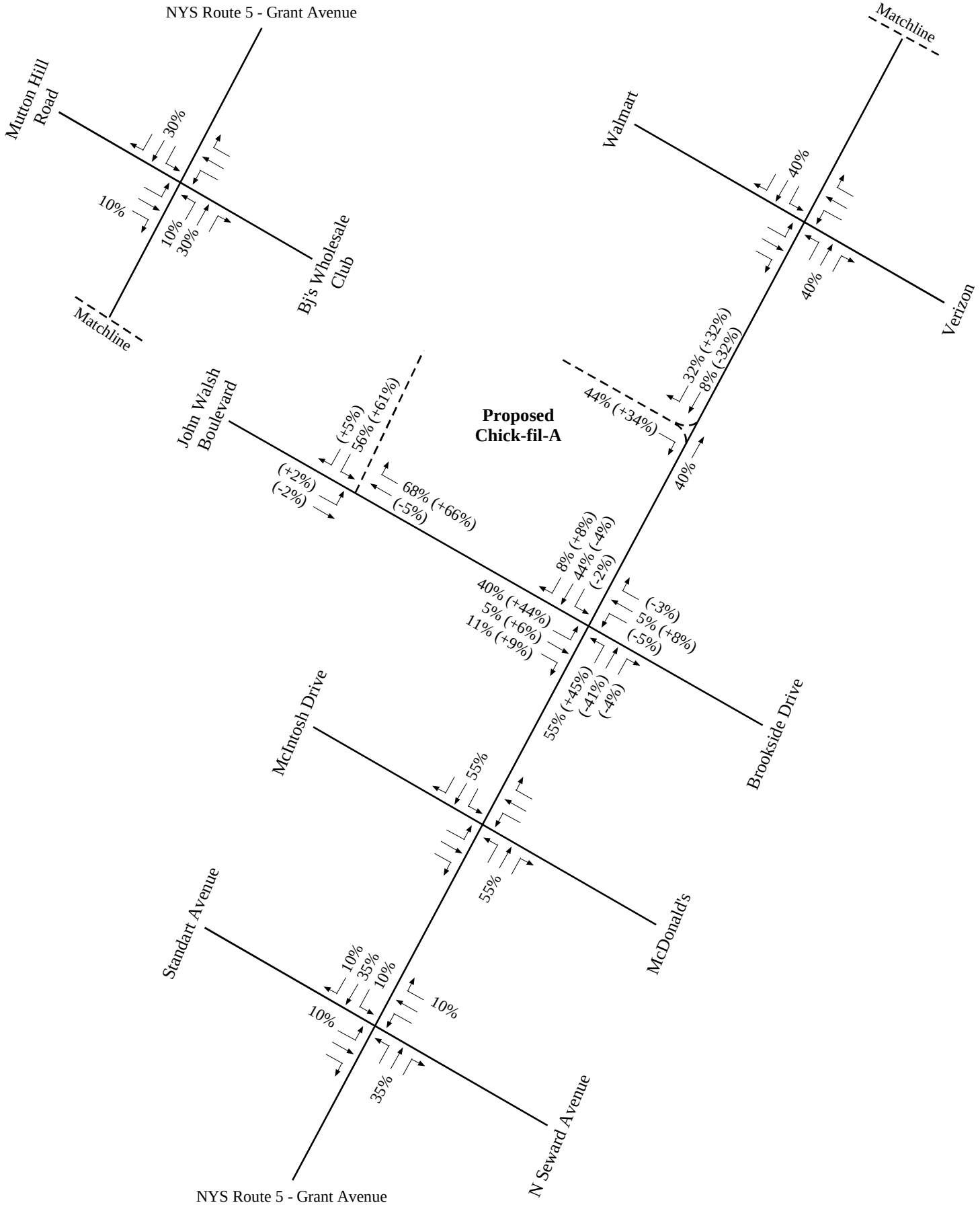
2027 Background Saturday Traffic Volumes - With Growth & Approved Development
Midday Peak Hour

Figure 8

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

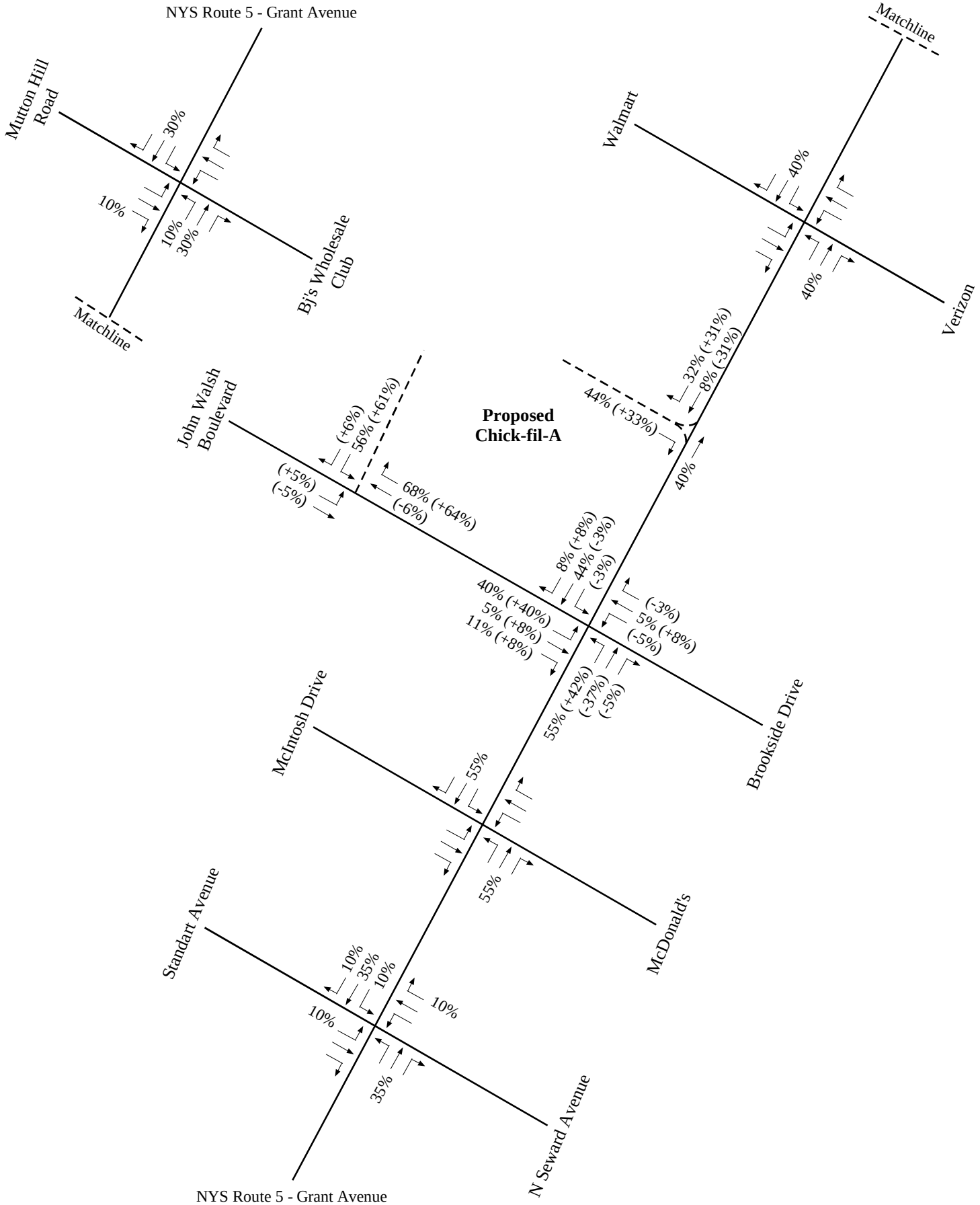
Arrival / Departure Trip Distribution - Weekday Morning Peak Hour
New (Pass-by) Trip Percentage

Figure 9

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

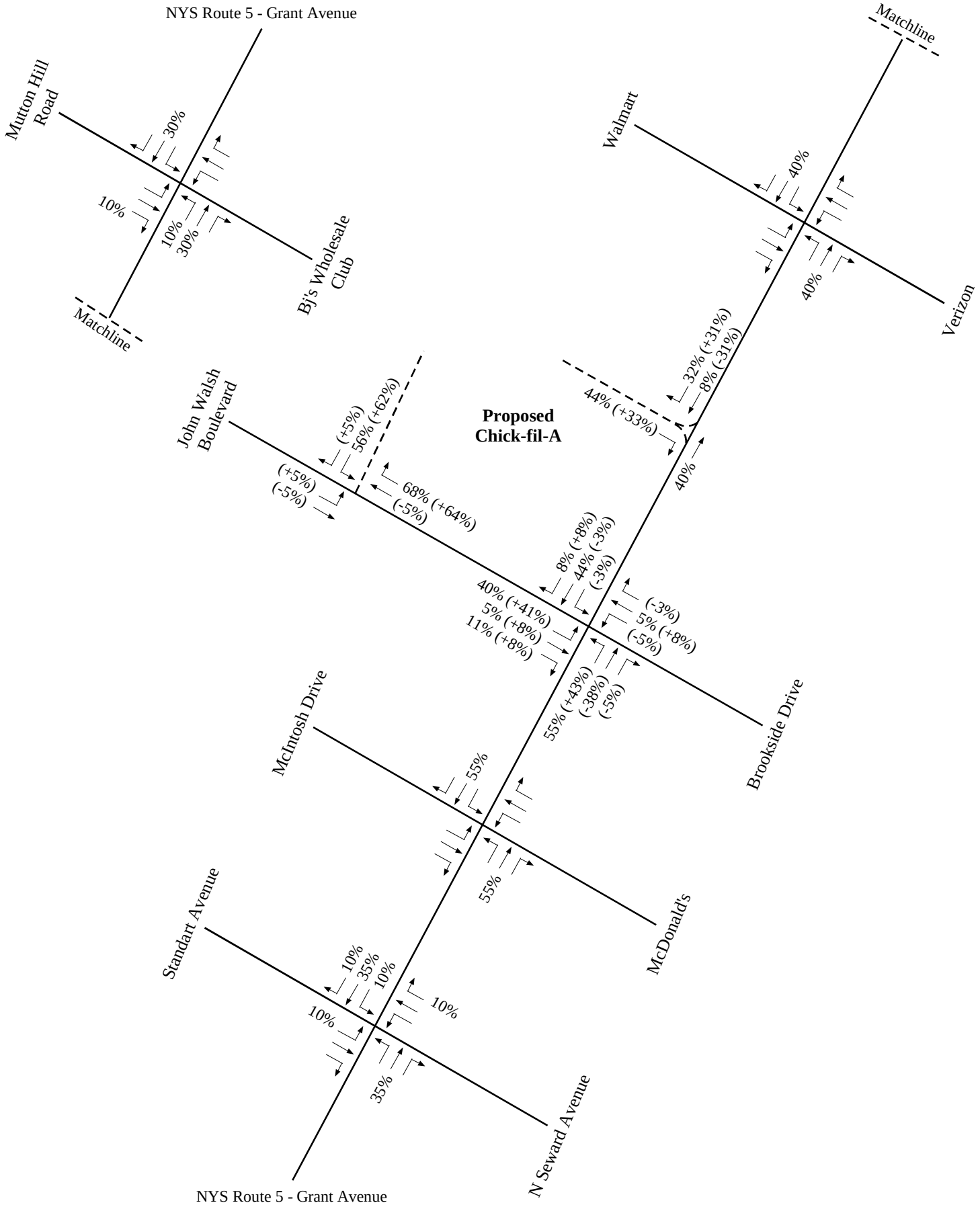
Arrival / Departure Trip Distribution - Weekday Midday Peak Hour
New (Pass-by) Trip Percentage

Figure 10

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

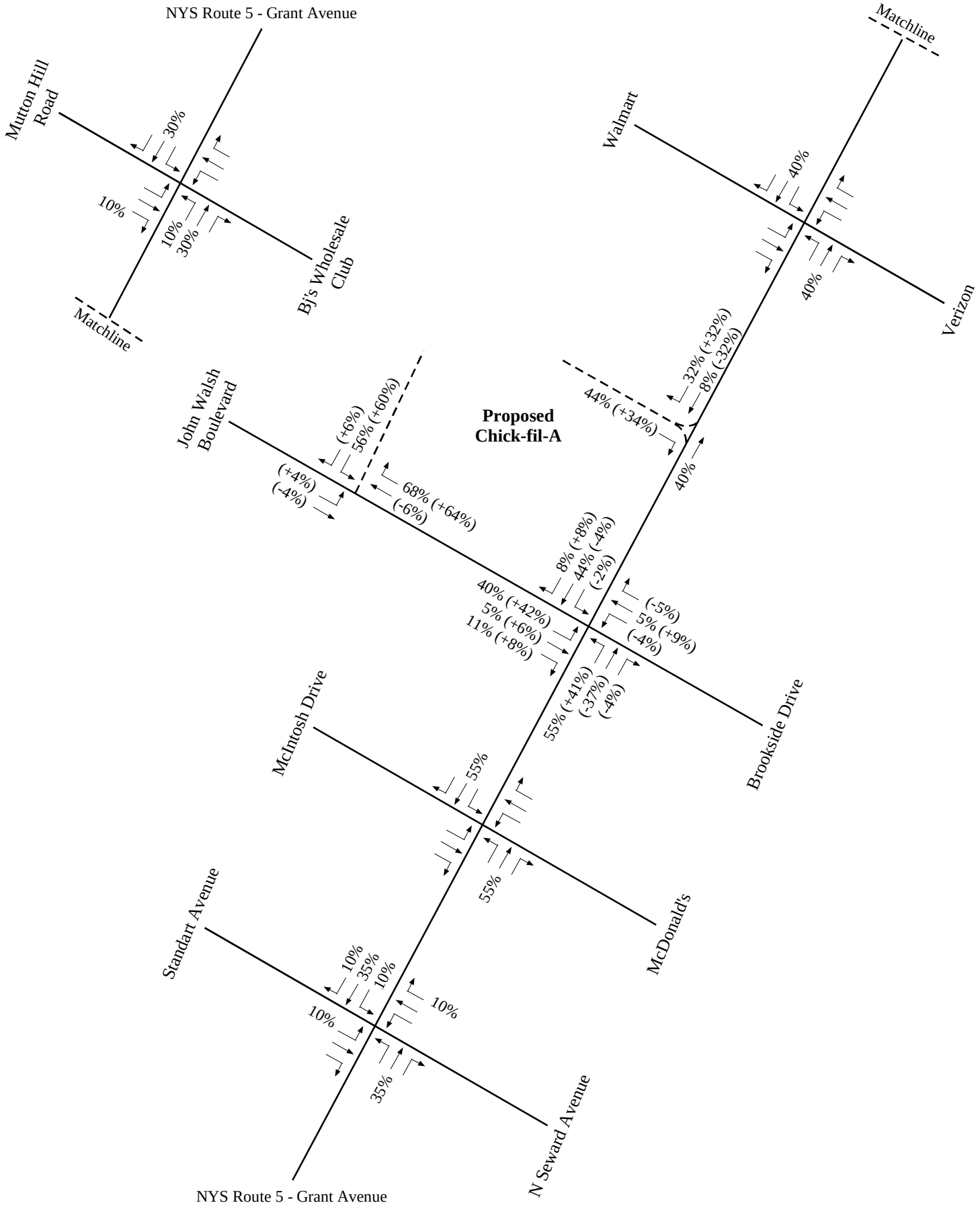
Arrival / Departure Trip Distribution - Weekday Evening Peak Hour
New (Pass-by) Trip Percentage

Figure 11

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

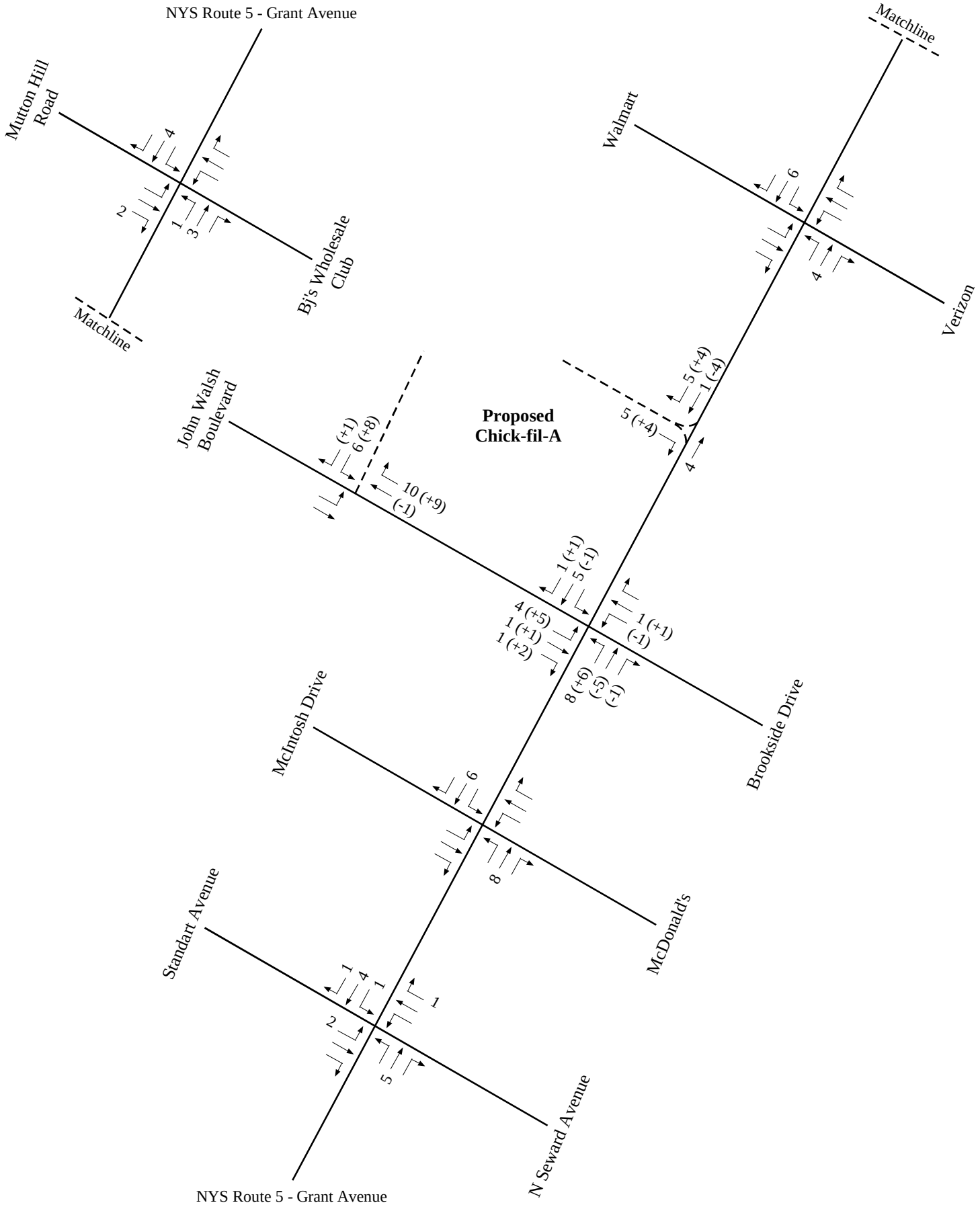
Arrival / Departure Trip Distribution - Saturday Midday Peak Hour
New (Pass-by) Trip Percentage

Figure 12

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

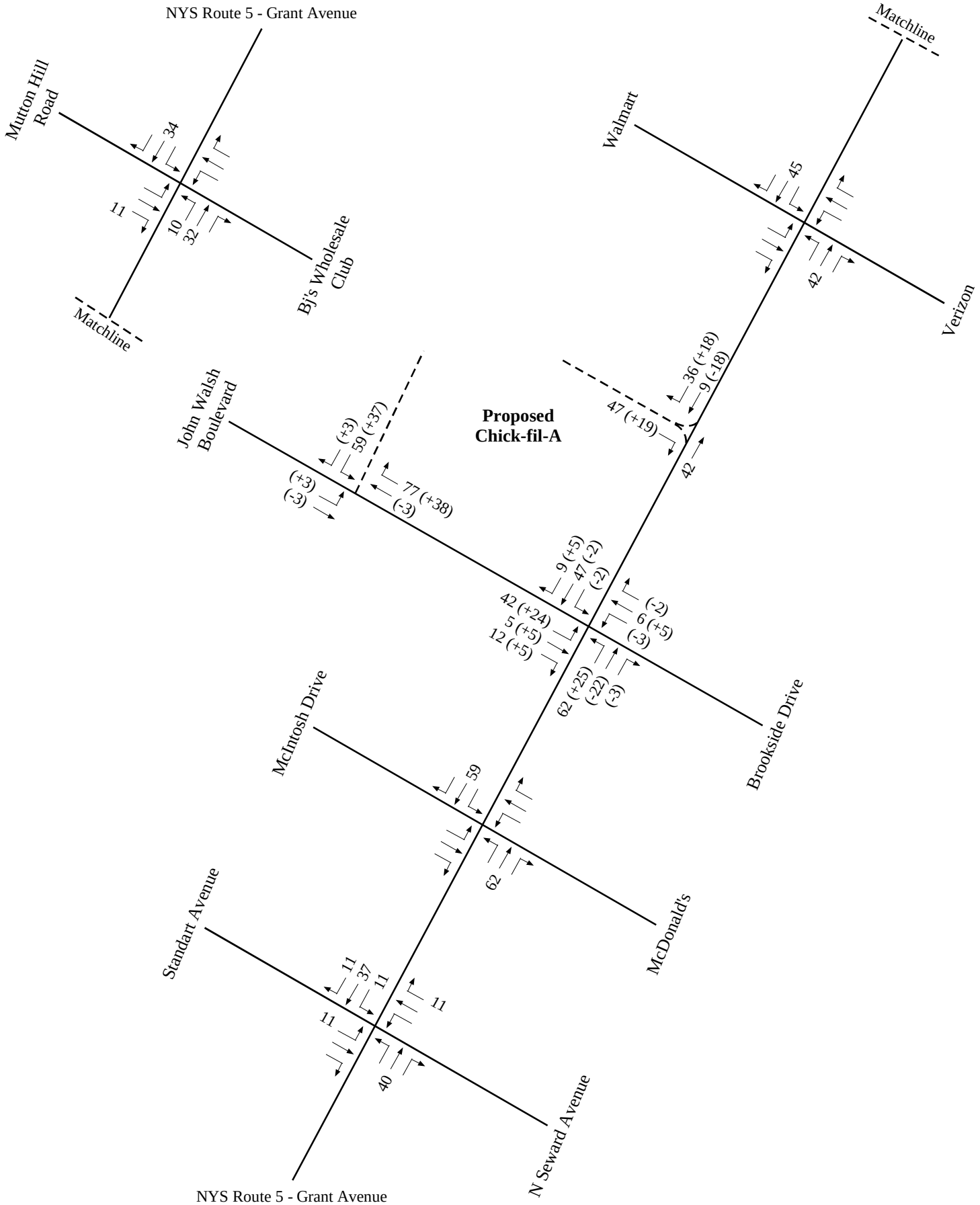
Trips Generated - Weekday Morning Peak Hour
New (Pass-by) Trips

Figure 13

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

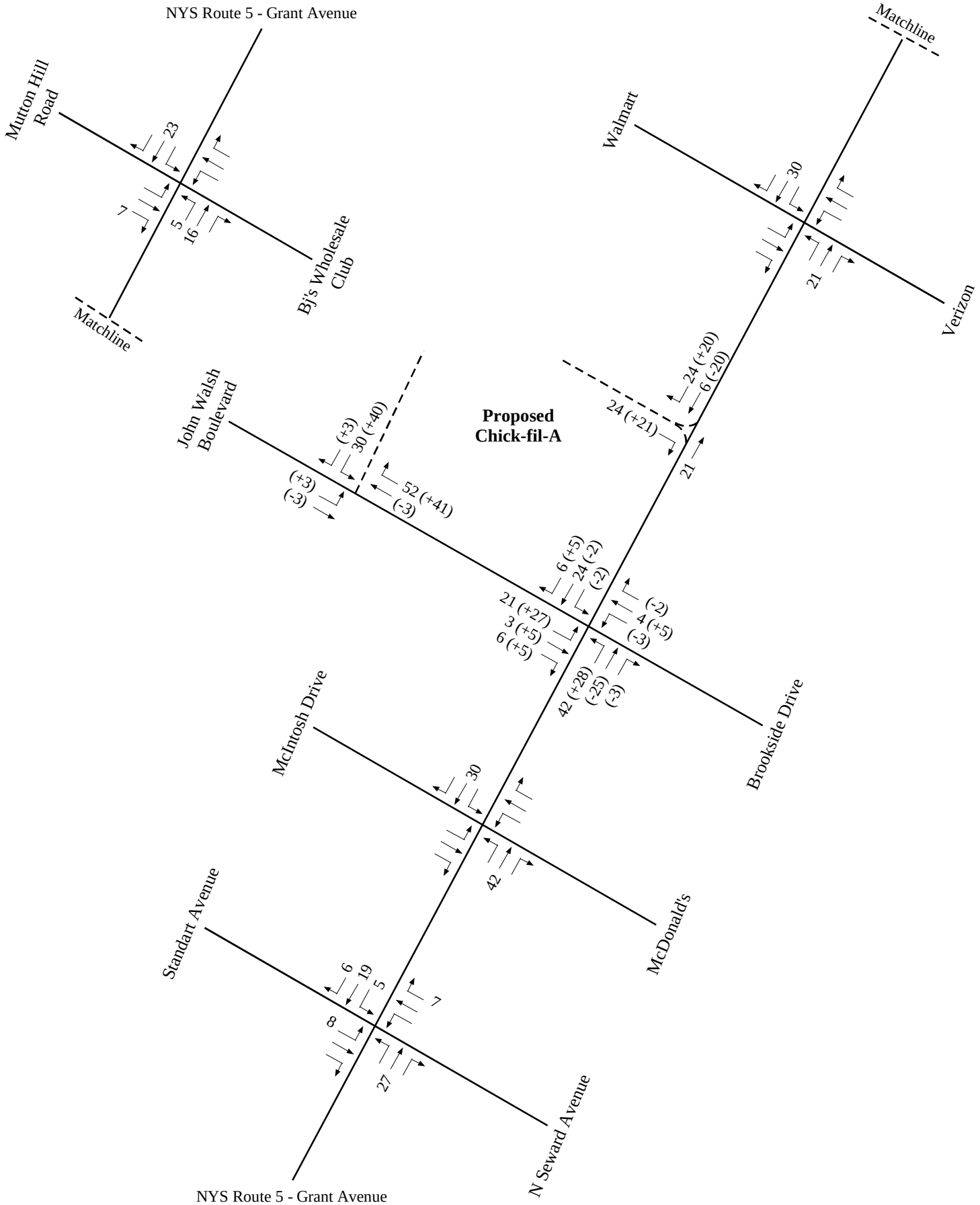
Trips Generated - Weekday Midday Peak Hour
New (Pass-by) Trips

Figure 14

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

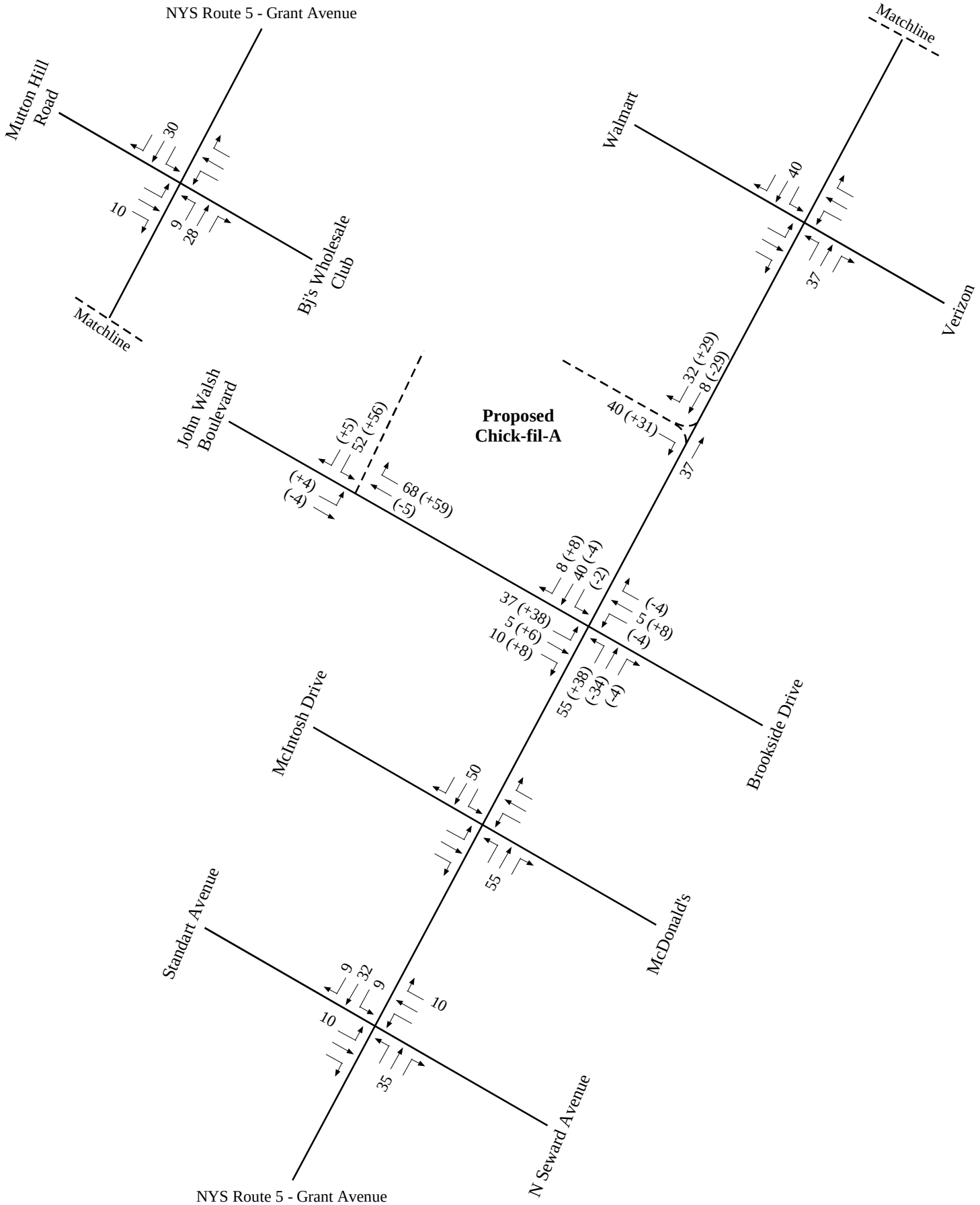
Trips Generated - Weekday Evening Peak Hour
New (Pass-by) Trips

Figure 15

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

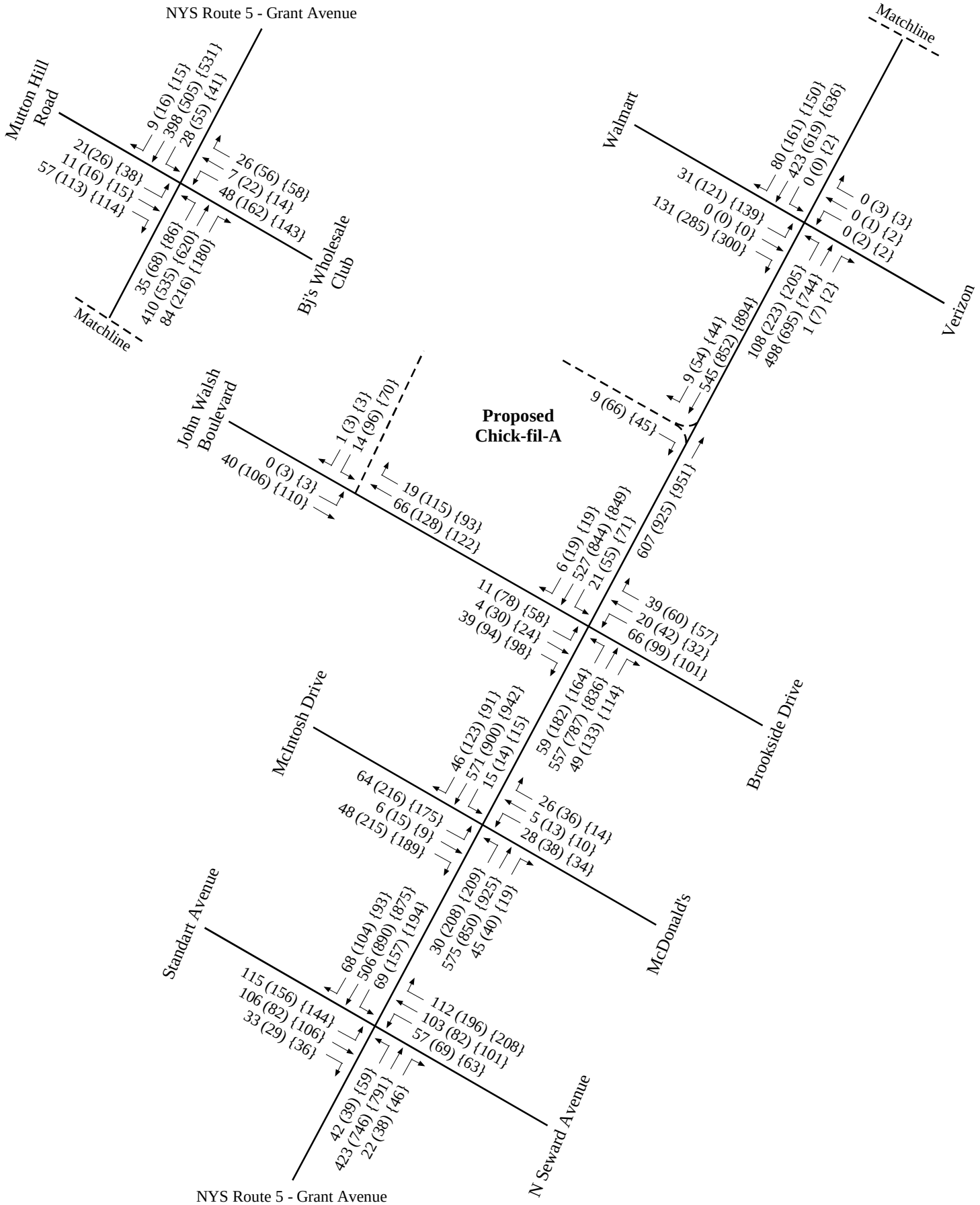
Trips Generated - Saturday Midday Peak Hour
New (Pass-by) Trips

Figure 16

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

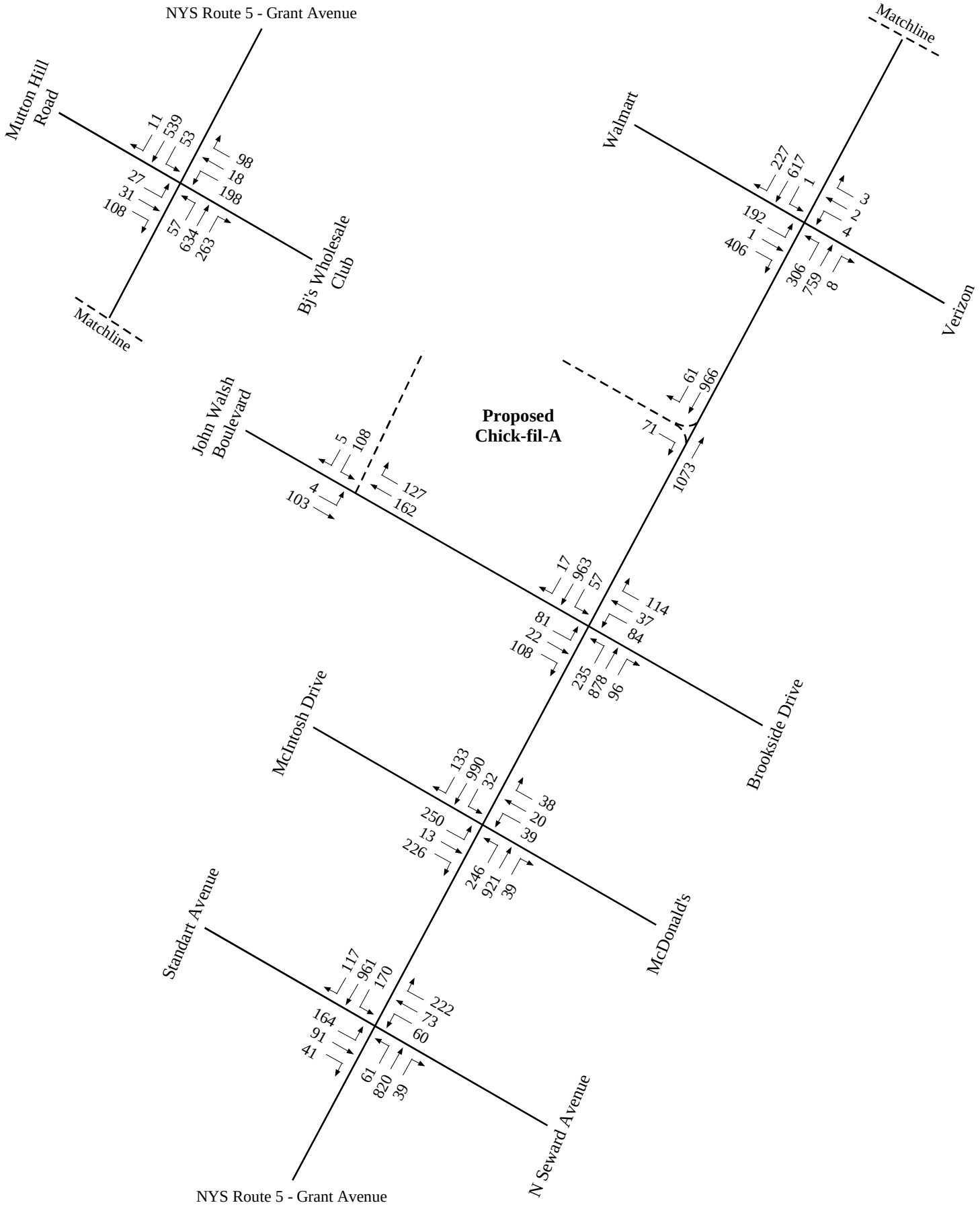
2027 Build Weekday Traffic Volumes
Morning (Midday) {Evening} Peak Hour

Figure 17

Not to Scale

N
W E

GTS Consulting



Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn, NY

2027 Build Saturday Traffic Volumes
Midday Peak Hour

Figure 18

Not to Scale

N
W E

GTS Consulting

Intersection Gap Study

Project: Proposed Chick-fil-A Development - 281 Grant Avenue - Auburn, NY
Date: 11/20/25 & 11/22/25

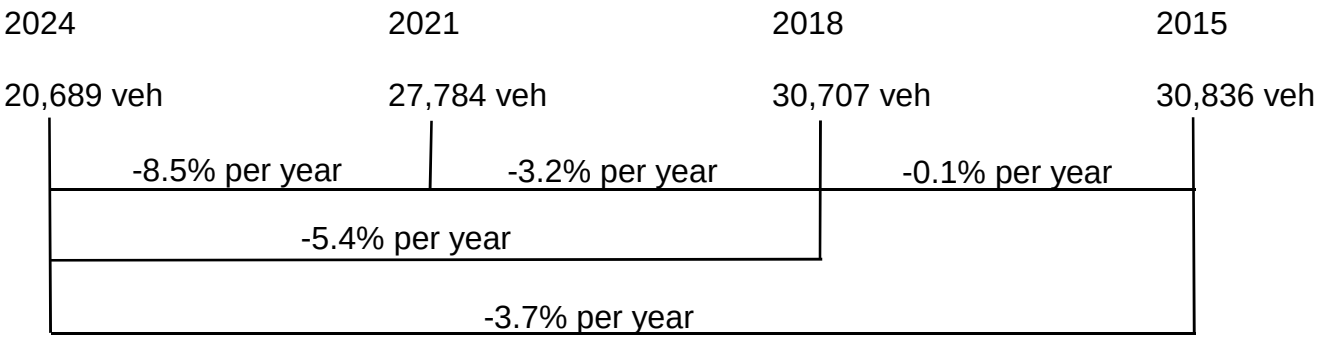
Intersection: Proposed Access @ Grant Avenue
Movement: Right Turns Exiting

Time Interval		6-10 sec x 1	11-14 sec x 2	15-18 sec x 3	19-20 sec x 4	21-24 sec x 5	25-26 sec x 6	>27 x 7	Interval Total	
Morning Peak Hour - 11/20/25										
8:00 - 9:00am	# of Gaps	48	32	19	11	20	1	26		
	# of Vehicles	**48**	**64**	**57**	**44**	**100**	**6**	**182**	**501**	
Midday Peak Hour - 11/20/25										
12:00-1:00pm	# of Gaps	67	37	20	4	7	1	7		
	# of Vehicles	**67**	**74**	**60**	**16**	**35**	**6**	**49**	**307**	
Evening Peak Hour - 11/20/25										
4:00-5:00pm	# of Gaps	67	41	22	5	6	0	4		
	# of Vehicles	**67**	**82**	**66**	**20**	**30**	**0**	**28**	**293**	
Saturday Peak Hour - 11/22/25										
11:45am-12:45pm	# of Gaps	69	38	17	6	2	3	3		
	# of Vehicles	**69**	**76**	**51**	**24**	**10**	**18**	**21**	**269**	

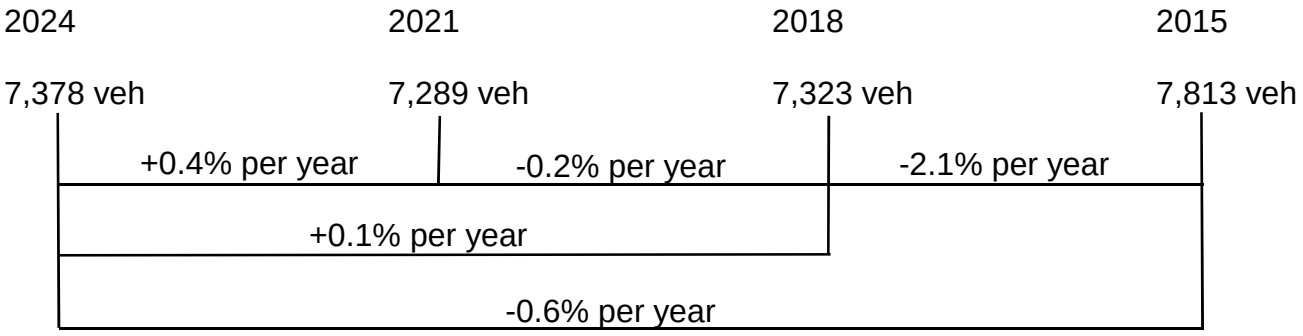
Background Traffic Growth Calculations
Proposed Chick-fil-A Development - 281 Grant Avenue, Auburn. NY

Historical Traffic Counts Taken from the NYSDOT Traffic Data Viewer Website

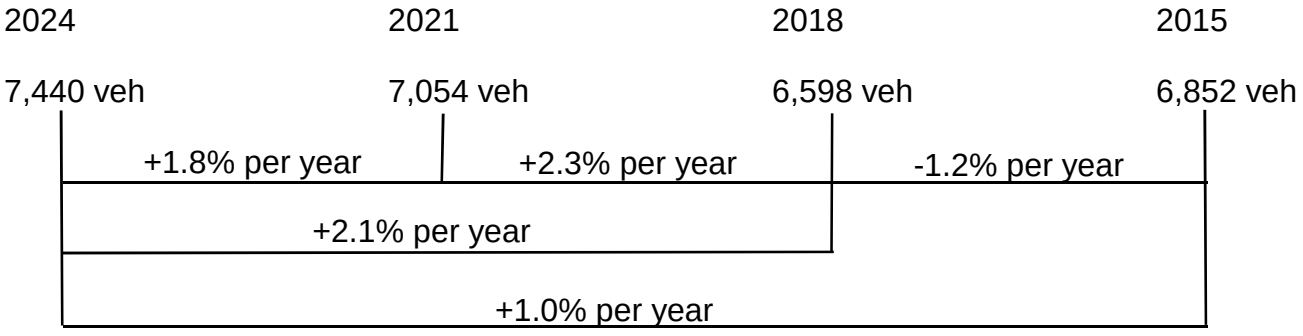
NYS Route 5 - Between Standart Avenue and North City Line



Standart Avenue - Between NYS Route 5 and North Street



N Seward Avenue - Between NYS Route 5 and Franklin Street



Use +1.0% Annual Growth for Traffic Projections

Proposed Chick-fil-A Development - 281 Grant Avenue - Auburn, NY

Trip Generation Estimate

Proposed Development — 5,183 SF - Chick-fil-A Fast Food Restaurant with Drive Through

ITE Trip Generation - 11th Edition

Land Use 934 - Fast Food Restaurant with Drive Through Window

AM Peak Hour	44.61 Trips/1,000 SF	51% Enter	49% Exit
Midday Peak		No data available	
PM Peak Hour	33.03 Trips/1,000 SF	52% Enter	48% Exit
Sat Peak Hour	55.25 Trips/1,000 SF	51% Enter	49% Exit

Trip Generation Estimate - Proposed Chick-fil-A - Based on ITE Trip Generation Rates

		Morning Peak Hour			Evening Peak Hour			Saturday Peak Hour		
Development	**Size**	**Total Trips**	**Entering**	**Exiting**	**Total Trips**	**Entering**	**Exiting**	**Total Trips**	**Entering**	**Exiting**
Chick-fil-A Restaurant	5,183 SF	231	118	113	171	89	82	286	146	140

Chick-fil-A Trip Generation Counts - NY

		Morning Peak Hour		Midday Peak Hour		Evening Peak Hour		Saturday Midday Peak Hour	
Restaurant Location	**Size**	**Entering**	**Exiting**	**Entering**	**Exiting**	**Entering**	**Exiting**	**Entering**	**Exiting**
Ridge Rd - Greece NY - Nov 2018	4,867 SF	-	-	163	160	111	100	192	179
Jefferson Rd - Henrietta, NY - April 2022	5,000 SF	-	-	185	214	164	116	212	231
Portland Ave - Irondequoit, NY - April 2022	5,000 SF	-	-	132	113	105	89	153	123
Losson Rd - DePew, NY - May 2022	5,000 SF	-	-	149	118	150	114	169	142
Route 11 - Cicero, NY - Nov 2021/July 2022	5,000 SF	34	32	215	208	182	167	210	238
Route 31 - Clay NY - Nov 2021/July 2022	5,000 SF	19	15	147	139	102	97	182	162
Average	**4,978 SF**	**27**	**24**	**165**	**159**	**136**	**114**	**186**	**179**

Average Pass-by Percentages

ITE Land Use 934 - Fast Food Restaurant with Drive Through - AM - 49%, PM - 50%

Recommend - 50% pass-by AM. PM, Sat. 35% pass-by weekday midday

Trip Generation Estimate - Proposed Chick-fil-A - Based on Average Chick-fil-A Trip Generation Rates

		Morning Peak Hour		Midday Peak Hour		Evening Peak Hour		Saturday Midday Peak Hour	
Development	**Size**	**Entering**	**Exiting**	**Entering**	**Exiting**	**Entering**	**Exiting**	**Entering**	**Exiting**
Chick-fil-A Restaurant	5,183 SF	28	24	172	165	141	119	195	187
Pass-by Trips - AM/PM/Sat 50%, Midday - 35%		*-13*	*-13*	*-59*	*-59*	*-65*	*-65*	*-95*	*-95*
Total New Trips Generated		**15**	**11**	**113**	**106**	**76**	**54**	**100**	**92**

Proposed Chick-fil-A Development - 281 Grant Avenue - City of Auburn, NY
Accident History Summaries - March 2022 Through February, 2025

Accident #	Date	Location	Type	# Cars	Severity	Direction	Conditions	Contributing Factors
1	3/2/2022	Rt 5 - 400 ft N of Brookside	Sideswipe	2	PDO	NB Changing Lanes / NB	Dry	Unsafe Lane Change
2	3/7/2022	P-Lot - Dunkin	Backing	2	PDO	NB Backing / SB	Dry	Backing Unsafely
3	3/23/2022	McIntosh @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Dry	Distracted Driver
4	4/6/2022	McIntosh @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Dry	Following Too Closely
5	3/30/2022	Brookside @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Dry	Following Too Closely
6	3/30/2022	Seward @ Rt 5	Right Turn	2	PDO	NB Changing Lanes / WB Right	Dry	Unsafe Lane Change
7	4/25/2022	McIntosh @ Rt 5	Left Turn	2	PDO	SB Left / NB	Dry	Turning Improper
8	4/29/2022	McIntosh @ Rt 5	Fixed Object	1	INJ	NB Swerving	Dry	Driver Inattention
9	4/26/2022	Standart @ Rt 5	Rearend	2	PDO	NB Stopped / NB	Dry	Following Too Closely
10	4/30/2022	Speedway Driveway	Rearend	2	PDO	WB Backing / EB Stopped	Dry	Backing Unsafely
11	5/6/2022	Mutton Hill @ Rt 5	Left Turn	3	PDO	EB Left / WB / SB Stopped	Dry	Failure to Yeild ROW
12	5/11/2022	Brookside @ Rt 5	Right Turn	2	PDO	SB Right / WB	Dry	Failure to Yeild ROW
13	5/25/2022	Rt 5 - 1000 ft S of Gates	Animal	1	PDO	SB / Deer	Dry	Animal Action
14	6/10/2022	Rt 5 - 75 ft S of McIntosh	Animal	1	PDO	SB / Deer	Dry	Animal Action
15	6/13/2022	Brookside @ Rt 5	Rearend	2	PDO	EB / EB Stopped	Dry	Brakes Failed
16	6/14/2022	Brookside @ Rt 5	Rearend	2	PDO	WB / WB Stopped	Dry	Following Too Closely
17	6/29/2022	Rt 5 - 100 ft S of Brookside	Bicyclist	2	INJ	NB / Bicyclist	Dry	Failure to Yeild ROW
18	7/2/2022	Rt 5 - 490 ft N of Seward	Sideswipe	2	PDO	SB / SB	Dry	Failure to Keep Right
19	7/6/2022	Rt 5 - 300 ft N of Seward	Sideswipe	2	PDO	NB Changing Lanes / NB	Wet	Unsafe Lane Change
20	7/9/2022	Rt 5 - 1000 ft N of Seward	Left Turn	2	INJ	NB Left / SB	Dry	Failure to Yeild ROW
21	6/22/2022	P-Lot - Speedway	Rearend	2	PDO	SB / SB Stopped	Dry	Following Too Closely
22	7/8/2022	McIntosh @ Rt 5	Bicyclist	2	PDO	Bicyclist / WB Right	Dry	Driver Inattention
23	7/28/2022	Seward @ Rt 5	Left Turn	3	PDO	SB Left / NB / WB Stopped	Dry	Failure to Yeild ROW
24	7/19/2022	Walmart @ Rt 5	Right Turn	2	PDO	EB Right / SB	Dry	Traffic Control Disregarded
25	8/3/2022	Seward @ Rt 5	Left Turn	2	PDO	SB Left / EB	Dry	Traffic Control Disregarded
26	8/13/2022	P-Lot - McDonald's	Rearend	2	PDO	WB / WB Stopped	Dry	Driver Inattention
27	8/25/2022	Rt 5 - 400 ft N of Brookside	Non-collision	1	PDO	NB	Dry	Tire Fell Off
28	9/20/2022	McIntosh @ Rt 5	Right Angle	2	INJ	EB / NB	Dry	Traffic Control Disregarded
29	9/20/2022	McIntosh @ Rt 5	Left Turn	2	INJ	SB / EB Left	Dry	Traffic Control Disregarded
30	10/1/2022	Brookside @ Rt 5	Rearend	2	INJ	WB / WB Stopped	Dry	Following Too Closely
31	10/13/2022	McIntosh @ Rt 5	Left Turn	2	INJ	NB Left / SB	Wet	Failure to Yeild ROW
32	11/3/2022	Midblock Rt 5	Left Turn	2	PDO	SB Left / NB	Dry	Failure to Yeild ROW
33	11/13/2022	McIntosh @ Rt 5	Sideswipe	2	PDO	SB Changing Lanes / SB	Dry	Unsafe Lane Change
34	11/28/2022	Seward @ Rt 5	Sideswipe	2	PDO	SB Changing Lanes / SB	Dry	Unsafe Lane Change
35	11/28/2022	Brookside @ Rt 5	Left Turn	2	PDO	EB Left / SB	Wet	Failure to Yeild ROW
36	12/3/2022	Rt 5 - 300 ft N of McIntosh	Sideswipe	2	PDO	NB Changing Lanes / NB	Wet	Unsafe Lane Change

Accident #	Date	Location	Type	# Cars	Severity	Direction	Conditions	Contributing Factors
37	12/2/2022	Rt 5 - 150 ft N of Mutton Hill	Sideswipe	2	PDO	NB Changing Lanes / NB	Dry	Unsafe Lane Change
38	12/3/2022	Brookside @ Rt 5	Rearend	2	PDO	NB / NB Stopped	Wet	Following Too Closely
39	12/2/2022	Rt 5 - 190 ft N of Seward	Right Turn	2	PDO	SB Right / SB	Dry	Turning Improper
40	11/30/2022	McIntosh @ Rt 5	Rearend	2	PDO	NB / NB Stopped	Wet	Distracted Driver
41	11/30/2022	Rt 5 - 1000 N of McIntosh	Right Angle	2	INJ	EB Left / NB	Wet	Failure to Yeild ROW
42	12/16/2022	Rt 5 - 500 ft N of McIntosh	Left Turn	2	PDO	EB Left / SB	Wet	Failure to Yeild ROW
43	12/20/2022	P-Lot - Chemung Canal Trust	Fixed Object	1	PDO	EB Right / Building	Dry	Turning Improper
44	12/23/2022	McIntosh @ Rt 5	Rearend	2	PDO	NB / NB Stopped	Icy	Slippery Pavement
45	12/22/2022	Rt 5 - 340 ft N of McIntosh	Left Turn	2	INJ	NB / WB Left	Dry	Failure to Keep Right
46	12/29/2022	Rt 5 - 100 ft N of McIntosh	Sideswipe	2	PDO	SB Changing Lanes / SB	Dry	Unsafe Lane Change
47	1/2/2023	Seward - 500 ft E of Rt 5	Fixed Object	1	PDO	NB / Rock	Dry	Turning Improper
48	1/3/2023	Midblock Rt 5	Animal	1	PDO	NB / Deer	Wet	Animal Action
49	1/9/2023	Seward @ Rt 5	Rearend	3	PDO	SB / SB Stopped / SB Stopped	Dry	Following Too Closely
50	1/24/2023	Seward @ Rt 5	Right Turn	2	PDO	WB Right / NB	Dry	Failure to Yeild ROW
51	1/27/2023	McIntosh @ Rt 5	Rearend	2	PDO	NB / NB Slowing	Dry	Following Too Closely
52	2/9/2023	P-Lot - Burger King	Rearend	2	PDO	EB / EB	Wet	Distracted Driver
53	2/2/2023	Seward @ Rt 5	Rearend	3	PDO	NB / NB / NB Stopped	Dry	Following Too Closely
54	2/9/2023	P-Lot - Walgreens	Backing	2	PDO	EB Backing / NB Stopped	Wet	Backing Unsafely
55	2/20/2023	P-Lot - Taco Bell	Backing	2	PDO	NB Backing / EB Stopped	Dry	Backing Unsafely
56	3/1/2023	Brookside @ Rt 5	Rearend	2	PDO	NB / NB Stopped	Dry	Driver Inattention
57	3/21/2023	Rt 5 - 320 ft N of Seward	Bicyclist	2	INJ	NB / EB Right	Dry	Driver Inattention
58	3/24/2023	McIntosh @ Rt 5	Rearend	2	PDO	NB / NB Stopped	Dry	Distracted Driver
59	4/3/2023	Brookside @ Rt 5	Rearend	2	INJ	NB / NB Stopped	Dry	Following Too Closely
60	4/5/2023	P-Lot - Chemung Canal Trust	Fixed Object	1	PDO	WB / Brick Structure	Wet	Driver Inattention
61	4/14/2023	P-Lot - M&T Bank	Pedestrian	1	INJ	EB / Pedestrian / Pedestrian	Dry	Driver Inattention
62	4/14/2023	P-Lot - Walmart	Backing	2	PDO	WB Backing / EB Stopped	Dry	Backing Unsafely
63	4/21/2023	Rt 5 - 400 ft N of Brookside	Right Turn	2	PDO	NB Right / NB	Dry	Turning Improper
64	5/4/2023	McIntosh @ Rt 5	Rearend	2	PDO	NB / NB Stopped	Dry	Following Too Closely
65	5/28/2023	Brookside @ Rt 5	Bicyclist	2	INJ	WB Right / Bicyclist	Dry	Driver Inattention
66	5/27/2023	McIntosh @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Dry	Driver Inattention
67	5/13/2023	Rt 5 - 100 ft N of Brookside	Sideswipe	2	PDO	NB / NB Changing Lanes	Dry	Failure to Keep Right
68	6/6/2023	McIntosh @ Rt 5	Rearend	3	INJ	SB / SB Stopped / SB Stopped	Dry	Following Too Closely
69	6/9/2023	Rt 5 - 400 ft N of Brookside	Rearend	2	INJ	NB / NB Stopped	Wet	Following Too Closely
70	6/28/2023	McIntosh @ Rt 5	Rearend	2	PDO	NB / NB Slowing	Wet	Following Too Closely
71	7/1/2023	Seward @ Rt 5	Sideswipe	2	PDO	SB Changing Lanes / SB	Dry	Unsafe Lane Change
72	6/29/2023	Seward @ Rt 5	Bicyclist	2	INJ	WB / Bicyclist	Dry	Traffic Control Disregarded
73	7/12/2023	Rt 5 - 1200 ft S of Brookside	Right Turn	2	PDO	WB Right / NB	Dry	Turning Improper
74	7/12/2023	Seward @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Dry	Driver Inattention
75	8/9/2023	Rt 5 - 420 ft N of McIntosh	Right Angle	2	PDO	WB / NB	Dry	Driver Inn

Accident #	Date	Location	Type	# Cars	Severity	Direction	Conditions	Contributing Factors
76	9/15/2023	Seward @ Rt 5	Sideswipe	2	PDO	NB Changing Lanes / NB	Dry	Unsafe Lane Change
77	9/20/2023	Seward @ Rt 5	Right Angle	2	PDO	SB / WB	Dry	Traffic Control Disregarded
78	10/9/2023	Seward @ Rt 5	Rearend	2	PDO	WB / WB Stopped	Dry	Following Too Closely
79	10/4/2023	Seward @ Rt 5	Right Angle	2	PDO	SB Left / NB	Dry	Failure to Yeild ROW
80	10/5/2023	P-Lot - McDonald's	Sideswipe	2	PDO	WB Changing Lanes / WB	Dry	Unsafe Lane Change
81	10/11/2023	Prospect - 500 ft N of Boyle	Sideswipe	2	PDO	SB Passing / SB Stopped	Wet	Passing Improper
82	10/17/2023	Brookside @ Rt 5	Rearend	2	PDO	NB / NB Stopped	Dry	Following Too Closely
83	10/22/2023	McIntosh @ Rt 5	Animal	1	PDO	SB / Deer	Wet	Animal Action
84	11/3/2023	Seward @ Rt 5	Left Turn	2	PDO	NB Left / WB Stopped	Dry	Turning Improper
85	10/30/2023	McIntosh @ Rt 5	Pedestrian	1	INJ	WB Left / Pedestrian	Wet	Traffic Control Disregarded
86	11/8/2023	Seward @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Dry	Following Too Closely
87	11/10/2023	Seward @ Rt 5	Rearend	2	INJ	SB / SB Stopped	Wet	Driver Inattention
88	11/21/2023	Rt 5 - 840 ft N of McIntosh	Right Angle	2	INJ	EB Left / SB	Wet	Failure to Yeild ROW
89	11/24/2023	Seward @ Rt 5	Animal	1	PDO	SB / Deer	Dry	Animal Action
90	11/28/2023	Rt 5 - 318 ft N of Seward	Left Turn	2	PDO	NB Left / SB	Dry	Failure to Yeild ROW
91	11/21/2023	P-Lot - Taco Bell	Backing	2	PDO	SB Backing / WB Stopped	Dry	Backing Unsafely
92	12/8/2023	P-Lot - Carpet Mouse	Fixed Object	1	PDO	WB / Lines on Utility Pole	Dry	Driver Inattention
93	12/12/2023	McIntosh @ Rt 5	Rearend	2	PDO	NB / NB Slowing	Dry	Following Too Closely
94	12/15/2023	P-Lot - M&T Bank	Fixed Object	1	PDO	WB / Wooden Post	Dry	Turning Improper
95	12/21/2023	Rt 5 - 800 ft N of McIntosh	Right Turn	2	PDO	EB Right / SB	Dry	Failure to Yeild ROW
96	12/13/2023	Seward @ Rt 5	Rearend	2	PDO	NB / NB Stopped	Dry	Distracted Driver
97	1/9/2024	Rt 5 - 300 ft N of Brookside	Right Turn	2	PDO	EB Right / SB	Dry	Turning Improper
98	1/10/2024	McIntosh @ Rt 5	Rearend	3	PDO	NB / NB Stopped / NB Stopped	Wet	Driver Inattention
99	1/9/2024	Rt 5 - 150 ft N of Seward	Sideswipe	2	PDO	SB Changing Lanes / SB	Wet	Unsafe Lane Change
100	10/3/2023	Rt 5 - 100 ft N of McIntosh	Left Turn	2	PDO	WB Left / SB	Dry	Driver Inattention
101	2/10/2024	Rt 5 - 600 ft S of McIntosh	Right Turn	2	PDO	WB Right / NB	Dry	Failure to Yeild ROW
102	2/3/2024	McIntosh @ Rt 5	Left Turn	2	PDO	EB Left / WB	Dry	Failure to Yeild ROW
103	3/5/2024	Rt 5 - 300 ft N of McIntosh	Sideswipe	2	PDO	NB Changing Lanes / NB	Dry	Unsafe Lane Change
104	3/11/2024	Seward @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Wet	Driver Inattention
105	3/17/2024	Rt 5 - 380 ft N of Seward	Rearend	2	PDO	NB / NB Stopped	Dry	Following Too Closely
106	3/27/2024	P-Lot - Auto Wash	Rearend	2	PDO	NB / NB Stopped	Dry	Following Too Closely
107	4/3/2024	Brookside @ Rt 5	Rearend	2	PDO	NB / NB Stopped	Wet	Distracted Driver
108	4/15/2024	Seward @ Rt 5	Rearend	2	PDO	NB / NB Stopped	Dry	Following Too Closely
109	4/15/2024	Rt 5 - 800 ft N of Seward	Animal	1	PDO	SB / Deer	Dry	Animal Action
110	4/17/2024	Rt 5 - 550 ft N of McIntosh	Left Turn	2	PDO	EB Left / NB	Wet	Failure to Yeild ROW
111	5/14/2024	McIntosh - 1000 ft W of Rt 5	Right Angle	2	PDO	NB Left / WB	Dry	Failure to Yeild ROW
112	5/11/2024	P-Lot - J&K Nails	Unknown	2	PDO	WB Stopped / Unknown	Dry	Unknown
113	5/6/2024	P-Lot - T&L Nail Spa	Backing	2	PDO	NB Backing / WB Stopped	Dry	Backing Unsafely
114	6/4/2024	Seward @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Dry	Following Too Closely

Accident #	Date	Location	Type	# Cars	Severity	Direction	Conditions	Contributing Factors
115	5/31/2024	Brookside @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Dry	Following Too Closely
116	6/2/2024	Mutton Hill @ Rt 5	Backing	2	PDO	EB Backing / EB Stopped	Dry	Backing Unsafely
117	6/13/2024	McIntosh @ Rt 5	Rearend	2	INJ	SB / SB Stopped	Dry	Distracted Driver
118	7/1/2024	Rt 5 - 1000 N of Brookside	Sideswipe	2	PDO	EB Right / SB	Dry	Turning Improper
119	7/12/2024	McIntosh @ Rt 5	Left Turn	2	PDO	EB Left / SB	Dry	Traffic Control Disregarded
120	7/25/2024	Rt 5 - 400 ft N of Brookside	Rearend	2	PDO	WB / WB Stopped	Dry	Following Too Closely
121	7/29/2024	Seward @ Rt 5	Rearend	2	PDO	SB / SB Slowing	Dry	Following Too Closely
122	7/24/2024	Seward @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Dry	Distracted Driver
123	8/15/2024	Rt 5 - 540 ft N of McIntosh	Left Turn	2	PDO	WB Left / SB	Dry	Failure to Yeild ROW
124	8/27/2024	Brookside @ Rt 5	Rearend	2	PDO	WB Left / WB Left	Dry	Following Too Closely
125	9/4/2024	McIntosh @ Rt 5	Left Turn	2	INJ	SB Left / NB	Dry	Failure to Yeild ROW
126	8/30//2024	Seward @ Rt 5	Rearend	2	PDO	NB / NB Stopped	Dry	Following Too Closely
127	9/17/2024	Seward @ Rt 5	Rearend	2	INJ	NB / NB Stopped	Dry	Following Too Closely
128	9/18/2024	Mutton Hill @ Rt 5	Sideswipe	2	PDO	EB Left / WB Right	Dry	Failure to Yeild ROW
129	9/22/2024	P-Lot - Dunkin	Fixed Object	1	PDO	WB / Building	Dry	Driver Inattention
130	10/11/2024	Seward @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Dry	Driver Inattention
131	11/4/2024	Brookside @ Rt 5	Left Turn	2	PDO	SB Left / NB	Dry	Failure to Yeild ROW
132	11/15/2024	Seward @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Wet	Following Too Closely
133	11/22/2024	Rt 5 - 400 ft N of McIntosh	Rearend	3	PDO	SB / SB Stopped / SB Stopped	Wet	Driver Inattention
134	11/22/2024	Rt 5 - 400 ft N of Brookside	Left Turn	2	PDO	WB Left / NB	Dry	Traffic Control Disregarded
135	12/3/2024	P-Lot - Auto Wash	Rearend	2	PDO	EB / EB Stopped	Wet	Following Too Closely
136	12/9/2024	Rt 5 - 800 ft N of McIntosh	Right Angle	2	PDO	EB Right / SB	Wet	Failure to Yeild ROW
137	12/13/2024	Rt 5 - 100 ft N of Seward	Sideswipe	2	PDO	SB Changing Lanes / SB	Dry	Unsafe Lane Change
138	12/22/2024	Seward @ Rt 5	Right Turn	2	PDO	NB Right / WB Stopped	Icy	Slippery Pavement
139	12/22/2024	McIntosh @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Icy	Slippery Pavement
140	12/26/2024	Rt 5 - 300 ft N of Mutton Hill	Right Turn	2	PDO	WB Right / NB	Wet	Failure to Yeild ROW
141	12/30/2024	Rt 5 - 500 ft N of Brookside	Left Turn	2	PDO	EB Left / SB	Wet	Failure to Yeild ROW
142	1/4/2025	Brookside @ Rt 5	Sideswipe	2	PDO	NB Changing Lanes / NB	Wet	Unsafe Lane Change
143	1/11/2025	Rt 5 - 400 ft N of Brookside	Right Angle	2	PDO	WB Slowing / NB	Icy	Slippery Pavement
144	1/10/2025	Rt 5 - 100 ft N of McIntosh	Right Turn	2	PDO	SB Left / NB	Wet	Failure to Yeild ROW
145	1/15/2025	McIntosh @ Rt 5	Sideswipe	2	PDO	SB Changing Lanes / SB	Wet	Unsafe Lane Change
146	1/21/2025	Brookside @ Rt 5	Rearend	2	PDO	NB / NB Stopped	Dry	Following Too Closely
147	1/24/2025	Midblock Rt 5	Rearend	3	INJ	SB / SB / NB	Wet	Following Too Closely
148	1/13/2025	Seward @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Dry	Following Too Closely
149	2/14/2025	Brookside @ Rt 5	Sideswipe	2	PDO	NB Changing Lanes / NB	Icy	Unsafe Lane Change
150	2/19/2025	Seward @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Icy	Driver Inattention
151	2/17/2025	P-Lot - H&R Block	Sideswipe	2	PDO	WB Stopped / EB Stopped	Icy	Weather Conditions
152	2/14/2025	Walmart @ Rt 5	Rearend	2	PDO	SB / SB Stopped	Dry	Distracted Driver
153	2/22/2025	Walmart @ Rt 5	Backing	2	PDO	NB Backing / NB Stopped	Dry	Backing Unsafely

Accident #	Date	Location	Type	# Cars	Severity	Direction	Conditions	Contributing Factors
154	1/6/2025	Midblock Rt 5	Rearend	2	PDO	NB Changing Lanes / NB	Dry	Unsafe Lane Change
155	2/28/2025	Walmart @ Rt 5	Rearend	2	PDO	NB / NB Stopped	Dry	Following Too Closely
156	1/28/2025	Seward - .2 mi E of Rt 5	Fixed Object	1	PDO	WB / Guiderail	Icy	Slippery Pavement
157	6/21/2024	Rt 5 - 150 ft N of Seward	Left Turn	2	INJ	EB Left / SB	Dry	Failure to Yeild ROW

Mutton Hill @ Grant - 3 Accidents
1 - Left Turn Accident
1 - Sideswipe Accidents
1 - Backing Accident

Walmart @ Grant - 4 Accidents
2 - Rearend Accidents
1 - Right Turn Accident
1 - Backing Accident

John Walsh/Brookside @ Grant - 18 Accidents
12 - Rearend Accidents
2 - Sideswipe Accidents
2 - Left Turn Accidents
1 - Right Turn Accident
1 - Bicyclist Accident

McIntosh @ Grant - 26 Accidents
13 - Rearend Accidents
6 - Left Turn Accidents
2 - Sideswipe Accidents
1 - Right Angle Accident
1 - Bicyclist Accident
1 - Pedestrian Accident
1 - Fixed Object Accident
1 - Animal Related Accident

Standart/Seward @ Grant - 32 Accidents
19 - Rearend Accidents
3 - Left Turn Accidents
3 - Right Turn Accidents
3 - Sideswipe Accidents
2 - Right Angle Accident
1 - Bicyclist Accident
1 - Animal Related Accident

Grant Midblock - 49 Accidents
11 - Left Turn Accidents
11 - Sideswipe Accidents
8 - Right Turn Accidents
7 - Rearend Accidents
5 - Right Angle Accident
4 - Animal Related Accidents
2 - Bicyclist Accidents
1 - Non-Collision Accident

2 Accidents on N Seward Avenue Included in Data

1 Accident on McIntosh Drive Included in Data

Area Parking Lots - 22 Accidents
21 - Property Damage Only
1 - Injury Accident

Mutton Hill @ Grant Intersection - Evening Peak Hour - 367 Veh EW / 1390 Veh NS. Assumed PM Peak is 9% of AADT, AADT = 4078 Veh EW / 15444 Veh N/S
Walmart @ Grant Intersection - Evening Peak Hour - 437 Veh EW / 1643 Veh NS. Assumed PM Peak is 9% of AADT, AADT = 4856 Veh EW / 18256 Veh N/S
John Walsh/Brookside @ Grant Intersection - Evening Peak Hour - 293 Veh EW / 1928 Veh NS. Assumed PM Peak is 9% of AADT, AADT = 3256 Veh EW / 21422 Veh N/S
McIntosh @ Grant Intersection - Evening Peak Hour - 423 Veh EW / 2072 Veh NS. Assumed PM Peak is 9% of AADT, AADT = 4700 Veh EW / 23022 Veh N/S
Standart/Seward @ Grant Intersection - Evening Peak Hour - 616 Veh EW / 1951 Veh NS. Assumed PM Peak is 9% of AADT, AADT = 6844 Veh EW / 21678 Veh N/S

Grant Avenue - AADT = 20689 - NYS Traffic Data Viewer (2024)

Intersection Accident Severity

			Basic LOSS
Mutton Hill @ Grant - 3 Accidents			
3 Total Accidents	NYSDOT Saftey Performance Function = 3.85 Accidents/Year	Calculated Rate = 1.00 Accidents/Year	**2**
0 Injury Accidents / 0 Fatality Accidents	NYSDOT Saftey Performance Function = 1.59 Accidents/Year	Calculated Rate = 0.00 Accidents/Year	**2**
Not a Severe Accident Location			
Walmart @ Grant - 4 Accidents			
4 Total Accidents	NYSDOT Saftey Performance Function = 4.55 Accidents/Year	Calculated Rate = 1.33 Accidents/Year	**2**
0 Injury Accidents / 0 Fatality Accidents	NYSDOT Saftey Performance Function = 1.90 Accidents/Year	Calculated Rate = 0.00 Accidents/Year	**2**
Not a Severe Accident Location			
John Walsh/Brookside @ Grant - 18 Accidents			
18 Total Accidents	NYSDOT Saftey Performance Function = 4.14 Accidents/Year	Calculated Rate = 6.00 Accidents/Year	**3**
3 Injury Accidents / 0 Fatality Accidents	NYSDOT Saftey Performance Function = 1.73 Accidents/Year	Calculated Rate = 1.00 Accidents/Year	**2**
Not a Severe Accident Location			
McIntosh @ Grant - 26 Accidents			
26 Total Accidents	NYSDOT Saftey Performance Function = 5.08 Accidents/Year	Calculated Rate = 8.66 Accidents/Year	**3**
7 Injury Accidents / 0 Fatality Accidents	NYSDOT Saftey Performance Function = 1.81 Accidents/Year	Calculated Rate = 2.33 Accidents/Year	**3**
Not a Severe Accident Location			
Standart/Seward @ Grant - 32 Accidents			
32 Total Accidents	NYSDOT Saftey Performance Function = 5.83 Accidents/Year	Calculated Rate = 10.66 Accidents/Year	**3**
3 Injury Accidents / 0 Fatality Accidents	NYSDOT Saftey Performance Function = 2.45 Accidents/Year	Calculated Rate = 1.00 Accidents/Year	**2**
Not a Severe Accident Location			

Link Accident Severity

			Basic LOSS
Grant Midblock - 49 Accidents			
49 Total Accidents	NYSDOT Saftey Performance Function = 18.47 Accidents/Year	Calculated Rate = 16.33 Accidents/Year	**2**
8 Injury Accidents / 0 Fatality Accidents	NYSDOT Saftey Performance Function = 3.72 Accidents/Year	Calculated Rate = 2.66 Accidents/Year	**2**
Not a Severe Accident Location			

Hourly Direction Report NYSDOT_SC 310084000000 Wednesday, October 25, 2023 to Thursday, October 26, 2023

Site Name	310084
Site ID	310084000000
Description	NY5 from STANDART AVE to CITY OF AUBURN/TOWN OF SENNE
Region	3
County	Cayuga
DOTID	100428
County Order	7

Exclude data: None

Time	Eastbound Slow	Eastbound Fast	Westbound Slow	Westbound Fast	Total
00:00:00	7	17	8	20	52
01:00:00	5	10	9	16	40
02:00:00	2	11	6	9	28
03:00:00	8	24	8	14	55
04:00:00	11	52	12	24	99
05:00:00	43	129	42	54	268
06:00:00	100	230	135	153	618
07:00:00	176	327	219	247	970
08:00:00	240	393	252	307	1192
09:00:00	285	464	354	332	1436
10:00:00	295	504	442	352	1593
11:00:00	340	542	514	386	1782
12:00:00	358	586	576	400	1919
13:00:00	363	554	506	366	1789
14:00:00	352	553	546	396	1846
15:00:00	373	608	540	422	1942
16:00:00	380	604	515	450	1948
17:00:00	332	515	518	440	1805
18:00:00	236	397	393	338	1364
19:00:00	166	300	267	235	967
20:00:00	92	182	158	182	614
21:00:00	44	130	119	116	410
22:00:00	26	72	70	88	256
23:00:00	13	34	36	37	120
7am-7pm	3730	6044	5374	4436	19586
6am-10pm	4132	6886	6053	5123	22194
6am-12am	4172	6992	6158	5248	22571
12am-12am	4248	7236	6243	5386	23113
am Peak	11:00:00	11:00:00	11:00:00	11:00:00	11:00:00
Peak Volume	340	542	514	386	1782
pm Peak	16:00:00	15:00:00	12:00:00	16:00:00	16:00:00
Peak Volume	380	608	576	450	1948

Hourly Direction Report NYSDOT_SC 312010000000 Wednesday, August 14, 2024 to Thursday, August 15, 2024

Site Name	312010
Site ID	312010000000
Description	STANDART AVE from NORTH ST to GRANT AVE
Region	3
County	Cayuga
DOTID	128930
County Order	1

Exclude data: None

Time	EB	WB	Total
00:00:00	14	16	30
01:00:00	6	8	14
02:00:00	4	5	10
03:00:00	6	5	10
04:00:00	21	12	34
05:00:00	49	40	89
06:00:00	104	92	196
07:00:00	204	144	348
08:00:00	226	192	417
09:00:00	279	211	490
10:00:00	295	239	534
11:00:00	330	280	610
12:00:00	372	324	696
13:00:00	332	308	640
14:00:00	326	307	632
15:00:00	375	292	668
16:00:00	365	314	678
17:00:00	302	314	616
18:00:00	246	236	482
19:00:00	194	188	382
20:00:00	127	156	284
21:00:00	84	90	174
22:00:00	43	62	104
23:00:00	30	37	68
7am-7pm	3652	3162	6814
6am-10pm	4160	3689	7850
6am-12am	4234	3788	8022
12am-12am	4334	3874	8208
am Peak	11:00:00	11:00:00	11:00:00
Peak Volume	330	280	610
pm Peak	15:00:00	12:00:00	12:00:00
Peak Volume	375	324	696

Hourly Direction Report NYSDOT_SC 314020000000 Tuesday, July 29, 2025 to Wednesday, July 30, 2025

Site Name	314020
Site ID	314020000000
Description	SEWARD AVE NORT from FRANKLIN ST to GRANT AVE
Region	3
County	Cayuga
DOTID	128915
County Order	1

Exclude data: None

Time	NB	SB	Total
00:00:00	10	13	22
01:00:00	8	10	18
02:00:00	4	4	8
03:00:00	7	5	12
04:00:00	18	10	28
05:00:00	74	38	112
06:00:00	135	68	203
07:00:00	202	126	328
08:00:00	250	161	410
09:00:00	258	210	469
10:00:00	280	232	513
11:00:00	282	274	556
12:00:00	305	280	586
13:00:00	292	271	564
14:00:00	275	301	576
15:00:00	306	282	589
16:00:00	305	326	631
17:00:00	272	298	570
18:00:00	230	242	472
19:00:00	184	205	388
20:00:00	146	152	298
21:00:00	97	104	201
22:00:00	53	58	110
23:00:00	23	23	46
7am-7pm	3258	3006	6264
6am-10pm	3820	3536	7355
6am-12am	3896	3616	7512
12am-12am	4017	3696	7713
am Peak	11:00:00	11:00:00	11:00:00
Peak Volume	282	274	556
pm Peak	15:00:00	16:00:00	16:00:00
Peak Volume	306	326	631

Tri-State Traffic Data, Inc.

610-466-1469

TSTData.com

Location: Auburn, New York
Road Name: Grand Ave - SB
Segment: 430' N od John Walsh Blvd
Date: 11/19/2025

GPS: 42.954297, -76.544643

SB

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
11/19/25	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	33	154	185	148	33	1	1	0	0	0	0	0	0	0	0	555
14:00	22	117	251	205	73	11	0	1	0	0	0	0	0	0	0	680
15:00	12	157	209	219	74	6	0	0	0	0	0	0	0	0	0	677
16:00	23	152	238	235	68	10	1	0	0	0	0	0	0	0	0	727
17:00	31	168	258	236	55	12	0	0	0	0	0	0	0	0	0	760
18:00	13	149	283	246	58	10	0	0	0	0	0	0	0	0	0	759
19:00	4	85	175	192	71	8	1	0	0	0	0	0	0	0	0	536
20:00	4	61	121	108	45	11	1	0	0	0	0	0	0	0	0	351
21:00	2	44	53	63	55	3	2	0	0	0	0	0	0	0	0	222
22:00	2	44	35	54	31	6	1	0	1	0	0	0	0	0	0	174
23:00	0	23	28	35	23	9	0	1	0	0	0	0	0	0	0	119
Total	146	1154	1836	1741	586	87	7	2	1	0	0	0	0	0	0	5560

Tri-State Traffic Data, Inc.

610-466-1469

TSTData.com

Location: Auburn, New York
Road Name: Grand Ave - SB
Segment: 430' N od John Walsh Blvd
Date: 11/19/2025

GPS: 42.954297, -76.544643

SB

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
11/20/25	0	2	9	20	21	6	1	0	0	0	0	0	0	0	0	59
01:00	0	0	2	8	5	3	0	0	0	0	0	0	0	0	0	18
02:00	0	1	3	5	5	1	1	0	0	0	0	0	0	0	0	16
03:00	0	3	5	5	4	1	0	0	0	0	0	0	0	0	0	18
04:00	0	1	1	4	9	0	1	0	0	0	0	0	0	0	0	16
05:00	0	1	3	9	11	3	1	1	0	0	0	0	0	0	0	29
06:00	0	5	13	33	34	13	1	0	0	0	0	0	0	0	0	99
07:00	3	17	34	96	108	29	5	3	0	0	0	0	0	0	0	295
08:00	4	49	82	132	108	22	1	0	0	0	0	0	0	0	0	398
09:00	9	75	156	171	69	16	0	0	0	0	0	0	0	0	0	496
10:00	14	96	211	191	62	3	0	0	0	0	0	0	0	0	0	577
11:00	31	151	233	170	41	4	1	0	0	0	0	0	0	0	0	631
12 PM	27	161	235	259	78	7	1	0	0	0	0	0	0	0	0	768
13:00	19	144	282	225	78	7	0	0	0	0	0	0	0	0	0	755
14:00	12	160	192	224	80	8	1	1	0	0	0	0	0	0	0	678
15:00	26	136	262	234	78	8	2	0	0	0	0	0	0	0	0	746
16:00	21	149	276	225	67	3	0	0	0	0	0	0	0	0	0	741
17:00	20	175	267	258	67	6	0	0	0	0	0	0	0	0	0	793
18:00	9	136	265	228	85	6	0	0	0	0	0	0	0	0	0	729
19:00	12	103	132	168	66	13	0	0	0	0	0	0	0	0	0	494
20:00	2	55	91	128	59	8	0	0	0	0	0	0	0	0	0	343
21:00	1	62	68	85	51	15	1	0	0	0	0	0	0	0	0	283
22:00	1	32	55	56	34	11	1	0	0	0	0	0	0	0	0	190
23:00	3	26	39	38	20	2	0	0	0	0	0	0	0	0	0	128
Total	214	1740	2916	2972	1240	195	18	5	0	0	0	0	0	0	0	9300

Tri-State Traffic Data, Inc.

610-466-1469

TSTData.com

Location: Auburn, New York
Road Name: Grand Ave - SB
Segment: 430' N od John Walsh Blvd
Date: 11/19/2025

GPS: 42.954297, -76.544643

SB

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
11/21/25	2	3	4	13	20	4	1	0	0	0	0	0	0	0	0	47
01:00	0	1	2	14	12	1	0	0	0	0	0	0	0	0	0	30
02:00	0	0	0	6	8	0	0	0	0	0	0	0	0	0	0	14
03:00	0	1	6	2	3	2	2	0	0	0	0	0	0	0	0	16
04:00	0	0	1	5	9	0	0	0	0	0	0	0	0	0	0	15
05:00	0	2	3	7	12	5	0	1	0	0	0	0	0	0	0	30
06:00	0	8	9	37	31	6	2	1	0	0	0	0	0	0	0	94
07:00	1	22	39	86	99	27	5	0	1	0	0	0	0	0	0	280
08:00	3	45	93	115	103	16	1	0	0	0	0	0	0	0	0	376
09:00	14	71	126	156	97	17	1	0	0	0	0	0	0	0	0	482
10:00	20	168	206	175	32	7	0	0	0	0	0	0	0	0	0	608
11:00	31	173	262	131	24	4	0	0	0	0	0	0	0	0	0	625
12 PM	36	173	256	174	54	6	1	0	0	0	0	0	0	0	0	700
13:00	38	187	267	235	53	4	0	1	0	0	0	0	0	0	0	785
14:00	39	193	281	216	34	7	0	0	0	0	0	0	0	0	0	770
15:00	35	191	230	225	65	5	1	0	0	0	0	0	0	0	0	752
16:00	27	189	289	228	44	3	0	0	0	0	0	0	0	0	0	780
17:00	24	206	316	233	55	4	1	0	0	0	0	0	0	0	0	839
18:00	26	151	254	252	81	7	0	0	0	0	0	0	0	0	0	771
19:00	11	109	184	225	86	7	0	0	0	0	0	0	0	0	0	622
20:00	8	73	106	126	65	10	2	0	0	0	0	0	0	0	0	390
21:00	3	64	71	94	58	14	2	0	0	0	0	0	0	0	0	306
22:00	4	53	68	76	42	4	0	0	0	0	0	0	0	0	0	247
23:00	6	35	37	51	23	3	1	0	0	0	0	0	0	0	0	156
Total	328	2118	3110	2882	1110	163	20	3	1	0	0	0	0	0	0	9735

Tri-State Traffic Data, Inc.

610-466-1469

TSTData.com

Location: Auburn, New York
Road Name: Grand Ave - SB
Segment: 430' N od John Walsh Blvd
Date: 11/19/2025

GPS: 42.954297, -76.544643

SB

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
11/22/25	0	1	5	28	20	9	1	0	0	0	0	0	0	0	0	64
01:00	0	1	2	20	19	1	2	1	0	0	0	0	0	0	0	46
02:00	0	0	1	12	9	2	0	0	0	0	0	0	0	0	0	24
03:00	0	2	5	9	7	2	0	0	0	0	0	0	0	0	0	25
04:00	0	1	3	4	4	5	0	0	0	0	0	0	0	0	0	17
05:00	0	1	3	3	11	4	3	1	0	0	0	0	0	0	0	26
06:00	0	6	8	15	33	7	1	0	1	0	0	0	0	0	0	71
07:00	4	20	28	47	51	9	2	1	0	0	0	0	0	0	0	162
08:00	4	39	54	71	37	14	1	1	0	0	0	0	0	0	0	221
09:00	4	72	130	84	46	4	2	0	0	0	0	0	0	0	0	342
10:00	18	135	196	162	79	9	0	1	0	0	0	0	0	0	0	600
11:00	45	201	287	174	30	0	1	0	0	0	0	0	0	0	0	738
12 PM	39	246	277	148	46	5	1	0	0	0	0	0	0	0	0	762
13:00	40	230	309	192	43	8	1	0	0	0	0	0	0	0	0	823
14:00	40	234	261	185	39	6	2	0	0	0	0	0	0	0	0	767
15:00	30	211	277	193	52	4	0	0	0	0	0	0	0	0	0	767
16:00	25	194	231	180	72	8	1	0	0	0	0	0	0	0	0	711
17:00	22	166	219	175	45	7	0	0	0	0	0	0	0	0	0	634
18:00	16	145	212	201	54	7	1	0	0	0	0	0	0	0	0	636
19:00	24	110	156	173	69	9	1	1	0	0	0	0	0	0	0	543
20:00	4	76	109	101	59	12	0	0	0	0	0	0	0	0	0	361
21:00	3	47	78	66	58	7	4	1	0	0	0	0	0	0	0	264
22:00	3	35	45	84	35	9	1	1	0	0	0	0	0	0	0	213
23:00	2	29	45	56	38	7	0	0	1	0	0	0	0	0	0	178
Total	323	2202	2941	2383	956	155	25	8	2	0	0	0	0	0	0	8995

Tri-State Traffic Data, Inc.

610-466-1469

TSTData.com

Location: Auburn, New York
Road Name: Grand Ave - SB
Segment: 430' N od John Walsh Blvd
Date: 11/19/2025

GPS: 42.954297, -76.544643

SB

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
11/23/25	2	4	10	26	20	5	0	0	0	0	0	0	0	0	0	67
01:00	0	1	3	15	11	4	2	0	0	0	0	0	0	0	0	36
02:00	0	0	1	7	12	2	1	0	0	0	0	0	0	0	0	23
03:00	0	5	2	5	7	1	1	0	0	0	0	0	0	0	0	21
04:00	1	2	4	5	6	0	1	0	0	0	0	0	0	0	0	19
05:00	0	1	2	9	4	5	0	0	0	0	0	0	0	0	0	21
06:00	0	3	7	15	21	6	1	1	0	0	0	0	0	0	0	54
07:00	1	16	29	33	21	14	2	1	0	0	0	0	0	0	0	117
08:00	3	33	50	36	27	6	1	0	0	0	0	0	0	0	0	156
09:00	6	62	104	59	25	3	1	0	0	0	0	0	0	0	0	260
10:00	9	91	156	109	44	8	0	0	0	0	0	0	0	0	0	417
11:00	20	150	200	148	62	6	0	0	0	0	0	0	0	0	0	586
12 PM	21	206	231	126	36	5	0	0	0	0	0	0	0	0	0	625
13:00	44	219	252	135	27	8	1	0	0	0	0	0	0	0	0	686
14:00	37	189	249	143	36	4	1	0	0	0	0	0	0	0	0	659
15:00	38	213	213	115	59	7	0	0	0	0	0	0	0	0	0	645
16:00	10	176	222	142	49	7	0	0	0	0	0	0	0	0	0	606
17:00	22	163	174	151	44	6	0	0	0	0	0	0	0	0	0	560
18:00	10	117	160	133	51	6	0	0	0	0	0	0	0	0	0	477
19:00	9	103	102	122	55	9	1	0	0	0	0	0	0	0	0	401
20:00	6	67	59	75	32	4	3	0	0	0	0	0	0	0	0	246
21:00	4	36	33	58	36	6	0	0	0	0	0	0	0	0	0	173
22:00	4	29	38	58	24	4	0	0	1	0	0	0	0	0	0	158
23:00	3	27	29	19	19	8	0	0	0	0	0	0	0	0	0	105
Total	250	1913	2330	1744	728	134	16	2	1	0	0	0	0	0	0	7118

Tri-State Traffic Data, Inc.

610-466-1469

TSTData.com

Location: Auburn, New York
Road Name: Grand Ave - SB
Segment: 430' N od John Walsh Blvd
Date: 11/19/2025

GPS: 42.954297, -76.544643

SB

Start Time	1 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 9999	Total
11/24/25	2	4	4	9	8	2	1	0	0	0	0	0	0	0	0	30
01:00	0	0	3	4	8	1	0	0	0	0	0	0	0	0	0	16
02:00	0	0	4	1	6	1	0	0	0	0	0	0	0	0	0	12
03:00	1	3	4	6	2	0	0	0	0	0	0	0	0	0	0	16
04:00	0	3	2	4	4	1	0	0	0	0	0	0	0	0	0	14
05:00	0	1	3	15	9	2	0	0	0	0	0	0	0	0	0	30
06:00	0	8	17	32	32	5	0	1	0	0	0	0	0	0	0	95
07:00	1	19	53	80	83	30	5	0	0	0	0	0	0	0	0	271
08:00	4	53	92	140	83	25	3	0	0	0	0	0	0	0	0	400
09:00	7	78	134	167	71	8	1	0	0	0	0	0	0	0	0	466
10:00	24	135	180	177	59	5	3	0	0	0	0	0	0	0	0	583
11:00	19	106	163	115	15	1	0	0	0	0	0	0	0	0	0	419
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	58	410	659	750	380	81	13	1	0	0	0	0	0	0	0	2352
Grand Total	1319	9537	13792	12472	5000	815	99	21	5	0	0	0	0	0	0	43060

Stats

15th Percentile :	22 MPH
50th Percentile :	28 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH
Mean Speed(Average) :	29 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	26264
Percent in Pace :	61.0%
Number of Vehicles > 35 MPH :	5940
Percent of Vehicles > 35 MPH :	13.8%

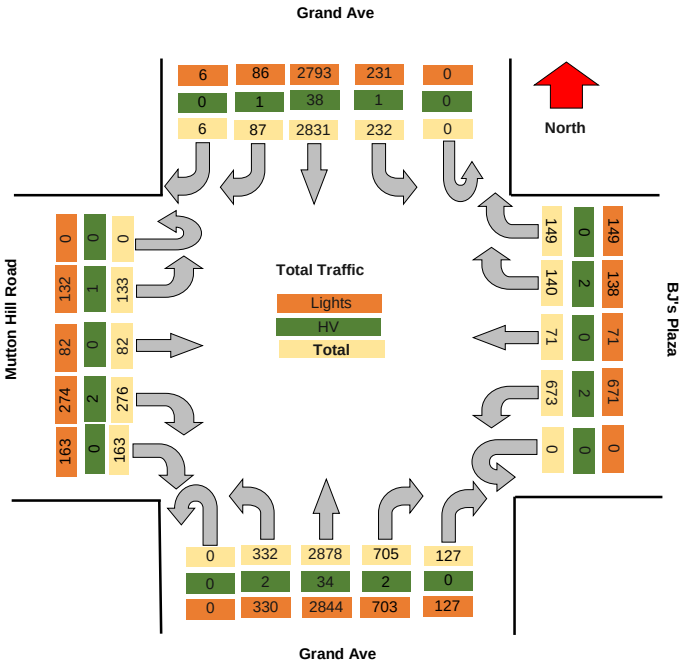
Project	GTS
Project Code	12290
Site Name	12290-1 - Grand Ave & Mutton
Legs and Movements	All Processed Legs & Moveme
Bin Size	15 minutes
Survey Date	2025/11/20, Thursday
Location	Grand Ave & Mutton Hill Road/
Latitude and Longitude	42.956917, -76.542750

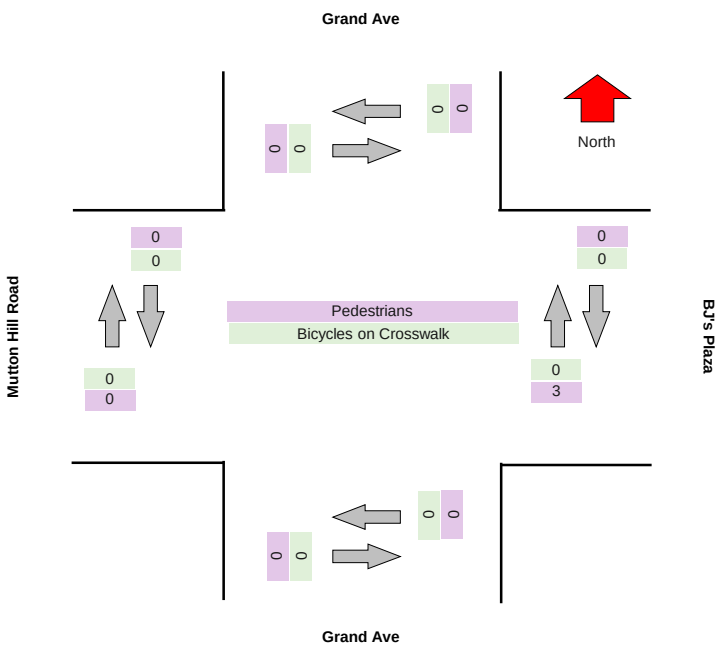
	Start	End	PHF
AM Peak	2025/11/20 08:00:00	2025/11/20 09:00:00	0.90
MID Peak	2025/11/20 12:00:00	2025/11/20 13:00:00	0.94
PM Peak	2025/11/20 16:00:00	2025/11/20 17:00:00	0.94

Turning Movement Data

Leg	Mutton Hill Road								BJ's Plaza								Grand Ave								Grand Ave								
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Total
7:00:00 AM	1	1	11	1	0	**14**	0	0	3	0	2	2	0	**7**	0	0	9	80	5	3	0	**97**	0	0	1	84	3	0	0	**88**	0	0	**206**
7:15:00 AM	2	0	7	13	0	**22**	0	0	4	0	3	3	0	**10**	0	0	15	107	8	0	0	**130**	0	0	6	87	3	0	0	**96**	0	0	**258**
7:30:00 AM	4	2	4	7	0	**17**	0	0	5	0	2	2	0	**9**	0	0	10	94	12	3	0	**119**	0	0	3	71	4	0	0	**78**	0	0	**223**
7:45:00 AM	8	7	9	3	0	**27**	0	0	6	0	3	2	0	**11**	0	0	15	100	18	3	0	**136**	0	0	8	120	8	0	0	**136**	0	0	**310**
Hourly Total	15	10	31	24	0	**80**	0	0	18	0	10	9	0	**37**	0	0	49	381	43	9	0	**482**	0	0	18	362	18	0	0	**398**	0	0	**997**
8:00:00 AM	4	3	8	4	0	**19**	0	0	8	0	3	2	0	**13**	0	0	8	98	13	3	0	**122**	0	0	4	108	2	0	0	**114**	0	0	**268**
8:15:00 AM	13	1	6	4	0	**24**	0	0	12	2	3	3	0	**20**	0	0	3	104	13	4	0	**124**	0	0	8	81	3	0	0	**92**	0	0	**260**
8:30:00 AM	0	5	14	4	0	**23**	0	0	17	4	3	4	0	**28**	0	0	8	80	11	5	0	**104**	0	0	9	98	1	0	0	**108**	0	0	**263**
8:45:00 AM	4	2	9	4	0	**19**	0	0	10	1	3	4	0	**18**	0	1	13	91	24	9	0	**137**	0	0	6	123	3	0	0	**132**	0	0	**306**
Hourly Total	21	11	37	16	0	**85**	0	0	47	7	12	13	0	**79**	0	1	32	373	61	21	0	**487**	0	0	27	410	9	0	0	**446**	0	0	**1097**
11:00:00 AM	6	7	18	2	0	**33**	0	0	35	6	9	6	0	**56**	0	0	18	102	42	5	0	**167**	0	0	17	99	1	1	0	**118**	0	0	**374**
11:15:00 AM	5	4	12	9	0	**30**	0	0	44	1	6	12	0	**63**	0	0	15	123	40	4	0	**182**	0	0	11	131	4	1	0	**147**	0	0	**422**
11:30:00 AM	2	3	9	8	0	**22**	0	0	44	7	13	7	0	**71**	0	0	12	112	34	5	0	**163**	0	0	10	116	5	0	0	**131**	0	0	**387**
11:45:00 AM	3	6	18	7	0	**34**	0	0	40	2	4	15	0	**61**	0	0	20	122	42	5	0	**189**	0	0	10	127	7	1	0	**145**	0	0	**429**
Hourly Total	16	20	57	26	0	**119**	0	0	163	16	32	40	0	**251**	0	0	65	459	158	19	0	**701**	0	0	48	473	17	3	0	**541**	0	0	**1612**
12:00:00 PM	8	4	12	12	0	**36**	0	0	45	1	5	6	0	**57**	0	0	12	137	46	9	0	**204**	0	0	12	145	4	1	0	**162**	0	0	**459**
12:15:00 PM	4	5	13	5	0	**27**	0	0	39	12	7	10	0	**68**	0	0	11	140	46	9	0	**206**	0	0	9	104	7	0	0	**120**	0	0	**421**
12:30:00 PM	9	4	13	14	0	**40**	0	0	39	8	4	10	0	**61**	0	0	15	120	46	8	0	**189**	0	0	16	118	3	1	0	**138**	0	0	**428**
12:45:00 PM	4	3	21	9	0	**37**	0	0	36	1	5	8	0	**50**	0	0	18	128	38	10	0	**194**	0	0	17	121	0	0	0	**138**	0	0	**419**
Hourly Total	25	16	59	40	0	**140**	0	0	159	22	21	34	0	**236**	0	0	56	525	176	36	0	**793**	0	0	54	488	14	2	0	**558**	0	0	**1727**
4:00:00 PM	8	3	23	14	0	**48**	0	0	33	8	6	7	0	**54**	0	0	20	167	38	4	0	**229**	0	0	8	143	8	0	0	**159**	0	0	**490**
4:15:00 PM	11	5	20	13	0	**49**	0	0	31	2	10	5	0	**48**	0	1	22	165	31	6	0	**224**	0	0	13	124	3	0	0	**140**	0	0	**461**
4:30:00 PM	13	4	11	8	0	**36**	0	0	43	2	7	9	0	**61**	0	0	19	125	38	7	0	**189**	0	0	11	137	1	0	0	**149**	0	0	**435**
4:45:00 PM	5	3	9	6	0	**23**	0	0	33	2	7	6	0	**48**	0	0	17	145	45	7	0	**214**	0	0	8	163	3	0	0	**174**	0	0	**459**
Hourly Total	37	15	63	41	0	**156**	0	0	140	14	30	27	0	**211**	0	1	78	602	152	24	0	**856**	0	0	40	567	15	0	0	**622**	0	0	**1845**
5:00:00 PM	12	3	12	3	0	**30**	0	0	35	3	8	10	0	**56**	0	1	21	133	27	7	0	**188**	0	0	11	154	3	0	0	**168**	0	0	**442**
5:15:00 PM	5	3	8	5	0	**21**	0	0	32	4	11	5	0	**52**	0	0	16	165	30	4	0	**215**	0	0	18	148	4	0	0	**170**	0	0	**458**
5:30:00 PM	1	2	4	4	0	**11**	0	0	45	4	12	6	0	**67**	0	0	10	122	30	6	0	**168**	0	0	9	115	3	0	0	**127**	0	0	**373**
5:45:00 PM	1	2	5	4	0	**12**	0	0	34	1	4	5	0	**44**	0	0	5	118	28	1	0	**152**	0	0	7	114	4	1	0	**126**	0	0	**334**
Hourly Total	19	10	29	16	0	**74**	0	0	146	12	35	26	0	**219**	0	1	52	538	115	18	0	**723**	0	0	45	531	14	1	0	**591**	0	0	**1607**
Grand Total	133	82	276	163	0	**654**	0	0	673	71	140	149	0	**1033**	0	3	332	2878	705	127	0	**4042**	0	0	232	2831	87	6	0	**3156**	0	0	**8885**
% Approach	20.3%	12.5%	42.2%	24.9%	0.0%	**0.0%**	0.0%	0.0%	65.2%	6.9%	13.6%	14.4%	0.0%	**0.0%**	0.0%	0.0%	8.2%	71.2%	17.4%	3.1%	0.0%	**0.0%**	0.0%	0.0%	7.4%	89.7%	2.8%	0.2%	0.0%	**0.0%**	0.0%	0.0%	
% Total	1.5%	0.9%	3.1%	1.8%	0.0%	**7.4%**	0.0%	0.0%	7.6%	0.8%	1.6%	1.7%	0.0%	**11.6%**	0.0%	0.0%	3.7%	32.4%	7.9%	1.4%	0.0%	**45.5%**	0.0%	0.0%	2.6%	31.9%	1.0%	0.1%	0.0%	**35.5%**	0.0%	0.0%	
Lights	132	82	274	163	0	**651**	0	0	671	71	138	149	0	**1029**	0	0	330	2844	703	127	0	**4004**	0	0	231	2793	86	6	0	**3116**	0	0	**8800**
% Lights	99.2%	100.0%	99.3%	100.0%	0.0%	**99.5%**	0.0%	0.0%	99.7%	100.0%	98.6%	100.0%	0.0%	**99.6%**	0.0%	0.0%	99.4%	98.8%	99.7%	100.0%	0.0%	**99.1%**	0.0%	0.0%	99.6%	98.7%	98.9%	100.0%	0.0%	**98.7%**	0.0%	0.0%	**99.0%**
Hv	1	0	2	0	0	**3**	0	0	2	0	2	0	0	**4**	0	0	2	34	2	0	0	**38**	0	0	1	38	1	0	0	**40**	0	0	**85**
% HV	0.8%	0.0%	0.7%	0.0%	0.0%	**0.5%**	0.0%	0.0%	0.3%	0.0%	1.4%	0.0%	0.0%	**0.4%**	0.0%	0.0%	0.6%	1.2%	0.3%	0.0%	0.0%	**0.9%**	0.0%	0.0%	0.4%	1.3%	1.1%	0.0%	0.0%	**1.3%**	0.0%	0.0%	**1.0%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	3	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	3
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

Turning Movement Data Plot

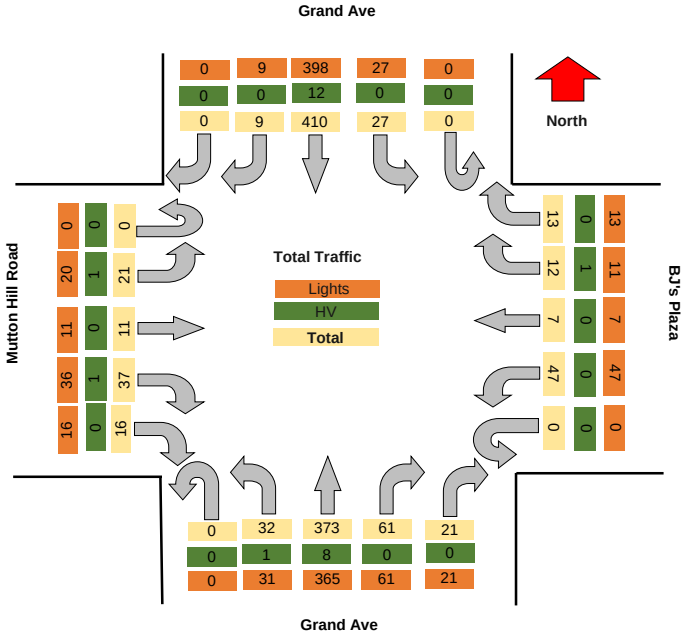


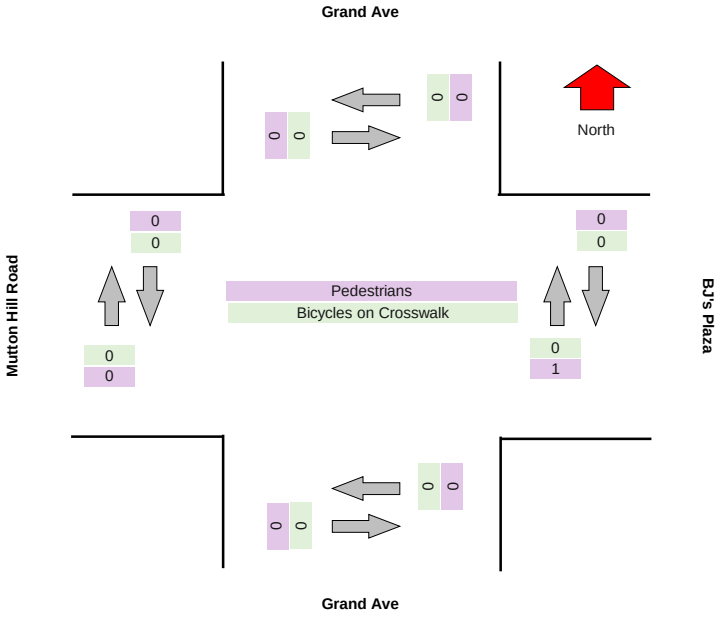


Turning Movement Peak Hour Data (AM)

8:00:00 AM

Leg	Mutton Hill Road								BJ's Plaza								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
8:00:00 AM	4	3	8	4	0	**19**	0	0	8	0	3	2	0	**13**	0	0	8	98	13	3	0	**122**	0	0	4	108	2	0	0	**114**	0	0	**268**
8:15:00 AM	13	1	6	4	0	**24**	0	0	12	2	3	3	0	**20**	0	0	3	104	13	4	0	**124**	0	0	8	81	3	0	0	**92**	0	0	**260**
8:30:00 AM	0	5	14	4	0	**23**	0	0	17	4	3	4	0	**28**	0	0	8	80	11	5	0	**104**	0	0	9	98	1	0	0	**108**	0	0	**263**
8:45:00 AM	4	2	9	4	0	**19**	0	0	10	1	3	4	0	**18**	0	1	13	91	24	9	0	**137**	0	0	6	123	3	0	0	**132**	0	0	**306**
Grand Total	21	11	37	16	0	**85**	0	0	47	7	12	13	0	**79**	0	1	32	373	61	21	0	**487**	0	0	27	410	9	0	0	**446**	0	0	**1097**
% Approach	24.7%	12.9%	43.5%	18.8%	0.0%	**0.0%**	0.0%	0.0%	59.5%	8.9%	15.2%	16.5%	0.0%	**0.0%**	0.0%	0.0%	6.6%	76.6%	12.5%	4.3%	0.0%	**0.0%**	0.0%	0.0%	6.1%	91.9%	2.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	
% Total	1.9%	1.0%	3.4%	1.5%	0.0%	**7.7%**	0.0%	0.0%	4.3%	0.6%	1.1%	1.2%	0.0%	**7.2%**	0.0%	0.0%	2.9%	34.0%	5.6%	1.9%	0.0%	**44.4%**	0.0%	0.0%	2.5%	37.4%	0.8%	0.0%	0.0%	**40.7%**	0.0%	0.0%	
PHF	0.404	0.550	0.661	1.000	0.000	**0.885**	0.000	0.000	0.691	0.438	1.000	0.813	0.000	**0.705**	0.000	0.000	0.615	0.897	0.635	0.583	0.000	**0.889**	0.000	0.000	0.750	0.833	0.750	0.000	0.000	**0.845**	0.000	0.000	**0.896**
Lights	20	11	36	16	0	**83**	0	0	47	7	11	13	0	**78**	0	0	31	365	61	21	0	**478**	0	0	27	398	9	0	0	**434**	0	0	**1073**
% Lights	95.2%	100.0%	97.3%	100.0%	0.0%	**97.6%**	0.0%	0.0%	100.0%	100.0%	91.7%	100.0%	0.0%	**98.7%**	0.0%	0.0%	96.9%	97.9%	100.0%	100.0%	0.0%	**98.2%**	0.0%	0.0%	100.0%	97.1%	100.0%	0.0%	0.0%	**97.3%**	0.0%	0.0%	**97.8%**
HV	1	0	1	0	0	**2**	0	0	0	0	1	0	0	**1**	0	0	1	8	0	0	0	**9**	0	0	0	12	0	0	0	**12**	0	0	**24**
% HV	4.8%	0.0%	2.7%	0.0%	0.0%	**2.4%**	0.0%	0.0%	0.0%	0.0%	8.3%	0.0%	0.0%	**1.3%**	0.0%	0.0%	3.1%	2.1%	0.0%	0.0%	0.0%	**1.8%**	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	**2.7%**	0.0%	0.0%	**2.2%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	1
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

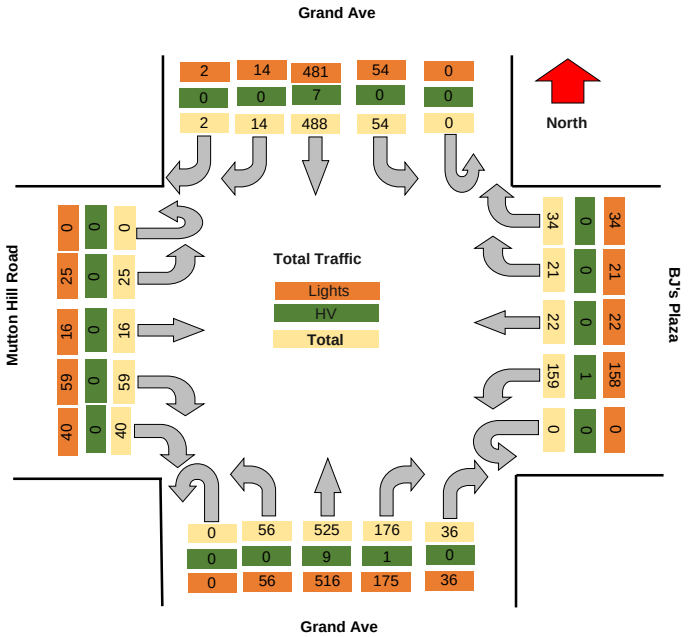


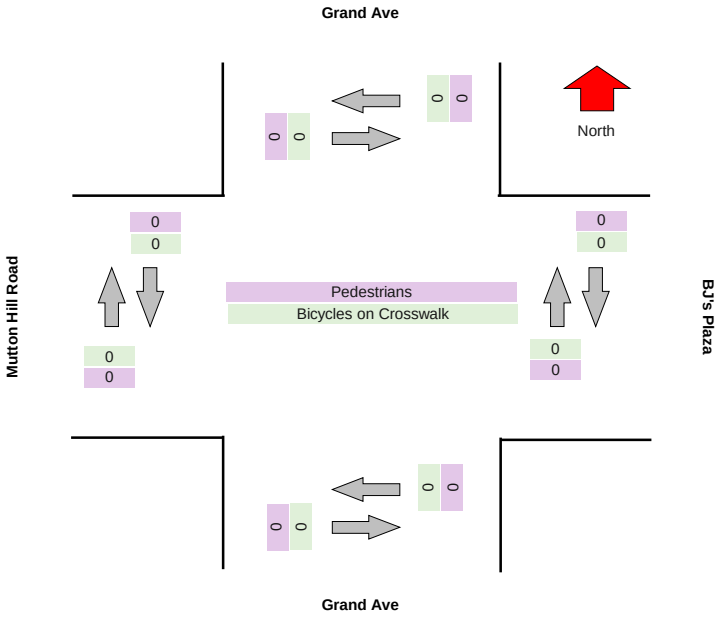


Turning Movement Peak Hour Data (MID)

12:00:00 PM

Leg	Mutton Hill Road								BJ's Plaza								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
12:00:00 PM	8	4	12	12	0	**36**	0	0	45	1	5	6	0	**57**	0	0	12	137	46	9	0	**204**	0	0	12	145	4	1	0	**162**	0	0	**459**
12:15:00 PM	4	5	13	5	0	**27**	0	0	39	12	7	10	0	**68**	0	0	11	140	46	9	0	**206**	0	0	9	104	7	0	0	**120**	0	0	**421**
12:30:00 PM	9	4	13	14	0	**40**	0	0	39	8	4	10	0	**61**	0	0	15	120	46	8	0	**189**	0	0	16	118	3	1	0	**138**	0	0	**428**
12:45:00 PM	4	3	21	9	0	**37**	0	0	36	1	5	8	0	**50**	0	0	18	128	38	10	0	**194**	0	0	17	121	0	0	0	**138**	0	0	**419**
Grand Total	25	16	59	40	0	**140**	0	0	159	22	21	34	0	**236**	0	0	56	525	176	36	0	**793**	0	0	54	488	14	2	0	**558**	0	0	**1727**
% Approach	17.9%	11.4%	42.1%	28.6%	0.0%	**0.0%**	0.0%	0.0%	67.4%	9.3%	8.9%	14.4%	0.0%	**0.0%**	0.0%	0.0%	7.1%	66.2%	22.2%	4.5%	0.0%	**0.0%**	0.0%	0.0%	9.7%	87.5%	2.5%	0.4%	0.0%	**0.0%**	0.0%	0.0%	
% Total	1.4%	0.9%	3.4%	2.3%	0.0%	**8.1%**	0.0%	0.0%	9.2%	1.3%	1.2%	2.0%	0.0%	**13.7%**	0.0%	0.0%	3.2%	30.4%	10.2%	2.1%	0.0%	**45.9%**	0.0%	0.0%	3.1%	28.3%	0.8%	0.1%	0.0%	**32.3%**	0.0%	0.0%	
PHF	0.694	0.800	0.702	0.714	0.000	**0.875**	0.000	0.000	0.883	0.458	0.750	0.850	0.000	**0.868**	0.000	0.000	0.778	0.938	0.957	0.900	0.000	**0.962**	0.000	0.000	0.794	0.841	0.500	0.500	0.000	**0.861**	0.000	0.000	**0.941**
Lights	25	16	59	40	0	**140**	0	0	158	22	21	34	0	**235**	0	0	56	516	175	36	0	**783**	0	0	54	481	14	2	0	**551**	0	0	**1709**
% Lights	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	99.4%	100.0%	100.0%	100.0%	0.0%	**99.6%**	0.0%	0.0%	100.0%	98.3%	99.4%	100.0%	0.0%	**98.7%**	0.0%	0.0%	100.0%	98.6%	100.0%	100.0%	0.0%	**98.7%**	0.0%	0.0%	**99.0%**
HV	0	0	0	0	0	**0**	0	0	1	0	0	0	0	**1**	0	0	0	9	1	0	0	**10**	0	0	0	7	0	0	0	**7**	0	0	**18**
% HV	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	**0.4%**	0.0%	0.0%	0.0%	1.7%	0.6%	0.0%	0.0%	**1.3%**	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	**1.3%**	0.0%	0.0%	**1.0%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

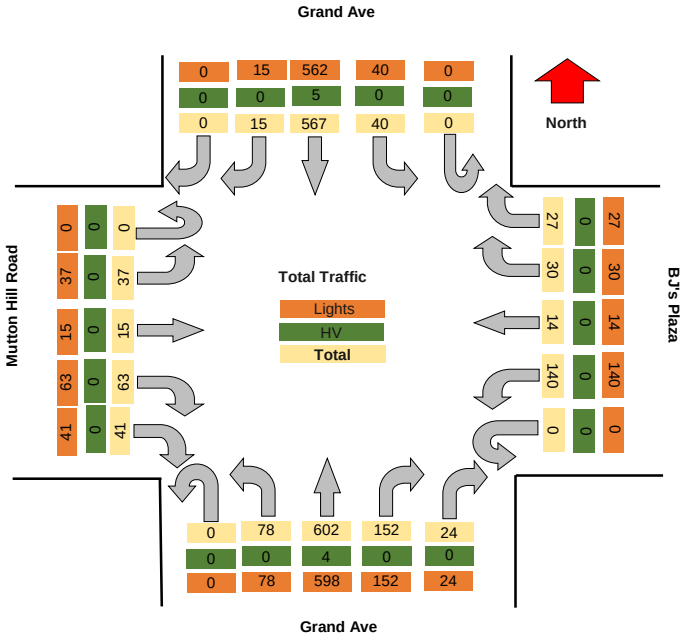


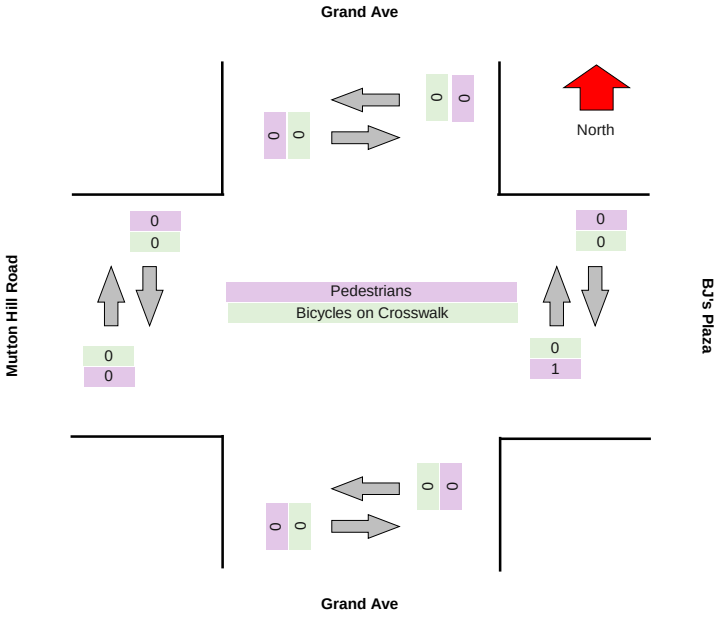


Turning Movement Peak Hour Data (PM)

4:00:00 PM

Leg	Mutton Hill Road								BJ's Plaza								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
4:00:00 PM	8	3	23	14	0	**48**	0	0	33	8	6	7	0	**54**	0	0	20	167	38	4	0	**229**	0	0	8	143	8	0	0	**159**	0	0	**490**
4:15:00 PM	11	5	20	13	0	**49**	0	0	31	2	10	5	0	**48**	0	1	22	165	31	6	0	**224**	0	0	13	124	3	0	0	**140**	0	0	**461**
4:30:00 PM	13	4	11	8	0	**36**	0	0	43	2	7	9	0	**61**	0	0	19	125	38	7	0	**189**	0	0	11	137	1	0	0	**149**	0	0	**435**
4:45:00 PM	5	3	9	6	0	**23**	0	0	33	2	7	6	0	**48**	0	0	17	145	45	7	0	**214**	0	0	8	163	3	0	0	**174**	0	0	**459**
Grand Total	37	15	63	41	0	**156**	0	0	140	14	30	27	0	**211**	0	1	78	602	152	24	0	**856**	0	0	40	567	15	0	0	**622**	0	0	**1845**
% Approach	23.7%	9.6%	40.4%	26.3%	0.0%	**0.0%**	0.0%	0.0%	66.4%	6.6%	14.2%	12.8%	0.0%	**0.0%**	0.0%	0.0%	9.1%	70.3%	17.8%	2.8%	0.0%	**0.0%**	0.0%	0.0%	6.4%	91.2%	2.4%	0.0%	0.0%	**0.0%**	0.0%	0.0%	
% Total	2.0%	0.8%	3.4%	2.2%	0.0%	**8.5%**	0.0%	0.0%	7.6%	0.8%	1.6%	1.5%	0.0%	**11.4%**	0.0%	0.0%	4.2%	32.6%	8.2%	1.3%	0.0%	**46.4%**	0.0%	0.0%	2.2%	30.7%	0.8%	0.0%	0.0%	**33.7%**	0.0%	0.0%	
PHF	0.712	0.750	0.685	0.732	0.000	**0.796**	0.000	0.000	0.814	0.438	0.750	0.750	0.000	**0.865**	0.000	0.000	0.886	0.901	0.844	0.857	0.000	**0.934**	0.000	0.000	0.769	0.870	0.469	0.000	0.000	**0.894**	0.000	0.000	**0.941**
Lights	37	15	63	41	0	**156**	0	0	140	14	30	27	0	**211**	0	0	78	598	152	24	0	**852**	0	0	40	562	15	0	0	**617**	0	0	**1836**
% Lights	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	99.3%	100.0%	100.0%	0.0%	**99.5%**	0.0%	0.0%	100.0%	99.1%	100.0%	0.0%	0.0%	**99.2%**	0.0%	0.0%	**99.5%**
HV	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	4	0	0	0	**4**	0	0	0	5	0	0	0	**5**	0	0	**9**
% HV	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	**0.5%**	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	**0.8%**	0.0%	0.0%	**0.5%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	1
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**





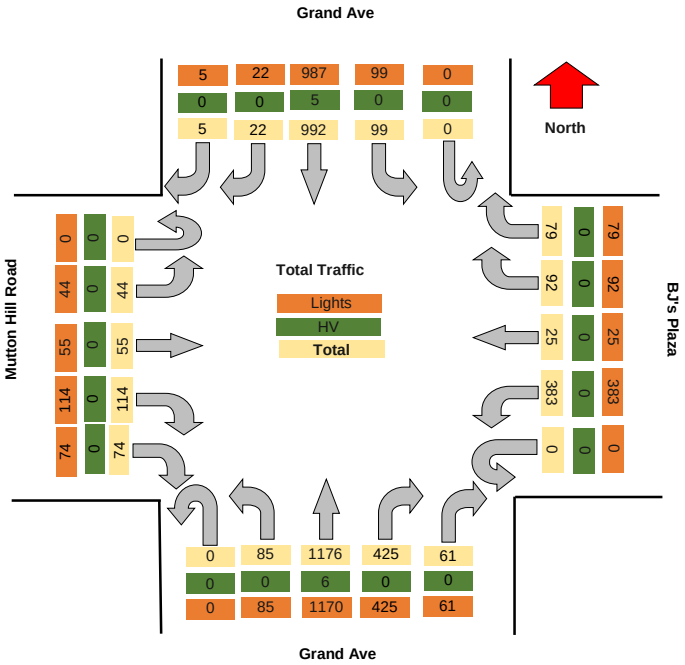
Project	GTS
Project Code	12290
Site Name	12290-1 - Grand Ave & Mutton
Legs and Movements	All Processed Legs & Moveme
Bin Size	15 minutes
Survey Date	2025/11/22, Saturday
Location	Grand Ave & Mutton Hill Road/
Latitude and Longitude	42.956917, -76.542750

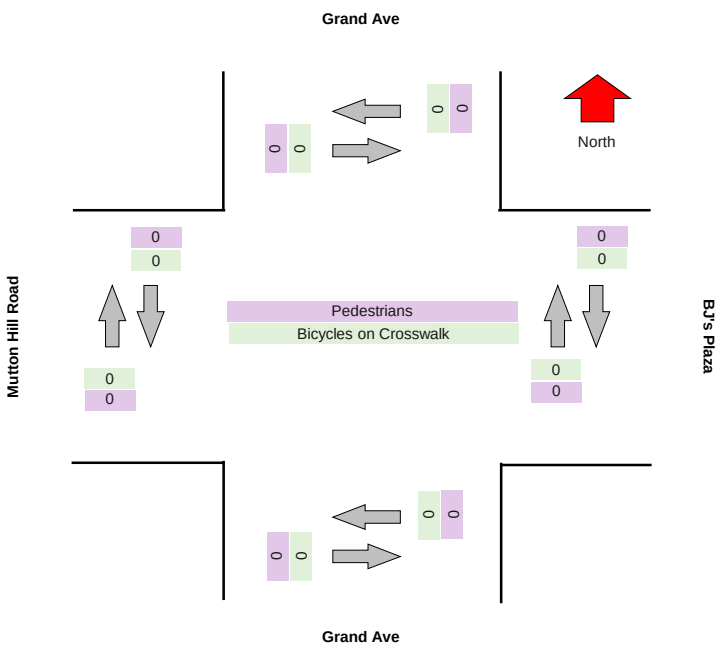
	Start	End	PHF
MID Peak	2025/11/22 11:45:00	2025/11/22 12:45:00	0.92

Turning Movement Data

Leg	Mutton Hill Road								BJ's Plaza								Grand Ave								Grand Ave								
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	**Total**
11:00:00 AM	5	7	8	8	0	**28**	0	0	42	3	8	13	0	**66**	0	0	9	113	38	12	0	**172**	0	0	10	111	6	0	0	**127**	0	0	**393**
11:15:00 AM	5	10	13	10	0	**38**	0	0	42	0	10	6	0	**58**	0	0	15	132	47	4	0	**198**	0	0	14	132	0	0	0	**146**	0	0	**440**
11:30:00 AM	5	6	29	9	0	**49**	0	0	53	2	7	13	0	**75**	0	0	8	155	61	2	0	**226**	0	0	13	148	5	0	0	**166**	0	0	**516**
11:45:00 AM	8	10	20	9	0	**47**	0	0	37	3	13	7	0	**60**	0	0	11	147	59	6	0	**223**	0	0	16	128	0	0	0	**144**	0	0	**474**
Hourly Total	23	33	70	36	0	**162**	0	0	174	8	38	39	0	**259**	0	0	43	547	205	24	0	**819**	0	0	53	519	11	0	0	**583**	0	0	**1823**
12:00:00 PM	7	9	16	11	0	**43**	0	0	64	8	19	10	0	**101**	0	0	14	162	57	6	0	**239**	0	0	11	138	2	2	0	**153**	0	0	**536**
12:15:00 PM	6	6	7	10	0	**29**	0	0	58	1	16	12	0	**87**	0	0	13	163	58	9	0	**243**	0	0	5	108	4	0	0	**117**	0	0	**476**
12:30:00 PM	5	5	15	6	0	**31**	0	0	35	6	10	9	0	**60**	0	0	7	179	54	9	0	**249**	0	0	20	114	1	2	0	**137**	0	0	**477**
12:45:00 PM	3	2	6	11	0	**22**	0	0	52	2	9	9	0	**72**	0	0	8	125	51	13	0	**197**	0	0	10	113	4	1	0	**128**	0	0	**419**
Hourly Total	21	22	44	38	0	**125**	0	0	209	17	54	40	0	**320**	0	0	42	629	220	37	0	**928**	0	0	46	473	11	5	0	**535**	0	0	**1908**
Grand Total	44	55	114	74	0	**287**	0	0	383	25	92	79	0	**579**	0	0	85	1176	425	61	0	**1747**	0	0	99	992	22	5	0	**1118**	0	0	**3731**
% Approach	15.3%	19.2%	39.7%	25.8%	0.0%	**0.0%**	0.0%	0.0%	66.1%	4.3%	15.9%	13.6%	0.0%	**0.0%**	0.0%	0.0%	4.9%	67.3%	24.3%	3.5%	0.0%	**0.0%**	0.0%	0.0%	8.9%	88.7%	2.0%	0.4%	0.0%	**0.0%**	0.0%	0.0%	
% Total	1.2%	1.5%	3.1%	2.0%	0.0%	**7.7%**	0.0%	0.0%	10.3%	0.7%	2.5%	2.1%	0.0%	**15.5%**	0.0%	0.0%	2.3%	31.5%	11.4%	1.6%	0.0%	**46.8%**	0.0%	0.0%	2.7%	26.6%	0.6%	0.1%	0.0%	**30.0%**	0.0%	0.0%	
Lights	44	55	114	74	0	**287**	0	0	383	25	92	79	0	**579**	0	0	85	1170	425	61	0	**1741**	0	0	99	987	22	5	0	**1113**	0	0	**3720**
% Lights	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	99.5%	100.0%	100.0%	0.0%	**99.7%**	0.0%	0.0%	100.0%	99.5%	100.0%	100.0%	0.0%	**99.6%**	0.0%	0.0%	**99.7%**
Hv	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	6	0	0	0	**6**	0	0	0	5	0	0	0	**5**	0	0	**11**
% HV	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	**0.3%**	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	**0.4%**	0.0%	0.0%	**0.3%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

Turning Movement Data Plot

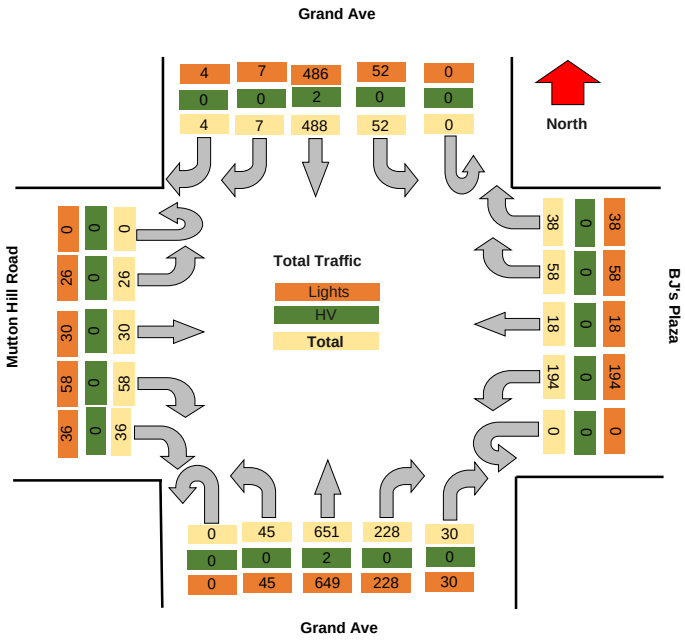


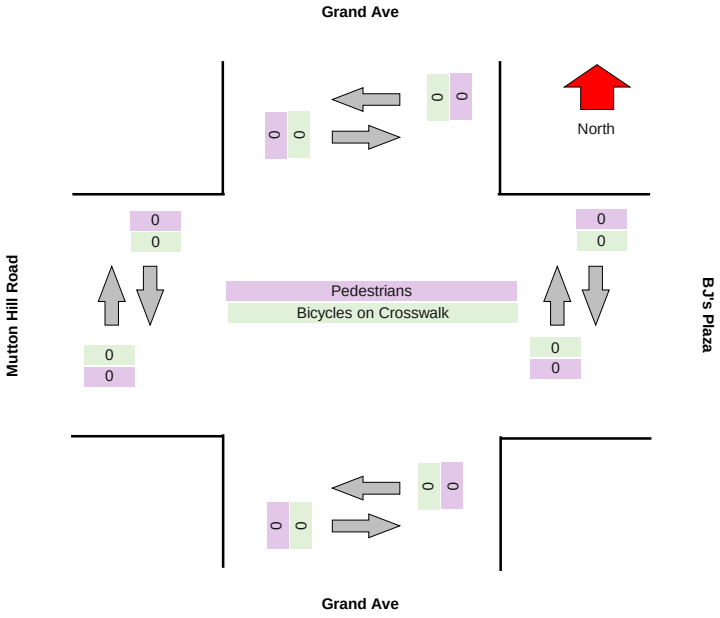


Turning Movement Peak Hour Data (MID)

11:45:00 AM

Leg	Mutton Hill Road								BJ's Plaza								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
11:45:00 AM	8	10	20	9	0	**47**	0	0	37	3	13	7	0	**60**	0	0	11	147	59	6	0	**223**	0	0	16	128	0	0	0	**144**	0	0	**474**
12:00:00 PM	7	9	16	11	0	**43**	0	0	64	8	19	10	0	**101**	0	0	14	162	57	6	0	**239**	0	0	11	138	2	2	0	**153**	0	0	**536**
12:15:00 PM	6	6	7	10	0	**29**	0	0	58	1	16	12	0	**87**	0	0	13	163	58	9	0	**243**	0	0	5	108	4	0	0	**117**	0	0	**476**
12:30:00 PM	5	5	15	6	0	**31**	0	0	35	6	10	9	0	**60**	0	0	7	179	54	9	0	**249**	0	0	20	114	1	2	0	**137**	0	0	**477**
Grand Total	26	30	58	36	0	**150**	0	0	194	18	58	38	0	**308**	0	0	45	651	228	30	0	**954**	0	0	52	488	7	4	0	**551**	0	0	**1963**
% Approach	17.3%	20.0%	38.7%	24.0%	0.0%	**0.0%**	0.0%	0.0%	63.0%	5.8%	18.8%	12.3%	0.0%	**0.0%**	0.0%	0.0%	4.7%	68.2%	23.9%	3.1%	0.0%	**0.0%**	0.0%	0.0%	9.4%	88.6%	1.3%	0.7%	0.0%	**0.0%**	0.0%	0.0%	
% Total	1.3%	1.5%	3.0%	1.8%	0.0%	**7.6%**	0.0%	0.0%	9.9%	0.9%	3.0%	1.9%	0.0%	**15.7%**	0.0%	0.0%	2.3%	33.2%	11.6%	1.5%	0.0%	**48.6%**	0.0%	0.0%	2.6%	24.9%	0.4%	0.2%	0.0%	**28.1%**	0.0%	0.0%	
PHF	0.813	0.750	0.725	0.818	0.000	**0.798**	0.000	0.000	0.758	0.563	0.763	0.792	0.000	**0.762**	0.000	0.000	0.804	0.909	0.966	0.833	0.000	**0.958**	0.000	0.000	0.650	0.884	0.438	0.500	0.000	**0.900**	0.000	0.000	**0.916**
Lights	26	30	58	36	0	**150**	0	0	194	18	58	38	0	**308**	0	0	45	649	228	30	0	**952**	0	0	52	486	7	4	0	**549**	0	0	**1959**
% Lights	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	99.7%	100.0%	100.0%	0.0%	**99.8%**	0.0%	0.0%	100.0%	99.6%	100.0%	100.0%	0.0%	**99.6%**	0.0%	0.0%	**99.8%**
HV	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	2	0	0	0	**2**	0	0	0	2	0	0	0	**2**	0	0	**4**
% HV	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	**0.2%**	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	**0.4%**	0.0%	0.0%	**0.2%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**





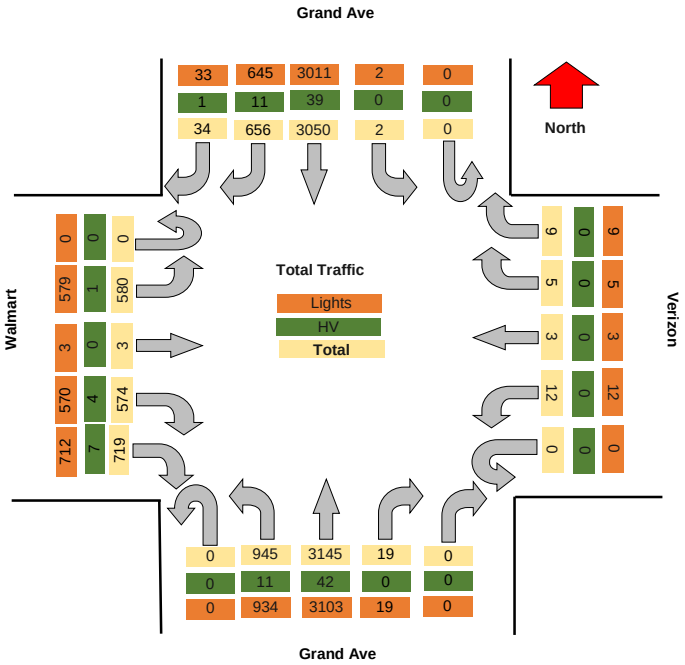
Project	GTS
Project Code	12290
Site Name	12290-2 - Grand Ave & Walma
Legs and Movements	All Processed Legs & Moveme
Bin Size	15 minutes
Survey Date	2025/11/20, Thursday
Location	Grand Ave & Walmart/Verizon
Latitude and Longitude	42.954667, -76.544139

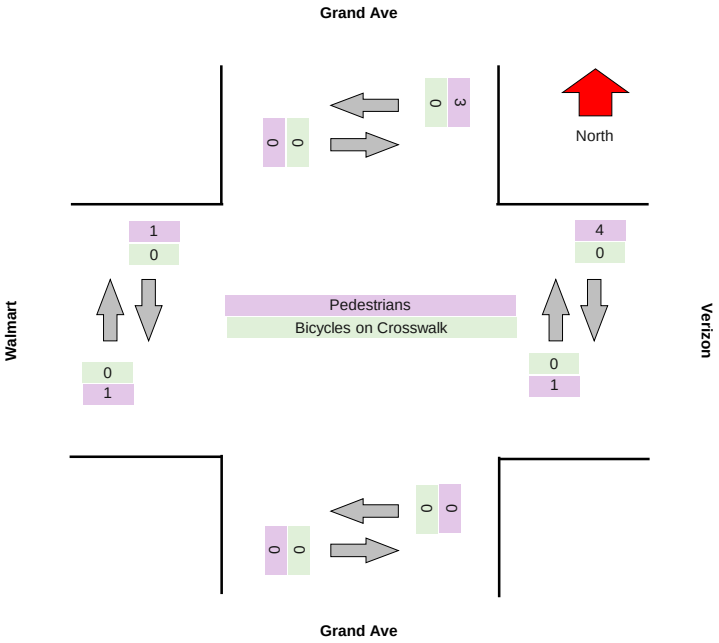
	Start	End	PHF
AM Peak	2025/11/20 08:00:00	2025/11/20 09:00:00	0.86
MID Peak	2025/11/20 12:00:00	2025/11/20 13:00:00	0.96
PM Peak	2025/11/20 16:00:00	2025/11/20 17:00:00	0.97

Turning Movement Data

Leg	Walmart								Verizon								Grand Ave								Grand Ave								
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Total
7:00:00 AM	9	0	5	15	0	**29**	0	0	0	0	0	0	0	**0**	0	0	14	74	0	0	0	**88**	0	0	0	71	13	0	0	**84**	0	0	**201**
7:15:00 AM	7	0	7	12	0	**26**	0	0	0	0	0	0	0	**0**	0	0	21	103	0	0	0	**124**	0	0	0	78	17	2	0	**97**	0	0	**247**
7:30:00 AM	9	0	3	19	0	**31**	0	0	0	0	0	0	0	**0**	0	0	29	103	0	0	0	**132**	0	0	0	72	9	0	0	**81**	0	0	**244**
7:45:00 AM	16	0	2	20	0	**38**	0	0	0	0	0	0	0	**0**	0	0	21	113	0	0	0	**134**	0	0	0	104	18	0	0	**122**	0	0	**294**
Hourly Total	41	0	17	66	0	**124**	0	0	0	0	0	0	0	**0**	0	0	85	393	0	0	0	**478**	0	0	0	325	57	2	0	**384**	0	0	**986**
8:00:00 AM	9	0	3	22	0	**34**	0	0	0	0	0	0	0	**0**	0	0	25	97	0	0	0	**122**	0	0	0	106	12	0	0	**118**	0	0	**274**
8:15:00 AM	6	0	6	18	0	**30**	0	0	0	0	0	0	0	**0**	0	0	23	109	0	0	0	**132**	0	0	0	79	16	0	0	**95**	0	0	**257**
8:30:00 AM	7	0	14	21	0	**42**	0	0	0	0	0	0	0	**0**	0	0	25	96	0	0	0	**121**	0	0	0	107	23	3	0	**133**	0	0	**296**
8:45:00 AM	8	0	17	27	0	**52**	0	0	0	0	0	0	0	**0**	0	0	33	108	1	0	0	**142**	0	0	0	123	22	2	0	**147**	0	0	**341**
Hourly Total	30	0	40	88	0	**158**	0	0	0	0	0	0	0	**0**	0	0	106	410	1	0	0	**517**	0	0	0	415	73	5	0	**493**	0	0	**1168**
11:00:00 AM	34	0	37	36	0	**107**	0	0	0	0	0	1	0	**1**	0	0	47	125	1	0	0	**173**	0	0	0	125	32	0	0	**157**	0	0	**438**
11:15:00 AM	36	0	31	36	0	**103**	0	0	3	0	0	0	0	**3**	0	1	54	139	2	0	0	**195**	0	0	0	148	45	1	0	**194**	0	0	**495**
11:30:00 AM	29	0	27	42	0	**98**	0	0	2	0	0	1	0	**3**	0	0	43	126	2	0	0	**171**	0	0	0	143	35	0	0	**178**	0	0	**450**
11:45:00 AM	35	0	27	31	0	**93**	0	0	2	0	1	0	0	**3**	0	0	47	138	0	0	0	**185**	0	0	0	138	41	1	0	**180**	0	1	**461**
Hourly Total	134	0	122	145	0	**401**	0	0	7	0	1	2	0	**10**	0	1	191	528	5	0	0	**724**	0	0	0	554	153	2	0	**709**	0	1	**1844**
12:00:00 PM	25	0	31	33	0	**89**	1	1	0	0	0	1	0	**1**	1	0	58	154	2	0	0	**214**	0	0	0	161	44	1	0	**206**	0	0	**510**
12:15:00 PM	37	0	41	49	0	**127**	0	0	1	1	0	1	0	**3**	0	0	44	166	3	0	0	**213**	0	0	0	115	34	0	0	**149**	0	0	**492**
12:30:00 PM	25	0	26	27	0	**78**	0	0	0	0	0	0	0	**0**	2	0	45	140	2	0	0	**187**	0	0	0	150	38	2	0	**190**	0	0	**455**
12:45:00 PM	32	0	35	37	0	**104**	0	0	1	0	0	1	0	**2**	0	0	72	149	0	0	0	**221**	0	0	0	133	37	0	0	**170**	0	2	**497**
Hourly Total	119	0	133	146	0	**398**	1	1	2	1	0	3	0	**6**	3	0	219	609	7	0	0	**835**	0	0	0	559	153	3	0	**715**	0	2	**1954**
4:00:00 PM	39	0	39	27	0	**105**	0	0	0	1	0	0	0	**1**	0	0	49	179	2	0	0	**230**	0	0	0	160	33	6	0	**199**	0	0	**535**
4:15:00 PM	33	0	38	35	0	**106**	0	0	0	0	1	0	0	**1**	0	0	61	177	0	0	0	**238**	0	0	2	139	30	6	0	**177**	0	0	**522**
4:30:00 PM	33	0	40	44	0	**117**	0	0	1	1	2	0	0	**4**	0	0	44	147	0	0	0	**191**	0	0	0	171	31	2	0	**204**	0	0	**516**
4:45:00 PM	31	0	34	37	0	**102**	0	0	1	0	0	0	0	**1**	0	0	47	162	0	0	0	**209**	0	0	0	159	37	2	0	**198**	0	0	**510**
Hourly Total	136	0	151	143	0	**430**	0	0	2	2	3	0	0	**7**	0	0	201	665	2	0	0	**868**	0	0	2	629	131	16	0	**778**	0	0	**2083**
5:00:00 PM	37	2	27	33	0	**99**	0	0	0	0	0	1	0	**1**	1	0	31	143	0	0	0	**174**	0	0	0	157	32	1	0	**190**	0	0	**464**
5:15:00 PM	32	0	34	30	0	**96**	0	0	0	0	1	1	0	**2**	0	0	30	152	3	0	0	**185**	0	0	0	153	24	1	0	**178**	0	0	**461**
5:30:00 PM	24	0	25	31	0	**80**	0	0	0	0	0	0	0	**0**	0	0	39	130	0	0	0	**169**	0	0	0	137	18	2	0	**157**	0	0	**406**
5:45:00 PM	27	1	25	37	0	**90**	0	0	1	0	0	2	0	**3**	0	0	43	115	1	0	0	**159**	0	0	0	121	15	2	0	**138**	0	0	**390**
Hourly Total	120	3	111	131	0	**365**	0	0	1	0	1	4	0	**6**	1	0	143	540	4	0	0	**687**	0	0	0	568	89	6	0	**663**	0	0	**1721**
Grand Total	580	3	574	719	0	**1876**	1	1	12	3	5	9	0	**29**	4	1	945	3145	19	0	0	**4109**	0	0	2	3050	656	34	0	**3742**	0	3	**9756**
% Approach	30.9%	0.2%	30.6%	38.3%	0.0%	**0.0%**	0.0%	0.0%	41.4%	10.3%	17.2%	31.0%	0.0%	**0.0%**	0.0%	0.0%	23.0%	76.5%	0.5%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.1%	81.5%	17.5%	0.9%	0.0%	**0.0%**	0.0%	0.0%	
% Total	5.9%	0.0%	5.9%	7.4%	0.0%	**19.2%**	0.0%	0.0%	0.1%	0.0%	0.1%	0.1%	0.0%	**0.3%**	0.0%	0.0%	9.7%	32.2%	0.2%	0.0%	0.0%	**42.1%**	0.0%	0.0%	0.0%	31.3%	6.7%	0.3%	0.0%	**38.4%**	0.0%	0.0%	
Lights	579	3	570	712	0	**1864**	0	0	12	3	5	9	0	**29**	0	0	934	3103	19	0	0	**4056**	0	0	2	3011	645	33	0	**3691**	0	0	**9640**
% Lights	99.8%	100.0%	99.3%	99.0%	0.0%	**99.4%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	98.8%	98.7%	100.0%	0.0%	0.0%	**98.7%**	0.0%	0.0%	100.0%	98.7%	98.3%	97.1%	0.0%	**98.6%**	0.0%	0.0%	**98.8%**
Hv	1	0	4	7	0	**12**	0	0	0	0	0	0	0	**0**	0	0	11	42	0	0	0	**53**	0	0	0	39	11	1	0	**51**	0	0	**116**
% HV	0.2%	0.0%	0.7%	1.0%	0.0%	**0.6%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	1.2%	1.3%	0.0%	0.0%	0.0%	**1.3%**	0.0%	0.0%	0.0%	1.3%	1.7%	2.9%	0.0%	**1.4%**	0.0%	0.0%	**1.2%**
Pedestrians	0	0	0	0	0	**0**	1	1	0	0	0	0	0	**0**	4	1	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	3	10
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

Turning Movement Data Plot

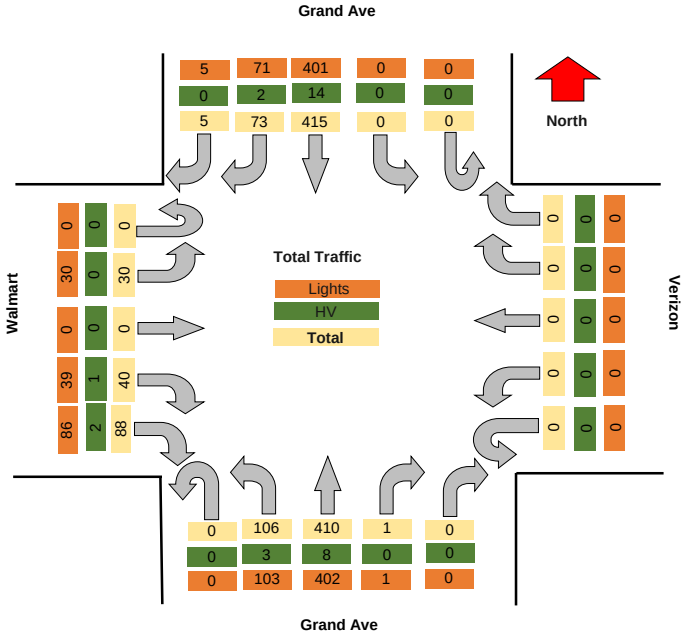


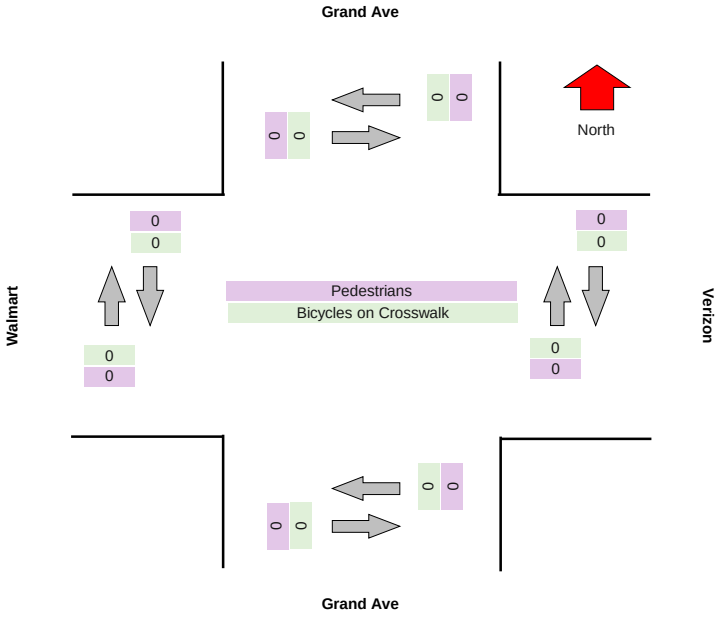


Turning Movement Peak Hour Data (AM)

8:00:00 AM

Leg	Walmart								Verizon								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
8:00:00 AM	9	0	3	22	0	**34**	0	0	0	0	0	0	0	**0**	0	0	25	97	0	0	0	**122**	0	0	0	106	12	0	0	**118**	0	0	**274**
8:15:00 AM	6	0	6	18	0	**30**	0	0	0	0	0	0	0	**0**	0	0	23	109	0	0	0	**132**	0	0	0	79	16	0	0	**95**	0	0	**257**
8:30:00 AM	7	0	14	21	0	**42**	0	0	0	0	0	0	0	**0**	0	0	25	96	0	0	0	**121**	0	0	0	107	23	3	0	**133**	0	0	**296**
8:45:00 AM	8	0	17	27	0	**52**	0	0	0	0	0	0	0	**0**	0	0	33	108	1	0	0	**142**	0	0	0	123	22	2	0	**147**	0	0	**341**
Grand Total	30	0	40	88	0	**158**	0	0	0	0	0	0	0	**0**	0	0	106	410	1	0	0	**517**	0	0	0	415	73	5	0	**493**	0	0	**1168**
% Approach	19.0%	0.0%	25.3%	55.7%	0.0%	**0.0%**	0.0%	0.0%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	**0.0%**	0.0%	0.0%	20.5%	79.3%	0.2%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	84.2%	14.8%	1.0%	0.0%	**0.0%**	0.0%	0.0%	
% Total	2.6%	0.0%	3.4%	7.5%	0.0%	**13.5%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	9.1%	35.1%	0.1%	0.0%	0.0%	**44.3%**	0.0%	0.0%	0.0%	35.5%	6.3%	0.4%	0.0%	**42.2%**	0.0%	0.0%	
PHF	0.833	0.000	0.588	0.815	0.000	**0.760**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.803	0.940	0.250	0.000	0.000	**0.910**	0.000	0.000	0.000	0.843	0.793	0.417	0.000	**0.838**	0.000	0.000	**0.856**
Lights	30	0	39	86	0	**155**	0	0	0	0	0	0	0	**0**	0	0	103	402	1	0	0	**506**	0	0	0	401	71	5	0	**477**	0	0	**1138**
% Lights	100.0%	0.0%	97.5%	97.7%	0.0%	**98.1%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	97.2%	98.0%	100.0%	0.0%	0.0%	**97.9%**	0.0%	0.0%	0.0%	96.6%	97.3%	100.0%	0.0%	**96.8%**	0.0%	0.0%	**97.4%**
HV	0	0	1	2	0	**3**	0	0	0	0	0	0	0	**0**	0	0	3	8	0	0	0	**11**	0	0	0	14	2	0	0	**16**	0	0	**30**
% HV	0.0%	0.0%	2.5%	2.3%	0.0%	**1.9%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	2.8%	2.0%	0.0%	0.0%	0.0%	**2.1%**	0.0%	0.0%	0.0%	3.4%	2.7%	0.0%	0.0%	**3.2%**	0.0%	0.0%	**2.6%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

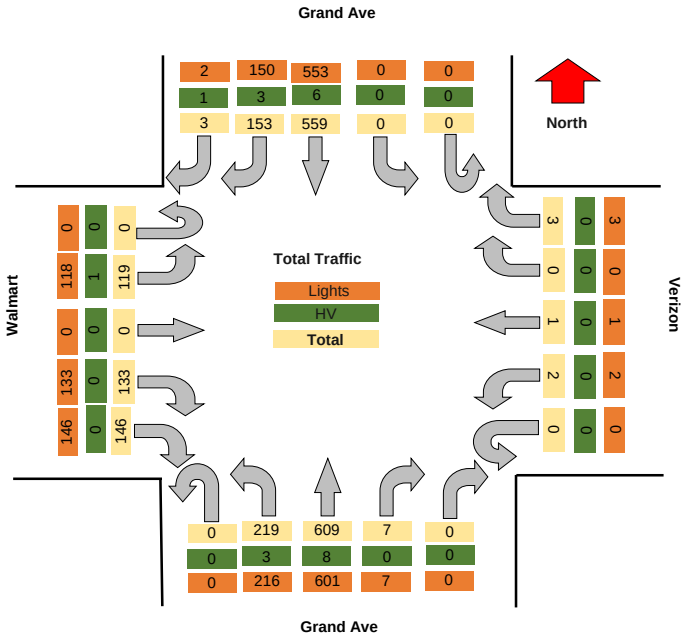


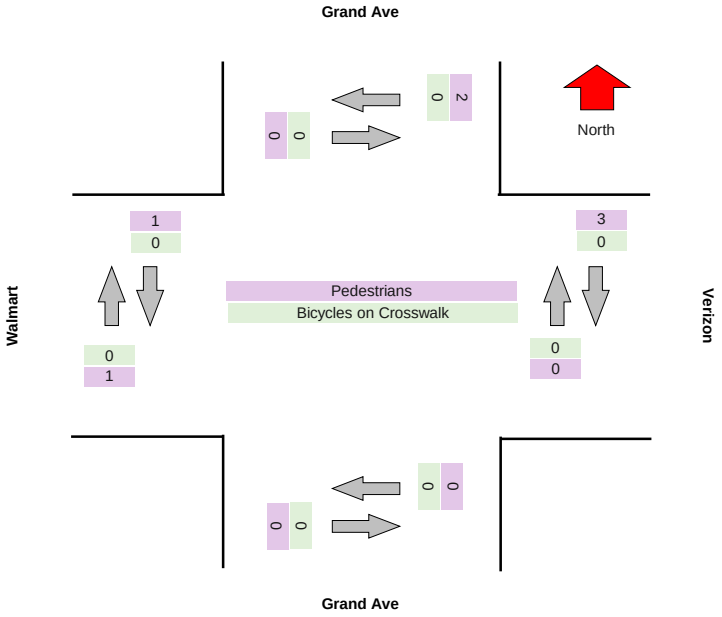


Turning Movement Peak Hour Data (MID)

12:00:00 PM

Leg	Walmart								Verizon								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
12:00:00 PM	25	0	31	33	0	**89**	1	1	0	0	0	1	0	**1**	1	0	58	154	2	0	0	**214**	0	0	0	161	44	1	0	**206**	0	0	**510**
12:15:00 PM	37	0	41	49	0	**127**	0	0	1	1	0	1	0	**3**	0	0	44	166	3	0	0	**213**	0	0	0	115	34	0	0	**149**	0	0	**492**
12:30:00 PM	25	0	26	27	0	**78**	0	0	0	0	0	0	0	**0**	2	0	45	140	2	0	0	**187**	0	0	0	150	38	2	0	**190**	0	0	**455**
12:45:00 PM	32	0	35	37	0	**104**	0	0	1	0	0	1	0	**2**	0	0	72	149	0	0	0	**221**	0	0	0	133	37	0	0	**170**	0	2	**497**
Grand Total	119	0	133	146	0	**398**	1	1	2	1	0	3	0	**6**	3	0	219	609	7	0	0	**835**	0	0	0	559	153	3	0	**715**	0	2	**1954**
% Approach	29.9%	0.0%	33.4%	36.7%	0.0%	**0.0%**	0.0%	0.0%	33.3%	16.7%	0.0%	50.0%	0.0%	**0.0%**	0.0%	0.0%	26.2%	72.9%	0.8%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	78.2%	21.4%	0.4%	0.0%	**0.0%**	0.0%	0.0%	
% Total	6.1%	0.0%	6.8%	7.5%	0.0%	**20.4%**	0.0%	0.0%	0.1%	0.1%	0.0%	0.2%	0.0%	**0.3%**	0.0%	0.0%	11.2%	31.2%	0.4%	0.0%	0.0%	**42.7%**	0.0%	0.0%	0.0%	28.6%	7.8%	0.2%	0.0%	**36.6%**	0.0%	0.0%	
PHF	0.804	0.000	0.811	0.745	0.000	**0.783**	0.000	0.000	0.500	0.250	0.000	0.750	0.000	**0.500**	0.000	0.000	0.760	0.917	0.583	0.000	0.000	**0.945**	0.000	0.000	0.000	0.868	0.869	0.375	0.000	**0.868**	0.000	0.000	**0.958**
Lights	118	0	133	146	0	**397**	0	0	2	1	0	3	0	**6**	0	0	216	601	7	0	0	**824**	0	0	0	553	150	2	0	**705**	0	0	**1932**
% Lights	99.2%	0.0%	100.0%	100.0%	0.0%	**99.7%**	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	98.6%	98.7%	100.0%	0.0%	0.0%	**98.7%**	0.0%	0.0%	0.0%	98.9%	98.0%	66.7%	0.0%	**98.6%**	0.0%	0.0%	**98.9%**
HV	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	3	8	0	0	0	**11**	0	0	0	6	3	1	0	**10**	0	0	**22**
% HV	0.8%	0.0%	0.0%	0.0%	0.0%	**0.3%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	1.4%	1.3%	0.0%	0.0%	0.0%	**1.3%**	0.0%	0.0%	0.0%	1.1%	2.0%	33.3%	0.0%	**1.4%**	0.0%	0.0%	**1.1%**
Pedestrians	0	0	0	0	0	**0**	1	1	0	0	0	0	0	**0**	3	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	2	7
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

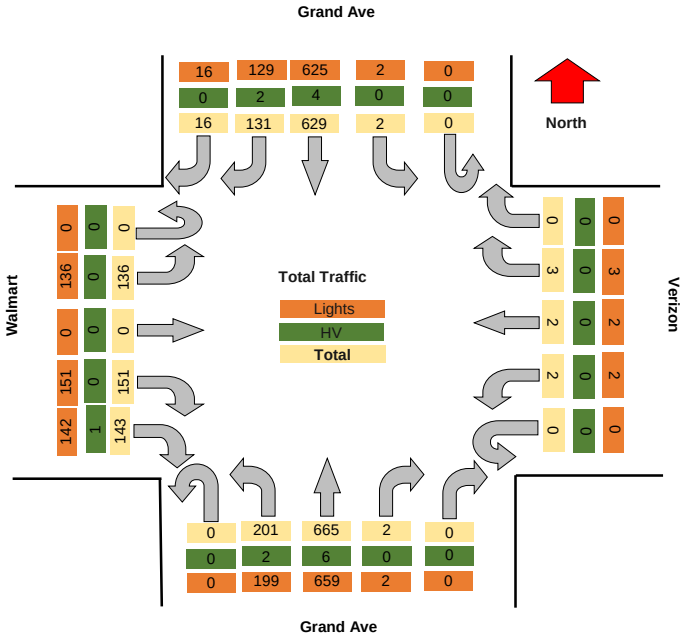


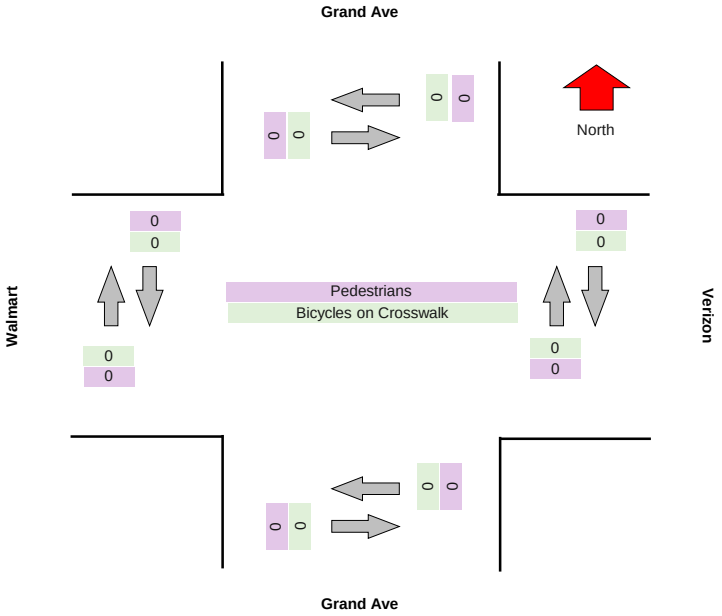


Turning Movement Peak Hour Data (PM)

4:00:00 PM

Leg	Walmart								Verizon								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
4:00:00 PM	39	0	39	27	0	**105**	0	0	0	1	0	0	0	**1**	0	0	49	179	2	0	0	**230**	0	0	0	160	33	6	0	**199**	0	0	**535**
4:15:00 PM	33	0	38	35	0	**106**	0	0	0	0	1	0	0	**1**	0	0	61	177	0	0	0	**238**	0	0	2	139	30	6	0	**177**	0	0	**522**
4:30:00 PM	33	0	40	44	0	**117**	0	0	1	1	2	0	0	**4**	0	0	44	147	0	0	0	**191**	0	0	0	171	31	2	0	**204**	0	0	**516**
4:45:00 PM	31	0	34	37	0	**102**	0	0	1	0	0	0	0	**1**	0	0	47	162	0	0	0	**209**	0	0	0	159	37	2	0	**198**	0	0	**510**
Grand Total	136	0	151	143	0	**430**	0	0	2	2	3	0	0	**7**	0	0	201	665	2	0	0	**868**	0	0	2	629	131	16	0	**778**	0	0	**2083**
% Approach	31.6%	0.0%	35.1%	33.3%	0.0%	**0.0%**	0.0%	0.0%	28.6%	28.6%	42.9%	0.0%	0.0%	**0.0%**	0.0%	0.0%	23.2%	76.6%	0.2%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.3%	80.8%	16.8%	2.1%	0.0%	**0.0%**	0.0%	0.0%	
% Total	6.5%	0.0%	7.2%	6.9%	0.0%	**20.6%**	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	**0.3%**	0.0%	0.0%	9.6%	31.9%	0.1%	0.0%	0.0%	**41.7%**	0.0%	0.0%	0.1%	30.2%	6.3%	0.8%	0.0%	**37.3%**	0.0%	0.0%	
PHF	0.872	0.000	0.944	0.813	0.000	**0.919**	0.000	0.000	0.500	0.500	0.375	0.000	0.000	**0.438**	0.000	0.000	0.824	0.929	0.250	0.000	0.000	**0.912**	0.000	0.000	0.250	0.920	0.885	0.667	0.000	**0.953**	0.000	0.000	**0.973**
Lights	136	0	151	142	0	**429**	0	0	2	2	3	0	0	**7**	0	0	199	659	2	0	0	**860**	0	0	2	625	129	16	0	**772**	0	0	**2068**
% Lights	100.0%	0.0%	100.0%	99.3%	0.0%	**99.8%**	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	99.0%	99.1%	100.0%	0.0%	0.0%	**99.1%**	0.0%	0.0%	100.0%	99.4%	98.5%	100.0%	0.0%	**99.2%**	0.0%	0.0%	**99.3%**
HV	0	0	0	1	0	**1**	0	0	0	0	0	0	0	**0**	0	0	2	6	0	0	0	**8**	0	0	0	4	2	0	0	**6**	0	0	**15**
% HV	0.0%	0.0%	0.0%	0.7%	0.0%	**0.2%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	1.0%	0.9%	0.0%	0.0%	0.0%	**0.9%**	0.0%	0.0%	0.0%	0.6%	1.5%	0.0%	0.0%	**0.8%**	0.0%	0.0%	**0.7%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**





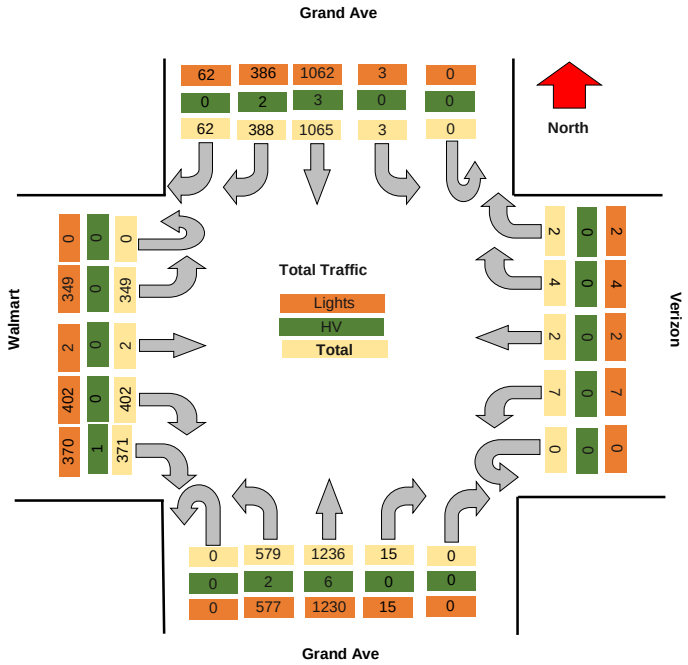
Project	GTS
Project Code	12290
Site Name	12290-2 - Grand Ave & Walma
Legs and Movements	All Processed Legs & Moveme
Bin Size	15 minutes
Survey Date	2025/11/22, Saturday
Location	Grand Ave & Walmart/Verizon
Latitude and Longitude	42.954667, -76.544139

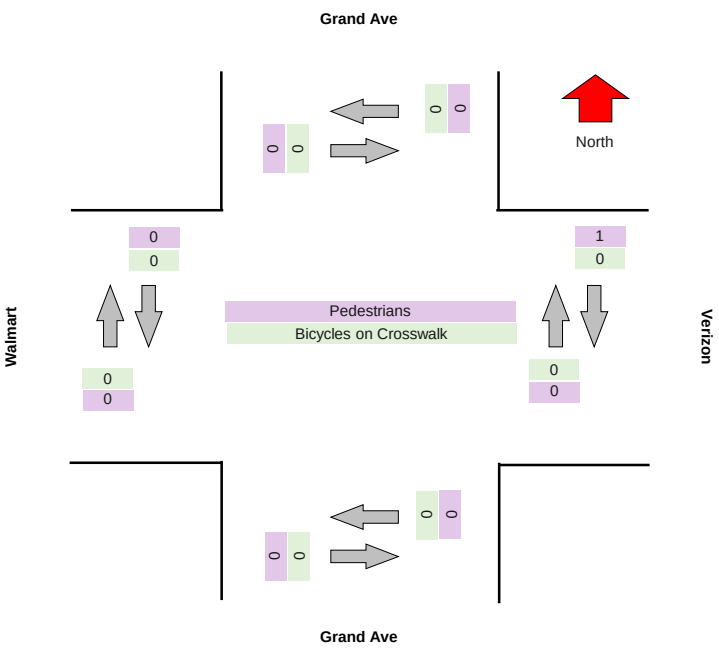
	Start	End	PHF
MID Peak	2025/11/22 11:45:00	2025/11/22 12:45:00	0.96

Turning Movement Data

Leg	Walmart								Verizon								Grand Ave								Grand Ave								
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	**Total**
11:00:00 AM	35	1	52	46	0	**134**	0	0	2	0	1	0	0	**3**	1	0	82	125	2	0	0	**209**	0	0	0	105	39	7	0	**151**	0	0	**497**
11:15:00 AM	32	0	40	47	0	**119**	0	0	0	0	0	1	0	**1**	0	0	66	152	0	0	0	**218**	0	0	0	134	56	4	0	**194**	0	0	**532**
11:30:00 AM	41	0	49	43	0	**133**	0	0	0	0	1	0	0	**1**	0	0	71	165	2	0	0	**238**	0	0	0	145	60	15	0	**220**	0	0	**592**
11:45:00 AM	43	0	55	53	0	**151**	0	0	0	2	0	0	0	**2**	0	0	71	148	1	0	0	**220**	0	0	0	145	48	7	0	**200**	0	0	**573**
Hourly Total	151	1	196	189	0	**537**	0	0	2	2	2	1	0	**7**	1	0	290	590	5	0	0	**885**	0	0	0	529	203	33	0	**765**	0	0	**2194**
12:00:00 PM	43	1	56	46	0	**146**	0	0	1	0	2	1	0	**4**	0	0	79	166	2	0	0	**247**	0	0	0	156	46	11	0	**213**	0	0	**610**
12:15:00 PM	61	0	55	44	0	**160**	0	0	2	0	0	0	0	**2**	0	0	65	162	1	0	0	**228**	0	0	0	128	47	8	0	**183**	0	0	**573**
12:30:00 PM	41	0	48	49	0	**138**	0	0	1	0	0	0	0	**1**	0	0	85	188	4	0	0	**277**	0	0	1	124	53	3	0	**181**	0	0	**597**
12:45:00 PM	53	0	47	43	0	**143**	0	0	1	0	0	0	0	**1**	0	0	60	130	3	0	0	**193**	0	0	2	128	39	7	0	**176**	0	0	**513**
Hourly Total	198	1	206	182	0	**587**	0	0	5	0	2	1	0	**8**	0	0	289	646	10	0	0	**945**	0	0	3	536	185	29	0	**753**	0	0	**2293**
Grand Total	349	2	402	371	0	**1124**	0	0	7	2	4	2	0	**15**	1	0	579	1236	15	0	0	**1830**	0	0	3	1065	388	62	0	**1518**	0	0	**4487**
% Approach	31.0%	0.2%	35.8%	33.0%	0.0%	**0.0%**	0.0%	0.0%	46.7%	13.3%	26.7%	13.3%	0.0%	**0.0%**	0.0%	0.0%	31.6%	67.5%	0.8%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.2%	70.2%	25.6%	4.1%	0.0%	**0.0%**	0.0%	0.0%	
% Total	7.8%	0.0%	9.0%	8.3%	0.0%	**25.1%**	0.0%	0.0%	0.2%	0.0%	0.1%	0.0%	0.0%	**0.3%**	0.0%	0.0%	12.9%	27.5%	0.3%	0.0%	0.0%	**40.8%**	0.0%	0.0%	0.1%	23.7%	8.6%	1.4%	0.0%	**33.8%**	0.0%	0.0%	
Lights	349	2	402	370	0	**1123**	0	0	7	2	4	2	0	**15**	0	0	577	1230	15	0	0	**1822**	0	0	3	1062	386	62	0	**1513**	0	0	**4473**
% Lights	100.0%	100.0%	100.0%	99.7%	0.0%	**99.9%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	99.7%	99.5%	100.0%	0.0%	0.0%	**99.6%**	0.0%	0.0%	100.0%	99.7%	99.5%	100.0%	0.0%	**99.7%**	0.0%	0.0%	**99.7%**
Hv	0	0	0	1	0	**1**	0	0	0	0	0	0	0	**0**	0	0	2	6	0	0	0	**8**	0	0	0	3	2	0	0	**5**	0	0	**14**
% HV	0.0%	0.0%	0.0%	0.3%	0.0%	**0.1%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.3%	0.5%	0.0%	0.0%	0.0%	**0.4%**	0.0%	0.0%	0.0%	0.3%	0.5%	0.0%	0.0%	**0.3%**	0.0%	0.0%	**0.3%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	1	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	1
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

Turning Movement Data Plot

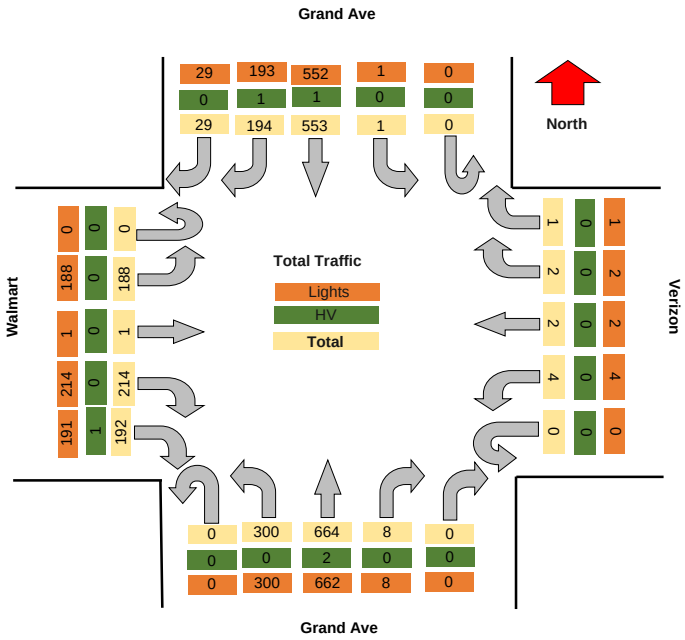


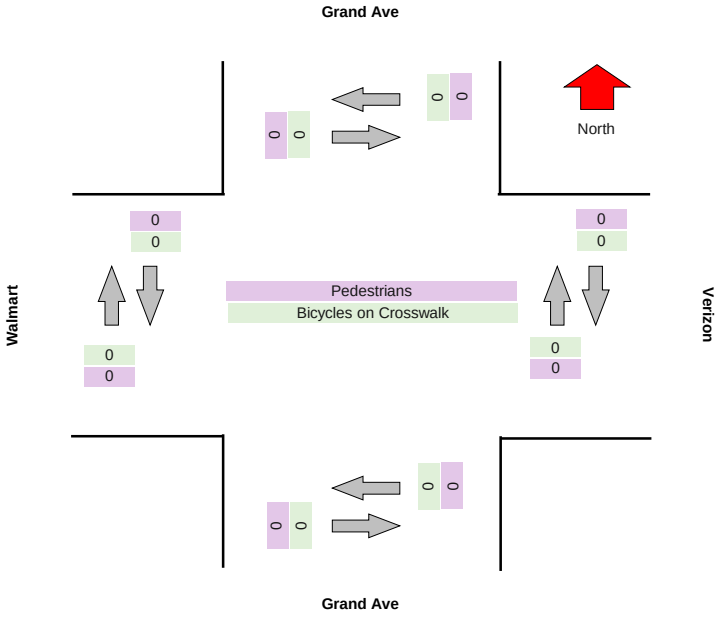


Turning Movement Peak Hour Data (MID)

11:45:00 AM

Leg	Walmart								Verizon								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
11:45:00 AM	43	0	55	53	0	**151**	0	0	0	2	0	0	0	**2**	0	0	71	148	1	0	0	**220**	0	0	0	145	48	7	0	**200**	0	0	**573**
12:00:00 PM	43	1	56	46	0	**146**	0	0	1	0	2	1	0	**4**	0	0	79	166	2	0	0	**247**	0	0	0	156	46	11	0	**213**	0	0	**610**
12:15:00 PM	61	0	55	44	0	**160**	0	0	2	0	0	0	0	**2**	0	0	65	162	1	0	0	**228**	0	0	0	128	47	8	0	**183**	0	0	**573**
12:30:00 PM	41	0	48	49	0	**138**	0	0	1	0	0	0	0	**1**	0	0	85	188	4	0	0	**277**	0	0	1	124	53	3	0	**181**	0	0	**597**
Grand Total	188	1	214	192	0	**595**	0	0	4	2	2	1	0	**9**	0	0	300	664	8	0	0	**972**	0	0	1	553	194	29	0	**777**	0	0	**2353**
% Approach	31.6%	0.2%	36.0%	32.3%	0.0%	**0.0%**	0.0%	0.0%	44.4%	22.2%	22.2%	11.1%	0.0%	**0.0%**	0.0%	0.0%	30.9%	68.3%	0.8%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.1%	71.2%	25.0%	3.7%	0.0%	**0.0%**	0.0%	0.0%	
% Total	8.0%	0.0%	9.1%	8.2%	0.0%	**25.3%**	0.0%	0.0%	0.2%	0.1%	0.1%	0.0%	0.0%	**0.4%**	0.0%	0.0%	12.7%	28.2%	0.3%	0.0%	0.0%	**41.3%**	0.0%	0.0%	0.0%	23.5%	8.2%	1.2%	0.0%	**33.0%**	0.0%	0.0%	
PHF	0.770	0.250	0.955	0.906	0.000	**0.930**	0.000	0.000	0.500	0.250	0.250	0.250	0.000	**0.563**	0.000	0.000	0.882	0.883	0.500	0.000	0.000	**0.877**	0.000	0.000	0.250	0.886	0.915	0.659	0.000	**0.912**	0.000	0.000	**0.964**
Lights	188	1	214	191	0	**594**	0	0	4	2	2	1	0	**9**	0	0	300	662	8	0	0	**970**	0	0	1	552	193	29	0	**775**	0	0	**2348**
% Lights	100.0%	100.0%	100.0%	99.5%	0.0%	**99.8%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	99.7%	100.0%	0.0%	0.0%	**99.8%**	0.0%	0.0%	100.0%	99.8%	99.5%	100.0%	0.0%	**99.7%**	0.0%	0.0%	**99.8%**
HV	0	0	0	1	0	**1**	0	0	0	0	0	0	0	**0**	0	0	0	2	0	0	0	**2**	0	0	0	1	1	0	0	**2**	0	0	**5**
% HV	0.0%	0.0%	0.0%	0.5%	0.0%	**0.2%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	**0.2%**	0.0%	0.0%	0.0%	0.2%	0.5%	0.0%	0.0%	**0.3%**	0.0%	0.0%	**0.2%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**





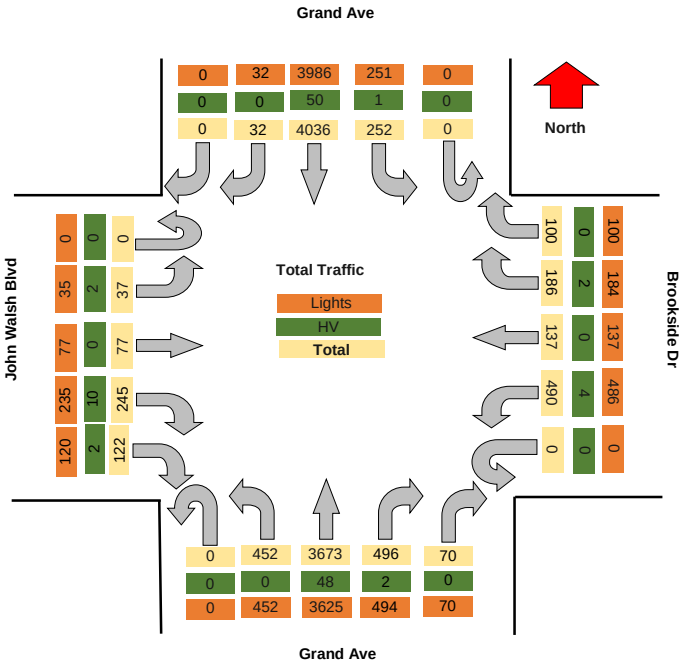
Project	GTS
Project Code	12290
Site Name	12290-3 - Grand Ave & John W
Legs and Movements	All Processed Legs & Moveme
Bin Size	15 minutes
Survey Date	2025/11/20, Thursday
Location	Grand Ave & John Walsh Blvd
Latitude and Longitude	42.953083, -76.545139

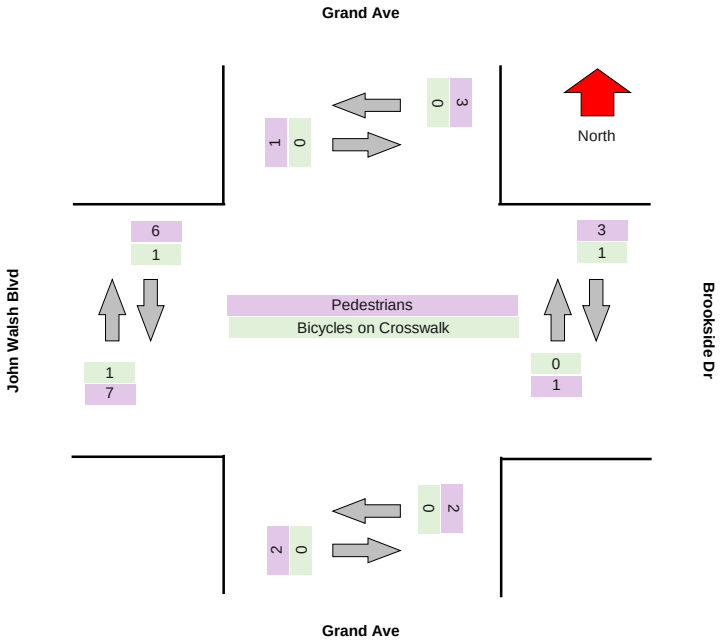
	Start	End	PHF
AM Peak	2025/11/20 08:00:00	2025/11/20 09:00:00	0.86
MID Peak	2025/11/20 12:00:00	2025/11/20 13:00:00	0.97
PM Peak	2025/11/20 16:00:00	2025/11/20 17:00:00	0.98

Turning Movement Data

Leg	John Walsh Blvd								Brookside Dr								Grand Ave								Grand Ave								
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Total
7:00:00 AM	0	2	2	4	0	**8**	1	0	7	3	2	1	0	**13**	0	0	6	78	5	0	0	**89**	1	0	5	85	2	0	0	**92**	0	0	**202**
7:15:00 AM	1	4	3	1	0	**9**	0	0	7	2	1	3	0	**13**	1	0	6	100	5	1	0	**112**	0	0	1	95	0	0	0	**96**	0	0	**230**
7:30:00 AM	1	0	1	1	0	**3**	0	0	18	1	3	4	0	**26**	0	0	5	106	9	0	0	**120**	0	0	2	87	1	0	0	**90**	0	0	**239**
7:45:00 AM	0	0	4	2	0	**6**	1	0	14	2	3	5	0	**24**	0	0	7	110	11	3	0	**131**	0	0	7	113	3	0	0	**123**	0	0	**284**
Hourly Total	2	6	10	8	0	**26**	2	0	46	8	9	13	0	**76**	1	0	24	394	30	4	0	**452**	1	0	15	380	6	0	0	**401**	0	0	**955**
8:00:00 AM	0	0	9	2	0	**11**	0	0	12	5	4	3	0	**24**	1	0	11	108	9	3	0	**131**	0	0	2	131	1	0	0	**134**	0	0	**300**
8:15:00 AM	0	1	1	2	0	**4**	0	1	21	4	6	2	0	**33**	0	0	8	123	9	4	0	**144**	0	0	4	93	0	0	0	**97**	0	0	**278**
8:30:00 AM	1	0	6	3	0	**10**	0	0	13	5	5	2	0	**25**	0	0	11	123	13	1	0	**148**	0	0	9	131	2	0	0	**142**	0	0	**325**
8:45:00 AM	1	1	6	6	0	**14**	0	0	19	4	12	4	0	**39**	0	0	14	129	17	1	0	**161**	0	0	6	150	1	0	0	**157**	0	0	**371**
Hourly Total	2	2	22	13	0	**39**	0	1	65	18	27	11	0	**121**	1	0	44	483	48	9	0	**584**	0	0	21	505	4	0	0	**530**	0	0	**1274**
11:00:00 AM	1	5	12	2	0	**20**	0	0	26	11	8	10	0	**55**	1	0	28	152	17	3	0	**200**	0	0	10	175	1	0	0	**186**	0	0	**461**
11:15:00 AM	3	3	13	5	0	**24**	0	0	28	6	5	8	0	**47**	0	1	24	166	16	0	0	**206**	0	0	14	208	2	0	0	**224**	0	0	**501**
11:30:00 AM	0	4	13	6	0	**23**	1	1	28	8	9	6	0	**51**	0	0	28	156	29	2	0	**215**	0	0	12	207	1	0	0	**220**	0	0	**509**
11:45:00 AM	1	1	18	8	0	**28**	0	0	26	6	16	3	0	**51**	0	0	20	167	29	4	0	**220**	0	0	11	199	2	0	0	**212**	0	0	**511**
Hourly Total	5	13	56	21	0	**95**	1	1	108	31	38	27	0	**204**	1	1	100	641	91	9	0	**841**	0	0	47	789	6	0	0	**842**	0	0	**1982**
12:00:00 PM	7	5	11	6	0	**29**	1	1	21	11	6	6	0	**44**	0	0	28	176	32	1	0	**237**	0	0	15	218	1	0	0	**234**	0	0	**544**
12:15:00 PM	1	6	10	5	0	**22**	0	0	28	10	12	1	0	**51**	0	0	25	185	32	4	0	**246**	0	0	19	184	1	0	0	**204**	0	0	**523**
12:30:00 PM	4	3	19	8	0	**34**	0	1	25	5	11	4	0	**45**	0	0	16	163	31	4	0	**214**	0	0	11	191	2	0	0	**204**	0	1	**497**
12:45:00 PM	0	6	12	4	0	**22**	0	0	25	4	20	1	0	**50**	0	0	24	208	24	4	0	**260**	0	0	11	202	1	0	0	**214**	0	0	**546**
Hourly Total	12	20	52	23	0	**107**	1	2	99	30	49	12	0	**190**	0	0	93	732	119	13	0	**957**	0	0	56	795	5	0	0	**856**	0	1	**2110**
4:00:00 PM	6	5	17	6	0	**34**	0	0	33	9	14	4	0	**60**	0	0	19	202	29	4	0	**254**	0	0	16	193	4	0	0	**213**	0	0	**561**
4:15:00 PM	1	4	16	4	0	**25**	0	1	20	5	16	4	0	**45**	1	0	20	217	34	7	0	**278**	0	0	16	195	2	0	0	**213**	0	0	**561**
4:30:00 PM	1	2	11	9	0	**23**	1	0	20	7	7	5	0	**39**	0	0	28	177	24	3	0	**232**	1	0	24	215	2	0	0	**241**	0	0	**535**
4:45:00 PM	2	5	12	10	0	**29**	2	0	28	2	6	2	0	**38**	0	0	25	202	27	5	0	**259**	0	0	16	201	0	0	0	**217**	1	0	**543**
Hourly Total	10	16	56	29	0	**111**	3	1	101	23	43	15	0	**182**	1	0	92	798	114	19	0	**1023**	1	0	72	804	8	0	0	**884**	1	0	**2200**
5:00:00 PM	2	6	18	8	0	**34**	0	1	21	13	5	5	0	**44**	0	0	28	152	24	5	0	**209**	0	0	13	204	1	0	0	**218**	0	0	**505**
5:15:00 PM	1	6	16	6	0	**29**	0	1	17	7	5	5	0	**34**	0	0	24	168	25	5	0	**222**	0	0	11	194	1	0	0	**206**	0	2	**491**
5:30:00 PM	0	5	6	6	0	**17**	1	0	14	2	6	5	0	**27**	0	0	30	161	25	4	0	**220**	0	2	8	191	1	0	0	**200**	0	0	**464**
5:45:00 PM	3	3	9	8	0	**23**	0	0	19	5	4	7	0	**35**	0	0	17	144	20	2	0	**183**	0	0	9	174	0	0	0	**183**	0	0	**424**
Hourly Total	6	20	49	28	0	**103**	1	2	71	27	20	22	0	**140**	0	0	99	625	94	16	0	**834**	0	2	41	763	3	0	0	**807**	0	2	**1884**
Grand Total	37	77	245	122	0	**481**	8	7	490	137	186	100	0	**913**	4	1	452	3673	496	70	0	**4691**	2	2	252	4036	32	0	0	**4320**	1	3	**10405**
% Approach	7.7%	16.0%	50.9%	25.4%	0.0%	**0.0%**	0.0%	0.0%	53.7%	15.0%	20.4%	11.0%	0.0%	**0.0%**	0.0%	0.0%	9.6%	78.3%	10.6%	1.5%	0.0%	**0.0%**	0.0%	0.0%	5.8%	93.4%	0.7%	0.0%	0.0%	**0.0%**	0.0%	0.0%	
% Total	0.4%	0.7%	2.4%	1.2%	0.0%	**4.6%**	0.0%	0.0%	4.7%	1.3%	1.8%	1.0%	0.0%	**8.8%**	0.0%	0.0%	4.3%	35.3%	4.8%	0.7%	0.0%	**45.1%**	0.0%	0.0%	2.4%	38.8%	0.3%	0.0%	0.0%	**41.5%**	0.0%	0.0%	
Lights	35	77	235	120	0	**467**	0	0	486	137	184	100	0	**907**	0	0	452	3625	494	70	0	**4641**	0	0	251	3986	32	0	0	**4269**	0	0	**10284**
% Lights	94.6%	100.0%	95.9%	98.4%	0.0%	**97.1%**	0.0%	0.0%	99.2%	100.0%	98.9%	100.0%	0.0%	**99.3%**	0.0%	0.0%	100.0%	98.7%	99.6%	100.0%	0.0%	**98.9%**	0.0%	0.0%	99.6%	98.8%	100.0%	0.0%	0.0%	**98.8%**	0.0%	0.0%	**98.8%**
Hv	2	0	10	2	0	**14**	0	0	4	0	2	0	0	**6**	0	0	0	48	2	0	0	**50**	0	0	1	50	0	0	0	**51**	0	0	**121**
% HV	5.4%	0.0%	4.1%	1.6%	0.0%	**2.9%**	0.0%	0.0%	0.8%	0.0%	1.1%	0.0%	0.0%	**0.7%**	0.0%	0.0%	0.0%	1.3%	0.4%	0.0%	0.0%	**1.1%**	0.0%	0.0%	0.4%	1.2%	0.0%	0.0%	0.0%	**1.2%**	0.0%	0.0%	**1.2%**
Pedestrians	0	0	0	0	0	**0**	7	6	0	0	0	0	0	**0**	3	1	0	0	0	0	0	**0**	2	2	0	0	0	0	0	**0**	1	3	25
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	87.5%	85.7%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	75.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	100.0%	**89.3%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	1	1	0	0	0	0	0	**0**	1	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	3
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	12.5%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**10.7%**

Turning Movement Data Plot

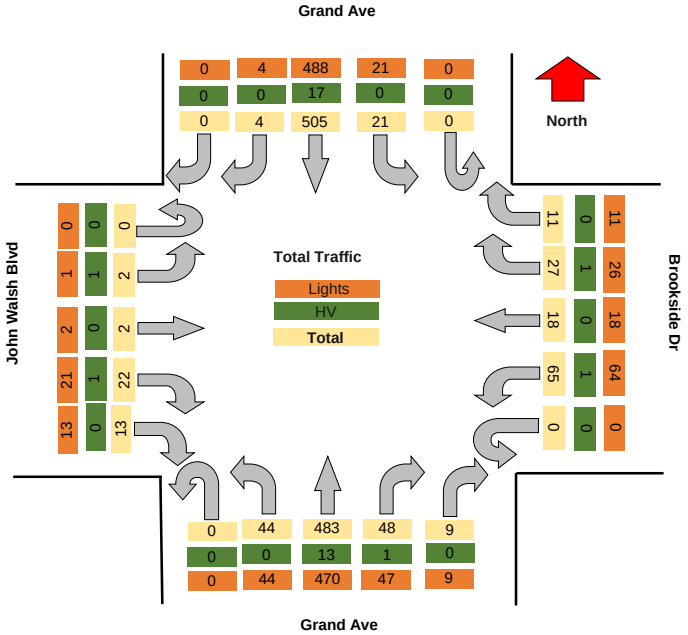


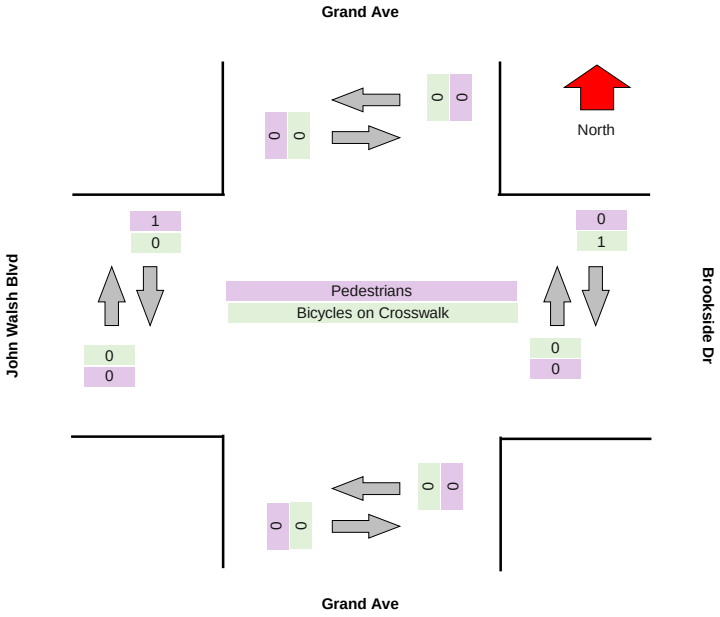


Turning Movement Peak Hour Data (AM)

8:00:00 AM

Leg	John Walsh Blvd								Brookside Dr								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
8:00:00 AM	0	0	9	2	0	**11**	0	0	12	5	4	3	0	**24**	1	0	11	108	9	3	0	**131**	0	0	2	131	1	0	0	**134**	0	0	**300**
8:15:00 AM	0	1	1	2	0	**4**	0	1	21	4	6	2	0	**33**	0	0	8	123	9	4	0	**144**	0	0	4	93	0	0	0	**97**	0	0	**278**
8:30:00 AM	1	0	6	3	0	**10**	0	0	13	5	5	2	0	**25**	0	0	11	123	13	1	0	**148**	0	0	9	131	2	0	0	**142**	0	0	**325**
8:45:00 AM	1	1	6	6	0	**14**	0	0	19	4	12	4	0	**39**	0	0	14	129	17	1	0	**161**	0	0	6	150	1	0	0	**157**	0	0	**371**
Grand Total	2	2	22	13	0	**39**	0	1	65	18	27	11	0	**121**	1	0	44	483	48	9	0	**584**	0	0	21	505	4	0	0	**530**	0	0	**1274**
% Approach	5.1%	5.1%	56.4%	33.3%	0.0%	**0.0%**	0.0%	0.0%	53.7%	14.9%	22.3%	9.1%	0.0%	**0.0%**	0.0%	0.0%	7.5%	82.7%	8.2%	1.5%	0.0%	**0.0%**	0.0%	0.0%	4.0%	95.3%	0.8%	0.0%	0.0%	**0.0%**	0.0%	0.0%	
% Total	0.2%	0.2%	1.7%	1.0%	0.0%	**3.1%**	0.0%	0.0%	5.1%	1.4%	2.1%	0.9%	0.0%	**9.5%**	0.0%	0.0%	3.5%	37.9%	3.8%	0.7%	0.0%	**45.8%**	0.0%	0.0%	1.6%	39.6%	0.3%	0.0%	0.0%	**41.6%**	0.0%	0.0%	
PHF	0.500	0.500	0.611	0.542	0.000	**0.696**	0.000	0.000	0.774	0.900	0.563	0.688	0.000	**0.776**	0.000	0.000	0.786	0.936	0.706	0.563	0.000	**0.907**	0.000	0.000	0.583	0.842	0.500	0.000	0.000	**0.844**	0.000	0.000	**0.858**
Lights	1	2	21	13	0	**37**	0	0	64	18	26	11	0	**119**	0	0	44	470	47	9	0	**570**	0	0	21	488	4	0	0	**513**	0	0	**1239**
% Lights	50.0%	100.0%	95.5%	100.0%	0.0%	**94.9%**	0.0%	0.0%	98.5%	100.0%	96.3%	100.0%	0.0%	**98.3%**	0.0%	0.0%	100.0%	97.3%	97.9%	100.0%	0.0%	**97.6%**	0.0%	0.0%	100.0%	96.6%	100.0%	0.0%	0.0%	**96.8%**	0.0%	0.0%	**97.3%**
HV	1	0	1	0	0	**2**	0	0	1	0	1	0	0	**2**	0	0	0	13	1	0	0	**14**	0	0	0	17	0	0	0	**17**	0	0	**35**
% HV	50.0%	0.0%	4.5%	0.0%	0.0%	**5.1%**	0.0%	0.0%	1.5%	0.0%	3.7%	0.0%	0.0%	**1.7%**	0.0%	0.0%	0.0%	2.7%	2.1%	0.0%	0.0%	**2.4%**	0.0%	0.0%	0.0%	3.4%	0.0%	0.0%	0.0%	**3.2%**	0.0%	0.0%	**2.7%**
Pedestrians	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	1
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**50.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	1	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	1
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**50.0%**

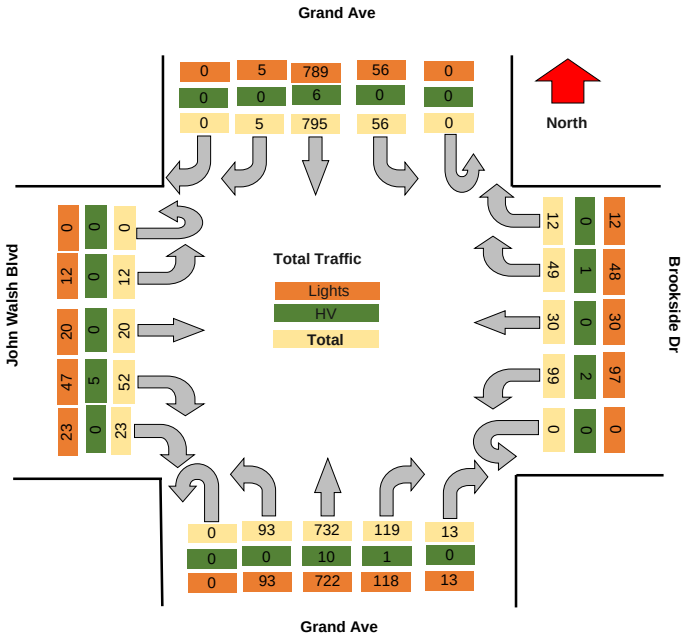


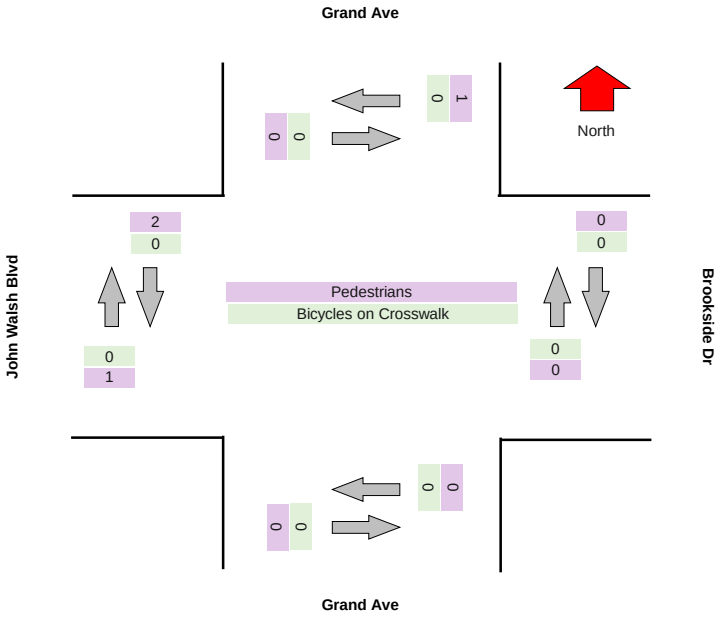


Turning Movement Peak Hour Data (MID)

12:00:00 PM

Leg	John Walsh Blvd								Brookside Dr								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
12:00:00 PM	7	5	11	6	0	**29**	1	1	21	11	6	6	0	**44**	0	0	28	176	32	1	0	**237**	0	0	15	218	1	0	0	**234**	0	0	**544**
12:15:00 PM	1	6	10	5	0	**22**	0	0	28	10	12	1	0	**51**	0	0	25	185	32	4	0	**246**	0	0	19	184	1	0	0	**204**	0	0	**523**
12:30:00 PM	4	3	19	8	0	**34**	0	1	25	5	11	4	0	**45**	0	0	16	163	31	4	0	**214**	0	0	11	191	2	0	0	**204**	0	1	**497**
12:45:00 PM	0	6	12	4	0	**22**	0	0	25	4	20	1	0	**50**	0	0	24	208	24	4	0	**260**	0	0	11	202	1	0	0	**214**	0	0	**546**
Grand Total	12	20	52	23	0	**107**	1	2	99	30	49	12	0	**190**	0	0	93	732	119	13	0	**957**	0	0	56	795	5	0	0	**856**	0	1	**2110**
% Approach	11.2%	18.7%	48.6%	21.5%	0.0%	**0.0%**	0.0%	0.0%	52.1%	15.8%	25.8%	6.3%	0.0%	**0.0%**	0.0%	0.0%	9.7%	76.5%	12.4%	1.4%	0.0%	**0.0%**	0.0%	0.0%	6.5%	92.9%	0.6%	0.0%	0.0%	**0.0%**	0.0%	0.0%	
% Total	0.6%	0.9%	2.5%	1.1%	0.0%	**5.1%**	0.0%	0.0%	4.7%	1.4%	2.3%	0.6%	0.0%	**9.0%**	0.0%	0.0%	4.4%	34.7%	5.6%	0.6%	0.0%	**45.4%**	0.0%	0.0%	2.7%	37.7%	0.2%	0.0%	0.0%	**40.6%**	0.0%	0.0%	
PHF	0.429	0.833	0.684	0.719	0.000	**0.787**	0.000	0.000	0.884	0.682	0.613	0.500	0.000	**0.931**	0.000	0.000	0.830	0.880	0.930	0.813	0.000	**0.920**	0.000	0.000	0.737	0.912	0.625	0.000	0.000	**0.915**	0.000	0.000	**0.966**
Lights	12	20	47	23	0	**102**	0	0	97	30	48	12	0	**187**	0	0	93	722	118	13	0	**946**	0	0	56	789	5	0	0	**850**	0	0	**2085**
% Lights	100.0%	100.0%	90.4%	100.0%	0.0%	**95.3%**	0.0%	0.0%	98.0%	100.0%	98.0%	100.0%	0.0%	**98.4%**	0.0%	0.0%	100.0%	98.6%	99.2%	100.0%	0.0%	**98.9%**	0.0%	0.0%	100.0%	99.2%	100.0%	0.0%	0.0%	**99.3%**	0.0%	0.0%	**98.8%**
HV	0	0	5	0	0	**5**	0	0	2	0	1	0	0	**3**	0	0	0	10	1	0	0	**11**	0	0	0	6	0	0	0	**6**	0	0	**25**
% HV	0.0%	0.0%	9.6%	0.0%	0.0%	**4.7%**	0.0%	0.0%	2.0%	0.0%	2.0%	0.0%	0.0%	**1.6%**	0.0%	0.0%	0.0%	1.4%	0.8%	0.0%	0.0%	**1.1%**	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	**0.7%**	0.0%	0.0%	**1.2%**
Pedestrians	0	0	0	0	0	**0**	1	2	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	1	4
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

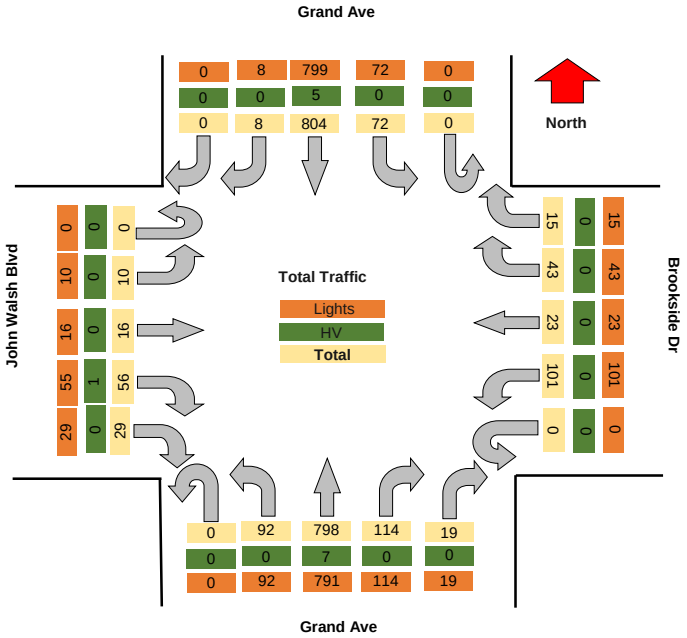


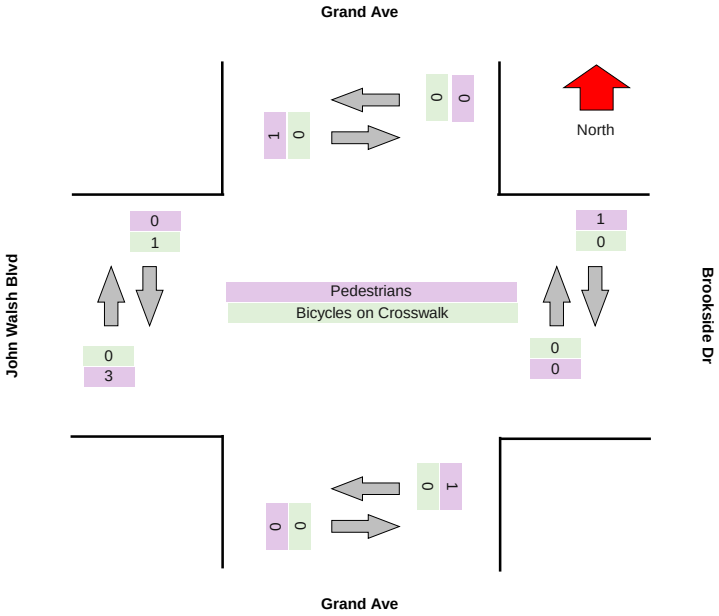


Turning Movement Peak Hour Data (PM)

4:00:00 PM

Leg	John Walsh Blvd								Brookside Dr								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
4:00:00 PM	6	5	17	6	0	**34**	0	0	33	9	14	4	0	**60**	0	0	19	202	29	4	0	**254**	0	0	16	193	4	0	0	**213**	0	0	**561**
4:15:00 PM	1	4	16	4	0	**25**	0	1	20	5	16	4	0	**45**	1	0	20	217	34	7	0	**278**	0	0	16	195	2	0	0	**213**	0	0	**561**
4:30:00 PM	1	2	11	9	0	**23**	1	0	20	7	7	5	0	**39**	0	0	28	177	24	3	0	**232**	1	0	24	215	2	0	0	**241**	0	0	**535**
4:45:00 PM	2	5	12	10	0	**29**	2	0	28	2	6	2	0	**38**	0	0	25	202	27	5	0	**259**	0	0	16	201	0	0	0	**217**	1	0	**543**
Grand Total	10	16	56	29	0	**111**	3	1	101	23	43	15	0	**182**	1	0	92	798	114	19	0	**1023**	1	0	72	804	8	0	0	**884**	1	0	**2200**
% Approach	9.0%	14.4%	50.5%	26.1%	0.0%	**0.0%**	0.0%	0.0%	55.5%	12.6%	23.6%	8.2%	0.0%	**0.0%**	0.0%	0.0%	9.0%	78.0%	11.1%	1.9%	0.0%	**0.0%**	0.0%	0.0%	8.1%	91.0%	0.9%	0.0%	0.0%	**0.0%**	0.0%	0.0%	
% Total	0.5%	0.7%	2.5%	1.3%	0.0%	**5.0%**	0.0%	0.0%	4.6%	1.0%	2.0%	0.7%	0.0%	**8.3%**	0.0%	0.0%	4.2%	36.3%	5.2%	0.9%	0.0%	**46.5%**	0.0%	0.0%	3.3%	36.5%	0.4%	0.0%	0.0%	**40.2%**	0.0%	0.0%	
PHF	0.417	0.800	0.824	0.725	0.000	**0.816**	0.000	0.000	0.765	0.639	0.672	0.750	0.000	**0.758**	0.000	0.000	0.821	0.919	0.838	0.679	0.000	**0.920**	0.000	0.000	0.750	0.935	0.500	0.000	0.000	**0.917**	0.000	0.000	**0.980**
Lights	10	16	55	29	0	**110**	0	0	101	23	43	15	0	**182**	0	0	92	791	114	19	0	**1016**	0	0	72	799	8	0	0	**879**	0	0	**2187**
% Lights	100.0%	100.0%	98.2%	100.0%	0.0%	**99.1%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	99.1%	100.0%	100.0%	0.0%	**99.3%**	0.0%	0.0%	100.0%	99.4%	100.0%	0.0%	0.0%	**99.4%**	0.0%	0.0%	**99.4%**
HV	0	0	1	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	0	7	0	0	0	**7**	0	0	0	5	0	0	0	**5**	0	0	**13**
% HV	0.0%	0.0%	1.8%	0.0%	0.0%	**0.9%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	**0.7%**	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	**0.6%**	0.0%	0.0%	**0.6%**
Pedestrians	0	0	0	0	0	**0**	3	0	0	0	0	0	0	**0**	1	0	0	0	0	0	0	**0**	1	0	0	0	0	0	0	**0**	1	0	6
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	**85.7%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	1
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**14.3%**





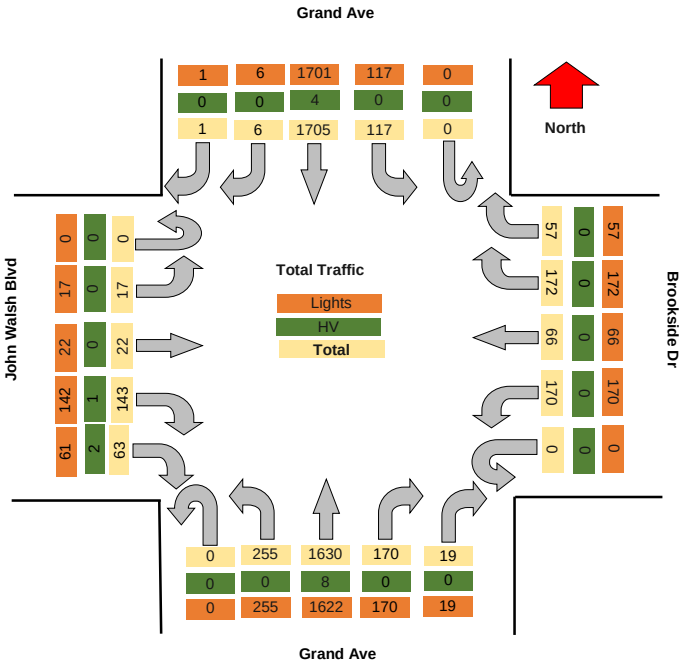
Project	GTS
Project Code	12290
Site Name	12290-3 - Grand Ave & John W
Legs and Movements	All Processed Legs & Moveme
Bin Size	15 minutes
Survey Date	2025/11/22, Saturday
Location	Grand Ave & John Walsh Blvd
Latitude and Longitude	42.953083, -76.545139

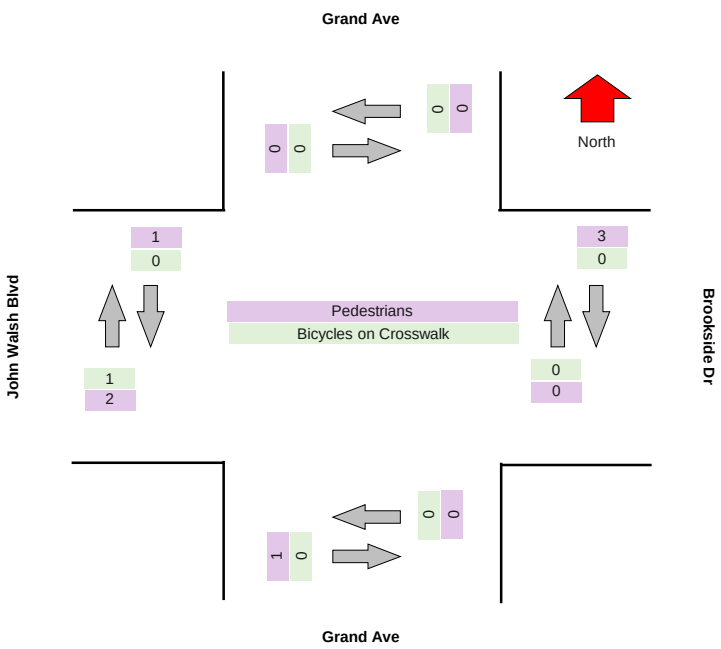
	Start	End	PHF
MID Peak	2025/11/22 11:45:00	2025/11/22 12:45:00	0.92

Turning Movement Data

Leg	John Walsh Blvd								Brookside Dr								Grand Ave								Grand Ave								
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Total
11:00:00 AM	4	2	33	13	0	**52**	0	0	28	12	21	11	0	**72**	2	0	36	177	23	3	0	**239**	0	0	16	191	0	0	0	**207**	0	0	**570**
11:15:00 AM	1	2	14	10	0	**27**	0	0	23	11	20	7	0	**61**	1	0	28	193	19	2	0	**242**	0	0	11	202	0	0	0	**213**	0	0	**543**
11:30:00 AM	4	2	27	5	0	**38**	1	0	15	11	25	4	0	**55**	0	0	21	219	20	3	0	**263**	0	0	14	225	3	0	0	**242**	0	0	**598**
11:45:00 AM	1	4	20	7	0	**32**	0	0	24	5	23	11	0	**63**	0	0	31	193	25	0	0	**249**	0	0	15	221	0	0	0	**236**	0	0	**580**
Hourly Total	10	10	94	35	0	**149**	1	0	90	39	89	33	0	**251**	3	0	116	782	87	8	0	**993**	0	0	56	839	3	0	0	**898**	0	0	**2291**
12:00:00 PM	1	1	10	10	0	**22**	0	0	30	7	26	9	0	**72**	0	0	42	213	24	3	0	**282**	0	0	14	254	0	1	0	**269**	0	0	**645**
12:15:00 PM	3	3	16	9	0	**31**	0	0	12	5	19	4	0	**40**	0	0	40	212	20	2	0	**274**	0	1	13	220	0	0	0	**233**	0	0	**578**
12:30:00 PM	1	3	11	5	0	**20**	1	0	18	7	20	4	0	**49**	0	0	26	245	20	2	0	**293**	0	0	16	200	0	0	0	**216**	0	0	**578**
12:45:00 PM	2	5	12	4	0	**23**	1	1	20	8	18	7	0	**53**	0	0	31	178	19	4	0	**232**	0	0	18	192	3	0	0	**213**	0	0	**521**
Hourly Total	7	12	49	28	0	**96**	2	1	80	27	83	24	0	**214**	0	0	139	848	83	11	0	**1081**	0	1	61	866	3	1	0	**931**	0	0	**2322**
Grand Total	17	22	143	63	0	**245**	3	1	170	66	172	57	0	**465**	3	0	255	1630	170	19	0	**2074**	0	1	117	1705	6	1	0	**1829**	0	0	**4613**
% Approach	6.9%	9.0%	58.4%	25.7%	0.0%	**0.0%**	0.0%	0.0%	36.6%	14.2%	37.0%	12.3%	0.0%	**0.0%**	0.0%	0.0%	12.3%	78.6%	8.2%	0.9%	0.0%	**0.0%**	0.0%	0.0%	6.4%	93.2%	0.3%	0.1%	0.0%	**0.0%**	0.0%	0.0%	
% Total	0.4%	0.5%	3.1%	1.4%	0.0%	**5.3%**	0.0%	0.0%	3.7%	1.4%	3.7%	1.2%	0.0%	**10.1%**	0.0%	0.0%	5.5%	35.3%	3.7%	0.4%	0.0%	**45.0%**	0.0%	0.0%	2.5%	37.0%	0.1%	0.0%	0.0%	**39.6%**	0.0%	0.0%	
Lights	17	22	142	61	0	**242**	0	0	170	66	172	57	0	**465**	0	0	255	1622	170	19	0	**2066**	0	0	117	1701	6	1	0	**1825**	0	0	**4598**
% Lights	100.0%	100.0%	99.3%	96.8%	0.0%	**98.8%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	99.5%	100.0%	100.0%	0.0%	**99.6%**	0.0%	0.0%	100.0%	99.8%	100.0%	100.0%	0.0%	**99.8%**	0.0%	0.0%	**99.7%**
Hv	0	0	1	2	0	**3**	0	0	0	0	0	0	0	**0**	0	0	0	8	0	0	0	**8**	0	0	0	4	0	0	0	**4**	0	0	**15**
% HV	0.0%	0.0%	0.7%	3.2%	0.0%	**1.2%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	**0.4%**	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	**0.2%**	0.0%	0.0%	**0.3%**
Pedestrians	0	0	0	0	0	**0**	2	1	0	0	0	0	0	**0**	3	0	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**0**	0	0	7
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	66.7%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**87.5%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	1	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	1
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**12.5%**

Turning Movement Data Plot

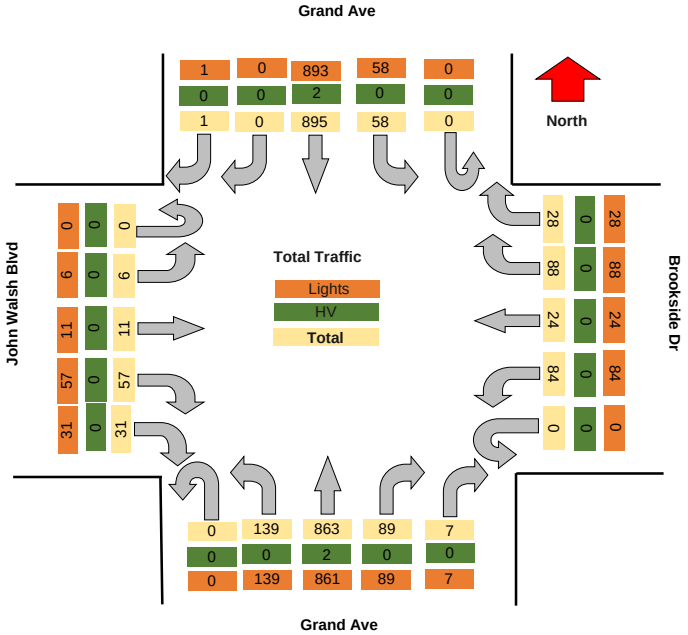


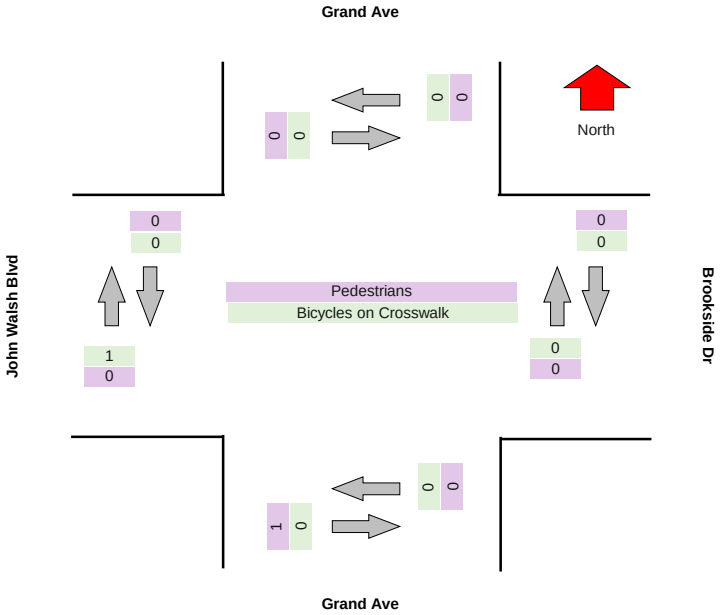


Turning Movement Peak Hour Data (MID)

11:45:00 AM

Leg	John Walsh Blvd								Brookside Dr								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
11:45:00 AM	1	4	20	7	0	**32**	0	0	24	5	23	11	0	**63**	0	0	31	193	25	0	0	**249**	0	0	15	221	0	0	0	**236**	0	0	**580**
12:00:00 PM	1	1	10	10	0	**22**	0	0	30	7	26	9	0	**72**	0	0	42	213	24	3	0	**282**	0	0	14	254	0	1	0	**269**	0	0	**645**
12:15:00 PM	3	3	16	9	0	**31**	0	0	12	5	19	4	0	**40**	0	0	40	212	20	2	0	**274**	0	1	13	220	0	0	0	**233**	0	0	**578**
12:30:00 PM	1	3	11	5	0	**20**	1	0	18	7	20	4	0	**49**	0	0	26	245	20	2	0	**293**	0	0	16	200	0	0	0	**216**	0	0	**578**
Grand Total	6	11	57	31	0	**105**	1	0	84	24	88	28	0	**224**	0	0	139	863	89	7	0	**1098**	0	1	58	895	0	1	0	**954**	0	0	**2381**
% Approach	5.7%	10.5%	54.3%	29.5%	0.0%	**0.0%**	0.0%	0.0%	37.5%	10.7%	39.3%	12.5%	0.0%	**0.0%**	0.0%	0.0%	12.7%	78.6%	8.1%	0.6%	0.0%	**0.0%**	0.0%	0.0%	6.1%	93.8%	0.0%	0.1%	0.0%	**0.0%**	0.0%	0.0%	
% Total	0.3%	0.5%	2.4%	1.3%	0.0%	**4.4%**	0.0%	0.0%	3.5%	1.0%	3.7%	1.2%	0.0%	**9.4%**	0.0%	0.0%	5.8%	36.2%	3.7%	0.3%	0.0%	**46.1%**	0.0%	0.0%	2.4%	37.6%	0.0%	0.0%	0.0%	**40.1%**	0.0%	0.0%	
PHF	0.500	0.688	0.713	0.775	0.000	**0.820**	0.000	0.000	0.700	0.857	0.846	0.636	0.000	**0.778**	0.000	0.000	0.827	0.881	0.890	0.583	0.000	**0.937**	0.000	0.000	0.906	0.881	0.000	0.250	0.000	**0.887**	0.000	0.000	**0.923**
Lights	6	11	57	31	0	**105**	0	0	84	24	88	28	0	**224**	0	0	139	861	89	7	0	**1096**	0	0	58	893	0	1	0	**952**	0	0	**2377**
% Lights	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	99.8%	100.0%	100.0%	0.0%	**99.8%**	0.0%	0.0%	100.0%	99.8%	0.0%	100.0%	0.0%	**99.8%**	0.0%	0.0%	**99.8%**
HV	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	2	0	0	0	**2**	0	0	0	2	0	0	0	**2**	0	0	**4**
% HV	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	**0.2%**	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	**0.2%**	0.0%	0.0%	**0.2%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**0**	0	0	1
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**50.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	1	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	1
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**50.0%**





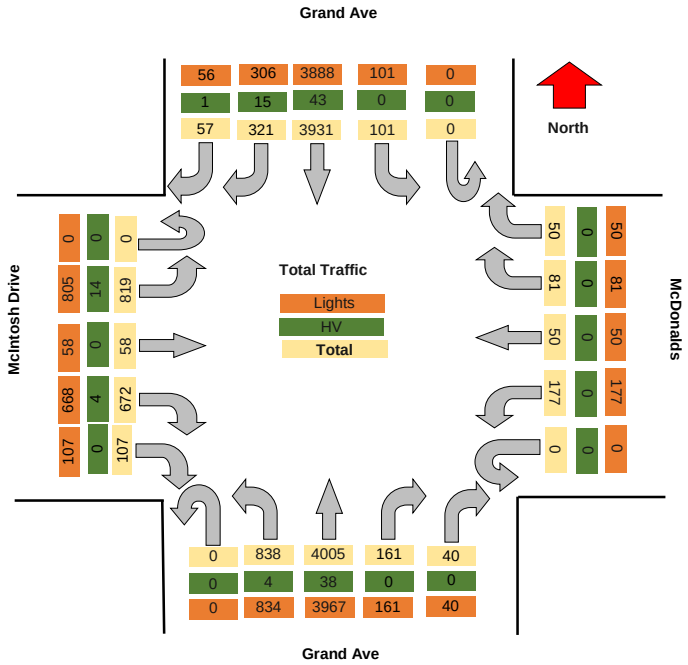
Project	GTS
Project Code	12290
Site Name	12290-4 - Grand Ave & McIntos
Legs and Movements	All Processed Legs & Moveme
Bin Size	15 minutes
Survey Date	2025/11/20, Thursday
Location	Grand Ave & McIntosh Drive/M
Latitude and Longitude	42.947972, -76.548333

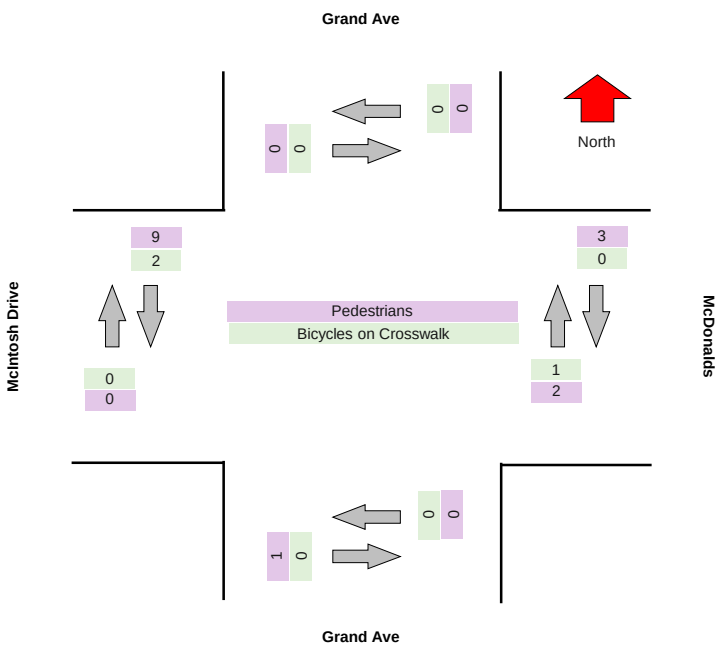
	Start	End	PHF
AM Peak	2025/11/20 08:00:00	2025/11/20 09:00:00	0.90
MID Peak	2025/11/20 12:00:00	2025/11/20 13:00:00	0.96
PM Peak	2025/11/20 16:00:00	2025/11/20 17:00:00	0.96

Turning Movement Data

Leg	McIntosh Drive								McDonalds								Grand Ave								Grand Ave								
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Total
7:00:00 AM	11	1	3	1	0	**16**	0	2	2	1	1	1	0	**5**	0	0	8	82	5	0	0	**95**	0	0	6	79	8	0	0	**93**	0	0	**209**
7:15:00 AM	9	2	4	2	0	**17**	0	1	12	2	3	0	0	**17**	0	0	9	116	5	1	0	**131**	0	0	1	100	1	0	0	**102**	0	0	**267**
7:30:00 AM	20	0	3	5	0	**28**	0	0	6	2	2	4	0	**14**	0	0	7	129	7	2	0	**145**	0	0	2	87	4	0	0	**93**	0	0	**280**
7:45:00 AM	18	3	5	2	0	**28**	0	0	4	3	1	3	0	**11**	0	0	11	148	5	0	0	**164**	0	0	1	121	11	1	0	**134**	0	0	**337**
Hourly Total	58	6	15	10	0	**89**	0	3	24	8	7	8	0	**47**	0	0	35	475	22	3	0	**535**	0	0	10	387	24	1	0	**422**	0	0	**1093**
8:00:00 AM	10	0	8	5	0	**23**	0	1	6	0	2	3	0	**11**	1	1	7	135	11	1	0	**154**	0	0	3	138	6	2	0	**149**	0	0	**337**
8:15:00 AM	17	3	3	8	0	**31**	0	1	5	1	2	3	0	**11**	0	0	6	134	5	0	0	**145**	0	0	3	104	5	3	0	**115**	0	0	**302**
8:30:00 AM	22	2	7	4	0	**35**	0	0	7	0	3	2	0	**12**	0	0	5	129	13	2	0	**149**	0	0	7	135	8	2	0	**152**	0	0	**348**
8:45:00 AM	14	1	8	4	0	**27**	0	0	9	4	6	4	0	**23**	0	0	11	151	10	2	0	**174**	0	0	2	135	18	1	0	**156**	0	0	**380**
Hourly Total	63	6	26	21	0	**116**	0	2	27	5	13	12	0	**57**	1	1	29	549	39	5	0	**622**	0	0	15	512	37	8	0	**572**	0	0	**1367**
11:00:00 AM	40	3	27	2	0	**72**	0	1	8	4	1	2	0	**15**	1	0	47	173	6	3	0	**229**	0	0	6	179	17	3	0	**205**	0	0	**521**
11:15:00 AM	40	2	26	5	0	**73**	0	0	8	2	2	2	0	**14**	0	0	47	172	3	4	0	**226**	0	0	4	185	14	1	0	**204**	0	0	**517**
11:30:00 AM	40	2	35	6	0	**83**	0	0	7	2	3	2	0	**14**	0	0	43	178	6	1	0	**228**	0	0	3	193	14	4	0	**214**	0	0	**539**
11:45:00 AM	48	3	47	5	0	**103**	0	0	7	1	3	2	0	**13**	0	0	54	184	9	1	0	**248**	0	0	7	198	16	2	0	**223**	0	0	**587**
Hourly Total	168	10	135	18	0	**331**	0	1	30	9	9	8	0	**56**	1	0	191	707	24	9	0	**931**	0	0	20	755	61	10	0	**846**	0	0	**2164**
12:00:00 PM	53	5	42	6	0	**106**	0	0	7	4	7	4	0	**22**	0	0	58	170	12	3	0	**243**	0	1	7	182	17	4	0	**210**	0	0	**581**
12:15:00 PM	59	1	47	2	0	**109**	0	0	5	5	7	3	0	**20**	0	0	52	186	5	2	0	**245**	0	0	1	181	8	4	0	**194**	0	0	**568**
12:30:00 PM	45	6	57	7	0	**115**	0	0	11	2	2	2	0	**17**	0	1	46	169	9	1	0	**225**	0	0	3	192	16	3	0	**214**	0	0	**571**
12:45:00 PM	55	3	44	6	0	**108**	0	0	14	2	8	2	0	**26**	0	0	48	203	6	1	0	**258**	0	0	3	189	18	1	0	**211**	0	0	**603**
Hourly Total	212	15	190	21	0	**438**	0	0	37	13	24	11	0	**85**	0	1	204	728	32	7	0	**971**	0	1	14	744	59	12	0	**829**	0	0	**2323**
4:00:00 PM	38	3	35	3	0	**79**	0	2	8	3	5	1	0	**17**	0	1	47	225	4	1	0	**277**	0	0	4	221	20	4	0	**249**	0	0	**622**
4:15:00 PM	46	3	36	9	0	**94**	0	0	12	1	0	0	0	**13**	0	0	54	221	3	2	0	**280**	0	0	1	183	9	4	0	**197**	0	0	**584**
4:30:00 PM	45	1	45	8	0	**99**	0	0	5	4	0	0	0	**9**	0	0	46	210	2	1	0	**259**	0	0	7	199	18	4	0	**228**	0	0	**595**
4:45:00 PM	43	2	45	4	0	**94**	0	2	8	2	5	3	0	**18**	0	0	58	192	4	2	0	**256**	0	0	3	193	25	5	0	**226**	0	0	**594**
Hourly Total	172	9	161	24	0	**366**	0	4	33	10	10	4	0	**57**	0	1	205	848	13	6	0	**1072**	0	0	15	796	72	17	0	**900**	0	0	**2395**
5:00:00 PM	33	6	44	7	0	**90**	0	0	4	3	3	2	0	**12**	0	0	42	194	7	5	0	**248**	0	0	4	217	22	4	0	**247**	0	0	**597**
5:15:00 PM	43	3	30	2	0	**78**	0	0	8	0	4	2	0	**14**	0	0	64	183	6	1	0	**254**	0	0	7	180	19	4	0	**210**	0	0	**556**
5:30:00 PM	37	2	40	4	0	**83**	0	0	7	0	6	1	0	**14**	1	0	35	164	12	1	0	**212**	0	0	7	170	14	0	0	**191**	0	0	**500**
5:45:00 PM	33	1	31	0	0	**65**	0	1	7	2	5	2	0	**16**	0	0	33	157	6	3	0	**199**	0	0	9	170	13	1	0	**193**	0	0	**473**
Hourly Total	146	12	145	13	0	**316**	0	1	26	5	18	7	0	**56**	1	0	174	698	31	10	0	**913**	0	0	27	737	68	9	0	**841**	0	0	**2126**
Grand Total	819	58	672	107	0	**1656**	0	11	177	50	81	50	0	**358**	3	3	838	4005	161	40	0	**5044**	0	1	101	3931	321	57	0	**4410**	0	0	**11468**
% Approach	49.5%	3.5%	40.6%	6.5%	0.0%	**0.0%**	0.0%	0.0%	49.4%	14.0%	22.6%	14.0%	0.0%	**0.0%**	0.0%	0.0%	16.6%	79.4%	3.2%	0.8%	0.0%	**0.0%**	0.0%	0.0%	2.3%	89.1%	7.3%	1.3%	0.0%	**0.0%**	0.0%	0.0%	
% Total	7.1%	0.5%	5.9%	0.9%	0.0%	**14.4%**	0.0%	0.0%	1.5%	0.4%	0.7%	0.4%	0.0%	**3.1%**	0.0%	0.0%	7.3%	34.9%	1.4%	0.3%	0.0%	**44.0%**	0.0%	0.0%	0.9%	34.3%	2.8%	0.5%	0.0%	**38.5%**	0.0%	0.0%	
Lights	805	58	668	107	0	**1638**	0	0	177	50	81	50	0	**358**	0	0	834	3967	161	40	0	**5002**	0	0	101	3888	306	56	0	**4351**	0	0	**11349**
% Lights	98.3%	100.0%	99.4%	100.0%	0.0%	**98.9%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	99.5%	99.1%	100.0%	100.0%	0.0%	**99.2%**	0.0%	0.0%	100.0%	98.9%	95.3%	98.2%	0.0%	**98.7%**	0.0%	0.0%	**99.0%**
Hv	14	0	4	0	0	**18**	0	0	0	0	0	0	0	**0**	0	0	4	38	0	0	0	**42**	0	0	0	43	15	1	0	**59**	0	0	**119**
% HV	1.7%	0.0%	0.6%	0.0%	0.0%	**1.1%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.5%	0.9%	0.0%	0.0%	0.0%	**0.8%**	0.0%	0.0%	0.0%	1.1%	4.7%	1.8%	0.0%	**1.3%**	0.0%	0.0%	**1.0%**
Pedestrians	0	0	0	0	0	**0**	0	9	0	0	0	0	0	**0**	3	2	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**0**	0	0	15
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	81.8%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	66.7%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**83.3%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	2	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	3
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	18.2%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**16.7%**

Turning Movement Data Plot

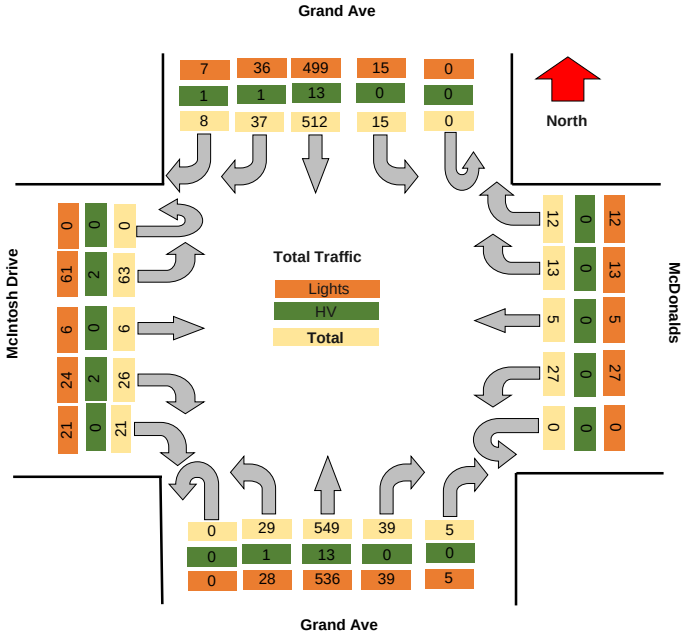


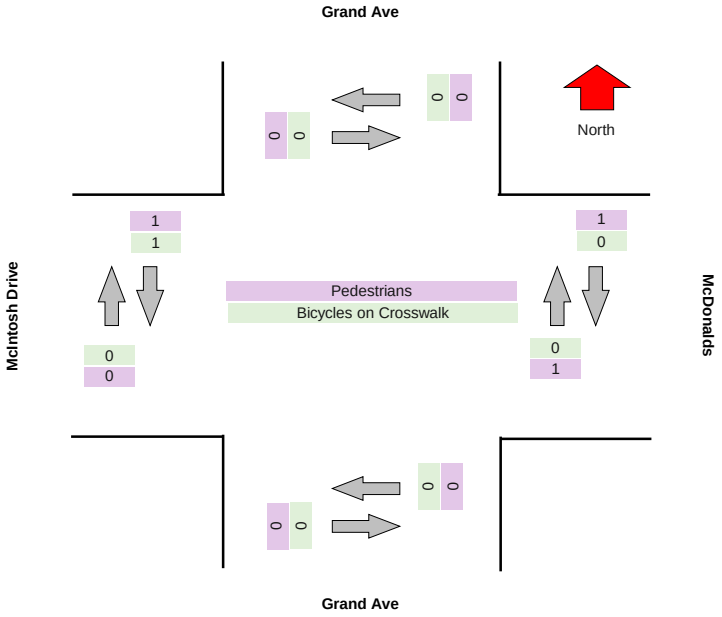


Turning Movement Peak Hour Data (AM)

8:00:00 AM

Leg	McIntosh Drive								McDonalds								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
8:00:00 AM	10	0	8	5	0	**23**	0	1	6	0	2	3	0	**11**	1	1	7	135	11	1	0	**154**	0	0	3	138	6	2	0	**149**	0	0	**337**
8:15:00 AM	17	3	3	8	0	**31**	0	1	5	1	2	3	0	**11**	0	0	6	134	5	0	0	**145**	0	0	3	104	5	3	0	**115**	0	0	**302**
8:30:00 AM	22	2	7	4	0	**35**	0	0	7	0	3	2	0	**12**	0	0	5	129	13	2	0	**149**	0	0	7	135	8	2	0	**152**	0	0	**348**
8:45:00 AM	14	1	8	4	0	**27**	0	0	9	4	6	4	0	**23**	0	0	11	151	10	2	0	**174**	0	0	2	135	18	1	0	**156**	0	0	**380**
Grand Total	63	6	26	21	0	**116**	0	2	27	5	13	12	0	**57**	1	1	29	549	39	5	0	**622**	0	0	15	512	37	8	0	**572**	0	0	**1367**
% Approach	54.3%	5.2%	22.4%	18.1%	0.0%	**0.0%**	0.0%	0.0%	47.4%	8.8%	22.8%	21.1%	0.0%	**0.0%**	0.0%	0.0%	4.7%	88.3%	6.3%	0.8%	0.0%	**0.0%**	0.0%	0.0%	2.6%	89.5%	6.5%	1.4%	0.0%	**0.0%**	0.0%	0.0%	
% Total	4.6%	0.4%	1.9%	1.5%	0.0%	**8.5%**	0.0%	0.0%	2.0%	0.4%	1.0%	0.9%	0.0%	**4.2%**	0.0%	0.0%	2.1%	40.2%	2.9%	0.4%	0.0%	**45.5%**	0.0%	0.0%	1.1%	37.5%	2.7%	0.6%	0.0%	**41.8%**	0.0%	0.0%	
PHF	0.716	0.500	0.813	0.656	0.000	**0.829**	0.000	0.000	0.750	0.313	0.542	0.750	0.000	**0.620**	0.000	0.000	0.659	0.909	0.750	0.625	0.000	**0.894**	0.000	0.000	0.536	0.928	0.514	0.667	0.000	**0.917**	0.000	0.000	**0.899**
Lights	61	6	24	21	0	**112**	0	0	27	5	13	12	0	**57**	0	0	28	536	39	5	0	**608**	0	0	15	499	36	7	0	**557**	0	0	**1334**
% Lights	96.8%	100.0%	92.3%	100.0%	0.0%	**96.6%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	96.6%	97.6%	100.0%	100.0%	0.0%	**97.7%**	0.0%	0.0%	100.0%	97.5%	97.3%	87.5%	0.0%	**97.4%**	0.0%	0.0%	**97.6%**
HV	2	0	2	0	0	**4**	0	0	0	0	0	0	0	**0**	0	0	1	13	0	0	0	**14**	0	0	0	13	1	1	0	**15**	0	0	**33**
% HV	3.2%	0.0%	7.7%	0.0%	0.0%	**3.4%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	3.4%	2.4%	0.0%	0.0%	0.0%	**2.3%**	0.0%	0.0%	0.0%	2.5%	2.7%	12.5%	0.0%	**2.6%**	0.0%	0.0%	**2.4%**
Pedestrians	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**0**	1	1	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	3
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**75.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	1
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**25.0%**

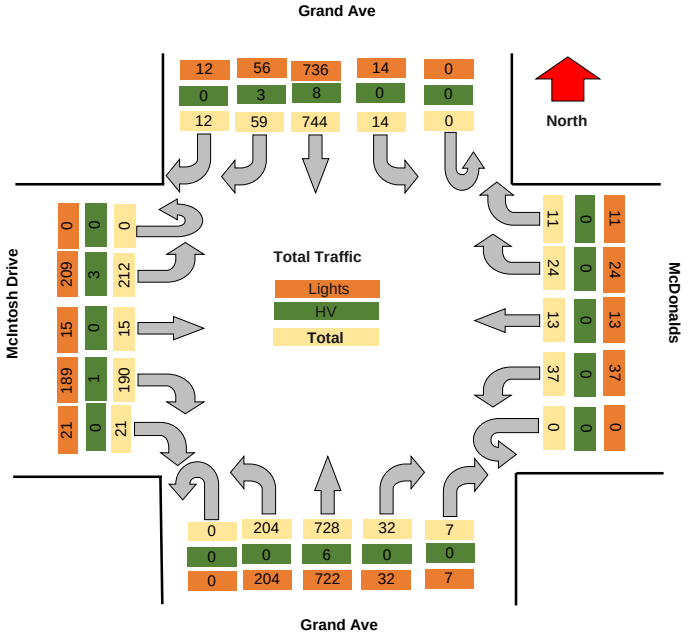


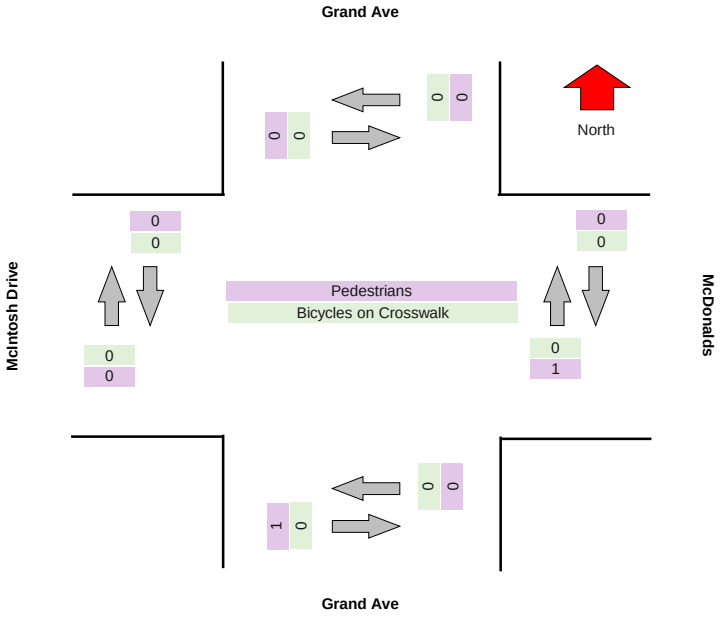


Turning Movement Peak Hour Data (MID)

12:00:00 PM

Leg	McIntosh Drive								McDonalds								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
12:00:00 PM	53	5	42	6	0	**106**	0	0	7	4	7	4	0	**22**	0	0	58	170	12	3	0	**243**	0	1	7	182	17	4	0	**210**	0	0	**581**
12:15:00 PM	59	1	47	2	0	**109**	0	0	5	5	7	3	0	**20**	0	0	52	186	5	2	0	**245**	0	0	1	181	8	4	0	**194**	0	0	**568**
12:30:00 PM	45	6	57	7	0	**115**	0	0	11	2	2	2	0	**17**	0	1	46	169	9	1	0	**225**	0	0	3	192	16	3	0	**214**	0	0	**571**
12:45:00 PM	55	3	44	6	0	**108**	0	0	14	2	8	2	0	**26**	0	0	48	203	6	1	0	**258**	0	0	3	189	18	1	0	**211**	0	0	**603**
Grand Total	212	15	190	21	0	**438**	0	0	37	13	24	11	0	**85**	0	1	204	728	32	7	0	**971**	0	1	14	744	59	12	0	**829**	0	0	**2323**
% Approach	48.4%	3.4%	43.4%	4.8%	0.0%	**0.0%**	0.0%	0.0%	43.5%	15.3%	28.2%	12.9%	0.0%	**0.0%**	0.0%	0.0%	21.0%	75.0%	3.3%	0.7%	0.0%	**0.0%**	0.0%	0.0%	1.7%	89.7%	7.1%	1.4%	0.0%	**0.0%**	0.0%	0.0%	
% Total	9.1%	0.6%	8.2%	0.9%	0.0%	**18.9%**	0.0%	0.0%	1.6%	0.6%	1.0%	0.5%	0.0%	**3.7%**	0.0%	0.0%	8.8%	31.3%	1.4%	0.3%	0.0%	**41.8%**	0.0%	0.0%	0.6%	32.0%	2.5%	0.5%	0.0%	**35.7%**	0.0%	0.0%	
PHF	0.898	0.625	0.833	0.750	0.000	**0.952**	0.000	0.000	0.661	0.650	0.750	0.688	0.000	**0.817**	0.000	0.000	0.879	0.897	0.667	0.583	0.000	**0.941**	0.000	0.000	0.500	0.969	0.819	0.750	0.000	**0.968**	0.000	0.000	**0.963**
Lights	209	15	189	21	0	**434**	0	0	37	13	24	11	0	**85**	0	0	204	722	32	7	0	**965**	0	0	14	736	56	12	0	**818**	0	0	**2302**
% Lights	98.6%	100.0%	99.5%	100.0%	0.0%	**99.1%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	99.2%	100.0%	100.0%	0.0%	**99.4%**	0.0%	0.0%	100.0%	98.9%	94.9%	100.0%	0.0%	**98.7%**	0.0%	0.0%	**99.1%**
HV	3	0	1	0	0	**4**	0	0	0	0	0	0	0	**0**	0	0	0	6	0	0	0	**6**	0	0	0	8	3	0	0	**11**	0	0	**21**
% HV	1.4%	0.0%	0.5%	0.0%	0.0%	**0.9%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	**0.6%**	0.0%	0.0%	0.0%	1.1%	5.1%	0.0%	0.0%	**1.3%**	0.0%	0.0%	**0.9%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**0**	0	0	2
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

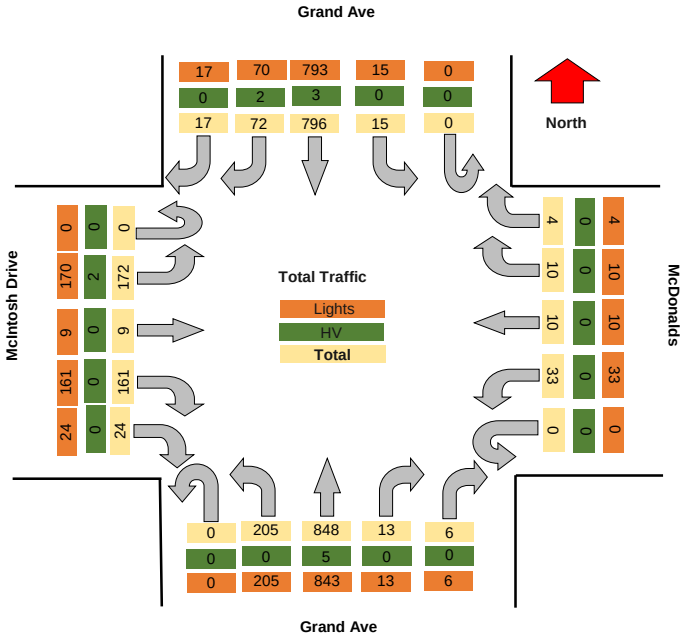


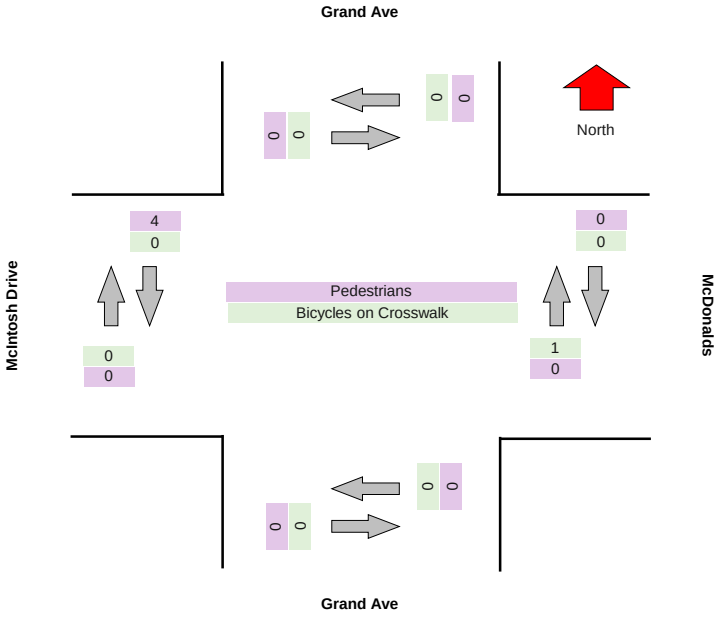


Turning Movement Peak Hour Data (PM)

4:00:00 PM

Leg	McIntosh Drive								McDonalds								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
4:00:00 PM	38	3	35	3	0	**79**	0	2	8	3	5	1	0	**17**	0	1	47	225	4	1	0	**277**	0	0	4	221	20	4	0	**249**	0	0	**622**
4:15:00 PM	46	3	36	9	0	**94**	0	0	12	1	0	0	0	**13**	0	0	54	221	3	2	0	**280**	0	0	1	183	9	4	0	**197**	0	0	**584**
4:30:00 PM	45	1	45	8	0	**99**	0	0	5	4	0	0	0	**9**	0	0	46	210	2	1	0	**259**	0	0	7	199	18	4	0	**228**	0	0	**595**
4:45:00 PM	43	2	45	4	0	**94**	0	2	8	2	5	3	0	**18**	0	0	58	192	4	2	0	**256**	0	0	3	193	25	5	0	**226**	0	0	**594**
Grand Total	172	9	161	24	0	**366**	0	4	33	10	10	4	0	**57**	0	1	205	848	13	6	0	**1072**	0	0	15	796	72	17	0	**900**	0	0	**2395**
% Approach	47.0%	2.5%	44.0%	6.6%	0.0%	**0.0%**	0.0%	0.0%	57.9%	17.5%	17.5%	7.0%	0.0%	**0.0%**	0.0%	0.0%	19.1%	79.1%	1.2%	0.6%	0.0%	**0.0%**	0.0%	0.0%	1.7%	88.4%	8.0%	1.9%	0.0%	**0.0%**	0.0%	0.0%	
% Total	7.2%	0.4%	6.7%	1.0%	0.0%	**15.3%**	0.0%	0.0%	1.4%	0.4%	0.4%	0.2%	0.0%	**2.4%**	0.0%	0.0%	8.6%	35.4%	0.5%	0.3%	0.0%	**44.8%**	0.0%	0.0%	0.6%	33.2%	3.0%	0.7%	0.0%	**37.6%**	0.0%	0.0%	
PHF	0.935	0.750	0.894	0.667	0.000	**0.924**	0.000	0.000	0.688	0.625	0.500	0.333	0.000	**0.792**	0.000	0.000	0.884	0.942	0.813	0.750	0.000	**0.957**	0.000	0.000	0.536	0.900	0.720	0.850	0.000	**0.904**	0.000	0.000	**0.963**
Lights	170	9	161	24	0	**364**	0	0	33	10	10	4	0	**57**	0	0	205	843	13	6	0	**1067**	0	0	15	793	70	17	0	**895**	0	0	**2383**
% Lights	98.8%	100.0%	100.0%	100.0%	0.0%	**99.5%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	99.4%	100.0%	100.0%	0.0%	**99.5%**	0.0%	0.0%	100.0%	99.6%	97.2%	100.0%	0.0%	**99.4%**	0.0%	0.0%	**99.5%**
HV	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**	0	0	0	5	0	0	0	**5**	0	0	0	3	2	0	0	**5**	0	0	**12**
% HV	1.2%	0.0%	0.0%	0.0%	0.0%	**0.5%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	**0.5%**	0.0%	0.0%	0.0%	0.4%	2.8%	0.0%	0.0%	**0.6%**	0.0%	0.0%	**0.5%**
Pedestrians	0	0	0	0	0	**0**	0	4	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	4
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**80.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	1
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**20.0%**





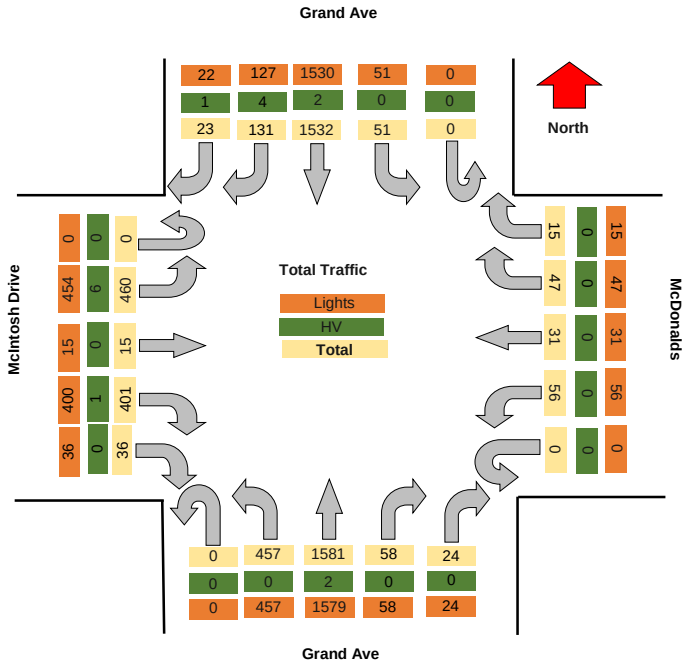
Project	GTS
Project Code	12290
Site Name	12290-4 - Grand Ave & McInto
Legs and Movements	All Processed Legs & Moveme
Bin Size	15 minutes
Survey Date	2025/11/22, Saturday
Location	Grand Ave & McIntosh Drive/M
Latitude and Longitude	42.947972, -76.548333

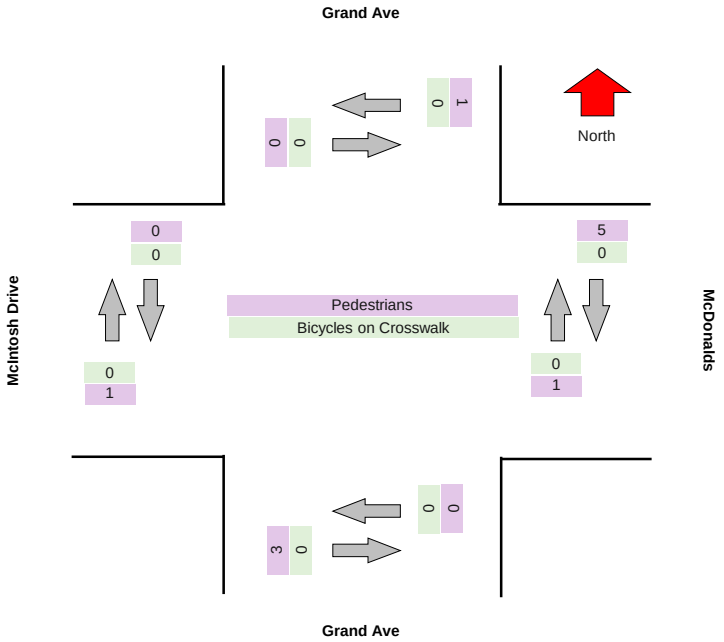
	Start	End	PHF
MID Peak	2025/11/22 11:45:00	2025/11/22 12:45:00	0.97

Turning Movement Data

Leg	**McIntosh Drive**								**McDonalds**								**Grand Ave**								**Grand Ave**								
Direction	**Eastbound**								**Westbound**								**Northbound**								**Southbound**								
Start Time	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	**Total**
11:00:00 AM	43	1	36	5	0	**85**	0	0	0	1	2	2	0	**5**	0	0	50	189	7	2	0	**248**	0	1	3	0	17	2	0	**211**	0	0	**549**
11:15:00 AM	50	0	50	5	0	**105**	1	0	7	3	6	2	0	**18**	1	1	63	196	5	9	0	**273**	0	1	5	0	16	1	0	**202**	0	0	**598**
11:30:00 AM	67	1	61	5	0	**134**	0	0	6	2	5	1	0	**14**	2	0	43	189	9	5	0	**246**	0	1	7	0	18	4	0	**204**	0	0	**598**
11:45:00 AM	55	7	45	5	0	**112**	0	0	8	5	7	3	0	**23**	2	0	65	206	11	2	0	**284**	0	0	11	0	16	3	0	**234**	0	0	**653**
Hourly Total	215	9	192	20	0	**436**	1	0	21	11	20	8	0	**60**	5	1	221	780	32	18	0	**1051**	0	3	26	0	67	10	0	**851**	0	0	**2398**
12:00:00 PM	67	3	47	1	0	**118**	0	0	10	5	10	2	0	**27**	0	0	67	208	8	2	0	**285**	0	0	8	0	19	2	0	**242**	0	1	**672**
12:15:00 PM	72	1	57	3	0	**133**	0	0	8	7	5	3	0	**23**	0	0	66	202	7	2	0	**277**	0	0	8	0	17	4	0	**226**	0	0	**659**
12:30:00 PM	51	2	62	2	0	**117**	0	0	12	3	7	0	0	**22**	0	0	43	219	6	0	0	**268**	0	0	4	0	16	1	0	**213**	0	0	**620**
12:45:00 PM	55	0	43	10	0	**108**	0	0	5	5	5	2	0	**17**	0	0	60	172	5	2	0	**239**	0	0	5	0	12	6	0	**205**	0	0	**569**
Hourly Total	245	6	209	16	0	**476**	0	0	35	20	27	7	0	**89**	0	0	236	801	26	6	0	**1069**	0	0	25	0	64	13	0	**886**	0	1	**2520**
Grand Total	460	15	401	36	0	**912**	1	0	56	31	47	15	0	**149**	5	1	457	1581	58	24	0	**2120**	0	3	51	1532	131	23	0	**1737**	0	1	**4918**
% Approach	50.4%	1.6%	44.0%	3.9%	0.0%	**0.0%**	0.0%	0.0%	37.6%	20.8%	31.5%	10.1%	0.0%	**0.0%**	0.0%	0.0%	21.6%	74.6%	2.7%	1.1%	0.0%	**0.0%**	0.0%	0.0%	2.9%	88.2%	7.5%	1.3%	0.0%	**0.0%**	0.0%	0.0%	
% Total	9.4%	0.3%	8.2%	0.7%	0.0%	**18.5%**	0.0%	0.0%	1.1%	0.6%	1.0%	0.3%	0.0%	**3.0%**	0.0%	0.0%	9.3%	32.1%	1.2%	0.5%	0.0%	**43.1%**	0.0%	0.0%	1.0%	31.2%	2.7%	0.5%	0.0%	**35.3%**	0.0%	0.0%	
Lights	454	15	400	36	0	**905**	0	0	56	31	47	15	0	**149**	0	0	457	1579	58	24	0	**2118**	0	0	51	1530	127	22	0	**1730**	0	0	**4902**
% Lights	98.7%	100.0%	99.8%	100.0%	0.0%	**99.2%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	99.9%	100.0%	100.0%	0.0%	**99.9%**	0.0%	0.0%	100.0%	99.9%	96.9%	95.7%	0.0%	**99.6%**	0.0%	0.0%	**99.7%**
Hv	6	0	1	0	0	**7**	0	0	0	0	0	0	0	**0**	0	0	0	2	0	0	0	**2**	0	0	0	2	4	1	0	**7**	0	0	**16**
% HV	1.3%	0.0%	0.2%	0.0%	0.0%	**0.8%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	**0.1%**	0.0%	0.0%	0.0%	0.1%	3.1%	4.3%	0.0%	**0.4%**	0.0%	0.0%	**0.3%**
Pedestrians	0	0	0	0	0	**0**	1	0	0	0	0	0	0	**0**	5	1	0	0	0	0	0	**0**	0	3	0	0	0	0	0	**0**	0	1	11
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

Turning Movement Data Plot

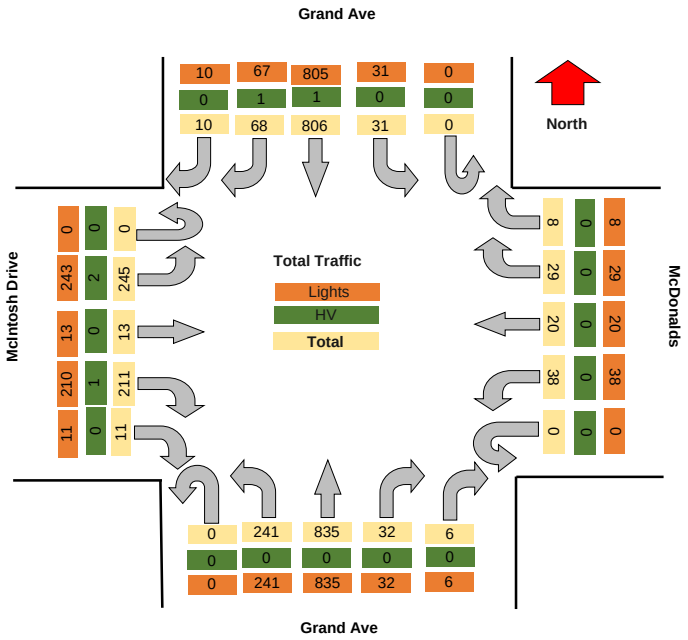


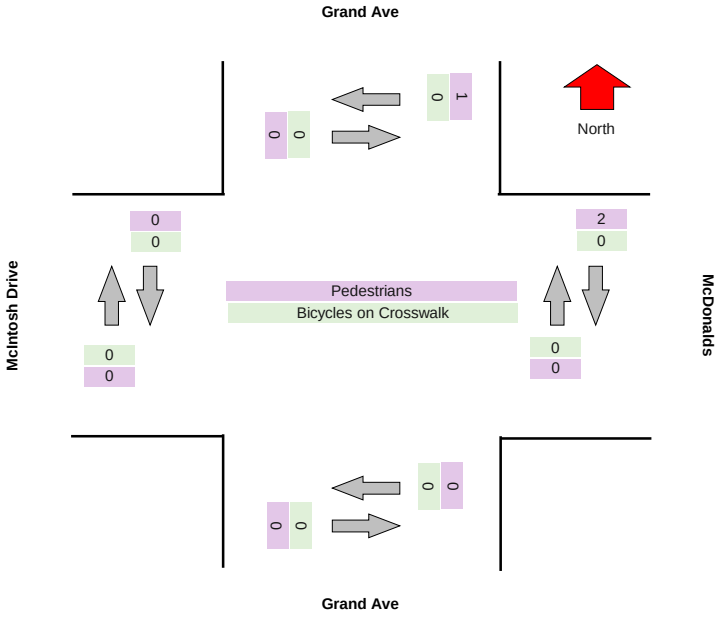


Turning Movement Peak Hour Data (MID)

11:45:00 AM

Leg	McIntosh Drive								McDonalds								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
11:45:00 AM	55	7	45	5	0	**112**	0	0	8	5	7	3	0	**23**	2	0	65	206	11	2	0	**284**	0	0	11	204	16	3	0	**234**	0	0	**653**
12:00:00 PM	67	3	47	1	0	**118**	0	0	10	5	10	2	0	**27**	0	0	67	208	8	2	0	**285**	0	0	8	213	19	2	0	**242**	0	1	**672**
12:15:00 PM	72	1	57	3	0	**133**	0	0	8	7	5	3	0	**23**	0	0	66	202	7	2	0	**277**	0	0	8	197	17	4	0	**226**	0	0	**659**
12:30:00 PM	51	2	62	2	0	**117**	0	0	12	3	7	0	0	**22**	0	0	43	219	6	0	0	**268**	0	0	4	192	16	1	0	**213**	0	0	**620**
Grand Total	245	13	211	11	0	**480**	0	0	38	20	29	8	0	**95**	2	0	241	835	32	6	0	**1114**	0	0	31	806	68	10	0	**915**	0	1	**2604**
% Approach	51.0%	2.7%	44.0%	2.3%	0.0%	**0.0%**	0.0%	0.0%	40.0%	21.1%	30.5%	8.4%	0.0%	**0.0%**	0.0%	0.0%	21.6%	75.0%	2.9%	0.5%	0.0%	**0.0%**	0.0%	0.0%	3.4%	88.1%	7.4%	1.1%	0.0%	**0.0%**	0.0%	0.0%	
% Total	9.4%	0.5%	8.1%	0.4%	0.0%	**18.4%**	0.0%	0.0%	1.5%	0.8%	1.1%	0.3%	0.0%	**3.6%**	0.0%	0.0%	9.3%	32.1%	1.2%	0.2%	0.0%	**42.8%**	0.0%	0.0%	1.2%	31.0%	2.6%	0.4%	0.0%	**35.1%**	0.0%	0.0%	
PHF	0.851	0.464	0.851	0.550	0.000	**0.902**	0.000	0.000	0.792	0.714	0.725	0.667	0.000	**0.880**	0.000	0.000	0.899	0.953	0.727	0.750	0.000	**0.977**	0.000	0.000	0.705	0.946	0.895	0.625	0.000	**0.945**	0.000	0.000	**0.969**
Lights	243	13	210	11	0	**477**	0	0	38	20	29	8	0	**95**	0	0	241	835	32	6	0	**1114**	0	0	31	805	67	10	0	**913**	0	0	**2599**
% Lights	99.2%	100.0%	99.5%	100.0%	0.0%	**99.4%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	99.9%	98.5%	100.0%	0.0%	**99.8%**	0.0%	0.0%	**99.8%**
HV	2	0	1	0	0	**3**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	1	1	0	0	**2**	0	0	**5**
% HV	0.8%	0.0%	0.5%	0.0%	0.0%	**0.6%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.1%	1.5%	0.0%	0.0%	**0.2%**	0.0%	0.0%	**0.2%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	2	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	1	3
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**





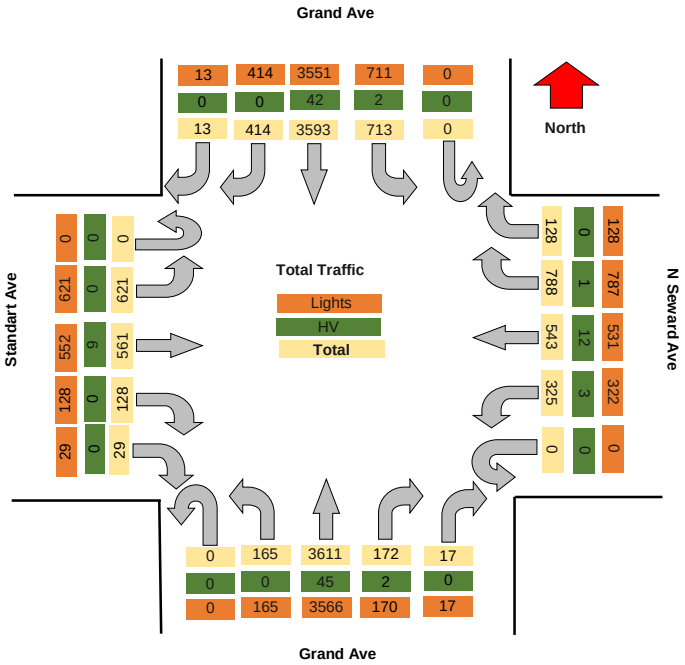
Project	GTS
Project Code	12290
Site Name	12290-5 - Grand Ave & Standa
Legs and Movements	All Processed Legs & Moveme
Bin Size	15 minutes
Survey Date	2025/11/20, Thursday
Location	Grand Ave & Standart Ave & N
Latitude and Longitude	42.944306, -76.550944

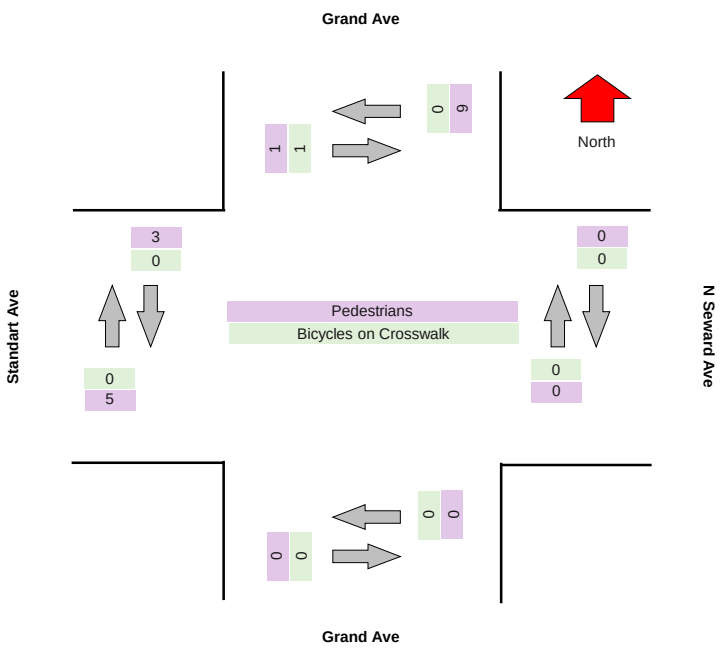
	Start	End	PHF
AM Peak	2025/11/20 08:00:00	2025/11/20 09:00:00	0.95
MID Peak	2025/11/20 12:00:00	2025/11/20 13:00:00	0.98
PM Peak	2025/11/20 16:00:00	2025/11/20 17:00:00	0.95

Turning Movement Data

Leg	Standart Ave								N Seward Ave								Grand Ave								Grand Ave								
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Total
7:00:00 AM	15	13	4	0	0	**32**	0	2	5	20	13	4	0	**42**	0	0	4	71	3	0	0	**78**	0	0	9	64	10	0	0	**83**	0	0	**235**
7:15:00 AM	19	29	3	3	0	**54**	0	1	6	18	14	4	0	**42**	0	0	1	111	1	0	0	**113**	0	0	9	94	11	0	0	**114**	0	0	**323**
7:30:00 AM	26	31	6	1	0	**64**	0	0	9	33	23	5	0	**70**	0	0	5	87	4	1	0	**97**	0	0	8	82	11	0	0	**101**	0	0	**332**
7:45:00 AM	21	31	8	5	0	**65**	0	0	7	38	23	3	0	**71**	0	0	3	126	5	0	0	**134**	0	0	18	100	18	0	0	**136**	0	0	**406**
Hourly Total	81	104	21	9	0	**215**	0	3	27	109	73	16	0	**225**	0	0	13	395	13	1	0	**422**	0	0	44	340	50	0	0	**434**	0	0	**1296**
8:00:00 AM	24	18	4	4	0	**50**	0	0	7	23	23	6	0	**59**	0	0	7	107	3	3	0	**120**	0	0	11	116	15	0	0	**142**	0	0	**371**
8:15:00 AM	29	33	4	0	0	**66**	0	0	15	22	26	3	0	**66**	0	0	5	119	4	1	0	**129**	0	0	20	86	13	0	0	**119**	0	0	**380**
8:30:00 AM	26	29	6	1	0	**62**	0	0	16	33	20	3	0	**72**	0	0	6	106	5	0	0	**117**	0	0	18	109	11	2	0	**140**	0	0	**391**
8:45:00 AM	22	21	6	2	0	**51**	0	0	18	20	33	5	0	**76**	0	0	5	126	6	0	0	**137**	0	0	18	105	23	0	0	**146**	0	0	**410**
Hourly Total	101	101	20	7	0	**229**	0	0	56	98	102	17	0	**273**	0	0	23	458	18	4	0	**503**	0	0	67	416	62	2	0	**547**	0	0	**1552**
11:00:00 AM	30	19	2	1	0	**52**	1	0	11	17	26	6	0	**60**	0	0	6	170	10	0	0	**186**	0	0	29	176	20	0	0	**225**	0	0	**523**
11:15:00 AM	25	15	4	1	0	**45**	0	0	17	18	38	5	0	**78**	0	0	3	159	9	2	0	**173**	0	0	30	170	19	1	0	**220**	0	0	**516**
11:30:00 AM	21	21	4	2	0	**48**	0	0	15	18	30	3	0	**66**	0	0	8	169	11	1	0	**189**	0	0	30	184	16	0	0	**230**	0	0	**533**
11:45:00 AM	22	25	4	2	0	**53**	0	0	17	13	50	5	0	**85**	0	0	6	160	8	1	0	**175**	0	0	31	190	14	0	0	**235**	0	0	**548**
Hourly Total	98	80	14	6	0	**198**	1	0	60	66	144	19	0	**289**	0	0	23	658	38	4	0	**723**	0	0	120	720	69	1	0	**910**	0	0	**2120**
12:00:00 PM	36	24	6	1	0	**67**	0	0	17	20	43	6	0	**86**	0	0	5	164	10	0	0	**179**	0	0	42	174	18	2	0	**236**	0	0	**568**
12:15:00 PM	30	22	3	1	0	**56**	0	0	15	11	48	7	0	**81**	0	0	3	182	4	2	0	**191**	0	0	39	173	16	4	0	**232**	0	0	**560**
12:30:00 PM	28	18	8	0	0	**54**	0	0	21	19	33	4	0	**77**	0	0	11	161	10	1	0	**183**	0	0	30	181	24	1	0	**236**	0	0	**550**
12:45:00 PM	35	14	6	0	0	**55**	0	0	15	28	36	4	0	**83**	0	0	7	193	9	1	0	**210**	0	0	32	148	24	0	0	**204**	0	2	**552**
Hourly Total	129	78	23	2	0	**232**	0	0	68	78	160	21	0	**327**	0	0	26	700	33	4	0	**763**	0	0	143	676	82	7	0	**908**	0	2	**2230**
4:00:00 PM	39	25	6	1	0	**71**	0	0	17	21	40	7	0	**85**	0	0	12	201	9	0	0	**222**	0	0	40	196	20	2	0	**258**	0	1	**636**
4:15:00 PM	34	30	7	0	0	**71**	0	0	11	28	33	9	0	**81**	0	0	11	186	10	1	0	**208**	0	0	45	162	13	0	0	**220**	0	0	**580**
4:30:00 PM	27	23	11	1	0	**62**	0	0	16	28	59	2	0	**105**	0	0	7	184	13	1	0	**205**	0	0	48	201	28	0	0	**277**	1	0	**649**
4:45:00 PM	26	24	5	1	0	**56**	0	0	18	20	44	3	0	**85**	0	0	13	188	11	0	0	**212**	0	0	52	185	20	0	0	**257**	0	0	**610**
Hourly Total	126	102	29	3	0	**260**	0	0	62	97	176	21	0	**356**	0	0	43	759	43	2	0	**847**	0	0	185	744	81	2	0	**1012**	1	1	**2475**
5:00:00 PM	35	25	8	0	0	**68**	1	0	14	19	32	5	0	**70**	0	0	10	169	10	0	0	**189**	0	0	46	210	22	1	0	**279**	0	1	**606**
5:15:00 PM	23	30	5	1	0	**59**	2	0	13	29	40	12	0	**94**	0	0	7	175	3	0	0	**185**	0	0	41	166	15	0	0	**222**	1	2	**560**
5:30:00 PM	10	17	3	1	0	**31**	0	0	17	17	30	9	0	**73**	0	0	10	155	8	1	0	**174**	0	0	33	162	19	0	0	**214**	0	0	**492**
5:45:00 PM	18	24	5	0	0	**47**	1	0	8	30	31	8	0	**77**	0	0	10	142	6	1	0	**159**	0	0	34	159	14	0	0	**207**	0	0	**490**
Hourly Total	86	96	21	2	0	**205**	4	0	52	95	133	34	0	**314**	0	0	37	641	27	2	0	**707**	0	0	154	697	70	1	0	**922**	1	3	**2148**
Grand Total	621	561	128	29	0	**1339**	5	3	325	543	788	128	0	**1784**	0	0	165	3611	172	17	0	**3965**	0	0	713	3593	414	13	0	**4733**	2	6	**11821**
% Approach	46.4%	41.9%	9.6%	2.2%	0.0%	**0.0%**	0.0%	0.0%	18.2%	30.4%	44.2%	7.2%	0.0%	**0.0%**	0.0%	0.0%	4.2%	91.1%	4.3%	0.4%	0.0%	**0.0%**	0.0%	0.0%	15.1%	75.9%	8.7%	0.3%	0.0%	**0.0%**	0.0%	0.0%	
% Total	5.3%	4.7%	1.1%	0.2%	0.0%	**11.3%**	0.0%	0.0%	2.7%	4.6%	6.7%	1.1%	0.0%	**15.1%**	0.0%	0.0%	1.4%	30.5%	1.5%	0.1%	0.0%	**33.5%**	0.0%	0.0%	6.0%	30.4%	3.5%	0.1%	0.0%	**40.0%**	0.0%	0.0%	
Lights	621	552	128	29	0	**1330**	0	0	322	531	787	128	0	**1768**	0	0	165	3566	170	17	0	**3918**	0	0	711	3551	414	13	0	**4689**	0	0	**11705**
% Lights	100.0%	98.4%	100.0%	100.0%	0.0%	**99.3%**	0.0%	0.0%	99.1%	97.8%	99.9%	100.0%	0.0%	**99.1%**	0.0%	0.0%	100.0%	98.8%	98.8%	100.0%	0.0%	**98.8%**	0.0%	0.0%	99.7%	98.8%	100.0%	100.0%	0.0%	**99.1%**	0.0%	0.0%	**99.0%**
Hv	0	9	0	0	0	**9**	0	0	3	12	1	0	0	**16**	0	0	0	45	2	0	0	**47**	0	0	2	42	0	0	0	**44**	0	0	**116**
% HV	0.0%	1.6%	0.0%	0.0%	0.0%	**0.7%**	0.0%	0.0%	0.9%	2.2%	0.1%	0.0%	0.0%	**0.9%**	0.0%	0.0%	0.0%	1.2%	1.2%	0.0%	0.0%	**1.2%**	0.0%	0.0%	0.3%	1.2%	0.0%	0.0%	0.0%	**0.9%**	0.0%	0.0%	**1.0%**
Pedestrians	0	0	0	0	0	**0**	5	3	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	1	6	15
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	50.0%	100.0%	**93.8%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	1	0	1
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	50.0%	0.0%	**6.3%**

Turning Movement Data Plot

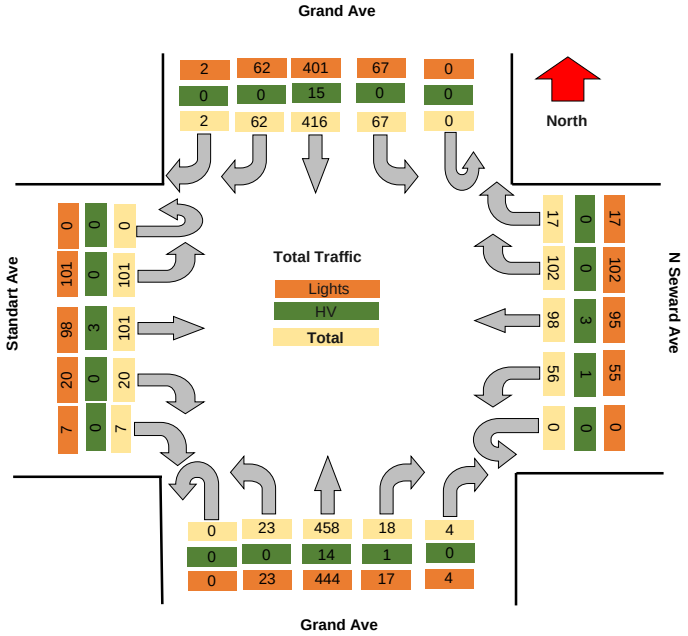


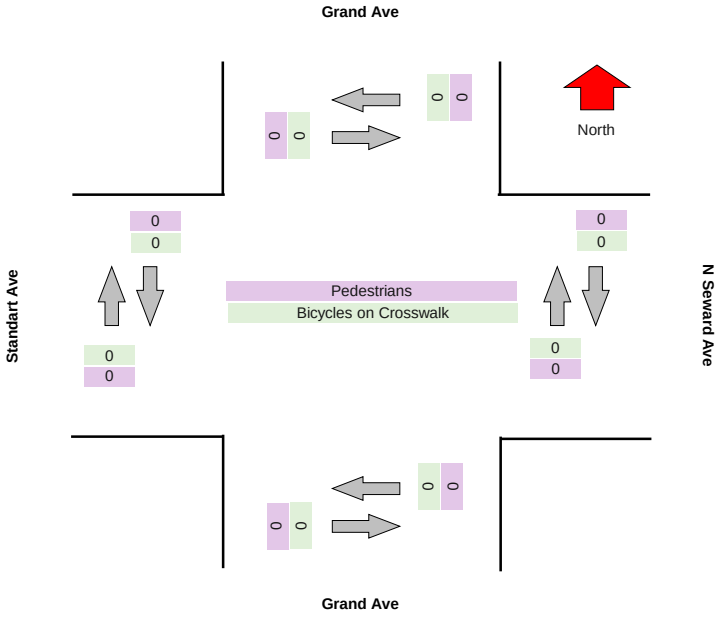


Turning Movement Peak Hour Data (AM)

8:00:00 AM

Leg	Standart Ave								N Seward Ave								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
8:00:00 AM	24	18	4	4	0	**50**	0	0	7	23	23	6	0	**59**	0	0	7	107	3	3	0	**120**	0	0	11	116	15	0	0	**142**	0	0	**371**
8:15:00 AM	29	33	4	0	0	**66**	0	0	15	22	26	3	0	**66**	0	0	5	119	4	1	0	**129**	0	0	20	86	13	0	0	**119**	0	0	**380**
8:30:00 AM	26	29	6	1	0	**62**	0	0	16	33	20	3	0	**72**	0	0	6	106	5	0	0	**117**	0	0	18	109	11	2	0	**140**	0	0	**391**
8:45:00 AM	22	21	6	2	0	**51**	0	0	18	20	33	5	0	**76**	0	0	5	126	6	0	0	**137**	0	0	18	105	23	0	0	**146**	0	0	**410**
Grand Total	101	101	20	7	0	**229**	0	0	56	98	102	17	0	**273**	0	0	23	458	18	4	0	**503**	0	0	67	416	62	2	0	**547**	0	0	**1552**
% Approach	44.1%	44.1%	8.7%	3.1%	0.0%	**0.0%**	0.0%	0.0%	20.5%	35.9%	37.4%	6.2%	0.0%	**0.0%**	0.0%	0.0%	4.6%	91.1%	3.6%	0.8%	0.0%	**0.0%**	0.0%	0.0%	12.2%	76.1%	11.3%	0.4%	0.0%	**0.0%**	0.0%	0.0%	
% Total	6.5%	6.5%	1.3%	0.5%	0.0%	**14.8%**	0.0%	0.0%	3.6%	6.3%	6.6%	1.1%	0.0%	**17.6%**	0.0%	0.0%	1.5%	29.5%	1.2%	0.3%	0.0%	**32.4%**	0.0%	0.0%	4.3%	26.8%	4.0%	0.1%	0.0%	**35.2%**	0.0%	0.0%	
PHF	0.871	0.765	0.833	0.438	0.000	**0.867**	0.000	0.000	0.778	0.742	0.773	0.708	0.000	**0.898**	0.000	0.000	0.821	0.909	0.750	0.333	0.000	**0.918**	0.000	0.000	0.838	0.897	0.674	0.250	0.000	**0.937**	0.000	0.000	**0.946**
Lights	101	98	20	7	0	**226**	0	0	55	95	102	17	0	**269**	0	0	23	444	17	4	0	**488**	0	0	67	401	62	2	0	**532**	0	0	**1515**
% Lights	100.0%	97.0%	100.0%	100.0%	0.0%	**98.7%**	0.0%	0.0%	98.2%	96.9%	100.0%	100.0%	0.0%	**98.5%**	0.0%	0.0%	100.0%	96.9%	94.4%	100.0%	0.0%	**97.0%**	0.0%	0.0%	100.0%	96.4%	100.0%	100.0%	0.0%	**97.3%**	0.0%	0.0%	**97.6%**
HV	0	3	0	0	0	**3**	0	0	1	3	0	0	0	**4**	0	0	0	14	1	0	0	**15**	0	0	0	15	0	0	0	**15**	0	0	**37**
% HV	0.0%	3.0%	0.0%	0.0%	0.0%	**1.3%**	0.0%	0.0%	1.8%	3.1%	0.0%	0.0%	0.0%	**1.5%**	0.0%	0.0%	0.0%	3.1%	5.6%	0.0%	0.0%	**3.0%**	0.0%	0.0%	0.0%	3.6%	0.0%	0.0%	0.0%	**2.7%**	0.0%	0.0%	**2.4%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

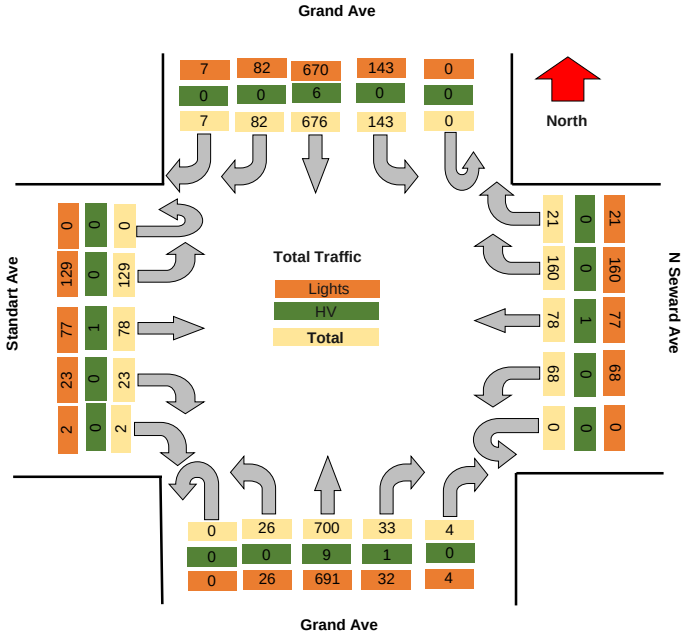


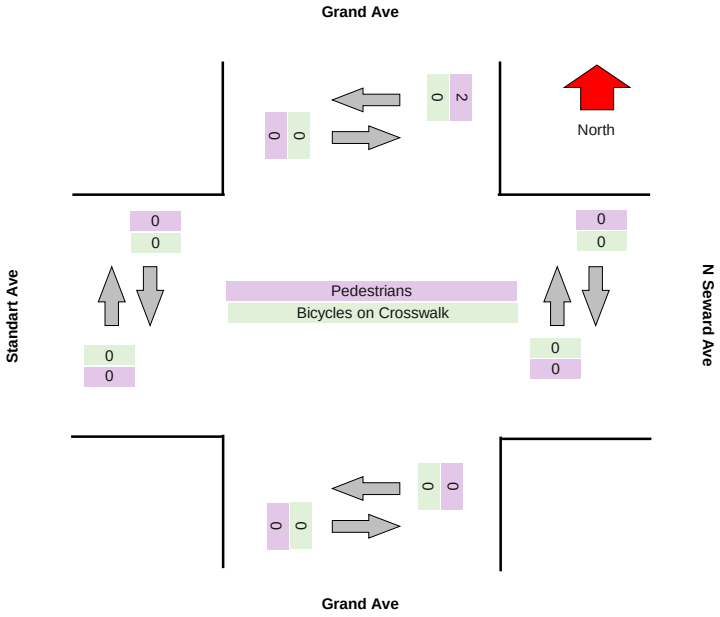


Turning Movement Peak Hour Data (MID)

12:00:00 PM

Leg	Standart Ave								N Seward Ave								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
12:00:00 PM	36	24	6	1	0	**67**	0	0	17	20	43	6	0	**86**	0	0	5	164	10	0	0	**179**	0	0	42	174	18	2	0	**236**	0	0	**568**
12:15:00 PM	30	22	3	1	0	**56**	0	0	15	11	48	7	0	**81**	0	0	3	182	4	2	0	**191**	0	0	39	173	16	4	0	**232**	0	0	**560**
12:30:00 PM	28	18	8	0	0	**54**	0	0	21	19	33	4	0	**77**	0	0	11	161	10	1	0	**183**	0	0	30	181	24	1	0	**236**	0	0	**550**
12:45:00 PM	35	14	6	0	0	**55**	0	0	15	28	36	4	0	**83**	0	0	7	193	9	1	0	**210**	0	0	32	148	24	0	0	**204**	0	2	**552**
Grand Total	129	78	23	2	0	**232**	0	0	68	78	160	21	0	**327**	0	0	26	700	33	4	0	**763**	0	0	143	676	82	7	0	**908**	0	2	**2230**
% Approach	55.6%	33.6%	9.9%	0.9%	0.0%	**0.0%**	0.0%	0.0%	20.8%	23.9%	48.9%	6.4%	0.0%	**0.0%**	0.0%	0.0%	3.4%	91.7%	4.3%	0.5%	0.0%	**0.0%**	0.0%	0.0%	15.7%	74.4%	9.0%	0.8%	0.0%	**0.0%**	0.0%	0.0%	
% Total	5.8%	3.5%	1.0%	0.1%	0.0%	**10.4%**	0.0%	0.0%	3.0%	3.5%	7.2%	0.9%	0.0%	**14.7%**	0.0%	0.0%	1.2%	31.4%	1.5%	0.2%	0.0%	**34.2%**	0.0%	0.0%	6.4%	30.3%	3.7%	0.3%	0.0%	**40.7%**	0.0%	0.0%	
PHF	0.896	0.813	0.719	0.500	0.000	**0.866**	0.000	0.000	0.810	0.696	0.833	0.750	0.000	**0.951**	0.000	0.000	0.591	0.907	0.825	0.500	0.000	**0.908**	0.000	0.000	0.851	0.934	0.854	0.438	0.000	**0.962**	0.000	0.000	**0.982**
Lights	129	77	23	2	0	**231**	0	0	68	77	160	21	0	**326**	0	0	26	691	32	4	0	**753**	0	0	143	670	82	7	0	**902**	0	0	**2212**
% Lights	100.0%	98.7%	100.0%	100.0%	0.0%	**99.6%**	0.0%	0.0%	100.0%	98.7%	100.0%	100.0%	0.0%	**99.7%**	0.0%	0.0%	100.0%	98.7%	97.0%	100.0%	0.0%	**98.7%**	0.0%	0.0%	100.0%	99.1%	100.0%	100.0%	0.0%	**99.3%**	0.0%	0.0%	**99.2%**
HV	0	1	0	0	0	**1**	0	0	0	1	0	0	0	**1**	0	0	0	9	1	0	0	**10**	0	0	0	6	0	0	0	**6**	0	0	**18**
% HV	0.0%	1.3%	0.0%	0.0%	0.0%	**0.4%**	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	**0.3%**	0.0%	0.0%	0.0%	1.3%	3.0%	0.0%	0.0%	**1.3%**	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	**0.7%**	0.0%	0.0%	**0.8%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	2	2
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	100.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

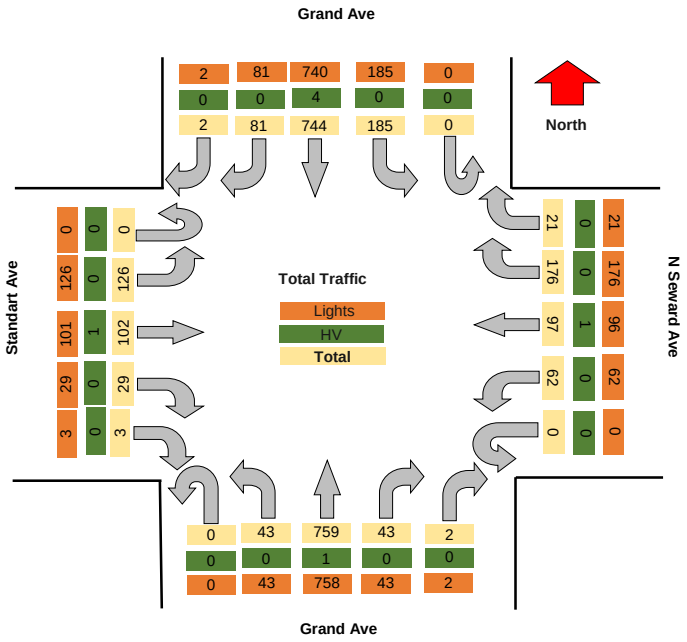


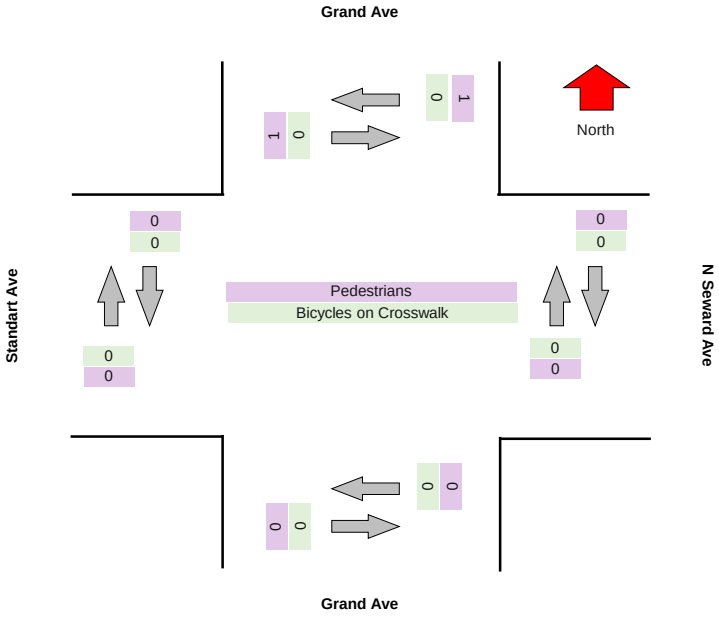


Turning Movement Peak Hour Data (PM)

4:00:00 PM

Leg	Standart Ave								N Seward Ave								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
4:00:00 PM	39	25	6	1	0	**71**	0	0	17	21	40	7	0	**85**	0	0	12	201	9	0	0	**222**	0	0	40	196	20	2	0	**258**	0	1	**636**
4:15:00 PM	34	30	7	0	0	**71**	0	0	11	28	33	9	0	**81**	0	0	11	186	10	1	0	**208**	0	0	45	162	13	0	0	**220**	0	0	**580**
4:30:00 PM	27	23	11	1	0	**62**	0	0	16	28	59	2	0	**105**	0	0	7	184	13	1	0	**205**	0	0	48	201	28	0	0	**277**	1	0	**649**
4:45:00 PM	26	24	5	1	0	**56**	0	0	18	20	44	3	0	**85**	0	0	13	188	11	0	0	**212**	0	0	52	185	20	0	0	**257**	0	0	**610**
Grand Total	126	102	29	3	0	**260**	0	0	62	97	176	21	0	**356**	0	0	43	759	43	2	0	**847**	0	0	185	744	81	2	0	**1012**	1	1	**2475**
% Approach	48.5%	39.2%	11.2%	1.2%	0.0%	**0.0%**	0.0%	0.0%	17.4%	27.2%	49.4%	5.9%	0.0%	**0.0%**	0.0%	0.0%	5.1%	89.6%	5.1%	0.2%	0.0%	**0.0%**	0.0%	0.0%	18.3%	73.5%	8.0%	0.2%	0.0%	**0.0%**	0.0%	0.0%	
% Total	5.1%	4.1%	1.2%	0.1%	0.0%	**10.5%**	0.0%	0.0%	2.5%	3.9%	7.1%	0.8%	0.0%	**14.4%**	0.0%	0.0%	1.7%	30.7%	1.7%	0.1%	0.0%	**34.2%**	0.0%	0.0%	7.5%	30.1%	3.3%	0.1%	0.0%	**40.9%**	0.0%	0.0%	
PHF	0.808	0.850	0.659	0.750	0.000	**0.915**	0.000	0.000	0.861	0.866	0.746	0.583	0.000	**0.848**	0.000	0.000	0.827	0.944	0.827	0.500	0.000	**0.954**	0.000	0.000	0.889	0.925	0.723	0.250	0.000	**0.913**	0.000	0.000	**0.953**
Lights	126	101	29	3	0	**259**	0	0	62	96	176	21	0	**355**	0	0	43	758	43	2	0	**846**	0	0	185	740	81	2	0	**1008**	0	0	**2468**
% Lights	100.0%	99.0%	100.0%	100.0%	0.0%	**99.6%**	0.0%	0.0%	100.0%	99.0%	100.0%	100.0%	0.0%	**99.7%**	0.0%	0.0%	100.0%	99.9%	100.0%	100.0%	0.0%	**99.9%**	0.0%	0.0%	100.0%	99.5%	100.0%	100.0%	0.0%	**99.6%**	0.0%	0.0%	**99.7%**
HV	0	1	0	0	0	**1**	0	0	0	1	0	0	0	**1**	0	0	0	1	0	0	0	**1**	0	0	0	4	0	0	0	**4**	0	0	**7**
% HV	0.0%	1.0%	0.0%	0.0%	0.0%	**0.4%**	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	**0.3%**	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	**0.1%**	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	**0.4%**	0.0%	0.0%	**0.3%**
Pedestrians	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	1	1	2
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	100.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**





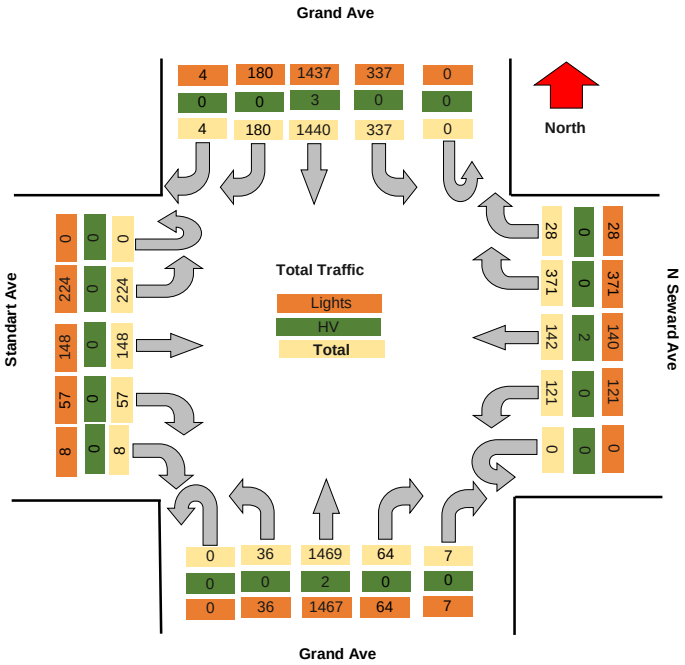
Project	GTS
Project Code	12290
Site Name	12290-5 - Grand Ave & Standa
Legs and Movements	All Processed Legs & Moveme
Bin Size	15 minutes
Survey Date	2025/11/22, Saturday
Location	Grand Ave & Standart Ave & N
Latitude and Longitude	42.944306, -76.550944

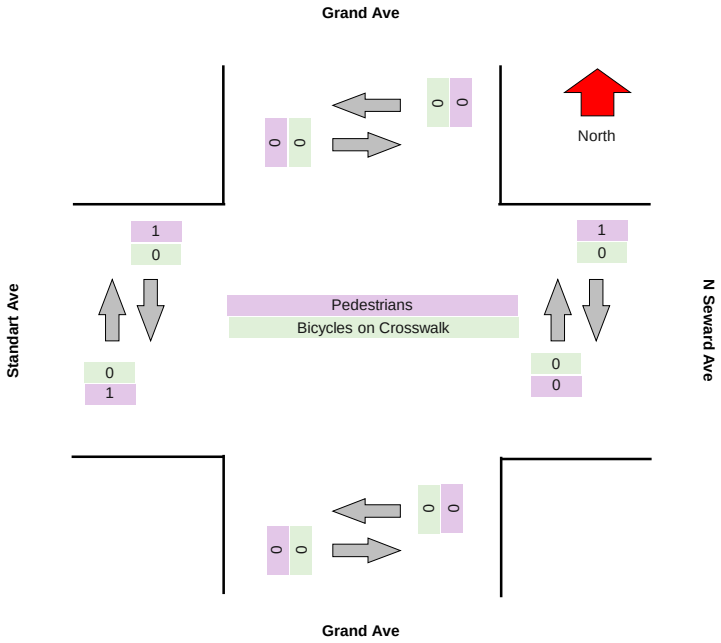
	Start	End	PHF
MID Peak	2025/11/22 11:45:00	2025/11/22 12:45:00	0.97

Turning Movement Data

Leg	Standart Ave								N Seward Ave								Grand Ave								Grand Ave								
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	**App Total**	Peds CW	Peds CCW	**Total**
11:00:00 AM	17	15	11	0	0	**43**	0	0	14	21	55	2	0	**92**	0	0	6	163	10	2	0	**181**	0	0	55	163	20	0	0	**238**	0	0	**554**
11:15:00 AM	46	14	5	0	0	**65**	0	0	12	26	41	2	0	**81**	1	0	3	183	5	1	0	**192**	0	0	37	171	18	0	0	**226**	0	0	**564**
11:30:00 AM	24	17	9	2	0	**52**	0	0	18	16	40	6	0	**80**	0	0	1	171	10	0	0	**182**	0	0	42	197	23	1	0	**263**	0	0	**577**
11:45:00 AM	29	20	2	1	0	**52**	0	0	12	13	50	3	0	**78**	0	0	6	209	16	0	0	**231**	0	0	40	184	22	0	0	**246**	0	0	**607**
Hourly Total	116	66	27	3	0	**212**	0	0	56	76	186	13	0	**331**	1	0	16	726	41	3	0	**786**	0	0	174	715	83	1	0	**973**	0	0	**2302**
12:00:00 PM	25	27	7	0	0	**59**	0	0	20	12	52	2	0	**86**	0	0	9	194	5	0	0	**208**	0	0	39	204	19	1	0	**263**	0	0	**616**
12:15:00 PM	27	20	13	3	0	**63**	1	1	13	21	50	5	0	**89**	0	0	4	185	10	1	0	**200**	0	0	37	178	28	0	0	**243**	0	0	**595**
12:30:00 PM	33	18	5	0	0	**56**	0	0	14	22	43	3	0	**82**	0	0	6	172	3	3	0	**184**	0	0	42	185	29	2	0	**258**	0	0	**580**
12:45:00 PM	23	17	5	2	0	**47**	0	0	18	11	40	5	0	**74**	0	0	1	192	5	0	0	**198**	0	0	45	158	21	0	0	**224**	0	0	**543**
Hourly Total	108	82	30	5	0	**225**	1	1	65	66	185	15	0	**331**	0	0	20	743	23	4	0	**790**	0	0	163	725	97	3	0	**988**	0	0	**2334**
Grand Total	224	148	57	8	0	**437**	1	1	121	142	371	28	0	**662**	1	0	36	1469	64	7	0	**1576**	0	0	337	1440	180	4	0	**1961**	0	0	**4636**
% Approach	51.3%	33.9%	13.0%	1.8%	0.0%	**0.0%**	0.0%	0.0%	18.3%	21.5%	56.0%	4.2%	0.0%	**0.0%**	0.0%	0.0%	2.3%	93.2%	4.1%	0.4%	0.0%	**0.0%**	0.0%	0.0%	17.2%	73.4%	9.2%	0.2%	0.0%	**0.0%**	0.0%	0.0%	
% Total	4.8%	3.2%	1.2%	0.2%	0.0%	**9.4%**	0.0%	0.0%	2.6%	3.1%	8.0%	0.6%	0.0%	**14.3%**	0.0%	0.0%	0.8%	31.7%	1.4%	0.2%	0.0%	**34.0%**	0.0%	0.0%	7.3%	31.1%	3.9%	0.1%	0.0%	**42.3%**	0.0%	0.0%	
Lights	224	148	57	8	0	**437**	0	0	121	140	371	28	0	**660**	0	0	36	1467	64	7	0	**1574**	0	0	337	1437	180	4	0	**1958**	0	0	**4629**
% Lights	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	98.6%	100.0%	100.0%	0.0%	**99.7%**	0.0%	0.0%	100.0%	99.9%	100.0%	100.0%	0.0%	**99.9%**	0.0%	0.0%	100.0%	99.8%	100.0%	100.0%	0.0%	**99.8%**	0.0%	0.0%	**99.8%**
Hv	0	0	0	0	0	**0**	0	0	0	2	0	0	0	**2**	0	0	0	2	0	0	0	**2**	0	0	0	3	0	0	0	**3**	0	0	**7**
% HV	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	**0.3%**	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	**0.1%**	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	**0.2%**	0.0%	0.0%	**0.2%**
Pedestrians	0	0	0	0	0	**0**	1	1	0	0	0	0	0	**0**	1	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	3
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

Turning Movement Data Plot

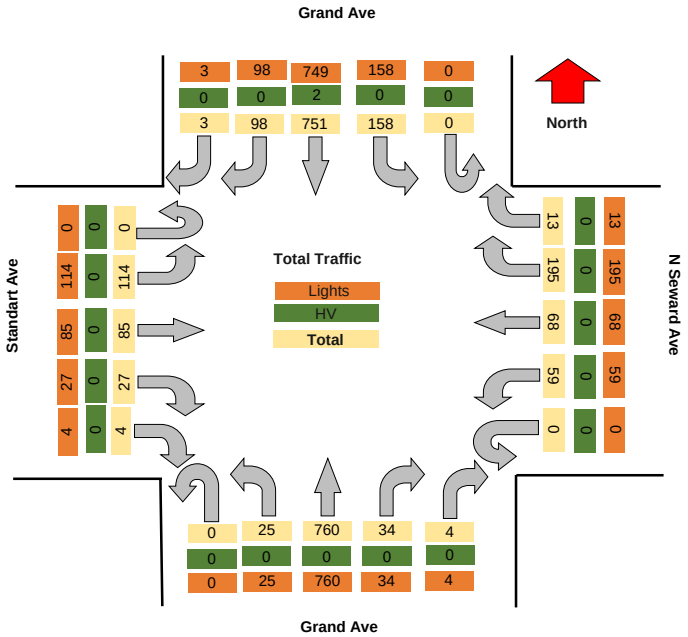


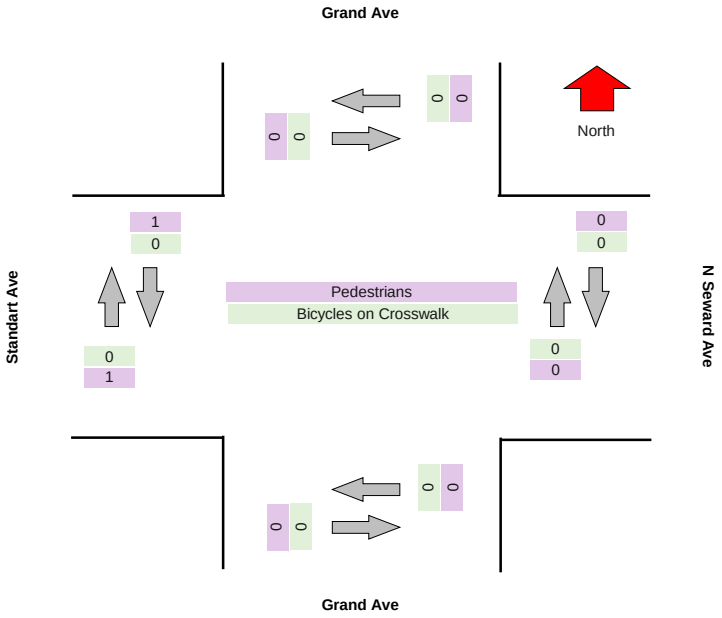


Turning Movement Peak Hour Data (MID)

11:45:00 AM

Leg	Standart Ave								N Seward Ave								Grand Ave								Grand Ave								Total
Direction	Eastbound								Westbound								Northbound								Southbound								
Start Time	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	Left	Thru	Right	RTOR	U-Turn	App Total	Peds CW	Peds CCW	
11:45:00 AM	29	20	2	1	0	**52**	0	0	12	13	50	3	0	**78**	0	0	6	209	16	0	0	**231**	0	0	40	184	22	0	0	**246**	0	0	**607**
12:00:00 PM	25	27	7	0	0	**59**	0	0	20	12	52	2	0	**86**	0	0	9	194	5	0	0	**208**	0	0	39	204	19	1	0	**263**	0	0	**616**
12:15:00 PM	27	20	13	3	0	**63**	1	1	13	21	50	5	0	**89**	0	0	4	185	10	1	0	**200**	0	0	37	178	28	0	0	**243**	0	0	**595**
12:30:00 PM	33	18	5	0	0	**56**	0	0	14	22	43	3	0	**82**	0	0	6	172	3	3	0	**184**	0	0	42	185	29	2	0	**258**	0	0	**580**
Grand Total	114	85	27	4	0	**230**	1	1	59	68	195	13	0	**335**	0	0	25	760	34	4	0	**823**	0	0	158	751	98	3	0	**1010**	0	0	**2398**
% Approach	49.6%	37.0%	11.7%	1.7%	0.0%	**0.0%**	0.0%	0.0%	17.6%	20.3%	58.2%	3.9%	0.0%	**0.0%**	0.0%	0.0%	3.0%	92.3%	4.1%	0.5%	0.0%	**0.0%**	0.0%	0.0%	15.6%	74.4%	9.7%	0.3%	0.0%	**0.0%**	0.0%	0.0%	
% Total	4.8%	3.5%	1.1%	0.2%	0.0%	**9.6%**	0.0%	0.0%	2.5%	2.8%	8.1%	0.5%	0.0%	**14.0%**	0.0%	0.0%	1.0%	31.7%	1.4%	0.2%	0.0%	**34.3%**	0.0%	0.0%	6.6%	31.3%	4.1%	0.1%	0.0%	**42.1%**	0.0%	0.0%	
PHF	0.864	0.787	0.519	0.333	0.000	**0.913**	0.000	0.000	0.738	0.773	0.938	0.650	0.000	**0.941**	0.000	0.000	0.694	0.909	0.531	0.333	0.000	**0.891**	0.000	0.000	0.940	0.920	0.845	0.375	0.000	**0.960**	0.000	0.000	**0.973**
Lights	114	85	27	4	0	**230**	0	0	59	68	195	13	0	**335**	0	0	25	760	34	4	0	**823**	0	0	158	749	98	3	0	**1008**	0	0	**2396**
% Lights	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	99.7%	100.0%	100.0%	0.0%	**99.8%**	0.0%	0.0%	**99.9%**
HV	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	2	0	0	0	**2**	0	0	**2**
% HV	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	**0.2%**	0.0%	0.0%	**0.1%**
Pedestrians	0	0	0	0	0	**0**	1	1	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	2
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**100.0%**
Bicycles on Crosswalk	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**





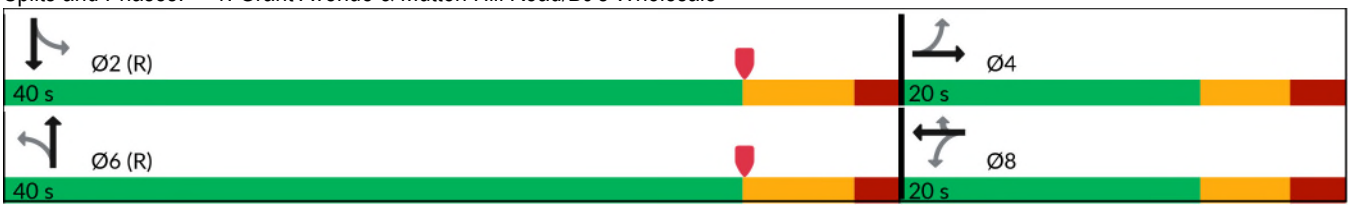
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	11	53	47	7	25	32	394	82	27	380	9
Future Volume (vph)	21	11	53	47	7	25	32	394	82	27	380	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1686	0	0	1802	1599	1770	3435	0	1752	3491	0
Flt Permitted		0.933			0.741		0.488			0.435		
Satd. Flow (perm)	0	1592	0	0	1394	1599	909	3435	0	802	3491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60				73		65			6	
Link Speed (mph)		30			30			30			45	
Link Distance (ft)		496			305			887			396	
Travel Time (s)		11.3			6.9			20.2			6.0	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.89	0.89	0.89	0.71	0.71	0.71	0.89	0.89	0.89	0.85	0.85	0.85
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	96	0	0	76	35	36	535	0	32	458	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		8	8	8	6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5	11.5	17.0	17.0		17.0	17.0	
Total Split (s)	20.0	20.0		20.0	20.0	20.0	40.0	40.0		40.0	40.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%	33.3%	66.7%	66.7%		66.7%	66.7%	
Maximum Green (s)	13.5	13.5		13.5	13.5	13.5	33.0	33.0		33.0	33.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.5			6.5	6.5	7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.3	3.3	
Recall Mode	Max	Max		Max	Max	Max	C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		28.2			28.2	28.2	18.3	18.3		18.3	18.3	
Actuated g/C Ratio		0.47			0.47	0.47	0.31	0.31		0.31	0.31	
v/c Ratio		0.12			0.12	0.04	0.13	0.49		0.13	0.43	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		6.8			12.4	1.6	20.6	22.5		13.4	16.6	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		6.8			12.4	1.6	20.6	22.5		13.4	16.6	
LOS		A			B	A	C	C		B	B	
Approach Delay (s/veh)		6.8			9.0			22.4			16.4	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)		6			14	0	12	90		9	71	
Queue Length 95th (ft)		37			36	1	39	145		19	74	
Internal Link Dist (ft)		416			225			807			316	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		779			655	789	499	1918		441	1922	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.12			0.12	0.04	0.07	0.28		0.07	0.24	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay (s/veh): 17.7 Intersection LOS: B
Intersection Capacity Utilization 49.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Grant Avenue & Mutton Hill Road/BJ's Wholesale



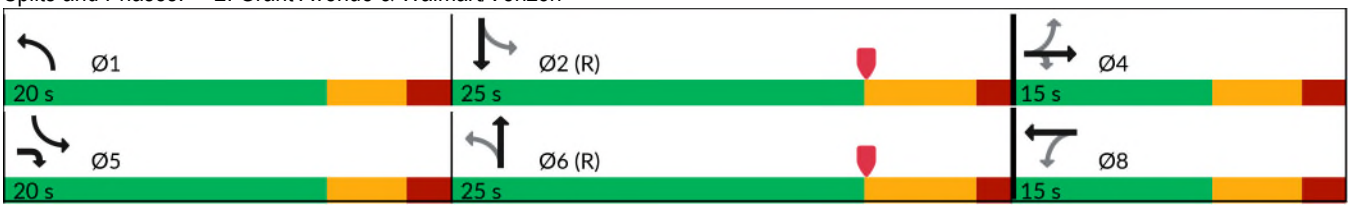
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	0	128	0	0	0	106	478	1	0	402	78
Future Volume (vph)	30	0	128	0	0	0	106	478	1	0	402	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1770	1583	0	1881	0	1770	3539	0	1845	3421	0
Flt Permitted							0.428					
Satd. Flow (perm)	0	1863	1583	0	1881	0	797	3539	0	1845	3421	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			141								39	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			98			331			887	
Travel Time (s)		8.2			2.2			7.5			20.2	
Peak Hour Factor	0.76	0.76	0.76	0.50	0.50	0.50	0.91	0.91	0.91	0.84	0.84	0.84
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	168	0	0	0	116	526	0	0	572	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	custom				pm+pt	NA		pm+pt	NA	
Protected Phases		4	5!		8		1	6		5	2!	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	5	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	12.0	12.0	9.5	12.0	12.0		9.5	16.5		9.5	16.5	
Total Split (s)	15.0	15.0	20.0	15.0	15.0		20.0	25.0		20.0	25.0	
Total Split (%)	25.0%	25.0%	33.3%	25.0%	25.0%		33.3%	41.7%		33.3%	41.7%	
Maximum Green (s)	9.0	9.0	14.5	9.0	9.0		14.5	18.5		14.5	18.5	
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	5.5		6.0		5.5	6.5		5.5	6.5	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		6.9	10.7				45.1	40.6			40.0	
Actuated g/C Ratio		0.12	0.18				0.75	0.68			0.67	
v/c Ratio		0.18	0.42				0.17	0.22			0.25	
Control Delay (s/veh)		25.6	8.3				1.5	2.2			3.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0				0.0	0.0			0.0	
Total Delay (s/veh)		25.6	8.3				1.5	2.2			3.6	
LOS		C	A				A	A			A	
Approach Delay (s/veh)		11.6						2.1			3.6	
Approach LOS		B						A			A	
Queue Length 50th (ft)		13	9				1	11			12	
Queue Length 95th (ft)		30	29				9	21			50	
Internal Link Dist (ft)		279			18			251			807	
Turn Bay Length (ft)							300					
Base Capacity (vph)		279	624				884	2396			2292	
Starvation Cap Reductn		0	0				0	0			0	
Spillback Cap Reductn		0	0				0	0			0	
Storage Cap Reductn		0	0				0	0			0	
Reduced v/c Ratio		0.14	0.27				0.13	0.22			0.25	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 4 (7%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.42
Intersection Signal Delay (s/veh): 4.1 Intersection LOS: A
Intersection Capacity Utilization 39.5% ICU Level of Service A
Analysis Period (min) 15
! Phase conflict between lane groups.

Splits and Phases: 2: Grant Avenue & Walmart/Verizon



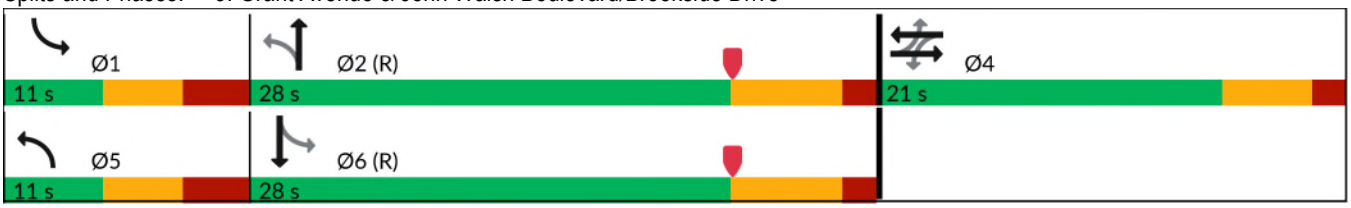
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	35	65	18	38	44	545	48	21	505	4
Future Volume (vph)	2	2	35	65	18	38	44	545	48	21	505	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	250		0	120		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1719	1553	0	1770	1673	0	1770	3491	0	1752	3501	0
Flt Permitted	0.710			0.722			0.405			0.404		
Satd. Flow (perm)	1285	1553	0	1345	1673	0	754	3491	0	745	3501	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50			49			17			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		322			515			2037			316	
Travel Time (s)		7.3			11.7			46.3			7.2	
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.70	0.70	0.70	0.78	0.78	0.78	0.91	0.91	0.91	0.84	0.84	0.84
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	53	0	83	72	0	48	652	0	25	606	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5		10.5	16.5		10.5	16.5	
Total Split (s)	21.0	21.0		21.0	21.0		11.0	28.0		11.0	28.0	
Total Split (%)	35.0%	35.0%		35.0%	35.0%		18.3%	46.7%		18.3%	46.7%	
Maximum Green (s)	15.5	15.5		15.5	15.5		4.5	21.5		4.5	21.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	9.3	9.3		9.3	9.3		38.6	37.5		36.8	34.9	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.64	0.63		0.61	0.58	
v/c Ratio	0.02	0.19		0.40	0.24		0.08	0.30		0.05	0.30	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	19.5	9.2		27.6	12.1		5.3	9.0		9.5	16.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	19.5	9.2		27.6	12.1		5.3	9.0		9.5	16.8	
LOS	B	A		C	B		A	A		A	B	
Approach Delay (s/veh)		9.7			20.4			8.7			16.5	
Approach LOS		A			C			A			B	
Queue Length 50th (ft)	1	1		28	7		5	44		6	104	
Queue Length 95th (ft)	5	16		51	28		18	133		23	163	
Internal Link Dist (ft)		242			435			1957			236	
Turn Bay Length (ft)				115			250			120		
Base Capacity (vph)	331	438		347	468		575	2186		543	2038	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.01	0.12		0.24	0.15		0.08	0.30		0.05	0.30	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 53 (88%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay (s/veh): 13.1 Intersection LOS: B
Intersection Capacity Utilization 45.6% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Grant Avenue & John Walsh Boulevard/Brookside Drive



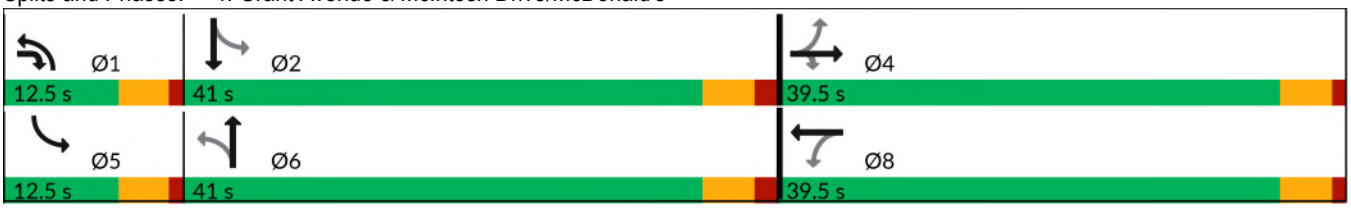
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	6	47	27	5	25	29	549	44	15	545	45
Future Volume (vph)	63	6	47	27	5	25	29	549	44	15	545	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		160	0		0	250		0	190		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1763	1568	0	1729	0	1770	3494	0	1752	3460	0
Flt Permitted		0.749			0.806		0.366			0.399		
Satd. Flow (perm)	0	1382	1568	0	1427	0	681	3494	0	735	3460	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			57		40			10			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			140			1517			2037	
Travel Time (s)		10.7			3.2			34.5			46.3	
Confl. Peds. (#/hr)							2		2	2		2
Peak Hour Factor	0.83	0.83	0.83	0.62	0.62	0.62	0.89	0.89	0.89	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	57	0	92	0	33	666	0	16	641	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	pm+ov	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	1		8		1	6		5	2	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	1	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	18.0		4.0	18.0	
Minimum Split (s)	8.5	8.5	8.5	8.5	8.5		8.5	23.0		8.5	23.0	
Total Split (s)	39.5	39.5	12.5	39.5	39.5		12.5	41.0		12.5	41.0	
Total Split (%)	42.5%	42.5%	13.4%	42.5%	42.5%		13.4%	44.1%		13.4%	44.1%	
Maximum Green (s)	35.0	35.0	8.0	35.0	35.0		8.0	36.0		8.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	5.0		4.5	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Act Effct Green (s)		9.5	17.7		9.5		47.7	47.1		44.8	40.8	
Actuated g/C Ratio		0.15	0.27		0.15		0.74	0.73		0.69	0.63	
v/c Ratio		0.41	0.12		0.38		0.05	0.26		0.03	0.29	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		31.6	5.6		20.8		3.6	5.3		3.6	8.3	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		31.6	5.6		20.8		3.6	5.3		3.6	8.3	
LOS		C	A		C		A	A		A	A	
Approach Delay (s/veh)		21.0			20.8			5.2			8.2	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		31	0		19		3	39		1	68	
Queue Length 95th (ft)		64	19		33		11	117		7	116	
Internal Link Dist (ft)		389			60			1437			1957	
Turn Bay Length (ft)			160				250			190		
Base Capacity (vph)		752	517		795		640	2550		653	2189	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.11	0.11		0.12		0.05	0.26		0.02	0.29	

Intersection Summary

Area Type: Other
Cycle Length: 93
Actuated Cycle Length: 64.6
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.41
Intersection Signal Delay (s/veh): 8.7 Intersection LOS: A
Intersection Capacity Utilization 41.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Grant Avenue & McIntosh Drive/McDonald's



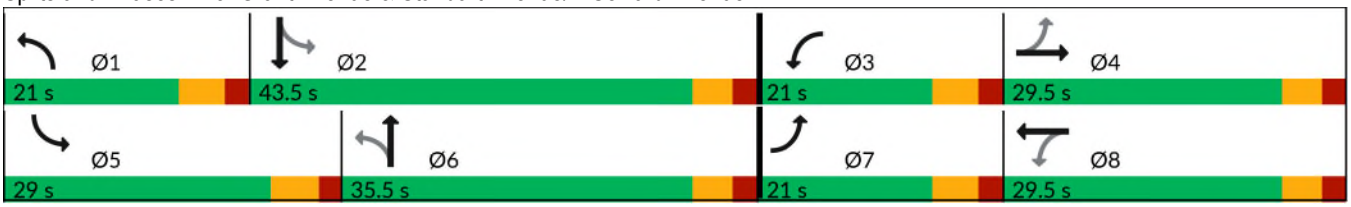
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	101	27	56	98	109	23	422	22	67	488	64
Future Volume (vph)	91	101	27	56	98	109	23	422	22	67	488	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	95		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1821	0	1770	1716	0	1752	3480	0	1752	3445	0
Flt Permitted	0.439			0.663			0.387			0.384		
Satd. Flow (perm)	826	1821	0	1235	1716	0	714	3480	0	708	3445	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			44			4			13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			561			1364			1517	
Travel Time (s)		15.5			12.8			31.0			34.5	
Peak Hour Factor	0.87	0.87	0.87	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	147	0	62	230	0	25	483	0	71	587	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0		6.0	12.0		6.0	12.0	
Minimum Split (s)	10.0	11.5		10.0	11.5		12.0	17.5		12.0	17.5	
Total Split (s)	21.0	29.5		21.0	29.5		21.0	35.5		29.0	43.5	
Total Split (%)	18.3%	25.7%		18.3%	25.7%		18.3%	30.9%		25.2%	37.8%	
Maximum Green (s)	15.0	24.0		15.0	24.0		15.0	30.0		23.0	38.0	
Yellow Time (s)	4.0	3.5		4.0	3.5		4.0	3.5		4.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	5.5		6.0	5.5		6.0	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	3.0		1.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Act Effct Green (s)	34.9	28.2		30.4	24.1		38.6	34.4		42.1	39.9	
Actuated g/C Ratio	0.37	0.30		0.32	0.26		0.41	0.37		0.45	0.42	
v/c Ratio	0.27	0.27		0.14	0.49		0.07	0.38		0.18	0.40	
Control Delay (s/veh)	20.7	27.4		19.7	29.2		14.5	23.8		15.4	20.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	20.7	27.4		19.7	29.2		14.5	23.8		15.4	20.5	
LOS	C	C		B	C		B	C		B	C	
Approach Delay (s/veh)		24.6			27.2			23.4			20.0	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	37	62		22	92		8	116		23	112	
Queue Length 95th (ft)	77	123		53	187		23	172		50	203	
Internal Link Dist (ft)		604			481			1284			1437	
Turn Bay Length (ft)	175			150			95			260		
Base Capacity (vph)	489	554		578	472		499	1276		586	1469	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.21	0.27		0.11	0.49		0.05	0.38		0.12	0.40	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 94
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay (s/veh): 22.9 Intersection LOS: C
Intersection Capacity Utilization 56.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 5: Grant Avenue & Standart Avenue/N Seward Avenue



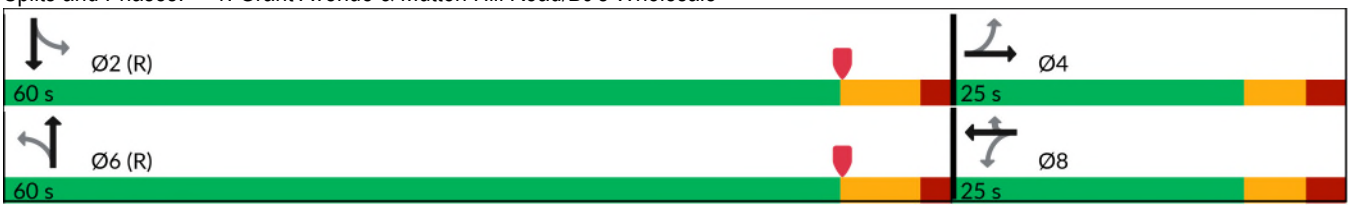
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	16	99	159	22	55	56	490	212	54	459	16
Future Volume (vph)	25	16	99	159	22	55	56	490	212	54	459	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1685	0	0	1802	1599	1787	3413	0	1787	3556	0
Flt Permitted		0.929			0.654		0.389			0.271		
Satd. Flow (perm)	0	1580	0	0	1230	1599	732	3413	0	510	3556	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		113				63		152			8	
Link Speed (mph)		30			30			30			45	
Link Distance (ft)		496			305			887			396	
Travel Time (s)		11.3			6.9			20.2			6.0	
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87	0.96	0.96	0.96	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	159	0	0	208	63	58	731	0	63	553	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		8	8	8	6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5	11.5	17.0	17.0		17.0	17.0	
Total Split (s)	25.0	25.0		25.0	25.0	25.0	60.0	60.0		60.0	60.0	
Total Split (%)	29.4%	29.4%		29.4%	29.4%	29.4%	70.6%	70.6%		70.6%	70.6%	
Maximum Green (s)	18.5	18.5		18.5	18.5	18.5	53.0	53.0		53.0	53.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.5			6.5	6.5	7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.3	3.3	
Recall Mode	Max	Max		Max	Max	Max	C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		42.0			42.0	42.0	29.5	29.5		29.5	29.5	
Actuated g/C Ratio		0.49			0.49	0.49	0.35	0.35		0.35	0.35	
v/c Ratio		0.19			0.34	0.08	0.23	0.57		0.36	0.45	
Control Delay (s/veh)		6.8			18.4	5.5	20.0	18.4		23.1	21.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		6.8			18.4	5.5	20.0	18.4		23.1	21.1	
LOS		A			B	A	B	B		C	C	
Approach Delay (s/veh)		6.8			15.4			18.5			21.3	
Approach LOS		A			B			B			C	
Queue Length 50th (ft)		12			63	0	20	108		25	119	
Queue Length 95th (ft)		57			151	25	m29	99		42	111	
Internal Link Dist (ft)		416			225			807			316	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		837			607	821	456	2185		318	2220	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.19			0.34	0.08	0.13	0.33		0.20	0.25	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay (s/veh): 18.0 Intersection LOS: B
Intersection Capacity Utilization 62.4% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Grant Avenue & Mutton Hill Road/BJ's Wholesale



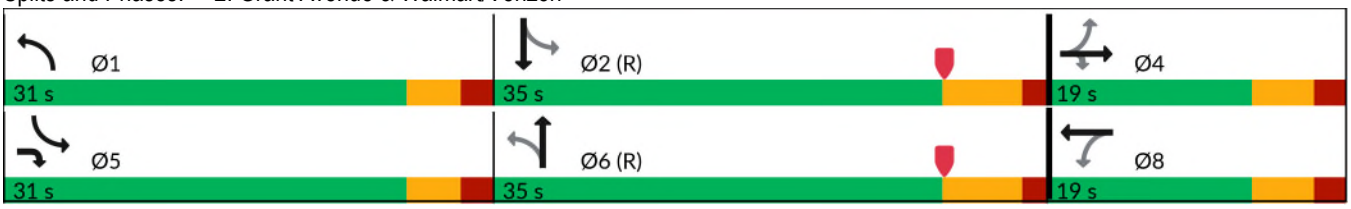
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	0	279	2	1	3	219	636	7	2	559	158
Future Volume (vph)	119	0	279	2	1	3	219	636	7	2	559	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1787	1599	0	1712	0	1787	3566	0	1787	3439	0
Flt Permitted		0.750			0.883		0.288			0.378		
Satd. Flow (perm)	0	1405	1599	0	1536	0	542	3566	0	710	3439	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			84		6			1			46	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			98			331			887	
Travel Time (s)		8.2			2.2			7.5			20.2	
Confl. Peds. (#/hr)	2					2	2		3	3		2
Peak Hour Factor	0.78	0.78	0.78	0.50	0.50	0.50	0.95	0.95	0.95	0.87	0.87	0.87
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	153	358	0	12	0	231	676	0	2	825	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	custom	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	5!		8		1	6		5	2!	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	5	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	12.0	12.0	9.5	12.0	12.0		9.5	16.5		9.5	16.5	
Total Split (s)	19.0	19.0	31.0	19.0	19.0		31.0	35.0		31.0	35.0	
Total Split (%)	22.4%	22.4%	36.5%	22.4%	22.4%		36.5%	41.2%		36.5%	41.2%	
Maximum Green (s)	13.0	13.0	25.5	13.0	13.0		25.5	28.5		25.5	28.5	
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	5.5		6.0		5.5	6.5		5.5	6.5	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		11.8	26.6		11.8		57.3	46.4		55.1	45.3	
Actuated g/C Ratio		0.14	0.31		0.14		0.67	0.55		0.65	0.53	
v/c Ratio		0.79	0.64		0.06		0.45	0.35		0.00	0.45	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		63.3	23.6		24.2		11.2	7.3		3.0	8.8	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		63.3	23.6		24.2		11.2	7.3		3.0	8.8	
LOS		E	C		C		B	A		A	A	
Approach Delay (s/veh)		35.5			24.2			8.3			8.8	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)		79	129		3		23	47		0	82	
Queue Length 95th (ft)		#130	144		9		97	64		m1	139	
Internal Link Dist (ft)		279			18			251			807	
Turn Bay Length (ft)							300			100		
Base Capacity (vph)		214	855		240		766	1947		838	1853	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.71	0.42		0.05		0.30	0.35		0.00	0.45	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay (s/veh): 14.7 Intersection LOS: B
Intersection Capacity Utilization 60.9% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 2: Grant Avenue & Walmart/Verizon



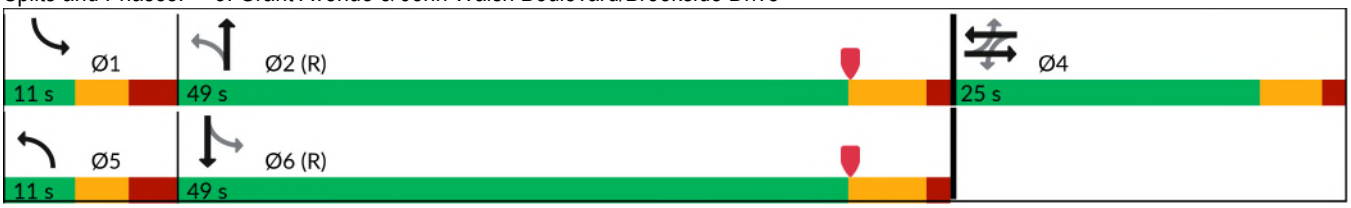
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	20	75	99	30	61	93	789	132	56	779	5
Future Volume (vph)	12	20	75	99	30	61	93	789	132	56	779	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	250		0	120		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1719	1594	0	1770	1660	0	1787	3499	0	1787	3570	0
Flt Permitted	0.694			0.680			0.293			0.241		
Satd. Flow (perm)	1254	1594	0	1267	1660	0	551	3499	0	453	3570	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		95			66			32			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		322			515			2037			316	
Travel Time (s)		7.3			11.7			46.3			7.2	
Confl. Peds. (#/hr)	1					1	3					3
Peak Hour Factor	0.79	0.79	0.79	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	120	0	106	98	0	101	1001	0	61	852	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5		10.5	16.5		10.5	16.5	
Total Split (s)	25.0	25.0		25.0	25.0		11.0	49.0		11.0	49.0	
Total Split (%)	29.4%	29.4%		29.4%	29.4%		12.9%	57.6%		12.9%	57.6%	
Maximum Green (s)	19.5	19.5		19.5	19.5		4.5	42.5		4.5	42.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	12.7	12.7		12.7	12.7		55.5	50.8		54.7	50.4	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.65	0.60		0.64	0.59	
v/c Ratio	0.08	0.38		0.56	0.32		0.23	0.48		0.16	0.40	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	29.3	13.2		44.0	15.4		6.2	11.7		9.1	17.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	29.3	13.2		44.0	15.4		6.2	11.7		9.1	17.5	
LOS	C	B		D	B		A	B		A	B	
Approach Delay (s/veh)		15.0			30.3			11.2			16.9	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	7	12		54	15		14	152		13	180	
Queue Length 95th (ft)	20	42		97	54		37	240		30	198	
Internal Link Dist (ft)		242			435			1957			236	
Turn Bay Length (ft)				115			250			120		
Base Capacity (vph)	287	438		290	431		441	2102		374	2117	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.27		0.37	0.23		0.23	0.48		0.16	0.40	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay (s/veh): 15.3 Intersection LOS: B
Intersection Capacity Utilization 56.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Grant Avenue & John Walsh Boulevard/Brookside Drive



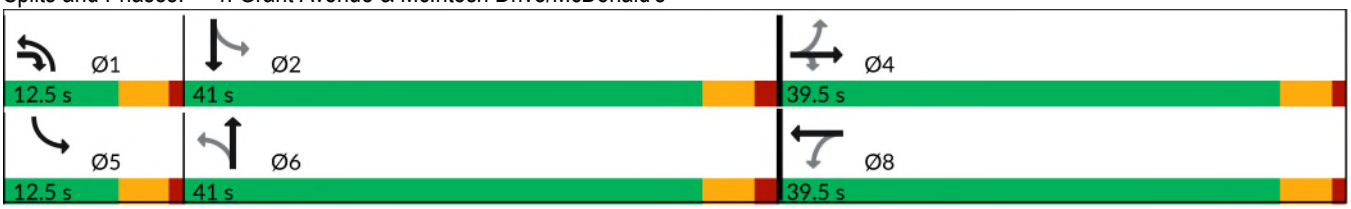
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	15	211	37	13	35	204	767	39	14	818	121
Future Volume (vph)	212	15	211	37	13	35	204	767	39	14	818	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		160	0		0	250		0	190		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1797	1599	0	1739	0	1787	3546	0	1787	3506	0
Flt Permitted		0.690			0.747		0.191			0.330		
Satd. Flow (perm)	0	1298	1579	0	1326	0	359	3546	0	621	3506	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			59		43			6			21	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			140			1517			2037	
Travel Time (s)		10.7			3.2			34.5			46.3	
Confl. Peds. (#/hr)			1	1					1	1		
Peak Hour Factor	0.95	0.95	0.95	0.82	0.82	0.82	0.94	0.94	0.94	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	239	222	0	104	0	217	857	0	14	968	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	pm+ov	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	1		8		1	6		5	2	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	1	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	18.0		4.0	18.0	
Minimum Split (s)	8.5	8.5	8.5	8.5	8.5		8.5	23.0		8.5	23.0	
Total Split (s)	39.5	39.5	12.5	39.5	39.5		12.5	41.0		12.5	41.0	
Total Split (%)	42.5%	42.5%	13.4%	42.5%	42.5%		13.4%	44.1%		13.4%	44.1%	
Maximum Green (s)	35.0	35.0	8.0	35.0	35.0		8.0	36.0		8.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	5.0		4.5	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Act Effct Green (s)		19.5	27.5		19.5		48.7	46.7		42.8	36.2	
Actuated g/C Ratio		0.25	0.35		0.25		0.63	0.60		0.55	0.47	
v/c Ratio		0.74	0.37		0.29		0.59	0.40		0.03	0.59	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		40.4	12.7		16.2		15.1	10.8		7.7	17.8	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		40.4	12.7		16.2		15.1	10.8		7.7	17.8	
LOS		D	B		B		B	B		A	B	
Approach Delay (s/veh)		27.1			16.2			11.7			17.7	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		107	50		23		39	94		2	170	
Queue Length 95th (ft)		183	96		53		#109	238		11	285	
Internal Link Dist (ft)		389			60			1437			1957	
Turn Bay Length (ft)			160				250			190		
Base Capacity (vph)		587	599		623		372	2132		478	1644	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.41	0.37		0.17		0.58	0.40		0.03	0.59	

Intersection Summary

Area Type: Other
Cycle Length: 93
Actuated Cycle Length: 77.8
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay (s/veh): 16.8 Intersection LOS: B
Intersection Capacity Utilization 68.6% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Grant Avenue & McIntosh Drive/McDonald's



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	129	78	25	68	78	181	26	700	37	143	834	89
Future Volume (vph)	129	78	25	68	78	181	26	700	37	143	834	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	95		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1812	0	1787	1666	0	1787	3546	0	1787	3521	0
Flt Permitted	0.342			0.681			0.182			0.166		
Satd. Flow (perm)	643	1812	0	1281	1666	0	342	3546	0	312	3521	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			92			5			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			561			1364			1517	
Travel Time (s)		15.5			12.8			31.0			34.5	
Confl. Peds. (#/hr)	2					2						
Peak Hour Factor	0.87	0.87	0.87	0.95	0.95	0.95	0.91	0.91	0.91	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	119	0	72	273	0	29	810	0	149	962	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0		6.0	12.0		6.0	12.0	
Minimum Split (s)	10.0	11.5		10.0	11.5		12.0	17.5		12.0	17.5	
Total Split (s)	21.0	29.5		21.0	29.5		21.0	35.5		29.0	43.5	
Total Split (%)	18.3%	25.7%		18.3%	25.7%		18.3%	30.9%		25.2%	37.8%	
Maximum Green (s)	15.0	24.0		15.0	24.0		15.0	30.0		23.0	38.0	
Yellow Time (s)	4.0	3.5		4.0	3.5		4.0	3.5		4.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	5.5		6.0	5.5		6.0	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	3.0		1.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Act Effct Green (s)	38.2	29.8		30.7	24.1		37.7	32.2		45.4	40.2	
Actuated g/C Ratio	0.39	0.30		0.31	0.24		0.38	0.33		0.46	0.41	
v/c Ratio	0.40	0.21		0.17	0.57		0.13	0.70		0.54	0.67	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	23.0	26.5		20.4	27.8		16.6	33.3		23.0	27.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	23.0	26.5		20.4	27.8		16.6	33.3		23.0	27.8	
LOS	C	C		C	C		B	C		C	C	
Approach Delay (s/veh)		24.6			26.3			32.7			27.1	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	63	54		29	104		10	230		52	276	
Queue Length 95th (ft)	103	100		58	200		27	337		97	375	
Internal Link Dist (ft)		604			481			1284			1437	
Turn Bay Length (ft)	175			150			95			260		
Base Capacity (vph)	434	556		571	476		378	1160		492	1440	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.34	0.21		0.13	0.57		0.08	0.70		0.30	0.67	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 98.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay (s/veh): 28.6 Intersection LOS: C
Intersection Capacity Utilization 72.2% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Grant Avenue & Standart Avenue/N Seward Avenue

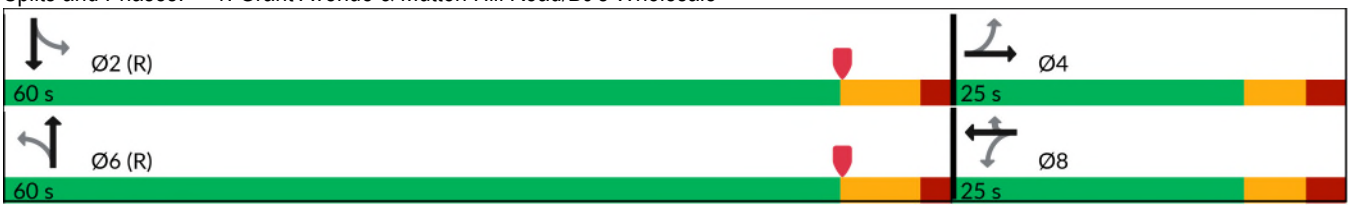
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	15	104	140	14	57	78	588	176	40	493	15
Future Volume (vph)	37	15	104	140	14	57	78	588	176	40	493	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1691	0	0	1798	1599	1787	3433	0	1787	3560	0
Flt Permitted		0.895			0.631		0.404			0.263		
Satd. Flow (perm)	0	1532	0	0	1187	1599	760	3433	0	495	3560	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		108				66		88			7	
Link Speed (mph)		30			30			30			45	
Link Distance (ft)		496			305			887			396	
Travel Time (s)		11.3			6.9			20.2			6.0	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.80	0.80	0.80	0.87	0.87	0.87	0.93	0.93	0.93	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	195	0	0	177	66	84	821	0	45	571	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		8	8	8	6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5	11.5	17.0	17.0		17.0	17.0	
Total Split (s)	25.0	25.0		25.0	25.0	25.0	60.0	60.0		60.0	60.0	
Total Split (%)	29.4%	29.4%		29.4%	29.4%	29.4%	70.6%	70.6%		70.6%	70.6%	
Maximum Green (s)	18.5	18.5		18.5	18.5	18.5	53.0	53.0		53.0	53.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.5			6.5	6.5	7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.3	3.3	
Recall Mode	Max	Max		Max	Max	Max	C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		35.2			35.2	35.2	36.3	36.3		36.3	36.3	
Actuated g/C Ratio		0.41			0.41	0.41	0.43	0.43		0.43	0.43	
v/c Ratio		0.28			0.36	0.09	0.26	0.54		0.21	0.37	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		11.7			24.6	7.2	12.5	13.2		14.2	16.1	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		11.7			24.6	7.2	12.5	13.2		14.2	16.1	
LOS		B			C	A	B	B		B	B	
Approach Delay (s/veh)		11.7			19.9			13.2			15.9	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		28			62	0	22	101		15	108	
Queue Length 95th (ft)		80			#163	29	m18	43		25	90	
Internal Link Dist (ft)		416			225			807			316	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		697			490	700	473	2173		308	2222	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.28			0.36	0.09	0.18	0.38		0.15	0.26	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.54
Intersection Signal Delay (s/veh): 14.7 Intersection LOS: B
Intersection Capacity Utilization 63.2% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Grant Avenue & Mutton Hill Road/BJ's Wholesale



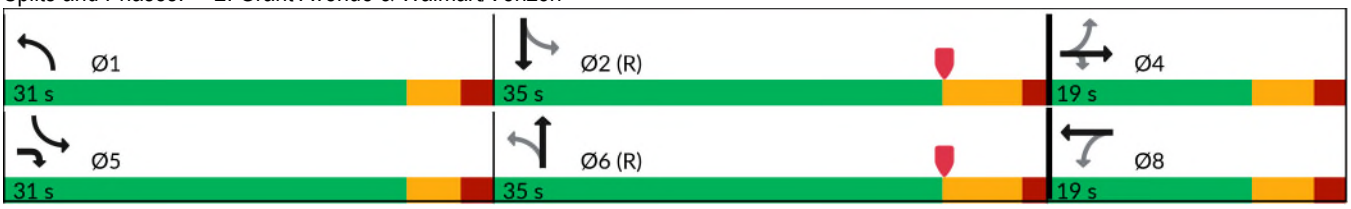
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	0	294	2	2	3	201	703	2	2	588	147
Future Volume (vph)	136	0	294	2	2	3	201	703	2	2	588	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1787	1599	0	1747	0	1787	3574	0	1787	3467	0
Flt Permitted		0.748			0.898		0.312			0.339		
Satd. Flow (perm)	0	1407	1599	0	1591	0	587	3574	0	638	3467	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96		6						39	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			98			331			887	
Travel Time (s)		8.2			2.2			7.5			20.2	
Peak Hour Factor	0.92	0.92	0.92	0.50	0.50	0.50	0.91	0.91	0.91	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	148	320	0	14	0	221	775	0	2	766	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	custom	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	5!		8		1	6		5	2!	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	5	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	12.0	12.0	9.5	12.0	12.0		9.5	16.5		9.5	16.5	
Total Split (s)	19.0	19.0	31.0	19.0	19.0		31.0	35.0		31.0	35.0	
Total Split (%)	22.4%	22.4%	36.5%	22.4%	22.4%		36.5%	41.2%		36.5%	41.2%	
Maximum Green (s)	13.0	13.0	25.5	13.0	13.0		25.5	28.5		25.5	28.5	
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	5.5		6.0		5.5	6.5		5.5	6.5	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		11.7	24.9		11.7		58.2	48.1		54.5	46.2	
Actuated g/C Ratio		0.14	0.29		0.14		0.68	0.57		0.64	0.54	
v/c Ratio		0.77	0.60		0.06		0.42	0.38		0.00	0.40	
Control Delay (s/veh)		61.3	21.8		24.9		8.9	6.8		3.0	8.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		61.3	21.8		24.9		8.9	6.8		3.0	8.4	
LOS		E	C		C		A	A		A	A	
Approach Delay (s/veh)		34.3			24.9			7.3			8.4	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		76	102		4		22	53		0	87	
Queue Length 95th (ft)		#162	163		10		78	72		m1	106	
Internal Link Dist (ft)		279			18			251			807	
Turn Bay Length (ft)							300			100		
Base Capacity (vph)		215	858		248		786	2023		808	1903	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.69	0.37		0.06		0.28	0.38		0.00	0.40	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay (s/veh): 13.4 Intersection LOS: B
Intersection Capacity Utilization 61.3% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 2: Grant Avenue & Walmart/Verizon



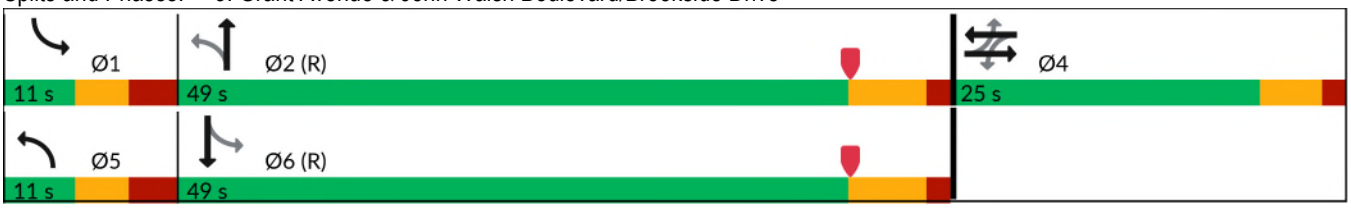
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	16	85	101	23	58	92	838	114	72	804	8
Future Volume (vph)	10	16	85	101	23	58	92	838	114	72	804	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	250		0	120		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1626	0	1787	1662	0	1787	3501	0	1787	3566	0
Flt Permitted	0.689			0.677			0.276			0.223		
Satd. Flow (perm)	1295	1626	0	1272	1662	0	519	3501	0	419	3566	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		104			76			25			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		322			515			2037			316	
Travel Time (s)		7.3			11.7			46.3			7.2	
Confl. Peds. (#/hr)	1		1	1		1	4		1	1		4
Peak Hour Factor	0.82	0.82	0.82	0.76	0.76	0.76	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	124	0	133	106	0	100	1035	0	78	883	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5		10.5	16.5		10.5	16.5	
Total Split (s)	25.0	25.0		25.0	25.0		11.0	49.0		11.0	49.0	
Total Split (%)	29.4%	29.4%		29.4%	29.4%		12.9%	57.6%		12.9%	57.6%	
Maximum Green (s)	19.5	19.5		19.5	19.5		4.5	42.5		4.5	42.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	14.1	14.1		14.1	14.1		54.0	49.3		53.5	49.1	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.64	0.58		0.63	0.58	
v/c Ratio	0.06	0.35		0.63	0.31		0.24	0.51		0.22	0.43	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	27.7	11.3		45.9	13.6		6.9	12.9		9.6	17.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	27.7	11.3		45.9	13.6		6.9	12.9		9.6	17.4	
LOS	C	B		D	B		A	B		A	B	
Approach Delay (s/veh)		12.7			31.5			12.4			16.8	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	5	9		67	14		15	172		17	176	
Queue Length 95th (ft)	17	42		96	39		37	252		34	191	
Internal Link Dist (ft)		242			435			1957			236	
Turn Bay Length (ft)				115			250			120		
Base Capacity (vph)	297	453		291	439		413	2041		350	2059	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.04	0.27		0.46	0.24		0.24	0.51		0.22	0.43	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay (s/veh): 16.0 Intersection LOS: B
Intersection Capacity Utilization 58.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Grant Avenue & John Walsh Boulevard/Brookside Drive



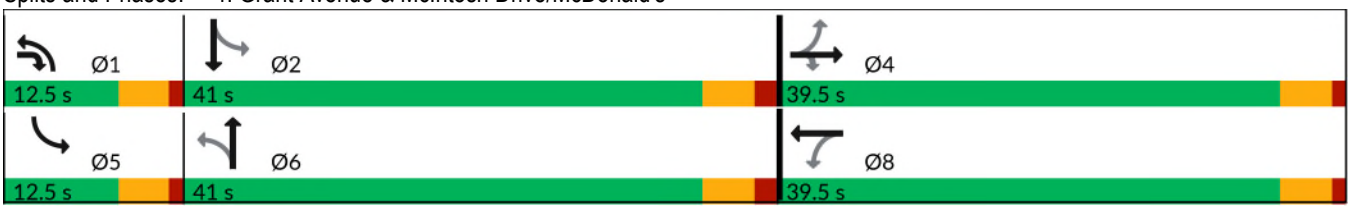
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	9	185	33	10	14	205	858	19	15	886	89
Future Volume (vph)	172	9	185	33	10	14	205	858	19	15	886	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		160	0		0	250		0	190		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1797	1599	0	1768	0	1787	3562	0	1787	3516	0
Flt Permitted		0.741			0.742		0.162			0.312		
Satd. Flow (perm)	0	1394	1599	0	1350	0	305	3562	0	587	3516	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			34		18			3			13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			140			1517			2037	
Travel Time (s)		10.7			3.2			34.5			46.3	
Confl. Peds. (#/hr)							4		1	1		4
Peak Hour Factor	0.92	0.92	0.92	0.79	0.79	0.79	0.96	0.96	0.96	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	197	201	0	73	0	214	914	0	17	1083	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	pm+ov	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	1		8		1	6		5	2	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	1	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	18.0		4.0	18.0	
Minimum Split (s)	8.5	8.5	8.5	8.5	8.5		8.5	23.0		8.5	23.0	
Total Split (s)	39.5	39.5	12.5	39.5	39.5		12.5	41.0		12.5	41.0	
Total Split (%)	42.5%	42.5%	13.4%	42.5%	42.5%		13.4%	44.1%		13.4%	44.1%	
Maximum Green (s)	35.0	35.0	8.0	35.0	35.0		8.0	36.0		8.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	5.0		4.5	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Act Effct Green (s)		16.1	28.7		16.1		48.7	46.7		42.7	36.2	
Actuated g/C Ratio		0.22	0.39		0.22		0.65	0.63		0.57	0.49	
v/c Ratio		0.65	0.32		0.24		0.60	0.41		0.04	0.63	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		37.0	14.2		20.4		15.2	9.3		6.2	16.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		37.0	14.2		20.4		15.2	9.3		6.2	16.9	
LOS		D	B		C		B	A		A	B	
Approach Delay (s/veh)		25.5			20.4			10.4			16.7	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		84	52		21		33	88		2	182	
Queue Length 95th (ft)		148	97		45		#115	230		11	298	
Internal Link Dist (ft)		389			60			1437			1957	
Turn Bay Length (ft)			160				250			190		
Base Capacity (vph)		658	637		647		359	2236		482	1715	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.30	0.32		0.11		0.60	0.41		0.04	0.63	

Intersection Summary

Area Type: Other
Cycle Length: 93
Actuated Cycle Length: 74.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay (s/veh): 15.5 Intersection LOS: B
Intersection Capacity Utilization 65.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Grant Avenue & McIntosh Drive/McDonald's



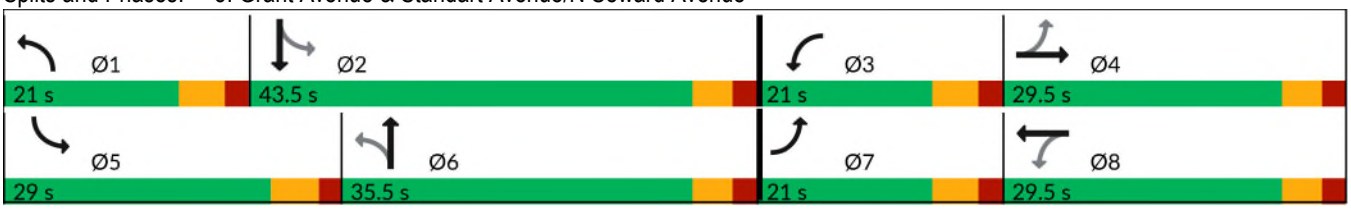
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	102	32	62	97	197	43	759	45	185	836	83
Future Volume (vph)	126	102	32	62	97	197	43	759	45	185	836	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	95		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1813	0	1787	1674	0	1787	3546	0	1787	3524	0
Flt Permitted	0.233			0.664			0.176			0.136		
Satd. Flow (perm)	438	1813	0	1249	1674	0	331	3546	0	256	3524	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			81			5			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			561			1364			1517	
Travel Time (s)		15.5			12.8			31.0			34.5	
Confl. Peds. (#/hr)	2					2						
Peak Hour Factor	0.92	0.92	0.92	0.85	0.85	0.85	0.95	0.95	0.95	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	137	146	0	73	346	0	45	846	0	203	1010	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0		6.0	12.0		6.0	12.0	
Minimum Split (s)	10.0	11.5		10.0	11.5		12.0	17.5		12.0	17.5	
Total Split (s)	21.0	29.5		21.0	29.5		21.0	35.5		29.0	43.5	
Total Split (%)	18.3%	25.7%		18.3%	25.7%		18.3%	30.9%		25.2%	37.8%	
Maximum Green (s)	15.0	24.0		15.0	24.0		15.0	30.0		23.0	38.0	
Yellow Time (s)	4.0	3.5		4.0	3.5		4.0	3.5		4.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	5.5		6.0	5.5		6.0	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	3.0		1.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Act Effct Green (s)	37.5	29.3		30.8	24.1		36.6	31.0		47.7	41.4	
Actuated g/C Ratio	0.38	0.29		0.31	0.24		0.37	0.31		0.48	0.42	
v/c Ratio	0.46	0.27		0.17	0.74		0.21	0.77		0.68	0.69	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	25.5	28.9		21.2	38.8		17.9	37.4		29.1	28.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	25.5	28.9		21.2	38.8		17.9	37.4		29.1	28.0	
LOS	C	C		C	D		B	D		C	C	
Approach Delay (s/veh)		27.2			35.7			36.4			28.2	
Approach LOS		C			D			D			C	
Queue Length 50th (ft)	58	69		30	162		15	250		73	294	
Queue Length 95th (ft)	106	133		59	#290		36	#403		142	401	
Internal Link Dist (ft)		604			481			1284			1437	
Turn Bay Length (ft)	175			150			95			260		
Base Capacity (vph)	377	542		557	465		369	1105		477	1470	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.36	0.27		0.13	0.74		0.12	0.77		0.43	0.69	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 99.7
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay (s/veh): 31.8 Intersection LOS: C
Intersection Capacity Utilization 76.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Grant Avenue & Standart Avenue/N Seward Avenue



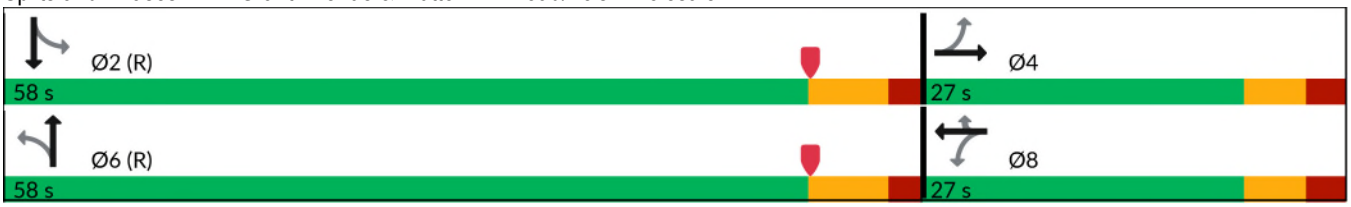
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	30	94	194	18	96	45	584	258	52	488	11
Future Volume (vph)	26	30	94	194	18	96	45	584	258	52	488	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1708	0	0	1798	1599	1787	3410	0	1787	3564	0
Flt Permitted		0.909			0.635		0.416			0.239		
Satd. Flow (perm)	0	1566	0	0	1195	1599	783	3410	0	450	3564	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		93				126		148			5	
Link Speed (mph)		30			30			30			45	
Link Distance (ft)		496			305			887			396	
Travel Time (s)		11.3			6.9			20.2			6.0	
Peak Hour Factor	0.80	0.80	0.80	0.76	0.76	0.76	0.96	0.96	0.96	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	189	0	0	279	126	47	877	0	58	554	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		8	8	8	6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5	11.5	17.0	17.0		17.0	17.0	
Total Split (s)	27.0	27.0		27.0	27.0	27.0	58.0	58.0		58.0	58.0	
Total Split (%)	31.8%	31.8%		31.8%	31.8%	31.8%	68.2%	68.2%		68.2%	68.2%	
Maximum Green (s)	20.5	20.5		20.5	20.5	20.5	51.0	51.0		51.0	51.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.5			6.5	6.5	7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.3	3.3	
Recall Mode	Max	Max		Max	Max	Max	C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		34.8			34.8	34.8	36.7	36.7		36.7	36.7	
Actuated g/C Ratio		0.41			0.41	0.41	0.43	0.43		0.43	0.43	
v/c Ratio		0.27			0.57	0.17	0.14	0.56		0.30	0.36	
Control Delay (s/veh)		12.6			30.1	5.6	8.5	9.7		16.7	15.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		12.6			30.1	5.6	8.5	9.7		16.7	15.7	
LOS		B			C	A	A	A		B	B	
Approach Delay (s/veh)		12.6			22.5			9.6			15.8	
Approach LOS		B			C			A			B	
Queue Length 50th (ft)		31			111	0	11	86		20	102	
Queue Length 95th (ft)		82			#231	26	m14	71		34	93	
Internal Link Dist (ft)		416			225			807			316	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		695			488	728	469	2105		270	2140	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.27			0.57	0.17	0.10	0.42		0.21	0.26	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay (s/veh): 14.1 Intersection LOS: B
Intersection Capacity Utilization 75.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Grant Avenue & Mutton Hill Road/BJ's Wholesale



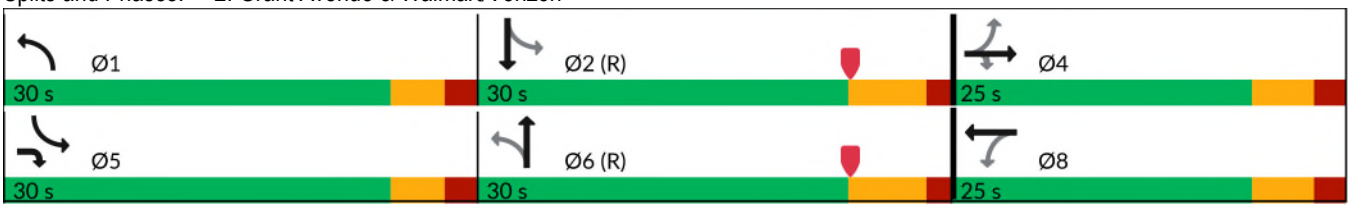
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	1	398	4	2	3	300	696	8	1	552	223
Future Volume (vph)	188	1	398	4	2	3	300	696	8	1	552	223
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1793	1599	0	1764	0	1787	3567	0	1787	3421	0
Flt Permitted		0.716			0.855		0.202			0.349		
Satd. Flow (perm)	0	1347	1599	0	1541	0	380	3567	0	657	3421	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			58		5			1			71	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			98			331			887	
Travel Time (s)		8.2			2.2			7.5			20.2	
Peak Hour Factor	0.93	0.93	0.93	0.56	0.56	0.56	0.88	0.88	0.88	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	203	428	0	16	0	341	800	0	1	852	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	custom	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	5!		8		1	6		5	2!	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	5	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	12.0	12.0	9.5	12.0	12.0		9.5	16.5		9.5	16.5	
Total Split (s)	25.0	25.0	30.0	25.0	25.0		30.0	30.0		30.0	30.0	
Total Split (%)	29.4%	29.4%	35.3%	29.4%	29.4%		35.3%	35.3%		35.3%	35.3%	
Maximum Green (s)	19.0	19.0	24.5	19.0	19.0		24.5	23.5		24.5	23.5	
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	5.5		6.0		5.5	6.5		5.5	6.5	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		16.0	31.1		16.0		57.1	41.9		44.6	34.6	
Actuated g/C Ratio		0.19	0.37		0.19		0.67	0.49		0.52	0.41	
v/c Ratio		0.80	0.69		0.05		0.65	0.46		0.00	0.59	
Control Delay (s/veh)		55.7	24.6		22.1		27.0	8.9		5.0	16.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		55.7	24.6		22.1		27.0	8.9		5.0	16.2	
LOS		E	C		C		C	A		A	B	
Approach Delay (s/veh)		34.6			22.1			14.3			16.2	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		103	169		5		90	50		0	118	
Queue Length 95th (ft)		#192	209		12		165	135		m0	#298	
Internal Link Dist (ft)		279			18			251			807	
Turn Bay Length (ft)							300			100		
Base Capacity (vph)		301	901		348		662	1758		762	1433	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.67	0.48		0.05		0.52	0.46		0.00	0.59	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 72 (85%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay (s/veh): 19.8 Intersection LOS: B
Intersection Capacity Utilization 71.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 2: Grant Avenue & Walmart/Verizon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	11	88	84	24	116	139	882	96	58	895	1
Future Volume (vph)	6	11	88	84	24	116	139	882	96	58	895	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	250		0	120		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1610	0	1787	1648	0	1787	3521	0	1787	3574	0
Flt Permitted	0.517			0.680			0.227			0.233		
Satd. Flow (perm)	973	1610	0	1278	1648	0	427	3521	0	438	3574	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		107			149			20				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		322			515			2037			316	
Travel Time (s)		7.3			11.7			46.3			7.2	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.82	0.82	0.82	0.78	0.78	0.78	0.94	0.94	0.94	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	120	0	108	180	0	148	1040	0	64	995	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5		10.5	16.5		10.5	16.5	
Total Split (s)	24.0	24.0		24.0	24.0		11.0	50.0		11.0	50.0	
Total Split (%)	28.2%	28.2%		28.2%	28.2%		12.9%	58.8%		12.9%	58.8%	
Maximum Green (s)	18.5	18.5		18.5	18.5		4.5	43.5		4.5	43.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	12.8	12.8		12.8	12.8		55.6	50.7		52.9	47.7	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.65	0.60		0.62	0.56	
v/c Ratio	0.05	0.36		0.56	0.48		0.39	0.49		0.18	0.50	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	28.5	10.9		43.6	12.5		8.5	12.1		9.5	18.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	28.5	10.9		43.6	12.5		8.5	12.1		9.5	18.9	
LOS	C	B		D	B		A	B		A	B	
Approach Delay (s/veh)		11.9			24.2			11.6			18.3	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	3	6		55	15		21	163		11	200	
Queue Length 95th (ft)	13	39		84	47		50	247		m34	308	
Internal Link Dist (ft)		242			435			1957			236	
Turn Bay Length (ft)				115			250			120		
Base Capacity (vph)	211	434		278	475		375	2108		354	2005	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.03	0.28		0.39	0.38		0.39	0.49		0.18	0.50	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay (s/veh): 15.7 Intersection LOS: B
Intersection Capacity Utilization 59.2% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Grant Avenue & John Walsh Boulevard/Brookside Drive

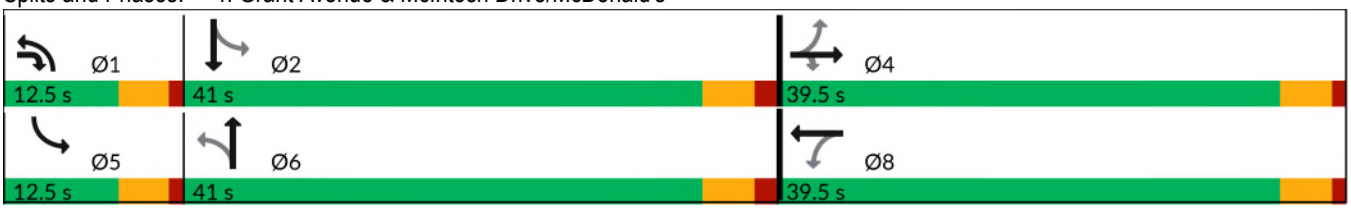
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	245	13	222	38	20	37	241	835	38	31	906	130
Future Volume (vph)	245	13	222	38	20	37	241	835	38	31	906	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		160	0		0	250		0	190		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1797	1599	0	1737	0	1787	3546	0	1787	3506	0
Flt Permitted		0.680			0.756		0.135			0.275		
Satd. Flow (perm)	0	1278	1599	0	1340	0	254	3546	0	517	3506	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			39		39			6			20	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			140			1517			2037	
Travel Time (s)		10.7			3.2			34.5			46.3	
Confl. Peds. (#/hr)	1					1			2	2		
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.98	0.98	0.98	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	286	247	0	108	0	246	891	0	33	1091	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	pm+ov	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	1		8		1	6		5	2	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	1	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	18.0		4.0	18.0	
Minimum Split (s)	8.5	8.5	8.5	8.5	8.5		8.5	23.0		8.5	23.0	
Total Split (s)	39.5	39.5	12.5	39.5	39.5		12.5	41.0		12.5	41.0	
Total Split (%)	42.5%	42.5%	13.4%	42.5%	42.5%		13.4%	44.1%		13.4%	44.1%	
Maximum Green (s)	35.0	35.0	8.0	35.0	35.0		8.0	36.0		8.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	5.0		4.5	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Act Effct Green (s)		23.3	35.9		23.3		47.5	42.4		43.2	36.3	
Actuated g/C Ratio		0.29	0.44		0.29		0.58	0.52		0.53	0.44	
v/c Ratio		0.79	0.34		0.26		0.83	0.48		0.09	0.70	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		42.4	13.5		15.9		38.9	16.5		9.5	22.2	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		42.4	13.5		15.9		38.9	16.5		9.5	22.2	
LOS		D	B		B		D	B		A	C	
Approach Delay (s/veh)		29.0			15.9			21.4			21.8	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)		134	66		27		55	162		6	223	
Queue Length 95th (ft)		222	116		61		#236	286		23	375	
Internal Link Dist (ft)		389			60			1437			1957	
Turn Bay Length (ft)			160				250			190		
Base Capacity (vph)		551	723		600		298	1843		408	1567	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.52	0.34		0.18		0.83	0.48		0.08	0.70	

Intersection Summary

Area Type: Other
Cycle Length: 93
Actuated Cycle Length: 81.7
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay (s/veh): 22.7 Intersection LOS: C
Intersection Capacity Utilization 75.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Grant Avenue & McIntosh Drive/McDonald's



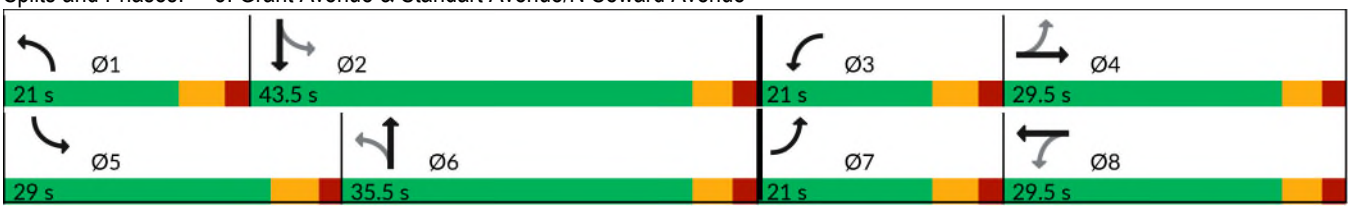
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	85	31	59	68	208	25	792	38	158	907	101
Future Volume (vph)	114	85	31	59	68	208	25	792	38	158	907	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	95		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1806	0	1787	1669	0	1787	3549	0	1787	3513	0
Flt Permitted	0.322			0.676			0.148			0.112		
Satd. Flow (perm)	606	1806	0	1272	1669	0	278	3549	0	211	3513	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			121			4			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			561			1364			1517	
Travel Time (s)		15.5			12.8			31.0			34.5	
Confl. Peds. (#/hr)							2					2
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.89	0.89	0.89	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	125	127	0	63	293	0	28	933	0	165	1050	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0		6.0	12.0		6.0	12.0	
Minimum Split (s)	10.0	11.5		10.0	11.5		12.0	17.5		12.0	17.5	
Total Split (s)	21.0	29.5		21.0	29.5		21.0	35.5		29.0	43.5	
Total Split (%)	18.3%	25.7%		18.3%	25.7%		18.3%	30.9%		25.2%	37.8%	
Maximum Green (s)	15.0	24.0		15.0	24.0		15.0	30.0		23.0	38.0	
Yellow Time (s)	4.0	3.5		4.0	3.5		4.0	3.5		4.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	5.5		6.0	5.5		6.0	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	3.0		1.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Act Effct Green (s)	36.6	29.0		30.4	24.1		37.3	31.8		45.7	40.3	
Actuated g/C Ratio	0.37	0.30		0.31	0.25		0.38	0.33		0.47	0.41	
v/c Ratio	0.37	0.23		0.15	0.58		0.14	0.81		0.66	0.72	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	22.9	26.8		20.3	24.9		16.4	37.4		30.2	28.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	22.9	26.8		20.3	24.9		16.4	37.4		30.2	28.8	
LOS	C	C		C	C		B	D		C	C	
Approach Delay (s/veh)		24.8			24.1			36.8			28.9	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	52	57		25	97		9	275		57	308	
Queue Length 95th (ft)	92	109		53	195		25	#427		118	413	
Internal Link Dist (ft)		604			481			1284			1437	
Turn Bay Length (ft)	175			150			95			260		
Base Capacity (vph)	423	546		571	502		361	1156		472	1453	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.30	0.23		0.11	0.58		0.08	0.81		0.35	0.72	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 97.7
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay (s/veh): 30.7 Intersection LOS: C
Intersection Capacity Utilization 74.8% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Grant Avenue & Standart Avenue/N Seward Avenue



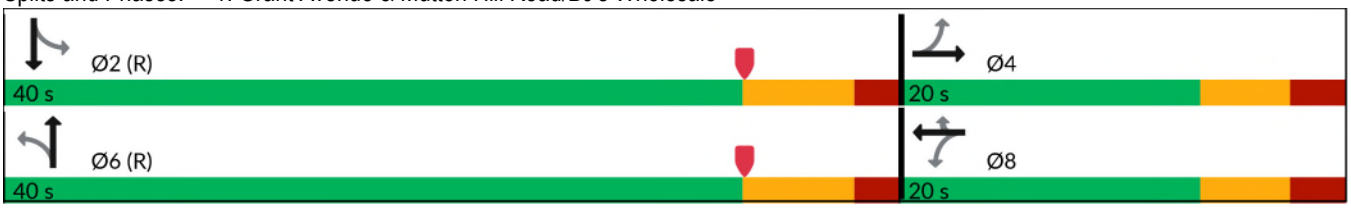
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	11	55	48	7	26	34	407	84	28	394	9
Future Volume (vph)	21	11	55	48	7	26	34	407	84	28	394	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1684	0	0	1802	1599	1770	3435	0	1752	3494	0
Flt Permitted		0.933			0.735		0.480			0.425		
Satd. Flow (perm)	0	1590	0	0	1383	1599	894	3435	0	784	3494	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		62				73		64			6	
Link Speed (mph)		30			30			30			45	
Link Distance (ft)		496			305			887			396	
Travel Time (s)		11.3			6.9			20.2			6.0	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.89	0.89	0.89	0.71	0.71	0.71	0.89	0.89	0.89	0.85	0.85	0.85
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	0	0	78	37	38	551	0	33	475	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		8	8	8	6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5	11.5	17.0	17.0		17.0	17.0	
Total Split (s)	20.0	20.0		20.0	20.0	20.0	40.0	40.0		40.0	40.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%	33.3%	66.7%	66.7%		66.7%	66.7%	
Maximum Green (s)	13.5	13.5		13.5	13.5	13.5	33.0	33.0		33.0	33.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.5			6.5	6.5	7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.3	3.3	
Recall Mode	Max	Max		Max	Max	Max	C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		27.6			27.6	27.6	18.9	18.9		18.9	18.9	
Actuated g/C Ratio		0.46			0.46	0.46	0.32	0.32		0.32	0.32	
v/c Ratio		0.13			0.12	0.05	0.14	0.49		0.13	0.43	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		7.0			13.0	1.8	20.6	22.6		13.0	16.2	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		7.0			13.0	1.8	20.6	22.6		13.0	16.2	
LOS		A			B	A	C	C		B	B	
Approach Delay (s/veh)		7.0			9.4			22.5			16.0	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)		7			15	0	13	93		9	72	
Queue Length 95th (ft)		38			38	2	41	150		19	74	
Internal Link Dist (ft)		416			225			807			316	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		765			636	775	491	1918		431	1924	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.13			0.12	0.05	0.08	0.29		0.08	0.25	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay (s/veh): 17.7 Intersection LOS: B
Intersection Capacity Utilization 51.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Grant Avenue & Mutton Hill Road/BJ's Wholesale



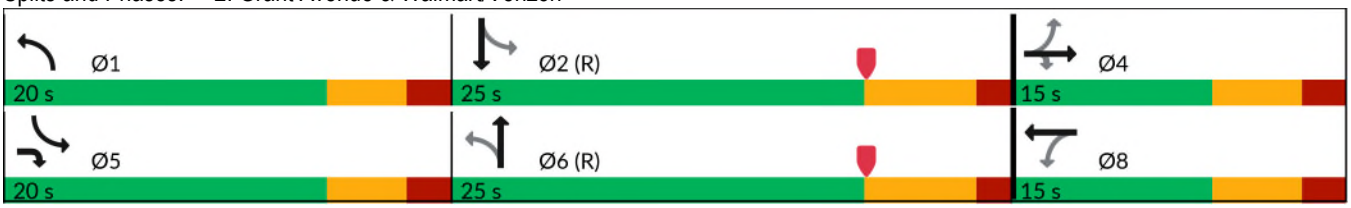
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	0	131	0	0	0	108	494	1	0	417	80
Future Volume (vph)	31	0	131	0	0	0	108	494	1	0	417	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1770	1583	0	1881	0	1770	3539	0	1845	3421	0
Flt Permitted							0.423					
Satd. Flow (perm)	0	1863	1583	0	1881	0	788	3539	0	1845	3421	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130								38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			98			331			887	
Travel Time (s)		8.2			2.2			7.5			20.2	
Peak Hour Factor	0.76	0.76	0.76	0.50	0.50	0.50	0.91	0.91	0.91	0.84	0.84	0.84
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	172	0	0	0	119	544	0	0	591	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	custom				pm+pt	NA		pm+pt	NA	
Protected Phases		4	5!		8		1	6		5	2!	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	5	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	12.0	12.0	9.5	12.0	12.0		9.5	16.5		9.5	16.5	
Total Split (s)	15.0	15.0	20.0	15.0	15.0		20.0	25.0		20.0	25.0	
Total Split (%)	25.0%	25.0%	33.3%	25.0%	25.0%		33.3%	41.7%		33.3%	41.7%	
Maximum Green (s)	9.0	9.0	14.5	9.0	9.0		14.5	18.5		14.5	18.5	
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	5.5		6.0		5.5	6.5		5.5	6.5	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		6.9	10.9				45.0	40.4			39.9	
Actuated g/C Ratio		0.12	0.18				0.75	0.67			0.67	
v/c Ratio		0.19	0.44				0.17	0.23			0.26	
Control Delay (s/veh)		25.6	9.4				1.5	2.3			3.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0				0.0	0.0			0.0	
Total Delay (s/veh)		25.6	9.4				1.5	2.3			3.8	
LOS		C	A				A	A			A	
Approach Delay (s/veh)		12.5						2.1			3.8	
Approach LOS		B						A			A	
Queue Length 50th (ft)		14	15				1	11			15	
Queue Length 95th (ft)		31	33				10	21			54	
Internal Link Dist (ft)		279			18			251			807	
Turn Bay Length (ft)							300					
Base Capacity (vph)		279	618				878	2385			2286	
Starvation Cap Reductn		0	0				0	0			0	
Spillback Cap Reductn		0	0				0	0			0	
Storage Cap Reductn		0	0				0	0			0	
Reduced v/c Ratio		0.15	0.28				0.14	0.23			0.26	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 4 (7%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.44
Intersection Signal Delay (s/veh): 4.3 Intersection LOS: A
Intersection Capacity Utilization 40.1% ICU Level of Service A
Analysis Period (min) 15
! Phase conflict between lane groups.

Splits and Phases: 2: Grant Avenue & Walmart/Verizon



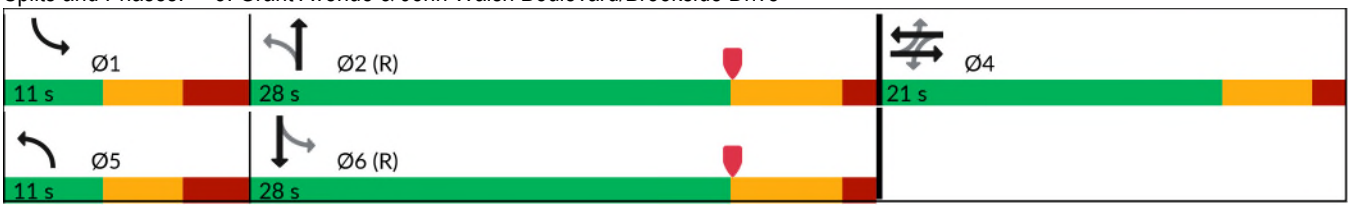
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	36	67	18	39	45	562	50	21	523	4
Future Volume (vph)	2	2	36	67	18	39	45	562	50	21	523	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	250		0	120		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1719	1553	0	1770	1671	0	1770	3491	0	1752	3501	0
Flt Permitted	0.709			0.722			0.392			0.396		
Satd. Flow (perm)	1283	1553	0	1345	1671	0	730	3491	0	730	3501	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		51			50			17			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		322			515			2037			316	
Travel Time (s)		7.3			11.7			46.3			7.2	
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.70	0.70	0.70	0.78	0.78	0.78	0.91	0.91	0.91	0.84	0.84	0.84
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	54	0	86	73	0	49	673	0	25	628	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5		10.5	16.5		10.5	16.5	
Total Split (s)	21.0	21.0		21.0	21.0		11.0	28.0		11.0	28.0	
Total Split (%)	35.0%	35.0%		35.0%	35.0%		18.3%	46.7%		18.3%	46.7%	
Maximum Green (s)	15.5	15.5		15.5	15.5		4.5	21.5		4.5	21.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	9.4	9.4		9.4	9.4		38.5	37.4		36.7	34.8	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.64	0.62		0.61	0.58	
v/c Ratio	0.01	0.19		0.41	0.24		0.09	0.31		0.05	0.31	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	19.5	9.1		27.7	12.0		5.4	9.1		9.8	17.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	19.5	9.1		27.7	12.0		5.4	9.1		9.8	17.2	
LOS	B	A		C	B		A	A		A	B	
Approach Delay (s/veh)		9.6			20.5			8.9			16.9	
Approach LOS		A			C			A			B	
Queue Length 50th (ft)	1	1		29	7		5	45		6	108	
Queue Length 95th (ft)	5	16		52	28		18	139		23	168	
Internal Link Dist (ft)		242			435			1957			236	
Turn Bay Length (ft)				115			250			120		
Base Capacity (vph)	331	439		347	468		562	2180		533	2029	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.01	0.12		0.25	0.16		0.09	0.31		0.05	0.31	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 53 (88%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.41
Intersection Signal Delay (s/veh): 13.3 Intersection LOS: B
Intersection Capacity Utilization 46.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Grant Avenue & John Walsh Boulevard/Brookside Drive



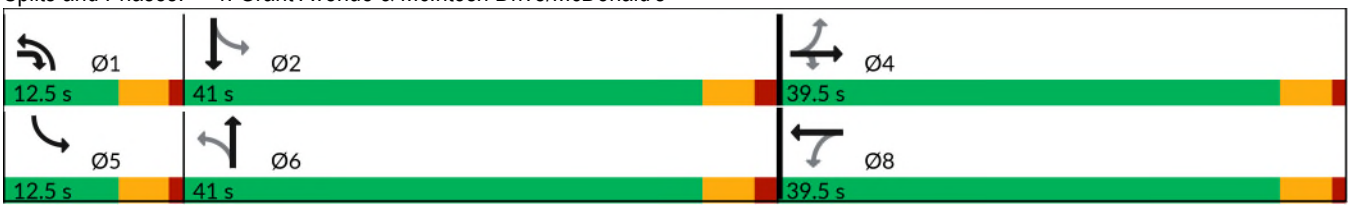
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	6	48	28	5	26	30	567	45	15	565	46
Future Volume (vph)	64	6	48	28	5	26	30	567	45	15	565	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		160	0		0	250		0	190		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1763	1568	0	1728	0	1770	3494	0	1752	3460	0
Flt Permitted		0.741			0.807		0.355			0.390		
Satd. Flow (perm)	0	1367	1568	0	1427	0	661	3494	0	719	3460	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			58		42			10			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			140			1517			2037	
Travel Time (s)		10.7			3.2			34.5			46.3	
Confl. Peds. (#/hr)							2		2	2		2
Peak Hour Factor	0.83	0.83	0.83	0.62	0.62	0.62	0.89	0.89	0.89	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	58	0	95	0	34	688	0	16	664	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	pm+ov	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	1		8		1	6		5	2	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	1	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	18.0		4.0	18.0	
Minimum Split (s)	8.5	8.5	8.5	8.5	8.5		8.5	23.0		8.5	23.0	
Total Split (s)	39.5	39.5	12.5	39.5	39.5		12.5	41.0		12.5	41.0	
Total Split (%)	42.5%	42.5%	13.4%	42.5%	42.5%		13.4%	44.1%		13.4%	44.1%	
Maximum Green (s)	35.0	35.0	8.0	35.0	35.0		8.0	36.0		8.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	5.0		4.5	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Act Effct Green (s)		9.6	17.8		9.5		47.7	47.2		44.8	40.8	
Actuated g/C Ratio		0.15	0.28		0.15		0.74	0.73		0.69	0.63	
v/c Ratio		0.41	0.12		0.39		0.06	0.27		0.03	0.30	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		31.9	5.6		20.7		3.6	5.4		3.7	8.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		31.9	5.6		20.7		3.6	5.4		3.7	8.4	
LOS		C	A		C		A	A		A	A	
Approach Delay (s/veh)		21.2			20.7			5.3			8.3	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		32	0		19		3	41		1	71	
Queue Length 95th (ft)		65	19		33		11	122		7	122	
Internal Link Dist (ft)		389			60			1437			1957	
Turn Bay Length (ft)			160				250			190		
Base Capacity (vph)		744	518		795		627	2549		644	2188	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.11	0.11		0.12		0.05	0.27		0.02	0.30	

Intersection Summary

Area Type: Other
Cycle Length: 93
Actuated Cycle Length: 64.7
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.41
Intersection Signal Delay (s/veh): 8.8 Intersection LOS: A
Intersection Capacity Utilization 42.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Grant Avenue & McIntosh Drive/McDonald's



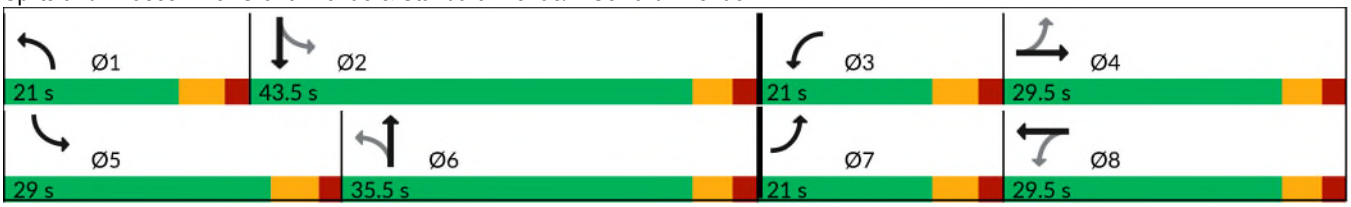
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	106	33	57	103	111	42	418	22	68	502	67
Future Volume (vph)	113	106	33	57	103	111	42	418	22	68	502	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	95		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1813	0	1770	1717	0	1752	3477	0	1752	3442	0
Flt Permitted	0.407			0.656			0.354			0.399		
Satd. Flow (perm)	766	1813	0	1222	1717	0	653	3477	0	736	3442	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			43			4			13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			561			1364			1517	
Travel Time (s)		15.5			12.8			31.0			34.5	
Peak Hour Factor	0.87	0.87	0.87	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	130	160	0	63	237	0	46	478	0	72	605	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0		6.0	12.0		6.0	12.0	
Minimum Split (s)	10.0	11.5		10.0	11.5		12.0	17.5		12.0	17.5	
Total Split (s)	21.0	29.5		21.0	29.5		21.0	35.5		29.0	43.5	
Total Split (%)	18.3%	25.7%		18.3%	25.7%		18.3%	30.9%		25.2%	37.8%	
Maximum Green (s)	15.0	24.0		15.0	24.0		15.0	30.0		23.0	38.0	
Yellow Time (s)	4.0	3.5		4.0	3.5		4.0	3.5		4.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	5.5		6.0	5.5		6.0	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	3.0		1.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Act Effct Green (s)	37.2	29.4		30.5	24.2		40.5	36.2		42.5	39.1	
Actuated g/C Ratio	0.38	0.30		0.31	0.25		0.42	0.37		0.44	0.40	
v/c Ratio	0.33	0.29		0.15	0.52		0.13	0.37		0.18	0.43	
Control Delay (s/veh)	21.9	28.2		20.4	31.6		15.5	24.0		15.8	23.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	21.9	28.2		20.4	31.6		15.5	24.0		15.8	23.0	
LOS	C	C		C	C		B	C		B	C	
Approach Delay (s/veh)		25.4			29.2			23.2			22.2	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	55	77		26	110		15	116		24	152	
Queue Length 95th (ft)	93	133		54	200		37	175		53	218	
Internal Link Dist (ft)		604			481			1284			1437	
Turn Bay Length (ft)	175			150			95			260		
Base Capacity (vph)	469	558		563	459		477	1299		587	1395	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.28	0.29		0.11	0.52		0.10	0.37		0.12	0.43	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 97
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.52
Intersection Signal Delay (s/veh): 24.2 Intersection LOS: C
Intersection Capacity Utilization 58.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 5: Grant Avenue & Standart Avenue/N Seward Avenue



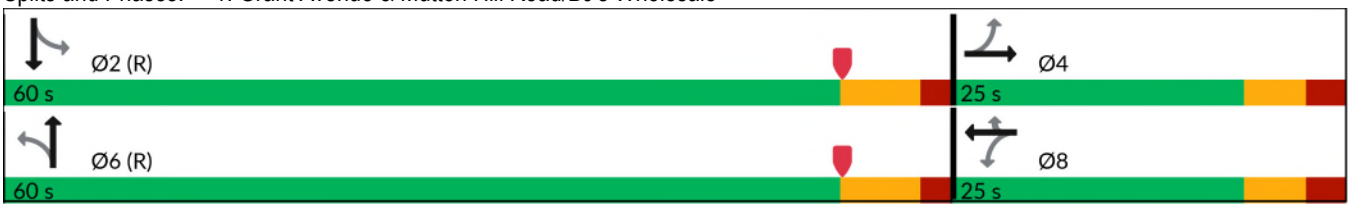
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	16	102	162	22	56	58	503	216	55	471	16
Future Volume (vph)	26	16	102	162	22	56	58	503	216	55	471	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1687	0	0	1802	1599	1787	3413	0	1787	3556	0
Flt Permitted		0.923			0.667		0.385			0.270		
Satd. Flow (perm)	0	1571	0	0	1255	1599	724	3413	0	508	3556	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		116				64		150			8	
Link Speed (mph)		30			30			30			45	
Link Distance (ft)		496			305			887			396	
Travel Time (s)		11.3			6.9			20.2			6.0	
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87	0.96	0.96	0.96	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	164	0	0	211	64	60	749	0	64	567	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		8	8	8	6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5	11.5	17.0	17.0		17.0	17.0	
Total Split (s)	25.0	25.0		25.0	25.0	25.0	60.0	60.0		60.0	60.0	
Total Split (%)	29.4%	29.4%		29.4%	29.4%	29.4%	70.6%	70.6%		70.6%	70.6%	
Maximum Green (s)	18.5	18.5		18.5	18.5	18.5	53.0	53.0		53.0	53.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.5			6.5	6.5	7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.3	3.3	
Recall Mode	Max	Max		Max	Max	Max	C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		40.7			40.7	40.7	30.8	30.8		30.8	30.8	
Actuated g/C Ratio		0.48			0.48	0.48	0.36	0.36		0.36	0.36	
v/c Ratio		0.20			0.35	0.08	0.23	0.56		0.35	0.44	
Control Delay (s/veh)		7.2			19.3	5.7	18.8	17.3		22.0	20.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		7.2			19.3	5.7	18.8	17.3		22.0	20.2	
LOS		A			B	A	B	B		C	C	
Approach Delay (s/veh)		7.2			16.1			17.4			20.4	
Approach LOS		A			B			B			C	
Queue Length 50th (ft)		13			67	0	20	107		25	120	
Queue Length 95th (ft)		60			156	25	m28	97		42	110	
Internal Link Dist (ft)		416			225			807			316	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		812			600	798	451	2184		316	2220	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.20			0.35	0.08	0.13	0.34		0.20	0.26	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay (s/veh): 17.3 Intersection LOS: B
Intersection Capacity Utilization 63.0% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Grant Avenue & Mutton Hill Road/BJ's Wholesale



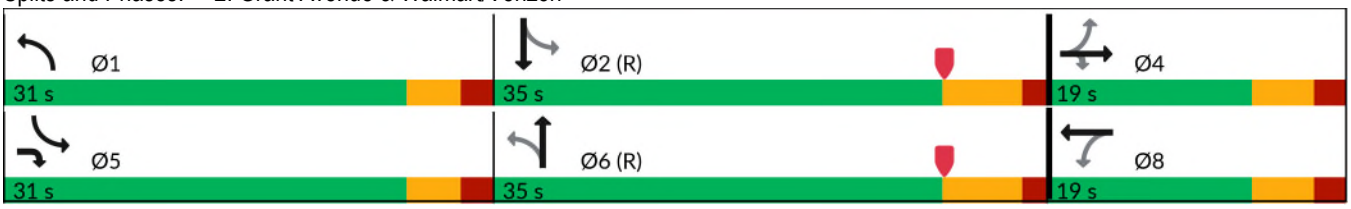
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	0	285	2	1	3	223	653	7	0	574	161
Future Volume (vph)	121	0	285	2	1	3	223	653	7	0	574	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1787	1599	0	1712	0	1787	3566	0	1881	3439	0
Flt Permitted		0.750			0.882		0.278					
Satd. Flow (perm)	0	1405	1599	0	1534	0	523	3566	0	1881	3439	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			78		6			1			45	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			98			331			887	
Travel Time (s)		8.2			2.2			7.5			20.2	
Confl. Peds. (#/hr)	2					2	2		3	3		2
Peak Hour Factor	0.78	0.78	0.78	0.50	0.50	0.50	0.95	0.95	0.95	0.87	0.87	0.87
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	155	365	0	12	0	235	694	0	0	845	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	custom	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	5!		8		1	6		5	2!	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	5	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	12.0	12.0	9.5	12.0	12.0		9.5	16.5		9.5	16.5	
Total Split (s)	19.0	19.0	31.0	19.0	19.0		31.0	35.0		31.0	35.0	
Total Split (%)	22.4%	22.4%	36.5%	22.4%	22.4%		36.5%	41.2%		36.5%	41.2%	
Maximum Green (s)	13.0	13.0	25.5	13.0	13.0		25.5	28.5		25.5	28.5	
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	5.5		6.0		5.5	6.5		5.5	6.5	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		11.8	27.1		11.8		57.1	45.9			44.9	
Actuated g/C Ratio		0.14	0.32		0.14		0.67	0.54			0.53	
v/c Ratio		0.79	0.65		0.06		0.47	0.36			0.46	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		64.2	24.0		24.2		12.2	7.4			9.2	
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	
Total Delay (s/veh)		64.2	24.0		24.2		12.2	7.4			9.2	
LOS		E	C		C		B	A			A	
Approach Delay (s/veh)		36.0			24.2			8.6			9.2	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)		81	134		3		23	48			87	
Queue Length 95th (ft)		#133	148		9		103	66			145	
Internal Link Dist (ft)		279			18			251			807	
Turn Bay Length (ft)							300					
Base Capacity (vph)		214	853		239		758	1924			1837	
Starvation Cap Reductn		0	0		0		0	0			0	
Spillback Cap Reductn		0	0		0		0	0			0	
Storage Cap Reductn		0	0		0		0	0			0	
Reduced v/c Ratio		0.72	0.43		0.05		0.31	0.36			0.46	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay (s/veh): 15.1 Intersection LOS: B
Intersection Capacity Utilization 61.8% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
! Phase conflict between lane groups.

Splits and Phases: 2: Grant Avenue & Walmart/Verizon



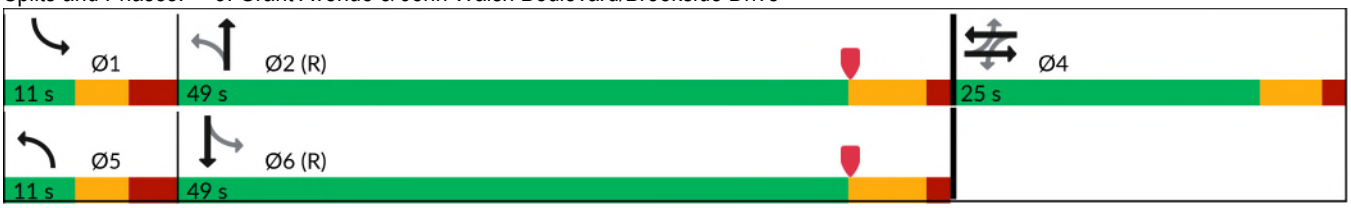
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	20	77	102	31	62	95	809	136	57	799	5
Future Volume (vph)	12	20	77	102	31	62	95	809	136	57	799	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	250		0	120		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1719	1594	0	1770	1660	0	1787	3496	0	1787	3570	0
Flt Permitted	0.692			0.679			0.283			0.231		
Satd. Flow (perm)	1251	1594	0	1265	1660	0	532	3496	0	435	3570	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		97			67			32			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		322			515			2037			316	
Travel Time (s)		7.3			11.7			46.3			7.2	
Confl. Peds. (#/hr)	1					1	3					3
Peak Hour Factor	0.79	0.79	0.79	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	122	0	110	100	0	103	1027	0	62	873	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5		10.5	16.5		10.5	16.5	
Total Split (s)	25.0	25.0		25.0	25.0		11.0	49.0		11.0	49.0	
Total Split (%)	29.4%	29.4%		29.4%	29.4%		12.9%	57.6%		12.9%	57.6%	
Maximum Green (s)	19.5	19.5		19.5	19.5		4.5	42.5		4.5	42.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	13.0	13.0		13.0	13.0		55.2	50.5		54.4	50.2	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.65	0.59		0.64	0.59	
v/c Ratio	0.08	0.38		0.57	0.32		0.24	0.49		0.17	0.41	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	28.9	12.9		43.9	15.2		6.5	12.0		9.2	17.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	28.9	12.9		43.9	15.2		6.5	12.0		9.2	17.4	
LOS	C	B		D	B		A	B		A	B	
Approach Delay (s/veh)		14.7			30.2			11.5			16.9	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	7	12		56	16		14	158		13	183	
Queue Length 95th (ft)	20	43		100	54		38	248		29	200	
Internal Link Dist (ft)		242			435			1957			236	
Turn Bay Length (ft)				115			250			120		
Base Capacity (vph)	286	440		290	432		428	2091		361	2107	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.28		0.38	0.23		0.24	0.49		0.17	0.41	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay (s/veh): 15.4 Intersection LOS: B
Intersection Capacity Utilization 57.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Grant Avenue & John Walsh Boulevard/Brookside Drive



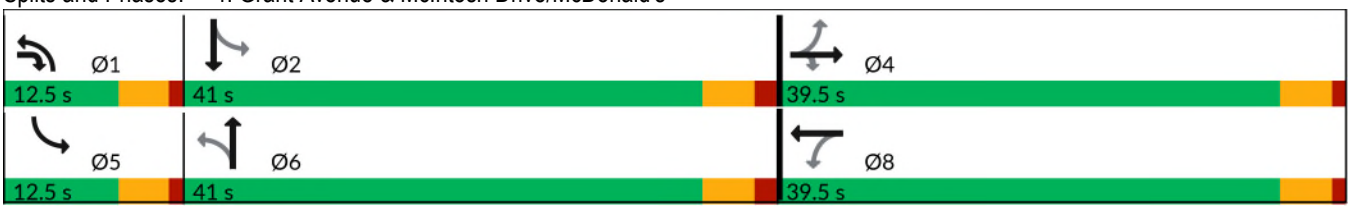
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	15	215	38	13	36	208	788	40	14	841	123
Future Volume (vph)	216	15	215	38	13	36	208	788	40	14	841	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		160	0		0	250		0	190		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1797	1599	0	1739	0	1787	3546	0	1787	3506	0
Flt Permitted		0.686			0.738		0.181			0.320		
Satd. Flow (perm)	0	1290	1579	0	1310	0	340	3546	0	602	3506	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			54		44			6			20	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			140			1517			2037	
Travel Time (s)		10.7			3.2			34.5			46.3	
Confl. Peds. (#/hr)			1	1					1	1		
Peak Hour Factor	0.95	0.95	0.95	0.82	0.82	0.82	0.94	0.94	0.94	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	243	226	0	106	0	221	881	0	14	994	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	pm+ov	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	1		8		1	6		5	2	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	1	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	18.0		4.0	18.0	
Minimum Split (s)	8.5	8.5	8.5	8.5	8.5		8.5	23.0		8.5	23.0	
Total Split (s)	39.5	39.5	12.5	39.5	39.5		12.5	41.0		12.5	41.0	
Total Split (%)	42.5%	42.5%	13.4%	42.5%	42.5%		13.4%	44.1%		13.4%	44.1%	
Maximum Green (s)	35.0	35.0	8.0	35.0	35.0		8.0	36.0		8.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	5.0		4.5	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Act Effct Green (s)		19.8	27.9		19.8		48.8	46.8		42.7	36.2	
Actuated g/C Ratio		0.25	0.36		0.25		0.62	0.60		0.55	0.46	
v/c Ratio		0.74	0.38		0.29		0.61	0.41		0.03	0.61	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		40.9	13.2		16.2		16.7	11.0		7.9	18.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		40.9	13.2		16.2		16.7	11.0		7.9	18.4	
LOS		D	B		B		B	B		A	B	
Approach Delay (s/veh)		27.6			16.2			12.2			18.2	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		109	53		24		40	98		2	178	
Queue Length 95th (ft)		186	100		54		#128	250		11	298	
Internal Link Dist (ft)		389			60			1437			1957	
Turn Bay Length (ft)			160				250			190		
Base Capacity (vph)		580	599		614		360	2125		466	1634	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.42	0.38		0.17		0.61	0.41		0.03	0.61	

Intersection Summary

Area Type: Other
Cycle Length: 93
Actuated Cycle Length: 78.2
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay (s/veh): 17.3 Intersection LOS: B
Intersection Capacity Utilization 69.8% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Grant Avenue & McIntosh Drive/McDonald's



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	82	29	69	82	185	39	706	38	146	853	93
Future Volume (vph)	145	82	29	69	82	185	39	706	38	146	853	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	95		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1808	0	1787	1668	0	1787	3546	0	1787	3521	0
Flt Permitted	0.319			0.676			0.169			0.159		
Satd. Flow (perm)	599	1808	0	1272	1668	0	318	3546	0	299	3521	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			90			5			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			561			1364			1517	
Travel Time (s)		15.5			12.8			31.0			34.5	
Confl. Peds. (#/hr)	2					2						
Peak Hour Factor	0.87	0.87	0.87	0.95	0.95	0.95	0.91	0.91	0.91	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	127	0	73	281	0	43	818	0	152	986	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0		6.0	12.0		6.0	12.0	
Minimum Split (s)	10.0	11.5		10.0	11.5		12.0	17.5		12.0	17.5	
Total Split (s)	21.0	29.5		21.0	29.5		21.0	35.5		29.0	43.5	
Total Split (%)	18.3%	25.7%		18.3%	25.7%		18.3%	30.9%		25.2%	37.8%	
Maximum Green (s)	15.0	24.0		15.0	24.0		15.0	30.0		23.0	38.0	
Yellow Time (s)	4.0	3.5		4.0	3.5		4.0	3.5		4.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	5.5		6.0	5.5		6.0	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	3.0		1.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Act Effct Green (s)	39.4	30.4		30.8	24.1		37.8	32.2		45.6	40.2	
Actuated g/C Ratio	0.40	0.31		0.31	0.24		0.38	0.32		0.46	0.40	
v/c Ratio	0.45	0.23		0.17	0.60		0.20	0.71		0.56	0.69	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	23.9	26.6		20.4	29.4		17.9	34.2		24.0	28.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	23.9	26.6		20.4	29.4		17.9	34.2		24.0	28.8	
LOS	C	C		C	C		B	C		C	C	
Approach Delay (s/veh)		25.0			27.5			33.4			28.2	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	72	58		30	112		15	236		55	291	
Queue Length 95th (ft)	116	106		60	211		35	345		99	393	
Internal Link Dist (ft)		604			481			1284			1437	
Turn Bay Length (ft)	175			150			95			260		
Base Capacity (vph)	424	562		568	472		368	1149		485	1429	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.39	0.23		0.13	0.60		0.12	0.71		0.31	0.69	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 99.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay (s/veh): 29.4 Intersection LOS: C
Intersection Capacity Utilization 74.2% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 5: Grant Avenue & Standart Avenue/N Seward Avenue

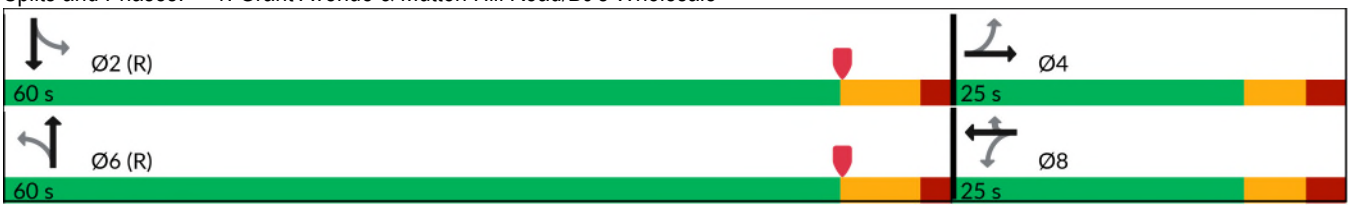
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	15	107	143	14	58	81	604	180	41	508	15
Future Volume (vph)	38	15	107	143	14	58	81	604	180	41	508	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1691	0	0	1798	1599	1787	3433	0	1787	3560	0
Flt Permitted		0.891			0.622		0.397			0.259		
Satd. Flow (perm)	0	1525	0	0	1170	1599	747	3433	0	487	3560	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		108				67		87			7	
Link Speed (mph)		30			30			30			45	
Link Distance (ft)		496			305			887			396	
Travel Time (s)		11.3			6.9			20.2			6.0	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.80	0.80	0.80	0.87	0.87	0.87	0.93	0.93	0.93	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	201	0	0	180	67	87	843	0	46	588	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		8	8	8	6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5	11.5	17.0	17.0		17.0	17.0	
Total Split (s)	25.0	25.0		25.0	25.0	25.0	60.0	60.0		60.0	60.0	
Total Split (%)	29.4%	29.4%		29.4%	29.4%	29.4%	70.6%	70.6%		70.6%	70.6%	
Maximum Green (s)	18.5	18.5		18.5	18.5	18.5	53.0	53.0		53.0	53.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.5			6.5	6.5	7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.3	3.3	
Recall Mode	Max	Max		Max	Max	Max	C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		34.0			34.0	34.0	37.5	37.5		37.5	37.5	
Actuated g/C Ratio		0.40			0.40	0.40	0.44	0.44		0.44	0.44	
v/c Ratio		0.30			0.38	0.10	0.26	0.54		0.21	0.37	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		12.5			26.3	7.4	11.6	12.3		13.5	15.4	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		12.5			26.3	7.4	11.6	12.3		13.5	15.4	
LOS		B			C	A	B	B		B	B	
Approach Delay (s/veh)		12.5			21.2			12.2			15.3	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)		31			66	0	22	97		15	108	
Queue Length 95th (ft)		85			#176	30	m18	42		25	91	
Internal Link Dist (ft)		416			225			807			316	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		675			468	680	465	2173		303	2222	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.30			0.38	0.10	0.19	0.39		0.15	0.26	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.54
Intersection Signal Delay (s/veh): 14.3 Intersection LOS: B
Intersection Capacity Utilization 71.4% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Grant Avenue & Mutton Hill Road/BJ's Wholesale



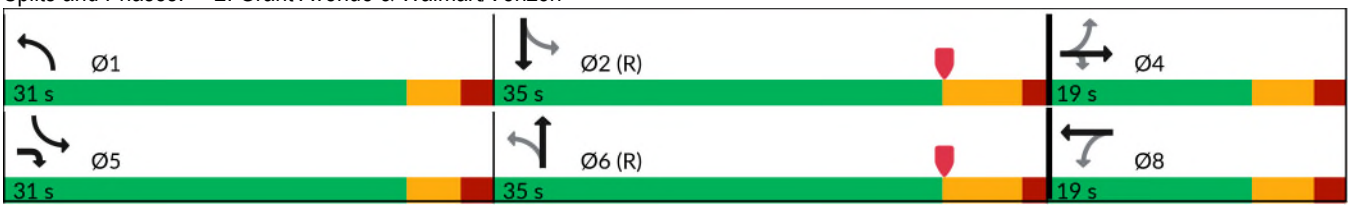
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	0	300	2	2	3	205	723	2	2	606	150
Future Volume (vph)	139	0	300	2	2	3	205	723	2	2	606	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1787	1599	0	1747	0	1787	3574	0	1787	3467	0
Flt Permitted		0.748			0.898		0.303			0.326		
Satd. Flow (perm)	0	1407	1599	0	1591	0	570	3574	0	613	3467	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			89		6						39	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			98			331			887	
Travel Time (s)		8.2			2.2			7.5			20.2	
Peak Hour Factor	0.92	0.92	0.92	0.50	0.50	0.50	0.91	0.91	0.91	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	151	326	0	14	0	225	797	0	2	787	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	custom	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	5!		8		1	6		5	2!	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	5	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	12.0	12.0	9.5	12.0	12.0		9.5	16.5		9.5	16.5	
Total Split (s)	19.0	19.0	31.0	19.0	19.0		31.0	35.0		31.0	35.0	
Total Split (%)	22.4%	22.4%	36.5%	22.4%	22.4%		36.5%	41.2%		36.5%	41.2%	
Maximum Green (s)	13.0	13.0	25.5	13.0	13.0		25.5	28.5		25.5	28.5	
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	5.5		6.0		5.5	6.5		5.5	6.5	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		11.8	25.4		11.8		57.9	47.6		54.6	46.0	
Actuated g/C Ratio		0.14	0.30		0.14		0.68	0.56		0.64	0.54	
v/c Ratio		0.78	0.60		0.06		0.43	0.40		0.00	0.42	
Control Delay (s/veh)		62.1	22.5		24.9		9.8	7.0		3.0	8.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		62.1	22.5		24.9		9.8	7.0		3.0	8.6	
LOS		E	C		C		A	A		A	A	
Approach Delay (s/veh)		35.0			24.9			7.6			8.6	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		78	109		4		22	55		0	92	
Queue Length 95th (ft)		#167	167		10		85	74		m1	110	
Internal Link Dist (ft)		279			18			251			807	
Turn Bay Length (ft)							300			100		
Base Capacity (vph)		215	857		248		778	2003		797	1893	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.70	0.38		0.06		0.29	0.40		0.00	0.42	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay (s/veh): 13.7 Intersection LOS: B
Intersection Capacity Utilization 62.3% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 2: Grant Avenue & Walmart/Verizon



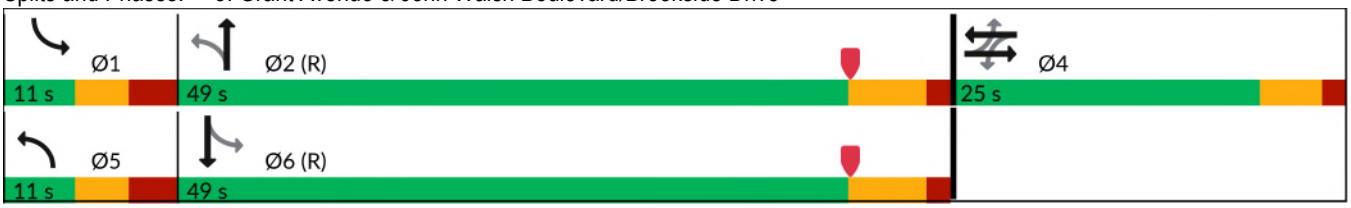
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	16	87	104	23	59	94	861	117	73	827	8
Future Volume (vph)	10	16	87	104	23	59	94	861	117	73	827	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	250		0	120		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1626	0	1787	1662	0	1787	3501	0	1787	3570	0
Flt Permitted	0.687			0.676			0.266			0.213		
Satd. Flow (perm)	1291	1626	0	1270	1662	0	500	3501	0	401	3570	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		106			78			25			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		322			515			2037			316	
Travel Time (s)		7.3			11.7			46.3			7.2	
Confl. Peds. (#/hr)	1		1	1		1	4		1	1		4
Peak Hour Factor	0.82	0.82	0.82	0.76	0.76	0.76	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	126	0	137	108	0	102	1063	0	79	908	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5		10.5	16.5		10.5	16.5	
Total Split (s)	25.0	25.0		25.0	25.0		11.0	49.0		11.0	49.0	
Total Split (%)	29.4%	29.4%		29.4%	29.4%		12.9%	57.6%		12.9%	57.6%	
Maximum Green (s)	19.5	19.5		19.5	19.5		4.5	42.5		4.5	42.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	14.3	14.3		14.3	14.3		53.8	49.1		53.3	48.9	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.63	0.58		0.63	0.58	
v/c Ratio	0.06	0.35		0.64	0.31		0.25	0.52		0.23	0.44	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	27.6	11.1		46.2	13.4		7.1	13.2		9.7	17.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	27.6	11.1		46.2	13.4		7.1	13.2		9.7	17.4	
LOS	C	B		D	B		A	B		A	B	
Approach Delay (s/veh)		12.6			31.8			12.7			16.8	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	5	9		69	14		16	180		17	180	
Queue Length 95th (ft)	17	43		98	39		38	262		33	193	
Internal Link Dist (ft)		242			435			1957			236	
Turn Bay Length (ft)				115			250			120		
Base Capacity (vph)	296	454		291	441		401	2032		339	2054	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.04	0.28		0.47	0.24		0.25	0.52		0.23	0.44	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay (s/veh): 16.1 Intersection LOS: B
Intersection Capacity Utilization 59.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Grant Avenue & John Walsh Boulevard/Brookside Drive



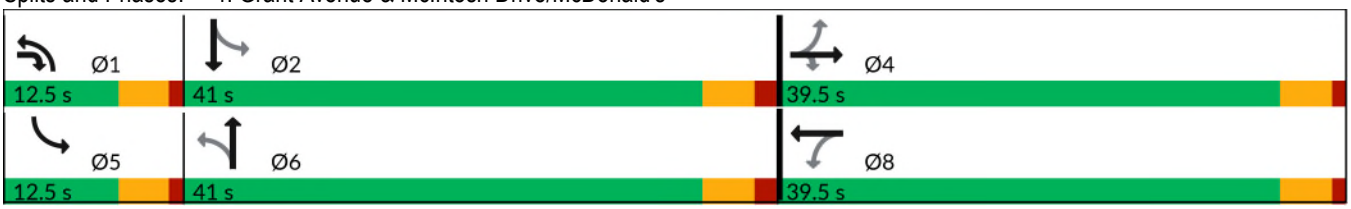
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	9	189	34	10	14	209	883	19	15	912	91
Future Volume (vph)	175	9	189	34	10	14	209	883	19	15	912	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		160	0		0	250		0	190		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1797	1599	0	1768	0	1787	3562	0	1787	3516	0
Flt Permitted		0.738			0.735		0.152			0.303		
Satd. Flow (perm)	0	1388	1599	0	1337	0	286	3562	0	570	3516	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			31		18			3			13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			140			1517			2037	
Travel Time (s)		10.7			3.2			34.5			46.3	
Confl. Peds. (#/hr)							4		1	1		4
Peak Hour Factor	0.92	0.92	0.92	0.79	0.79	0.79	0.96	0.96	0.96	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	205	0	74	0	218	940	0	17	1114	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	pm+ov	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	1		8		1	6		5	2	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	1	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	18.0		4.0	18.0	
Minimum Split (s)	8.5	8.5	8.5	8.5	8.5		8.5	23.0		8.5	23.0	
Total Split (s)	39.5	39.5	12.5	39.5	39.5		12.5	41.0		12.5	41.0	
Total Split (%)	42.5%	42.5%	13.4%	42.5%	42.5%		13.4%	44.1%		13.4%	44.1%	
Maximum Green (s)	35.0	35.0	8.0	35.0	35.0		8.0	36.0		8.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	5.0		4.5	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Act Effct Green (s)		16.4	28.9		16.4		48.6	46.7		42.6	36.1	
Actuated g/C Ratio		0.22	0.39		0.22		0.65	0.63		0.57	0.48	
v/c Ratio		0.66	0.32		0.24		0.63	0.42		0.04	0.65	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		37.1	14.5		20.4		17.3	9.5		6.3	17.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		37.1	14.5		20.4		17.3	9.5		6.3	17.4	
LOS		D	B		C		B	A		A	B	
Approach Delay (s/veh)		25.7			20.4			11.0			17.2	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		85	54		21		34	93		2	191	
Queue Length 95th (ft)		151	101		46		#131	240		11	312	
Internal Link Dist (ft)		389			60			1437			1957	
Turn Bay Length (ft)			160				250			190		
Base Capacity (vph)		653	639		639		348	2230		472	1710	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.31	0.32		0.12		0.63	0.42		0.04	0.65	

Intersection Summary

Area Type: Other
Cycle Length: 93
Actuated Cycle Length: 74.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay (s/veh): 15.9 Intersection LOS: B
Intersection Capacity Utilization 66.6% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Grant Avenue & McIntosh Drive/McDonald's



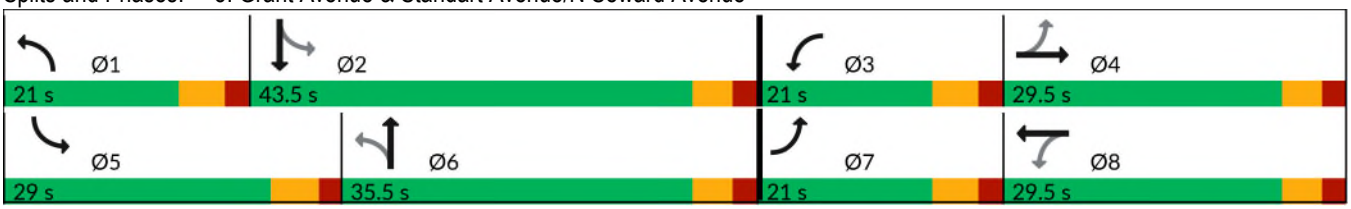
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	106	36	63	101	201	59	764	46	189	856	87
Future Volume (vph)	136	106	36	63	101	201	59	764	46	189	856	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	95		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1810	0	1787	1676	0	1787	3546	0	1787	3524	0
Flt Permitted	0.214			0.659			0.145			0.129		
Satd. Flow (perm)	402	1810	0	1240	1676	0	273	3546	0	243	3524	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			78			5			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			561			1364			1517	
Travel Time (s)		15.5			12.8			31.0			34.5	
Confl. Peds. (#/hr)	2					2						
Peak Hour Factor	0.92	0.92	0.92	0.85	0.85	0.85	0.95	0.95	0.95	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	154	0	74	355	0	62	852	0	208	1037	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0		6.0	12.0		6.0	12.0	
Minimum Split (s)	10.0	11.5		10.0	11.5		12.0	17.5		12.0	17.5	
Total Split (s)	21.0	29.5		21.0	29.5		21.0	35.5		29.0	43.5	
Total Split (%)	18.3%	25.7%		18.3%	25.7%		18.3%	30.9%		25.2%	37.8%	
Maximum Green (s)	15.0	24.0		15.0	24.0		15.0	30.0		23.0	38.0	
Yellow Time (s)	4.0	3.5		4.0	3.5		4.0	3.5		4.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	5.5		6.0	5.5		6.0	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	3.0		1.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Act Effct Green (s)	38.3	29.8		30.9	24.1		37.8	31.9		48.2	39.8	
Actuated g/C Ratio	0.38	0.29		0.31	0.24		0.37	0.31		0.48	0.39	
v/c Ratio	0.50	0.28		0.18	0.78		0.31	0.76		0.71	0.75	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	26.8	29.3		21.6	42.0		20.2	37.4		31.9	31.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	26.8	29.3		21.6	42.0		20.2	37.4		31.9	31.4	
LOS	C	C		C	D		C	D		C	C	
Approach Delay (s/veh)		28.1			38.5			36.3			31.5	
Approach LOS		C			D			D			C	
Queue Length 50th (ft)	63	73		30	172		21	256		76	307	
Queue Length 95th (ft)	114	140		60	#311		46	#415		152	425	
Internal Link Dist (ft)		604			481			1284			1437	
Turn Bay Length (ft)	175			150			95			260		
Base Capacity (vph)	364	541		548	457		349	1121		469	1391	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.41	0.28		0.14	0.78		0.18	0.76		0.44	0.75	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 101.3
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay (s/veh): 33.7 Intersection LOS: C
Intersection Capacity Utilization 77.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Grant Avenue & Standart Avenue/N Seward Avenue



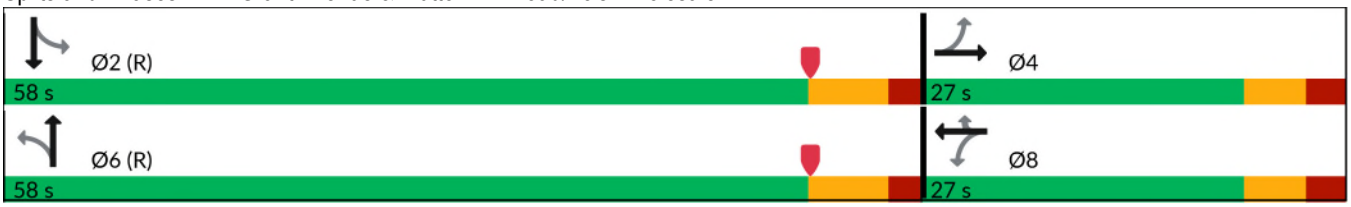
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	31	98	198	18	98	48	606	263	53	509	11
Future Volume (vph)	27	31	98	198	18	98	48	606	263	53	509	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1706	0	0	1798	1599	1787	3413	0	1787	3564	0
Flt Permitted		0.907			0.624		0.405			0.232		
Satd. Flow (perm)	0	1561	0	0	1174	1599	762	3413	0	436	3564	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		94				129		144			4	
Link Speed (mph)		30			30			30			45	
Link Distance (ft)		496			305			887			396	
Travel Time (s)		11.3			6.9			20.2			6.0	
Peak Hour Factor	0.80	0.80	0.80	0.76	0.76	0.76	0.96	0.96	0.96	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	196	0	0	285	129	50	905	0	59	578	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		8	8	8	6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5	11.5	17.0	17.0		17.0	17.0	
Total Split (s)	27.0	27.0		27.0	27.0	27.0	58.0	58.0		58.0	58.0	
Total Split (%)	31.8%	31.8%		31.8%	31.8%	31.8%	68.2%	68.2%		68.2%	68.2%	
Maximum Green (s)	20.5	20.5		20.5	20.5	20.5	51.0	51.0		51.0	51.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.5			6.5	6.5	7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.3	3.3	
Recall Mode	Max	Max		Max	Max	Max	C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		33.6			33.6	33.6	37.9	37.9		37.9	37.9	
Actuated g/C Ratio		0.40			0.40	0.40	0.45	0.45		0.45	0.45	
v/c Ratio		0.29			0.61	0.18	0.15	0.57		0.30	0.36	
Control Delay (s/veh)		13.3			32.5	5.6	8.5	9.6		16.3	15.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		13.3			32.5	5.6	8.5	9.6		16.3	15.2	
LOS		B			C	A	A	A		B	B	
Approach Delay (s/veh)		13.3			24.1			9.5			15.3	
Approach LOS		B			C			A			B	
Queue Length 50th (ft)		34			119	0	12	87		20	104	
Queue Length 95th (ft)		86			#241	26	m16	83		35	97	
Internal Link Dist (ft)		416			225			807			316	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		674			464	710	457	2105		261	2140	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.29			0.61	0.18	0.11	0.43		0.23	0.27	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay (s/veh): 14.3 Intersection LOS: B
Intersection Capacity Utilization 77.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Grant Avenue & Mutton Hill Road/BJ's Wholesale



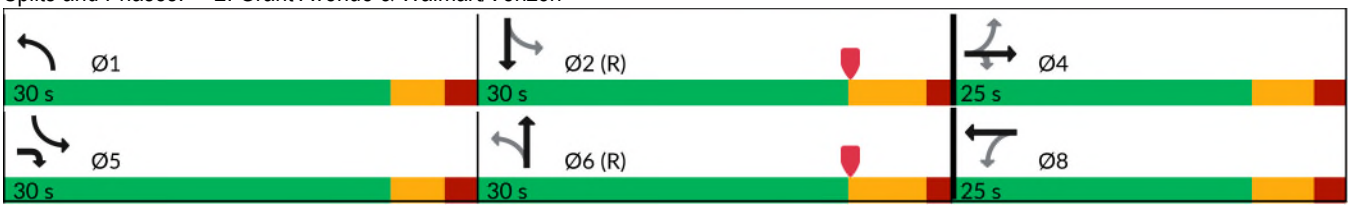
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	192	1	406	4	2	3	306	722	8	1	577	227
Future Volume (vph)	192	1	406	4	2	3	306	722	8	1	577	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1793	1599	0	1764	0	1787	3567	0	1787	3424	0
Flt Permitted		0.716			0.855		0.186			0.334		
Satd. Flow (perm)	0	1347	1599	0	1541	0	350	3567	0	628	3424	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			50		5			1			67	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			98			331			887	
Travel Time (s)		8.2			2.2			7.5			20.2	
Peak Hour Factor	0.93	0.93	0.93	0.56	0.56	0.56	0.88	0.88	0.88	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	207	437	0	16	0	348	829	0	1	883	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	custom	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	5!		8		1	6		5	2!	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	5	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	12.0	12.0	9.5	12.0	12.0		9.5	16.5		9.5	16.5	
Total Split (s)	25.0	25.0	30.0	25.0	25.0		30.0	30.0		30.0	30.0	
Total Split (%)	29.4%	29.4%	35.3%	29.4%	29.4%		35.3%	35.3%		35.3%	35.3%	
Maximum Green (s)	19.0	19.0	24.5	19.0	19.0		24.5	23.5		24.5	23.5	
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	5.5		6.0		5.5	6.5		5.5	6.5	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		16.2	31.9		16.2		56.9	41.1		44.7	34.0	
Actuated g/C Ratio		0.19	0.38		0.19		0.67	0.48		0.53	0.40	
v/c Ratio		0.81	0.69		0.05		0.67	0.48		0.00	0.63	
Control Delay (s/veh)		56.0	24.7		22.0		29.7	9.4		5.0	17.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		56.0	24.7		22.0		29.7	9.4		5.0	17.3	
LOS		E	C		C		C	A		A	B	
Approach Delay (s/veh)		34.8			22.0			15.4			17.3	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		105	176		5		103	52		0	127	
Queue Length 95th (ft)		#198	214		12		174	157		m0	#333	
Internal Link Dist (ft)		279			18			251			807	
Turn Bay Length (ft)							300			100		
Base Capacity (vph)		301	902		348		649	1724		748	1410	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.69	0.48		0.05		0.54	0.48		0.00	0.63	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 72 (85%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay (s/veh): 20.6 Intersection LOS: C
Intersection Capacity Utilization 72.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 2: Grant Avenue & Walmart/Verizon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	11	90	88	24	118	142	912	100	59	927	1
Future Volume (vph)	6	11	90	88	24	118	142	912	100	59	927	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	250		0	120		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1610	0	1787	1648	0	1787	3521	0	1787	3574	0
Flt Permitted	0.516			0.678			0.214			0.219		
Satd. Flow (perm)	971	1610	0	1274	1648	0	402	3521	0	412	3574	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		110			151			20				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		322			515			2037			316	
Travel Time (s)		7.3			11.7			46.3			7.2	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.82	0.82	0.82	0.78	0.78	0.78	0.94	0.94	0.94	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	123	0	113	182	0	151	1076	0	66	1031	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5		10.5	16.5		10.5	16.5	
Total Split (s)	24.0	24.0		24.0	24.0		11.0	50.0		11.0	50.0	
Total Split (%)	28.2%	28.2%		28.2%	28.2%		12.9%	58.8%		12.9%	58.8%	
Maximum Green (s)	18.5	18.5		18.5	18.5		4.5	43.5		4.5	43.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	13.1	13.1		13.1	13.1		55.3	50.4		52.7	47.5	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.65	0.59		0.62	0.56	
v/c Ratio	0.05	0.36		0.58	0.48		0.42	0.51		0.19	0.52	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	28.3	10.8		44.2	12.4		9.2	12.5		9.8	19.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	28.3	10.8		44.2	12.4		9.2	12.5		9.8	19.4	
LOS	C	B		D	B		A	B		A	B	
Approach Delay (s/veh)		11.8			24.6			12.1			18.8	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	3	6		57	15		22	173		11	206	
Queue Length 95th (ft)	13	40		87	47		51	260		m34	322	
Internal Link Dist (ft)		242			435			1957			236	
Turn Bay Length (ft)				115			250			120		
Base Capacity (vph)	211	436		277	476		358	2097		340	1996	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.03	0.28		0.41	0.38		0.42	0.51		0.19	0.52	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay (s/veh): 16.1 Intersection LOS: B
Intersection Capacity Utilization 60.5% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Grant Avenue & John Walsh Boulevard/Brookside Drive

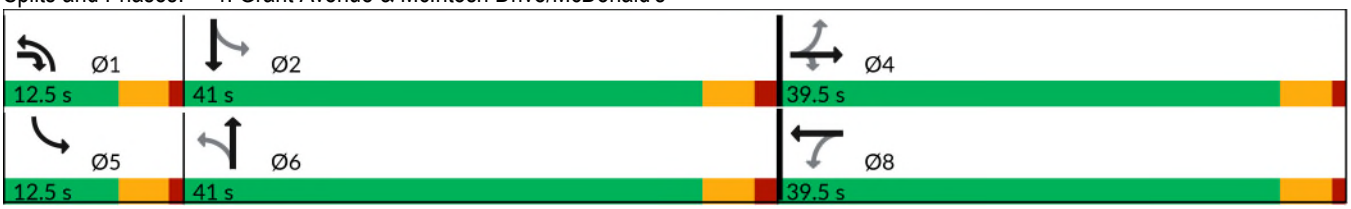
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	13	226	39	20	38	246	866	39	32	940	133
Future Volume (vph)	250	13	226	39	20	38	246	866	39	32	940	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		160	0		0	250		0	190		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1797	1599	0	1737	0	1787	3549	0	1787	3506	0
Flt Permitted		0.676			0.745		0.123			0.259		
Satd. Flow (perm)	0	1271	1599	0	1321	0	231	3549	0	487	3506	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			35		40			6			19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			140			1517			2037	
Travel Time (s)		10.7			3.2			34.5			46.3	
Confl. Peds. (#/hr)	1					1			2	2		
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.98	0.98	0.98	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	292	251	0	110	0	251	924	0	34	1129	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	pm+ov	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	1		8		1	6		5	2	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	1	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	18.0		4.0	18.0	
Minimum Split (s)	8.5	8.5	8.5	8.5	8.5		8.5	23.0		8.5	23.0	
Total Split (s)	39.5	39.5	12.5	39.5	39.5		12.5	41.0		12.5	41.0	
Total Split (%)	42.5%	42.5%	13.4%	42.5%	42.5%		13.4%	44.1%		13.4%	44.1%	
Maximum Green (s)	35.0	35.0	8.0	35.0	35.0		8.0	36.0		8.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	5.0		4.5	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Act Effct Green (s)		23.7	36.3		23.7		47.4	42.4		43.2	36.3	
Actuated g/C Ratio		0.29	0.44		0.29		0.58	0.52		0.53	0.44	
v/c Ratio		0.80	0.35		0.27		0.88	0.50		0.09	0.72	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		43.3	13.8		15.8		48.8	17.0		9.7	23.2	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		43.3	13.8		15.8		48.8	17.0		9.7	23.2	
LOS		D	B		B		D	B		A	C	
Approach Delay (s/veh)		29.6			15.8			23.8			22.8	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)		138	69		27		67	173		7	238	
Queue Length 95th (ft)		229	119		62		#255	301		24	394	
Internal Link Dist (ft)		389			60			1437			1957	
Turn Bay Length (ft)			160				250			190		
Base Capacity (vph)		545	725		590		286	1834		393	1559	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.54	0.35		0.19		0.88	0.50		0.09	0.72	

Intersection Summary

Area Type: Other
Cycle Length: 93
Actuated Cycle Length: 82.1
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay (s/veh): 24.2 Intersection LOS: C
Intersection Capacity Utilization 76.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Grant Avenue & McIntosh Drive/McDonald's



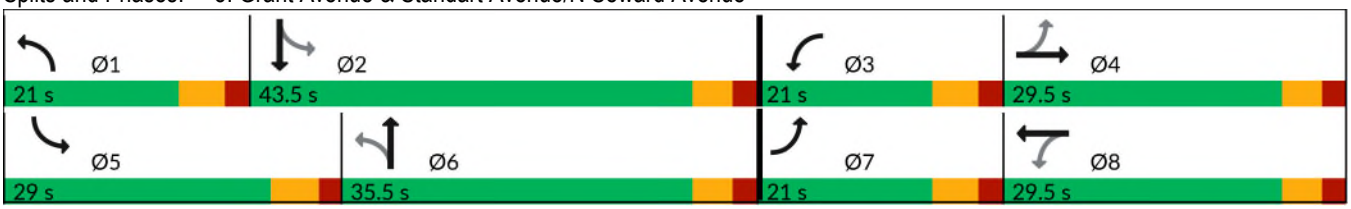
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	91	41	60	73	212	61	785	39	161	929	108
Future Volume (vph)	154	91	41	60	73	212	61	785	39	161	929	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	95		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1793	0	1787	1670	0	1787	3549	0	1787	3509	0
Flt Permitted	0.277			0.665			0.116			0.112		
Satd. Flow (perm)	521	1793	0	1251	1670	0	218	3549	0	211	3509	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			115			4			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			561			1364			1517	
Travel Time (s)		15.5			12.8			31.0			34.5	
Confl. Peds. (#/hr)							2					2
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.89	0.89	0.89	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	169	145	0	64	304	0	69	926	0	168	1081	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0		6.0	12.0		6.0	12.0	
Minimum Split (s)	10.0	11.5		10.0	11.5		12.0	17.5		12.0	17.5	
Total Split (s)	21.0	29.5		21.0	29.5		21.0	35.5		29.0	43.5	
Total Split (%)	18.3%	25.7%		18.3%	25.7%		18.3%	30.9%		25.2%	37.8%	
Maximum Green (s)	15.0	24.0		15.0	24.0		15.0	30.0		23.0	38.0	
Yellow Time (s)	4.0	3.5		4.0	3.5		4.0	3.5		4.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	5.5		6.0	5.5		6.0	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	3.0		1.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Act Effct Green (s)	40.1	31.0		30.5	24.1		39.2	33.2		46.7	39.0	
Actuated g/C Ratio	0.40	0.31		0.30	0.24		0.39	0.33		0.46	0.38	
v/c Ratio	0.49	0.26		0.15	0.63		0.37	0.80		0.68	0.80	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	25.4	26.9		21.0	28.6		21.9	37.9		32.1	34.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	25.4	26.9		21.0	28.6		21.9	37.9		32.1	34.0	
LOS	C	C		C	C		C	D		C	C	
Approach Delay (s/veh)		26.1			27.3			36.8			33.7	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	73	65		26	111		24	283		61	332	
Queue Length 95th (ft)	124	124		55	219		50	#435		124	#462	
Internal Link Dist (ft)		604			481			1284			1437	
Turn Bay Length (ft)	175			150			95			260		
Base Capacity (vph)	398	559		552	484		333	1164		459	1358	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.42	0.26		0.12	0.63		0.21	0.80		0.37	0.80	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 101.4
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay (s/veh): 33.1 Intersection LOS: C
Intersection Capacity Utilization 78.3% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Grant Avenue & Standart Avenue/N Seward Avenue



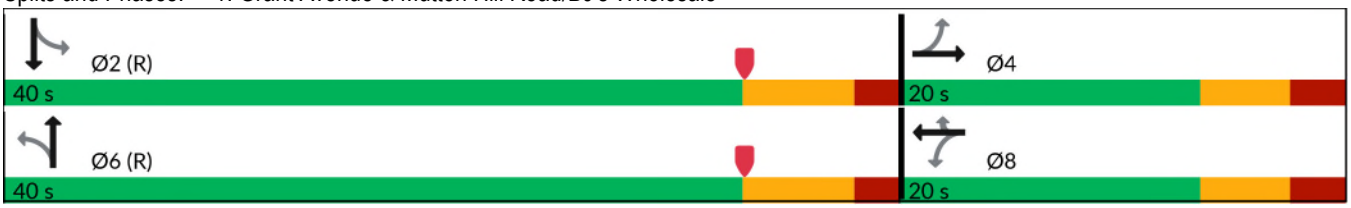
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	11	57	48	7	26	35	410	84	28	398	9
Future Volume (vph)	21	11	57	48	7	26	35	410	84	28	398	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1682	0	0	1802	1599	1770	3439	0	1752	3494	0
Flt Permitted		0.934			0.734		0.478			0.422		
Satd. Flow (perm)	0	1590	0	0	1381	1599	890	3439	0	778	3494	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64				73		63			6	
Link Speed (mph)		30			30			30			45	
Link Distance (ft)		496			305			887			396	
Travel Time (s)		11.3			6.9			20.2			6.0	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.89	0.89	0.89	0.71	0.71	0.71	0.89	0.89	0.89	0.85	0.85	0.85
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	78	37	39	555	0	33	479	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		8	8	8	6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5	11.5	17.0	17.0		17.0	17.0	
Total Split (s)	20.0	20.0		20.0	20.0	20.0	40.0	40.0		40.0	40.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%	33.3%	66.7%	66.7%		66.7%	66.7%	
Maximum Green (s)	13.5	13.5		13.5	13.5	13.5	33.0	33.0		33.0	33.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.5			6.5	6.5	7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.3	3.3	
Recall Mode	Max	Max		Max	Max	Max	C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		27.5			27.5	27.5	19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.46			0.46	0.46	0.32	0.32		0.32	0.32	
v/c Ratio		0.13			0.12	0.05	0.14	0.49		0.13	0.43	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		7.0			13.0	1.8	20.9	22.7		13.0	16.2	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		7.0			13.0	1.8	20.9	22.7		13.0	16.2	
LOS		A			B	A	C	C		B	B	
Approach Delay (s/veh)		7.0			9.4			22.6			16.0	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)		7			15	0	13	92		9	72	
Queue Length 95th (ft)		38			38	2	42	151		19	74	
Internal Link Dist (ft)		416			225			807			316	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		764			633	773	489	1919		427	1924	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.13			0.12	0.05	0.08	0.29		0.08	0.25	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay (s/veh): 17.7 Intersection LOS: B
Intersection Capacity Utilization 51.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Grant Avenue & Mutton Hill Road/BJ's Wholesale



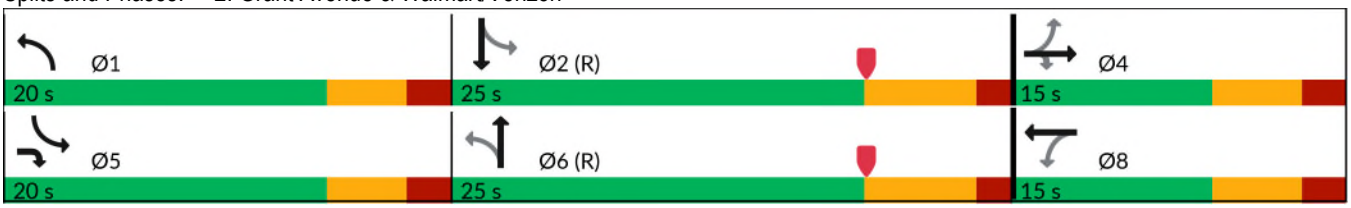
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	0	131	0	0	0	108	498	1	0	423	80
Future Volume (vph)	31	0	131	0	0	0	108	498	1	0	423	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1770	1583	0	1881	0	1770	3539	0	1845	3421	0
Flt Permitted							0.419					
Satd. Flow (perm)	0	1863	1583	0	1881	0	780	3539	0	1845	3421	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			126								37	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			98			331			887	
Travel Time (s)		8.2			2.2			7.5			20.2	
Peak Hour Factor	0.76	0.76	0.76	0.50	0.50	0.50	0.91	0.91	0.91	0.84	0.84	0.84
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	172	0	0	0	119	548	0	0	599	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	custom				pm+pt	NA		pm+pt	NA	
Protected Phases		4	5!		8		1	6		5	2!	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	5	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	12.0	12.0	9.5	12.0	12.0		9.5	16.5		9.5	16.5	
Total Split (s)	15.0	15.0	20.0	15.0	15.0		20.0	25.0		20.0	25.0	
Total Split (%)	25.0%	25.0%	33.3%	25.0%	25.0%		33.3%	41.7%		33.3%	41.7%	
Maximum Green (s)	9.0	9.0	14.5	9.0	9.0		14.5	18.5		14.5	18.5	
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	5.5		6.0		5.5	6.5		5.5	6.5	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		6.9	11.0				44.9	40.4			39.9	
Actuated g/C Ratio		0.12	0.18				0.75	0.67			0.67	
v/c Ratio		0.19	0.44				0.18	0.23			0.26	
Control Delay (s/veh)		25.6	9.7				1.6	2.5			3.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0				0.0	0.0			0.0	
Total Delay (s/veh)		25.6	9.7				1.6	2.5			3.9	
LOS		C	A				A	A			A	
Approach Delay (s/veh)		12.7						2.4			3.9	
Approach LOS		B						A			A	
Queue Length 50th (ft)		14	16				1	14			15	
Queue Length 95th (ft)		31	34				11	25			55	
Internal Link Dist (ft)		279			18			251			807	
Turn Bay Length (ft)							300					
Base Capacity (vph)		279	616				873	2381			2286	
Starvation Cap Reductn		0	0				0	0			0	
Spillback Cap Reductn		0	0				0	0			0	
Storage Cap Reductn		0	0				0	0			0	
Reduced v/c Ratio		0.15	0.28				0.14	0.23			0.26	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 4 (7%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.44
Intersection Signal Delay (s/veh): 4.5 Intersection LOS: A
Intersection Capacity Utilization 40.2% ICU Level of Service A
Analysis Period (min) 15
! Phase conflict between lane groups.

Splits and Phases: 2: Grant Avenue & Walmart/Verizon



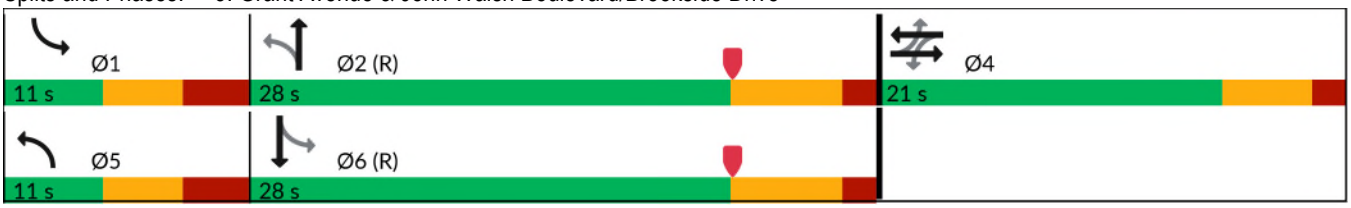
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	4	39	66	20	39	59	557	49	21	527	6
Future Volume (vph)	11	4	39	66	20	39	59	557	49	21	527	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	250		0	120		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1719	1565	0	1770	1678	0	1770	3491	0	1752	3497	0
Flt Permitted	0.708			0.717			0.386			0.399		
Satd. Flow (perm)	1281	1565	0	1336	1678	0	719	3491	0	736	3497	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56			50			17			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		322			515			2037			316	
Travel Time (s)		7.3			11.7			46.3			7.2	
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.70	0.70	0.70	0.78	0.78	0.78	0.91	0.91	0.91	0.84	0.84	0.84
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	62	0	85	76	0	65	666	0	25	634	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5		10.5	16.5		10.5	16.5	
Total Split (s)	21.0	21.0		21.0	21.0		11.0	28.0		11.0	28.0	
Total Split (%)	35.0%	35.0%		35.0%	35.0%		18.3%	46.7%		18.3%	46.7%	
Maximum Green (s)	15.5	15.5		15.5	15.5		4.5	21.5		4.5	21.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	9.4	9.4		9.4	9.4		38.6	37.4		36.5	34.6	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.64	0.62		0.61	0.58	
v/c Ratio	0.08	0.21		0.41	0.25		0.12	0.31		0.05	0.31	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	20.7	9.4		27.7	12.3		5.5	9.1		9.7	17.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	20.7	9.4		27.7	12.3		5.5	9.1		9.7	17.2	
LOS	C	A		C	B		A	A		A	B	
Approach Delay (s/veh)		11.7			20.5			8.8			16.9	
Approach LOS		B			C			A			B	
Queue Length 50th (ft)	5	2		29	8		7	45		6	108	
Queue Length 95th (ft)	14	17		52	29		22	137		23	170	
Internal Link Dist (ft)		242			435			1957			236	
Turn Bay Length (ft)				115			250			120		
Base Capacity (vph)	330	445		345	470		561	2180		534	2018	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.14		0.25	0.16		0.12	0.31		0.05	0.31	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 53 (88%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.41
Intersection Signal Delay (s/veh): 13.4 Intersection LOS: B
Intersection Capacity Utilization 46.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Grant Avenue & John Walsh Boulevard/Brookside Drive



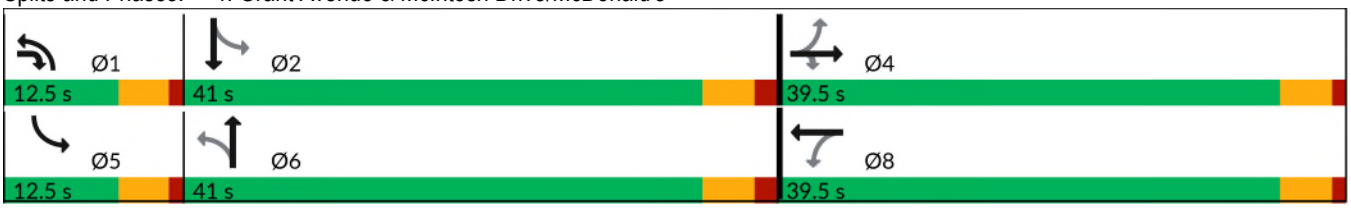
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	6	48	28	5	26	30	575	45	15	571	46
Future Volume (vph)	64	6	48	28	5	26	30	575	45	15	571	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		160	0		0	250		0	190		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1763	1568	0	1728	0	1770	3495	0	1752	3460	0
Flt Permitted		0.741			0.807		0.352			0.387		
Satd. Flow (perm)	0	1367	1568	0	1427	0	655	3495	0	713	3460	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			58		42			10			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			140			1517			2037	
Travel Time (s)		10.7			3.2			34.5			46.3	
Confl. Peds. (#/hr)							2		2	2		2
Peak Hour Factor	0.83	0.83	0.83	0.62	0.62	0.62	0.89	0.89	0.89	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	58	0	95	0	34	697	0	16	671	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	pm+ov	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	1		8		1	6		5	2	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	1	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	18.0		4.0	18.0	
Minimum Split (s)	8.5	8.5	8.5	8.5	8.5		8.5	23.0		8.5	23.0	
Total Split (s)	39.5	39.5	12.5	39.5	39.5		12.5	41.0		12.5	41.0	
Total Split (%)	42.5%	42.5%	13.4%	42.5%	42.5%		13.4%	44.1%		13.4%	44.1%	
Maximum Green (s)	35.0	35.0	8.0	35.0	35.0		8.0	36.0		8.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	5.0		4.5	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Act Effct Green (s)		9.6	17.8		9.5		47.7	47.2		44.8	40.8	
Actuated g/C Ratio		0.15	0.28		0.15		0.74	0.73		0.69	0.63	
v/c Ratio		0.41	0.12		0.39		0.06	0.27		0.03	0.31	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		31.9	5.6		20.7		3.6	5.4		3.7	8.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		31.9	5.6		20.7		3.6	5.4		3.7	8.4	
LOS		C	A		C		A	A		A	A	
Approach Delay (s/veh)		21.2			20.7			5.3			8.3	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		32	0		19		3	41		1	72	
Queue Length 95th (ft)		65	19		33		11	123		7	123	
Internal Link Dist (ft)		389			60			1437			1957	
Turn Bay Length (ft)			160				250			190		
Base Capacity (vph)		744	518		795		624	2549		640	2188	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.11	0.11		0.12		0.05	0.27		0.03	0.31	

Intersection Summary

Area Type: Other
Cycle Length: 93
Actuated Cycle Length: 64.7
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.41
Intersection Signal Delay (s/veh): 8.8 Intersection LOS: A
Intersection Capacity Utilization 42.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Grant Avenue & McIntosh Drive/McDonald's



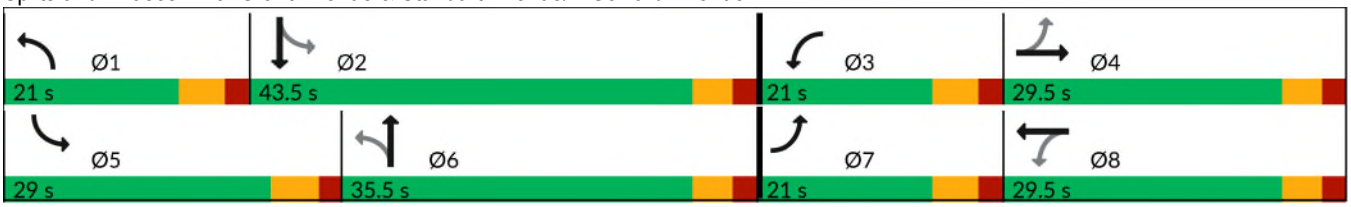
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	106	33	57	103	112	42	423	22	69	506	68
Future Volume (vph)	115	106	33	57	103	112	42	423	22	69	506	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	95		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1813	0	1770	1717	0	1752	3480	0	1752	3442	0
Flt Permitted	0.405			0.656			0.351			0.395		
Satd. Flow (perm)	762	1813	0	1222	1717	0	647	3480	0	729	3442	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			43			4			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			561			1364			1517	
Travel Time (s)		15.5			12.8			31.0			34.5	
Peak Hour Factor	0.87	0.87	0.87	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	160	0	63	238	0	46	484	0	73	610	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0		6.0	12.0		6.0	12.0	
Minimum Split (s)	10.0	11.5		10.0	11.5		12.0	17.5		12.0	17.5	
Total Split (s)	21.0	29.5		21.0	29.5		21.0	35.5		29.0	43.5	
Total Split (%)	18.3%	25.7%		18.3%	25.7%		18.3%	30.9%		25.2%	37.8%	
Maximum Green (s)	15.0	24.0		15.0	24.0		15.0	30.0		23.0	38.0	
Yellow Time (s)	4.0	3.5		4.0	3.5		4.0	3.5		4.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	5.5		6.0	5.5		6.0	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	3.0		1.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Act Effct Green (s)	37.4	29.6		30.5	24.2		40.5	36.1		42.5	39.1	
Actuated g/C Ratio	0.39	0.30		0.31	0.25		0.42	0.37		0.44	0.40	
v/c Ratio	0.33	0.29		0.15	0.52		0.14	0.37		0.19	0.44	
Control Delay (s/veh)	21.9	28.2		20.4	31.7		15.5	24.2		15.9	23.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	21.9	28.2		20.4	31.7		15.5	24.2		15.9	23.1	
LOS	C	C		C	C		B	C		B	C	
Approach Delay (s/veh)		25.4			29.4			23.4			22.3	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	55	77		26	111		15	118		25	153	
Queue Length 95th (ft)	94	133		54	201		37	178		53	221	
Internal Link Dist (ft)		604			481			1284			1437	
Turn Bay Length (ft)	175			150			95			260		
Base Capacity (vph)	469	560		563	459		475	1297		585	1394	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.28	0.29		0.11	0.52		0.10	0.37		0.12	0.44	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 97.1
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.52
Intersection Signal Delay (s/veh): 24.3
Intersection LOS: C
Intersection Capacity Utilization 59.0%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 5: Grant Avenue & Standart Avenue/N Seward Avenue



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	9	0	607	545	9
Future Volume (vph)	0	9	0	607	545	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1627	0	3539	3494	0
Flt Permitted						
Satd. Flow (perm)	0	1627	0	3539	3494	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	234			316	331	
Travel Time (s)	5.3			7.2	7.5	
Peak Hour Factor	0.90	0.90	0.91	0.91	0.84	0.84
Heavy Vehicles (%)	1%	1%	2%	2%	3%	3%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	10	0	667	660	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 25.4% ICU Level of Service A
Analysis Period (min) 15

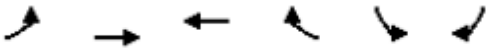
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	9	0	607	545	9
Future Vol, veh/h	0	9	0	607	545	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	91	91	84	84
Heavy Vehicles, %	1	1	2	2	3	3
Mvmt Flow	0	10	0	667	649	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	324	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.92	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.31	-	-	-	-
Pot Cap-1 Maneuver	0	674	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	674	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.42	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	674	-
HCM Lane V/C Ratio	-	0.015	-
HCM Ctrl Dly (s/v)	-	10.4	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	40	66	19	14	1
Future Volume (vph)	0	40	66	19	14	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	75				25	
Satd. Flow (prot)	0	3438	1755	0	1782	0
Flt Permitted					0.955	
Satd. Flow (perm)	0	3438	1755	0	1782	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		541	322		201	
Travel Time (s)		12.3	7.3		4.6	
Peak Hour Factor	0.70	0.70	0.70	0.70	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	5%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	57	121	0	17	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 14.6% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	40	66	19	14	1
Future Vol, veh/h	0	40	66	19	14	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	70	70	70	70	90	90
Heavy Vehicles, %	5	5	5	5	1	1
Mvmt Flow	0	57	94	27	16	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	121	0	-	0	136	108
Stage 1	-	-	-	-	108	-
Stage 2	-	-	-	-	29	-
Critical Hdwy	4.175	-	-	-	6.615	6.215
Critical Hdwy Stg 1	-	-	-	-	5.415	-
Critical Hdwy Stg 2	-	-	-	-	5.815	-
Follow-up Hdwy	2.2475	-	-	-	3.5095	3.3095
Pot Cap-1 Maneuver	1445	-	-	-	853	948
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	993	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1445	-	-	-	853	948
Mov Cap-2 Maneuver	-	-	-	-	853	-
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	993	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	9.28
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1445	-	-	-	858
HCM Lane V/C Ratio	-	-	-	-	0.019
HCM Ctrl Dly (s/v)	0	-	-	-	9.3
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

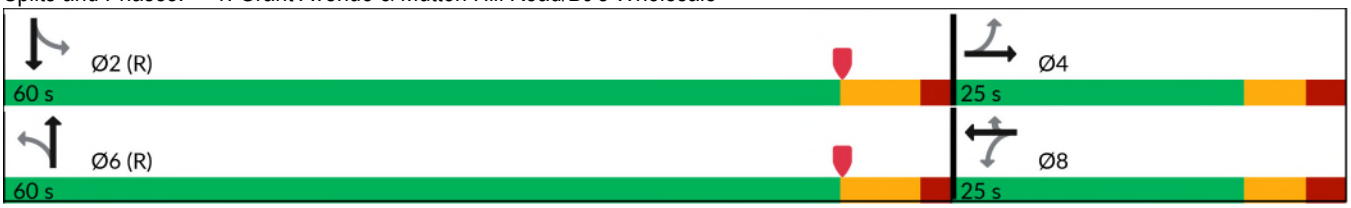
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	16	113	162	22	56	68	535	216	55	505	16
Future Volume (vph)	26	16	113	162	22	56	68	535	216	55	505	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1683	0	0	1802	1599	1787	3421	0	1787	3556	0
Flt Permitted		0.927			0.660		0.369			0.266		
Satd. Flow (perm)	0	1573	0	0	1242	1599	694	3421	0	500	3556	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		128				64		135			7	
Link Speed (mph)		30			30			30			45	
Link Distance (ft)		496			305			887			396	
Travel Time (s)		11.3			6.9			20.2			6.0	
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87	0.96	0.96	0.96	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	176	0	0	211	64	71	782	0	64	606	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		8	8	8	6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5	11.5	17.0	17.0		17.0	17.0	
Total Split (s)	25.0	25.0		25.0	25.0	25.0	60.0	60.0		60.0	60.0	
Total Split (%)	29.4%	29.4%		29.4%	29.4%	29.4%	70.6%	70.6%		70.6%	70.6%	
Maximum Green (s)	18.5	18.5		18.5	18.5	18.5	53.0	53.0		53.0	53.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.5			6.5	6.5	7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.3	3.3	
Recall Mode	Max	Max		Max	Max	Max	C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		38.4			38.4	38.4	33.1	33.1		33.1	33.1	
Actuated g/C Ratio		0.45			0.45	0.45	0.39	0.39		0.39	0.39	
v/c Ratio		0.23			0.38	0.08	0.26	0.55		0.33	0.44	
Control Delay (s/veh)		7.7			21.7	6.4	14.6	13.3		19.5	18.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		7.7			21.7	6.4	14.6	13.3		19.5	18.8	
LOS		A			C	A	B	B		B	B	
Approach Delay (s/veh)		7.7			18.1			13.4			18.9	
Approach LOS		A			B			B			B	
Queue Length 50th (ft)		14			70	0	19	92		24	125	
Queue Length 95th (ft)		65			167	27	m23	67		38	106	
Internal Link Dist (ft)		416			225			807			316	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		780			560	757	432	2183		311	2219	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.23			0.38	0.08	0.16	0.36		0.21	0.27	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay (s/veh): 15.4 Intersection LOS: B
Intersection Capacity Utilization 71.9% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Grant Avenue & Mutton Hill Road/BJ's Wholesale



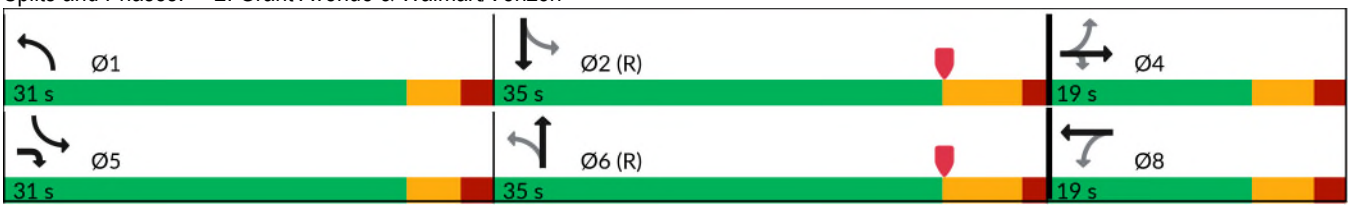
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	0	285	2	1	3	223	695	7	0	619	161
Future Volume (vph)	121	0	285	2	1	3	223	695	7	0	619	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1787	1599	0	1712	0	1787	3570	0	1881	3447	0
Flt Permitted		0.750			0.882		0.254					
Satd. Flow (perm)	0	1405	1599	0	1534	0	478	3570	0	1881	3447	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			63		6			1			41	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			98			331			887	
Travel Time (s)		8.2			2.2			7.5			20.2	
Confl. Peds. (#/hr)	2					2	2		3	3		2
Peak Hour Factor	0.78	0.78	0.78	0.50	0.50	0.50	0.95	0.95	0.95	0.87	0.87	0.87
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	155	365	0	12	0	235	739	0	0	896	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	custom	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	5!		8		1	6		5	2!	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	5	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	12.0	12.0	9.5	12.0	12.0		9.5	16.5		9.5	16.5	
Total Split (s)	19.0	19.0	31.0	19.0	19.0		31.0	35.0		31.0	35.0	
Total Split (%)	22.4%	22.4%	36.5%	22.4%	22.4%		36.5%	41.2%		36.5%	41.2%	
Maximum Green (s)	13.0	13.0	25.5	13.0	13.0		25.5	28.5		25.5	28.5	
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	5.5		6.0		5.5	6.5		5.5	6.5	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		11.8	27.6		11.8		57.3	45.4			44.2	
Actuated g/C Ratio		0.14	0.32		0.14		0.67	0.53			0.52	
v/c Ratio		0.79	0.65		0.06		0.48	0.39			0.49	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		64.2	24.8		24.2		12.2	8.7			9.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	
Total Delay (s/veh)		64.2	24.8		24.2		12.2	8.7			9.9	
LOS		E	C		C		B	A			A	
Approach Delay (s/veh)		36.5			24.2			9.6			9.9	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)		81	140		3		21	67			98	
Queue Length 95th (ft)		#133	153		9		103	88			156	
Internal Link Dist (ft)		279			18			251			807	
Turn Bay Length (ft)							300					
Base Capacity (vph)		214	846		239		739	1906			1812	
Starvation Cap Reductn		0	0		0		0	0			0	
Spillback Cap Reductn		0	0		0		0	0			0	
Storage Cap Reductn		0	0		0		0	0			0	
Reduced v/c Ratio		0.72	0.43		0.05		0.32	0.39			0.49	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay (s/veh): 15.6 Intersection LOS: B
Intersection Capacity Utilization 63.0% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
! Phase conflict between lane groups.

Splits and Phases: 2: Grant Avenue & Walmart/Verizon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	30	94	99	42	60	182	787	133	55	844	19
Future Volume (vph)	78	30	94	99	42	60	182	787	133	55	844	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	250		0	120		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1719	1603	0	1770	1684	0	1787	3496	0	1787	3562	0
Flt Permitted	0.686			0.591			0.242			0.249		
Satd. Flow (perm)	1240	1603	0	1101	1684	0	455	3496	0	468	3562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			65			32			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		322			515			2037			316	
Travel Time (s)		7.3			11.7			46.3			7.2	
Confl. Peds. (#/hr)	1					1	3					3
Peak Hour Factor	0.79	0.79	0.79	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	157	0	106	110	0	198	1000	0	60	938	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5		10.5	16.5		10.5	16.5	
Total Split (s)	25.0	25.0		25.0	25.0		11.0	49.0		11.0	49.0	
Total Split (%)	29.4%	29.4%		29.4%	29.4%		12.9%	57.6%		12.9%	57.6%	
Maximum Green (s)	19.5	19.5		19.5	19.5		4.5	42.5		4.5	42.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	13.3	13.3		13.3	13.3		55.6	50.2		51.9	46.7	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.65	0.59		0.61	0.55	
v/c Ratio	0.51	0.45		0.62	0.35		0.50	0.48		0.16	0.48	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	40.8	13.7		47.7	17.0		11.2	12.1		9.0	18.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	40.8	13.7		47.7	17.0		11.2	12.1		9.0	18.9	
LOS	D	B		D	B		B	B		A	B	
Approach Delay (s/veh)		24.2			32.1			11.9			18.3	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	51	19		55	22		30	154		13	195	
Queue Length 95th (ft)	81	51		99	62		68	240		m26	206	
Internal Link Dist (ft)		242			435			1957			236	
Turn Bay Length (ft)				115			250			120		
Base Capacity (vph)	284	459		252	436		398	2079		366	1960	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.35	0.34		0.42	0.25		0.50	0.48		0.16	0.48	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay (s/veh): 17.1 Intersection LOS: B
Intersection Capacity Utilization 66.9% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Grant Avenue & John Walsh Boulevard/Brookside Drive

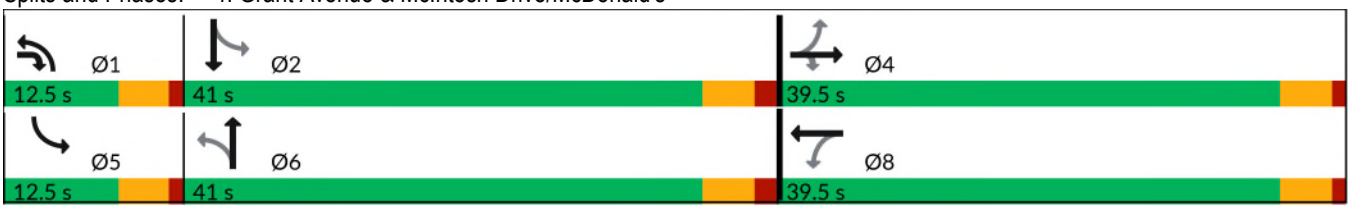
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	15	215	38	13	36	208	850	40	14	900	123
Future Volume (vph)	216	15	215	38	13	36	208	850	40	14	900	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		160	0		0	250		0	190		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1797	1599	0	1739	0	1787	3546	0	1787	3510	0
Flt Permitted		0.686			0.738		0.161			0.290		
Satd. Flow (perm)	0	1290	1579	0	1310	0	303	3546	0	545	3510	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			43		44			6			19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			140			1517			2037	
Travel Time (s)		10.7			3.2			34.5			46.3	
Confl. Peds. (#/hr)			1	1					1	1		
Peak Hour Factor	0.95	0.95	0.95	0.82	0.82	0.82	0.94	0.94	0.94	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	243	226	0	106	0	221	947	0	14	1055	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	pm+ov	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	1		8		1	6		5	2	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	1	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	18.0		4.0	18.0	
Minimum Split (s)	8.5	8.5	8.5	8.5	8.5		8.5	23.0		8.5	23.0	
Total Split (s)	39.5	39.5	12.5	39.5	39.5		12.5	41.0		12.5	41.0	
Total Split (%)	42.5%	42.5%	13.4%	42.5%	42.5%		13.4%	44.1%		13.4%	44.1%	
Maximum Green (s)	35.0	35.0	8.0	35.0	35.0		8.0	36.0		8.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	5.0		4.5	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Act Effct Green (s)		19.8	27.9		19.8		48.8	46.8		42.7	36.2	
Actuated g/C Ratio		0.25	0.36		0.25		0.62	0.60		0.55	0.46	
v/c Ratio		0.74	0.38		0.29		0.65	0.45		0.04	0.64	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		40.9	14.1		16.2		19.4	11.4		7.9	19.1	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		40.9	14.1		16.2		19.4	11.4		7.9	19.1	
LOS		D	B		B		B	B		A	B	
Approach Delay (s/veh)		28.0			16.2			12.9			19.0	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		109	57		24		40	110		2	194	
Queue Length 95th (ft)		186	105		54		#147	274		11	324	
Internal Link Dist (ft)		389			60			1437			1957	
Turn Bay Length (ft)			160				250			190		
Base Capacity (vph)		580	592		614		341	2125		439	1636	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.42	0.38		0.17		0.65	0.45		0.03	0.64	

Intersection Summary

Area Type: Other
Cycle Length: 93
Actuated Cycle Length: 78.2
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay (s/veh): 17.8 Intersection LOS: B
Intersection Capacity Utilization 71.4% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Grant Avenue & McIntosh Drive/McDonald's



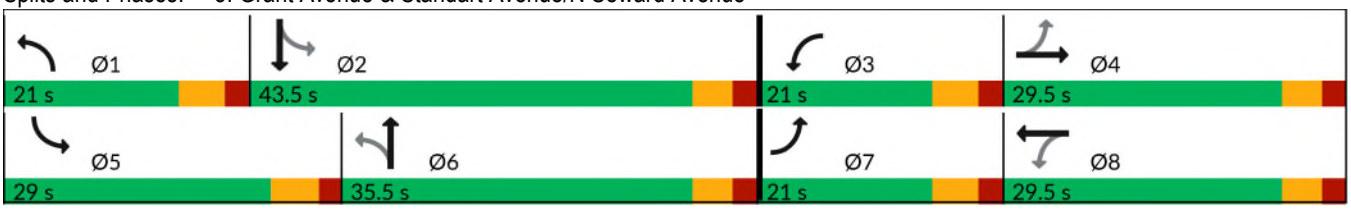
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	156	82	29	69	82	196	39	746	38	157	890	104
Future Volume (vph)	156	82	29	69	82	196	39	746	38	157	890	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	95		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1808	0	1787	1664	0	1787	3549	0	1787	3517	0
Flt Permitted	0.296			0.676			0.147			0.134		
Satd. Flow (perm)	556	1808	0	1272	1664	0	277	3549	0	252	3517	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			95			4			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			561			1364			1517	
Travel Time (s)		15.5			12.8			31.0			34.5	
Confl. Peds. (#/hr)	2					2						
Peak Hour Factor	0.87	0.87	0.87	0.95	0.95	0.95	0.91	0.91	0.91	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	127	0	73	292	0	43	862	0	164	1035	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0		6.0	12.0		6.0	12.0	
Minimum Split (s)	10.0	11.5		10.0	11.5		12.0	17.5		12.0	17.5	
Total Split (s)	21.0	29.5		21.0	29.5		21.0	35.5		29.0	43.5	
Total Split (%)	18.3%	25.7%		18.3%	25.7%		18.3%	30.9%		25.2%	37.8%	
Maximum Green (s)	15.0	24.0		15.0	24.0		15.0	30.0		23.0	38.0	
Yellow Time (s)	4.0	3.5		4.0	3.5		4.0	3.5		4.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	5.5		6.0	5.5		6.0	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	3.0		1.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Act Effct Green (s)	40.2	30.9		30.8	24.1		37.4	31.7		46.0	40.3	
Actuated g/C Ratio	0.40	0.31		0.31	0.24		0.37	0.32		0.46	0.40	
v/c Ratio	0.49	0.22		0.17	0.62		0.22	0.76		0.63	0.73	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	24.7	26.5		20.4	30.0		18.6	36.8		27.2	30.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	24.7	26.5		20.4	30.0		18.6	36.8		27.2	30.1	
LOS	C	C		C	C		B	D		C	C	
Approach Delay (s/veh)		25.4			28.1			36.0			29.7	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	77	58		30	117		15	258		60	314	
Queue Length 95th (ft)	123	106		60	219		35	#396		108	420	
Internal Link Dist (ft)		604			481			1284			1437	
Turn Bay Length (ft)	175			150			95			260		
Base Capacity (vph)	413	567		566	473		353	1128		472	1424	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.43	0.22		0.13	0.62		0.12	0.76		0.35	0.73	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 100
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay (s/veh): 31.1 Intersection LOS: C
Intersection Capacity Utilization 76.8% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Grant Avenue & Standart Avenue/N Seward Avenue



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	66	0	925	852	54
Future Volume (vph)	0	66	0	925	852	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1627	0	3574	3542	0
Flt Permitted						
Satd. Flow (perm)	0	1627	0	3574	3542	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	234			316	331	
Travel Time (s)	5.3			7.2	7.5	
Peak Hour Factor	0.90	0.90	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	73	0	1005	985	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 36.0% ICU Level of Service A
Analysis Period (min) 15

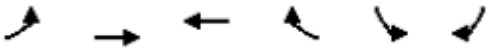
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	66	0	925	852	54
Future Vol, veh/h	0	66	0	925	852	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	73	0	1005	926	59

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	463	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.92	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.31	-	-	-	-
Pot Cap-1 Maneuver	0	548	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	548	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.58	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	548	-
HCM Lane V/C Ratio	-	0.134	-
HCM Ctrl Dly (s/v)	-	12.6	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.5	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	106	128	115	96	3
Future Volume (vph)	3	106	128	115	96	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	75				25	
Satd. Flow (prot)	0	3435	1694	0	1787	0
Flt Permitted		0.999			0.954	
Satd. Flow (perm)	0	3435	1694	0	1787	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		541	322		201	
Travel Time (s)		12.3	7.3		4.6	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	5%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	138	308	0	110	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 25.9% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	106	128	115	96	3
Future Vol, veh/h	3	106	128	115	96	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	79	79	79	79	90	90
Heavy Vehicles, %	5	5	5	5	1	1
Mvmt Flow	4	134	162	146	107	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	308	0	-	0	309	235
Stage 1	-	-	-	-	235	-
Stage 2	-	-	-	-	75	-
Critical Hdwy	4.175	-	-	-	6.615	6.215
Critical Hdwy Stg 1	-	-	-	-	5.415	-
Critical Hdwy Stg 2	-	-	-	-	5.815	-
Follow-up Hdwy	2.2475	-	-	-	3.5095	3.3095
Pot Cap-1 Maneuver	1232	-	-	-	673	806
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	943	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1232	-	-	-	671	806
Mov Cap-2 Maneuver	-	-	-	-	671	-
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	943	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.24	0	11.38
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	99	-	-	-	674
HCM Lane V/C Ratio	0.003	-	-	-	0.163
HCM Ctrl Dly (s/v)	7.9	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6

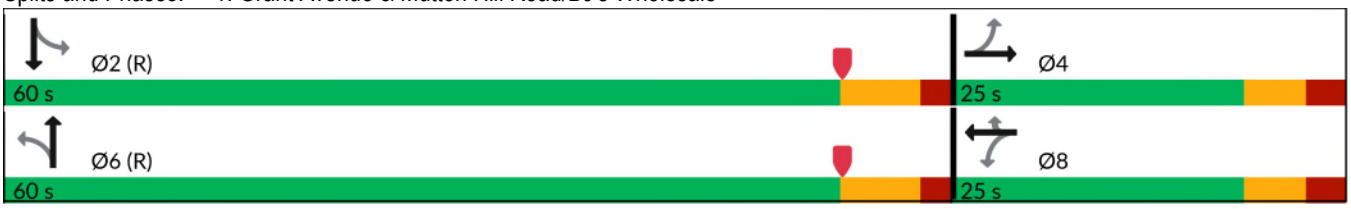
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	15	114	143	14	58	86	620	180	41	531	15
Future Volume (vph)	38	15	114	143	14	58	86	620	180	41	531	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1689	0	0	1798	1599	1787	3437	0	1787	3560	0
Flt Permitted		0.895			0.612		0.383			0.253		
Satd. Flow (perm)	0	1529	0	0	1151	1599	720	3437	0	476	3560	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		116				67		84			6	
Link Speed (mph)		30			30			30			45	
Link Distance (ft)		496			305			887			396	
Travel Time (s)		11.3			6.9			20.2			6.0	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.80	0.80	0.80	0.87	0.87	0.87	0.93	0.93	0.93	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	210	0	0	180	67	92	861	0	46	614	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		8	8	8	6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5	11.5	17.0	17.0		17.0	17.0	
Total Split (s)	25.0	25.0		25.0	25.0	25.0	60.0	60.0		60.0	60.0	
Total Split (%)	29.4%	29.4%		29.4%	29.4%	29.4%	70.6%	70.6%		70.6%	70.6%	
Maximum Green (s)	18.5	18.5		18.5	18.5	18.5	53.0	53.0		53.0	53.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.5			6.5	6.5	7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.3	3.3	
Recall Mode	Max	Max		Max	Max	Max	C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		33.4			33.4	33.4	38.1	38.1		38.1	38.1	
Actuated g/C Ratio		0.39			0.39	0.39	0.45	0.45		0.45	0.45	
v/c Ratio		0.31			0.40	0.10	0.29	0.54		0.22	0.38	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		12.5			27.1	7.5	10.6	10.9		13.3	15.2	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		12.5			27.1	7.5	10.6	10.9		13.3	15.2	
LOS		B			C	A	B	B		B	B	
Approach Delay (s/veh)		12.5			21.8			10.9			15.1	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)		32			67	0	20	86		15	112	
Queue Length 95th (ft)		86			#178	30	m18	41		25	95	
Internal Link Dist (ft)		416			225			807			316	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		671			452	669	448	2174		296	2222	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.31			0.40	0.10	0.21	0.40		0.16	0.28	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.54
Intersection Signal Delay (s/veh): 13.7 Intersection LOS: B
Intersection Capacity Utilization 72.3% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Grant Avenue & Mutton Hill Road/BJ's Wholesale



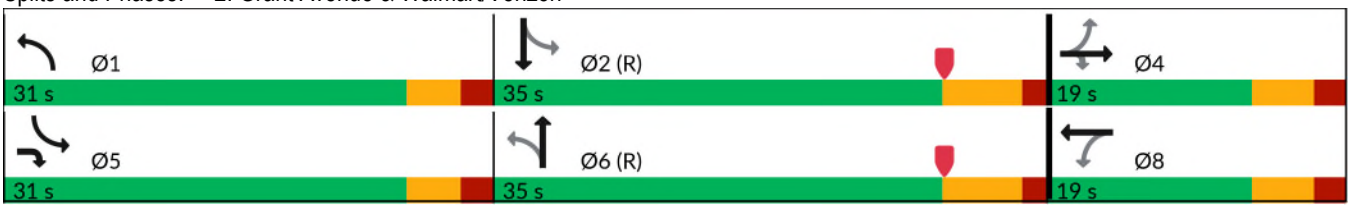
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	0	300	2	2	3	205	744	2	2	636	150
Future Volume (vph)	139	0	300	2	2	3	205	744	2	2	636	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1787	1599	0	1747	0	1787	3574	0	1787	3471	0
Flt Permitted		0.748			0.898		0.290			0.314		
Satd. Flow (perm)	0	1407	1599	0	1591	0	546	3574	0	591	3471	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			78		6						36	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			98			331			887	
Travel Time (s)		8.2			2.2			7.5			20.2	
Peak Hour Factor	0.92	0.92	0.92	0.50	0.50	0.50	0.91	0.91	0.91	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	151	326	0	14	0	225	820	0	2	819	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	custom	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	5!		8		1	6		5	2!	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	5	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	12.0	12.0	9.5	12.0	12.0		9.5	16.5		9.5	16.5	
Total Split (s)	19.0	19.0	31.0	19.0	19.0		31.0	35.0		31.0	35.0	
Total Split (%)	22.4%	22.4%	36.5%	22.4%	22.4%		36.5%	41.2%		36.5%	41.2%	
Maximum Green (s)	13.0	13.0	25.5	13.0	13.0		25.5	28.5		25.5	28.5	
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	5.5		6.0		5.5	6.5		5.5	6.5	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		11.8	25.6		11.8		57.7	47.4		54.8	45.9	
Actuated g/C Ratio		0.14	0.30		0.14		0.68	0.56		0.64	0.54	
v/c Ratio		0.78	0.61		0.06		0.44	0.41		0.00	0.43	
Control Delay (s/veh)		62.1	23.4		24.9		9.7	7.8		3.0	8.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		62.1	23.4		24.9		9.7	7.8		3.0	8.8	
LOS		E	C		C		A	A		A	A	
Approach Delay (s/veh)		35.6			24.9			8.2			8.8	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)		78	114		4		20	68		0	98	
Queue Length 95th (ft)		#167	171		10		84	91		m1	120	
Internal Link Dist (ft)		279			18			251			807	
Turn Bay Length (ft)							300			100		
Base Capacity (vph)		215	852		248		768	1993		788	1892	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.70	0.38		0.06		0.29	0.41		0.00	0.43	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay (s/veh): 14.0 Intersection LOS: B
Intersection Capacity Utilization 63.1% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 2: Grant Avenue & Walmart/Verizon



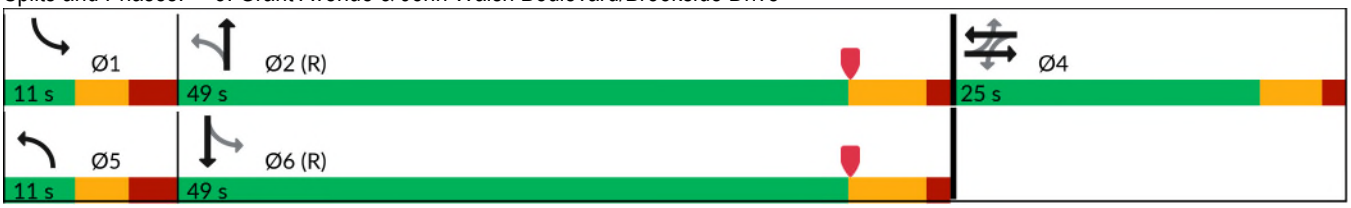
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	24	98	101	32	57	164	836	114	71	849	19
Future Volume (vph)	58	24	98	101	32	57	164	836	114	71	849	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	250		0	120		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1636	0	1787	1686	0	1787	3501	0	1787	3562	0
Flt Permitted	0.682			0.623			0.239			0.229		
Satd. Flow (perm)	1282	1636	0	1171	1686	0	449	3501	0	431	3562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		120			75			25			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		322			515			2037			316	
Travel Time (s)		7.3			11.7			46.3			7.2	
Confl. Peds. (#/hr)	1		1	1		1	4		1	1		4
Peak Hour Factor	0.82	0.82	0.82	0.76	0.76	0.76	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	149	0	133	117	0	178	1033	0	77	944	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5		10.5	16.5		10.5	16.5	
Total Split (s)	25.0	25.0		25.0	25.0		11.0	49.0		11.0	49.0	
Total Split (%)	29.4%	29.4%		29.4%	29.4%		12.9%	57.6%		12.9%	57.6%	
Maximum Green (s)	19.5	19.5		19.5	19.5		4.5	42.5		4.5	42.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	14.5	14.5		14.5	14.5		53.9	49.0		51.3	46.0	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.63	0.58		0.60	0.54	
v/c Ratio	0.33	0.39		0.67	0.34		0.47	0.51		0.22	0.49	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	33.3	11.7		48.6	14.9		10.8	13.1		9.6	18.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	33.3	11.7		48.6	14.9		10.8	13.1		9.6	18.9	
LOS	C	B		D	B		B	B		A	B	
Approach Delay (s/veh)		18.7			32.8			12.8			18.2	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	34	13		68	19		29	173		17	186	
Queue Length 95th (ft)	61	49		97	45		62	252		32	201	
Internal Link Dist (ft)		242			435			1957			236	
Turn Bay Length (ft)				115			250			120		
Base Capacity (vph)	294	467		268	444		379	2029		344	1930	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.24	0.32		0.50	0.26		0.47	0.51		0.22	0.49	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay (s/veh): 17.1 Intersection LOS: B
Intersection Capacity Utilization 66.2% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Grant Avenue & John Walsh Boulevard/Brookside Drive



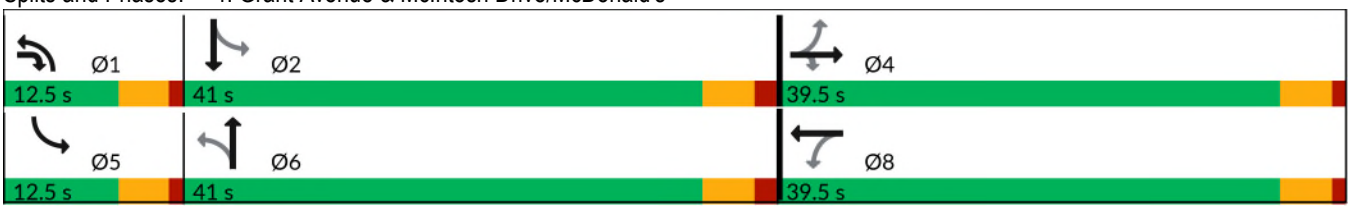
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	9	189	34	10	14	209	925	19	15	942	91
Future Volume (vph)	175	9	189	34	10	14	209	925	19	15	942	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		160	0		0	250		0	190		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1797	1599	0	1768	0	1787	3562	0	1787	3520	0
Flt Permitted		0.738			0.735		0.142			0.284		
Satd. Flow (perm)	0	1388	1599	0	1337	0	267	3562	0	534	3520	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			27		18			3			13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			140			1517			2037	
Travel Time (s)		10.7			3.2			34.5			46.3	
Confl. Peds. (#/hr)							4		1	1		4
Peak Hour Factor	0.92	0.92	0.92	0.79	0.79	0.79	0.96	0.96	0.96	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	205	0	74	0	218	984	0	17	1148	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	pm+ov	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	1		8		1	6		5	2	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	1	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	18.0		4.0	18.0	
Minimum Split (s)	8.5	8.5	8.5	8.5	8.5		8.5	23.0		8.5	23.0	
Total Split (s)	39.5	39.5	12.5	39.5	39.5		12.5	41.0		12.5	41.0	
Total Split (%)	42.5%	42.5%	13.4%	42.5%	42.5%		13.4%	44.1%		13.4%	44.1%	
Maximum Green (s)	35.0	35.0	8.0	35.0	35.0		8.0	36.0		8.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	5.0		4.5	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Act Effct Green (s)		16.4	28.9		16.4		48.6	46.7		42.6	36.1	
Actuated g/C Ratio		0.22	0.39		0.22		0.65	0.63		0.57	0.48	
v/c Ratio		0.66	0.32		0.24		0.65	0.44		0.04	0.67	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		37.1	14.9		20.4		19.0	9.7		6.3	17.8	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		37.1	14.9		20.4		19.0	9.7		6.3	17.8	
LOS		D	B		C		B	A		A	B	
Approach Delay (s/veh)		25.9			20.4			11.4			17.6	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		85	56		21		34	98		2	200	
Queue Length 95th (ft)		151	102		46		#141	255		11	326	
Internal Link Dist (ft)		389			60			1437			1957	
Turn Bay Length (ft)			160				250			190		
Base Capacity (vph)		653	636		639		337	2230		454	1712	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.31	0.32		0.12		0.65	0.44		0.04	0.67	

Intersection Summary

Area Type: Other
Cycle Length: 93
Actuated Cycle Length: 74.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay (s/veh): 16.3 Intersection LOS: B
Intersection Capacity Utilization 67.4% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Grant Avenue & McIntosh Drive/McDonald's



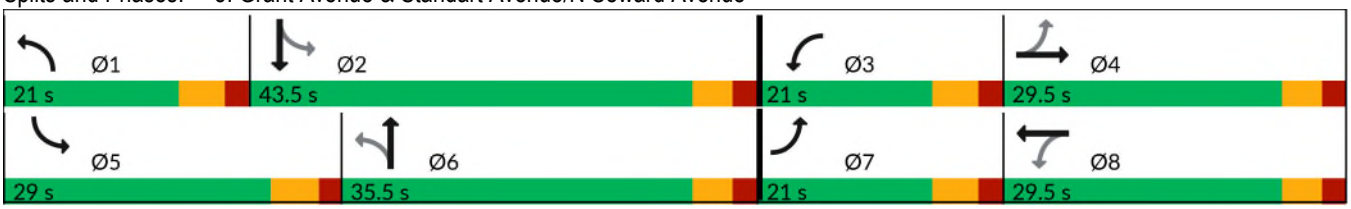
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	144	106	36	63	101	208	59	791	46	194	875	93
Future Volume (vph)	144	106	36	63	101	208	59	791	46	194	875	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	95		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1810	0	1787	1674	0	1787	3546	0	1787	3524	0
Flt Permitted	0.198			0.659			0.133			0.114		
Satd. Flow (perm)	372	1810	0	1240	1674	0	250	3546	0	214	3524	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			81			5			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			561			1364			1517	
Travel Time (s)		15.5			12.8			31.0			34.5	
Confl. Peds. (#/hr)	2					2						
Peak Hour Factor	0.92	0.92	0.92	0.85	0.85	0.85	0.95	0.95	0.95	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	157	154	0	74	364	0	62	881	0	213	1064	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0		6.0	12.0		6.0	12.0	
Minimum Split (s)	10.0	11.5		10.0	11.5		12.0	17.5		12.0	17.5	
Total Split (s)	21.0	29.5		21.0	29.5		21.0	35.5		29.0	43.5	
Total Split (%)	18.3%	25.7%		18.3%	25.7%		18.3%	30.9%		25.2%	37.8%	
Maximum Green (s)	15.0	24.0		15.0	24.0		15.0	30.0		23.0	38.0	
Yellow Time (s)	4.0	3.5		4.0	3.5		4.0	3.5		4.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	5.5		6.0	5.5		6.0	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	3.0		1.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Act Effct Green (s)	38.9	30.1		30.9	24.1		37.7	31.8		48.4	40.0	
Actuated g/C Ratio	0.38	0.30		0.30	0.24		0.37	0.31		0.48	0.39	
v/c Ratio	0.53	0.28		0.18	0.79		0.33	0.79		0.75	0.77	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	27.9	29.3		21.7	43.4		20.9	39.3		36.4	32.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	27.9	29.3		21.7	43.4		20.9	39.3		36.4	32.2	
LOS	C	C		C	D		C	D		D	C	
Approach Delay (s/veh)		28.6			39.8			38.0			32.9	
Approach LOS		C			D			D			C	
Queue Length 50th (ft)	67	73		30	178		21	271		79	322	
Queue Length 95th (ft)	122	141		61	#326		46	#444		166	440	
Internal Link Dist (ft)		604			481			1284			1437	
Turn Bay Length (ft)	175			150			95			260		
Base Capacity (vph)	356	544		547	458		340	1110		460	1389	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.44	0.28		0.14	0.79		0.18	0.79		0.46	0.77	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 101.8
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay (s/veh): 35.1 Intersection LOS: D
Intersection Capacity Utilization 79.0% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Grant Avenue & Standart Avenue/N Seward Avenue



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	45	0	951	894	44
Future Volume (vph)	0	45	0	951	894	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1627	0	3574	3549	0
Flt Permitted						
Satd. Flow (perm)	0	1627	0	3574	3549	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	234			316	331	
Travel Time (s)	5.3			7.2	7.5	
Peak Hour Factor	0.90	0.90	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	50	0	1034	1020	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 36.1% ICU Level of Service A
Analysis Period (min) 15

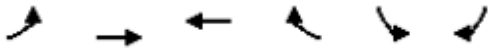
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	45	0	951	894	44
Future Vol, veh/h	0	45	0	951	894	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	50	0	1034	972	48

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	486	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.92	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.31	-	-	-	-
Pot Cap-1 Maneuver	0	530	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	530	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	530	-
HCM Lane V/C Ratio	-	0.094	-
HCM Ctrl Dly (s/v)	-	12.5	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	110	122	93	70	3
Future Volume (vph)	3	110	122	93	70	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	75				25	
Satd. Flow (prot)	0	3571	1772	0	1786	0
Flt Permitted		0.999			0.954	
Satd. Flow (perm)	0	3571	1772	0	1786	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		541	322		201	
Travel Time (s)		12.3	7.3		4.6	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	138	262	0	81	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 22.8% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	110	122	93	70	3
Future Vol, veh/h	3	110	122	93	70	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	4	134	149	113	78	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	262	0	-	0	280	205
Stage 1	-	-	-	-	205	-
Stage 2	-	-	-	-	74	-
Critical Hdwy	4.115	-	-	-	6.615	6.215
Critical Hdwy Stg 1	-	-	-	-	5.415	-
Critical Hdwy Stg 2	-	-	-	-	5.815	-
Follow-up Hdwy	2.2095	-	-	-	3.5095	3.3095
Pot Cap-1 Maneuver	1307	-	-	-	701	837
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	943	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1307	-	-	-	699	837
Mov Cap-2 Maneuver	-	-	-	-	699	-
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	943	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.23	0	10.78
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	96	-	-	-	704
HCM Lane V/C Ratio	0.003	-	-	-	0.115
HCM Ctrl Dly (s/v)	7.8	0	-	-	10.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

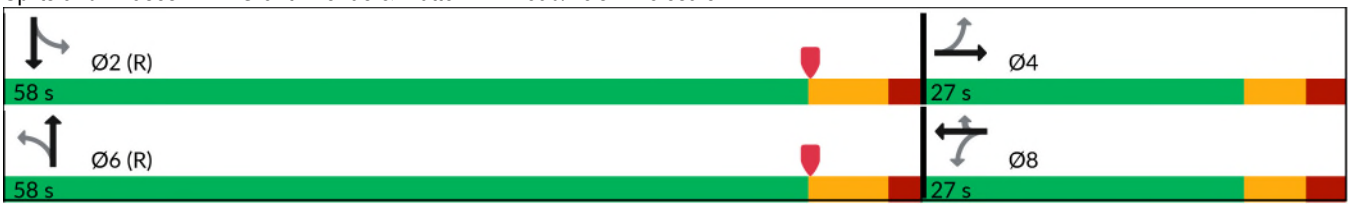
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	31	108	198	18	98	57	634	263	53	539	11
Future Volume (vph)	27	31	108	198	18	98	57	634	263	53	539	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1702	0	0	1798	1599	1787	3417	0	1787	3564	0
Flt Permitted		0.911			0.607		0.390			0.228		
Satd. Flow (perm)	0	1563	0	0	1142	1599	734	3417	0	429	3564	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		103				129		133			4	
Link Speed (mph)		30			30			30			45	
Link Distance (ft)		496			305			887			396	
Travel Time (s)		11.3			6.9			20.2			6.0	
Peak Hour Factor	0.80	0.80	0.80	0.76	0.76	0.76	0.96	0.96	0.96	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	208	0	0	285	129	59	934	0	59	611	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		8	8	8	6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5	11.5	17.0	17.0		17.0	17.0	
Total Split (s)	27.0	27.0		27.0	27.0	27.0	58.0	58.0		58.0	58.0	
Total Split (%)	31.8%	31.8%		31.8%	31.8%	31.8%	68.2%	68.2%		68.2%	68.2%	
Maximum Green (s)	20.5	20.5		20.5	20.5	20.5	51.0	51.0		51.0	51.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.5			6.5	6.5	7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.3	3.3	
Recall Mode	Max	Max		Max	Max	Max	C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		32.0			32.0	32.0	39.5	39.5		39.5	39.5	
Actuated g/C Ratio		0.38			0.38	0.38	0.46	0.46		0.46	0.46	
v/c Ratio		0.32			0.66	0.19	0.17	0.56		0.30	0.37	
Control Delay (s/veh)		13.6			36.1	5.8	8.4	9.0		15.3	14.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		13.6			36.1	5.8	8.4	9.0		15.3	14.4	
LOS		B			D	A	A	A		B	B	
Approach Delay (s/veh)		13.6			26.6			9.0			14.5	
Approach LOS		B			C			A			B	
Queue Length 50th (ft)		37			125	0	12	82		19	106	
Queue Length 95th (ft)		89			#245	26	m21	97		35	103	
Internal Link Dist (ft)		416			225			807			316	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		653			430	682	440	2103		257	2140	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.32			0.66	0.19	0.13	0.44		0.23	0.29	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay (s/veh): 14.2 Intersection LOS: B
Intersection Capacity Utilization 78.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Grant Avenue & Mutton Hill Road/BJ's Wholesale



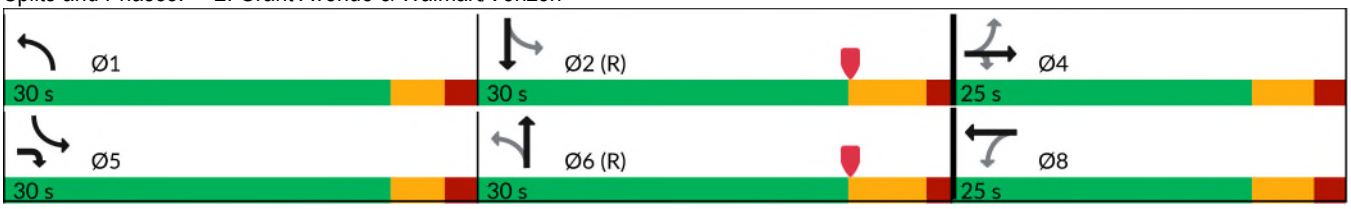
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	192	1	406	4	2	3	306	759	8	1	617	227
Future Volume (vph)	192	1	406	4	2	3	306	759	8	1	617	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1793	1599	0	1764	0	1787	3567	0	1787	3431	0
Flt Permitted		0.716			0.855		0.169			0.308		
Satd. Flow (perm)	0	1347	1599	0	1541	0	318	3567	0	579	3431	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			45		5			1			61	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			98			331			887	
Travel Time (s)		8.2			2.2			7.5			20.2	
Peak Hour Factor	0.93	0.93	0.93	0.56	0.56	0.56	0.88	0.88	0.88	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	207	437	0	16	0	348	872	0	1	927	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	custom	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	5!		8		1	6		5	2!	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	5	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	12.0	12.0	9.5	12.0	12.0		9.5	16.5		9.5	16.5	
Total Split (s)	25.0	25.0	30.0	25.0	25.0		30.0	30.0		30.0	30.0	
Total Split (%)	29.4%	29.4%	35.3%	29.4%	29.4%		35.3%	35.3%		35.3%	35.3%	
Maximum Green (s)	19.0	19.0	24.5	19.0	19.0		24.5	23.5		24.5	23.5	
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	5.5		6.0		5.5	6.5		5.5	6.5	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		16.2	32.1		16.2		56.9	40.9		44.9	34.0	
Actuated g/C Ratio		0.19	0.38		0.19		0.67	0.48		0.53	0.40	
v/c Ratio		0.81	0.69		0.05		0.69	0.51		0.00	0.66	
Control Delay (s/veh)		56.0	24.9		22.0		30.5	11.7		5.0	18.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		56.0	24.9		22.0		30.5	11.7		5.0	18.3	
LOS		E	C		C		C	B		A	B	
Approach Delay (s/veh)		34.9			22.0			17.1			18.3	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		105	177		5		118	74		0	140	
Queue Length 95th (ft)		#198	216		12		184	221		m0	#363	
Internal Link Dist (ft)		279			18			251			807	
Turn Bay Length (ft)							300			100		
Base Capacity (vph)		301	899		348		637	1717		730	1409	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.69	0.49		0.05		0.55	0.51		0.00	0.66	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 72 (85%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay (s/veh): 21.6 Intersection LOS: C
Intersection Capacity Utilization 73.6% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 2: Grant Avenue & Walmart/Verizon



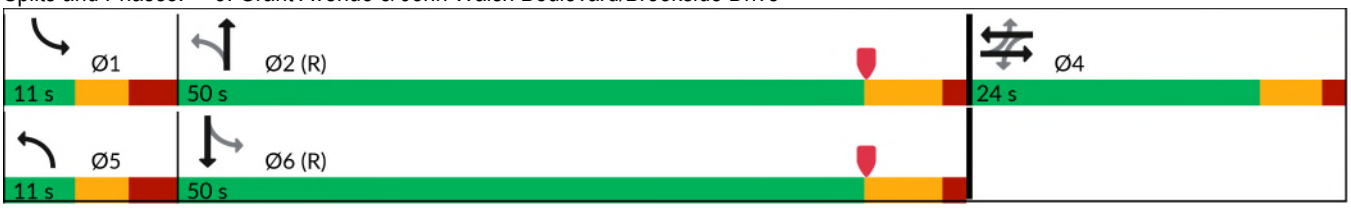
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	21	108	84	37	114	235	878	96	57	963	17
Future Volume (vph)	81	21	108	84	37	114	235	878	96	57	963	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	250		0	120		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1628	0	1787	1669	0	1787	3521	0	1787	3562	0
Flt Permitted	0.492			0.591			0.179			0.241		
Satd. Flow (perm)	926	1628	0	1111	1669	0	337	3521	0	453	3562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		132			146			20			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		322			515			2037			316	
Travel Time (s)		7.3			11.7			46.3			7.2	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.82	0.82	0.82	0.78	0.78	0.78	0.94	0.94	0.94	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	158	0	108	193	0	250	1036	0	63	1089	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	11.5	11.5		11.5	11.5		10.5	16.5		10.5	16.5	
Total Split (s)	24.0	24.0		24.0	24.0		11.0	50.0		11.0	50.0	
Total Split (%)	28.2%	28.2%		28.2%	28.2%		12.9%	58.8%		12.9%	58.8%	
Maximum Green (s)	18.5	18.5		18.5	18.5		4.5	43.5		4.5	43.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	5.0		3.5	5.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	13.6	13.6		13.6	13.6		55.8	50.0		50.5	45.4	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.66	0.59		0.59	0.53	
v/c Ratio	0.67	0.43		0.61	0.50		0.71	0.50		0.18	0.57	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	54.5	11.7		46.9	13.7		23.5	12.5		9.9	21.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	54.5	11.7		46.9	13.7		23.5	12.5		9.9	21.0	
LOS	D	B		D	B		C	B		A	C	
Approach Delay (s/veh)		28.2			25.6			14.6			20.4	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	50	12		54	22		42	171		11	220	
Queue Length 95th (ft)	88	49		86	55		#149	246		m32	336	
Internal Link Dist (ft)		242			435			1957			236	
Turn Bay Length (ft)				115			250			120		
Base Capacity (vph)	201	457		241	477		350	2079		350	1902	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.49	0.35		0.45	0.40		0.71	0.50		0.18	0.57	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 67 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay (s/veh): 19.1 Intersection LOS: B
Intersection Capacity Utilization 74.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Grant Avenue & John Walsh Boulevard/Brookside Drive



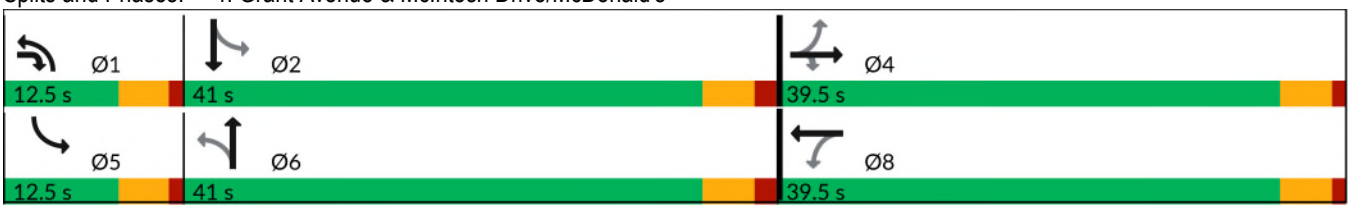
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	13	226	39	20	38	246	921	39	32	990	133
Future Volume (vph)	250	13	226	39	20	38	246	921	39	32	990	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		160	0		0	250		0	190		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1797	1599	0	1737	0	1787	3550	0	1787	3510	0
Flt Permitted		0.676			0.745		0.107			0.235		
Satd. Flow (perm)	0	1271	1599	0	1321	0	201	3550	0	442	3510	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			28		40			5			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			140			1517			2037	
Travel Time (s)		10.7			3.2			34.5			46.3	
Confl. Peds. (#/hr)	1					1			2	2		
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.98	0.98	0.98	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	292	251	0	110	0	251	980	0	34	1182	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	pm+ov	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	1		8		1	6		5	2	
Permitted Phases	4		4	8			6			2		
Detector Phase	4	4	1	8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	18.0		4.0	18.0	
Minimum Split (s)	8.5	8.5	8.5	8.5	8.5		8.5	23.0		8.5	23.0	
Total Split (s)	39.5	39.5	12.5	39.5	39.5		12.5	41.0		12.5	41.0	
Total Split (%)	42.5%	42.5%	13.4%	42.5%	42.5%		13.4%	44.1%		13.4%	44.1%	
Maximum Green (s)	35.0	35.0	8.0	35.0	35.0		8.0	36.0		8.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	5.0		4.5	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Act Effct Green (s)		23.7	36.3		23.7		47.4	42.4		43.2	36.3	
Actuated g/C Ratio		0.29	0.44		0.29		0.58	0.52		0.53	0.44	
v/c Ratio		0.80	0.35		0.27		0.93	0.53		0.10	0.76	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		43.3	14.3		15.8		59.9	17.5		9.8	24.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		43.3	14.3		15.8		59.9	17.5		9.8	24.4	
LOS		D	B		B		E	B		A	C	
Approach Delay (s/veh)		29.9			15.8			26.1			23.9	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)		138	72		27		76	188		7	256	
Queue Length 95th (ft)		229	122		62		#270	324		24	#428	
Internal Link Dist (ft)		389			60			1437			1957	
Turn Bay Length (ft)			160				250			190		
Base Capacity (vph)		545	722		590		271	1834		373	1560	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.54	0.35		0.19		0.93	0.53		0.09	0.76	

Intersection Summary

Area Type: Other
Cycle Length: 93
Actuated Cycle Length: 82.1
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay (s/veh): 25.6 Intersection LOS: C
Intersection Capacity Utilization 78.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Grant Avenue & McIntosh Drive/McDonald's



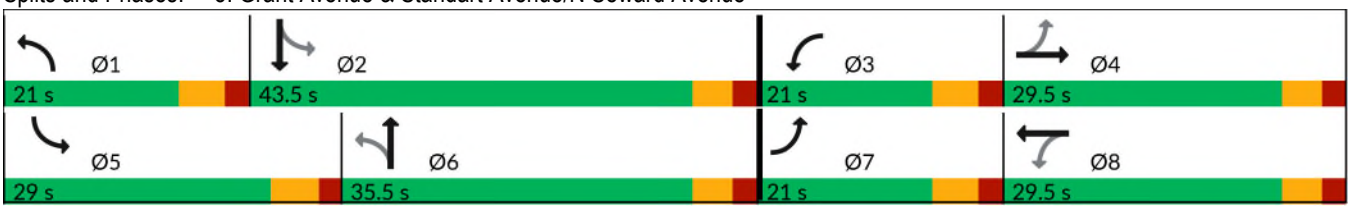
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	91	41	60	73	222	61	820	39	170	961	117
Future Volume (vph)	164	91	41	60	73	222	61	820	39	170	961	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	95		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Satd. Flow (prot)	1787	1793	0	1787	1669	0	1787	3549	0	1787	3508	0
Flt Permitted	0.257			0.665			0.117			0.102		
Satd. Flow (perm)	483	1793	0	1251	1669	0	220	3549	0	192	3508	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			120			4			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			561			1364			1517	
Travel Time (s)		15.5			12.8			31.0			34.5	
Confl. Peds. (#/hr)							2					2
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.89	0.89	0.89	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	180	145	0	64	314	0	69	965	0	177	1123	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0		6.0	12.0		6.0	12.0	
Minimum Split (s)	10.0	11.5		10.0	11.5		12.0	17.5		12.0	17.5	
Total Split (s)	21.0	29.5		21.0	29.5		21.0	35.5		29.0	43.5	
Total Split (%)	18.3%	25.7%		18.3%	25.7%		18.3%	30.9%		25.2%	37.8%	
Maximum Green (s)	15.0	24.0		15.0	24.0		15.0	30.0		23.0	38.0	
Yellow Time (s)	4.0	3.5		4.0	3.5		4.0	3.5		4.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	5.5		6.0	5.5		6.0	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	3.0		1.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Act Effct Green (s)	40.8	31.4		30.5	24.1		38.9	32.8		47.0	39.1	
Actuated g/C Ratio	0.40	0.31		0.30	0.24		0.38	0.32		0.46	0.38	
v/c Ratio	0.52	0.26		0.16	0.65		0.38	0.84		0.72	0.83	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	26.3	26.8		21.0	29.2		22.2	41.0		36.4	35.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	26.3	26.8		21.0	29.2		22.2	41.0		36.4	35.9	
LOS	C	C		C	C		C	D		D	D	
Approach Delay (s/veh)		26.5			27.8			39.7			36.0	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	78	65		26	116		24	304		66	355	
Queue Length 95th (ft)	131	124		55	225		50	#475		138	#515	
Internal Link Dist (ft)		604			481			1284			1437	
Turn Bay Length (ft)	175			150			95			260		
Base Capacity (vph)	388	564		551	486		332	1146		452	1352	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.46	0.26		0.12	0.65		0.21	0.84		0.39	0.83	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 101.9
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay (s/veh): 35.2 Intersection LOS: D
Intersection Capacity Utilization 80.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Grant Avenue & Standart Avenue/N Seward Avenue



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	71	0	1073	966	61
Future Volume (vph)	0	71	0	1073	966	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1627	0	3574	3542	0
Flt Permitted						
Satd. Flow (perm)	0	1627	0	3574	3542	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	234			316	331	
Travel Time (s)	5.3			7.2	7.5	
Peak Hour Factor	0.90	0.90	0.94	0.94	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	79	0	1141	1141	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 39.7% ICU Level of Service A
Analysis Period (min) 15

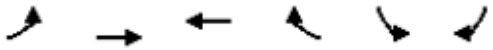
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	71	0	1073	966	61
Future Vol, veh/h	0	71	0	1073	966	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	94	94	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	79	0	1141	1073	68

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	537	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.92	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.31	-	-	-	-
Pot Cap-1 Maneuver	0	491	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	491	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.73	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	491	-
HCM Lane V/C Ratio	-	0.161	-
HCM Ctrl Dly (s/v)	-	13.7	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.6	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	103	162	127	108	5
Future Volume (vph)	4	103	162	127	108	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	75				25	
Satd. Flow (prot)	0	3567	1770	0	1786	0
Flt Permitted		0.998			0.955	
Satd. Flow (perm)	0	3567	1770	0	1786	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		541	322		201	
Travel Time (s)		12.3	7.3		4.6	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	131	353	0	126	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 29.2% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	103	162	127	108	5
Future Vol, veh/h	4	103	162	127	108	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	5	126	198	155	120	6

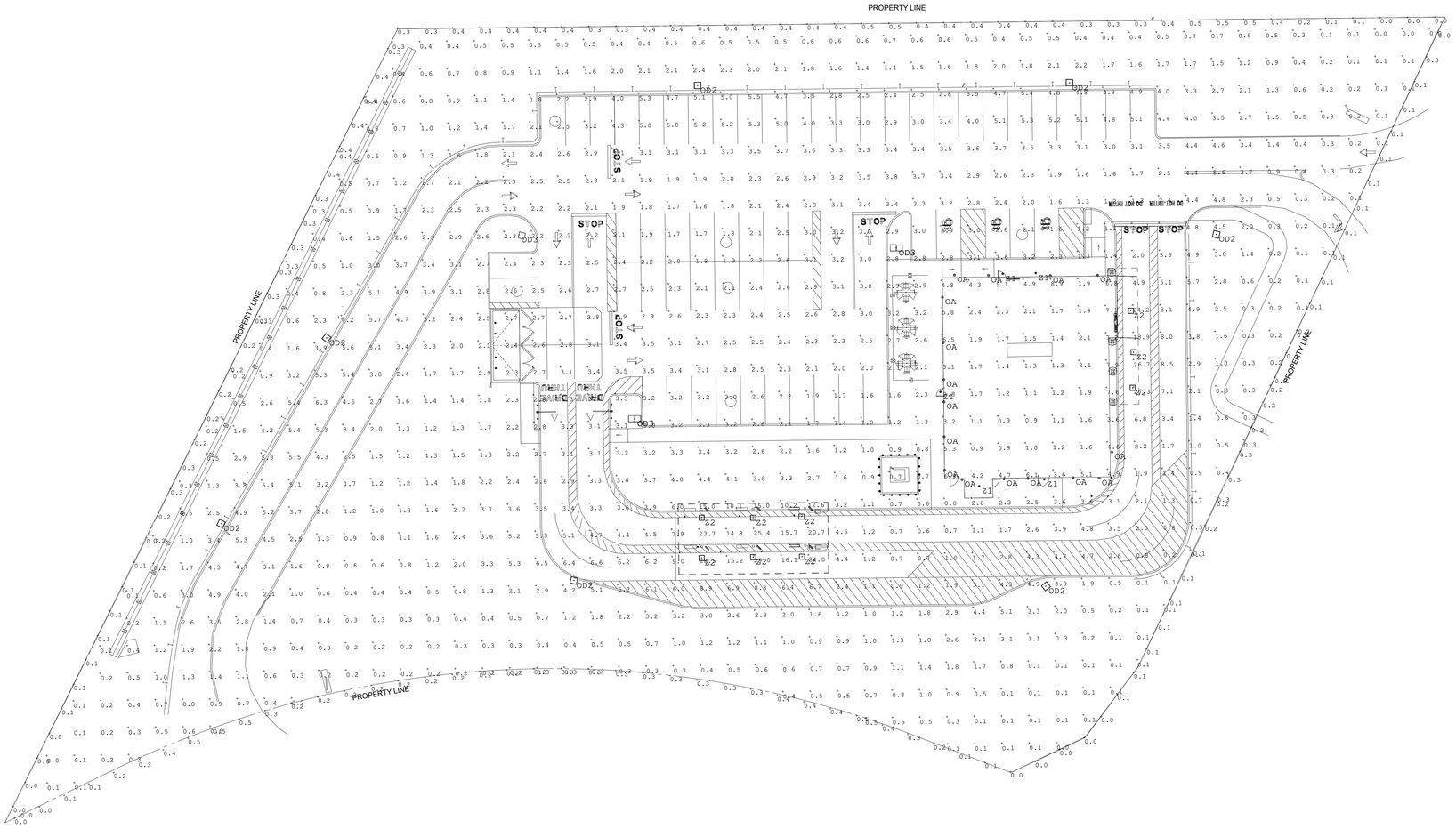
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	352	0	-	0	348	275
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	73	-
Critical Hdwy	4.115	-	-	-	6.615	6.215
Critical Hdwy Stg 1	-	-	-	-	5.415	-
Critical Hdwy Stg 2	-	-	-	-	5.815	-
Follow-up Hdwy	2.2095	-	-	-	3.5095	3.3095
Pot Cap-1 Maneuver	1211	-	-	-	639	766
Stage 1	-	-	-	-	773	-
Stage 2	-	-	-	-	945	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1211	-	-	-	636	766
Mov Cap-2 Maneuver	-	-	-	-	636	-
Stage 1	-	-	-	-	770	-
Stage 2	-	-	-	-	945	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.33	0	11.98
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	135	-	-	-	641
HCM Lane V/C Ratio	0.004	-	-	-	0.196
HCM Ctrl Dly (s/v)	8	0	-	-	12
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Luminaire Schedule							
Symbol	Qty	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	5	SLD405830WH	Z1	1.000	750	12.2	61
	16	P5675-3130K	OA	1.000	830	33.9	542.4
	9	CRUS-SC-SLW-30	Z2	1.000	5585	38	342
	5	PRV-C40-D-UNV-T5-BZ	OD3	1.000	18264	131	655
	7	PRV-C40-D-UNV-T2-BZ-HSS	OD2	1.000	15793	131	917

Calculation Summary						
CalcType	Units	Avg	Max	Min	Avg/Min	Label
Illuminance	Fc	2.54	29.0	0.0	N.A.	CalcPts_1
Illuminance	Fc	0.24	0.5	0.0	N.A.	Property Line



A4 ELECTRICAL SITE PLAN
N.T.S.

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

HFA
HARRISON FRENCH & ASSOCIATES, PLLC
t 479.273.7780
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
www.hfa-ae.com

PROTOTYPICAL SET

NOT FOR REGULATORY APPROVAL, BIDDING, OR CONSTRUCTION

CHICK-FIL-A
NEW RESTAURANT

281 GRANT AVE
AUBURN, NY 13021

FSR#06315

BUILDING TYPE / SIZE: SAM SE
RELEASE: 24.06
PRINTED FOR
PERMIT

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	16-26-60008
DATE	04/14/2026
DRAWN BY	AP

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SHEET
SITE PHOTOMETRIC PLAN

SHEET NUMBER
E-102

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50-SE-16-26-60008-E-102-SITE PHOTOMETRIC PLAN

Project	06315_Auburn, NY	Catalog #	PRV-C40-D-UNV-T5-BZ	Type	OD3
Prepared by		Notes		Date	04/28/2026

Lumark

Prevail LED

Area / Site Luminaire

Product Features

BAA TAA BABA Light Alfabet™ PADC

Product Certifications

ISO9001 DLC PREMIUM FC COMPLIANT RAEE IP66 5 YEAR

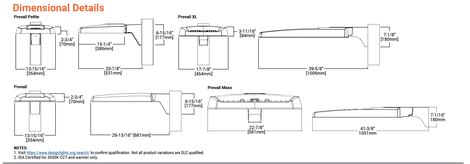
Interactive Menu

- Ordering Information page 2
- Mounting Details page 3, 4
- Optical Configurations page 5
- Product Specifications page 5
- Energy and Performance Data page 6, 7
- Control Options page 8

Quick Facts

- Lumen packages range from 4,800 - 84,000 lumens (35W - 588W)
- Replaces 70W up to 1,000W HID equivalents
- Efficacies up to 160 lumens per watt
- Energy and maintenance savings up to 85% versus HID solutions
- Standard universal quick mount arm with universal drill pattern

Dimensional Details



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

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Lumark

Prevail LED

Ordering Information

SAMPLE NUMBER: **PRV-XL-C75-740-D-UNV-T4-SA-BZ**

Product Family [1,2]	Light Engine [3]	Color Temperature	Driver	Voltage	Distribution	Mounting	Color
PRV-P=Prevail Petite **BAA-PRV-P**=Prevail Petite BAA Compliant [4] **TAA-PRV-P**=Prevail Petite TAA Compliant [5] **BABA-PRV-P**=Prevail Petite BABA Build America Buy America Act Compliant [6]	**C10**=(1) LED, 4,900 Nominal Lumens **C15**=(1) LED, 6,900 Nominal Lumens **C20**=(1) LED, 9,800 Nominal Lumens **C25**=(1) LED, 11,800 Nominal Lumens	**740**=70CRI, 4000K **727**=70CRI, 2700K **730**=70CRI, 3000K **750**=70CRI, 5000K **840**=80CRI, 4000K	**D**=Dimming (0-10V)	**UNV**=Universal (120-277V) Multi-Tap Voltage, 347-480V [7] **E**=480V [8] **H**=347V **DV**=Dual-Volt (277-480V) [9,10]	**T2**=Type II **T3**=Type III **T4**=Type IV **T5**=Type V	**SA**=OM Standard Versatile Arm **MA**=OM Mast Arm **FMA**=Fixed Mast Arm [11] **AM**=OM Wall Mount Arm **ADJA-WM**=Adjustable Arm - Slipfitter, 3" vertical tenon [11,12] **ADJA**=Adjustable Arm - Pole Mount [11] **ADJD**=Adjustable Arm - Slipfitter, 3" vertical tenon [11,12] **SPD**=Adjustable Arm - Slipfitter, 2 3/8" vertical tenon [11,12]	**BZ**=Bronze **AP**=Grey **BK**=Black **DP**=Dark Platinum Textured Metallic **WH**=White

Options (Add as Suffix)	
CC=Coastal Construction finish [4] **L90**=Optics Rotated 90° Left **R90**=Optics Rotated 90° Right **10K**=10kV/10kA UL 1449 Fused Surge Protective Device **20MSP**=20kV MOV Surge Protective Device **20K**=20kV UL 1449 Fused Surge Protective Device **HA**=50°C High Ambient Temperature [4] **PR**=NEMA 3 PIN Twistlock Photocontrol Receptacle [14] **PRT**=NEMA 7 PIN Twistlock Photocontrol Receptacle [14] **WLSDIM**=Dimming Motion and Daylight Sensor, Wireless Remote Programmable, < 8' Mounting Height [13,14] **WLSDIM-LSR**=Dimming Motion and Daylight Sensor, IR Remote Programmable, 8' - 20' Mounting Height [13,14] **WLSDIM-LSR-HI**=Dimming Motion and Daylight Sensor, IR Remote Programmable, 21' - 40' Mounting [13,14]	**SPB1**=Dimming Motion and Daylight Sensor, Bluetooth Programmable, < 8' Mounting Height [13,14] **SPB2**=Dimming Motion and Daylight Sensor, Bluetooth Programmable, 8' - 20' Mounting Height [13,14] **SPB3**=Dimming Motion and Daylight Sensor, Bluetooth Programmable, 21' - 40' Mounting Height [13,14,34] **WPEXCA**=WaveLinx Pro, Sft Driver, Dimming Motion and Daylight, MAC Programmable, 7' - 13' Mounting [13,14,15,16] **WPSXCA**=WaveLinx Pro, Sft Driver, Dimming Motion and Daylight, MAC Programmable, 13' - 40' Mounting [13,14,15,16] **WLSXEX**=WaveLinx Lite, Sft Driver, Dimming Motion and Daylight, Bluetooth Programmable, 7' - 13' Mounting [13,14,15,16] **WLSAEX**=WaveLinx Lite, Sft Driver, Dimming Motion and Daylight, Bluetooth Programmable, 13' - 40' Mounting [13,14,15,16]

Accessories (Order Separately) [18,19]	
PRVSA-XX=Standard Arm Mounting Kit [20] **PRVMA-XX**=Mast Arm Mounting Kit [20] **PRVWM-XX**=Wall Mount Kit [20] **PRV-ADJA-XX**=Adjustable Arm - Pole Mount Kit [20] **PRV-ADJS-XX**=Adjustable Arm - Slipfitter Kit [20] **PRV-ADJA-WM-XX**=Adjustable Arm - Wall Mount Kit [20] **PRVXLSA-XX**=Standard Arm Mounting Kit [21] **PRVXLMA-XX**=Mast Arm Mounting Kit [21] **PRVXLWM-XX**=Wall Mount Kit [21] **PRV-XL-ADJA-XX**=Adjustable Arm - Pole Mount Kit [21] **PRV-XL-ADJS-XX**=Adjustable Arm - Slipfitter Kit [21] **PRV-XL-ADJA-WM-XX**=Adjustable Arm - Wall Mount Kit [21] **PRV-MP-ADJA-XX**=Adjustable Arm - Pole Mount Kit [22] **PRV-MP-ADJS-XX**=Adjustable Arm - Slipfitter Kit [22] **PRV-MP-ADJA-WM-XX**=Adjustable Arm - Wall Mount Kit [22] **WSQC-TP-10A**=WaveLinx Outdoor Control Module (7-PIN) [23]	**MA1011-XX**=(@180° Tenon Adapter for 3-1/2" O.D. Tenon **MA1017-XX**=Single Tenon Adapter for 2-3/8" O.D. Tenon **MA1018-XX**=(@180° Tenon Adapter for 2-3/8" O.D. Tenon **SRA338**=Tenon Adapter from 3" to 2-3/8" **PRVCOR-FBV**=Full Drop Visor [9] **PRVXLCOR-FBV**=Full Drop Visor [9] **HSVWSD**=House Side Shield Kit [24] **VGS-FB**= Vertical Glare Shield Kit, Front Back [9] **VGS-SS**= Vertical Glare Shield Kit, Side to Side [9] **SCR**=Notch Photocontrol Shorting Cap **GA/BA1014**=NEMA Photocontrol - 120V **GA/BA1016**=NEMA Photocontrol - Multi Tap 105-285V **GA/BA1201**=NEMA Photocontrol - 347V **GA/BA1027**=NEMA Photocontrol - 480V **FSIR-100**=Wireless Configuration Tool for Occupancy Sensor [9] **WSQC-TP-10A**=WaveLinx Outdoor Control Module (7-PIN) [23]

NOTES:
1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Luminaire is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to installation instructions 8100000235 and pole white paper WP01130319 for additional support information.
3. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
4. Not for use with PRV-XL or PRV-MP configurations.
5. ABSV not to be used with ungrounded or impedance grounded systems.
6. Durashield drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Refer to DURASHIELD DRIVER SPECIFICATIONS for more information.
7. House Side Shield not available with T5 distribution. Not available with PRV-C40 lumen package.
8. Not available with PRV-C40 lumen package. Not available with PRV-P-C25 lumen package.
9. Coastal construction finish is warranted for only 5 years. Consult factory for other CC warranty options.
10. If DuraVolt (DV) is specified, use a photocontrol that matches the input voltage used.
11. Only available in PRVS configurations C15, C25, C40 or C60. Not available with PRV-P configurations.
12. Luminaire ships with 4000K/700CRI, bronze finish, and include the standard versatile mounting arm.
13. Requires 7-PIN NEMA twistlock photocontrol receptacle (PR & PRT) option. The WSQC-T cannot be used in conjunction with other controls systems (MS or LMS). Operates on 120-347V input voltages.
14. Only for use with PRV-M configurations.
15. Only for use with PRV-XL configurations.
16. Fixed for PRV-M.
17. Cannot be used with PRT or other motion response control options
18. Only product configurations with these prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or the Build America Buy America Act (BABA). BABA is the minimum Government compliance requirement for the Build America Buy America Act (BABA) Act. Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
19. Replace XX with sensor color (WH, BZ, or BK).
20. Only available in PRV-XL configurations C75, C100, C125, C150, or C175.
21. Not available with SATV, ABSV, DV, or HA options.
22. Replace XX with paint color.
23. Ships with 5' cable pigtail. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
24. Not for use with PRV-XL or PRV-M configurations.
25. Only for use with PRV. Not applicable to PRV-M, PRV-XL, or PRV-P.
26. Must order one per optic LED when ordering as a field-installable accessory (1, 2, 4, 6 or 8).
27. Ideal for applications requiring consistent illumination, long and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative for more information.
28. Requires 7-PIN NEMA twistlock photocontrol receptacle (PR & PRT) option. Operates on 120-347V input voltages.
29. Only for use with PRV-M configurations.
30. Only for use with PRV-XL configurations.
31. Fixed for PRV-M.
32. Cannot be used with PRT or other motion response control options
33. Only product configurations with these prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or the Build America Buy America Act (BABA). BABA is the minimum Government compliance requirement for the Build America Buy America Act (BABA) Act. Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
34. Replace XX with sensor color (WH, BZ or BK).
35. Only available in PRV-XL configurations C75, C100, C125, C150, or C175.
36. Not available with SATV, ABSV, DV, or HA options.
37. Only available in PRV-P configurations C10, C15, C20 or C25.
38. Replace XX with paint color.
39. Ships with 5' cable pigtail. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
40. Not for use with PRV-XL or PRV-M configurations.
41. Only for use with PRV. Not applicable to PRV-M, PRV-XL, or PRV-P.
42. Must order one per optic LED when ordering as a field-installable accessory (1, 2, 4, 6 or 8).
43. Ideal for applications requiring consistent illumination, long and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative for more information.
44. Requires 7-PIN NEMA twistlock photocontrol receptacle (PR & PRT) option. The WSQC-T cannot be used in conjunction with other controls systems (MS or LMS). Operates on 120-347V input voltages.
45. Only for use with PRV-M configurations.
46. Only for use with PRV-XL configurations.
47. Fixed for PRV-M.
48. Cannot be used with PRT or other motion response control options
49. Only product configurations with these prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or the Build America Buy America Act (BABA). BABA is the minimum Government compliance requirement for the Build America Buy America Act (BABA) Act. Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.

Stock Ordering Information

Product Family [1]	Light Engine	Voltage	Distribution
PRVS=Prevail	**C15**=(1) LED, 7,100 Nominal Lumens **C25**=(2) LEDs, 13,100 Nominal Lumens **C40**=(2) LEDs, 17,100 Nominal Lumens **C60**=(2) LEDs, 20,900 Nominal Lumens	**UNV**=Universal (120-277V) **347**=347V [1]	**T2**=Type III **T4**=Type IV
PRVS-XL=Prevail XL	**C75**=(4) LED, 26,100 Nominal Lumens **C100**=(4) LED, 31,000 Nominal Lumens **C125**=(4) LED, 36,000 Nominal Lumens **C150**=(5) LED, 41,100 Nominal Lumens **C175**=(5) LED, 48,600 Nominal Lumens		

NOTES:
1. All stock configurations are standard 4000K/70CRI, bronze finish, and include the standard versatile mounting arm.
2. Only available in PRVS configurations C15, C25, C40 or C60.

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COOPER Lighting Solutions
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Project	06315_Auburn, NY	Catalog #	PRV-C40-D-UNV-T2-BZ-HSS	Type	OD2
Prepared by		Notes		Date	04/28/2026

Lumark

Prevail LED

Area / Site Luminaire

Product Features

BAA TAA BABA Light Alfabet™ PADC

Product Certifications

ISO9001 DLC PREMIUM FC COMPLIANT RAEE IP66 5 YEAR

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- Ordering Information page 2
- Mounting Details page 3, 4
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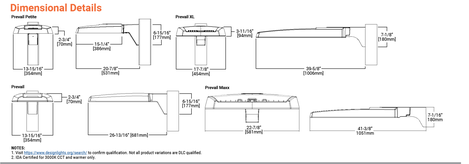
Quick Facts

- Lumen packages range from 4,800 - 84,000 lumens (35W - 588W)
- Replaces 70W up to 1,000W HID equivalents
- Efficacies up to 160 lumens per watt
- Energy and maintenance savings up to 85% versus HID solutions
- Standard universal quick mount arm with universal drill pattern

Dimensional Details



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

PS500001EN page 1
September 30, 2025 1:29 PM

COOPER Lighting Solutions
a Signify business

Lumark

Prevail LED

Ordering Information

SAMPLE NUMBER: **PRV-XL-C75-740-D-UNV-T4-SA-BZ**

Product Family [1,2]	Light Engine [3]	Color Temperature	Driver	Voltage	Distribution	Mounting	Color
PRV-P=Prevail Petite **BAA-PRV-P**=Prevail Petite BAA Compliant [4] **TAA-PRV-P**=Prevail Petite TAA Compliant [5] **BABA-PRV-P**=Prevail Petite BABA Build America Buy America Act Compliant [6]	**C10**=(1) LED, 4,900 Nominal Lumens **C15**=(1) LED, 6,900 Nominal Lumens **C20**=(1) LED, 9,800 Nominal Lumens **C25**=(1) LED, 11,800 Nominal Lumens	**740**=70CRI, 4000K **727**=70CRI, 2700K **730**=70CRI, 3000K **750**=70CRI, 5000K **840**=80CRI, 4000K	**D**=Dimming (0-10V)	**UNV**=Universal (120-277V) Multi-Tap Voltage, 347-480V [7] **E**=480V [8] **H**=347V **DV**=Dual-Volt (277-480V) [9,10]	**T2**=Type II **T3**=Type III **T4**=Type IV **T5**=Type V	**SA**=OM Standard Versatile Arm **MA**=OM Mast Arm **FMA**=Fixed Mast Arm [11] **AM**=OM Wall Mount Arm **ADJA-WM**=Adjustable Arm - Slipfitter, 3" vertical tenon [11,12] **ADJA**=Adjustable Arm - Pole Mount [11] **ADJD**=Adjustable Arm - Slipfitter, 3" vertical tenon [11,12] **SPD**=Adjustable Arm - Slipfitter, 2 3/8" vertical tenon [11,12]	**BZ**=Bronze **AP**=Grey **BK**=Black **DP**=Dark Platinum Textured Metallic **WH**=White

Options (Add as Suffix)	
CC=Coastal Construction finish [4] **L90**=Optics Rotated 90° Left **R90**=Optics Rotated 90° Right **10K**=10kV/10kA UL 1449 Fused Surge Protective Device **20MSP**=20kV MOV Surge Protective Device **20K**=20kV UL 1449 Fused Surge Protective Device **HA**=50°C High Ambient Temperature [4] **PR**=NEMA 3 PIN Twistlock Photocontrol Receptacle [14] **PRT**=NEMA 7 PIN Twistlock Photocontrol Receptacle [14] **WLSDIM**=Dimming Motion and Daylight Sensor, Wireless Remote Programmable, < 8' Mounting Height [13,14] **WLSDIM-LSR**=Dimming Motion and Daylight Sensor, IR Remote Programmable, 8' - 20' Mounting Height [13,14] **WLSDIM-LSR-HI**=Dimming Motion and Daylight Sensor, IR Remote Programmable, 21' - 40' Mounting [13,14]	**SPB1**=Dimming Motion and Daylight Sensor, Bluetooth Programmable, < 8' Mounting Height [13,14] **SPB2**=Dimming Motion and Daylight Sensor, Bluetooth Programmable, 8' - 20' Mounting Height [13,14] **SPB3**=Dimming Motion and Daylight Sensor, Bluetooth Programmable, 21' - 40' Mounting Height [13,14,34] **WPEXCA**=WaveLinx Pro, Sft Driver, Dimming Motion and Daylight, MAC Programmable, 7' - 13' Mounting [13,14,15,16] **WPSXCA**=WaveLinx Pro, Sft Driver, Dimming Motion and Daylight, MAC Programmable, 13' - 40' Mounting [13,14,15,16] **WLSXEX**=WaveLinx Lite, Sft Driver, Dimming Motion and Daylight, Bluetooth Programmable, 7' - 13' Mounting [13,14,15,16] **WLSAEX**=WaveLinx Lite, Sft Driver, Dimming Motion and Daylight, Bluetooth Programmable, 13' - 40' Mounting [13,14,15,16]

Accessories (Order Separately) [18,19]	
PRVSA-XX=Standard Arm Mounting Kit [20] **PRVMA-XX**=Mast Arm Mounting Kit [20] **PRVWM-XX**=Wall Mount Kit [20] **PRV-ADJA-XX**=Adjustable Arm - Pole Mount Kit [20] **PRV-ADJS-XX**=Adjustable Arm - Slipfitter Kit [20] **PRV-ADJA-WM-XX**=Adjustable Arm - Wall Mount Kit [20] **PRVXLSA-XX**=Standard Arm Mounting Kit [21] **PRVXLMA-XX**=Mast Arm Mounting Kit [21] **PRVXLWM-XX**=Wall Mount Kit [21] **PRV-XL-ADJA-XX**=Adjustable Arm - Pole Mount Kit [21] **PRV-XL-ADJS-XX**=Adjustable Arm - Slipfitter Kit [21] **PRV-XL-ADJA-WM-XX**=Adjustable Arm - Wall Mount Kit [21] **PRV-MP-ADJA-XX**=Adjustable Arm - Pole Mount Kit [22] **PRV-MP-ADJS-XX**=Adjustable Arm - Slipfitter Kit [22] **PRV-MP-ADJA-WM-XX**=Adjustable Arm - Wall Mount Kit [22] **WSQC-TP-10A**=WaveLinx Outdoor Control Module (7-PIN) [23]	**MA1011-XX**=(@180° Tenon Adapter for 3-1/2" O.D. Tenon **MA1017-XX**=Single Tenon Adapter for 2-3/8" O.D. Tenon **MA1018-XX**=(@180° Tenon Adapter for 2-3/8" O.D. Tenon **SRA338**=Tenon Adapter from 3" to 2-3/8" **PRVCOR-FBV**=Full Drop Visor [9] **PRVXLCOR-FBV**=Full Drop Visor [9] **HSVWSD**=House Side Shield Kit [24] **VGS-FB**= Vertical Glare Shield Kit, Front Back [9] **VGS-SS**= Vertical Glare Shield Kit, Side to Side [9] **SCR**=Notch Photocontrol Shorting Cap **GA/BA1014**=NEMA Photocontrol - 120V **GA/BA1016**=NEMA Photocontrol - Multi Tap 105-285V **GA/BA1201**=NEMA Photocontrol - 347V **GA/BA1027**=NEMA Photocontrol - 480V **FSIR-100**=Wireless Configuration Tool for Occupancy Sensor [9] **WSQC-TP-10A**=WaveLinx Outdoor Control Module (7-PIN) [23]

NOTES:
1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Luminaire is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to installation instructions 8100000235 and pole white paper WP01130319 for additional support information.
3. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
4. Not for use with PRV-XL or PRV-MP configurations.
5. ABSV not to be used with ungrounded or impedance grounded systems.
6. Durashield drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Refer to DURASHIELD DRIVER SPECIFICATIONS for more information.
7. House Side Shield not available with T5 distribution. Not available with PRV-C40 lumen package.
8. Not available with PRV-C40 lumen package. Not available with PRV-P-C25 lumen package.
9. Coastal construction finish is warranted for only 5 years. Consult factory for other CC warranty options.
10. If DuraVolt (DV) is specified, use a photocontrol that matches the input voltage used.
11. Only available in PRVS configurations C15, C25, C40 or C60. Not available with PRV-P configurations.
12. Luminaire ships with 4000K/700CRI, bronze finish, and include the standard versatile mounting arm.
13. Requires 7-PIN NEMA twistlock photocontrol receptacle (PR & PRT) option. The WSQC-T cannot be used in conjunction with other controls systems (MS or LMS). Operates on 120-347V input voltages.
14. Only for use with PRV-M configurations.
15. Only for use with PRV-XL configurations.
16. Fixed for PRV-M.
17. Cannot be used with PRT or other motion response control options
18. Only product configurations with these prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or the Build America Buy America Act (BABA). BABA is the minimum Government compliance requirement for the Build America Buy America Act (BABA) Act. Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
19. Replace XX with sensor color (WH, BZ, or BK).
20. Only available in PRV-XL configurations C75, C100, C125, C150, or C175.
21. Not available with SATV, ABSV, DV, or HA options.
22. Replace XX with paint color.
23. Ships with 5' cable pigtail. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
24. Not for use with PRV-XL or PRV-M configurations.
25. Only for use with PRV. Not applicable to PRV-M, PRV-XL, or PRV-P.
26. Must order one per optic LED when ordering as a field-installable accessory (1, 2, 4, 6 or 8).
27. Ideal for applications requiring consistent illumination, long and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative for more information.
28. Requires 7-PIN NEMA twistlock photocontrol receptacle (PR & PRT) option. Operates on 120-347V input voltages.
29. Only for use with PRV-M configurations.
30. Only for use with PRV-XL configurations.
31. Fixed for PRV-M.
32. Cannot be used with PRT or other motion response control options
33. Only product configurations with these prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or the Build America Buy America Act (BABA). BABA is the minimum Government compliance requirement for the Build America Buy America Act (BABA) Act. Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
34. Replace XX with sensor color (WH, BZ or BK).
35. Only available in PRV-XL configurations C75, C100, C125, C150, or C175.
36. Not available with SATV, ABSV, DV, or HA options.
37. Only available in PRV-P configurations C10, C15, C20 or C25.
38. Replace XX with paint color.
39. Ships with 5' cable pigtail. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
40. Not for use with PRV-XL or PRV-M configurations.
41. Only for use with PRV. Not applicable to PRV-M, PRV-XL, or PRV-P.
42. Must order one per optic LED when ordering as a field-installable accessory (1, 2, 4, 6 or 8).
43. Ideal for applications requiring consistent illumination, long and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative for more information.
44. Requires 7-PIN NEMA twistlock photocontrol receptacle (PR & PRT) option. The WSQC-T cannot be used in conjunction with other controls systems (MS or LMS). Operates on 120-347V input voltages.
45. Only for use with PRV-M configurations.
46. Only for use with PRV-XL configurations.
47. Fixed for PRV-M.
48. Cannot be used with PRT or other motion response control options
49. Only product configurations with these prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or the Build America Buy America Act (BABA). BABA is the minimum Government compliance requirement for the Build America Buy America Act (BABA) Act. Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.

Stock Ordering Information

Product Family [1]	Light Engine	Voltage	Distribution
PRVS=Prevail	**C15**=(1) LED, 7,100 Nominal Lumens **C25**=(2) LEDs, 13,100 Nominal Lumens **C40**=(2) LEDs, 17,100 Nominal Lumens **C60**=(2) LEDs, 20,900 Nominal Lumens	**UNV**=Universal (120-277V) **347**=347V [1]	**T2**=Type III **T4**=Type IV
PRVS-XL=Prevail XL	**C75**=(4) LED, 26,100 Nominal Lumens **C100**=(4) LED, 31,000 Nominal Lumens **C125**=(4) LED, 36,000 Nominal Lumens **C150**=(5) LED, 41,100 Nominal Lumens **C175**=(5) LED, 48,600 Nominal Lumens		

NOTES:
1. All stock configurations are standard 4000K/70CRI, bronze finish, and include the standard versatile mounting arm.
2. Only available in PRVS configurations C15, C25, C40 or C60.

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September 30, 2025 1:29 PM

COOPER Lighting Solutions
a Signify business

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

HFA
HARRISON FRENCH & ASSOCIATES, PLLC

t 479.273.7780

1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
www.hfa-ac.com

PROTOTYPICAL SET

NOT FOR REGULATORY APPROVAL, BIDDING, OR CONSTRUCTION

CHICK-FIL-A
NEW RESTAURANT

281 GRANT AVE
AUBURN, NY 13021

FSR#06315

BUILDING TYPE / SIZE: SAM SE
RELEASE: 24.06
PRINTED FOR

PERMIT

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	16-26-60008
DATE	04/14/2026
DRAWN BY	AP

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SHEET
SITE LIGHTING SPEC SHEETS

SHEET NUMBER
E-106

4/28/2026 9:48:35 AM C:\Users\andrew.perez\Documents\2024 Revit Projects\06315_Auburn, NY_SE_ELE_v24_HFA.Andrew.Perez.rvt
50-SE-16-26-60008-E-106-SITE LIGHTING SPEC SHEETS

HALO

DESCRIPTION

The Halo Surface LED Downlight (SLD) incorporates WaveStream™ technology to create an ultra-low profile surface mounting luminaire with the performance and look of a traditional downlight. SLD4 is designed for installation in many 3-1/2" and 4" round or octagon junction boxes. May also retrofit in 4" aperture IC and Non-IC recessed housings*. Dedicated LED wiring connector meets high-efficacy code requirement in recessed downlighting. Suitable for residential or commercial installations. Ideal for closets, storage areas, attics and basements. Compliant with NFPA® 70, NEC® Section 410.16 (A)(3) and 410.16 (C)(5).

Catalog #	SLD405830WH	Type	Z1
Project	06315_Auburn, NY		
Comments		Date	04/28/2026
Prepared by			

SPECIFICATION FEATURES

CONSTRUCTION
- Die-cast aluminum trim ring and die formed aluminum frame

OPTICS
- WaveStream™ technology provides uniform luminance from a low profile flat lens
- AccuAim™ optics provide directional control for the "cone-of-light" beam distribution of a traditional downlight
- Precision molded lens features high transmission polymer with UV stabilized protecting film

DESIGNER TRIMS
Accessories (sold separately)
SLD designer trims are accessory rings that attach to the SLD for a permanent finish. Refer to SLD accessories specification sheet for details.
- White (Paintable)
- Satin Nickel
- Tuscan Bronze

ELECTRICAL JUNCTION BOX MOUNTING
- SLD may be used in compatible electrical junction boxes in direct contact with insulation including spray foam insulation
- Suitable for installation in many 3-1/2" and 4" octagon and round electrical junction boxes. **Note:** Driver consumes 3 cubic inches of junction box.
- Installer must ensure compatibility of fit, wiring and proper mounting in the electrical junction box. This includes all applicable national and local electrical and building codes.
- Proprietary Slot-N-Lock quick installation system for junction box installation
- T-bracket with Slot-N-Lock mounting tabs included.

RECESSED HOUSING MOUNTING
Friction Blade
- Pre-installed precision formed friction blades included
- Friction blade design allows the SLD to be installed in any position within the housing aperture (360 degrees)
- **Note:** Not for use in recessed housings in direct contact with spray foam insulation refer to NEMA LSD 57-2013

LED
- Trilateral linear LED assembly is integrated in trim perimeter.
- Color Temperature: 2700K, 3000K, 3500K, 4000K
- CRI options: 80 and 90
  - 90 CRI can be used to comply with California Title 24 High Efficacy requirements. Certified to California Appliance Efficiency Database under JA8
- L70 at 50,000 hours projected in accordance with TM-21

WARRANTY
Cooper Lighting Solutions provides a five year limited warranty on the SLD LED

LED CHROMATICITY
- A tight chromaticity specification ensures LED color uniformity, sustainable Color Rendering Index (CRI) and Correlated Color Temperature (CCT) over the useful life of the LED
- LED chromaticity of 3 SDCM exceeds ENERGY STAR® color standards per ANSI C78.377-2008
- 90 CRI model features high color performance with R9 greater than 50
- Every Halo LED is quality tested, measured, and serialized in a permanent record to register lumens, wattage, CRI and CCT.
- Halo LED serialized testing and measurement ensures color and lumen consistency on a per-unit basis, and validates long-term product consistency over time

ELECTRICAL CONNECTIONS
Junction Box
- Compatible with many 3-1/2" x 2" and 4" x 1-1/2" round and octagon boxes (2-1/8" deep boxes recommended)
- Supply-Wire Adapter with LED quick connector included

Recessed Housings
- LED connector is compatible with Halo 4" H995 and H245 Series LED Housings
- LED Connector meets California Title-24 high-efficacy luminaire standard as a non-screw base
- The included E26 Edison screw-base adapter provides capability for retrofit*
- LED connector is a non-screwbase luminaire disconnect for tool-less installation

LED DRIVER
- Driver is a 120V input high efficiency, dimmable electronic power supply providing DC power to the LED array
- Driver features high power factor, low THD, and has integral thermal protection in the event of over temperature or internal failure.
- Driver is replaceable if it should be required

SLD4058xxWH
80CRI
2700K, 3000K, 3500K, and 4000K

SLD4059xxWH
90CRI
2700K, 3000K, 3500K, and 4000K

4" Surface LED Downlight

Suitable for ceiling or wall electrical junction boxes

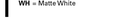
Suitable for 4" recessed housing retrofit (IC, Non-IC & AIR-TITE™)

ENERGY DATA

	80 CRI	90 CRI
Lumens (4000K models)	800	710
Input Voltage	120V	120V
Frequency	50/60 Hz	50/60 Hz
Input Current	0.10 A	0.10 A
Input Power	12.2 W	12 W
Efficiency (4000K models)	66 lm/W	59 lm/W
THD	< 20%	
Power Factor	> 0.90	
T Ambient	-30 - +40°C	
Sound Rating	Class A	

NOMENCLATURE

SLD 405 8 30 WH
405 = 4" SLD
8 = >80 CRI
30 = 3000K
WH = Matte White



*Non-California Product Only

TD518264EN
11/13/2018

COOPER Lighting Solutions

page 2

SLD405BxxWH
SLD405GxxWH

DIMMING
- Designed for continuous dimming capability to nominally 5% with many 120V Leading Edge (LE) and Trailing Edge (TE) phase control dimmers. Dimming to 5

PROGRESS LIGHTING™

Project: 06135_Auburn, NY
Fixture Type: OA
Location: Auburn, NY
Contact:

Cylinder

Wall Mounted • Damp Location Listed PROGRESS LED

P5675-31/30K

Description:

5" LED up down wall cylinder - wall lantern in Black. The P5675 Series are ideal for a wide variety of interior and exterior applications including residential and commercial. The Cylinders feature a 120V alternating current source and eliminates the need for a traditional LED driver. This modular approach results in an encapsulated luminaire that unites performance, cost and safety benefits. Specify P860045 top cover lens for use in wet locations.

Specifications:

- Black finish.
- Powder coat finish.
- Die-cast aluminum construction with durable powder coated finish
- 795 lumens 46 lumens/watt per module (source)
- 3000K color temperature, 90+ CRI
- Meets California Title 24 high efficacy requirements for outdoor use only.
- Dimmable to 10% with many ELV dimmers
- Dimmable to 10% brightness (See Dimming Notes)
- Back plate covers a standard 4" recessed outlet box: 4.5 in W, 4.5 in ht., 2.95 in depth
- Mounting strap for outlet box included
- 6 in of wire supplied

Performance:

Number of Modules	2
Input Power	17 W
Input Voltage	120 V
Input Frequency	60 Hz
Lumens/LPW (Down-Source)	795/46 (LM-82) per module
Lumens/LPW (Up-Source)	795/46 (LM-82) per module
Lumens/LPW (Source)	795/46 (LM-82)
Lumens/LPW (Delivered)	830/24.4 (LM-79)
CCT	3000 K
CRI	90 CRI
Life (hours)	60000 (L70/TM-21)
EMI/RFI	FCC Title 47, Part 15, Class B
Max. Operating Temp	30 °C
Warranty	5-year Limited Warranty
Labels	cCSAus Damp Location Listed

Dimensions:

Width: 5 in
Height: 14 in
Depth: 8-7/8 in
H/CTR: 8 in

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

HFA
HARRISON FRENCH & ASSOCIATES, PLLC

t 479.273.7780

1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
www.hfa-ae.com

PROTOTYPICAL SET

NOT FOR REGULATORY APPROVAL, BIDDING, OR CONSTRUCTION

CHICK-FIL-A
NEW RESTAURANT

281 GRANT AVE
AUBURN, NY 13021

FSR#06315

BUILDING TYPE / SIZE: SAM SE
RELEASE: 24.06
PRINTED FOR
PERMIT

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 16-26-60008
DATE 04/14/2026
DRAWN BY AP

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SHEET
SITE LIGHTING SPEC SHEETS

SHEET NUMBER
E-107

4/28/2026 9:48:35 AM C:\Users\andrew.perez\Documents\2024 Revit Projects\06315_Auburn, NY_SE_ELE_v24_HFA.Andrew.Perez.rvt
50-SE-16-26-60008-E-107-SITE LIGHTING SPEC SHEETS

DRAINAGE AND EROSION CONTROL REPORT

FOR

CONSTUCTION ACTIVITIES

Located At:

[redacted] Avenue,
Auburn, NY 13021
City of Auburn
Cayuga County

Prepared For:
Chick-fil-A, Inc
[redacted]
Atlanta, GA 30349

Prepared By:
Bohler Engineering NY, PLLC
[redacted]
Rochester, NY 14625

Report Date:
April 13th, 2026

BE Project #: NYB210111

Table of Contents

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2) EROSION AND SEDIMENT CONTROLS 3

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a. Construction Phasing Plan 3

b. Minimum Soil & Erosion Control Measures 4

c. Soil Stabilization Plan 4

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(a) Introduction 4

(b) Project Information 5

(c) Existing Conditions 5

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(e) Stormwater Calculations 7

APPENDIX

Appendix A – Pre-Development Drainage Area Map

Appendix B – Post-Development Drainage Area Map

Appendix C – Hydraulic Calculations

Appendix D – NRCS Soil Survey

Appendix E – Operation & Maintenance Plan

1) PROJECT INTRODUCTION

The applicant, Chick-fil-A, Inc. ("CFA") is proposing to redevelop a proposed ±2.22-acre parcel along Grant Avenue/ NYS Route 5 with a quick serve restaurant with drive thru. The Project site is located in the City of Auburn as part of tax map parcel numbers [redacted] Access to the proposed site will be via the rebuilt access drives on Grant Avenue/NYS Route 5 as well as John Walsh Bouelvard. CFA will own the property.

CFA proposes to develop the site with a new ±4,620 SF GFA restaurant with a double lane drive thru and outdoor patio area along with detached meal ordering and meal delivery canopies over the drive thru. In addition to the drive thru restaurant, new asphalt parking, concrete curbing\sidewalk, utilities, stormwater treatment, retaining wall, lighting, landscaping, signage and a dumpster enclosure\shed are proposed.

The project will disturb ±2.2-acres of land and will reduce the impervious area by +/-0.18 acre within the project site area. Stormwater runoff from the new impervious and rooftop areas will be directed to new on-site catch basins & hydro dynamic separator which will discharge to the existing drainage swale along the western property line.

2) EROSION AND SEDIMENT CONTROLS

a) Soils Description

Data supplied by the USDA Natural Resources Conservation Service (NRCS) indicates that site soils are primarily classified as:

USDA Soil Symbol	Hydrologic Group (HSG)	Texture	Character	% within disturbed area
CeB	C	Cazenovia silt loam	Well Drained	49.8%
OdA	D	Odessa silt loam	Somewhat poorly drained	32.6%
OvB	C/D	Ovid silt loam	Somewhat poorly drained	17.6%
CeB	C	Cazenovia silt loam	Well Drained	49.8%

The USDA NRCS Soil Survey is included in the appendix of this report.

a. Construction Phasing Plan

Construction sequencing, limits of clearing and grading, utility and infrastructure installation, and all other associated activities resulting in soil disturbance are detailed on the Erosion and Sediment Control, Grading and Drainage and Utility Plans. A recommended Construction Sequence has been included on the Erosion and Sediment Control Notes & Details sheet.

b. Minimum Soil & Erosion Control Measures

The Soil and Erosion Control measures that are proposed to be implemented for this site are shown and detailed in the Site Development Plans. All practices are to be installed per requirements outlined in the NYSDEC Standards and Specifications for Erosion and Sediment Control (Blue Book). The project design proposes no deviations from these standards. All practices shall be installed per the timeline outlined in the Construction Sequence and shall remain functional until the contributing areas have achieved 80% stabilization. The dimensions, material specifications, installation details and operation and maintenance requirements are included on the Soil Erosion & Sediment Control Notes & Details Sheet included in the Site Development Plans.

c. Soil Stabilization Plan

All temporary and permanent soil stabilization practices to be implemented at the subject Project are outlined in the Erosion & Sediment Control Plan included in the Site Development Plans. It is the responsibility of the General Contractor to identify any areas that are not adequately stabilized and provide adequate stabilization practices to address. As a guideline, any temporary or permanent slopes over 3:1 shall be stabilized using slope stabilization fabric installed per the manufacturer's guidelines. Any open soil that is not to be disturbed within 14 days shall be seeded or mulched. These practices shall remain operational until 80% establishment has been achieved.

d. Pollution Prevention Measures

The following activities are anticipated during construction and could have the potential to generate pollutants. All such activities are to be conducted in accordance with all applicable General Permit requirements and in accordance with industry-standard best management practices. An inventory of possible pollutants and their associated pollution prevention measure is listed below.

- Construction waste will be disposed in on-site construction dumpsters immediately. The dumpsters shall be located such that any stormwater runoff will be directed to a sediment trap.
- Any materials or chemicals considered to be hazardous shall be covered or stored in construction trailers to ensure no discharge to stormwater will occur.
- A concrete washout will be installed prior to any concrete being poured onsite. The washout will meet or exceed the requirements outlined in the Blue Book.
- Any spills that occur must be reported to the below contacts:

Contact	Name	Phone Number
NYSDEC Spills Hotline	NYSDEC	1-800-457-7362

3) STORMWATER DRAINAGE REPORT

(a) Introduction

The applicant, Chick-fil-A, Inc. ("CFA") is proposing to redevelop a proposed ±2.22-acre parcel along Grant Avenue/ NYS Route 5 with a quick serve restaurant with drive thru. The Project site is located in the City of Auburn as part of tax map parcel numbers 109.48-1-3.12 & 109.48-1-3.2. Access to the proposed site will be via the rebuilt access drives on Grant Avenue/NYS Route 5 as well as John Walsh Bouelvard. CFA will own the property.

This report will briefly discuss the proposed development and provide a detailed analysis of the existing and proposed site conditions and the proposed stormwater management system. Hydraulic calculations included in this report were generated for the 1-, 10- and 100-year storm events utilizing the SCS TR-20 and HydroCad Stormwater modeling software.

(b) Project Information

2) Site Name	Proposed Quick-Service Restaurant w/ drive thru
Address	[redacted] / [redacted]
City, State, Zip Code	City of Auburn, NY 13021
County	Cayuga County

Type of Construction: ☐Residential ☒Commercial ☐Industrial ☐Other _____

Size of Property	±2.2 acres
Total Area Expected to be Disturbed	±2.2 acres
Maximum Area to be Disturbed at Any One Time:	±2.2 acres

(c) Existing Conditions

The project site is a developed plaza with the ground cover being parking lot and maintained lawn areas with some existing trees. The topography slopes from County Rt. 64 down towards the Plaza.

The existing project site has been divided into 2 Watershed area(s) for analysis purposes. Watershed ground covers, flow paths, and design points are depicted in the Existing Conditions Watershed Areas Summary Table Below.

Watershed	Ground Cover	Flow Path	Discharge Point
E-1	Impervious, Grass,	Sheet flow to on-site catch basin and existing permitter swales, discharging to existing swale along western property line of site.	DP-1

The existing watershed area, discharge points, and topography are illustrated on the Existing Watershed Map included in the appendix of this report.

The table below identifies all discharge points for stormwater leaving the project site.

Point of Discharge	Name of State receiving water	Is the receiving water on 303d list?	If yes, limiting pollutant
Design Point 1	N/A	N/A	

Data supplied by the USDA Natural Resources Conservation Service (NRCS) indicates that site soils are primarily classified as:

USDA Soil Symbol	Hydrologic Group (HSG)	Texture	Character	% within disturbed area
CeB	C	Cazenovia silt loam	Well Drained	49.8%
OdA	D	Odessa silt loam	Somewhat poorly drained	32.6%
OvB	C/D	Ovid silt loam	Somewhat poorly drained	17.6%

The USDA NRCS Soil Survey is included in the appendix of this report.

(d) Proposed Conditions

The proposed development drainage patterns will mimic the existing drainage patterns and stormwater will be captured in new on-site catch basins and discharged to the existing mall storm sewer.

The proposed project site has been divided into 1 Watershed area(s) for analysis purposes. Ground covers, flow paths, and design points associated with proposed flows are depicted in the Proposed Conditions Watershed Areas Summary Table Below.

Watershed	Sub-Catchment	Ground Cover	Flow Path	Discharge Point
P-1	N/A	Grass, Impervious	Sheet flow to on-site catch basins; conveyed to hydro dynamic separator, discharging to existing swale along western property line of site. There is also a drainage swale along the northern property line that drains along the permitter to the same DP	DP-1

The proposed watershed areas, topography and flow paths are illustrated on the Proposed Watershed Plan, included in the appendix of this report.

(e) Stormwater Calculations

The proposed stormwater management system serves to mitigate the impact of the development. During major storm events, post-development peak rates are expected to be reduced from pre-development peak rates, as shown on the discharge quantity table(s) below.

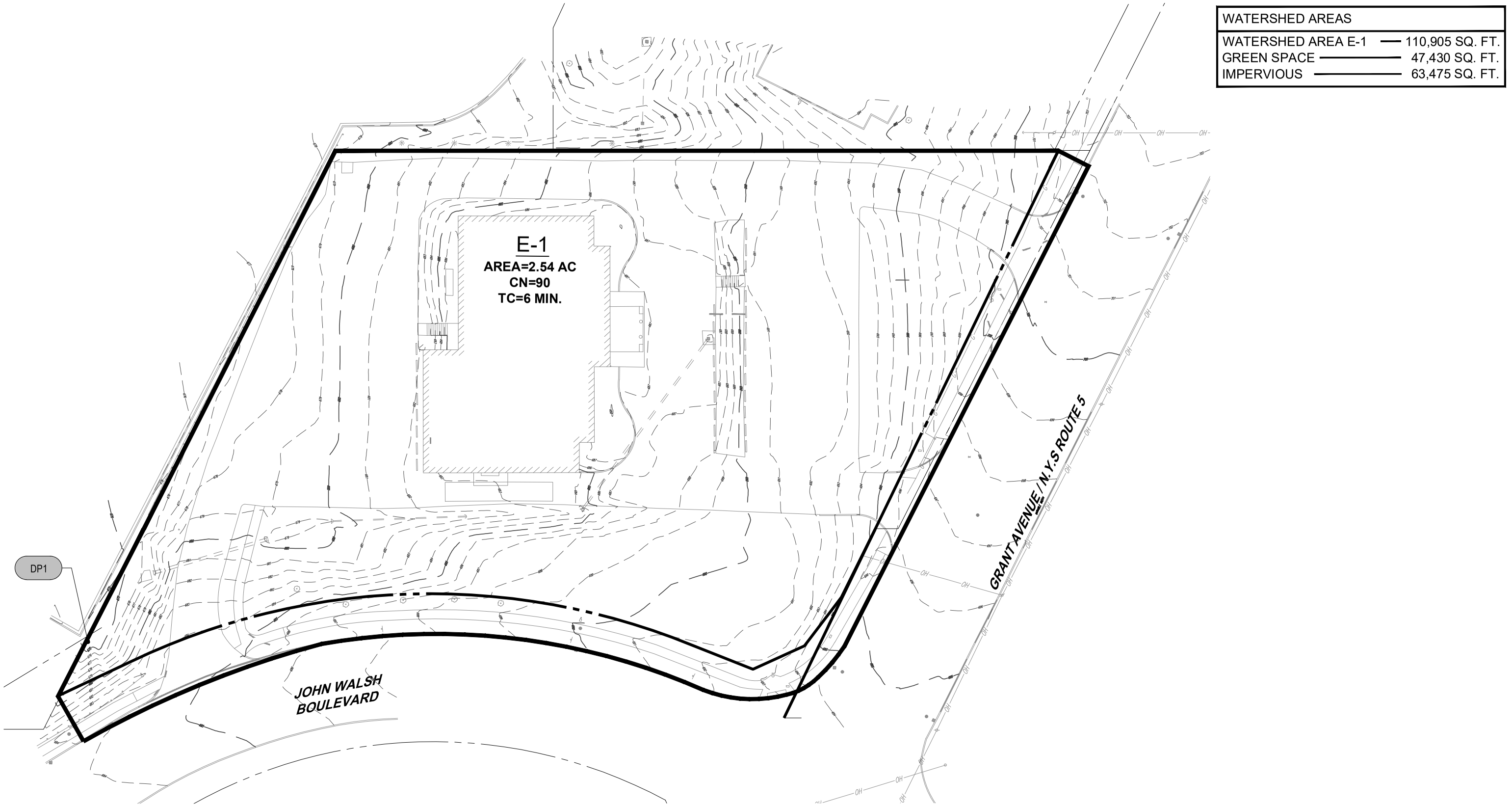
Rainfall Event	Design Point 1		
	Existing (cfs)	Proposed (cfs)	% Increase
1-year	±3.95	±3.45	13%
2-year	±4.70	±4.12	13%
10-year	±7.45	±6.73	10%
50-year	±9.77	±8.97	8%
100-year	±14.63	±13.74	6%

The existing and proposed stormwater models, depicting peak flow rates for pre- and post-development conditions are included within the appendix portion of this report.

APPENDIX "A"

Pre-Development Drainage Area Map

WATERSHED AREAS	
WATERSHED AREA E-1	110,905 SQ. FT.
GREEN SPACE	47,430 SQ. FT.
IMPERVIOUS	63,475 SQ. FT.



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BOHLER
BOHLER ENGINEERING NY, PLLC
[redacted] SUITE 15
ROCHESTER, NY 14625
Phone: (585) 866-1100
www.BohlerEngineering.com

PREDEVELOPMENT WATERSHED MAP

Chick-fil-A

[redacted], AUBURN, NY 13021

04/13/2026 | WB | NYB250120 | REV A

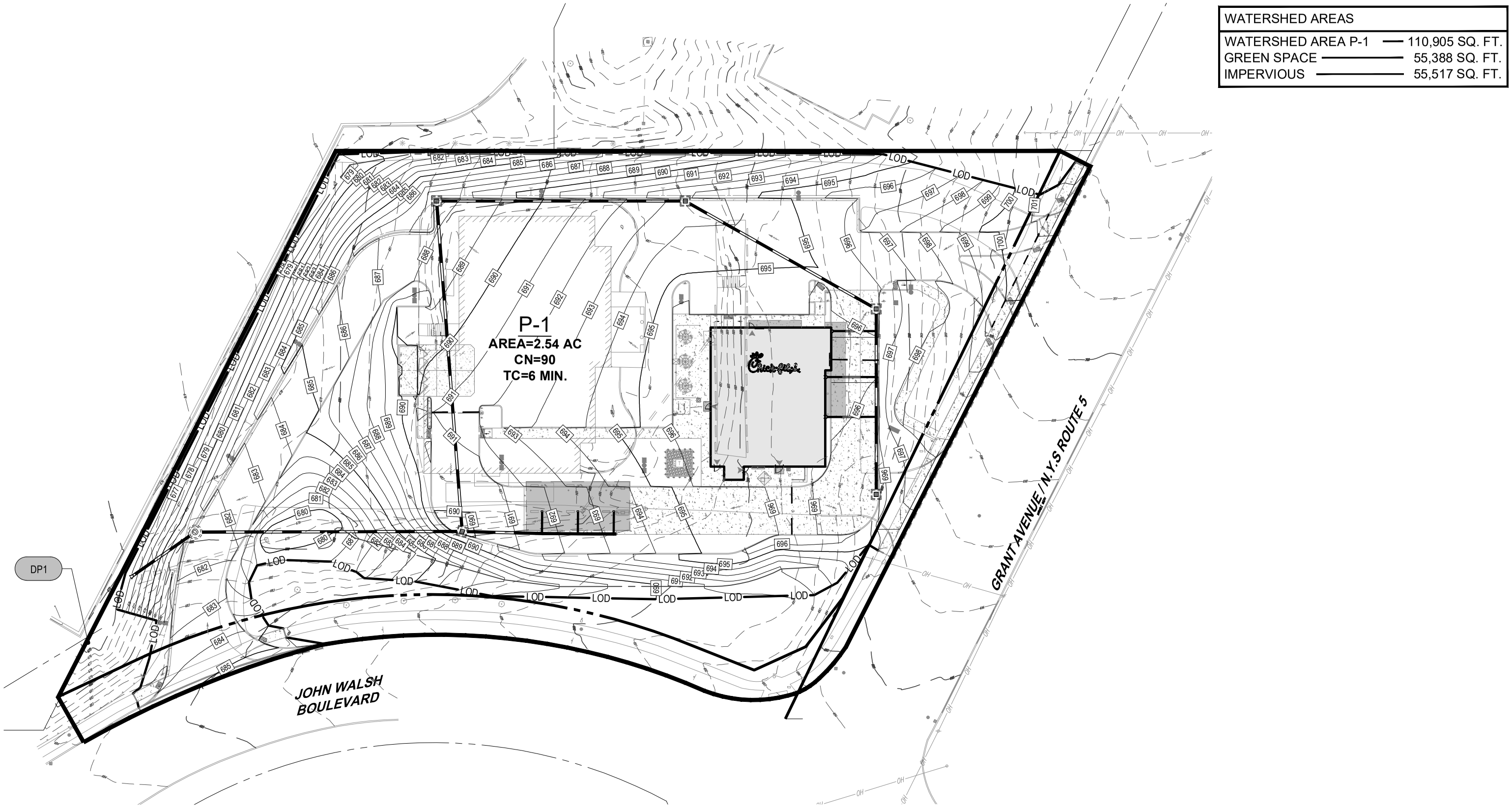
50 25 12.5 0 50

SCALE: 1" = 50'

APPENDIX "B"

Post-Development Drainage Area Map

WATERSHED AREAS	
WATERSHED AREA P-1	110,905 SQ. FT.
GREEN SPACE	55,388 SQ. FT.
IMPERVIOUS	55,517 SQ. FT.



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POST-DEVELOPMENT WATERSHED MAP

Chick-fil-A

[redacted], AUBURN, NY 13021

04/13/2026 | WB | NYB250120 | REV A

50 25 12.5 0 50

SCALE: 1" = 50'

APPENDIX "C"

NRCS SOIL SURVEY

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cayuga County, New York

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:841 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 40 80 160 240

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cayuga County, New York
Survey Area Data: Version 22, Sep 2, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CeB	Cazenovia silt loam, 2 to 8 percent slopes	1.1	49.8%
OdA	Odessa silt loam, 0 to 3 percent slopes	0.7	32.6%
OvB	Ovid silt loam, 2 to 6 percent slopes	0.4	17.6%
Totals for Area of Interest		**2.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cayuga County, New York

CeB—Cazenovia silt loam, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9q3n
Elevation: 330 to 1,020 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Cazenovia and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cazenovia

Setting

Landform: Till plains, reworked lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till that contains limestone with an admixture of reddish lake-laid clays or reddish clay shale

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 36 inches: silty clay loam
H3 - 36 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Ovid

Percent of map unit: 5 percent

Hydric soil rating: No

Romulus

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Ontario

Percent of map unit: 5 percent
Hydric soil rating: No

OdA—Odessa silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2wrd8
Elevation: 260 to 1,540 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Odessa and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Odessa

Setting

Landform: Lake terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Red clayey glaciolacustrine deposits derived from calcareous shale

Typical profile

Ap - 0 to 8 inches: silt loam
Bt/E - 8 to 10 inches: silty clay loam
Bt1 - 10 to 15 inches: silty clay
Bt2 - 15 to 25 inches: silty clay
C - 25 to 79 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F101XY009NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

Lakemont

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Schoharie

Percent of map unit: 5 percent
Landform: Lake terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Churchville

Percent of map unit: 3 percent
Landform: Drumlinoid ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Rhinebeck

Percent of map unit: 2 percent
Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

OvB—Ovid silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 9q6v
Elevation: 250 to 1,000 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Ovid and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ovid

Setting

Landform: Reworked lake plains, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till with a significant component of reddish shale or reddish glaciolacustrine clays, mixed with limestone and some sandstone

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 28 inches: silty clay loam
H3 - 28 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Cazenovia

Percent of map unit: 5 percent
Hydric soil rating: No

Odessa

Percent of map unit: 5 percent
Hydric soil rating: No

Kendaia

Percent of map unit: 5 percent
Hydric soil rating: No

Angola

Percent of map unit: 5 percent
Hydric soil rating: No

Romulus

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the following National Soil Survey Handbook link: “National Soil Survey Handbook.”

ABC soil

A soil having an A, a B, and a C horizon.

Ablation till

Loose, relatively permeable earthy material deposited during the downwasting of nearly static glacial ice, either contained within or accumulated on the surface of the glacier.

AC soil

A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil

The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil

Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil

A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial cone

A semiconical type of alluvial fan having very steep slopes. It is higher, narrower, and steeper than a fan and is composed of coarser and thicker layers of material deposited by a combination of alluvial episodes and (to a much lesser degree) landslides (debris flow). The coarsest materials tend to be concentrated at the apex of the cone.

Alluvial fan

A low, outspread mass of loose materials and/or rock material, commonly with gentle slopes. It is shaped like an open fan or a segment of a cone. The material was deposited by a stream at the place where it issues from a narrow mountain valley or upland valley or where a tributary stream is near or at its junction with the main stream. The fan is steepest near its apex, which points upstream, and slopes gently and convexly outward (downstream) with a gradual decrease in gradient.

Alluvium

Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Alpha,alpha-dipyridyl

A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

Animal unit month (AUM)

The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions

Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon

A subsoil horizon characterized by an accumulation of illuvial clay.

Arroyo

The flat-floored channel of an ephemeral stream, commonly with very steep to vertical banks cut in unconsolidated material. It is usually dry but can be transformed into a temporary watercourse or short-lived torrent after heavy rain within the watershed.

Aspect

The direction toward which a slope faces. Also called slope aspect.

Association, soil

A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity)

The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low: 0 to 3
Low: 3 to 6
Moderate: 6 to 9
High: 9 to 12
Very high: More than 12

Backslope

The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Backswamp

A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Badland

A landscape that is intricately dissected and characterized by a very fine drainage network with high drainage densities and short, steep slopes and narrow interfluves. Badlands develop on surfaces that have little or no vegetative cover overlying unconsolidated or poorly cemented materials (clays, silts, or sandstones) with, in some cases, soluble minerals, such as gypsum or halite.

Bajada

A broad, gently inclined alluvial piedmont slope extending from the base of a mountain range out into a basin and formed by the lateral coalescence of a series of alluvial fans. Typically, it has a broadly undulating transverse profile, parallel to the mountain front, resulting from the convexities of component fans. The term is generally restricted to constructional slopes of intermontane basins.

Basal area

The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation

The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope (geomorphology)

A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding plane

A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology)

from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

Bedding system

A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock

The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography

A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace

A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum

Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout (map symbol)

A saucer-, cup-, or trough-shaped depression formed by wind erosion on a preexisting dune or other sand deposit, especially in an area of shifting sand or loose soil or where protective vegetation is disturbed or destroyed. The adjoining accumulation of sand derived from the depression, where recognizable, is commonly included. Blowouts are commonly small.

Borrow pit (map symbol)

An open excavation from which soil and underlying material have been removed, usually for construction purposes.

Bottom land

An informal term loosely applied to various portions of a flood plain.

Boulders

Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks

A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.

Breast height

An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management

Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Butte

An isolated, generally flat-topped hill or mountain with relatively steep slopes and talus or precipitous cliffs and characterized by summit width that is less than the height of bounding escarpments; commonly topped by a caprock of resistant material and representing an erosion remnant carved from flat-lying rocks.

Cable yarding

A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

Calcareous soil

A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Caliche

A general term for a prominent zone of secondary carbonate accumulation in surficial materials in warm, subhumid to arid areas. Caliche is formed by both geologic and pedologic processes. Finely crystalline calcium carbonate forms a nearly continuous surface-coating and void-filling medium in geologic (parent) materials. Cementation ranges from weak in nonindurated forms to very strong in indurated forms. Other minerals (e.g., carbonates, silicate, and sulfate) may occur as accessory cements. Most petrocalcic horizons and some calcic horizons are caliche.

California bearing ratio (CBR)

The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy

The leafy crown of trees or shrubs. (See Crown.)

Canyon

A long, deep, narrow valley with high, precipitous walls in an area of high local relief.

Capillary water

Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena

A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material and under similar climatic conditions but that have different characteristics as a result of differences in relief and drainage.

Cation

An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity

The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Catsteps

See Terracettes.

Cement rock

Shaly limestone used in the manufacture of cement.

Channery soil material

Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment

Control of unwanted vegetation through the use of chemicals.

Chiseling

Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Cirque

A steep-walled, semicircular or crescent-shaped, half-bowl-like recess or hollow, commonly situated at the head of a glaciated mountain valley or high on the side of a mountain. It was produced by the erosive activity of a mountain glacier. It commonly contains a small round lake (tarn).

Clay

As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions

See Redoximorphic features.

Clay film

A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Clay spot (map symbol)

A spot where the surface texture is silty clay or clay in areas where the surface layer of the soils in the surrounding map unit is sandy loam, loam, silt loam, or coarser.

Claypan

A dense, compact subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. The layer restricts the downward movement of water through the soil. A claypan is commonly hard when dry and plastic and sticky when wet.

Climax plant community

The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil

Sand or loamy sand.

Cobble (or cobblestone)

A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material

Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility)

See Linear extensibility.

Colluvium

Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

Complex slope

Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil

A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions

See Redoximorphic features.

Conglomerate

A coarse grained, clastic sedimentary rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system

Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage

A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil

Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping

Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section

The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coprogenous earth (sedimentary peat)

A type of limnic layer composed predominantly of fecal material derived from aquatic animals.

Corrosion (geomorphology)

A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.

Corrosion (soil survey interpretations)

Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop

A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management

Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system

Growing crops according to a planned system of rotation and management practices.

Cross-slope farming

Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown

The upper part of a tree or shrub, including the living branches and their foliage.

Cryoturbate

A mass of soil or other unconsolidated earthy material moved or disturbed by frost action. It is typically coarser than the underlying material.

Cuesta

An asymmetric ridge capped by resistant rock layers of slight or moderate dip (commonly less than 15 percent slopes); a type of homocline produced by differential erosion of interbedded resistant and weak rocks. A cuesta has a long, gentle slope on one side (dip slope) that roughly parallels the inclined beds; on the other side, it has a relatively short and steep or clifflike slope (scarp) that cuts through the tilted rocks.

Culmination of the mean annual increment (CMAI)

The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave

The walls of excavations tend to cave in or slough.

Decreasers

The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing

Postponing grazing or resting grazing land for a prescribed period.

Delta

A body of alluvium having a surface that is fan shaped and nearly flat; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer

A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depression, closed (map symbol)

A shallow, saucer-shaped area that is slightly lower on the landscape than the surrounding area and that does not have a natural outlet for surface drainage.

Depth, soil

Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Desert pavement

A natural, residual concentration or layer of wind-polished, closely packed gravel, boulders, and other rock fragments mantling a desert surface. It forms where wind action and sheetwash have removed all smaller particles or where rock fragments have migrated upward through sediments to the surface. It typically protects the finer grained underlying material from further erosion.

Diatomaceous earth

A geologic deposit of fine, grayish siliceous material composed chiefly or entirely of the remains of diatoms.

Dip slope

A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace)

A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming

A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Drainage class (natural)

Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

Drainage, surface

Runoff, or surface flow of water, from an area.

Drainageway

A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Draw

A small stream valley that generally is shallower and more open than a ravine or gulch and that has a broader bottom. The present stream channel may appear inadequate to have cut the drainageway that it occupies.

Drift

A general term applied to all mineral material (clay, silt, sand, gravel, and boulders) transported by a glacier and deposited directly by or from the ice or transported by running water emanating from a glacier. Drift includes unstratified material (till) that forms moraines and stratified deposits that form outwash plains, eskers, kames, varves, and glaciofluvial sediments. The term is generally applied to Pleistocene glacial deposits in areas that no longer contain glaciers.

Drumlin

A low, smooth, elongated oval hill, mound, or ridge of compact till that has a core of bedrock or drift. It commonly has a blunt nose facing the direction from which the ice approached and a gentler slope tapering in the other direction. The longer axis is parallel to the general direction of glacier flow. Drumlins are products of streamline (laminar) flow of glaciers, which molded the subglacial floor through a combination of erosion and deposition.

Duff

A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Dune

A low mound, ridge, bank, or hill of loose, windblown granular material (generally sand), either barren and capable of movement from place to place or covered and stabilized with vegetation but retaining its characteristic shape.

Earthy fill

See Mine spoil.

Ecological site

An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation

The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation

A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian deposit

Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.

Ephemeral stream

A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation

A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion

The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (accelerated)

Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion (geologic)

Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion pavement

A surficial lag concentration or layer of gravel and other rock fragments that remains on the soil surface after sheet or rill erosion or wind has removed the finer soil particles and that tends to protect the underlying soil from further erosion.

Erosion surface

A land surface shaped by the action of erosion, especially by running water.

Escarpment

A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Escarpment, bedrock (map symbol)

A relatively continuous and steep slope or cliff, produced by erosion or faulting, that breaks the general continuity of more gently sloping land surfaces. Exposed material is hard or soft bedrock.

Escarpment, nonbedrock (map symbol)

A relatively continuous and steep slope or cliff, generally produced by erosion but in some places produced by faulting, that breaks the continuity of more gently sloping land surfaces. Exposed earthy material is nonsoil or very shallow soil.

Esker

A long, narrow, sinuous, steep-sided ridge of stratified sand and gravel deposited as the bed of a stream flowing in an ice tunnel within or below the ice (subglacial) or between ice walls on top of the ice of a wasting glacier and left

behind as high ground when the ice melted. Eskers range in length from less than a kilometer to more than 160 kilometers and in height from 3 to 30 meters.

Extrusive rock

Igneous rock derived from deep-seated molten matter (magma) deposited and cooled on the earth's surface.

Fallow

Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan remnant

A general term for landforms that are the remaining parts of older fan landforms, such as alluvial fans, that have been either dissected or partially buried.

Fertility, soil

The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat)

The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity

The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope

A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil

Sandy clay, silty clay, or clay.

Firebreak

An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom

An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.

Flaggy soil material

Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone

A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain

The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms

A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Flood-plain splay

A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.

Flood-plain step

An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.

Fluvial

Of or pertaining to rivers or streams; produced by stream or river action.

Foothills

A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).

Footslope

The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb

Any herbaceous plant not a grass or a sedge.

Forest cover

All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type

A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan

A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil

The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gilgai

Commonly, a succession of microbasins and microknolls in nearly level areas or of microvalleys and microridges parallel with the slope. Typically, the microrelief of clayey soils that shrink and swell considerably with changes in moisture content.

Glaciofluvial deposits

Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur in the form of outwash plains, valley trains, deltas, kames, eskers, and kame terraces.

Glaciolacustrine deposits

Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are bedded or laminated.

Gleyed soil

Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping

Growing crops in strips that grade toward a protected waterway.

Grassed waterway

A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel

Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravel pit (map symbol)

An open excavation from which soil and underlying material have been removed and used, without crushing, as a source of sand or gravel.

Gravelly soil material

Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Gravelly spot (map symbol)

A spot where the surface layer has more than 35 percent, by volume, rock fragments that are mostly less than 3 inches in diameter in an area that has less than 15 percent rock fragments.

Green manure crop (agronomy)

A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water

Water filling all the unblocked pores of the material below the water table.

Gully (map symbol)

A small, steep-sided channel caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage whereas a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock

Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim

Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Hardpan

A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head slope (geomorphology)

A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat)

Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops

Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill

A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope

A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil

A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon: An organic layer of fresh and decaying plant residue.

L horizon: A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

A horizon: The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon: The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon: The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon: The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon: Soft, consolidated bedrock beneath the soil.

R layer: Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

M layer: A root-limiting subsoil layer consisting of nearly continuous, horizontally oriented, human-manufactured materials.

W layer: A layer of water within or beneath the soil.

Humus

The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups

Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties include depth to a seasonal high water table, the infiltration rate, and depth to a layer that significantly restricts the downward movement of water. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock

Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

Illuviation

The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil

A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers

Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration

The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity

The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate

The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate

The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Very low: Less than 0.2
Low: 0.2 to 0.4
Moderately low: 0.4 to 0.75
Moderate: 0.75 to 1.25
Moderately high: 1.25 to 1.75
High: 1.75 to 2.5
Very high: More than 2.5

Interfluve

A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology)

A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream

A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders

On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions

See Redoximorphic features.

Irrigation

Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin: Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border: Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding: Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation: Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle): Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow: Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler: Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation: Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding: Water, released at high points, is allowed to flow onto an area without controlled distribution.

Kame

A low mound, knob, hummock, or short irregular ridge composed of stratified sand and gravel deposited by a subglacial stream as a fan or delta at the margin of a melting glacier; by a supraglacial stream in a low place or hole on the surface of the glacier; or as a ponded deposit on the surface or at the margin of stagnant ice.

Karst (topography)

A kind of topography that formed in limestone, gypsum, or other soluble rocks by dissolution and that is characterized by closed depressions, sinkholes, caves, and underground drainage.

Knoll

A small, low, rounded hill rising above adjacent landforms.

Ksat

See Saturated hydraulic conductivity.

Lacustrine deposit

Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lake plain

A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

Lake terrace

A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

Landfill (map symbol)

An area of accumulated waste products of human habitation, either above or below natural ground level.

Landslide

A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones

Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Lava flow (map symbol)

A solidified, commonly lobate body of rock formed through lateral, surface outpouring of molten lava from a vent or fissure.

Leaching

The removal of soluble material from soil or other material by percolating water.

Levee (map symbol)

An embankment that confines or controls water, especially one built along the banks of a river to prevent overflow onto lowlands.

Linear extensibility

Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^{1}/_{3}$- or $^{1}/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit

The moisture content at which the soil passes from a plastic to a liquid state.

Loam

Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess

Material transported and deposited by wind and consisting dominantly of silt-sized particles.

Low strength

The soil is not strong enough to support loads.

Low-residue crops

Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Marl

An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.

Marsh or swamp (map symbol)

A water-saturated, very poorly drained area that is intermittently or permanently covered by water. Sedges, cattails, and rushes are the dominant vegetation in marshes, and trees or shrubs are the dominant vegetation in swamps. Not used in map units where the named soils are poorly drained or very poorly drained.

Mass movement

A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

Masses

See Redoximorphic features.

Meander belt

The zone within which migration of a meandering channel occurs; the flood-plain area included between two imaginary lines drawn tangential to the outer bends of active channel loops.

Meander scar

A crescent-shaped, concave or linear mark on the face of a bluff or valley wall, produced by the lateral erosion of a meandering stream that impinged upon and undercut the bluff.

Meander scroll

One of a series of long, parallel, close-fitting, crescent-shaped ridges and troughs formed along the inner bank of a stream meander as the channel migrated laterally down-valley and toward the outer bank.

Mechanical treatment

Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil

Very fine sandy loam, loam, silt loam, or silt.

Mesa

A broad, nearly flat topped and commonly isolated landmass bounded by steep slopes or precipitous cliffs and capped by layers of resistant, nearly horizontal rocky material. The summit width is characteristically greater than the height of the bounding escarpments.

Metamorphic rock

Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth’s crust. Nearly all such rocks are crystalline.

Mine or quarry (map symbol)

An open excavation from which soil and underlying material have been removed and in which bedrock is exposed. Also denotes surface openings to underground mines.

Mine spoil

An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.

Mineral soil

Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage

Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area

A kind of map unit that has little or no natural soil and supports little or no vegetation.

Miscellaneous water (map symbol)

Small, constructed bodies of water that are used for industrial, sanitary, or mining applications and that contain water most of the year.

Moderately coarse textured soil

Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil

Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon

A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Moraine

In terms of glacial geology, a mound, ridge, or other topographically distinct accumulation of unsorted, unstratified drift, predominantly till, deposited primarily by the direct action of glacial ice in a variety of landforms. Also, a general term for a landform composed mainly of till (except for kame moraines, which are composed mainly of stratified outwash) that has been deposited by a glacier. Some types of moraines are disintegration, end, ground, kame, lateral, recessional, and terminal.

Morphology, soil

The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil

Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mountain

A generic term for an elevated area of the land surface, rising more than 1,000 feet (300 meters) above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can

occur as a single, isolated mass or in a group forming a chain or range. Mountains are formed primarily by tectonic activity and/or volcanic action but can also be formed by differential erosion.

Muck

Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mucky peat

See Hemic soil material.

Mudstone

A blocky or massive, fine grained sedimentary rock in which the proportions of clay and silt are approximately equal. Also, a general term for such material as clay, silt, claystone, siltstone, shale, and argillite and that should be used only when the amounts of clay and silt are not known or cannot be precisely identified.

Munsell notation

A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon

A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil

A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules

See Redoximorphic features.

Nose slope (geomorphology)

A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).

Nutrient, plant

Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter

Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low: Less than 0.5 percent
Low: 0.5 to 1.0 percent
Moderately low: 1.0 to 2.0 percent
Moderate: 2.0 to 4.0 percent
High: 4.0 to 8.0 percent
Very high: More than 8.0 percent

Outwash

Stratified and sorted sediments (chiefly sand and gravel) removed or “washed out” from a glacier by meltwater streams and deposited in front of or beyond the end moraine or the margin of a glacier. The coarser material is deposited nearer to the ice.

Outwash plain

An extensive lowland area of coarse textured glaciofluvial material. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Paleoterrace

An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan

A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material

The unconsolidated organic and mineral material in which soil forms.

Peat

Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped

An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment

A layer of sediment, eroded from the shoulder and backslope of an erosional slope, that lies on and is being (or was) transported across a gently sloping erosional surface at the foot of a receding hill or mountain slope.

Pedon

The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation

The movement of water through the soil.

Perennial water (map symbol)

Small, natural or constructed lakes, ponds, or pits that contain water most of the year.

Permafrost

Ground, soil, or rock that remains at or below 0 degrees C for at least 2 years. It is defined on the basis of temperature and is not necessarily frozen.

pH value

A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil

A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping

Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting

Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plastic limit

The moisture content at which a soil changes from semisolid to plastic.

Plasticity index

The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plateau (geomorphology)

A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.

Playa

The generally dry and nearly level lake plain that occupies the lowest parts of closed depressions, such as those on intermontane basin floors. Temporary flooding occurs primarily in response to precipitation and runoff. Playa deposits are fine grained and may or may not have a high water table and saline conditions.

Plinthite

The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan

A compacted layer formed in the soil directly below the plowed layer.

Ponding

Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded

Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings

See Redoximorphic features.

Potential native plant community

See Climax plant community.

Potential rooting depth (effective rooting depth)

Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning

Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil

The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil

A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use

Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and

promotes the accumulation of litter and mulch necessary to conserve soil and water.

Rangeland

Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Reaction, soil

A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid: Less than 3.5
Extremely acid: 3.5 to 4.4
Very strongly acid: 4.5 to 5.0
Strongly acid: 5.1 to 5.5
Moderately acid: 5.6 to 6.0
Slightly acid: 6.1 to 6.5
Neutral: 6.6 to 7.3
Slightly alkaline: 7.4 to 7.8
Moderately alkaline: 7.9 to 8.4
Strongly alkaline: 8.5 to 9.0
Very strongly alkaline: 9.1 and higher

Red beds

Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

Redoximorphic concentrations

See Redoximorphic features.

Redoximorphic depletions

See Redoximorphic features.

Redoximorphic features

Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
   A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*
   B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*
   C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.
2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:
   A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*
   B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).
3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix

See Redoximorphic features.

Regolith

All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief

The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Residuum (residual soil material)

Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

Rill

A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

Riser

The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

Road cut

A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments

Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rock outcrop (map symbol)

An exposure of bedrock at the surface of the earth. Not used where the named soils of the surrounding map unit are shallow over bedrock or where “Rock outcrop” is a named component of the map unit.

Root zone

The part of the soil that can be penetrated by plant roots.

Runoff

The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil

A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Saline spot (map symbol)

An area where the surface layer has an electrical conductivity of 8 mmhos/cm more than the surface layer of the named soils in the surrounding map unit. The surface layer of the surrounding soils has an electrical conductivity of 2 mmhos/cm or less.

Sand

As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone

Sedimentary rock containing dominantly sand-sized particles.

Sandy spot (map symbol)

A spot where the surface layer is loamy fine sand or coarser in areas where the surface layer of the named soils in the surrounding map unit is very fine sandy loam or finer.

Sapric soil material (muck)

The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturated hydraulic conductivity (Ksat)

The ease with which pores of a saturated soil transmit water. Formally, the proportionality coefficient that expresses the relationship of the rate of water movement to hydraulic gradient in Darcy's Law, a law that describes the rate of water movement through porous media. Commonly abbreviated as "Ksat." Terms describing saturated hydraulic conductivity are:

Very high: 100 or more micrometers per second (14.17 or more inches per hour)

High: 10 to 100 micrometers per second (1.417 to 14.17 inches per hour)

Moderately high: 1 to 10 micrometers per second (0.1417 inch to 1.417 inches per hour)

Moderately low: 0.1 to 1 micrometer per second (0.01417 to 0.1417 inch per hour)

Low: 0.01 to 0.1 micrometer per second (0.001417 to 0.01417 inch per hour)

Very low: Less than 0.01 micrometer per second (less than 0.001417 inch per hour).

To convert inches per hour to micrometers per second, multiply inches per hour by 7.0572. To convert micrometers per second to inches per hour, multiply micrometers per second by 0.1417.

Saturation

Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification

The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Sedimentary rock

A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

Sequum

A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil

A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Severely eroded spot (map symbol)

An area where, on the average, 75 percent or more of the original surface layer has been lost because of accelerated erosion. Not used in map units in which “severely eroded,” “very severely eroded,” or “gullied” is part of the map unit name.

Shale

Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

Sheet erosion

The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Short, steep slope (map symbol)

A narrow area of soil having slopes that are at least two slope classes steeper than the slope class of the surrounding map unit.

Shoulder

The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

Shrink-swell

The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Shrub-coppice dune

A small, streamlined dune that forms around brush and clump vegetation.

Side slope (geomorphology)

A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silica

A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio

The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt

As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone

An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.

Similar soils

Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole (map symbol)

A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.

Site index

A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides (pedogenic)

Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

Slide or slip (map symbol)

A prominent landform scar or ridge caused by fairly recent mass movement or descent of earthy material resulting from failure of earth or rock under shear stress along one or several surfaces.

Slope

The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Slope alluvium

Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

Slow refill

The slow filling of ponds, resulting from restricted water transmission in the soil.

Slow water movement

Restricted downward movement of water through the soil. See Saturated hydraulic conductivity.

Sodic (alkali) soil

A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodic spot (map symbol)

An area where the surface layer has a sodium adsorption ratio that is at least 10 more than that of the surface layer of the named soils in the surrounding map unit. The surface layer of the surrounding soils has a sodium adsorption ratio of 5 or less.

Sodicity

The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^{+} to $Ca^{++} + Mg^{++}$. The degrees of sodicity and their respective ratios are:

Slight: Less than 13:1
Moderate: 13-30:1
Strong: More than 30:1

Sodium adsorption ratio (SAR)

A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock

Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil

A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates

Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand: 2.0 to 1.0
Coarse sand: 1.0 to 0.5
Medium sand: 0.5 to 0.25
Fine sand: 0.25 to 0.10
Very fine sand: 0.10 to 0.05
Silt: 0.05 to 0.002
Clay: Less than 0.002

Solum

The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Spoil area (map symbol)

A pile of earthy materials, either smoothed or uneven, resulting from human activity.

Stone line

In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial. Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

Stones

Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony

Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stony spot (map symbol)

A spot where 0.01 to 0.1 percent of the soil surface is covered by rock fragments that are more than 10 inches in diameter in areas where the surrounding soil has no surface stones.

Strath terrace

A type of stream terrace; formed as an erosional surface cut on bedrock and thinly mantled with stream deposits (alluvium).

Stream terrace

One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Stripcropping

Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil

The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are:

Platy: Flat and laminated

Prismatic: Vertically elongated and having flat tops

Columnar: Vertically elongated and having rounded tops

Angular blocky: Having faces that intersect at sharp angles (planes)

Subangular blocky: Having subrounded and planar faces (no sharp angles)

Granular: Small structural units with curved or very irregular faces

Structureless soil horizons are defined as follows:

Single grained: Entirely noncoherent (each grain by itself), as in loose sand

Massive: Occurring as a coherent mass

Stubble mulch

Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil

Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling

Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum

The part of the soil below the solum.

Subsurface layer

Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow

The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit

The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer

The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil

The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus

Rock fragments of any size or shape (commonly coarse and angular) derived from and lying at the base of a cliff or very steep rock slope. The accumulated mass of such loose broken rock formed chiefly by falling, rolling, or sliding.

Taxadjuncts

Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terminal moraine

An end moraine that marks the farthest advance of a glacier. It typically has the form of a massive arcuate or concentric ridge, or complex of ridges, and is underlain by till and other types of drift.

Terrace (conservation)

An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field

generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geomorphology)

A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

Terracettes

Small, irregular steplike forms on steep hillslopes, especially in pasture, formed by creep or erosion of surficial materials that may be induced or enhanced by trampling of livestock, such as sheep or cattle.

Texture, soil

The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer

Otherwise suitable soil material that is too thin for the specified use.

Till

Dominantly unsorted and nonstratified drift, generally unconsolidated and deposited directly by a glacier without subsequent reworking by meltwater, and consisting of a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders; rock fragments of various lithologies are embedded within a finer matrix that can range from clay to sandy loam.

Till plain

An extensive area of level to gently undulating soils underlain predominantly by till and bounded at the distal end by subordinate recessional or end moraines.

Tilth, soil

The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope

The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil

The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements

Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tread

The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

Tuff

A generic term for any consolidated or cemented deposit that is 50 percent or more volcanic ash.

Upland

An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Valley fill

The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.

Variegation

Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve

A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

Very stony spot (map symbol)

A spot where 0.1 to 3.0 percent of the soil surface is covered by rock fragments that are more than 10 inches in diameter in areas where the surface of the surrounding soil is covered by less than 0.01 percent stones.

Water bars

Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering

All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth’s surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded

Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wet spot (map symbol)

A somewhat poorly drained to very poorly drained area that is at least two drainage classes wetter than the named soils in the surrounding map unit.

Wilting point (or permanent wilting point)

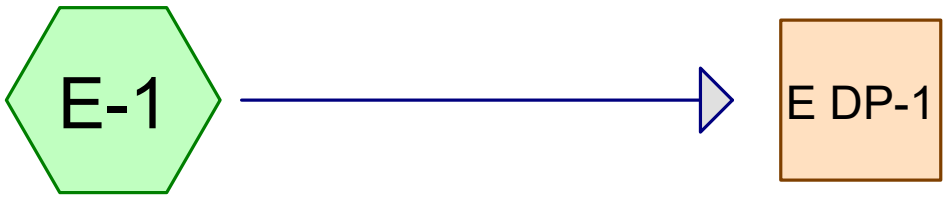
The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow

The uprooting and tipping over of trees by the wind.

APPENDIX "D"

HYDRAULIC CALCULATIONS



Existing Watershed 1

EX. Design Point 1

Subcat Reach Pond Link

Routing Diagram for Auburn CFA_Redevlopment - All Cond
Prepared by Bohler Engineering, PC, Printed 4/13/2026
HydroCAD® 10.20-8a s/n 03478 © 2025 HydroCAD Software Solutions LLC

Project Notes

Defined 9 rainfall events from NY-Big Flats IDF
Copied 9 events from NY-Big Flats 24-hr S1 storm

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.089	61	>75% Grass cover, Good, HSG B (E-1)
1.457	98	Paved parking, HSG D (E-1)
2.546	**82**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
1.089	HSG B	E-1
0.000	HSG C	
1.457	HSG D	E-1
0.000	Other	
2.546		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	1.089	0.000	0.000	0.000	1.089	>75% Grass cover, Good	E-1
0.000	0.000	0.000	1.457	0.000	1.457	Paved parking	E-1
0.000	**1.089**	**0.000**	**1.457**	**0.000**	**2.546**	**TOTAL AREA**	

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment E-1: Existing Watershed 1 Runoff Area=110,905 sf 57.23% Impervious Runoff Depth>3.73"
Tc=6.0 min CN=WQ Runoff=14.63 cfs 0.792 af

Reach E DP-1: EX. Design Point 1 Inflow=14.63 cfs 0.792 af
Outflow=14.63 cfs 0.792 af

Total Runoff Area = 2.546 ac Runoff Volume = 0.792 af Average Runoff Depth = 3.73"
42.77% Pervious = 1.089 ac 57.23% Impervious = 1.457 ac

Summary for Subcatchment E-1: Existing Watershed 1

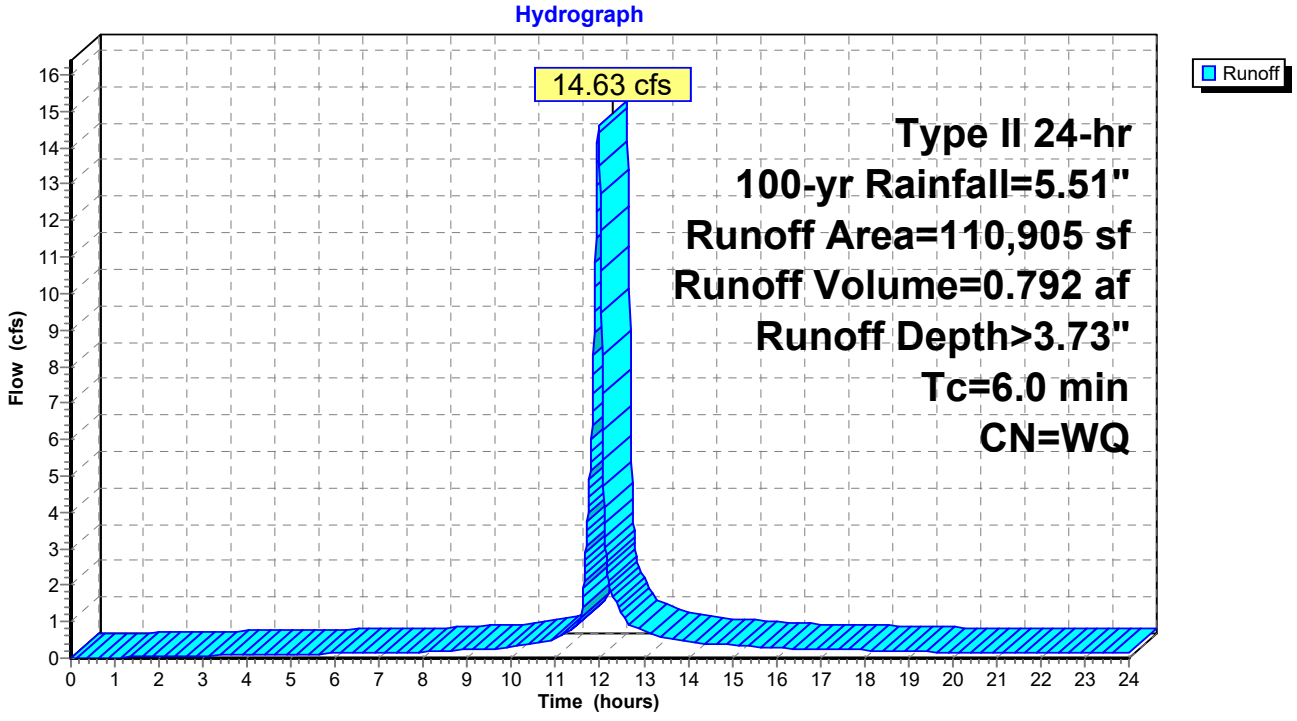
Runoff = 14.63 cfs @ 11.97 hrs, Volume= 0.792 af, Depth> 3.73"
Routed to Reach E DP-1 : EX. Design Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=5.51"

Area (sf)	CN	Description
47,430	61	>75% Grass cover, Good, HSG B
63,475	98	Paved parking, HSG D
110,905		Weighted Average
47,430		42.77% Pervious Area
63,475		57.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment E-1: Existing Watershed 1



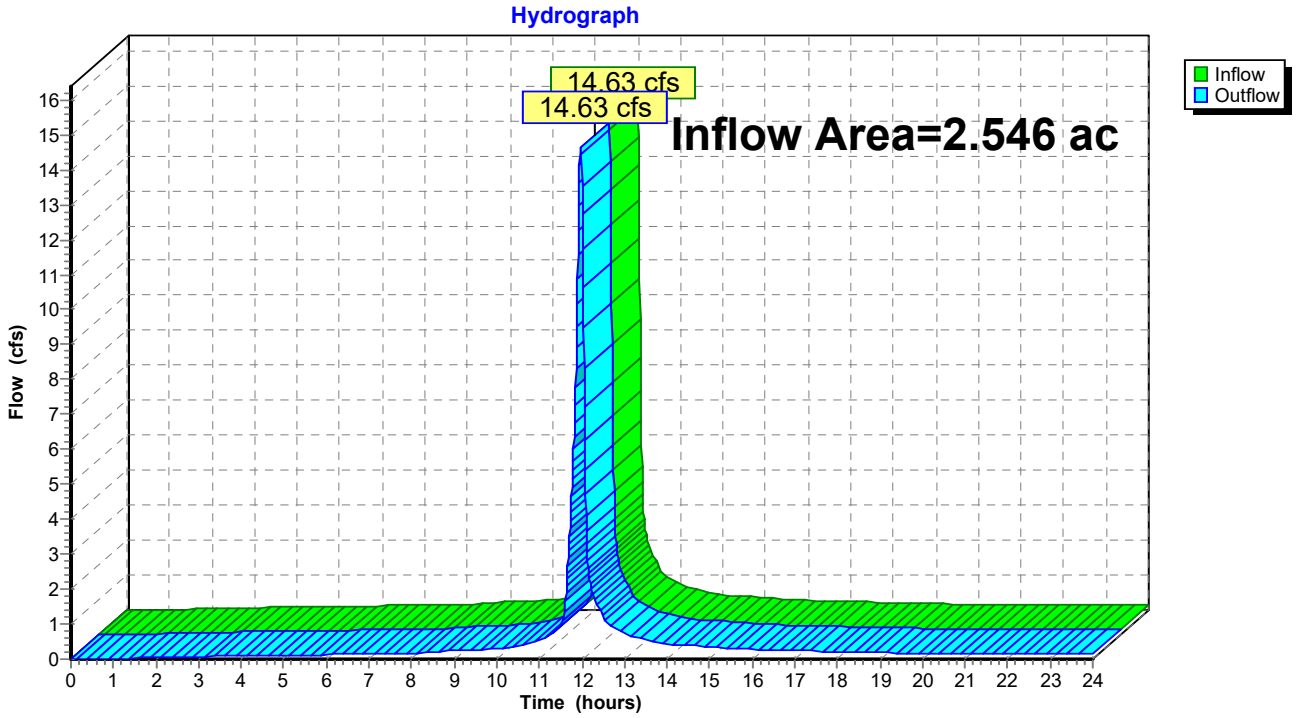
Summary for Reach E DP-1: EX. Design Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.546 ac, 57.23% Impervious, Inflow Depth > 3.73" for 100-yr event
Inflow = 14.63 cfs @ 11.97 hrs, Volume= 0.792 af
Outflow = 14.63 cfs @ 11.97 hrs, Volume= 0.792 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Reach E DP-1: EX. Design Point 1



Proposed Watershed P-1

PR. Design Point 1

Subcat Reach Pond Link

Routing Diagram for Auburn CFA_Redevlopment - All Cond
Prepared by Bohler Engineering, PC, Printed 4/13/2026
HydroCAD® 10.20-8a s/n 03478 © 2025 HydroCAD Software Solutions LLC

Project Notes

Defined 9 rainfall events from NY-Big Flats IDF
Copied 9 events from NY-Big Flats 24-hr S1 storm

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.272	61	>75% Grass cover, Good, HSG B (P-1)
1.274	98	Paved parking, HSG D (P-1)
2.546	**80**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
1.272	HSG B	P-1
0.000	HSG C	
1.274	HSG D	P-1
0.000	Other	
2.546		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	1.272	0.000	0.000	0.000	1.272	>75% Grass cover, Good	P-1
0.000	0.000	0.000	1.274	0.000	1.274	Paved parking	P-1
0.000	**1.272**	**0.000**	**1.274**	**0.000**	**2.546**	**TOTAL AREA**	

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P-1: Proposed Watershed Runoff Area=110,905 sf 50.06% Impervious Runoff Depth>3.48"
Tc=6.0 min CN=WQ Runoff=13.74 cfs 0.738 af

Reach P DP-1: PR. Design Point 1 Inflow=13.74 cfs 0.738 af
Outflow=13.74 cfs 0.738 af

Total Runoff Area = 2.546 ac Runoff Volume = 0.738 af Average Runoff Depth = 3.48"
49.94% Pervious = 1.272 ac 50.06% Impervious = 1.274 ac

Summary for Subcatchment P-1: Proposed Watershed P-1

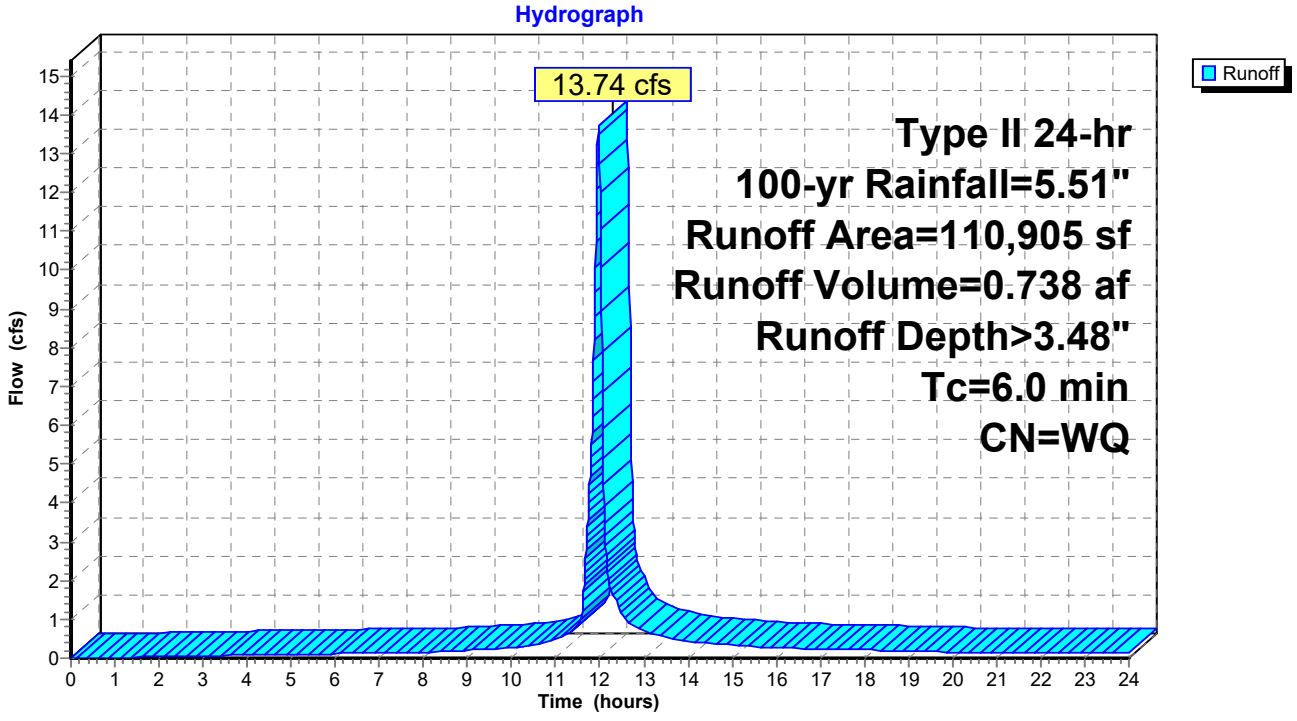
Runoff = 13.74 cfs @ 11.97 hrs, Volume= 0.738 af, Depth> 3.48"
Routed to Reach P DP-1 : PR. Design Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=5.51"

Area (sf)	CN	Description
55,388	61	>75% Grass cover, Good, HSG B
55,517	98	Paved parking, HSG D
110,905		Weighted Average
55,388		49.94% Pervious Area
55,517		50.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment P-1: Proposed Watershed P-1



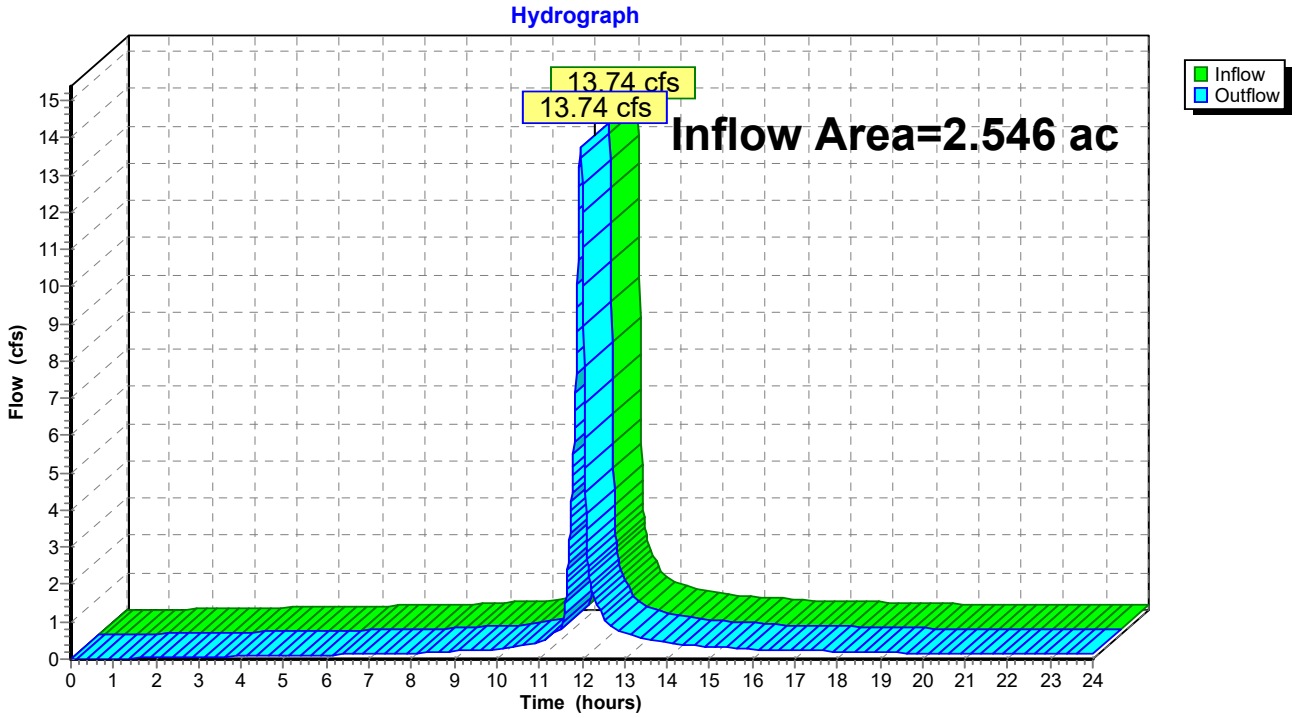
Summary for Reach P DP-1: PR. Design Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.546 ac, 50.06% Impervious, Inflow Depth > 3.48" for 100-yr event
Inflow = 13.74 cfs @ 11.97 hrs, Volume= 0.738 af
Outflow = 13.74 cfs @ 11.97 hrs, Volume= 0.738 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Reach P DP-1: PR. Design Point 1



APPENDIX "E"

OPERATIONS AND MAINTANENCE PLAN

SHORT TERM MEASURES (FREQUENCY: AT LEAST ONCE A MONTH)

1. CATCH BASINS AND DRAINAGE STRUCTURES
   - INSPECT ON-SITE CATCH BASINS AND MANHOLES
   - CHECK INLET AND OUTLET PIPES FOR OBSTRUCTIONS AND DISPOSE OFF-SITE AS NEEDED
   - CHECK SUMPS FOR SEDIMENT AND DEBRIS. DISPOSE OFF-SITE IF MORE THAN 6" OF SEDIMENT HAS ACCUMULATED.
   - CHECK ROOF OUTLET PIPES FOR OBSTRUCTIONS AND DISPOSE OFF-SITE AS NEEDED.

2. STORM DRAIN PIPES
   - INSPECT ON-SITE CATCH BASINS AND MANHOLES
   - CHECK ROOF OUTLET PIPES FOR OBSTRUCTIONS AND DISPOSE OFF-SITE AS NEEDED.

3. HYDRODYNAMIC SEPARATOR
   - INSPECT AND MAINTAIN PER THE OPERATIONS AND MAINTENANCE MANUAL INCLUDED IN THE SWPPP
   - BASED ON INITIAL INSPECTIONS, A MAINTENANCE SCHEDULE CAN BE ESTABLISHED FOR ROUTINE CLEANING

LONG TERM MEASURES (FREQUENCY: TWICE YEARLY)

4. REPEAT SHORT TERM INSPECTION ITEMS
   - EXTENSIVE INSPECTION OF ALL SHORT TERM INSPECTION ITEMS
   - SPEED PAVED PARKING AND ACCESS AREAS AND DISPOSE OF DEBRIS OFFSITE

5. SWPPP INSPECTION
   - INSPECTION OF ENTIRE SYSTEM SHALL BE CONDUCTED AND A REPORT SHALL BE PREPARED BY A QUALIFIED INSPECTOR MEETING THE REQUIREMENTS AS SET FORTH IN THE GENERAL PERMIT, INCLUDED IN THE SWPPP. THE REPORT SHALL INCLUDE A DESCRIPTION OF ALL INSPECTION FINDINGS, ACTIONS COMPLETED AND ACTIONS REQUIRED TO DATE.
   - THE SWPPP INSPECTION FORMS SHALL BE COMPLETED AND KEPT ON-SITE BY THE OWNER FOR FUTURE REFERENCE FOR THE LIFETIME OF THE FACILITY.

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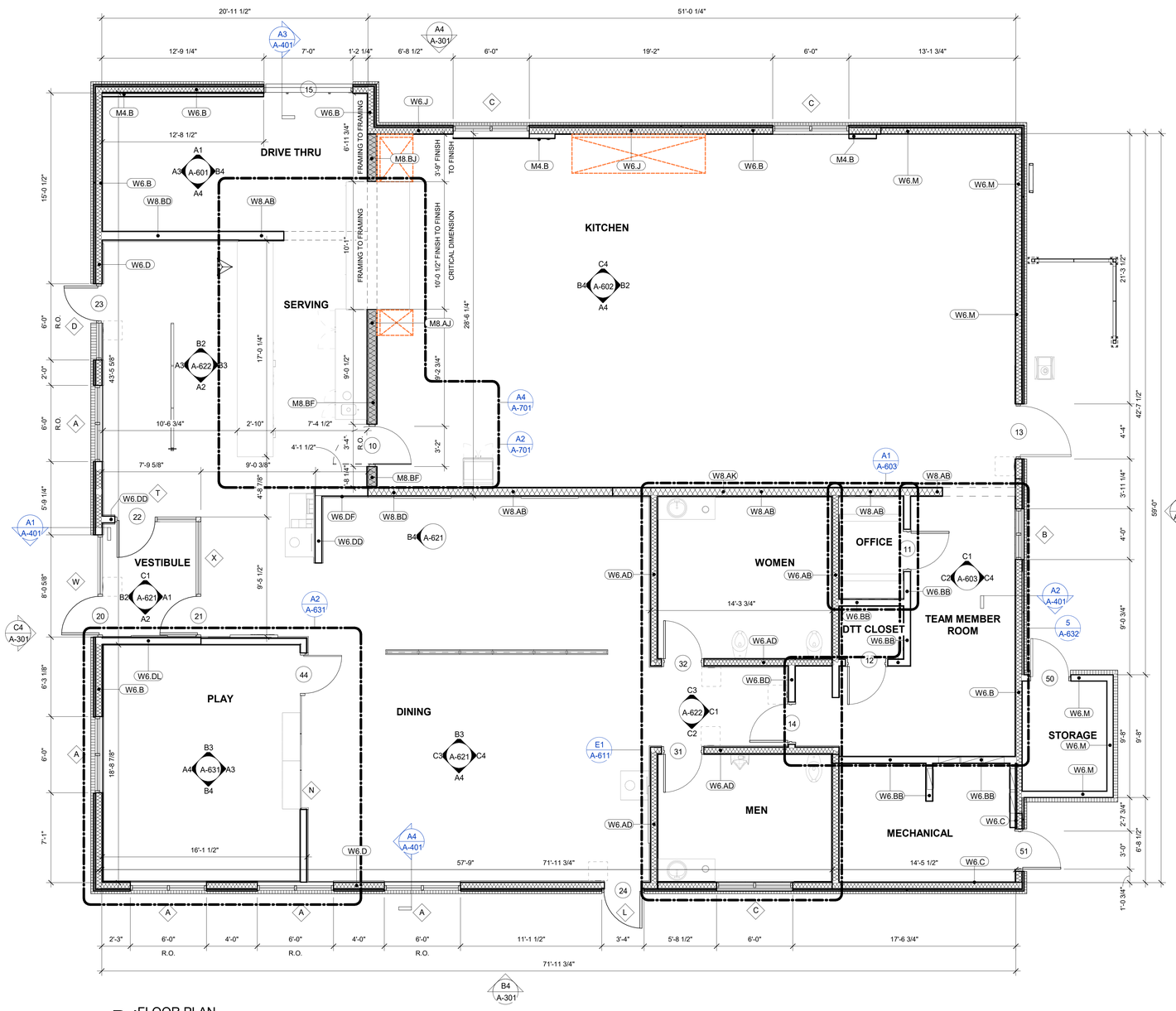
OPERATION & MAINTENANCE PLAN

Chick-fil-A

821 GRANT AVENUE, AUBURN, NY 13021

04/13/2026 | WB | NYB250120 | REV A

50 25 12.5 0 50
SCALE: 1" = 50'



B4 FLOOR PLAN
1/4" = 1'-0"

FLOOR PLAN LEGEND:

- CT CABINET RE: ELECTRICAL
- MDP RE: ELECTRICAL
- STEEL WALL BY OWNER RE: OWNER FOR EXACT LOCATIONS
- ITEM BY OWNER
- SOFFIT OR BULKHEAD ABOVE RE: REFLECTED CEILING PLAN
- 2-SIDED BRAND ICON RE: OWNER DRAWINGS
- RECESSED PIN AND SLEEVE BOX. RE: A4/A620 & MEP DRAWINGS.
- ELECTRICAL PANEL RE: ELECTRICAL

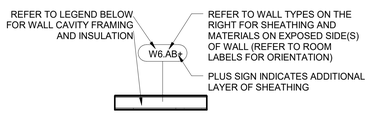
INSULATION SCHEDULE

LOCATION	R-VALUE	THICKNESS
ROOF	R-29	5" RIGID
WALL (CONTINUOUS)	R-5	1" RIGID
WALL (CAVITY)	R-19	6" BATT
SLAB	R-10	2" RIGID

NOTES:
1. REFER TO FLOOR PLAN AND WALL SECTION SHEETS FOR INSULATION EXTENTS AND LOCATIONS.
2. REFER TO SPECIFICATIONS FOR INSULATION PRODUCT INFORMATION.

FLOOR PLAN GENERAL NOTES

A.1 DIMENSIONS ARE FROM FACE OF STUD TO FACE OF STUD (UNLESS OTHERWISE NOTED).
A.2 FASTENERS, ANCHORS, CLIPS, STRAPS, ETC WHICH ARE IN CONTACT WITH PRESERVATIVE AND/OR FIRE TREATED WOOD SHALL BE OF G-185 HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, OR AN APPROVED EQUAL.
A.3 REFER TO CIVIL AND LANDSCAPE FOR LOCATIONS OF WALKS, BOLLARDS, LANDSCAPING AREAS, FLAG POLE, AND OTHER SITE ITEMS.
A.4 REFER TO INTERIOR ELEVATIONS FOR LOCATIONS AND TYPES OF CORNER GUARDS.
A.5 CONTRACTOR TO COORDINATE LOCATION OF POLE MOUNTED EXTERIOR CAMERA WITH STRONG SYSTEMS AND INSTALL UNDERGROUND CONDUIT AS REQUIRED. RE: ELECTRICAL.
A.6 REFER TO ACCESSIBILITY PLAN AND FURNITURE DRAWINGS FOR SEATING LAYOUT & SPECIFICATIONS. CONTACT: OWNER.
A.7 REFER TO ACCESSIBILITY PLAN AND OWNER DRAWINGS FOR CONDIMENT COUNTERS AND TRASH RECEPTACLES.
A.8 NOT USED
A.9 REFER TO MILLWORK PLAN FOR RAISED CONCRETE CURB LOCATIONS
A.10 FREEZER AND COOLER DOORS AND HARDWARE SUPPLIED BY FREEZER/COOLER MANUFACTURER



WOOD STUD WALL	
W4	2x4 WOOD STUDS
W6	2x6 WOOD STUDS
W8	2x8 WOOD STUDS
METAL STUD WALL	
M4	3 5/8" METAL STUDS
M6	6" METAL STUDS
M8	8" METAL STUDS
BATT INSULATION	

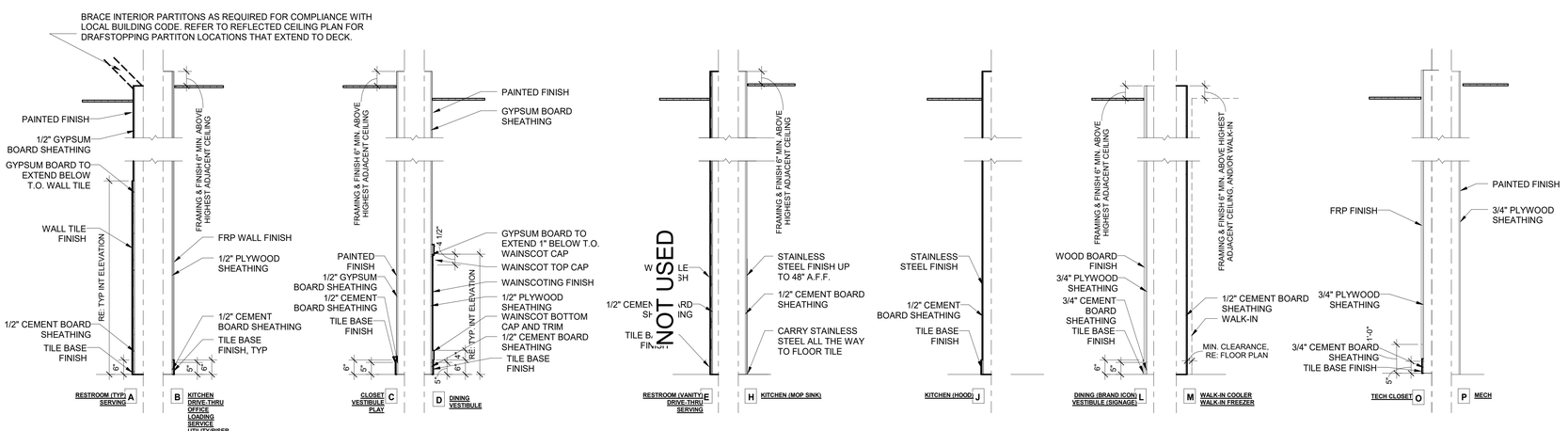
NOTE 1: WALL BLOCKING SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY. BLOCKING SHALL INCLUDE, BUT IS NOT LIMITED TO: AREAS INDICATED ON INTERIOR ELEVATIONS FOR GRAB BARS, SHELVING BRACKETS, MONITORS, FIXTURES, ETC, AS WELL AS BLOCKING FOR WINDOWS, CANOPIES ROOF FRAMING, ROOF TOP UNITS, ETC.

NOTE 2: REFER TO STRUCTURAL DRAWINGS AND WALL SECTIONS FOR EXTERIOR WALL CONSTRUCTION.

NOTE 3: REFER TO FINISH PLAN FOR WALL FINISH INFO AND SPECIFICATIONS FOR WALL SHEATHING INFO

NOTE 4: GENERAL CONTRACTOR TO PROVIDE AND/OR VERIFY FIRE BLOCKING AND DRAFTSTOPPING AT CEILING HEIGHT IN ALL COMBUSTIBLE CONSTRUCTION AS REQUIRED ACCORDING TO LOCAL CODE REQUIREMENTS.

WALL TYPES LEGEND
N.T.S.



Chick-fil-A
[redacted]
Atlanta, Georgia
30349-2998

HFA
HFA-AE, LTD.
t 479.273.7780
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
www.hfa-ae.com

NOT FOR CONSTRUCTION

CHICK-FIL-A NEW RESTAURANT
[redacted]
AUBURN, NY 13021

FSR#06315

RELEASE: 26.02
PRINTED FOR
PERMIT

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
N/A	N/A	

CONSULTANT PROJECT # 16-26-60008
DATE 04/13/2026
DRAWN BY Author

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SHEET
FLOOR PLAN

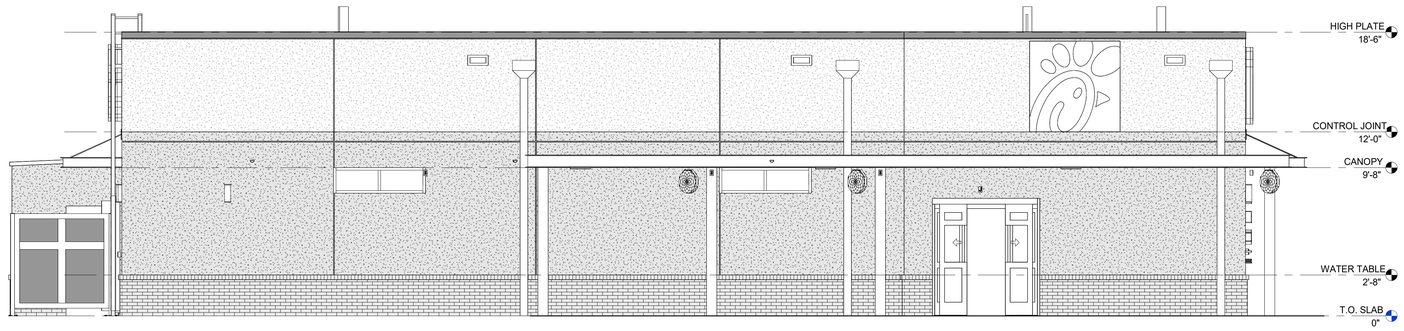
SHEET NUMBER
A-201

4/13/2026 9:01:42 AM Autodesk Docs://NY_06315_Auburn (NY) FSU_2026.4_FSR06315_Auburn_NY_ARC_SE.rvt
10-SE-16-26-60008-A-201-FLOOR PLAN

D4 EXTERIOR ELEVATION
1/4" = 1'-0"

C4 EXTERIOR ELEVATION
1/4" = 1'-0"

B4 EXTERIOR ELEVATION
1/4" = 1'-0"



A4 EXTERIOR ELEVATION
1/4" = 1'-0"

GENERAL NOTES
1. ALL SIGNAGE PROVIDED BY OTHERS
2. REF FLOOR PLAN AND WINDOW LEGEND FOR STOREFRONT INFORMATION

CANOPY NOTES:

ATTACHED CANOPIES - 8" THICK CANOPY
- KYNAR FINISH OF STRUCTURE, FASCIA, & DECKING TO MATCH (PT-113)

DETACHED CANOPIES - 10" THICK CANOPY
- SEE RCP AND EXTERIOR ELEVS FOR FINISHES

BUILDING MOUNTED CANOPIES - 8" THICK CANOPY
- KYNAR FINISH OF STRUCTURE, FASCIA, & DECKING TO MATCH (CP-1)

COLUMN MOUNTED CANOPIES - 10" THICK CANOPY (CP-1)
- FINISH OF STRUCTURE TO BE (CP-2)
- FINISH OF DECKING TO BE

ATTACHED CANOPY SCHEDULE

Mark	Description	Count	Overall Width	Overall Depth	Tie Back Mounting (Offset From Top)	Integral Lighting
C4-A	Exterior Canopy	2	5'-0"	4'-0"	1'-6"	Yes
C4-H	Exterior Canopy	1	28'-0"	4'-0"	1'-6"	Yes
Grand total		3				

FINISH SCHEDULE - EXTERIOR

MARK	DESCRIPTION	MANUFACTURER	MODEL NAME	COLOR	NOTE
BR-A	BRICK VENEER (PRIMARY)	*	MODULAR	*	*SEE APPROVED BRICK ALTERNATES
BR-B	BRICK VENEER (ACCENT)	*	MODULAR	*	*SEE APPROVED BRICK ALTERNATES
CM-1	WOOD COMPOSITE MATERIAL	RESYSTA INTERNATIONAL	FACADE CLADDING 7CH	RESP340812	
CP-1	CANOPY METAL FASCIA		DURA COAT	DARK BRONZE	OIL RUBBED BRONZE METALLIC TEXTURE PVD
CP-2	CANOPY METAL DECK			WHITE	SMOOTH WHITE, HIGH GLOSS
EC-1	PARAPET WALL COPING	DUROLAST / EXCEPTIONAL METALS		DARK BRONZE (MATTE)	
PT-100	EXTERIOR PAINT	SHERWIN WILLIAMS	SHER-CRYL HIGH PERFORMANCE ACRYLIC #B66-350	ROOKWOOD	REFUSE ENCLOSURE. FINISH: SEMI-GLOSS ON DOOR FRAMES, SATIN ON WALLS
PT-113	EXTERIOR PAINT	SHERWIN WILLIAMS	SHER-CRYL HIGH PERFORMANCE ACRYLIC #B66-350	DARK BRONZE	FINISH: SEMI-GLOSS
SC-1	STUCCO	STO	POWERWALL	STO WHITE	FINISH: SAND MEDIUM
SC-2	STUCCO	STO	POWERWALL	STO BROWN	FINISH: SAND MEDIUM
ST-1	STOREFRONT	YKK	YES 45	DARK BRONZE (MATTE)	

APPROVED BRICK ALTERNATES
(SEE NATIONAL ACCOUNTS LIST FOR CONTACT INFORMATION)

FINISH	MANUFACTURER	MODEL	MORTAR	PLANT LOCATION	PREFERRED REGION(S)
BR-A (PRIMARY BRICK)					
BR-02	ACME BRICK	PALOMA GRAY	ARGOS, SAN TAN	ELGIN, TX	SOUTHWEST
BR-18	MUTUAL MATERIALS	IMPERIAL GRAY	ARGOS, SAN TAN	MICA, WA	WEST
BR-20	GLEN-GERY	KHAKI MATT	ARGOS, SAN TAN	CHESWICK, PA	ATLANTIC, NORTHEAST, MIDWEST
BR-30	CHEROKEE BRICK	LIGHT GRAY SMOOTH	ARGOS, SAN TAN	MACON, GA	SOUTHEAST
BR-B (ACCENT BRICK)					
BR-03	ACME BRICK	RUSTIC WHITE	ARGOS, SAN TAN	MALVERN, AR	SOUTHWEST
BR-19	MUTUAL MATERIALS	DESERT WHITE	ARGOS, SAN TAN	MICA, WA	WEST
BR-26	GLEN-GERY	WHITEHALL	ARGOS, SAN TAN	CHESWICK, PA	ATLANTIC, NORTHEAST, MIDWEST
BR-31	CHEROKEE BRICK	OATMEAL SMOOTH	ARGOS, SAN TAN	MACON, GA	SOUTHEAST

LEGEND

SC-1
SC-2
BR-A
EC-1

EXPANSION JOINT, SEALANT COLOR TO MATCH MORTAR COLOR, RE: SPECIFICATIONS
CARD READER BY SECURITY VENDOR - RE: ELEC
SCUPPER PT-113 SEE
DOWNSPOUT PT-113 SEE

OIL EXTRACTION PORT ACCESS BOX
CO2 FILL BOX - RE: KITCHEN
LIGHT FIXTURE - RE: ELECTRICAL
CT CABINET PT-113 RE: ELECTRICAL
MDP PT-113 RE: ELECTRICAL

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

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Bentonville, Arkansas 72712
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NOT FOR CONSTRUCTION

CHICK-FIL-A NEW RESTAURANT

AUBURN, NY 13021

FSR#06315

BUILDING TYPE / SIZE: SSAM SE
RELEASE: 26.02
PRINTED FOR
PERMIT

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
N/A	N/A	

CONSULTANT PROJECT # 16-26-60008
DATE 04/13/2026
DRAWN BY Author

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SHEET
EXTERIOR ELEVATIONS

SHEET NUMBER
A-301

4/13/2026 9:01:48 AM Autodesk Docs://NY_06315_Auburn (NY) FSU_2026.4_FSR/06315_Auburn_NY_ARC_SE.rvt
10-SE-16-26-60008-A-301-EXTERIOR ELEVATIONS

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

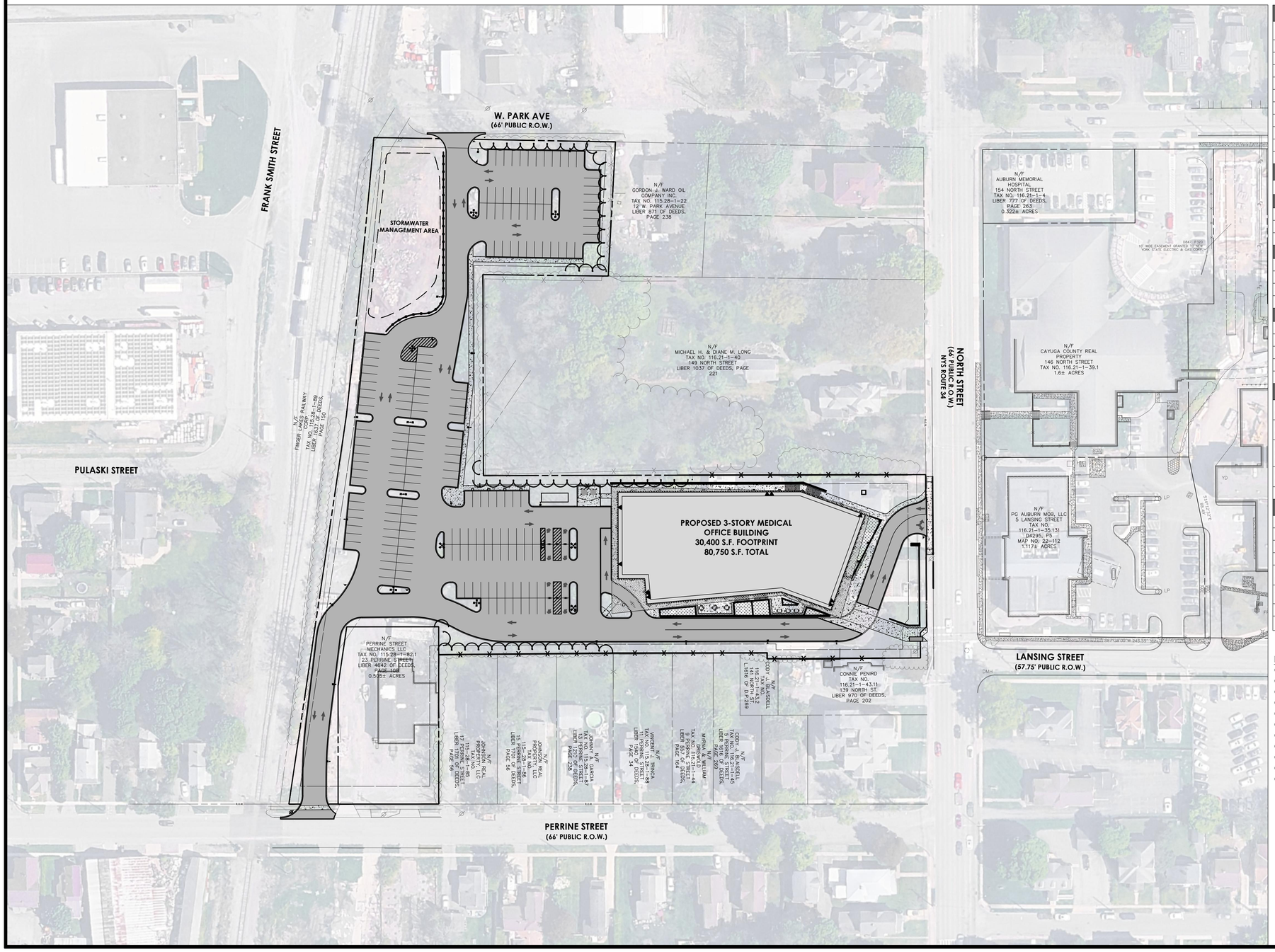
SITE DEVELOPMENT PLANS

CITY OF AUBURN | CAYUGA | NEW YORK

PN: 20255046.0001

60 0 30 60 120

HORIZONTAL SCALE: 1"=60'



SITE DATA	
TAX ACCOUNT NUMBER:	116.21-1-41, 116.21-1-42.1, 115-28-1-82.2
PARCEL ADDRESS:	147 NORTH ST., 143 NORTH ST. W. PARK AVENUE
MUNICIPALITY:	CITY OF AUBURN
COUNTY:	CAYUGA
TOTAL PARCEL AREA:	4.911 ACRES
AREA OF DISTURBANCE:	**± 4.9 ACRES**
EXISTING ZONING:	C-GENERAL COMMERCIAL
PROPOSED ZONING:	C-GENERAL COMMERCIAL
EXISTING USE:	MIXED USE
PROPOSED USE:	MEDICAL OFFICE BUILDING

ZONING DATA	REQUIRED	PROPOSED
ZONING DISTRICT: C-GENERAL COMMERCIAL		
LOT		
WIDTH	75'	208'
AREA	20,000 SF	213,941 S.F.
COVERAGE	80% MAX	67.20%
BUILDING		
SETBACK - FRONT	20'	67.2
SETBACK - SIDE	10'	18'
SETBACK - REAR	10'	311.6'
HEIGHT	35' MAX.	30'
PARKING		
SETBACK	10'	10'
STALLS QTY	2 PER 1,000 SF=162	201
STALL SIZE - PERPENDICULAR	9' x 18'	9'X18'
DRIVE AISLE WIDTH - 90 DEG	24'	24'/26'

ENVIRONMENTAL DATA	NO	YES
STATE REGULATED WETLANDS (NYSDEC ERM):	X	
FEDERALLY REGULATED WETLANDS (USFWS NWI):	X	
FLOOD PLAIN (FEMA NFHL): FIRM PANEL: 36011C0305E DATED: 8/2/2007	X	
ENDANGERED SPECIES (NYSDEC ERM):	X	

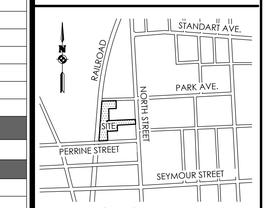
UTLITIES DATA	
PUBLIC WATER PROVIDED BY:	CITY OF AUBURN
ELECTRIC SERVICE PROVIDED BY:	NYSEG
GAS SERVICE SUPPLIED BY:	NYSEG
SANITARY SEWER PROVIDED BY:	CITY OF AUBURN
STORM SEWER & DRAINAGE WILL BE: (MAINTAINED BY THE OWNER)	PRIVATE
ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE CURRENT DEVELOPMENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY	

DRAWING INDEX

C-101 COVER
C-102 SITE PLAN
C-103 EXISTING CONDITIONS & DEMOLITION PLAN
C-104 UTILITY PLAN
C-105 GRADING & EROSION CONTROL PLAN
C-106 LANDSCAPING PLAN
C-107 FOUNDATION PLANTING PLAN
C-108 LIGHTING PLAN
C-109 FIRE APPARATUS ACCESS ROAD PLAN
C-201 NOTES
C-202 - 205 DETAILS

DESIGN DEVELOPMENT

PASSERO
engineering architecture



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100 (585) 325-1000
ROCHESTER, NY 14614 FAX: (585) 325-1691
PROJECT MANAGER EDMUND MARTIN, P.E.
PROJECT ENGINEER ANDREW BURNS, P.E.
DESIGNER JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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COVER

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: C-101

DATE: **JUNE 2026**

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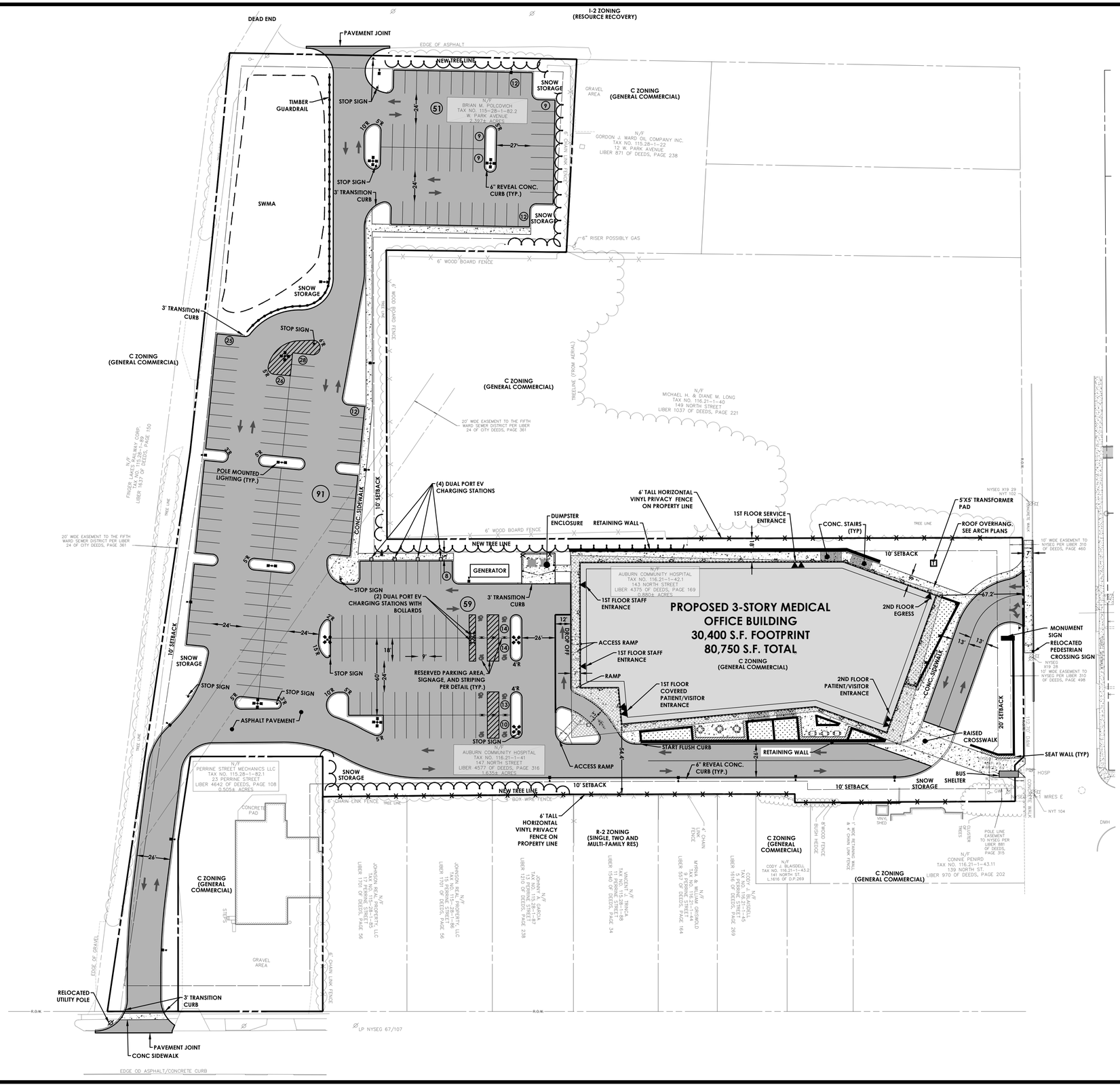


LEGEND - SITE:

- PROPERTY BOUNDARY
- R.O.W. RIGHT OF WAY
- EXISTING CENTER LINE ROAD
- SETBACK
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- EXISTING BUILDING
- PROPOSED BUILDING
- (14) PROPOSED PARKING COUNT
- PROPOSED CONCRETE
- PROPOSED ACCESS RAMP
- PROPOSED PAVEMENT STRIPING
- PROPOSED CURB
- PROPOSED SIGN
- EXISTING SIGN
- PROPOSED LIGHT POLE
- PROPOSED TIMBER GUARD RAIL
- PROPOSED BUILDING MOUNTED LIGHT

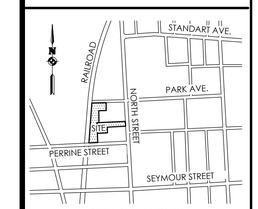
40 0 20 40 80

HORIZONTAL SCALE: 1"=40'

N

DESIGN DEVELOPMENT

PASSERO
engineering architecture



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100 (585) 325-1000
ROCHESTER, NY 14614 FAX: (585) 325-1691
PROJECT MANAGER EDMUND MARTIN, P.E.
PROJECT ENGINEER ANDREW BURNS, P.E.
DESIGNER JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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SITE PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-102**

DATE: **JUNE 2026**

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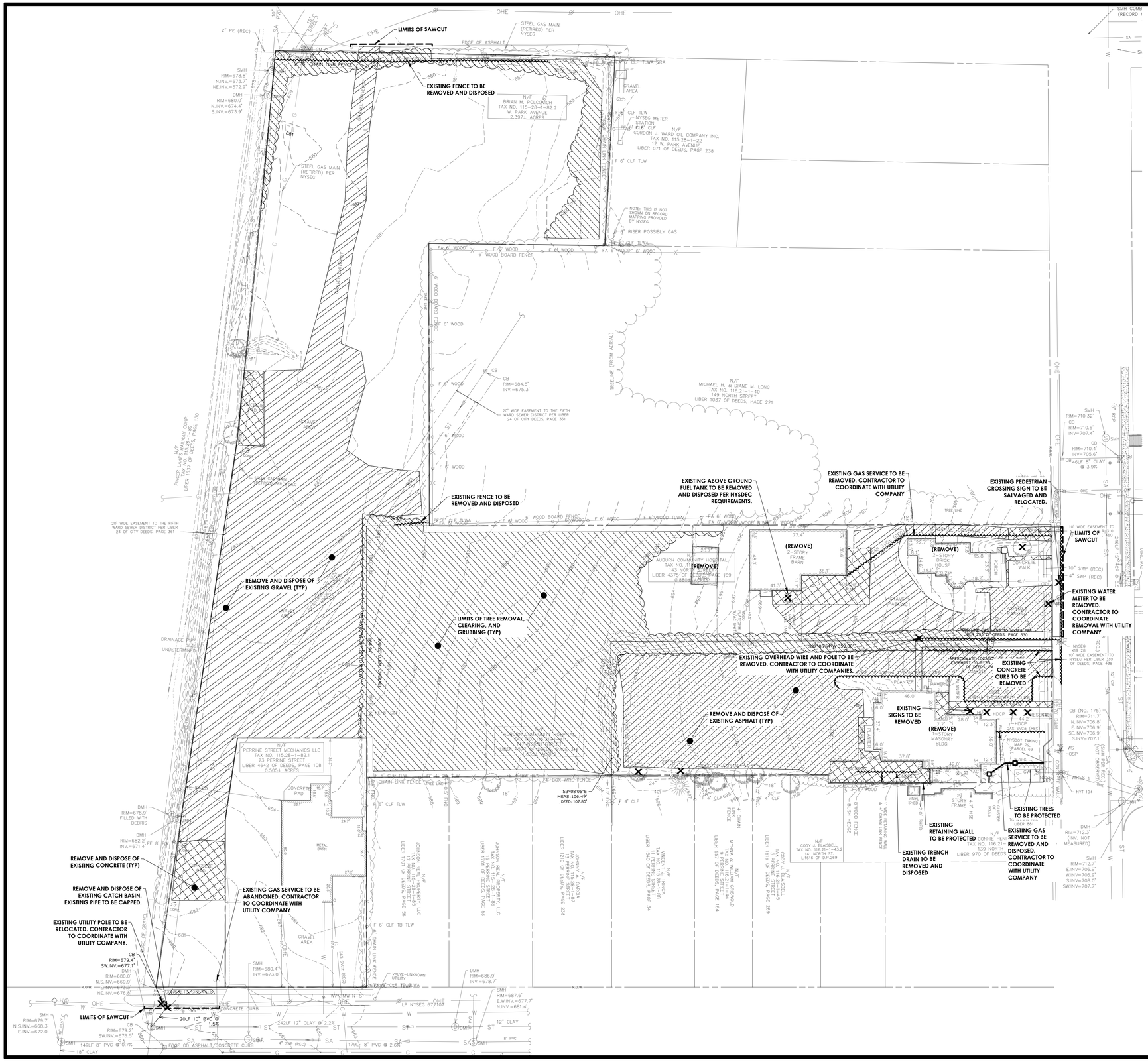


40 0 20 40 80

HORIZONTAL SCALE: 1"=40'

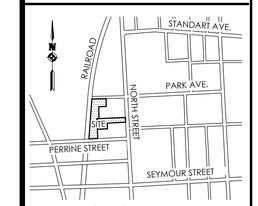
LEGEND - DEMO:

- PROPERTY BOUNDARY
- R.O.W.
- EXISTING CENTER LINE ROAD
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING EASEMENT LINE
- SETBACK
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING STORM SEWER & MH
- EXISTING WATER SERVICE & VALVE
- EXISTING SIGN
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING ELECTRIC LINE & POLE
- EXIST. LIGHT POLE
- EXIST. ELECTRIC MANHOLE
- EXIST. ELECTRIC HANDHOLE
- EXIST. GAS VALVE
- EXIST. GAS MAIN
- EXIST. WATER MAIN
- EXIST. ELECTRIC LINE
- EXISTING FEATURE TO BE REMOVED
- EXISTING ASPHALT TO BE REMOVED
- EXISTING BUILDING TO BE REMOVED

DESIGN DEVELOPMENT

PASSERO
engineering architecture

If you excavate anywhere in New York State, except NYC or Long Island, call
Dig Safely. New York
1-800-962-7962
i-Notice = www.DigSafelyNewYork.com



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

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CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100, ROCHESTER, NY 14614
(585) 325-1000 FAX: (585) 325-1691
PROJECT MANAGER: EDMUND MARTIN, P.E.
PROJECT ENGINEER: ANDREW BURNS, P.E.
DESIGNER: JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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EXISTING CONDITIONS & DEMOLITION PLAN

AUBURN, NY

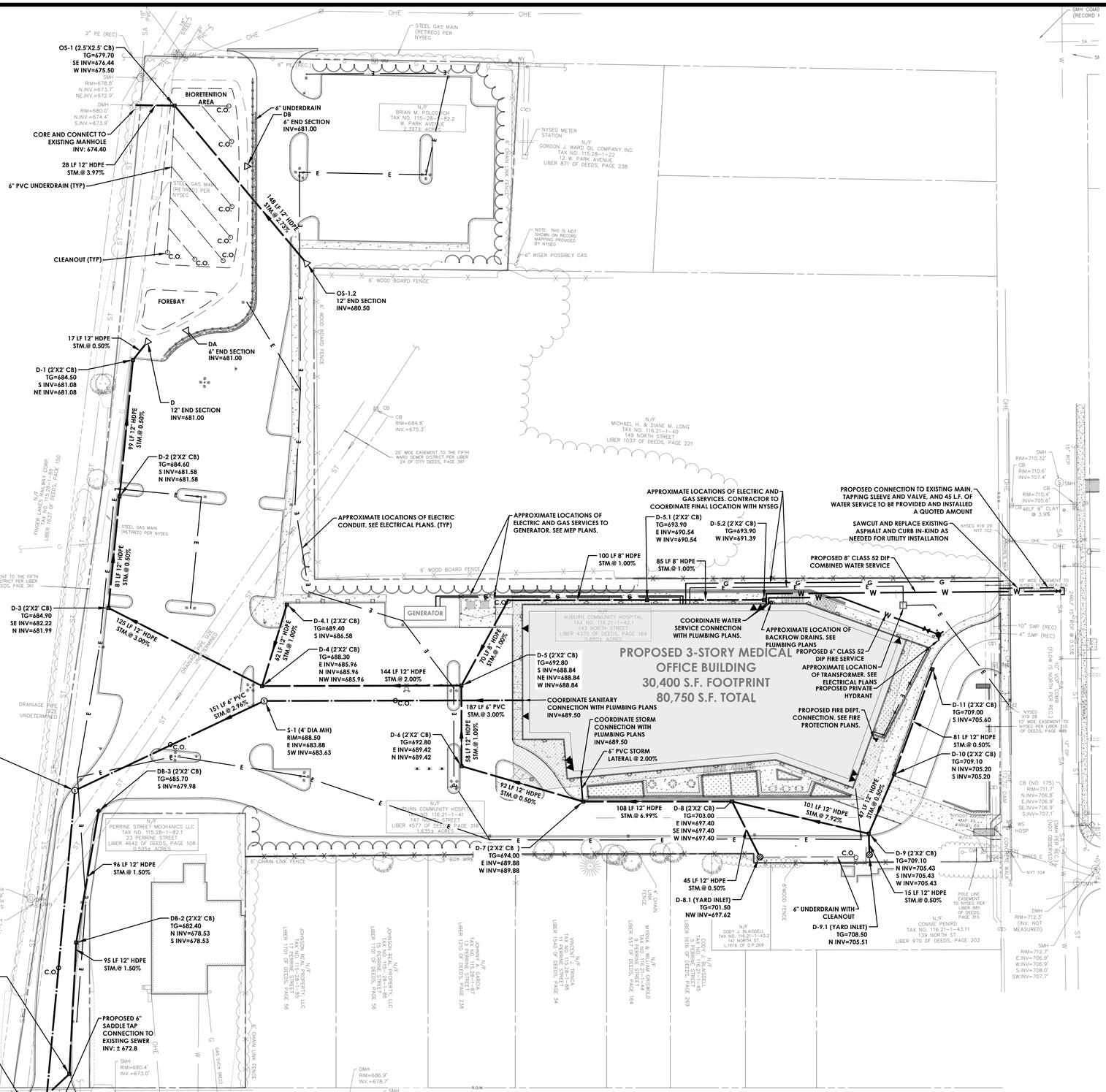
AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

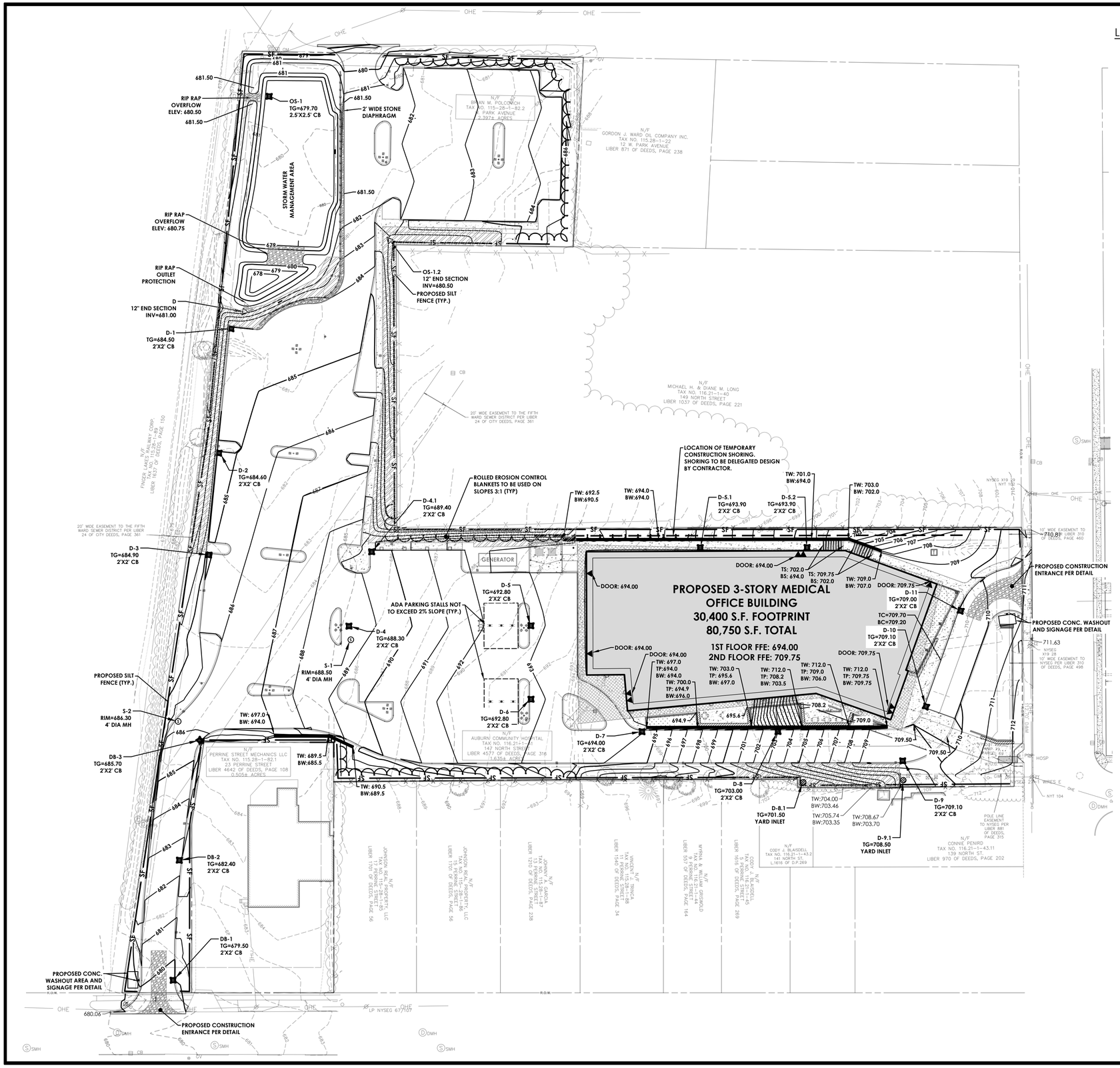
PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-103**

DATE: **JUNE 2026**

Y:\PROJECTS-NEW\2025\20255046\20255046.0001\01_CAD-BIM-MODELS\CIVIL\20255046.01_EXCON.DWG 6/15/2026 12:34 PM Jacob Lewis


PROPOSED 3-STORY MEDICAL OFFICE BUILDING
30,400 S.F. FOOTPRINT
80,750 S.F. TOTAL
AUBURN COMMUNITY HOSPITAL
TAX NO. 116.21-1-42.1
143 NORTH STREET
LIBER 4375 OF DEEDS, PAGE 169
0.880± ACRES
GENERATOR
OS-1 (2.5'X2.5' CB)
TG=679.70
SE INV=676.44
W INV=675.50
BIORETENTION AREA
6" UNDERDRAIN
DB
6" END SECTION
INV=681.00
CORE AND CONNECT TO EXISTING MANHOLE
INV: 674.40
28 LF 12" HDPE
STM.@ 3.97%
6" PVC UNDERDRAIN (TYP)
CLEANOUT (TYP)
148 LF 12" HDPE
STM.@ 2.29%
OS-1.2
12" END SECTION
INV=680.50
FOREBAY
17 LF 12" HDPE
STM.@ 0.50%
D-1 (2'X2' CB)
TG=684.50
S INV=681.08
NE INV=681.08
DA
6" END SECTION
INV=681.00
D
12" END SECTION
INV=681.00
99 LF 12" HDPE
STM.@ 0.50%
D-2 (2'X2' CB)
TG=684.60
S INV=681.58
N INV=681.58
81 LF 12" HDPE
STM.@ 0.50%
D-3 (2'X2' CB)
TG=684.90
SE INV=682.22
N INV=681.99
125 LF 12" HDPE
STM.@ 3.00%
D-4.1 (2'X2' CB)
TG=689.40
S INV=686.58
42 LF 12" HDPE
STM.@ 1.00%
D-4 (2'X2' CB)
TG=688.30
E INV=685.96
N INV=685.96
NW INV=685.96
144 LF 12" HDPE
STM.@ 2.00%
151 LF 6" PVC
STM.@ 2.96%
S-1 (4' DIA MH)
RIM=688.50
E INV=683.88
SW INV=683.63
S-2 (4' DIA MH)
RIM=686.30
NE INV=679.15
S INV=678.90
DB-3 (2'X2' CB)
TG=685.70
S INV=679.98
96 LF 12" HDPE
STM.@ 1.50%
DB-2 (2'X2' CB)
TG=682.40
N INV=678.53
S INV=678.53
95 LF 12" HDPE
STM.@ 1.50%
DB-1 (2'X2' CB)
TG=679.50
N INV=677.10
SW INV=677.10
61 LF 12" HDPE
STM.@ 0.50%
RELOCATED UTILITY POLE. CONTRACTOR TO COORDINATE RELOCATION WITH UTILITY COMPANY
PROPOSED 4" SADDLE TAP CONNECTION TO EXISTING SEWER
INV: ± 672.8
APPROXIMATE LOCATIONS OF ELECTRIC CONDUIT. SEE ELECTRICAL PLANS. (TYP)
APPROXIMATE LOCATIONS OF ELECTRIC AND GAS SERVICES TO GENERATOR. SEE MEP PLANS.
APPROXIMATE LOCATIONS OF ELECTRIC AND GAS SERVICES. CONTRACTOR TO COORDINATE FINAL LOCATION WITH NYSEG
100 LF 8" HDPE
STM.@ 1.00%
85 LF 8" HDPE
STM.@ 1.00%
70 LF 8" HDPE
STM.@ 1.00%
D-5.1 (2'X2' CB)
TG=693.90
E INV=690.54
W INV=690.54
D-5.2 (2'X2' CB)
TG=693.90
W INV=691.39
D-5 (2'X2' CB)
TG=692.80
S INV=688.84
NE INV=688.84
W INV=688.84
COORDINATE SANITARY CONNECTION WITH PLUMBING PLANS
INV=689.50
COORDINATE STORM CONNECTION WITH PLUMBING PLANS
INV=689.50
6" PVC STORM LATERAL @ 2.00%
187 LF 6" PVC
STM.@ 3.00%
D-6 (2'X2' CB)
TG=692.80
E INV=689.42
N INV=689.42
58 LF 12" HDPE
STM.@ 1.00%
92 LF 12" HDPE
STM.@ 0.50%
108 LF 12" HDPE
STM.@ 6.99%
D-8 (2'X2' CB)
TG=703.00
E INV=697.40
SE INV=697.40
W INV=697.40
D-7 (2'X2' CB
TG=694.00
E INV=689.88
W INV=689.88
45 LF 12" HDPE
STM.@ 0.50%
D-8.1 (YARD INLET)
TG=701.50
NW INV=697.62
6" UNDERDRAIN WITH CLEANOUT
D-9.1 (YARD INLET)
TG=708.50
N INV=705.51
101 LF 12" HDPE
STM.@ 7.92%
41 LF 12" HDPE
STM.@ 0.50%
D-9 (2'X2' CB)
TG=709.10
N INV=705.43
S INV=705.43
W INV=705.43
15 LF 12" HDPE
STM.@ 0.50%
PROPOSED CONNECTION TO EXISTING MAIN, TAPPING SLEEVE AND VALVE, AND 45 LF. OF WATER SERVICE TO BE PROVIDED AND INSTALLED A QUOTED AMOUNT
SAWCUT AND REPLACE EXISTING ASPHALT AND CURB IN-KIND AS NEEDED FOR UTILITY INSTALLATION
PROPOSED 8" CLASS 52 DIP COMBINED WATER SERVICE
COORDINATE WATER SERVICE CONNECTION WITH PLUMBING PLANS.
APPROXIMATE LOCATION OF BACKFLOW DRAINS. SEE PLUMBING PLANS
PROPOSED 6" CLASS 52 DIP FIRE SERVICE
APPROXIMATE LOCATION OF TRANSFORMER. SEE ELECTRICAL PLANS
PROPOSED PRIVATE HYDRANT
PROPOSED FIRE DEPT. CONNECTION. SEE FIRE PROTECTION PLANS.
D-11 (2'X2' CB)
TG=709.00
S INV=705.60
81 LF 12" HDPE
STM.@ 0.50%
D-10 (2'X2' CB)
TG=709.10
N INV=705.20
S INV=705.20
OHE
G
W
S
E
SA
ST
STEEL GAS MAIN (RETIRED) PER NYSEG
6" WOOD BOARD FENCE
6" CHAIN LINK FENCE
4" CHAIN FENCE
BOX WIRE
N/F BRIAN M. POLOVISH TAX NO. 115.-28-1-32.2 W. PARK AVENUE 2.397± ACRES
N/F GORDON J. WARD OIL COMPANY INC. TAX NO. 115.28-1-22 12 W. PARK AVENUE LIBER 871 OF DEEDS, PAGE 238
NYSEG METER STATION
NOTE: THIS IS NOT SHOWN ON RECORD MAPPING PROVIDED BY NYSEG
6" RISER POSSIBLY GAS
N/F MICHAEL H. & DIANE M. LONG TAX NO. 116.21-1-40 149 NORTH STREET LIBER 1037 OF DEEDS, PAGE 221
20' WIDE EASEMENT TO THE FIFTH WARD SEWER DISTRICT PER LIBER 24 OF CITY DEEDS, PAGE 361
N/F FINGER LAKES RAILWAY CORP TAX NO. 115.-28-1-69 LIBER 1637 OF DEEDS, PAGE 150
N/F AUBURN COMMUNITY HOSPITAL TAX NO. 116.21-1-41 147 NORTH STREET LIBER 4577 OF DEEDS, PAGE 316 1.635± ACRES
N/F PERRINE STREET MECHANICS LLC TAX NO. 115.28-1-82.1 23 PERRINE STREET LIBER 4642 OF DEEDS, PAGE 108 0.505± ACRES
N/F JOHNSON REAL PROPERTY, LLC TAX NO. 115.-28-1-85 15 PERRINE STREET LIBER 1701 OF DEEDS, PAGE 56
N/F JOHN Y. GARCIA TAX NO. 115.28-1-87 LIBER 1210 OF DEEDS, PAGE 238
N/F VINCENT J. TRINCA TAX NO. 115.28-1-88 11 PERRINE STREET LIBER 1540 OF DEEDS, PAGE 34
N/F MYRNA N. WHITMORE TAX NO. 116.21-1-44 9 PERRINE STREET LIBER 525 OF DEEDS, PAGE 164
N/F CODY J. BLASDELL TAX NO. 116.21-1-45.2 141 NORTH ST LIBER 1616 OF DEEDS, PAGE 269
N/F CODY J. BLASDELL TAX NO. 116.21-1-43.2 141 NORTH ST. L.1616 OF D.P.269
N/F CONNIE PENIRO TAX NO. 116.21-1-43.11 139 NORTH ST. LIBER 970 OF DEEDS, PAGE 202
POLE LINE EASEMENT TO NYSEG PER LIBER 881 OF DEEDS, PAGE 315
242LF 12" CLAY @ 2.2%
179LF 8" PVC @ 2.6%
149LF 8" PVC @ 0.7%
4" SWP (REC)
8" PVC
12" CLAY
18" CLAY
DRAINAGE PIPE SIZE UNDETERMINED
SMH RIM=678.8' N.INV.=673.7' NE.INV.=672.9'
DMH RIM=680.0' N.INV.=674.4' S.INV.=673.9'
SMH RIM=679.7' N.S.INV.=668.3' E.INV.=672.0'
DMH RIM=680.0' N.S.INV.=669.9' E INV=673.3' NE.INV.=676.81'
DMH RIM=679.2' SW.INV.=676.5'
DMH RIM=678.9' FILLED WITH DEBRIS
DMH RIM=682.2' INV.=671.4'
DMH RIM=686.9' INV.=678.7'
SMH RIM=680.4' INV.=673.0'
SMH RIM=687.6' E.W.INV.=677.7' N.INV.=681.4'
SMH RIM=710.32' CB RIM=710.6' INV=707.4'
CB RIM=710.4' INV=705.6' 46LF 8" CLAY @ 3.9%
DMH RIM=712.3' (INV. NOT MEASURED)
SMH RIM=712.7' E.INV=706.9' W.INV=706.9' S.INV=708.0' SW.INV=707.7'
CB (NO. 175) RIM=711.7' N.INV=706.8' E.INV=706.9' SE.INV=706.9' S.INV=707.1'
CB RIM=711.2' INV=707.0' 15" RCP
MHP P3.1' P.INV=21.6'
WS HOSP
WIRES
NYT 104
NYSEG X19 29 NYT 102
NYSEG X19 28 10' WIDE EASEMENT TO NYSEG PER LIBER 310 OF DEEDS, PAGE 480
10" SWP (REC)
4" SWP (REC)
SEE NYSEG MAP NO. 1 FOR SIZE OF MAIN
SEE NYSEG MAP NO. 2 FOR SIZE OF MAIN
SEE NYSEG MAP NO. 3 FOR SIZE OF MAIN
SEE NYSEG MAP NO. 4 FOR SIZE OF MAIN
SEE NYSEG MAP NO.



LEGEND - GRADING:

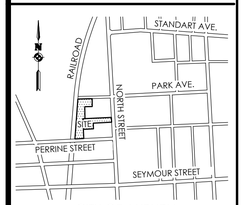
- PROPERTY BOUNDARY
- R.O.W.
- EXISTING CENTER LINE ROAD
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- PROPOSED BUILDING
- PROPOSED CONCRETE
- PROPOSED SIGN
- PROPOSED LIGHT
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- SILT FENCE
- PROPOSED STORM SEWER, INLET MH, CB & END SECTION
- EXISTING STORM SEWER & MH
- PROPOSED WATER SERVICE W/ HYDRANT & VALVE
- EXISTING WATER SERVICE & VALVE
- PROPOSED SANITARY SEWER AND MANHOLE
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING ELECTRIC LINE & POLE
- EXIST. LIGHT POLE
- EXIST. ELECTRIC MANHOLE
- EXIST. ELECTRIC HANDHOLE
- EXIST. GAS VALVE
- PROPOSED STONE CHECK DAM
- PROPOSED INLET PROTECTION
- PROPOSED TREE/BRUSH LINE
- EXISTING TREE/BRUSH LINE
- SILT FENCE
- (P) TOP (T) OF: CURB (C), WALL (W), STAIRS (S), RAMP (R)PAVEMENT
  BOTTOM (B) OF: CURB (C), WALL (W), STAIRS (S), RAMP (R)
  *RETAINING WALL DESIGN TO BE PREFORMED BY OTHERS AND BY A LICENSED ENGINEER. BOTTOM OF WALL ELEVATION TO BE ELEVATION AT GRADE, NOT BOTTOM FOUNDATION COURSE OF THE WALL
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION

40 0 20 40 80

HORIZONTAL SCALE: 1"=40'

DESIGN DEVELOPMENT

PASSERO
engineering architecture



CITY OF AUBURN
LOCATION SKETCH
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PROJECT MANAGER EDMUND MARTIN, P.E.
PROJECT ENGINEER ANDREW BURNS, P.E.
DESIGNER JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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GRADING & EROSION CONTROL PLAN
AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-105**

DATE: **JUNE 2026**

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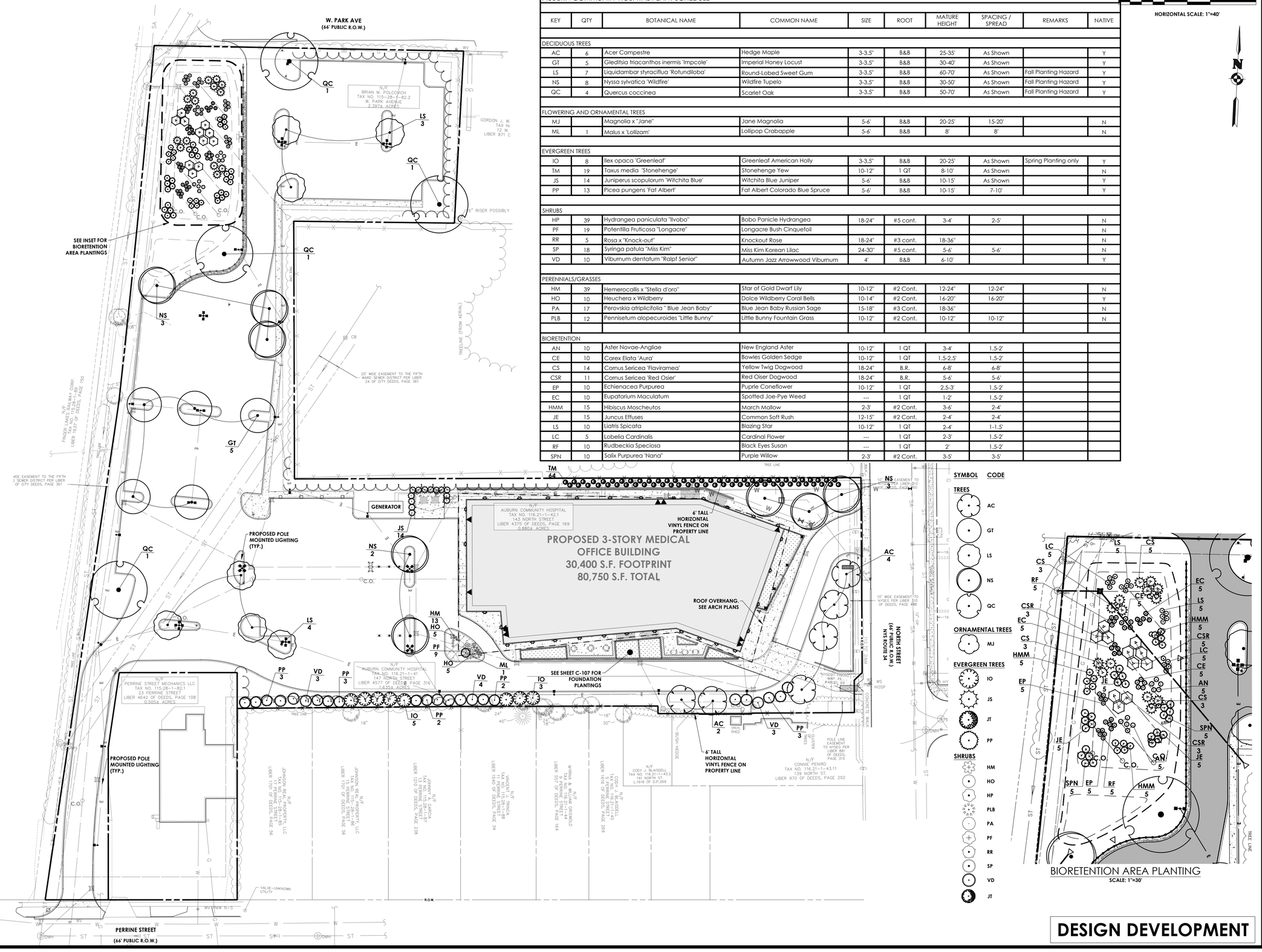
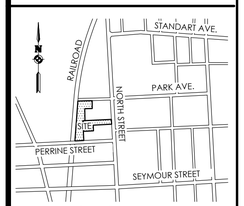
AUBURN COMMUNITY HOSPITAL PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	MATURE HEIGHT	SPACING / SPREAD	REMARKS	NATIVE
DECIDUOUS TREES									
AC	6	Acer Campestre	Hedge Maple	3-3.5"	B&B	25-35'	As Shown		Y
GT	5	Gleditsia triacanthos inermis 'Impcole'	Imperial Honey Locust	3-3.5"	B&B	30-40'	As Shown		Y
LS	7	Liquidambar styraciflua 'Rotundiloba'	Round-Lobed Sweet Gum	3-3.5"	B&B	60-70'	As Shown	Fall Planting Hazard	Y
NS	8	Nyssa sylvatica 'Wildfire'	Wildfire Tupelo	3-3.5"	B&B	30-50'	As Shown	Fall Planting Hazard	Y
QC	4	Quercus coccinea	Scarlet Oak	3-3.5"	B&B	50-70'	As Shown	Fall Planting Hazard	Y
FLOWERING AND ORNAMENTAL TREES									
MJ		Magnolia x "Jane"	Jane Magnolia	5-6'	B&B	20-25'	15-20'		N
ML	1	Malus x 'Lollizam'	Lollipop Crabapple	5-6'	B&B	8'	8'		N
EVERGREEN TREES									
IO	8	Ilex opaca 'Greenleaf'	Greenleaf American Holly	3-3.5"	B&B	20-25'	As Shown	Spring Planting only	Y
TM	19	Taxus media 'Stonehenge'	Stonehenge Yew	10-12"	1 QT	8-10'	As Shown		N
JS	14	Juniperus scopulorum 'Witchita Blue'	Witchita Blue Juniper	5-6'	B&B	10-15'	As Shown		Y
PP	13	Picea pungens 'Fat Albert'	Fat Albert Colorado Blue Spruce	5-6'	B&B	10-15'	7-10'		Y
SHRUBS									
HP	39	Hydrangea paniculata "Ilvobo"	Bobo Panicle Hydrangea	18-24"	#5 cont.	3-4'	2-5'		N
PF	19	Potentilla Fruticosa "Longacre"	Longacre Bush Cinquefoil						N
RR	5	Rosa x "Knock-out"	Knockout Rose	18-24"	#3 cont.	18-36"			N
SP	18	Syringa patula "Miss Kim"	Miss Kim Korean Lilac	24-30"	#5 cont.	5-6'	5-6'		N
VD	10	Viburnum dentatum "Ralpf Senior"	Autumn Jazz Arrowwood Viburnum	4'	B&B	6-10'			Y
PERENNIALS/GRASSES									
HM	39	Hemerocallis x "Stella d'oro"	Star of Gold Dwarf Lily	10-12"	#2 Cont.	12-24"	12-24"		N
HO	10	Heuchera x Wildberry	Dolce Wildberry Coral Bells	10-14"	#2 Cont.	16-20"	16-20"		Y
PA	17	Perovskia atriplicifolia " Blue Jean Baby"	Blue Jean Baby Russian Sage	15-18"	#3 Cont.	18-36"			N
PLB	12	Pennisetum alopecuroides "Little Bunny"	Little Bunny Fountain Grass	10-12"	#2 Cont.	10-12"	10-12"		N
BIORETENTION									
AN	10	Aster Novae-Angliae	New England Aster	10-12"	1 QT	3-4'	1.5-2'		
CE	10	Carex Elata 'Aura'	Bowles Golden Sedge	10-12"	1 QT	1.5-2.5'	1.5-2'		
CS	14	Cornus Sericea 'Flaviramea'	Yellow Twig Dogwood	18-24"	B.R.	6-8'	6-8'		
CSR	11	Cornus Sericea 'Red Osier'	Red Oiser Dogwood	18-24"	B.R.	5-6'	5-6'		
EP	10	Echienacea Purpurea	Puprle Coneflower	10-12"	1 QT	2.5-3'	1.5-2'		
EC	10	Eupatorium Maculatum	Spotted Joe-Pye Weed	---	1 QT	1-2'	1.5-2'		
HMM	15	Hibiscus Moscheutos	March Mallow	2-3'	#2 Cont.	3-6'	2-4'		
JE	15	Juncus Effuses	Common Soft Rush	12-15"	#2 Cont.	2-4'	2-4'		
LS	10	Liatris Spicata	Blazing Star	10-12"	1 QT	2-4'	1-1.5'		
LC	5	Lobelia Cardinalis	Cardinal Flower	---	1 QT	2-3'	1.5-2'		
RF	10	Rudbeckia Speciosa	Black Eyes Susan	---	1 QT	2'	1.5-2'		
SPN	10	Salix Purpurea 'Nana'	Purple Willow	2-3'	#2 Cont.	3-5'	3-5'		



BIORETENTION AREA PLANTING
SCALE: 1"=30'

HORIZONTAL SCALE: 1"=40'



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

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PASSERO
engineering architecture

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PROJECT MANAGER: EDMUND MARTIN, P.E.
PROJECT ENGINEER: ANDREW BURNS, P.E.
DESIGNER: JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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LANDSCAPING PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-106**

DATE: **JUNE 2026**

DESIGN DEVELOPMENT

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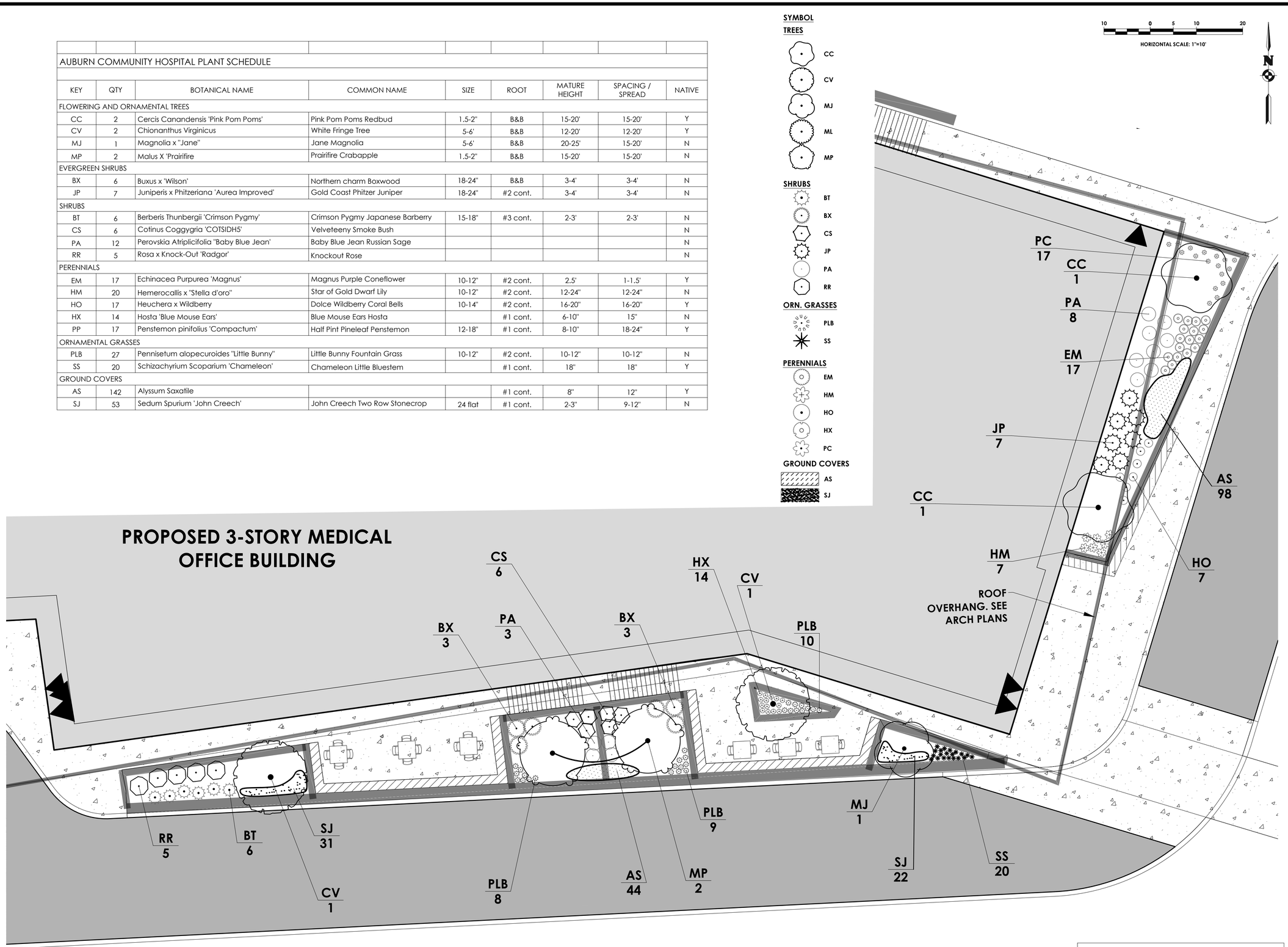
AUBURN COMMUNITY HOSPITAL PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	MATURE HEIGHT	SPACING / SPREAD	NATIVE
FLOWERING AND ORNAMENTAL TREES								
CC	2	Cercis Canandensis 'Pink Pom Poms'	Pink Pom Poms Redbud	1.5-2"	B&B	15-20'	15-20'	Y
CV	2	Chionanthus Virginicus	White Fringe Tree	5-6'	B&B	12-20'	12-20'	Y
MJ	1	Magnolia x "Jane"	Jane Magnolia	5-6'	B&B	20-25'	15-20'	N
MP	2	Malus X 'Prairifire	Prairifire Crabapple	1.5-2"	B&B	15-20'	15-20'	N
EVERGREEN SHRUBS								
BX	6	Buxus x 'Wilson'	Northern charm Boxwood	18-24"	B&B	3-4'	3-4'	N
JP	7	Juniperis x Phitzeriana 'Aurea Improved'	Gold Coast Phitzer Juniper	18-24"	#2 cont.	3-4'	3-4'	N
SHRUBS								
BT	6	Berberis Thunbergii 'Crimson Pygmy'	Crimson Pygmy Japanese Barberry	15-18"	#3 cont.	2-3'	2-3'	N
CS	6	Cotinus Coggygria 'COTSIDH5'	Velveteeny Smoke Bush					N
PA	12	Perovskia Atriplicifolia "Baby Blue Jean'	Baby Blue Jean Russian Sage					N
RR	5	Rosa x Knock-Out 'Radgor'	Knockout Rose					N
PERENNIALS								
EM	17	Echinacea Purpurea 'Magnus'	Magnus Purple Coneflower	10-12"	#2 cont.	2.5'	1-1.5'	Y
HM	20	Hemerocallis x 'Stella d'oro"	Star of Gold Dwarf Lily	10-12"	#2 cont.	12-24"	12-24"	N
HO	17	Heuchera x Wildberry	Dolce Wildberry Coral Bells	10-14"	#2 cont.	16-20"	16-20"	Y
HX	14	Hosta 'Blue Mouse Ears'	Blue Mouse Ears Hosta		#1 cont.	6-10"	15"	N
PP	17	Penstemon pinifolius 'Compactum'	Half Pint Pineleaf Penstemon	12-18"	#1 cont.	8-10"	18-24"	Y
ORNAMENTAL GRASSES								
PLB	27	Pennisetum alopecuroides "Little Bunny"	Little Bunny Fountain Grass	10-12"	#2 cont.	10-12"	10-12"	N
SS	20	Schizachyrium Scoparium 'Chameleon'	Chameleon Little Bluestem		#1 cont.	18"	18"	Y
GROUND COVERS								
AS	142	Alyssum Saxatile			#1 cont.	8"	12"	Y
SJ	53	Sedum Spurium 'John Creech'	John Creech Two Row Stonecrop	24 flat	#1 cont.	2-3"	9-12"	N



DESIGN DEVELOPMENT

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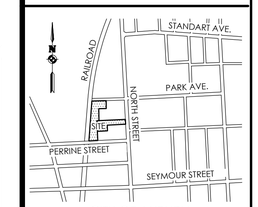
engineering architecture



CITY OF AUBURN
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PROJECT ENGINEER ANDREW BURNS, P.E.
DESIGNER JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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FOUNDATION LANDSCAPING PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-107**

DATE: **JUNE 2026**

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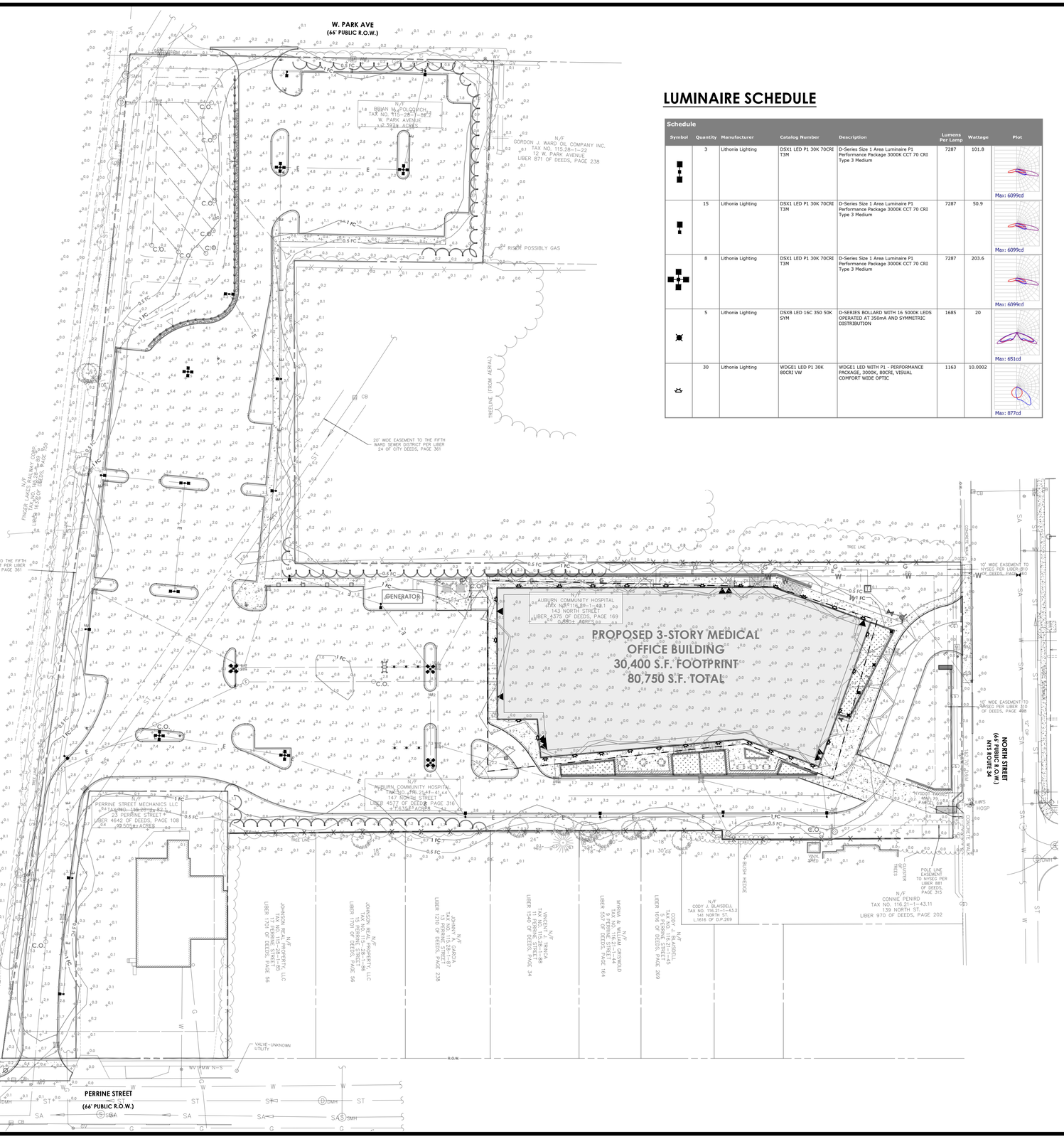


LUMINAIRE SCHEDULE

Schedule

Symbol	Quantity	Manufacturer	Catalog Number	Description	Lumens Per Lamp	Wattage	Plot
	3	Lithonia Lighting	DSX1 LED P1 30K 70CRI T3M	D-Series Size 1 Area Luminaire P1 Performance Package 3000K CCT 70 CRI Type 3 Medium	7287	101.8	Max: 6099cd
	15	Lithonia Lighting	DSX1 LED P1 30K 70CRI T3M	D-Series Size 1 Area Luminaire P1 Performance Package 3000K CCT 70 CRI Type 3 Medium	7287	50.9	Max: 6099cd
	8	Lithonia Lighting	DSX1 LED P1 30K 70CRI T3M	D-Series Size 1 Area Luminaire P1 Performance Package 3000K CCT 70 CRI Type 3 Medium	7287	203.6	Max: 6099cd
	5	Lithonia Lighting	DSXB LED 16C 350 50K SYM	D-SERIES BOLLARD WITH 16 5000K LEDS OPERATED AT 350mA AND SYMMETRIC DISTRIBUTION	1685	20	Max: 651cd
	30	Lithonia Lighting	WDGE1 LED P1 30K 80CRI VW	WDGE1 LED WITH P1 - PERFORMANCE PACKAGE, 3000K, 80CRI, VISUAL COMFORT WIDE OPTIC	1163	10.0002	Max: 877cd

LEGEND - LIGHTING:

1 FC

0.5 FC

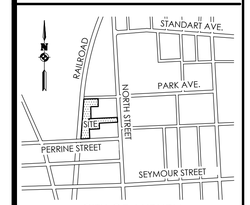
40 0 20 40 80

HORIZONTAL SCALE: 1"=40'

N

DESIGN DEVELOPMENT

PASSERO
engineering architecture



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

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CLIENT:
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46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
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PROJECT MANAGER EDMUND MARTIN, P.E.
PROJECT ENGINEER ANDREW BURNS, P.E.
DESIGNER JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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LIGHTING PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-108**

DATE: **JUNE 2026**

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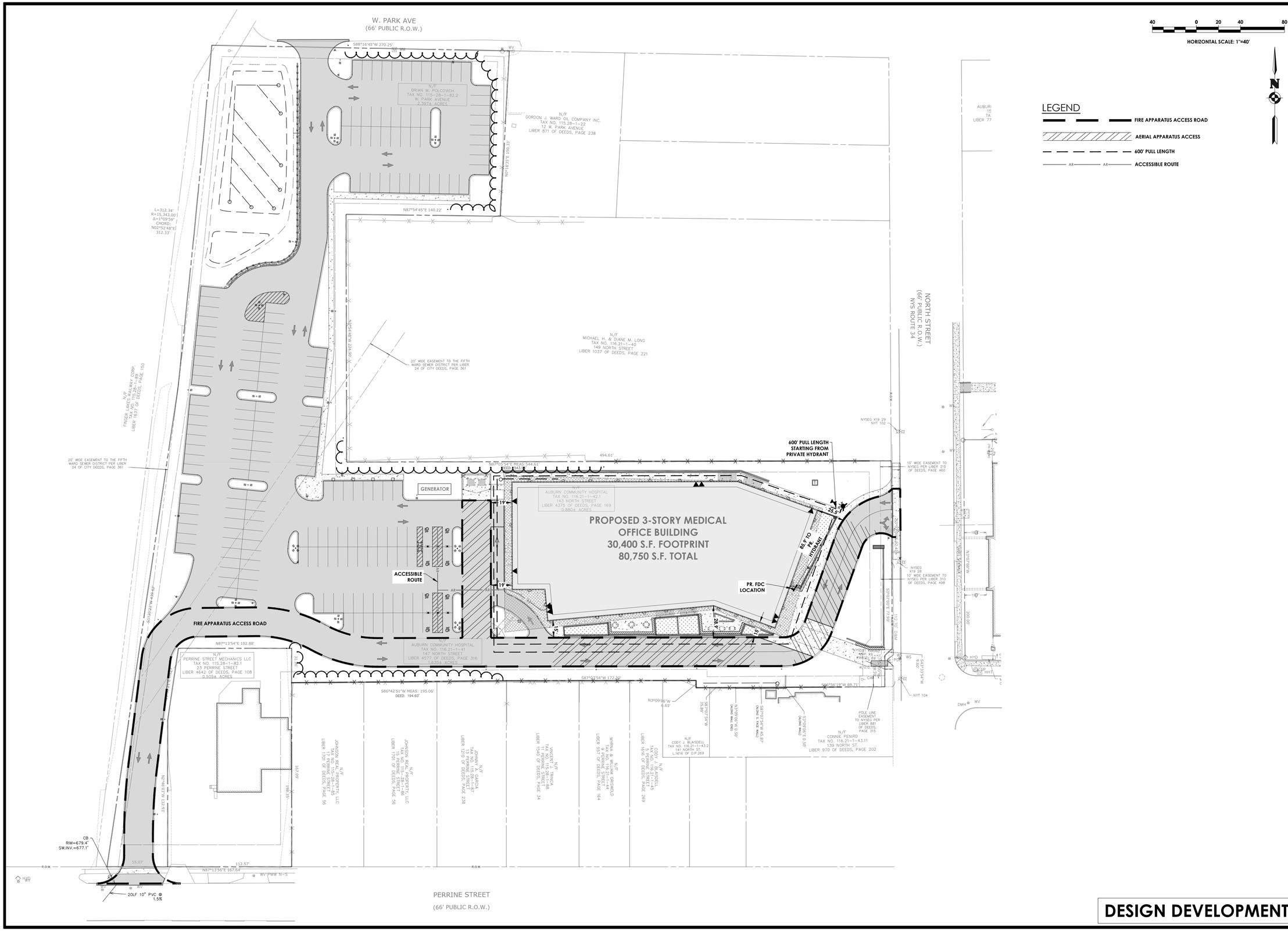

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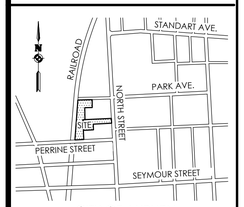
engineering architecture



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FIRE & ADA ACCESS PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-109**

DATE: **JUNE 2026**

DESIGN DEVELOPMENT

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DEMOLITION NOTES:

1. CONTRACTOR IS RESPONSIBLE TO CALL DIG SAFE 811 PRIOR TO BEGINNING DEMOLITION.
2. WITHIN LIMIT LINES, ALL AT GRADE UTILITIES SUCH AS TRANSFORMERS, GENERATORS, HVAC UNITS, THE UNIT'S CONCRETE PAD AND ANY FENCING THAT SURROUNDS THE UNIT, TO BE REMOVED.
3. PRIOR TO ANY DEMOLITION TAKING PLACE, CONTRACTOR TO VERIFY LOCATION AND DEPTH OF ALL UTILITIES WITHIN THE WORK AREA OR THOSE EXPECTED TO BE AFFECTED BY NEW WORK, AND SUBSURFACE FEATURES.
4. CONTRACTOR TO COORDINATE ALL UTILITY SHUT DOWNS, RELOCATIONS, SERVICE INSTALLATIONS WITH THE LOCAL UTILITY COMPANIES.
5. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL DEMOLISHED MATERIAL IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
6. ALL EXISTING FEATURES TO BE REMOVED ARE NOT SHOWN ON SUBSEQUENT PLANS FOR CLARITY.
7. CONTRACTOR SHALL PROTECT ALL EXISTING FEATURES TO REMAIN. DAMAGE TO EXISTING FEATURES TO REMAIN SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
8. ALL SURFACES THAT ARE DISTURBED DUE TO UTILITY CONSTRUCTION, OUTSIDE OF THE MAJOR WORK AREAS, ARE TO BE RESTORED TO PRE-CONSTRUCTION CONDITION, IN ACCORDANCE WITH THE ASPHALT AND CONCRETE SECTION DETAILS INCLUDED IN THESE PLANS. LAWN AREAS ARE TO BE RE-ESTABLISHED WITH 4 INCHES OF TOPSOIL (MINIMUM) AND HYDROSEED.
9. ANY MATERIALS CONTAINING ASBESTOS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. NOTE THIS MAY INCLUDE UNDERGROUND UTILITIES.
10. ALL UTILITIES NOT SLATED FOR DEMOLITION ARE TO REMAIN FUNCTIONAL UPON COMPLETION OF DEMOLITION. THIS INCLUDES BYPASS PUMPING, IF NECESSARY.
11. EXISTING UTILITIES THAT ARE PROPOSED TO BE REMOVED, UNLESS OTHERWISE INDICATED, SHALL BE EXCAVATED, UTILITY MATERIAL REMOVED, AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE SPECIFICATIONS. ALL TRENCHES SHALL BE BACKFILLED WITH GRANULAR FILL, COMPACTED IN 12" LIFTS TO 95% MODIFIED PROCTOR TEST. ALL DISTURBED AREAS SHALL BE RESTORED IN KIND IN ACCORDANCE WITH THE DETAILS IN THESE PLANS AND AT A MINIMUM TO THEIR ORIGINAL STATE.
12. AREAS OF ASPHALT AND CONCRETE REMOVAL SHALL BE SAWCUT WITH A NEAT STRAIGHT LINE AT ALL REMOVAL LIMITS.
13. CONTRACTOR RESPONSIBLE FOR OBTAINING ALL DEMOLITION PERMITS AND INCLUDE ALL FEES ASSOCIATED WITH THOSE PERMITS, IN HIS BID.
14. IF ANY ENVIRONMENTAL CONDITIONS OR ISSUES, NOT PREVIOUSLY IDENTIFIED, ARE ENCOUNTERED DURING DEMOLITION, THE OWNER AND THE CONTRACTORS(S) SHALL IMMEDIATELY NOTIFY THE CITY, CAYUGA COUNTY HEALTH DEPARTMENT AND NYSDEC BEFORE CONTINUING THE DEMOLITION PROCESS.
15. ALL MATERIALS SHALL BE RECYCLED, WHEN APPROPRIATE.
16. THE CONTRACTOR SHALL OBTAIN ALL SEWER PERMITS PRIOR TO DEMOLITION.
17. ALL SPOIL MATERIALS FROM DEMOLITION OR EARTHWORK, SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT THE CONTRACTORS EXPENSE.
18. ALL EXISTING STRUCTURES THAT ARE ABANDONED IN PLACE, SHALL BE REMOVED TO A DEPTH OF 2 FEET BELOW FINISHED GRADE. STRUCTURES SHALL BE FILLED WITH CRUSHED STONE, (MEETING NYSDOT STANDARD SPECIFICATION SECTION 304) COMPACTED IN 12" LIFTS TO 95% MODIFIED PROCTOR TEST.

UTILITY CONTRACTOR COORDINATION NOTES:

1. PRIOR TO THE START OF UTILITY INSTALLATION THE CONTRACTOR AND SUBCONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL UTILITY CONNECTIONS WITH MECHANICAL/ARCHITECTURAL DRAWINGS FOR INCLUDING BUT NOT LIMITED TO VERTICAL AND HORIZONTAL LOCATION, PENETRATIONS, AND SIZES. THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROCEED WITH UTILITY INSTALLATION BY THE OWNERS ONSITE REPRESENTATIVE UPON COMPLETION OF COORDINATION WITH CONTRACTORS, AND PLANS.
2. THE DEVELOPER AND HIS/HER CONTRACTOR IS RESPONSIBLE FOR COORDINATING GAS, ELECTRICAL, CABLE, TELEPHONE AND ANY OTHER UTILITIES NOT SPECIFICALLY SHOWN WITHIN THIS PLAN SET WITH APPROPRIATE AGENCY. PASSERO ASSOCIATES ASSUMES NO RESPONSIBILITY FOR THE DESIGN OR PERFORMANCE OF UTILITIES NOT SPECIFICALLY SHOWN WITHIN THIS PLAN SET.
3. PRIOR TO THE START OF UTILITY INSTALLATION THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY AND COORDINATE WITH EXISTING UTILITIES SHOWN ON THE PLANS AND REPORT ANY DISCREPANCIES TO THE DESIGN ENGINEER. THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROCEED WITH UTILITY INSTALLATION BY THE OWNERS ONSITE REPRESENTATIVE UPON COMPLETION EXISTING UTILITY VERIFICATION.
4. THE CONTRACTOR IS REQUIRED TO COORDINATE WITH SITE CONTRACTOR/PLUMBER & SEWER CONTRACTOR TO PREDETERMINE THE NECESSARY WYE & CLEANOUT LOCATION ON THE STORM SEWER SYSTEM. THE STORM SEWER SYSTEM IS RECOMMENDED AND MAY BE MODIFIED TO PROVIDE ADEQUATE ROOF DRAINAGE CONNECTIONS.
5. THRUST BLOCKS ON THE WATERMAIN ARE REQUIRED AT BENDS, TEES OR PLUGS. SEE DETAIL SHEETS FOR THRUST BLOCK DETAILS.

STANDARD WATER MAIN EXTENSION NOTES:

1. THE WATER MAIN PIPELINE SHALL BE DISINFECTED EQUAL TO AWWA STANDARD FOR DISINFECTING WATER MAINS DESIGNATION C651 (LATEST REVISION). FOLLOWING DISINFECTION, THE WATER MAIN PIPELINE SHALL BE FLUSHED UNTIL THE CHLORINE CONCENTRATION IN THE WATER LEAVING THE MAIN IS NO HIGHER THAN THAT GENERALLY PREVAILING IN THE SYSTEM.
   ALL WATER MAIN PIPE FITTINGS NOT RECEIVING 24-HOUR CHLORINE DISINFECTION CONTACT TIME MUST BE SWAB-DISINFECTED 30 MINUTES PRIOR TO INSTALLATION.
   THE SAMPLING POINT(S) MUST BE DECONTAMINATED BY FLAMING.
   FIRE HYDRANTS ARE NOT ACCEPTABLE SAMPLING POINTS.
   THE CAYUGA COUNTY DEPARTMENT OF PUBLIC HEALTH MUST RECEIVE AT LEAST 48-HOUR ADVANCE NOTIFICATION REQUESTING SAMPLING SERVICES. SAMPLING WILL NOT BE PERFORMED PRIOR TO RECEIPT FROM A NEW YORK STATE LICENSED OR REGISTERED DESIGN PROFESSIONAL (ENGINEER, ARCHITECT OR LAND SURVEYOR WITH A SPECIAL EXEMPTION UNDER SECTION 7208(N) OF THE EDUCATION LAW) CERTIFYING THAT THE WATER SUPPLY IMPROVEMENTS, TESTING AND DISINFECTION PROCEDURES WERE COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS, REPORTS, SPECIFICATIONS AND ANY APPROVED AMENDMENTS. THE DEPARTMENT WILL COLLECT SAMPLES FOR FREE CHLORINE RESIDUAL, TOTAL COLIFORM, ESCHERICHIA COLI (E. COLI) AND TURBIDITY.
   THE WATER MAIN PIPE AND APPURTENANCES SHALL NOT BE PLACED INTO SERVICE UNTIL SO AUTHORIZED BY THE CAYUGA COUNTY DEPARTMENT OF PUBLIC HEALTH.
2. MINIMUM VERTICAL SEPARATION BETWEEN WATER MAIN PIPELINES AND SEWER PIPELINES SHALL BE 18 INCHES MEASURED FROM THE OUTSIDE OF THE PIPES AT THE POINT OF CROSSING. ONE FULL STANDARD LAYING LENGTH OF WATER MAIN PIPE SHALL BE CENTERED UNDER OR OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. IN ADDITION, WHEN THE WATER MAIN PIPELINE PASSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT (COMPACTED SELECTED FILL) SHALL BE PROVIDED FOR THE SEWER TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING OF THE SEWER ON THE WATER MAIN. MINIMUM HORIZONTAL SEPARATION BETWEEN PARALLEL WATER MAINS AND SEWER PIPES (INCLUDING MANHOLES AND VAULTS) SHALL BE 10 FEET MEASURED FROM THE OUTSIDE OF THE PIPES, MANHOLES OR VAULTS.
3. WHEN INSTALLING FIRE HYDRANTS, SHOULD GROUND WATER BE ENCOUNTERED WITHIN SEVEN (7) FEET OF THE FINISHED GRADE, FIRE HYDRANT WEEP HOLES (DRAINS) SHALL BE PLUGGED.
4. THE WATER MAIN PIPELINE AND APPURTENANCES SHALL BE PRESSURE/LEAKAGE TESTED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF THE AWWA STANDARD C600, C602, C604, OR C605 (MOST RECENT VERSION AS APPLICABLE) OR IN ACCORDANCE WITH MORE STRINGENT REQUIREMENTS IMPOSED BY THE SUPPLIER OF WATER.

SANITARY NOTES

1. SANITARY SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE LATEST REGULATIONS OF THE STATE, COUNTY AND LOCAL MUNICIPALITY
2. MATERIALS
   - MAINS - PIPING SHALL BE POLYVINYL CHLORIDE (PVC) WITH ENDS SUITABLE FOR ELASTOMERIC GASKET JOINTS, AND A MINIMUM WALL THICKNESS OF SDR-35. PIPING AND FITTINGS SHALL MEET:
     ASTM D-3034 (4" THRU 15")
     ASTM F-679 (18" THRU 48")
   - LATERALS - 4" MIN. INSTALLED AT $\frac{1}{4}$" PER FOOT MIN. PIPING SHALL BE POLYVINYL CHLORIDE (PVC) WITH ENDS SUITABLE FOR ELASTOMERIC GASKET JOINTS, AND A MINIMUM WALL THICKNESS OF SDR-21. PIPING AND FITTINGS SHALL MEET ASTM D-2241.
   - JOINTING MATERIALS - SHALL BE BELL-AND-SPIGOT WITH INTEGRAL PUSH ON TYPE ELASTOMERIC GASKET JOINTS, GASKET MATERIAL TO BE NEOPRENE MEETING ASTM D-3212.
   - MANHOLES - SHALL BE PRECAST CONCRETE WITH NEOPRENE GASKETS MEETING ASTM C-478 & ASTM C-443.
3. INFILTRATION AND EXFILTRATION FOR SANITARY SEWERS SHALL BE LIMITED TO 100 GALLONS PER MILE PER INCH DIAMETER OF PIPE PER 24 HOURS.
4. IF AN AIR TEST IS USED, THE TEST AS A MINIMUM SHALL CONFORM TO THE PROCEDURE DESCRIBED IN ASTM C-828-80, ENTITLED STANDARD PRACTICE FOR LOW PRESSURE AIR TEST OF VITRIFIED CLAY PIPELINES; SANITARY MANHOLES SHALL BE TESTED FOR EXFILTRATION.
5. VACUUM TESTING OF MANHOLES IS ALLOWED. THE CONTRACTOR IS CAUTIONED TO SPEAK TO THE SUPERINTENDENT OF SEWERS PRIOR TO COMMENCING WITH PLANS TO VACUUM TEST.
6. DEFLECTION TEST - TEN STATE STANDARDS.
   6.A. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.
   6.B. IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL OR MANDRELL, IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.
   6.C. NO PIPE SHALL EXCEED A DEFLECTION OF 5%.
7. ALL SANITARY SEWER INSTALLATION SHALL BE MADE IN CONFORMANCE WITH THE SPECIFICATIONS, REGULATIONS, AND POLICIES OF THE CITY OF AUBURN.
8. FLOOR DRAINS, IF CONSTRUCTED, SHALL BE CONNECTED TO THE SANITARY SEWER/COMBINATION SEWER. (FLOOR DRAINS DO NOT INCLUDE FOUNDATION/FOOTER DRAINS). ALL DISCHARGES TO THE SANITARY/ COMBINATION SEWER MUST COMPLY WITH THE EFFLUENT LIMITS OF THE LOCAL AND/OR THE CAYUGA COUNTY SEWER USE LAW.
9. SEPARATION - MINIMUM VERTICAL SEPARATION BETWEEN WATER MAINS AND SEWER LINES SHALL BE 18 INCHES MEASURED FROM THE OUTSIDE OF THE PIPES AT THE POINT OF CROSSING. ONE FULL STANDARD LAYING LENGTH OF WATER MAIN PIPE SHALL BE CENTERED UNDER OR OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. IN ADDITION, WHEN THE WATER MAIN PASSES UNDER A SEWER ADEQUATE STRUCTURAL SUPPORT (COMPACTED SELECTED FILL) SHALL BE PROVIDED FOR THE SEWER TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING OF THE SEWER ON THE WATER MAIN. MINIMUM HORIZONTAL SEPARATION BETWEEN PARALLEL WATER MAINS AND SEWER PIPES (INCLUDING MANHOLES AND VAULTS) SHALL BE 10 FEET MEASURED FROM THE OUTSIDE OF THE PIPES, MANHOLES OR VAULTS.
10. SEWER USE LAW: FLOOR DRAINS, IF CONSTRUCTED, SHALL BE CONNECTED TO THE SANITARY/COMBINATION SEWER. FLOOR DRAINS DO NOT INCLUDE FOUNDATION/FOOTER DRAINS. NOTE: ALL DISCHARGES TO THE SANITARY/COMBINATION SEWER MUST COMPLY WITH THE EFFLUENT LIMITS OF THE LOCAL AND OR CAYUGA COUNTY SEWER USE LAW.

STORM NOTES

1. STORM SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE LATEST REGULATIONS OF THE MUNICIPALITY
2. PROPOSED STORM SEWER LATERAL MATERIAL:
   PVC SDR-35 6" MIN. SIZE & SHALL BE LAID AT A MINIMUM GRADE OF 1/4" PER FT.
   STORM SEWER MATERIAL:
   ADS HDPE 12" MIN.
3. FOUNDATION DRAINS SHALL BE CONNECTED TO STORM WATER SYSTEM VIA SUMP PUMPS. DOWNSPOUTS SHALL BE CONNECTED TO STORM SEWER WHERE APPLICABLE, WHERE NOTED ON THE PLANS DOWNSPOUTS SHALL DISCHARGE TO SPLASH BLOCKS.
4. UPON COMPLETION OF SYSTEM INSTALLATION, THE MAIN SEWER SYSTEM AND LEADS TO STRUCTURES SHALL BE FLUSHED AND LAMPED OR MANDREL TESTED TO THE SATISFACTION OF THE MUNICIPALITY.

SEWER USE LAW:

FLOOR DRAINS, IF CONSTRUCTED, SHALL BE CONNECTED TO THE SANITARY/COMBINATION SEWER. FLOOR DRAINS DO NOT INCLUDE FOUNDATION/FOOTER DRAINS.

NOTE: ALL DISCHARGES TO THE SANITARY/COMBINATION SEWER MUST COMPLY WITH THE EFFLUENT LIMITS OF THE LOCAL AND OR CAYUGA COUNTY SEWER USE LAW.

STANDARD SANITARY SEWER EXTENSION NOTES:

1. MAXIMUM ALLOWABLE INFILTRATION OR EXFILTRATION SHALL NOT EXCEED 100 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER DAY FOR THE SANITARY SEWER. IF AN AIR TEST IS USED, THE TEST AS A MINIMUM SHALL CONFORM TO THE PROCEDURE DESCRIBED IN ASTM DESIGNATION C828-86 ENTITLED PRACTICE FOR LOW-PRESSURE AIR TEST OF VITRIFIED CLAY PIPE LINES. SANITARY MANHOLES SHALL BE VISUALLY INSPECTED AND TESTED FOR LEAKAGE BY EXFILTRATION OR VACUUM. VACUUM TESTING OF MANHOLES SHALL COMPLY WITH THE METHOD OUTLINED IN THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION - TECHNICAL INFORMATION PAMPHLET (TIP) NO. 15 (LATEST REVISION).
2. FLOOR DRAINS, IF CONSTRUCTED IN THE PROJECT, MUST BE CONNECTED TO THE SANITARY SEWER. NOTE: FLOOR DRAINS DO NOT INCLUDE FOUNDATION OR FOOTER DRAINS INSTALLED TO INTERCEPT UNCONTAMINATED GROUND WATER. ALL DISCHARGES FROM THE FLOOR DRAINS TO THE SANITARY SEWER MUST COMPLY WITH THE EFFLUENT LIMITS OF THE LOCAL AND/OR THE CAYUGA COUNTY SEWER USE LAW.
3. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL OR MANDREL, IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.
4. MINIMUM VERTICAL SEPARATION BETWEEN WATER MAINS AND SEWER LINES SHALL BE 18 INCHES MEASURED FROM THE OUTSIDE OF THE PIPES AT THE POINT OF CROSSING. ONE FULL STANDARD LAYING LENGTH OF WATER MAIN PIPE SHALL BE CENTERED UNDER OR OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. IN ADDITION, WHEN THE WATER MAIN PIPELINE PASSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT (COMPACTED SELECTED FILL) SHALL BE PROVIDED FOR THE SEWER TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING OF THE SEWER ON THE WATER MAIN. MINIMUM HORIZONTAL SEPARATION BETWEEN PARALLEL WATER MAINS PIPES AND SEWER PIPES (INCLUDING MANHOLES AND VAULTS) SHALL BE 10 FEET MEASURED FROM THE OUTSIDE OF THE PIPES, MANHOLES OR VAULTS.

GENERAL NOTES

1. THE SANITARY WASTE DISPOSAL SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS OF THE NEW YORK STATE AND CAYUGA COUNTY HEALTH DEPARTMENTS.
2. WATER SERVICE WILL BE INSTALLED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE CITY OF AUBURN
3. THE BUILDING CONSTRUCTION TO BE IN COMPLIANCE WITH THE NEW YORK STATE BUILDING CODE.
4. ANY COST RELATED TO THE RELOCATION OF ANY UTILITIES NECESSITATED BY THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE OWNER OR THOSE REQUESTING THE RELOCATION OF THE UTILITY.
5. ANY AND ALL CULVERT LOCATIONS, SIZES OR TYPES, TO BE APPROVED BY THE CITY SUPERINTENDENT OF HIGHWAYS.
6. ALL PROPERTY CORNERS TO BE MARKED WITH IRON PINS.
7. THIS SUBDIVISION SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE COUNTY MONUMENTATION LAW.
8. THE SUBDIVISION IS LESS THAN 1500 FEET FROM THE NEAREST CONTROL MONUMENT AND IS THEREFORE TIED INTO THE MONUMENTATION NETWORK.
9. THIS SUBDIVISION SHALL COMPLY WITH ANY COUNTY OR STATE AGENCIES HAVING JURISDICTION.
10. ALL SITE WORK TO BE IN COMPLIANCE WITH THE STANDARDS OF CHAPTER 29 - ARTICLE V OF THE CITY OF AUBURN.
11. ALL CONSTRUCTION WILL BE IN ACCORDANCE WITH THE DESIGN CRITERIA AND CONSTRUCTION SPECIFICATIONS FOR LAND DEVELOPMENT FOR THE CITY OF AUBURN DATED THE MOST CURRENT REVISION.
12. THIS PROJECT WILL BE IN ACCORDANCE WITH THE CITY OF AUBURN HIGHWAY FRONTAGE POLICY.

CONSTRUCTION SEQUENCE FOR GRADING AND EROSION CONTROL:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. CONSTRUCT STORMWATER MANAGEMENT AREA AND EROSION CONTROL MEASURES AS SHOWN ON THE PLANS.
3. CONSTRUCT DRAINAGE SWALES ALONG PROPERTY LINES AS SHOWN.
4. CLEAR AND GRUB THE PROJECT IMPROVEMENTS AREAS.
5. STRIP TOPSOIL AND STOCKPILE FOR LATER USE.
6. GRADE IMPROVEMENTS AREAS WITHIN THE PROJECT SITE. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 7 DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN 7 DAYS OF THE LAST DISTURBANCE.
7. CONSTRUCT SEDIMENTATION BARRIERS AS SHOWN ON THIS PLAN.
8. REPLACE TOPSOIL AND FINE GRADE.
9. HYDRO-SEED ALL DISTURBED AREAS WITHIN 10 DAYS AFTER FINAL GRADING, CONTRACTOR IS RESPONSIBLE TO RESEED IF GRADING IS UNSATISFACTORY.
10. UPON APPROVAL OF THE CITY, REMOVE ALL TEMPORARY SILTATION CONTROLS.
11. SLOPES SHALL NOT EXCEED 1' VERTICAL TO 3' HORIZONTAL MAX. MAINTAIN 1:4 WHERE POSSIBLE.
12. MINIMUM OF 6" OF TOPSOIL IS TO BE PLACED ON ALL GRASS AREAS.
13. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BASED UPON ACTUAL FIELD CONDITIONS AOBE. CONTRACTOR SHALL PROVIDE FOR THIS COST IN HIS CONTRACT.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SILTATION AND EROSION CONTROL MEASURES FROM INSTALLATION THROUGH MAINTENANCE AND REMOVAL AFTER REVEGETATION HAS BEEN ESTABLISHED.
15. ALL END SECTIONS WILL BE PROVIDED WITH RIP-RAP APRONS.
16. ALL EROSION AND SEDIMENT CONTROL METHODS WILL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

CONSTRUCTION SEQUENCE FOR STEEP SLOPE STABILIZATION / JUTE MESH INSTALLATION FOR SLOPES OF 1:3 OR GREATER:

1. STRIP TOPSOIL ON SLOPE.
2. GRADE SLOPE PER PLAN. CONTRACTOR SHALL TAKE CARE TO NOT OVER EXCAVATE EMBANKMENT.
3. REPLACE TOPSOIL.
4. TRACK TOPSOIL WITH A BULLDOZER IN A DIRECTION PERPENDICULAR TO THE PROPOSED CONTOUR LINES.
5. IMMEDIATELY SEED AND FERTILIZE TOPSOIL PER PLAN.
6. IMMEDIATELY APPLY JUTE MESH BY UNROLLING THE PRODUCT DOWN THE SLOPE. DO NOT STRETCH THE MESH, ALLOWING IT TO FULLY CONTACT THE SOIL.
7. SECURE THE JUTE MESH WITH STAPLES (11 GAUGE - 8"x1"x8") 24" APART THOUGH OUT THE MATTING (APPROXIMATELY 200 STAPLES PER 100 SY). STAPLES SHOULD BE DRIVEN FLUSH WITH THE GROUND.
8. SECURE BEGINNING AND END OF ROLL BY ANCHORING THE MATTING INTO 6" DEEP SLOTS CUT INTO THE SOIL. THEN STAPLE MATTING AT CHECK SLOTS.

STABILIZATION STANDARDS AND SPECIFICATIONS :

A TEMPORARY OR PERMANENT PROTECTIVE COVERING PLACED ON A PREPARED, SEEDED PLANTING AREA THAT IS ANCHORED IN PLACE BY STAPLES OR OTHER MEANS TO AID IN CONTROLLING EROSION BY ABSORBING RAIN SPLASH ENERGY AND WITHSTAND OVERLAND FLOW AS WELL AS PROVIDE A MICROCLIMATE TO PROTECT AND PROMOTE SEED ESTABLISHMENT.

CONDITIONS WHERE PRACTICE APPLIES

ANCHORED STABILIZATION MATS ARE REQUIRED FOR SEEDED EARTHEN SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL; IN VEGETATED CHANNELS WHERE THE VELOCITY OF THE DESIGN FLOW EXCEEDS THE ALLOWABLE VELOCITY FOR VEGETATION ALONE (USUALLY GREATER THAN 5 FEET PER SECOND); ON STREAMBANKS AND SHORELINES WHERE MOVING WATER IS LIKELY TO ERODE NEWLY SEEDED OR PLANTED AREAS; AND IN AREAS WHERE WIND PREVENTS STANDARD MULCHING WITH STRAW. THIS STANDARD DOES NOT APPLY TO SLOPES STABILIZED WITH SOD, ROCK RIPRAP OR HARD ARMOR MATERIAL.

DESIGN CRITERIA

SLOPE APPLICATIONS - ANCHORED STABILIZATION MATS FOR USE ON SLOPES ARE PRIMARILY USED AS MULCH BLANKETS WHERE THE MESH MATERIAL IS WITHIN THE BLANKET OR AS A NETTING OVER PREVIOUSLY PLACED MULCH. THESE STABILIZATION MATS ARE NOT EFFECTIVE IN PREVENTING SLOPE FAILURES.

1. REQUIRED ON ALL SLOPES STEEPER THAN 3:1
2. MATTING WILL BE DESIGNED FOR PROPER LONGEVITY NEED AND STRENGTH BASED ON INTENDED USE.
3. ALL INSTALLATION DETAILS AND DIRECTIONS WILL BE INCLUDED ON THE SITE EROSION AND SEDIMENT CONTROL PLAN AND WILL FOLLOW MANUFACTURES SPECIFICATIONS.

CHANNEL APPLICATIONS - ANCHORED STABILIZATION MATS, FOR USE IN SUPPORTING VEGETATION IN FLOW CHANNELS, ARE GENERALLY A NON-DEGRADABLE, THREE DIMENSIONAL PLASTIC STRUCTURE WHICH CAN BE FILLED WITH SOIL PRIOR TO PLANTING. THIS STRUCTURE PROVIDES A MEDIUM FOR ROOT GROWTH WHERE THE MATTING AND ROOTS BECOME INTERTWINED FORMING A CONTINUOUS ANCHOR FOR THE VEGETATED LINING.

1. CHANNEL STABILIZATION SHALL BE BASED ON THE TRACTIVE FORCE METHOD.
2. FOR MAXIMUM DESIGN SHEAR STRESSES LESS THAN 2 POUNDS PER SQUARE FOOT, A TEMPORARY OR BIO-DEGRADABLE MAT MAY BE USED.
3. THE DESIGN OF THE FINAL MATTING SHALL BE BASED ON THE MATS ABILITY TO RESIST THE TRACTIVE SHEAR STRESS AT BANK FULL FLOW.
4. THE INSTALLATION DETAILS AND PROCEDURES SHALL BE INCLUDED ON THE SITE EROSION AND SEDIMENT CONTROL PLAN AND WILL FOLLOW MANUFACTURERS SPECIFICATIONS.

STANDARD AND SPECIFICATIONS FOR ANCHORED STABILIZATION MATTING

CONSTRUCTION SPECIFICATIONS

1. PREPARE SOIL BEFORE INSTALLING MATTING BY SMOOTHING THE SURFACE, REMOVING DEBRIS AND LARGE STONE, AND APPLYING LIME, FERTILIZER AND SEED. REFER TO MANUFACTURERS INSTALLATION DETAILS.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE MAT IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. IN CHANNELS OR SWALES, BEGIN AT THE DOWNSLOPE END, ANCHORING THE MAT AT THE BOTTOM AND TOP ENDS OF THE BLANKET. WHEN ANOTHER ROLL IS NEEDED, THE UPSLOPE ROLL SHOULD OVERLAY THE LOWER LAYER, SHINGLE STYLE, SO THAT CHANNEL FLOWS DO NOT PEEL BACK THE MATERIAL.
4. ROLL THE MATS DOWN A SLOPE WITH A MINIMUM 4" OVERLAP. ROLL CENTER MAT IN A CHANNEL IN DIRECTION OF WATER FLOW ON BOTTOM OF THE CHANNEL. DO NOT STRETCH BLANKETS. BLANKETS SHALL HAVE GOOD CONTINUOUS CONTACT WITH THE UNDERLYING SOIL THROUGHOUT ITS ENTIRE LENGTH.
5. PLACE MATS END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP, USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE MATS.
6. FULL LENGTH EDGE OF MATS AT TOP OF SIDE SLOPES MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH; BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
7. MATS ON SIDE SLOPES OF A CHANNEL MUST BE OVERLAPPED 4" OVER THE CENTER MAT AND STAPLED.
8. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN.
9. THE TERMINAL END OF THE MATS MUST BE ANCHORED IN A 6"X6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
10. STAPLING AND ANCHORING OF BLANKET SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATIONS.

MAINTENANCE

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 80% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 2 CALENDAR DAYS

SOIL RESTORATION NOTES:

1. TILL COMPOST INTO SUBSOIL TO A DEPTH OF AT LEAST 12" USING CAT-MOUNTED RIPPER, TRACTOR MOUNTED DISC, OR TILLER, MIXING, AND CIRCULATING AIR AND COMPOST INTO SUBSOILS.
2. ROCK-PICK UNTIL UPLIFTED STONE/ROCK MATERIALS OF 4" AND LARGER ARE CLEANED OFF SITE.
3. APPLY TOPSOIL TO A DEPTH OF 6 INCHES ON ALL AREAS BEING RETURNED TO GRASS.
4. VEGETATE AS REQUIRED BY APPROVED PLAN.

TEMPORARY CONSTRUCTION AREA SEEDING NOTES:

1. THE AREA MUST BE ROUGH GRADED AND SLOPES PHYSICALLY STABLE.
2. SEEDING MUST TAKE PLACE WITHIN 24 HOURS OF DISTURBANCE OR SCARIFICATION OF THE SOIL WILL BE NEEDED PRIOR TO SEEDING.
3. TYPICALLY FERTILIZER OR LIME IS NOT USED FOR TEMPORARY SEEDINGS.
4. ANY SEEDING METHOD MAY BE USED THAT PROVIDES UNIFORM APPLICATION OF SEED TO THE AREA.
5. SEEDING

PLANTING SEASON	SPECIES	RATE IN LBS./ACRE
SPRING, SUMMER, OR EARLY FALL	RYEGRASS (ANNUAL OR PERENNIAL)	30
LATE FALL OR EARLY WINTER	WINTER RYE (CEREAL RYE)	100

*MULCH THE AREA WITH HAY OR STRAW AT 2 TONS/ACRE. WOOD FIBER HYDROMULCH OR OTHER SPRAYABLE PRODUCTS APPROVED FOR EROSION CONTROL MAY BE USED IF APPLIED ACCORDING TO SPECIFICATIONS.

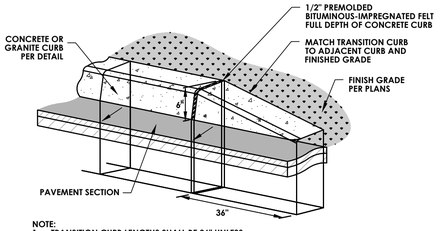
COMPACTION NOTES

1. THE CONTRACTOR SHALL STRIP THE TOPSOIL AND REMOVE ANY UNSUITABLE SOILS WITHIN THE PROPOSED GRADING LIMITS PRIOR TO PLACEMENT OF FILL MATERIAL.
2. ALL FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY OF STANDARD PROCTOR TEST AT OPTIMUM MOISTURE CONTENT.
3. THE COMPACTION TESTS WILL BE CONDUCTED BY A LICENSED TESTING LABORATORY AND RESULTS SUBMITTED TO DESIGN ENGINEER.

EROSION AND SEDIMENT CONTROL NOTES:

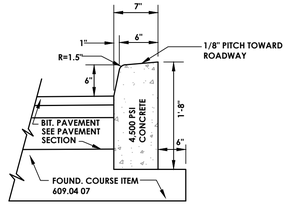
(OCTOBER 2021)

1. IN ACCORDANCE WITH SECTIONS 107-12 AND 209-3.01 OF THE NYSDOT STANDARD SPECIFICATIONS, THE CONTRACTOR SHALL REVIEW THE EROSION AND SEDIMENT CONTROL PLAN INCLUDED IN THE CONTRACT DOCUMENTS, AND IF NECESSARY, MODIFY THE PLAN WITH THE CONTRACTOR'S INTENDED SEQUENCE AND TYPES OF OPERATIONS. THE CONTRACTOR'S MODIFIED EROSION AND SEDIMENT CONTROL PLAN SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL, ALONG WITH

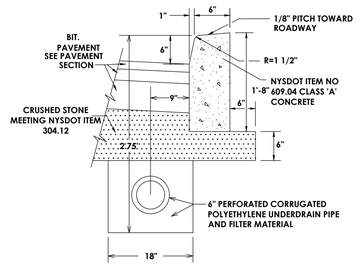


NOTE:
1. TRANSITION CURB LENGTHS SHALL BE 36" UNLESS OTHERWISE INDICATED IN THE DRAWINGS.

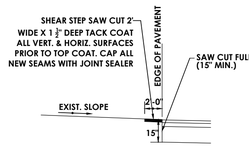
TRANSITION CURB TO GRADE
N.T.S.



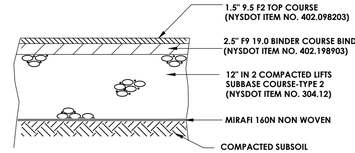
CONCRETE CURB
N.T.S.



CONCRETE CURB WITH UNDERDRAIN
N.T.S.

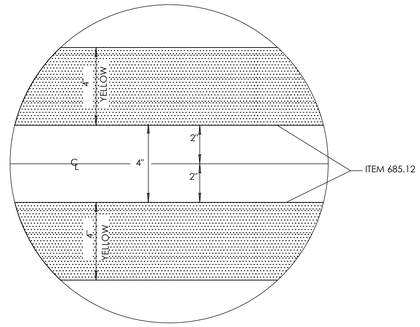


PAVEMENT KEY
(FOR CONNECTION TO EXISTING PAVEMENT)
N.T.S.



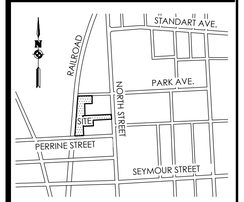
NOTE: ALL DEPTHS ARE COMPACTED THICKNESSES

PAVEMENT SECTION
N.T.S.



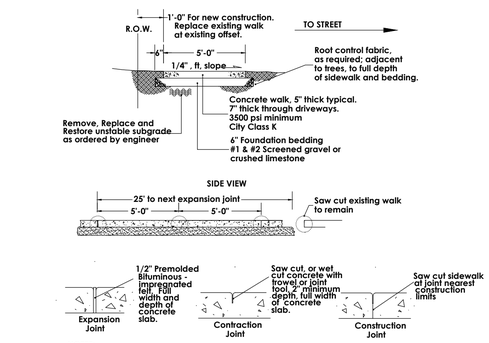
DOUBLE YELLOW CENTERLINE
N.T.S.

MODIFIED INTERNATIONAL SYMBOL OF ACCESS
N.T.S.



CITY OF AUBURN

LOCATION SKETCH
N.T.S.



NOTES:
1) The gravel or stone base shall be placed on a well graded and compacted subgrade. The gravel or stone base shall be thoroughly compacted.

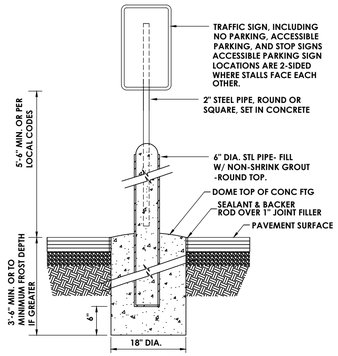
2) All exposed surfaces shall be broomed and edges finished with a 1.4" radius edging tool. The finished concrete surface shall be treated with a clear, non-yellowing curing compound.

3) No concrete shall be placed before April 20th, or after October 31st. No concrete shall be placed unless the ambient air surface temperature is above 40 degrees.

4) All work shall meet these specifications.

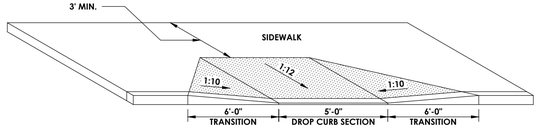
5) All work shall conform to ADA requirements.

TYPICAL SIDEWALK
N.T.S.

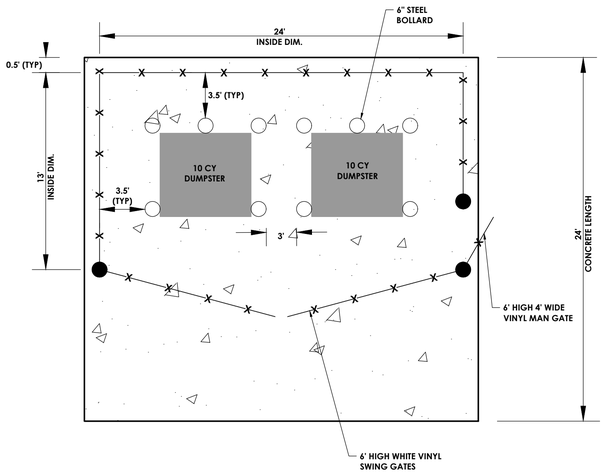


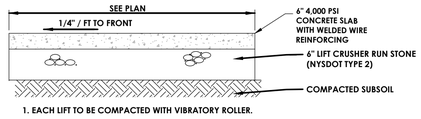
(SIGN IN PARKING LOT OR DRIVE)

TYPICAL POST MOUNT HANDICAP SIGN INSTALLATION
N.T.S.



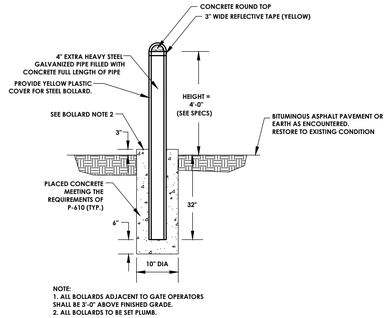
TYPICAL HANDICAP RAMP
N.T.S.





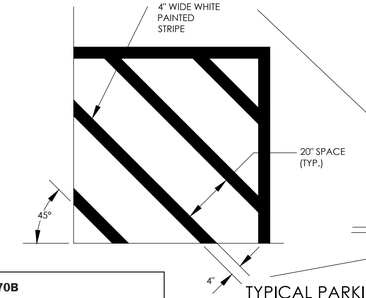
1. EACH LIFT TO BE COMPACTED WITH VIBRATORY ROLLER.

CONCRETE DUMPSTER PAD
N.T.S.

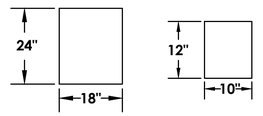


NOTE:
1. ALL BOLLARDS ADJACENT TO GATE OPERATORS SHALL BE 3'-0" ABOVE FINISHED GRADE.
2. ALL BOLLARDS TO BE SET PLUMB.

BOLLARD
N.T.S.



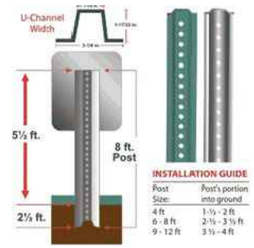
TYPICAL PARKING PAVEMENT MARKING LAYOUT
N.T.S.



WET POND SIGN — BIORETENTION AREA SIGN

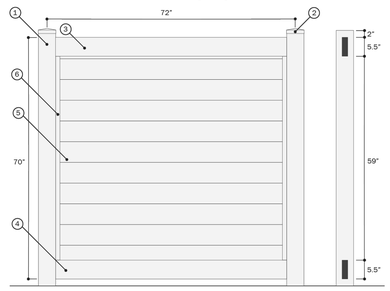
SMP SIGN INFORMATION

STORMWATER MANAGEMENT PRACTICE - BIORETENTION AREA / WET POND
PROJECT IDENTIFICATION - (SPDES CONSTRUCTION PERMIT #)
MUST BE MAINTAINED IN ACCORDANCE WITH O&M PLAN



SMP SIGN
N.T.S.

6ft Horizontal Privacy - Style 3906-6-70B



	ITEM #	DESCRIPTION	QTY	SKU
POST	1	Post, 5" x 5" (In-ground post depth varies regionally)		PS55-135
	2	Cap - Pyramid 5" x 5" (other cap options available)		1523

	ITEM #	DESCRIPTION	QTY	SKU
PANEL	3	Top Pocket Rail, 1.5" x 5.5" x 71"	1	PR1555-09071
	4	Bottom Pocket Rail, 1.5" x 5.5" x 71"	1	PR1555-09071
	5	T&G Panel, .875" x 6" x 66.5"	11	TG6-04066.5
	6	U-Channel, 1" x 1.25" x 59"	2	UC59
		Metal Rail Insert, I-Beam, 70"	1	1555AL-70

BuyDirectVinylFence.com®

PRIVACY FENCE

TITLE: 6ft Horizontal Privacy - Style 3906-6-70B

STYLE #: 3906-6-70B | REV: A
SCALE: NONE | DATE: 22 JAN 2024 | SHEET: 1 of 1

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DESIGN DEVELOPMENT

PASSERO engineering architecture

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100
ROCHESTER, NY 14614
(585) 325-1000
FAX: (585) 325-1691

PROJECT MANAGER — EDMUND MARTIN, P.E.
PROJECT ENGINEER — ANDREW BURNS, P.E.
DESIGNER — JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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DETAILS

AUBURN, NY

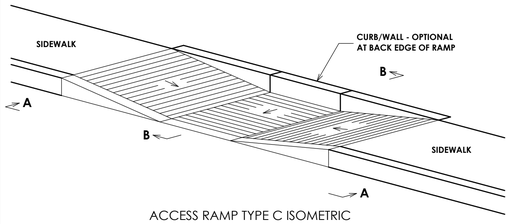
AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

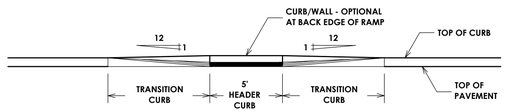
DRAWING NO.: **C-202**

DATE: **JUNE 2026**

Y:\PROJECTS-NEW\2025\20255046\20255046.0001\01_CAD-BIM-MODELS\CIVIL\20255046.01_DETAILS.DWG 6/15/2026 12:37 PM Jacob Lewis



ACCESS RAMP TYPE C ISOMETRIC



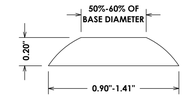
VIEW A-A

NOTES:

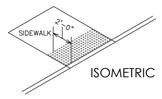
1. 1:12 IS MAXIMUM SLOPE OF ACCESS RAMP AND SIDE FLARES.
2. SURFACE OF ACCESS RAMP IS TO BE STABLE, FIRM AND SLIP-RESISTANT. TEXTURE SURFACE WITH COARSE BROOM RUNNING TRANSVERSE TO SLOPE OF ACCESS RAMP.

SIDEWALK ACCESS RAMP

N.T.S.



DOME SECTION



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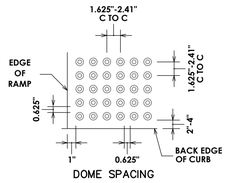
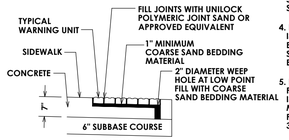


DOME SPACING



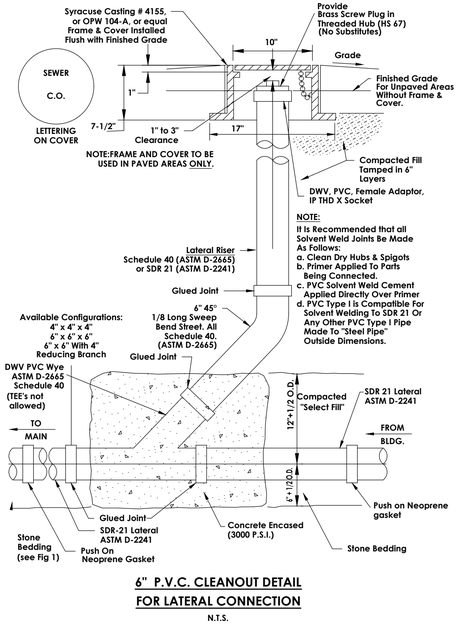
SECTION

NOTES:

1. QUANTITY OF TRUNCATED DOMES SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY. TO DEPICT REQUIRED SQUARE GRID PATTERN.
2. TRUNCATED DOMES ARE TO BE ALIGNED IN SQUARE GRID PATTERN IN PREDOMINANT DIRECTION OF TRAVEL.
3. DETECTABLE WARNING SYSTEM FIELD IS TO BE 2 FEET DEEP, AND IS TO EXTEND ACROSS FULL WIDTH OF SIDEWALK ACCESS RAMP, BUT NOT UP SIDE FLARES.
4. DETECTABLE WARNING SYSTEM FIELD IS TO BE LOCATED SUCH THAT OUTER EDGE OF WARNING FIELD NEAREST TO STREET IS 2 TO 4 INCHES OFF BACK EDGE OF CURB.
5. ENTIRE DETECTABLE WARNING SYSTEM FIELD INCLUDING TRUNCATED DOMES, IS TO BE DARK GRAY IN COLOR, PER MUNSELL BOOK NOTATION 10BG 3/1, FEDERAL STANDARD 595B NUMBER 36081, OR APPROVED EQUIVALENT.

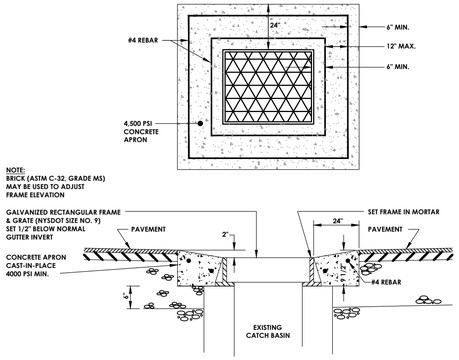
DETECTABLE WARNING SURFACE

N.T.S.



6" P.V.C. CLEANOUT DETAIL FOR LATERAL CONNECTION

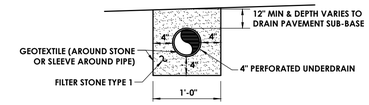
N.T.S.



NOTE:
BRICK (ASTM C-32, GRADE MS) MAY BE USED TO ADJUST FRAME ELEVATION

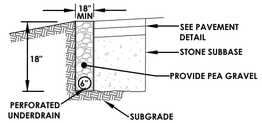
CONCRETE APRON FOR CATCH BASINS

N.T.S.



PAVEMENT AREA UNDERDRAIN

N.T.S.



STONE DIAPHRAGM

N.T.S.

BIO-RETENTION BASIN SOIL MEDIA REQUIRED RATIOS

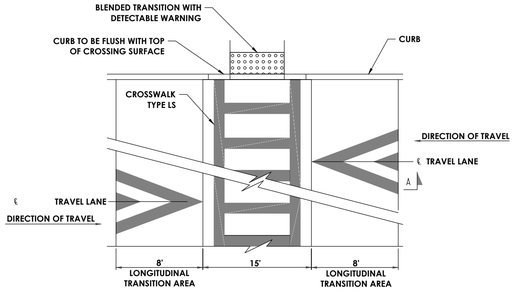
*per NYSDEC 2024 SWDM.

Surface Layer: Shredded Hardwood Mulch or Non-Invasive Living Mulch
Filter Media: 30 inches thick
- ASTM C-33 Sand, 60-75% of total mix.
- Topsoil. 25-40% of total mix.

Drainage Layer: 10 inches of AASHTO #57 Stone, washed, no fines.

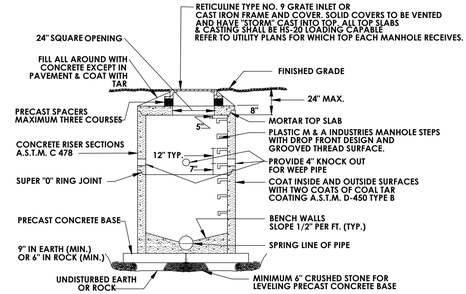
Underdrain: As shown on utility plans.

Geo fabric: Non-woven, polypropylene with flow rate > 125gpm/sf 9ASTM DD4491) AND opening size US #70 sieve (ASTM D4751)



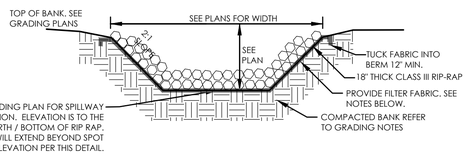
RAISED CROSSWALK DETAIL

N.T.S



STANDARD STORM MANHOLE

N.T.S.



NOTES:

FILTER FABRICS ARE TO MEET THE FOLLOWING CRITERIA:
- THICKNESS: 20-60 MILS
- GRAB STRENGTH 90-120 LBS

IF UNDERLYING SOIL IS <50% FINES,
- MAX OPENING EOS <= #100 SIEVE
- TOTAL OPEN AREA OF FABRIC CANNOT BE >32%

IF UNDERLYING SOIL IS >50% FINES,
- MAX OPENING EOS <=#70 SIEVE
- TOTAL OPEN AREA OF FABRIC CANNOT BE >10%

1. SOIL TO BE COMPACTED TO 95% STANDARD PROCTOR TEST OF USED MATERIAL. SEE GRADING NOTES FOR MORE INFORMATION.

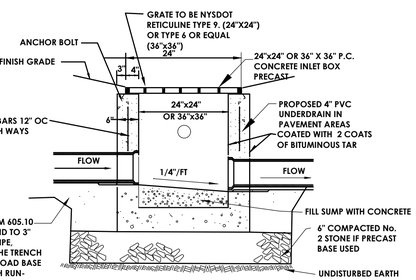
2. SIDE SLOPES SHALL BE GRADED TO 2:1 OR FLATTER PRIOR TO PLACING FILTER MATERIAL AND RIP RAP.

3. RIP RAP SHALL BE PLACED TO MAINTAIN A UNIFORM GRADATION. LARGER STONE SHALL BE PLACED AT THE TOE.

4. ENDS OF THE RIP RAP SHALL BE KEYED INTO A STABLE BANK. WHEN TYING INTO OTHER STRUCTURES, LARGER RIPRAP CAN BE LAID IN STEPS OR STACKED AS NEEDED TO FIT. STONES LARGER THAN THOSE DESIGNATED FOR FLOW (12") SHALL BE USED FOR THIS PURPOSE.

RIP RAP OVERFLOW

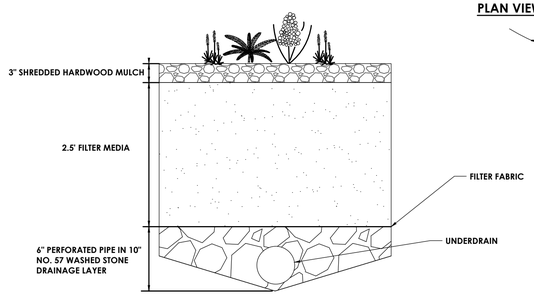
N.T.S.



1. ALL CONCRETE TO BE 3500 psi CLASS A N.Y.S.D.O.T. ITEM 601.05
2. ALL CONCRETE IN CONTACT WITH ASPHALT PAVEMENT SHALL BE COVERED WITH A TACK COAT IN ACCORDANCE WITH N.Y.S.D.O.T. SECTION 407.

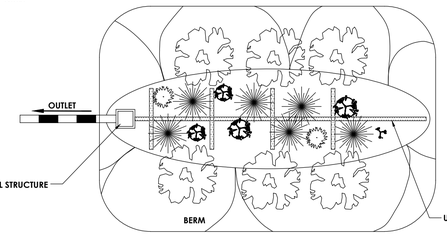
STANDARD CATCH BASIN

N.T.S.



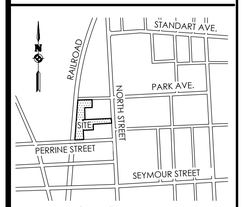
BIORETENTION AREA

N.T.S.



DESIGN DEVELOPMENT

PASSERO
engineering architecture



CITY OF AUBURN

LOCATION SKETCH

N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100
ROCHESTER, NY 14614
(585) 325-1000
FAX: (585) 325-1691
PROJECT MANAGER: EDMUND MARTIN, P.E.
PROJECT ENGINEER: ANDREW BURNS, P.E.
DESIGNER: JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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DETAILS

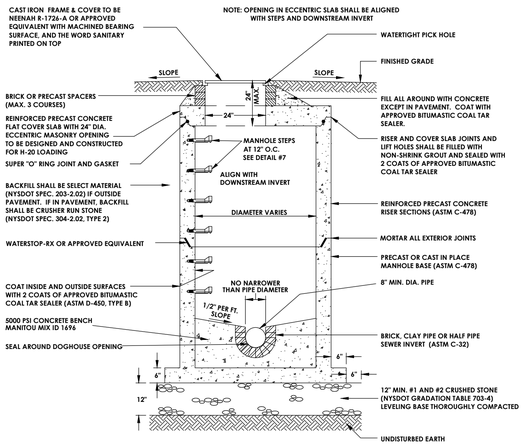
AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

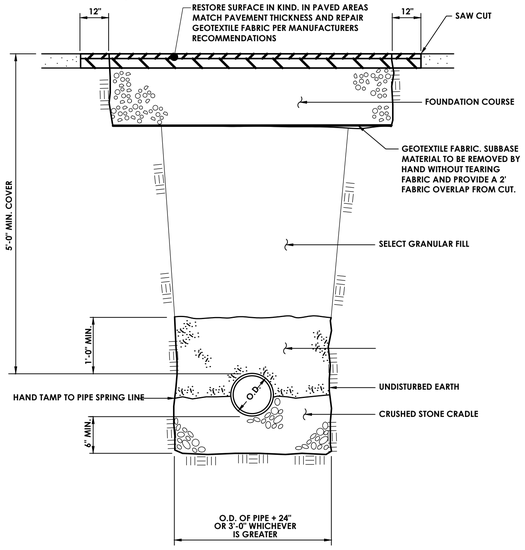
DRAWING NO.: C-203

DATE: **JUNE 2026**



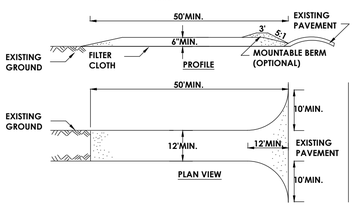
SANITARY SEWER MANHOLE

(N.T.S.)



TYPICAL SEWER TRENCH SECTION IN PAVEMENT AREAS

N.T.S.

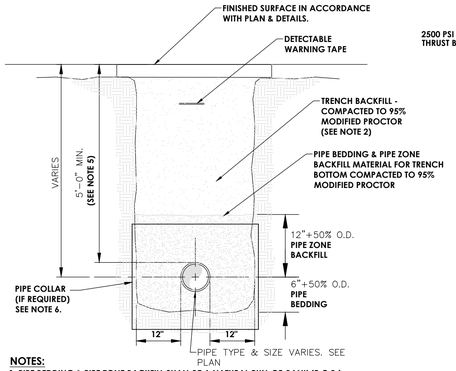


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.



NOTES:

1. PIPE BEDDING & PIPE ZONE BACKFILL SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) SAND OR A MIXTURE OF CRUSHED STONE AND GRAVEL, FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. BEDDING GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION	% PASSING
3/4"	100%
NO. 40	0-70%
NO. 200	0-10%

2. TRENCH BACKFILL SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) OR PROCESSED GRAVEL, OR EXCAVATED MATERIAL FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. TRENCH BACKFILL GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

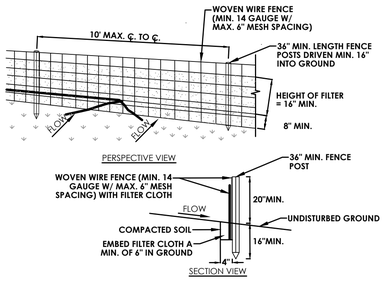
SIEVE DESIGNATION	% PASSING
4"	100%
NO. 40	0-70%
NO. 200	0-10%

IN NON-TRAFFIC UNPAVED AREAS TRENCH BACKFILL CAN BE MATERIALS EXCAVATED FROM THE TRENCH AS APPROVED BY THE ENGINEER AND COMPACTED TO 90% MODIFIED PROCTOR.

3. INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND PIPING. LOCATE TAPE 12" BELOW FINISHED GRADE, DIRECTLY OVER PIPING, EXCEPT 6" BELOW SUBGRADE UNDER PAVEMENTS & SLAB.
4. TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.
5. 5'-0" MIN COVER SHALL BE APPLIED TO WATER MAIN OR SANITARY SEWER FORCE MAINS ONLY. IF 5' COVER CANNOT BE ACHIEVED, INSULATION SHALL BE REQUIRED. INSULATION SHALL BE APPROVED BY THE AHJ WHERE INSTALLATION IS PUBLIC.
6. FOR SANITARY AND STORM PIPE RUNS STEEPER THAN 12%, 4'x4' PIPE COLLARS SHALL BE INSTALLED AT 100' MIN. INTERVALS.

PIPE TRENCH DETAIL (TYPICAL)

N.T.S.

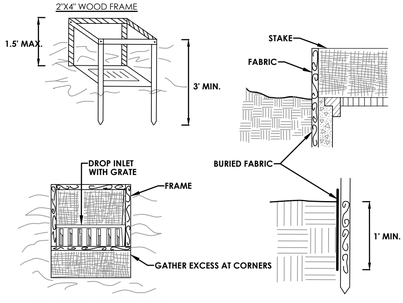


CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 14 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE

N.T.S.



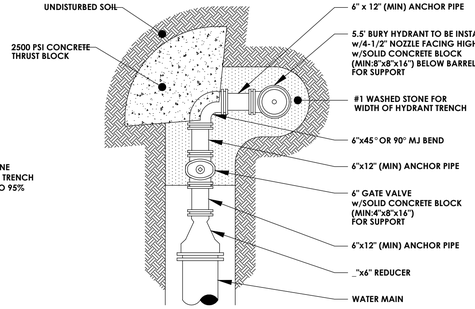
CONSTRUCTION SPECIFICATIONS:

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUM DRAINAGE AREA 1 ACRE

FILTER FABRIC DROP INLET PROTECTION

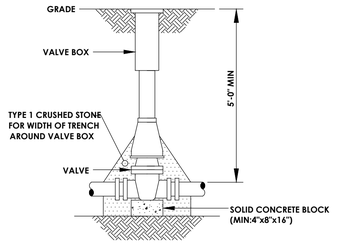
N.T.S.



NOTETO BE USED WHEN WATER MAIN WILL NOT BE EXTENDED.

DEAD END PERPENDICULAR HYDRANT ASSEMBLY

N.T.S.

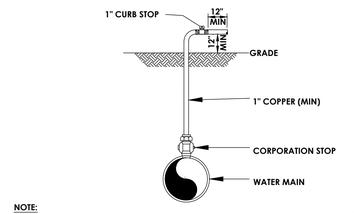


NOTE:

1. VALVE BOX SHALL BE CENTERED ON VALVE AND SET ON COMPACTED BACKFILL.
2. VALVE SHALL NOT SUPPORT VALVE BOX.
3. ALL BODY AND BONNET BOLTS SHALL BE STAINLESS STEEL.
4. ALL VALVES SHALL BE OPEN LEFT EXCEPT VALVES 12" AND SMALLER

WATER VALVE

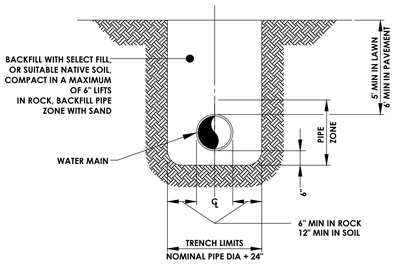
N.T.S.



NOTE:
IMMEDIATELY PRIOR TO THE AUTHORITY PLACING WATER MAIN IN SERVICE CONTRACTOR SHALL REMOVE ALL CORPORATIONS ASSOCIATED WITH TEMPORARY FACILITIES (I.E. SAMPLING TAPS, ETC.) AND REPLACE WITH THREADED BRASS PLUGS. PLACEMENT OF THREADED BRASS PLUG MUST BE WITNESSED BY A MCWA REPRESENTATIVE.

DISINFECTION / BLOW-OFF/ SAMPLING TAP

N.T.S.



WATERMAIN TRENCH

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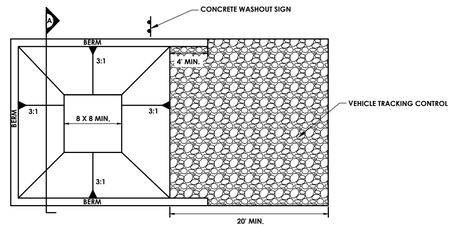

CONCRETE WASHOUT AREA PLAN

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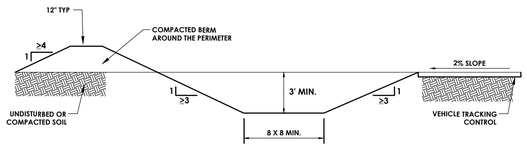


SECTION A

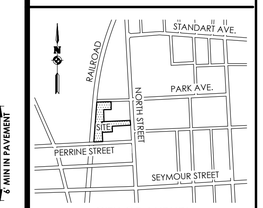
CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN FOR:
   - CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFRABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL NE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR THE PERIMETER BERM CONSTRUCTION.

DESIGN DEVELOPMENT

PASSERO
engineering architecture



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100 (585) 325-1000
ROCHESTER, NY 14614 FAX: (585) 325-1691

PROJECT MANAGER EDMUND MARTIN, P.E.
PROJECT ENGINEER ANDREW BURNS, P.E.
DESIGNER JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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DETAILS

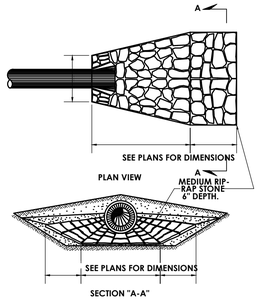
AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

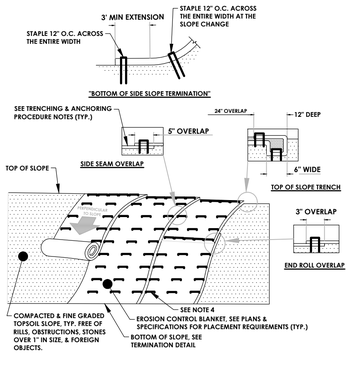
DRAWING NO.: **C-204**

DATE: **JUNE 2026**



STONE RIP-RAP

N.T.S.



NOTES:

1. PREPARE THE TOPSOIL (SEEDBED) FIRST BY RAKING, SHAPING, FINE GRADING, COMPACTING, SEEDING & FERTILIZING THE SLOPES.

2. USE THE TRENCHING & ANCHORING PROCEDURES DETAILED HEREIN TO SECURE ANY EXPOSED MATERIAL ENDS, SECURE ALL PRODUCT OVERLAPS, OVERLAP IN THE DIRECTION OF WATER FLOW, PERPENDICULAR TO THE SLOPE.

3. KEEP EROSION CONTROL BLANKET IN SOLID CONTACT WITH THE TOPSOIL.

4. USE THE REQUIRED NUMBER OF STAPLES/STAKES TO SECURELY FASTEN THE EROSION CONTROL BLANKET TO THE SLOPE IN LOOSE SOIL CONDITIONS. THE USE OF STAPLES/STAKES LENGTHS GREATER THAN 6" MAYBE NECESSARY FOR PROPER SECURING. STAPLE PATTERNS & OVERLAPS ARE DEPENDENT ON SITE CONDITIONS & MANUFACTURER'S REQUIREMENTS. CONTRACTOR SHALL CONSULT WITH MANUFACTURER FOR ACTUAL SITE SPECIFIC REQUIREMENTS.

TRENCHING & ANCHORING PROCEDURE NOTES:

SIDE SEAM OVERLAP: THE EDGES OF PARALLEL BLANKETS SHALL BE STAPLED WITH A 5" OVERLAP.

TOP OF SLOPE TRENCH: BEGIN AT THE TOP OF SLOPE BY ANCHORING THE EROSION CONTROL BLANKET IN A 6"D X 6"W TRENCH WITH A 12" OVERLAP EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR WITH A ROW OF STAPLES/STAKES 12" O.C. IN THE BOTTOM OF THE TRENCH. BACKFILL & COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL & FOLD THE REMAINING 12" PORTION OF THE EROSION CONTROL BLANKET BACK OVER THE SEED & COMPACTED SOIL. SECURE THE EROSION CONTROL BLANKET BACK OVER THE SEED & COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED 12" O.C. ACROSS THE ENTIRE WIDTH.

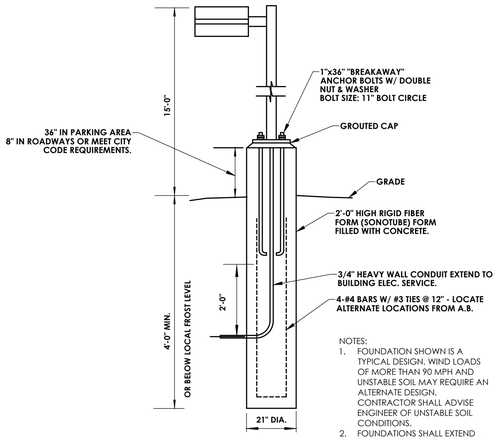
END ROLL OVERLAP: CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE SHALL BE PLACED END OVER END (SINGLE-STYLE) WITH A 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREAS, 12" APART ACROSS THE ENTIRE WIDTH.

EROSION CONTROL BLANKET INSTALLATION DETAIL

N.T.S.

LIGHTPOLE BASE DEPTH

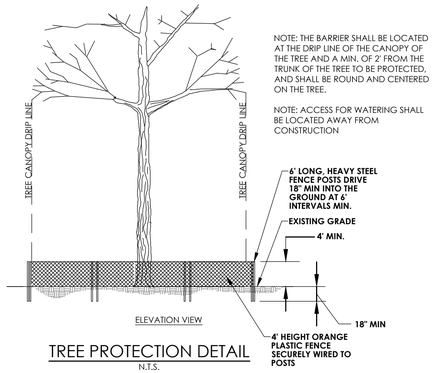
POLE HEIGHT	GROUND SLOPE	GROUND WATER BELOW FOUNDATION	GROUND WATER 2' BELOW SURFACE
LESS THAN 14'	NA	4'-0"	4'-0"
LESS THAN 30'	LESS THAN 1:4	5'-0"	6'-0"
LESS THAN 30'	GREATER THAN 1:4	6'-0"	7'-0"



NOTES:
1. FOUNDATION SHOWN IS A TYPICAL DESIGN. WIND LOADS OF MORE THAN 90 MPH AND UNSTABLE SOIL MAY REQUIRE AN ALTERNATE DESIGN. CONTRACTOR SHALL ADVISE ENGINEER OF UNSTABLE SOIL CONDITIONS.
2. FOUNDATIONS SHALL EXTEND BELOW FROST DEPTH PER LOCAL CODES.

LIGHT POLE AND BASE DETAIL

N.T.S.

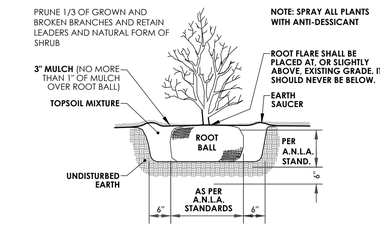


NOTE: THE BARRIER SHALL BE LOCATED AT THE DRIP LINE OF THE CANOPY OF THE TREE AND A MIN. OF 2' FROM THE TRUNK OF THE TREE TO BE PROTECTED, AND SHALL BE ROUND AND CENTERED ON THE TREE.

NOTE: ACCESS FOR WATERING SHALL BE LOCATED AWAY FROM CONSTRUCTION

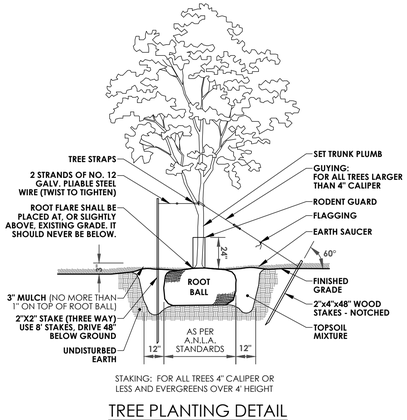
TREE PROTECTION DETAIL

N.T.S.



SHRUB PLANTING DETAIL

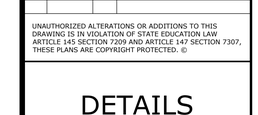
N.T.S.



STAKING: FOR ALL TREES 4" CALIPER OR LESS AND EVERGREENS OVER 4' HEIGHT

TREE PLANTING DETAIL

N.T.S.



CITY OF AUBURN

LOCATION SKETCH

N.T.S.

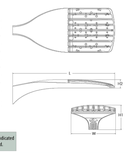
STAMP:

D-Series Size 1
LED Area Luminaire

d-series

Specifications

EPA:	0.69 ft² (0.064 m²)
Length:	32.71" (83.1 cm)
Width:	14.26" (36.2 cm)
Height H1:	7.88" (20.0 cm)
Height H2:	2.73" (6.9 cm)
Weight:	34 lbs (15.4 kg)



Design Select options indicated by this color background.

Catalog Number: DSX1 LED P1 30K 70CRI T3M
Notes:
Type:

Hit the Tab key or mouse over the page to see all interactive elements.

Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details.

Ordering Information EXAMPLE: DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature	Color Rendering Index	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P5 P7 P2 P6 P8 P3 P9 P4 P10 P11 P12 P13 **Rotated optics** P16 P17 P14 P15	(this section 70CRI only) 30K 3000K 40K 4000K 50K 5000K 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	70CRI 70CRI 70CRI 80CRI 80CRI 80CRI 80CRI	AFR Automotive front row T1S Type I short T2M Type II medium T3M Type III medium T4FT Type IV Texas glare[1] T4M Type IV medium T4LG Type IV Low glare[1] T5FW Forward throw medium T5W Type V wide T5VW Type V very wide T5LG Type V Low glare[1] BLC4 Type IV backlight control[1] LCCO Left corner cutoff[1] RCCO Right corner cutoff[1]	MVOLT (120V-277V)[2] HVOLT (347V-480V)[3,4] XVOLT (277V - 480V)[3,4] 120[5,6] 208[5,6] 240[5,6] 277[5,6] 347[5,6] 480[5,6]	**Shipped included** SPA Square pole mounting (Ø3 drilling) RPA Round pole mounting (Ø3 drilling) SPAS Square pole mounting (Ø drilling)[7] RPAS Round pole mounting (Ø drilling)[7] SPABN Square narrow pole mounting (Ø drilling) WBA Wall bracket[8] MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)

Control options	Other options	Finish (required)
Shipped installed NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc,[9,11,24,25] PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc,[9,11] PER NEMA twist-lock receptacle only (controls ordered separately)[12] PERS Five-pin receptacle only (controls ordered separately)[12]	PE[27] Seven-pin receptacle only (controls ordered separate)[9,12] FAO Field adjustable output[13,23] BL30 Bi-level switched dimming, 30%[14] BL50 Bi-level switched dimming, 50%[14] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[15] DS Dual switching[14,16,17]	**Shipped installed** SPD20KV 20kV surge protection HS Houseside shield (black finish standard)[18] L90 Left rotated optics[1] R90 Right rotated optics[1] CCE Coastal Construction[19] HA 50°C ambient operation[20] BAA Buy America(n) Act and/or Build America Buy America Qualified SF Single fuse (120, 277, 347V)[4] DF Double fuse (208, 240, 480V)[4] **Shipped separately** BSSR External Gare Shield (mennible, field install required, matches housing finish) BSBR Bird Spikes (field install required)	DDBXD Dark Bronze DBLXD Black DNAXD Natural Aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

D-Series
LED Bollard

d-series

Specifications

Diameter:	8" Round (20.3 cm)
Height:	42" (106.7 cm)
Weight (max):	27 lbs (12.20 kg)

Catalog Number: DSXB LED 16C 350 50K SYM
Notes:
Type:

Hit the Tab key or mouse over the page to see all interactive elements.

Introduction

The D-Series LED Bollard is a stylish, energy-saving, long-life solution designed to perform the way a bollard should—with zero uplight. An optical leap forward, this full cut-off luminaire will meet the most stringent of lighting codes. The D-Series LED Bollard's rugged construction, durable finish and long-lasting LEDs will provide years of maintenance-free service.

Ordering Information EXAMPLE: DSXB LED 16C 700 40K SYM MVOLT DDBXD

DSXB LED

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Control options	Other options	Finish (required)
DSXB LED	**Asymmetric** 12C 12 LEDs[1] **Symmetric** 16C 16 LEDs[1]	350 350 mA 450 450 mA[2,3] 530 530 mA[2,3] 700 700 mA	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted AMBLW Amber limited wavelength[2,3]	ASY Asymmetric[1] SYM Symmetric[1]	MVOLT[2] 120[3] 208[3] 240[3] 277[3] 347[3,4]	**Shipped installed** PE Photoelectric cell, button type DMG 0(-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) ELCW Emergency battery backup[5]	**Shipped installed** SF Single fuse (120, 277, 347V)[4] DF Double fuse (208, 240V)[4] H24 24" overall height H30 30" overall height H36 36" overall height PG Ground-fault friction slip[6] LHJB Without anchor bolts LHJB4 4-bolt retrofit base without anchor bolts[7]	DWHXD White DNAXD Natural aluminum DDBXD Dark bronze DBLXD Black DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

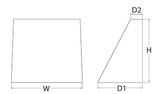
Accessories
Ordered and shipped separately.
MRAB U Anchor bolts for DSXB[8]

NOTES
1. Only available in the 12C, ASY version.
2. Only available in the 16C, SYM version.
3. Only available with 450 AMBLW version.
4. Not available with ELCW.
5. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with HVOLT, XVOLT or 347V options. See page 3 for details.
6. Not available with 347V. Not available with fusing. Not available with 450 AMBLW.
7. Single fuse (SF) requires 120, 277, or 347 voltage option. Double fuse (DF) requires 208 or 240 voltage option.
8. MRAB U not available with LHJB4 option.

WDGE1 LED
Architectural Wall Sconce

Specifications

Depth (D1):	5.5"
Depth (D2):	1.5"
Height:	8"
Width:	9"
Weight (without options):	9 lbs



Catalog Number: WDGE1 LED P1 30K 80CRI VW
Notes:
Type:

Hit the Tab key or mouse over the page to see all interactive elements.

Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details.

WDGE LED Family Overview

Luminaire	Optics	Standard (0°C - 40°C)	Cold (0°C - -20°C)	Sensor	Approximate Lumens (4000K, 80CRI) P0	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	4W		—	750	1,200	2,000	—	—	—	—
WDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight	—	1,200	2,000	3,000	4,500	6,000	—
WDGE2 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200	—	—
WDGE3 LED	Precision Refractive	15W	18W	Standalone / nLight	6,000	7,500	8,500	10,000	12,000	—	—
WDGA4 LED	Precision Refractive			Standalone / nLight	—	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information EXAMPLE: WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE1 LED	P0 27K 2700K P1 30K 3000K P2 35K 3500K 40K 4000K 50K 5000K		80CRI 90CRI	VF Visual comfort forward throw VW Visual comfort wide	MVOLT 347[1]	**Shipped included** SRM Surface mounting bracket ICW Inches I Canopy/Cutlery Washer bracket (dry/damp locations only)[2] **Shipped separately** AWS 3.0inch Architectural wall spacer[3] PIRFW Surface-mounted back box (top, left, right conduit entry) Use when there is no junction box available.[4]

Options	Finish
E4WH Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)[5] PE Photocell, Button Type[6] DS Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)[7] DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately) BCE Bottom conduit entry for back box (FBWW). Total of 4 entry points. DSLE Dual Switching (1 Driver, 2 Light Engines) CCE Coastal Construction[8]	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSXD Sandstone DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone

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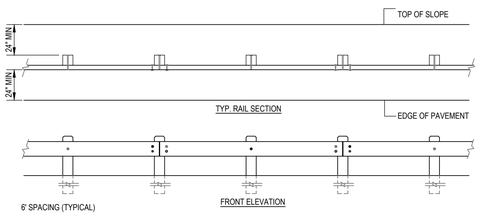

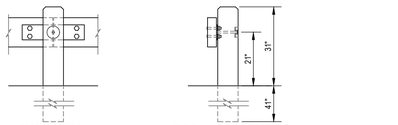

POST CONNECTION
NOT TO SCALE

TYP. GUARDRAIL CROSS SECTION
1:10 SLOPE OR FLATTER
NOT TO SCALE

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. IF TOP OF SLOPE IS CLOSER THAN 24" INCREASE POST LENGTH TO 7'.
4. DRIVE POSTS OR AUGER, BACKFILL WITH NATIVE SOIL AND COMPACT EVERY 12".
5. ALL TIMBER #1 SAS SOUTHERN PINE, PRESSURE TREATED: AWPA-C14, WOOD FOR USE IN HWY. CONSTR.
6. TYP. POST: 8" X 8" X 6' - TYP. RAIL: 4" X 12" X 11' 11 1/2"
7. FASTENERS: ASTM A307; A242; F436 TYPE 3; A563 DH3.
8. TIMBARRIER™ SPLICE PLATE & PLATE WASHER ASTM-A588.
9. UNDER EACH BOLT HEAD ON FACE OF RAIL INSTALL ONE 7/8" WASHER.
10. REFER TO DRAWINGS 651-003b OR 651-003c FOR TERMINAL DETAILS
11. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 651-003.

TIMBARRIER™
STREETGUARD,™ ROADWAY AND STREET APPLICATIONS (25 MPH MAX.)

651-003

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DESIGN DEVELOPMENT

PASSERO
engineering architecture

CLIENT:
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ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100
ROCHESTER, NY 14614
(585) 325-1000
FAX: (585) 325-1691
PROJECT MANAGER: EDMUND MARTIN, P.E.
PROJECT ENGINEER: ANDREW BURNS, P.E.
DESIGNER: JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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DETAILS

AUBURN, NY

AUBURN COMMUNITY HOSPITAL
HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.:
20255046.0001

DRAWING NO.:
C-205

DATE:
JUNE 2026

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Revised 6/10/26

Name of Action or Project: Auburn Community Hospital Health Campus		
Project Location (describe, and attach a general location map): **See Appendix A for a location map*** 23 Peerine St., 147 North St., 143 North St., 1 West Park Avenue Auburn, Cayuga County, NY		
Brief Description of Proposed Action (include purpose or need): **See Appendix B for project site plans*** The proposed project involves the construction of a new medical office building for Auburn Community Hospital Health Campus located in the City of Auburn, Cayuga County, New York. The project site consists of approximately 5.4 acres with 4.9 acres of proposed disturbance and includes multiple parcels located along Perrine Street, North Street (NYS Route 34), and West Park Avenue. Tax IDs include: 115.28-1-82.1, 116.21-1-41, 116.21-1-42.1, and 115-28-1-82.2 that will be combined in order to facilitate the redevelopment. . Project development will require the demolition of existing buildings and associated site features located within the proposed disturbance area to accommodate the new development. Following demolition, site improvements will include construction of internal access drives, parking areas, sidewalks, landscaped areas, and utility connections to support the proposed building. The development will include the construction of a three-story medical office building with an approximate footprint of 30,700 square feet and a total building area of approximately 80,750 square feet. The building will serve as a medical office facility supporting Auburn Medical Center and will include patient access areas, medical office space, and associated support services. See Appendix B for project site plans.		
Name of Applicant/Sponsor: Park Grove Reality LLC	Telephone: E-Mail:	
Address: 46 Prince Street		
City/PO: Rochester	State: NY	Zip Code: 14607
Project Contact (if not same as sponsor; give name and title/role): Carly Kremer, Passero Associates, on behalf of Park Grove Reality	Telephone: 585-760-8501 E-Mail: ckremer@passero.com	
Address: 242 West Main Street, Suite 100		
City/PO: Rochester	State: NY	Zip Code: 14614
Property Owner (if not same as sponsor): Auburn Community Hospital	Telephone: E-Mail:	
Address: 17 Lansing Street		
City/PO: Auburn	State: NY	Zip Code: 13021

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	City of Auburn - Site Plan Review	04/14/2026
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	Cayuga County - 239-m referral	April 2026
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDEC - SWPPP	April 2026
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

C.3. Zoning **See Appendix C for a zoning map***

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
C - General Commercial

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Auburn City School District

b. What police or other public protection forces serve the project site?
Cayuga County Sheriff Department, & Auburn Police Department

c. Which fire protection and emergency medical services serve the project site?
Auburn Community Hospital & Auburn Fire Department

d. What parks serve the project site?
Osborne Park, Freedom Park, Seminary Park, Veteran's Memorial Park, Lincoln Playground, Casey Park & Hoopes Park

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Commercial - Medical Office

b. a. Total acreage of the site of the proposed action? 5.4 acres
b. Total acreage to be physically disturbed? 4.9 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 5.4 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 12 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐ Yes ☑ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase	_____	_____	_____	_____
At completion of all phases	_____	_____	_____	_____

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No

If Yes,

i. Total number of structures 1

ii. Dimensions (in feet) of largest proposed structure: 30' height; ~120' width; and ~270' length

iii. Approximate extent of building space to be heated or cooled: 80,750 square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐ Yes ☑ No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐ Yes ☑ No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

i*v.* Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No

If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐ Yes ☐ No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☑ No

If Yes: **See Appendix D for NWI and NYSDEC wetland maps***

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐ Yes ☐ No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐ Yes ☐ No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☑ Yes ☐ No

If Yes:

i. Total anticipated water usage/demand per day: 11,340 gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☑ Yes ☐ No

If Yes:

- Name of district or service area: City of Auburn Water Department
- Does the existing public water supply have capacity to serve the proposal? ☑ Yes ☐ No
- Is the project site in the existing district? ☑ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☑ No
- Do existing lines serve the project site? ☑ Yes ☐ No

iii. Will line extension within an existing district be necessary to supply the project? ☐ Yes ☑ No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☐ No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☑ Yes ☐ No

If Yes:

i. Total anticipated liquid waste generation per day: 11,340 gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

Sanitary Waste Water

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑ Yes ☐ No

If Yes:

- Name of wastewater treatment plant to be used: Auburn Waste Water Treatment Plant
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☑ Yes ☐ No
- Is the project site in the existing district? ☑ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☑ No

- Do existing sewer lines serve the project site? ☑ Yes ☐ No
- Will a line extension within an existing district be necessary to serve the project? ☐ Yes ☑ No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐ Yes ☑ No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑ Yes ☐ No **See Appendix E***

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 4.9 acres (impervious surface)

_____ Square feet or 5.4 acres (parcel size)

ii. Describe types of new point sources. Connection to existing storm water infrastructure.

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

Stormwater will be directed to a bioretention area on site that discharges to existing infrastructure operated by the Fifth Ward Sewer District located on the adjacent property

- If to surface waters, identify receiving water bodies or wetlands: Stormwater is not directed to any surface waters.
- Will stormwater runoff flow to adjacent properties? ☑ Yes ☐ No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑ Yes ☐ No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐ Yes ☑ No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐ Yes ☑ No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐ Yes ☐ No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

See Appendix F*

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

_____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7 AM - 5 PM
- Saturday: None
- Sunday: None
- Holidays: None

ii. During Operations:

- Monday - Friday: 8 AM- 8 PM
- Saturday: 8 AM- 8 PM
- Sunday: None
- Holidays: None

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Temporary increases in noise will occur during construction from equipment, trucks, and site development activities. These activities will occur during typical daytime construction hours and will be temporary. Operation of the medical building is not expected to generate noise above ambient levels.

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: The site is largely disturbed and does not contain significant natural vegetation or landforms that function as noise barriers.

n. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

Outdoor lighting will be provided for parking areas, pedestrian walkways, and building entrances. Fixtures will be downward-directed to illuminate the site while minimizing light spillover onto adjacent properties.

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe: The site does not contain significant natural vegetation that functions as a light screen.

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____
- Operation: _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____
- Operation: _____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

_____

_____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

_____

_____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

_____

_____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

_____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

_____

_____

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☑ Industrial ☑ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)

☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

_____

_____

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	3.3	4.6	+1.3
• Forested	2.1	0.6	-1.5
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0.2	0.1	-0.1
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0.17	+0.17
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: _____ _____			

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑ Yes ☐ No

If Yes,

i. Identify Facilities:

Auburn Community Hospital, Finger Lakes Center For Living & Finger Lakes Hearing Center, E. John Gavras Center

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes: **See Appendix G for a remediation site map***

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures:_____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site **See Appendix H for a soil map***

a. What is the average depth to bedrock on the project site? >6 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site:

CeB - Cazenovia silt loam	32.2 %
Uc - Urban land-Cazenovia Complex	67.8 %
	%

d. What is the average depth to the water table on the project site? Average: 4.4 feet

e. Drainage status of project site soils:

☑	Well Drained:	100 % of site
☐	Moderately Well Drained:	% of site
☐	Poorly Drained	% of site

f. Approximate proportion of proposed action site with slopes:

☑	0-10%:	100 % of site
☐	10-15%:	% of site
☐	15% or greater:	% of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐ Yes ☑ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? **See Appendix I for a FEMA map*** ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

See Appendix J for Aquifer maps*

m. Identify the predominant wildlife species that occupy or use the project site:

Squirrels, Mice, Chipmunks, Insects, Various bird species

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑ No

If Yes:

i. Species and listing (endangered or threatened): _____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No

If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☑ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☑ Historic Building or District

ii. Name: Listed Property: Charles Chauncey Dwight House (149 North St), Eligible Property: 175 North St, Eligible Property: 165 North St, Eligible Property: 161 North St, Eligible Property:POWERS INSURANCE, Eligible property:161 North St, Eligible property:165 North St., Eligible propert...

iii. Brief description of attributes on which listing is based:

SHPO Letter has been provided

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

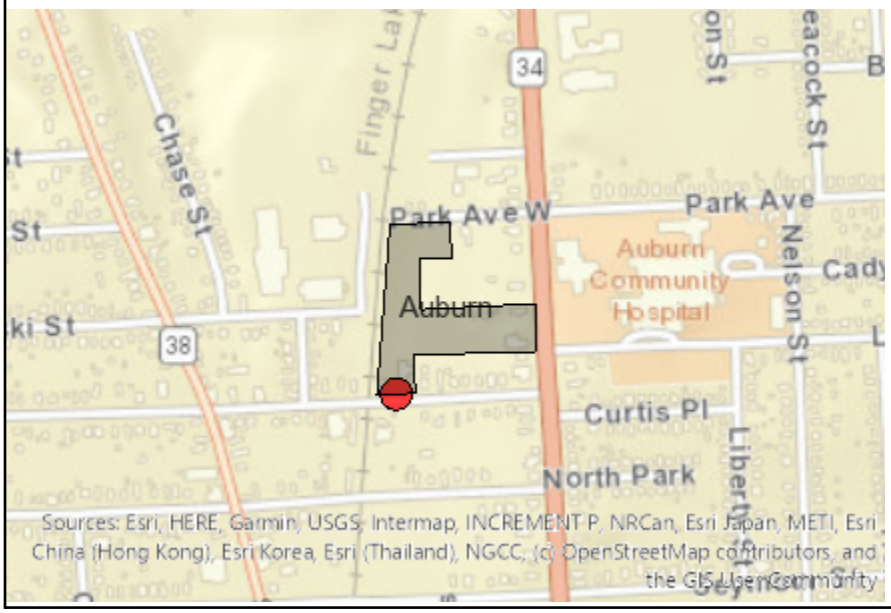
G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Carly Kremer, Passero Associates, on behalf of Park Grove Reality LLC Date _____

Signature Carly Kremer Title Environmental Scientist

PRINT FORM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources to confirm data provided by the Mapper or to obtain data not provided by the Mapper.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.h.ii [Surface Water Features]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.h.iii [Surface Water Features]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No

E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Eligible property:POWERS INSURANCE, Eligible property:161 North St, Eligible property:165 North St., Eligible property:157 North St, Eligible property:139 North St, Charles Chauncey Dwight House
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Exhibit A

Site Plan Set

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

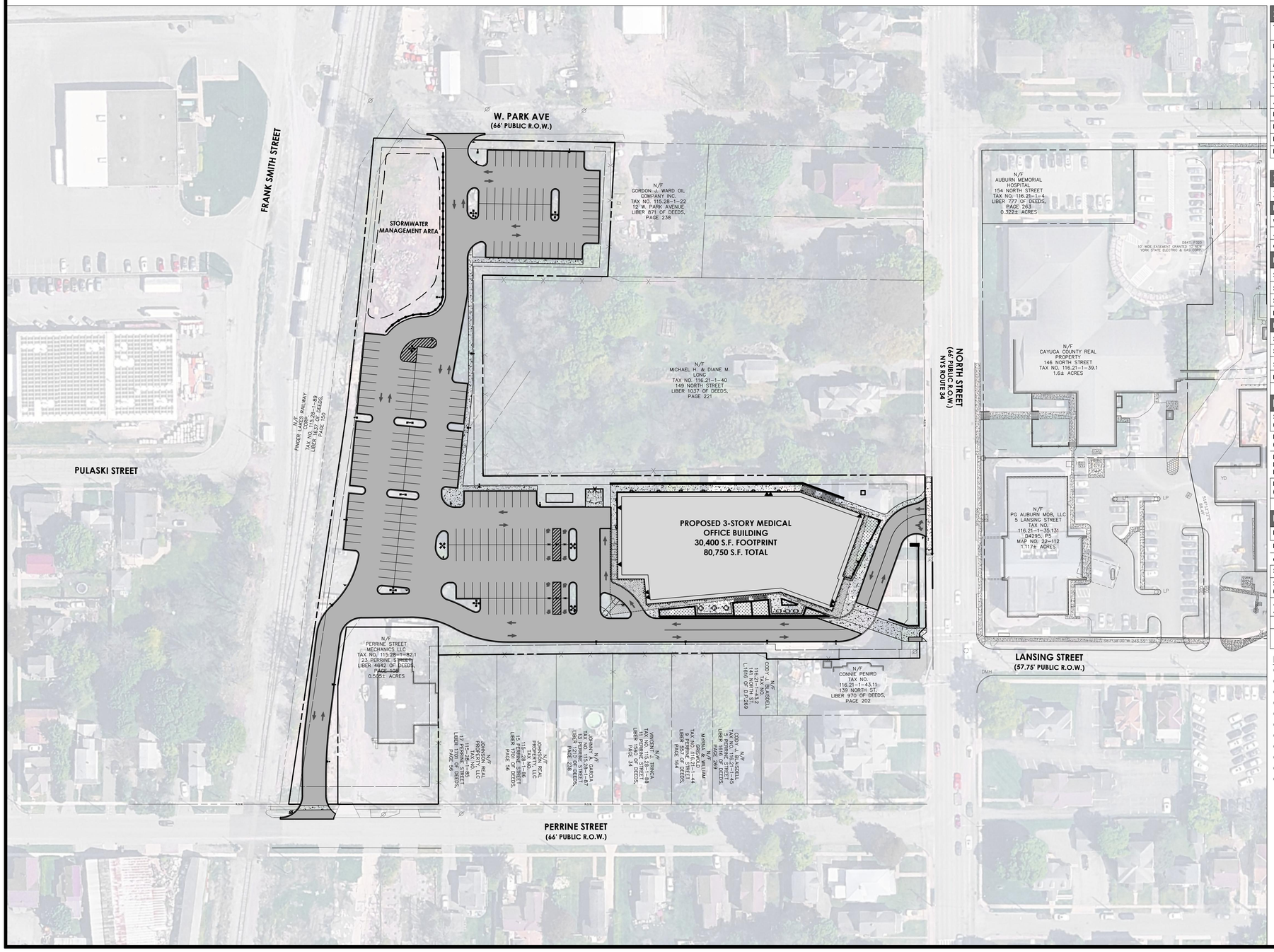
SITE DEVELOPMENT PLANS

CITY OF AUBURN | CAYUGA | NEW YORK

PN: 20255046.0001

60 0 30 60 120

HORIZONTAL SCALE: 1"=60'



SITE DATA	
TAX ACCOUNT NUMBER:	115.28-1-82.1, 116.21-1-41, 116.21-1-42.1, 115-28-1-82.2
PARCEL ADDRESS:	23 PERRINE ST., 147 NORTH ST., 143 NORTH ST., W. PARK AVENUE
MUNICIPALITY:	CITY OF AUBURN
COUNTY:	CAYUGA
TOTAL PARCEL AREA:	5.417 ACRES
AREA OF DISTURBANCE:	4.912 ACRES
EXISTING ZONING:	C-GENERAL COMMERCIAL
PROPOSED ZONING:	C-GENERAL COMMERCIAL
EXISTING USE:	MIXED USE
PROPOSED USE:	MEDICAL OFFICE BUILDING

ZONING DATA	REQUIRED	PROPOSED
ZONING DISTRICT: C-GENERAL COMMERCIAL		
LOT		
WIDTH	75'	208'
AREA	20,000 SF	235,965 SF
COVERAGE	80% MAX	78.80%
BUILDING		
SETBACK - FRONT	20'	65.4'
SETBACK - SIDE	10'	18'
SETBACK - REAR	10'	326'
HEIGHT	35' MAX.	30'
PARKING		
SETBACK	10'	10'
STALLS QTY	2 PER 1,000 SF=150	202
STALL SIZE - PERPENDICULAR	9' x 18'	9'X18'
DRIVE AISLE WIDTH - 90 DEG	24'	24'

ENVIRONMENTAL DATA	NO	YES
STATE REGULATED WETLANDS (NYSDEC ERM):	X	
FEDERALLY REGULATED WETLANDS (USFWS NWI):	X	
FLOOD PLAIN (FEMA NFHL): FIRM PANEL: 36011C0305E DATED: 8/2/2007	X	
ENDANGERED SPECIES (NYSDEC ERM):	X	

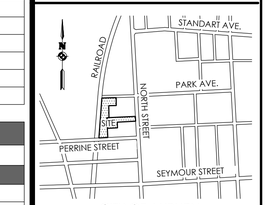
UTLITIES DATA	
PUBLIC WATER PROVIDED BY:	CITY OF AUBURN
ELECTRIC SERVICE PROVIDED BY:	NYSEG
GAS SERVICE SUPPLIED BY:	NYSEG
SANITARY SEWER PROVIDED BY:	CITY OF AUBURN
STORM SEWER & DRAINAGE WILL BE: (MAINTAINED BY THE OWNER)	PRIVATE
ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE CURRENT DEVELOPMENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY	

DRAWING INDEX

C-101 COVER
C-102 SITE PLAN
C-103 EXISTING CONDITIONS & DEMOLITION PLAN
C-104 UTILITY PLAN
C-105 GRADING & EROSION CONTROL PLAN
C-106 LANDSCAPING PLAN
C-107 FOUNDATION PLANTING PLAN
C-108 LIGHTING PLAN
C-109 FIRE APPARATUS ACCESS ROAD PLAN
C-201 NOTES
C-202 - 205 DETAILS

DESIGN DEVELOPMENT

PASSERO
engineering architecture



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100 (585) 325-1000
ROCHESTER, NY 14614 FAX: (585) 325-1691
PROJECT MANAGER EDMUND MARTIN, P.E.
PROJECT ENGINEER ANDREW BURNS, P.E.
DESIGNER JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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COVER

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-101**

DATE: **APRIL 2026**

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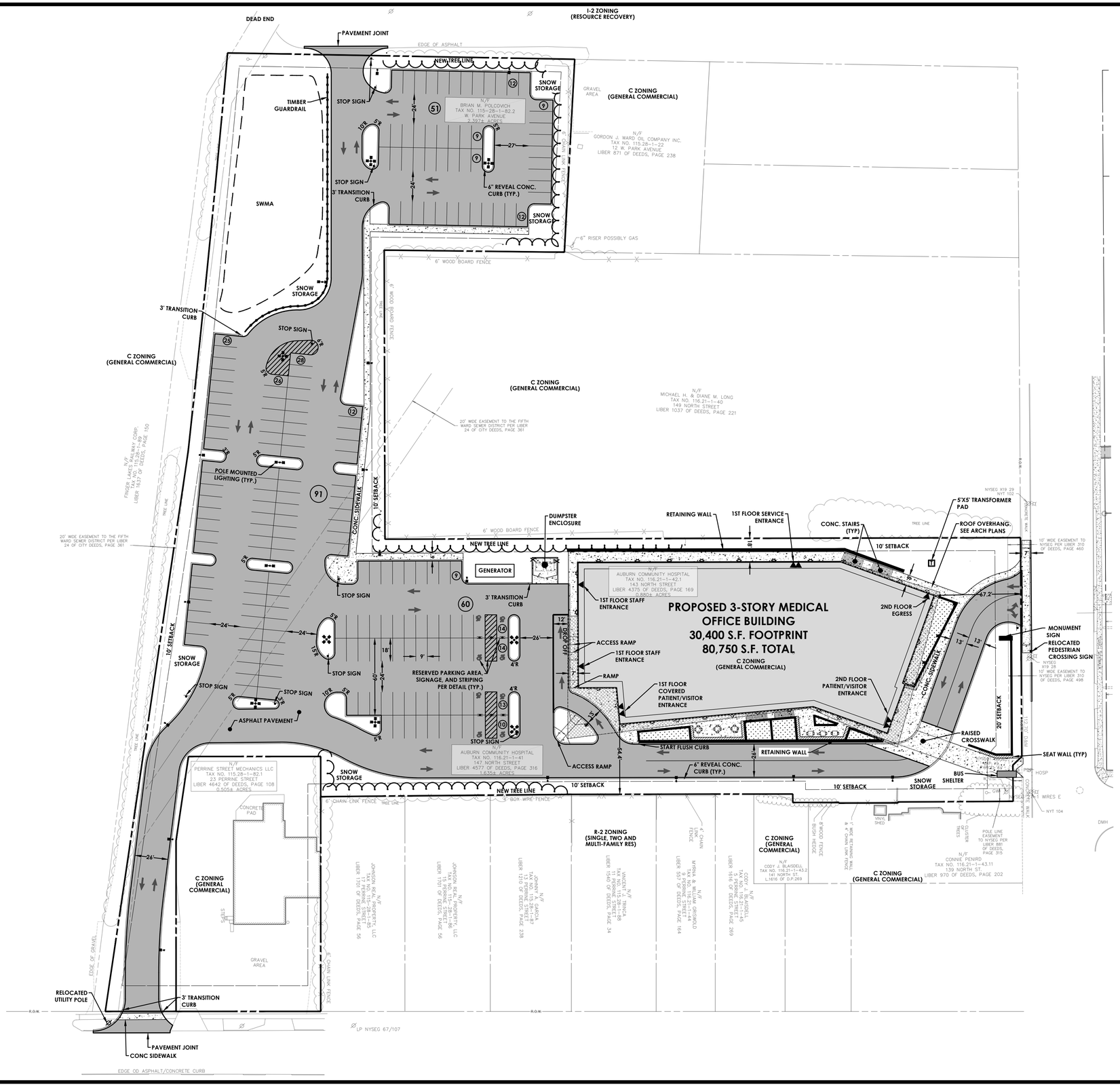


LEGEND - SITE:

- PROPERTY BOUNDARY
- R.O.W. RIGHT OF WAY
- EXISTING CENTER LINE ROAD
- SETBACK
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- EXISTING BUILDING
- PROPOSED BUILDING
- (14) PROPOSED PARKING COUNT
- PROPOSED CONCRETE
- PROPOSED ACCESS RAMP
- PROPOSED PAVEMENT STRIPING
- PROPOSED CURB
- PROPOSED SIGN
- EXISTING SIGN
- PROPOSED LIGHT POLE
- PROPOSED TIMBER GUARD RAIL
- PROPOSED BUILDING MOUNTED LIGHT

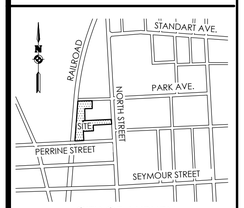
40 0 20 40 80

HORIZONTAL SCALE: 1"=40'

N

DESIGN DEVELOPMENT

PASSERO
engineering architecture



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100
ROCHESTER, NY 14614
(585) 325-1000
FAX: (585) 325-1691

PROJECT MANAGER — EDMUND MARTIN, P.E.
PROJECT ENGINEER — ANDREW BURNS, P.E.
DESIGNER — JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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SITE PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-102**

DATE: **APRIL 2026**

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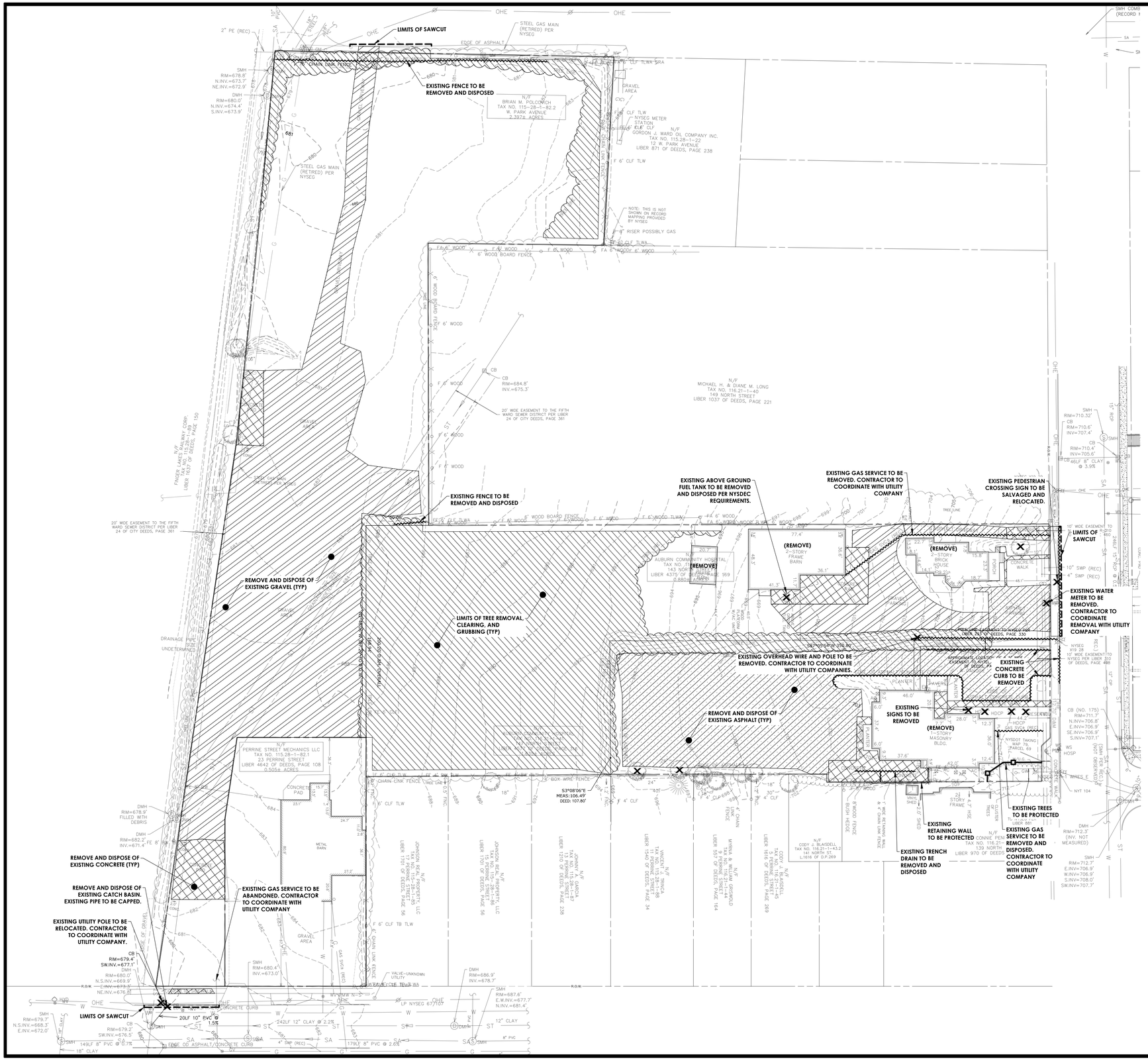

HORIZONTAL SCALE: 1"=40'

40 0 20 40 80

LEGEND - DEMO:

- PROPERTY BOUNDARY
- R.O.W.
- EXISTING CENTER LINE ROAD
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING EASEMENT LINE
- SETBACK
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING STORM SEWER & MH
- EXISTING WATER SERVICE & VALVE
- EXISTING SIGN
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING ELECTRIC LINE & POLE
- EXIST. LIGHT POLE
- EXIST. ELECTRIC MANHOLE
- EXIST. ELECTRIC HANDHOLE
- EXIST. GAS VALVE
- EXIST. GAS MAIN
- EXIST. WATER MAIN
- EXIST. ELECTRIC LINE
- EXISTING FEATURE TO BE REMOVED
- EXISTING ASPHALT TO BE REMOVED
- EXISTING BUILDING TO BE REMOVED

DESIGN DEVELOPMENT

PASSERO
engineering architecture

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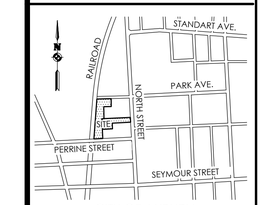
1-800-962-7962
i-Notice = www.DigSafelyNewYork.com



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100, ROCHESTER, NY 14614
(585) 325-1000 FAX: (585) 325-1691
PROJECT MANAGER: EDMUND MARTIN, P.E.
PROJECT ENGINEER: ANDREW BURNS, P.E.
DESIGNER: JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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EXISTING CONDITIONS & DEMOLITION PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-103**

DATE: **APRIL 2026**

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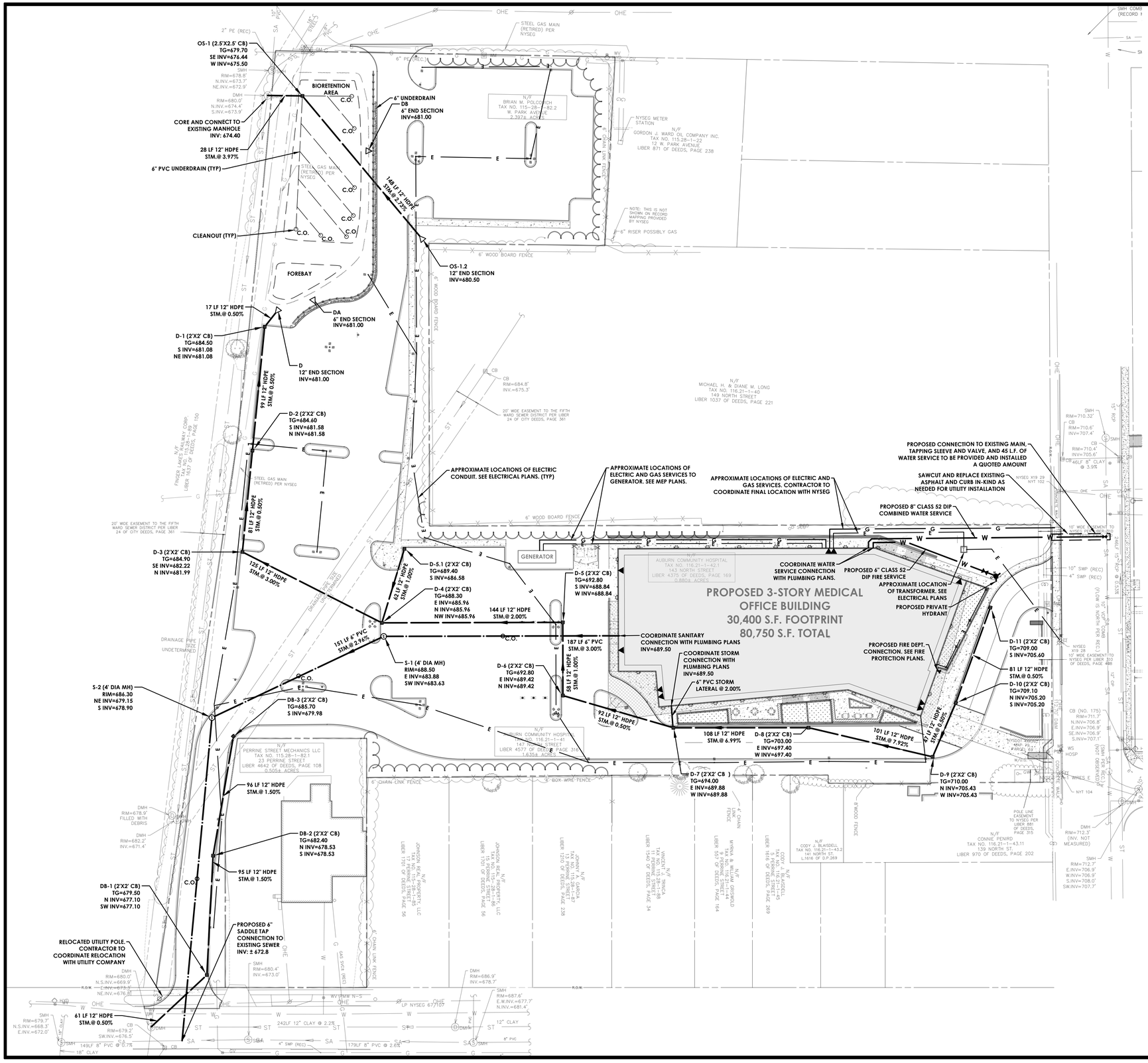
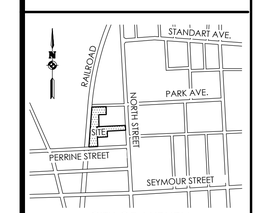


LEGEND - UTILITIES:

HORIZONTAL SCALE: 1"=40'

- PROPERTY BOUNDARY
- R.O.W.
- EXISTING CENTER LINE ROAD
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- PROPOSED BUILDING
- PROPOSED CONCRETE
- PROPOSED SIGN
- PROPOSED LIGHT
- PROPOSED STORM SEWER, INLET MH, CB & END SECTION
- EXISTING STORM SEWER & MH
- PROPOSED WATER SERVICE W/ HYDRANT & VALVE
- EXISTING WATER SERVICE & VALVE
- PROPOSED SANITARY SEWER AND MANHOLE
- PROPOSED SANITARY SEWER FORCEMAIN
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING ELECTRIC LINE & POLE
- EXIST. LIGHT POLE
- EXIST. ELECTRIC MANHOLE
- EXIST. ELECTRIC HANDHOLE
- EXIST. GAS VALVE
- EXIST. GAS MAIN
- EXIST. WATER MAIN
- EXIST. ELECTRIC LINE
- PROPOSED UNDERGROUND ELECTRIC



CITY OF AUBURN

LOCATION SKETCH

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46 PRINCE STREET
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Passero Associates
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(585) 325-1000 FAX: (585) 325-1691
PROJECT MANAGER: EDMUND MARTIN, P.E.
PROJECT ENGINEER: ANDREW BURNS, P.E.
DESIGNER: JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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UTILITY PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-104**

DATE: **APRIL 2026**

DESIGN DEVELOPMENT

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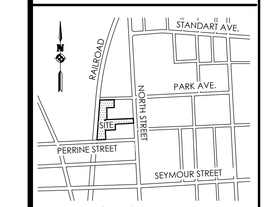
LEGEND - GRADING:

- PROPERTY BOUNDARY
- R.O.W.
- EXISTING CENTER LINE ROAD
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- PROPOSED BUILDING
- PROPOSED CONCRETE
- PROPOSED SIGN
- PROPOSED LIGHT
- 520 EXISTING MAJOR CONTOUR
- 521 EXISTING MINOR CONTOUR
- 520 PROPOSED MAJOR CONTOUR
- 521 PROPOSED MINOR CONTOUR
- SF SILT FENCE
- PROPOSED STORM SEWER, INLET MH, CB & END SECTION
- EXISTING STORM SEWER & MH
- PROPOSED WATER SERVICE W/ HYDRANT & VALVE
- EXISTING WATER SERVICE & VALVE
- PROPOSED SANITARY SEWER AND MANHOLE
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING ELECTRIC LINE & POLE
- EXIST. LIGHT POLE
- EXIST. ELECTRIC MANHOLE
- EXIST. ELECTRIC HANDHOLE
- EXIST. GAS VALVE
- PROPOSED STONE CHECK DAM
- PROPOSED INLET PROTECTION
- PROPOSED TREE/BRUSH LINE
- EXISTING TREE/BRUSH LINE
- SF SILT FENCE
- TC:492.50 BC:492.40 (P) TOP (T) OF: CURB (C), WALL (W), STAIRS (S), RAMP (R)PAVEMENT BOTTOM (B) OF: CURB (C), WALL (W), STAIRS (S), RAMP (R) *RETAINING WALL DESIGN TO BE PREFORMED BY OTHERS AND BY A LICENSED ENGINEER. BOTTOM OF WALL ELEVATION TO BE ELEVATION AT GRADE, NOT BOTTOM FOUNDATION COURSE OF THE WALL
- 492.70 PROPOSED SPOT ELEVATION
- 492.70 EXISTING SPOT ELEVATION

40 0 20 40 80

HORIZONTAL SCALE: 1"=40'



CITY OF AUBURN

LOCATION SKETCH

N.T.S.

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46 PRINCE STREET
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Passero Associates
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(585) 325-1000
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PROJECT MANAGER: EDMUND MARTIN, P.E.
PROJECT ENGINEER: ANDREW BURNS, P.E.
DESIGNER: JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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GRADING & EROSION CONTROL PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

MUNICIPALITY: **AUBURN**

COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-105**

DATE: **APRIL 2026**

DESIGN DEVELOPMENT

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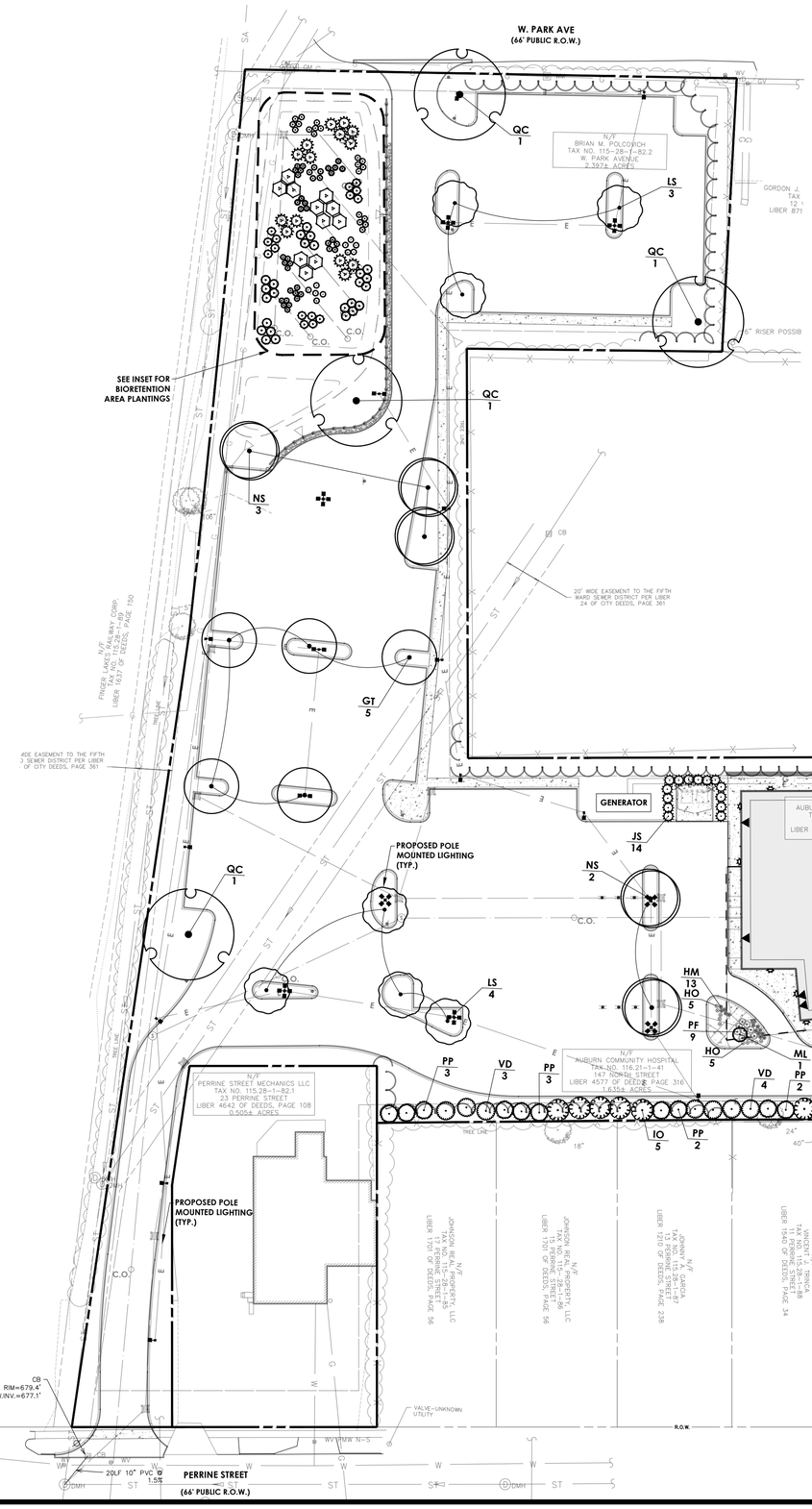


AUBURN COMMUNITY HOSPITAL PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	MATURE HEIGHT	SPACING / SPREAD	REMARKS	NATIVE
DECIDUOUS TREES									
AC	6	Acer Campestre	Hedge Maple	3-3.5"	B&B	25-35'	As Shown		Y
GT	5	Gleditsia triacanthos inermis 'Impcole'	Imperial Honey Locust	3-3.5"	B&B	30-40'	As Shown		Y
LS	7	Liquidambar styraciflua 'Rotundiloba'	Round-Lobed Sweet Gum	3-3.5"	B&B	60-70'	As Shown	Fall Planting Hazard	Y
NS	7	Nyssa sylvatica 'Wildfire'	Wildfire Tupelo	3-3.5"	B&B	30-50'	As Shown	Fall Planting Hazard	Y
QC	4	Quercus coccinea	Scarlet Oak	3-3.5"	B&B	50-70'	As Shown	Fall Planting Hazard	Y
FLOWERING AND ORNAMENTAL TREES									
MJ		Magnolia x "Jane"	Jane Magnolia	5-6'	B&B	20-25'	15-20'		N
EVERGREEN TREES									
IO	8	Ilex opaca 'Greenleaf'	Greenleaf American Holly	3-3.5"	B&B	20-25'	As Shown	Spring Planting only	Y
JS	14	Juniperus scopulorum 'Witchita Blue'	Witchita Blue Juniper	5-6'	B&B	10-15'	As Shown		Y
PP	13	Picea pungens 'Fat Albert'	Fat Albert Colorado Blue Spruce	5-6'	B&B	10-15'	7-10'		Y
SHRUBS									
HP	39	Hydrangea paniculata "Ilvobo"	Bobo Panicle Hydrangea	18-24"	#5 cont.	3-4'	2-5'		N
PF	19	Potentilla Fruticosa "Longacre"	Longacre Bush Cinquefoil						N
RR	5	Rosa x "Knock-out"	Knockout Rose	18-24"	#3 cont.	18-36"			N
SP	18	Syringa patula "Miss Kim"	Miss Kim Korean Lilac	24-30"	#5 cont.	5-6'	5-6'		N
VD	10	Viburnum dentatum "Ralpf Senior"	Autumn Jazz Arrowwood Viburnum	4'	B&B	6-10'			Y
PERENNIALS/GRASSES									
HM	39	Hemerocallis x "Stella d'oro"	Star of Gold Dwarf Lily	10-12"	#2 Cont.	12-24"	12-24"		N
HO	10	Heuchera x Wildberry	Dolce Wildberry Coral Bells	10-14"	#2 Cont.	16-20"	16-20"		Y
PA	17	Perovskia atriplicifolia " Blue Jean Baby"	Blue Jean Baby Russian Sage	15-18"	#3 Cont.	18-36"			N
PLB	12	Pennisetum alopecuroides "Little Bunny"	Little Bunny Fountain Grass	10-12"	#2 Cont.	10-12"	10-12"		N
BIORETENTION									
AN	10	Aster Novae-Angliae	New England Aster	10-12"	1 QT	3-4'	1.5-2'		
CE	10	Carex Elata 'Aura'	Bowles Golden Sedge	10-12"	1 QT	1.5-2.5'	1.5-2'		
CS	14	Cornus Sericea 'Flaviramea'	Yellow Twig Dogwood	18-24"	B.R.	6-8'	6-8'		
CSR	11	Cornus Sericea 'Red Osier'	Red Oiser Dogwood	18-24"	B.R.	5-6'	5-6'		
EP	10	Echienacea Purpurea	Puprle Coneflower	10-12"	1 QT	2.5-3'	1.5-2'		
EC	10	Eupatorium Maculatum	Spotted Joe-Pye Weed	---	1 QT	1-2'	1.5-2'		
HMM	15	Hibiscus Moscheutos	March Mallow	2-3'	#2 Cont.	3-6'	2-4'		
JE	15	Juncus Effuses	Common Soft Rush	12-15"	#2 Cont.	2-4'	2-4'		
LS	10	Liatris Spicata	Blazing Star	10-12"	1 QT	2-4'	1-1.5'		
LC	5	Lobelia Cardinalis	Cardinal Flower	---	1 QT	2-3'	1.5-2'		
RF	10	Rudbeckia Speciosa	Black Eyes Susan	---	1 QT	2'	1.5-2'		
SPN	10	Salix Purpurea 'Nana"	Purple Willow	2-3'	#2 Cont.	3-5'	3-5'		

HORIZONTAL SCALE: 1"=40'

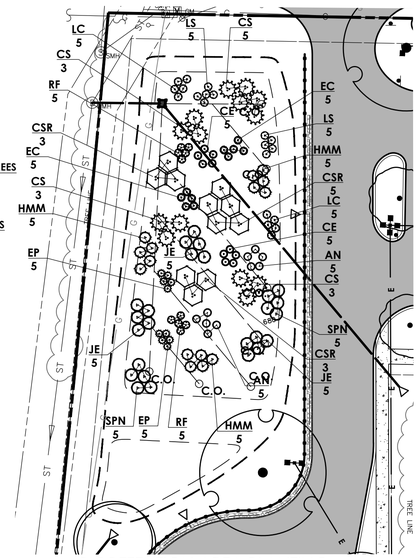
SYMBOL CODE

TREES: AC, GT, LS, NS, QC

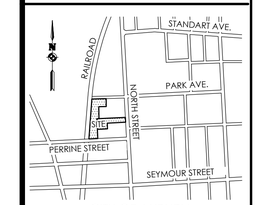
ORNAMENTAL TREES: MJ

EVERGREEN TREES: IO, JS, PP

SHRUBS: HM, HO, HP, PLB, PA, PF, RR, SP, VD



BIORETENTION AREA PLANTING
SCALE: 1"=30'



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

PASSERO
engineering architecture

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100 (585) 325-1000
ROCHESTER, NY 14614 FAX: (585) 325-1691
PROJECT MANAGER: EDMUND MARTIN, P.E.
PROJECT ENGINEER: ANDREW BURNS, P.E.
DESIGNER: JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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LANDSCAPING PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-106**

DATE: **APRIL 2026**

DESIGN DEVELOPMENT

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AUBURN COMMUNITY HOSPITAL PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	MATURE HEIGHT	SPACING / SPREAD	NATIVE
FLOWERING AND ORNAMENTAL TREES								
CC	2	Cercis Canandensis 'Pink Pom Poms'	Pink Pom Poms Redbud	1.5-2"	B&B	15-20'	15-20'	Y
CV	2	Chionanthus Virginicus	White Fringe Tree	5-6'	B&B	12-20'	12-20'	Y
MJ	1	Magnolia x "Jane"	Jane Magnolia	5-6'	B&B	20-25'	15-20'	N
MP	2	Malus X 'Prairifire	Prairifire Crabapple	1.5-2"	B&B	15-20'	15-20'	N
EVERGREEN SHRUBS								
BX	6	Buxus x 'Wilson'	Northern charm Boxwood	18-24"	B&B	3-4'	3-4'	N
JP	7	Juniperis x Phitzeriana 'Aurea Improved'	Gold Coast Phitzer Juniper	18-24"	#2 cont.	3-4'	3-4'	N
SHRUBS								
BT	6	Berberis Thunbergii 'Crimson Pygmy'	Crimson Pygmy Japanese Barberry	15-18"	#3 cont.	2-3'	2-3'	N
CS	6	Cotinus Coggygria 'COTSIDH5'	Velveteeny Smoke Bush					N
PA	12	Perovskia Atriplicifolia "Baby Blue Jean'	Baby Blue Jean Russian Sage					N
RR	5	Rosa x Knock-Out 'Radgor'	Knockout Rose					N
PERENNIALS								
EM	17	Echinacea Purpurea 'Magnus'	Magnus Purple Coneflower	10-12"	#2 cont.	2.5'	1-1.5'	Y
HM	20	Hemerocallis x "Stella d'oro"	Star of Gold Dwarf Lily	10-12"	#2 cont.	12-24"	12-24"	N
HO	17	Heuchera x Wildberry	Dolce Wildberry Coral Bells	10-14"	#2 cont.	16-20"	16-20"	Y
HX	14	Hosta 'Blue Mouse Ears'	Blue Mouse Ears Hosta		#1 cont.	6-10"	12"	N
ORNAMENTAL GRASSES								
PLB	27	Pennisetum alopecuroides "Little Bunny"	Little Bunny Fountain Grass	10-12"	#2 cont.	10-12"	10-12"	N
SS	20	Schizachyrium Scoparium 'Chameleon'	Chameleon Little Bluestem		#1 cont.	18"	18"	Y
GROUND COVERS								
AS	142	Alyssum Saxatile			#1 cont.	8"	12"	Y
SJ	53	Sedum Spurium 'John Creech'	John Creech Two Row Stonecrop	24 flat	#1 cont.	2-3"	9-12"	N

SYMBOL

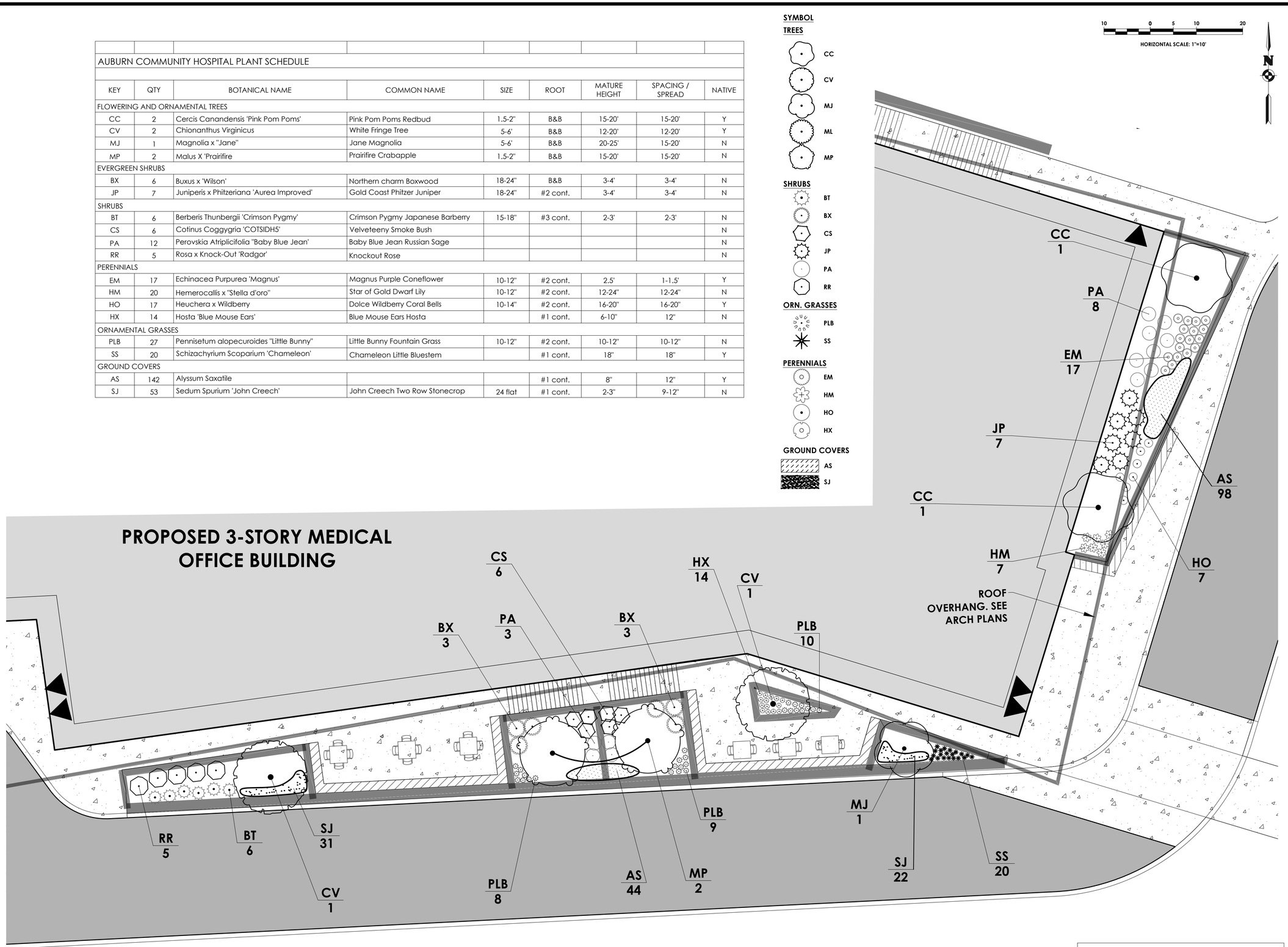
TREES
CC, CV, MJ, ML, MP

SHRUBS
BT, BX, CS, JP, PA, RR

ORN. GRASSES
PLB, SS

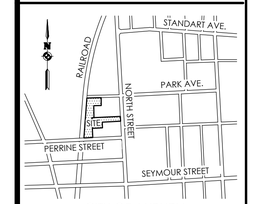
PERENNIALS
EM, HM, HO, HX

GROUND COVERS
AS, SJ



DESIGN DEVELOPMENT

PASSERO engineering architecture



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

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CLIENT:
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ROCHESTER, NY 14607

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PROJECT MANAGER: EDMUND MARTIN, P.E.
PROJECT ENGINEER: ANDREW BURNS, P.E.
DESIGNER: JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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FOUNDATION LANDSCAPING PLAN

AUBURN, NY

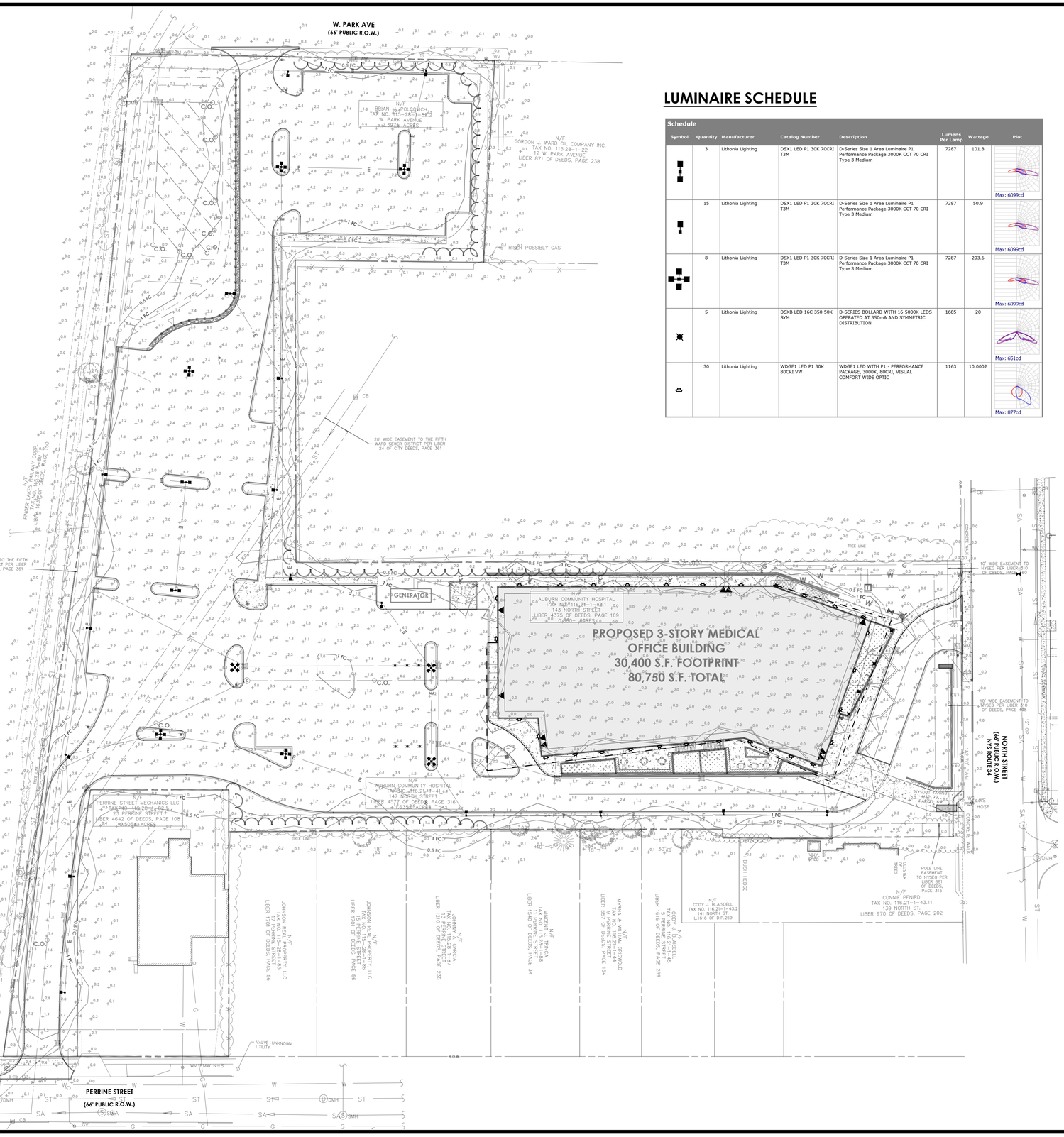
AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-107**

DATE: **APRIL 2026**

Y:\PROJECTS-NEW\2025\20255046\20255046.0001\01_CAD-BIM-MODELS\CIVIL\CGH LANDSCAPING MESS.DWG 4/14/2026 2:55 PM Jacob Lewis



LUMINAIRE SCHEDULE

Schedule

Symbol	Quantity	Manufacturer	Catalog Number	Description	Lumens Per Lamp	Wattage	Plot
	3	Lithonia Lighting	DSX1 LED P1 30K 70CRI T3M	D-Series Size 1 Area Luminaire P1 Performance Package 3000K CCT 70 CRI Type 3 Medium	7287	101.8	Max: 6099cd
	15	Lithonia Lighting	DSX1 LED P1 30K 70CRI T3M	D-Series Size 1 Area Luminaire P1 Performance Package 3000K CCT 70 CRI Type 3 Medium	7287	50.9	Max: 6099cd
	8	Lithonia Lighting	DSX1 LED P1 30K 70CRI T3M	D-Series Size 1 Area Luminaire P1 Performance Package 3000K CCT 70 CRI Type 3 Medium	7287	203.6	Max: 6099cd
	5	Lithonia Lighting	DSXB LED 16C 350 50K SYM	D-SERIES BOLLARD WITH 16 5000K LEDS OPERATED AT 350mA AND SYMMETRIC DISTRIBUTION	1685	20	Max: 651cd
	30	Lithonia Lighting	WDGE1 LED P1 30K 80CRI VW	WDGE1 LED WITH P1 - PERFORMANCE PACKAGE, 3000K, 80CRI, VISUAL COMFORT WIDE OPTIC	1163	10.0002	Max: 877cd

LEGEND - LIGHTING:

1 FC

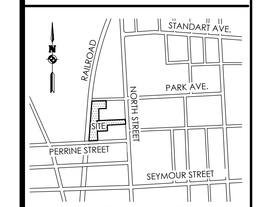
0.5 FC

40 0 20 40 80

HORIZONTAL SCALE: 1"=40'

DESIGN DEVELOPMENT

PASSERO
engineering architecture



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100 (585) 325-1000
ROCHESTER, NY 14614 FAX: (585) 325-1691

PROJECT MANAGER EDMUND MARTIN, P.E.
PROJECT ENGINEER ANDREW BURNS, P.E.
DESIGNER JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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LIGHTING PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
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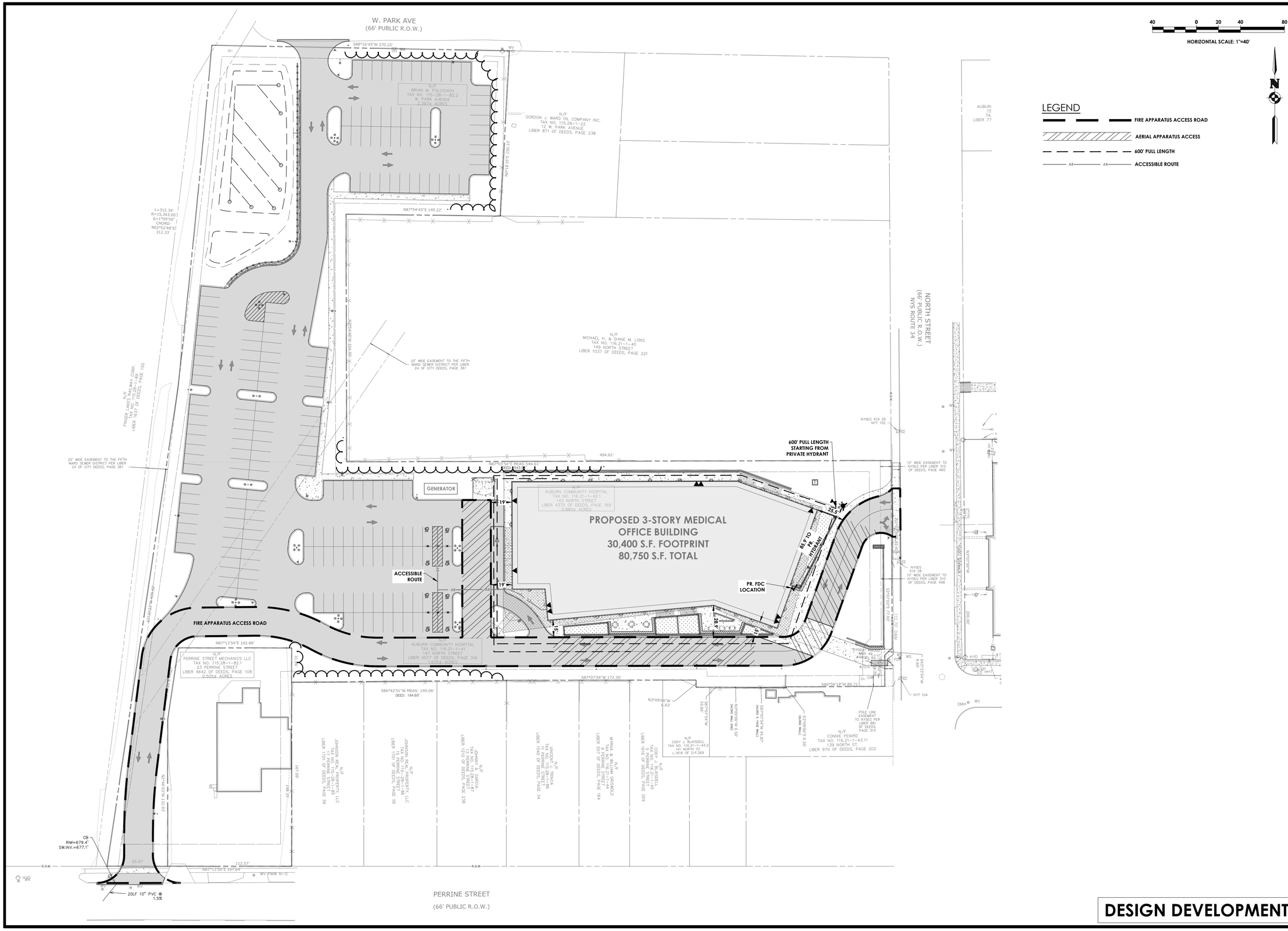
Y:\PROJECTS-NEW\2025\20255046\20255046.0001\01_CAD-BIM-MODELS\CIVIL\20255046-01_LAND_LIGHT.DWG 4/14/2026 2:56 PM Jacob Lewis


W. PARK AVE
(66' PUBLIC R.O.W.)
S88°16'45"W 270.25'
N/F
BRIAN M. POLCOVICH
TAX NO. 115.-28-1-82.2
W. PARK AVENUE
2.397± ACRES
N/F
GORDON J. WARD OIL COMPANY INC.
TAX NO. 115.28-1-22
12 W. PARK AVENUE
LIBER 871 OF DEEDS, PAGE 238
N0°18'35"E 150.33'
N87°54'45"E 140.22'
L=312.34'
R=15,343.00'
Δ=1°09'59"
CHORD=
N02°52'48"E
312.33'
N/F
MICHAEL H. & DIANE M. LONG
TAX NO. 116.21-1-40
149 NORTH STREET
LIBER 1037 OF DEEDS, PAGE 221
20' WIDE EASEMENT TO THE FIFTH
WARD SEWER DISTRICT PER LIBER
24 OF CITY DEEDS, PAGE 361
N/F
FINGER LAKES TITLE AGENCY CORP.
TAX NO. 115.28-1-82.1
LIBER 1637 OF DEEDS, PAGE 150
20' WIDE EASEMENT TO THE FIFTH
WARD SEWER DISTRICT PER LIBER
24 OF CITY DEEDS, PAGE 361
GENERATOR
AUBURN COMMUNITY HOSPITAL
TAX NO. 116.21-1-42.1
143 NORTH STREET
LIBER 4375 OF DEEDS, PAGE 169
0.880± ACRES
PROPOSED 3-STORY MEDICAL
OFFICE BUILDING
30,400 S.F. FOOTPRINT
80,750 S.F. TOTAL
600' PULL LENGTH
STARTING FROM
PRIVATE HYDRANT
85'-9" TO
PR. HYDRANT
ACCESSIBLE
ROUTE
PR. FDC
LOCATION
FIRE APPARATUS ACCESS ROAD
AUBURN COMMUNITY HOSPITAL
TAX NO. 116.21-1-41
147 NORTH STREET
LIBER 4577 OF DEEDS, PAGE 316
5.635± ACRES
N/F
PERRINE STREET MECHANICS LLC
TAX NO. 115.28-1-82.1
23 PERRINE STREET
LIBER 4642 OF DEEDS, PAGE 108
0.505± ACRES
N87°13'54"E 102.88'
S87°07'54"W 172.30'
S86°42'51"W MEAS: 195.06'
DEED: 194.60'
494.61'
N3°09'06"W
6.63'
S86°56'18"W 89.71'
NYSEG X19 29
NYT 102
NYSEG
X19 28
10' WIDE EASEMENT TO
NYSEG PER LIBER 310
OF DEEDS, PAGE 498
10' WIDE EASEMENT TO
NYSEG PER LIBER 310
OF DEEDS, PAGE 460
POLE LINE
EASEMENT
TO NYSEG PER
LIBER 881
OF DEEDS,
PAGE 315
N/F
CODY J. BLAISDELL
TAX NO. 116.21-1-43.2
141 NORTH ST.
L.1616 OF D.P.269
N/F
CONNIE PENIRD
TAX NO. 116.21-1-43.11
139 NORTH ST.
LIBER 970 OF DEEDS, PAGE 202
NORTH STREET
(66' PUBLIC R.O.W.)
NYS ROUTE 34
AUBURN
15
TA
LIBER 77
N/F
JOHNSON REALTY, LLC
TAX NO. 115.-28-1-86
13 PERRINE STREET
LIBER 1101 OF DEEDS, PAGE 56
N/F
JOHNSON REALTY, LLC
TAX NO. 115.-28-1-87
9 PERRINE STREET
LIBER 1101 OF DEEDS, PAGE 56
N/F
JOHNNY A. GARCIA
TAX NO. 115.28-1-88
5 PERRINE STREET
LIBER 1210 OF DEEDS, PAGE 228
N/F
HYMAN L. HOWARD
TAX NO. 115.28-1-89
1 PERRINE STREET
LIBER 1249 OF DEEDS, PAGE 34
N/F
MYRNA & WILLIAM ORSWOLD
TAX NO. 116.21-1-44
135 NORTH ST.
LIBER 557 OF DEEDS, PAGE 164
N/F
CODY J. BLAISDELL
TAX NO. 116.21-1-45
5 PERRINE STREET
LIBER 1616 OF DEEDS, PAGE 269
N/F
CODY J. BLAISDELL
TAX NO. 116.21-1-43.2
141 NORTH ST.
L.1616 OF D.P.269
N87°13'54"E 167.64'
112.57'
55.07'
187.69'
158.35'
S2°46'06"W 113.97'
CB
RIM=679.4'
SW.INV.=677.1'
20LF 10" PVC @
1.5%
PERRINE STREET
(66' PUBLIC R.O.W.)
R.O.W.
R.O.W.
HYD
WV
PMW N=S
WV
WS
HYD
DMH
WV
S45°33'51"W
9.69'
NYT 104
N/F
N/F
N/F

DEMOLITION NOTES:

1. CONTRACTOR IS RESPONSIBLE TO CALL DIG SAFE 811 PRIOR TO BEGINNING DEMOLITION.
2. WITHIN LIMIT LINES, ALL AT GRADE UTILITIES SUCH AS TRANSFORMERS, GENERATORS, HVAC UNITS, THE UNIT'S CONCRETE PAD AND ANY FENCING THAT SURROUNDS THE UNIT, TO BE REMOVED.
3. PRIOR TO ANY DEMOLITION TAKING PLACE, CONTRACTOR TO VERIFY LOCATION AND DEPTH OF ALL UTILITIES WITHIN THE WORK AREA OR THOSE EXPECTED TO BE AFFECTED BY NEW WORK, AND SUBSURFACE FEATURES.
4. CONTRACTOR TO COORDINATE ALL UTILITY SHUT DOWNS, RELOCATIONS, SERVICE INSTALLATIONS WITH THE LOCAL UTILITY COMPANIES.
5. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL DEMOLISHED MATERIAL IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
6. ALL EXISTING FEATURES TO BE REMOVED ARE NOT SHOWN ON SUBSEQUENT PLANS FOR CLARITY.
7. CONTRACTOR SHALL PROTECT ALL EXISTING FEATURES TO REMAIN. DAMAGE TO EXISTING FEATURES TO REMAIN SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
8. ALL SURFACES THAT ARE DISTURBED DUE TO UTILITY CONSTRUCTION, OUTSIDE OF THE MAJOR WORK AREAS, ARE TO BE RESTORED TO PRE-CONSTRUCTION CONDITION, IN ACCORDANCE WITH THE ASPHALT AND CONCRETE SECTION DETAILS INCLUDED IN THESE PLANS. LAWN AREAS ARE TO BE RE-ESTABLISHED WITH 4 INCHES OF TOPSOIL (MINIMUM) AND HYDROSEED.
9. ANY MATERIALS CONTAINING ASBESTOS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. NOTE THIS MAY INCLUDE UNDERGROUND UTILITIES.
10. ALL UTILITIES NOT SLATED FOR DEMOLITION ARE TO REMAIN FUNCTIONAL UPON COMPLETION OF DEMOLITION. THIS INCLUDES BYPASS PUMPING, IF NECESSARY.
11. EXISTING UTILITIES THAT ARE PROPOSED TO BE REMOVED, UNLESS OTHERWISE INDICATED, SHALL BE EXCAVATED, UTILITY MATERIAL REMOVED, AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE SPECIFICATIONS. ALL TRENCHES SHALL BE BACKFILLED WITH GRANULAR FILL, COMPACTED IN 12" LIFTS TO 95% MODIFIED PROCTOR TEST. ALL DISTURBED AREAS SHALL BE RESTORED IN KIND IN ACCORDANCE WITH THE DETAILS IN THESE PLANS AND AT A MINIMUM TO THEIR ORIGINAL STATE.
12. AREAS OF ASPHALT AND CONCRETE REMOVAL SHALL BE SAWCUT WITH A NEAT STRAIGHT LINE AT ALL REMOVAL LIMITS.
13. CONTRACTOR RESPONSIBLE FOR OBTAINING ALL DEMOLITION PERMITS AND INCLUDE ALL FEES ASSOCIATED WITH THOSE PERMITS, IN HIS BID.
14. IF ANY ENVIRONMENTAL CONDITIONS OR ISSUES, NOT PREVIOUSLY IDENTIFIED, ARE ENCOUNTERED DURING DEMOLITION, THE OWNER AND THE CONTRACTORS(S) SHALL IMMEDIATELY NOTIFY THE CITY, CAYUGA COUNTY HEALTH DEPARTMENT AND NYSDEC BEFORE CONTINUING THE DEMOLITION PROCESS.
15. ALL MATERIALS SHALL BE RECYCLED, WHEN APPROPRIATE.
16. THE CONTRACTOR SHALL OBTAIN ALL SEWER PERMITS PRIOR TO DEMOLITION.
17. ALL SPOIL MATERIALS FROM DEMOLITION OR EARTHWORK, SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT THE CONTRACTORS EXPENSE.
18. ALL EXISTING STRUCTURES THAT ARE ABANDONED IN PLACE, SHALL BE REMOVED TO A DEPTH OF 2 FEET BELOW FINISHED GRADE. STRUCTURES SHALL BE FILLED WITH CRUSHED STONE, (MEETING NYSDOT STANDARD SPECIFICATION SECTION 304) COMPACTED IN 12" LIFTS TO 95% MODIFIED PROCTOR TEST.

UTILITY CONTRACTOR COORDINATION NOTES:

1. PRIOR TO THE START OF UTILITY INSTALLATION THE CONTRACTOR AND SUBCONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL UTILITY CONNECTIONS WITH MECHANICAL/ARCHITECTURAL DRAWINGS FOR INCLUDING BUT NOT LIMITED TO VERTICAL AND HORIZONTAL LOCATION, PENETRATIONS, AND SIZES. THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROCEED WITH UTILITY INSTALLATION BY THE OWNERS ONSITE REPRESENTATIVE UPON COMPLETION OF COORDINATION WITH CONTRACTORS, AND PLANS.
2. THE DEVELOPER AND HIS/HER CONTRACTOR IS RESPONSIBLE FOR COORDINATING GAS, ELECTRICAL, CABLE, TELEPHONE AND ANY OTHER UTILITIES NOT SPECIFICALLY SHOWN WITHIN THIS PLAN SET WITH APPROPRIATE AGENCY. PASSERO ASSOCIATES ASSUMES NO RESPONSIBILITY FOR THE DESIGN OR PERFORMANCE OF UTILITIES NOT SPECIFICALLY SHOWN WITHIN THIS PLAN SET.
3. PRIOR TO THE START OF UTILITY INSTALLATION THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY AND COORDINATE WITH EXISTING UTILITIES SHOWN ON THE PLANS AND REPORT ANY DISCREPANCIES TO THE DESIGN ENGINEER. THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROCEED WITH UTILITY INSTALLATION BY THE OWNERS ONSITE REPRESENTATIVE UPON COMPLETION EXISTING UTILITY VERIFICATION.
4. THE CONTRACTOR IS REQUIRED TO COORDINATE WITH SITE CONTRACTOR/PLUMBER & SEWER CONTRACTOR TO PREDETERMINE THE NECESSARY WYE & CLEANOUT LOCATION ON THE STORM SEWER SYSTEM. THE STORM SEWER SYSTEM IS RECOMMENDED AND MAY BE MODIFIED TO PROVIDE ADEQUATE ROOF DRAINAGE CONNECTIONS.
5. THRUST BLOCKS ON THE WATERMAIN ARE REQUIRED AT BENDS, TEES OR PLUGS. SEE DETAIL SHEETS FOR THRUST BLOCK DETAILS.

STANDARD WATER MAIN EXTENSION NOTES:

1. THE WATER MAIN PIPELINE SHALL BE DISINFECTED EQUAL TO AWWA STANDARD FOR DISINFECTING WATER MAINS DESIGNATION C651 (LATEST REVISION). FOLLOWING DISINFECTION, THE WATER MAIN PIPELINE SHALL BE FLUSHED UNTIL THE CHLORINE CONCENTRATION IN THE WATER LEAVING THE MAIN IS NO HIGHER THAN THAT GENERALLY PREVAILING IN THE SYSTEM.
   ALL WATER MAIN PIPE FITTINGS NOT RECEIVING 24-HOUR CHLORINE DISINFECTION CONTACT TIME MUST BE SWAB-DISINFECTED 30 MINUTES PRIOR TO INSTALLATION.
   THE SAMPLING POINT(S) MUST BE DECONTAMINATED BY FLAMING.
   FIRE HYDRANTS ARE NOT ACCEPTABLE SAMPLING POINTS.
   THE CAYUGA COUNTY DEPARTMENT OF PUBLIC HEALTH MUST RECEIVE AT LEAST 48-HOUR ADVANCE NOTIFICATION REQUESTING SAMPLING SERVICES. SAMPLING WILL NOT BE PERFORMED PRIOR TO RECEIPT FROM A NEW YORK STATE LICENSED OR REGISTERED DESIGN PROFESSIONAL (ENGINEER, ARCHITECT OR LAND SURVEYOR WITH A SPECIAL EXEMPTION UNDER SECTION 7208(N) OF THE EDUCATION LAW) CERTIFYING THAT THE WATER SUPPLY IMPROVEMENTS, TESTING AND DISINFECTION PROCEDURES WERE COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS, REPORTS, SPECIFICATIONS AND ANY APPROVED AMENDMENTS. THE DEPARTMENT WILL COLLECT SAMPLES FOR FREE CHLORINE RESIDUAL, TOTAL COLIFORM, ESCHERICHIA COLI (E. COLI) AND TURBIDITY.
   THE WATER MAIN PIPE AND APPURTENANCES SHALL NOT BE PLACED INTO SERVICE UNTIL SO AUTHORIZED BY THE CAYUGA COUNTY DEPARTMENT OF PUBLIC HEALTH.
2. MINIMUM VERTICAL SEPARATION BETWEEN WATER MAIN PIPELINES AND SEWER PIPELINES SHALL BE 18 INCHES MEASURED FROM THE OUTSIDE OF THE PIPES AT THE POINT OF CROSSING. ONE FULL STANDARD LAYING LENGTH OF WATER MAIN PIPE SHALL BE CENTERED UNDER OR OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. IN ADDITION, WHEN THE WATER MAIN PIPELINE PASSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT (COMPACTED SELECTED FILL) SHALL BE PROVIDED FOR THE SEWER TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING OF THE SEWER ON THE WATER MAIN. MINIMUM HORIZONTAL SEPARATION BETWEEN PARALLEL WATER MAINS AND SEWER PIPES (INCLUDING MANHOLES AND VAULTS) SHALL BE 10 FEET MEASURED FROM THE OUTSIDE OF THE PIPES, MANHOLES OR VAULTS.
3. WHEN INSTALLING FIRE HYDRANTS, SHOULD GROUND WATER BE ENCOUNTERED WITHIN SEVEN (7) FEET OF THE FINISHED GRADE, FIRE HYDRANT WEEP HOLES (DRAINS) SHALL BE PLUGGED.
4. THE WATER MAIN PIPELINE AND APPURTENANCES SHALL BE PRESSURE/LEAKAGE TESTED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF THE AWWA STANDARD C600, C602, C604, OR C605 (MOST RECENT VERSION AS APPLICABLE) OR IN ACCORDANCE WITH MORE STRINGENT REQUIREMENTS IMPOSED BY THE SUPPLIER OF WATER.

SANITARY NOTES

1. SANITARY SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE LATEST REGULATIONS OF THE STATE, COUNTY AND LOCAL MUNICIPALITY
2. MATERIALS
   - MAINS - PIPING SHALL BE POLYVINYL CHLORIDE (PVC) WITH ENDS SUITABLE FOR ELASTOMERIC GASKET JOINTS, AND A MINIMUM WALL THICKNESS OF SDR-35. PIPING AND FITTINGS SHALL MEET:
     ASTM D-3034 (4" THRU 15")
     ASTM F-679 (18" THRU 48")
   - LATERALS - 4" MIN. INSTALLED AT $\frac{1}{4}$" PER FOOT MIN. PIPING SHALL BE POLYVINYL CHLORIDE (PVC) WITH ENDS SUITABLE FOR ELASTOMERIC GASKET JOINTS, AND A MINIMUM WALL THICKNESS OF SDR-21. PIPING AND FITTINGS SHALL MEET ASTM D-2241.
   - JOINTING MATERIALS - SHALL BE BELL-AND-SPIGOT WITH INTEGRAL PUSH ON TYPE ELASTOMERIC GASKET JOINTS, GASKET MATERIAL TO BE NEOPRENE MEETING ASTM D-3212.
   - MANHOLES - SHALL BE PRECAST CONCRETE WITH NEOPRENE GASKETS MEETING ASTM C-478 & ASTM C-443.
3. INFILTRATION AND EXFILTRATION FOR SANITARY SEWERS SHALL BE LIMITED TO 100 GALLONS PER MILE PER INCH DIAMETER OF PIPE PER 24 HOURS.
4. IF AN AIR TEST IS USED, THE TEST AS A MINIMUM SHALL CONFORM TO THE PROCEDURE DESCRIBED IN ASTM C-828-80, ENTITLED STANDARD PRACTICE FOR LOW PRESSURE AIR TEST OF VITRIFIED CLAY PIPELINES; SANITARY MANHOLES SHALL BE TESTED FOR EXFILTRATION.
5. VACUUM TESTING OF MANHOLES IS ALLOWED. THE CONTRACTOR IS CAUTIONED TO SPEAK TO THE SUPERINTENDENT OF SEWERS PRIOR TO COMMENCING WITH PLANS TO VACUUM TEST.
6. DEFLECTION TEST - TEN STATE STANDARDS.
   6.A. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.
   6.B. IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL OR MANDRELL, IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.
   6.C. NO PIPE SHALL EXCEED A DEFLECTION OF 5%.
7. ALL SANITARY SEWER INSTALLATION SHALL BE MADE IN CONFORMANCE WITH THE SPECIFICATIONS, REGULATIONS, AND POLICIES OF THE CITY OF AUBURN.
8. FLOOR DRAINS, IF CONSTRUCTED, SHALL BE CONNECTED TO THE SANITARY SEWER/COMBINATION SEWER. (FLOOR DRAINS DO NOT INCLUDE FOUNDATION/FOOTER DRAINS). ALL DISCHARGES TO THE SANITARY/ COMBINATION SEWER MUST COMPLY WITH THE EFFLUENT LIMITS OF THE LOCAL AND/OR THE CAYUGA COUNTY SEWER USE LAW.
9. SEPARATION - MINIMUM VERTICAL SEPARATION BETWEEN WATER MAINS AND SEWER LINES SHALL BE 18 INCHES MEASURED FROM THE OUTSIDE OF THE PIPES AT THE POINT OF CROSSING. ONE FULL STANDARD LAYING LENGTH OF WATER MAIN PIPE SHALL BE CENTERED UNDER OR OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. IN ADDITION, WHEN THE WATER MAIN PASSES UNDER A SEWER ADEQUATE STRUCTURAL SUPPORT (COMPACTED SELECTED FILL) SHALL BE PROVIDED FOR THE SEWER TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING OF THE SEWER ON THE WATER MAIN. MINIMUM HORIZONTAL SEPARATION BETWEEN PARALLEL WATER MAINS AND SEWER PIPES (INCLUDING MANHOLES AND VAULTS) SHALL BE 10 FEET MEASURED FROM THE OUTSIDE OF THE PIPES, MANHOLES OR VAULTS.
10. SEWER USE LAW: FLOOR DRAINS, IF CONSTRUCTED, SHALL BE CONNECTED TO THE SANITARY/COMBINATION SEWER. FLOOR DRAINS DO NOT INCLUDE FOUNDATION/FOOTER DRAINS. NOTE: ALL DISCHARGES TO THE SANITARY/COMBINATION SEWER MUST COMPLY WITH THE EFFLUENT LIMITS OF THE LOCAL AND OR CAYUGA COUNTY SEWER USE LAW.

STORM NOTES

1. STORM SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE LATEST REGULATIONS OF THE MUNICIPALITY
2. PROPOSED STORM SEWER LATERAL MATERIAL:
   PVC SDR-35 6" MIN. SIZE & SHALL BE LAID AT A MINIMUM GRADE OF 1/4" PER FT.
   STORM SEWER MATERIAL:
   ADS HDPE 12" MIN.
3. FOUNDATION DRAINS SHALL BE CONNECTED TO STORM WATER SYSTEM VIA SUMP PUMPS. DOWNSPOUTS SHALL BE CONNECTED TO STORM SEWER WHERE APPLICABLE, WHERE NOTED ON THE PLANS DOWNSPOUTS SHALL DISCHARGE TO SPLASH BLOCKS.
4. UPON COMPLETION OF SYSTEM INSTALLATION, THE MAIN SEWER SYSTEM AND LEADS TO STRUCTURES SHALL BE FLUSHED AND LAMPED OR MANDREL TESTED TO THE SATISFACTION OF THE MUNICIPALITY.

SEWER USE LAW:

FLOOR DRAINS, IF CONSTRUCTED, SHALL BE CONNECTED TO THE SANITARY/COMBINATION SEWER. FLOOR DRAINS DO NOT INCLUDE FOUNDATION/FOOTER DRAINS.

NOTE: ALL DISCHARGES TO THE SANITARY/COMBINATION SEWER MUST COMPLY WITH THE EFFLUENT LIMITS OF THE LOCAL AND OR CAYUGA COUNTY SEWER USE LAW.

STANDARD SANITARY SEWER EXTENSION NOTES:

1. MAXIMUM ALLOWABLE INFILTRATION OR EXFILTRATION SHALL NOT EXCEED 100 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER DAY FOR THE SANITARY SEWER. IF AN AIR TEST IS USED, THE TEST AS A MINIMUM SHALL CONFORM TO THE PROCEDURE DESCRIBED IN ASTM DESIGNATION C828-86 ENTITLED PRACTICE FOR LOW-PRESSURE AIR TEST OF VITRIFIED CLAY PIPE LINES. SANITARY MANHOLES SHALL BE VISUALLY INSPECTED AND TESTED FOR LEAKAGE BY EXFILTRATION OR VACUUM. VACUUM TESTING OF MANHOLES SHALL COMPLY WITH THE METHOD OUTLINED IN THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION - TECHNICAL INFORMATION PAMPHLET (TIP) NO. 15 (LATEST REVISION).
2. FLOOR DRAINS, IF CONSTRUCTED IN THE PROJECT, MUST BE CONNECTED TO THE SANITARY SEWER. NOTE: FLOOR DRAINS DO NOT INCLUDE FOUNDATION OR FOOTER DRAINS INSTALLED TO INTERCEPT UNCONTAMINATED GROUND WATER. ALL DISCHARGES FROM THE FLOOR DRAINS TO THE SANITARY SEWER MUST COMPLY WITH THE EFFLUENT LIMITS OF THE LOCAL AND/OR THE CAYUGA COUNTY SEWER USE LAW.
3. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL OR MANDREL, IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.
4. MINIMUM VERTICAL SEPARATION BETWEEN WATER MAINS AND SEWER LINES SHALL BE 18 INCHES MEASURED FROM THE OUTSIDE OF THE PIPES AT THE POINT OF CROSSING. ONE FULL STANDARD LAYING LENGTH OF WATER MAIN PIPE SHALL BE CENTERED UNDER OR OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. IN ADDITION, WHEN THE WATER MAIN PIPELINE PASSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT (COMPACTED SELECTED FILL) SHALL BE PROVIDED FOR THE SEWER TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING OF THE SEWER ON THE WATER MAIN. MINIMUM HORIZONTAL SEPARATION BETWEEN PARALLEL WATER MAINS PIPES AND SEWER PIPES (INCLUDING MANHOLES AND VAULTS) SHALL BE 10 FEET MEASURED FROM THE OUTSIDE OF THE PIPES, MANHOLES OR VAULTS.

GENERAL NOTES

1. THE SANITARY WASTE DISPOSAL SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS OF THE NEW YORK STATE AND CAYUGA COUNTY HEALTH DEPARTAMENTS.
2. WATER SERVICE WILL BE INSTALLED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE CITY OF AUBURN
3. THE BUILDING CONSTRUCTION TO BE IN COMPLIANCE WITH THE NEW YORK STATE BUILDING CODE.
4. ANY COST RELATED TO THE RELOCATION OF ANY UTILITIES NECESSITATED BY THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE OWNER OR THOSE REQUESTING THE RELOCATION OF THE UTILITY.
5. ANY AND ALL CULVERT LOCATIONS, SIZES OR TYPES, TO BE APPROVED BY THE CITY SUPERINTENDENT OF HIGHWAYS.
6. ALL PROPERTY CORNERS TO BE MARKED WITH IRON PINS.
7. THIS SUBDIVISION SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE COUNTY MONUMENTATION LAW.
8. THE SUBDIVISION IS LESS THAN 1500 FEET FROM THE NEAREST CONTROL MONUMENT AND IS THEREFORE TIED INTO THE MONUMENTATION NETWORK.
9. THIS SUBDIVISION SHALL COMPLY WITH ANY COUNTY OR STATE AGENCIES HAVING JURISDICTION.
10. ALL SITE WORK TO BE IN COMPLIANCE WITH THE STANDARDS OF CHAPTER 29 - ARTICLE V OF THE CITY OF AUBURN.
11. ALL CONSTRUCTION WILL BE IN ACCORDANCE WITH THE DESIGN CRITERIA AND CONSTRUCTION SPECIFICATIONS FOR LAND DEVELOPMENT FOR THE CITY OF AUBURN DATED THE MOST CURRENT REVISION.
12. THIS PROJECT WILL BE IN ACCORDANCE WITH THE CITY OF AUBURN HIGHWAY FRONTAGE POLICY.

CONSTRUCTION SEQUENCE FOR GRADING AND EROSION CONTROL:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. CONSTRUCT STORMWATER MANAGEMENT AREA AND EROSION CONTROL MEASURES AS SHOWN ON THE PLANS.
3. CONSTRUCT DRAINAGE SWALES ALONG PROPERTY LINES AS SHOWN.
4. CLEAR AND GRUB THE PROJECT IMPROVEMENTS AREAS.
5. STRIP TOPSOIL AND STOCKPILE FOR LATER USE.
6. GRADE IMPROVEMENTS AREAS WITHIN THE PROJECT SITE. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 7 DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN 7 DAYS OF THE LAST DISTURBANCE.
7. CONSTRUCT SEDIMENTATION BARRIERS AS SHOWN ON THIS PLAN.
8. REPLACE TOPSOIL AND FINE GRADE.
9. HYDRO-SEED ALL DISTURBED AREAS WITHIN 10 DAYS AFTER FINAL GRADING, CONTRACTOR IS RESPONSIBLE TO RESEED IF GRADING IS UNSATISFACTORY.
10. UPON APPROVAL OF THE CITY, REMOVE ALL TEMPORARY SILTATION CONTROLS.
11. SLOPES SHALL NOT EXCEED 1' VERTICAL TO 3' HORIZONTAL MAX. MAINTAIN 1:4 WHERE POSSIBLE.
12. MINIMUM OF 6" OF TOPSOIL IS TO BE PLACED ON ALL GRASS AREAS.
13. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BASED UPON ACTUAL FIELD CONDITIONS AOBE. CONTRACTOR SHALL PROVIDE FOR THIS COST IN HIS CONTRACT.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SILTATION AND EROSION CONTROL MEASURES FROM INSTALLATION THROUGH MAINTENANCE AND REMOVAL AFTER REVEGETATION HAS BEEN ESTABLISHED.
15. ALL END SECTIONS WILL BE PROVIDED WITH RIP-RAP APRONS.
16. ALL EROSION AND SEDIMENT CONTROL METHODS WILL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

CONSTRUCTION SEQUENCE FOR STEEP SLOPE STABILIZATION / JUTE MESH INSTALLATION FOR SLOPES OF 1:3 OR GREATER:

1. STRIP TOPSOIL ON SLOPE.
2. GRADE SLOPE PER PLAN. CONTRACTOR SHALL TAKE CARE TO NOT OVER EXCAVATE EMBANKMENT.
3. REPLACE TOPSOIL.
4. TRACK TOPSOIL WITH A BULLDOZER IN A DIRECTION PERPENDICULAR TO THE PROPOSED CONTOUR LINES.
5. IMMEDIATELY SEED AND FERTILIZE TOPSOIL PER PLAN.
6. IMMEDIATELY APPLY JUTE MESH BY UNROLLING THE PRODUCT DOWN THE SLOPE. DO NOT STRETCH THE MESH, ALLOWING IT TO FULLY CONTACT THE SOIL.
7. SECURE THE JUTE MESH WITH STAPLES (11 GAUGE - 8"x1"x8") 24" APART THOUGH OUT THE MATTING (APPROXIMATELY 200 STAPLES PER 100 SY). STAPLES SHOULD BE DRIVEN FLUSH WITH THE GROUND.
8. SECURE BEGINNING AND END OF ROLL BY ANCHORING THE MATTING INTO 6" DEEP SLOTS CUT INTO THE SOIL. THEN STAPLE MATTING AT CHECK SLOTS.

STABILIZATION STANDARDS AND SPECIFICATIONS :

A TEMPORARY OR PERMANENT PROTECTIVE COVERING PLACED ON A PREPARED, SEEDED PLANTING AREA THAT IS ANCHORED IN PLACE BY STAPLES OR OTHER MEANS TO AID IN CONTROLLING EROSION BY ABSORBING RAIN SPLASH ENERGY AND WITHSTAND OVERLAND FLOW AS WELL AS PROVIDE A MICROCLIMATE TO PROTECT AND PROMOTE SEED ESTABLISHMENT.

CONDITIONS WHERE PRACTICE APPLIES

ANCHORED STABILIZATION MATS ARE REQUIRED FOR SEEDED EARTHEN SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL; IN VEGETATED CHANNELS WHERE THE VELOCITY OF THE DESIGN FLOW EXCEEDS THE ALLOWABLE VELOCITY FOR VEGETATION ALONE (USUALLY GREATER THAN 5 FEET PER SECOND); ON STREAMBANKS AND SHORELINES WHERE MOVING WATER IS LIKELY TO ERODE NEWLY SEEDED OR PLANTED AREAS; AND IN AREAS WHERE WIND PREVENTS STANDARD MULCHING WITH STRAW. THIS STANDARD DOES NOT APPLY TO SLOPES STABILIZED WITH SOD, ROCK RIPRAP OR HARD ARMOR MATERIAL.

DESIGN CRITERIA

SLOPE APPLICATIONS - ANCHORED STABILIZATION MATS FOR USE ON SLOPES ARE PRIMARILY USED AS MULCH BLANKETS WHERE THE MESH MATERIAL IS WITHIN THE BLANKET OR AS A NETTING OVER PREVIOUSLY PLACED MULCH. THESE STABILIZATION MATS ARE NOT EFFECTIVE IN PREVENTING SLOPE FAILURES.

1. REQUIRED ON ALL SLOPES STEEPER THAN 3:1
2. MATTING WILL BE DESIGNED FOR PROPER LONGEVITY NEED AND STRENGTH BASED ON INTENDED USE.
3. ALL INSTALLATION DETAILS AND DIRECTIONS WILL BE INCLUDED ON THE SITE EROSION AND SEDIMENT CONTROL PLAN AND WILL FOLLOW MANUFACTURES SPECIFICATIONS.

CHANNEL APPLICATIONS - ANCHORED STABILIZATION MATS, FOR USE IN SUPPORTING VEGETATION IN FLOW CHANNELS, ARE GENERALLY A NON-DEGRADABLE, THREE DIMENSIONAL PLASTIC STRUCTURE WHICH CAN BE FILLED WITH SOIL PRIOR TO PLANTING. THIS STRUCTURE PROVIDES A MEDIUM FOR ROOT GROWTH WHERE THE MATTING AND ROOTS BECOME INTERTWINED FORMING A CONTINUOUS ANCHOR FOR THE VEGETATED LINING.

1. CHANNEL STABILIZATION SHALL BE BASED ON THE TRACTIVE FORCE METHOD.
2. FOR MAXIMUM DESIGN SHEAR STRESSES LESS THAN 2 POUNDS PER SQUARE FOOT, A TEMPORARY OR BIO-DEGRADABLE MAT MAY BE USED.
3. THE DESIGN OF THE FINAL MATTING SHALL BE BASED ON THE MATS ABILITY TO RESIST THE TRACTIVE SHEAR STRESS AT BANK FULL FLOW.
4. THE INSTALLATION DETAILS AND PROCEDURES SHALL BE INCLUDED ON THE SITE EROSION AND SEDIMENT CONTROL PLAN AND WILL FOLLOW MANUFACTURERS SPECIFICATIONS.

STANDARD AND SPECIFICATIONS FOR ANCHORED STABILIZATION MATTING

CONSTRUCTION SPECIFICATIONS

1. PREPARE SOIL BEFORE INSTALLING MATTING BY SMOOTHING THE SURFACE, REMOVING DEBRIS AND LARGE STONE, AND APPLYING LIME, FERTILIZER AND SEED. REFER TO MANUFACTURERS INSTALLATION DETAILS.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE MAT IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. IN CHANNELS OR SWALES, BEGIN AT THE DOWNSLOPE END, ANCHORING THE MAT AT THE BOTTOM AND TOP ENDS OF THE BLANKET. WHEN ANOTHER ROLL IS NEEDED, THE UPSLOPE ROLL SHOULD OVERLAY THE LOWER LAYER, SHINGLE STYLE, SO THAT CHANNEL FLOWS DO NOT PEEL BACK THE MATERIAL.
4. ROLL THE MATS DOWN A SLOPE WITH A MINIMUM 4" OVERLAP. ROLL CENTER MAT IN A CHANNEL IN DIRECTION OF WATER FLOW ON BOTTOM OF THE CHANNEL. DO NOT STRETCH BLANKETS. BLANKETS SHALL HAVE GOOD CONTINUOUS CONTACT WITH THE UNDERLYING SOIL THROUGHOUT ITS ENTIRE LENGTH.
5. PLACE MATS END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP, USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE MATS.
6. FULL LENGTH EDGE OF MATS AT TOP OF SIDE SLOPES MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH; BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
7. MATS ON SIDE SLOPES OF A CHANNEL MUST BE OVERLAPPED 4" OVER THE CENTER MAT AND STAPLED.
8. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN.
9. THE TERMINAL END OF THE MATS MUST BE ANCHORED IN A 6"X6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
10. STAPLING AND ANCHORING OF BLANKET SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATIONS.

MAINTENANCE

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 80% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 2 CALENDAR DAYS

SOIL RESTORATION NOTES:

1. TILL COMPOST INTO SUBSOIL TO A DEPTH OF AT LEAST 12" USING CAT-MOUNTED RIPPER, TRACTOR MOUNTED DISC, OR TILLER, MIXING, AND CIRCULATING AIR AND COMPOST INTO SUBSOILS.
2. ROCK-PICK UNTIL UPLIFTED STONE/ROCK MATERIALS OF 4" AND LARGER ARE CLEANED OFF SITE.
3. APPLY TOPSOIL TO A DEPTH OF 6 INCHES ON ALL AREAS BEING RETURNED TO GRASS.
4. VEGETATE AS REQUIRED BY APPROVED PLAN.

TEMPORARY CONSTRUCTION AREA SEEDING NOTES:

1. THE AREA MUST BE ROUGH GRADED AND SLOPES PHYSICALLY STABLE.
2. SEEDING MUST TAKE PLACE WITHIN 24 HOURS OF DISTURBANCE OR SCARIFICATION OF THE SOIL WILL BE NEEDED PRIOR TO SEEDING.
3. TYPICALLY FERTILIZER OR LIME IS NOT USED FOR TEMPORARY SEEDINGS.
4. ANY SEEDING METHOD MAY BE USED THAT PROVIDES UNIFORM APPLICATION OF SEED TO THE AREA.
5. SEEDING

PLANTING SEASON	SPECIES	RATE IN LBS./ACRE
SPRING, SUMMER, OR EARLY FALL	RYEGRASS (ANNUAL OR PERENNIAL)	30
LATE FALL OR EARLY WINTER	WINTER RYE (CEREAL RYE)	100

*MULCH THE AREA WITH HAY OR STRAW AT 2 TONS/ACRE. WOOD FIBER HYDROMULCH OR OTHER SPRAYABLE PRODUCTS APPROVED FOR EROSION CONTROL MAY BE USED IF APPLIED ACCORDING TO SPECIFICATIONS.

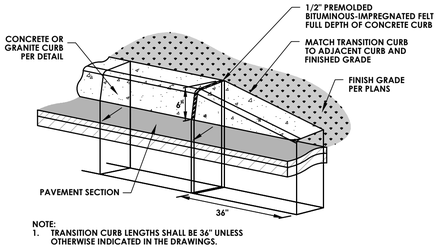
COMPACTION NOTES

1. THE CONTRACTOR SHALL STRIP THE TOPSOIL AND REMOVE ANY UNSUITABLE SOILS WITHIN THE PROPOSED GRADING LIMITS PRIOR TO PLACEMENT OF FILL MATERIAL.
2. ALL FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY OF STANDARD PROCTOR TEST AT OPTIMUM MOISTURE CONTENT.
3. THE COMPACTION TESTS WILL BE CONDUCTED BY A LICENSED TESTING LABORATORY AND RESULTS SUBMITTED TO DESIGN ENGINEER.

EROSION AND SEDIMENT CONTROL NOTES:

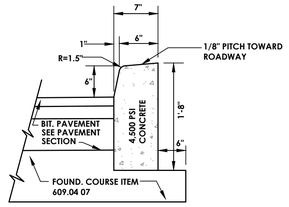
(OCTOBER 2021)

1. IN ACCORDANCE WITH SECTIONS 107-12 AND 209-3.01 OF THE NYSDOT STANDARD SPECIFICATIONS, THE CONTRACTOR SHALL REVIEW THE EROSION AND SEDIMENT CONTROL PLAN INCLUDED IN THE CONTRACT DOCUMENTS, AND IF NECESSARY, MODIFY THE PLAN WITH THE CONTRACTOR'S INTENDED SEQUENCE AND TYPES OF OPERATIONS. THE CONTRACTOR'S MODIFIED EROSION AND SEDIMENT CONTROL PLAN SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL, ALONG WIT

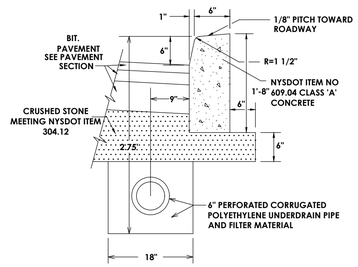


NOTE:
1. TRANSITION CURB LENGTHS SHALL BE 36" UNLESS OTHERWISE INDICATED IN THE DRAWINGS.

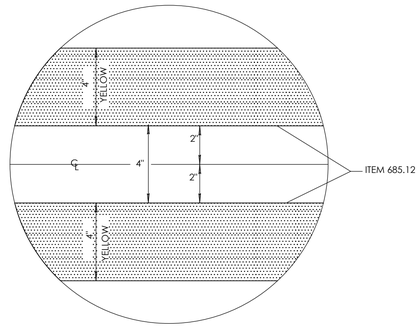
TRANSITION CURB TO GRADE
N.T.S.



CONCRETE CURB
N.T.S.

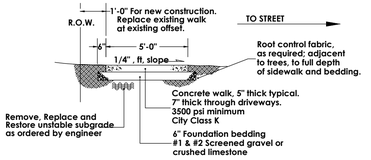


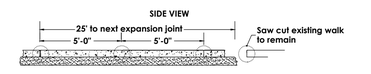
CONCRETE CURB WITH UNDERDRAIN
N.T.S.

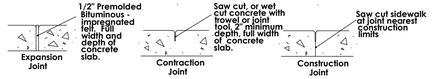


DOUBLE YELLOW CENTERLINE
N.T.S.

MODIFIED INTERNATIONAL SYMBOL OF ACCESS
N.T.S.







NOTES:
1) The gravel or stone base shall be placed on a well graded and compacted subgrade. The gravel or stone base shall be thoroughly compacted.

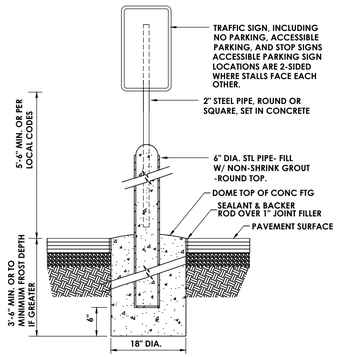
2) All exposed surfaces shall be broomed and edges finished with a 1.4" radius edging tool. The finished concrete surface shall be treated with a clear, non-yellowing curing compound.

3) No concrete shall be placed before April 20th, or after October 31st. No concrete shall be placed unless the ambient air surface temperature is above 40 degrees.

4) All work shall meet these specifications.

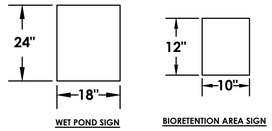
5) All work shall conform to ADA requirements.

TYPICAL SIDEWALK
N.T.S.



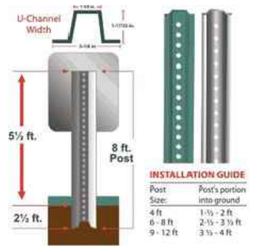
(SIGN IN PARKING LOT OR DRIVE)

TYPICAL POST MOUNT HANDICAP SIGN INSTALLATION
N.T.S.



WET POND SIGN — BIORETENTION AREA SIGN

SMP SIGN INFORMATION
STORMWATER MANAGEMENT PRACTICE - BIORETENTION AREA / WET POND
PROJECT IDENTIFICATION - (SPDES CONSTRUCTION PERMIT #)
MUST BE MAINTAINED IN ACCORDANCE WITH O&M PLAN



SMP SIGN
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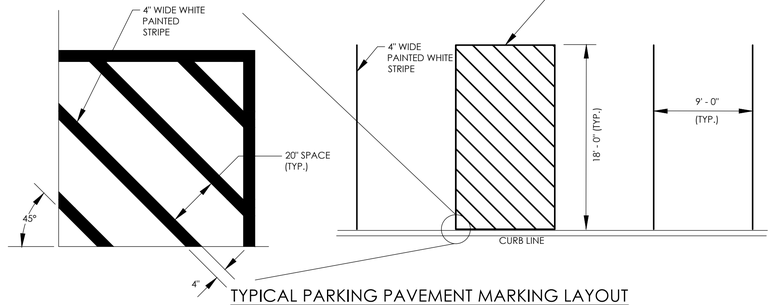
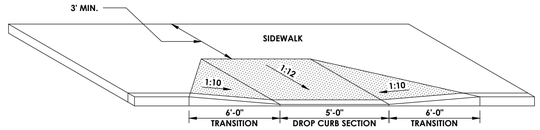
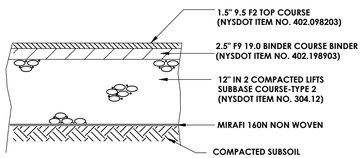


TYPICAL PARKING PAVEMENT MARKING LAYOUT
N.T.S.

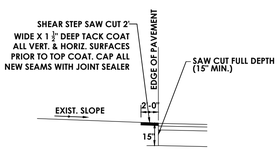


TYPICAL HANDICAP RAMP
N.T.S.

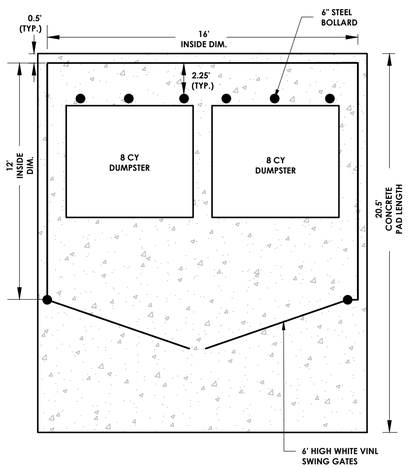


NOTE: ALL DEPTHS ARE COMPACTED THICKNESSES

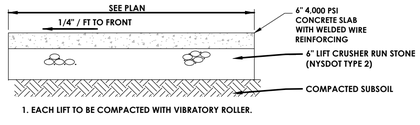
PAVEMENT SECTION
N.T.S.



PAVEMENT KEY
(FOR CONNECTION TO EXISTING PAVEMENT)
N.T.S.

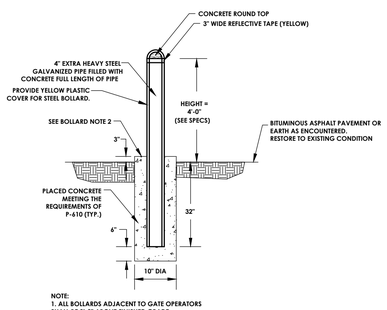


DUMPSTER ENCLOSURE
N.T.S.



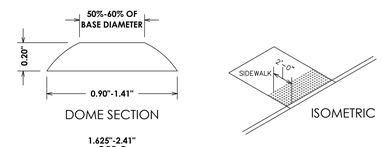
1. EACH LIFT TO BE COMPACTED WITH VIBRATORY ROLLER.

CONCRETE PAD
N.T.S.



NOTE:
1. ALL BOLLARDS ADJACENT TO GATE OPERATORS SHALL BE 3'-0" ABOVE FINISHED GRADE.
2. ALL BOLLARDS TO BE SET PLUMB.

BOLLARD
N.T.S.



NOTES:

1. QUANTITY OF TRUNCATED DOMES SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY. TO DEPICT REQUIRED SQUARE GRID PATTERN.

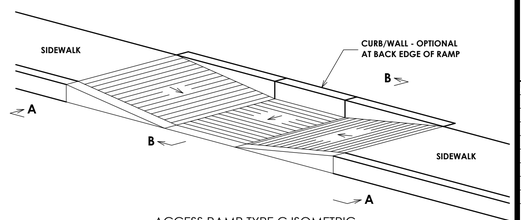
2. TRUNCATED DOMES ARE TO BE ALIGNED IN SQUARE GRID PATTERN IN PREDOMINANT DIRECTION OF TRAVEL.

3. DETECTABLE WARNING SYSTEM FIELD IS TO BE 2 FEET DEEP, AND IS TO EXTEND ACROSS FULL WIDTH OF SIDEWALK ACCESS RAMP, BUT NOT UP SIDE FLARES.

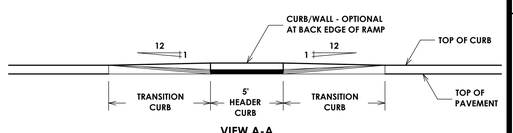
4. DETECTABLE WARNING SYSTEM FIELD IS TO BE LOCATED SUCH THAT OUTER EDGE OF WARNING FIELD NEAREST TO STREET IS 2 TO 4 INCHES OFF BACK EDGE OF CURB.

5. ENTIRE DETECTABLE WARNING SYSTEM FIELD INCLUDING TRUNCATED DOMES, IS TO BE DARK GRAY IN COLOR, PER MUNSELL BOOK NOTATION 10BG 3/1, FEDERAL STANDARD 595B NUMBER 36081, OR APPROVED EQUIVALENT.

DETECTABLE WARNING SURFACE
N.T.S.



ACCESS RAMP TYPE C ISOMETRIC



VIEW A-A

NOTES:

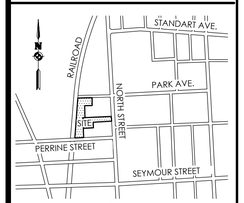
1. 1:12 IS MAXIMUM SLOPE OF ACCESS RAMP AND SIDE FLARES.

2. SURFACE OF ACCESS RAMP IS TO BE STABLE, FIRM AND SLIP-RESISTANT. TEXTURE SURFACE WITH COARSE BROOM RUNNING TRANSVERSE TO SLOPE OF ACCESS RAMP.

SIDEWALK ACCESS RAMP
N.T.S.

DESIGN DEVELOPMENT

PASSERO
engineering architecture



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100 (585) 325-1000
ROCHESTER, NY 14614 FAX: (585) 325-1691
PROJECT MANAGER EDMUND MARTIN, P.E.
PROJECT ENGINEER ANDREW BURNS, P.E.
DESIGNER JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS IN VIOLATION OF STATE EDUCATION LAW ARTICLE 145 SECTION 7209 AND ARTICLE 147 SECTION 7307, THESE PLANS ARE COPYRIGHT PROTECTED. ©

DETAILS

AUBURN, NY

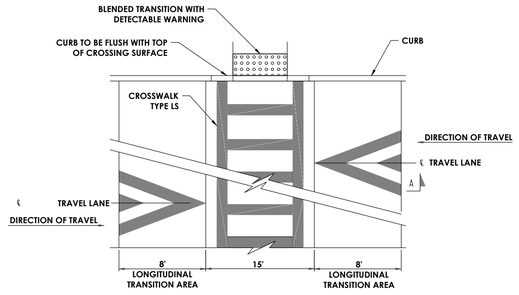
AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-202**

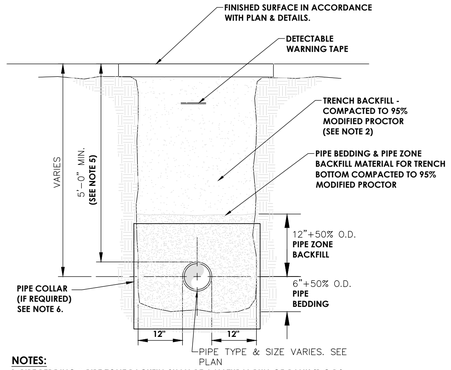
DATE: **APRIL 2026**

Y:\PROJECTS-NEW\2025\20255046\20255046.0001\01 - CAD-BIM-MODELS\CIVIL\20255046.01_DETAILS.DWG 4/14/2026 2:57 PM Jacob Lewis



RAISED CROSSWALK DETAIL

N.T.S



NOTES:

1. PIPE BEDDING & PIPE ZONE BACKFILL SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) SAND OR A MIXTURE OF CRUSHED STONE AND GRAVEL, FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. BEDDING GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION	% PASSING
3/4"	100%
NO. 40	0-70%
NO. 200	0-10%

2. TRENCH BACKFILL SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) OR PROCESSED GRAVEL, OR EXCAVATED MATERIAL FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. TRENCH BACKFILL GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION	% PASSING
4"	100%
NO. 40	0-70%
NO. 200	0-10%

IN NON-TRAFFIC UNPAVED AREAS TRENCH BACKFILL CAN BE MATERIALS EXCAVATED FROM THE TRENCH AS APPROVED BY THE ENGINEER AND COMPACTED TO 90% MODIFIED PROCTOR.

3. INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND PIPING. LOCATE TAPE 12" BELOW FINISHED GRADE, DIRECTLY OVER PIPING, EXCEPT 6" BELOW SUBGRADE UNDER PAVEMENTS & SLAB.

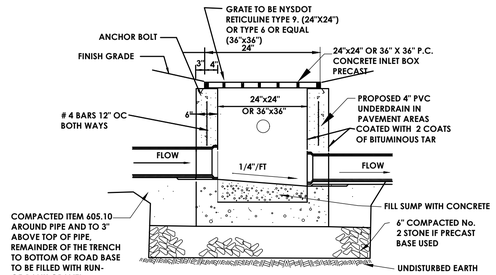
4. TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.

5. 5'-0" MIN COVER SHALL BE APPLIED TO WATER MAIN OR SANITARY SEWER FORCE MAINS ONLY. IF 5' COVER CANNOT BE ACHIEVED, INSULATION SHALL BE REQUIRED. INSULATION SHALL BE APPROVED BY THE AHJ WHERE INSTALLATION IS PUBLIC.

6. FOR SANITARY AND STORM PIPE RUNS STEEPER THAN 12%, 4'x4' PIPE COLLARS SHALL BE INSTALLED AT 100' MIN. INTERVALS.

PIPE TRENCH DETAIL (TYPICAL)

N.T.S.

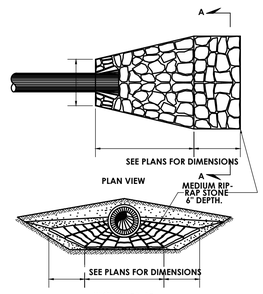


1. ALL CONCRETE TO BE 3500 psi CLASS A N.Y.S.D.O.T. ITEM 601.05

2. ALL CONCRETE IN CONTACT WITH ASPHALT PAVEMENT SHALL BE COVERED WITH A TACK COAT IN ACCORDANCE WITH N.Y.S.D.O.T. SECTION 407.

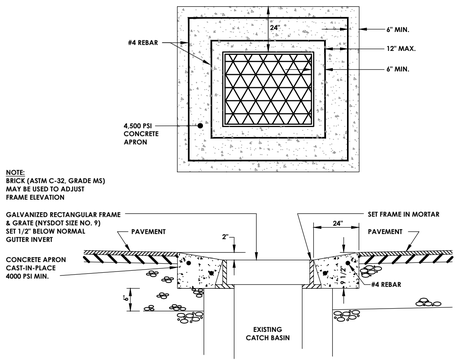
STANDARD CATCH BASIN

N.T.S.



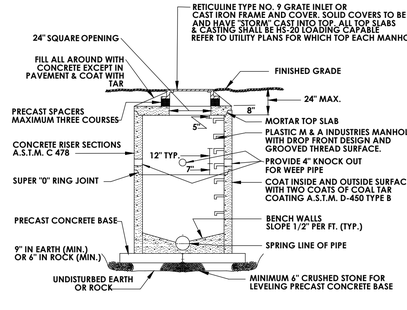
STONE RIP-RAP

N.T.S.



CONCRETE APRON FOR CATCH BASINS

N.T.S.



STANDARD STORM MANHOLE

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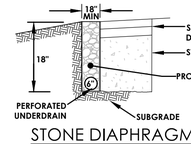
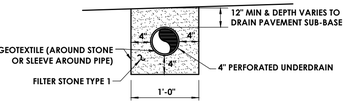


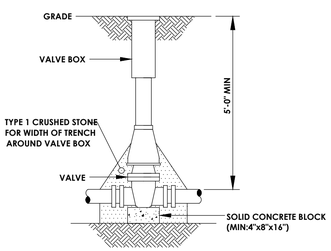
STONE DIAPHRAGM

N.T.S.



PAVEMENT AREA UNDERDRAIN

N.T.S.



NOTE:

1. VALVE BOX SHALL BE CENTERED ON VALVE AND SET ON COMPACTED BACKFILL.
2. VALVE SHALL NOT SUPPORT VALVE BOX.
3. ALL BODY AND BONNET BOLTS SHALL BE STAINLESS STEEL.
4. ALL VALVES SHALL BE OPEN LEFT EXCEPT VALVES 12" AND SMALLER

WATER VALVE

N.T.S.

BIO-RETENTION BASIN SOIL MEDIA REQUIRED RATIOS

*per NYSDEC 2024 SWDM.

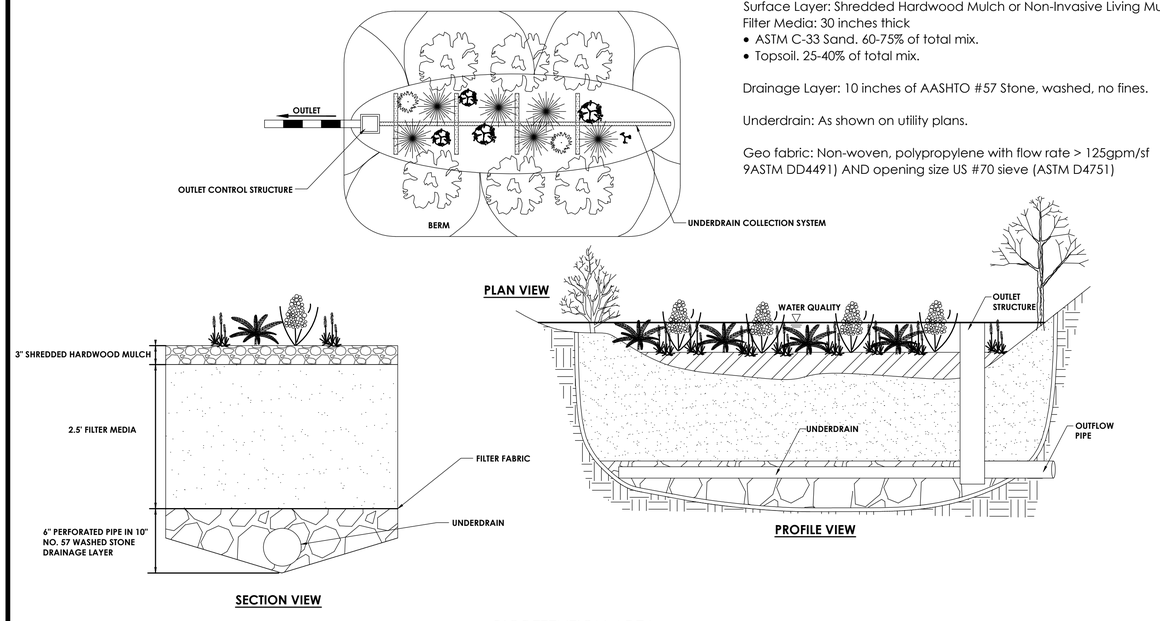
Surface Layer: Shredded Hardwood Mulch or Non-Invasive Living Mulch
Filter Media: 30 inches thick

- ASTM C-33 Sand. 60-75% of total mix.
- Topsoil. 25-40% of total mix.

Drainage Layer: 10 inches of AASHTO #57 Stone, washed, no fines.

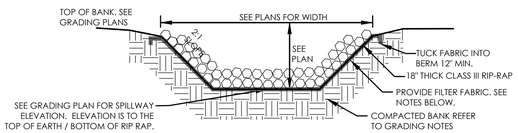
Underdrain: As shown on utility plans.

Geo fabric: Non-woven, polypropylene with flow rate > 125gpm/sf 9ASTM DD4491) AND opening size US #70 sieve (ASTM D4751)



BIORETENTION AREA

N.T.S.



NOTES:

FILTER FABRICS ARE TO MEET THE FOLLOWING CRITERIA:

- THICKNESS: 20-60 MILS
- GRAB STRENGTH 90-120 LBS

IF UNDERLYING SOIL IS <50% FINES.

- MAX OPENING EOS <= #100 SIEVE
- TOTAL OPEN AREA OF FABRIC CANNOT BE >32%

IF UNDERLYING SOIL IS >50% FINES.

- MAX OPENING EOS <=#70 SIEVE
- TOTAL OPEN AREA OF FABRIC CANNOT BE >10%

1. SOIL TO BE COMPACTED TO 95% STANDARD PROCTOR TEST OF USED MATERIAL. SEE GRADING NOTES FOR MORE INFORMATION.

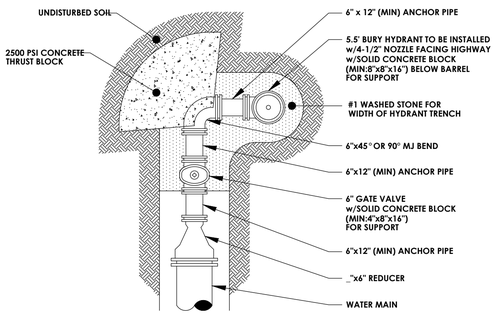
2. SIDE SLOPES SHALL BE GRADED TO 2:1 OR FLATTER PRIOR TO PLACING FILTER MATERIAL AND RIP RAP.

3. RIP RAP SHALL BE PLACED TO MAINTAIN A UNIFORM GRADATION. LARGER STONE SHALL BE PLACED AT THE TOE.

4. ENDS OF THE RIP RAP SHALL BE KEYED INTO A STABLE BANK. WHEN TYING INTO OTHER STRUCTURES, LARGER RIPRAP CAN BE LAID IN STEPS OR STACKED AS NEEDED TO FIT. STONES LARGER THAN THOSE DESIGNATED FOR FLOW (12') SHALL BE USED FOR THIS PURPOSE.

RIP RAP OVERFLOW

N.T.S.



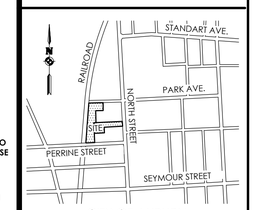
NOTE:TO BE USED WHEN WATER MAIN WILL NOT BE EXTENDED.

DEAD END PERPENDICULAR HYDRANT ASSEMBLY

N.T.S.

DESIGN DEVELOPMENT

PASSERO
engineering architecture



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
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ROCHESTER, NY 14614
(585) 325-1000
FAX: (585) 325-1691

PROJECT MANAGER	EDMUND MARTIN, P.E.
PROJECT ENGINEER	ANDREW BURNS, P.E.
DESIGNER	JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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DETAILS

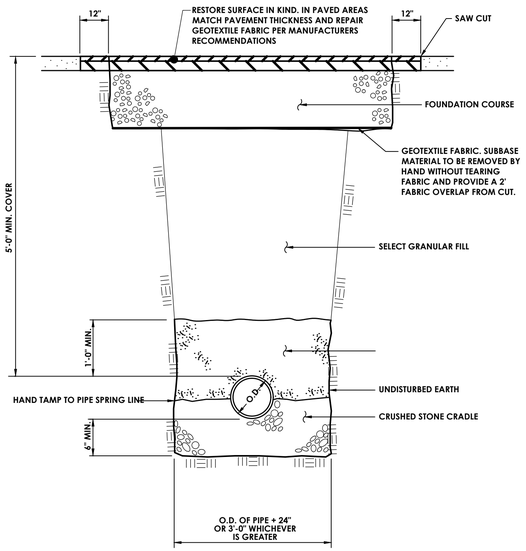
AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

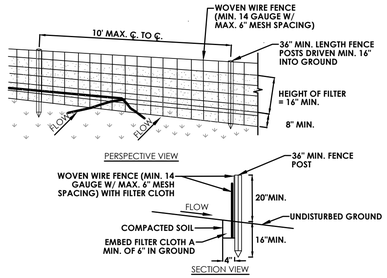
DRAWING NO.: **C-203**

DATE: **APRIL 2026**



TYPICAL SEWER TRENCH SECTION IN PAVEMENT AREAS

N.T.S.

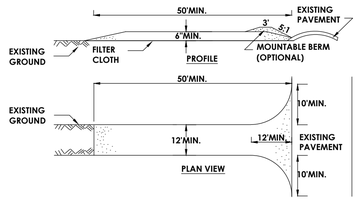


CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 14 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE

N.T.S.

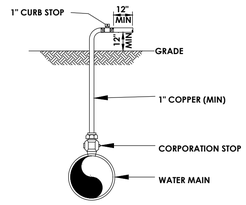


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN

STABILIZED CONSTRUCTION ENTRANCE

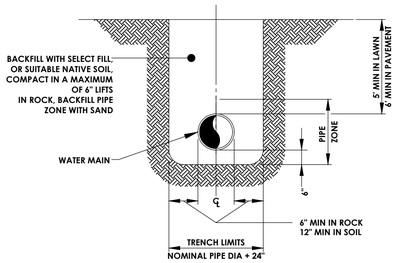
N.T.S.



NOTE:
IMMEDIATELY PRIOR TO THE AUTHORITY PLACING WATER MAIN IN SERVICE CONTRACTOR SHALL REMOVE ALL CORPORATIONS ASSOCIATED WITH TEMPORARY FACILITIES (I.E. SAMPLING TAPS, ETC.) AND REPLACE WITH THREADED BRASS PLUGS. PLACEMENT OF THREADED BRASS PLUG MUST BE WITNESSED BY A MCWA REPRESENTATIVE.

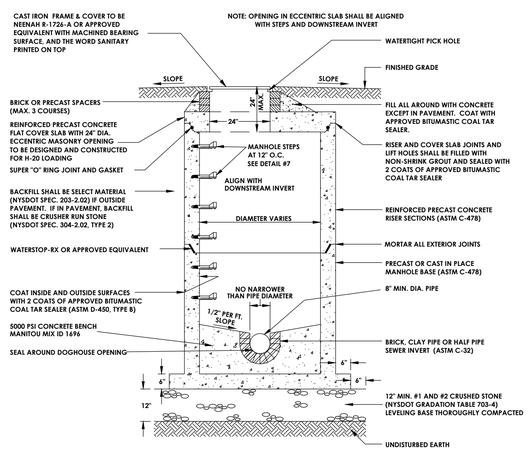
DISINFECTION / BLOW-OFF/ SAMPLING TAP

N.T.S.



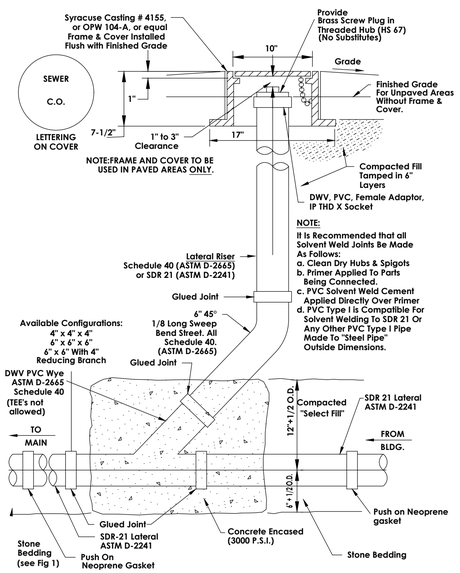
WATERMAIN TRENCH

N.T.S.



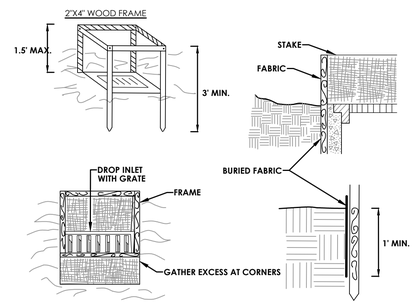
SANITARY SEWER MANHOLE

(N.T.S.)



6" P.V.C. CLEANOUT DETAIL FOR LATERAL CONNECTION

N.T.S.



CONSTRUCTION SPECIFICATIONS:

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUM DRAINAGE AREA 1 ACRE

FILTER FABRIC DROP INLET PROTECTION

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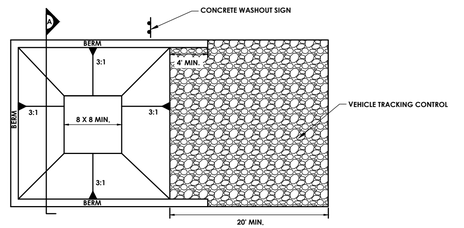

CONCRETE WASHOUT AREA PLAN

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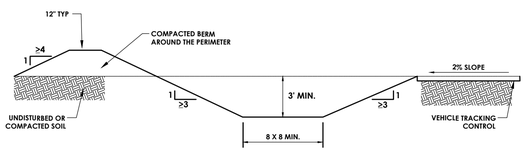


SECTION A

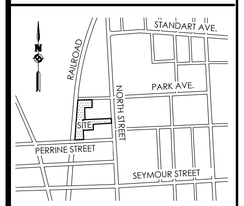
CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN FOR:
   - CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFRABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR THE PERIMETER BERM CONSTRUCTION.

DESIGN DEVELOPMENT

PASSERO
engineering architecture



CITY OF AUBURN

LOCATION SKETCH

N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100 (585) 325-1000
ROCHESTER, NY 14614 FAX: (585) 325-1691
PROJECT MANAGER EDMUND MARTIN, P.E.
PROJECT ENGINEER ANDREW BURNS, P.E.
DESIGNER JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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DETAILS

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

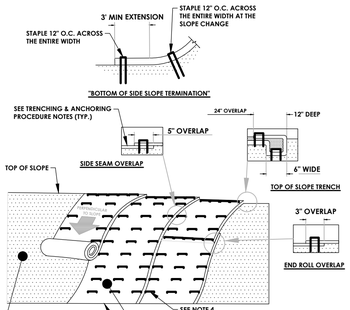
PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-204**

DATE: **APRIL 2026**

LIGHTPOLE BASE DEPTH

POLE HEIGHT	GROUND SLOPE	GROUND WATER BELOW FOUNDATION	GROUND WATER 2' BELOW SURFACE
LESS THAN 14'	NA	4'-0"	4'-0"
LESS THAN 30'	LESS THAN 1:4	5'-0"	6'-0"
LESS THAN 30'	GREATER THAN 1:4	6'-0"	7'-0"



EROSION CONTROL BLANKET INSTALLATION DETAIL
N.T.S.

NOTES:

1. PREPARE THE TOPSOIL (SEEDBED) FIRST BY RAKING, SHAPING, FINE GRADING, COMPACTING, SEEDING & FERTILIZING THE SLOPES.

2. USE THE TRENCHING & ANCHORING PROCEDURES DETAILED HEREIN TO SECURE ANY EXPOSED MATERIAL ENDS, SECURE ALL PRODUCT OVERLAPS, OVERLAP IN THE DIRECTION OF WATER FLOW, PERPENDICULAR TO THE SLOPE.

3. KEEP EROSION CONTROL BLANKET IN SOLID CONTACT WITH THE TOPSOIL.

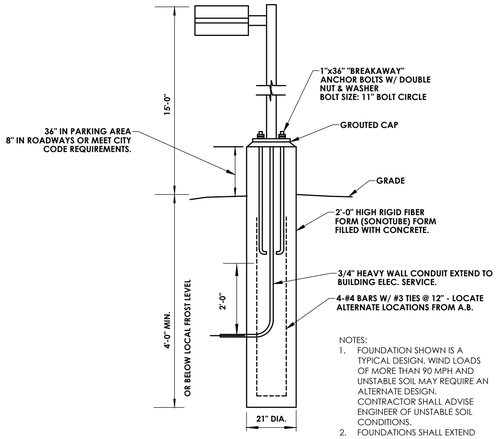
4. USE THE REQUIRED NUMBER OF STAPLES/STAKES TO SECURELY FASTEN THE EROSION CONTROL BLANKET TO THE SLOPE IN LOOSE SOIL CONDITIONS. THE USE OF STAPLES/STAKES LENGTHS GREATER THAN 6" MAYBE NECESSARY FOR PROPER SECURING. STAPLE PATTERNS & OVERLAPS ARE DEPENDENT ON SITE CONDITIONS & MANUFACTURER'S REQUIREMENTS. CONTRACTOR SHALL CONSULT WITH MANUFACTURER FOR ACTUAL SITE SPECIFIC REQUIREMENTS.

TRENCHING & ANCHORING PROCEDURE NOTES:

SIDE SEAM OVERLAP: THE EDGES OF PARALLEL BLANKETS SHALL BE STAPLED WITH A 5" OVERLAP.

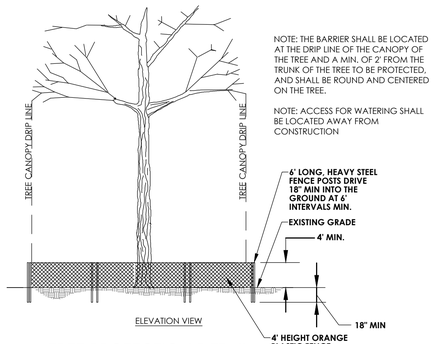
TOP OF SLOPE TRENCH: BEGIN AT THE TOP OF SLOPE BY ANCHORING THE EROSION CONTROL BLANKET IN A 6"D X 6"W TRENCH WITH A 12" OVERLAP EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR WITH A ROW OF STAPLES/STAKES 12" O.C. IN THE BOTTOM OF THE TRENCH. BACKFILL & COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL & FOLD THE REMAINING 12" PORTION OF THE EROSION CONTROL BLANKET BACK OVER THE SEED & COMPACTED SOIL. SECURE THE EROSION CONTROL BLANKET BACK OVER THE SEED & COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED 12" O.C. ACROSS THE ENTIRE WIDTH.

END ROLL OVERLAP: CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE SHALL BE PLACED END OVER END (SINGLE-STYLE) WITH A 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREAS, 12" APART ACROSS THE ENTIRE WIDTH.



NOTES:
1. FOUNDATION SHOWN IS A TYPICAL DESIGN. WIND LOADS OF MORE THAN 90 MPH AND UNSTABLE SOIL MAY REQUIRE AN ALTERNATE DESIGN. CONTRACTOR SHALL ADVISE ENGINEER OF UNSTABLE SOIL CONDITIONS.
2. FOUNDATIONS SHALL EXTEND BELOW FROST DEPTH PER LOCAL CODES.

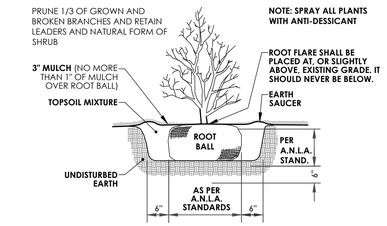
LIGHT POLE AND BASE DETAIL
N.T.S.



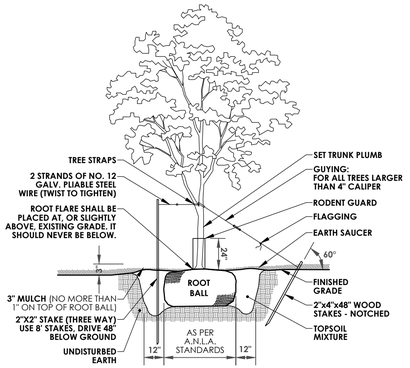
NOTE: THE BARRIER SHALL BE LOCATED AT THE DRIP LINE OF THE CANOPY OF THE TREE AND A MIN. OF 2' FROM THE TRUNK OF THE TREE TO BE PROTECTED, AND SHALL BE ROUND AND CENTERED ON THE TREE.

NOTE: ACCESS FOR WATERING SHALL BE LOCATED AWAY FROM CONSTRUCTION

TREE PROTECTION DETAIL
N.T.S.

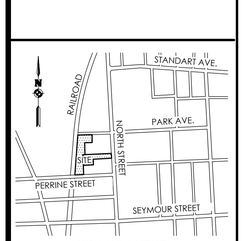


SHRUB PLANTING DETAIL
N.T.S.



STAKING: FOR ALL TREES 4" CALIPER OR LESS AND EVERGREENS OVER 4' HEIGHT

TREE PLANTING DETAIL
N.T.S.



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

D-Series Size 1
LED Area Luminaire

d-series

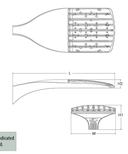
DSX1 LED P1 30K 70CRI T3M

Catalog Number
Notes
Type

Hit the tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	0.69 ft² (0.064 m²)
Length:	32.71" (83.1 cm)
Width:	14.26" (36.2 cm)
Height H1:	7.88" (20.0 cm)
Height H2:	2.73" (6.9 cm)
Weight:	34 lbs (15.4 kg)



Design Select options indicated by this color background.

Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details

Ordering Information

EXAMPLE: DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature*	Color Rendering Index*	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P6 P2 P7 P3 P8 P4 P9 P5 **Rotated optics** P10² P12² P11² P13²	(this section 70CRI only) 30K 3000K 40K 4000K 50K 5000K 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	70CRI 70CRI 70CRI 80CRI 80CRI 80CRI 80CRI	AFR Automotive front row T1S Type 1 short T2M Type 2 medium T3M Type 3 medium T3LG Type 3 low glare³ T3HB Type 3 H backlight control³ T4LG Type 4 low glare³ T4FTM Forward throw medium T5M Type 5 medium T5LG Type 5 low glare T5W Type 5 W medium T5HB Type 5 H backlight control³ BLC4 Type 3 backlight control³ LCCO Left corner cutoff³ RCCO Right corner cutoff³	MVOLT (120V-277V)⁴ HVOLT (347V-480V)⁴⁵ XVOLT (277V - 480V)⁴⁵ 120⁴·⁵ 208⁴·⁵ 240⁴·⁵ 277⁴·⁵ 347⁴·⁵ 480⁴·⁵·⁶	**Shipped included** SPA Square pole mounting (Ø3 drilling) RPA Round pole mounting (Ø3 drilling) SPA5 Square pole mounting (Ø5 drilling) RPA5 Round pole mounting (Ø5 drilling)⁶ SPABW Square narrow pole mounting (Ø3 drilling) WBA Wall bracket⁶ MA Mast arm adapter (mounts on 2 1/8" OD horizontal tenon)

Control options	Other options	Finish (required)
Shipped installed NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc⁷·⁸·⁹·¹⁰ PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc⁷·⁸·⁹·¹⁰ PER NEMA twist-lock receptacle only (controls ordered separately)¹¹ PER5 Five-pin receptacle only (controls ordered separately)¹¹·¹²	PER7 Seven-pin receptacle only (controls ordered separately)¹¹·¹² EAD Field adjustable output¹³·¹⁴ BL30 Bi-level switched dimming, 30%¹⁴·¹⁵ BL50 Bi-level switched dimming, 50%¹⁴·¹⁵ DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)¹⁴ DS Dual switching¹⁴·¹⁵·¹⁶	**Shipped included** SPD20KV 20KV surge protection HS Houseside shield (Black finish standard)¹⁷ L90 Left-rotated optics¹ R90 Right-rotated optics¹ CCE Coastal Construction¹⁸ HA 50°C ambient operation¹⁹ BAA Buy America(n) Act and/or Build America Buy America Qualified SF Single fuse (120, 277, 347V)²⁰ DF Double fuse (208, 240, 480V)²⁰ **Shipped separately** BSGR External Glare Shield (reversible, field install required, matches housing finish) BSDB Bird Spikes (field install required)	DDBXD Dark Bronze DBLXD Black DNAXD Natural Aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

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DSX1 LED
Rev. 08/28/25
Page 1 of 10

D-Series
LED Bollard

d-series

DSXB LED 16C 350 50K SYM

Catalog Number
Notes
Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Diameter:	8" Round (20.3 cm)
Height:	42" (106.7 cm)
Weight (max):	27 lbs (12.25 kg)

Introduction

The D-Series LED Bollard is a stylish, energy-saving, long-life solution designed to perform the way a bollard should—with zero uplight. An optical leap forward, this full cut-off luminaire will meet the most stringent of lighting codes. The D-Series LED Bollard's rugged construction, durable finish and long-lasting LEDs will provide years of maintenance-free service.

Ordering Information

EXAMPLE: DSXB LED 16C 700 40K SYM MVOLT DDBXD

DSXB LED

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Control options	Other options	Finish (required)
DSXB LED	Asymmetric 12C 12 LEDs² Symmetric 16C 16 LEDs²	350 350 mA 450 450 mA[1,2] 530 530 mA 700 700 mA	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted AMBLW Amber limited wavelength[3,4]	ASY Asymmetric[1] SYM Symmetric[1]	MVOLT[1,2] 120[1] 208[1] 240[1] 277[1] 347[1,4] 480[1,5,6]	**Shipped installed** PE Photoelectric cell, button type DMG 0(-10)v dimming wires pulled outside fixture (for use with an external control, ordered separately) ELCW Emergency battery backup[7]	**Shipped installed** SF Single fuse (120, 277, 347V)[4] DF Double fuse (208, 240)[4] H24 24" overall height H30 30" overall height H36 36" overall height FG Ground-fault friction-outlet LHA Without anchor bolts LHBA 4-bolt retrofit base without anchor bolts[8]	DWHXD White DNAXD Natural aluminum DDBXD Dark bronze DBLXD Black DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

Accessories
Ordered and shipped separately.
MA48 U Anchor bolts for DSXB[9]

NOTES
1. Only available in the 12C, A07 version.
2. Only available in the 16C, SYM version.
3. Not available with 450 AMBLW version.
4. Not available with ELCW.
5. MVOLT driver operates on any voltage from 120-277V (50/60 Hz). HVOLT driver is 347V or 480V. Single fuse (SF) options only when ordering with fusing (DF, DF options), or photocontrol (PE option).
6. Not available with 347V. Not available with fusing. Not available with 450 AMBLW.
7. Single fuse (SF) requires 120, 277, or 347 voltage option. Double fuse (DF) requires 208 or 240 voltage option.
8. MA48 U not available with LHA48 option.

LITHONIA LIGHTING.

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WDGE1 LED
Architectural Wall Sconce

DSX

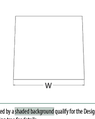
WDGE1 LED P1 30K 80CRI VW

Catalog Number
Notes
Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1):	5.5"
Depth (D2):	1.5"
Height:	8"
Width:	9"
Weight: (without options)	9 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details

WDGE LED Family Overview

Luminaire	Optics	Standard Eff., 0°C	Cold Eff., 20°C	Sensor	Approximate Lumens (4000K, 80CRI) P0	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	49W		--	750	1,200	2,000	--	--	--	--
WDGE2 LED	Visual Comfort	109W	189W	Standalone / nLight	--	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	Precision Refractive	109W	189W	Standalone / nLight	700	1,200	2,000	3,200	4,200	--	--
WDGE3 LED	Precision Refractive	159W	189W	Standalone / nLight	6,000	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	Precision Refractive			Standalone / nLight	--	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE1 LED	P0 P1 P2	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K[1] 5000K	80CRI 90CRI	VF Visual comfort forward throw VW Visual comfort wide	MVOLT 347[2]	**Shipped included** SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[3] **Shipped separately** AWS 3.0inch Architectural wall spacer[4] PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.[4]

Options	Finish
E4WH Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)[5]	DDBXD Dark bronze
PE Photocell, Button Type[6]	DBLXD Black
DS Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)[7]	DNAXD Natural aluminum
DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)	DWHXD White
BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points.	DSSTD Sandstone
DSLE Dual Switching (1 Driver, 2 Light Engines)	
CCE Coastal Construction[8]	

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COMMERCIAL OUTDOOR

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WDGE1 LED
Rev. 04/02/25

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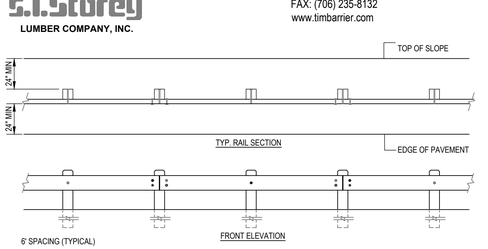
285 SIKE STOREY RD NW, P.O. BOX 99
ARMUCHEE, GA 30105-0099
TOLL FREE: 1-888-934-1605
PHONE: (706) 234-1605
FAX: (706) 235-8132
www.timbarrier.com

S.I. Storey
LUMBER COMPANY, INC.



POST CONNECTION
NOT TO SCALE

TYP. GUARDRAIL CROSS SECTION
1:10 SLOPE OR FLATTER
NOT TO SCALE

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. IF TOP OF SLOPE IS CLOSER THAN 24" INCREASE POST LENGTH TO 7'.
4. DRIVE POSTS OR AUGER, BACKFILL WITH NATIVE SOIL AND COMPACT EVERY 12".
5. ALL TIMBER #1 S4S SOUTHERN PINE, PRESSURE TREATED. AWPA-C14, WOOD FOR USE IN HWY. CONSTR.
6. TYP. POST: 8" X 8" X 6' - TYP. RAIL: 4" X 12" X 11' 11 1/2"
7. FASTENERS: ASTM A307; A242; F436 TYPE 3; A563 DH3.
8. TIMBARRIER™ SPLICE PLATE & PLATE WASHER ASTM-A588.
9. UNDER EACH BOLT HEAD ON FACE OF RAIL INSTALL ONE 7/8" WASHER.
10. REFER TO DRAWINGS 651-003b OR 651-003c FOR TERMINAL DETAILS
11. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 651-003.

TIMBARRIER™
STREETGUARD™ ROADWAY AND STREET APPLICATIONS (25 MPH MAX.)

651-003

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DESIGN DEVELOPMENT

PASSERO
engineering architecture

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100
ROCHESTER, NY 14614
(585) 325-1000
FAX: (585) 325-1691

PROJECT MANAGER: EDMUND MARTIN, P.E.
PROJECT ENGINEER: ANDREW BURNS, P.E.
DESIGNER: JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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DETAILS

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.:
20255046.0001

DRAWING NO.:
C-205

DATE:
APRIL 2026

Floor Plan Set

4/10/2026 11:07:10 AM

C1 FIRST FLOOR PLAN - OVERALL BY DEPARTMENTS
1/8" = 1'-0"

DEPARTMENT LEGEND

- 01 - ORTHOPEDICS
- 10 – REGISTRATION & WAITING
- 11 - SHARED SUPPORT
- 12 - STAFF SUPPORT
- 13 - BUILDING SUPPORT
- 14 – PUBLIC CIRCULATION
- 15 – STAFF CIRCULATION

0' 2' 4' 8' 16'

HOLT ARCHITECTS
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REVISION SCHEDULE

NAME	DATE

PARK GROVE REALTY

ACH HEALTH CAMPUS
147 NORTH ST, AUBURN, NEW YORK

DATE:	APRIL 10, 2026
PROJECT:	24089
OTHER:	
DRAWN BY:	Author

FIRST FLOOR PLAN - OVERALL

A110.

4/10/2026 11:07:54 AM

C1 SECOND FLOOR PLAN - OVERALL BY DEPARTMENTS
1/8" = 1'-0"

DEPARTMENT LEGEND

- 02 - ENDOCRINOLOGY
- 03 - NEUROSCIENCE
- 04 – OUTPATIENT LABORATORY
- 05 – IMAGING
- 10 – REGISTRATION & WAITING
- 11 - SHARED SUPPORT
- 12 - STAFF SUPPORT
- 13 - BUILDING SUPPORT
- 14 – PUBLIC CIRCULATION
- 15 – STAFF CIRCULATION

0' 4' 8' 16'

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FS-01	

PARK GROVE REALTY
ACH HEALTH CAMPUS
147 NORTH ST, AUBURN, NEW YORK

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SECOND FLOOR PLAN - OVERALL

A120.

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C1 THIRD FLOOR PLAN - OVERALL BY DEPARTMENTS
1/8" = 1'-0"

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REVISION SCHEDULE

NAME	DATE
FS-01	

PARK GROVE REALTY

ACH HEALTH CAMPUS
147 NORTH ST, AUBURN, NEW YORK

DATE:	APRIL 10, 2026
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DRAWN BY:	Author

THIRD FLOOR PLAN - OVERALL

A130.

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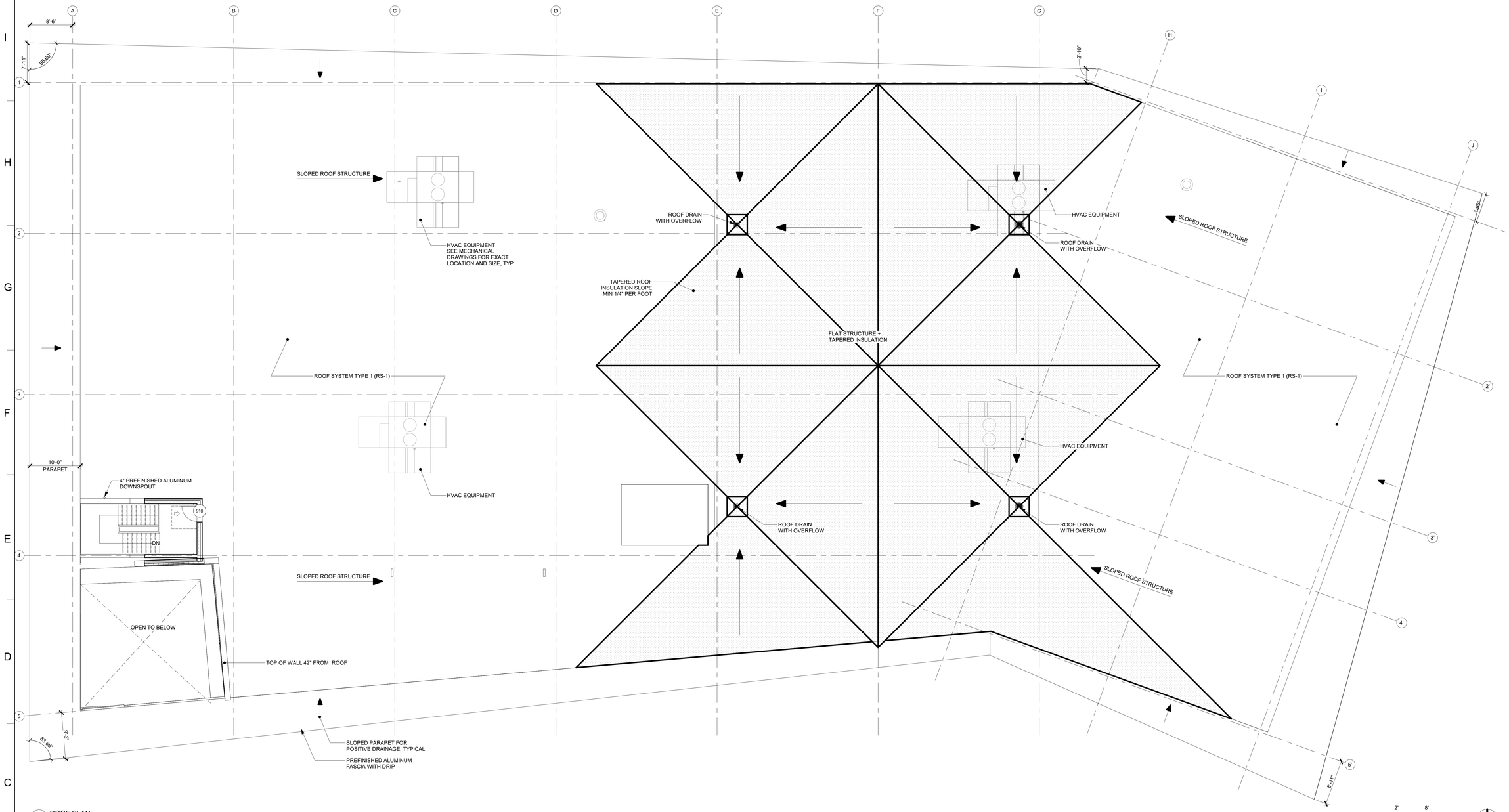
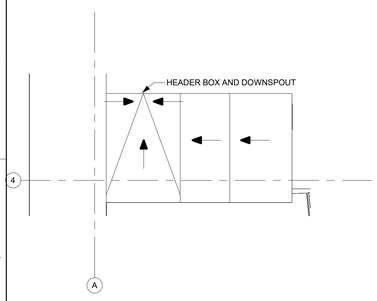


C1 ROOF PLAN
1/8" = 1'-0"



A1 STAIR 1 PENTHOUSE ROOF PLAN
1/8" = 1'-0"

KEYED ROOF NOTES

00

ROOF LEGEND

V ROOF VENT	SNOW GUARDS
ROOF DRAIN	ROOF HATCH
EF EXHAUST FAN	
RTU ROOF TOP UNIT	
RCU ROOF CONDENSING UNIT	
ACCU AIR COOLED CONDENSING UNIT	
DSCU DUCTLESS SPLIT CONDENSING UNIT	
+ x" DEPTH OF ROOF INSULATION	
ROOF WALKWAY PAD	

GENERAL ROOF NOTES

1. CONTRACTOR TO PROVIDE CRICKETS AROUND ALL NEW ROOF CURBS AND NEW EQUIPMENT TAPERED AT A MINIMUM OF 1/4" PER FOOT TO ASSURE THE POSITIVE FLOW OF WATER. THIS NOTE APPLIES TO NEW ROOF CURBS AND NEW EQUIPMENT CONSTRUCTED ON BOTH NEW AND EXISTING ROOFS. CRICKET ROOF SYSTEM TO MATCH THE CONSTRUCTION OF THE ADJACENT ROOF.

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REVISION SCHEDULE

NAME	DATE

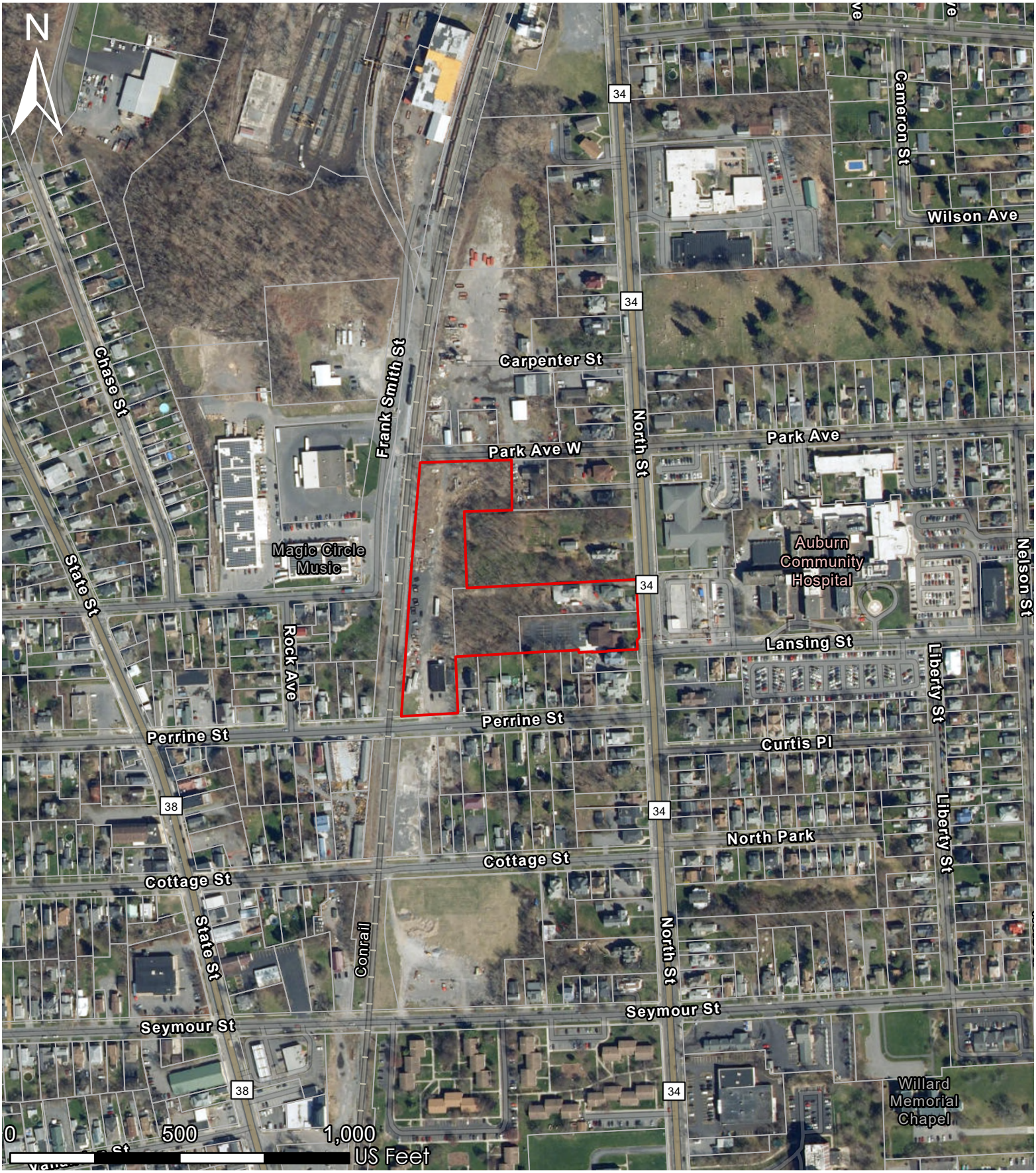
PARK GROVE REALTY
ACH HEALTH CAMPUS
147 NORTH ST, AUBURN, NEW YORK

DATE:	APRIL 10, 2026
PROJECT:	24089
OTHER:	
DRAWN BY:	BRB

ROOF PLAN

A190

Exhibit B



Legend

- Project Location
- Parcels

Location Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: Cayuga County GIS

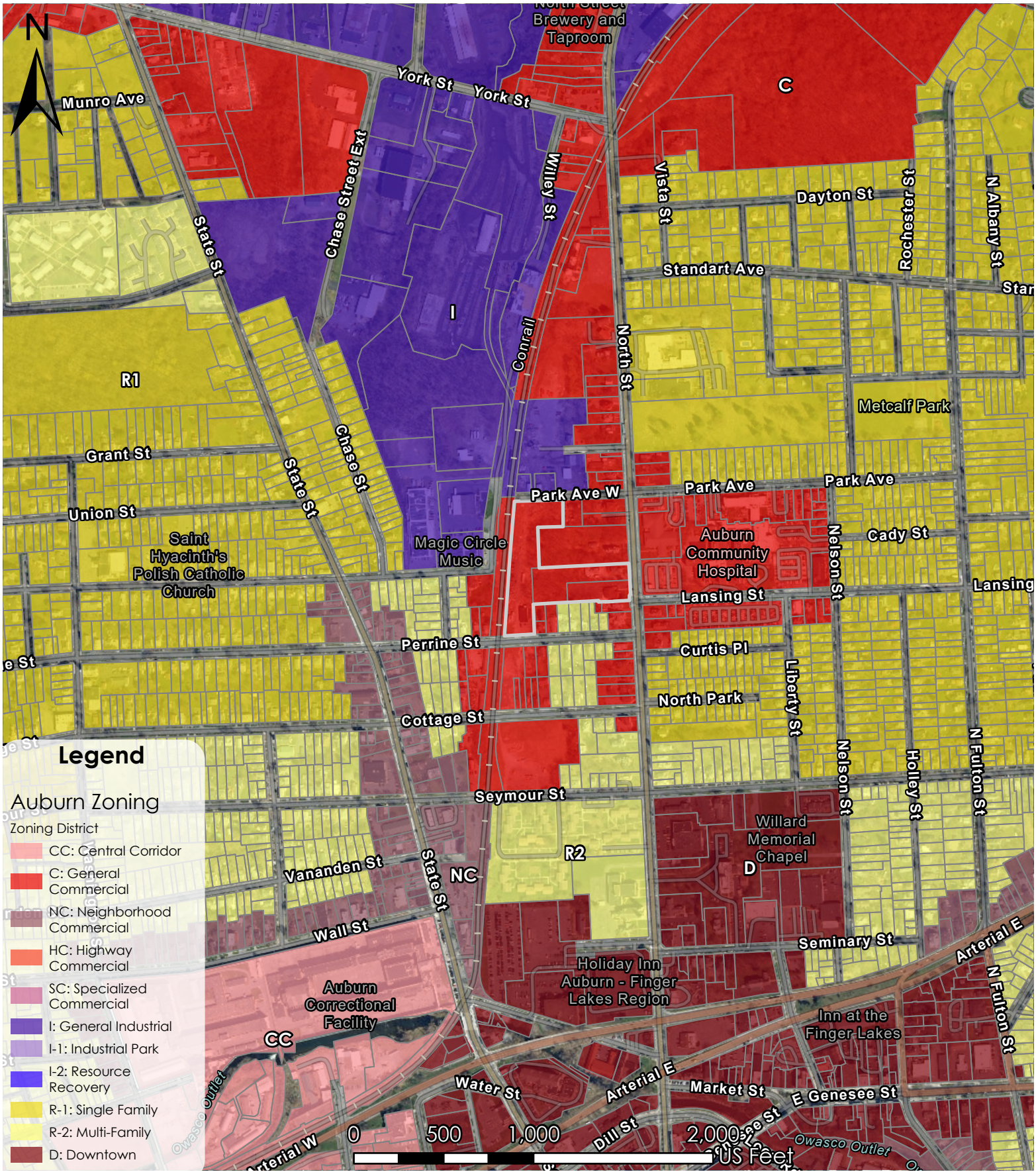
PASSERO
architecture engineering

Service Credits:

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Vantor

Date: 3/9/2026

Exhibit C



Legend

Project Location

Parcels

Zoning Map

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CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: City of Auburn

PASSERO architecture engineering

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Date: 3/9/2026

Exhibit D

Legend

- Project Location
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

USFWS National Wetlands Inventory

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: U.S. Fish and Wildlife Service

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Service Credits:

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Microsoft, Vantor

Date: 3/6/2026

Legend

- Project Location
- Previously Mapped Freshwater Wetlands
- 100ft Buffer
- Informational Freshwater Wetland Mapping

NYSDEC Wetlands

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: NYSDEC

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Service Credits:

New York State Department of Environmental Conservation, NYSDEC, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Microsoft, Vantor

Date: 3/6/2026

Exhibit E

SWPPP REPORT

April 10, 2026

20255046.0001

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

AUBURN, NY

PREPARED FOR:
Park Grove Realty, LLC
46 Prince Street
Rochester, NY 14607

242 West Main Street, Suite 100 | Rochester, NY 14614 | 585.325.1000 | www.passero.com

PASSERO engineering architecture

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1.0 EXECUTIVE SUMMARY

The proposed project is located along the North Street (NYS Route 34), W. Park Avenue, and Perrine Street right of ways in the City of Auburn, NY. The project involves the subdivision of four parcels (Tax Account Numbers 115.28-1-82.1, 116.21-1-41, 116.21-1-42.1, 115-28-1-82.2) situated on approximately 5.42 acres in order to redevelop the site. The redevelopment of the site will include the demolition of the existing buildings and infrastructure on the site followed by the construction of a Medical Office Building with a ± 30,400 sq. ft. footprint and a total building area of ± 80,750 sq. ft. Site improvements will include internal access drives, parking areas, sidewalks, landscaping and utility connections to serve the proposed building.

Stormwater generally drains to western boundaries of the site via sheet flow and shallow concentrated flow where it discharges either to the adjacent property or to the Perrine Street right of way, ultimately entering into the Fifth Ward Sewer District infrastructure.

Under developed conditions runoff generally flows to the proposed bioretention area located in the northwestern corner of the site. The stormwater management area will be discharged to the West. With stormwater storage and controlled outflow, there is a net decrease in the 1-year, 10-year, and 100-year storm events. Additionally, the site uses green infrastructure practices to meet NYSDEC stormwater quality minimum requirements, which include water quality volume, runoff reduction volume, and channel protection volume. The summary table below shows the site water quantity and quality comparison between existing and proposed conditions:

Table 1: *Summary Table*

Summary Table

Water Quantity

	Existing	Proposed	Reduction (%)
1-Year Runoff (cfs)	10.59	6.940	34.47%
10-Year Runoff (cfs)	27.93	25.64	8.20%
100-Year Runoff (cfs)	60.540	50.41	16.73%

Water Quality

	Required	Provided
Water Quality Volume (WQv) (acre-ft)	0.091	0.091
Minimum Allowable Runoff Reduction Volume (RRv) (acre-ft)	0.011	0.091
Channel Protection Volume (CPv) (acre-ft)	0.319	0.408
Qp (cfs)	13.880	12.630
Qf (cfs)	30.130	23.780

2.0 INTRODUCTION

The proposed project is located along the North Street (NYS Route 34), W. Park Avenue, and Perrine Street right of ways in the City of Auburn, NY. The project involves the subdivision of three parcels (Tax Account Numbers 115.28-1-82.1, 116.21-1-41, 116.21-1-42.1, 115-28-1-82.2) situated on approximately 5.42 acres in order to redevelop the site. The redevelopment of the site will include the demolition of the existing buildings and infrastructure on the site followed by the construction of a Medical Office Building with a ± 30,400 sq. ft. footprint and a total building area of ± 80,750 sq. ft. Site improvements will include internal access drives, parking areas, sidewalks, landscaping and utility connections to serve the proposed building.

Public sewer, water, gas, electric and telecommunications/cable will be newly connected along North Street (NYS Route 34) and Perrine Street.

The provided Stormwater Pollution Prevention Plan (SWPPP) materials adhere to the State Pollutant Discharge Elimination System (SPDES) General Permit (GP-0-25-01) for Stormwater Discharges from Construction Activity. The guidelines specified by the *New York State Stormwater Management Design Manual, July 2024* (SWDM) were used to analyze the proposed stormwater management facilities for this project. Erosion and Sediment controls were designed in conformance with New York Standards and Specifications for Erosion and Sediment Controls. A copy of the SWPPP preparer certification form is included in Appendix N.

A copy of this SWPPP and associated inspection logs will be kept on site in the proposed office space and job trailer/SWPPP mailbox.

Owner/Operator
Park Grove Realty, LLC
46 Prince Street
Rochester, NY 14607
Contact: Andrew Bodewes

SWPPP Preparer
Passero Associates
242 West Main Street. Suite 100
Rochester, NY 14614
(585) 325-1000
Contact: Andrew Burns, P.E.

3.0 EXISTING SITE CONDITIONS

3.1 Topography/ Drainage

The parcel has varied land cover, which ranges from existing impervious, to woods. The land also varies in slope throughout the site, with slopes between 1% to 10%.

Stormwater generally drains to the West via sheet flow and shallow concentrated flow where it discharges either to the adjacent property owned by the Finger Lakes Railway Corporation or to the Perrine Street right of way, ultimately entering into the Fifth Ward Sewer District infrastructure.

There are two drainage areas on site that drain to two separate analysis points see below for descriptions of the existing drainage area:

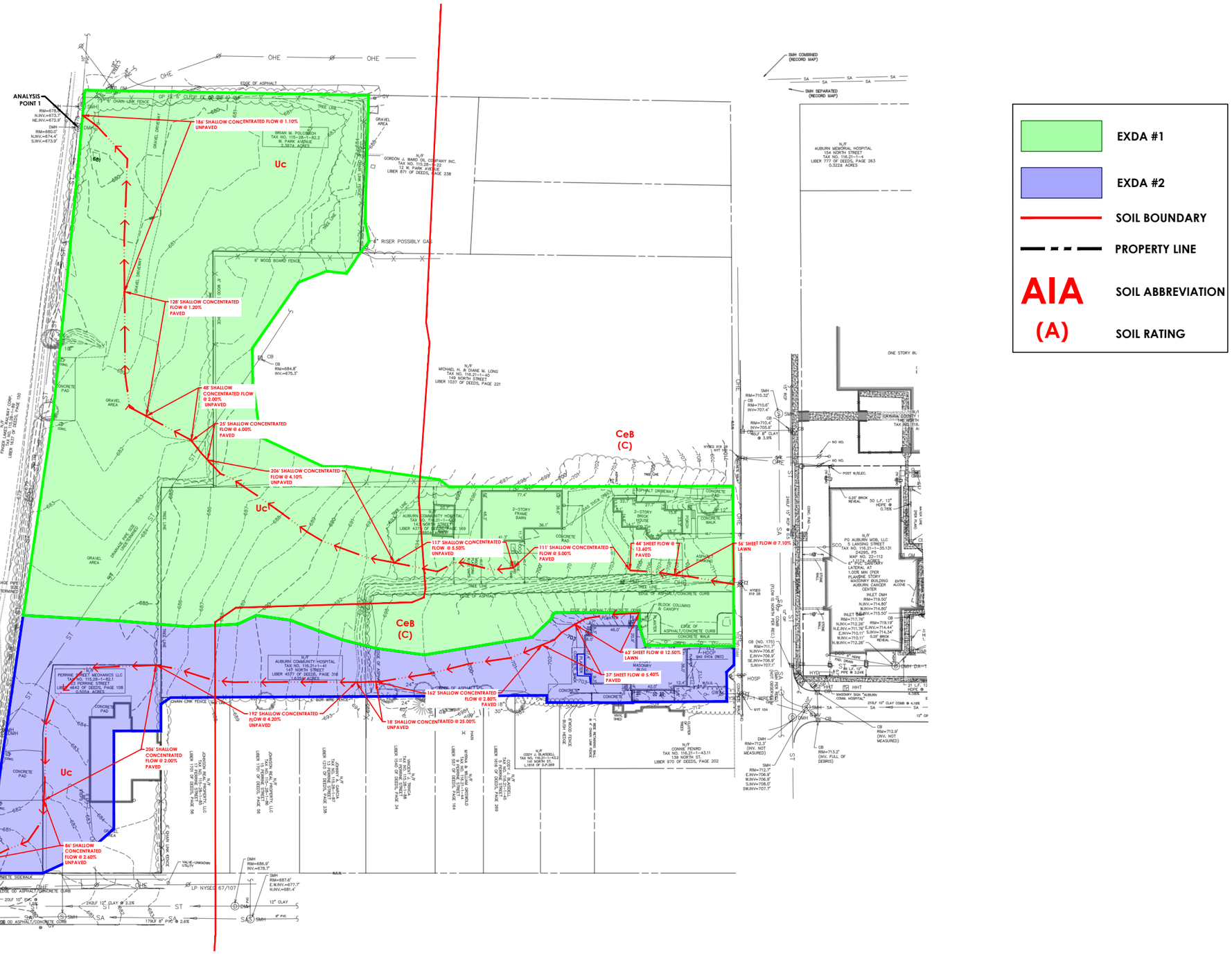
Existing Drainage Area 1:

This area encompasses the northern portion of the site, encompassing existing buildings and pavement areas, woods and gravel areas. In total the area is 4.20 acres. Stormwater generally sheet and shallow concentrated flows from East to West flowing to existing infrastructure in the adjacent property owned by the Finger Lakes Railway Corporation to analysis point 1 which ultimately terminates at the Fifth Ward Sewer District Infrastructure.

Existing Drainage Area 2:

This area encompasses the southern portion of the site, encompassing existing buildings and pavement areas, woods and gravel areas. In total the area is 1.43 acres. Stormwater generally sheet and shallow concentrated flows from East to West towards the Perrine Street right of way into existing infrastructure to analysis point 2, ultimately terminating at the Fifth Ward Sewer District Infrastructure.

The provided existing drainage map graphically shows this drainage area, as well as the other hydraulic characteristics:



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AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

EXISTING DRAINAGE MAP

20255046.0001

APRIL, 2026

CITY OF AUBURN, NY

3.2 Wetlands/Tributary

The site was reviewed for the existence of federal and state regulated wetlands within the property boundaries. Federal wetlands were researched using the National Wetlands Inventory (NWI) using an online U.S. Fish and Wildlife website search. State regulated wetlands were researched using the NYSDEC's online Environmental Resource Mapper website. Refer to Appendix D and E for the federal and state regulated wetlands mapping. In addition to online mapping, a wetland delineation report was conducted.

Online wetland mapping is shown in appendix D and E.

3.3 Floodplain

Floodplains were researched using the online Firmette tools found at FEMA Map Service Center. Review of the mapping indicates the subject parcels are not located with a flood hazard area. The parcels are located within Flood Zone X, defined as areas determined to be outside the 0.2% annual chance floodplain per FEMA Map 36011C0305E dated August 2, 2007.

Appendix G provides the FEMA Firmette maps showing the location of the floodplains.

3.4 NYSDEC Environmental Resources

The NYSDEC has an Environmental Resource Mapper on its website. The Environmental Resource Mapper is an interactive mapping application that can be used to identify some of New York State's natural resources and environmental features that are state protected, or of conservation concern. It displays the following:

- Animals and plants that are rare in New York, including those listed as Endangered or Threatened (generalized locations). [Updated May 2008]
- Significant natural communities, such as rare or high-quality forests, wetlands, and other habitat types.
- New York's streams, rivers, lakes, and ponds; water quality classifications are also displayed

According to this database, there are no potential for rare and endangered animals in the vicinity of the project. The environmental mapper is shown on Appendix D.

3.5 State Historic Preservation Office Review

The site was reviewed for the presence of an archeological sensitive area within the property boundary. The archeo-sensitive areas were located using online GIS tools found at the NYS Historic Preservation Office (SHPO).

It was determined that site is not within archeological-sensitive area but is adjacent to properties either listed or eligible for the National or State Register of Historic Places. The archeological sensitive areas map is included in Appendix H.

4.0 DEVELOPED SITE CONDITIONS

The site will be segmented into three proposed drainage areas. See below for a description of these drainage areas:

4.1 Proposed Drainage Area 1:

This area encompasses the majority of the proposed building, parking area and sidewalks. In total the area is 4.05 acres Stormwater will sheet flow to proposed stormwater infrastructure located on site which ultimately discharge to the proposed bioretention area. Here stormwater first discharges to the proposed forebay where sediment is allowed to settle out. It then overflows a rip rap spillway into the bioretention area where stormwater will filter through filter media and enter underdrain and enter into the outlet control structure. From the outlet control structure stormwater is conveyed to existing infrastructure on the adjacent property owned by the Finger Lakes Railway Corporation to analysis point 1 which ultimately terminates at the Fifth Ward Sewer District Infrastructure.

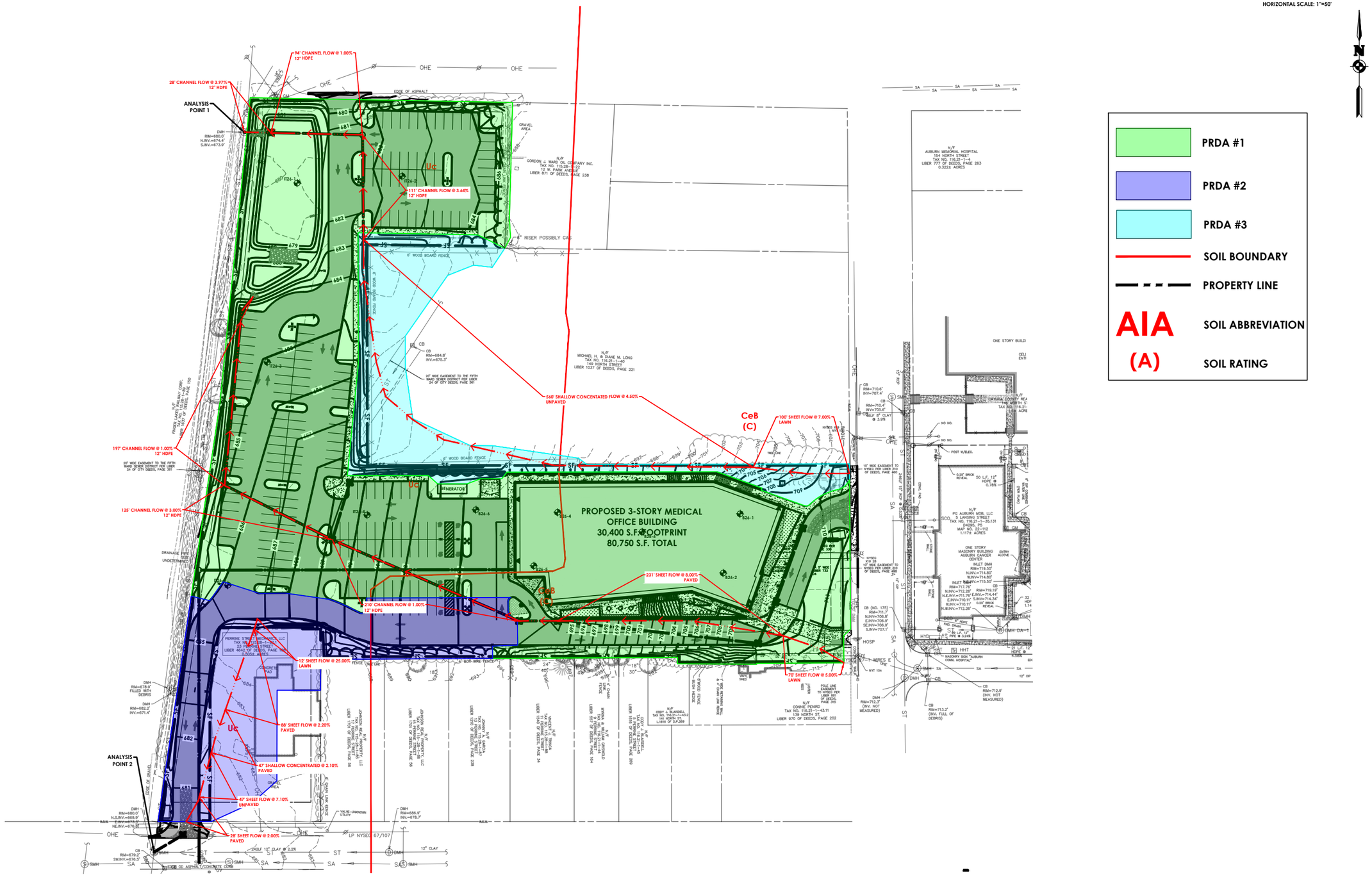
4.2 Proposed Drainage Area 2:

This area encompasses a portion of the proposed access road. In total the area is 0.92 acres. Stormwater will sheet flow to proposed stormwater infrastructure located in the Perrine Street right of way into existing infrastructure to analysis point 2, ultimately terminating at the Fifth Ward Sewer District Infrastructure.

4.3 Proposed Drainage Area 3:

This area encompasses offsite areas that under existing conditions flow onto our site. In total the area is 0.66 acres. Stormwater sheet flows to proposed stormwater infrastructure that will divert this water to conveyed to existing infrastructure on the adjacent property owned by the Finger Lakes Railway Corporation to analysis point 1 which ultimately terminates at the Fifth Ward Sewer District Infrastructure.

The proposed drainage map provided graphically shows this drainage area, as well as the other hydraulic characteristics:



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AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

PROPOSED DRAINAGE MAP

20255046.0001

APRIL, 2026

CITY OF AUBURN, NY

5.0 STORMWATER QUALITY

Stormwater quality requirements will be achieved using green infrastructure practices as well as standard stormwater practices. Chapter 5 of the NYSDEC Stormwater Management Design Manual was used to design the green infrastructure for this project. The design manual outlines which practices are best suited for specific scenarios, and how to properly size these practices. Water Quality Volume (WQv) and Runoff Reduction Volume (RRv) requirements are met using green infrastructure practices as well as other standard stormwater management practices.

This project will use filtration - bioretention to meet all NYSDEC requirements for stormwater quality.

5.1 Infrastructure Practice Type Example: Filtration - Bioretention:

The bioretention areas shown on the plans will treat runoff from a portion of the proposed roads, roofs, and parking areas. Water will discharge to a forebay where settlement is allowed time to settle out. The forebay will discharge via a rip rap lined overflow to the bioretention area where Water will filter through the soil media to underdrains, which connect to outlet control structures. A rip-rap lined overflow weir will be utilized to ensure excessive ponding does not occur in the filtration-bioretention area during extreme storm events which will allow stormwater to overflow the basin.

Table 2: *Stormwater Quality Comparison*

Water Quality		
Description:	**Required**	**Provided**
WQv Total (acre-ft)	0.091	0.091
Min RRv Total (acre-ft)	0.011	0.091
CPv Total (acre-ft)	0.319	0.408
Qp Total (cfs)	13.880	12.630
Qf Total (cfs)	30.130	23.780

See the Appendix I for all green infrastructure calculations, and see the green infrastructure map below which details the catchment areas that go to each GI practice:

6.0 STORMWATER QUANTITY & CLIMATE CHANGE

The proposed development will increase impervious area on site, which increases the rate of stormwater runoff from the site. This runoff must be reduced to a rate that is less than the offsite flow rate during existing conditions. Reduction for this project is achieved through a new stormwater management area that will be used to release stormwater runoff at a controlled rate via an outlet control structure.

See the comparison table below for the sites analysis points under existing and proposed conditions:

Table 3: *Stormwater Quantity Comparison*

Runoff Comparison Table				
Analysis Point:	**Condition:**	**Runoff (cfs)**		
		1 year	**10 year**	**100 year**
Analysis Point 1	EXISTING	3.00	9.05	20.88
	PROPOSED	2.01	9.04	19.64
	PERCENT REDUCTION	**33.00%**	**0.11%**	**5.94%**
Analysis Point 2	EXISTING	2.35	5.00	9.53
	PROPOSED	2.13	3.97	6.99
	PERCENT REDUCTION	**9.36%**	**20.60%**	**26.65%**
Total Site	EXISTING	5.24	13.88	30.13
	PROPOSED	2.8	12.63	23.78
	PERCENT REDUCTION	**46.56%**	**9.01%**	**21.08%**

As shown above, the proposed design meets the requirements of stormwater management by releasing the water at a reduced rate that does not lead to erosion or high levels or pollution. Refer to Appendix K for the HydroCAD analysis and the breakdown of each hydrograph.

6.1 Considerations for Climate Change

In accordance with Part III.A.2 of the General Permit, considerations must be made in SWPPP design to account for ongoing climate change across NYS. This SWPPP considered the following physical risks pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490.

- Increasing temperatures and increasing precipitation
- Increasing variability in precipitation, including chance of drought
- Increasing frequency and severity of flooding and rising sea levels
- Increasing storm surge and shifting ecologies.

The following methods to consider and implement resiliency to combat climate change in NYS are below:

- *Accurate Rainfall Data* – This SWPPP utilizes the most up-to-date rainfall data provided by the "Extreme Precipitation in New York & New England" tool managed by Cornell University. This data is important for proper stormwater design of infrastructure to meet modern climate conditions.

7.0 CONSTRUCTION EROSION CONTROL PRACTICES & INSPECTIONS

The Owner is responsible for having monthly inspections of the storm water management facility completed. The inspections shall review and document the following at a minimum: visual inspection of the outlet structure, check of the outlets for excessive sediment accumulation, burrowing, vegetation degradation, or any other issues of concern. A certified copy of the annual summary of inspections report will be provided to the City of Auburn by the first of December. The owner is also responsible for having SWPPP inspections once per week once disturbance of the site starts. Copies of the SWPPP inspection reports will be sent to the City, owner, and contractor and deficiencies should be addressed immediately.

Several erosion control practices will be utilized during construction by the contractor under direct supervision by the owner and a qualified SWPPP inspector (S.W.T.). These practices are explained below and shown in detail in the appendix of this report and the construction plans:

- Silt Fence → Silt fencing shall be installed at the toe of all slopes along the perimeter of the disturbed areas and at the toe of slope for any soil stock pile areas. Also, a row of silt fence will be installed around the perimeter of all wetlands in an effort to delineate its boundary. The fencing will be installed in accordance with the NYSDEC construction standards and at the instruction of this plan. The silt fencing shall be buried in the ground at least 6 inches. The contractor shall provide continued monitoring to ensure the silt fencing remains intact, and shall repair as needed. When the silt accumulates to greater than 1/3 the height of the fence the contractor shall remove and dispose of the silt.

- Stabilized Construction Entrance → The existing project entrance shall serve as the construction entrance to the project. The contractor shall ensure that mud is not tracked onto the adjacent roadways and that the stone entrance properly removes mud and debris from construction vehicles.

- Drop Inlet Protection → All field inlets and catch basins shall have inlet protection in accordance with the detail the Appendix. Drop Inlet protection can be removed from catch basins in the roadway when the sub base is installed, and from the field inlets when the adjacent area is brought to final grade and stabilized.

- Seeding and Stabilization → The contractor shall seed and stabilize all disturbed areas not to be worked for 7 days. Stabilization measures may include but are not limited to straw mulching, wood chip mulching, jute mesh and hydroseeding. The SMA and adjacent areas shall be stabilized immediately following their shaping and installation. All embankments greater than 3:1 shall be stabilized with jute mesh. The timeline requirements for stabilization are below:

    - If not in a listed impaired watershed AND site is NOT under a 5-acre wavier, 14 days.
    - If inside an impaired watershed OR utilizing a 5-acre wavier, 7 days.
    - During the winter months, including sites under winter shutdown, 3 days.

- Check Dam → 24 inch high stone check dams will be installed in all temporary and permanent diversion swales. The check dams will be installed every 2 vertical feet. Once the site is stabilized, these check dams will be removed.

- Truck Washdown area → a truck washdown area will be provided adjacent to the construction entrance. This area will be constructed such that it drains to a sediment basin immediately adjacent prior to discharging offsite.

- Winter Shutdown → The contractor may request to enter winter shutdown provided the contractor has fulfilled the requirements set forth in the NYSDEC Blue Book Standard and Specifications for Winter Stabilization contained in Appendix Q of this report. The certified SWPPP inspector will then perform an inspection and upon agreement with the contractor's practice, shall complete the "Notice to reduce Frequency of SPDES Site Inspections" Form contained in Appendix Q of this report. The form will then be submitted to the regulatory MS4 (or NYSDEC regional office should there be no MS4 for the project area) for review. After the regulatory MS4 or NYSDEC regional office has approved the request, the site will enter winter shutdown and SPDES site inspections may drop to monthly. Should the certified SWPPP inspector find any problems during winter shutdown, the contractor is liable to correct the issues on site in the same timely manner as an active project

Additional measures may be required during construction at the guidance of the owner or certified SWPPP Inspector. The contractor shall begin to make all adjustments to the erosion control within 24 hours of receipt of any deficiencies. The owner will be responsible for providing weekly reports when the site disturbance totals less than 5 acres. Inspections are to be completed by a qualified inspector in accordance with the GP-0-25-001, during construction to the City of Auburn.

If the developer of site plans to increase the disturbance greater than 5 acres at any given time, a 5 acre waiver must be submitted to the NYSDEC and approval granted prior to reaching this limit. The developer must adhere to the conditions set forth in the SPDES General Permit GP-0-25-001 Part II.D.3, located as Appendix K of this report. The conditions of Part II.D.3 are outlined below:

1. The owner or operator shall have a qualified inspector conduct at least two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

2. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within three (3) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated July 2024.

3. In areas where soil disturbance and compaction due to construction activities has taken place and the final product is to be pervious soils, lawns, or soils underlying a pervious man-made surface (i.e. pervious pavement, etc) the contractor is required to restore the soil per table 5.2 of the NYSDEC Stormwater Design Manual (see below).

Table 5.2 Soil Restoration Requirements

Type of Soil Disturbance	Soil Restoration Requirement		Comments/Examples
No soil disturbance	Restoration not permitted		Preservation of Natural Features
Minimal soil disturbance	Restoration not required		Clearing and grubbing
Areas where topsoil is stripped only - no change in grade	HSG A &B	HSG C&D	Protect area from any ongoing construction activities.
	apply 6 inches of topsoil	Aerate* and apply 6 inches of topsoil	
Areas of cut or fill	HSG A &B	HSG C & D	
	Aerate and apply 6 inches of topsoil	Apply full Soil Restoration **	
Heavy traffic areas on site (especially in a zone 5-25 ft around buildings but not within a 5 ft perimeter around foundation walls)	Apply full Soil Restoration** de-compaction and compost enhancement)		
Areas where Runoff Reduction and/or Infiltration practices are applied	Restoration not required but may be applied to enhance the reduction specified for appropriate practices.		Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single-phase operation fence area
Redevelopment projects	Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area as well as existing pervious areas.		

*Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.

** Refer to latest version of NYSDEC Deep-Ripping and Decompaction.

4. The owner or operator shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

5. The owner or operator shall install any additional site-specific practices needed to protect water quality.

Any modifications to the SWPPP will be reported and approved by the City in writing prior to implementation. See Appendix A for additional SWPPP information. The owner is responsible for having a qualified operator on site at all times who has at least 4 hours of erosion control training in accordance with the GP-0-25-001. Once the site has achieved 80% stabilization and ground cover, the City may sign off on the Notice of Termination prior to submission to the NYSDEC. Removal of all temporary erosion and sediment control practices is required prior to demobilization.

8.0 POST CONSTRUCTION

The owner of the subject project will be responsible for all post construction practices. The contact information for the owner is illustrated on the cover of this plan as well as the design plans for the project. The post construction practices include performing annual inspections of the SMAs to ensure proper working conditions and ensure continual stabilized cover of all project areas to 80% cover, minimum. All applicable inspection and maintenance activities shall continue until the 80% cover is met. Any silt removal will be disposed either off site or on site and immediately stabilized in accordance with the practices of this plan.

Additionally, annual monitoring of the storm sewer structures will be provided by the owner to ensure that they are functioning properly. All documentation related to this SWPPP and post construction monitoring reports, shall be kept by the owner for five years after project completion. These inspections will be certified by a Professional Engineer and a copy of the inspection report will be furnished to the City.

Additionally, annual monitoring of the storm sewer structures will be:

POST-CONSTRUCTION STORMWATER MANAGEMENT MAINTENANCE LIST

Practice	Requirement	Frequency
Project Area (entirety)	Contact and engage NYS Licensed Professional Engineer (PE) for Annual stormwater inspection per requirement of maintenance agreement with Dutchess County.	Annually.
Project area grass areas	Inspect for patchy/un-stabilized grass areas. Reseed as necessary	Monthly or as indicated by annual inspection report.
Project area pavement areas	Inspect for contaminants, trash and broken/damaged pavement. Soak up, remove and repair as necessary.	Weekly or as indicated by annual inspection report.
Storm structures	Clean/remove trash/blockages.	As found or as indicated by annual inspection report.
Filtration bio-retention	Inspect for bare soil, blocked inlets, sediment accumulation, and vegetation level. Remove sediment and reseed as necessary.	Annually or as indicated by annual inspection report.

All documentation related to this SWPPP and post construction monitoring reports shall be kept by the owner for five years after project completion. These inspections will be certified by a Professional Engineer and a copy of the inspection report will be furnished to the City.

9.0 SUMMARY

The proposed project requires stormwater management practices which conform to NYSDEC regulations. The proposed standard stormwater management practices will also result in a net decrease in peak runoff from the site while meeting the NYSDEC requirements for Runoff Reduction, Water Quality and Channel Protection. Continued monitoring of the practices included in this plan will be provided by the owner and a designated SWPPP Inspector.

The following appendices of this report illustrate the additional requirements and specifications for stormwater pollution prevention. All practices included in this report and incorporated in the proposed project have been designed in compliance with the NYS Storm Water Design Manual and NYS Standards and Specifications for Erosion and Sediment Control.

APPENDICES

APPENDIX A: SWPPP PRACTICES PROCEDURES AND CERTIFICATIONS

STORMWATER POLLUTION PREVENTION PLAN

SITE DESCRIPTION			
Project Name and Location: (Latitude, Longitude, or Address)	Auburn Community Hospital Health Campus 23 Perrine Street, 147 North Street, 143 North Street W Park Avenue Auburn, NY 13021	Owner Name and Address:	Park Grove Realty, LLC 46 Prince Street Rochester, NY 14607
Description: (Purpose and Types of Soil Disturbing Activities)	Demolition of the existing buildings and infrastructure on the site followed by the construction of a Medical Office Building with a ± 30,400 sq. ft. footprint and a total building area of ± 80,750 sq. ft. Site improvements will include internal access drives, parking areas, sidewalks, landscaping and utility connections to serve the proposed building.		
Runoff Coefficient/Soils Conditions:	The runoff coefficient impervious area is 0.9 and 0.2 for the grass areas. The soils on-site consist of Cazenovia silt loam with hydrologic soil class "C" and Urban land-Cazenovia complex.		
Site Area:	5.41 acres		

Sequence of Major Activities

The order of activities will be as follows:

1. **Install silt fences, stabilized construction entrance and other erosion control measures.**
2. **Protect vegetation to remain.**
3. **Construct temporary sediment basins including grading, and stabilization.**
4. **Demolish existing buildings and pavement areas.**
5. **Strip and stockpile topsoil as necessary.**
6. **Conduct mass earth moving activities.**
7. **Install utilities including storm sewers.**
8. **Box parking lot and access drives.**
9. **Install parking and access drive subbase and continue monitoring of erosion control.**
10. **Stabilize disturbed areas and stockpiles within 7 days of last construction activity in all areas.**
11. **Construct filtration bioretenion area.**
12. **Final grading, seeding, and mulching of all disturbed areas.**
13. **When all work areas are complete and the entire areas are stabilized, remove the erosion control measures.**

Name of Receiving Waters:	Fifth Ward Sewer District

CONTROLS

Erosion and Sediment Controls

Stabilization Practices

Temporary Stabilization - Topsoil will be replaced onsite or removed from the site. Disturbed portions of the site where construction activity temporarily ceases for at least 7 days will be stabilized with temporary seed and mulch no later than 7 days from the last construction activity in that area. The temporary seed shall be Rye (grain) applied at the rate of 120 pounds per acre. Prior to seeding, 2,000 pounds per acre of ground agricultural limestone and 1,000 pounds per acre of 10-10-10 fertilizer shall be applied. If applicable, areas of the site which are to be paved will be temporarily stabilized by applying geotextile and stone sub-base until bituminous pavement can be applied.

Permanent Stabilization - Disturbed portions of the site where construction activities permanently cease shall be stabilized with permanent seed no later than 7 days after the last construction activity. The permanent seed mix shall be as indicated on the plans and specifications.

Stormwater Management

The proposed Infiltration basin will provide stormwater quality and siltation control post construction. The areas which are not graded as part of this project will remain untouched. When construction has been completed all surfaces will be restored and erosion control measures removed after all turf areas are established. After construction has been completed the siltation basins will be cleaned of all construction debris, then filled and stabilized.

Post Construction Stormwater Management/Maintenance Procedures

Once the stormwater management areas are permanently stabilized and operating properly, an annual inspection is required. This shall consist of:

- A visual inspection of the outlet structure and removal of any debris that may affect its performance.
- A visual inspection of the earthen berm. Signs of erosion or areas lacking vegetation should be identified and corrected.
- Provide a report summarizing the above to the Town in a format acceptable to their office.
- See attached GP-01-25-001 for additional inspection requirements
- Stormwater management areas shall be maintained a minimum of 3 times per growing season.

OTHER CONTROLS

Waste Disposal:

Waste Material - All waste material will be collected and stored in a metal dumpster rented from a NYSDEC approved hauler, which is a licensed solid waste management company. The dumpster will meet all local and state solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied a minimum of once per week or more often if necessary, and the trash will be hauled to a NYSDEC approved dump. No construction waste material will be buried on site. All personnel will be instructed regarding the correct procedures for waste disposal. Notices stating these practices will be posted in the office trailer and the individual who manages the day-to-day operations will be responsible for seeing that these procedures are followed.

Hazardous Waste – All hazardous waste materials will be disposed of in a manner specified by local and state regulations or by the manufacturer. Site personnel will be instructed in these practices and the individual who manages the day-to-day operations will be responsible for seeing that these practices are followed.

Sanitary Waste – If portable units are used, all sanitary waste will be collected from the portable units a minimum of three times per week by a licensed sanitary waste management contractor, as required by local regulation.

Offsite Vehicle Tracking:

The paved streets adjacent to the site will be swept daily to remove any excess mud, dirt, or rock tracked from the site. Dump trucks hauling material from the construction site will be covered with a tarpaulin.

TIMING OF CONTROLS/MEASURES

As indicated in the Sequence of Major Activities, the erosion and sedimentation control measures, including silt fence, will be constructed prior to clearing or grading of any other portions of the site. Areas where construction activity temporarily ceases for more than 7 days will be stabilized with a temporary seed and mulch within 7 days of the last disturbance. Once construction activity ceases permanently in an area, that area will be stabilized with permanent seed and mulch.

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

The stormwater collection and discharge complies with the NYSDEC requirements of the New York State Stormwater Management Design Manual.

MAINTENANCE/INSPECTION PROCEDURES

Erosion and Sediment Control Inspection and Maintenance Practices

These are the inspection and maintenance practices that will be used to maintain erosion and sediment controls:

- All control measures will be inspected at least once each week if there is 5 acres or less of disturbance. Twice a week if more than 5 acres is disturbed.
- All measures will be maintained in good working order; if a repair is necessary; it will be initiated within 24 hours or report.
- Built-up sediment will be removed from silt fence when it has reached one-third the height of the fence.
- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and health of growth.
- A maintenance inspection report will be made after each inspection. A copy of the report form to be completed by the inspector is attached.
- The site superintendent will select individuals who will be responsible for inspections, maintenance and repair activities, and filling out the inspection and maintenance report.
- Personnel selected for inspection and maintenance responsibilities will receive training from the site superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used on-site in good working order.

Non-Stormwater Discharges

No non-stormwater discharges will occur from the site during the period, except the following:
It is expected that the following non-storm water discharges will occur from the site during the construction period:

- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated groundwater (from dewatering excavation).

INVENTORY FOR POLLUTION PREVENTION PLAN

The materials or substances listed below are expected to be present on-site during construction:

Select Granular Fill	Topsoil	HDPE Pipe
Precast Concrete	Mulch	Construction Signs
Concrete	Joint Sealant	Sign Panels & Sign Supports
Seed	Electric Cable	Metal Frames & Grates
Steel Conduit	Asphalt Tack Coat	SDR-35 PVC Pipe
Subbase Course	Asphalt Concrete	

SPILL PREVENTION

Material Management Practices

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

Good Housekeeping:

The following good housekeeping practices will be followed on-site during the construction project:

- An effort will be made to store only enough product required to do the job.
- All materials stored on-site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposing of the container.
- Manufacturers' recommendations for proper use and disposal will be followed.
- The site superintendent will inspect daily to ensure proper use and disposal of materials on-site.

Hazardous Products:

These practices are used to reduce the risks associated with hazardous materials:

- Products will be kept in original containers unless they are not re-sealable.
- Original labels and material safety data will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and state recommended methods of proper disposal will be followed.

SPILL PREVENTION (Continued)

Product Specific Practices

The following product specific practices will be followed on-site:

Petroleum Products:

All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Fuel oil for construction machinery will be stored in an above-ground tank with a suitable containment system. Material safety data sheets will be filed in the site superintendent's trailer. Any asphalt substances used on-site will be applied according to the manufacturer's recommendations.

Fertilizers:

Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to stormwater. The contents of any partially used bags of fertilizer will be transferred to resealable plastic bags to avoid spills.

Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system, but will be properly disposed of according to manufacturers' instructions or state and local regulations.

Concrete Trucks:

Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on site.

Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area on-site. Equipment and materials will include but not be limited to brooms, dust pans, mops, rags, gloves, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with hazardous substance.
- Reportable spills of any petroleum-based material will be reported to the appropriate state or local government agency.
- The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
- The site superintendent responsible for the day-to-day operations will be the spill prevention and cleanup coordinator. He will designate at least three other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the office trailer on-site.

POLLUTION PREVENTION PLAN CERTIFICATION

I certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP for the construction site identified in such SWPPP as a condition of authorization to discharge stormwater. I also understand that the operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards.

Signed:_____
Owner

Date:_____

CONTRACTOR'S CERTIFICATION

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

Signature	For	Responsible for
Trained Contractor _____ Date:_____		
_____ Date:_____		
_____ Date:_____		
_____ Date:_____		
_____ Date:_____		

Signature	For	Responsible for
_____ Date:_____		
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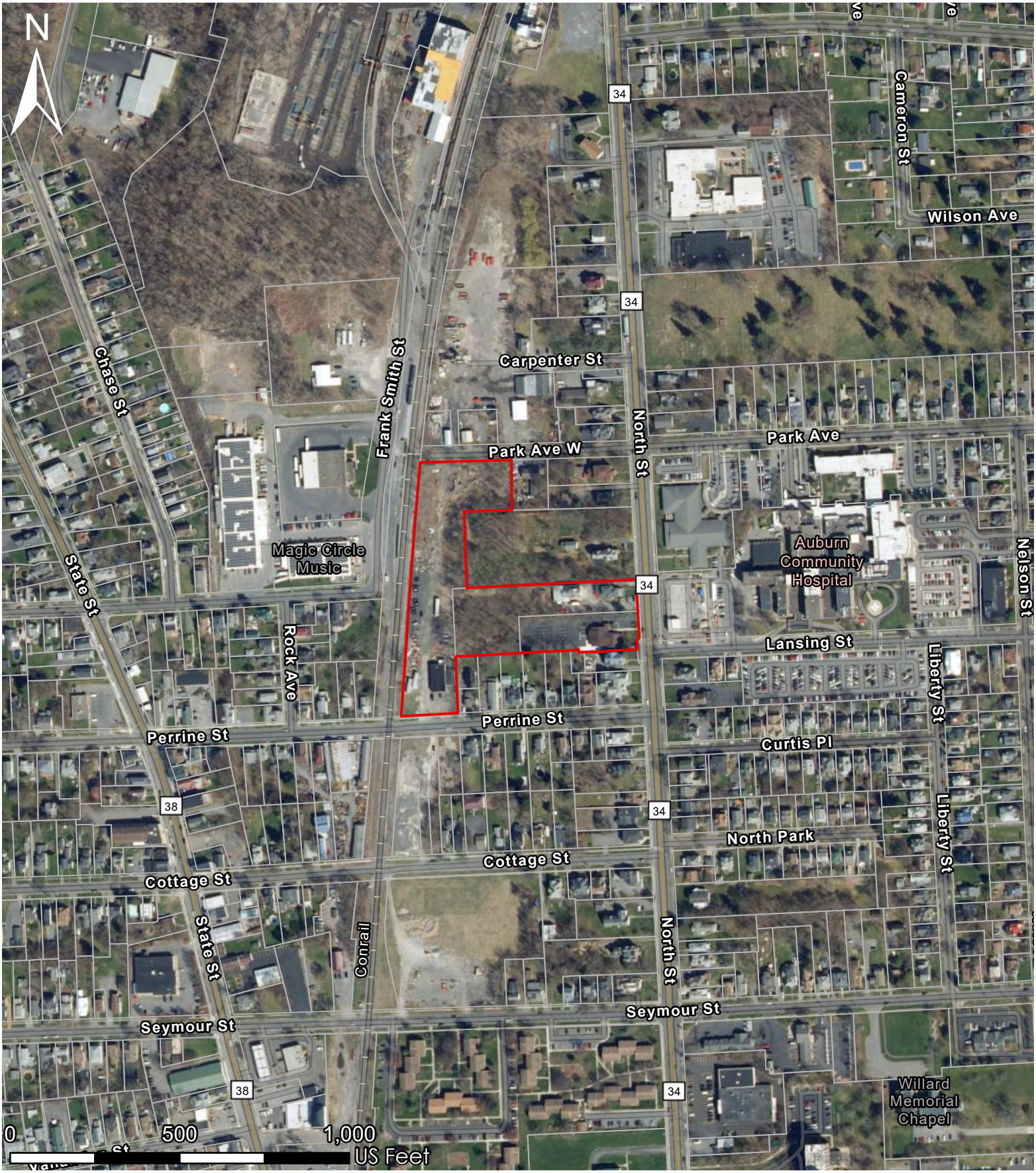
APPENDIX B: AERIAL PHOTOGRAPH



Legend

- Project Location
- Parcels

Location Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: Cayuga County GIS

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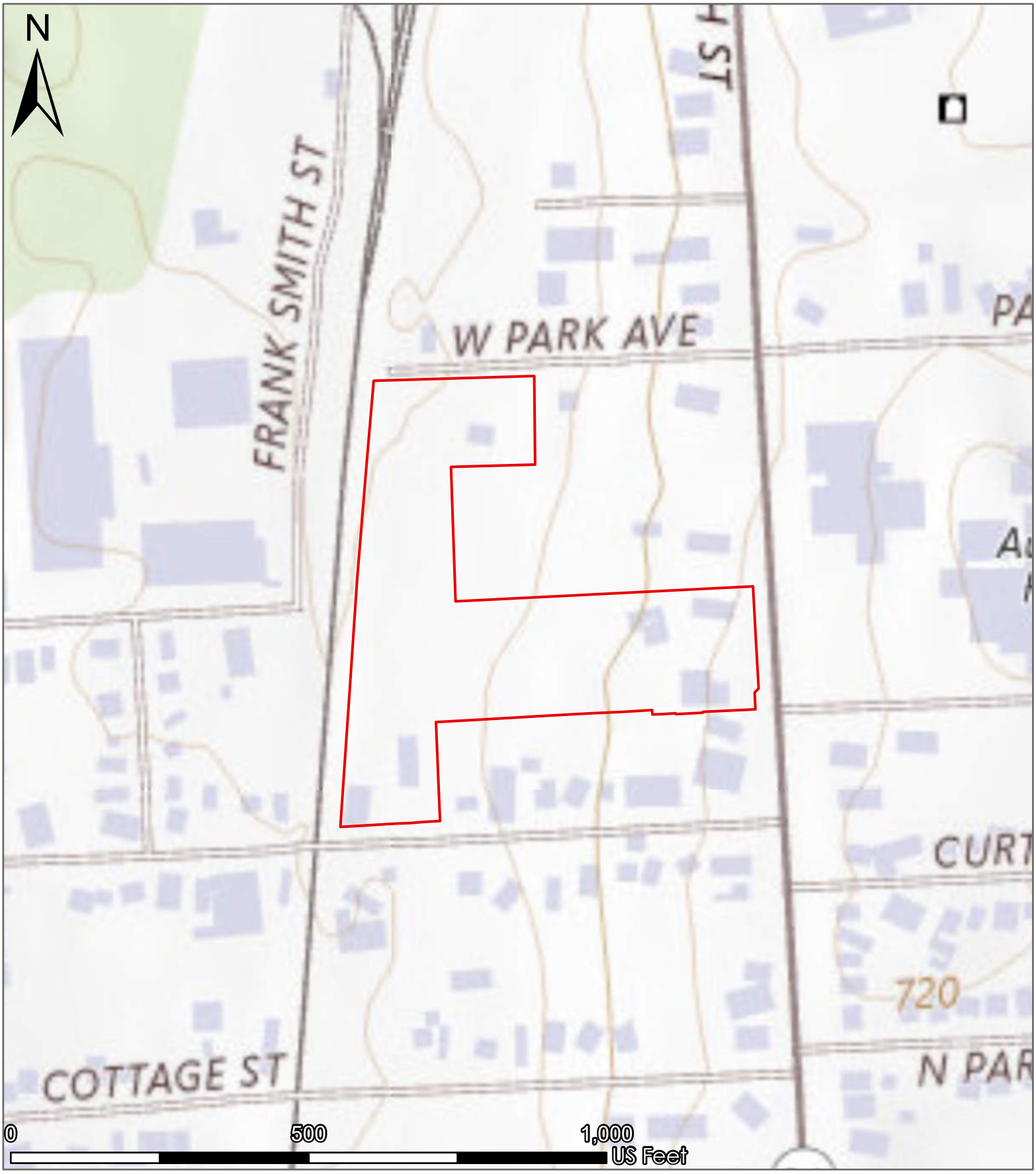
architecture engineering

Service Credits:

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Vantor

Date: 4/10/2026

APPENDIX C: USGS QUADRANGLE MAP



Legend

Project Location

USGS Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: United States Geological Survey

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Service Credits:

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information. Data refreshed October 27, 2025.

Date: 4/10/2026

APPENDIX D: ENVIRONMENTAL RESOURCE MAPPER

Legend

- Streams & Rivers
- Project Location
- Informational Freshwater Wetland Mapping
- 100ft Buffer
- Previously Mapped Freshwater Wetlands
- NYS Natural Heritage Communities
- Rare Plants & Animals

Environmental Resource Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: Environmental Resource Mapper

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Service Credits:

New York State Department of Environmental Conservation, NYSDEC, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Microsoft, Vantor

Date: 4/10/2026

APPENDIX E: WETLAND MAPPING

Legend

- Project Location
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

USFWS National Wetlands Inventory

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: U.S. Fish and Wildlife Service

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Service Credits:

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Vantor

Date: 4/10/2026

APPENDIX F: SOILS MAP

Legend

- Project Location

Soils

Hydrologic Group Rating

- C
- N/A

Soil Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: NRCS Web Soil Survey

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Service Credits:

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Microsoft, Vantor

Date: 3/9/2026

APPENDIX G: FEMA MAPPING

Legend

- Project Location
- 0.2% Annual Chance Flood Hazard
- 1% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Area with Reduced Risk Due to Levee
- Special Floodway

FEMA Flood Areas Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: FEMA FIRMette 36011C0305E

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Service Credits:

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Microsoft, Vantor

Date: 4/10/2026

APPENDIX H: ARCHEOLOGICAL SENSITIVE AREAS MAP

Legend

- Project Location
- National Register Building Listings

Historic Building Districts

- Eligible
- Listed

Historic Building Points

- Eligible
- Listed

Archeological Sensitive Areas

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: Cultural Resource Information System

PASSERO architecture engineering

Service Credits:

Division for Historic Preservation, New York State Office of Parks, Recreation and Historic Preservation, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Microsoft, Vantor

Date: 4/10/2026

APPENDIX I: HYDROCAD CALCULATIONS

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point	
Smoothing	Yes
State	New York
Location	New York, United States
Latitude	42.941 degrees North
Longitude	76.569 degrees West
Elevation	200 feet
Date/Time	Tue Mar 24 2026 16:24:15 GMT-0400 (Eastern Daylight Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.27	0.41	0.52	0.68	0.84	1.04	**1yr**	0.73	0.93	1.17	1.40	1.66	1.95	2.19	**1yr**	1.72	2.11	2.52	3.04	3.50	**1yr**
2yr	0.32	0.49	0.61	0.81	1.01	1.25	**2yr**	0.88	1.13	1.41	1.67	1.96	2.28	2.55	**2yr**	2.02	2.46	2.88	3.44	3.96	**2yr**
5yr	0.38	0.59	0.74	0.99	1.27	1.56	**5yr**	1.09	1.40	1.77	2.09	2.44	2.80	3.15	**5yr**	2.48	3.03	3.53	4.13	4.74	**5yr**
10yr	0.43	0.67	0.85	1.16	1.50	1.86	**10yr**	1.30	1.64	2.11	2.49	2.87	3.28	3.69	**10yr**	2.90	3.55	4.12	4.74	5.43	**10yr**
25yr	0.51	0.81	1.03	1.42	1.89	2.35	**25yr**	1.63	2.03	2.65	3.11	3.57	4.03	4.55	**25yr**	3.56	4.38	5.05	5.69	6.50	**25yr**
50yr	0.57	0.92	1.18	1.66	2.24	2.80	**50yr**	1.94	2.40	3.17	3.70	4.22	4.71	5.34	**50yr**	4.17	5.14	5.90	6.54	7.44	**50yr**
100yr	0.66	1.07	1.38	1.96	2.67	3.34	**100yr**	2.30	2.83	3.77	4.38	4.96	5.51	6.27	**100yr**	4.88	6.03	6.88	7.52	8.53	**100yr**
200yr	0.76	1.23	1.60	2.30	3.18	3.98	**200yr**	2.74	3.34	4.50	5.20	5.85	6.44	7.36	**200yr**	5.70	7.07	8.04	8.64	9.78	**200yr**
500yr	0.91	1.50	1.96	2.85	4.00	5.03	**500yr**	3.45	4.17	5.66	6.51	7.27	7.94	9.10	**500yr**	7.02	8.75	9.87	10.38	11.73	**500yr**

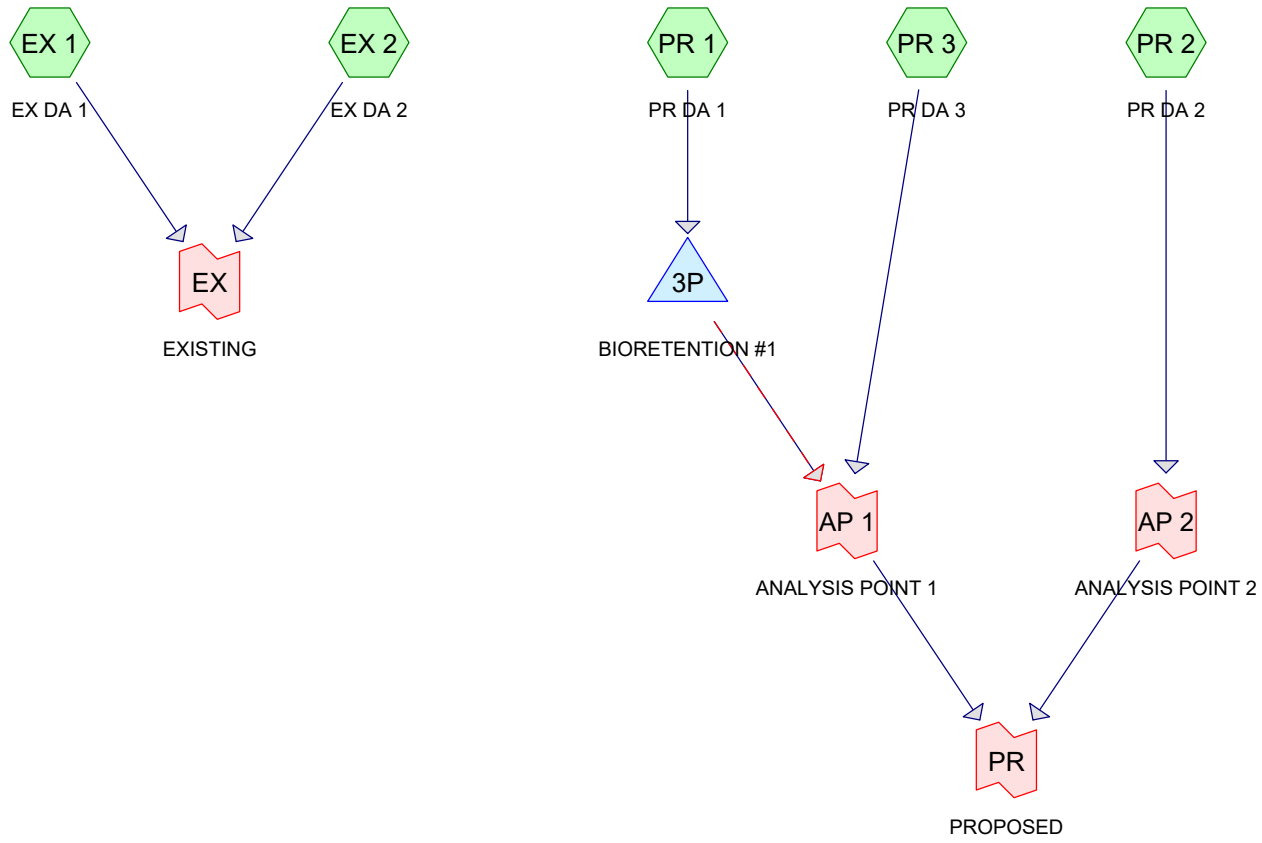
Lower Confidence Limits

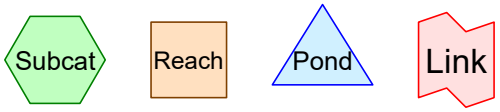
	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.35	0.43	0.58	0.71	0.78	**1yr**	0.61	0.77	0.84	1.03	1.40	1.74	2.04	**1yr**	1.54	1.96	2.35	2.89	3.28	**1yr**
2yr	0.31	0.48	0.59	0.80	0.99	1.10	**2yr**	0.86	1.08	1.23	1.51	1.84	2.22	2.51	**2yr**	1.96	2.41	2.85	3.40	3.91	**2yr**
5yr	0.35	0.54	0.67	0.93	1.18	1.33	**5yr**	1.02	1.30	1.46	1.79	2.20	2.68	2.99	**5yr**	2.37	2.87	3.39	3.93	4.57	**5yr**
10yr	0.39	0.60	0.74	1.03	1.33	1.51	**10yr**	1.15	1.47	1.65	2.01	2.48	3.04	3.41	**10yr**	2.69	3.28	3.87	4.40	5.12	**10yr**
25yr	0.44	0.67	0.83	1.19	1.57	1.79	**25yr**	1.35	1.75	1.96	2.35	2.88	3.56	4.04	**25yr**	3.15	3.89	4.60	5.13	5.93	**25yr**
50yr	0.48	0.73	0.91	1.31	1.76	2.03	**50yr**	1.52	1.99	2.23	2.64	3.21	4.03	4.62	**50yr**	3.56	4.44	5.23	5.77	6.64	**50yr**
100yr	0.53	0.80	1.01	1.45	1.99	2.32	**100yr**	1.72	2.27	2.54	2.96	3.59	4.54	5.28	**100yr**	4.02	5.07	5.97	6.45	7.42	**100yr**
200yr	0.59	0.88	1.12	1.62	2.26	2.67	**200yr**	1.95	2.61	2.89	3.32	4.01	5.11	6.02	**200yr**	4.52	5.78	6.79	7.23	8.31	**200yr**
500yr	0.71	1.05	1.36	1.97	2.80	3.22	**500yr**	2.42	3.15	3.46	3.88	4.64	5.99	7.16	**500yr**	5.30	6.89	8.09	8.38	9.64	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.30	0.46	0.56	0.75	0.93	1.04	**1yr**	0.80	1.02	1.16	1.46	1.78	2.10	2.36	**1yr**	1.86	2.27	2.67	3.19	3.70	**1yr**
2yr	0.34	0.52	0.64	0.87	1.07	1.19	**2yr**	0.92	1.17	1.32	1.64	2.01	2.34	2.61	**2yr**	2.07	2.51	2.96	3.54	4.06	**2yr**
5yr	0.41	0.63	0.78	1.06	1.35	1.54	**5yr**	1.17	1.51	1.69	2.08	2.51	2.92	3.30	**5yr**	2.59	3.18	3.66	4.34	4.92	**5yr**
10yr	0.48	0.73	0.91	1.27	1.64	1.89	**10yr**	1.42	1.85	2.05	2.53	3.05	3.47	3.94	**10yr**	3.07	3.79	4.34	5.09	5.73	**10yr**
25yr	0.60	0.91	1.13	1.62	2.13	2.48	**25yr**	1.84	2.43	2.65	3.29	3.94	4.35	4.99	**25yr**	3.85	4.80	5.46	6.29	7.00	**25yr**
50yr	0.71	1.08	1.34	1.93	2.59	3.04	**50yr**	2.24	2.97	3.22	4.01	4.78	5.19	5.97	**50yr**	4.59	5.75	6.48	7.09	8.17	**50yr**
100yr	0.84	1.27	1.60	2.31	3.16	3.72	**100yr**	2.73	3.64	3.92	4.89	5.81	6.18	7.16	**100yr**	5.47	6.89	7.68	8.27	9.53	**100yr**
200yr	1.00	1.51	1.91	2.77	3.86	4.56	**200yr**	3.33	4.46	4.76	5.98	7.07	7.36	8.57	**200yr**	6.51	8.24	9.12	9.64	11.12	**200yr**
500yr	1.28	1.91	2.45	3.57	5.07	5.97	**500yr**	4.38	5.83	6.15	7.78	9.18	9.29	10.88	**500yr**	8.22	10.46	11.44	11.79	13.64	**500yr**

Powered by ACIS Northeast Regional Climate Center





Routing Diagram for Auburn MOB
Prepared by Passero Associates, Printed 4/10/2026
HydroCAD® 10.20-4c s/n 13263 © 2024 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC	P2 (inches)
1	1-YEAR	Type II 24-hr		Default	24.00	1	1.95	2	2.28
2	10-YEAR	Type II 24-hr		Default	24.00	1	3.28	2	2.28
3	100-YEAR	Type II 24-hr		Default	24.00	1	5.51	2	2.28

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.654	74	>75% Grass cover, Good, HSG C (EX 1, EX 2, PR 1, PR 2, PR 3)
1.346	80	>75% Grass cover, Good, HSG D (EX 1, EX 2, PR 1, PR 2, PR 3)
1.890	98	Paved parking, HSG C (EX 1, EX 2, PR 1, PR 2)
3.611	98	Paved parking, HSG D (EX 1, EX 2, PR 1, PR 2)
1.467	70	Woods, Good, HSG C (EX 1, EX 2, PR 1)
1.304	77	Woods, Good, HSG D (EX 1, EX 2, PR 3)
11.272	**86**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
5.011	HSG C	EX 1, EX 2, PR 1, PR 2, PR 3
6.261	HSG D	EX 1, EX 2, PR 1, PR 2, PR 3
0.000	Other	
11.272		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	1.654	1.346	0.000	3.000	>75% Grass cover, Good	EX 1, EX 2, PR 1, PR 2, PR 3
0.000	0.000	1.890	3.611	0.000	5.501	Paved parking	EX 1, EX 2, PR 1, PR 2
0.000	0.000	1.467	1.304	0.000	2.771	Woods, Good	EX 1, EX 2, PR 1, PR 3
0.000	**0.000**	**5.011**	**6.261**	**0.000**	**11.272**	**TOTAL AREA**	

Time span=1.00-48.00 hrs, dt=0.01 hrs, 4701 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method

Subcatchment EX 1: EX DA 1 Runoff Area=4.206 ac 20.23% Impervious Runoff Depth=0.49"
Flow Length=921' Tc=10.0 min CN=79 Runoff=3.00 cfs 0.173 af

Subcatchment EX 2: EX DA 2 Runoff Area=1.430 ac 63.78% Impervious Runoff Depth=0.99"
Flow Length=764' Tc=7.9 min CN=89 Runoff=2.35 cfs 0.118 af

Subcatchment PR 1: PR DA 1 Runoff Area=4.053 ac 73.82% Impervious Runoff Depth=1.27"
Flow Length=813' Tc=6.5 min CN=93 Runoff=8.78 cfs 0.429 af

Subcatchment PR 2: PR DA 2 Runoff Area=0.919 ac 81.18% Impervious Runoff Depth=1.35"
Flow Length=222' Tc=6.0 min CN=94 Runoff=2.13 cfs 0.103 af

Subcatchment PR 3: PR DA 3 Runoff Area=0.664 ac 0.00% Impervious Runoff Depth=0.42"
Flow Length=893' Tc=11.2 min CN=77 Runoff=0.37 cfs 0.023 af

Pond 3P: BIORETENTION#1 Peak Elev=679.82' Storage=7,516 cf Inflow=8.78 cfs 0.429 af
Primary=1.78 cfs 0.429 af Secondary=0.00 cfs 0.000 af Outflow=1.78 cfs 0.429 af

Link AP 1: ANALYSIS POINT 1 Inflow=2.01 cfs 0.452 af
Primary=2.01 cfs 0.452 af

Link AP 2: ANALYSIS POINT 2 Inflow=2.13 cfs 0.103 af
Primary=2.13 cfs 0.103 af

Link EX: EXISTING Inflow=5.24 cfs 0.291 af
Primary=5.24 cfs 0.291 af

Link PR: PROPOSED Inflow=2.80 cfs 0.555 af
Primary=2.80 cfs 0.555 af

Total Runoff Area = 11.272 ac Runoff Volume = 0.846 af Average Runoff Depth = 0.90"
51.20% Pervious = 5.771 ac 48.80% Impervious = 5.501 ac

Summary for Subcatchment EX 1: EX DA 1

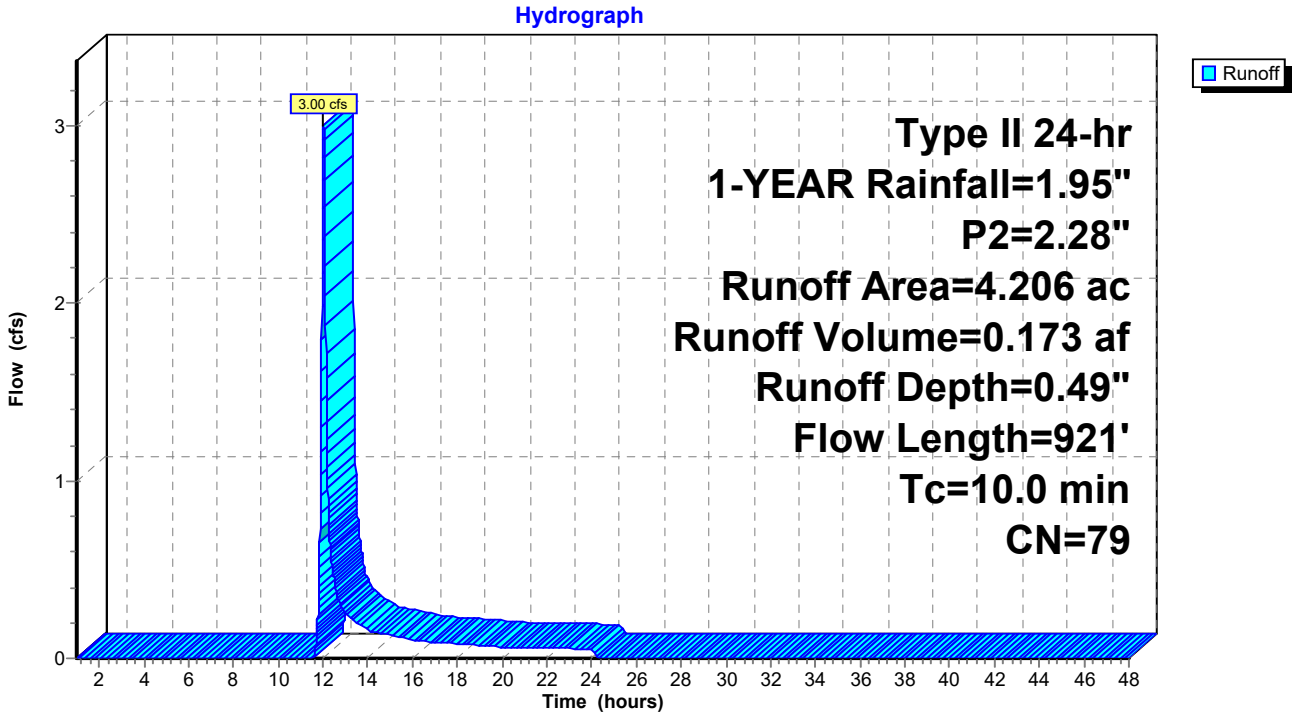
Runoff = 3.00 cfs @ 12.03 hrs, Volume= 0.173 af, Depth= 0.49"
Routed to Link EX : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-YEAR Rainfall=1.95", P2=2.28"

Area (ac)	CN	Description
1.095	74	>75% Grass cover, Good, HSG C
0.164	98	Paved parking, HSG C
1.233	70	Woods, Good, HSG C
0.238	80	>75% Grass cover, Good, HSG D
0.687	98	Paved parking, HSG D
0.789	77	Woods, Good, HSG D
4.206	79	Weighted Average
3.355		79.77% Pervious Area
0.851		20.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	56	0.0710	0.21		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.3	44	0.1360	2.12		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.4	111	0.0500	4.54		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.5	117	0.0550	3.78		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.1	206	0.0410	3.26		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
0.1	25	0.0600	4.97		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.4	48	0.0200	2.28		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.0	128	0.0120	2.22		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
1.8	186	0.0110	1.69		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
10.0	921	Total			

Subcatchment EX 1: EX DA 1



Summary for Subcatchment EX 2: EX DA 2

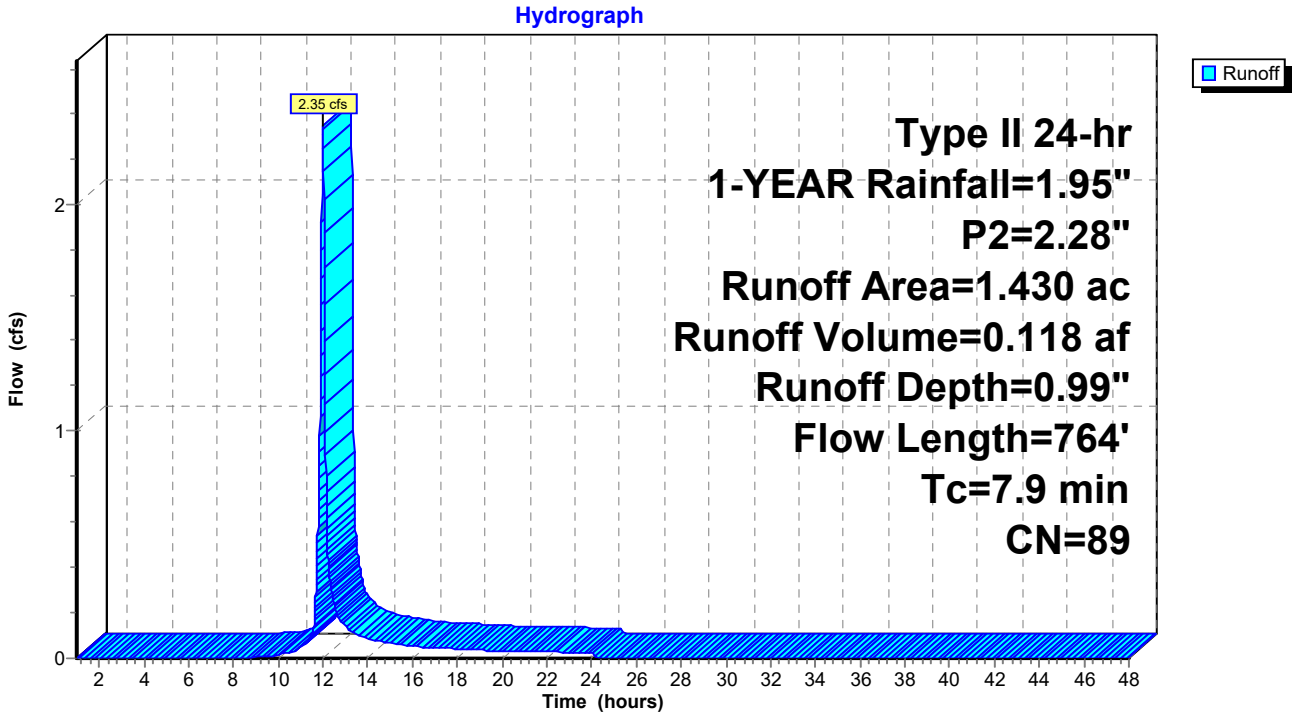
Runoff = 2.35 cfs @ 12.00 hrs, Volume= 0.118 af, Depth= 0.99"
Routed to Link EX : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-YEAR Rainfall=1.95", P2=2.28"

Area (ac)	CN	Description
0.122	74	>75% Grass cover, Good, HSG C
0.343	98	Paved parking, HSG C
0.224	70	Woods, Good, HSG C
0.079	80	>75% Grass cover, Good, HSG D
0.569	98	Paved parking, HSG D
0.093	77	Woods, Good, HSG D
1.430	89	Weighted Average
0.518		36.22% Pervious Area
0.912		63.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	63	0.1250	0.27		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.4	37	0.0540	1.42		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.8	162	0.0280	3.40		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.0	18	0.2500	8.05		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.0	192	0.0420	3.30		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.2	206	0.0200	2.87		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.6	86	0.0260	2.60		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
7.9	764	Total			

Subcatchment EX 2: EX DA 2



Summary for Subcatchment PR 1: PR DA 1

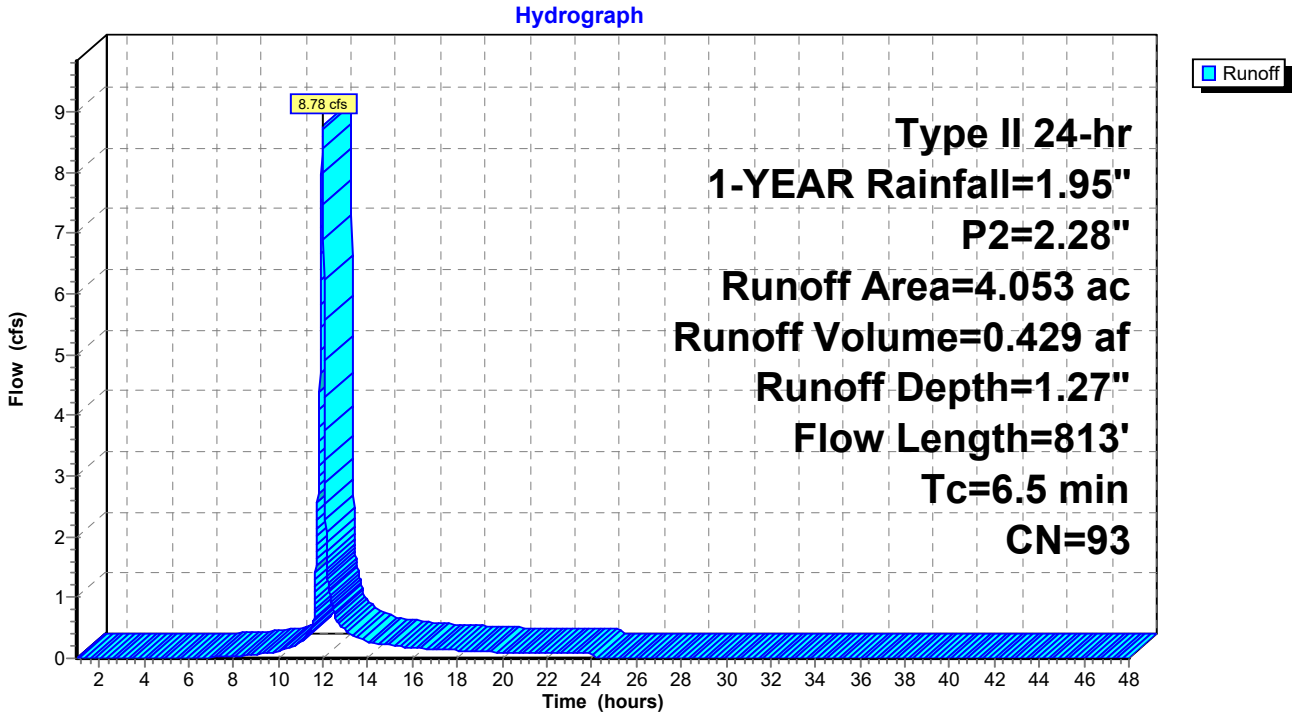
Runoff = 8.78 cfs @ 11.98 hrs, Volume= 0.429 af, Depth= 1.27"
Routed to Pond 3P : BIORETENTION #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-YEAR Rainfall=1.95", P2=2.28"

Area (ac)	CN	Description
0.774	80	>75% Grass cover, Good, HSG D
0.277	74	>75% Grass cover, Good, HSG C
1.774	98	Paved parking, HSG D
1.218	98	Paved parking, HSG C
0.010	70	Woods, Good, HSG C
4.053	93	Weighted Average
1.061		26.18% Pervious Area
2.992		73.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0600	0.19		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.6	231	0.0860	5.95		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Paved Kv= 20.3 fps
0.7	210	0.0100	4.91	3.86	**Pipe Channel, PIPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.2	125	0.0300	8.51	6.69	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.7	197	0.0100	4.91	3.86	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
6.5	813	Total			

Subcatchment PR 1: PR DA 1



Summary for Subcatchment PR 2: PR DA 2

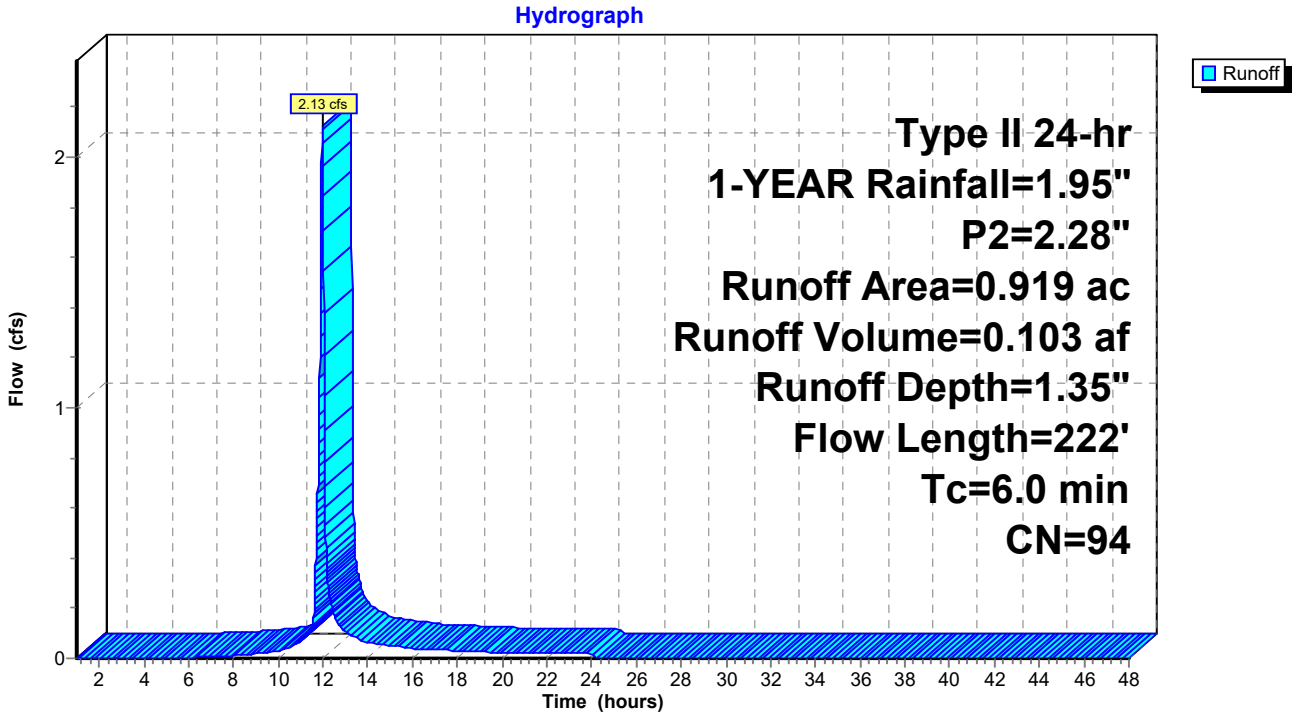
Runoff = 2.13 cfs @ 11.97 hrs, Volume= 0.103 af, Depth= 1.35"
Routed to Link AP 2 : ANALYSIS POINT 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-YEAR Rainfall=1.95", P2=2.28"

Area (ac)	CN	Description
0.132	80	>75% Grass cover, Good, HSG D
0.041	74	>75% Grass cover, Good, HSG C
0.581	98	Paved parking, HSG D
0.165	98	Paved parking, HSG C
0.919	94	Weighted Average
0.173		18.82% Pervious Area
0.746		81.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	12	0.2500	0.18		**Sheet Flow, SHEET** Grass: Dense n= 0.240 P2= 2.28"
1.2	88	0.0220	1.18		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.3	47	0.0220	3.01		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	47	0.0210	2.33		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Unpaved Kv= 16.1 fps
0.2	28	0.0200	2.87		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Paved Kv= 20.3 fps
3.1	222	Total, Increased to minimum Tc = 6.0 min			

Subcatchment PR 2: PR DA 2



Summary for Subcatchment PR 3: PR DA 3

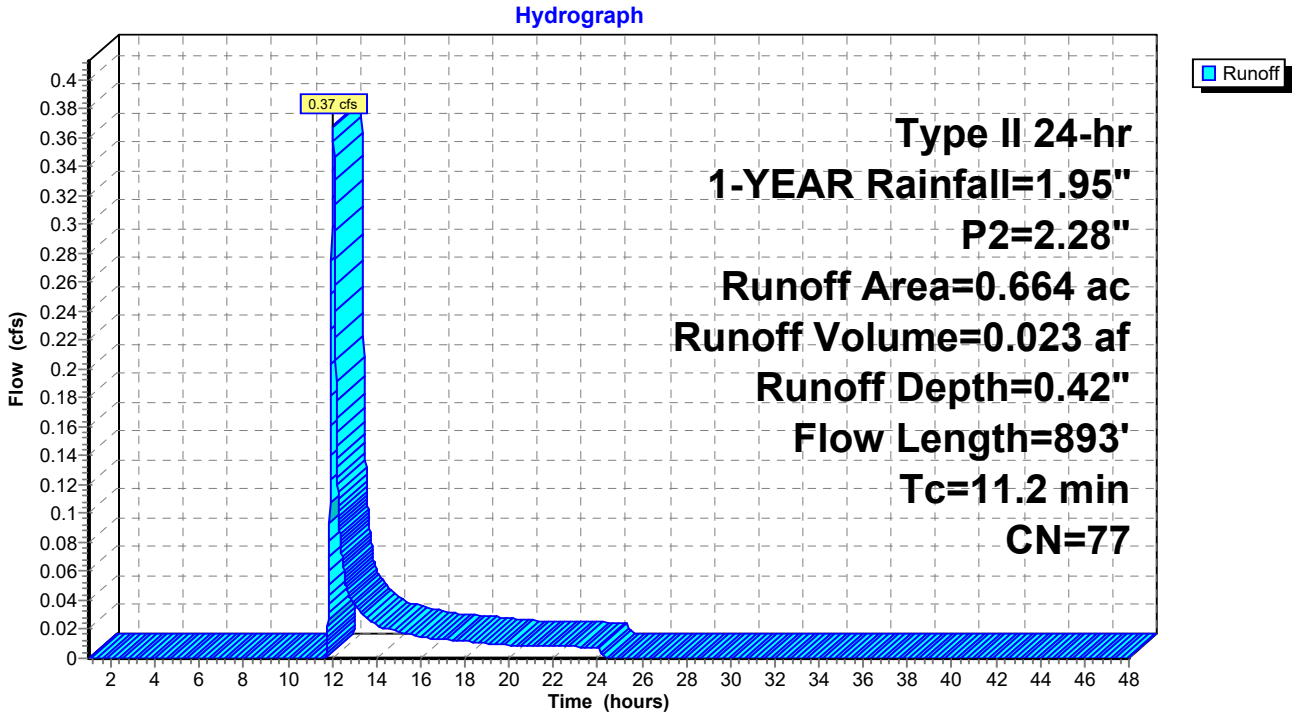
Runoff = 0.37 cfs @ 12.05 hrs, Volume= 0.023 af, Depth= 0.42"
Routed to Link AP 1 : ANALYSIS POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-YEAR Rainfall=1.95", P2=2.28"

Area (ac)	CN	Description
0.119	74	>75% Grass cover, Good, HSG C
0.123	80	>75% Grass cover, Good, HSG D
0.422	77	Woods, Good, HSG D
0.664	77	Weighted Average
0.664		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0500	0.21		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
2.7	560	0.0450	3.42		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Unpaved Kv= 16.1 fps
0.2	111	0.0364	9.38	7.36	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.3	94	0.0100	4.91	3.86	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.0	28	0.3970	30.96	24.32	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
11.2	893	Total			

Subcatchment PR 3: PR DA 3



Summary for Pond 3P: BIORETENTION #1

Inflow Area = 4.053 ac, 73.82% Impervious, Inflow Depth = 1.27" for 1-YEAR event
Inflow = 8.78 cfs @ 11.98 hrs, Volume= 0.429 af
Outflow = 1.78 cfs @ 12.15 hrs, Volume= 0.429 af, Atten= 80%, Lag= 10.6 min
Primary = 1.78 cfs @ 12.15 hrs, Volume= 0.429 af
Routed to Link AP 1 : ANALYSIS POINT 1
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Routed to Link AP 1 : ANALYSIS POINT 1

Routing by Sim-Route method, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 679.82' @ 12.15 hrs Surf.Area= 9,418 sf Storage= 7,516 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 130.8 min (939.3 - 808.4)

Volume	Invert	Avail.Storage	Storage Description
#1	679.00'	22,813 cf	**Bioretention (Irregular)**Listed below (Recalc)
#2	678.00'	3,226 cf	**Forebay (Irregular)**Listed below (Recalc)
		26,039 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
679.00	7,575	365.0	0	0	7,575
680.00	8,721	385.0	8,141	8,141	8,826
681.00	9,906	404.0	9,307	17,448	10,083
681.50	11,573	429.0	5,364	22,813	11,753

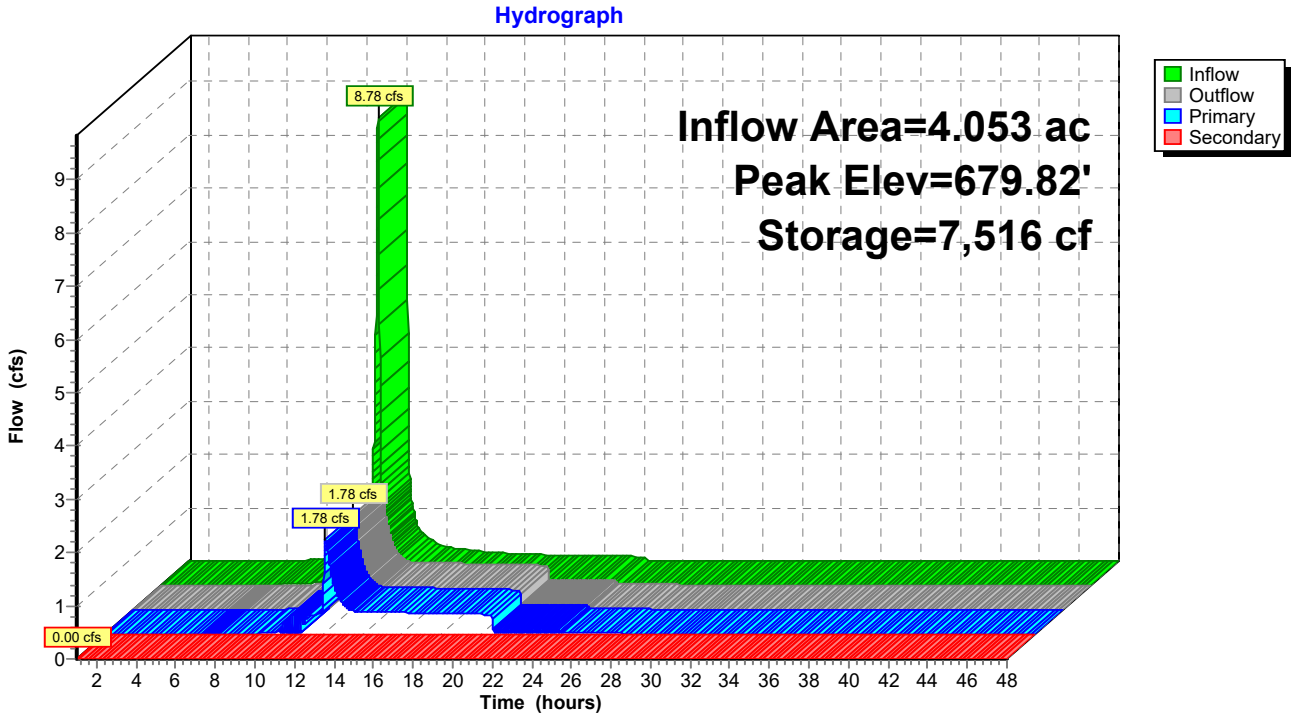
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
678.00	218	62.0	0	0	218
679.00	514	105.0	356	356	796
680.00	1,012	139.0	749	1,105	1,467
681.00	1,457	157.0	1,228	2,332	1,916
681.50	2,139	183.0	894	3,226	2,625

Device	Routing	Invert	Outlet Devices
#1	Device 3	678.00'	**2.000 in/hr Exfiltration over Surface area**
#2	Secondary	680.50'	**5.0' long + 3.0 '/' SideZ x 16.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Primary	675.50'	**12.0" Round Culvert** L= 28.0' Ke= 0.500 Inlet / Outlet Invert= 675.50' / 674.40' S= 0.0393 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#4	Device 3	679.70'	**30.0" x 30.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.78 cfs @ 12.15 hrs HW=679.82' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Passes 1.78 cfs of 7.39 cfs potential flow)
  └─**1=Exfiltration** (Exfiltration Controls 0.44 cfs)
  └─**4=Orifice/Grate** (Weir Controls 1.35 cfs @ 1.13 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=678.00' TW=0.00' (Dynamic Tailwater)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3P: BIORETENTION #1



Stage-Discharge for Pond 3P: BIORETENTION #1

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
678.00	0.00	0.00	0.00
678.05	0.01	0.01	0.00
678.10	0.01	0.01	0.00
678.15	0.01	0.01	0.00
678.20	0.01	0.01	0.00
678.25	0.01	0.01	0.00
678.30	0.01	0.01	0.00
678.35	0.01	0.01	0.00
678.40	0.01	0.01	0.00
678.45	0.02	0.02	0.00
678.50	0.02	0.02	0.00
678.55	0.02	0.02	0.00
678.60	0.02	0.02	0.00
678.65	0.02	0.02	0.00
678.70	0.02	0.02	0.00
678.75	0.02	0.02	0.00
678.80	0.02	0.02	0.00
678.85	0.02	0.02	0.00
678.90	0.02	0.02	0.00
678.95	0.02	0.02	0.00
679.00	0.37	0.37	0.00
679.05	0.38	0.38	0.00
679.10	0.38	0.38	0.00
679.15	0.39	0.39	0.00
679.20	0.39	0.39	0.00
679.25	0.39	0.39	0.00
679.30	0.40	0.40	0.00
679.35	0.40	0.40	0.00
679.40	0.40	0.40	0.00
679.45	0.41	0.41	0.00
679.50	0.41	0.41	0.00
679.55	0.41	0.41	0.00
679.60	0.42	0.42	0.00
679.65	0.42	0.42	0.00
679.70	0.43	0.43	0.00
679.75	0.80	0.80	0.00
679.80	1.47	1.47	0.00
679.85	2.34	2.34	0.00
679.90	3.37	3.37	0.00
679.95	4.53	4.53	0.00
680.00	5.82	5.82	0.00
680.05	7.23	7.23	0.00
680.10	7.66	7.66	0.00
680.15	7.70	7.70	0.00
680.20	7.75	7.75	0.00
680.25	7.80	7.80	0.00
680.30	7.84	7.84	0.00
680.35	7.89	7.89	0.00
680.40	7.93	7.93	0.00
680.45	7.98	7.98	0.00
680.50	8.02	8.02	0.00
680.55	8.22	8.07	0.15
680.60	8.55	8.11	0.44
680.65	8.99	8.15	0.83
680.70	9.51	8.20	1.31
680.75	10.12	8.24	1.88
680.80	10.81	8.29	2.53
680.85	11.59	8.33	3.26
680.90	12.44	8.37	4.07
680.95	13.37	8.41	4.96
681.00	14.37	8.46	5.92
681.05	15.46	8.50	6.96
681.10	16.62	8.54	8.08
681.15	17.81	8.58	9.23
681.20	19.07	8.62	10.45
681.25	20.39	8.66	11.73
681.30	21.78	8.71	13.07
681.35	23.30	8.75	14.55
681.40	24.90	8.79	16.11
681.45	26.57	8.83	17.75
681.50	**28.33**	**8.87**	**19.46**

Stage-Area-Storage for Pond 3P: BIORETENTION #1

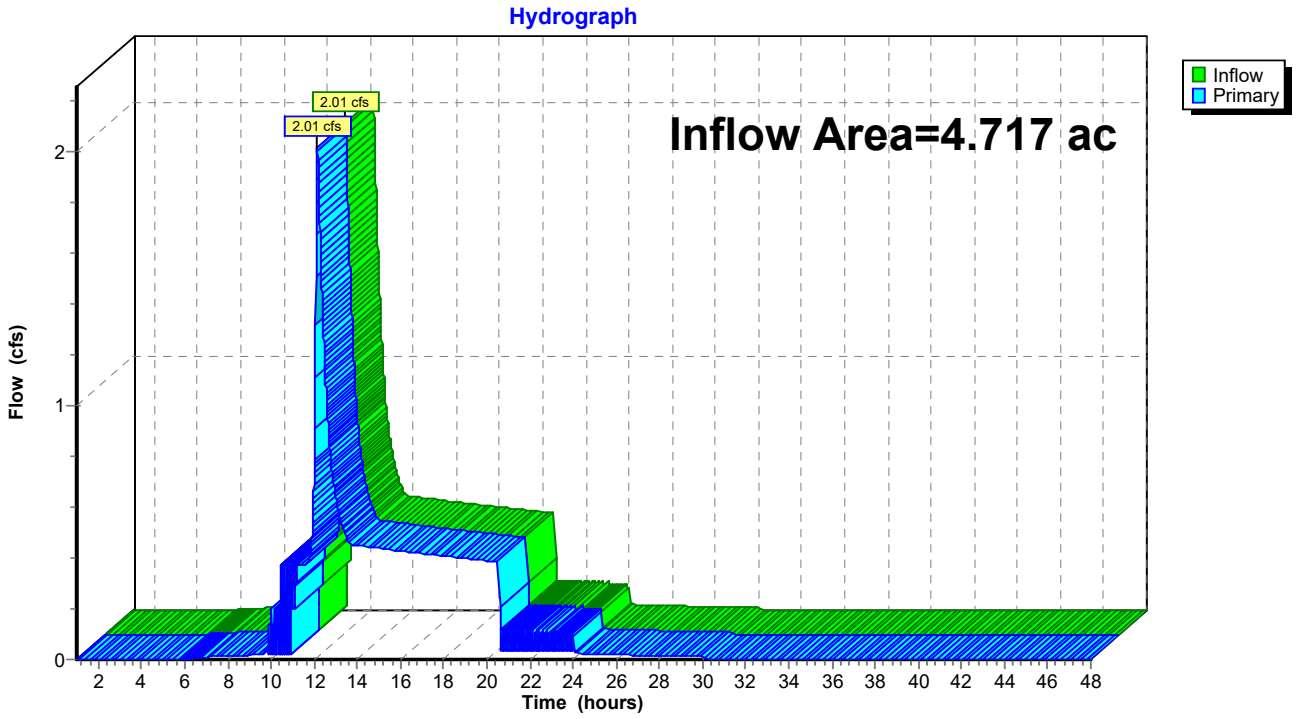
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
678.00	218	0
678.05	230	11
678.10	242	23
678.15	254	35
678.20	267	48
678.25	280	62
678.30	294	76
678.35	307	91
678.40	321	107
678.45	336	124
678.50	350	141
678.55	365	159
678.60	381	177
678.65	396	197
678.70	412	217
678.75	428	238
678.80	445	260
678.85	462	282
678.90	479	306
678.95	496	330
679.00	8,089	356
679.05	8,165	762
679.10	8,242	1,172
679.15	8,320	1,586
679.20	8,398	2,004
679.25	8,477	2,426
679.30	8,556	2,852
679.35	8,636	3,282
679.40	8,717	3,715
679.45	8,798	4,153
679.50	8,880	4,595
679.55	8,963	5,041
679.60	9,046	5,492
679.65	9,129	5,946
679.70	9,214	6,404
679.75	9,299	6,867
679.80	9,384	7,334
679.85	9,471	7,806
679.90	9,557	8,281
679.95	9,645	8,761
680.00	9,733	9,246
680.05	9,811	9,735
680.10	9,889	10,227
680.15	9,968	10,723
680.20	10,046	11,224
680.25	10,126	11,728
680.30	10,206	12,236
680.35	10,286	12,749
680.40	10,366	13,265
680.45	10,447	13,785
680.50	10,528	14,310
680.55	10,610	14,838
680.60	10,692	15,371
680.65	10,775	15,907
680.70	10,858	16,448
680.75	10,941	16,993
680.80	11,024	17,542
680.85	11,109	18,096
680.90	11,193	18,653
680.95	11,278	19,215
681.00	11,363	19,781
681.05	11,586	20,355
681.10	11,812	20,940
681.15	12,040	21,536
681.20	12,271	22,144
681.25	12,505	22,763
681.30	12,741	23,394
681.35	12,980	24,037
681.40	13,221	24,692
681.45	13,465	25,359
681.50	**13,712**	**26,039**

Summary for Link AP 1: ANALYSIS POINT 1

Inflow Area = 4.717 ac, 63.43% Impervious, Inflow Depth = 1.15" for 1-YEAR event
Inflow = 2.01 cfs @ 12.14 hrs, Volume= 0.452 af
Primary = 2.01 cfs @ 12.15 hrs, Volume= 0.452 af, Atten= 0%, Lag= 0.6 min
Routed to Link PR : PROPOSED

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link AP 1: ANALYSIS POINT 1

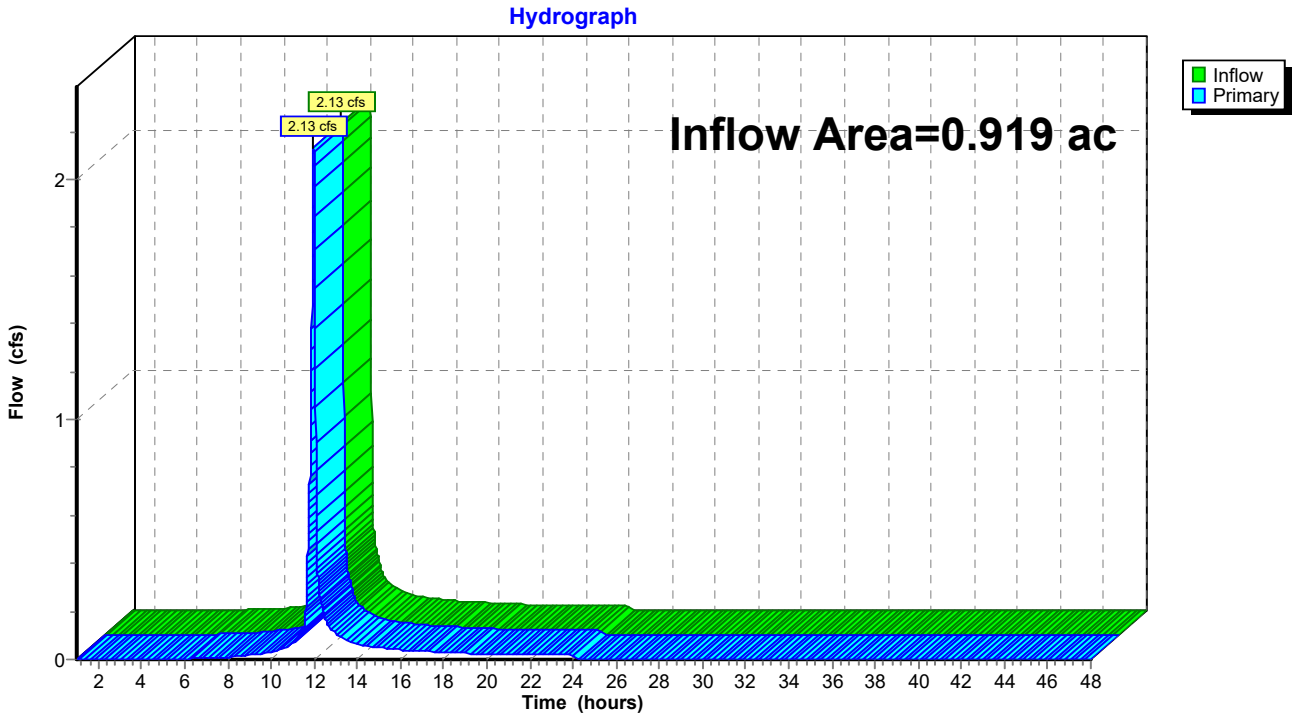


Summary for Link AP 2: ANALYSIS POINT 2

Inflow Area = 0.919 ac, 81.18% Impervious, Inflow Depth = 1.35" for 1-YEAR event
Inflow = 2.13 cfs @ 11.97 hrs, Volume= 0.103 af
Primary = 2.13 cfs @ 11.98 hrs, Volume= 0.103 af, Atten= 0%, Lag= 0.6 min
Routed to Link PR : PROPOSED

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link AP 2: ANALYSIS POINT 2

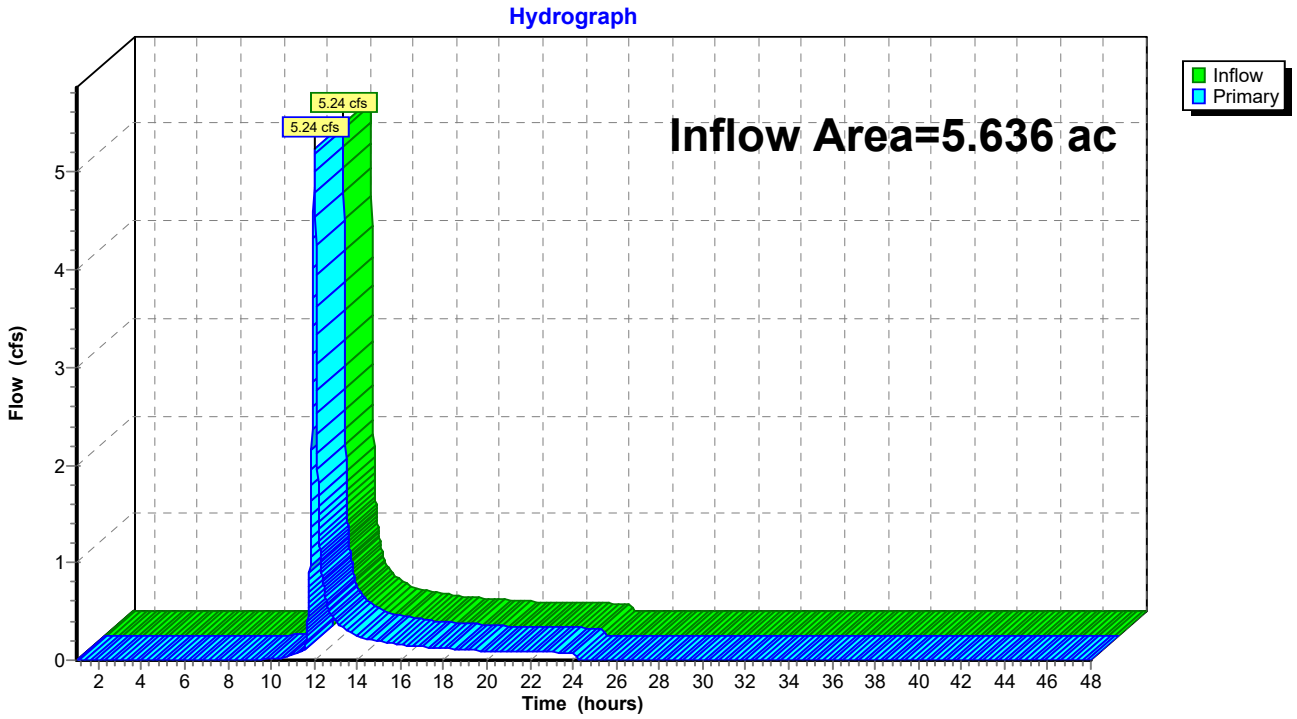


Summary for Link EX: EXISTING

Inflow Area = 5.636 ac, 31.28% Impervious, Inflow Depth = 0.62" for 1-YEAR event
Inflow = 5.24 cfs @ 12.01 hrs, Volume= 0.291 af
Primary = 5.24 cfs @ 12.02 hrs, Volume= 0.291 af, Atten= 0%, Lag= 0.6 min

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link EX: EXISTING

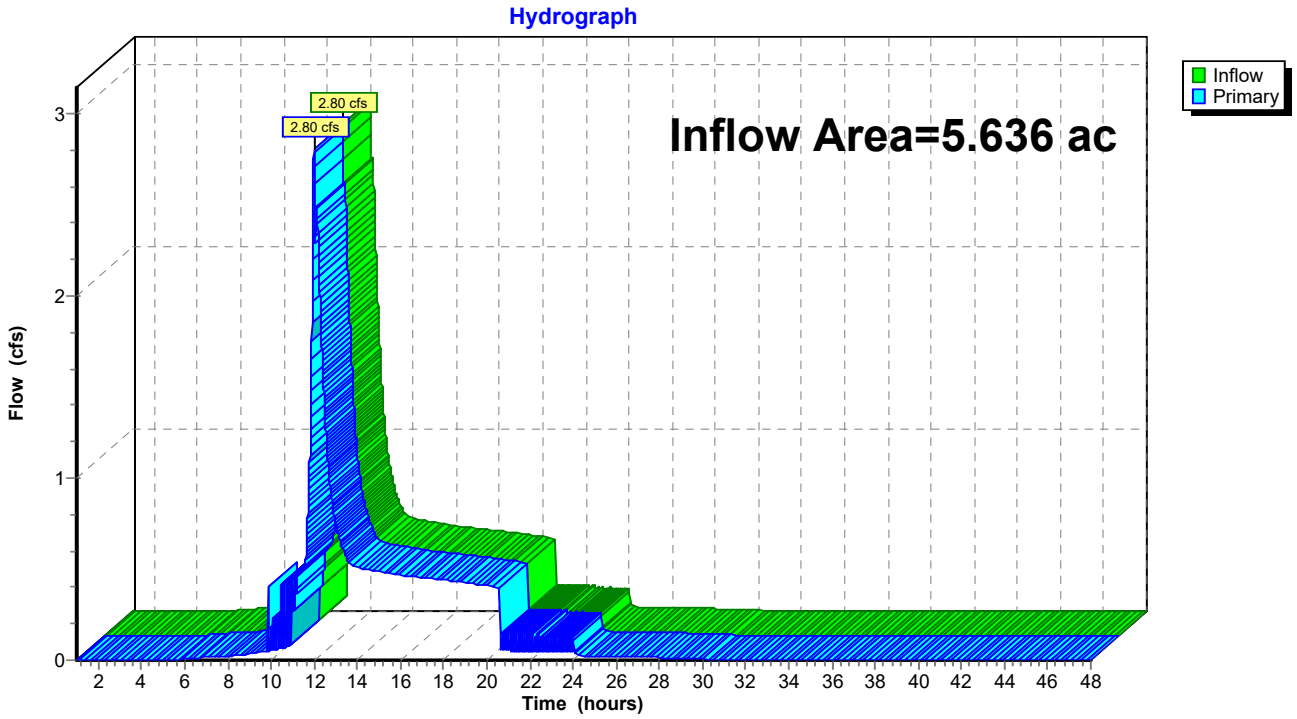


Summary for Link PR: PROPOSED

Inflow Area = 5.636 ac, 66.32% Impervious, Inflow Depth = 1.18" for 1-YEAR event
Inflow = 2.80 cfs @ 11.99 hrs, Volume= 0.555 af
Primary = 2.80 cfs @ 12.00 hrs, Volume= 0.555 af, Atten= 0%, Lag= 0.6 min

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link PR: PROPOSED



Time span=1.00-48.00 hrs, dt=0.01 hrs, 4701 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method

Subcatchment EX 1: EX DA 1 Runoff Area=4.206 ac 20.23% Impervious Runoff Depth=1.40"
Flow Length=921' Tc=10.0 min CN=79 Runoff=9.05 cfs 0.490 af

Subcatchment EX 2: EX DA 2 Runoff Area=1.430 ac 63.78% Impervious Runoff Depth=2.15"
Flow Length=764' Tc=7.9 min CN=89 Runoff=5.00 cfs 0.257 af

Subcatchment PR 1: PR DA 1 Runoff Area=4.053 ac 73.82% Impervious Runoff Depth=2.52"
Flow Length=813' Tc=6.5 min CN=93 Runoff=16.78 cfs 0.852 af

Subcatchment PR 2: PR DA 2 Runoff Area=0.919 ac 81.18% Impervious Runoff Depth=2.62"
Flow Length=222' Tc=6.0 min CN=94 Runoff=3.97 cfs 0.201 af

Subcatchment PR 3: PR DA 3 Runoff Area=0.664 ac 0.00% Impervious Runoff Depth=1.27"
Flow Length=893' Tc=11.2 min CN=77 Runoff=1.23 cfs 0.070 af

Pond 3P: BIORETENTION#1 Peak Elev=680.29' Storage=12,148 cf Inflow=16.78 cfs 0.852 af
Primary=7.83 cfs 0.852 af Secondary=0.00 cfs 0.000 af Outflow=7.83 cfs 0.852 af

Link AP 1: ANALYSIS POINT 1 Inflow=9.04 cfs 0.922 af
Primary=9.04 cfs 0.922 af

Link AP 2: ANALYSIS POINT 2 Inflow=3.97 cfs 0.201 af
Primary=3.97 cfs 0.201 af

Link EX: EXISTING Inflow=13.88 cfs 0.746 af
Primary=13.88 cfs 0.746 af

Link PR: PROPOSED Inflow=12.63 cfs 1.123 af
Primary=12.63 cfs 1.123 af

Total Runoff Area = 11.272 ac Runoff Volume = 1.869 af Average Runoff Depth = 1.99"
51.20% Pervious = 5.771 ac 48.80% Impervious = 5.501 ac

Summary for Subcatchment EX 1: EX DA 1

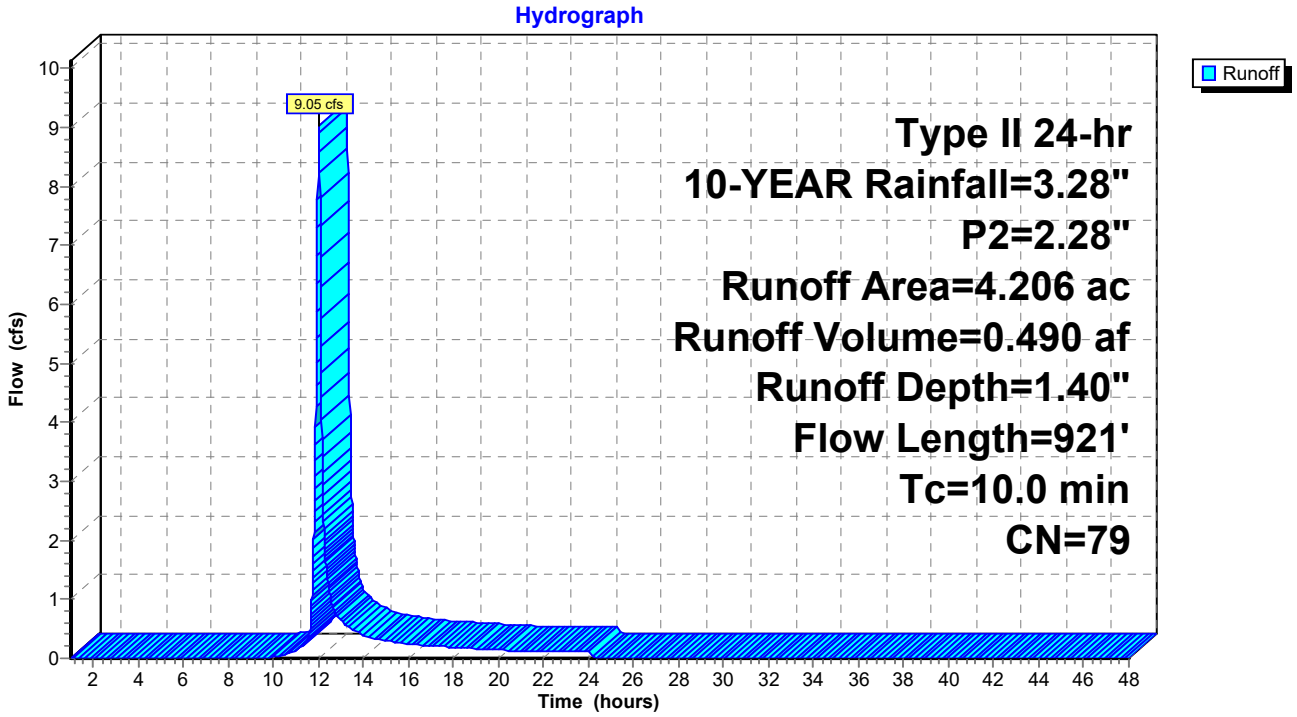
Runoff = 9.05 cfs @ 12.02 hrs, Volume= 0.490 af, Depth= 1.40"
Routed to Link EX : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YEAR Rainfall=3.28", P2=2.28"

Area (ac)	CN	Description
1.095	74	>75% Grass cover, Good, HSG C
0.164	98	Paved parking, HSG C
1.233	70	Woods, Good, HSG C
0.238	80	>75% Grass cover, Good, HSG D
0.687	98	Paved parking, HSG D
0.789	77	Woods, Good, HSG D
4.206	79	Weighted Average
3.355		79.77% Pervious Area
0.851		20.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	56	0.0710	0.21		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.3	44	0.1360	2.12		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.4	111	0.0500	4.54		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.5	117	0.0550	3.78		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.1	206	0.0410	3.26		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
0.1	25	0.0600	4.97		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.4	48	0.0200	2.28		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.0	128	0.0120	2.22		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
1.8	186	0.0110	1.69		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
10.0	921	Total			

Subcatchment EX 1: EX DA 1



Summary for Subcatchment EX 2: EX DA 2

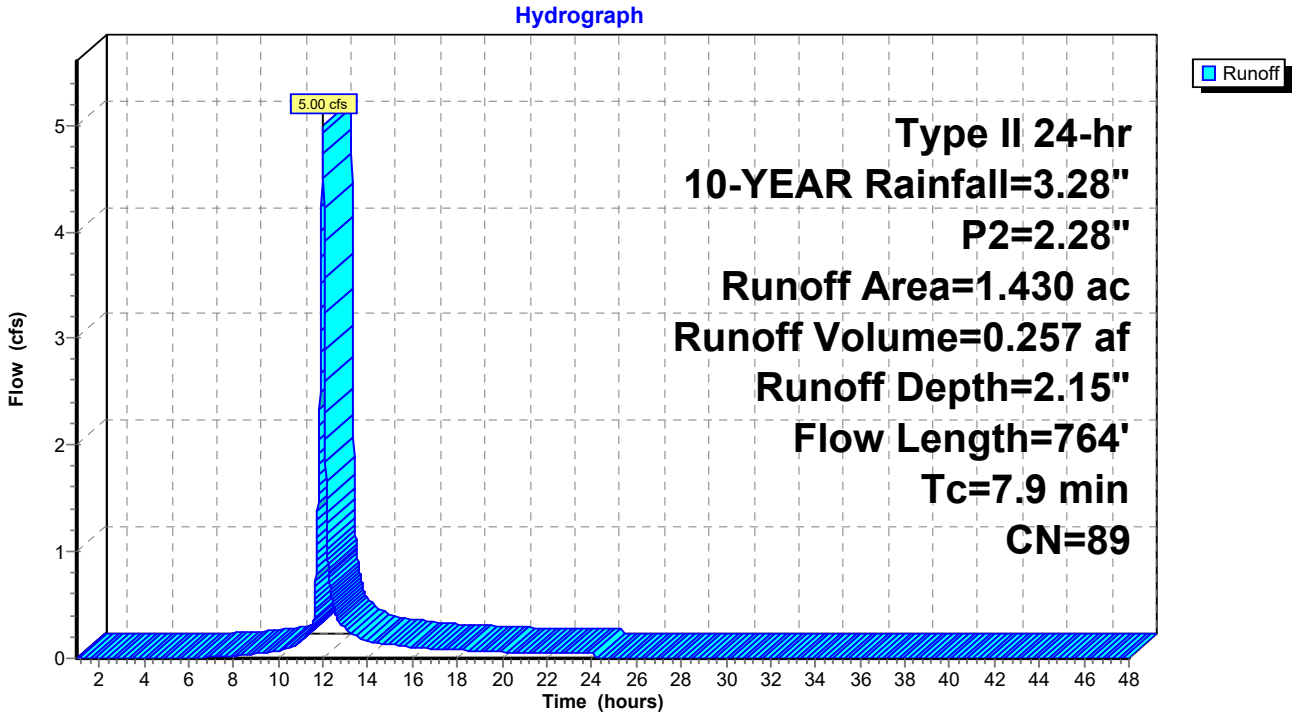
Runoff = 5.00 cfs @ 11.99 hrs, Volume= 0.257 af, Depth= 2.15"
Routed to Link EX : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YEAR Rainfall=3.28", P2=2.28"

Area (ac)	CN	Description
0.122	74	>75% Grass cover, Good, HSG C
0.343	98	Paved parking, HSG C
0.224	70	Woods, Good, HSG C
0.079	80	>75% Grass cover, Good, HSG D
0.569	98	Paved parking, HSG D
0.093	77	Woods, Good, HSG D
1.430	89	Weighted Average
0.518		36.22% Pervious Area
0.912		63.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	63	0.1250	0.27		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.4	37	0.0540	1.42		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.8	162	0.0280	3.40		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.0	18	0.2500	8.05		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.0	192	0.0420	3.30		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.2	206	0.0200	2.87		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.6	86	0.0260	2.60		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
7.9	764	Total			

Subcatchment EX 2: EX DA 2



Summary for Subcatchment PR 1: PR DA 1

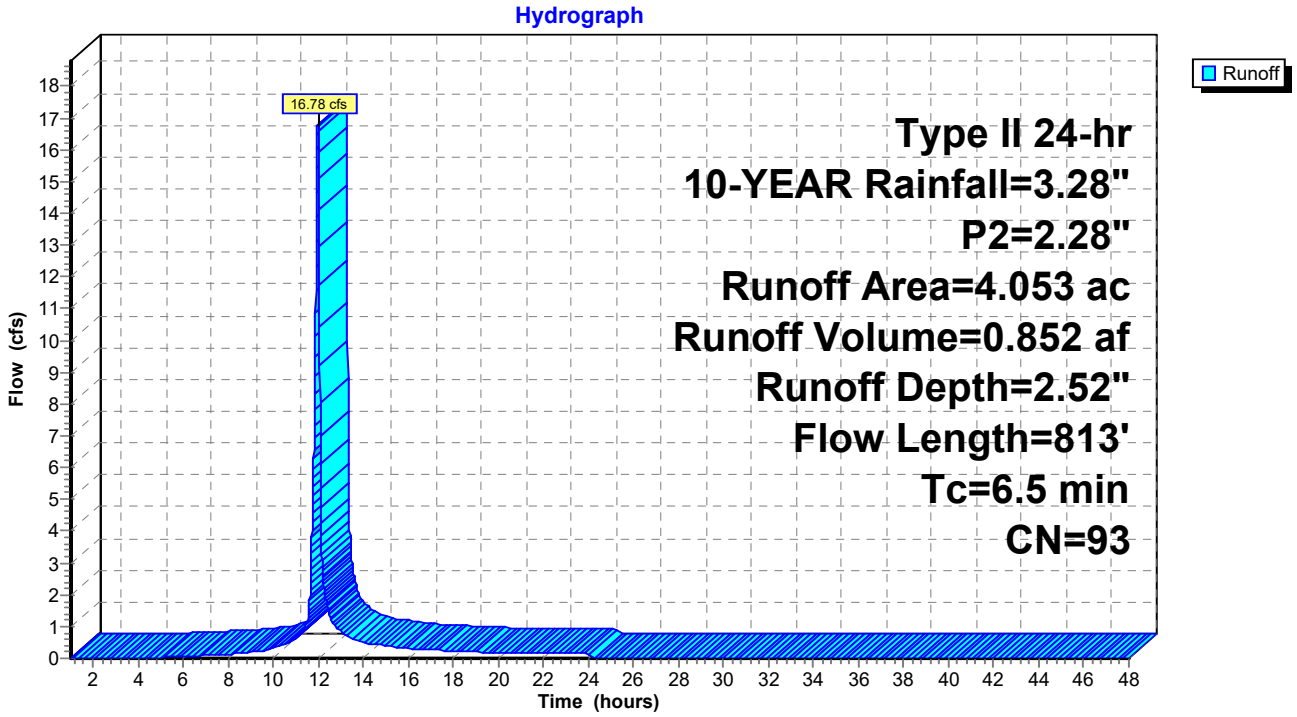
Runoff = 16.78 cfs @ 11.97 hrs, Volume= 0.852 af, Depth= 2.52"
Routed to Pond 3P : BIORETENTION #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YEAR Rainfall=3.28", P2=2.28"

Area (ac)	CN	Description
0.774	80	>75% Grass cover, Good, HSG D
0.277	74	>75% Grass cover, Good, HSG C
1.774	98	Paved parking, HSG D
1.218	98	Paved parking, HSG C
0.010	70	Woods, Good, HSG C
4.053	93	Weighted Average
1.061		26.18% Pervious Area
2.992		73.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0600	0.19		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.6	231	0.0860	5.95		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Paved Kv= 20.3 fps
0.7	210	0.0100	4.91	3.86	**Pipe Channel, PIPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.2	125	0.0300	8.51	6.69	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.7	197	0.0100	4.91	3.86	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
6.5	813	Total			

Subcatchment PR 1: PR DA 1



Summary for Subcatchment PR 2: PR DA 2

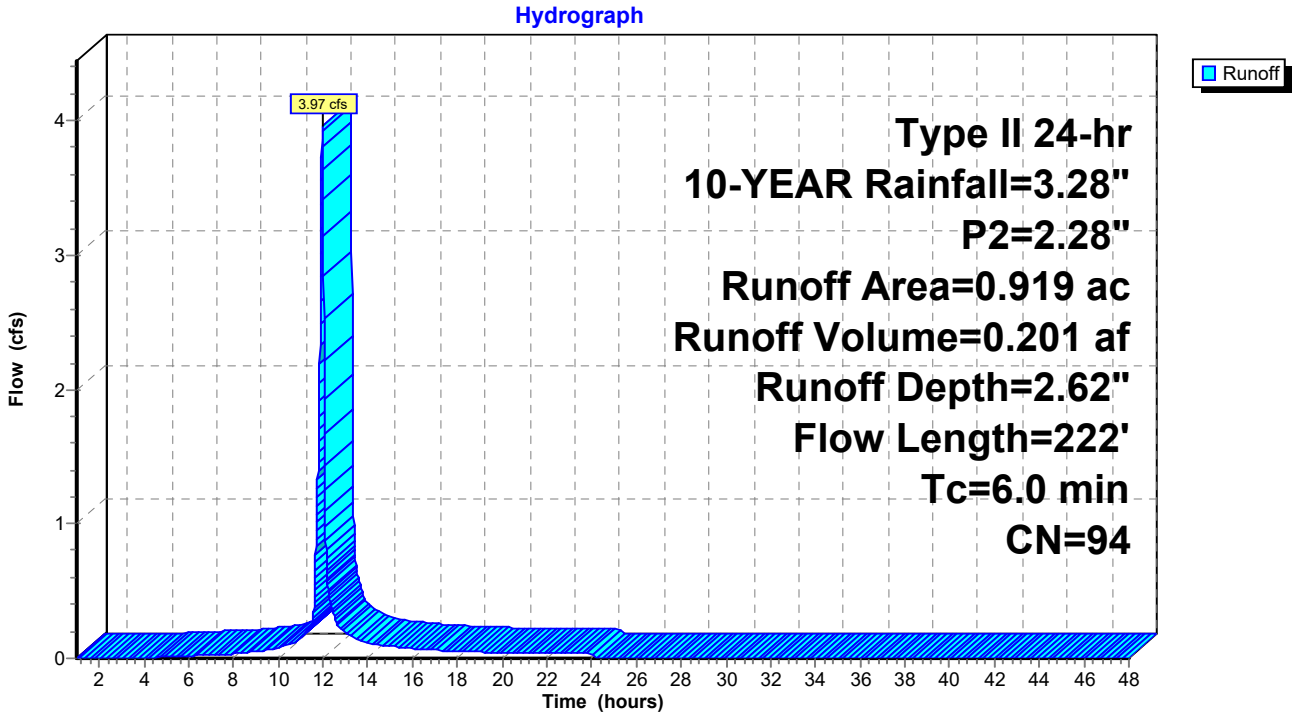
Runoff = 3.97 cfs @ 11.97 hrs, Volume= 0.201 af, Depth= 2.62"
Routed to Link AP 2 : ANALYSIS POINT 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YEAR Rainfall=3.28", P2=2.28"

Area (ac)	CN	Description
0.132	80	>75% Grass cover, Good, HSG D
0.041	74	>75% Grass cover, Good, HSG C
0.581	98	Paved parking, HSG D
0.165	98	Paved parking, HSG C
0.919	94	Weighted Average
0.173		18.82% Pervious Area
0.746		81.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	12	0.2500	0.18		**Sheet Flow, SHEET** Grass: Dense n= 0.240 P2= 2.28"
1.2	88	0.0220	1.18		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.3	47	0.0220	3.01		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	47	0.0210	2.33		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Unpaved Kv= 16.1 fps
0.2	28	0.0200	2.87		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Paved Kv= 20.3 fps
3.1	222	Total, Increased to minimum Tc = 6.0 min			

Subcatchment PR 2: PR DA 2



Summary for Subcatchment PR 3: PR DA 3

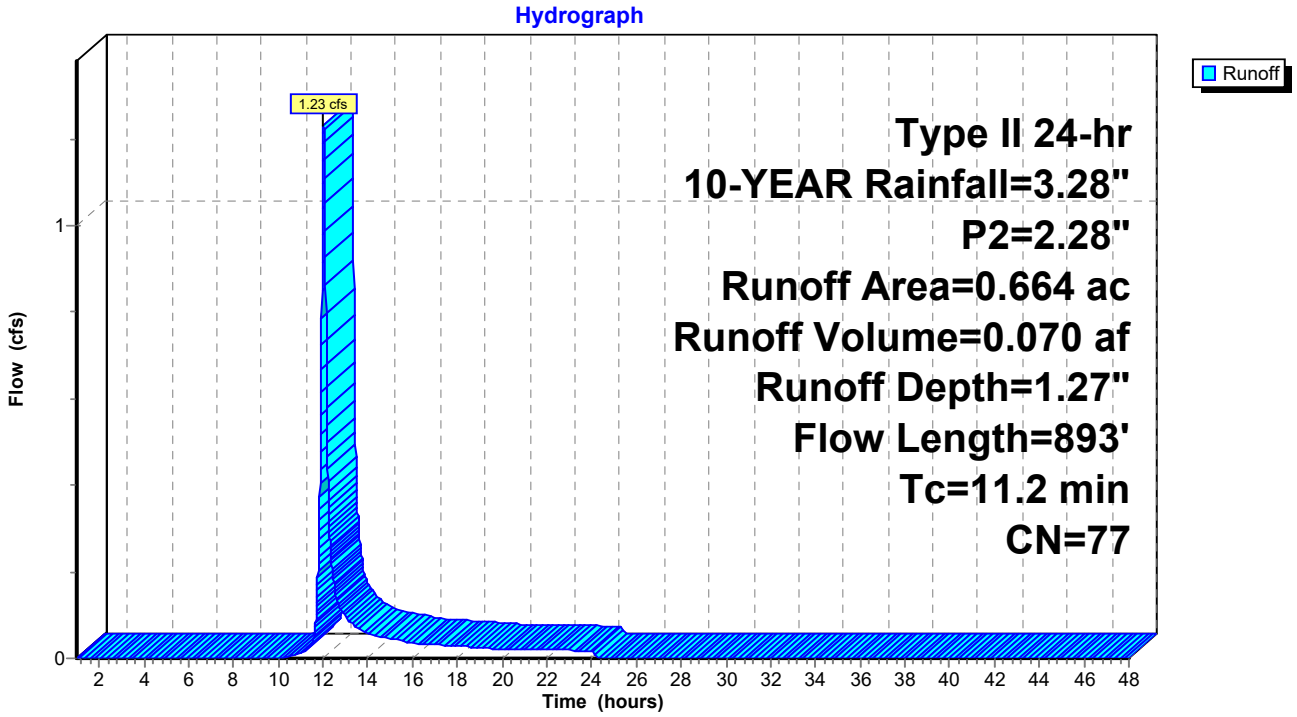
Runoff = 1.23 cfs @ 12.03 hrs, Volume= 0.070 af, Depth= 1.27"
Routed to Link AP 1 : ANALYSIS POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YEAR Rainfall=3.28", P2=2.28"

Area (ac)	CN	Description
0.119	74	>75% Grass cover, Good, HSG C
0.123	80	>75% Grass cover, Good, HSG D
0.422	77	Woods, Good, HSG D
0.664	77	Weighted Average
0.664		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0500	0.21		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
2.7	560	0.0450	3.42		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Unpaved Kv= 16.1 fps
0.2	111	0.0364	9.38	7.36	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.3	94	0.0100	4.91	3.86	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.0	28	0.3970	30.96	24.32	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
11.2	893	Total			

Subcatchment PR 3: PR DA 3



Summary for Pond 3P: BIORETENTION #1

Inflow Area = 4.053 ac, 73.82% Impervious, Inflow Depth = 2.52" for 10-YEAR event
Inflow = 16.78 cfs @ 11.97 hrs, Volume= 0.852 af
Outflow = 7.83 cfs @ 12.08 hrs, Volume= 0.852 af, Atten= 53%, Lag= 6.1 min
Primary = 7.83 cfs @ 12.08 hrs, Volume= 0.852 af
Routed to Link AP 1 : ANALYSIS POINT 1
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Routed to Link AP 1 : ANALYSIS POINT 1

Routing by Sim-Route method, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 680.29' @ 12.08 hrs Surf.Area= 10,192 sf Storage= 12,148 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 98.8 min (887.9 - 789.1)

Volume	Invert	Avail.Storage	Storage Description
#1	679.00'	22,813 cf	**Bioretention (Irregular)**Listed below (Recalc)
#2	678.00'	3,226 cf	**Forebay (Irregular)**Listed below (Recalc)
		26,039 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
679.00	7,575	365.0	0	0	7,575
680.00	8,721	385.0	8,141	8,141	8,826
681.00	9,906	404.0	9,307	17,448	10,083
681.50	11,573	429.0	5,364	22,813	11,753

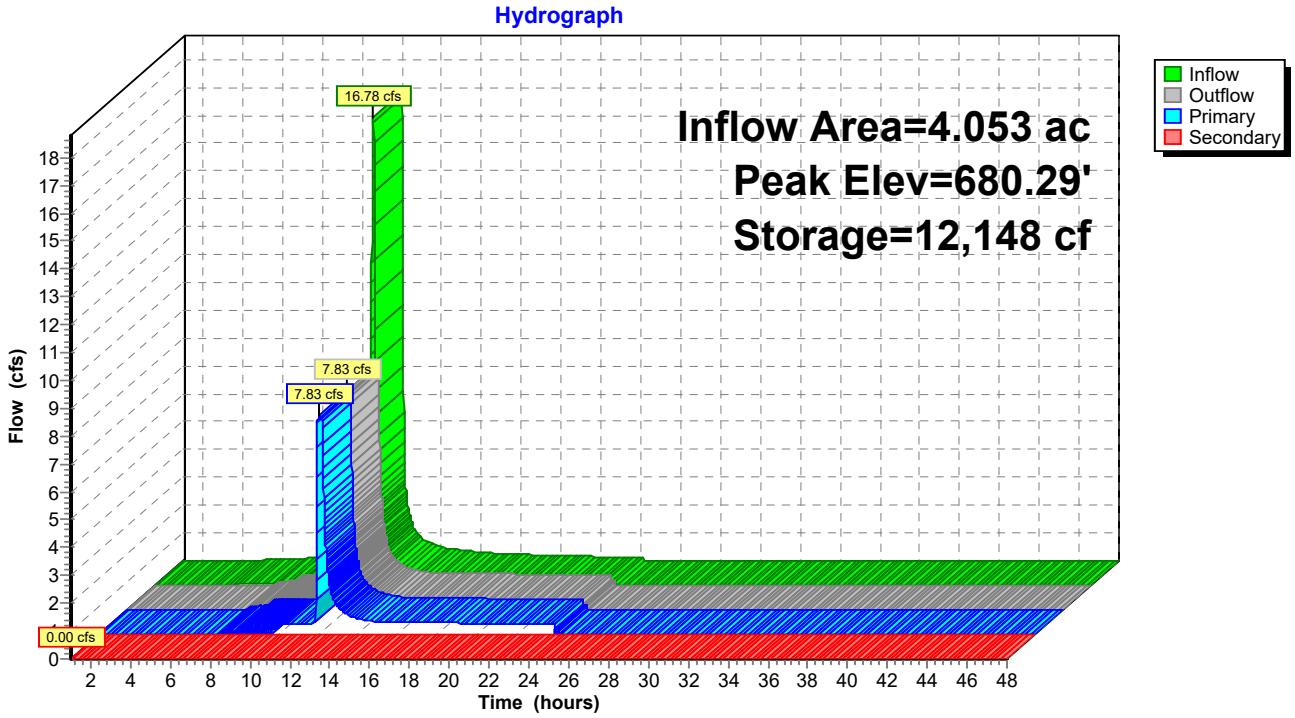
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
678.00	218	62.0	0	0	218
679.00	514	105.0	356	356	796
680.00	1,012	139.0	749	1,105	1,467
681.00	1,457	157.0	1,228	2,332	1,916
681.50	2,139	183.0	894	3,226	2,625

Device	Routing	Invert	Outlet Devices
#1	Device 3	678.00'	**2.000 in/hr Exfiltration over Surface area**
#2	Secondary	680.50'	**5.0' long + 3.0 '/' SideZ x 16.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Primary	675.50'	**12.0" Round Culvert** L= 28.0' Ke= 0.500 Inlet / Outlet Invert= 675.50' / 674.40' S= 0.0393 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#4	Device 3	679.70'	**30.0" x 30.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=7.83 cfs @ 12.08 hrs HW=680.29' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Inlet Controls 7.83 cfs @ 9.97 fps)
  └─**1=Exfiltration** (Passes < 0.47 cfs potential flow)
  └─**4=Orifice/Grate** (Passes < 14.86 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=678.00' TW=0.00' (Dynamic Tailwater)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3P: BIORETENTION #1



Stage-Discharge for Pond 3P: BIORETENTION #1

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
678.00	0.00	0.00	0.00
678.05	0.01	0.01	0.00
678.10	0.01	0.01	0.00
678.15	0.01	0.01	0.00
678.20	0.01	0.01	0.00
678.25	0.01	0.01	0.00
678.30	0.01	0.01	0.00
678.35	0.01	0.01	0.00
678.40	0.01	0.01	0.00
678.45	0.02	0.02	0.00
678.50	0.02	0.02	0.00
678.55	0.02	0.02	0.00
678.60	0.02	0.02	0.00
678.65	0.02	0.02	0.00
678.70	0.02	0.02	0.00
678.75	0.02	0.02	0.00
678.80	0.02	0.02	0.00
678.85	0.02	0.02	0.00
678.90	0.02	0.02	0.00
678.95	0.02	0.02	0.00
679.00	0.37	0.37	0.00
679.05	0.38	0.38	0.00
679.10	0.38	0.38	0.00
679.15	0.39	0.39	0.00
679.20	0.39	0.39	0.00
679.25	0.39	0.39	0.00
679.30	0.40	0.40	0.00
679.35	0.40	0.40	0.00
679.40	0.40	0.40	0.00
679.45	0.41	0.41	0.00
679.50	0.41	0.41	0.00
679.55	0.41	0.41	0.00
679.60	0.42	0.42	0.00
679.65	0.42	0.42	0.00
679.70	0.43	0.43	0.00
679.75	0.80	0.80	0.00
679.80	1.47	1.47	0.00
679.85	2.34	2.34	0.00
679.90	3.37	3.37	0.00
679.95	4.53	4.53	0.00
680.00	5.82	5.82	0.00
680.05	7.23	7.23	0.00
680.10	7.66	7.66	0.00
680.15	7.70	7.70	0.00
680.20	7.75	7.75	0.00
680.25	7.80	7.80	0.00
680.30	7.84	7.84	0.00
680.35	7.89	7.89	0.00
680.40	7.93	7.93	0.00
680.45	7.98	7.98	0.00
680.50	8.02	8.02	0.00
680.55	8.22	8.07	0.15
680.60	8.55	8.11	0.44
680.65	8.99	8.15	0.83
680.70	9.51	8.20	1.31
680.75	10.12	8.24	1.88
680.80	10.81	8.29	2.53
680.85	11.59	8.33	3.26
680.90	12.44	8.37	4.07
680.95	13.37	8.41	4.96
681.00	14.37	8.46	5.92
681.05	15.46	8.50	6.96
681.10	16.62	8.54	8.08
681.15	17.81	8.58	9.23
681.20	19.07	8.62	10.45
681.25	20.39	8.66	11.73
681.30	21.78	8.71	13.07
681.35	23.30	8.75	14.55
681.40	24.90	8.79	16.11
681.45	26.57	8.83	17.75
681.50	**28.33**	**8.87**	**19.46**

Stage-Area-Storage for Pond 3P: BIORETENTION #1

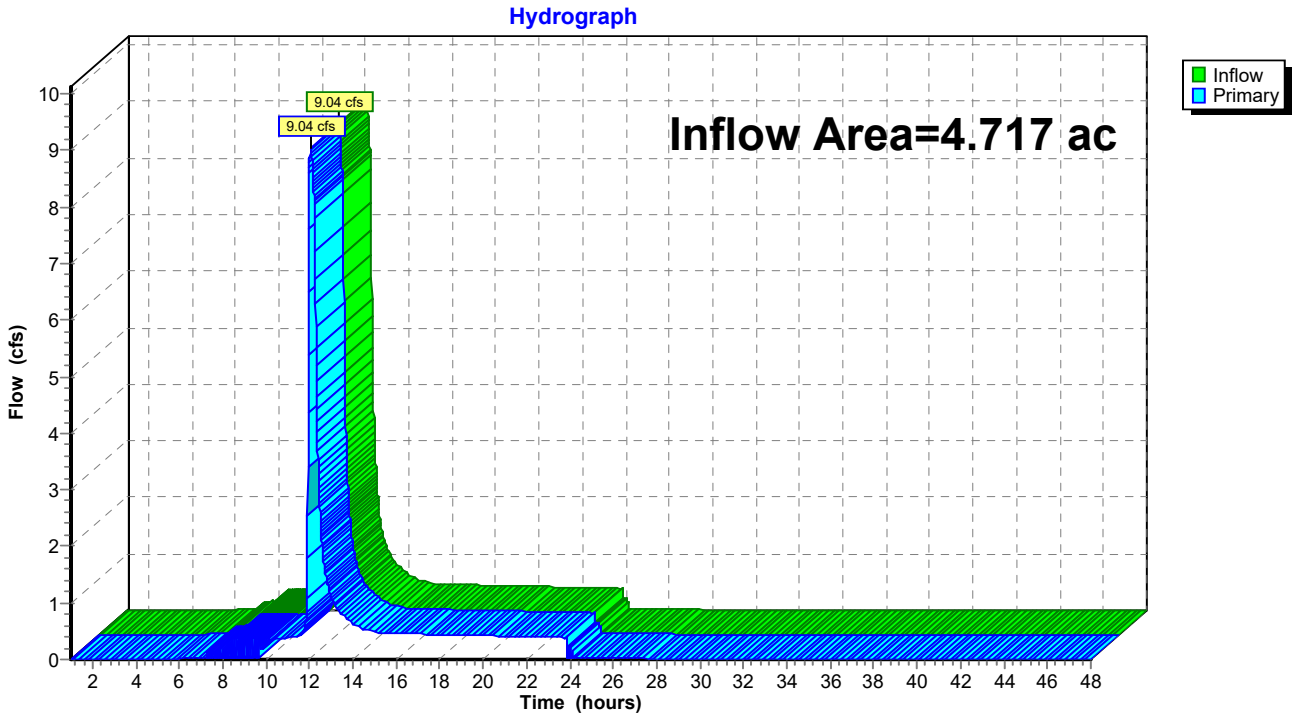
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
678.00	218	0
678.05	230	11
678.10	242	23
678.15	254	35
678.20	267	48
678.25	280	62
678.30	294	76
678.35	307	91
678.40	321	107
678.45	336	124
678.50	350	141
678.55	365	159
678.60	381	177
678.65	396	197
678.70	412	217
678.75	428	238
678.80	445	260
678.85	462	282
678.90	479	306
678.95	496	330
679.00	8,089	356
679.05	8,165	762
679.10	8,242	1,172
679.15	8,320	1,586
679.20	8,398	2,004
679.25	8,477	2,426
679.30	8,556	2,852
679.35	8,636	3,282
679.40	8,717	3,715
679.45	8,798	4,153
679.50	8,880	4,595
679.55	8,963	5,041
679.60	9,046	5,492
679.65	9,129	5,946
679.70	9,214	6,404
679.75	9,299	6,867
679.80	9,384	7,334
679.85	9,471	7,806
679.90	9,557	8,281
679.95	9,645	8,761
680.00	9,733	9,246
680.05	9,811	9,735
680.10	9,889	10,227
680.15	9,968	10,723
680.20	10,046	11,224
680.25	10,126	11,728
680.30	10,206	12,236
680.35	10,286	12,749
680.40	10,366	13,265
680.45	10,447	13,785
680.50	10,528	14,310
680.55	10,610	14,838
680.60	10,692	15,371
680.65	10,775	15,907
680.70	10,858	16,448
680.75	10,941	16,993
680.80	11,024	17,542
680.85	11,109	18,096
680.90	11,193	18,653
680.95	11,278	19,215
681.00	11,363	19,781
681.05	11,586	20,355
681.10	11,812	20,940
681.15	12,040	21,536
681.20	12,271	22,144
681.25	12,505	22,763
681.30	12,741	23,394
681.35	12,980	24,037
681.40	13,221	24,692
681.45	13,465	25,359
681.50	**13,712**	**26,039**

Summary for Link AP 1: ANALYSIS POINT 1

Inflow Area = 4.717 ac, 63.43% Impervious, Inflow Depth = 2.35" for 10-YEAR event
Inflow = 9.04 cfs @ 12.04 hrs, Volume= 0.922 af
Primary = 9.04 cfs @ 12.05 hrs, Volume= 0.922 af, Atten= 0%, Lag= 0.6 min
Routed to Link PR : PROPOSED

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link AP 1: ANALYSIS POINT 1

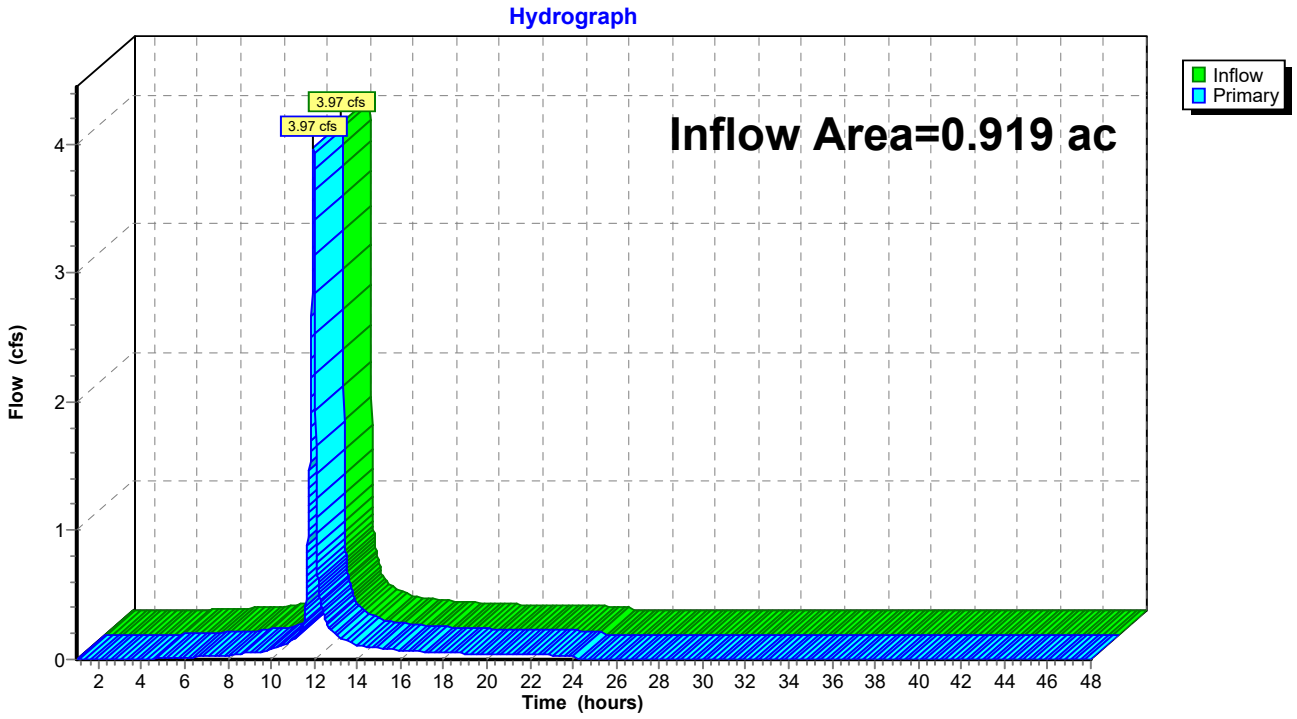


Summary for Link AP 2: ANALYSIS POINT 2

Inflow Area = 0.919 ac, 81.18% Impervious, Inflow Depth = 2.62" for 10-YEAR event
Inflow = 3.97 cfs @ 11.97 hrs, Volume= 0.201 af
Primary = 3.97 cfs @ 11.98 hrs, Volume= 0.201 af, Atten= 0%, Lag= 0.6 min
Routed to Link PR : PROPOSED

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link AP 2: ANALYSIS POINT 2

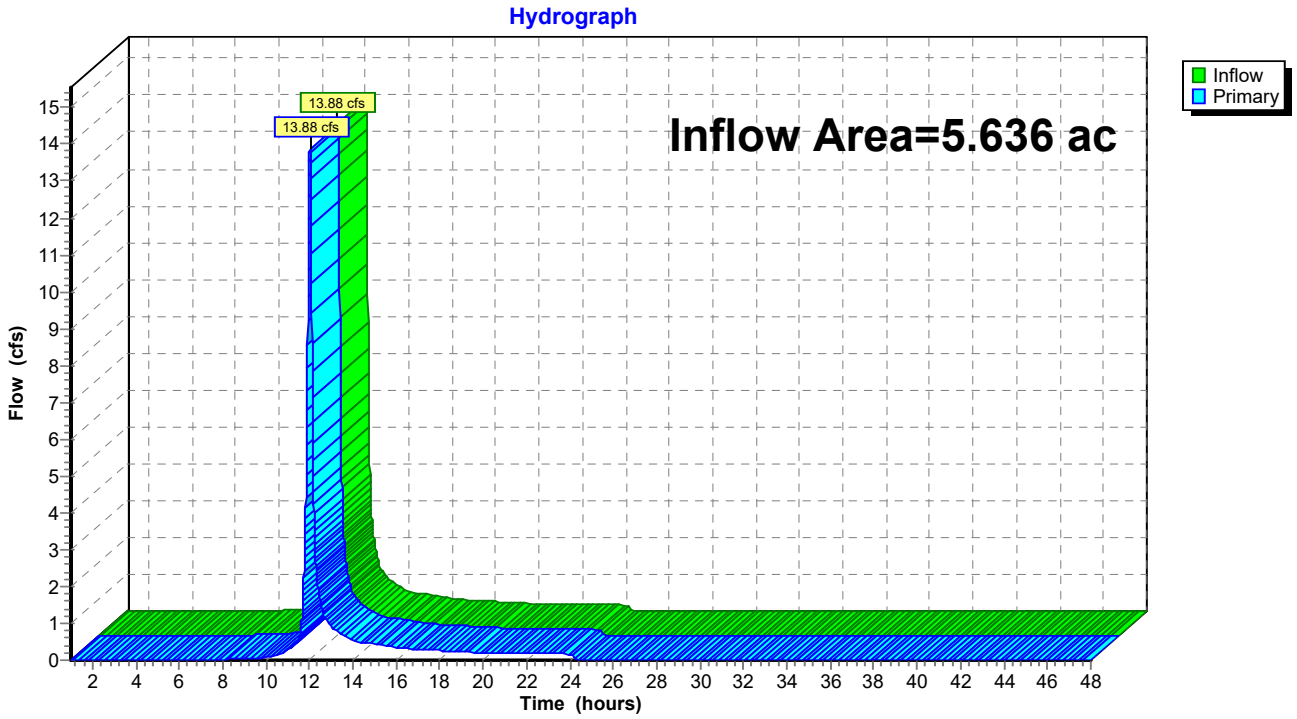


Summary for Link EX: EXISTING

Inflow Area = 5.636 ac, 31.28% Impervious, Inflow Depth = 1.59" for 10-YEAR event
Inflow = 13.88 cfs @ 12.01 hrs, Volume= 0.746 af
Primary = 13.88 cfs @ 12.02 hrs, Volume= 0.746 af, Atten= 0%, Lag= 0.6 min

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link EX: EXISTING

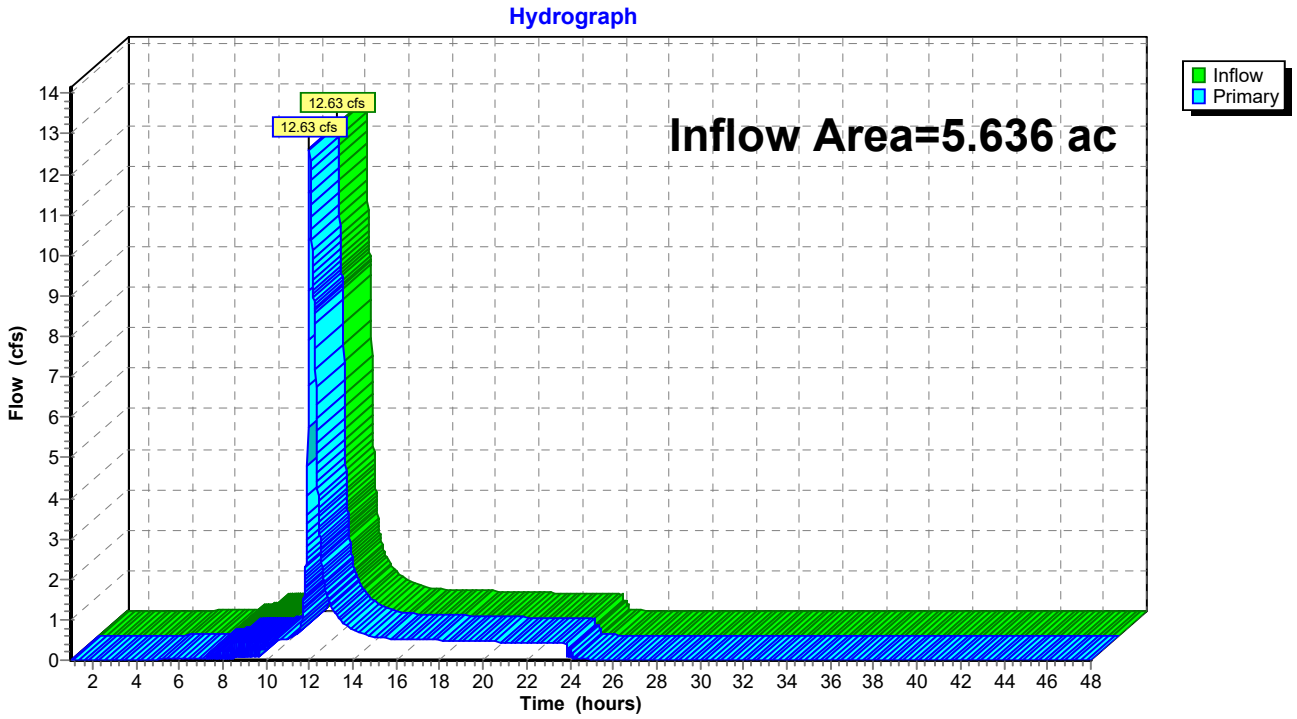


Summary for Link PR: PROPOSED

Inflow Area = 5.636 ac, 66.32% Impervious, Inflow Depth = 2.39" for 10-YEAR event
Inflow = 12.63 cfs @ 11.99 hrs, Volume= 1.123 af
Primary = 12.63 cfs @ 12.00 hrs, Volume= 1.123 af, Atten= 0%, Lag= 0.6 min

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link PR: PROPOSED



Time span=1.00-48.00 hrs, dt=0.01 hrs, 4701 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method

Subcatchment EX 1: EX DA 1 Runoff Area=4.206 ac 20.23% Impervious Runoff Depth=3.25"
Flow Length=921' Tc=10.0 min CN=79 Runoff=20.88 cfs 1.138 af

Subcatchment EX 2: EX DA 2 Runoff Area=1.430 ac 63.78% Impervious Runoff Depth=4.26"
Flow Length=764' Tc=7.9 min CN=89 Runoff=9.53 cfs 0.508 af

Subcatchment PR 1: PR DA 1 Runoff Area=4.053 ac 73.82% Impervious Runoff Depth=4.70"
Flow Length=813' Tc=6.5 min CN=93 Runoff=30.01 cfs 1.587 af

Subcatchment PR 2: PR DA 2 Runoff Area=0.919 ac 81.18% Impervious Runoff Depth=4.81"
Flow Length=222' Tc=6.0 min CN=94 Runoff=6.99 cfs 0.368 af

Subcatchment PR 3: PR DA 3 Runoff Area=0.664 ac 0.00% Impervious Runoff Depth=3.06"
Flow Length=893' Tc=11.2 min CN=77 Runoff=2.99 cfs 0.169 af

Pond 3P: BIORETENTION#1 Peak Elev=681.11' Storage=21,023 cf Inflow=30.01 cfs 1.587 af
Primary=8.55 cfs 1.457 af Secondary=8.24 cfs 0.130 af Outflow=16.78 cfs 1.587 af

Link AP 1: ANALYSIS POINT 1 Inflow=19.63 cfs 1.756 af
Primary=19.63 cfs 1.756 af

Link AP 2: ANALYSIS POINT 2 Inflow=6.99 cfs 0.368 af
Primary=6.99 cfs 0.368 af

Link EX: EXISTING Inflow=30.13 cfs 1.645 af
Primary=30.13 cfs 1.645 af

Link PR: PROPOSED Inflow=23.78 cfs 2.125 af
Primary=23.78 cfs 2.125 af

Total Runoff Area = 11.272 ac Runoff Volume = 3.770 af Average Runoff Depth = 4.01"
51.20% Pervious = 5.771 ac 48.80% Impervious = 5.501 ac

Summary for Subcatchment EX 1: EX DA 1

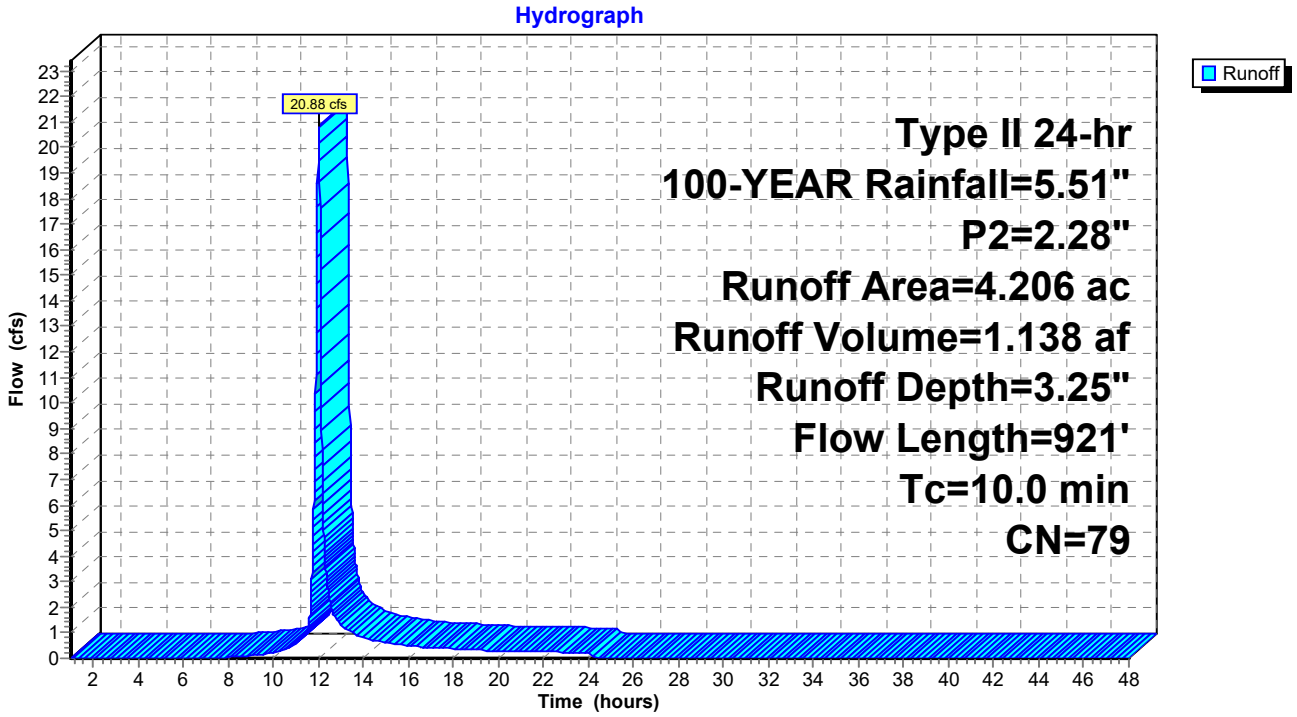
Runoff = 20.88 cfs @ 12.02 hrs, Volume= 1.138 af, Depth= 3.25"
Routed to Link EX : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=5.51", P2=2.28"

Area (ac)	CN	Description
1.095	74	>75% Grass cover, Good, HSG C
0.164	98	Paved parking, HSG C
1.233	70	Woods, Good, HSG C
0.238	80	>75% Grass cover, Good, HSG D
0.687	98	Paved parking, HSG D
0.789	77	Woods, Good, HSG D
4.206	79	Weighted Average
3.355		79.77% Pervious Area
0.851		20.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	56	0.0710	0.21		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.3	44	0.1360	2.12		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.4	111	0.0500	4.54		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.5	117	0.0550	3.78		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.1	206	0.0410	3.26		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
0.1	25	0.0600	4.97		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.4	48	0.0200	2.28		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.0	128	0.0120	2.22		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
1.8	186	0.0110	1.69		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
10.0	921	Total			

Subcatchment EX 1: EX DA 1



Summary for Subcatchment EX 2: EX DA 2

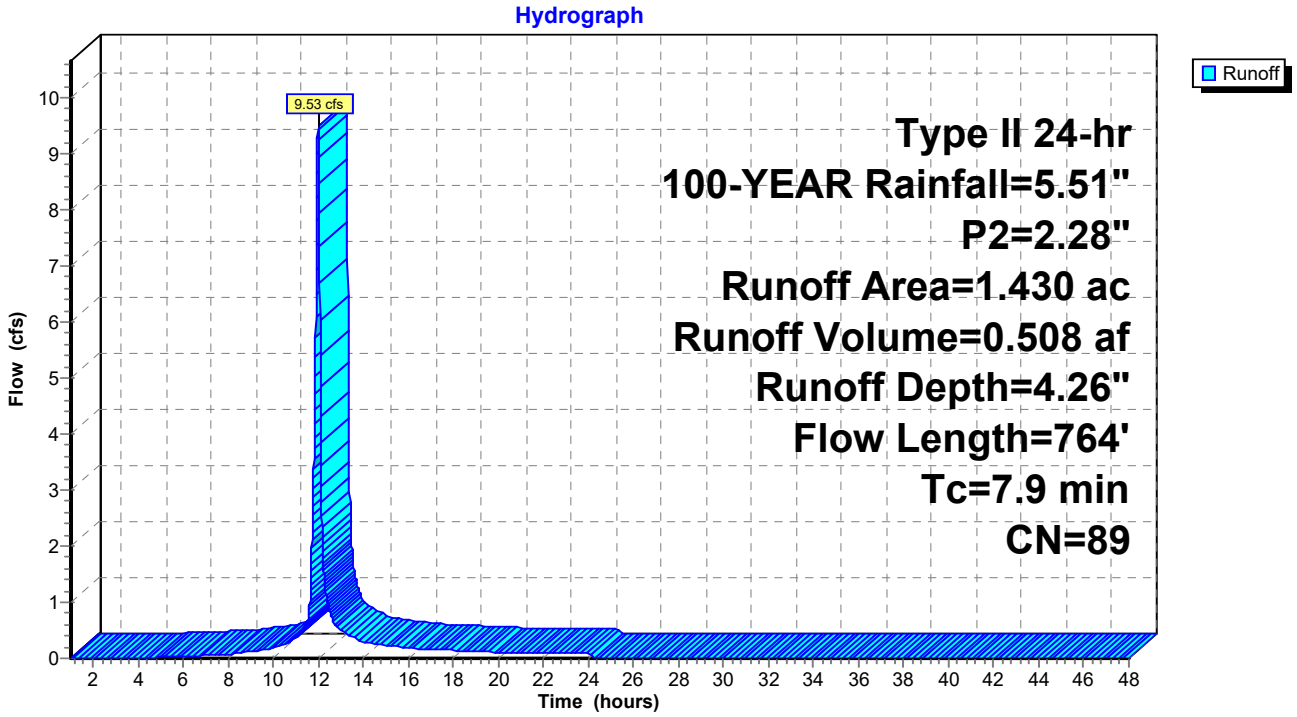
Runoff = 9.53 cfs @ 11.99 hrs, Volume= 0.508 af, Depth= 4.26"
Routed to Link EX : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=5.51", P2=2.28"

Area (ac)	CN	Description
0.122	74	>75% Grass cover, Good, HSG C
0.343	98	Paved parking, HSG C
0.224	70	Woods, Good, HSG C
0.079	80	>75% Grass cover, Good, HSG D
0.569	98	Paved parking, HSG D
0.093	77	Woods, Good, HSG D
1.430	89	Weighted Average
0.518		36.22% Pervious Area
0.912		63.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	63	0.1250	0.27		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.4	37	0.0540	1.42		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.8	162	0.0280	3.40		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.0	18	0.2500	8.05		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.0	192	0.0420	3.30		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.2	206	0.0200	2.87		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.6	86	0.0260	2.60		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
7.9	764	Total			

Subcatchment EX 2: EX DA 2



Summary for Subcatchment PR 1: PR DA 1

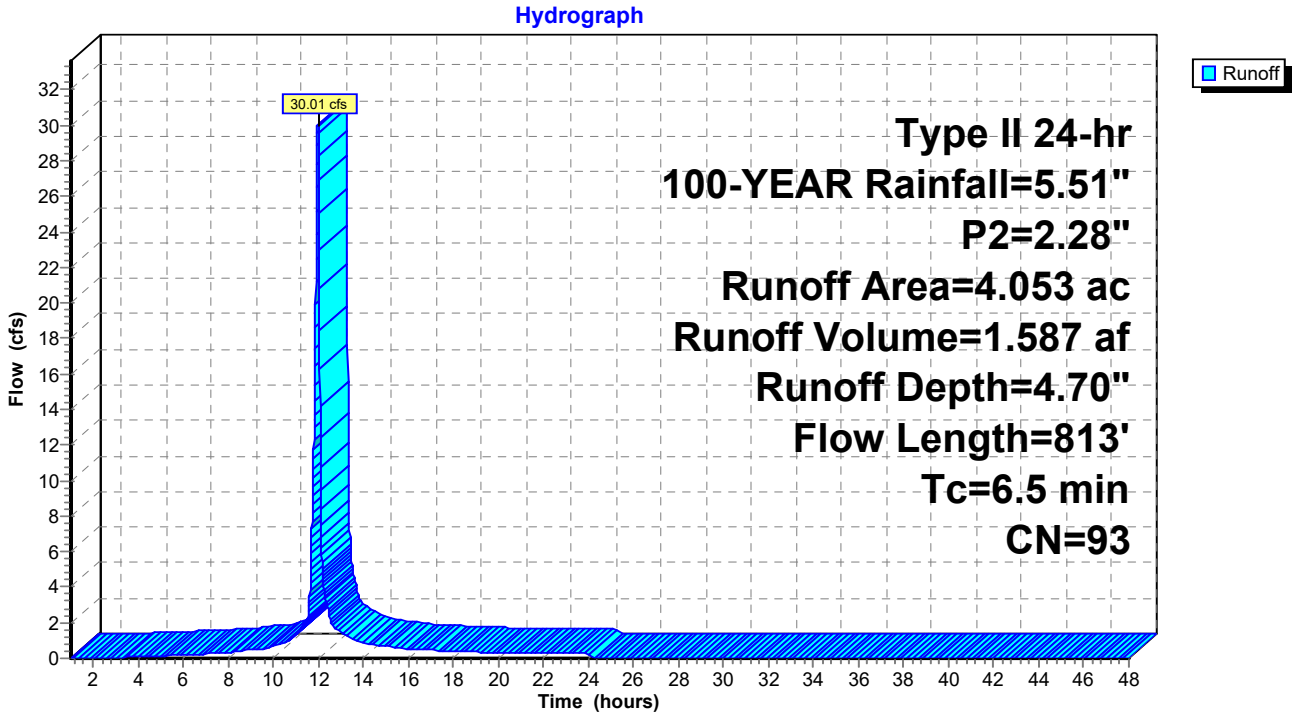
Runoff = 30.01 cfs @ 11.97 hrs, Volume= 1.587 af, Depth= 4.70"
Routed to Pond 3P : BIORETENTION #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=5.51", P2=2.28"

Area (ac)	CN	Description
0.774	80	>75% Grass cover, Good, HSG D
0.277	74	>75% Grass cover, Good, HSG C
1.774	98	Paved parking, HSG D
1.218	98	Paved parking, HSG C
0.010	70	Woods, Good, HSG C
4.053	93	Weighted Average
1.061		26.18% Pervious Area
2.992		73.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0600	0.19		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.6	231	0.0860	5.95		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Paved Kv= 20.3 fps
0.7	210	0.0100	4.91	3.86	**Pipe Channel, PIPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.2	125	0.0300	8.51	6.69	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.7	197	0.0100	4.91	3.86	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
6.5	813	Total			

Subcatchment PR 1: PR DA 1



Summary for Subcatchment PR 2: PR DA 2

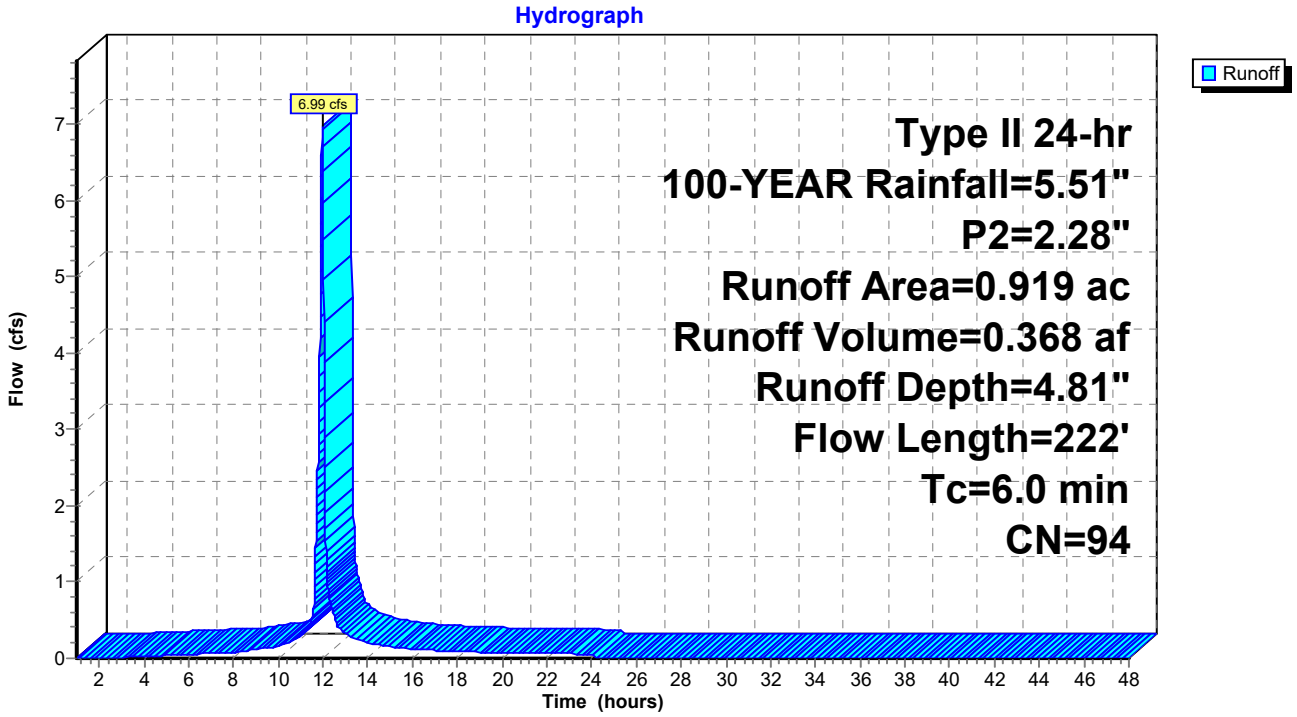
Runoff = 6.99 cfs @ 11.97 hrs, Volume= 0.368 af, Depth= 4.81"
Routed to Link AP 2 : ANALYSIS POINT 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=5.51", P2=2.28"

Area (ac)	CN	Description
0.132	80	>75% Grass cover, Good, HSG D
0.041	74	>75% Grass cover, Good, HSG C
0.581	98	Paved parking, HSG D
0.165	98	Paved parking, HSG C
0.919	94	Weighted Average
0.173		18.82% Pervious Area
0.746		81.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	12	0.2500	0.18		**Sheet Flow, SHEET** Grass: Dense n= 0.240 P2= 2.28"
1.2	88	0.0220	1.18		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.3	47	0.0220	3.01		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	47	0.0210	2.33		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Unpaved Kv= 16.1 fps
0.2	28	0.0200	2.87		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Paved Kv= 20.3 fps
3.1	222	Total, Increased to minimum Tc = 6.0 min			

Subcatchment PR 2: PR DA 2



Summary for Subcatchment PR 3: PR DA 3

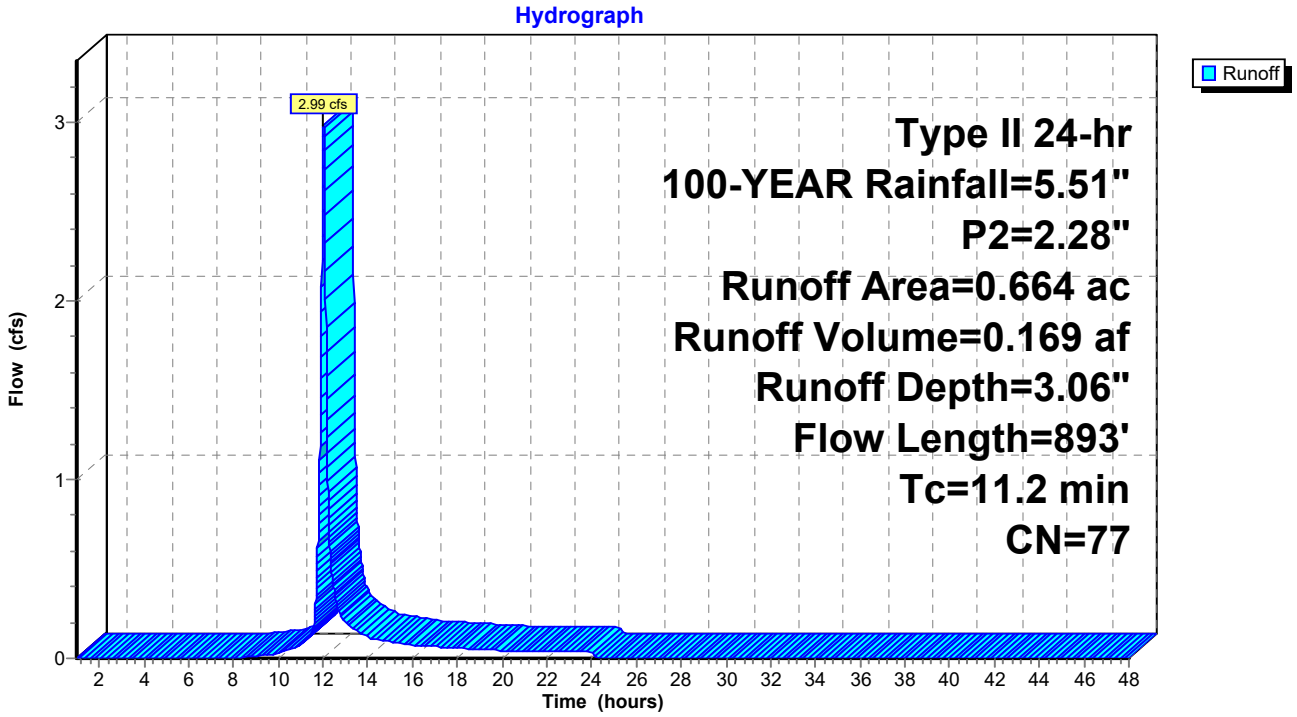
Runoff = 2.99 cfs @ 12.03 hrs, Volume= 0.169 af, Depth= 3.06"
Routed to Link AP 1 : ANALYSIS POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=5.51", P2=2.28"

Area (ac)	CN	Description
0.119	74	>75% Grass cover, Good, HSG C
0.123	80	>75% Grass cover, Good, HSG D
0.422	77	Woods, Good, HSG D
0.664	77	Weighted Average
0.664		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0500	0.21		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
2.7	560	0.0450	3.42		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Unpaved Kv= 16.1 fps
0.2	111	0.0364	9.38	7.36	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.3	94	0.0100	4.91	3.86	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.0	28	0.3970	30.96	24.32	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
11.2	893	Total			

Subcatchment PR 3: PR DA 3



Summary for Pond 3P: BIORETENTION #1

Inflow Area = 4.053 ac, 73.82% Impervious, Inflow Depth = 4.70" for 100-YEAR event
Inflow = 30.01 cfs @ 11.97 hrs, Volume= 1.587 af
Outflow = 16.78 cfs @ 12.06 hrs, Volume= 1.587 af, Atten= 44%, Lag= 5.4 min
Primary = 8.55 cfs @ 12.06 hrs, Volume= 1.457 af
Routed to Link AP 1 : ANALYSIS POINT 1
Secondary = 8.24 cfs @ 12.06 hrs, Volume= 0.130 af
Routed to Link AP 1 : ANALYSIS POINT 1

Routing by Sim-Route method, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 681.11' @ 12.06 hrs Surf.Area= 11,844 sf Storage= 21,023 cf

Plug-Flow detention time= 83.2 min calculated for 1.587 af (100% of inflow)
Center-of-Mass det. time= 83.3 min (855.7 - 772.4)

Volume	Invert	Avail.Storage	Storage Description
#1	679.00'	22,813 cf	**Bioretention (Irregular)**Listed below (Recalc)
#2	678.00'	3,226 cf	**Forebay (Irregular)**Listed below (Recalc)
		26,039 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
679.00	7,575	365.0	0	0	7,575
680.00	8,721	385.0	8,141	8,141	8,826
681.00	9,906	404.0	9,307	17,448	10,083
681.50	11,573	429.0	5,364	22,813	11,753

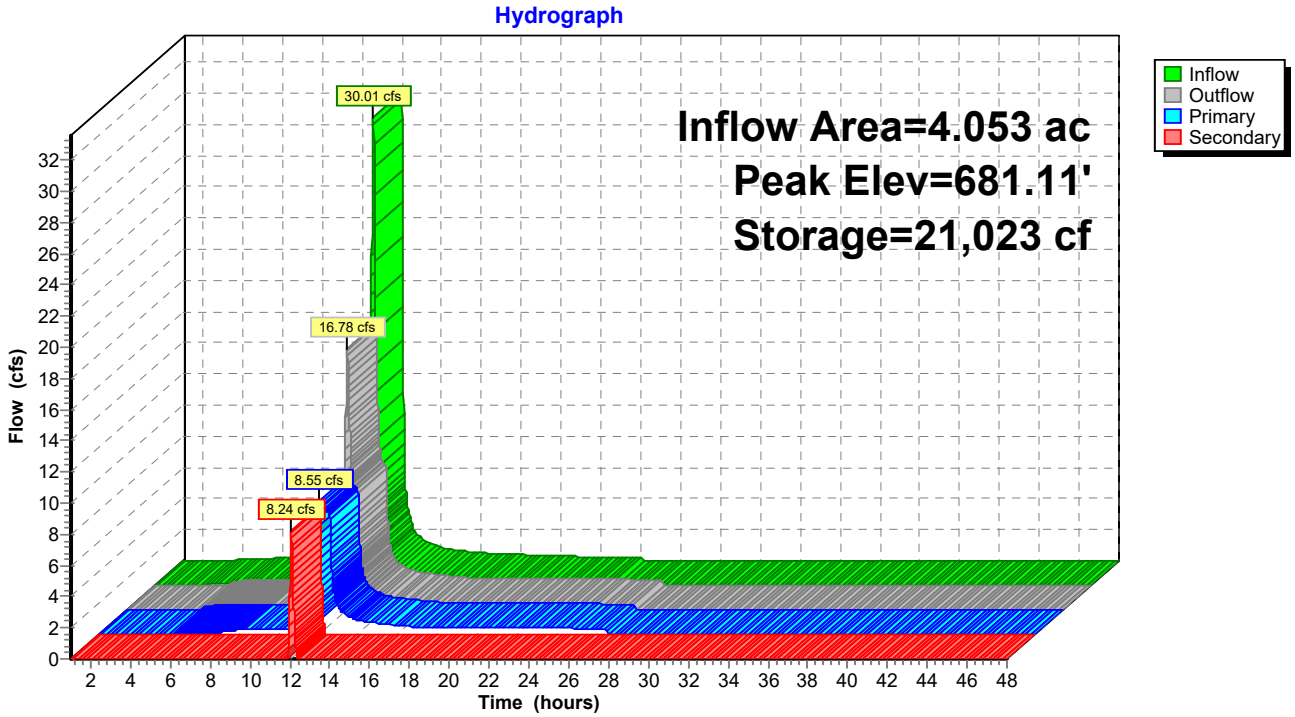
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
678.00	218	62.0	0	0	218
679.00	514	105.0	356	356	796
680.00	1,012	139.0	749	1,105	1,467
681.00	1,457	157.0	1,228	2,332	1,916
681.50	2,139	183.0	894	3,226	2,625

Device	Routing	Invert	Outlet Devices
#1	Device 3	678.00'	**2.000 in/hr Exfiltration over Surface area**
#2	Secondary	680.50'	**5.0' long + 3.0 '/' SideZ x 16.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Primary	675.50'	**12.0" Round Culvert** L= 28.0' Ke= 0.500 Inlet / Outlet Invert= 675.50' / 674.40' S= 0.0393 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#4	Device 3	679.70'	**30.0" x 30.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=8.55 cfs @ 12.06 hrs HW=681.11' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Inlet Controls 8.55 cfs @ 10.88 fps)
  └─**1=Exfiltration** (Passes < 0.55 cfs potential flow)
  └─**4=Orifice/Grate** (Passes < 35.69 cfs potential flow)

Secondary OutFlow Max=8.22 cfs @ 12.06 hrs HW=681.11' TW=0.00' (Dynamic Tailwater)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 8.22 cfs @ 1.99 fps)

Pond 3P: BIORETENTION #1



Stage-Discharge for Pond 3P: BIORETENTION #1

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
678.00	0.00	0.00	0.00
678.05	0.01	0.01	0.00
678.10	0.01	0.01	0.00
678.15	0.01	0.01	0.00
678.20	0.01	0.01	0.00
678.25	0.01	0.01	0.00
678.30	0.01	0.01	0.00
678.35	0.01	0.01	0.00
678.40	0.01	0.01	0.00
678.45	0.02	0.02	0.00
678.50	0.02	0.02	0.00
678.55	0.02	0.02	0.00
678.60	0.02	0.02	0.00
678.65	0.02	0.02	0.00
678.70	0.02	0.02	0.00
678.75	0.02	0.02	0.00
678.80	0.02	0.02	0.00
678.85	0.02	0.02	0.00
678.90	0.02	0.02	0.00
678.95	0.02	0.02	0.00
679.00	0.37	0.37	0.00
679.05	0.38	0.38	0.00
679.10	0.38	0.38	0.00
679.15	0.39	0.39	0.00
679.20	0.39	0.39	0.00
679.25	0.39	0.39	0.00
679.30	0.40	0.40	0.00
679.35	0.40	0.40	0.00
679.40	0.40	0.40	0.00
679.45	0.41	0.41	0.00
679.50	0.41	0.41	0.00
679.55	0.41	0.41	0.00
679.60	0.42	0.42	0.00
679.65	0.42	0.42	0.00
679.70	0.43	0.43	0.00
679.75	0.80	0.80	0.00
679.80	1.47	1.47	0.00
679.85	2.34	2.34	0.00
679.90	3.37	3.37	0.00
679.95	4.53	4.53	0.00
680.00	5.82	5.82	0.00
680.05	7.23	7.23	0.00
680.10	7.66	7.66	0.00
680.15	7.70	7.70	0.00
680.20	7.75	7.75	0.00
680.25	7.80	7.80	0.00
680.30	7.84	7.84	0.00
680.35	7.89	7.89	0.00
680.40	7.93	7.93	0.00
680.45	7.98	7.98	0.00
680.50	8.02	8.02	0.00
680.55	8.22	8.07	0.15
680.60	8.55	8.11	0.44
680.65	8.99	8.15	0.83
680.70	9.51	8.20	1.31
680.75	10.12	8.24	1.88
680.80	10.81	8.29	2.53
680.85	11.59	8.33	3.26
680.90	12.44	8.37	4.07
680.95	13.37	8.41	4.96
681.00	14.37	8.46	5.92
681.05	15.46	8.50	6.96
681.10	16.62	8.54	8.08
681.15	17.81	8.58	9.23
681.20	19.07	8.62	10.45
681.25	20.39	8.66	11.73
681.30	21.78	8.71	13.07
681.35	23.30	8.75	14.55
681.40	24.90	8.79	16.11
681.45	26.57	8.83	17.75
681.50	**28.33**	**8.87**	**19.46**

Stage-Area-Storage for Pond 3P: BIORETENTION #1

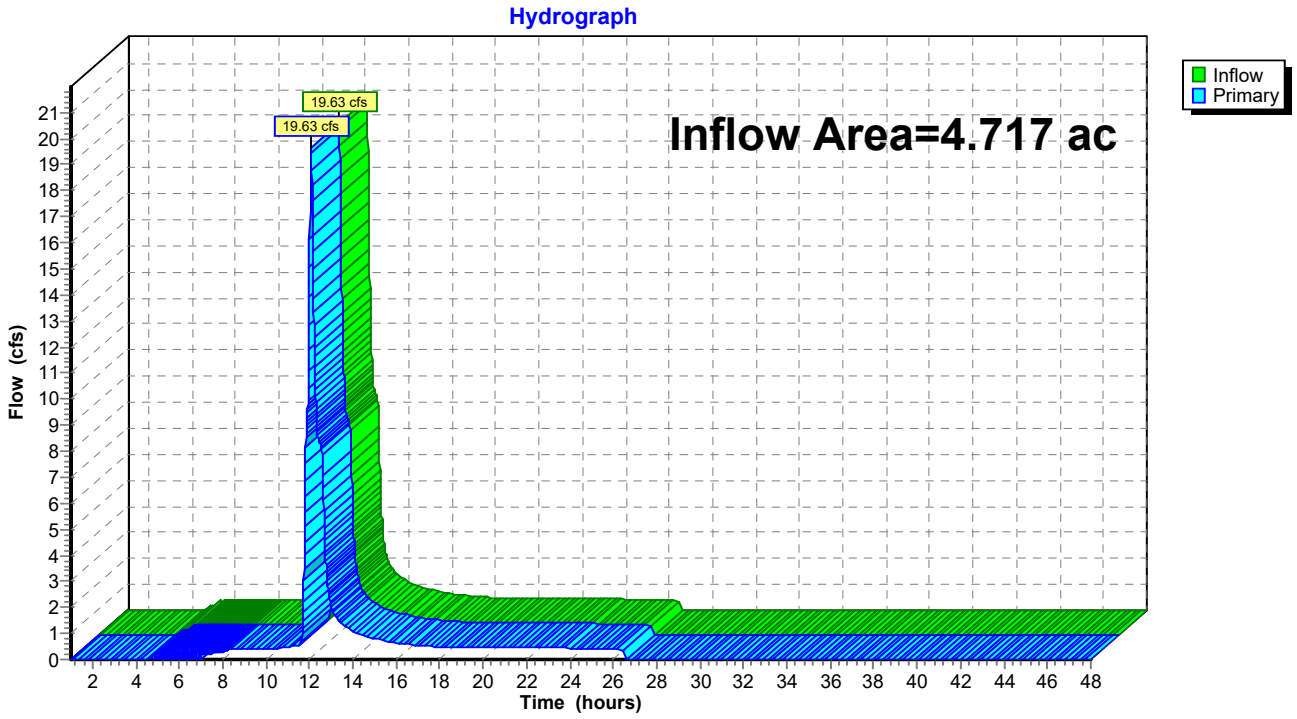
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
678.00	218	0
678.05	230	11
678.10	242	23
678.15	254	35
678.20	267	48
678.25	280	62
678.30	294	76
678.35	307	91
678.40	321	107
678.45	336	124
678.50	350	141
678.55	365	159
678.60	381	177
678.65	396	197
678.70	412	217
678.75	428	238
678.80	445	260
678.85	462	282
678.90	479	306
678.95	496	330
679.00	8,089	356
679.05	8,165	762
679.10	8,242	1,172
679.15	8,320	1,586
679.20	8,398	2,004
679.25	8,477	2,426
679.30	8,556	2,852
679.35	8,636	3,282
679.40	8,717	3,715
679.45	8,798	4,153
679.50	8,880	4,595
679.55	8,963	5,041
679.60	9,046	5,492
679.65	9,129	5,946
679.70	9,214	6,404
679.75	9,299	6,867
679.80	9,384	7,334
679.85	9,471	7,806
679.90	9,557	8,281
679.95	9,645	8,761
680.00	9,733	9,246
680.05	9,811	9,735
680.10	9,889	10,227
680.15	9,968	10,723
680.20	10,046	11,224
680.25	10,126	11,728
680.30	10,206	12,236
680.35	10,286	12,749
680.40	10,366	13,265
680.45	10,447	13,785
680.50	10,528	14,310
680.55	10,610	14,838
680.60	10,692	15,371
680.65	10,775	15,907
680.70	10,858	16,448
680.75	10,941	16,993
680.80	11,024	17,542
680.85	11,109	18,096
680.90	11,193	18,653
680.95	11,278	19,215
681.00	11,363	19,781
681.05	11,586	20,355
681.10	11,812	20,940
681.15	12,040	21,536
681.20	12,271	22,144
681.25	12,505	22,763
681.30	12,741	23,394
681.35	12,980	24,037
681.40	13,221	24,692
681.45	13,465	25,359
681.50	**13,712**	**26,039**

Summary for Link AP 1: ANALYSIS POINT 1

Inflow Area = 4.717 ac, 63.43% Impervious, Inflow Depth = 4.47" for 100-YEAR event
Inflow = 19.63 cfs @ 12.06 hrs, Volume= 1.756 af
Primary = 19.63 cfs @ 12.07 hrs, Volume= 1.756 af, Atten= 0%, Lag= 0.6 min
Routed to Link PR : PROPOSED

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link AP 1: ANALYSIS POINT 1

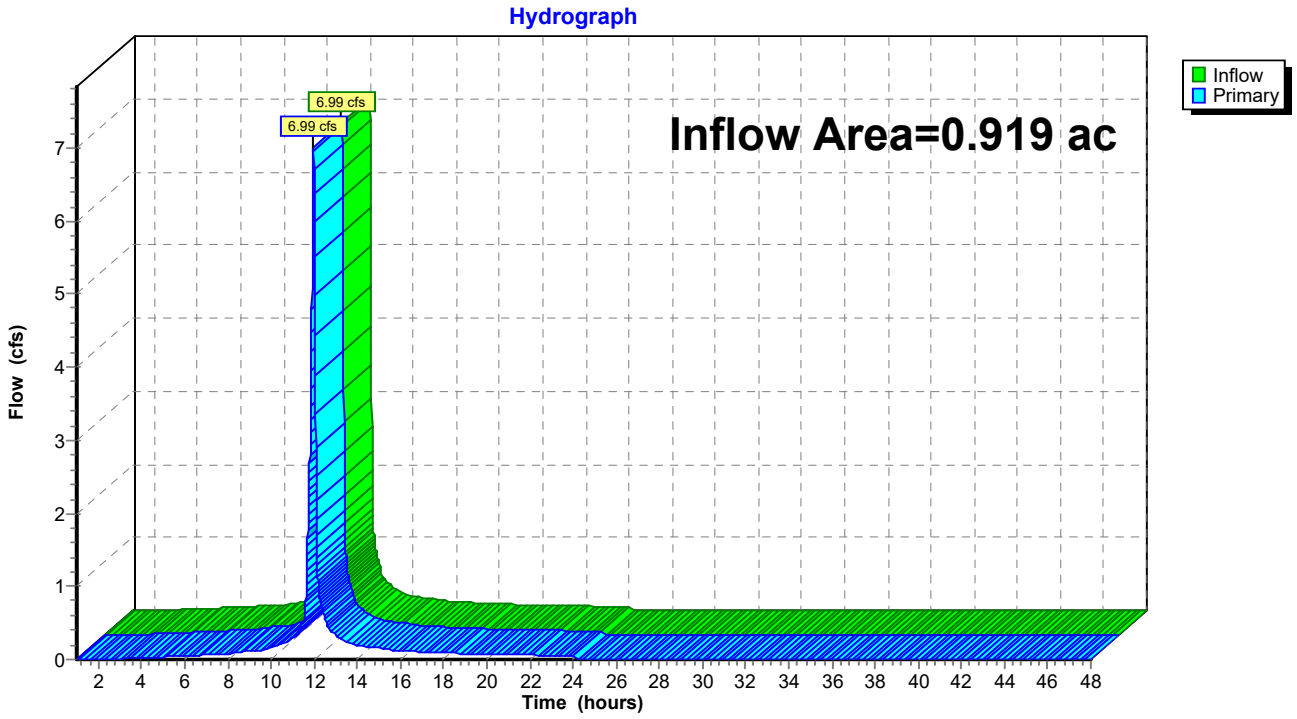


Summary for Link AP 2: ANALYSIS POINT 2

Inflow Area = 0.919 ac, 81.18% Impervious, Inflow Depth = 4.81" for 100-YEAR event
Inflow = 6.99 cfs @ 11.97 hrs, Volume= 0.368 af
Primary = 6.99 cfs @ 11.98 hrs, Volume= 0.368 af, Atten= 0%, Lag= 0.6 min
Routed to Link PR : PROPOSED

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link AP 2: ANALYSIS POINT 2

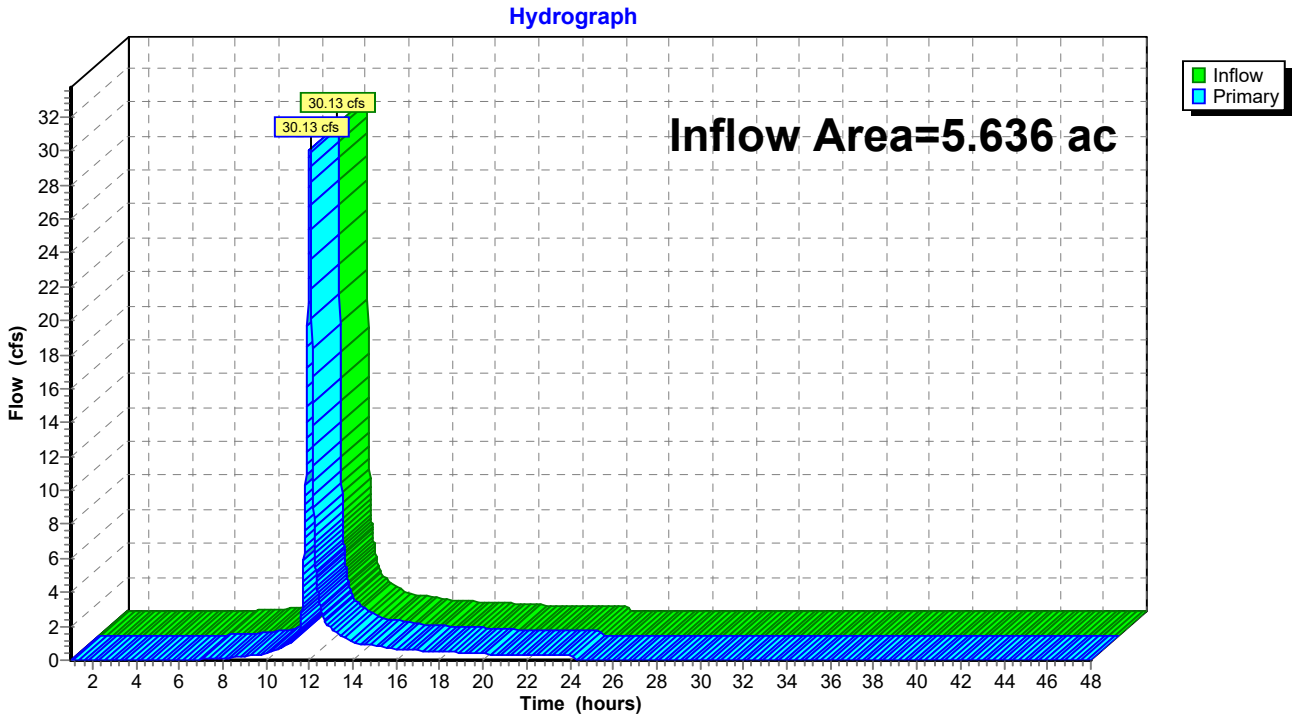


Summary for Link EX: EXISTING

Inflow Area = 5.636 ac, 31.28% Impervious, Inflow Depth = 3.50" for 100-YEAR event
Inflow = 30.13 cfs @ 12.01 hrs, Volume= 1.645 af
Primary = 30.13 cfs @ 12.02 hrs, Volume= 1.645 af, Atten= 0%, Lag= 0.6 min

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link EX: EXISTING

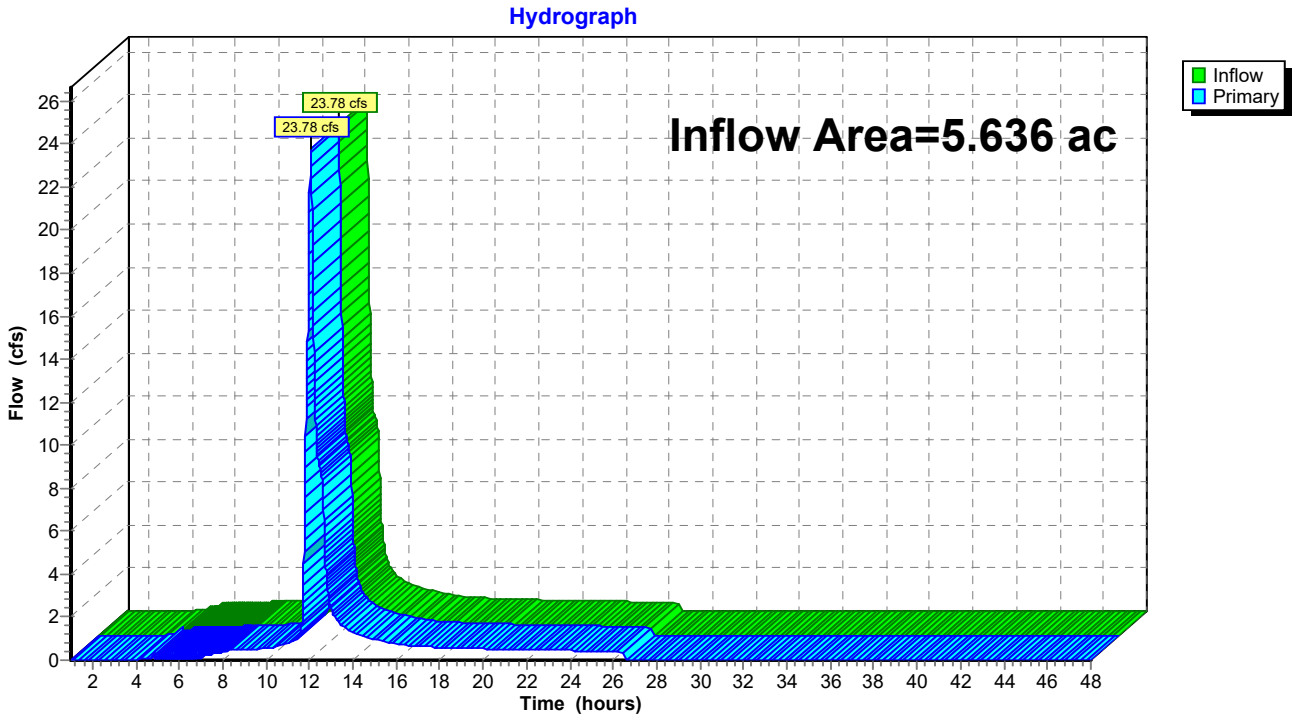


Summary for Link PR: PROPOSED

Inflow Area = 5.636 ac, 66.32% Impervious, Inflow Depth = 4.52" for 100-YEAR event
Inflow = 23.78 cfs @ 12.04 hrs, Volume= 2.125 af
Primary = 23.78 cfs @ 12.05 hrs, Volume= 2.125 af, Atten= 0%, Lag= 0.6 min

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link PR: PROPOSED



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APPENDIX J: WATER QUALITY CALCULATIONS

WQv Calculation for Redevelopment

Auburn Community Hospital Health Campus

Per Section 9.2B.II, the project contains both redevelopment and development. Therefore:

TOTAL WQv = (75% WQv of Existing, Disturbed Impervious Area) or (25% WQv of Existing, Disturbed Impervious Area with Green Infrastructure) + (WQv of the new development area) Or a weighted average per 9.2.1.B.IV

Total Site Area	**4.911**	acres	Reduction in impervious area	**-0.61**	acres
Total Pre Development Impervious Area	**2.045**	acres			X<0%, use calculations below
			Percent Reduction from existing	**-29.83%**	0%<X<25% use weighted average equation
Total Post Development Impervious Area	**2.655**	acres			X>25% WQv met, skip below calculations
New Impervious Area	**0.61**	acres	(if negative, see above IC Reduction)		
Redevelopment Impervious Area	**1.572**	acres	(Value of pre and post impervious area overlap)		
90% Rainfall Event	**1**	inch			

WQv Calculation for Redevelopment

Redevelopment Section				New Development Section			
WQv = P x Rv x A / 12				WQv = P x Rv x A / 12			
where:				where:			
P =	90% Rainfall Event Number	1.0	inch	P =	90% Rainfall Event Number	1.0	inch
Rv =	0.05 + (0.009 x I)	0.95		Rv =	0.05 + (0.009 x I)	0.214	
I =	Impervious Cover	100	%	I =	Impervious Cover	18.27	%
A =	Existing Disturbed Impervious Area	68,476	sf or	A =	Area of Development	145,447	sf or
		1.57	acres			3.34	acres
25% WQv of Existing, Disturbed Impervious Area		**0.031**	ac-ft or	WQv of the Development Area		**0.060**	ac-ft or
		1,355.3	cf			**2,598.9**	cf

Total WQv	**0.091 ac-ft or 3,954.2 cf**

RRv Calculation for Redevelopment

Redevelopment Section	New Development Section				
	RRv min = P x Rv x Aic x S / 12				
	where:				
	P =	90% Rainfall Event Number	1.0	inch	
	Rv =	0.05 + (0.009 x I)	0.950		
	I =	Impervious Cover	18.27	%	
	A =	Total Area of New Impervious Cover	145,447	sf or	
			0.61	acres	
	S =	HSG Specific Reduction Factor =			
Per Section 9.2B.II, RRv sizing criteria is not required for redevelopment		Soil Group	Acres	S	
		A		55%	
		B		40%	
		C	1.77	30%	
		D	3.14	20%	
		Weighted Avg	**0.24**		
	RRv min =		0.011	ac-ft or	
			496.5	cf	

#	NOI Question			
28	Total Water Quality (WQv) Required		0.091 ac-ft or	3,954 cf
30	Total RRv	**Filtration Bioretention**	0.091 ac-ft or	3,955 cf
31	Is RRv Provided ≥ WQv Required?		Yes	
32	Minimum RRv		0.011 ac-ft or	497 cf
32a	Is RRv Provided ≥ Minimum RRv Required?		Yes	
33a	Total WQv Treated		ac-ft or	cf
			ac-ft or	cf
		TOTAL	0.000 ac-ft or	- cf
34	Sum of Volume Reduced & Treated		0.091 ac-ft or	3,955 cf
35	Is Sum RRv Provided and WQv Provided ≥ WQv Required?		Yes	

Filtration Bioretention (F-5)

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
1	4.91	0.83	17	0.20	3,955	1.10	0

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	0	Underdrains required
Is the contributing area to the practice a stormwater hotspot?	No	
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?	No	
Is contributing area greater than max. contributing area?	No	
Enter depth to seasonal high water table (ft)	2	
Enter depth to bedrock (ft)	2	
Is pretreatment provided, in conformance with Section 6.4.3.1	Yes	
Enter average height of ponding (ft)	0.5	
Enter depth of surface layer (inches)	3	
Enter depth of filter media (ft)	2.5	
Enter depth of drainage layer (inches)	10	
Enter slope of maintenance access (%)	5	
Enter width of maintenance access (ft)	12	

Sizing Criteria				
		Value	Units	Notes
Permeability Flow Rate	k	1	ft/day	
Filter Time	tf	2	days	
Required Filter Area	Af	1648	sf	
Enter Provided Filter Area	Af	7575	sf	
Recalculated Water Quality Volume (based on provided filter area)	WQv calc	18180	cf	

Calculate Runoff Reduction			
RRv Provided	**3,955**	***cf***	
WQv Treated	0	cf	This is the portion of the WQv that is not reduced in the practice.

Compute Channel Protection Storage Volume		
Ia for Drainage Area		
Drainage Area	CN	Area (ac)
1	93.00	4.05
2	94.00	0.92
3	77.00	0.66
Weighted CN	91.28	
Corresponding Ia = (200/CN)-2		0.191
P, Precipitation, 1yr (in)		1.83
Ia/P		0.104
Tc for Drainage Area (hr)		0.10
From Exhibit 4-II, qu (csm/in)		1000
Figure 8.5, T = 24 hr, qo/qi		0.020
Vs/Vr		0.655
Q		1.04
Cpv Required (ac-ft)		**0.319**

Size of Secondary Orifice	RISER
Elevation of Secondary Orifice	679.7
CPv Provided (ac-ft)	0.408

APPENDIX K: NYSDEC SPEDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITY (PERMIT NO. GP-0-25-001)

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL
CONSERVATION (NYSDEC)

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-25-001

Construction General Permit (CGP)

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2025 Expiration Date: January 28, 2030

Scott E. Sheeley

Chief Permit Administrator

Scott E. Sheeley JAN. 29, 2025

Authorized Signature Date

Address: NYSDEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act (CWA), and 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), *stormwater discharges* from certain *construction activities* are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or by a state permit program. New York State administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7 and 8, and Article 70, as well as 6 NYCRR Parts 621 and 750.

C*onstruction activities* constitute construction of a *point source* and, therefore, pursuant to ECL sections 17-0505, 17-0701, and 17-0803, the *owner or operator* must have coverage under a SPDES permit prior to *commencement of construction activities*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES CONSTRUCTION GENERAL PERMIT (CGP) GP-0-25-001
FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part I. How to Obtain Coverage and General Requirements

To be covered under this permit, the *owner or operator* must meet all eligibility requirements in Part I.A. and follow the requirements for obtaining permit coverage in Part I.D., F., or G.

A. Eligibility Requirements

For a *common plan of development or sale*, the *phase(s)* that meet the eligibility requirements in Part I.A. may obtain coverage under this permit even if other *phase(s)* of the same *common plan of development or sale* do not meet the eligibility requirements and require an individual SPDES permit.

1. The *owner's or operator's construction activities* involve soil disturbances of:

    a. one or more acres; or

    b. less than one acre which are part of a *common plan of development or sale* that will ultimately disturb one or more acres; or

    c. less than one acre where NYSDEC has determined that a SPDES permit is required for *stormwater discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of pollutants to *surface waters of the State*.

        i. 5,000 square feet or more, but less than one acre, and are in the New York City Watershed located east of the Hudson River, Appendix C Figure 1; or

        ii. 20,000 square feet or more, but less than one acre, within the municipal boundaries of the City of New York (NYC); or

        iii. less than 20,000 square feet which are part of a *common plan of development or sale* that will ultimately disturb 20,000 square feet or more, but less than one acre, within the municipal boundaries of NYC; or

        iv. that creates 5,000 square feet or more of *impervious area* within the municipal boundaries of NYC.

2. *Discharges* from the *owner's or operator's construction activities* are/were not:

    a. already covered by a different SPDES permit; or

    b. covered under a different SPDES permit that was denied, terminated, or revoked; or

    c. identified in an expired individual SPDES permit that was not renewed; or

    d. required to obtain an individual SPDES permit or another general SPDES permit in accordance with Part VII.K.

3. If *construction activities* may adversely affect a species that is endangered or threatened, the *owner or operator* must obtain a:

    a. permit issued pursuant to 6 NYCRR Part 182 for the project; or

    b. letter issued by NYSDEC of non-jurisdiction pursuant to 6 NYCRR Part 182 for the project.

4. If *construction activities* have the potential to affect an *historic property*, the *owner or operator* must obtain one of the following:

    a. documentation that the *construction activity* is not within an archeological buffer area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:

        i. 1-5 acres of disturbance - 20 feet; or

        ii. 5-20 acres of disturbance - 50 feet; or

iii. 20+ acres of disturbance - 100 feet.

b. NYSDEC consultation form sent to OPRHP,[1] and copied to NYSDEC's Agency Historic Preservation Officer (APO), and

i. the State Environmental Quality Review Act (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or

ii. documentation from OPRHP that the *construction activity* will result in No Impact; or

iii. documentation from OPRHP providing a determination of No Adverse Impact; or

iv. a Letter of Resolution signed by the *owner or operator*, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA).

c. documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

i. No Affect; or

ii. No Adverse Affect; or

iii. Executed Memorandum of Agreement.

d. documentation that SHPA Section 14.09 has been completed by NYSDEC or another state agency.

5. If *construction activities* are subject to SEQR, the *owner or operator* must obtain documentation that SEQR has been satisfied.

6. If *construction activities* are not subject to SEQR, but subject to the equivalent environmental review from another New York State or federal agency, the

[1] The consultation form can be submitted, along with other project information, through OPRHP's Cultural Resource Information System (CRIS) portal. If submitted through CRIS, paper copies of the consultation form need not be mailed.

owner or operator must obtain documentation that project review, pursuant to a process equivalent to SEQR from another New York State or federal agency, has been satisfied.

7. If *construction activities* require Uniform Procedures Act (UPA) Permits (see 6 NYCRR Part 621) from NYSDEC, or the equivalent from another New York State or federal agency, the *owner or operator* must:

    a. obtain all such necessary permits; or

    b. receive notification from NYSDEC pursuant to 6 NYCRR 621.3(a)(4) excepting Part I.A.7.a.

8. *Construction activities* are not eligible if they meet the following criteria in Part I.A.8.a. or b.:

    a. For linear transportation and linear utility project types, the *construction activities*:

        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

        ii. are undertaken on land with no existing *impervious cover*; and

        iii. disturb two or more acres of *steep slope*.

    b. For all other project types, the *construction activities*:

        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

        ii. are undertaken on land with no existing *impervious cover*; and

        iii. disturb one or more acres of *steep slope*.

B. Types of *Discharges* Authorized

1. The following *stormwater discharges* are authorized under this permit:

   a. *Stormwater discharges*, including *stormwater* runoff, snowmelt runoff, and surface runoff and drainage, associated with *construction activity*, are authorized under this permit provided that appropriate *stormwater* controls are designed, installed, and maintained in accordance with Part II. and Part III.

   b. *Stormwater discharges* from construction support activities at the *construction site* (including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) if the following requirements are met:

      i. The support activity is directly related to the *construction site* required to have permit coverage for *stormwater discharges*; and

      ii. The support activity is not a commercial operation, nor does it serve multiple unrelated *construction sites*; and

      iii. The support activity does not continue to operate beyond the completion of the *construction activity* at the site it supports; and

      iv. *Stormwater* controls are implemented in accordance with Part II. and Part III. for *discharges* from the support activity areas.

2. The following non-*stormwater discharges* associated with *construction activity* are authorized under this permit:

   a. Non-*stormwater discharges* listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "*Discharges* from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; and

   b. Non-*stormwater discharges* of waters to which other components have not been added that are used in accordance with the *SWPPP* to control dust or irrigate vegetation in stabilized areas; and

   c. Uncontaminated *discharges* from *dewatering* operations

3. Authorized *discharges* of *stormwater* or authorized *discharges* of non-*stormwater*, commingled with a *discharge* authorized by a different SPDES permit and/or a *discharge* that does not require SPDES permit authorization, are also authorized under this permit.

C. Prohibited *Discharges*

1. Non-*stormwater discharges* prohibited under this permit include but are not limited to:

    a. Wastewater from washout of concrete; and

    b. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials; and

    c. Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance; and

    d. Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and

    e. Toxic or hazardous substances from a spill or other release.

D. Electronic Notice of Intent (eNOI) Submittal

To receive authorization in accordance with Part I.D.3.b., the *owner or operator* must submit a complete eNOI in accordance with the requirements in Part I.D. The eNOI contains questions to: ensure eligibility requirements in Part I.A. have been met; obtain *owner or operator* contact information; obtain the total area to be disturbed and the existing/future *impervious areas* (rounded to the nearest tenth of an acre); confirm *Traditional Land Use Control MS4 Operator* jurisdiction over construction projects; satisfy the EPA eRule requirements; confirm that the Water Quality-Based Effluent Limitations in Part II. have been met; demonstrate consideration of the future risks due to climate change in accordance with Part III.A.2.; and confirm that the other *Stormwater Pollution Prevention Plan (SWPPP)* requirements in Part III. have been met.

1. An eNOI may be submitted for:

    a. *construction activities* that are not part of a *common plan of development or sale*; or

b. an entire *common plan of development or sale*; or

c. separate *phase(s)* of a *common plan of development or sale* if the following requirements are met:

    i. the *common plan of development or sale* meets the eligibility requirements of Part I.A.5. or 6.; and

    ii. the *phase(s)* meet(s) all other eligibility requirements of Part I.A.; and

    iii. Part III.C. Required *SWPPP* Components by Project Type is based on the *common plan of development or sale*, not the *phase(s)*; or

d. *tree clearing* that is associated with, or will support, a *renewable energy* generation, transmission, or storage project that meets Part I.A.5. and 6., if the *tree clearing*:

    i. meets all other eligibility requirements of Part I.A.; and

    ii. will occur in NYSDEC's Regions 3-9; and

    iii. is not within ¼ mile of a bat hibernaculum protected pursuant to 6 NYCRR Part 182; and

    iv. will occur between November 1st and March 31st.

2. As prerequisites for submitting an eNOI, the *owner or operator* must:

    a. prepare a *SWPPP* for Part I.D.1.a., b., c., or d. in accordance with Part III.; and

    b. based on the following criteria, upload the following signature forms signed in accordance with Part VII.J. to the eNOI prior to submission:

        i. for all eNOIs:

            1. the SWPPP Preparer Certification Form, Appendix F, signed by the *SWPPP* preparer; and

2. the Owner/Operator Certification Form, Appendix J, signed by the *owner or operator*; and

ii. if an eNOI includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that will *discharge* to the *MS4(s)*:

1. determine if the *Traditional Land Use Control MS4 Operator(s)* have review authority. A *Traditional Land Use Control MS4 Operator* does not have review authority where:

a. the *owner or operator* of the *construction activities* in Part I.D.2.b.ii. is the same entity as the *Traditional Land Use Control MS4 Operator* identified in Part I.D.2.b.ii.; or

b. there is a statute exempting the *owner or operator* from zoning review by the *Traditional Land Use Control MS4 Operator*; or

c. there is no such statute per Part I.D.2.b.ii.1.b., the *Traditional Land Use Control MS4 Operator* concludes, after public hearing, that it does not have zoning review authority in accordance with Legal Memorandum LU14 Updated January 2020 “Governmental Immunity from Zoning and Other Legislation”; and

2. if the *Traditional Land Use Control MS4 Operator(s)* have review authority, submit the *SWPPP* to the *Traditional Land Use Control MS4 Operator(s)* for review and have:

a. if outside the municipal boundaries of NYC: the MS4 SWPPP Acceptance Form, Appendix G, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.; or

b. if within the municipal boundaries of NYC: The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval Form, Appendix H, signed by the principal executive officer or ranking elected official from the Traditional Land Use Control MS4 Operator, or by a duly authorized representative of that person in accordance with Part VII.J.2.; and

3. if the *Traditional Land Use Control MS4 Operator* does not have review authority, have the MS4 No Jurisdiction Form, Appendix I, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.

3. Submitting an eNOI:

a. The *owner or operator* must submit a complete Notice of Intent electronically using a NYSDEC approved form.[2]

b. The *owner or operator* is authorized to *commence construction activity* as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.

i. If an eNOI is received for a *SWPPP* that deviates from one of the technical standards but demonstrates *equivalence* in accordance with Part III.B.1.a.ii. or Part III.B.2.b.ii., if the *SWPPP* includes *construction activities* that are not within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)*, and/or if the *SWPPP* includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that do not have review authority in accordance with Part I.D.2.b.ii.1., the authorization date indicated in the LOA will be 60 business days after the eNOI submission date.

[2] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

c. If *Traditional Land Use Control MS4 Operator(s)* have review authority in accordance with Part I.D.2.b.ii.2., the *owner or operator* must, within five business days of receipt of the LOA, send an electronic copy of the LOA to the *Traditional Land Use Control MS4 Operator(s)* with review authority.

E. General Requirements for *Owners or Operators* with Permit Coverage

1. As of the date the LOA is received, the *owner or operator* must make the eNOI, *SWPPP*, and LOA available for review and copying in accordance with the requirements in Part VII.H. When applicable, as of the date an updated LOA is received, the *owner or operator* must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.

2. The *owner or operator* must ensure compliance with all requirements of this permit and that the provisions of the *SWPPP*, including any changes made to the *SWPPP* in accordance with Part III.A.5., are properly implemented and maintained from the *commencement of construction activity* until:

   a. all areas of disturbance have achieved *final stabilization;* and

   b. the owner's or operator's coverage under this permit is terminated in accordance with Part V.A.5.a.

3. As of the date of the *commencement of construction activities* until Part I.E.2.a. and b. have been met, the *owner or operator* must maintain at the *construction site*, a copy of:

   a. all documentation necessary to demonstrate eligibility with this permit; and

   b. this permit; and

   c. the *SWPPP*; and

   d. the signed SWPPP Preparer Certification Form; and

   e. the signed MS4 SWPPP Acceptance Form or signed NYCDEP SWPPP Acceptance/Approval Form or signed MS4 No Jurisdiction Form (when applicable); and

   f. the signed Owner/Operator Certification Form; and

g. the eNOI; and

h. the LOA; and

i. the LOA transmittal to the Traditional Land Use Control MS4 Operator in accordance with Part I.D.3.c. (when applicable).

4. The *owner or operator* must maintain at the *construction site*, until Part I.E.2.a. and b. have been met, as of the date the documents become final or are received, a copy of the:

   a. responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7.; and

   b. inspection reports in accordance with Part IV.C.4. and 6.; and

   c. Request to Disturb Greater Than Five Acres and the Authorization Letter to Disturb Greater Than Five Acres in accordance with Part I.E.6. (when applicable); and

   d. Request to Continue Coverage and the Letter of Continued Coverage (LOCC) in accordance with Part I.F.2. and 4. (when applicable); and

   e. The updated LOA(s) in accordance with Part I.E.9. (when applicable).

5. The *owner or operator* must maintain the documents in Part I.E.3. and 4. in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the *owner or operator* must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.

6. The *owner or operator* must meet the following requirements prior to disturbing greater than five acres of soil at any one time:

   a. The *owner or operator* must submit a written Request to Disturb Greater Than Five Acres to:

i. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, if a *Traditional Land Use Control MS4 Operator* does not have review authority in accordance with Part I.D.2.b.ii.1.; or

ii. the *Traditional Land Use Control MS4 Operator*, if a *Traditional Land Use Control MS4 Operator* has review authority in accordance with Part I.D.2.b.ii.1.; or

iii. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, and each involved *Traditional Land Use Control MS4 Operator*, if the project spans multiple municipalities with more than one *Traditional Land Use Control MS4 Operator* involved with review authority in accordance with Part I.D.2.b.ii.1.

b. The written Request to Disturb Greater Than Five Acres must include:

i. The SPDES permit identification number (Permit ID); and

ii. Full technical justification demonstrating why alternative methods of construction that would result in five acres of soil disturbance or less at any one time are not feasible; and

iii. The phasing plan for the project and sequencing plans for all *phases* from the *SWPPP* in accordance with Part III.B.1.d.; and

iv. Plans with locations and details of erosion and sediment control practices such that the heightened concern for erosion when disturbing greater than five acres at one time has been addressed; and

v. Acknowledgment that "the *owner or operator* will comply with the requirements in Part IV.C.2.b."; and

vi. Acknowledgment that "the *owner or operator* will comply with the requirements in Part II.B.1.b."

c. The *owner or operator* must be in receipt of an Authorization Letter to Disturb Greater Than Five Acres, which will include when the

authorization begins and ends and indicate a maximum area (acres) of soil disturbance allowed at any one time, from:

i. NYSDEC, if Part I.E.6.a.i. or iii. apply; or

ii. the *Traditional Land Use Control MS4 Operator*, if Part I.E.6.a.ii. applies.

7. Upon a finding of significant non-compliance with the practices described in the *SWPPP* or violation of this permit, NYSDEC may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

8. If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE).[3] *Construction activity* shall not resume until written permission to do so has been received from the RWE.

9. To be authorized to implement modifications to the information previously submitted in the eNOI, the *owner or operator* must:

   a. notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI; and

   b. update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D.; and

   c. receive an updated LOA.

10. The eNOI, *SWPPP*, LOA, updated LOAs (when applicable), and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

[3] The Regional Water Manager where a DEC Region does not have a RWE.

F. Permit Coverage for *Discharges* Authorized Under GP-0-20-001

When applicable:

1. Upon the effective date of this permit, an *owner or operator* of *a construction activity*, with coverage under GP-0-20-001, will have interim coverage under GP-0-25-001 for 45 calendar days starting on the effective date of GP-0-25-001 so long as the *owner or operator* maintains compliance with all applicable requirements of this permit.

2. Within 30 calendar days of the effective date of this permit, the *owner or operator*, with coverage under GP-0-20-001, must submit a complete Request to Continue Coverage electronically using a NYSDEC approved form,[4] which contains the information identified in Part I.F.3. below, if:

   a. the *owner or operator* continues to implement the SMP component in conformance with the technical standards in place at the time of initial project authorization; and

   b. the *owner or operator* will comply with all non-design requirements of GP-0-25-001.

3. The Request to Continue Coverage form contains questions to: ensure eligibility requirements in Part I.A. have been met; verify *owner or operator* contact information; verify the permit identification number; verify the original eNOI submission ID, if applicable; verify Part I.F.2.a. and b.; verify the version of the Design Manual that the technical/design components conform to; and receive an updated Owner/Operator Certification Form, Appendix I.

4. The *owner or operator* has obtained continued coverage under GP-0-25-001 as of the date indicated in the LOCC, which is sent by NYSDEC after a complete Request to Continue Coverage form is submitted.

5. If the owner or operator does not submit the Request to Continue Coverage form in accordance with Part I.F.2. and 3., coverage under this permit is automatically terminated after interim coverage expires.

[4] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

G. Change of *Owner or Operator*

When applicable:

1. When property ownership changes, or when there is a change in operational control over the construction plans and specifications, the following process applies:

    a. The new *owner or operator* must meet the applicable prerequisites for submitting an eNOI in accordance with Part I.D.2.; and

    b. The new *owner or operator* must submit an eNOI in accordance with Part I.D.3.; and

    c. Permit coverage for the new *owner or operator* will be effective upon receipt of the LOA in accordance with Part I.D.3.b.; and

    d. The new *owner or operator*, upon receipt of their LOA, must provide their Permit ID to the original *owner or operator*; and

    e. If the original *owner or operator* will no longer be the *owner or operator* of the *construction activity* identified in the original *owner's or operator's* eNOI, the original *owner or operator*, upon receipt of the new *owner's or operator's* Permit ID in accordance with Part I.G.1.d., must submit to NYSDEC a completed eNOT in accordance with Part V. that includes the name and Permit ID of the new *owner or operator*; or

    f. If the original *owner or operator* maintains ownership of a portion of the *construction activity*, the original *owner or operator* must maintain their coverage under the permit by modifying their eNOI; modifications to the eNOI must include:

        i. the revised area of disturbance and/or *impervious area(s)*; and

        ii. the revised SMP information, if applicable; and

        iii. a narrative description of what has changed; and

        iv. the new *owner's or operator's* Permit ID for the portion of the project removed from the eNOI.

    Owners or operators must follow Part I.E.9. to modify the eNOI.

Part II. Water Quality-Based Effluent Limitations

A. Maintaining Water Quality

NYSDEC expects that compliance with the requirements of this permit will control *discharge*s necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any *discharge* to either cause or contribute to a violation of the following *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York:

1. There must be no increase in turbidity that will cause a substantial visible contrast to natural conditions; and

2. There must be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There must be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the *stormwater discharge*s authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standard,* the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this permit and document in accordance with Part IV.C.4. of this permit. To address the *water quality standard* violation the *owner or operator* must include and implement appropriate controls in the *SWPPP* to correct the problem or obtain an individual SPDES permit.

If, despite compliance with the requirements of this permit, it is demonstrated that the *stormwater discharge*s authorized by this permit are causing or contributing to a violation of *water quality standards*, or if NYSDEC determines that a modification of this permit is necessary to prevent a violation of *water quality standards*, the authorized *discharge*s will no longer be eligible for coverage under this permit, and the *owner or operator* must obtain an individual SPDES permit prior to further *discharges* from the *construction site*.

B. Effluent Limitations Applicable to *Discharges* from *Construction Activities*

*Discharge*s authorized by this permit must achieve, at a minimum, the effluent limitations in Part II.B.1.a., b., c., d., and e. These limitations represent the

degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement, and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part II.B.1.a., b., c., d., and e. and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (BB), dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in *SWPPP* the reason(s) for the deviation, or alternative design, and provide information in the *SWPPP* demonstrating that the deviation or alternative design is *equivalent* to the technical standard.

    a. **Erosion and Sediment Controls.** At a minimum, erosion and sediment controls must be selected, designed, installed, implemented, and maintained to:

        i. *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharge*s; and

        ii. Control *stormwater discharge*s, including both peak flow rates and total *stormwater* volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points; and

        iii. *Minimize* the amount of soil exposed during *construction activity*; and

        iv. *Minimize* the disturbance of *steep slope*; and

        v. *Minimize* sediment *discharge*s from the site; and

        vi. Provide and maintain *natural buffers* around surface waters, direct *stormwater* to vegetated areas and maximize *stormwater* infiltration to reduce *pollutant discharge*s, unless *infeasible*; and

        vii. *Minimize* soil compaction. *Minimizing* soil compaction is not required

where the intended function of a specific area of the site dictates that it be compacted; and

viii. Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and

ix. *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of *pollutants* that could be discharged from the site.

b. **Soil Stabilization**. In areas where soil disturbance activity has ceased, whether permanently or *temporarily ceased*, the application of soil stabilization measures must be initiated by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. For *construction sites* that *directly discharge* to one of the 303(d) segments listed in Appendix D, or are located in one of the watersheds listed in Appendix C, or are authorized to disturb greater than five acres in accordance with Part I.E.5.a.viii., the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven calendar days from the date the soil disturbance activity ceased.

c. **Dewatering**. *Discharge*s from *dewatering* activities, including *discharge*s from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

d. **Pollution Prevention Measures**. Select, design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be selected, designed, installed, implemented, and maintained to:

i. *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. Soaps, detergents and solvents cannot be used; and

ii. *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation

and to *stormwater*. *Minimization* of exposure is not required in cases where the exposure to precipitation and to *stormwater* will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of *stormwater* contamination (such as final products and materials intended for outdoor use); and

iii. Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Surface Outlets.** When discharging from basins and impoundments, the surface outlets must be designed, constructed, and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-Construction Stormwater Management Practice (SMP) Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction SMPs, in accordance with Part III.C., must select, design, install, implement, and maintain the SMPs to meet the *performance criteria* in the New York State Stormwater Management Design Manual, dated July 31, 2024 (DM), using sound engineering judgment. Where SMPs are not designed in conformance with the *performance criteria* in the DM, the *owner or operator* must include in the *SWPPP* the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity*, that requires SMPs in accordance with Part III.C., must design the practices to meet the applicable *sizing criteria* in Part II.C.2.a., b., c., or d.

a. Sizing Criteria for *New Development*

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the total WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv must be calculated in accordance with the criteria in Section 4.2 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the requirements in Part II.C.2.a.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

   In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.4 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

   1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

   2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs without detention or velocity controls; or

   3. The site *directly discharges* into a fifth order or larger water body (stream, river, or lake), or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

b. *Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watersheds

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24-hour design storm over the post-developed watershed and must be calculated in accordance with the criteria in Section 4.3 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part II.C.2.b.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include

documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.5 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs; or

3. The site *directly discharges* to tidal waters, or a fifth order or larger water body (stream, river, or lake) where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

c. *Sizing Criteria* for *Redevelopment Activity*

i. Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* must be addressed by one of the following options, as outlined in Section 9.2.1. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C) must calculate the WQv in accordance with Section 4.3 of the DM. All other *redevelopment activities* must calculate the WQv in accordance with Section 4.2 of the DM.

1. Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the DM must be applied to all newly created pervious areas; or

2. Capture and treat 100% of the required WQv, for a minimum of 25% of the disturbed redevelopment *impervious area*, by implementation of standard SMPs or reduced by application of runoff reduction techniques; or

3. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a volume-based alternative SMP, as defined in Section 9.4 of the DM; or

4. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm; or

5. Application of a combination of 1 through 4 above that provide a weighted average of at least two of the above methods. Application of this method must be in accordance with the criteria in Section 9.2.1(A)(V) of the DM; or

6. If there is an existing SMP located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 through 5 above.

ii. Channel Protection Volume (CPv) is not required if there is 0% change to hydrology that increases the *discharge* rate and volume from the project site.

iii. *Overbank* Flood Control (Qp) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

iv. Extreme Flood Control (Qf) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

d. *Sizing Criteria* for Combination of *Redevelopment Activity* and *New Development*

Construction projects, that include both *new development* and *redevelopment activity*, must use SMPs that meet the *sizing criteria* calculated as an aggregate of the *sizing criteria* in Part II.C.2.a. or b. for the *new development* portion of the project and Part II.C.2.c. for the *redevelopment activity* portion of the project.

Part III. Stormwater Pollution Prevention Plan (SWPPP)

A. General *SWPPP* Requirements

1. A *SWPPP* must be prepared and implemented by the *owner or operator* of all *construction activity* covered by this permit. All authorized *discharges* must be identified in the *SWPPP*. The *SWPPP* must document the selection, design, installation, implementation and maintenance of the control measures and

practices that will be used to meet the effluent limitations in Part II.B. and, where applicable, the SMP requirements in Part II.C.

2. The *SWPPP* must demonstrate consideration in narrative format of the future physical risks due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490, and associated guidance.

    a. The owner or operator must consider:

        i. the following physical risks due to climate change:

            (i) increasing temperature; and

            (ii) increasing precipitation; and

            (iii) increasing variability in precipitation, including chance of drought; and

            (iv) increasing frequency and severity of flooding; and

            (v) rising sea level; and

            (vi) increasing storm surge; and

            (vii) shifting ecology.

        ii. for each of the following:

            (i) overall site planning; and

            (ii) location, elevation, and sizing of:

                a. control measures and practices; and

                b. conveyance system(s); and

                c. detention system(s).

3. The *SWPPP* must describe the erosion and sediment control practices and where required, SMPs that will be used and/or constructed to reduce the *pollutants* in *stormwater discharges* and to assure compliance with the

requirements of this permit. In addition, the *SWPPP* must identify potential sources of pollution which may reasonably be expected to affect the quality of *stormwater discharges*.

4. All *SWPPPs*, that require the SMP component in accordance with Part III.B.2., must be prepared by a *qualified professional*.

5. The *owner or operator* must keep the *SWPPP* current so that, at all times, it accurately documents the erosion and sediment control practices that are being used or will be used during construction, and all SMPs that will be constructed on the site. At a minimum, the *owner or operator* must modify the *SWPPP*, including construction drawings:

   a. whenever the current provisions prove to be ineffective in *minimizing pollutants* in *stormwater discharges* from the site; and

   b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*; and

   c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* NYSDEC, or other regulatory authority; and

   d. to document the final construction conditions in an as-built drawing.

6. NYSDEC may notify the *owner or operator* at any time that the *SWPPP* does not meet one or more of the minimum requirements of this permit. The notification must be in writing and identify the provisions of the *SWPPP* that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by NYSDEC, the *owner or operator* must make the required changes to the *SWPPP* and submit written notification to NYSDEC that the changes have been made. If the *owner or operator* does not respond to NYSDEC's comments in the specified time frame, NYSDEC may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4.

7. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion and sediment control practices included in the *SWPPP* and the

contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the *SWPPP*. The *owner or operator* must have each of the contractors and subcontractors identify at least one person from their company to be *trained contractor* that will be responsible for implementation of the *SWPPP*. The *owner or operator* must ensure that at least one *trained contractor* is on site daily when soil disturbance activities are being performed.

The *owner or operator* must have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before the *commencement of construction activities*:

> "I hereby certify under penalty of law that I understand and agree to comply with the requirements of the *SWPPP* and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the *SWPPP* that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for *SWPPP* implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* must attach the certification statement(s) to the copy of the *SWPPP* that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the *SWPPP* after the *commencement of construction activities*, they must also sign the certification statement and provide the information listed above prior to performing *construction activities*.

B. Required *SWPPP* Contents

1. Erosion and sediment control component - The *owner or operator* must prepare a *SWPPP* that includes erosion and sediment control practices.

    a. Erosion and sediment control practices must be designed:

        i. in conformance with the BB; or

        ii. *equivalent* to the BB if deviating from Part III.B.1.a.i.

    b. If the erosion and sediment control practices are designed in conformance with Part III.B.1.a.ii., the *SWPPP* must include a demonstration of *equivalence* to the BB.

    c. At a minimum, the erosion and sediment control component of the *SWPPP* must include the following:

        i. Background information about the scope of the project, including the location, type and size of project; and

        ii. A site map/construction drawing(s) with north arrows for the project, including a general location map. At a minimum, the site map must show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the *stormwater discharge*(s) and receiving surface water(s); and

        iii. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG); and

        iv. A phasing plan for the project and sequencing plans for all *phases*, both of which must address clearing and grubbing, excavation and grading, utility and infrastructure installation, *final stabilization*,

and any other *construction activity* at the site that will result in soil disturbance.

1. The phasing plan must include:

    a. a map delineating and labeling the limits of soil disturbance for all *phases* of a project; and

    b. a table identifying the order and intended schedule of when each *phase* will begin and end its sequencing plan. The table must identify the total disturbed area for each *phase* at any one time and the total disturbed area for the overall project at any one time all on one timeline showing all overlapping quantities of disturbed area at any one time; and

2. A sequencing plan for a specific *phase* must include:

    a. a table indicating the order and intended schedule of *construction activities* within a *phase*, and corresponding construction drawings with a description of the work to be performed; and

    b. all permanent and *temporary stabilization* measures; and

v. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented; and

vi. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice; and

vii. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any

temporary sediment basins and structural practices that will be used to divert flows from exposed soils; and

viii. A maintenance inspection schedule for the contractor(s) and subcontractor(s) identified in Part III.A.7. to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule must be in accordance with the requirements in the BB technical standard; and

ix. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the *stormwater discharges*; and

x. A description and location of any *stormwater discharges* associated with industrial activity other than construction at the site, including, but not limited to, *stormwater discharges* from asphalt plants and concrete plants located on the *construction site*; and

xi. Identification of any elements of the design that are not in conformance with the design criteria in the BB technical standard. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. SMP component – The *owner or operator* of *construction activity* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs.

   a. SMPs must be designed in conformance with the applicable *sizing criteria* in Part II.C.2.a., c., or d.; and

   b. SMPs must be designed in conformance with the *performance criteria*:

      i. in the DM; or

      ii. *equivalent* to the DM if deviating from Part III.B.2.b.i.; or

      iii. in the New York State Stormwater Management Design Manual, dated January 2015 (2015 Design Manual), or *equivalent* to it, if the following criteria are met:

1. The eNOI is submitted in accordance with Part I.D. before January 29, 2027 for *construction activities* that are either:

    a. subject to governmental review and approval:

        i. where the *owner or operator* made any application to that governmental entity prior to the effective date of this permit; and

        ii. such application included a *SWPPP* developed using the 2015 Design Manual or *equivalent* to it; or

    b. not subject to governmental review and approval:

        i. where a fiscal allocation for the *construction activities* has been developed and approved by a governmental entity; and

        ii. the *SWPPP* was developed using the 2015 Design Manual or *equivalent* to it; and

c. If SMPs are designed in conformance with Part III.B.2.b.ii., the *SWPPP* must include the reason(s) for the deviation or alternative design and a demonstration of *equivalence* to the DM; and

d. If SMPs are designed in conformance with Part III.B.2.b.iii., the *SWPPP* must include supporting information or documentation demonstrating that Part III.B.2.b.iii.1.a. or b. apply; and

e. The SMP component of the *SWPPP* must include the following:

    i. Identification of all SMPs to be constructed as part of the project, including which option the SMP designs conform to, either Part III.B.2.b.i., ii., or iii. Include the dimensions, material specifications and installation details for each SMP; and

    ii. A site map/construction drawing(s) showing the specific location and size of each SMP; and

iii. A Stormwater Modeling and Analysis Report that includes:

(i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points; and

(ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and SMPs; and

(iii) Results of *stormwater* modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre- and post-development runoff rates and volumes for the different storm events; and

(iv) Summary table, with supporting calculations, which demonstrates that each SMP has been designed in conformance with the *sizing criteria* included in the DM; and

(v) Identification of any *sizing criteria* that is not required based on the requirements included in Part II.C.; and

(vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the DM. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the DM.

iv. Soil testing results and locations (test pits, borings); and

v. Infiltration test results, when required in accordance with Part III.B.2.a.; and

vi. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each SMP. The plan must identify the entity

that will be responsible for the long-term operation and maintenance of each practice; and

3. Enhanced Phosphorus Removal Standards - The *owner or operator* of *construction activity* identified in Table 2 of Appendix B that is located in a watershed identified in Appendix C must prepare a *SWPPP* that includes SMPs designed in conformance with the applicable *sizing criteria* in Part II.C.2.b., c., or d. and the *performance criteria* Enhanced Phosphorus Removal Standards included in the DM. At a minimum, the SMP component of the *SWPPP* must meet the requirements of Part III.B.2.

C. Required *SWPPP* Components by Project Type

Owners or operators of *construction activities*, identified in Table 1 of Appendix B, are required to prepare a *SWPPP* that only includes erosion and sediment control practices designed in accordance with Part III.B.1. *Owners or operators* of the *construction activities*, identified in Table 2 of Appendix B, must prepare a *SWPPP* that also includes SMPs designed in accordance with Part III.B.2 or 3.

For the entire area of disturbance, including the entire *common plan of development or sale* if applicable, the owner or operator must evaluate every bullet from Appendix B Table 1 and Table 2 separately. If bullets from both Table 1 and Table 2 apply, the *SWPPP* must include erosion and sediment control practices for all *construction activities* but SMPs for only those portions of the *construction activities* that fall under Table 2 bullet(s).

Part IV. Inspection and Maintenance Requirements

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures), and all SMPs identified in the *SWPPP*, are inspected and maintained in accordance with Part IV.B. and C.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity*, identified in Tables 1 and 2 of Appendix B, must have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being

implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor must:

a. if the corrective action does not require engineering design:

    i. begin implementing corrective actions within one business day; and

    ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

    i. begin the engineering design process within five business days; and

    ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

2. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. The *trained contractor* must begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.

3. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational.

C. *Qualified Inspector* Inspection Requirements

1. With the exception of the following *construction activities* identified in Tables 1 and 2 of Appendix B, a *qualified inspector* must conduct site inspections for all other *construction activities* identified in Tables 1 and 2 of Appendix B:

    a. the construction of a single-family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than or equal to five (5) acres and is

not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

b. the construction of a single-family home that involves soil disturbances of one (1) or more acres but less than or equal to five (5) acres and is not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

c. construction on *agricultural property* that involves soil disturbances of one (1) or more acres but less than five (5) acres; and

d. *construction activities* located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances of 5,000 square feet or more, but less than one acre.

2. The *qualified inspector* must conduct site inspections in accordance with the following timetable:

a. For *construction sites* where soil disturbance activities are on-going, the *qualified inspector* must conduct a site inspection at least once every seven (7) calendar days; or

b. For *construction sites* where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part I.E.6. to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days; or

c. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* must conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas under the jurisdiction of a *Traditional Land Use Control MS4 Operator,* the *Traditional Land Use Control MS4 Operator* (provided the *Traditional Land Use Control MS4 Operator* is not the *owner or operator* of the *construction activity*) by hard copy or email prior to reducing the inspections to this frequency and again by hard copy or email prior to re-commencing construction; or

d. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the requirement to have the *qualified inspector* conduct inspections ceases if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1., the *Traditional Land Use Control MS4 Operator(s)* (provided the *Traditional Land Use Control MS4 Operator(s)* are not the *owners or operators* of the *construction activity*) in writing prior to the shutdown and again in writing prior to resuming *construction activity*. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* must terminate coverage by meeting the requirements of Part V; or

e. For *construction sites* involving soil disturbance of one (1) or more acres that *directly discharge* to one of the 303(d) segments listed in Appendix D or is located in one of the watersheds listed in Appendix C, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* must inspect:

   a. all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness; and

   b. all SMPs under construction to ensure that they are constructed in conformance with the *SWPPP*; and

   c. all areas of disturbance that have not achieved *final stabilization*; and

   d. all points of *discharge* to *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site*; and

   e. all points of *discharge* from the *construction site*.

4. The *qualified inspector* must prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report must include and/or address all of the following, for all *construction activities* except those listed in Part IV.C.1.:

   a. Permit identification number; and

   b. Date and time of inspection; and

   c. Name and title of person(s) performing inspection; and

   d. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and

   e. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This must include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and

   f. A description of the condition of all *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This must include identification of any *discharges* of sediment to the *surface waters of the State*; and

   g. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and

   h. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and

   i. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and

   j. Estimates, in square feet or acres, of the following areas:

i. Total area with active soil disturbance (not requiring either *temporary stabilization* or *final stabilization*); and

ii. Total area with inactive soil disturbance (requiring either *temporary stabilization* or *final stabilization*); and

iii. Total area that has achieved *temporary stabilization*; and

iv. Total area that has achieved *final stabilization*; and

k. Current stage of construction of all SMPs and identification of all *construction activity* on site that is not in conformance with the *SWPPP* and technical standards; and

l. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the SMP(s); and

m. Identification and status of all corrective actions that were required by previous inspection; and

n. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* must notify the *owner or operator*, and appropriate contractor or subcontractor identified in Part III.A.7., of any corrective actions that need to be taken. The contractor or subcontractor must:

a. if the corrective action does not require engineering design:

i. begin implementing corrective actions within one business day; and

ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

i. begin the engineering design process within five business days; and

ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

6. All inspection reports must be signed by the *qualified inspector.* In accordance with Part I.E.3., the inspection reports must be maintained on site with the *SWPPP*.

Part V. How to Terminate CGP Coverage

A. Electronic Notice of Termination (eNOT) Submittal

The eNOT contains questions to ensure requirements in Part V.A. have been met.

1. An *owner or operator* must terminate coverage when one or more of the following requirements have been met:

a. Total project completion:

i. all *construction activity* identified in the *SWPPP* has been completed; and

ii. all areas of disturbance have achieved *final stabilization*; and

iii. all temporary, structural erosion and sediment control measures have been removed; and

iv. all SMPs have been constructed in conformance with the *SWPPP* and are operational; and

v. an as-built drawing has been prepared; or

b. Planned shutdown with partial project completion:

   i. all soil disturbance activities have ceased; and

   ii. all areas disturbed as of the project shutdown date have achieved *final stabilization*; and

   iii. all temporary, structural erosion and sediment control measures have been removed; and

   iv. all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational; and

   v. an as-built drawing has been prepared; or

c. In accordance with Part I.G. Change of Owner or Operator; or

d. The *owner or operator* has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.

2. For *construction activities* that require *qualified inspector* inspections in accordance with Part IV.C.1. and have met Part V.A.1.a. or b., the *owner or operator* must have the *qualified inspector* perform a final site inspection prior to submitting the eNOT. The *qualified inspector* must, by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice(s)" certification statements on the eNOT, certify that all the requirements in Part V.A.1.a. or b. have been achieved.

3. For *construction activities* that are subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1. and meet Part V.A.1.a. or b., the *owner or operator* must have the *Traditional Land Use Control MS4 Operator(s)* sign the "MS4 Acceptance" statement on the eNOT in accordance with the requirements in Part VII.J. A *Traditional Land Use Control MS4 Operator* official, by signing this statement, determined that it is acceptable for the *owner or operator* to submit the eNOT in accordance with the requirements of this Part. A *Traditional Land Use Control MS4 Operator* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) when required in Part V.A.2.

4. For *construction activities* that require SMPs and meet Part V.A.1.a. or b., the *owner or operator* must, prior to submitting the eNOT, ensure one of the following:

    a. for SMP(s) that were constructed by a private entity, but will be owned, operated, and maintained by a public entity, the SMP(s) and any right-of-way(s) needed to operate and maintain such practice(s) have been deeded to the municipality in which the practice(s) is located; or

    b. for SMP(s) that are privately owned, but will be operated and maintained by a public entity, an executed operation and maintenance agreement is in place with the municipality that will operate and maintain the SMP(s); or

    c. for SMP(s) that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record; or

    d. for SMP(s) that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility, the *owner or operator* has policies and procedures in place that ensure operation and maintenance of the practices in accordance with the operation and maintenance plan.

5. An *owner or operator* that has met the requirements of Part V.A.1., 2., 3., and 4. must request termination of coverage under this permit by submitting a complete Notice of Termination form electronically using a NYSDEC approved form.[5]

    a. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

[5] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

Part VI. Record Retention and Reporting

A. Record Retention

The *owner or operator* must retain a copy of the documents listed in Part I.E.3. and a copy of the LOT for a period of at least five years from the date that NYSDEC accepts a complete NOT submitted in accordance with Part V.

B. Reporting

Except for the eNOI, the signature forms associated with the eNOI, and the eNOT, all other written correspondence requested by NYSDEC, including individual permit applications, must be sent to the address of the appropriate DOW (SPDES) Program contact at the Regional Office listed in Appendix E.

Part VII. Standard Permit Requirements

For the purposes of this permit, examples of contractors and subcontractors include: third-party maintenance and construction contractors.

A. Duty to Comply

The *owner or operator*, and all contractors or subcontractors, must comply with all requirements of this permit. Any non-compliance with the requirements of this permit constitutes a violation of the New York State Environmental Conservation Law (ECL), and its implementing regulations, and is grounds for enforcement action. Filing of a request for termination of coverage under this permit, or a notification of planned changes or anticipated non-compliance, does not limit, diminish or stay compliance with any requirements of this permit.

B. Need to Halt or Reduce Activity Not a Defense

The necessity to halt or reduce the *construction activity* regulated by this permit, in order to maintain compliance with the requirements of this permit, must not be a defense in an enforcement action.

C. Penalties

There are substantial criminal, civil, and administrative penalties associated with violating the requirements of this permit. Fines of up to $37,500 per day for each

violation and imprisonment for up to 15 years may be assessed depending upon the nature and degree of the offense.

D. False Statements

Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance must, upon conviction, be punished in accordance with ECL §71-1933 and or New York State Penal Law Articles 175 and 210.

E. Re-Opener Clause

Upon issuance of this permit, a determination has been made on the basis of a submitted Notice of Intent, plans, or other available information, that compliance with the specified permit requirements will reasonably protect classified water use and assure compliance with applicable *water quality standards*. Satisfaction of the requirements of this permit notwithstanding, if operation pursuant to this permit causes or contributes to a condition in contravention of State *water quality standards* or guidance values, or if NYSDEC determines that a modification is necessary to prevent impairment of the best use of the waters or to assure maintenance of *water quality standards* or compliance with other provisions of ECL Article 17 or the Clean Water Act (CWA), or any regulations adopted pursuant thereto, NYSDEC may require such modification and the Commissioner may require abatement action to be taken by the *owner or operator* and may also prohibit such operation until the modification has been implemented.

F. Duty to Mitigate

The *owner or operator*, and its contractors and subcontractors, must take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

G. Requiring Another General Permit or Individual SPDES Permit

NYSDEC may require any *owner or operator* authorized to *discharge* in accordance with this permit to apply for and obtain an individual SPDES permit or apply for authorization to *discharge* in accordance with another general SPDES permit.

1. Cases where an individual SPDES permit or authorization to discharge in accordance with another general SPDES permit may be required include, but is not limited to the following:

a. the *owner or operator* is not in compliance with the conditions of this permit or does not meet the requirements for coverage under this permit; and

b. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of *pollutants* applicable to the *point source*; and

c. new effluent limitation guidelines or new source performance standards are promulgated that are applicable to *point sources* authorized to *discharge* in accordance with this permit; and

d. existing effluent limitation guidelines or new source performance standards that are applicable to *point sources* authorized to *discharge* in accordance with this permit are modified; and

e. a water quality management plan containing requirements applicable to such *point sources* is approved by NYSDEC; and

f. circumstances have changed since the time of the request to be covered so that the *owner or operator* is no longer appropriately controlled under this permit, or either a temporary or permanent reduction or elimination of the authorized *discharge* is necessary; and

g. the *discharge* is in violation of section 17-0501 of the ECL; and

h. the *discharge(s)* is a significant contributor of *pollutants*. In making this determination, NYSDEC may consider the following factors:

   i. the location of the *discharge(s)* with respect to *surface waters of the State*; and

   ii. the size of the *discharge(s)*; and

   iii. the quantity and nature of the *pollutants discharged* to *surface waters of the State*; and

   iv. other relevant factors including compliance with other provisions of ECL Article 17, or the CWA.

2. When NYSDEC requires any *owner or operator* authorized by this permit to apply for an individual SPDES permit as provided for in this subdivision, it must notify the *owner or operator* in writing that a permit application is required. This notice must include a brief statement of the reasons for this decision, an application

form, a statement setting a time for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from the *owner's or operator's* receipt of the notification letter, whereby the authorization to *discharge* under this permit must be terminated. NYSDEC may grant additional time upon demonstration, to the satisfaction of the RWE,[6] that additional time to apply for an alternative authorization is necessary or where NYSDEC has not provided a permit determination in accordance with 6 NYCRR Part 621.

3. When an individual SPDES permit is issued to an *owner or operator* authorized to *discharge* under this permit for the same *discharge(s)*, this permit authorization for *construction activities* authorized under the individual SPDES permit is automatically terminated on the effective date of the individual SPDES permit unless termination is earlier in accordance with 6 NYCRR Part 750.

H. Duty to Provide Information

The *owner or operator* must furnish to NYSDEC, within five business days, unless otherwise set forth by NYSDEC, any information that NYSDEC may request to determine whether cause exists to determine compliance with this permit or to determine whether cause exists for requiring an individual SPDES permit in accordance with 6 NYCRR 750-1.21(e) (see Part VII.G. Requiring Another General Permit or Individual Permit).

The *owner or operator* must make available to NYSDEC, for inspection and copying, or furnish to NYSDEC within 25 business days of receipt of a NYSDEC request for such information, any information retained in accordance with this permit.

Except for Part I.D.4. and 5. and Part I.G., the following applies: where the *owner or operator* becomes aware that it failed to submit any relevant facts on the Notice of Intent, or submitted incorrect information in a Notice of Intent or in any report to NYSDEC, the *owner or operator* must submit such facts or corrected information to NYSDEC within five business days.

I. Extension

In the event a new permit is not issued and effective prior to the expiration of this permit, and this permit is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, then the *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the requirements of this permit until a new permit is issued and effective.

[6] The Regional Water Manager where a DEC Region does not have a RWE.

J. Signatories and Certification

The Notice of Intent, Notice of Termination, and reports required by this permit must be signed as provided in 40 CFR §122.22.

1. All Notices of Intent and Notices of Termination must be signed as follows:

    a. For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

        (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

        (ii) the manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for Notice of Intent or Notice of Termination requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

        Note: NYSDEC does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR §122.22(a)(1)(i). NYSDEC will presume that these responsible corporate officers have the requisite authority to sign the Notice of Intent or Notice of Termination unless the corporation has notified NYSDEC to the contrary. Corporate procedures governing authority to sign a Notice of Intent or Notice of Termination may provide for assignment or delegation to applicable corporate positions under 40 CFR §122.22(a)(1)(ii) rather than to specific individuals.

    b. For a partnership or sole proprietorship. By a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

   1. the chief executive officer of the agency; or

   2. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. All reports required by this permit, and other information requested by NYSDEC, must be signed by a person described in Part VII.J.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Part VII.J.1. or using the Duly Authorized Form, found on the DEC website; and

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

   c. The written authorization is submitted to NYSDEC.

3. Changes to authorization. If an authorization under Part VII.J.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the *construction activity*, a new authorization satisfying the requirements of Part VII.J.2. must be submitted to NYSDEC prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under Part VII.J.1. or 2. must make the following certification:

   I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who

manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

5. Electronic reporting. If documents described in Part VII.J.1. or 2. are submitted electronically by or on behalf of the *construction activity* with coverage under this permit, any person providing the electronic signature for such documents must meet all relevant requirements of this section, and must ensure that all of the relevant requirements of 40 CFR Part 3 (including, in all cases, subpart D to Part 3) (Cross-Media Electronic Reporting) and 40 CFR Part 127 (NPDES Electronic Reporting Requirements) are met for that submission.

K. Inspection and Entry

The *owner or operator* must allow NYSDEC, the USEPA Regional Administrator, the applicable county health department, or any authorized representatives of those entities, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the *discharge*, upon the presentation of credentials and other documents as may be required by law, to:

1. enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the requirements of this permit; and

2. have access to and copy at reasonable times, any records that must be kept under the requirements of this permit, including records required to be maintained for purposes of operation and maintenance; and

3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. sample or monitor at reasonable times, for the purposes of assuring general SPDES permit compliance or as otherwise authorized by the CWA or ECL, any substances or parameters at any location; and

5. enter upon the property of any contributor to the regulated facility or activity under authority of the *owner or operator*.

L. Confidentiality of Information

The following must not be held confidential: this permit, the fact sheet for this permit, the name and address of any *owner or operator*, effluent data, the Notice of Intent, and information regarding the need to obtain an individual permit or an alternative general SPDES permit. This includes information submitted on forms themselves and any attachments used to supply information required by the forms (except information submitted on usage of substances). Upon the request of the *owner or operator*, NYSDEC must make determinations of confidentiality in accordance with 6 NYCRR Part 616, except as set forth in the previous sentence. Any information accorded confidential status must be disclosed to the Regional Administrator upon his or her written request. Prior to disclosing such information to the Regional Administrator, NYSDEC will notify the Regional Administrator of the confidential status of such information.

M. Other Permits May Be Required

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

N. NYSDEC Orders or Civil Decrees/Judgments

The issuance of this permit by the NYSDEC, and the coverage under this permit by the *owner or operator*, does not supersede, revoke, or rescind any existing order on consent or civil Decree/Judgment, or modification to any such documents or to any order issued by the Commissioner, or any of the terms, conditions, or requirements contained in such order or modification therefore, unless expressly noted.

O. Property Rights

Coverage under this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations, nor does it obviate the necessity of obtaining the assent of any other jurisdiction as required by law for the *discharge* authorized.

P. Compliance with Interstate Standards

If the *construction activity* covered by this permit originates within the jurisdiction of an interstate water pollution control agency, then the *construction activity* must also comply with any applicable effluent standards or *water quality standards* promulgated by that interstate agency and as set forth in this permit for such *construction activities*.

Q. Oil and Hazardous Substance Liability

Coverage under this permit does not affect the imposition of responsibilities upon, or the institution of any legal action against, the *owner or operator* under section 311 of the CWA, which must be in conformance with regulations promulgated pursuant to section 311 governing the applicability of section 311 of the CWA to *discharges* from facilities with *NPDES* permits, nor must such issuance preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties to which the *owner or operator* is or may be subject pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. section 9601 et seq. (CERCLA).

R. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, must not be affected thereby.

S. NYSDEC Approved Forms

The *owner or operator* must provide all relevant information that is requested by NYSDEC, and required by this permit, on all NYSDEC approved forms.

APPENDIX A – Abbreviations and Definitions

Abbreviations

APO – Agency Preservation Officer
BB – New York State Standards and Specifications for Erosion and Sediment Control (Blue Book), dated November 2016
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
CPv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DM – New York State Stormwater Management Design Manual (Design Manual), dated July 31, 2024
DOW – Division of Water
EAF – Environmental Assessment Form
ECL – chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law
EPA – U.S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NYC – The City of New York
NYCDEP – The City of New York Department of Environmental Protection
NYSDEC – The New York State Department of Environmental Conservation
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RR – Runoff Reduction
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SMP – Post-Construction Stormwater Management Practice
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit. If a word is not italicized in the permit, use its common definition.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023).

Alter Hydrology from Pre- to Post-Development Conditions – the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer System – a sewer system which conveys sewage and *stormwater* through a single pipe system to a publicly owned treatment works.

Commence (Commencement of) Construction Activities – the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the *SWPPP*. See definition for "*Construction Activity(ies)*" also.

Common Plan of Development or Sale – a contiguous area where multiple separate and distinct *construction activities* are occurring, or may occur, under one plan. The "common plan" of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQR) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating *construction activities* may occur on a specific plot. A *common plan of development or sale* is comprised of two or more *phases*.

Common plan of development or sale does not include separate and distinct *construction activities* that are occurring, or may occur, under one plan that are at least 1/4 mile apart provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Construction Activity(ies) – identified within 40 CFR 122.26(b)(14)(x), 122.26(b)(15)(i), and 122.26(b)(15)(ii), any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, mechanized logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal.

Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, which is excluded from the calculation of the soil disturbance for a project. Routine maintenance includes, but is not limited to:

- Re-grading of gravel roads or parking lots; and
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of the ditch; and
- Replacement of existing culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of a ditch; and
- Replacement of existing bridges that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity beneath the bridges; and
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch); and
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*; and
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material; and
- Long-term use of equipment storage areas at or near highway maintenance facilities; and
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*; and
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts; and
- Maintenance of ski trails including brush hog use and mowing; and
- Above ground snowmaking pipe replacement; and
- Replacement of existing utility poles; etc.

Construction Site – the land area where *construction activity(ies)* will occur. See also the definitions for "*Commence (Commencement of) Construction Activities"* and "*Common Plan of Development or Sale."*

Dewatering – the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Directly Discharge(s)(ing) (to a specific surface waterbody) – runoff flows from a *construction site* by overland flow and the first point of *discharge* is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system and the first point of *discharge* from the separate storm sewer system is the specific surface waterbody.

Discharge(s)(d) – any addition of any *pollutant* to waters of the State through an outlet or *point source*.

Embankment – an earthen or rock slope that supports a road/highway.

Equivalent (Equivalence) – the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization – all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other *equivalent* stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

Historic Property – any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) – all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and compacted gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – not technologically possible, or not economically practicable and achievable considering best industry practices.

Minimize(ing)(ation) – reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. owned or operated by a State, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, *stormwater*, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA, that *discharges* to *surface waters of the State*; and

2. designed or used for collecting or conveying *stormwater*; and

3. which is not a *combined sewer system*; and

4. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Natural Buffer(s) – an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – any land disturbance that does not meet the definition of *Redevelopment Activity* included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

Nonpoint Source(s) – any source of water pollution or *pollutants* which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank – flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator – the person, persons, or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit requirements.

Performance Criteria – the six performance criteria for each group of SMPs in Chapters 5 and 6 of the technical standard, New York State Stormwater Management Design Manual (DM), dated July 31, 2024. These include feasibility, conveyance, pretreatment, treatment, landscaping, and maintenance. It does not include the *Sizing Criteria* (i.e. WQv, RRv, CPv, Qp and Qf) in Part I.C.2. of the permit.

Phase – a defined area in which *construction activities* are occurring or will occur separate from other defined area(s).

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be *discharged*.

Pollutant(s) – dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast *discharged* into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq.

Qualified Inspector – a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder or other NYSDEC endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any SMPs that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional – a person that is knowledgeable in the principles and practices of *stormwater* management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other NYSDEC endorsed individual(s). Individuals preparing *SWPPPs* that require the SMP component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the *SWPPP* that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – the disturbance and reconstruction of existing *impervious area*, including *impervious areas* that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Renewable Energy – electricity or thermal energy generated by renewable energy systems through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.

Site Limitations – site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical *site limitations* include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of *site limitations* shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – the criteria included in Part I.C.2 of the permit that are used to size SMPs. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

Steep Slope – land area designated on the current United States Department of Agriculture (USDA) Soil Survey as Soil Slope Phase D, (provided the map unit name or description is inclusive of slopes greater than 25%), or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Stormwater – that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the State.

Streambank – the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – a project specific report, including construction drawings, that among other things: describes the *construction activity(ies)*, identifies the potential sources of pollution at the *construction site*; describes and shows the *stormwater* controls that will be used to control the *pollutants* (i.e. erosion and sediment controls; for many projects, includes SMPs); and identifies procedures the *owner or operator* will implement to comply with the requirements of the permit. See Part III of the permit for a complete description of the information that must be included in the *SWPPP*.

Surface Waters of the State – shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization – exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Load (TMDL) – the sum of the allowable loads of a single *pollutant* from all contributing point and *nonpoint source*s. It is a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet *water quality standards*, and an allocation of that amount to the *pollutant's* sources. A TMDL stipulates Waste Load Allocations (WLA) for *point source discharges*, Load Allocations (LA) for *nonpoint source*s, and a margin of safety (MOS).

Traditional Land Use Control MS4 Operator – a city, town, or village with land use control authority that is authorized to *discharge* under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Trained Contractor – an employee from the contracting (construction) company, identified in Part III.A.7., that has received four (4) hours of NYSDEC endorsed training

in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.7., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity).

The *trained contractor* is responsible for the day-to-day implementation of the *SWPPP*.

Tree Clearing – *construction activities* limited to felling and removal of trees.

Tree clearing does not include hand felling and leaving the trees in place with no support from mechanized equipment, which is not considered *construction activity* requiring coverage under this permit.

Water Quality Standard – such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities* that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single-family home not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions with 25% or less *impervious cover* at total site build-out and not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that include construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.

The following *construction activities* that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

- All construction activities located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

Within the municipal boundaries of NYC:

- Stand-alone road reconstruction, where the total soil disturbance from only that road construction, is less than one (1) acre of land.

The following *construction activities*:

- Installation of underground linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation, *stormwater* retrofits, stream restoration, and resiliency projects that reconstruct shoreline areas to address sea level rise
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an *impervious cover*
- Cross-country ski trails, walking/hiking trails, and mountain biking trails, including a de minimis parking lot (maximum 10 spaces total, sized for passenger cars) with 35 feet minimum preservation of undisturbed area downgradient from the parking lot
- Dam rehabilitation (the structure of the dam itself)
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are not part of residential, commercial, or institutional development;
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path, or walking path.

Table 1 (Continued)
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities*:

- Slope stabilization
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Vegetated open space (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) that do not *alter hydrology from pre- to post-development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions
- Demolition where vegetation will be established, and no *redevelopment activity* is planned[1]
- Installation or replacement of either an overhead electric transmission line or a ski lift tower that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*.
- Solar array field areas that have tables elevated off the ground, spaced one table width apart, do not *alter hydrology from pre- to post-development conditions*, and address water quality volume and runoff reduction volume by maintaining sheet flow on slopes less than 8%.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that do not include construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions.
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary *impervious areas* that will be restored to pre-construction conditions once the *construction activity* is complete (in this context, "temporary" means the *impervious area* will be in place for two years or less)
- Other *construction activities* that do not include the construction or reconstruction of *impervious area*, and do not *alter hydrology from pre- to post-development* conditions, and are not listed in Table 2.

1. If the site is redeveloped in the future, a new eNOI must be submitted.

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Single-family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family home that disturbs five (5) or more acres of land
- Single-family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of between 20,000 square feet and one (1) acre of land within the municipal boundaries of NYC with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single-family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a *common plan of development or sale* that will ultimately disturb five (5) or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Creation of 5,000 square feet or more of *impervious area* in the municipal boundaries of NYC
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) that involves soil disturbance greater than five acres.
- Structural agricultural conservation practices as identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023) that involves soil disturbance greater than five acres and include the construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
- Facility buildings, including ski lodges, restroom buildings, pumphouses, ski lift terminals, and maintenance and groomer garages
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills; including creation of landfills or capping landfills.
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTWs, water treatment plants, and water storage tanks
- Golf courses
- Office complexes

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Permanent laydown yards and equipment storage lots
- Playgrounds that include the construction or reconstruction of *impervious area*
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surfaces
- Road construction or reconstruction, outside the municipal boundaries of NYC
- Road construction within the municipal boundaries of NYC
- Stand-alone road reconstruction, within the municipal boundaries of NYC where the total soil disturbance from that road reconstruction involves soil disturbance of one (1) acre or more of land
- Parking lot construction or reconstruction (as with all Table 2 bullets, this includes parking lots constructed as part of the *construction activities* listed in Table 1, unless a Table 1 bullet specifies otherwise)
- Athletic fields (natural grass) that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations, and well drilling pads, surfaced with *impervious cover,* and constructed as part of an overhead electric transmission line, wind-power, cell tower, oil or gas well drilling, sewer or water main, ski lift, or other linear utility project
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of a residential, commercial or institutional development
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of highway construction or reconstruction
- Solar array field areas on slopes greater than 8% that cannot maintain sheet flow using management practices identified in the BB or the DM
- Solar array field areas on slopes less than 8% that will *alter the hydrology from pre- to post-development* conditions
- Solar array field areas with tables that are not elevated high enough to achieve *final stabilization* beneath the tables
- Traditional *impervious areas* associated with solar development (e.g. roads, buildings, transformers)
- Utility pads surfaced with *impervious cover*, including electric vehicle charging stations
- All other *construction activities* that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre- to post-development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of *construction activities* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs designed in conformance with the Enhanced Phosphorus Removal Standards included in the DM technical standard.

- Entire New York City Watershed located east of the Hudson River – Figure 1
- Onondaga Lake Watershed – Figure 2
- Greenwood Lake Watershed – Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

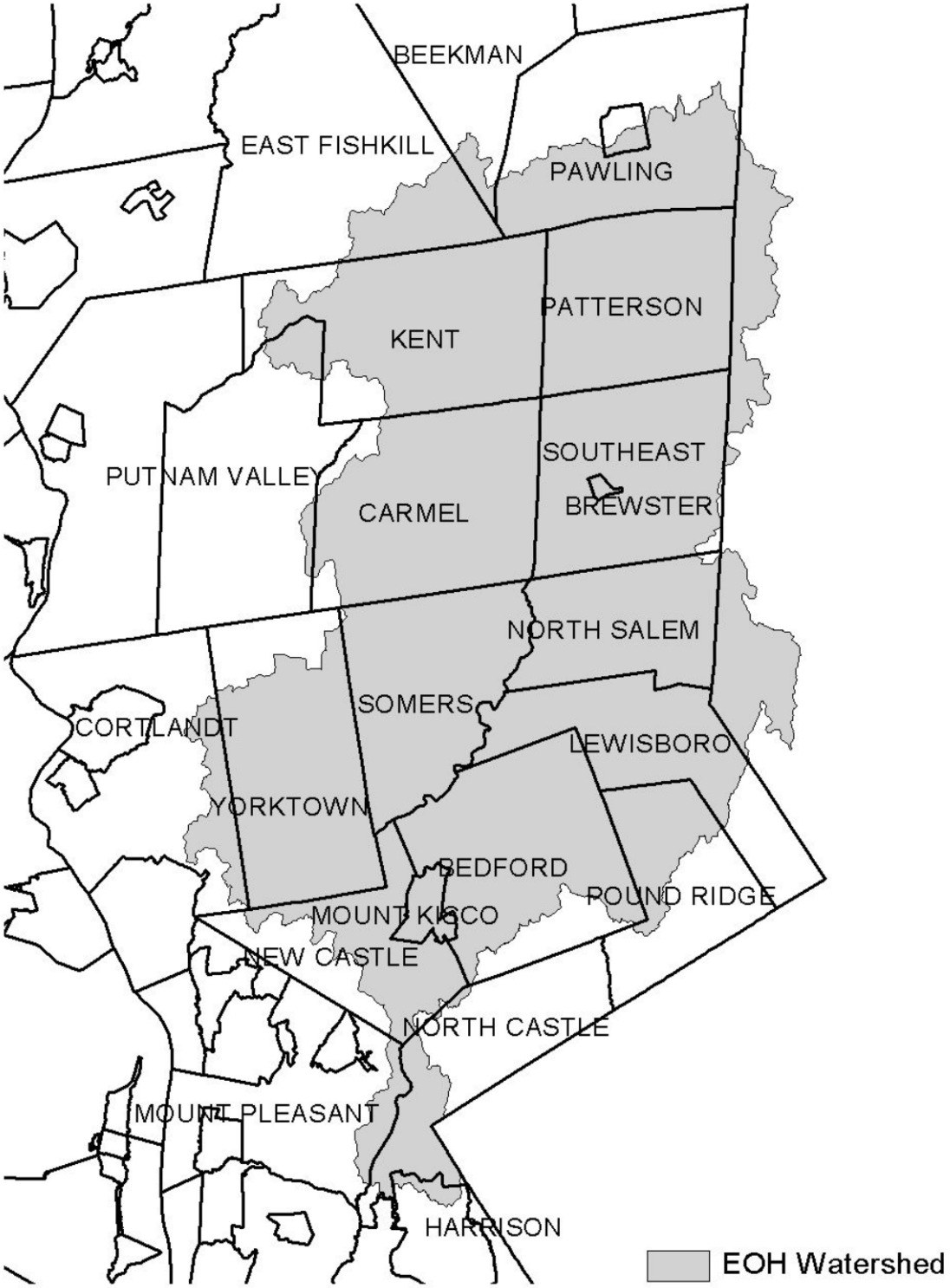


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

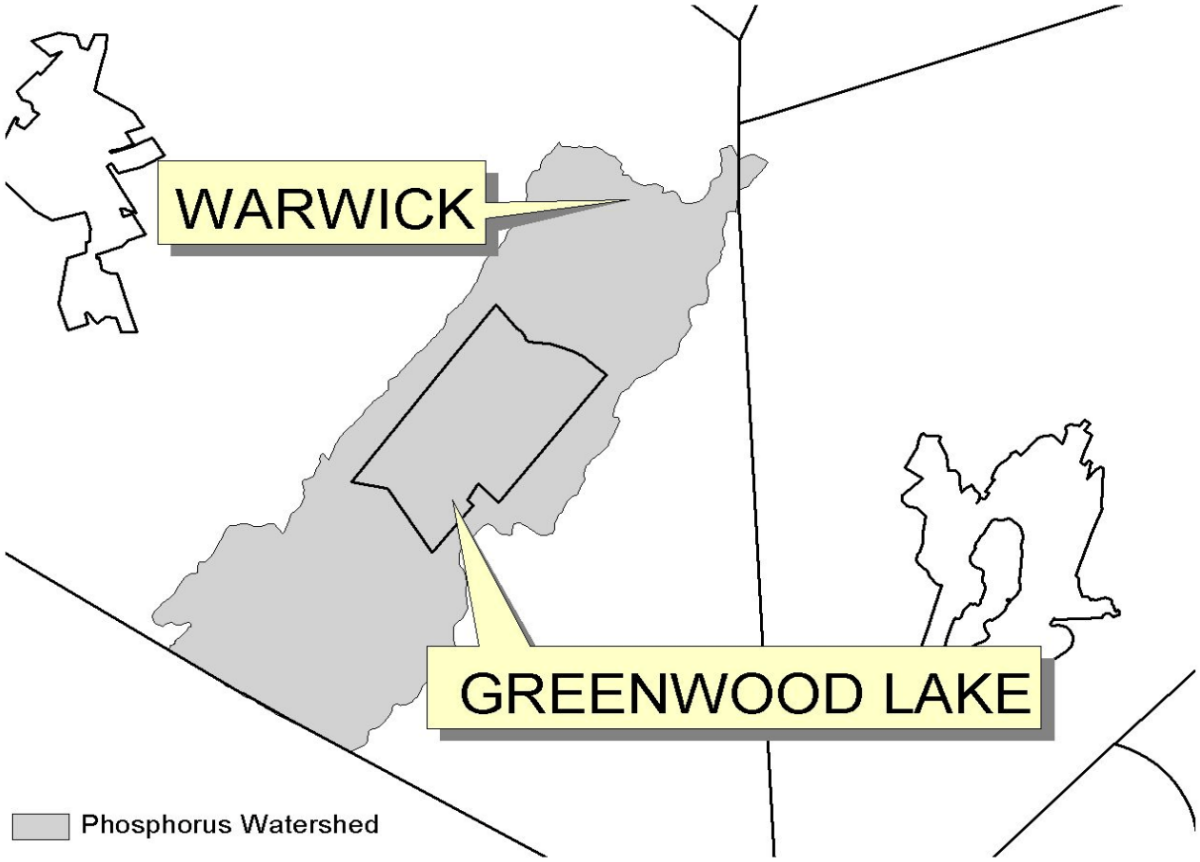


Figure 4 - Oscawana Lake Watershed

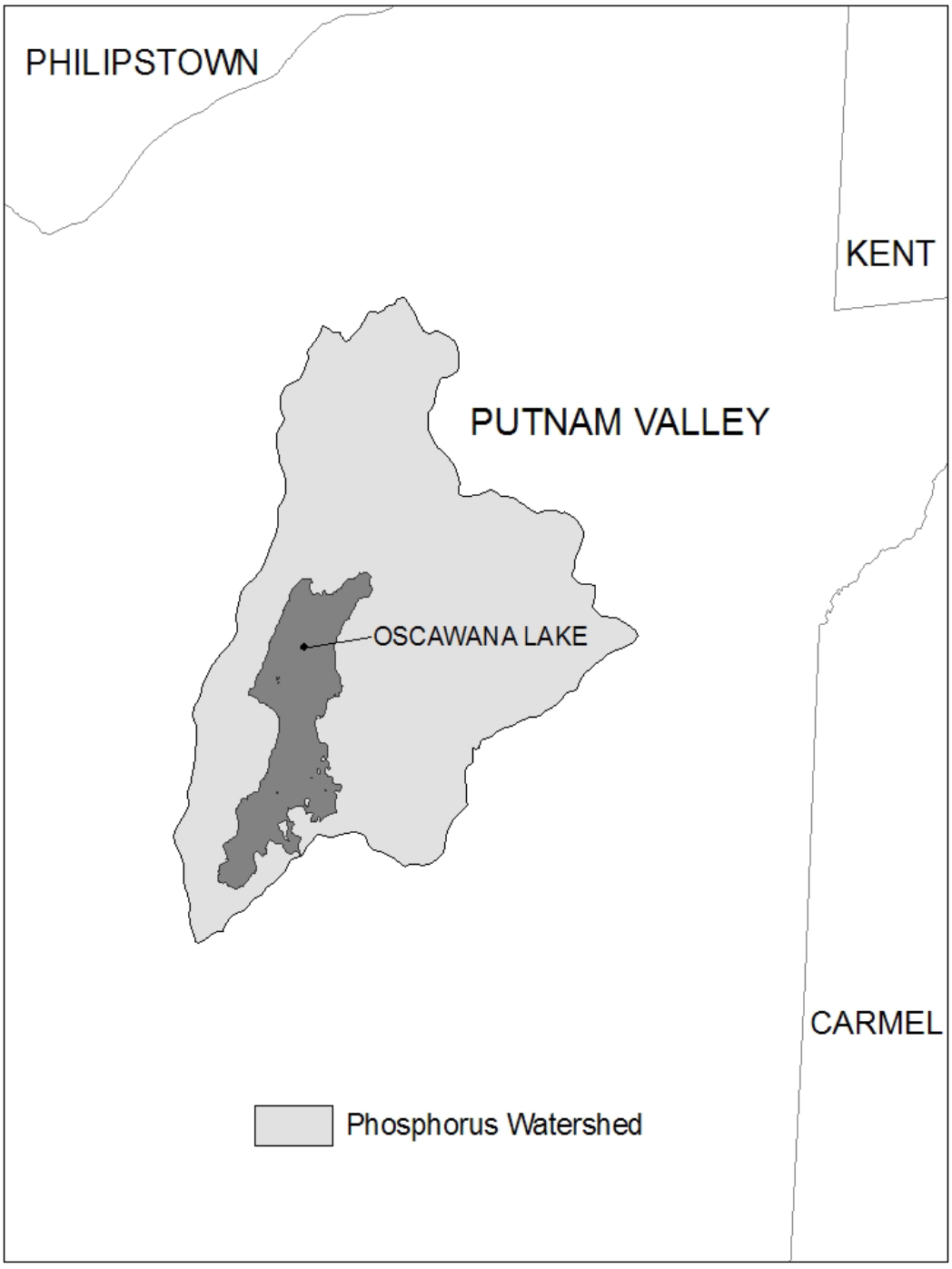
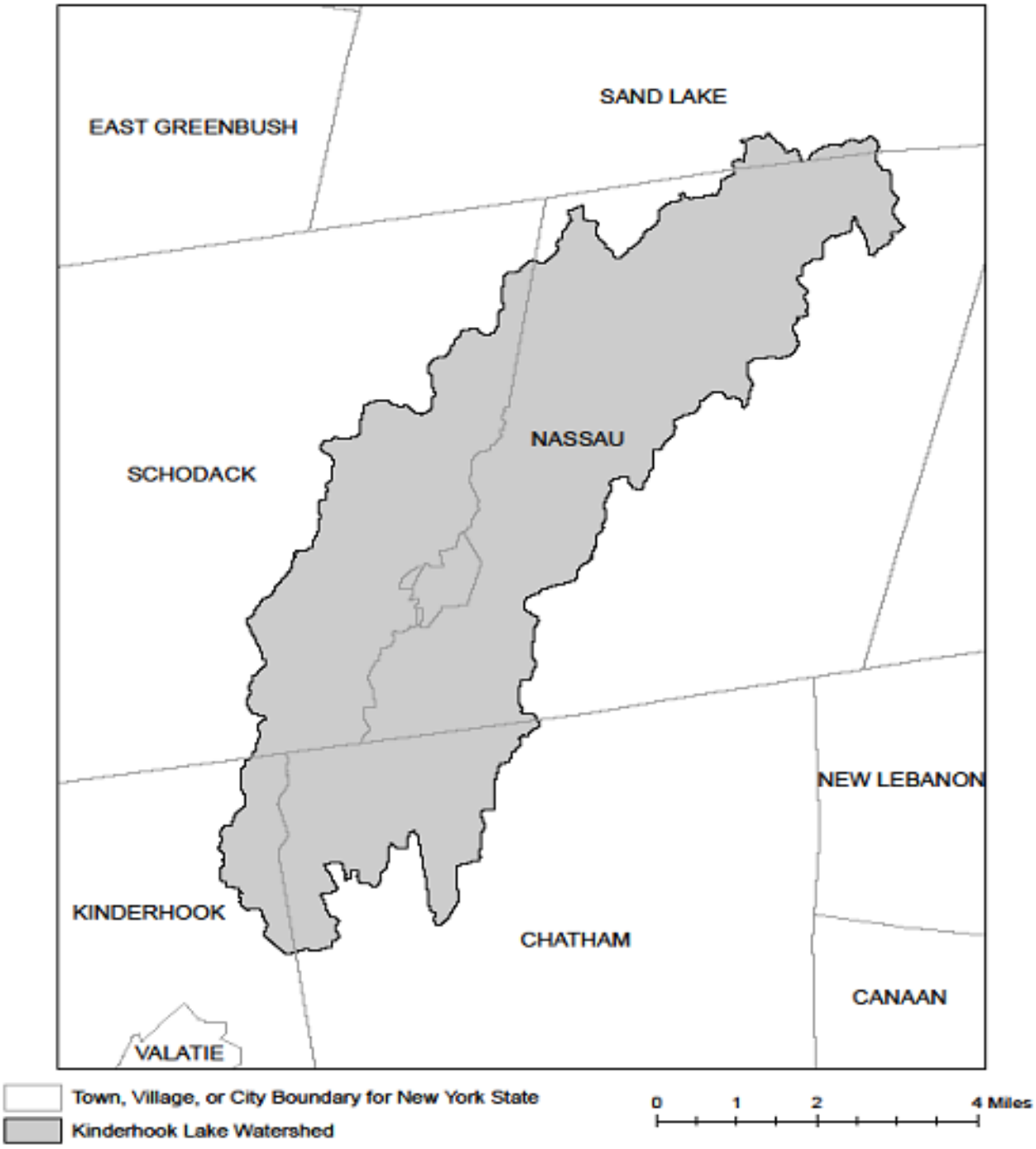


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants)

List of waterbodies impaired by *pollutants* related to *construction activity*, including turbidity, silt/sediment, and nutrients (e.g. nitrogen, phosphorus). This list is a subset of "The Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL" dated June 2020.

County	Waterbody	Pollutant
Albany	Ann Lee (Shakers) Pond, Stump Pond (1201-0096)	Phosphorus
Albany	Lawsons Lake (1301-0235)	Phosphorus
Allegany	Amity Lake, Saunders Pond (0403-0054)	Phosphorus
Allegany	Andover Pond (0403-0056)	Phosphorus
Bronx	Reservoir No.1/Lake Isle (1702-0075)	Phosphorus
Bronx	Van Cortlandt Lake (1702-0008)	Phosphorus
Broome	Blueberry, Laurel Lakes (1404-0033)	Phosphorus
Broome	Fly Pond, Deer Lake (1404-0038)	Phosphorus
Broome	Minor Tribs to Lower Susquehanna (0603-0044)	Phosphorus
Broome	Whitney Point Lake/Reservoir (0602-0004)	Phosphorus
Cattaraugus	Allegheny River/Reservoir (0201-0023)	Phosphorus
Cattaraugus	Beaver Lake/Alma Pond (0201-0073)	Phosphorus
Cattaraugus	Case Lake (0201-0020)	Phosphorus
Cattaraugus	Linlyco/Club Pond (0201-0035)	Phosphorus
Cayuga	Duck Lake (0704-0025)	Phosphorus
Cayuga	Owasco Inlet, Upper, and tribs (0706-0014)	Nutrients
Chautauqua	Chadakoin River and tribs (0202-0018)	Phosphorus
Chautauqua	Hulburt/Clymer Pond (0202-0079)	Phosphorus
Chautauqua	Middle Cassadaga Lake (0202-0002)	Phosphorus
Clinton	Great Chazy River, Lower, Main Stem (1002-0001)	Silt/Sediment
Columbia	Robinson Pond (1308-0003)	Phosphorus
Cortland	Dean Pond (0602-0077)	Phosphorus
Dutchess	Fallkill Creek (1301-0087)	Phosphorus
Dutchess	Hillside Lake (1304-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Silt/Sediment
Erie	Beeman Creek and tribs (0102-0030)	Phosphorus
Erie	Delaware Park Pond (0101-0026)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Silt/Sediment
Erie	Green Lake (0101-0038)	Phosphorus
Erie	Little Sister Creek, Lower, and tribs (0104-0045)	Phosphorus
Erie	Murder Creek, Lower, and tribs (0102-0031)	Phosphorus

Erie	Rush Creek and tribs (0104-0018)	Phosphorus
Erie	Scajaquada Creek, Lower, and tribs (0101-0023)	Phosphorus
Erie	Scajaquada Creek, Middle, and tribs (0101-0033)	Phosphorus
Erie	Scajaquada Creek, Upper, and tribs (0101-0034)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Silt/Sediment
Genesee	Bigelow Creek and tribs (0402-0016)	Phosphorus
Genesee	Black Creek, Middle, and minor tribs (0402 0028)	Phosphorus
Genesee	Black Creek, Upper, and minor tribs (0402-0048)	Phosphorus
Genesee	Bowen Brook and tribs (0102-0036)	Phosphorus
Genesee	LeRoy Reservoir (0402-0003)	Phosphorus
Genesee	Mill Pond (0402-0050)	Phosphorus
Genesee	Oak Orchard Cr, Upper, and tribs (0301-0014)	Phosphorus
Genesee	Oatka Creek, Middle, and minor tribs (0402-0031)	Phosphorus
Genessee	Tonawanda Cr, Middle, Main Stem (0102-0002)	Phosphorus
Greene	Schoharie Reservoir (1202-0012)	Silt/Sediment
Greene	Sleepy Hollow Lake (1301-0059)	Silt/Sediment
Herkimer	Steele Creek tribs (1201-0197)	Phosphorus
Herkimer	Steele Creek tribs (1201-0197)	Silt/Sediment
Kings	Hendrix Creek (1701-0006) 18	Nitrogen
Kings	Prospect Park Lake (1701-0196)	Phosphorus
Lewis	Mill Creek/South Branch, and tribs (0801-0200)	Nutrients
Livingston	Christie Creek and tribs (0402-0060)	Phosphorus
Livingston	Conesus Lake (0402-0004)	Phosphorus
Livingston	Mill Creek and minor tribs (0404-0011)	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs (0402-0033)	Phosphorus
Monroe	Buck Pond (0301-0017)	Phosphorus
Monroe	Cranberry Pond (0301-0016)	Phosphorus
Monroe	Durand, Eastman Lakes (0302-0037)	Phosphorus
Monroe	Lake Ontario Shoreline, Western (0301-0069) 9	Phosphorus
Monroe	Long Pond (0301-0015)	Phosphorus
Monroe	Mill Creek and tribs (0302-0025)	Phosphorus 2
Monroe	Mill Creek/Blue Pond Outlet and tribs (0402-0049)	Phosphorus
Monroe	Minor Tribs to Irondequoit Bay (0302-0038)	Phosphorus
Monroe	Rochester Embayment - East (0302-0002) [9]	Phosphorus
Monroe	Rochester Embayment - West (0301-0068) 9	Phosphorus
Monroe	Shipbuilders Creek and tribs (0302-0026)	Phosphorus 2
Monroe	Thomas Creek/White Brook and tribs (0302-0023)	Phosphorus

Nassau	Bannister Creek/Bay (1701-0380)	Nitrogen
Nassau	Beaver Lake (1702-0152)	Phosphorus
Nassau	Browswere Bay (1701-0383)	Nitrogen
Nassau	Camaans Pond (1701-0052)	Phosphorus
Nassau	East Meadow Brook, Upper, and tribs (1701-0211)	Silt/Sediment
Nassau	East Rockaway Channel (1701-0381)	Nitrogen
Nassau	Glen Cove Creek, Lower, and tribs (1702-0146)	Silt/Sediment
Nassau	Grant Park Pond (1701-0054)	Phosphorus
Nassau	Hempstead Bay, Broad Channel (1701-0032)	Nitrogen
Nassau	Hempstead Lake (1701-0015)	Phosphorus
Nassau	Hewlett Bay (1701-0382)	Nitrogen
Nassau	Hog Island Channel (1701-0220)	Nitrogen
Nassau	Massapequa Creek, Upper, and tribs (1701-0174)	Phosphorus
Nassau	Milburn/Parsonage Creeks, Upp, and tribs (1701-0212)	Phosphorus
Nassau	Reynolds Channel, East (1701-0215) [12]	Nitrogen
Nassau	Reynolds Channel, West (1701-0216) 12	Nitrogen
Nassau	Tidal Tribs to Hempstead Bay (1701-0218)	Nitrogen
Nassau	Tribs (fresh) to East Bay (1701-0204)	Silt/Sediment
Nassau	Tribs (fresh) to East Bay (1701-0204)	Phosphorus
Nassau	Tribs to Smith Pond/Halls Pond (1701-0221)	Phosphorus
Nassau	Woodmere Channel (1701-0219)	Nitrogen
New York	Harlem Meer (1702-0103)	Phosphorus
New York	The Lake in Central Park (1702-0105)	Phosphorus
Niagara	Bergholtz Creek and tribs (0101-0004)	Phosphorus
Niagara	Hyde Park Lake (0101-0030)	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0053) 9	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0072) 9	Phosphorus
Oneida	Ballou, Nail Creeks (1201-0203)	Phosphorus
Onondaga	Ley Creek and tribs (0702-0001) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nitrogen (NH3, NO2)
Onondaga	Onondaga Creek, Lower (0702-0023) 10	Nutrients (phosphorus)
Onondaga	Onondaga Creek, Lower, and tribs (0702-0023)	Turbidity
Onondaga	Onondaga Creek, Middle, and tribs (0702-0004)	Turbidity
Onondaga	Onondaga Creek, Upper, and tribs (0702-0024)	Turbidity
Ontario	Great Brook and minor tribs (0704-0034)	Phosphorus 2
Ontario	Great Brook and minor tribs (0704-0034)	Silt/Sediment

Ontario	Hemlock Lake Outlet and minor tribs (0402-0013)	Phosphorus
Ontario	Honeoye Lake (0402-0032)	Phosphorus
Orange	Brown Pond Reservoir (1303-0013)	Phosphorus
Orange	Lake Washington (1303-0012)	Phosphorus
Orange	Minor Tribs to Middle Wallkill (1306-0061)	Phosphorus
Orange	Monhagen Brook and tribs (1306-0074)	Phosphorus
Orange	Orange Lake (1301-0008) [16]	Phosphorus
Orange	Quaker Creek and tribs (1306-0025)	Phosphorus
Orange	Wallkill River, Middle, Main Stem (1306-0038)	Phosphorus
Orange	Wallkill River, Upper, and Minor tribs (1306-0017)	Phosphorus
Orleans	Glenvwood Lake (0301-0041)	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0070) 9	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0071) 9	Phosphorus
Oswego	Lake Neatahwanta (0701-0018)	Nutrients (phosphorus)
Oswego	Pleasant Lake (0703-0047)	Phosphorus
Putnam	Lost Lake, Putnam Lake (1302-0053)	Phosphorus
Putnam	Minor Tribs to Croton Falls Reservoir (1302-0001)	Phosphorus
Queens	Bergen Basin (1701-0009) 18	Nitrogen
Queens	Jamaica Bay, Eastern, and tribs, Queens (1701-0005) 18	Nitrogen
Queens	Kissena Lake (1702-0258)	Phosphorus
Queens	Meadow Lake (1702-0030)	Phosphorus
Queens	Shellbank Basin (1701-0001) 18	Nitrogen
Queens	Willow Lake (1702-0031)	Phosphorus
Rensselaer	Nassau Lake (1310-0001)	Phosphorus
Rensselaer	Snyders Lake (1301-0043)	Phosphorus
Richmond	Grassmere Lake/Bradys Pond (1701-0357)	Phosphorus
Rockland	Congers Lake, Swartout Lake (1501-0019)	Phosphorus
Rockland	Rockland Lake (1501-0021)	Phosphorus
Saratoga	Ballston Lake (1101-0036)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Silt/Sediment
Saratoga	Lake Lonely (1101-0034)	Phosphorus
Saratoga	Round Lake (1101-0060)	Phosphorus
Saratoga	Tribs to Lake Lonely (1101-0001)	Phosphorus
Schenectady	Collins Lake (1201-0077)	Phosphorus
Schenectady	Duane Lake (1311-0006)	Phosphorus
Schenectady Lake	Mariaville Lake (1201-0113)	Phosphorus
Schuyler	Cayuta Lake (0603-0005)	Phosphorus

Seneca	Reeder Creek and tribs (0705-0074)	Phosphorus
St.Lawrence	Black Lake Outlet, Black Lake (0906-0001)	Phosphorus
St.Lawrence	Fish Creek and minor tribs (0906-0026)	Phosphorus
Steuben	Smith Pond (0502-0012)	Phosphorus
Suffolk	Agawam Lake (1701-0117)	Phosphorus
Suffolk	Big/Little Fresh Ponds (1701-0125)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Silt/Sediment
Suffolk	Fresh Pond (1701-0241)	Phosphorus
Suffolk	Great South Bay, East (1701-0039)	Nitrogen
Suffolk	Great South Bay, Middle (1701-0040)	Nitrogen
Suffolk	Great South Bay, West (1701-0173)	Nitrogen
Suffolk	Lake Ronkonkoma (1701-0020)	Phosphorus
Suffolk	Mattituck/Marratooka Pond (1701-0129)	Phosphorus
Suffolk	Mill and Seven Ponds (1701-0113)	Phosphorus
Suffolk	Millers Pond (1702-0013)	Phosphorus
Suffolk	Moriches Bay, East (1701-0305)	Nitrogen
Suffolk	Moriches Bay, West (1701-0038)	Nitrogen
Suffolk	Quantuck Bay (1701-0042)	Nitrogen
Suffolk	Shinnecock Bay and Inlet (1701-0033)	Nitrogen
Suffolk	Tidal Tribs to West Moriches Bay (1701-0312)	Nitrogen
Sullivan	Bodine, Mongomery Lakes (1401-0091)	Phosphorus
Sullivan	Davies Lake (1402-0047)	Phosphorus
Sullivan	Evens Lake (1402-0004)	Phosphorus
Sullivan	Pleasure Lake (1402-0055)	Phosphorus
Sullivan	Swan Lake (1401-0063)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Silt/Sediment
Ulster	Ashokan Reservoir (1307-0004)	Silt/Sediment
Ulster	Esopus Creek, Lower, Main Stem (1307-0010) [17]	Turbidity
Ulster	Esopus Creek, Middle, Main Stem (1307-0003) 17	Turbidity
Ulster	Esopus Creek, Upper, and minor tribs (1307-0007)[3]	Silt/Sediment
Ulster	Wallkill River, Lower, Main Stem (1306-0027)	Phosphorus
Warren	Hague Brook and tribs (1006-0006)	Silt/Sediment
Warren	Huddle/Finkle Brooks and tribs (1006-0003)	Silt/Sediment
Warren	Indian Brook and tribs (1006-0002)	Silt/Sediment
Warren	Lake George (1006-0016) and tribs	Silt/Sediment
Warren	Tribs to Lake George, East Shore (1006-0020)	Silt/Sediment
Warren	Tribs to Lake George, Lk.George Village (1006-0008)	Silt/Sediment

Washington	Wood Cr/Champlain Canal and tribs (1005-0036)	Phosphorus
Westchester	Lake Katonah (1302-0136)	Phosphorus
Westchester	Lake Lincolndale (1302-0089)	Phosphorus
Westchester	Lake Meahagh (1301-0053)	Phosphorus
Westchester	Lake Mohegan (1301-0149)	Phosphorus
Westchester	Lake Shenorock (1302-0083)	Phosphorus
Westchester	Mamaroneck River, Lower (1702-0071)	Silt/Sediment
Westchester	Mamaroneck River, Upp, & minor tribs (1702-0123)	Silt/Sediment
Westchester	Saw Mill River (1301-0007)	Phosphorus
Westchester	Saw Mill River, Middle, and tribs (1301-0100)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Silt/Sedimnt
Westchester	Silver Lake (1702-0040)	Phosphorus
Westchester	Teatown Lake (1302-0150)	Phosphorus
Westchester	Truesdale Lake (1302-0054)	Phosphorus
Westchester	Wallace Pond (1301-0140)	Phosphorus

APPENDIX E – List of NYSDEC Regional Offices

Region	Covering the following counties:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) Permit Administrators	DIVISION OF WATER (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	220 White Plains Road, Suite 110 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7438	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7165	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7070

APPENDIX L: CONSTRUCTION SITE INSPECTION, WINTER SHUTDOWN AND SWPPP REVISION FORM

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION ACTIVITIES

Standardized Qualified Inspector Form

Project Name and Location of Project: _____ _____ _____ Municipality:_____ County: _____ Qualified Inspector: _____ Qualified Inspector Title:_____	Date:	Weather:
	Permit #: **NYR10**	
	Entry Time:	Exit Time:
5 Acre Waiver: □ Yes □ No Name of SPDES Permittee:_____ Phone: _____Fax:_____ Name of Representative on Site: _____		

Qualified Inspector's Credentials & Certification

Qualified Inspector (QI) means a person that is knowledgeable in the principles and practices of erosion and sediment control (ESC). A person is considered qualified under the following conditions:

1. A licensed Professional Engineer; licensed Landscape Architect with documented training and education in the principles and practices of ESC;
2. An individual certified in ESC by CPESC, Incorporated or any other agency endorsed by the NYS Department of Environmental Conservation Office of Water Resources;
3. An individual working under the direct supervision of a qualified licensed Professional Engineer or qualified licensed Landscape Architect with documented training and education in the principles and practices of ESC **and has** completed the four (4) hour training program in the principles and practices of erosion and sediment control from either a Soil and Water Conservation District, CPESC or any other agency endorsed by the NYS Department of Environmental Conservation Office of Water Resources. This initial training must be completed no later than May 1, 2010. After receiving the initial training, an individual working under the direct supervision of a qualified licensed Professional Engineer or qualified licensed Landscape Architect must complete four (4) hours of training every three (3) years.
4. Any other individual endorsed by the NYS Department of Environmental Conservation by written documentation.
5. Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.1

Part I. CONSTRUCTION DURATION INSPECTIONS **Page 2 of _____**

a. Important Site Notes for Contractor. Failure to maintain these requirements may be subject to fines at discretion of NYS Dept. of Environmental Conservation.

#1: Is the most recent SWPPP book & SWPPP Mailbox on site?
- Or located inside job trailer & easily accessible?

#2: Is the most recent SWPPP inspection(s) located in the mailbox or on site?

#3: If the site has a 5 acre waiver, is the phasing plan located on site?
-Is the contractor following the approved phasing plan?

LIST OF DEFICIENCES NOTED BY INSPECTOR:
-
-
-
-
-
-
-

CONTRACTOR TO REFER TO ATTACHED SKETCH DRAWING FOR LOCATIONS, AS WELL AS FOLLOWING SHEETS.

b. Other Permit Required Reporting

Maintaining Water Quality - *Attach Color Photographs of the site documenting discharge points and site conditions.*
Describe the condition of runoff at all points of discharge.
Is there an increase in turbidity causing a substantial visible contrast to natural conditions? _____
Is there residue from oil and floating substances, visible oil film, or globules or grease? _____
Is there evidence of silt deposition from project in a stream, wetland, or other water body? _____
If yes, where? _____remedial measure needed? _____
Provide a description of the conditions of all natural water bodies within or immediately adjacent to the project. _____

Area of Disturbance
Total area of disturbance (as shown on sketch plan and not including areas that have temporary or permanent stabilization measures applied) _____
Are all disturbances within the limits of the SWPPP? _____

Weather Conditions
A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
_____
_____

General Housekeeping
Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?_____
Is construction impacting the adjacent property? _____
Is dust adequately controlled?_____
Describe corrective action(s): _____
Date correction needed: _____

c. Runoff Controls *Direct runoff away from exposed soil surfaces and control water that falls onto the site*

Runoff conveyance systems ☐ N A
Are all runoff conveyance systems called for in the SWPPP installed, stabilized and working? _____
If not, what specific areas need detailing?_____
With minimum side slopes 2H:1V or flatter? _____ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring? _____Sediment-laden runoff directed to sediment trapping structure? _____
Describe corrective action(s): _____
Date correction needed: _____

Runoff Control Structures ☐ N A
Have all required runoff control structures (rock outlets and aprons) been installed and constructed per plan and according to the Blue Book?_____ Installed concurrently with pipe installation? _____
Describe corrective action(s): _____
Date correction needed: _____

Temporary Stream or Channel Crossing □ N A
Have construction crossings at concentrated flow areas been culverted?_____
Describe corrective action(s): _____
Date correction needed: _____

Stone Check Dam □ N A
Installed per standards? _____ channel stable (flow is not eroding soil underneath or around the structure). _____does sediment need to be removed? _____
Describe corrective action(s): _____
Date correction needed: _____

Excavation Dewatering □ N A
1. Flowing water □ N A – Upstream berm (sandbags, inflatable dams, etc. with one-foot minimum freeboard) and downstream berms are installed per plan? _____and functioning? (clean water from upstream pool is being pumped to the downstream pool)?
_____
2. Sediment laden water from work area □ N A - Is being discharged to a silt-trapping device? _____
3. Groundwater from excavations □ N A - is being managed properly (sumps and sediment control)? _____
Describe corrective action(s): _____
Date correction needed: _____

d. Soil Stabilization *Basic erosion control is achieved by covering all bare ground areas.*

Topsoil and Spoil Stockpiles □ N A
Stabilized - sediment controls at downhill slope? _____
Describe corrective action(s): _____
Date correction needed: _____

Revegetation/Stabilization □ N A
Has temporary or permanent seeding *and* mulch (as shown on site sketch plan) been applied to areas that have been inactive for 14 days or less (or, inactive for 7 days if over 5 acres disturbed)?_____
Has soil preparation been applied as specified in the SWPPP and in accordance with the Blue Book (Assure that all the necessary soil testing/fertilizer/lime, topsoil, decompaction has been applied)?
_____
Have rolled erosion control products specified for steep slopes or channels been installed? _____
Describe corrective action(s): _____
Date correction needed: _____

e. Sediment Controls

Stabilized Construction Entrance □ N A
Stone is clean and all access areas covered (entrances, construction routes, materials storage areas, equipment parking)?_____ Tracking onto public streets is minimized and cleaned daily? _____
Describe:_____
Date correction needed: _____

Silt Fence □ N A

Installed on contour? not across conveyance channels?_____ At least 10 feet from toe of slope?_____At appropriate spacing intervals based on slope?_____Wrapped ends for continuous support?_____Fabric is tight, without rips or frayed areas?_____Posts are stable?_____ buried 6 inches minimum?_____Any "bulges"?_____
Describe:_____
_____
Date correction needed: _____

Temporary Sediment Trap □ N A

Is outlet structure constructed properly?_____geotextile fabric has been placed beneath rock fill?_____Maintenance – depth of sediment in basin? _____ 50% capacity?
_____
Describe:_____
_____
Date correction needed: _____

Temporary Sediment Basin □ N A

Is basin and outlet structure constructed per the approved plan? _____
Are basin side slopes stabilized with seed/mulch?
_____
Maintenance – depth of sediment in basin? _____ 50% capacity?
_____
Describe:_____
_____
Date correction needed: _____

Drop Inlet Protection □ N A

Type(s) of inlet control? _____
Installed per Blue Book specifications: drainage area (typically 1 acre)? _____
Appropriate for location? _____
Describe:_____
_____
Date correction needed: _____

f. Digital Color Photographs of Deficient BMPs

The *qualified inspector* shall attach paper color copies of the digital photographs to this inspection report of deficient BMPs with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions.

g. Digital Color Photographs of BMPs that have been Corrected

The *qualified inspector* shall attach paper color copies of the digital photographs to this inspection report of corrected BMPs with date stamp, that clearly show the condition of the practice(s) after the corrective actions has been completed.

h. Post-Construction Stormwater Management

Report of any corrective action(s) that must be taken to install, correct, repair, replace or maintain any deficiencies identified with the construction of the post-construction stormwater management practice(s).
Report the current phase of construction of all post-construction stormwater management practice(s) and whether the installation appears to be geometrically consistent with the approved hydraulic design (e.g. the pond, the outlet structure, orifice, pipe sizing and slope is geometrically consistent with the SWPPP):_____

_____
_____
_____

i. Revisions to SWPPP

When the owner or operator becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any other report, or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or impervious area) which were not reflected in the original NOI submitted to the Department and/or the MS4, they shall promptly submit such facts or information. Failure of the owner or operator to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a permit violation (GP-0-10-001 PartVII.G)

_____
_____
_____
_____

j. Inspection Notes and Signature

Inspection Notes:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Standardized Qualified Inspector Form

PART I. j. Signature

GP-0-10-001 Part VII.Q

Articles 175 and 210 of the New York State Penal Law provide for Criminal penalty of a fine and/or imprisonment for falsifying forms and reports required by this permit.

_____ _____

Qualified Inspector (print name) **Date of Inspection**

_____

Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Title: _____ Address: _____

Phone: _____ Email: _____

CPESC#: _____

Stormwater Training Number for *Trained Individuals*: _____

P.E. or L.A. Supervisor Name for *Trained Individuals*:_____

Compliance certification:

Received and reviewed by_____Title:_____

The above signed acknowledges receipt of this inspection report

STANDARD AND SPECIFICATIONS FOR WINTER STABILIZATION

Definition & Scope

A temporary site specific, enhanced erosion and sediment control plan to manage runoff and sediment at the site during construction activities in the winter months to protect off-site water resources.

Conditions Where Practice Applies

This standard applies to all construction activities involved with ongoing land disturbance and exposure between November 15th to the following April 1st.

Design Criteria

1. Prepare a snow management plan with adequate storage for snow and control of melt water, requiring cleared snow to be stored in a manner not affecting ongoing construction activities.

2. Enlarge and stabilize access points to provide for snow management and stockpiling. Snow management activities must not destroy or degrade installed erosion and sediment control practices.

3. A minimum 25 foot buffer shall be maintained from all perimeter controls such as silt fence. Mark silt fence with tall stakes that are visible above the snow pack.

4. Edges of disturbed areas that drain to a waterbody within 100 feet will have 2 rows of silt fence, 5 feet apart, installed on the contour.

5. Drainage structures must be kept open and free of snow and ice dams. All debris, ice dams, or debris from plowing operations, that restrict the flow of runoff and meltwater, shall be removed.

6. Sediment barriers must be installed at all appropriate perimeter and sensitive locations. Silt fence and other practices requiring earth disturbance must be installed before the ground freezes.

7. Soil stockpiles must be protected by the use of established vegetation, anchored straw mulch, rolled stabilization matting, or other durable covering. A barrier must be installed at least 15 feet from the toe of the stockpile to prevent soil migration and to capture loose soil.

8. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures should be initiated by the end of the next business day and completed within three (3) days. Rolled erosion control blankets must be used on all slopes 3 horizontal to 1 vertical or steeper.

9. If straw mulch alone is used for temporary stabilization, it shall be applied at double the standard rate of 2 tons per acre, making the application rate 4 tons per acre. Other manufactured mulches should be applied at double the manufacturer's recommended rate.

10. To ensure adequate stabilization of disturbed soil in advance of a melt event, areas of disturbed soil should be stabilized at the end of each work day unless:

    a. work will resume within 24 hours in the same area and no precipitation is forecast or;

    b. the work is in disturbed areas that collect and retain runoff, such as open utility trenches, foundation excavations, or water management areas.

11. Use stone paths to stabilize access perimeters of buildings under construction and areas where construction vehicle traffic is anticipated. Stone paths should be a minimum 10 feet in width but wider as necessary to accommodate equipment.

Maintenance

The site shall be inspected frequently to ensure that the erosion and sediment control plan is performing its winter stabilization function. If the site will not have earth disturbing activities ongoing during the "winter season", **all** bare exposed soil must be stabilized by established vegetation, straw or other acceptable mulch, matting, rock, or other approved material such as rolled erosion control products. Seeding of areas with mulch cover is preferred but seeding alone is not acceptable for proper stabilization.

Compliance inspections must be performed and reports filed properly in accordance with the SWPPP for all sites under a winter shutdown.

References

1. Northeastern Illinois Soil and Sedimentation Control Steering Committee. October 1981. Procedures and Standards for Urban Soil Erosion and Sediment Control in Illinois.
2. J.F. Rushing, V.M. Moore, J.S. Tingle, Q. Mason, and T. McCaffery, 2005. Dust Abatement Methods for Lines of Communication and Base Camps in Temperate Climates. ERDC/GSL TR-05-23, October 2005.

CONR 8
(1/21)

SPDES STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REVISION

JOB STAMP

Date: _____

Day of Week: S M T W T F S

Sheet No. ____ of ____

This form is to be used when revisions to the current Stormwater Pollution Prevention Plan (SWPPP) are required by SPDES General Permit for Stormwater Discharges from Construction Activity. The completed form must be filed in the Engineer's Field Office.

Reason for the Revision(s): Revision(s) were requested by NYSDEC: ☐ Yes ☐ No

Describe the Revision(s) to the SWPPP:

Engineer-in-Charge Signature: _____

EICs Name & Title: _____

Date Completed: _____

Print Form

Copy to Contractor: _____

APPENDIX M: MS4 SWPPP ACCEPTANCE FORM

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information	
1. Owner/Operator Name:	Park Grove Realty, LLC
2. Contact Person:	Andrew Bodewes
3. Street Address:	46 Prince Street
4. City/State/Zip:	Rochester, NY 14607
II. Project Site Information	
5. Project/Site Name:	Auburn Community Hospital Health Campus
6. Street Address:	23 Perrine Street, 147 North Street, 143 North Street W Park Avenue
7. City/State/Zip:	Auburn, NY 13021
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information	
8. SWPPP Reviewed by:	
9. Title/Position:	
10. Date Final SWPPP Reviewed and Accepted:	
IV. Regulated MS4 Information	
11. Name of MS4 Operator:	
12. MS4 SPDES Permit Identification Number: NYR20A	
13. Street Address:	
14. City/State/Zip:	
15. Telephone Number:	

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name[1]:

Title/Position:

Signature:

Date:

VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

APPENDIX N: NOTICE OF INTENT, SWPPP PREPARER CERTIFICATION, OWNER CERTIFICATION FORMS.

Construction General Permit (CGP) Electronic Notice of Intent (eNOI) GP-0-25-001

version 1.17

(Submission #: HQM-SF4T-KB52S, version 1)

Details

Originally Started By	Pamela Freeman
Alternate Identifier	Auburn Community Hospital Health Campus—Region 7
Submission ID	HQM-SF4T-KB52S
Status	Draft

Form Input

Eligibility

Disturbance Threshold

1. Will the construction activity involve soil disturbances listed in Part I.A.1 of GP-0-25-001?
Yes

1.a. Will any runoff from the site enter a sewer system classified as a combined sewer?
No

1.b. Is this a remediation project being done under a Department approved work plan (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) with a SWPPP which meets the substantive requirements of GP-0-25-001?
No

1.c. Is the construction activity related to a stormwater discharge that does not require a permit as described in 40 CFR 122.3(e), e.g. non-point source agriculture or silviculture activities?
No

Other SPDES Permits

2. Will the discharge from the construction activity meet all conditions listed in Part I.A.2 of GP-0-25-001?
Yes

Threatened and Endangered Species

3. Will the construction activity potentially adversely affect a species that is endangered or threatened per Part I.A.3.?
No

State Historic Preservation Act (SHPA)

4. Is the construction activity designated by the Commissioner of the Office of Parks, Recreation and Historic Preservation (OPRHP), pursuant to 9 NYCRR §§428.12 or 428.13 as exempt from the SHPA review (see Attachment 2 of the Letter of Resolution between NYSDEC and OPRHP, dated January 9, 2015)?
No

4.a. Will the construction activity:

a) occur within an archeologically sensitive area indicated on the sensitivity map, or

b) have the potential to affect a property that is listed or determined to be eligible for listing on the Na or State Registers of Historic Places, or

c) include a new permanent building on the construction site within the following distances from a building, structure, or object that is more than 50 years old and OPRHP, a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determinec historically/archeologically significant building, structure, or object:

- 1-5 acres of disturbance—20 feet
- 5-20 acres of disturbance—50 feet
- 20+ acres of disturbance—100 feet?

No

4.b. Is there documentation at the construction site demonstrating:

a) that the construction activity is not within an archeologically sensitive area indicated on the sensiti map, and that the construction activity is not immediately adjacent to a property listed or determined t eligible for listing on the National or State Registers of Historic Places, and

b) that there is no new permanent building to be built on the construction site within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the construction site within those parameters that OPRHP, a Historic Preserva Commission of a Certified Local Government, or a qualified preservation professional has determinec the building, structure, or object more than 50 years old is not historically/archeologically significant:

- 1-5 acres of disturbance – 20 feet
- 5-20 acres of disturbance – 50 feet
- 20+ acres of disturbance – 100 feet?

Yes

State Environmental Quality Review (SEQR)

5. Is the construction activity subject to SEQR (Part I.A.5.), or the equivalent environmental review from another NYS or federal agency (Part I.A.6.)?
Yes

5.a. Has the owner/operator obtained documentation that the project review pursuant to SEQR, or the equivalent, has been satisfied per Part I.A.5. or I.A.6. of GP-0-25-001?
Yes

Uniform Procedures Act (UPA) Permits

6. Has the owner/operator obtained all necessary UPA permits from NYSDEC, or the equivalent from another NYS or federal agency per Part I.A.7.a. of GP-0-25-001? Select "Yes" if no UPA permits, or the equivalent, are required for this construction activity.
Yes

Steep Slope

7. Is the construction activity within the watershed of surface waters of the State classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website?
No

Owner/Operator Information

8. Owner/Operator Name
Park Grove Realty

9. Owner/Operator Contact Person Information

First and Last Name	Phone	E-mail
Andrew Bodewes	585-435-4766	abodewes@parkgrovellc.com

10. Owner/Operator Mailing Address
46 Prince Street
Rochester, NY 14607
USA

11. Is the billing contact different from the Owner/Operator Contact?
No

12. What type of organization is the owner/operator?
Other: Private Entity

Site Information

13. Project/Site Name
Auburn Community Hospital Health Campus

14. Site Address
23 Peerine Street, 147 North Street, 143 North St., 1 West Park
Auburn, NY 13021
Cayuga

DEC Region
7

15. Site Latitude & Longitude
42.9411661,-76.56771619999999

Project Details

16. This eNOI submission is for:
A construction activity not part of a common plan of development or sale in accordance with Part I.D.1.a.

17. Does the project type fall under Table 1 or Table 2 of Appendix B of GP-0-25-001? If any portion of the construction activity falls under Table 2, regardless of the size of the disturbance, select "Table 2".
Table 2

18. Consistent with Part III.B.1.c.i. of GP-0-25-001, provide a concise overview of the project. Describe existing and proposed conditions, and include any other relevant information.
Demolition of the existing buildings and infrastructure on the site followed by the construction of a Medical Office Building with a +/- 30,400 sq. ft. footprint and a total building area of +/- 80,750 sq. ft. Site improvements will include internal access drives, parking areas, sidewalks, landscaping and utility connections to serve the proposed building.

Enter the total project site acreage, the acreage to be disturbed, and the future impervious area (acreage) within the disturbed area, rounded to the nearest tenth of an acre.

19. Total Site Area (acres)
5.4

20. Total Area to be Disturbed (acres)
5.0

21. Existing Impervious Area to be Disturbed (acres)
2.1

22. Future Impervious Area Within Disturbed Area (acres)
2.6

Nature of the project:
Redevelopment with increase in impervious area

23. Do you plan to disturb more than 5 acres of soil at any one time?
No

---

24. Indicate the percentage (%) of each Hydrologic Soil Group(HSG) at the site.

A (%)
0

B (%)
0

C (%)
33

D (%)
67

25. Enter the planned start and end dates of the disturbance activities.

Start Date
04/01/2027

End Date
04/01/2028

26. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.
Owasco River

27. Type of waterbody identified in question 26?
River Off Site

28. Has the surface waterbody in question 26 been identified as a 303(d) segment in Appendix D of GP-0-25-001?
No

29. Is this project located in one of the Watersheds identified in Appendix C of GP-0-25-001?
No

30. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area?
No

31. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)?
Yes

31.a. What is the name of the municipality/entity that owns the separate storm sewer system? If the separate sewer system is owned by an MS4 Operator, enter the MS4 Operator name.
Fifth Ward Sewer District

32. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law?
No

33. Is this property owned by a state authority, state agency, federal government or local government?
No

Required SWPPP Components

General SWPPP Requirements

34. Has a SWPPP been developed in conformance with the requirements in Part III. of GP-0-25-001?
Yes

35. Does the SWPPP demonstrate consideration of the future physical risks due to climate change pursuant to the CRRA, 6 NYCRR Part 490, and associated guidance per Part III.A.2. of GP-0-25-001?
Yes

36. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)?
Yes

37. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the NYS Stormwater Management Design Manual?
Yes

37.a. Which version of the NYS Stormwater Management Design Manual was used to develop the SWPPP?
2024

SWPPP Preparer

39. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:
Professional Engineer (P.E.)

40. Name of the person who prepared the SWPPP
Andrew Burns

41. SWPPP Preparer Organization Name
Passero Associates

42. SWPPP Preparer Contact Information

First and Last Name	Phone	E-mail
Andrew Burns	585-325-1000	aburns@passero.com

43. SWPPP Preparer Address

242 West Main St., S100

Rochester, NY 14614

Download SWPPP Preparer Certification Form

Please take the following steps to prepare and upload your preparer certification form:

1) Click on the link below to download a blank certification form
2) The certified SWPPP preparer should sign this form
3) Upload the completed form
Download SWPPP Preparer Certification Form

44. Please upload the SWPPP Preparer Certification

Auburn appf_swppcertform.pdf - 04/13/2026 12:49 PM

Comment

NONE PROVIDED

44.a. Has the SWPPP Preparer Certification Form been signed by the SWPPP preparer in accordance with Part VII.J of GP-0-25-001?
Yes

Erosion & Sediment Control Criteria

45. Has a construction sequence schedule for the planned management practices been prepared?
Yes

Post-Construction Criteria

Site Planning and Soil Restoration

46. Identify all site planning practices that were used to prepare the final site plan/layout for the project.
Locating Development in Less Sensitive Areas

47. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6 ("Soil Restoration") of the Design Manual.
All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).

Water Quality Criteria

49. Water Quality Sizing Criteria

Total WQv required (acre-feet)	Total RRv provided (acre-feet)	Minimum RRv (acre-feet)	Total WQv provided (acre-feet)	Sum of RRv and WQv provided
0.091	0.091			0.091

Water Quantity Criteria

50. Per Section 9.2.1.C.VI and VII of the 2024 Design Manual, is there 0% change to hydrology that increases the discharge rate and volume from the project site?
No

51. Does one of the waiver conditions apply to the channel protection for this construction activity?
No

51.b.i. CPv Required (acre-feet)
0.319

51.b.ii. CPv Provided (acre-feet)
0.408

52. Does one of the waiver conditions apply to the Qp and Qf for this construction activity?
No

Overbank Flood Control Criteria (Qp)

52.b.i. Pre-Development (CFS)
13.880

52.b.ii. Post-Development (CFS)
12.630

Total Extreme Flood Control Criteria (Qf)

52.b.iii. Pre-Development (CFS)
30.130

52.b.iv. Post-Development (CFS)
23.780

Operation and Maintenance

53. Has a long-term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed?
Yes

53.a. Identify the entity responsible for the long-term Operation and Maintenance.
Owner

Post-Construction SMP Identification

54. Post-Construction RR Techniques and Standard SMPs

RR Techniques and SMPs	Contributing Impervious Area (acres)	Total Contributing Area (acres)
Filtration Bioretention (F-5)	3.0	

55. Alternative SMPs

Type of Alternative SMP	Manufacturer of the Alternative SMP	Name of the Alternative SMP	Contributing Impervious Area (acres)
NONE PROVIDED	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*

Other Permits

56. Identify other permits, existing and new, that are required for this project/facility.
None

57. Is this NOI for a change in owner/operator per Part I.G.?
No

MS4 SWPPP Acceptance

59. Will the construction activities be within the municipal boundary(ies) of Traditional Land Use Control MS4 Operator(s) and discharge to the MS4(s)?
Yes

59.a. Which form is required per Part I.D.2.b.ii.?
MS4 SWPPP Acceptance Form

MS4 SWPPP Acceptance Form Download

Download the MS4 SWPPP Acceptance Form from the link below.
MS4 SWPPP Acceptance Form

60. MS4 Acceptance or No Jurisdiction Form Upload

NONE PROVIDED

Comment

NONE PROVIDED

60.a. Has the form been signed by the principal executive officer or ranking elected official—or duly authorized representative of that person—in accordance with Part VII.J. and submitted along with this NOI?
Yes

Owner/Operator Certification

Owner/Operator Certification Form Download

Download the Owner/Operator Certification Form by clicking the link below.
Owner/Operator Certification Form

61. Upload Owner/Operator Certification Form

> Auburn appj_operatorcertform.pdf - 04/13/2026 01:16 PM
> **Comment**
> *NONE PROVIDED*

61.a. Has the Owner/Operator Certification Form from Appendix J been signed by the owner/operator, or a representative of the owner/operator in accordance with Part VII.J of GP-0-25-001 and uploaded to the eNOI?
Yes

Additional Project Information

62. Enter any additional pertinent project information in the text box below.
NONE PROVIDED

Attachments

Date	Attachment Name	Context	User
4/13/2026 1:16 PM	Auburn appj_operatorcertform.pdf	Attachment	Pamela Freeman
4/13/2026 12:49 PM	Auburn appf_swppcertform.pdf	Attachment	Pamela Freeman

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: Auburn Community Hospital Health Campus

eNOI Submission ID: _____

eNOI Submitted by: ☐ **Owner/Operator** ☑ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Andrew		Bodewes
Owner/Operator First Name	MI	Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:	Auburn Community Hospital Health Campus
eNOI Submission ID:	
Owner/Operator Name:	Park Grove Realty, LLC

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Andrew		Burns
SWPPP Preparer First Name	MI	SWPPP Preparer Last Name

Signature Date

Revised: January 2025

APPENDIX O: NOTICE OF TERMINATION

eNOT Qualified Inspector Certification – Final Stabilization

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.i., ii., and iii. or CGP Part V.A.1.b.i., ii., and iii. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector:

b. Title/Position:

c. Signature:

d. Date:

eNOT Qualified Inspector Certification – SMPs

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.iv. or CGP Part V.A.1.b.iv. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector:

b. Title/Position:

c. Signature:

d. Date:

eNOT MS4 Acceptance

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Traditional Land Use Control MS4 Operator Information

a. Name of MS4 Operator:

b. MS4 SPDES Permit ID Number: NYR20A

c. Street Address:

d. City/State/Zip:

e. Telephone Number:

IV. Certification Statement

I have determined that it is acceptable for the owner or operator of the construction project identified above to submit the electronic Notice of Termination in accordance with CGP Part V. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.:

b. Title/Position:

c. Signature:

d. Date:

eNOT Owner or Operator Certification

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I certify that I have met the requirements of CGP Part V.A.1., 2., 3., and 4. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Owner or Operator:

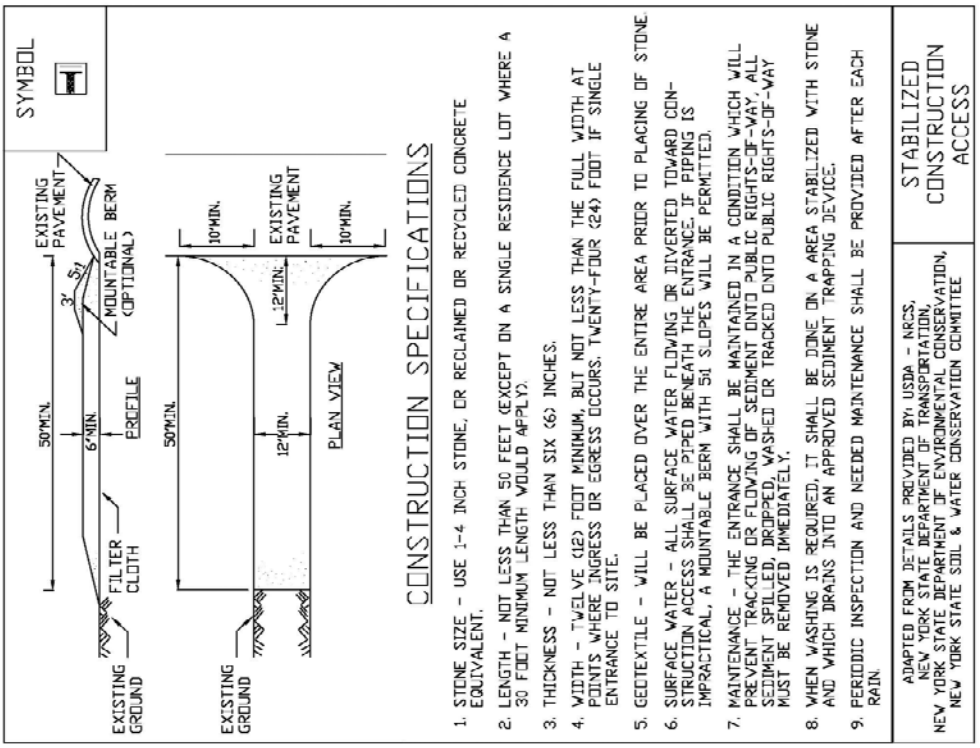
b. Title/Position:

c. Signature:

d. Date:

APPENDIX P: EROSION CONTROL DETAILS

Figure D.5
Construction Details for Stabilized Construction Entrance and Silt



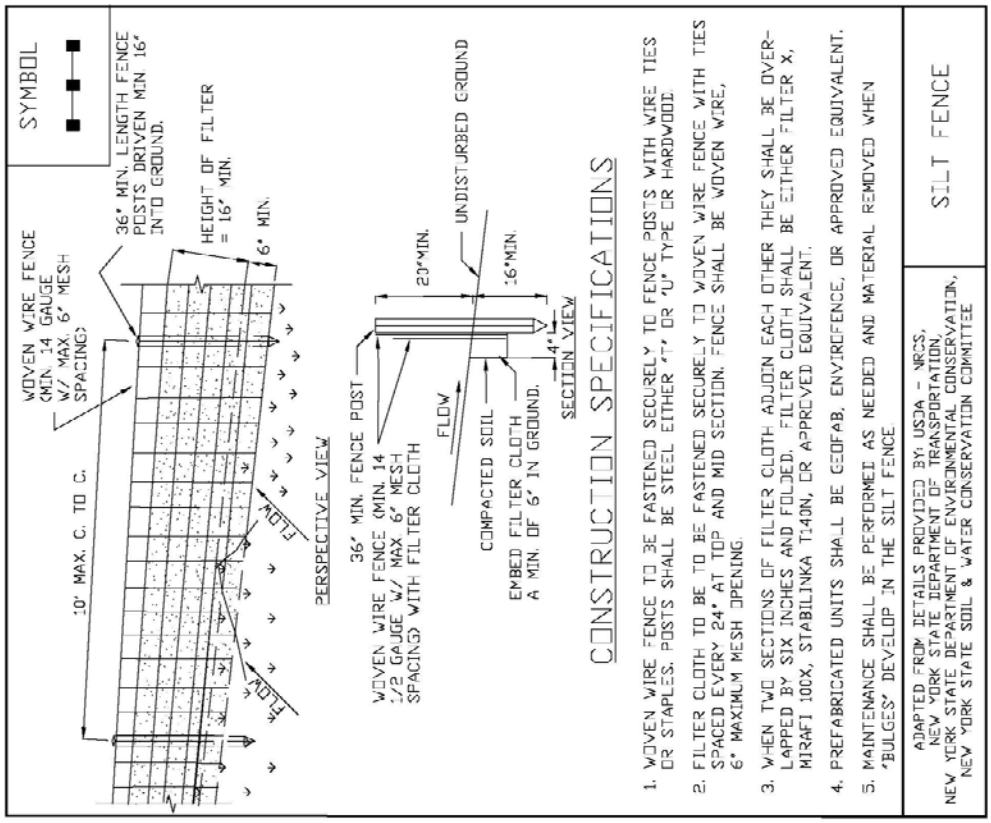


Figure 5.32
Fabric Drop Inlet Protection

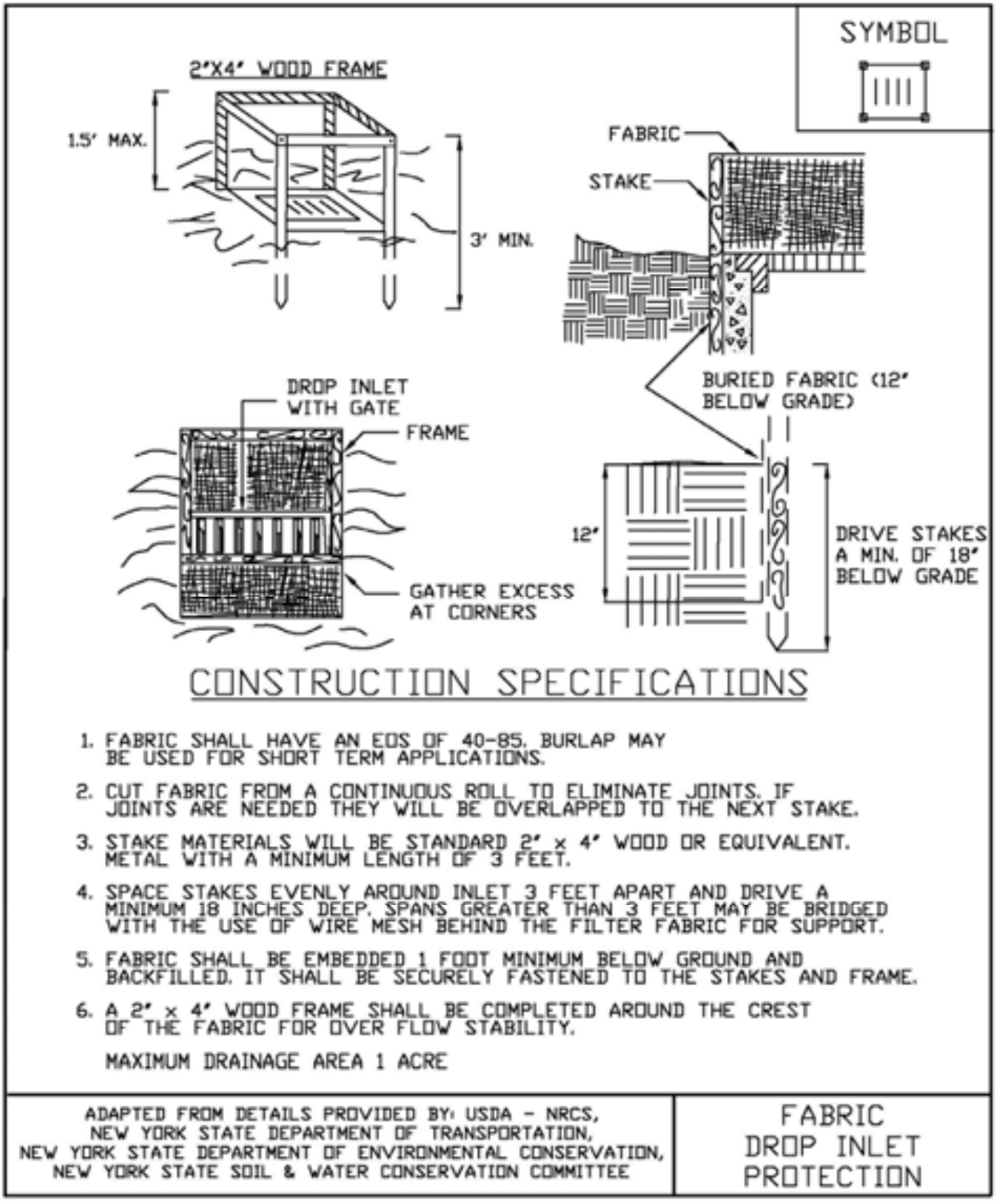
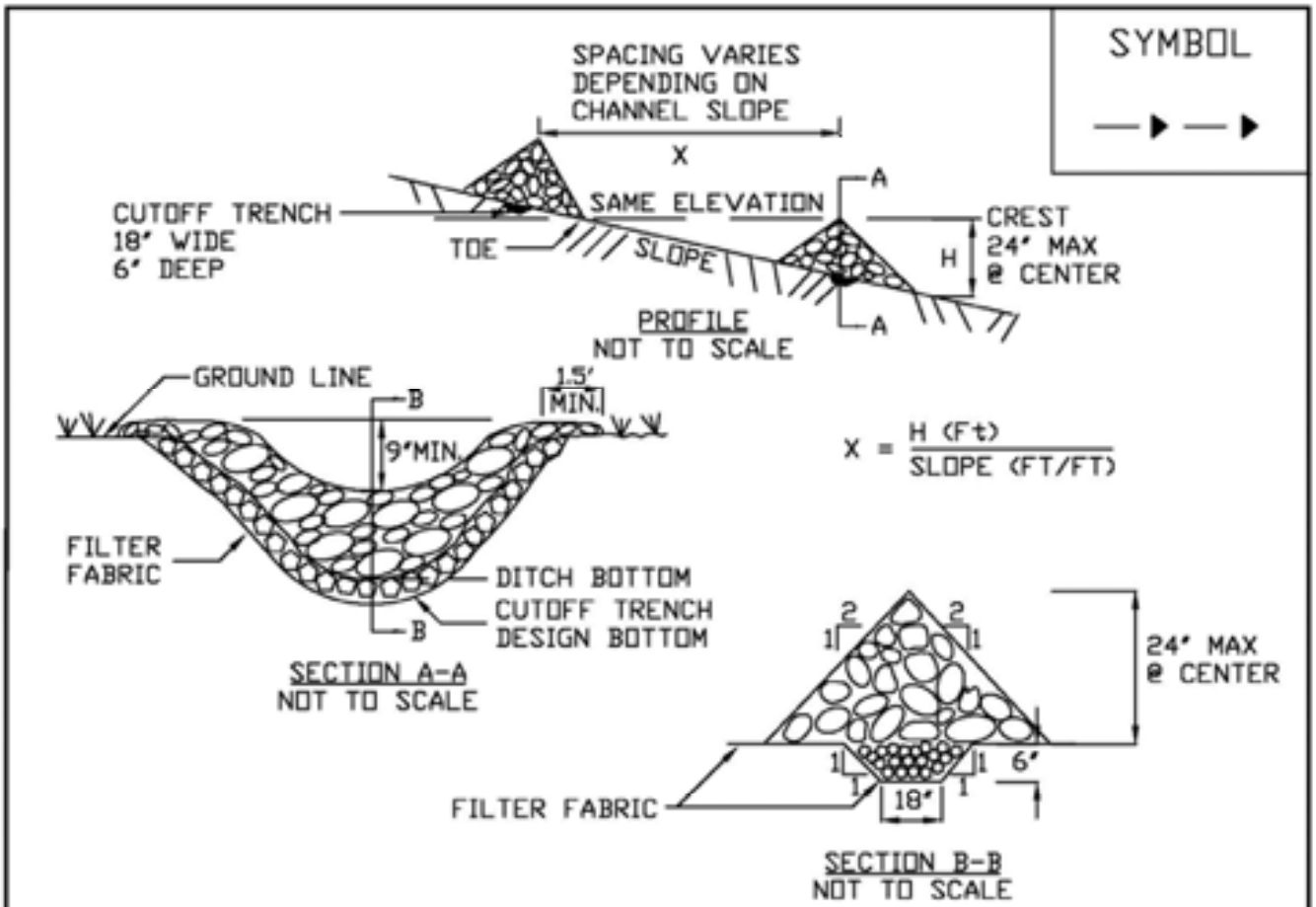


Figure 3.1
Stone Check Dam Detail



CONSTRUCTION SPECIFICATIONS

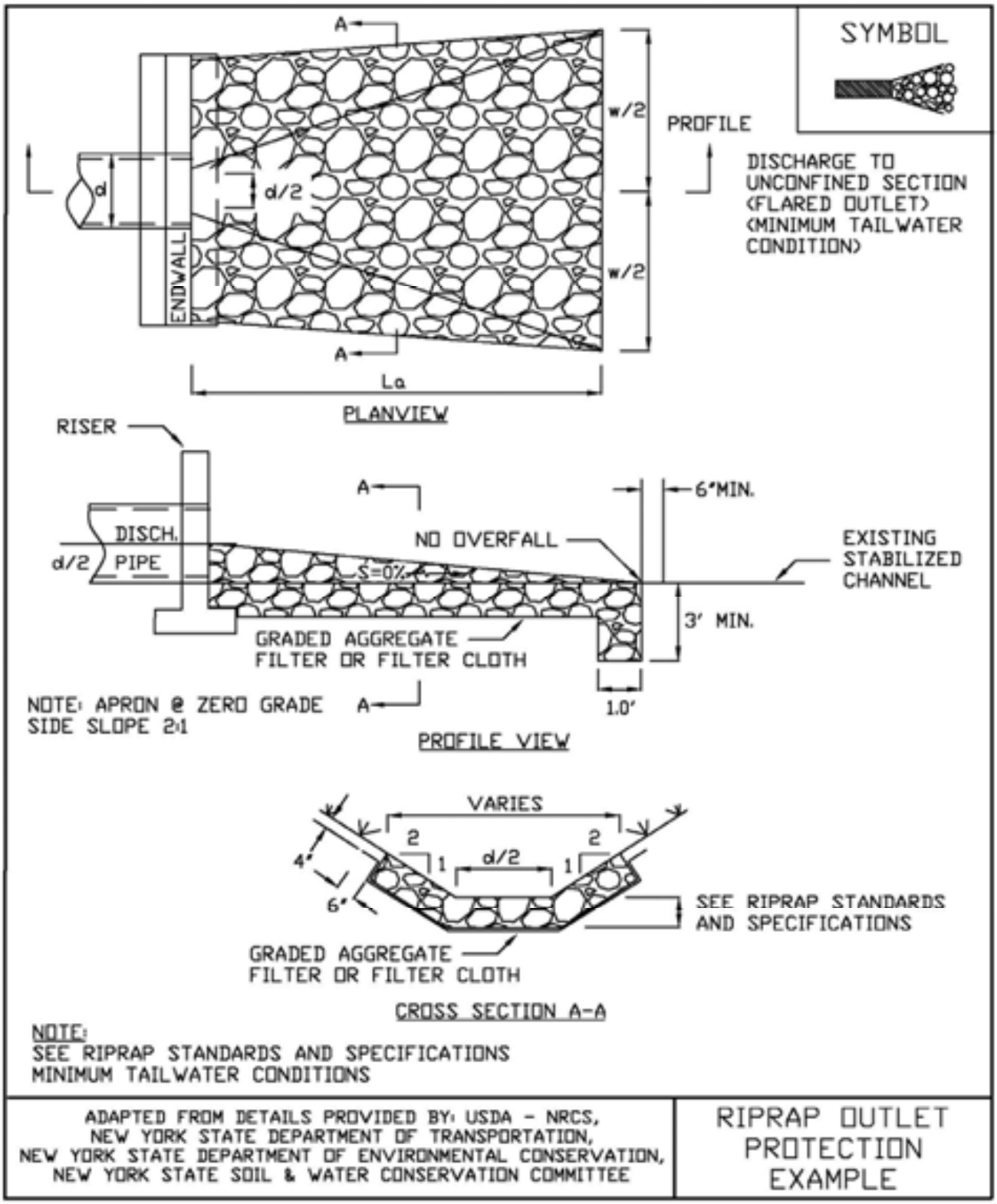
1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS,
NEW YORK STATE DEPARTMENT OF TRANSPORTATION,
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

STONE CHECK DAM

Figure 3.18
Riprap Outlet Protection Detail (1)



APPENDIX Q: MAINTENANCE/CONSTRUCTION INSPECTION REPORTS

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

MAINTENANCE GUIDANCE

Stormwater Management Practices

March 31, 2017

FINAL

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2.7. Bioretention

Areas of Bioretention

Key areas to inspect for Bioretention include the following:

- BR 1. Drainage Area
- BR 2. Inlets
- BR 3. Bioretention Ponding Area
- BR 4. Vegetation
- BR 5. Outlets

Note: The category of Bioretention includes:

- Bioretention cells – areas of soil, mulch, and vegetation that treat runoff
- Dry swales – long, linear bioretention cells, sometimes with check dams along a mildly sloping swale
- Rain gardens – usually small-scale bioretention practices on residential or small commercial properties

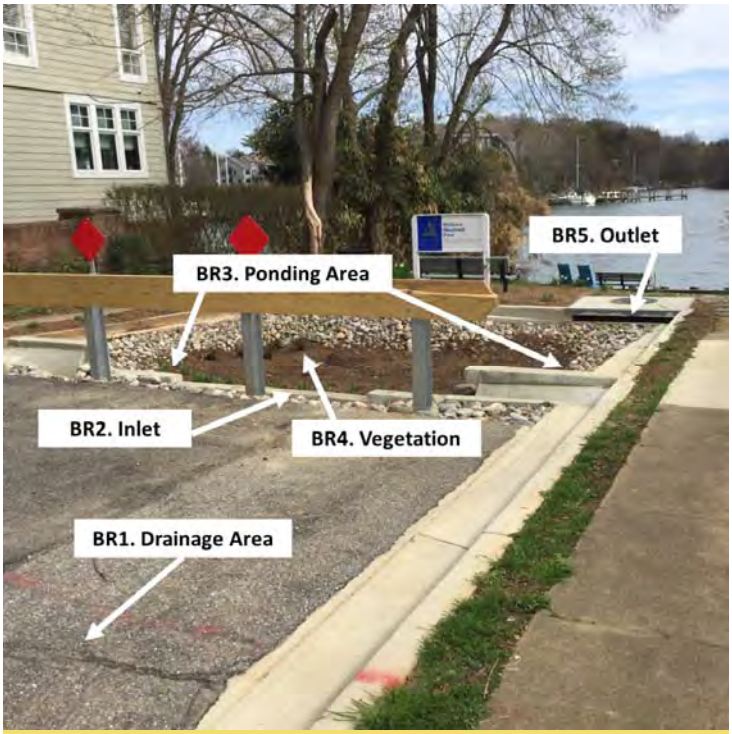

Figure 2.7.1. Key Areas for Level 1 Inspection of Bioretention

- Stormwater planters – usually in more urban settings, with soil and plants in a concrete box that receives roof runoff or perhaps other water from the site
- Tree pits – also a more urban practice where the bioretention is confined within some sort of box (e.g., concrete) and places along road curbs or other areas to treat runoff

For the purposes of this chapter, the term “Bioretention cell” will be used to generally describe these practices.

Bioretention Level 1 Inspection

The Level 1 Inspection focuses on the Drainage Area (BR1), Inlets (BR2), Bioretention Ponding Area (BR3), Vegetation (BR4), and Outlets (BR5). This inspection should be conducted on a regular basis, with an early spring inspection to ensure that the practice has survived the winter, particularly if there has been a significant amount of snow. An inspection during the growing season or in the early fall is also recommended to check on the health of vegetation.

BR 1. Drainage Area

Description: The drainage area sends runoff to and is uphill from the Bioretention cell. When it rains, water runs off and flows to the Bioretention cell and ponds within the cell temporarily (usually for no more than 48 hours). Sometimes, the runoff will contain dirt, grit, grass clippings, oil, or other substances that SHOULD NOT be directed to the Bioretention area.

Instruction: Look for areas that are uphill from the Bioretention cell. Consult **Table 2.7.1** below.

Table 2.7.1 BR Drainage Area

Problem (Check if Present)		Follow-Up Actions
	☐ Bare soil, erosion of the ground (rills washing out the dirt)	☐ Seed and mulch areas of bare soil to establish vegetation. ☐ Fill in erosion areas with soil, compact, and seed and straw to establish vegetation. ☐ If a rill or small channel is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Large areas of soil have been eroded, or larger channels are forming. May require rerouting of flow paths.
	☐ Piles of grass clippings, mulch, dirt, salt, or other materials	☐ Remove or cover piles of grass clippings, mulch, dirt, etc. ☐ Other:
	☐ Open containers of oil, grease, paint, or other substances	☐ Cover or properly dispose of materials; consult your local solid waste authority for guidance on materials that may be toxic or hazardous. ☐ Other:

BR 2. Inlets

Description: The inlets to a Bioretention cell are where water flows into the cell. Depending on the design, water can flow in through:

- Curb cuts or openings in a parking lot or roadway
- Pipes or ditches that carry water into the Bioretention cell from the drainage area
- Flow directly over the land surface (known as “sheetflow”), sometimes across a strip of rock or stone

Figure 2.7.2 Bioretention Cell Inlets

CSN, 2013

Instruction: Stand in the Bioretention cell itself and look for all the places where water flows in. Often there will be multiple points of inflow to the practice. Consult **Table 2.7.2** below for possible problems.

Table 2.7.2 BR Inlets

Problem (Check if Present)	Follow-Up Actions
 ☐ Inlets collect grit and debris or grass/weeds. Some water may not be getting into the Bioretention cell. The objective is to have a clear pathway for water to flow into the cell.	☐ Use a flat shovel to remove grit and debris (especially at curb inlets or openings). Parking lots generate fine grit that will accumulate at these spots. ☐ Pull out clumps of growing grass or weeds and scoop out the soil or grit that the plants are growing in. ☐ Remove any grass clippings, leaves, sticks, and other debris that is collecting at inlets. ☐ For pipes and ditches, remove sediment and debris that is partially blocking the pipe or ditch opening where it enters the Bioretention cell. ☐ Dispose of all material properly where it will not re-enter the Bioretention cell. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Inlets are blocked to the extent that most of the water does not seem to be entering the Bioretention cell.
 ☐ Some or all of the inlets are eroding so that rills, gullies, and other erosion is present, or there is bare dirt that is washing into the Bioretention cell.	☐ For small areas of erosion, smooth out the eroded part and apply rock or stone (e.g., river cobble) to prevent further erosion. Usually, filter fabric is placed under the rock or stone. ☐ In some cases, reseeding and applying erosion-control matting can be used to prevent further erosion. Some of these materials may be available at a garden center, but it may be best to consult a landscape contractor. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Erosion is occurring at most of the inlets, and it looks like there is too much water that is concentrating at these points. The inlet design may have to be modified.

BR 3. Bioretention Ponding Area

Description: The ponding area fills up with water during a rainstorm. If you picture the Bioretention cell as a bathtub, there is the *bottom* (usually flat surface), *side slopes* (areas that slope down to the bottom from the surrounding ground), and *berms or structures that control the depth to which water ponds.*

Instruction: Examine the entire Bioretention surface and side slopes. Consult the table below for possible problems.

Table 2.7.3 BR Ponding Area

Problem (Check if Present)	Follow-Up Actions
 ☐ Mulch (if used) needs to be replaced or replenished. The mulch layer had decomposed or is less than 1-inch thick.	☐ Add new mulch to a total depth (including any existing mulch that is left) of 2 to 3 inches. The mulch should be shredded hardwood mulch that is less likely to float away during rainstorms. ☐ Avoid adding too much mulch so that inlets are obstructed or certain areas become higher than the rest of the Bioretention surface. ☐ Other:
 ☐ Minor areas of sediment, grit, trash, or other debris are accumulating on the bottom.	☐ Use a shovel to scoop out minor areas of sediment or grit, especially in the spring after winter sanding materials may wash in and accumulate. Dispose of the material where it cannot re-enter the Bioretention cell. ☐ If removing the material creates a hole or low area, fill with soil mix that matches original mix and cover with mulch so that the Bioretention surface area is as flat as possible. ☐ Remove trash, vegetative debris, and other undesirable materials. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Sediment has accumulated more than 2-inches deep and covers 25% or more of the Bioretention surface. ☐ Kick-Out to Level 2 Inspection: The Bioretention cell is too densely vegetated to assess sediment accumulation or ponding; see BR-4, Vegetation.

 ☐ There is erosion in the bottom or on the side slopes. Water seems to be carving out rills as it flows across the Bioretention surface or on the slopes, or sinkholes are forming in certain areas. ☐ Source: Stormwater Maintenance, LLC.	☐ Try filling the eroded areas with clean topsoil or sand, and cover with mulch. ☐ If the problem recurs, you may have to use stone (e.g., river cobble) to fill in problem areas. ☐ If the erosion is on a side slope, fill with clay that can be compacted and seed and mulch the area. ☐ Other: ☐ Kick-Out to Level 2 Inspection: The problem persists or the erosion is more than 3-inches deep and seems to be an issue with how water enters and moves through the Bioretention cell. ☐ Kick-Out to Level 2 Inspection: The problem does not seem to be caused by flowing water, but a collapse or sinking of the surface (e.g., “sinkhole”) due to some underground problem.
 ☐ The bottom of the Bioretention cell is not flat, and the water pools at one end, along an edge, or in certain pockets. The whole bottom is not uniformly covered with water. See design plan to verify that Bioretention surface is intended to be flat. Check during or immediately after a rainstorm.	☐ If the problem is minor (just small, isolated areas are not covered with water), try raking the surface OR adding mulch to low spots to create a more level surface. You may need to remove and replace plantings in order to properly even off the surface. ☐ Check the surface with a string and bubble level to get the surface as flat as possible. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Ponding water is isolated to less than half of the Bioretention surface area, and there seem to be elevation differences of more than a couple of inches across the surface.
 ☐ Water stands on the surface more than 72 hours after a rainstorm and /or wetland-type vegetation is present. The Bioretention cell does not appear to be draining properly.	☐ Kick-Out to Level 2 Inspection: This is generally a serious problem, and it will be necessary to activate a Level 2 Inspection.

BR 4. Vegetation

Description: The health of vegetation within the Bioretention cell is perhaps the most critical maintenance item for the property owner or responsible party. Many Bioretention cells become overgrown, and "desirable" vegetation becomes choked out by weeds and invasive plants. It is important to know what the Bioretention cell is supposed to look like and what plants seem to be thriving or doing poorly. Periodic maintenance of vegetation will prevent larger problems that are more difficult and costly to manage.

Instruction: Examine all Bioretention cell vegetation. Consult the table below for possible problems.

Table 2.7.4 BR Vegetation

Problem (Check if Present)	Follow-Up Actions
 ☐ Vegetation requires regular maintenance—pulling weeds, removing dead and diseased plants, replacing mulch around plants, adding plants to fill in areas that are not well vegetated, etc.	☐ If you can identify which plants are weeds or not intended to be part of the planting plan, eliminate these, preferably by hand pulling. ☐ If weeds are widespread, check with the local stormwater authority and/or Extension Office about proper use of herbicides for areas connected with the flow of water. ☐ Even vegetation that is intended to be present can become large, overgrown, and/or crowd out surrounding plants. Prune and thin accordingly. ☐ If weeds or invasive plants have overtaken the whole Bioretention cell, bush-hog the entire area before seedheads form in the spring. It will be necessary to remove the root mat manually or with appropriate herbicides, as noted above. ☐ Re-plant with species that are aesthetically pleasing and seem to be doing well in the Bioretention cell. ☐ Other: ☐ Kick-Out to Level 2 Inspection: You are unsure of the original planting design, or the vegetation maintenance task is beyond your capabilities of time, expertise, or resources. If you are unsure of the health of the vegetation (e.g. salt damage, invasives, which plants are undesirable) or the appropriate season to conduct vegetation management, consult a landscape professional before undertaking any cutting, pruning, mowing, or brush hogging.
 ☐ Vegetation is too thin, is not healthy, and there are many spots that are not well vegetated.	☐ The original plants are likely not suited for the actual conditions within the Bioretention cell. If you are knowledgeable about plants, select and plant more appropriate vegetation (preferably native plants) so that almost the entire surface area will be covered by the end of the second growing season. ☐ Other: ☐ Kick-Out to Level 2 Inspection: For all but small practices (e.g., rain gardens), this task will likely require a landscape design professional or horticulturalist.

BR 5. Outlets

Description: Outlets are where water leaves the Bioretention cell when there is too much ponded water. There are various ways that outlets are configured. They can be a yard drain type of structure in the Bioretention cell itself or a rock weir where water flows during large storms. Many Bioretention practices have an underdrain, which is like a French drain, that helps the Bioretention cell drain properly after storms. The underdrain pipe may “daylight” (come to the ground surface) at some point downhill from the Bioretention cell.

Instruction: Examine outlets that release water out of the Bioretention cell. Consult the table below for possible problems.

Table 2.7.5 BR Outlets

Problem (Check if Present)	Follow-Up Actions
☐ Erosion at outlet	☐ Add stone to reduce the impact from the water flowing out of the outlet pipe or weir during storms. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Rills have formed and erosion problem becomes more severe.
 ☐ Outlet obstructed with mulch, sediment, debris, trash, etc.	☐ Remove the debris and dispose of it where it cannot re-enter the Bioretention cell. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Outlet is completely clogged or obstructed; there is too much material to remove by hand or with simple hand tools.

2.8. Green Roof

Areas of the Green Roof

Key areas to inspect for green roofs include the following:

GR 1. Vegetation and Surface
GR 2. Overflows and Drains

Note: Green Roofs consist of green infrastructure practices applied on rooftops, wherein stormwater is filtered through a vegetated planting bed. Green Roofs are a unique practice in that they are often covered by a professional ongoing maintenance contract, and their design is highly variable depending on the specific product. This section highlights some key inspection items.

Figure 2.8.1. Key Areas for Level 1 Inspection of Green Roof

3.6. Tree Planting – Level 2 Inspections and Triggers for Level 3

A Level 2 Tree Planting inspection should be conducted periodically during the growing season by the Cooperative Extension or an arborist.

Table 3.6.1 Level 2 Inspection: TREE PLANTING	
Recommended Repairs	**Triggers for Level 3 Inspection**
Observed Condition: Appearance of fungus or pest damage	
Condition 1: Fungus, discoloration, browning leaves or holes in leaves Check with arborist or other tree professional about the best way to proceed. This requires a Level 3 inspection. Condition 2: Burrowing insects, holes Check with arborist or other tree professional about the best way to proceed. This requires a Level 3 inspection.	• Any concerns about how to address infestation or disease

3.7. Bioretention – Level 2 Inspections and Triggers for Level 3

The most likely triggers for a Level 3 Inspection for Bioretention are:

- Standing water, clogged media
- Vegetation management
- Bioretention does not conform to original design plan in surface area or storage.
- Severe erosion of filter bed, inlets, or around outlets
- Significant sediment accumulation, indicating an uncontrolled source of sediment

Table 3.7.1 Level 2 Inspection: BIORETENTION NOTE: Key Source for this Information *(CSN, 2013)*	
Recommended Repairs	**Triggers for Level 3 Inspection**
Observed Condition: Water Stands on Surface for More than 72 Hours after Storm	
Condition 1: Small pockets of standing water Use a soil probe or auger to examine the soil profile. If isolated areas have accumulated grit, fines, or vegetative debris or have bad soil media, try scraping off top 3 inches of media and replacing with clean material. Also check to see that surface is level and water is not ponding selectively in certain areas. Condition 2: Standing water is widespread or covers entire surface Requires diagnosis and resolution of problem: • Clogged underdrain? • Filter fabric between soil media and underdrain stone? • Need to install underdrain if not present? • Too much sediment/grit washing in from drainage area? • Too much ponding depth? • Improper soil media?	• Soil media is clogged and problem is not evident from Level 2 inspection. • Level 2 inspection identifies problem, but it cannot be resolved easily or is associated with the original design of the practice.

Observed Condition: Vegetation is sparse or out of control	
Condition 1: Original design planting plan seems good but has not been maintained, so there are many invasives and/or dead plants Will require some horticultural experience to restore vegetation to intended condition by weeding, pruning, removing plants, and adding new plants. Condition 2: Original design planting plan is unknown or cannot be actualized A landscape architect or horticulturalist will be needed to redo the planting plan. Will likely require analysis of soil pH, moisture, organic content, sun/shade, and other conditions to make sure plants match conditions. Plan should include invasive plant management and maintenance plan to include mulching, watering, disease intervention, periodic thinning/pruning, etc.	• Vegetation deviates significantly from original planting plan; Bioretention has been neglected and suffered from deferred maintenance. • Owner/responsible party does not know how to maintain the practice.
Observed Condition: Bioretention does not conform to original design plan in surface area or storage	
Condition 1: Level 2 Inspection reveals that practice is too small based on design dimension, does not have adequate storage (e.g., ponding depth) based on the plan, and/or does not treat the drainage area runoff as indicated on the plan Small areas of deviation can be corrected by the property owner or responsible party, but it is likely that a Qualified Professional will have to revisit the design and attempt a redesign that meets original objectives or that can be resubmitted to the municipality for approval.	• More than a 25% departure from the approved plan in surface area, storage, or drainage area; sometimes less than this threshold at the discretion of the Level 2 inspector.
Observed Condition: Severe erosion of filter bed, inlets, or around outlets	
Condition 1: Erosion at inlets The lining (e.g., grass, matting, stone, rock) may not be adequate for the actual flow velocities coming through the inlets. First line of defense is to try a more non-erosive lining and/or to extend the lining further down to where inlet slopes meet the Bioretention surface. If problem persists, analysis by a Qualified Professional is warranted. Condition 2: Erosion of Bioretention filter bed This is often caused by “preferential flow paths” through and along the Bioretention surface. The source of flow should be analyzed and methods employed to dissipate energy and disperse the flow (e.g., check dams, rock splash pads). Condition 3: Erosion on side slopes Again, the issue is likely linked with unanticipated flow paths down the side slopes (probably overland flow that concentrates as it hits the edge of the slope). For small or isolated areas, try filling, compacting, and re-establishing healthy ground cover vegetation. If the problem is more widespread, further analysis is required to determine how to redirect the flow.	• Erosion (rills, gullies) is more than 12 inches deep at inlets or the filter bed or more than 3 inches deep on side slopes. • If the issue is not caused by moving water but some sort of subsurface defect. This may manifest as a sinkhole or linear depression and be associated with problems with the underdrain stone or pipe or underlying soil.
Observed Condition: Significant sediment accumulation, indicating an uncontrolled source of sediment	
Condition 1: Isolated areas of sediment accumulation, generally less than 3-inches deep Sediment source may be from a one-time or isolated event. Remove accumulated sediment and top 2 to 3 inches of Bioretention soil media; replace with clean material. Check drainage area for any ongoing sources of sediment. Condition 2: Majority of the surface is caked with “hard pan” (thin layer of clogging material) or accumulated sediment that is 3-inches deep or more This can be caused by an improper construction sequence (drainage area not fully stabilized prior to installation of Bioretention soil media) or another chronic source of sediment in the drainage area. Augering several holes down through the media can indicate how severe the problem is; often the damage is confined to the first several inches of soil media. Removing and replacing this top layer (or to the depth where sediment incursion is seen in auger holes) can be adequate, as long as the problem does not recur.	• More than 2 inches of accumulated sediment cover 25% or more of the Bioretention surface area. • “Hard pan” of thin, crusty layer covers majority of Bioretention surface area and seems to be impeding flow of water down through the soil media. • New sources of sediment seem to be accumulating with each significant rainfall event.

3.10. Ponds & Wetlands – Level 2 Inspections and Triggers for Level 3

The most likely triggers for a Level 3 Inspection for Ponds and Wetlands are:

- Severe erosion
- Excessive algae or aquatic plants
- Settlement and pipe corrosion
- Major sediment buildup

Table 3.10.1 Level Inspection: PONDS and WETLANDS

Recommended Repairs and Required Skills	Triggers for Level 3 Inspection
Observed Condition: Bare Soil or Erosion in the Drainage Area	
Condition 1: Extensive problem spots, but no channels or rills forming Reseed problem areas. If problem persists or grass does not take, consider hiring a landscape contractor. Condition 2: Problem is extensive, and rills/channels are beginning to form May be necessary to divert or redirect water that is causing the erosion problem. If it appears that simple regrading—such as installing a berm or leveling a low spot–will fix the problem, make repairs and ensure that the problem is repaired after the next storm.	• Large rills or gullies are forming in the drainage area. • An attempt to regrade the drainage area has been unsuccessful. • Fixing the problem would require major regrading (i.e., redirecting more than a 100-square-foot area. • It is not clear why the problem is occurring.
Observed Condition: Manholes or Inlet Pipe Buried or Covered with Vegetation	
Condition 1: Nearest manhole and inlet pipe not found Consult as-built drawings to get to closest suspected location and use metal detector to search for metal manhole cover. If unsuccessful, identify nearest drain inlets and approximate pipe direction to locate next manhole. Condition 2: Manhole located and inspected Never enter a manhole, except by following confined-space entry protocols. If outlet pipe is not visible or greater than 25% full of sediment/debris or trash, it will typically require a qualified contractor to flush, clean and clear blockages. Condition 3: Inlet pipe not found at pond Clear vegetation and brush that may be covering the inlet pipe. Buried inlet pipes may be found through use of a metal probe. Condition 4: Inlet pipe buried in sediment or blocked by vegetation Once located, the pipe path can be cleared of vegetation with brush hook or other brush tools. Light digging may clear sediment from the end of the pipe.	• To locate buried manholes and lost storm lines, it is sometimes necessary to hire a pipeline inspection contractor with televising equipment or ground-penetrating radar and enter at the closest upstream access point. • Locating a buried inlet pipe may require wading in the edge of the pond and using a metal probe and brush axe to find and expose the pipe. • If other than light digging is necessary to remove accumulated sediment, a contractor with heavy equipment may be required.

Table 3.10.1 Level Inspection: PONDS and WETLANDS	
Recommended Repairs and Required Skills	**Triggers for Level 3 Inspection**
Observed Condition: Pipe or Headwall Settlement, Erosion, Corrosion or Failure	
Condition 1: Pipe or headwall settlement or failure Severe sinkholes, settlement or corrosion should be kicked out to Level 3 Inspection. Condition 2: Flow not confined to pipe and visible outside pipe wall With flashlight, observe the inside of the pipe and note its condition. Take photographs. Look for sinkholes developing that indicate pipe failure beneath the surface. Kick out to Level 3 inspection.	• Where blockages are visible, a decision is needed on whether to clear them or leave in place. If a third of the pipe is full of sediment, it should be removed by a contractor with pipe-cleaning equipment. • Corrosion of inlet pipes that allows flow around the pipe exterior is a structural concern because it can lead to settlement, sinkholes and undermining pond embankment. Evidence of this type of failure may require specialized pipe-inspection equipment and investigation by an engineer.
Observed Condition: Pond Conditions	
Condition 1: Pond pre-treatment zone is full of sediment or not constructed as shown on as-built drawings. Condition 2: Excessive buildup of sediment or overgrowth If the pre-treatment area or pond pool is overgrown or filled with sediment so that the original design is compromised, corrective measures are required. If plants have died, then replanting is necessary. If none of the original design exists due to alteration or sediment, kick out to Level 3 inspection.	• It may require inspection by an engineer to determine next steps for clearing, replanting or reconstruction. • Erosion or settlement such that design has been compromised should be reviewed by an engineer. Recurring erosion may require redesign and/or regrading to direct flow away from eroding area. • If sediment has filled more than 50% of the pond's capacity, dredging is likely needed and should be evaluated by a qualified contractor. • Removal or control of excessive algae or aquatic plants can be assessed by a qualified pond maintenance company.

Bioretention Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Facility area cleared		
If designed as exfilter, soil testing for permeability		
Facility location staked out		
2. Excavation		
Size and location		
Lateral slopes completely level		
If designed as exfilter, ensure that excavation does not compact susoils.		
Longitudinal slopes within design range		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
3. Structural Components		
Stone diaphragm installed correctly		
Outlets installed correctly		
Underdrain		
Pretreatment devices installed		
Soil bed composition and texture		
4. Vegetation		
Complies with planting specs		
Topsoil adequate in composition and placement		
Adequate erosion control measures in place		
5. Final Inspection		
Dimensions		
Proper stone diaphragm		
Proper outlet		
Soil/ filter bed permeability testing		
Effective stand of vegetation and stabilization		
Construction generated sediments removed		
Contributing watershed stabilized before flow is diverted to the practice		

Comments:

Actions to be Taken:

Exhibit F

April 8, 2026

20255046.0001

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

CITY OF AUBURN, NY

PREPARED FOR:
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1.0 EXECUTIVE SUMMARY

The purpose of this report is to evaluate the potential traffic impacts related to the proposed medical office located at 143-147 North Street in the City of Auburn, NY. Within this report, the operating characteristics of the proposed access points and impacts to the adjacent roadway network are evaluated. Mitigating measures are identified, if needed, to minimize operational concerns. To define traffic impact, this analysis establishes existing baseline traffic conditions, projects background traffic flow including area growth, and determines the traffic operations that would result from the proposed project. All figures and supporting calculations are included at the end of this report.

Project Location and Description

The project site is located along the west side of North Street to the north of Perrine Street, in the City of Auburn, Cayuga County, NY. The project comprises the following aspects:

- **Site Status:** Currently, a portion of the site is occupied by an existing medical office building and two single family homes but most of the site is occupied by vacant undeveloped land.
- **Site Boundary:**
  - **North:** Single Family Home.
  - **East:** North Street.
  - **South:** An existing medical office building and single family homes along Perrine St.
  - **West:** Railroad tracks.
- **Vicinity Land Uses:** There is a mix of land uses, including residential, medical, and service.

The proposed development consists of constructing a ±80,750 square foot (SF) three-story medical office building. The proposed building will contain ±54 offices and employ 162 staff members. The existing medical office building and single family homes on the property will be demolished as a part of the proposed development. Access to the proposed development will be provided via the existing driveway along North St, which will be redesigned as a part of the proposed project. Additionally, one proposed driveway will be constructed along Perrine St and another proposed driveway will be constructed along W Park Ave.

Study Area

To ensure a comprehensive analysis of potential traffic impacts, a study area was selected consisting of the following intersections. **Figure 1** illustrates the study area and project location.

1. North Street/Standart Avenue
2. North Street/143 North Street Driveway
3. North Street/Lansing Street
4. North Street/Perrine Street
5. North Street/Seymour Street
6. Perrine Street/State Street
7. Lansing Street/Grant Avenue

Existing and Background Conditions

Turning movement traffic counts were collected by Passero Associates on Wednesday, March 11, 2026, between 7:00-9:00 AM for the weekday AM peak period and 4:00-6:00 PM for the weekday PM peak period by Passero Associates at the study area intersections listed in Section 2.3. The peak hour traffic periods generally occurred between 7:45-8:45 AM for the AM peak hour, and 4:00-5:00 PM for the PM peak hour at the study intersections; these time periods were used for analysis purposes in this study.

The weekday turning movement count data was collected on a typical weekday while local schools were in session. No adverse weather conditions impacted the traffic counts. The traffic volumes were reviewed to confirm accuracy, seasonality, and relative balance between intersections. No seasonality adjustment was required. The actual differences in traffic volumes can be attributed to temporal variations in traffic volumes as well as activity related to driveways located in the segments between the study intersections.

Construction of the proposed project is anticipated to reach full build-out within approximately one year depending on market conditions.

To account for normal increases in background traffic growth, including any unforeseen developments in the study area, a growth rate of 1.0% was applied to the existing traffic volumes for the build out period.

Conclusions and Recommendations

This Traffic Impact Study identified and evaluated the potential traffic impacts that can be expected from the proposed medical office located at 143-147 North Street in the City of Auburn, NY. The results of this comprehensive study determined that the existing transportation network can adequately accommodate the projected traffic volumes and resulting minor impacts to study area intersections. The following sets forth the conclusions and recommendations based upon the results of the analyses:

1. The proposed project is estimated to generate 125 entering and 12 exiting vehicle trips during the AM peak hour, and 13 entering and 115 exiting vehicle trips during the PM peak hour.

2. Based on the results of crash analysis, there are no inherent safety deficiencies at any of the study intersections.

3. All movements generally operate at an acceptable LOS D or better under existing, projected background, and full build conditions (with proposed development) during both peak hours at all study intersections. No changes in level of service are anticipated at any of the study intersections.

4. The proposed driveway along Perrine St should consist of one enter and one exit lane.

5. The proposed driveway along W Park Ave should consist of one enter and one exit lane.

6. Pursuant to the State Environmental Quality Review Act (SEQRA), this detailed analysis demonstrates that the proposed project does not result in any significant adverse traffic impacts even at full development

2.0 INTRODUCTION

2.1 Study Purpose and Objectives

The purpose of this report is to evaluate the potential traffic impacts related to the proposed medical office located at 143-147 North Street in the City of Auburn, NY. Within this report, the operating characteristics of the proposed access points and impacts to the adjacent roadway network are evaluated. Mitigating measures are identified, if needed, to minimize operational concerns. To define traffic impact, this analysis establishes existing baseline traffic conditions, projects background traffic flow including area growth, and determines the traffic operations that would result from the proposed project. All figures and supporting calculations are included at the end of this report.

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3. North Street/Lansing Street
4. North Street/Perrine Street
5. North Street/Seymour Street
6. Perrine Street/State Street
7. Lansing Street/Grant Avenue

3.0 TRANSPORTATION SETTING

3.1 Description of Study Area Roadways

The information outlined in **Table 1** provides a description of the existing roadway network within the study area. **Figure 2** illustrates the lane geometry and traffic controls at each of the study intersections and the Annual Average Daily Traffic (AADT) volumes on the study roadways. The AADTs, in vehicles per day (vpd), reflect the most recently collected data obtained from the NYSDOT or Passero Associates.

Table 1: *Existing Highway System*

Roadway	Class[1]	Agency[2]	Speed	Typical Cross Section[3]	AADT
North Street (NY-34)	14	NYSDOT	30 mph	4-lane undivided	10,487 (NYSDOT 2023)
Standart Avenue	17	City of Auburn	30 mph	2-lane undivided	7,378 (NYSDOT 2024)
Lansing Street	19	City of Auburn	30 mph	2-lane undivided	2,432 (Passero 2026)
Perrine Street	19	City of Auburn	30 mph	2-lane undivided	2,083 (NYSDOT 2022)
State Street (NY-38)	17	NYSDOT	30 mph	2-lane undivided	3,154 (NYSDOT 2024)
Grant Avenue (NY-5)	14	NYSDOT	30 mph	4-lane undivided	16,920 (NYSDOT 2023)

1. Functional Classification.
2. Roadway ownership.
3. Excludes turning lanes at intersections.

Functional classification of roadways is determined by the NYSDOT and the Federal Highway Administration (FHWA). Both the NYSDOT and FHWA groups roads, streets, and highways into different classes based on how they are used. This is called functional classification. Roads and streets do not work alone to move traffic. Instead, they form a network. Functional classification defines how each road or street fits into this network, how it provides access to nearby properties, and whether it is in an urban or rural area. In the study area, all the roadways are classified as urban.

The primary functional classification within the study area:

- Principal Arterial (Class 14)
- Major Collector (Class 17)
- Local (Class 19)

3.2 Description of Multimodal Network

Table 2 summarizes the traffic controls, pedestrian, bicycle, and transit accommodations within the study area.

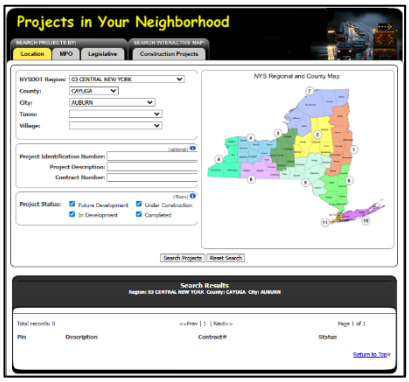
Table 2: *Multimodal Network*

Intersection	Traffic Control	Pedestrian			Bicycle		Transit
		Sidewalk	Crosswalk	Ped Signal	Lane	Other	
North St/Standart Ave	Signal	Fully present	Yes	No	No	In lane	Bus Route Aub 3
North St/143 North St Driveway	Sign	Fully present	No	No	No	In lane	No
North St/Lansing St	Signal	Fully present	Yes	Yes	No	In lane	Bus Route Aub 3
North St/Perrine St	Sign	Fully present	No	No	No	In lane	Bus Route Aub 3

Intersection	Traffic Control	Pedestrian			Bicycle		Transit
		Sidewalk	Crosswalk	Ped Signal	Lane	Other	
North St/Seymour St	Signal	Fully present	Yes	Yes	No	In lane	Bus Route Aub 3
Perine St/State St	Signal	Fully present	Yes	Yes	No	In lane	Bus Route Aub 3 & Aub 38
Lansing St/Grant Ave	Sign	Fully present	Yes	No	No	In lane	No

3.3 Planned/Programmed Highway Improvements

The NYSDOT *Projects in Your Neighborhood* web portal was reviewed and it was determined that there are no planned or ongoing projects within the study area.



4.0 EXISTING CONDITIONS ANALYSIS

4.1 Peak Intervals for Analysis

Given the functional characteristics of the corridors, adjacent land uses, and the proposed land use for the project site, the peak hours selected for analysis are the weekday morning (AM) and weekday afternoon (PM) peak periods. The combination of site traffic and adjacent street traffic produces the greatest demand during these time periods.

4.2 Existing Traffic Volume Data

Turning movement traffic counts were collected by Passero Associates on Wednesday, March 11, 2026, between 7:00-9:00 AM for the weekday AM peak period and 4:00-6:00 PM for the weekday PM peak period by Passero Associates at the study area intersections listed in Section 2.3. The peak hour traffic periods generally occurred between 7:45-8:45 AM for the AM peak hour, and 4:00-5:00 PM for the PM peak hour at the study intersections; these time periods were used for analysis purposes in this study.

The weekday turning movement count data was collected on a typical weekday while local schools were in session. No adverse weather conditions impacted the traffic counts. The traffic volumes were reviewed to confirm accuracy, seasonality, and relative balance between intersections. No seasonality adjustment was required. The actual differences in traffic volumes can be attributed to temporal variations in traffic volumes as well as activity related to driveways located in the segments between the study intersections. **Figures 3a and 3b** illustrate the 2026 existing balanced conditions for the AM and PM peak hours, respectively.

4.3 Field Observations

The study intersections were observed during peak intervals to assess current traffic operations. Signal timing and phasing information was obtained from the NYSDOT to determine peak hour phasing plans and phase durations during

each interval at the signalized intersections with the exception of the State St/Perrine St intersection. The City of Auburn did not have any signal timings for this intersection. Therefore, signal timing and phasing information for the State St/Perrine St intersection was obtained by Passero Associates in the field to determine peak hour phasing and phase durations during each peak hour. This information was used to support and/or calibrate capacity analysis models described in detail later in this report.

4.4 Existing Crash Investigation

The Federal Highway Administration (FHWA) and local agencies, such as NYSDOT, have adopted the Safe Systems Approach to roadway safety. This approach prioritizes the elimination of crashes that result in death and serious injuries. The safety evaluation process follows three general components: identification of safety problems, development of potential safety strategies, and selection and implementation of strategies.

Intersections are evaluated using the Potential for Safety Improvement (PSI) and Safety Performance Function (SPF) methodology described in the latest American Association of State Highway Transportation Officials (AASHTO) *Highway Safety Manual (2010)*, FHWA *Road Safety Fundamentals (2017)*, NYSDOT *Yellow Book (2023)*, and NYSDOT *Red Book (2023)*. The accompanying SPF worksheet can be obtained from the NYSDOT Crash Analysis Toolbox. NYSDOT defines PSI and SPF as:

- **Potential for Safety Improvement (PSI)** A comparison of the site-specific safety performance compared to the statewide average using either observed or expected crashes depending on whether traffic volume is available.
- **Safety Performance Function (SPF)** An equation used to estimate or predict the average crash frequency per year at a location as a function of traffic volume and, in some cases, roadway or intersection characteristics (e.g., number of lanes, traffic control, or type of median).

To support this effort on a site-level scale, Passero obtained crash history data using MV-104 Police Accident Reports provided by the NYSDOT *Crash Location & Engineering Analysis & Reporting (CLEAR)* database from **February 28, 2022, to February 28, 2025.**

Table 3 provides a summary of the crashes that occurred within the study area and resulting PSI. SPF Prediction, Expected Crashes, and Excess Expected Crashes are shown as crashes per year. NYSDOT suggests that intersections with positive values under Excess Expected Crashes per year greater than 5.0000 for total crashes and 1.0000 for injury crashes should be evaluated further for potential safety improvements.

Table 3: *Intersection Crash Rate Analysis*

Intersection	Crashes		SPF Prediction		Expected Crashes		Excess Expected Crashes	
	Total	Injury	Total	Injury	Total	Injury	Total	Injury
North St/Standart Ave	15	1	4.0785	1.6755	4.8403	0.8288	0.7619	-0.8467
North St/143 North St Driveway	0	0	0.5861	0.1633	0.2712	0.1170	-0.3149	-0.0464
North St/Lansing St	10	3	1.8355	0.6119	2.9456	0.7936	1.1101	0.1817
North St/Perrine St	5	1	1.1689	0.3416	1.5165	0.3379	0.3477	-0.0038
North St/Seymour St	28	6	3.2075	1.3148	8.0444	1.7073	4.8370	0.3925
Perrine St/State St	4	1	2.2054	0.8424	1.5111	0.4951	-0.6943	-0.3473
Lansing St/Grant Ave	0	0	0.5950	0.1343	0.2731	0.1013	-0.3219	-0.0330

North St/Standart Ave: The following crashes occurred at this intersection: rear end (5), left turn (2), right angle (2), right turn (1), and sideswipe (5). The following crash patterns were reported:

- Rear End
  - Northbound (three crashes)
- Sideswipe
  - Northbound (three crashes)

The reported rear end crashes (33%) are characteristic of moderate to heavily trafficked signalized intersections. The causes of the rear end crashes were generally driver inattention, driver error, unsafe speeds, or following too closely. The causes of the sideswipe crashes were generally driver inattention, unsafe lane changes, or turning improperly. Given the causes of the crash patterns and the low PSI values, no geometric improvements are recommended.

North St/143 North St Driveway: No crashes occurred at this intersection during the study period.

North St/Lansing St: The following crashes occurred at this intersection: left turn (1), right angle (1), sideswipe (6), fixed object (1), and bicycle/pedestrian (1). The only crash pattern reported was three southbound sideswipe crashes.

The causes of the sideswipe crashes were generally driver inattention or unsafe lane changes. Given the causes of the crash patterns and the low PSI values, no geometric improvements are recommended.

North St/Perrine St: The following crashes occurred at this intersection: rear end (1), left turn (1), and right angle (3). The only crash pattern reported was three eastbound right angle crashes.

The causes of the sideswipe crashes were generally driver inattention or failure to yield right of way. Given the causes of the crash patterns and the low PSI values, no geometric improvements are recommended.

North St/Seymour St: The following crashes occurred at this intersection: rear end (7), left turn (9), right angle (7), sideswipe (2), fixed object (1), and bicycle/pedestrian (2). The following crash patterns were reported:

- Left Turn
  - Northbound (five crashes)
  - Southbound (four crashes)
- Rear End
  - Southbound (three crashes)
  - Eastbound (three crashes)
- Right Angle
  - Northbound (three crashes)
  - Southbound (three crashes)

The reported rear end crashes (25%) are characteristic of moderate to heavily trafficked signalized intersections. The causes of the rear end crashes were generally driver inattention, driver error, unsafe speeds, or following too closely. The causes of the left turn crashes were generally driver inattention, failure to yield right of way, or disregard of traffic control device. The causes of the right angle crashes were generally driver inattention, disregard of traffic control device, or driver inexperience. Given the causes of the crash patterns and the low PSI values, no geometric improvements are recommended.

Perrine St/State St: The following crashes occurred at this intersection: rear end (1), right angle (3), sideswipe (1), fixed object (1), and bicycle/pedestrian (1). No crash patterns were reported at this intersection. Given the negative PSI values and that no discernible crash patterns exist, no geometric improvements are recommended.

Lansing St/Grant Ave: The following crashes occurred at this intersection: right angle (1), sideswipe (1), and backing (1). No crash patterns were reported at this intersection. Given the negative PSI values and that no discernible crash patterns exist, no geometric improvements are recommended.

5.0 BACKGROUND (NO BUILD) CONDITIONS

Construction of the proposed project is anticipated to reach full build-out within approximately one year depending on market conditions. The widely accepted methodology for preparing traffic impact studies requires that any projects in the study area that are currently approved and/or under construction must be considered in the traffic analysis. Projects that are contemplated but not yet approved are not included in a traffic analysis. Local municipal personnel were contacted to discuss any other specific projects that are currently approved or under construction that would generate additional traffic in the study area. No such information was provided.

A review of available historical NYSDOT traffic volume data in the vicinity of the site indicates that traffic has decreased between 2015 and 2025. To account for normal increases in background traffic growth, including any unforeseen developments in the study area, a growth rate of 1.0% was applied to the existing traffic volumes for the build out period. **Figures 4a & 4b** depict the 2027 peak hour background traffic volumes for the AM and PM peak hours, respectively.

6.0 PROPOSED DEVELOPMENT CONDITIONS

6.1 Project Description

The proposed development consists of constructing a ±80,750 square foot (SF) three-story medical office building. The proposed building will contain ±54 offices and employ 162 staff members. The existing medical office building and single family homes on the property will be demolished as a part of the proposed development. Access to the proposed development will be provided via the existing driveway along North St, which will be redesigned as a part of the proposed project. Additionally, one proposed driveway will be constructed along Perrine St and another proposed driveway will be constructed along W Park Ave.

6.2 Proposed Traffic Generation

The volume of traffic generated by a site is dependent on the intended land use and size of the development. Trip generation is an estimate of the number of trips generated by a specific building or land use. These trips represent the volume of traffic entering and exiting the development. *Trip Generation Manual* (12th Edition) published by the Institute of Transportation Engineers (ITE) is used as a reference for this information. The trip rate for the peak hour of the generator may or may not coincide in time or volume with the trip rate for the peak hour of adjacent street traffic. Volumes generated during the peak hour of the adjacent street traffic and proposed land uses, in this case, the weekday commuter AM and PM peak hours, represent a more critical volume when analyzing the capacity of the system; those intervals will provide the basis of this analysis.

Table 4: *Site Generated Trips*

Description	ITE Land Use Code	Size	AM Peak Hour		PM Peak Hour	
			Enter	Exit	Enter	Exit
Medical-Dental Office Building	720	162 Employees	125	12	13	115

The proposed project is estimated to generate 125 entering and 12 exiting vehicle trips during the AM peak hour, and 13 entering and 115 exiting vehicle trips during the PM peak hour.

6.3 Trip Distribution

The cumulative effect of site-generated traffic on the transportation network is dependent on the origins and destinations of that traffic and the location of the access drives serving the site. The proposed arrival and departure distribution of traffic generated by the proposed project is considered a function of several parameters, including:

- Residential and employment centers using US Census data.
- Surrounding roadway network.
- Site layout and access locations.
- Existing traffic patterns.
- Existing traffic conditions and controls.

Figure 5 shows the anticipated trip distribution pattern percentage for the project site. **Figures 6a and 6b** illustrate the peak hour project site-generated traffic during the AM and PM peak hours, respectively, based on the percentages in **Figure 5.**

6.4 Full Development Volumes

The proposed design hour traffic volumes are developed for the peak hours by combining the background traffic conditions (**Figures 4a & 4b**) and the new site-generated traffic volumes (**Figures 6a & 6b**) to yield the traffic volumes under full development conditions. It should be noted that since the existing medical office on the proposed site will be demolished, the existing site trips generated by this development have been subtracted from the full build traffic volumes. **Figures 7a & 7b** illustrate total anticipated full build peak hour volumes for the AM and PM peak hours, respectively.

7.0 TRAFFIC OPERATIONS AND ANALYSIS

7.1 Description of Capacity Analysis

Capacity analysis is a technique used for determining a measure of effectiveness for a section of roadway and/or intersection based on the number of vehicles during a specific time period. The measure of effectiveness used for the capacity analysis is referred to as a Level of Service (LOS). Levels of service are calculated to provide an indication of the amount of delay that a motorist experiences while traveling along a roadway or through an intersection. Since the most amount of delay to motorists usually occurs at intersections, capacity analysis focuses on intersections, as opposed to highway segments.

The standard procedure for capacity analysis of signalized and unsignalized intersections is outlined in the *Highway Capacity Manual (HCM) 7th Edition* published by the Transportation Research Board (TRB). Traffic analysis software,

Synchro 12, which is based on procedures and methodologies contained in the HCM, was used to analyze operating conditions at study area intersections. The procedure yields a level of service based on the HCM as an indicator of how well intersections operate.

Six levels of service are defined for analysis purposes. They are assigned letter designations, from A to F, with LOS A representing the conditions with little to no delay, and LOS F conditions with very long delays. Suggested ranges of service capacity and an explanation of levels of service are included in the Appendices. LOS C or better is desirable, but LOS D for signalized locations and LOS E for unsignalized locations are generally thresholds of acceptable operation during peak periods so long as the volume to capacity ratio (v/c) is below 1.0. **Table 5** depicts level of service criteria for both signalized and unsignalized intersections and associated delays per vehicle in seconds.

Table 5: *Level of Service Criteria*

Level of Service	Signalized Control	Unsignalized Control
A	< 10	< 10
B	10 – 20	10 – 15
C	20 – 35	15 – 25
D	35 – 55	25 – 35
E	55 – 80	35 – 50
F	> 80	> 50

Level of service for signalized intersections is defined in terms of delay specifically, average total delay per vehicle for a 15-minute analysis period. Level of service for unsignalized intersections, however, are different from a signalized intersection. The primary reason for this is driver expectation that a signalized intersection is designed to carry higher volumes than an unsignalized intersection. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable than they are at signals.

The v/c ratio, also referred to as degree of saturation, represents the sufficiency of an intersection to accommodate the vehicular demand. A v/c ratio less than 0.85 generally indicates that adequate capacity is available, and vehicles are not expected to experience significant queues and delays. As the v/c ratio approaches 1.0, traffic flow may become unstable, and delay and queuing conditions may occur.

7.2 Capacity Analysis Results

Existing and background operating conditions during the peak study periods are evaluated to determine a basis for comparison with the projected future conditions. The future traffic conditions generated by the project were analyzed to assess the operation of the study area intersections. Capacity results for existing, background, and full build conditions are listed in **Table 6**. The discussion following the table summarizes capacity conditions. The detailed Synchro capacity analysis worksheets are provided after this report.

Table 6: *Capacity Analysis Results*

INTERSECTION	2026 EXISTING CONDITIONS						2027 BACKGROUND CONDITIONS						2027 FULL BUILD CONDITIONS					
	AM			PM			AM			PM			AM			PM		
	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c
1. North St at Standart Ave (S)																		
EB - Standart Ave	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
WB - Standart Ave	A	7.8	0.35	B	11.6	0.48	A	7.8	0.35	B	11.7	0.49	A	8.1	0.36	B	11.8	0.49
NB - North St	B	12.9	0.28	B	14.2	0.41	B	13.0	0.28	B	14.2	0.41	B	13.0	0.29	B	14.3	0.43
SB - North St	B	11.1	0.47	B	10.1	0.38	B	11.2	0.47	B	10.2	0.38	B	11.3	0.48	B	10.2	0.39
Overall LOS	**B**	**11.1**	**0.47**	**B**	**12.2**	**0.49**	**B**	**11.2**	**0.48**	**B**	**12.3**	**0.49**	**B**	**11.3**	**0.49**	**B**	**12.4**	**0.49**
2. North St at Exist Driveway (U)																		
EB - Exist Driveway	B	10.8	0.01	B	12.3	0.07	B	10.8	0.01	B	12.4	0.07	B	12.7	0.01	B	13.0	0.12
NB Left - North St	A	8.4	0.02	A	8.3	0.00	A	8.4	0.02	A	8.3	0.00	A	8.6	0.04	A	8.3	0.00
3. North St at Lansing St (S)																		
WB - Lansing St	B	18.5	0.36	C	22.9	0.54	B	18.8	0.37	C	22.9	0.55	B	19.9	0.43	C	22.9	0.55
NB - North St	A	4.0	0.23	A	5.8	0.26	A	4.0	0.23	A	5.8	0.27	A	4.3	0.24	A	5.8	0.28
SB - North St	A	4.6	0.23	A	5.8	0.24	A	4.7	0.23	A	5.9	0.24	A	4.9	0.24	A	6.0	0.25
Overall LOS	**A**	**5.9**	**0.37**	**A**	**8.6**	**0.55**	**A**	**5.9**	**0.37**	**A**	**8.7**	**0.55**	**A**	**6.5**	**0.43**	**A**	**8.7**	**0.55**
4. North St at Perrine St (U)																		
EB - Perrine St	C	20.0	0.26	C	17.5	0.19	C	20.2	0.27	C	17.7	0.20	C	24.3	0.32	C	18.8	0.31
WB - Exist Driveway	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
NB Left - North St	A	8.6	0.04	A	8.7	0.03	A	8.7	0.04	A	8.7	0.03	A	8.9	0.08	A	8.8	0.03
SB Left - North St	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
5. North St at Seymour St (S)																		
EB - Seymour St	C	23.0	0.49	C	22.8	0.55	C	23.0	0.50	C	22.8	0.55	C	23.5	0.51	C	22.8	0.55
WB - Seymour St	C	21.0	0.41	B	19.4	0.36	C	21.0	0.41	B	19.4	0.36	C	20.6	0.43	B	19.4	0.36
NB - North St	A	7.5	0.27	A	8.8	0.33	A	7.5	0.27	A	8.8	0.33	A	7.9	0.30	A	8.9	0.34
SB - North St	A	7.4	0.27	A	8.1	0.28	A	7.5	0.27	A	8.2	0.29	A	7.7	0.28	A	8.5	0.32
Overall LOS	**B**	**11.6**	**0.57**	**B**	**12.3**	**0.56**	**B**	**11.6**	**0.50**	**B**	**12.3**	**0.56**	**B**	**11.9**	**0.52**	**B**	**12.3**	**0.56**
6. State St at Perrine St (S)																		
EB - Perrine St	A	8.7	0.28	A	6.8	0.15	A	8.8	0.28	A	6.8	0.15	A	9.2	0.29	A	6.7	0.15
WB - Perrine St	A	8.2	0.21	A	9.0	0.24	A	8.2	0.22	A	9.1	0.24	A	8.4	0.22	A	9.4	0.28
NB - State St	A	6.2	0.21	A	6.0	0.23	A	6.2	0.21	A	6.1	0.23	A	6.1	0.23	A	6.3	0.24
SB - State St	A	6.7	0.26	A	5.9	0.17	A	6.7	0.26	A	5.9	0.18	A	6.8	0.28	A	6.2	0.18
Overall LOS	**A**	**7.1**	**0.29**	**A**	**6.6**	**0.24**	**A**	**7.1**	**0.29**	**A**	**6.6**	**0.24**	**A**	**7.2**	**0.30**	**A**	**7.0**	**0.28**
7. Lansing St at Grant Ave (U)																		
EB - Lansing St	C	15.0	0.11	C	21.4	0.15	C	15.2	0.11	C	21.7	0.15	C	15.6	0.12	C	23.3	0.22
NB Left - Grant Ave	A	8.4	0.01	A	9.7	0.01	A	8.4	0.01	A	9.7	0.01	A	8.5	0.02	A	9.8	0.01
8. Perrine St at Proposed Driveway (U)																		
EB Left - Perrine St	N/A			N/A			N/A			N/A			A	7.6	0.02	A	7.4	0.00
SB - Proposed Driveway													A	9.7	0.01	A	9.6	0.08

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound

N/A = Approach does not exist and/or was not analyzed during this condition

1. North St at Standart Ave (Signalized)
All approaches operate at an acceptable LOS B or better under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

2. North St at 143 North St Driveway (Signalized)
All approaches operate at an acceptable LOS B or better under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

3. North St at Lansing St (Signalized)
All approaches operate at an acceptable LOS C or better under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

4. North St at Perrine St (Unsignalized)
All approaches operate at an acceptable LOS C or better under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

5. North St at Seymour St (Signalized)
All approaches operate at an acceptable LOS C or better under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

6. State St at Perrine St (Signalized)
All approaches operate at an acceptable LOS A under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

7. Lansing St at Grant Ave (Unsignalized)
All approaches operate at an acceptable LOS C or better under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

8. Perrine St at Proposed Driveway (Signalized)
All approaches operate at an acceptable LOS A under full build conditions during both peak hours. The proposed westerly driveway should consist of one enter and one exit lane

8.0 CONCLUSIONS AND RECOMMENDATIONS

This Traffic Impact Study identified and evaluated the potential traffic impacts that can be expected from the proposed medical office located at 143-147 North Street in the City of Auburn, NY. The results of this comprehensive study determined that the existing transportation network can adequately accommodate the projected traffic volumes and resulting minor impacts to study area intersections. The following sets forth the conclusions and recommendations based upon the results of the analyses:

1. The proposed project is estimated to generate 125 entering and 12 exiting vehicle trips during the AM peak hour, and 13 entering and 115 exiting vehicle trips during the PM peak hour.

2. Based on the results of crash analysis, there are no inherent safety deficiencies at any of the study intersections.

3. All movements generally operate at an acceptable LOS D or better under existing, projected background, and full build conditions (with proposed development) during both peak hours at all study intersections. No changes in level of service are anticipated at any of the study intersections.

4. The proposed driveway along Perrine St should consist of one enter and one exit lane.

5. The proposed driveway along W Park Ave should consist of one enter and one exit lane.

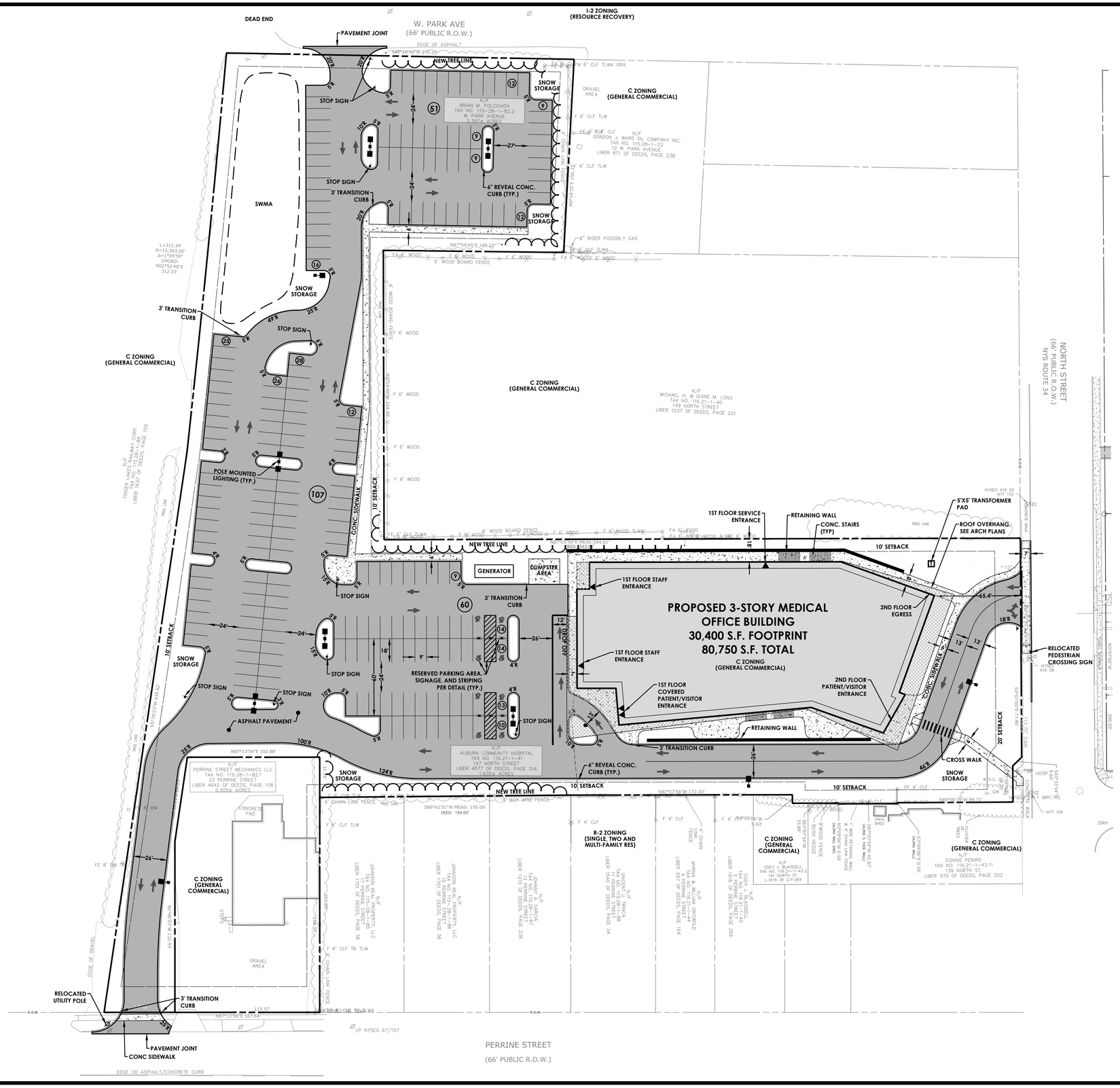
6. Pursuant to the State Environmental Quality Review Act (SEQRA), this detailed analysis demonstrates that the proposed project does not result in any significant adverse traffic impacts even at full development.

9.0 REFERENCES

- Synchro 12 Software. Cubic ITS.
- Highway Capacity Manual (7th Edition). Transportation Research Board (TRB). Washington, DC. 2022.
- Trip Generation Manual (12th Edition). Institute of Transportation Engineers (ITE). Washington, DC. 2025.
- Trip Generation Handbook (3rd Edition). Institute of Transportation Engineers (ITE). Washington, DC. 2017.
- OnTheMap. United States Census Bureau. 2024.
- Traffic Data Viewer. New York State Department of Transportation (NYSDOT). 2024.
- Highway Functional Classification Concepts, Criteria, and Procedures. Federal Highway Administration (FHWA). 2023.
- Manual on Uniform Traffic Control Devices (11th Edition). Federal Highway Administration. 2023

10.0 FIGURES

Figures 1 through 7b are included on the following pages.



LEGEND - SITE:

HORIZONTAL SCALE: 1"=40'

- PROPERTY BOUNDARY
- R.O.W. — RIGHT OF WAY
- EXISTING CENTER LINE ROAD
- SETBACK
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- EXISTING BUILDING
- PROPOSED BUILDING
- (14) PROPOSED PARKING COUNT
- PROPOSED CONCRETE
- PROPOSED ACCESS RAMP
- PROPOSED PAVEMENT STRIPING
- PROPOSED CURB
- PROPOSED SIGN
- EXISTING SIGN
- PROPOSED LIGHT POLE
- PROPOSED FENCE
- PROPOSED BUILDING MOUNTED LIGHT

CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100
ROCHESTER, NY 14614
(585) 325-1000
FAX: (585) 325-1691
PROJECT MANAGER: ANDREW BURNS, P.E.
PROJECT ENGINEER: ANDREW BURNS, P.E.
DESIGNER: JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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SITE PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-102**

DATE: **MARCH 2026**

SCHEMATIC DESIGN

Y:\PROJECTS-NEW\2025\20255046\20255046.0001\01_CAD-BIM-MODELS\CIVIL\20255046.01_SITE.DWG 4/6/2026 4:07 PM Shari Kiels

Figure 1

PASSERO engineering architecture

Auburn Community Hospital Health Campus |
Cayuga County, City of Auburn, NY

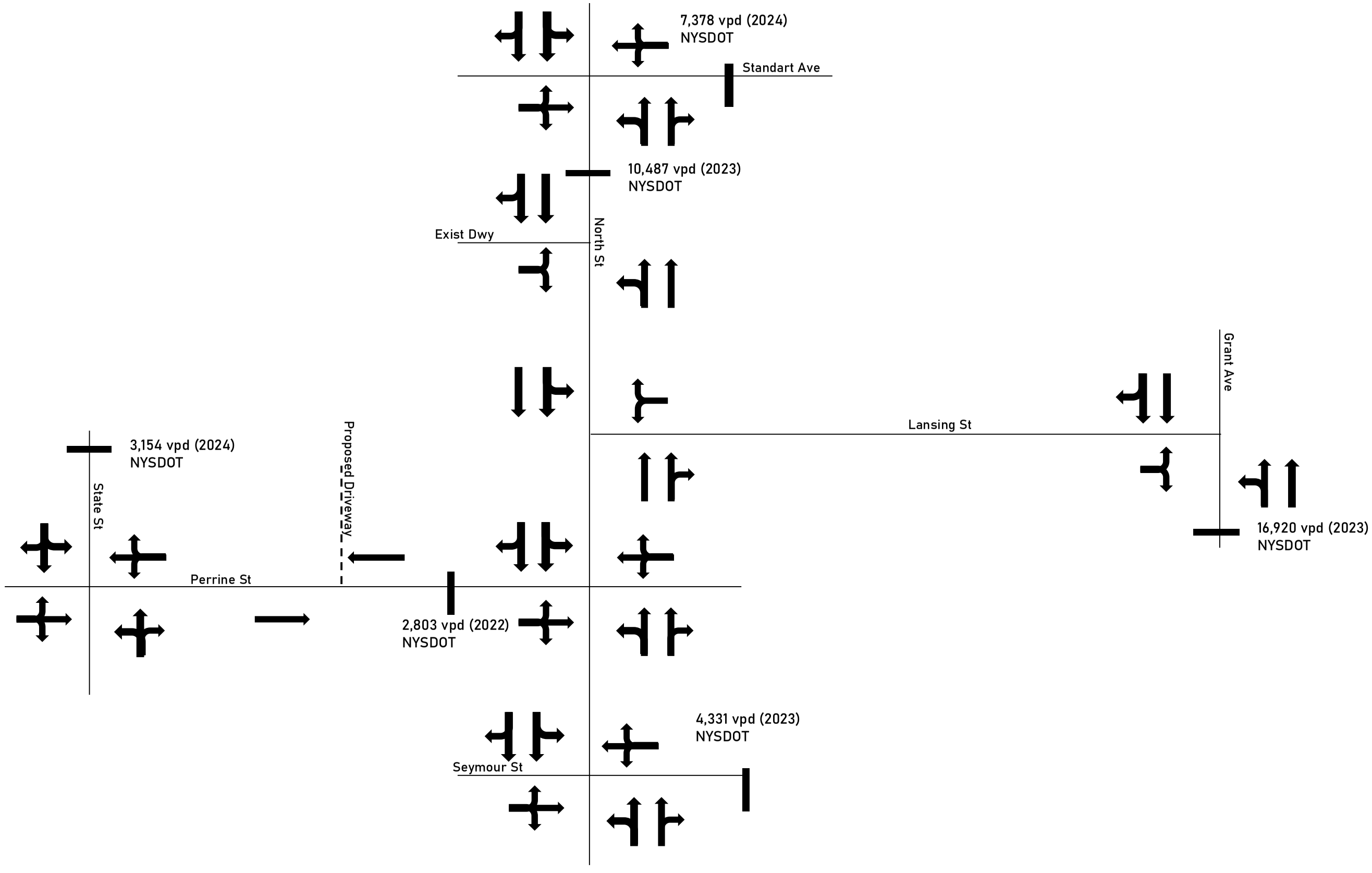
0 500 1,000 2,000 Feet

N

Site Location and Study Area

Key:
- # Study Intersection
- # Proposed Intersection
- Study Area
- Project Location

Project Number: 20255046.0001



PASSERO engineering architecture

242 West Main Street, Suite 100
Rochester, NY 14614

Lane Geometry and Average Daily Traffic

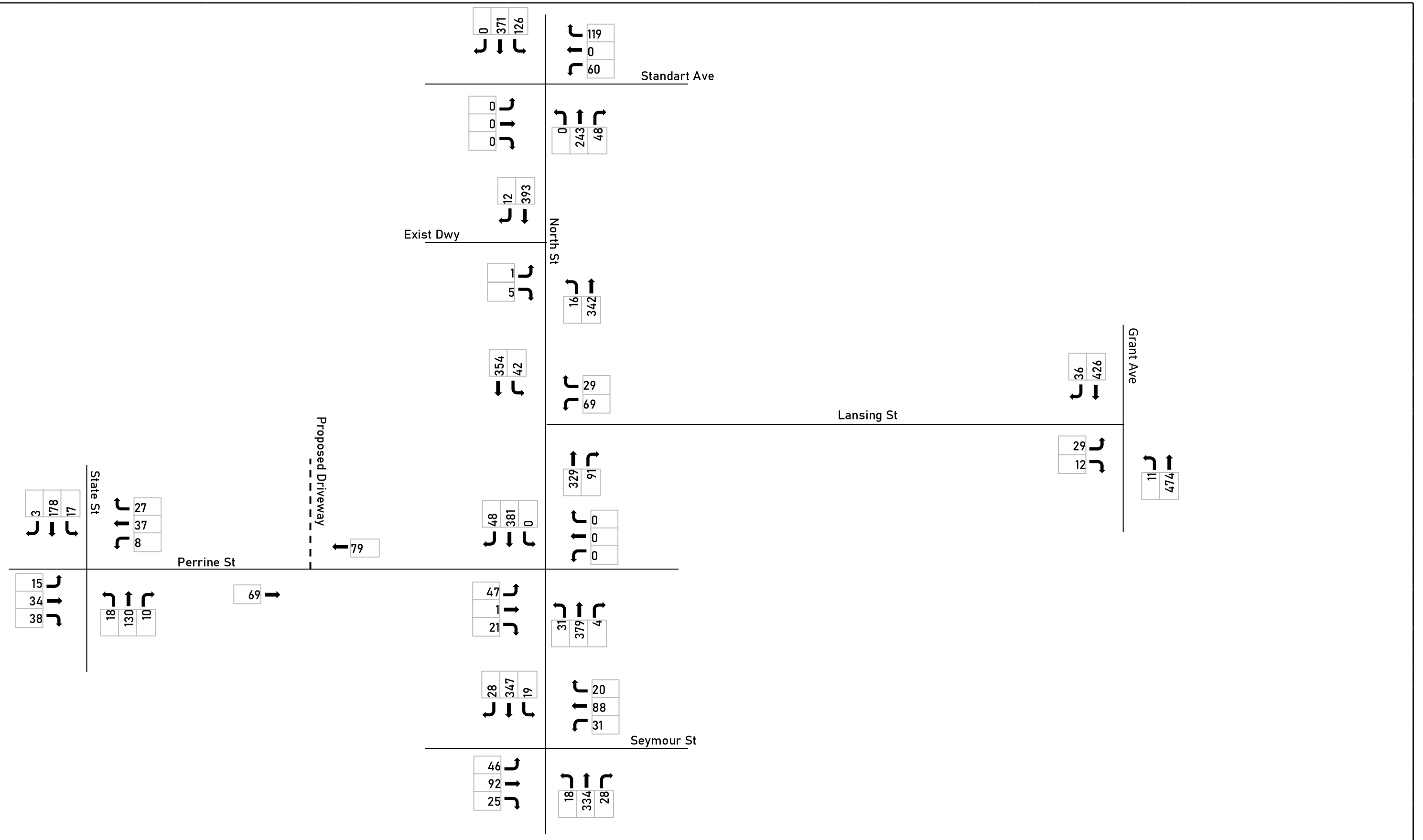
Auburn Community Hospital Health Campus

City of Auburn, NY

Notes:

Figure 2

PN: 20255046.0001



2026 Existing Conditions - Weekday AM Peak Hour

Auburn Community Hospital Health Campus

City of Auburn, NY

PASSERO engineering architecture

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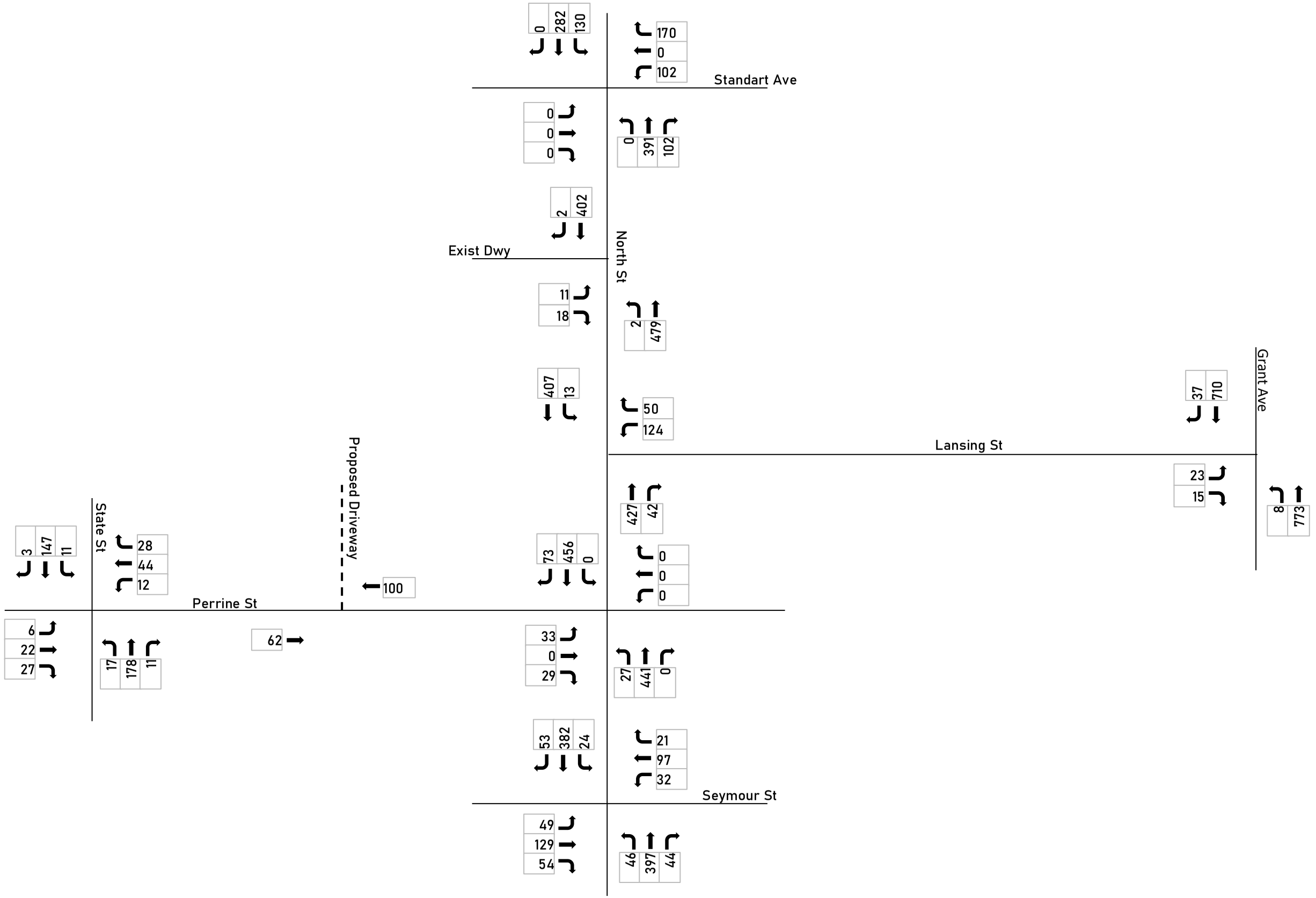
Rochester, NY 14614

Notes:

Figure 3a

PN: 20255046.0001



2026 Existing Conditions - Weekday PM Peak Hour

Auburn Community Hospital Health Campus

City of Auburn, NY

Notes:

Figure 3b

PN: 20255046.0001

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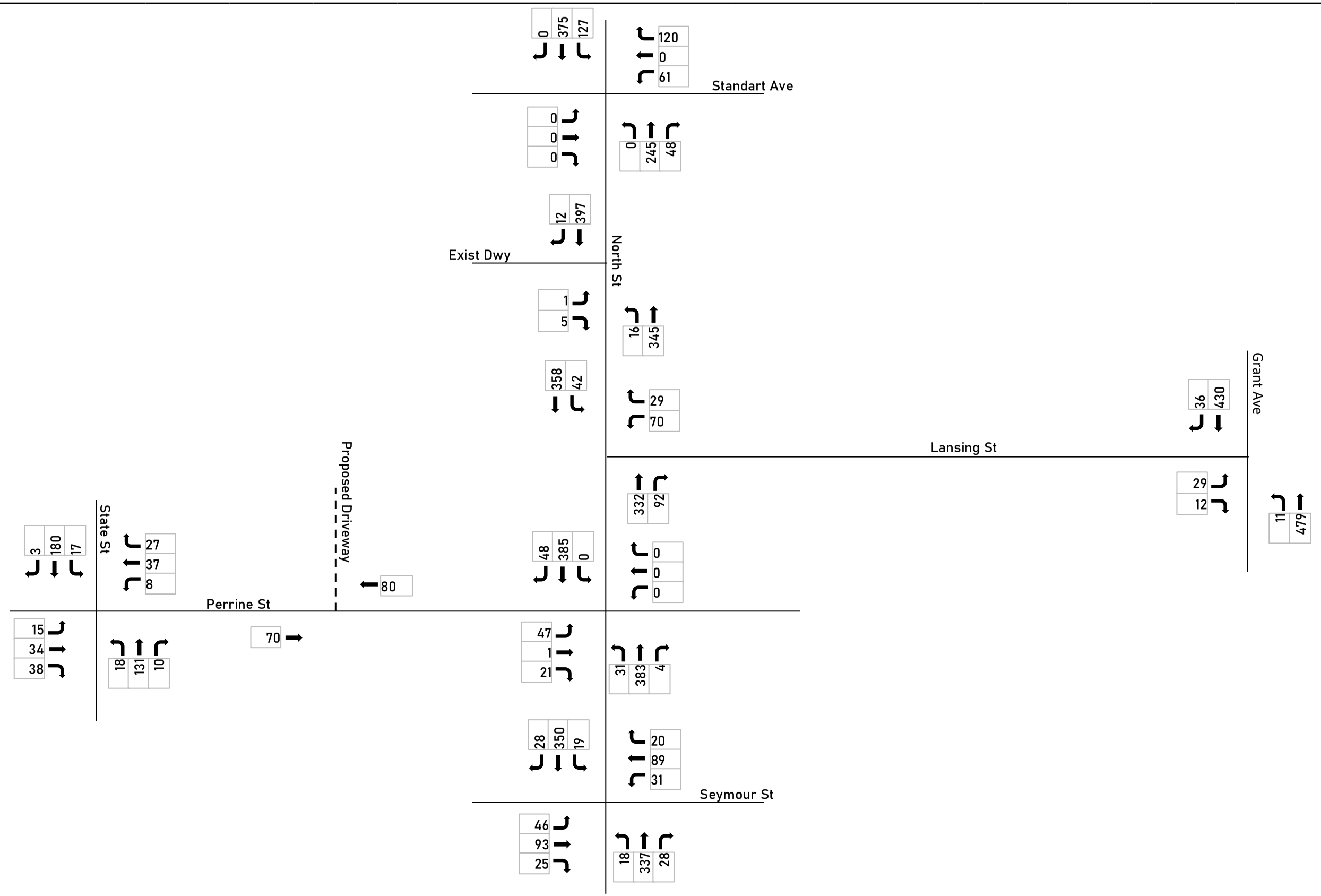

2027 Background Conditions - Weekday AM Peak Hour

Auburn Community Hospital Health Campus

City of Auburn, NY

Notes:

Figure 4a

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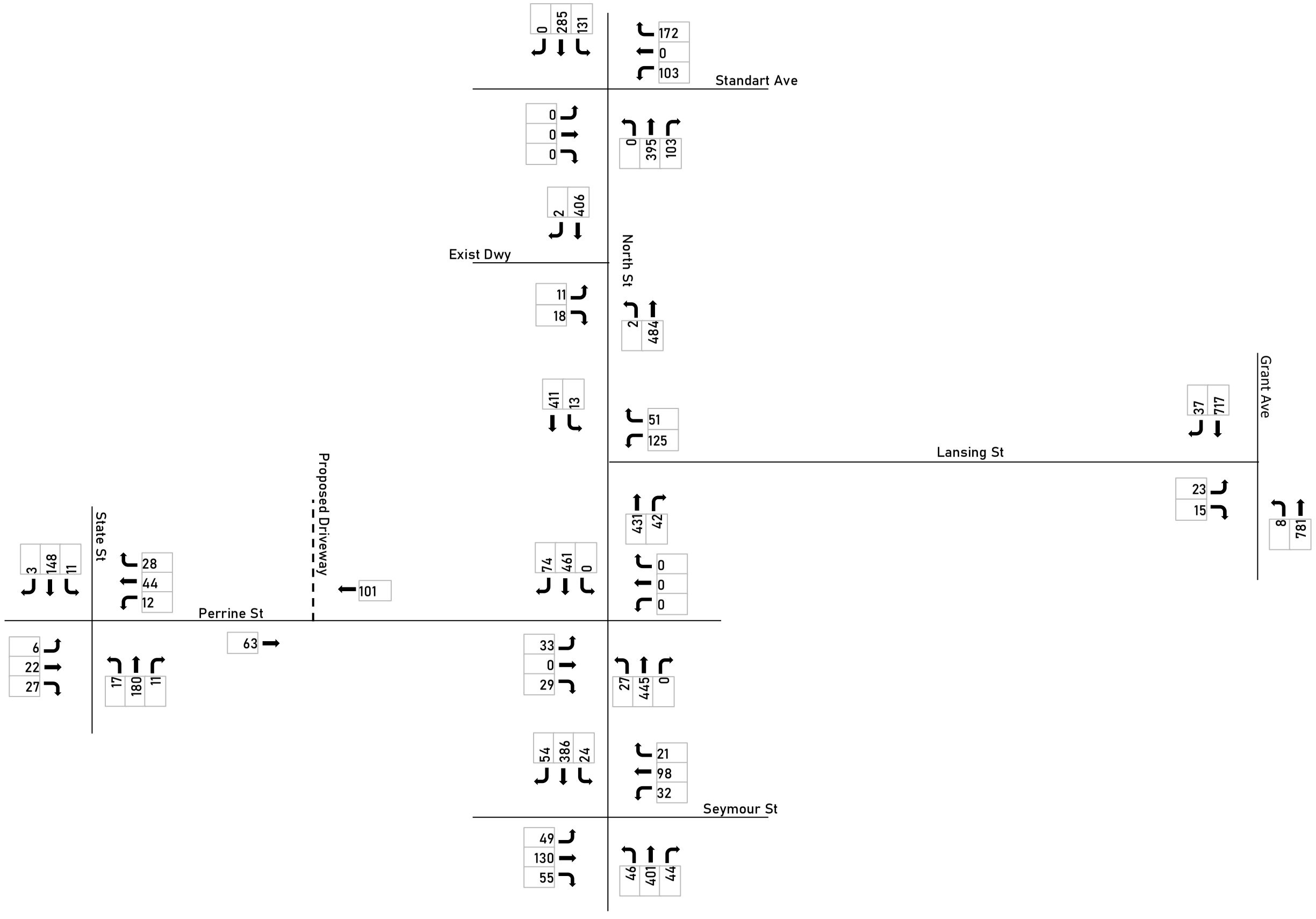

2027 Background Conditions - Weekday PM Peak Hour

Auburn Community Hospital Health Campus

City of Auburn, NY

Notes:

Figure 4b

PN: 20255046.0001

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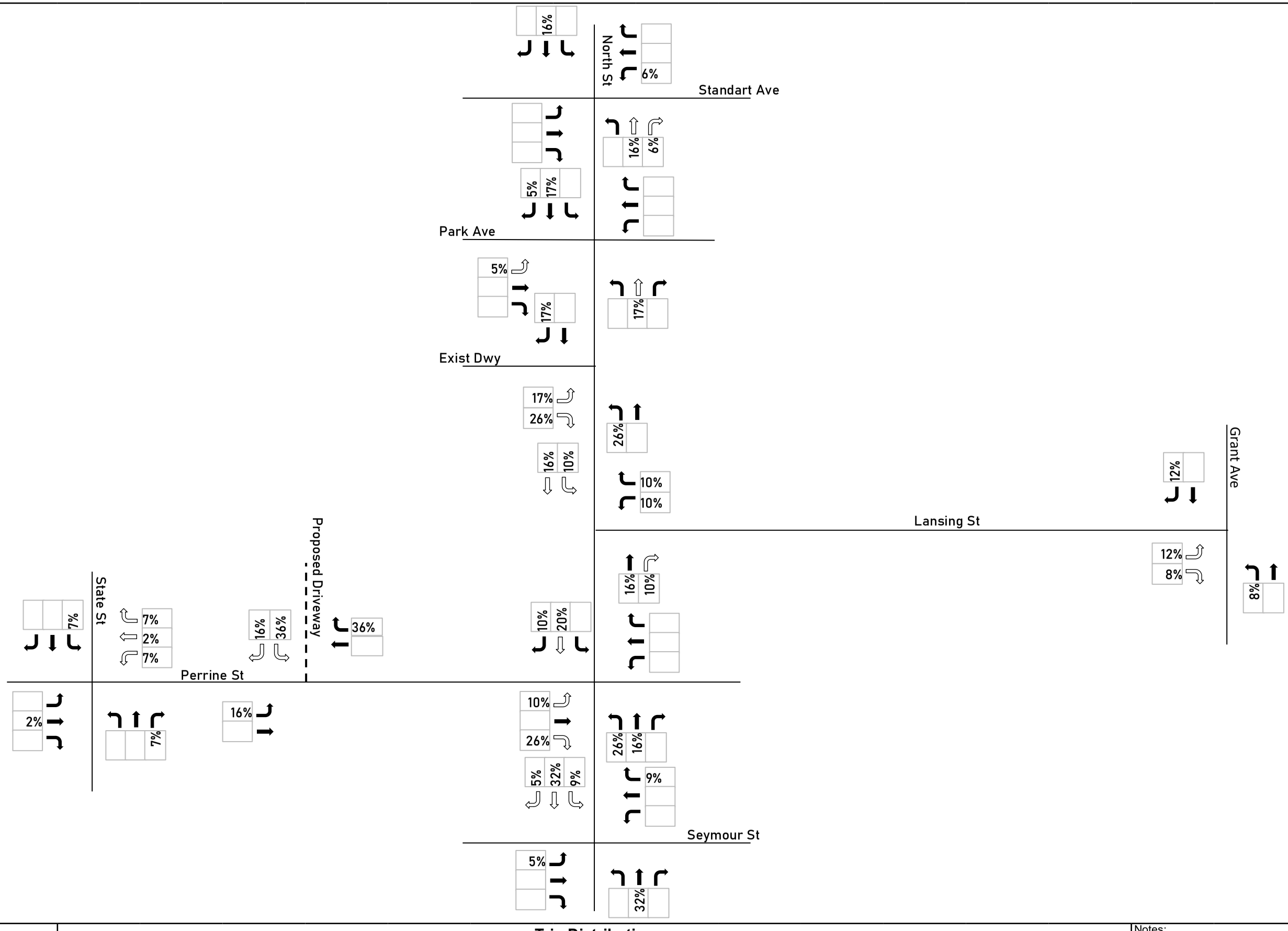

Trip Distribution

Auburn Community Hospital Health Campus

City of Auburn, NY

Notes:

Figure 5

PN: 20255046.0001

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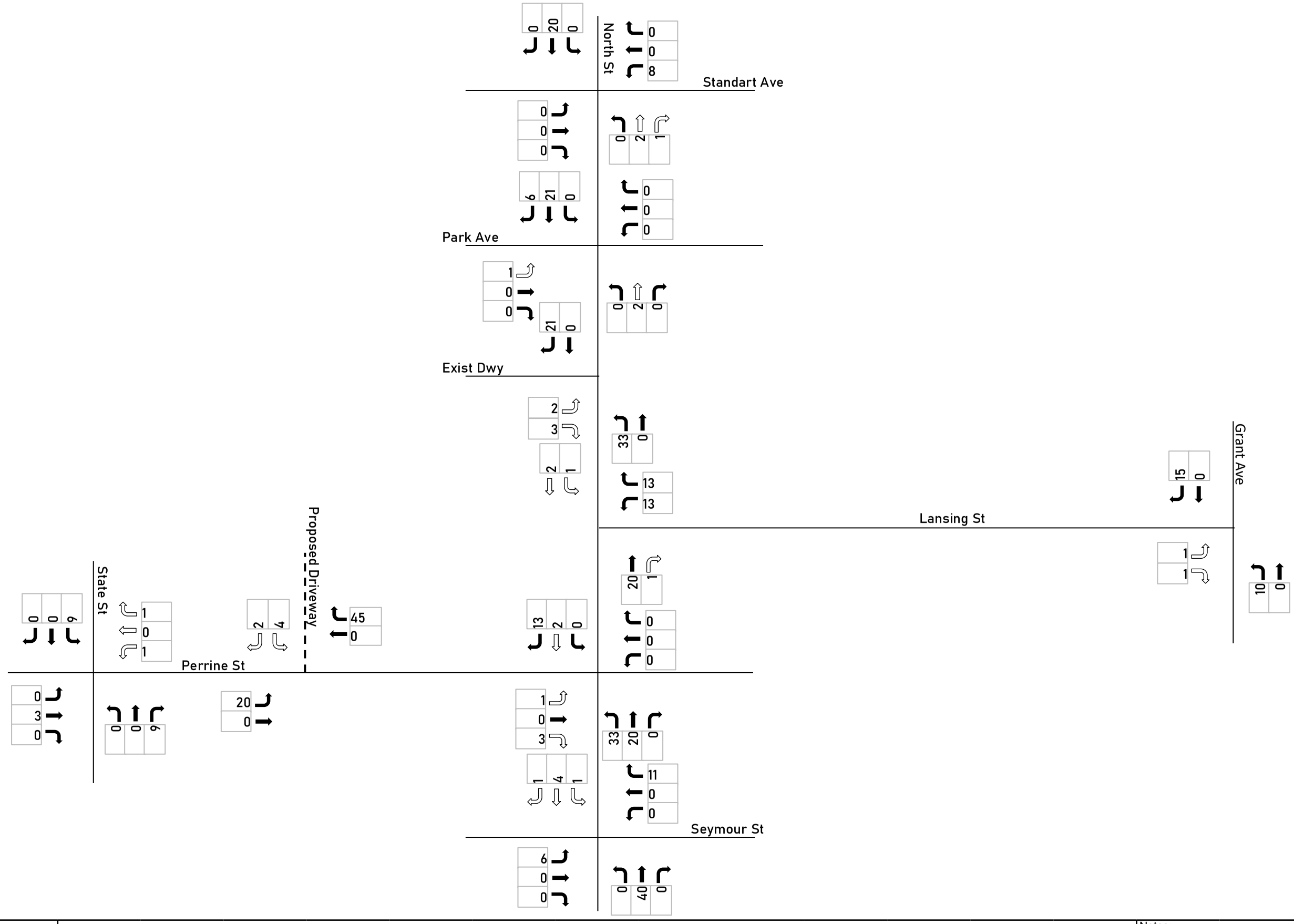

Total Site Trip Assignment - Weekday AM Peak Hour

Auburn Community Hospital Health Campus

City of Auburn, NY

Notes:

Figure 6a

PN: 20255046.0001

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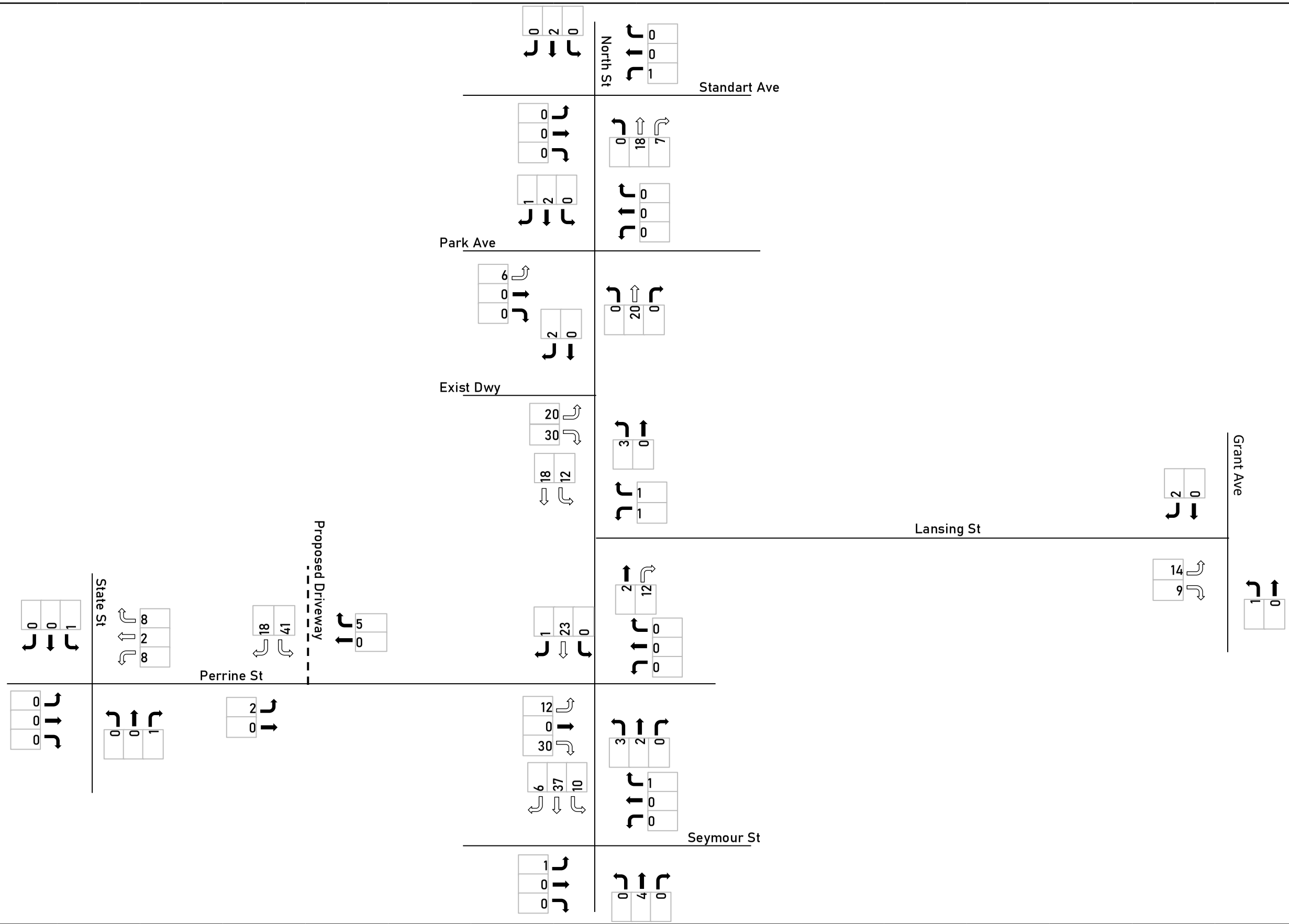


Total Site Trip Assignment - Weekday PM Peak Hour

Auburn Community Hospital Health Campus

City of Auburn, NY

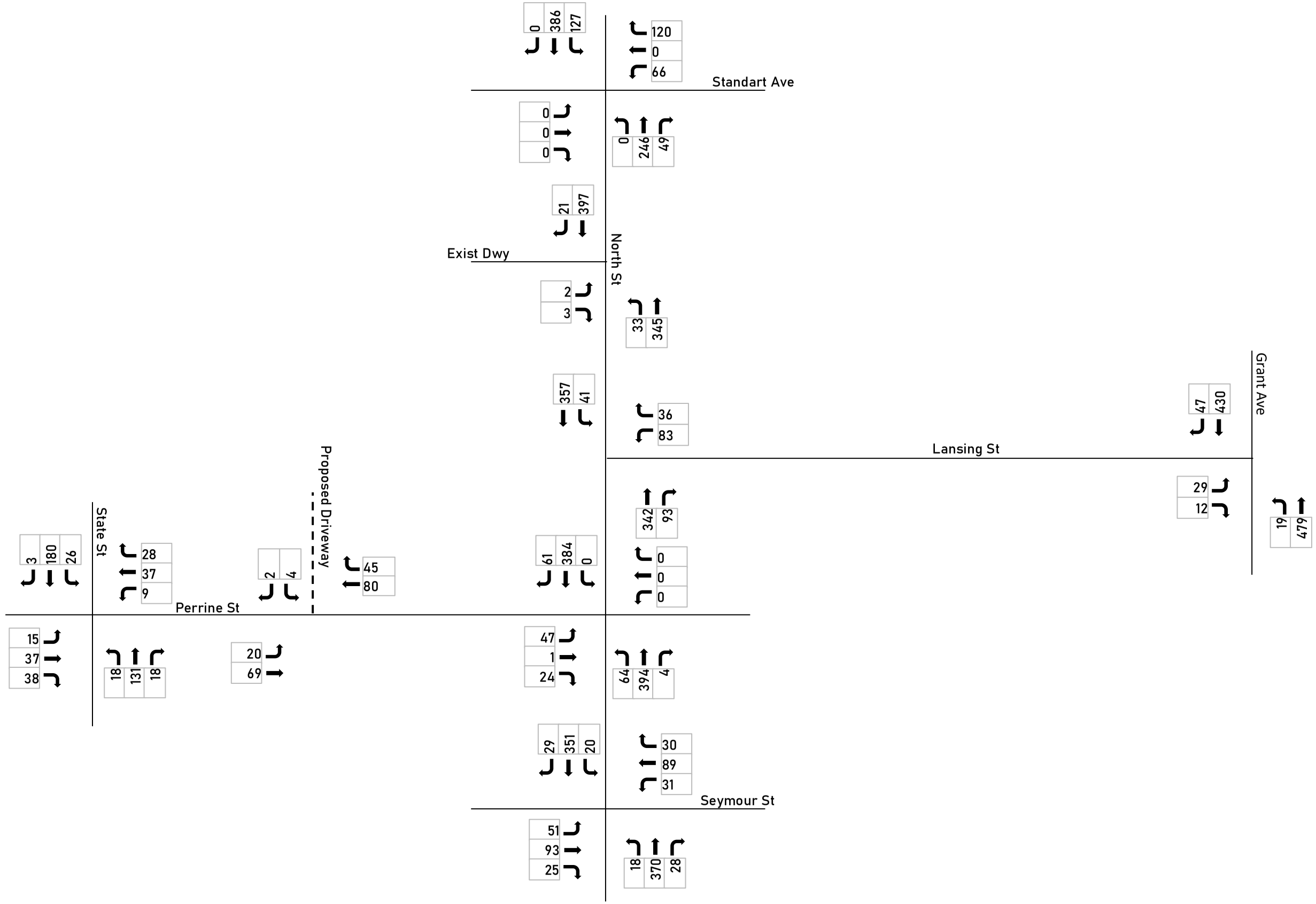
Notes:

Figure 6b

PN: 20255046.0001

PASSERO engineering architecture

242 West Main Street, Suite 100
Rochester, NY 14614



2027 Full Build Conditions - Weekday AM Peak Hour

Auburn Community Hospital Health Campus

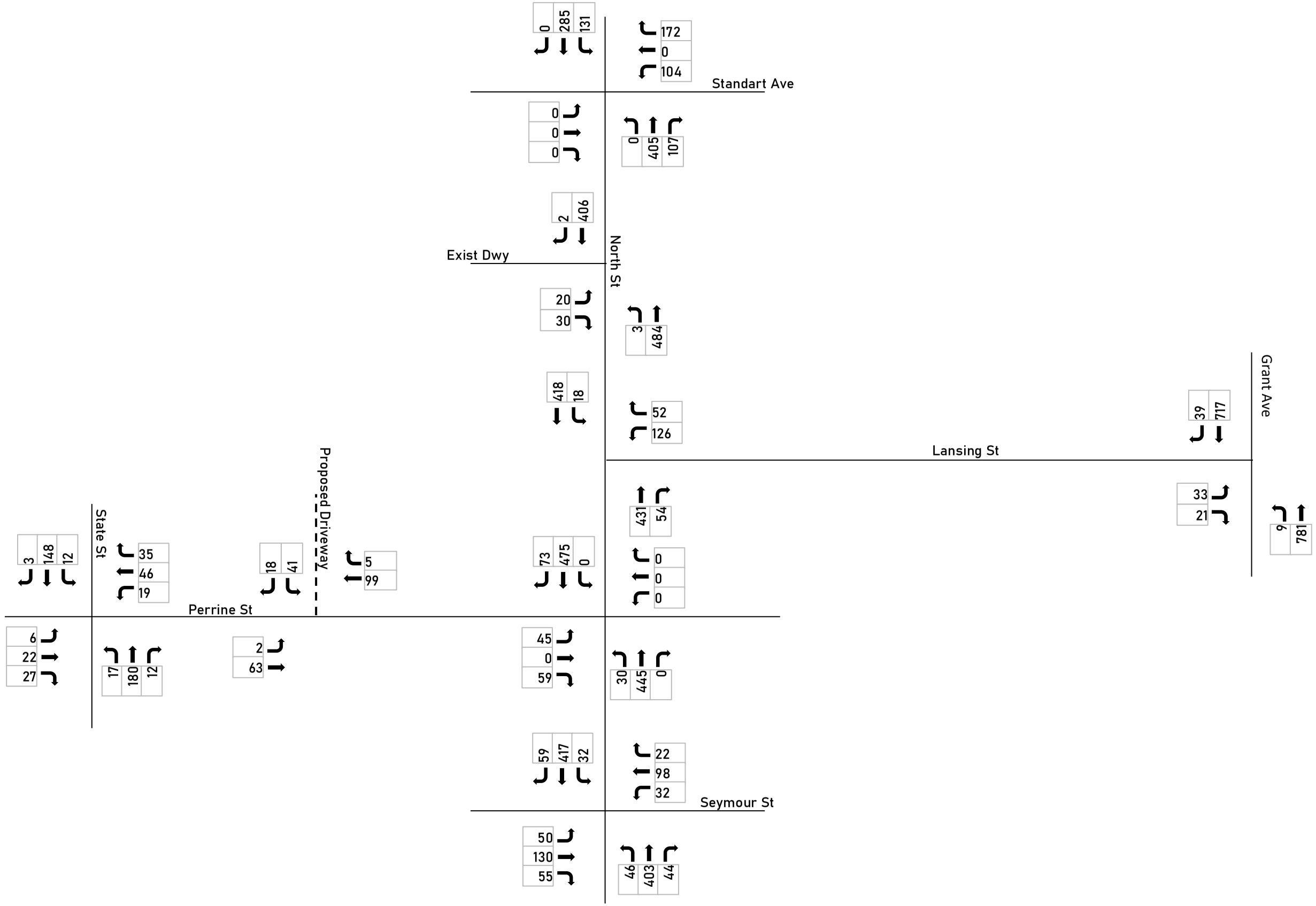
City of Auburn, NY

Notes:

Figure 7a

PN: 20255046.0001

PASSERO engineering architecture
242 West Main Street, Suite 100
Rochester, NY 14614



2027 Full Build Conditions - Weekday PM Peak Hour

Auburn Community Hospital Health Campus

City of Auburn, NY

PASSERO engineering architecture

242 West Main Street, Suite 100
Rochester, NY 14614

Notes:

Figure 7b

PN: 20255046.0001

APPENDICES

APPENDIX A: EXISTING TRAFFIC COUNT DATA

Project Name Auburn Medical Office
Location Name North St at Standart Ave
Classification 7:00 AM
Project Date(s) 3/11/2026

		North St				Standart Ave				South St								
		North				East				South				West				
Date	Start Time	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Intersection Total
03/11/2026	7:00 AM	13	66	0	0	8	0	26	0	0	63	5	0	0	0	0	0	181
03/11/2026	7:15 AM	15	69	0	0	13	0	26	0	0	50	6	0	0	0	0	0	179
03/11/2026	7:30 AM	19	101	0	0	12	0	28	0	0	49	13	0	0	0	0	0	222
03/11/2026	7:45 AM	30	124	0	0	16	0	31	0	0	81	12	0	0	0	0	0	294
03/11/2026	7 AM Hourly Total	77	360	0	0	49	0	111	0	0	243	36	0	0	0	0	0	876
03/11/2026	8:00 AM	30	78	0	0	13	0	28	0	0	55	9	0	0	0	0	0	213
03/11/2026	8:15 AM	34	83	0	0	17	0	24	0	0	49	8	0	0	0	0	0	215
03/11/2026	8:30 AM	32	86	0	0	14	0	36	0	0	58	19	0	0	0	0	0	245
03/11/2026	8:45 AM	27	97	0	0	18	0	29	0	0	63	22	0	0	0	0	0	256
03/11/2026	8 AM Hourly Total	123	344	0	0	62	0	117	0	0	225	58	0	0	0	0	0	929
03/11/2026	4:00 PM	30	81	0	0	17	0	35	0	0	133	28	0	0	0	0	0	324
03/11/2026	4:15 PM	37	59	0	0	27	0	48	0	0	93	23	0	0	0	0	0	287
03/11/2026	4:30 PM	32	70	0	0	32	0	46	0	0	95	27	0	0	0	0	0	302
03/11/2026	4:45 PM	31	72	0	0	26	0	41	0	0	70	24	0	0	0	0	0	264
03/11/2026	4 PM Hourly Total	130	282	0	0	102	0	170	0	0	391	102	0	0	0	0	0	1177
03/11/2026	5:00 PM	24	76	0	0	31	0	34	0	0	69	15	0	0	0	0	0	249
03/11/2026	5:15 PM	23	58	0	0	22	0	31	0	0	68	19	0	0	0	0	0	221
03/11/2026	5:30 PM	32	59	0	0	15	0	30	0	0	54	16	0	0	0	0	0	206
03/11/2026	5:45 PM	27	59	0	0	18	0	32	0	1	50	17	0	0	0	1	0	205
03/11/2026	5 PM Hourly Total	106	252	0	0	86	0	127	0	1	241	67	0	0	0	1	0	881
03/11/2026	Project Total	436	1238	0	0	299	0	525	0	1	1100	263	0	0	0	1	0	3863

		North St				Standart Ave				South St								
		North				East				South				West				
Date	Start Time	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Intersection Total
03/11/2026	7:45 AM	30	124	0	0	16	0	31	0	0	81	12	0	0	0	0	0	294
03/11/2026	8:00 AM	30	78	0	0	13	0	28	0	0	55	9	0	0	0	0	0	213
03/11/2026	8:15 AM	34	83	0	0	17	0	24	0	0	49	8	0	0	0	0	0	215
03/11/2026	8:30 AM	32	86	0	0	14	0	36	0	0	58	19	0	0	0	0	0	245
03/11/2026	**AM PEAK HOUR**	**126**	**371**	**0**	**0**	**60**	**0**	**119**	**0**	**0**	**243**	**48**	**0**	**0**	**0**	**0**	**0**	**967** PHF = **0.82**
	HV%	1.6%	5.1%	#DIV/0!	#DIV/0!	6.7%	#DIV/0!	0.8%	#DIV/0!	#DIV/0!	13.2%	6.3%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

03/11/2026	4:00 PM	30	81	0	0	17	0	35	0	0	133	28	0	0	0	0	0	324
03/11/2026	4:15 PM	37	59	0	0	27	0	48	0	0	93	23	0	0	0	0	0	287
03/11/2026	4:30 PM	32	70	0	0	32	0	46	0	0	95	27	0	0	0	0	0	302
03/11/2026	4:45 PM	31	72	0	0	26	0	41	0	0	70	24	0	0	0	0	0	264
03/11/2026	**PM PEAK HOUR**	**130**	**282**	**0**	**0**	**102**	**0**	**170**	**0**	**0**	**391**	**102**	**0**	**0**	**0**	**0**	**0**	**1177** PHF = **0.91**
	HV%	0.0%	2.8%	#DIV/0!	#DIV/0!	1.0%	#DIV/0!	0.6%	#DIV/0!	#DIV/0!	7.4%	1.0%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

W
N
North St
S
South St
E
Standart Ave

Project Name Auburn Medical Office
Location Name North St at 143 North St
Classification 2 Class & NVC
Project Date(s) 3/11/2026

		North St North			North St South			143 North St Driveway West			
Date	**Start Time**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Left**	**Right**	**U-Turn**	**Intersection Total**
03/11/2026	7:00 AM	71	4	0	2	76	0	0	0	0	153
03/11/2026	7:15 AM	75	2	0	1	56	0	1	1	0	136
03/11/2026	7:30 AM	111	2	0	4	66	0	1	0	0	184
03/11/2026	7:45 AM	116	4	0	10	108	0	0	1	0	239
03/11/2026	7 AM Hourly Total	373	12	0	17	306	0	2	2	0	712
03/11/2026	8:00 AM	87	3	0	3	73	0	0	1	0	167
03/11/2026	8:15 AM	90	2	0	1	64	0	1	1	0	159
03/11/2026	8:30 AM	100	3	0	2	97	0	0	2	0	204
03/11/2026	8:45 AM	107	0	0	3	94	0	2	2	0	208
03/11/2026	8 AM Hourly Total	384	8	0	9	328	0	3	6	0	738
03/11/2026	4:00 PM	103	2	0	0	152	0	5	8	0	270
03/11/2026	4:15 PM	87	0	0	2	115	0	6	9	0	219
03/11/2026	4:30 PM	121	0	0	0	111	0	0	0	0	232
03/11/2026	4:45 PM	91	0	0	0	101	0	0	1	0	193
03/11/2026	4 PM Hourly Total	402	2	0	2	479	0	11	18	0	914
03/11/2026	5:00 PM	120	0	0	0	98	0	1	1	0	220
03/11/2026	5:15 PM	89	0	0	0	81	0	0	0	0	170
03/11/2026	5:30 PM	74	0	0	0	75	0	0	0	0	149
03/11/2026	5:45 PM	69	0	0	0	68	0	0	0	0	137
03/11/2026	5 PM Hourly Total	352	0	0	0	322	0	1	1	0	676
03/11/2026	Project Total	1511	22	0	28	1435	0	17	27	0	3040

		North St North			North St South			143 North St Driveway West					
Date	**Start Time**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Left**	**Right**	**U-Turn**	**Intersection Total**		
03/11/2026	7:45 AM	116	4	0	10	108	0	0	1	0	239		
03/11/2026	8:00 AM	87	3	0	3	73	0	0	1	0	167		
03/11/2026	8:15 AM	90	2	0	1	64	0	1	1	0	159		
03/11/2026	8:30 AM	100	3	0	2	97	0	0	2	0	204		
03/11/2026	**AM PEAK HOUR**	**393**	**12**	**0**	**16**	**342**	**0**	**1**	**5**	**0**	**769**	PHF =	**0.80**
	HV%	6.6%	0.0%	#DIV/0!	0.0%	11.1%	#DIV/0!	0.0%	0.0%	#DIV/0!			

03/11/2026	4:00 PM	103	2	0	0	152	0	5	8	0	270		
03/11/2026	4:15 PM	87	0	0	2	115	0	6	9	0	219		
03/11/2026	4:30 PM	121	0	0	0	111	0	0	0	0	232		
03/11/2026	4:45 PM	91	0	0	0	101	0	0	1	0	193		
03/11/2026	**PM PEAK HOUR**	**402**	**2**	**0**	**2**	**479**	**0**	**11**	**18**	**0**	**914**	PHF =	**0.85**
	HV%	2.0%	0.0%	#DIV/0!	0.0%	6.5%	#DIV/0!	0.0%	0.0%	#DIV/0!			

N
North St
W
143 North St Driveway
S
North St

Project Name Auburn Medical Office
Location Name North St at Lansing St
Classification 2 Class & NVC
Project Date(s) 3/11/2026

		North St North			Lansing St East			North St South			
Date	**Start Time**	**Left**	**Thru**	**U-Turn**	**Left**	**Right**	**U-Turn**	**Thru**	**Right**	**U-Turn**	**Intersection Total**
03/11/2026	7:00 AM	11	61	0	23	8	0	70	19	0	192
03/11/2026	7:15 AM	7	68	0	18	7	0	50	15	0	165
03/11/2026	7:30 AM	18	93	0	15	6	0	64	25	0	221
03/11/2026	7:45 AM	12	103	0	16	7	0	112	32	0	282
03/11/2026	7 AM Hourly Total	48	325	0	72	28	0	296	91	0	860
03/11/2026	8:00 AM	13	74	0	19	6	0	68	22	0	202
03/11/2026	8:15 AM	8	84	0	13	7	0	60	19	0	191
03/11/2026	8:30 AM	9	93	0	21	9	0	89	18	0	239
03/11/2026	8:45 AM	13	95	0	19	4	0	95	28	0	254
03/11/2026	8 AM Hourly Total	43	346	0	72	26	0	312	87	0	886
03/11/2026	4:00 PM	4	105	0	41	28	0	124	10	0	312
03/11/2026	4:15 PM	3	93	0	33	9	0	107	14	0	259
03/11/2026	4:30 PM	3	119	0	31	9	0	101	6	0	269
03/11/2026	4:45 PM	3	90	0	19	4	0	95	12	0	223
03/11/2026	4 PM Hourly Total	13	407	0	124	50	0	427	42	0	1063
03/11/2026	5:00 PM	2	117	0	27	11	0	89	12	0	258
03/11/2026	5:15 PM	5	85	0	17	5	0	77	8	0	197
03/11/2026	5:30 PM	1	73	0	19	0	0	76	13	0	182
03/11/2026	5:45 PM	2	64	0	16	7	0	60	11	0	160
03/11/2026	5 PM Hourly Total	10	339	0	79	23	0	302	44	0	797
03/11/2026	Project Total	114	1417	0	347	127	0	1337	264	0	3606

		North St North			Lansing St East			North St South					
Date	**Start Time**	**Left**	**Thru**	**U-Turn**	**Left**	**Right**	**U-Turn**	**Thru**	**Right**	**U-Turn**	**Intersection Total**		
03/11/2026	7:45 AM	12	103	0	16	7	0	112	32	0	282		
03/11/2026	8:00 AM	13	74	0	19	6	0	68	22	0	202		
03/11/2026	8:15 AM	8	84	0	13	7	0	60	19	0	191		
03/11/2026	8:30 AM	9	93	0	21	9	0	89	18	0	239		
03/11/2026	**AM PEAK HOUR**	**42**	**354**	**0**	**69**	**29**	**0**	**329**	**91**	**0**	**914**	PHF =	**0.81**
	HV%	2.4%	7.1%	#DIV/0!	11.6%	0.0%	#DIV/0!	11.6%	5.5%	#DIV/0!			

03/11/2026	4:00 PM	4	105	0	41	28	0	124	10	0	312		
03/11/2026	4:15 PM	3	93	0	33	9	0	107	14	0	259		
03/11/2026	4:30 PM	3	119	0	31	9	0	101	6	0	269		
03/11/2026	4:45 PM	3	90	0	19	4	0	95	12	0	223		
03/11/2026	**PM PEAK HOUR**	**13**	**407**	**0**	**124**	**50**	**0**	**427**	**42**	**0**	**1063**	PHF =	**0.85**
	HV%	0.0%	2.0%	#DIV/0!	6.5%	0.0%	#DIV/0!	7.3%	2.4%	#DIV/0!			

W
N
North St
S
North St
E
Lansing St

Project Name Auburn Medical Office
Location Name North St at Perrine St
Classification 2 Class & NVC
Project Date(s) 3/11/2026

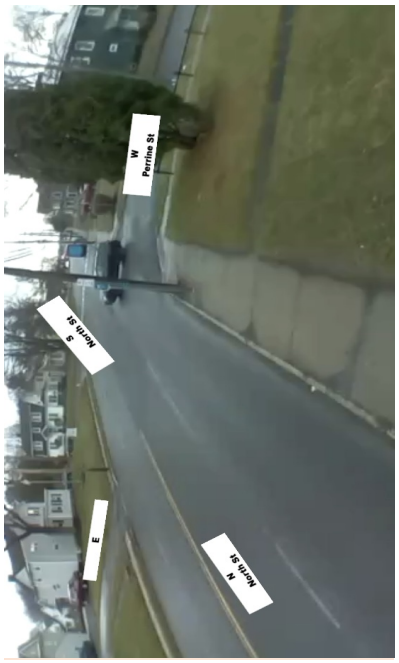
		North St								North St				Perrine St				
		North				East				South				West				
Date	Start Time	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Intersection Total
03/11/2026	7:00 AM	0	81	4	0	0	0	0	0	5	76	0	0	9	0	4	0	179
03/11/2026	7:15 AM	0	85	2	0	0	0	0	0	5	57	0	0	8	0	1	0	158
03/11/2026	7:30 AM	0	101	6	0	0	0	0	0	8	76	0	0	13	0	6	0	210
03/11/2026	7:45 AM	0	112	12	0	0	0	0	0	5	138	0	0	6	0	7	0	280
03/11/2026	7 AM Hourly Total	0	379	24	0	0	0	0	0	23	347	0	0	36	0	18	0	827
03/11/2026	8:00 AM	0	81	11	0	0	0	0	0	8	83	0	0	9	0	4	0	196
03/11/2026	8:15 AM	0	90	10	0	0	0	0	0	10	71	3	0	8	1	2	0	195
03/11/2026	8:30 AM	0	98	15	0	0	0	0	0	8	87	1	0	24	0	8	0	241
03/11/2026	8:45 AM	0	100	15	0	0	0	0	0	6	108	0	0	13	0	7	0	249
03/11/2026	8 AM Hourly Total	0	369	51	0	0	0	0	0	32	349	4	0	54	1	21	0	881
03/11/2026	4:00 PM	0	128	17	0	0	0	0	0	5	133	0	0	5	0	7	0	295
03/11/2026	4:15 PM	0	101	23	0	0	0	0	0	9	110	0	0	9	0	9	0	261
03/11/2026	4:30 PM	0	132	19	0	0	0	0	0	6	101	0	0	7	0	8	0	273
03/11/2026	4:45 PM	0	95	14	0	0	0	0	0	7	97	0	0	12	0	5	0	230
03/11/2026	4 PM Hourly Total	0	456	73	0	0	0	0	0	27	441	0	0	33	0	29	0	1059
03/11/2026	5:00 PM	0	122	22	0	0	0	0	0	6	87	0	0	14	0	5	1	257
03/11/2026	5:15 PM	0	89	14	0	0	0	0	0	8	76	0	0	9	0	6	0	202
03/11/2026	5:30 PM	0	83	8	0	0	0	0	0	2	76	0	0	13	0	8	0	190
03/11/2026	5:45 PM	0	63	19	0	0	0	0	0	6	57	0	0	14	0	5	0	164
03/11/2026	5 PM Hourly Total	0	357	63	0	0	0	0	0	22	296	0	0	50	0	24	1	813
03/11/2026	Project Total	0	1561	211	0	0	0	0	0	104	1433	4	0	173	1	92	1	3580

		North St								North St				Perrine St				
		North				East				South				West				
Date	Start Time	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Intersection Total
03/11/2026	7:45 AM	0	112	12	0	0	0	0	0	5	138	0	0	6	0	7	0	280
03/11/2026	8:00 AM	0	81	11	0	0	0	0	0	8	83	0	0	9	0	4	0	196
03/11/2026	8:15 AM	0	90	10	0	0	0	0	0	10	71	3	0	8	1	2	0	195
03/11/2026	8:30 AM	0	98	15	0	0	0	0	0	8	87	1	0	24	0	8	0	241
03/11/2026	**AM PEAK HOUR**	**0**	**381**	**48**	**0**	**0**	**0**	**0**	**0**	**31**	**379**	**4**	**0**	**47**	**1**	**21**	**0**	**912**
	HV%	#DIV/0!	8.1%	4.2%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	3.2%	11.6%	0.0%	#DIV/0!	0.0%	0.0%	4.8%	#DIV/0!	

PHF = **0.81**

03/11/2026	4:00 PM	0	128	17	0	0	0	0	0	5	133	0	0	5	0	7	0	295
03/11/2026	4:15 PM	0	101	23	0	0	0	0	0	9	110	0	0	9	0	9	0	261
03/11/2026	4:30 PM	0	132	19	0	0	0	0	0	6	101	0	0	7	0	8	0	273
03/11/2026	4:45 PM	0	95	14	0	0	0	0	0	7	97	0	0	12	0	5	0	230
03/11/2026	**PM PEAK HOUR**	**0**	**456**	**73**	**0**	**0**	**0**	**0**	**0**	**27**	**441**	**0**	**0**	**33**	**0**	**29**	**0**	**1059**
	HV%	#DIV/0!	3.3%	1.4%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.0%	7.3%	#DIV/0!	#DIV/0!	0.0%	#DIV/0!	0.0%	#DIV/0!	

PHF = **0.90**


W
Perrine St
S
North St
E
N
North St

Project Name Auburn Medical Office
Location Name North St at Seymour St
Classificatiom 2 Class & NVC
Project Date(s) 3/11/2026

		North St North				Seymour St East				South St South				Seymour St West				
Date	**Start Time**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Intersection Total**
03/11/2026	7:00 AM	1	68	13	0	5	13	3	0	2	65	4	0	8	15	7	0	204
03/11/2026	7:15 AM	7	72	7	0	1	11	5	0	5	52	6	0	8	18	5	0	197
03/11/2026	7:30 AM	8	85	9	0	4	17	7	0	9	69	10	0	13	27	14	0	272
03/11/2026	7:45 AM	6	105	7	0	9	27	8	0	4	114	5	0	13	29	7	0	334
03/11/2026	7 AM Hourly Total	22	330	36	0	19	68	23	0	20	300	25	0	42	89	33	0	1007
03/11/2026	8:00 AM	9	73	6	0	5	23	8	0	4	69	11	0	8	17	5	0	238
03/11/2026	8:15 AM	1	75	7	0	7	18	2	0	3	68	8	0	12	22	7	0	230
03/11/2026	8:30 AM	3	94	8	0	10	20	2	0	7	83	4	0	13	24	6	0	274
03/11/2026	8:45 AM	4	105	8	0	10	23	7	0	5	95	6	0	9	41	6	0	319
03/11/2026	8 AM Hourly Total	17	347	29	0	32	84	19	0	19	315	29	0	42	104	24	0	1061
03/11/2026	4:00 PM	5	113	19	0	10	21	3	0	7	126	14	0	16	24	13	0	371
03/11/2026	4:15 PM	11	86	9	0	8	26	9	0	18	93	6	0	12	33	13	0	324
03/11/2026	4:30 PM	3	102	15	0	6	22	5	0	10	90	13	0	10	32	15	0	323
03/11/2026	4:45 PM	5	81	10	0	8	28	4	0	11	88	11	0	11	40	13	0	310
03/11/2026	4 PM Hourly Total	24	382	53	0	32	97	21	0	46	397	44	0	49	129	54	0	1328
03/11/2026	5:00 PM	6	98	17	0	6	28	8	0	9	78	15	0	9	27	15	0	316
03/11/2026	5:15 PM	5	77	11	0	7	28	10	0	19	65	10	0	12	41	11	0	296
03/11/2026	5:30 PM	6	67	8	0	6	29	3	0	7	67	11	0	8	30	7	0	249
03/11/2026	5:45 PM	4	62	7	0	5	25	5	0	12	48	10	0	4	24	11	0	217
03/11/2026	5 PM Hourly Total	21	304	43	0	24	110	26	0	47	258	46	0	33	122	44	0	1078
03/11/2026	Project Total	84	1363	161	0	107	359	89	0	132	1270	144	0	166	444	155	0	4474

		North St North				Seymour St East				South St South				Seymour St West					
Date	**Start Time**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Intersection Total**	
03/11/2026	7:45 AM	6	105	7	0	9	27	8	0	4	114	5	0	13	29	7	0	334	
03/11/2026	8:00 AM	9	73	6	0	5	23	8	0	4	69	11	0	8	17	5	0	238	
03/11/2026	8:15 AM	1	75	7	0	7	18	2	0	3	68	8	0	12	22	7	0	230	
03/11/2026	8:30 AM	3	94	8	0	10	20	2	0	7	83	4	0	13	24	6	0	274	
03/11/2026	**AM PEAK HOUR**	**19**	**347**	**28**	**0**	**31**	**88**	**20**	**0**	**18**	**334**	**28**	**0**	**46**	**92**	**25**	**0**	**1076**	PHF = **0.81**
	HV%	5.3%	10.4%	0.0%	#DIV/0!	0.0%	6.8%	5.0%	#DIV/0!	0.0%	12.0%	25.0%	#DIV/0!	4.3%	5.4%	8.0%	#DIV/0!		
03/11/2026	4:00 PM	5	113	19	0	10	21	3	0	7	126	14	0	16	24	13	0	371	
03/11/2026	4:15 PM	11	86	9	0	8	26	9	0	18	93	6	0	12	33	13	0	324	
03/11/2026	4:30 PM	3	102	15	0	6	22	5	0	10	90	13	0	10	32	15	0	323	
03/11/2026	4:45 PM	5	81	10	0	8	28	4	0	11	88	11	0	11	40	13	0	310	
03/11/2026	**PM PEAK HOUR**	**24**	**382**	**53**	**0**	**32**	**97**	**21**	**0**	**46**	**397**	**44**	**0**	**49**	**129**	**54**	**0**	**1328**	PHF = **0.89**
	HV%	0.0%	4.2%	0.0%	#DIV/0!	0.0%	0.0%	0.0%	#DIV/0!	0.0%	8.3%	13.6%	#DIV/0!	0.0%	0.0%	0.0%	#DIV/0!		

S
South St
W
Seymour St
E
Seymour St
N
North St

Project Name Auburn Medical Office
Location Name Perrine St at State St
Classification 2 Class & NVC
Project Date(s) 3/11/2026

		State St North				Perrine St East				State St South				Perrine St West				
Date	**Start Time**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Intersection Total**
03/11/2026	7:00 AM	3	24	0	0	0	6	2	0	0	17	3	0	1	3	3	0	62
03/11/2026	7:15 AM	2	48	1	0	0	2	2	0	1	14	1	0	0	7	3	0	81
03/11/2026	7:30 AM	6	51	0	0	6	1	10	0	2	28	1	0	1	6	2	0	114
03/11/2026	7:45 AM	2	66	2	0	2	3	10	0	3	33	3	0	0	5	5	0	134
03/11/2026	7 AM Hourly Total	13	189	3	0	8	12	24	0	6	92	8	0	2	21	13	0	391
03/11/2026	8:00 AM	6	42	0	0	2	9	5	0	3	40	3	0	2	2	2	0	116
03/11/2026	8:15 AM	2	28	1	0	3	14	7	0	4	31	2	0	1	7	6	0	106
03/11/2026	8:30 AM	7	42	0	0	1	11	5	0	8	26	2	0	12	20	25	0	159
03/11/2026	8:45 AM	0	40	0	0	4	10	5	0	3	25	5	0	7	11	12	0	122
03/11/2026	8 AM Hourly Total	15	152	1	0	10	44	22	0	18	122	12	0	22	40	45	0	503
03/11/2026	4:00 PM	3	48	2	0	2	10	4	0	1	57	1	0	2	5	8	0	143
03/11/2026	4:15 PM	2	33	1	0	4	11	10	0	4	49	4	0	3	6	2	0	129
03/11/2026	4:30 PM	3	35	0	0	5	12	6	0	6	32	2	0	0	4	8	0	113
03/11/2026	4:45 PM	3	31	0	0	1	11	8	0	6	40	4	0	1	7	9	0	121
03/11/2026	4 PM Hourly Total	11	147	3	0	12	44	28	0	17	178	11	0	6	22	27	0	506
03/11/2026	5:00 PM	6	35	2	0	2	14	7	0	6	31	1	0	1	7	10	0	122
03/11/2026	5:15 PM	3	40	1	0	7	11	6	0	5	33	6	0	0	9	7	0	128
03/11/2026	5:30 PM	2	33	3	0	1	9	1	0	7	37	3	0	2	14	6	0	118
03/11/2026	5:45 PM	8	23	1	0	2	12	5	0	0	26	2	0	0	9	5	0	93
03/11/2026	5 PM Hourly Total	19	131	7	0	12	46	19	0	18	127	12	0	3	39	28	0	461
03/11/2026	Project Total	58	619	14	0	42	146	93	0	59	519	43	0	33	122	113	0	1861

		State St North				Perrine St East				State St South				Perrine St West					
Date	**Start Time**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Intersection Total**	
03/11/2026	7:45 AM	2	66	2	0	2	3	10	0	3	33	3	0	0	5	5	0	134	
03/11/2026	8:00 AM	6	42	0	0	2	9	5	0	3	40	3	0	2	2	2	0	116	
03/11/2026	8:15 AM	2	28	1	0	3	14	7	0	4	31	2	0	1	7	6	0	106	
03/11/2026	8:30 AM	7	42	0	0	1	11	5	0	8	26	2	0	12	20	25	0	159	
03/11/2026	**AM PEAK HOUR**	**17**	**178**	**3**	**0**	**8**	**37**	**27**	**0**	**18**	**130**	**10**	**0**	**15**	**34**	**38**	**0**	**515**	PHF = **0.81**
	HV%	11.8%	5.6%	33.3%	#DIV/0!	0.0%	2.7%	7.4%	#DIV/0!	0.0%	9.2%	10.0%	#DIV/0!	26.7%	2.9%	10.5%	#DIV/0!		

03/11/2026	4:00 PM	3	48	2	0	2	10	4	0	1	57	1	0	2	5	8	0	143	
03/11/2026	4:15 PM	2	33	1	0	4	11	10	0	4	49	4	0	3	6	2	0	129	
03/11/2026	4:30 PM	3	35	0	0	5	12	6	0	6	32	2	0	0	4	8	0	113	
03/11/2026	4:45 PM	3	31	0	0	1	11	8	0	6	40	4	0	1	7	9	0	121	
03/11/2026	**PM PEAK HOUR**	**11**	**147**	**3**	**0**	**12**	**44**	**28**	**0**	**17**	**178**	**11**	**0**	**6**	**22**	**27**	**0**	**506**	PHF = **0.88**
	HV%	0.0%	1.4%	0.0%	#DIV/0!	0.0%	0.0%	3.6%	#DIV/0!	0.0%	2.8%	0.0%	#DIV/0!	0.0%	0.0%	0.0%	#DIV/0!		

S
State St
E
Perrine St
W
Perrine St
N
State St

Project Name Auburn Medical Office
Location Name Lansing St at Grant Ave
Classification 2 Class & NVC
Project Date(s) 3/11/2026

		Grant Ave North			Grant Ave South			Lansing Ave West			
Date	**Start Time**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Left**	**Right**	**U-Turn**	**Intersection Total**
03/11/2026	7:00 AM	79	4	0	3	92	0	5	8	0	191
03/11/2026	7:15 AM	88	4	0	0	103	0	6	1	0	202
03/11/2026	7:30 AM	97	15	0	4	112	0	1	2	0	231
03/11/2026	7:45 AM	121	19	0	5	112	0	8	3	0	268
03/11/2026	7 AM Hourly Total	385	42	0	12	419	0	20	14	0	892
03/11/2026	8:00 AM	106	6	0	2	122	0	5	5	0	246
03/11/2026	8:15 AM	93	8	0	2	115	0	5	2	0	225
03/11/2026	8:30 AM	106	3	0	2	125	0	11	2	0	249
03/11/2026	8:45 AM	113	15	0	7	146	0	5	2	0	288
03/11/2026	8 AM Hourly Total	418	32	0	13	508	0	26	11	0	1008
03/11/2026	4:00 PM	168	5	0	1	206	0	7	6	0	393
03/11/2026	4:15 PM	175	9	0	2	208	0	6	4	0	404
03/11/2026	4:30 PM	181	11	0	2	174	0	3	3	0	374
03/11/2026	4:45 PM	186	12	0	3	185	0	7	2	0	395
03/11/2026	4 PM Hourly Total	710	37	0	8	773	0	23	15	0	1566
03/11/2026	5:00 PM	221	10	0	3	163	0	6	7	0	410
03/11/2026	5:15 PM	187	12	0	1	172	0	6	1	0	379
03/11/2026	5:30 PM	174	8	0	1	148	0	8	3	0	342
03/11/2026	5:45 PM	158	8	0	4	111	0	2	3	0	286
03/11/2026	5 PM Hourly Total	740	38	0	9	594	0	22	14	0	1417
03/11/2026	Project Total	2253	149	0	42	2294	0	91	54	0	4883

		Grant Ave North			Grant Ave South			Lansing Ave West				
Date	**Start Time**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Left**	**Right**	**U-Turn**	**Intersection Total**	
03/11/2026	7:45 AM	121	19	0	5	112	0	8	3	0	268	
03/11/2026	8:00 AM	106	6	0	2	122	0	5	5	0	246	
03/11/2026	8:15 AM	93	8	0	2	115	0	5	2	0	225	
03/11/2026	8:30 AM	106	3	0	2	125	0	11	2	0	249	
03/11/2026	**AM PEAK HOUR**	**426**	**36**	**0**	**11**	**474**	**0**	**29**	**12**	**0**	**988**	PHF = **0.92**
	HV%	2.8%	0.0%	#DIV/0!	0.0%	3.4%	#DIV/0!	0.0%	8.3%	#DIV/0!		

03/11/2026	4:00 PM	168	5	0	1	206	0	7	6	0	393	
03/11/2026	4:15 PM	175	9	0	2	208	0	6	4	0	404	
03/11/2026	4:30 PM	181	11	0	2	174	0	3	3	0	374	
03/11/2026	4:45 PM	186	12	0	3	185	0	7	2	0	395	
03/11/2026	**PM PEAK HOUR**	**710**	**37**	**0**	**8**	**773**	**0**	**23**	**15**	**0**	**1566**	PHF = **0.97**
	HV%	1.0%	0.0%	#DIV/0!	12.5%	0.9%	#DIV/0!	0.0%	0.0%	#DIV/0!		

N
Grant Ave
W
Lansing Ave
S
Grant Ave

APPENDIX B: MISCELLANEOUS CALCULATIONS

Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green	4	12	12			12	12	
Gap, Ext	1	6	6			6	6	
Max 1	9	29	32			42	32	
Max 2								
Yel Clearance	3.5	3.5	3	3.5	3.5	3.5	3	3.5
Red Clearance	2	2	2	1.5	1.5	2	2	1.5
Walk		16	13			16	13	
Ped Clearance		13	18			13	18	
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								

Options [1.1.2]

	1	2	3	4	5	6	7	8
Enable	ON	ON	ON			ON	ON	
Min Recall								
Max Recall						ON		
Ped Recall								
Soft Recall								
Lock Calls		ON	ON				ON	
Auto Flash Entry								
Auto Flash Exit								
Dual Entry		ON	ON			ON	ON	
Enable Simul Gap	ON	ON	ON	ON	ON	ON	ON	ON
Gaurantee Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								

Options+ [1.1.3]

	1	2	3	4	5	6	7	8
Reservice								
PedClr Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Call Phase								
Conflicting Phase								
Omit Yellow								
Ped Delay								
Grn/Ped Delay								

1901 34 @ SEYMOUR

Coordination Patterns [2.4] and Coordination Split Tables [2.7.1]

Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq
1	0	0	1	1	13	0	0	13	1	25	0	0	0	1	37	0	0	0	1
2	0	0	2	1	14	0	0	14	1	26	0	0	0	1	38	0	0	0	1
3	0	0	3	1	15	0	0	15	1	27	0	0	0	1	39	0	0	0	1
4	0	0	4	1	16	0	0	16	1	28	0	0	0	1	40	0	0	0	1
5	0	0	5	1	17	0	0	17	1	29	0	0	0	1	41	0	0	0	1
6	0	0	6	1	18	0	0	18	1	30	0	0	0	1	42	0	0	0	1
7	0	0	7	1	19	0	0	19	1	31	0	0	0	1	43	0	0	0	1
8	0	0	8	1	20	0	0	20	1	32	0	0	0	1	44	0	0	0	1
9	0	0	9	1	21	0	0	21	1	33	0	0	0	1	45	0	0	0	1
10	0	0	10	1	22	0	0	22	1	34	0	0	0	1	46	0	0	0	1
11	0	0	11	1	23	0	0	23	1	35	0	0	0	1	47	0	0	0	1
12	0	0	12	1	24	0	0	24	1	36	0	0	0	1	48	0	0	0	1

Split		1	2	3	4	5	6	7	8	Split		1	2	3	4	5	6	7	8
1	Coor	0	0	0	0	0	0	0	0	13	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
2	Coor	0	0	0	0	0	0	0	0	14	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
3	Coor	0	0	0	0	0	0	0	0	15	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
4	Coor	0	0	0	0	0	0	0	0	16	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
5	Coor	0	0	0	0	0	0	0	0	17	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
6	Coor	0	0	0	0	0	0	0	0	18	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
7	Coor	0	0	0	0	0	0	0	0	19	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
8	Coor	0	0	0	0	0	0	0	0	20	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
9	Coor	0	0	0	0	0	0	0	0	21	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
10	Coor	0	0	0	0	0	0	0	0	22	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
11	Coor	0	0	0	0	0	0	0	0	23	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
12	Coor	0	0	0	0	0	0	0	0	24	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON

Page#	
1	8 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
1A&1B	16 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
2	Overlaps; Channel Settings; Coord Alt Table+ (values not associated with time-of-day)
3	Detection; Sample Time and Unit Parameters related to detection
4	Preemption and Alternate Phase Time and Phase Options
5	Annual Schedule
6	Day Plans; Action Tables; Coord Alt Table+ (values varied by time-of-day)
7	Communications; Secutiry; I/O Setup
8	Misc - Events/Alarms; Call/Inhibit/Redirect; P/OLAP Auto Flash; CIC; Misc Unit Param

1901

Ring/Startup [1.1.4]

Phs	Ring	Start	Enable
1	1	Red	ON
2	1	Red	ON
3	1	Red	ON
4	1	Red	OFF
5	2	Red	OFF
6	2	Red	ON
7	2	Red	ON
8	2	Red	OFF

Coord Modes [2.1]

Test OpMode	0
Correction	SHRT/LNG
Maximum	MAX 1
Force-Off	Float
Closed Loop	ON
Stop-in-Walk	OFF
Auto Reset	ON
Expand Splt	
Ped Recycle	NO_RECYCLE
Before	TIMED
After	TIMED

Auto Flash [1.4.1]

Auto Flash	PH_OVLP
Flash Yel	45
Flash Red	20

Unit Params [1.2.1]

Phase Mode	STD8
IO Mode	User
Loc Flsh Start	Red
Start Flash(s)	0
Start AllRed(s)	6
Yellow < 3"	OFF
Display Time	20
Red Revert	3
MCE Timeout	0
Feature Profile	
Free Ring Seq	1
Auxswitch	STOPTM
SDLC Retry	0
TS2 Det Faults	ON
Auto Ped Clear	OFF
SDLC Retry	0

01/07/26 **Page 1**

Overlap 1-16 Program Parms & Parm+ [1.5.2.1] [1.5.2.2]

Overlap Conflict Lock	OFF	Overlap Lock Inhibit	OFF	Parent Ph Clearance	ON	Extra Included Ph	OFF

	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
1	Modifier Ø								Grn		9	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
A	Conflict Olap								Red	1.5	I	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
2	Modifier Ø								Grn		10	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
B	Conflict Olap								Red	1.5	J	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
3	Modifier Ø								Grn		11	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
C	Conflict Olap								Red	1.5	K	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
4	Modifier Ø								Grn		12	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
D	Conflict Olap								Red	1.5	L	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
5	Modifier Ø								Grn		13	Modifier Ø									Grn	
	Conflo0l								Yel	3.5		Conflict Ø									Yel	3.5
E	Conflict Olap								Red	1.5	M	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
6	Modifier Ø								Grn		14	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
F	Conflict Olap								Red	1.5	N	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
7	Modifier Ø								Grn		15	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
G	Conflict Olap								Red	1.5	O	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
8	Modifier Ø								Grn		16	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
H	Conflict Olap								Red	1.5	P	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	

Channel Settings [1.8.1]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	6	2	7	2	3	3		6															
Channel Type	VEH	VEH	VEH	VEH	PED	PED	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Channel Flash	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Alt Hz																								

Channel+ Settings [1.8.4]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Flash Red+																								
Flash Yellow+																								
Flash Green+																								
Flash Inh Red+																								
Olap Ovrd																								

Coord Transition, CoorPhs [2.5]

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	RetHld	Float	Min Veh Perm	Min Ped Perm
1	12	22							EndGRN				
2	12	22							EndGRN				
3	12	22							EndGRN				
4	12	22							EndGRN				
5	12	22							EndGRN				
6	12	22							EndGRN				
7	12	22							EndGRN				
8	12	22							EndGRN				
9	12	22							EndGRN				
10	12	22							EndGRN				
11	12	22							EndGRN				
12	12	22							EndGRN				
13	12	22							EndGRN				
14	12	22							EndGRN				
15	12	22							EndGRN				
16	12	22							EndGRN				
17	12	22							EndGRN				
18	12	22							EndGRN				
19	12	22							EndGRN				
20	12	22							EndGRN				
21	12	22							EndGRN				
22	12	22							EndGRN				
23	12	22							EndGRN				
24	12	22							EndGRN				
25									BegGRN				
26									BegGRN				
27									BegGRN				
28									BegGRN				
29									BegGRN				
30									BegGRN				
31									BegGRN				
32									BegGRN				
33									BegGRN				
34									BegGRN				
35									BegGRN				
36									BegGRN				
37									BegGRN				
38									BegGRN				
39									BegGRN				
40									BegGRN				
41									BegGRN				
42									BegGRN				
43									BegGRN				
44									BegGRN				
45									BegGRN				
46									BegGRN				
47									BegGRN				
48									BegGRN				

Channel Params[1.8.3]

C1 IO Mode	User	Single BIU Map	DEFAULT	Invert Rail Input	OFF

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
1	1						45	50	2
2	6						45	50	2
3	3						45	50	2
4	7						45	50	2
5	2						45	50	2
6							45	50	2
7							45	50	2
8							45	50	2
9							45	50	2
10							45	50	2
11							45	50	2
12							45	50	2
13							45	50	2
14							45	50	2
15							45	50	2
16							45	50	2
17							45	50	2
18							45	50	2
19							45	50	
20							45	50	
21							45	50	
22							45	50	
23							45	50	
24							45	50	
25							45	50	
26							45	50	
27							45	50	
28							45	50	
29							45	50	
30							45	50	
31							45	50	
32							45	50	

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
33							45	50	
34							45	50	
35							45	50	
36							45	50	
37							45	50	
38							45	50	
39							45	50	
40							45	50	
41							45	50	
42							45	50	
43							45	50	
44							45	50	
45							45	50	
46							45	50	
47							45	50	
48							45	50	
49							45	50	
50							45	50	
51							45	50	
52							45	50	
53							45	50	
54							45	50	
55							45	50	
56							45	50	
57							45	50	
58							45	50	
59							45	50	
60							45	50	
61							45	50	
62							45	50	
63							45	50	
64							45	50	

Vehicle Options 1-64 [5.2]

Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol
1	ON	ON		ON				
2	ON	ON		ON				
3	ON	ON		ON				
4	ON	ON		ON				
5	ON	ON		ON				
6	ON	ON		ON				
7	ON	ON		ON				
8	ON	ON		ON				
9	ON	ON		ON				
10	ON	ON		ON				
11	ON	ON		ON				
12	ON	ON		ON				
13	ON	ON		ON				
14	ON	ON		ON				
15	ON	ON		ON				
16	ON	ON		ON				
17	ON	ON		ON				
18	ON	ON		ON				
19	ON	ON		ON				
20	ON	ON		ON				
21	ON	ON		ON				
22	ON	ON		ON				
23	ON	ON		ON				
24	ON	ON		ON				
25	ON	ON		ON				
26	ON	ON		ON				
27	ON	ON		ON				
28	ON	ON		ON				
29	ON	ON		ON				
30	ON	ON		ON				
31	ON	ON		ON				
32	ON	ON		ON				

Vehicle Options 1-64 [5.2]

Det #	vol	occ	Yell Lock	Red Lock	Ext	Add Init	Que	Call
33					ON	ON		ON
34					ON	ON		ON
35					ON	ON		ON
36					ON	ON		ON
37					ON	ON		ON
38					ON	ON		ON
39					ON	ON		ON
40					ON	ON		ON
41					ON	ON		ON
42					ON	ON		ON
43					ON	ON		ON
44					ON	ON		ON
45					ON	ON		ON
46					ON	ON		ON
47					ON	ON		ON
48					ON	ON		ON
49					ON	ON		ON
50					ON	ON		ON
51					ON	ON		ON
52					ON	ON		ON
53					ON	ON		ON
54					ON	ON		ON
55					ON	ON		ON
56					ON	ON		ON
57					ON	ON		ON
58					ON	ON		ON
59					ON	ON		ON
60					ON	ON		ON
61					ON	ON		ON
62					ON	ON		ON
63					ON	ON		ON
64					ON	ON		ON

Parameters+ 1-64 [5.3]

Det #	oc G	oc Y	oc R	Dlay 1	Dlay 2	Type	Src
1						NORM	
2						NORM	
3						NORM	
4						NORM	
5						NORM	
6						NORM	
7						NORM	
8						NORM	
9						NORM	
10						NORM	
11						NORM	
12						NORM	
13						NORM	
14						NORM	
15						NORM	
16						NORM	
17						NORM	
18						NORM	
19						NORM	
20						NORM	
21						NORM	
22						NORM	
23						NORM	
24						NORM	
25						NORM	
26						NORM	
27						NORM	
28						NORM	
29						NORM	
30						NORM	
31						NORM	
32						NORM	

Parameters+ 1-64 [5.3]

Det #	occ Grn	occ Yell	occ Red	Dlay 1	Dlay 2	Type	Src
33						NORM	
34						NORM	
35						NORM	
36						NORM	
37						NORM	
38						NORM	
39						NORM	
40						NORM	
41						NORM	
42						NORM	
43						NORM	
44						NORM	
45						NORM	
46						NORM	
47						NORM	
48						NORM	
49						NORM	
50						NORM	
51						NORM	
52						NORM	
53						NORM	
54						NORM	
55						NORM	
56						NORM	
57						NORM	
58						NORM	
59						NORM	
60						NORM	
61						NORM	
62						NORM	
63						NORM	
64						NORM	

Ped Det Parms [5.4]

Det #	Call Ø	No Act	Max Pres	Err Cnt
1	2		15	
2	2		15	
3	3		15	
4	3		15	
5			15	
6			15	
7			15	
8			15	

Unit Paramters [1.2.1]

TS2 Det Faults		ON

Vol/Occ Report Parm [1.5.8]

Vol/Occ Period Minutes	0
Vol/Occ Period Minutes	15

1901 34 @ SEYMOUR

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Preemption Times [3.1], Options+ [3.6]

Pre #	Enable	Type	Output	Delay	MinDura
1	ON	RAIL	Dwell		
2	ON	RAIL	Dwell		
3	ON	EMERG	Dwell		
4	ON	EMERG	Dwell		
5	ON	EMERG	Dwell		
6	ON	EMERG	Dwell		

Pre #	MaxPres	MinGrn	MinWlk	PedClr	Co+Pre
1					ON
2					ON
3					ON
4					ON
5					ON
6					ON

Pre #	Track Grn	Min Dwell	Ext Dwell	PedClr+	Yel
1		2			
2		2			
3		2			
4		2			
5		2			
6		2			

Pre #	Red	Pattern	Skip
1			OFF
2			OFF
3			OFF
4			OFF
5			OFF
6			OFF

Low Priority Preempts

Pre #	Type	Min	Max
7	OFF		
8	OFF		
9	OFF		
10	OFF		

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	PRE
Max Seek Track Time	
Max Seek Dwell Time	

Channel Parameters [1.8.3]

D Conn Mappings	OFF
Pre Invert Rail Input	None

Track Clear Phases [3.2], Track Clear Overlaps+ [3.5]

Pre #	Track Phases				Track Overlaps											
1																
2																
3																
4																
5																
6																

Dwell Phases [3.2] and Overlaps+ [3.5]

Pre #														
1	Phases													
	Overlaps													
	Peds													
2	Phases													
	Overlaps													
	Peds													
3	Phases													
	Overlaps													
	Peds													
4	Phases													
	Overlaps													
	Peds													
5	Phases													
	Overlaps													
	Peds													
6	Phases													
	Overlaps													
	Peds													

Exit Phases [3.2]

Pre #	Exit Phase			
1				
2				
3				
4				
5				
6				

Preemption 1, Options+ [3.6]

Pre #	Lock	Override Auto Flsh		Override Higher		Flsh Dwell	Link
1	ON		ON		ON		OFF	
2	ON		ON		ON		OFF	
3	ON		ON		ON		OFF	
4	ON		ON		ON		OFF	
5	ON		ON		ON		OFF	
6	ON		ON		ON		OFF	

Alt# 1 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	ON	ON	ON	ON	ON	ON	ON	ON
Soft Recall								
Dual Enrty								
Enabl SimGap	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Annual Schedule [4.3] **Month of Year** **Day of Week** **Date** **Day Plan** **Link To**

	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Day Plan	Link To
1																																																			1	
2																																																			1	
3																																																			1	
4																																																			1	
5																																																			1	
6																																																			1	
7																																																			1	
8																																																			1	
9																																																			1	
10																																																			1	
11																																																			1	
12																																																			1	
13	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
14																																																		1	
15																																																			1	
16																																																			1	
17																																																			1	
18																																																			1	
19																																																			1	
20																																																			1	
21																																																			1	
22																																																			1	
23																																																			1	
24																																																			1	

Day Plans [4.4]

Day Plan 1

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 2

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 3

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 4

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 5

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 6

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 7

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 8

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 9

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 10

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 11

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 12

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 13

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 14

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 15

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Action Table [4.5]

Act#	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
48												
98												
99												
100	255											

Coord Alternate Tables - Pat+ [2.6]

Pat#	ØOpt	ØTime	DetG	Call Inh	CIC	CNA1	Overlap Off 1	2	3	4	5	6	7	8	Dia	Max2
1															DFT	
2															DFT	
3															DFT	
4															DFT	
5															DFT	
6															DFT	
7															DFT	
8															DFT	
9															DFT	
10															DFT	
11															DFT	
12															DFT	
13															DFT	
14															DFT	
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17															DFT	
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32															DFT	
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36															DFT	
37															DFT	
38															DFT	
39															DFT	
40															DFT	
41															DFT	
42															DFT	
43															DFT	
44															DFT	
45															DFT	
46															DFT	
47															DFT	
48															DFT	

1901 34 @ SEYMOUR

01/07/26 Page 6

#	Event / Alarm	Ev	Alr
1	Power Up Alarm.	ON	ON
2	Stop Timing	ON	ON
3	TS1 Cabinet Door	ON	ON
4	Coordination Failure	ON	ON
5	External Alarm # 1	ON	ON
6	External Alarm # 2	ON	ON
7	External Alarm # 3	ON	ON
8	External Alarm # 4	ON	ON
9	Closed Loop Disabled	ON	ON
10	External Alarm # 5	ON	ON
11	External Alarm # 6	ON	ON
12	Manual Control Enable	ON	ON
13	Coord Free Input	ON	ON
14	Local Flash Input	ON	ON
15	MMU Flash	ON	ON
16	CMU Flash	ON	ON
17	Cycle Fault	ON	ON
18	Cycle Failure	ON	ON
19	Coordination Fault	ON	ON
20	Controller Fault	ON	ON
21	Detector SDLC Failure	ON	ON
22	MMU SDLC Failure	ON	ON
23	Critical SDLC Failure	ON	ON
24	Reserved	ON	ON
25	EEPROM CRC Fault	ON	ON
26	Detector Diagnostic Failure	ON	ON
27	BIU Detector Failure	ON	ON
28	Queue detector alarm	ON	ON
29	Ped Detector Fault	ON	ON
30	Coord Diagnostic Fault	ON	ON
41	TempAlert Probe Ch. A	ON	ON
42	TempAlert Probe Ch. B	ON	ON
47	Coord Active	ON	ON
48	Preempt Active	ON	ON
49	Preempt 1 Input	ON	ON
50	Preempt 2 Input	ON	ON
51	Preempt 3 Input	ON	ON
52	Preempt 4 Input	ON	ON
53	Preempt 5 Input	ON	ON
54	Preempt 6 Input	ON	ON
55	Preempt 7 Input	ON	ON
56	Preempt 8 Input	ON	ON
57	Preempt 9 Input	ON	ON
58	Preempt 10 Input	ON	ON
61	In Transition	ON	ON
81	FIO Status Alarm	ON	ON

Call Phases[1.1.5]

Ø	Phases Called By Ø			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1						1								
2						2								
3						3								
4						4								
5						5								
6						6								
7						7								
8						8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1						1								
2						2								
3						3								
4						4								
5						5								
6						6								
7						7								
8						8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Auto Flash Phase/Olap Settings [1.4.2]

Yel Ø								
Yel (olaps)								

Unit Parameters [1.2.1]

Allow Skip Yellow	OFF	Max Cycle Time	
TOD Dim Enable	OFF	Cycle Fault Action	Alarm
Tone Disable	OFF		
Diamond Mode	4Ph		
Backup Time (s)	900		
Disable Init Ped	OFF		
Cycle Fault Action	Alarm		
Enable Run Timer	ON		

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C1-USER IO Map [1.8.9.1 In]

I1-1	1	Veh Call 1
I1-2	2	Veh Call 2
I1-3	3	Veh Call 3
I1-4	4	Veh Call 4
I1-5	5	Veh Call 5
I1-6	189	Unused
I1-7	189	Unused
I1-8	189	Unused
I2-1	189	Unused
I2-2	189	Unused
I2-3	189	Unused
I2-4	189	Unused
I2-5	129	Ped Call 1
I2-6	130	Ped Call 2
I2-7	131	Ped Call 3
I2-8	132	Ped Call 4
I3-1	189	Unused
I3-2	189	Unused
I3-3	189	Unused
I3-4	189	Unused
I3-5	189	Unused
I3-6	189	Unused
I3-7	189	Unused
I3-8	189	Unused
I4-1	189	
I4-2		
I4-3		
I4-4		
I4-5	189	Unused
I4-6	189	Unused
I4-7	229	33xCMUStop
I4-8	228	33xFlashSns
I5-1	189	Unused
I5-2	189	Unused
I5-3	189	Unused
I5-4	189	Unused
I5-5	189	Unused
I5-6	189	Unused
I5-7	189	Unused
I5-8	189	Unused
I6-1	189	Unused
I6-2	189	Unused
I6-3	189	Unused
I6-4	189	Unused
I6-5	189	Unused
I6-6	189	Unused
I6-7	189	Unused
I6-8	189	Unused

C1-USER IO Map [1.8.9.2 Out]

O1-1	1	Ch1 Red
O1-2	49	Ch1 Green
O1-3	2	Ch2 Red
O1-4	26	Ch2 Yellow
O1-5	50	Ch2 Green
O1-6	3	Ch3 Red
O1-7	27	Ch3 Yellow
O1-8	51	Ch3 Green
O2-1	4	Ch4 Red
O2-2	52	Ch4 Green
O2-3	5	Ch5 Red
O2-4	29	Ch5 Yellow
O2-5	53	Ch5 Green
O2-6	6	Ch6 Red
O2-7	30	Ch6 Yellow
O2-8	54	Ch6 Green
O3-1	7	Ch7 Red
O3-2	55	Ch7 Green
O3-3	8	Ch8 Red
O3-4	32	Ch8 Yellow
O3-5	56	Ch8 Green
O3-6	9	Ch9 Red
O3-7	33	Ch9 Yellow
O3-8	57	Ch9 Green
O4-1	10	Ch10 Red
O4-2	58	Ch10 Green
O4-3	11	Ch11 Red
O4-4	35	Ch11 Yellow
O4-5	59	Ch11 Green
O4-6	12	Ch12 Red
O4-7	36	Ch12 Yellow
O4-8	60	Ch12 Green
O5-1	28	Ch4 Yellow
O5-2	34	Ch10 Yellow
O5-3	25	Ch1 Yellow
O5-4	31	Ch7 Yellow
O5-5	115	Not Used
O5-6	115	Not Used
O5-7	115	Not Used
O5-8	114	Watchdog
O6-1	115	Not Used
O6-2	115	Not Used
O6-3	13	Ch13 Red
O6-4	37	Ch13 Yellow
O6-5	61	Ch13 Green
O6-6	14	Ch14 Red
O6-7	38	Ch14 Yellow
O6-8	62	Ch14 Green

C1-USER IO Map [1.8.9.2 Out]

O7-1	115	Not Used
O7-2	115	Not Used
O7-3	115	Not Used
O7-4	115	Not Used
O7-5	115	Not Used
O7-6	115	Not Used
O7-7	115	Not Used
O7-8	115	Not Used

C11S-USER IO Map [1.8.9.1 In]

I4-1		
I4-2		
I4-3		
I4-4		
I7-1	189	Unused
I7-2	189	Unused
I7-3	189	Unused
I7-4	189	Unused
I7-5	189	Unused
I7-6	189	Unused
I7-7	189	Unused
I7-8	189	Unused
I8-1	189	Unused
I8-2	189	Unused
I8-3	189	Unused
I8-4	189	Unused
I8-5	189	Unused
I8-6	189	Unused
I8-7	189	Unused
I8-8	189	Unused

C11S-USER IO Map [1.8.9.2 Out]

O8-1	115	Not Used
O8-2	115	Not Used
O8-3	115	Not Used
O8-4	115	Not Used
O8-5	115	Not Used
O8-6	115	Not Used
O8-7	115	Not Used
O8-8	115	Not Used

IO Logic [1.8.7]

Op1	Result		O1Fcn	Inv1	Src1	IO1	Fun1	O2Fcn	Inv2	Src2	IO2	Fun2	O3Fcn	Inv3	Src3	IO3	Fun3	Dly	Sec
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0

Security Access Levels [8.2]

1	SWLOAD
2	SECURE
3	None
4	None
5	None
6	None
7	None
8	None
9	None
10	None
11	None
12	None
13	None
14	None
15	None
16	None
17	None
18	None
19	None
20	None
21	None
22	None
23	None
24	None
25	None
26	None
27	None
28	None
29	None
30	None
31	None
32	None
33	None
34	None
35	None
36	None
37	None
38	None
39	None
40	None
41	None
42	None
43	None
44	None
45	None
46	None
47	None
48	None
49	None
50	None
51	None
52	None
53	None
54	None
55	None
56	None
57	None
58	None
59	None
60	None
61	None
62	None
63	None
64	None

Com Parameters [6.1]

Station ID	1901
Group ID	0
Master ID	0
Backup Time	900

SysUp Modem [6.1]

Enable Modem	None
Idle Time	0
Dial Time	0
Tel:	
Alt:	

2070 Port Parms [6.2]

Port	Baud Rate	FCM
SP1	9600	6
SP2	9600	6
SP3	19200	6
SP4	38400	6
SP5	1200	0
SP6	1200	0
SP7	1200	0
SP8	1200	0

2070 IP 1 Addressing [6.5]

	Addressing			
Addr	192	168	10	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	10	1
Port	###			

2070 IP 2 Addressing [6.5]

	Addressing			
Addr	192	168	10	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	10	1
Port	5001			

2070 Port Binding Ports [6.6]

	Port	Echo	Mode
ASYNC1	SP1	None	0
ASYNC2	SP2	None	0
ASYNC3	SP3	None	0
ASYNC4	SP4	None	0
SYNC1	SP5	SYNC3	OFF
SYNC2	OFF	SYNC4	OFF

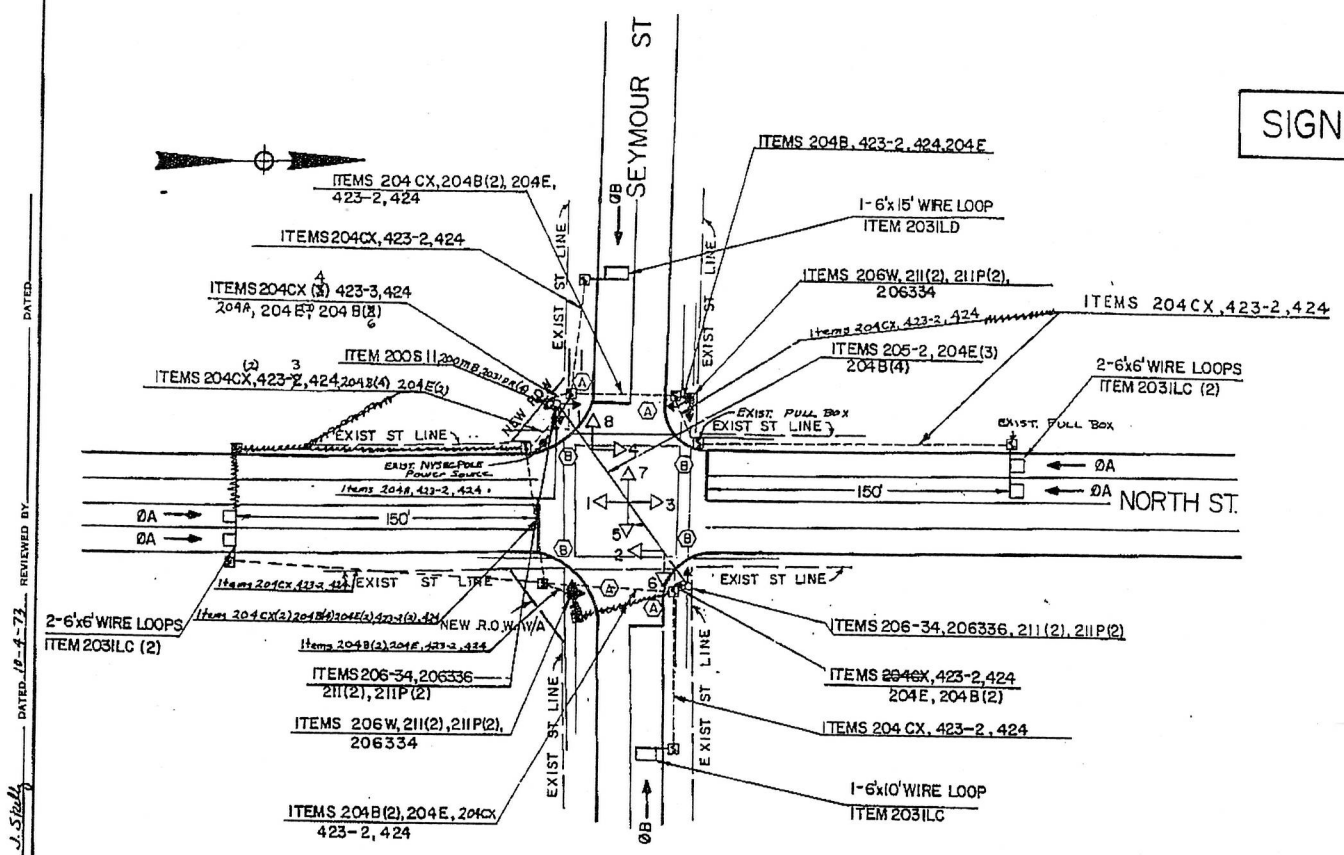
2070 Port Binding Functions [6.6]

Functio	Channel	Functio	Channel
TS2/CVN	None	SYSUp	ASYNC2
CMU/MM	None	SYSDow	ASYNC1
Opticom	None	Shell	None
Loop De	None		
GPS	None		

F.A.R.C. 74-2 F.A.C. 74-2, 3, 4, 5

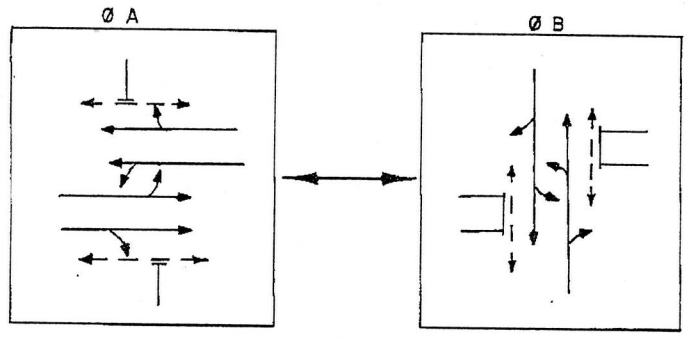
FED. ROAD REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.		165 RI	249
CITY OF AUBURN				
NORTH STREET ARTERIAL				

SIGNAL NO IA



TRAFFIC SIGNAL LEGEND	
S	PULL BOX, ITEMS 102DRS, 30C2, 102333
▷	TRAFFIC SIGNAL FACE, ITEMS 202AB(2), AABB
C	CONTROLLER (POLE MTD) ITEM 200S
▶	PEDESTRIAN "WALK-DON'T WALK" SIGNAL HEAD- ITEM 211

SEQUENCE OF OPERATION



TABLE

~~ESTIMATE~~ OF QUANTITIES

ITEM NO	DESCRIPTION	UNIT	QUANTITY
3002	FRAMES & GRATES CASTING (3.3 S.F.)	S.F.	~~33.0~~ 26.4
102 DRS	PULL BOXES	L.F.	~~36.0~~ 32.0
*102333	PULL BOX EXCAVATION & BACKFILL	EA.	~~10~~ 8
200SII	SOLID STATE CONTROLLER	EA.	1
202AB	TRAFFIC SIGNAL HEAD, TWO WAY, FACES A, B	EA.	2
202AABB	TRAFFIC SIGNAL HEAD FOUR WAY, FACES A, A, B, B	EA.	1
2031DR	INDUCTANCE LOOP VEHICLE DETECTOR	EA.	4
*423-3	GALVANIZED RIGID STEEL CONDUIT 3" I.D.	L.F.	~~10~~ 42.9
*424	CONDUIT EXCAVATION & BACKFILL	L.F.	~~576~~ 422.8
204A	POWER CABLE, TWO CONDUCTOR, NO. 10	L.F.	~~100~~ 86.0
204CX	CABLE, TWO CONDUCTOR, NO 14 SHIELDED	L.F.	~~765~~ 841.0
204E	CABLE SEVEN CONDUCTOR, NO14 SHIELDED	L.F.	~~1050~~ 650.0
205-2	SPAN WIRE ASSEMBLY, TWO PTS. OF ATTACHMENT	EA.	1
206-34	STEEL SIGNAL POLE, 34FT. LONG	EA.	2
206336	SIGNAL POLE EXCAVATION AND CONCRETE FOR FOUNDATION	EA.	2
* 423-2	GALVANIZED RIGID STEEL CONDUIT, 2" I.D.	L.F.	~~660~~ 654.3
*2031LC	WIRE LOOP FOR INDUCTANCE LOOP VEHICLE DETECTOR UNIT, 20'-40' PERIMETER	EA	5
* 2031LD	WIRE LOOP FOR INDUCTANCE LOOP VEHICLE DETECTOR UNIT, OVER 40' PERIMETER	EA	1
* 204B	CABLE, TWO CONDUCTOR NO. 14	EA.	~~860~~ 950.0
* 206W	PEDESTRIAN SIGNAL POLE, 18' LONG	EA.	2
* 211	PEDESTRIAN "WALK-DON'T WALK" SIGNAL HEAD	EA.	8
* 211P	PEDESTRIAN PUSH BUTTON WITH SIGN	EA.	8
*206334	SIGNAL POLE EXCAVATION AND CONCRETE FOR FOUNDATION	EA.	2
200 MB	METER BASE INSTALLATION & WIRING	EA.	1

* OUT OF SEQUENCE

28' Above Ground
6' Below Ground

TABLE OF OPERATION

FACE	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G		
PHASE:	1	2	3	4	5	6	7	8	⟨A⟩	⟨B⟩
A	G	G	G	G	R	R	R	R	DW†	DW
1 ST CL TO B	Y	Y	Y	Y	R	R	R	R	DW	DW
2 ND CL TO B	R	R	R	R	R	R	R	R	DW	DW
B	R	R	R	R	G	G	G	G	DW	DW†
1 ST CL TO A	R	R	R	R	Y	Y	Y	Y	DW	DW
2 ND CL TO A	R	R	R	R	R	R	R	R	DW	DW
FLASHER	FY	FY	FY	FY	FR	FR	FR	FR		

† "THIS WILL BE FLASHING "WALK" FOLLOWED BY A FLASHING "DON'T WALK" PEDESTRIAN CLEARANCE INTERVAL IF A PEDESTRIAN PUSH BUTTON HAS BEEN ACTUATED.

12" LENS

8" LENS

As Built Revisions
1) Revise Final Table of Quantities
2) Modify intersection to reflect AS-BUILT Quantity locations.

IN CHARGE OF ____ CHECKED BY J. Stelly DATED 12-4-73 REVIEWED BY ____ DATED ____ DESIGNED BY R. Lansdown DATED 12-4-73 CHECKED BY ____ DATED ____

SIGNAL NO IA AT
NORTH ST & SEYMOUR ST

DWG. NO.	SCALE	SHEET NO.
TS-9	1" = 40'	

SIGNAL NO 1A COUNTY Cayuga

SWITCH PACK	FUNCTION	FACE NOS	FLASH PLUG	INDICATIONS	TERMINAL WIRING BOARD	
					TERMINAL	WIRE COLOR CODE
SP 1	ϕ1	3	W		SP 1R	
				~~Y~~	SP 1Y	14/19C-1-B
				~~G~~	SP 1G	14/19C-1-BL
				GRND WIRE	GRND BUS	14/19C-1-BL/B
SP 2	ϕ6	1,2	R	R	SP 2R	14/19C-1-R
				Y	SP 2Y	14/19C-1-O
				G	SP 2G	14/19C-1-G
				GRND WIRE	GRND BUS	14/19C-1-W
SP 3	ϕ2	3,4	R	R	SP 3R	14/19C-1-R/B
				Y	SP 3Y	14/19C-1-O/B
				G	SP 3G	14/19C-1-G/B
				GRND WIRE	GRND BUS	14/19C-1-W/B
SP 4	ϕ7	5,6	R	R	SP 4R	14/19C-1-R/W
				Y	SP 4Y	14/19C-1-BL/W
				G	SP 4G	14/19C-1-G/W
				GRND WIRE	GRND BUS	14/19C-1-B/W
SP 5	Ped A (ϕ2)		W	Walk	SP 5R	
					SP 5Y	
				Don't Walk	SP 5G	
				GRND WIRE	GRND BUS	
SP 6	Ped B (ϕ3)		W	Walk	SP 6R	
					SP 6Y	
				Don't Walk	SP 6G	
				GRND WIRE	GRND BUS	
SP 7	ϕ3	7,8	R	R	SP 7R	14/19C-1-B/R
				Y	SP 7Y	14/19C-1-O/R
				G	SP 7G	14/19C-1-BL/R
				GRND WIRE	GRND BUS	14/19C-1-W/R
SP 8					SP 8R	
					SP 8Y	
					SP 8G	
				GRND WIRE	GRND BUS	
SP 9					SP 9R	
					SP 9Y	
					SP 9G	
				GRND WIRE	GRND BUS	
SP 10					SP 10R	
					SP 10Y	
					SP 10G	
				GRND WIRE	GRND BUS	
SP 11					SP 11R	
					SP 11Y	
					SP 11G	
				GRND WIRE	GRND BUS	
SP 12					SP 12R	
					SP 12Y	
					SP 12G	
				GRND WIRE	GRND BUS	
SP 13					SP 13R	
					SP 13Y	
					SP 13G	
				GRND WIRE	GRND BUS	
SP 14					SP 14R	
					SP 14Y	
					SP 14G	
				GRND WIRE	GRND BUS	
SP 15					SP 15R	
					SP 15Y	
					SP 15G	
				GRND WIRE	GRND BUS	
SP 16					SP 16R	
					SP 16Y	
					SP 16G	
				GRND WIRE	GRND BUS	

no changes to existing wiring

Seymour - Rt 34

84-1 (12/80)

NEMA 170

STUDY NO: 3830047
FILE: 75-5-3-3

SIGNAL OPERATION SPECIFICATIONS
TABLE OF SWITCH PACKS

17 SIGNAL NO. | CAYUGA COUNTY | 9/21/83 DATE | PAGE 4 OF ____ PAGES 7

CONFLICT MONITOR	SWITCH PACK	FUNCTION	FACE NUMBERS	INDICATIONS	TERMINAL WIRING BOARD Terminal	Wire Color Code
Diodes to be Cut (List Below)*	SP 1	ϕ1 Y		R	SP 1 R	Wired as per field
				Y	SP 1 Y	
				G	SP 1 G	
				Grnd Wire	Grnd Bus	
1-5 6-7	SP 2	ϕ6			SP 2 R	
					SP 2 Y	
					SP 2 G	
				Grnd Wire	Grnd Bus	
	SP 3	ϕ2			SP 3 R	
					SP 3 Y	
					SP 3 G	
				Grnd Wire	Grnd Bus	
	SP 4	ϕ7			SP 4 R	
					SP 4 Y	
					SP 4 G	
				Grnd Wire	Grnd Bus	
	SP 5	Ped A W ϕ2		Fl. DW	SP 5 R	
				—	SP 5 Y	
				Fl. W	SP 5 G	
				Grnd Wire	Grnd Bus	
	SP 6	Ped B W ϕ3		Fl. DW	SP 6 R	
				—	SP 6 Y	
				Fl. W	SP 6 G	
				Grnd Wire	Grnd Bus	
	SP 7	ϕ3 R		R	SP 7 R	
				Y	SP 7 Y	
				G	SP 7 G	
				Grnd Wire	Grnd Bus	
	SP 8				SP 8 R	
					SP 8 Y	
					SP 8 G	
				Grnd Wire	Grnd Bus	
	SP 9				SP 9 R	
					SP 9 Y	
					SP 9 G	
				Grnd Wire	Grnd Bus	
To Omit Yellow Monitoring — Add Jumpers — (List Below) 5 6	SP 10	ϕ5			SP 10 R	
					SP 10 Y	
					SP 10 G	
				Grnd Wire	Grnd Bus	
	SP 11	TELL TALE			SP 11 R	
				Blue Light	SP 11 Y	
					SP 11 G	
			Blue Light	Grnd Wire	Grnd Bus	
	SP 12				Grnd Bus	
					SP 12 R	
					SP 12 Y	
					SP 12 G	
				Grnd Wire	Grnd Bus	

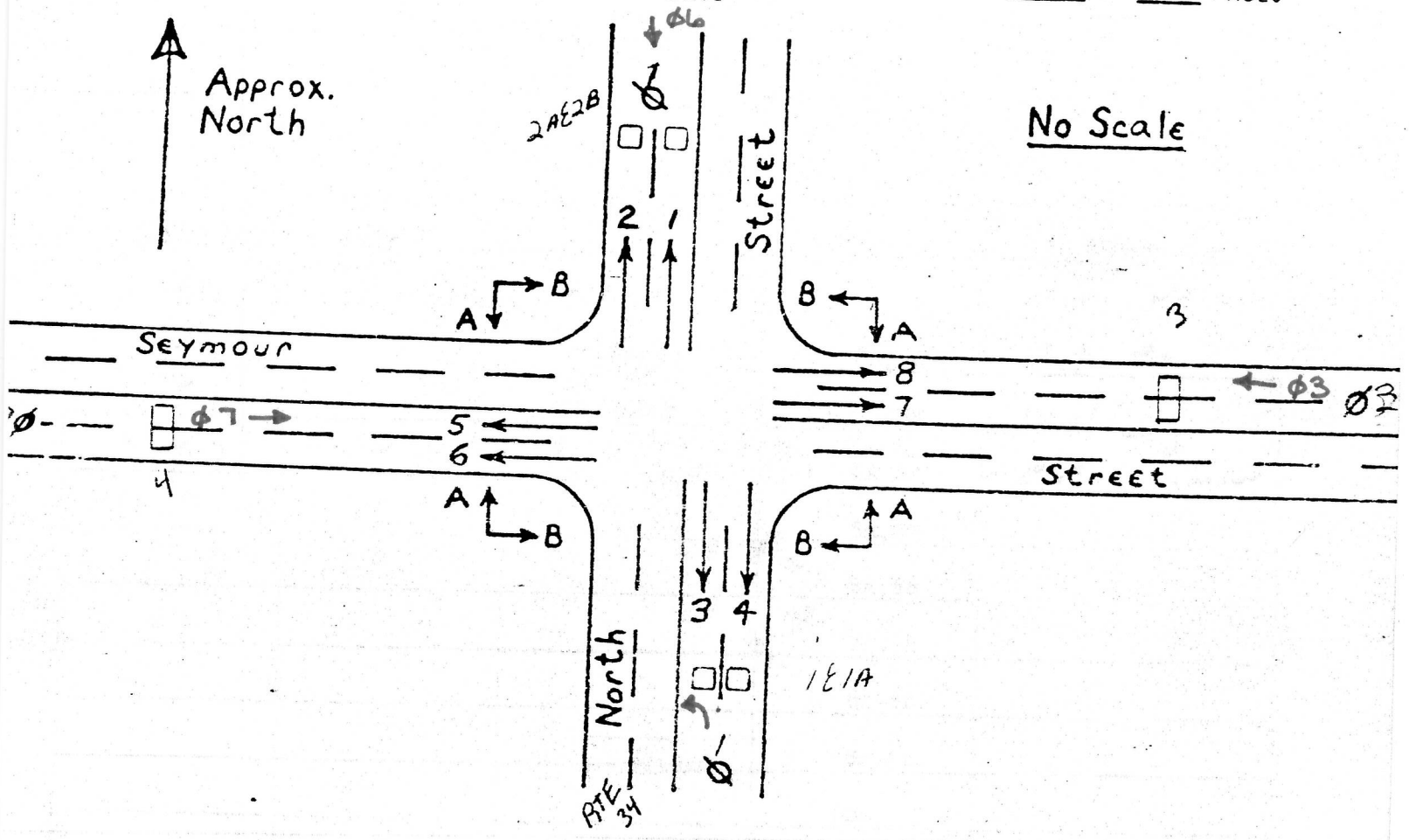
*This list reflects those pairs of switch packs which may display green indications concurrently.

STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC ENGINEERING AND SAFETY

CASE: 23300 47
FILE: 75-5-3-3

SIGNAL OPERATION SPECIFICATIONS (CONTINUED)

1A — SIGNAL NO. | Cayuga — COUNTY | 9/21/83 — DATE | PAGE 2 OF 1 PAGES



FACES

Phase	1,2,3,4	5,6,7,8	_A	_B
1				
1st Clearance to 2	Green	Red	DONT WALK*	DONT WALK
2nd Clearance to 2	Yellow	Red	DONT WALK	DONT WALK
	Red	Red	DONT WALK	DONT WALK
2				
1st Clearance to 1	Red	Green	DONT WALK	DONT WALK*
2nd Clearance to 1	Red	Yellow	DONT WALK	DONT WALK
	Red	Red	DONT WALK	DONT WALK
Emergency	Flashing Yellow	Flashing Red	Inoperative	Inoperative

* This will be a flashing "WALK" followed by a flashing "DONT WALK" and "DONT WALK" interval upon actuation of a pedestrian push-button.

01-1(12/80)

NEMA 170

STUDY NO 38700477
FILE: 75-5-3-3

SIGNAL OPERATION SPECIFICATIONS
TABLE OF INPUT WIRING

1A
SIGNAL NO

CAYUGA
COUNTY

9/21/83
DATE

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FUNCTION	DETECTOR NUMBER	DETECTOR TYPE	TERMINALS	REMARKS
Ø1	1	pt. loop	1A,1B	N.B. Rt 34
Ø6	2	pt. loop	2A,2B	S.B. Rt 34
Ø3	3	pt. loop	3A,3B	W.B. Seymour
Ø8 7	4	pt. loop	4A,4B	E.B. Seymour
			5A,5B	
			6A,6B	
			7A,7B	
			8A,8B	
			9A,9B	
			10A,10B	
			11A,11B	
			12A,12B	
Ø X 62	ped A	push button	13A,13B	crossing Seymour
Ø3	ped B	push button	14A,14B	crossing Rt 34
			15A,15B	
			16A,16B	

NOTES:

Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green		15		10		15		
Gap, Ext				3				
Max 1		40		35		40		
Max 2								
Yel Clearance		3.5		3.5		3.5		
Red Clearance		1.5		2		1.5		
Walk		8		7				
Ped Clearance		11		15				
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								

Options [1.1.2]

	1	2	3	4	5	6	7	8
Enable		ON		ON		ON		
Min Recall								
Max Recall		ON				ON		
Ped Recall								
Soft Recall		ON				ON		
Lock Calls								
Auto Flash Entry								
Auto Flash Exit								
Dual Entry		ON				ON		
Enable Simul Gap	ON	ON	ON	ON	ON	ON	ON	ON
Gaurantee Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								

Options+ [1.1.3]

	1	2	3	4	5	6	7	8
Reservice								
PedClr Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Call Phase								
Conflicting Phase								
Omit Yellow								
Ped Delay								
Grn/Ped Delay				5				

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Coordination Patterns [2.4] and Coordination Split Tables [2.7.1]

Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq
1	0	0	1	1	13	0	0	13	1	25	0	0	0	1	37	0	0	0	1
2	0	0	2	1	14	0	0	14	1	26	0	0	0	1	38	0	0	0	1
3	0	0	3	1	15	0	0	15	1	27	0	0	0	1	39	0	0	0	1
4	0	0	4	1	16	0	0	16	1	28	0	0	0	1	40	0	0	0	1
5	0	0	5	1	17	0	0	17	1	29	0	0	0	1	41	0	0	0	1
6	0	0	6	1	18	0	0	18	1	30	0	0	0	1	42	0	0	0	1
7	0	0	7	1	19	0	0	19	1	31	0	0	0	1	43	0	0	0	1
8	0	0	8	1	20	0	0	20	1	32	0	0	0	1	44	0	0	0	1
9	0	0	9	1	21	0	0	21	1	33	0	0	0	1	45	0	0	0	1
10	0	0	10	1	22	0	0	22	1	34	0	0	0	1	46	0	0	0	1
11	0	0	11	1	23	0	0	23	1	35	0	0	0	1	47	0	0	0	1
12	0	0	12	1	24	0	0	24	1	36	0	0	0	1	48	0	0	0	1

Split		1	2	3	4	5	6	7	8	Split		1	2	3	4	5	6	7	8
1	Coor	0	0	0	0	0	0	0	0	13	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
2	Coor	0	0	0	0	0	0	0	0	14	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
3	Coor	0	0	0	0	0	0	0	0	15	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
4	Coor	0	0	0	0	0	0	0	0	16	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
5	Coor	0	0	0	0	0	0	0	0	17	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
6	Coor	0	0	0	0	0	0	0	0	18	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
7	Coor	0	0	0	0	0	0	0	0	19	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
8	Coor	0	0	0	0	0	0	0	0	20	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
9	Coor	0	0	0	0	0	0	0	0	21	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
10	Coor	0	0	0	0	0	0	0	0	22	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
11	Coor	0	0	0	0	0	0	0	0	23	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
12	Coor	0	0	0	0	0	0	0	0	24	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON

Page#	
1	8 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
1A&1B	16 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
2	Overlaps; Channel Settings; Coord Alt Table+ (values not associated with time-of-day)
3	Detection; Sample Time and Unit Parameters related to detection
4	Preemption and Alternate Phase Time and Phase Options
5	Annual Schedule
6	Day Plans; Action Tables; Coord Alt Table+ (values varied by time-of-day)
7	Communications; Secutiry; I/O Setup
8	Misc - Events/Alarms; Call/Inhibit/Redirect; P/OLAP Auto Flash; CIC; Misc Unit Param

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Ring/Startup [1.1.4]

Phs	Ring	Start	Enable
1	1	Red	OFF
2	1	Red	ON
3	1	Red	OFF
4	1	Red	ON
5	2	Red	OFF
6	2	Red	ON
7	2	Red	OFF
8	2	Red	OFF

Coord Modes [2.1]

Test OpMode	0
Correction	SHRT/LNG
Maximum	MAX 1
Force-Off	Float
Closed Loop	ON
Stop-in-Walk	OFF
Auto Reset	ON
Expand Splt	
Ped Recycle	NO_RECYCLE
Before	TIMED
After	TIMED

Auto Flash [1.4.1]

Auto Flash	Channel
Flash Yel	45
Flash Red	20

Unit Params [1.2.1]

Phase Mode	STD8
IO Mode	User
Loc Flsh Start	Red
Start Flash(s)	0
Start AllRed(s)	6
Yellow < 3"	OFF
Display Time	20
Red Revert	3
MCE Timeout	0
Feature Profile	
Free Ring Seq	1
Auxswitch	STOPTM
SDLC Retry	0
TS2 Det Faults	ON
Auto Ped Clear	OFF
SDLC Retry	0

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Overlap 1-16 Program Parms & Parm+ [1.5.2.1] [1.5.2.2]

Overlap Conflict Lock	OFF	Overlap Lock Inhibit	OFF	Parent Ph Clearance	ON	Extra Included Ph	OFF

	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
1	Modifier Ø								Grn		9	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
A	Conflict Olap								Red	1.5	I	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
2	Modifier Ø								Grn		10	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
B	Conflict Olap								Red	1.5	J	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
3	Modifier Ø								Grn		11	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
C	Conflict Olap								Red	1.5	K	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
4	Modifier Ø								Grn		12	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
D	Conflict Olap								Red	1.5	L	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
5	Modifier Ø								Grn		13	Modifier Ø									Grn	
	Conflo0l								Yel	3.5		Conflict Ø									Yel	3.5
E	Conflict Olap								Red	1.5	M	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
6	Modifier Ø								Grn		14	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
F	Conflict Olap								Red	1.5	N	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
7	Modifier Ø								Grn		15	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
G	Conflict Olap								Red	1.5	O	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
8	Modifier Ø								Grn		16	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
H	Conflict Olap								Red	1.5	P	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	

Channel Settings [1.8.1]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	2	4	6	2	4	4																		
Channel Type	VEH	VEH	VEH	PED	PED	PED	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Channel Flash	YEL	Red	YEL	DRK	DRK	DRK	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Alt Hz																								

Channel+ Settings [1.8.4]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Flash Red+																								
Flash Yellow+																								
Flash Green+																								
Flash Inh Red+																								
Olap Ovrd																								

Coord Transition, CoorPhs [2.5]

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	RetHld	Float	Min Veh Perm	Min Ped Perm
1	12	22							EndGRN				
2	12	22							EndGRN				
3	12	22							EndGRN				
4	12	22							EndGRN				
5	12	22							EndGRN				
6	12	22							EndGRN				
7	12	22							EndGRN				
8	12	22							EndGRN				
9	12	22							EndGRN				
10	12	22							EndGRN				
11	12	22							EndGRN				
12	12	22							EndGRN				
13	12	22							EndGRN				
14	12	22							EndGRN				
15	12	22							EndGRN				
16	12	22							EndGRN				
17	12	22							EndGRN				
18	12	22							EndGRN				
19	12	22							EndGRN				
20	12	22							EndGRN				
21	12	22							EndGRN				
22	12	22							EndGRN				
23	12	22							EndGRN				
24	12	22							EndGRN				
25									BegGRN				
26									BegGRN				
27									BegGRN				
28									BegGRN				
29									BegGRN				
30									BegGRN				
31									BegGRN				
32									BegGRN				
33									BegGRN				
34									BegGRN				
35									BegGRN				
36									BegGRN				
37									BegGRN				
38									BegGRN				
39									BegGRN				
40									BegGRN				
41									BegGRN				
42									BegGRN				
43									BegGRN				
44									BegGRN				
45									BegGRN				
46									BegGRN				
47									BegGRN				
48									BegGRN				

Channel Params[1.8.3]

C1 IO Mode	User	Single BIU Map	DEFAULT	Invert Rail Input	OFF

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
1	4						45	50	2
2							45	50	2
3							45	50	2
4							45	50	2
5							45	50	2
6							45	50	2
7							45	50	2
8							45	50	2
9							45	50	2
10							45	50	2
11							45	50	2
12							45	50	2
13							45	50	2
14							45	50	2
15							45	50	2
16							45	50	2
17							45	50	2
18							45	50	2
19							45	50	
20							45	50	
21							45	50	
22							45	50	
23							45	50	
24							45	50	
25							45	50	
26							45	50	
27							45	50	
28							45	50	
29							45	50	
30							45	50	
31							45	50	
32							45	50	

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
33							45	50	
34							45	50	
35							45	50	
36							45	50	
37							45	50	
38							45	50	
39							45	50	
40							45	50	
41							45	50	
42							45	50	
43							45	50	
44							45	50	
45							45	50	
46							45	50	
47							45	50	
48							45	50	
49							45	50	
50							45	50	
51							45	50	
52							45	50	
53							45	50	
54							45	50	
55							45	50	
56							45	50	
57							45	50	
58							45	50	
59							45	50	
60							45	50	
61							45	50	
62							45	50	
63							45	50	
64							45	50	

Vehicle Options 1-64 [5.2]

Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol
1	ON	ON		ON				
2	ON	ON		ON				
3	ON	ON		ON				
4	ON	ON		ON				
5	ON	ON		ON				
6	ON	ON		ON				
7	ON	ON		ON				
8	ON	ON		ON				
9	ON	ON		ON				
10	ON	ON		ON				
11	ON	ON		ON				
12	ON	ON		ON				
13	ON	ON		ON				
14	ON	ON		ON				
15	ON	ON		ON				
16	ON	ON		ON				
17	ON	ON		ON				
18	ON	ON		ON				
19	ON	ON		ON				
20	ON	ON		ON				
21	ON	ON		ON				
22	ON	ON		ON				
23	ON	ON		ON				
24	ON	ON		ON				
25	ON	ON		ON				
26	ON	ON		ON				
27	ON	ON		ON				
28	ON	ON		ON				
29	ON	ON		ON				
30	ON	ON		ON				
31	ON	ON		ON				
32	ON	ON		ON				

Vehicle Options 1-64 [5.2]

Det #	vol	occ	Yell Lock	Red Lock	Ext	Add Init	Que	Call
33					ON	ON		ON
34					ON	ON		ON
35					ON	ON		ON
36					ON	ON		ON
37					ON	ON		ON
38					ON	ON		ON
39					ON	ON		ON
40					ON	ON		ON
41					ON	ON		ON
42					ON	ON		ON
43					ON	ON		ON
44					ON	ON		ON
45					ON	ON		ON
46					ON	ON		ON
47					ON	ON		ON
48					ON	ON		ON
49					ON	ON		ON
50					ON	ON		ON
51					ON	ON		ON
52					ON	ON		ON
53					ON	ON		ON
54					ON	ON		ON
55					ON	ON		ON
56					ON	ON		ON
57					ON	ON		ON
58					ON	ON		ON
59					ON	ON		ON
60					ON	ON		ON
61					ON	ON		ON
62					ON	ON		ON
63					ON	ON		ON
64					ON	ON		ON

Parameters+ 1-64 [5.3]

Det #	oc G	oc Y	oc R	Dlay 1	Dlay 2	Type	Src
1						NORM	
2						NORM	
3						NORM	
4						NORM	
5						NORM	
6						NORM	
7						NORM	
8						NORM	
9						NORM	
10						NORM	
11						NORM	
12						NORM	
13						NORM	
14						NORM	
15						NORM	
16						NORM	
17						NORM	
18						NORM	
19						NORM	
20						NORM	
21						NORM	
22						NORM	
23						NORM	
24						NORM	
25						NORM	
26						NORM	
27						NORM	
28						NORM	
29						NORM	
30						NORM	
31						NORM	
32						NORM	

Parameters+ 1-64 [5.3]

Det #	occ Grn	occ Yell	occ Red	Dlay 1	Dlay 2	Type	Src
33						NORM	
34						NORM	
35						NORM	
36						NORM	
37						NORM	
38						NORM	
39						NORM	
40						NORM	
41						NORM	
42						NORM	
43						NORM	
44						NORM	
45						NORM	
46						NORM	
47						NORM	
48						NORM	
49						NORM	
50						NORM	
51						NORM	
52						NORM	
53						NORM	
54						NORM	
55						NORM	
56						NORM	
57						NORM	
58						NORM	
59						NORM	
60						NORM	
61						NORM	
62						NORM	
63						NORM	
64						NORM	

Ped Det Parms [5.4]

Det #	Call Ø	No Act	Max Pres	Err Cnt
1	2		15	
2	4		15	
3	4		15	
4			15	
5			15	
6			15	
7			15	
8			15	

Unit Paramters [1.2.1]

TS2 Det Faults		ON

Vol/Occ Report Parm [1.5.8]

Vol/Occ Period Minutes	0
Vol/Occ Period Minutes	15

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Preemption Times [3.1], Options+ [3.6]

Pre #	Enable	Type	Output	Delay	MinDura
1	ON	RAIL	Dwell		
2	ON	RAIL	Dwell		
3	ON	EMERG	Dwell		
4	ON	EMERG	Dwell		
5	ON	EMERG	Dwell		
6	ON	EMERG	Dwell		

Pre #	MaxPres	MinGrn	MinWlk	PedClr	Co+Pre
1					ON
2					ON
3					ON
4					ON
5					ON
6					ON

Pre #	Track Grn	Min Dwell	Ext Dwell	PedClr+	Yel
1		2			
2		2			
3		2			
4		2			
5		2			
6		2			

Pre #	Red	Pattern	Skip
1			OFF
2			OFF
3			OFF
4			OFF
5			OFF
6			OFF

Low Priority Preempts

Pre #	Type	Min	Max
7	OFF		
8	OFF		
9	OFF		
10	OFF		

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	PRE
Max Seek Track Time	
Max Seek Dwell Time	

Channel Parameters [1.8.3]

D Conn Mappings	OFF
Pre Invert Rail Input	None

Track Clear Phases [3.2], Track Clear Overlaps+ [3.5]

Pre #	Track Phases				Track Overlaps											
1																
2																
3																
4																
5																
6																

Dwell Phases [3.2] and Overlaps+ [3.5]

Pre #														
1	Phases													
	Overlaps													
	Peds													
2	Phases													
	Overlaps													
	Peds													
3	Phases													
	Overlaps													
	Peds													
4	Phases													
	Overlaps													
	Peds													
5	Phases													
	Overlaps													
	Peds													
6	Phases													
	Overlaps													
	Peds													

Exit Phases [3.2]

Pre #	Exit Phase			
1				
2				
3				
4				
5				
6				

Preemption 1, Options+ [3.6]

Pre #	Lock	Override Auto Flsh		Override Higher		Flsh Dwell	Link
1	ON		ON		ON		OFF	
2	ON		ON		ON		OFF	
3	ON		ON		ON		OFF	
4	ON		ON		ON		OFF	
5	ON		ON		ON		OFF	
6	ON		ON		ON		OFF	

Alt# 1 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	ON	ON	ON	ON	ON	ON	ON	ON
Soft Recall								
Dual Enrty								
Enabl SimGap	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Annual Schedule [4.3] — **Month of Year** — **Day of Week** — **Date** — **Day Plan** — **Link To**

	Month of Year												Day of Week							Date																							Day Plan	Link To
1	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
2	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
3	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
4	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
5	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
6	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
7	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
8	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
9	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
10	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
11	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
12	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
13	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
14	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
15	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
16	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
17	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
18	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
19	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
20	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
21	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
22	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
23	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
24	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	

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Day Plans [4.4]

Day Plan 1

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 2

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 3

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 4

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 5

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 6

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 7

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 8

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 9

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 10

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 11

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 12

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 13

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 14

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 15

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Action Table [4.5]

Act#	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
48												
98												
99												
100	255											

Coord Alternate Tables - Pat+ [2.6]

Pat#	ØOpt	ØTime	DetG	Call Inh	CIC	CNA1	Overlap Off 1	2	3	4	5	6	7	8	Dia	Max2
1															DFT	
2															DFT	
3															DFT	
4															DFT	
5															DFT	
6															DFT	
7															DFT	
8															DFT	
9															DFT	
10															DFT	
11															DFT	
12															DFT	
13															DFT	
14															DFT	
15															DFT	
16															DFT	
17															DFT	
18															DFT	
19															DFT	
20															DFT	
21															DFT	
22															DFT	
23															DFT	
24															DFT	
25															DFT	
26															DFT	
27															DFT	
28															DFT	
29															DFT	
30															DFT	
31															DFT	
32															DFT	
33															DFT	
34															DFT	
35															DFT	
36															DFT	
37															DFT	
38															DFT	
39															DFT	
40															DFT	
41															DFT	
42															DFT	
43															DFT	
44															DFT	
45															DFT	
46															DFT	
47															DFT	
48															DFT	

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#	Event / Alarm	Ev	Alr
1	Power Up Alarm.	ON	ON
2	Stop Timing	ON	ON
3	TS1 Cabinet Door		
4	Coordination Failure	ON	ON
5	External Alarm # 1	ON	ON
6	External Alarm # 2	ON	ON
7	External Alarm # 3		
8	External Alarm # 4		
9	Closed Loop Disabled	ON	
10	External Alarm # 5		
11	External Alarm # 6		
12	Manual Control Enable	ON	ON
13	Coord Free Input		
14	Local Flash Input	ON	ON
15	MMU Flash		
16	CMU Flash		
17	Cycle Fault	ON	
18	Cycle Failure	ON	
19	Coordination Fault	ON	
20	Controller Fault	ON	ON
21	Detector SDLC Failure		
22	MMU SDLC Failure		
23	Critical SDLC Failure		
24	Reserved		
25	EEPROM CRC Fault	ON	ON
26	Detector Diagnostic Failure		ON
27	BIU Detector Failure	ON	ON
28	Queue detector alarm	ON	
29	Ped Detector Fault	ON	ON
30	Coord Diagnostic Fault		
41	TempAlert Probe Ch. A		
42	TempAlert Probe Ch. B		
47	Coord Active		
48	Preempt Active	ON	
49	Preempt 1 Input	ON	
50	Preempt 2 Input	ON	
51	Preempt 3 Input	ON	
52	Preempt 4 Input	ON	
53	Preempt 5 Input	ON	
54	Preempt 6 Input	ON	
55	Preempt 7 Input	ON	
56	Preempt 8 Input	ON	
57	Preempt 9 Input	ON	
58	Preempt 10 Input	ON	
61	In Transition	ON	
81	FIO Status Alarm		

Call Phases[1.1.5]

Ø	Phases Called By Ø			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø				
1						
2						
3						
4						
5						
6						
7						
8						

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø				
1						
2						
3						
4						
5						
6						
7						
8						

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Auto Flash Phase/Olap Settings [1.4.2]

Yel Ø								
Yel (olaps)								

Unit Parameters [1.2.1]

Allow Skip Yellow	OFF	Max Cycle Time	
TOD Dim Enable	OFF	Cycle Fault Action	Alarm
Tone Disable	OFF		
Diamond Mode	4Ph		
Backup Time (s)	900		
Disable Init Ped	OFF		
Cycle Fault Action	Alarm		
Enable Run Timer	ON		

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C1-USER IO Map [1.8.9.1 In]

I1-1	1	Veh Call 1
I1-2	189	Unused
I1-3	129	Ped Call 1
I1-4	130	Ped Call 2
I1-5	131	Ped Call 3
I1-6	189	Unused
I1-7	189	Unused
I1-8	189	Unused
I2-1	189	Unused
I2-2	189	Unused
I2-3	189	Unused
I2-4	189	Unused
I2-5	189	Unused
I2-6	189	Unused
I2-7	189	Unused
I2-8	189	Unused
I3-1	189	Unused
I3-2	189	Unused
I3-3	189	Unused
I3-4	189	Unused
I3-5	189	Unused
I3-6	189	Unused
I3-7	189	Unused
I3-8	189	Unused
I4-1	189	
I4-2		
I4-3		
I4-4		
I4-5	189	Unused
I4-6	189	Unused
I4-7	229	33xCMUStop
I4-8	228	33xFlashSns
I5-1	189	Unused
I5-2	189	Unused
I5-3	189	Unused
I5-4	189	Unused
I5-5	189	Unused
I5-6	189	Unused
I5-7	189	Unused
I5-8	189	Unused
I6-1	189	Unused
I6-2	189	Unused
I6-3	189	Unused
I6-4	189	Unused
I6-5	189	Unused
I6-6	189	Unused
I6-7	189	Unused
I6-8	189	Unused

C1-USER IO Map [1.8.9.2 Out]

O1-1	1	Ch1 Red
O1-2	49	Ch1 Green
O1-3	2	Ch2 Red
O1-4	26	Ch2 Yellow
O1-5	50	Ch2 Green
O1-6	3	Ch3 Red
O1-7	27	Ch3 Yellow
O1-8	51	Ch3 Green
O2-1	4	Ch4 Red
O2-2	52	Ch4 Green
O2-3	5	Ch5 Red
O2-4	29	Ch5 Yellow
O2-5	53	Ch5 Green
O2-6	6	Ch6 Red
O2-7	30	Ch6 Yellow
O2-8	54	Ch6 Green
O3-1	7	Ch7 Red
O3-2	55	Ch7 Green
O3-3	8	Ch8 Red
O3-4	32	Ch8 Yellow
O3-5	56	Ch8 Green
O3-6	9	Ch9 Red
O3-7	33	Ch9 Yellow
O3-8	57	Ch9 Green
O4-1	10	Ch10 Red
O4-2	58	Ch10 Green
O4-3	11	Ch11 Red
O4-4	35	Ch11 Yellow
O4-5	59	Ch11 Green
O4-6	12	Ch12 Red
O4-7	36	Ch12 Yellow
O4-8	60	Ch12 Green
O5-1	28	Ch4 Yellow
O5-2	34	Ch10 Yellow
O5-3	25	Ch1 Yellow
O5-4	31	Ch7 Yellow
O5-5	115	Not Used
O5-6	115	Not Used
O5-7	115	Not Used
O5-8	114	Watchdog
O6-1	115	Not Used
O6-2	115	Not Used
O6-3	13	Ch13 Red
O6-4	37	Ch13 Yellow
O6-5	61	Ch13 Green
O6-6	14	Ch14 Red
O6-7	38	Ch14 Yellow
O6-8	62	Ch14 Green

C1-USER IO Map [1.8.9.2 Out]

O7-1	115	Not Used
O7-2	115	Not Used
O7-3	115	Not Used
O7-4	115	Not Used
O7-5	115	Not Used
O7-6	115	Not Used
O7-7	115	Not Used
O7-8	115	Not Used

C11S-USER IO Map [1.8.9.1 In]

I4-1		
I4-2		
I4-3		
I4-4		
I7-1	189	Unused
I7-2	189	Unused
I7-3	189	Unused
I7-4	189	Unused
I7-5	189	Unused
I7-6	189	Unused
I7-7	189	Unused
I7-8	189	Unused
I8-1	189	Unused
I8-2	189	Unused
I8-3	189	Unused
I8-4	189	Unused
I8-5	189	Unused
I8-6	189	Unused
I8-7	189	Unused
I8-8	189	Unused

C11S-USER IO Map [1.8.9.2 Out]

O8-1	115	Not Used
O8-2	115	Not Used
O8-3	115	Not Used
O8-4	115	Not Used
O8-5	115	Not Used
O8-6	115	Not Used
O8-7	115	Not Used
O8-8	115	Not Used

IO Logic [1.8.7]

Op1	Result		O1Fcn	Inv1	Src1	IO1	Fun1	O2Fcn	Inv2	Src2	IO2	Fun2	O3Fcn	Inv3	Src3	IO3	Fun3	Dly	Sec
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0

Security Access Levels [8.2]

1	SWLOAD
2	SECURE
3	None
4	None
5	None
6	None
7	None
8	None
9	None
10	None
11	None
12	None
13	None
14	None
15	None
16	None
17	None
18	None
19	None
20	None
21	None
22	None
23	None
24	None
25	None
26	None
27	None
28	None
29	None
30	None
31	None
32	None
33	None
34	None
35	None
36	None
37	None
38	None
39	None
40	None
41	None
42	None
43	None
44	None
45	None
46	None
47	None
48	None
49	None
50	None
51	None
52	None
53	None
54	None
55	None
56	None
57	None
58	None
59	None
60	None
61	None
62	None
63	None
64	None

Com Parameters [6.1]

Station ID	1918
Group ID	0
Master ID	0
Backup Time	900

SysUp Modem [6.1]

Enable Modem	None
Idle Time	0
Dial Time	0
Tel:	
Alt:	

2070 Port Parms [6.2]

Port	Baud Rate	FCM
SP1	9600	6
SP2	9600	6
SP3	19200	6
SP4	38400	6
SP5	1200	0
SP6	1200	0
SP7	1200	0
SP8	1200	0

2070 IP 1 Addressing [6.5]

	Addressing			
Addr	192	168	10	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	10	1
Port	###			

2070 IP 2 Addressing [6.5]

	Addressing			
Addr	192	168	10	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	10	1
Port	5001			

2070 Port Binding Ports [6.6]

	Port	Echo	Mode
ASYNC1	SP1	None	0
ASYNC2	SP2	None	0
ASYNC3	SP3	None	0
ASYNC4	SP4	None	0
SYNC1	SP5S	SYNC3	OFF
SYNC2	OFF	SYNC4	OFF

2070 Port Binding Functions [6.6]

Functio	Channel	Functio	Channel
TS2/CVN	None	SYSUp	ASYNC2
CMU/MM	None	SYSDow	ASYNC1
Opticom	None	Shell	None
Loop De	None		
GPS	None		

NOTES:

1. THE VIDEO DETECTION SYSTEM INSTALLED UNDER ITEM 680.05010007 SHALL BE CONNECTED TO THE CONTROLLER THROUGH THE SDLC CONNECTOR (INPUTS 33 TO 64).

2. THE CONTRACTOR SHALL PROGRAM THE VIDEO DETECTION ZONES AS SHOWN ON THE PLANS.

3. THE MANUFACTURER OF THE VIDEO DETECTION SYSTEM OR THEIR REPRESENTATIVE SHALL DESIGN THE VIDEO DETECTION SYSTEM LAYOUT/PLACEMENT AND SUPERVISE THE INSTALLATION AND TESTING OF THE VIDEO DETECTION EQUIPMENT.

4. THE CONTRACTOR SHALL PROVIDE 14 DAYS NOTICE TO THE REGIONAL TRAFFIC SAFETY AND MOBILITY GROUP AT (315) 426-2131 PRIOR TO INSTALLING THE VIDEO DETECTION EQUIPMENT TO CONFIRM THE OPTIMAL DETECTOR LOCATION.

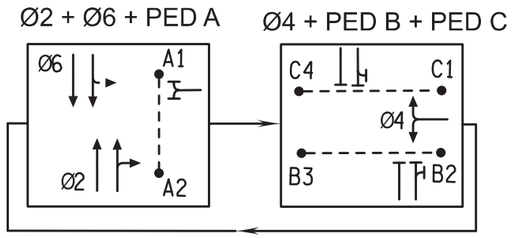
5. THE VIDEO DETECTION SYSTEM MAY BE INSTALLED AND ENABLED PRIOR TO DISABLING THE EXISTING DETECTION SYSTEM. IF THIS CAN NOT BE ACHIEVED, ALTERNATIVE METHODS OF DETECTION MUST BE ESTABLISHED AT THE CONTRACTOR'S EXPENSE. THE INTERSECTION SHALL NOT REMAIN WITHOUT DETECTION FOR MORE THAN TWO WEEKS.

6. UNDER ITEM 680.79002305 - REMOVE TRAFFIC SIGNAL INSTALLATION, LOCATION 0023. THIS ITEM SHALL INCLUDE:

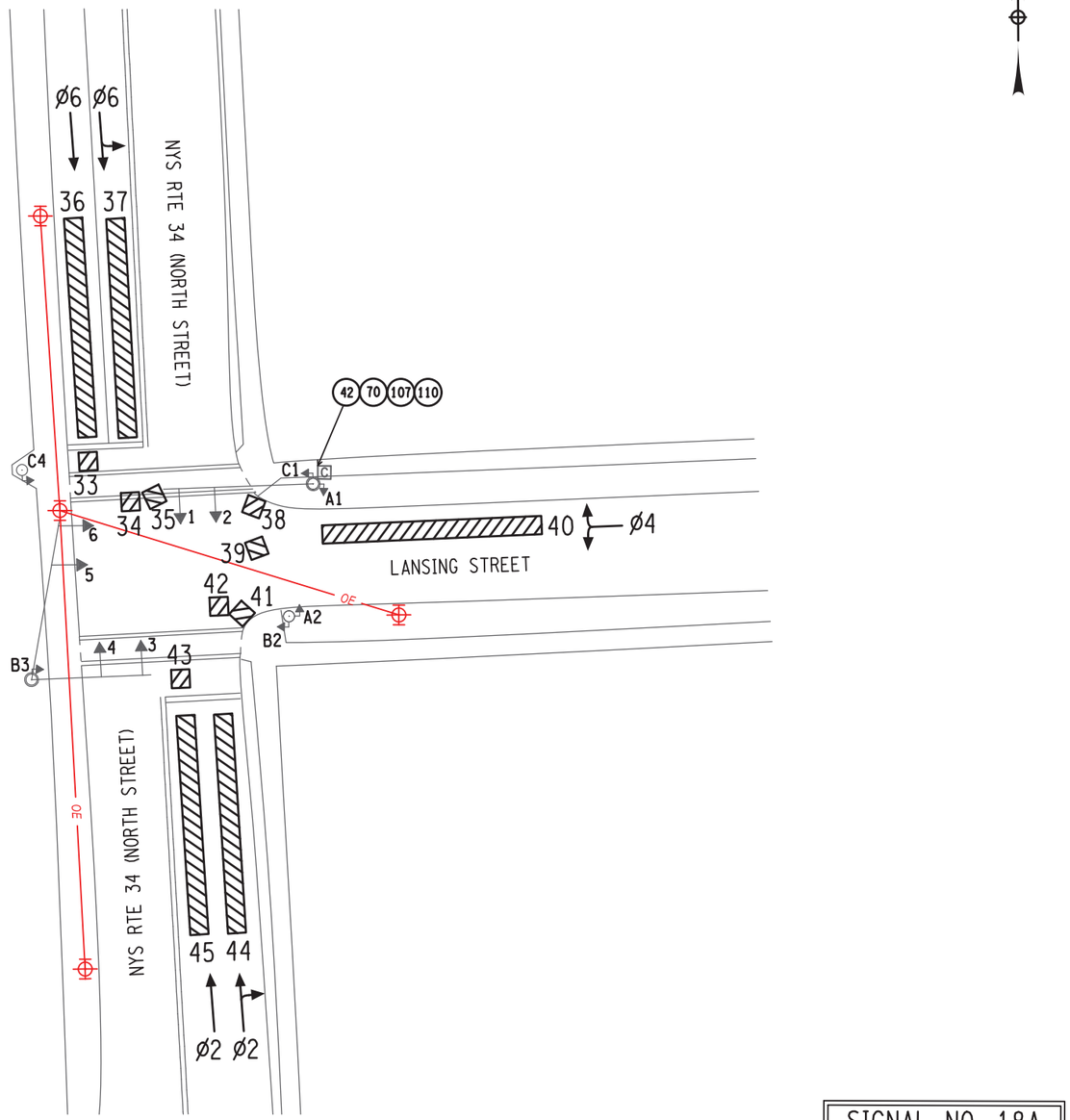
DISCONNECTION OF ALL SHIELDED LEAD-IN WIRES FROM THEIR TERMINALS. THE DISCONNECTED WIRES SHALL THEN BE COILED UP AND ABANDONED IN THE PULL BOX CLOSEST TO THE CONTROLLER CABINET. ENSURE ALL WIRES ARE LABELED WITH THE INPUT THEY WERE REMOVED FROM.

REMOVAL AND DELIVERY OF THE CONTROLLER CABINET, AND ALL ITS CONTENTS DIRECTLY TO STATE FORCES. PLEASE CONTACT NYSDOT TRAFFIC SIGNAL MAINTENANCE AT (315) 426-2131 TO SCHEDULE DROP-OFF TIME TO THE NYSDOT SIGNAL SHOP IN NORTH SYRACUSE, NY. TRAFFIC SIGNAL MAINTENANCE SHALL VERIFY ALL SIGNAL EQUIPMENT WITH QUANTITIES THAT HAVE BEEN DELIVERED FOR THIS SPECIFIC LOCATION.

THE CONTRACTOR SHALL REMOVE ALL DECOMMISSIONED PULLBOXES. EXCEPT IN ROADWAY SECTIONS, THE CONTRACTOR SHALL EXCAVATE ALL DECOMMISSIONED PULLBOXES TO A DEPTH OF 6" BELOW EXISTING GRADE AND BACKFILL WITH MATERIAL IN KIND. THE CHARACTER AND CONDITION SHALL MATCH THAT SURROUNDING THE STRUCTURE OR AOBE. FOR CLARITY OF THE PLAN, DECOMMISSIONED PULLBOXES ARE NOT SHOWN AND SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD.



PHASE DIAGRAM



ESTIMATE OF QUANTITIES				
KEY NO.	ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
42	619.1613	MAINTAIN TRAFFIC SIGNAL EQUIPMENT (REQUIREMENT C)	INTM	3
70	680.05010007	360 DEGREE CAMERA VIDEO DETECTION SYSTEM	EA	1
107	680.79002305	REMOVE TRAFFIC SIGNAL INSTALLATION - LOCATION 0023	ELOC	1
110	680.80324515	INSTALL MICROCOMPUTER CABINET	EA	1

SIGNAL NO. 18A
CAYUGA COUNTY

AFFIX SEAL: 7/24/2025
ON:

ALTERED BY:
ON:

STATE OF NEW YORK
SCOTT ROBERT BATES
080916
LICENSED PROFESSIONAL ENGINEER

AS-BUILT REVISIONS
DESCRIPTION OF ALTERATIONS:

NYS RTE 34 (NORTH STREET) AT LANSING STREET
CITY OF AUBURN
SIGNAL VIDEO DETECTION
S.H. 60-5
COUNTY: CAYUGA REGION: 03

PIN 380725
NY 34
UTILITY QUALITY LEVEL D

BRIDGES

CULVERTS

ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED

TRAFFIC SIGNAL NO. 18A - PLAN

CONTRACT NUMBER
D265574

DRAWING NO. TSP-60
SHEET NO. 78

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

NEW YORK STATE Department of Transportation

DESIGN SUPERVISOR P. LO GALLO
JOB MANAGER N. BOULTON
DESIGN N. BOULTON
CHECK M. VONDEN STEINEN
DRAFTING C.DOGGETT
PROJECT MANAGER N. BOULTON
CHECK B. LEBBON
FILE NAME =
DATE/TIME = 21-JUL-2025 13:46
USER = DOTOGrebenevich

PROJECT MANAGER N. BOULTON
CHECK M. VONDEN STEINEN
DRAFTING C. DOGGETT
CHECK B. LEBBON
DESIGN N. BOULTON
JOB MANAGER N. BOULTON
DESIGN SUPERVISOR P. LO GALLO

FILE NAME =
DATE/TIME = 22-JUL-2025 08:31
USER = DOTOGrebenevich

SIGNAL OPERATIONS SPECIFICATIONS
TABLE OF SWITCHPACKS

Signal No. 18A — Cayuga County

SWITCH PACK	FUNCTION	FACE NO.'s		FLASH PLUG	INDICATIONS	TERMINAL WIRING BOARD	
						TERMINAL	WIRING COLORING CODE
SP 1	Ø 2	1, 2		R	R Y G GROUND WIRE	SP 1R SP 1Y SP 1G GROUND BUS	MATCH EXISTING
SP 2	Ø 4	5, 6		R	R Y G GROUND WIRE	SP 2R SP 2Y SP 2G GROUND BUS	MATCH EXISTING
SP 3	Ø 6	3, 4		R	R Y G GROUND WIRE	SP 3R SP 3Y SP 3G GROUND BUS	MATCH EXISTING
SP 4	PED A (Ø 2)	A1	A2	W	HAND MAN GROUND WIRE	SP 4R SP 4Y SP 4G GROUND BUS	MATCH EXISTING
SP 5	PED B (Ø 4)	B2	B3	W	HAND MAN GROUND WIRE	SP 5R SP 5Y SP 5G GROUND BUS	MATCH EXISTING
SP 6	PED C (Ø 4)	C4	C1	W	HAND MAN GROUND WIRE	SP 6R SP 6Y SP 6G GROUND BUS	MATCH EXISTING
SP 7							
SP 8							
SP 9							
SP 10							
SP 11							
SP 12					GROUND WIRE	SP 12R SP 12Y SP 12G GROUND BUS	
SP 13					GROUND WIRE	SP 13R SP 13Y SP 13G GROUND BUS	
SP 14					GROUND WIRE	SP 14R SP 14Y SP 14G GROUND BUS	
SP 15					GROUND WIRE	SP 15R SP 15Y SP 15G GROUND BUS	
SP 16					GROUND WIRE	SP 16R SP 16Y SP 16G GROUND BUS	

TABLE OF OPERATIONS

PHASE \ FACE	(R)(Y)(G) 1	(R)(Y)(G) 2	(R)(Y)(G) 3	(R)(Y)(G) 4	(R)(Y)(G) 5	(R)(Y)(G) 6	PED A	PED B	PED C
	1	2	3	4	5	6	A1 - A2	B2 - B3	C1 - C4
Ø 2 + Ø 6 + PED A	G	G	G	G	R	R	DW*	DW	DW
Ø 4 + PED B + PED C	R	R	R	R	G	G	DW	DW*	DW*
EMERGENCY FLASH	FR	FR	FR	FR	FR	FR	DK	DK	DK

*UPON ACTUATION OF A PEDESTRIAN PUSH BUTTON, A "WALKING MAN" INDICATION FOLLOWED BY A FLASHING "HAND" INDICATION FOLLOWED BY A STEADY "HAND" WILL BE DISPLAYED, AND COUNTDOWN TIMER IS INITIATED.

SIGNAL OPERATIONS SPECIFICATIONS
TABLE OF INPUTS

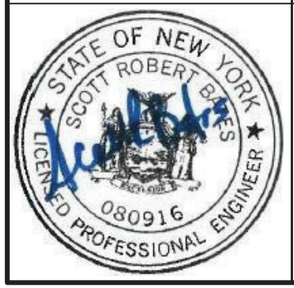
Signal No. 18A — Cayuga County

INPUT	FUNCTION	TERMINAL BOARD WIRING / SDLC CHANNEL	SIZE	REMARKS
A1 - A2	PED A (Ø2)	1A, 1B	-	CROSSING LANSING STREET EASTERN LEG
B2 - B3	PED B (Ø4)	2A, 2B	-	CROSSING ROUTE 34 (NORTH ST) SOUTHERN LEG
C1 - C4	PED C (Ø4)	3A, 3B	-	CROSSING ROUTE 34 (NORTH ST) NORTHERN LEG
33	Ø 6	33	6' X 6'	ROUTE 34 (NORTH ST) SB THRU COUNT
34	Ø 6	34	6' X 6'	ROUTE 34 (NORTH ST) SB THRU COUNT
35	Ø 6	35	6' X 6'	ROUTE 34 (NORTH ST) SB LEFT TURN COUNT
36	Ø 6	36	6' X 60'	ROUTE 34 (NORTH ST) SB THRU PRESENCE
37	Ø 6	37	6' X 60'	ROUTE 34 (NORTH ST) SB LEFT/THRU PRESENCE
38	Ø 4	38	6' X 6'	LANSING ST WB RIGHT TURN COUNT
39	Ø 4	39	6' X 6'	LANSING ST WB LEFT TURN COUNT
40	Ø 4	40	6' X 60'	LANSING ST LEFT/RIGHT TURN PRESENCE
41	Ø 2	41	6' X 6'	ROUTE 34 (NORTH ST) NB RIGHT TURN COUNT
42	Ø 2	42	6' X 6'	ROUTE 34 (NORTH ST) NB THRU COUNT
43	Ø 2	43	6' X 6'	ROUTE 34 (NORTH ST) NB THRU COUNT
44	Ø 2	44	6' X 60'	ROUTE 34 (NORTH ST) THRU/RIGHT PRESENCE
45	Ø 2	45	6' X 60'	ROUTE 34 (NORTH ST) THRU PRESENCE

TABLE OF CLEARANCES

TO \ FROM	R	G
R	X	Y
	X	R
G	R	X
	R	X

AFFIX SEAL: 7/24/2025 ON:



ALTERED BY: ON:

SIGNAL NO. 18A
CAYUGA COUNTY

AS-BUILT REVISIONS
DESCRIPTION OF ALTERATIONS:

NY RTE 34 (NORTH STREET) AT LANSING STREET
CITY OF AUBURN
SIGNAL VIDEO DETECTION
S.H. 60-5
COUNTY: ONONDAGA REGION: 03

PIN 380725
NY 34
UTILITY QUALITY LEVEL D

BRIDGES

CULVERTS

ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED

TRAFFIC SIGNAL NO. 18A - TABLES

CONTRACT NUMBER D265574

DRAWING NO. TSP-61

SHEET NO. 79

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

NEW YORK STATE | Department of Transportation

Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green	8	30	22			30		
Gap, Ext			4.5					
Max 1	8	30	35			30		
Max 2								
Yel Clearance	3.5	3.2	3.2	3.5	3.5	3.2	3.5	3.5
Red Clearance	1	2	1	1.5	1.5	2	1.5	1.5
Walk								
Ped Clearance								
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								

Options [1.1.2]

	1	2	3	4	5	6	7	8
Enable	ON	ON	ON			ON		
Min Recall	ON	ON				ON		
Max Recall								
Ped Recall								
Soft Recall								
Lock Calls								
Auto Flash Entry								
Auto Flash Exit								
Dual Entry		ON		ON		ON		ON
Enable Simul Gap	ON	ON	ON	ON	ON	ON	ON	ON
Gaurantee Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								

Options+ [1.1.3]

	1	2	3	4	5	6	7	8
Reservice								
PedClr Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Call Phase								
Conflicting Phase								
Omit Yellow								
Ped Delay								
Grn/Ped Delay								

1923 34 @ STANDART

Coordination Patterns [2.4] and Coordination Split Tables [2.7.1]

Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq
1	0	0	1	1	13	0	0	13	1	25	0	0	0	1	37	0	0	0	1
2	0	0	2	1	14	0	0	14	1	26	0	0	0	1	38	0	0	0	1
3	0	0	3	1	15	0	0	15	1	27	0	0	0	1	39	0	0	0	1
4	0	0	4	1	16	0	0	16	1	28	0	0	0	1	40	0	0	0	1
5	0	0	5	1	17	0	0	17	1	29	0	0	0	1	41	0	0	0	1
6	0	0	6	1	18	0	0	18	1	30	0	0	0	1	42	0	0	0	1
7	0	0	7	1	19	0	0	19	1	31	0	0	0	1	43	0	0	0	1
8	0	0	8	1	20	0	0	20	1	32	0	0	0	1	44	0	0	0	1
9	0	0	9	1	21	0	0	21	1	33	0	0	0	1	45	0	0	0	1
10	0	0	10	1	22	0	0	22	1	34	0	0	0	1	46	0	0	0	1
11	0	0	11	1	23	0	0	23	1	35	0	0	0	1	47	0	0	0	1
12	0	0	12	1	24	0	0	24	1	36	0	0	0	1	48	0	0	0	1

Split		1	2	3	4	5	6	7	8	Split		1	2	3	4	5	6	7	8
1	Coor	0	0	0	0	0	0	0	0	13	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
2	Coor	0	0	0	0	0	0	0	0	14	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
3	Coor	0	0	0	0	0	0	0	0	15	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
4	Coor	0	0	0	0	0	0	0	0	16	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
5	Coor	0	0	0	0	0	0	0	0	17	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
6	Coor	0	0	0	0	0	0	0	0	18	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
7	Coor	0	0	0	0	0	0	0	0	19	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
8	Coor	0	0	0	0	0	0	0	0	20	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
9	Coor	0	0	0	0	0	0	0	0	21	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
10	Coor	0	0	0	0	0	0	0	0	22	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
11	Coor	0	0	0	0	0	0	0	0	23	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
12	Coor	0	0	0	0	0	0	0	0	24	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON

Page#	
1	8 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
1A&1B	16 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
2	Overlaps; Channel Settings; Coord Alt Table+ (values not associated with time-of-day)
3	Detection; Sample Time and Unit Parameters related to detection
4	Preemption and Alternate Phase Time and Phase Options
5	Annual Schedule
6	Day Plans; Action Tables; Coord Alt Table+ (values varied by time-of-day)
7	Communications; Secutiry; I/O Setup
8	Misc - Events/Alarms; Call/Inhibit/Redirect; P/OLAP Auto Flash; CIC; Misc Unit Param

1923

Ring/Startup [1.1.4]

Phs	Ring	Start	Enable
1	1	Red	ON
2	1	Red	ON
3	1	Red	ON
4	1	Red	OFF
5	2	Red	OFF
6	2	Red	ON
7	2	Red	OFF
8	2	Red	OFF

Coord Modes [2.1]

Test OpMode	0
Correction	SHRT/LNG
Maximum	MAX 1
Force-Off	Float
Closed Loop	ON
Stop-in-Walk	OFF
Auto Reset	ON
Expand Splt	
Ped Recycle	NO_RECYCLE
Before	TIMED
After	TIMED

Auto Flash [1.4.1]

Auto Flash	PH_OVLP
Flash Yel	45
Flash Red	20

Unit Params [1.2.1]

Phase Mode	STD8
IO Mode	User
Loc Flsh Start	Red
Start Flash(s)	0
Start AllRed(s)	6
Yellow < 3"	OFF
Display Time	20
Red Revert	3
MCE Timeout	0
Feature Profile	
Free Ring Seq	1
Auxswitch	STOPTM
SDLC Retry	0
TS2 Det Faults	ON
Auto Ped Clear	OFF
SDLC Retry	0

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Overlap 1-16 Program Parms & Parm+ [1.5.2.1] [1.5.2.2]

Overlap Conflict Lock	OFF	Overlap Lock Inhibit	OFF	Parent Ph Clearance	ON	Extra Included Ph	OFF

	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
1	Modifier Ø								Grn		9	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
A	Conflict Olap								Red	1.5	I	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
2	Modifier Ø								Grn		10	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
B	Conflict Olap								Red	1.5	J	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
3	Modifier Ø								Grn		11	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
C	Conflict Olap								Red	1.5	K	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
4	Modifier Ø								Grn		12	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
D	Conflict Olap								Red	1.5	L	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
5	Modifier Ø								Grn		13	Modifier Ø									Grn	
	Conflo0l								Yel	3.5		Conflict Ø									Yel	3.5
E	Conflict Olap								Red	1.5	M	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
6	Modifier Ø								Grn		14	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
F	Conflict Olap								Red	1.5	N	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
7	Modifier Ø								Grn		15	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
G	Conflict Olap								Red	1.5	O	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
8	Modifier Ø								Grn		16	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
H	Conflict Olap								Red	1.5	P	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	

Channel Settings [1.8.1]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	2					3	3	6															
Channel Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Channel Flash	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Alt Hz																								

Channel+ Settings [1.8.4]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Flash Red+																								
Flash Yellow+																								
Flash Green+																								
Flash Inh Red+																								
Olap Ovrd																								

Coord Transition, CoorPhs [2.5]

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	RetHld	Float	Min Veh Perm	Min Ped Perm
1	12	22							EndGRN				
2	12	22							EndGRN				
3	12	22							EndGRN				
4	12	22							EndGRN				
5	12	22							EndGRN				
6	12	22							EndGRN				
7	12	22							EndGRN				
8	12	22							EndGRN				
9	12	22							EndGRN				
10	12	22							EndGRN				
11	12	22							EndGRN				
12	12	22							EndGRN				
13	12	22							EndGRN				
14	12	22							EndGRN				
15	12	22							EndGRN				
16	12	22							EndGRN				
17	12	22							EndGRN				
18	12	22							EndGRN				
19	12	22							EndGRN				
20	12	22							EndGRN				
21	12	22							EndGRN				
22	12	22							EndGRN				
23	12	22							EndGRN				
24	12	22							EndGRN				
25									BegGRN				
26									BegGRN				
27									BegGRN				
28									BegGRN				
29									BegGRN				
30									BegGRN				
31									BegGRN				
32									BegGRN				
33									BegGRN				
34									BegGRN				
35									BegGRN				
36									BegGRN				
37									BegGRN				
38									BegGRN				
39									BegGRN				
40									BegGRN				
41									BegGRN				
42									BegGRN				
43									BegGRN				
44									BegGRN				
45									BegGRN				
46									BegGRN				
47									BegGRN				
48									BegGRN				

Channel Params[1.8.3]

C1 IO Mode	User	Single BIU Map	DEFAULT	Invert Rail Input	OFF

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
1	3						45	50	2
2							45	50	2
3							45	50	2
4							45	50	2
5							45	50	2
6							45	50	2
7							45	50	2
8							45	50	2
9							45	50	2
10							45	50	2
11							45	50	2
12							45	50	2
13							45	50	2
14							45	50	2
15							45	50	2
16							45	50	2
17							45	50	2
18							45	50	2
19							45	50	
20							45	50	
21							45	50	
22							45	50	
23							45	50	
24							45	50	
25							45	50	
26							45	50	
27							45	50	
28							45	50	
29							45	50	
30							45	50	
31							45	50	
32							45	50	

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
33							45	50	
34							45	50	
35							45	50	
36							45	50	
37							45	50	
38							45	50	
39							45	50	
40							45	50	
41							45	50	
42							45	50	
43							45	50	
44							45	50	
45							45	50	
46							45	50	
47							45	50	
48							45	50	
49							45	50	
50							45	50	
51							45	50	
52							45	50	
53							45	50	
54							45	50	
55							45	50	
56							45	50	
57							45	50	
58							45	50	
59							45	50	
60							45	50	
61							45	50	
62							45	50	
63							45	50	
64							45	50	

Vehicle Options 1-64 [5.2]

Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol
1	ON	ON		ON				
2	ON	ON		ON				
3	ON	ON		ON				
4	ON	ON		ON				
5	ON	ON		ON				
6	ON	ON		ON				
7	ON	ON		ON				
8	ON	ON		ON				
9	ON	ON		ON				
10	ON	ON		ON				
11	ON	ON		ON				
12	ON	ON		ON				
13	ON	ON		ON				
14	ON	ON		ON				
15	ON	ON		ON				
16	ON	ON		ON				
17	ON	ON		ON				
18	ON	ON		ON				
19	ON	ON		ON				
20	ON	ON		ON				
21	ON	ON		ON				
22	ON	ON		ON				
23	ON	ON		ON				
24	ON	ON		ON				
25	ON	ON		ON				
26	ON	ON		ON				
27	ON	ON		ON				
28	ON	ON		ON				
29	ON	ON		ON				
30	ON	ON		ON				
31	ON	ON		ON				
32	ON	ON		ON				

Vehicle Options 1-64 [5.2]

Det #	vol	occ	Yell Lock	Red Lock	Ext	Add Init	Que	Call
33					ON	ON		ON
34					ON	ON		ON
35					ON	ON		ON
36					ON	ON		ON
37					ON	ON		ON
38					ON	ON		ON
39					ON	ON		ON
40					ON	ON		ON
41					ON	ON		ON
42					ON	ON		ON
43					ON	ON		ON
44					ON	ON		ON
45					ON	ON		ON
46					ON	ON		ON
47					ON	ON		ON
48					ON	ON		ON
49					ON	ON		ON
50					ON	ON		ON
51					ON	ON		ON
52					ON	ON		ON
53					ON	ON		ON
54					ON	ON		ON
55					ON	ON		ON
56					ON	ON		ON
57					ON	ON		ON
58					ON	ON		ON
59					ON	ON		ON
60					ON	ON		ON
61					ON	ON		ON
62					ON	ON		ON
63					ON	ON		ON
64					ON	ON		ON

Parameters+ 1-64 [5.3]

Det #	oc G	oc Y	oc R	Dlay 1	Dlay 2	Type	Src
1						NORM	
2						NORM	
3						NORM	
4						NORM	
5						NORM	
6						NORM	
7						NORM	
8						NORM	
9						NORM	
10						NORM	
11						NORM	
12						NORM	
13						NORM	
14						NORM	
15						NORM	
16						NORM	
17						NORM	
18						NORM	
19						NORM	
20						NORM	
21						NORM	
22						NORM	
23						NORM	
24						NORM	
25						NORM	
26						NORM	
27						NORM	
28						NORM	
29						NORM	
30						NORM	
31						NORM	
32						NORM	

Parameters+ 1-64 [5.3]

Det #	occ Grn	occ Yell	occ Red	Dlay 1	Dlay 2	Type	Src
33						NORM	
34						NORM	
35						NORM	
36						NORM	
37						NORM	
38						NORM	
39						NORM	
40						NORM	
41						NORM	
42						NORM	
43						NORM	
44						NORM	
45						NORM	
46						NORM	
47						NORM	
48						NORM	
49						NORM	
50						NORM	
51						NORM	
52						NORM	
53						NORM	
54						NORM	

Parameters+ 1-64 [5.3]

Det #	occ Grn	occ Yell	occ Red	Dlay 1	Dlay 2	Type	Src
55						NORM	
56						NORM	
57						NORM	
58						NORM	
59						NORM	
60						NORM	
61						NORM	
62						NORM	
63						NORM	
64						NORM	

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Ped Det Parms [5.4]

Det #	Call Ø	No Act	Max Pres	Err Cnt
1			15	
2			15	
3			15	
4			15	
5			15	
6			15	
7			15	
8			15	

Unit Paramters [1.2.1]

TS2 Det Faults		ON

Vol/Occ Report Parm [1.5.8]

Vol/Occ Period Minutes	0
Vol/Occ Period Minutes	15

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Preemption Times [3.1], Options+ [3.6]

Pre #	Enable	Type	Output	Delay	MinDura
1	ON	RAIL	Dwell		
2	ON	RAIL	Dwell		
3	ON	EMERG	Dwell		
4	ON	EMERG	Dwell		
5	ON	EMERG	Dwell		
6	ON	EMERG	Dwell		

Pre #	MaxPres	MinGrn	MinWlk	PedClr	Co+Pre
1					ON
2					ON
3					ON
4					ON
5					ON
6					ON

Pre #	Track Grn	Min Dwell	Ext Dwell	PedClr+	Yel
1		2			
2		2			
3		2			
4		2			
5		2			
6		2			

Pre #	Red	Pattern	Skip
1			OFF
2			OFF
3			OFF
4			OFF
5			OFF
6			OFF

Low Priority Preempts

Pre #	Type	Min	Max
7	OFF		
8	OFF		
9	OFF		
10	OFF		

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	PRE
Max Seek Track Time	
Max Seek Dwell Time	

Channel Parameters [1.8.3]

D Conn Mappings	OFF
Pre Invert Rail Input	None

Track Clear Phases [3.2], Track Clear Overlaps+ [3.5]

Pre #	Track Phases				Track Overlaps											
1																
2																
3																
4																
5																
6																

Dwell Phases [3.2] and Overlaps+ [3.5]

Pre #														
1	Phases													
	Overlaps													
	Peds													
2	Phases													
	Overlaps													
	Peds													
3	Phases													
	Overlaps													
	Peds													
4	Phases													
	Overlaps													
	Peds													
5	Phases													
	Overlaps													
	Peds													
6	Phases													
	Overlaps													
	Peds													

Exit Phases [3.2]

Pre #	Exit Phase			
1				
2				
3				
4				
5				
6				

Preemption 1, Options+ [3.6]

Pre #	Lock	Override Auto Flsh		Override Higher		Flsh Dwell	Link
1	ON		ON		ON		OFF	
2	ON		ON		ON		OFF	
3	ON		ON		ON		OFF	
4	ON		ON		ON		OFF	
5	ON		ON		ON		OFF	
6	ON		ON		ON		OFF	

Alt# 1 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	ON	ON	ON	ON	ON	ON	ON	ON
Soft Recall								
Dual Enrty								
Enabl SimGap	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Annual Schedule [4.3] **Month of Year** **Day of Week** **Date** **Day Plan** **Link To**

	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Day Plan	Link To
1																																																			1	
2																																																			1	
3																																																			1	
4																																																			1	
5																																																			1	
6																																																			1	
7																																																			1	
8																																																			1	
9																																																			1	
10																																																			1	
11																																																			1	
12																																																			1	
13	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
14																																																		1	
15																																																			1	
16																																																			1	
17																																																			1	
18																																																			1	
19																																																			1	
20																																																			1	
21																																																			1	
22																																																			1	
23																																																			1	
24																																																			1	

Day Plans [4.4]

Day Plan 1

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 2

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 3

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 4

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 5

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 6

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 7

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 8

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 9

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 10

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 11

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 12

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 13

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 14

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 15

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Action Table [4.5]

Act#	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
48												
98												
99												
100	255											

Coord Alternate Tables - Pat+ [2.6]

Pat#	ØOpt	ØTime	DetG	Call Inh	CIC	CNA1	Overlap Off 1	2	3	4	5	6	7	8	Dia	Max2
1															DFT	
2															DFT	
3															DFT	
4															DFT	
5															DFT	
6															DFT	
7															DFT	
8															DFT	
9															DFT	
10															DFT	
11															DFT	
12															DFT	
13															DFT	
14															DFT	
15															DFT	
16															DFT	
17															DFT	
18															DFT	
19															DFT	
20															DFT	
21															DFT	
22															DFT	
23															DFT	
24															DFT	
25															DFT	
26															DFT	
27															DFT	
28															DFT	
29															DFT	
30															DFT	
31															DFT	
32															DFT	
33															DFT	
34															DFT	
35															DFT	
36															DFT	
37															DFT	
38															DFT	
39															DFT	
40															DFT	
41															DFT	
42															DFT	
43															DFT	
44															DFT	
45															DFT	
46															DFT	
47															DFT	
48															DFT	

#	Event / Alarm	Ev	Alr
1	Power Up Alarm.	ON	ON
2	Stop Timing	ON	ON
3	TS1 Cabinet Door	ON	ON
4	Coordination Failure	ON	ON
5	External Alarm # 1	ON	ON
6	External Alarm # 2	ON	ON
7	External Alarm # 3	ON	ON
8	External Alarm # 4	ON	ON
9	Closed Loop Disabled	ON	ON
10	External Alarm # 5	ON	ON
11	External Alarm # 6	ON	ON
12	Manual Control Enable	ON	ON
13	Coord Free Input	ON	ON
14	Local Flash Input	ON	ON
15	MMU Flash	ON	ON
16	CMU Flash	ON	ON
17	Cycle Fault	ON	ON
18	Cycle Failure	ON	ON
19	Coordination Fault	ON	ON
20	Controller Fault	ON	ON
21	Detector SDLC Failure	ON	ON
22	MMU SDLC Failure	ON	ON
23	Critical SDLC Failure	ON	ON
24	Reserved	ON	ON
25	EEPROM CRC Fault	ON	ON
26	Detector Diagnostic Failure	ON	ON
27	BIU Detector Failure	ON	ON
28	Queue detector alarm	ON	ON
29	Ped Detector Fault	ON	ON
30	Coord Diagnostic Fault	ON	ON
41	TempAlert Probe Ch. A	ON	ON
42	TempAlert Probe Ch. B	ON	ON
47	Coord Active	ON	ON
48	Preempt Active	ON	ON
49	Preempt 1 Input	ON	ON
50	Preempt 2 Input	ON	ON
51	Preempt 3 Input	ON	ON
52	Preempt 4 Input	ON	ON
53	Preempt 5 Input	ON	ON
54	Preempt 6 Input	ON	ON
55	Preempt 7 Input	ON	ON
56	Preempt 8 Input	ON	ON
57	Preempt 9 Input	ON	ON
58	Preempt 10 Input	ON	ON
61	In Transition	ON	ON
81	FIO Status Alarm	ON	ON

Call Phases[1.1.5]

Ø	Phases Called By Ø			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1						1								
2						2								
3						3								
4						4								
5						5								
6						6								
7						7								
8						8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1						1								
2						2								
3						3								
4						4								
5						5								
6						6								
7						7								
8						8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Auto Flash Phase/Olap Settings [1.4.2]

Yel Ø								
Yel (olaps)								

Unit Parameters [1.2.1]

Allow Skip Yellow	OFF	Max Cycle Time	
TOD Dim Enable	OFF	Cycle Fault Action	Alarm
Tone Disable	OFF		
Diamond Mode	4Ph		
Backup Time (s)	900		
Disable Init Ped	OFF		
Cycle Fault Action	Alarm		
Enable Run Timer	ON		

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C1-USER IO Map [1.8.9.1 In]

I1-1	1	Veh Call 1
I1-2	189	Unused
I1-3	189	Unused
I1-4	189	Unused
I1-5	189	Unused
I1-6	189	Unused
I1-7	189	Unused
I1-8	189	Unused
I2-1	189	Unused
I2-2	189	Unused
I2-3	189	Unused
I2-4	189	Unused
I2-5	189	Unused
I2-6	189	Unused
I2-7	189	Unused
I2-8	189	Unused
I3-1	189	Unused
I3-2	189	Unused
I3-3	189	Unused
I3-4	189	Unused
I3-5	189	Unused
I3-6	189	Unused
I3-7	189	Unused
I3-8	189	Unused
I4-1	189	
I4-2		
I4-3		
I4-4		
I4-5	189	Unused
I4-6	189	Unused
I4-7	229	33xCMUStop
I4-8	228	33xFlashSns
I5-1	189	Unused
I5-2	189	Unused
I5-3	189	Unused
I5-4	189	Unused
I5-5	189	Unused
I5-6	189	Unused
I5-7	189	Unused
I5-8	189	Unused
I6-1	189	Unused
I6-2	189	Unused
I6-3	189	Unused
I6-4	189	Unused
I6-5	189	Unused
I6-6	189	Unused
I6-7	189	Unused
I6-8	189	Unused

C1-USER IO Map [1.8.9.2 Out]

O1-1	1	Ch1 Red
O1-2	49	Ch1 Green
O1-3	2	Ch2 Red
O1-4	26	Ch2 Yellow
O1-5	50	Ch2 Green
O1-6	3	Ch3 Red
O1-7	27	Ch3 Yellow
O1-8	51	Ch3 Green
O2-1	4	Ch4 Red
O2-2	52	Ch4 Green
O2-3	5	Ch5 Red
O2-4	29	Ch5 Yellow
O2-5	53	Ch5 Green
O2-6	6	Ch6 Red
O2-7	30	Ch6 Yellow
O2-8	54	Ch6 Green
O3-1	7	Ch7 Red
O3-2	55	Ch7 Green
O3-3	8	Ch8 Red
O3-4	32	Ch8 Yellow
O3-5	56	Ch8 Green
O3-6	9	Ch9 Red
O3-7	33	Ch9 Yellow
O3-8	57	Ch9 Green
O4-1	10	Ch10 Red
O4-2	58	Ch10 Green
O4-3	11	Ch11 Red
O4-4	35	Ch11 Yellow
O4-5	59	Ch11 Green
O4-6	12	Ch12 Red
O4-7	36	Ch12 Yellow
O4-8	60	Ch12 Green
O5-1	28	Ch4 Yellow
O5-2	34	Ch10 Yellow
O5-3	25	Ch1 Yellow
O5-4	31	Ch7 Yellow
O5-5	115	Not Used
O5-6	115	Not Used
O5-7	115	Not Used
O5-8	114	Watchdog
O6-1	115	Not Used
O6-2	115	Not Used
O6-3	13	Ch13 Red
O6-4	37	Ch13 Yellow
O6-5	61	Ch13 Green
O6-6	14	Ch14 Red
O6-7	38	Ch14 Yellow
O6-8	62	Ch14 Green

C1-USER IO Map [1.8.9.2 Out]

O7-1	115	Not Used
O7-2	115	Not Used
O7-3	115	Not Used
O7-4	115	Not Used
O7-5	115	Not Used
O7-6	115	Not Used
O7-7	115	Not Used
O7-8	115	Not Used

C11S-USER IO Map [1.8.9.1 In]

I4-1		
I4-2		
I4-3		
I4-4		
I7-1	189	Unused
I7-2	189	Unused
I7-3	189	Unused
I7-4	189	Unused
I7-5	189	Unused
I7-6	189	Unused
I7-7	189	Unused
I7-8	189	Unused
I8-1	189	Unused
I8-2	189	Unused
I8-3	189	Unused
I8-4	189	Unused
I8-5	189	Unused
I8-6	189	Unused
I8-7	189	Unused
I8-8	189	Unused

C11S-USER IO Map [1.8.9.2 Out]

O8-1	115	Not Used
O8-2	115	Not Used
O8-3	115	Not Used
O8-4	115	Not Used
O8-5	115	Not Used
O8-6	115	Not Used
O8-7	115	Not Used
O8-8	115	Not Used

IO Logic [1.8.7]

Op1	Result		O1Fcn	Inv1	Src1	IO1	Fun1	O2Fcn	Inv2	Src2	IO2	Fun2	O3Fcn	Inv3	Src3	IO3	Fun3	Dly	Sec
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0

Security Access Levels [8.2]

1	SWLOAD
2	SECURE
3	None
4	None
5	None
6	None
7	None
8	None
9	None
10	None
11	None
12	None
13	None
14	None
15	None
16	None
17	None
18	None
19	None
20	None
21	None
22	None
23	None
24	None
25	None
26	None
27	None
28	None
29	None
30	None
31	None
32	None
33	None
34	None
35	None
36	None
37	None
38	None
39	None
40	None
41	None
42	None
43	None
44	None
45	None
46	None
47	None
48	None
49	None
50	None
51	None
52	None
53	None
54	None
55	None
56	None
57	None
58	None
59	None
60	None
61	None
62	None
63	None
64	None

Com Parameters [6.1]

Station ID	1923
Group ID	0
Master ID	0
Backup Time	900

SysUp Modem [6.1]

Enable Modem	None
Idle Time	0
Dial Time	0
Tel:	
Alt:	

2070 Port Parms [6.2]

Port	Baud Rate	FCM
SP1	9600	6
SP2	9600	6
SP3	19200	6
SP4	38400	6
SP5	1200	0
SP6	1200	0
SP7	1200	0
SP8	1200	0

2070 IP 1 Addressing [6.5]

	Addressing			
Addr	192	168	10	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	10	1
Port	###			

2070 IP 2 Addressing [6.5]

	Addressing			
Addr	192	168	10	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	10	1
Port	5001			

2070 Port Binding Ports [6.6]

	Port	Echo	Mode
ASYNC1	SP1	None	0
ASYNC2	SP2	None	0
ASYNC3	SP3	None	0
ASYNC4	SP4	None	0
SYNC1	SP5S	SYNC3	OFF
SYNC2	OFF	SYNC4	OFF

2070 Port Binding Functions [6.6]

Functio	Channel	Functio	Channel
TS2/CVN	None	SYSUp	ASYNC2
CMU/MM	None	SYSDow	ASYNC1
Opticom	None	Shell	None
Loop De	None		
GPS	None		

CLEARANCES

1. ALL SIGNALS IN THIS CONTRACT SHALL BE A MINIMUM OF 16.5 FEET ABOVE THE HIGH POINT OF THE ROADWAY, WITH ALL RED INDICATIONS LEVEL ACROSS THE INTERSECTION. NO EXCEPTIONS SHALL BE MADE FOR SIGNALS MOUNTED BELOW 16.5 FEET.

PULLBOXES

1. PULLBOXES SHALL HAVE A TWO-FOOT MINIMUM DRAINAGE BED OF NO. 2 CRUSHED STONE OR GRAVEL PLACED BELOW THE PULLBOX, AOBE. THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 680.510501 - "PULLBOX, RECTANGULAR 26" X 18" REINFORCED CONCRETE."
2. ON STANDARD SHEET NO. 680-04, ALL PULLBOXES SHALL BE SET TO 1/2 INCH BELOW GRADE WITH ALL THE SURROUNDING SURFACES, EXCEPT SIDEWALKS, WHERE THEY SHALL BE FLUSH.

PAVEMENT MARKINGS

1. PAVEMENT MARKINGS SHOWN ON THE TRAFFIC SIGNAL PLANS, UNLESS OTHERWISE NOTED, ARE FOR DESIGN PURPOSES ONLY.

CONDUITS

1. WHERE CONDUIT IS TO BE PLACED UNDER THE ROADWAY, THE CONTRACTOR SHALL USE A 3" DIAMETER CONDUIT, UNLESS OTHERWISE SHOWN ON THE PLAN SHEET.
2. ALL SIGNAL CONDUITS SHALL BE BONDED WITH A #6 BARE STRANDED COPPER GROUND WIRE.
3. ALL COUPLINGS AND BUSHINGS SHALL BE MECHANICALLY THREADED. COMPRESSION OR SLIP TYPE COUPLINGS OR BUSHINGS SHALL NOT BE ALLOWED.

UTILITIES

1. THE APPROXIMATE LOCATION OF UNDERGROUND UTILITIES MAY BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE TRUE LOCATION BEFORE COMMENCING WORK. BEFORE ANY PIPE IS PLACED, THE CONTRACTOR SHALL UNCOVER ALL UTILITIES AT PIPE CROSSINGS TO ENABLE THE ENGINEER TO VERIFY THE PROPOSED PIPE WITH GRADES SHOWN ON THE PLANS IS NOT OBSTRUCTED BY EXISTING UTILITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL UTILITY WORK WITH THE RESPECTIVE OWNERS DURING CONSTRUCTION. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS ITEMS IN THE CONTRACT.
3. ALL SIGNAL EQUIPMENT SHALL BE PLACED IN A LOCATION THAT COMPLIES WITH THE NYS HIGH VOLTAGE PROXIMITY ACT. THIS INCLUDES, BUT IS NOT LIMITED TO, KEEPING ALL SIGNAL EQUIPMENT A MINIMUM OF 10 FT FROM PRIMARY LINES, AND 2 FT FROM SECONDARY AND ALL OTHER LINES.
4. CONTRACTOR IS TO CONTACT DIG SAFELY NEW YORK AT 811 FOR MARK OUT OF ALL UNDERGROUND SIGNAL CONDUIT AND LOOP WIRE PRIOR TO ANY DIGGING. ANY BROKEN SIGNAL WIRE CANNOT BE SPLICED. A NEW RUN OF WIRE FROM THE POLE TO THE FURTHEST END MUST BE REPLACED.
5. UNDERGROUND UTILITY LOCATIONS ARE NOT GUARANTEED, NOR IS THERE ANY GUARANTEE THAT ALL EXISTING UTILITIES, WHETHER FUNCTIONAL OR ABANDONED, WITHIN THE PROJECT AREA ARE SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE STARTING WORK AND SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM THEIR WORK. CONTRACTOR SHALL NOTIFY DIG SAFELY NEW YORK AT 811 IN ACCORDANCE WITH 16 NYCRR PART 753.

LOOPS

1. IN NEW CONSTRUCTION OF ASPHALT PAVEMENTS, THE LOOP SHOULD BE PLACED BELOW THE TOP COURSE, PREFERABLY IN THE BINDER.
2. EIC SHALL RECORD LOCATIONS OF LOOPS AND LEAD-INS AND SUBMIT TO NYSDOT FOR MAINTENANCE RECORDS.
3. THIS IS ONLY A TYPICAL DETAIL AND THE LOOP LAYOUTS AND DIMENSIONS MAY VARY BASED ON INTERSECTION LOCATION. CONTRACTOR SHALL FIRST VERIFY LOOP LOCATIONS, AND DIMENSIONS ON EACH INTERSECTION TRAFFIC SIGNAL PLAN SHEET PRIOR TO BEGINNING ANY LOOP INSTALLATION WORK.

CONTRACTOR

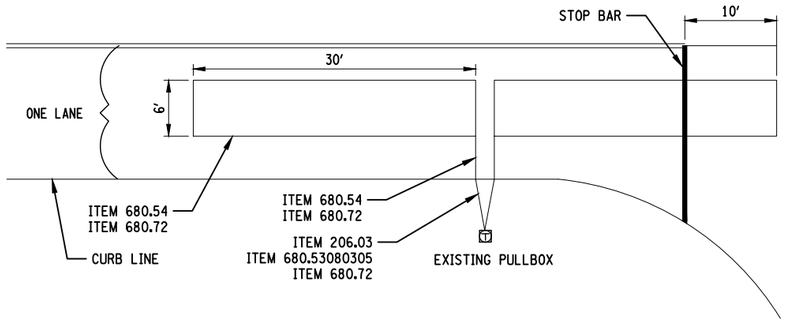
1. NO PROPOSAL WHICH MODIFIES THE APPROVED DESIGN PLAN SUGGESTED BY EITHER THE CONTRACTOR, OR CONSTRUCTION PERSONNEL SHALL BE MADE IN THE FIELD WITHOUT FIRST CONSULTING WITH THE E.I.C. THESE CHANGES INCLUDE, BUT ARE NOT LIMITED TO, 90-DEGREE BENDS IN THE CONDUITS.
2. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT THERE MAY BE OTHER CONTRACTORS WORKING WITHIN THE LIMITS OF WORK FOR THIS CONTRACT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE WORK OF THIS CONTRACT WITH THAT OF OTHERS SO THERE IS NO CONFLICT.

HIGHWAY MAINTENANCE

1. UPON COMPLETION AND ACCEPTANCE OF THIS CONTRACT, THE HIGHWAY WILL CONTINUE TO BE MAINTAINED BY THOSE AGENCIES WHICH HAD JURISDICTION PRIOR TO THIS CONTRACT.

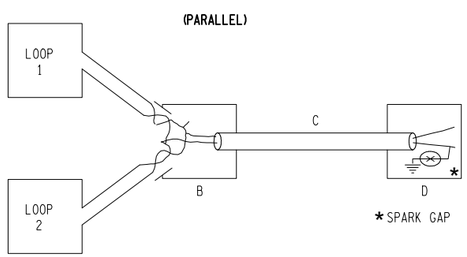
NYSDOT FUTURE WORK

1. A COMPLETE SIGNAL REPLACEMENT PROJECT IS CURRENTLY BEING PROGRESSED BY NYSDOT REGION 3. LAYOUT OF PULLBOXES AND CONDUIT SHALL BE CONFIRMED PRIOR TO PLACEMENT TO ENSURE COMPATIBILITY WITH FINAL NYSDOT SIGNAL LAYOUT.



INDUCTANCE LOOP INSTALLATION

NOT TO SCALE



NOTE: THE TOTAL COMBINED LENGTH OF THE TWISTED PAIR IS 100 FEET MAX.

TWO ROAD LOOPS WHEN LOCATED ADJACENT TO EACH OTHER. THESE ENCAPSULATED LOOP AND LOOP LEAD-IN WIRES (TWISTED PAIR) ARE CONNECTED IN PARALLEL WITHIN THE CURBSIDE JUNCTION BOX AND THEN PROCEED THROUGH THE SHIELDED LEAD-IN CABLE WHICH IN TURN GOES TO THE TERMINAL BLOCK IN THE MAIN CABINET.

THE CONFIGURATION OF FIGURE 2 MAY BE EXPANDED TO ACCOMMODATE ADDITIONAL LOOPS (UP TO 4) OF THE SAME PHASE.

LEGEND

A - TWISTED PAIR LEAD-IN
B - CURBSIDE JUNCTION BOX
C - SHIELDED LEAD-IN CABLE
D - MAIN CABINET & MAIN CABINET PULL BOX
E - FLEXIBLE LIQUID-TIGHT CONDUIT

INDUCTANCE LOOP WIRING

NOT TO SCALE

TABLE OF TRAFFIC SIGNAL QUANTITIES FOR SIGNAL NO. 23A CAYUGA COUNTY

ITEM	DESCRIPTION	UNIT	QUANTITY
206.03	CONDUIT EXCAVATION AND BACKFILL INCLUDING SURFACE RESTORATION	LF	103
619.1613	MAINTAIN TRAFFIC SIGNAL EQUIPMENT (REQUIREMENT C)	INTM	2
680.510501	PULLBOX-RECTANGULAR, 26 X 18 INCH, REINFORCED CONCRETE	EA	2
680.520106	CONDUIT, METAL STEEL, ZINC COATED, 2"	LF	21
680.520108	CONDUIT, METAL STEEL, ZINC COATED, 3"	LF	64
680.53080305	CONDUIT, FLEXIBLE, LIQUID TIGHT NON METALLIC, 1"	LF	36
680.54	INDUCTANCE LOOP INSTALLATION	LF	82
680.72	INDUCTANCE LOOP WIRE	LF	504
680.77000105	MODIFY TRAFFIC SIGNAL INSTALLATION, LOCATION 1	ELOC	1
680.8111	TRAFFIC SIGNAL BRACKET ASSEMBLY - 1 WAY	EA	4

C&S COMPANIES
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
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STATE OF NEW YORK
JEFFREY M. REINA
No. 081990
LICENSED PROFESSIONAL ENGINEER

CITY OF AUBURN NEW YORK

STANDART AVENUE INTERSECTION WIDENING

CITY OF AUBURN
AUBURN, NY

MARK	DATE	DESCRIPTION
		REVISIONS

PROJECT NO:	155.033.001
DATE:	JUNE 2, 2025
DRAWN BY:	M. ANASTAS
DESIGNED BY:	M. ANASTAS
CHECKED BY:	J. REINA

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

TRAFFIC SIGNAL DETAILS & NOTES

TSD-01

SHEET 24 of 26

Jun 03, 2025 - 7:40pm
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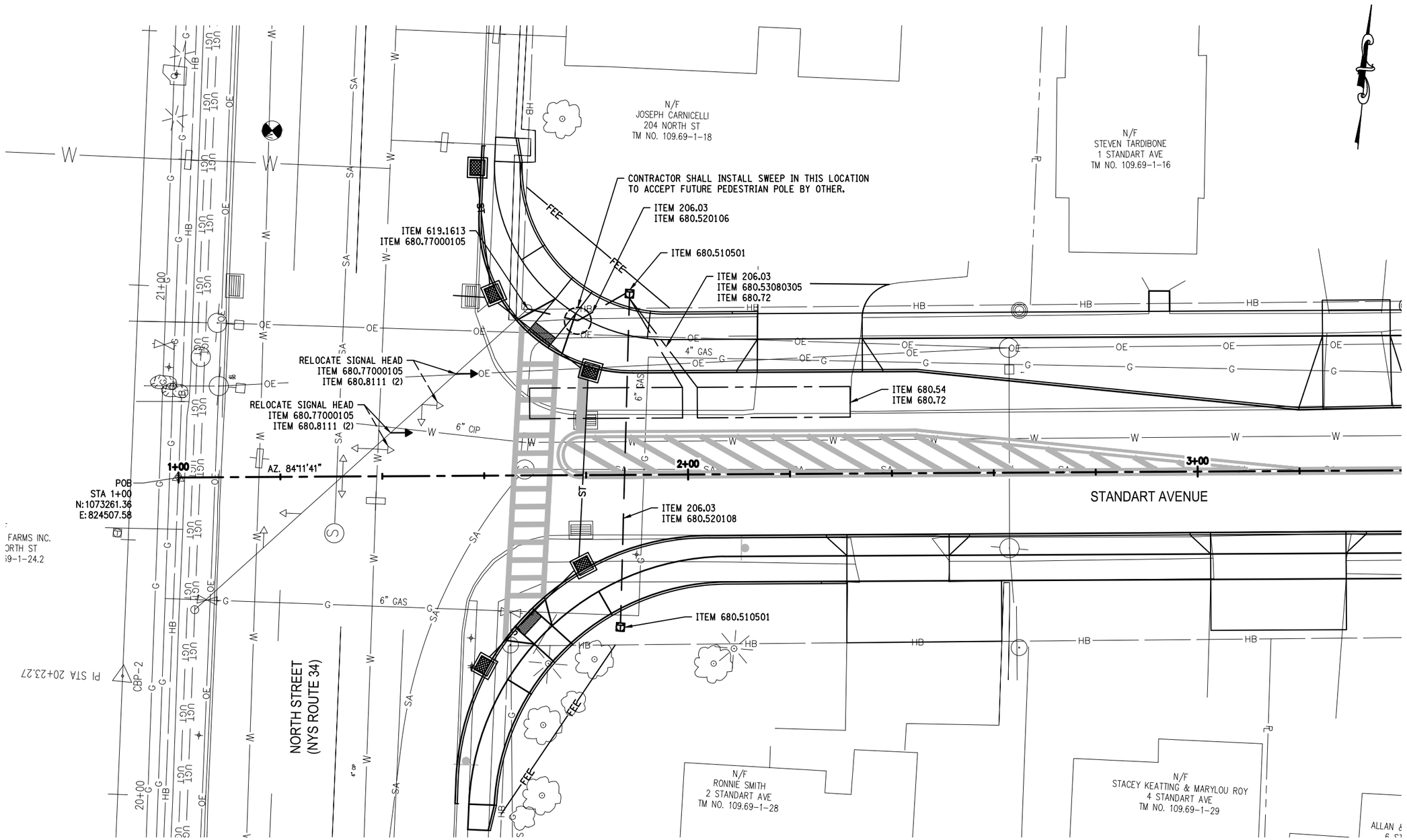

NOTE: ITEM 680.77000101 - MODIFY TRAFFIC SIGNAL EQUIPMENT, LOCATION 1 INCLUDES

1. THE RELOCATION, WIRING AND PROGRAMMING OF RELOCATING TRAFFIC SIGNALS TO LINE UP WITH ROAD WIDENING LANE.
2. PROGRAMMING AND INSTALLING NEW LOOP VEHICLE DETECTION.

SIGNAL NO. 23A
CAYUGA COUNTY

10 0 10 20

C&S COMPANIES
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
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TRAFFIC SIGNAL PLAN

TSP-01

SHEET 25 of 26

Jun 03, 2025 - 7:41am
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TABLE OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES	
			PROP.	AS-BUILT
201.06	CLEARING AND GRUBBING	LS	NEC	
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	710	
203.07	SELECT GRANULAR FILL	CY	160	
206.0201	TRENCH AND CULVERT EXCAVATION	CY	270	
206.03	CONDUIT EXCAVATION AND BACKFILL INCLUDING SURFACE RESTORATION	LF	103	
207.21	GEOTEXTILE SEPARATION	SY	565	
209.11010024	TEMPORARY CATCH BASIN INSERT TRASH, SEDIMENT, AND DEBRIS REMOVAL	EA	8	
209.2301	SEDIMENT FILTER LOG-TEMPORARY, 12"	LF	450	
304.12	SUBBASE COURSE, TYPE 2	CY	332	
404.00001	PLANT PRODUCTION QUALITY ADJUSTMENT TO WMA ITEMS	QU	24	
404.0982	9.5 F2 TOP COURSE ASPHALT, 80 SERIES COMPACTION	TON	80	
404.1989	19 F9 BINDER COURSE ASPHALT, 80 SERIES COMPACTION	TON	130	
404.2589	25 F9 BASE ASPHALT, 80 SERIES COMPACTION	TON	260	
407.0102	DILUTED TACK COAT	GAL	143	
418.7603	ASPHALT PAVEMENT JOINT ADHESIVE	LF	510	
490.30	MISCELLANEOUS COLD MILLING OF BITUMINOUS CONCRETE	SY	305	
552.17	SHIELDS AND SHORING	SF	1895	
603.77	CONCRETE COLLARS	EA	2	
603.9815	SMOOTH INTERIOR CORRUGATED POLYETHYLENE CULVERT AND STORMDRAIN 15 INCH DIAMETER	LF	106	
604.070301	ALTERING DRAINAGE STRUCTURES, LEACHING BASINS AND MANHOLES	EA	1	
604.302192	RECTANGULAR DRAINAGE STRUCTURE TYPE U FOR PARALLEL BAR #12PCB FRAME	LF	39.2	
605.0901	UNDERDRAIN FILTER TYPE 1	CY	45	
605.1701	OPTIONAL UNDERDRAIN PIPE, 4 INCH DIAMETER	LF	500	
608.0101	CONCRETE SIDEWALKS AND DRIVEWAYS	CY	38	
608.21000003	CAST IRON EMBEDDED DETECTABLE WARNING UNITS	SY	2.2	
608.020102	ASPHALT SIDEWALKS, DRIVEWAYS AND BICYCLE PATHS, AND VEGETATION CONTROL STRIPS	TON	35	
609.0212	STONE CURB NEAR VERTICAL FACE (NVF)	LF	669	
610.1605	TURF ESTABLISHMENT - PERFORMANCE	SY	600	
619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	NEC	
619.04	TYPE III CONSTRUCTION BARRICADE	EA	31	
619.1613	MAINTAIN TRAFFIC SIGNAL EQUIPMENT (REQUIREMENT C)	INTM	2	
625.01	SURVEY OPERATIONS	LS	NEC	
627.50140008	CUTTING PAVEMENT	LF	285	
637.12	ENGINEER'S FIELD OFFICE - TYPE 2	MNTH	2	
637.34	OFFICE TECHNOLOGY AND SUPPLIES	DC	1000	
645.81	TYPE A SIGN POSTS	EA	2	
647.31	RELOCATE SIGN PANEL, SIGN PANEL ASSEMBLY SIZE I (UNDER 30 SF)	EA	2	
655.0903	PARALLEL BAR FRAME 12 PCB & PARALLEL BAR GRATE 12 PCB	EA	5	
663.33	ADJUST EXISTING VALVE BOX ELEVATION	EA	1	
680.510501	PULLBOX-RECTANGULAR, 26 X 18 INCH, REINFORCED CONCRETE	EA	2	
680.520106	CONDUIT, METAL STEEL, ZINC COATED, 2"	LF	21	
680.520108	CONDUIT, METAL STEEL, ZINC COATED, 3"	LF	64	
680.53080305	CONDUIT, FLEXIBLE, LIQUID TIGHT NON METALLIC, 1"	LF	36	
680.54	INDUCTANCE LOOP INSTALLATION	LF	82	
680.72	INDUCTANCE LOOP WIRE	LF	504	
680.77000105	MODIFY TRAFFIC SIGNAL INSTALLATION, LOCATION 1	ELOC	1	
680.8111	TRAFFIC SIGNAL BRACKET ASSEMBLY - 1 WAY	EA	4	
685.1202	YELLOW EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MIL	LF	700	
685.3104	WHITE EPOXY REFLECTORIZED PAVEMENT SPECIAL STRIPES - 20 MILS PORTABLE/HAND APPLICATION	LF	700	
686.3204	YELLOW EPOXY REFLECTORIZED PAVEMENT SPECIAL STRIPES - 20 MILS PORTABLE/HAND APPLICATION	LF	600	
697.03	FIELD CHANGE PAYMENT	DC	43000	
698.04	ASPHALT PRICE ADJUSTMENT	DC	1100	
698.05	FUEL PRICE ADJUSTMENT	DC	400	
699.040001	MOBILIZATION	LS	NEC	

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ESTIMATE OF QUANTITIES

EOQ-01
SHEET 26 of 26

Jun 03, 2025 – 7:41pm
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Passero Associates Engineering Architecture 242 West Main Street, Suite 100 Rochester, New York 14614 (585) 505-6010 (Phone)	Project: Auburn MOB	Project No: 20250416.0001 Date: 3/11/26 Observer: NGM Peak: Am

Signal Timing Worksheet

Street: State			
↰ ↳	↓ ↳	↰ ↑	↓ ↑
			33
			72
			156
			17
			35
			137
			59
			51

Street: Perrine			
↑ ↓	→ ↑	← ↓	← →
			18
			14
			18
			15
			18
			15
			17
			18

Average Timings

			70

			17

Phasing Plan

			↓

			← →

Passero Associates Engineering Architecture 242 West Main Street, Suite 100 Rochester, New York 14614 (585) 505-6010 (Phone)	**Project:** Auburn MOB	**Project No:** 20250416.0001 **Date:** 3/11/26 **Observer:** NGM **Peak:** PM

Signal Timing Worksheet

Street: State			
↰ ↳	↓ ↳	↰ ↑	↓ ↑
			108
			104
			38
			75
			65
			41
			37
			94

Street: Perrine			
↑ ↳	→ ↑	↰ ←	←
			22
			20
			19
			19
			24
			18
			22
			17

Average Timings

			70

			20

Phasing Plan

			↓

			← →

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Auburn Community Hospital Health Campus, City of Auburn, NY
Documentation of Ambient Traffic Volume Growth

Roadway	Segment starts at	Segment end at	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Annual Growth
North St	NY-5	York St									10,318		10,487		10,422	-0.31%
Standart Ave	North St	Grant Ave						7,323		6,892			7,506	7,378		0.12%
Perrine St	North St	State St					1,919					2,083				1.65%
State St	RR X-ing	York St						4,268		2,492			2,752	3,154		-4.92%
Seymour St	North St	Grant Ave			4,847			5,132		4,356				4,331		-2.79%
Seymour St	Washington St	North St				5,699				5,954			6,666			2.26%
Grant Ave	N Fulton St	Standart Ave									17,891		16,920			-2.75%
															AVERAGE	**-0.96%**

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Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #1: North St at Standart Ave

Number of Crashes: 15
Number of Injuries: 1
Number of Fatalities: 0

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3

Intersection Type: 4 Legged
Area Type: Urban
Control Type: Signal 1-4 Lanes

	Direction					
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn		2				2
Rear-end	3	2				5
Overtaking						0
Right Angle	1			1		2
Right Turn				1		1
Head On						0
Side-swipe	3	1	1			5
Fixed Object						0
Backing						0
Other						0
Bike/Ped						0
Animal						0
Totals	7	5	1	2	0	15

PDO	14
Injury	1
Injury + PDO	
Fatal	
NR	
Total	15

Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #2: North St at 143 North St Dwy

Number of Crashes: 0
Number of Injuries: 0
Number of Fatalities: 0

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3

Intersection Type: 3 Legged
Area Type: Urban
Control Type: Sign 4 Lanes

	Direction					
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn						0
Rear-end						0
Overtaking						0
Right Angle						0
Right Turn						0
Head On						0
Side-swipe						0
Fixed Object						0
Backing						0
Other						0
Bike/Ped						0
Animal						0
Totals	0	0	0	0	0	0

PDO	
Injury	
Injury + PDO	
Fatal	
NR	
Total	0

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Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #3: North St at Lansing St

Number of Crashes: 10
Number of Injuries: 2
Number of Fatalities: 1

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3

Intersection Type: 3 Legged
Area Type: Urban
Control Type: Signal 1-4 Lanes

	Direction					
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn		1				1
Rear-end						0
Overtaking						0
Right Angle	1					1
Right Turn						0
Head On						0
Side-swipe	1	3	1	1		6
Fixed Object	1					1
Backing						0
Other						0
Bike/Ped	1					1
Animal						0
Totals	4	4	1	1	0	10

PDO	7
Injury	2
Injury + PDO	
Fatal	1
NR	
Total	10

Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #4: North St at Perrine St

Number of Crashes: 5
Number of Injuries: 1
Number of Fatalities: 0

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3
Intersection Type: 3 Legged
Area Type: Urban
Control Type: Sign 4 Lanes

	Direction					
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn			1			1
Rear-end			1			1
Overtaking						0
Right Angle			3			3
Right Turn						0
Head On						0
Side-swipe						0
Fixed Object						0
Backing						0
Other						0
Bike/Ped						0
Animal						0
Totals	0	0	5	0	0	5

PDO	4
Injury	1
Injury + PDO	
Fatal	
NR	
Total	5

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Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #5: North St at Seymour St

Number of Crashes: 28
Number of Injuries: 6
Number of Fatalities: 0

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3

Intersection Type: 4 Legged
Area Type: Urban
Control Type: Signal 1-4 Lanes

	Direction					
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn	5	4				9
Rear-end	1	3	3			7
Overtaking						0
Right Angle	3	3		1		7
Right Turn						0
Head On						0
Side-swipe	1	1				2
Fixed Object		1				1
Backing						0
Other						0
Bike/Ped	2					2
Animal						0
Totals	12	12	3	1	0	28

PDO	22
Injury	6
Injury + PDO	
Fatal	
NR	
Total	28

Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #6: State St at Perrine St

Number of Crashes: 7
Number of Injuries: 1
Number of Fatalities: 0

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3

Intersection Type: 4 Legged
Area Type: Urban
Control Type: Signal 1-4 Lanes

	Direction					Totals
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	
Left turn						0
Rear-end			1			1
Overtaking						0
Right Angle	2			1		3
Right Turn						0
Head On						0
Side-swipe			1			1
Fixed Object	1					1
Backing						0
Other						0
Bike/Ped				1		1
Animal						0
Totals	3	0	2	2	0	7

PDO	6
Injury	1
Injury + PDO	
Fatal	
NR	
Total	7

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Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #7: Lansing St at Grant Ave

Number of Crashes: 3
Number of Injuries: 1
Number of Fatalities: 0

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3
Intersection Type: 3 Legged
Area Type: Urban
Control Type: Sign 4 Lanes

	Direction					
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn						0
Rear-end						0
Overtaking						0
Right Angle			1			1
Right Turn						0
Head On						0
Side-swipe		1				1
Fixed Object						0
Backing			1			1
Other						0
Bike/Ped						0
Animal						0
Totals	0	1	2	0	0	3

PDO	2
Injury	1
Injury + PDO	
Fatal	
NR	
Total	3

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

The table below is a list of the parameters used by CLEAR Safety to calculate SPFs for each facility type. There is more information in NYSDOT's "HSIP Procedures and Techniques" (also called 'The Red Book').

NOTES: TT (‡) = Major Road is Two-Way, Minor Road is Two-Way • TO (‡) = Major Road is Two-Way, Minor Road is One-Way • OT (‡) = Major Road is One-Way, Minor Road is Two-Way • OO (‡) = Major Road is One-Way, Minor Road is One-Way

Screen Type	Facility Type	Description	Area Type	Directional / Bidirectional	Number of Lanes	Median Type	Access	Major Road Operation	Minor Road Operation	Number of Approaches	Traffic Control	Ramp Type (Entrance / Exit)	Year	Severity	Long-Term Calibration Factor (CA)	Long-Term Functional Form Adjustment Factor (CB)	Constant (BC)	Coefficient for Major Road AADT (B1)	Coefficient for Minor Road AADT (B2; intersections only)	Coefficient for Hoerl Functional Form (B2; segments and ramps only)	Coefficient for Segment Length (BL)	Overdispersion parameter A (D1)	Overdispersion parameter B (D2)	Overdispersion parameter C (D3)	AADT Presence (2 = major and minor; 1 = major only; 0 = not available)
Int	111	Urban 4-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	4	Signal	N/A	*	Total Crashes	1.0000	1.0000	-7.6010	0.5390	0.4510	0.0000	0	0.3900	0.0000	0.0000	2
Int	111	Urban 4-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	4	Signal	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-8.8040	0.5690	0.4550	0.0000	0	0.3400	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
10487	7378	N/A	4.0785	0.3900	15	3	12.2355	0.1733	14.5210	4.8403	0.7619	3.8205	0.2580	7.8990	3
10487	7378	N/A	1.6755	0.3400	1	3	5.0264	0.3691	2.4863	0.8288	-0.8467	1.4654	0.2100	3.1409	2

Alpha	Beta	10th	90th	Advanced LOSS
2.5641	1.5906	1.3394	7.4912	3
2.9412	0.5697	0.6073	2.9853	2

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

The table below is a list of the parameters used by CLEAR Safety to calculate SPFs for each facility type. There is more information in NYSDOT's "HSIP Procedures and Techniques" (also called 'The Red Book').

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Screen Type	Facility Type	Description	Area Type	Directional / Bidirectional	Number of Lanes	Median Type	Access	Major Road Operation	Minor Road Operation	Number of Approaches	Traffic Control	Ramp Type (Entrance / Exit)	Year	Severity	Long-Term Calibration Factor (CA)	Long-Term Functional Form Adjustment Factor (CB)	Constant (BC)	Coefficient for Major Road AADT (B1)	Coefficient for Minor Road AADT (B2; intersections only)	Coefficient for Hoerl Functional Form (B2; segments and ramps only)	Coefficient for Segment Length (BL)	Overdispersion parameter A (D1)	Overdispersion parameter B (D2)	Overdispersion parameter C (D3)	AADT Presence (2 = major and minor; 1 = major only; 0 = not available)
Int	86	Urban 3-Leg Two-Way Stop-Controlled TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Minor Road Stop	N/A	*	Total Crashes	1.0000	1.0000	-8.1720	0.5760	0.3920	0.0000	0	0.6603	0.0000	0.0000	2
Int	86	Urban 3-Leg Two-Way Stop-Controlled TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Minor Road Stop	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-11.4600	0.7760	0.4190	0.0000	0	0.8090	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
10487	358	N/A	0.5861	0.6603	0	3	1.7583	0.4627	0.8136	0.2712	-0.3149	0.7144	-0.1283	1.3005	2
10487	358	N/A	0.1633	0.8090	0	3	0.4900	0.7161	0.3509	0.1170	-0.0464	0.2204	-0.0570	0.3837	2

Alpha	Beta	10th	90th	Advanced LOSS
1.5144	0.3870	0.1155	1.2185	2
1.2361	0.1321	0.0245	0.3569	2

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

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Int	109	Urban 3-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Signal	N/A	*	Total Crashes	1.0000	1.0000	-8.6580	0.7010	0.3560	0.0000	0	0.5200	0.0000	0.0000	2
Int	109	Urban 3-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Signal	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-9.4900	0.7000	0.3230	0.0000	0	0.4795	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
10487	2432	N/A	1.8355	0.5200	10	3	5.5065	0.2588	8.8369	2.9456	1.1101	1.9854	-0.1499	3.8209	3
10487	2432	N/A	0.6119	0.4795	3	3	1.8356	0.5319	2.3807	0.7936	0.1817	0.6356	-0.0237	1.2474	3

Alpha	Beta	10th	90th	Advanced LOSS
1.9231	0.9545	0.4700	3.6030	3
2.0855	0.2934	0.1691	1.1784	3

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

The table below is a list of the parameters used by CLEAR Safety to calculate SPFs for each facility type. There is more information in NYSDOT's "HSIP Procedures and Techniques" (also called 'The Red Book').

NOTES: TT (‡) = Major Road is Two-Way, Minor Road is Two-Way • TO (‡) = Major Road is Two-Way, Minor Road is One-Way • OT (‡) = Major Road is One-Way, Minor Road is Two-Way • OO (‡) = Major Road is One-Way, Minor Road is One-Way

Screen Type	Facility Type	Description	Area Type	Directional / Bidirectional	Number of Lanes	Median Type	Access	Major Road Operation	Minor Road Operation	Number of Approaches	Traffic Control	Ramp Type (Entrance / Exit)	Year	Severity	Long-Term Calibration Factor (CA)	Long-Term Functional Form Adjustment Factor (CB)	Constant (BC)	Coefficient for Major Road AADT (B1)	Coefficient for Minor Road AADT (B2; intersections only)	Coefficient for Hoerl Functional Form (B2; segments and ramps only)	Coefficient for Segment Length (BL)	Overdispersion parameter A (D1)	Overdispersion parameter B (D2)	Overdispersion parameter C (D3)	AADT Presence (2 = major and minor; 1 = major only; 0 = not available)
Int	86	Urban 3-Leg Two-Way Stop-Controlled TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Minor Road Stop	N/A	*	Total Crashes	1.0000	1.0000	-8.1720	0.5760	0.3920	0.0000	0	0.6603	0.0000	0.0000	2
Int	86	Urban 3-Leg Two-Way Stop-Controlled TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Minor Road Stop	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-11.4600	0.7760	0.4190	0.0000	0	0.8090	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
10487	2083	N/A	1.1689	0.6603	5	3	3.5066	0.3016	4.5496	1.5165	0.3477	1.4248	-0.2559	2.5936	3
10487	2083	N/A	0.3416	0.8090	1	3	1.0249	0.5467	1.0136	0.3379	-0.0038	0.4609	-0.1193	0.8025	2

Alpha	Beta	10th	90th	Advanced LOSS
1.5144	0.7719	0.2304	2.4300	3
1.2361	0.2764	0.0512	0.7465	2

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

The table below is a list of the parameters used by CLEAR Safety to calculate SPFs for each facility type. There is more information in NYSDOT's "HSIP Procedures and Techniques" (also called 'The Red Book').

NOTES: TT (‡) = Major Road is Two-Way, Minor Road is Two-Way • TO (‡) = Major Road is Two-Way, Minor Road is One-Way • OT (‡) = Major Road is One-Way, Minor Road is Two-Way • OO (‡) = Major Road is One-Way, Minor Road is One-Way

Screen Type	Facility Type	Description	Area Type	Directional / Bidirectional	Number of Lanes	Median Type	Access	Major Road Operation	Minor Road Operation	Number of Approaches	Traffic Control	Ramp Type (Entrance / Exit)	Year	Severity	Long-Term Calibration Factor (CA)	Long-Term Functional Form Adjustment Factor (CB)	Constant (BC)	Coefficient for Major Road AADT (B1)	Coefficient for Minor Road AADT (B2; intersections only)	Coefficient for Hoerl Functional Form (B2; segments and ramps only)	Coefficient for Segment Length (BL)	Overdispersion parameter A (D1)	Overdispersion parameter B (D2)	Overdispersion parameter C (D3)	AADT Presence (2 = major and minor; 1 = major only; 0 = not available)
Int	111	Urban 4-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	4	Signal	N/A	*	Total Crashes	1.0000	1.0000	-7.6010	0.5390	0.4510	0.0000	0	0.3900	0.0000	0.0000	2
Int	111	Urban 4-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	4	Signal	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-8.8040	0.5690	0.4550	0.0000	0	0.3400	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
10487	4331	N/A	3.2075	0.3900	28	3	9.6224	0.2104	24.1332	8.0444	4.8370	3.0046	0.2029	6.2120	4
10487	4331	N/A	1.3148	0.3400	6	3	3.9445	0.4271	5.1220	1.7073	0.3925	1.1500	0.1648	2.4648	3

Alpha	Beta	10th	90th	Advanced LOSS
2.5641	1.2509	1.0533	5.8913	4
2.9412	0.4470	0.4766	2.3427	3

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

The table below is a list of the parameters used by CLEAR Safety to calculate SPFs for each facility type. There is more information in NYSDOT's "HSIP Procedures and Techniques" (also called 'The Red Book').

NOTES: TT (‡) = Major Road is Two-Way, Minor Road is Two-Way • TO (‡) = Major Road is Two-Way, Minor Road is One-Way • OT (‡) = Major Road is One-Way, Minor Road is Two-Way • OO (‡) = Major Road is One-Way, Minor Road is One-Way

Screen Type	Facility Type	Description	Area Type	Directional / Bidirectional	Number of Lanes	Median Type	Access	Major Road Operation	Minor Road Operation	Number of Approaches	Traffic Control	Ramp Type (Entrance / Exit)	Year	Severity	Long-Term Calibration Factor (CA)	Long-Term Functional Form Adjustment Factor (CB)	Constant (BC)	Coefficient for Major Road AADT (B1)	Coefficient for Minor Road AADT (B2; intersections only)	Coefficient for Hoerl Functional Form (B2; segments and ramps only)	Coefficient for Segment Length (BL)	Overdispersion parameter A (D1)	Overdispersion parameter B (D2)	Overdispersion parameter C (D3)	AADT Presence (2 = major and minor; 1 = major only; 0 = not available)
Int	111	Urban 4-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	4	Signal	N/A	*	Total Crashes	1.0000	1.0000	-7.6010	0.5390	0.4510	0.0000	0	0.3900	0.0000	0.0000	2
Int	111	Urban 4-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	4	Signal	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-8.8040	0.5690	0.4550	0.0000	0	0.3400	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
3154	2803	N/A	1.3794	0.3900	7	3	4.1382	0.3826	5.9052	1.9684	0.5890	1.2922	0.0872	2.6716	3
3154	2803	N/A	0.5445	0.3400	1	3	1.6335	0.6429	1.4073	0.4691	-0.0754	0.4762	0.0683	1.0207	2

Alpha	Beta	10th	90th	Advanced LOSS
2.5641	0.5380	0.4530	2.5336	3
2.9412	0.1851	0.1974	0.9702	2

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

The table below is a list of the parameters used by CLEAR Safety to calculate SPFs for each facility type. There is more information in NYSDOT's "HSIP Procedures and Techniques" (also called 'The Red Book').

NOTES: TT (‡) = Major Road is Two-Way, Minor Road is Two-Way • TO (‡) = Major Road is Two-Way, Minor Road is One-Way • OT (‡) = Major Road is One-Way, Minor Road is Two-Way • OO (‡) = Major Road is One-Way, Minor Road is One-Way

Screen Type	Facility Type	Description	Area Type	Directional / Bidirectional	Number of Lanes	Median Type	Access	Major Road Operation	Minor Road Operation	Number of Approaches	Traffic Control	Ramp Type (Entrance / Exit)	Year	Severity	Long-Term Calibration Factor (CA)	Long-Term Functional Form Adjustment Factor (CB)	Constant (BC)	Coefficient for Major Road AADT (B1)	Coefficient for Minor Road AADT (B2; intersections only)	Coefficient for Hoerl Functional Form (B2; segments and ramps only)	Coefficient for Segment Length (BL)	Overdispersion parameter A (D1)	Overdispersion parameter B (D2)	Overdispersion parameter C (D3)	AADT Presence (2 = major and minor; 1 = major only; 0 = not available)
Int	86	Urban 3-Leg Two-Way Stop-Controlled TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Minor Road Stop	N/A	*	Total Crashes	1.0000	1.0000	-8.1720	0.5760	0.3920	0.0000	0	0.6603	0.0000	0.0000	2
Int	86	Urban 3-Leg Two-Way Stop-Controlled TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Minor Road Stop	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-11.4600	0.7760	0.4190	0.0000	0	0.8090	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
16920	926	N/A	1.1205	0.6603	3	3	3.3615	0.3106	3.1123	1.0374	-0.0831	1.3658	-0.2453	2.4863	2
16920	926	N/A	0.3526	0.8090	1	3	1.0577	0.5389	1.0311	0.3437	-0.0089	0.4757	-0.1231	0.8282	2

Alpha	Beta	10th	90th	Advanced LOSS
1.5144	0.7399	0.2208	2.3295	2
1.2361	0.2852	0.0528	0.7704	2

Project: Auburn Community Hospital Health Campus
Location: City of Auburn, NY
Peak Hour: Weekday AM
Condition: Proposed Action

Figure:		3a	4a	5				6		7
			# of Years							
			1							
Location Number	Intersection	2026 Collected Volumes	No-Build Volumes 1.00%	Trip Generation and Distribution				Total Site Trips	143 North Trips	Full Build Volumes
				Enter Dist. %	Exit Dist. %	Trips IN 125	Trips OUT 12			
1	North Street/ Standart Ave									
	SR	0	0					0		0
	ST	371	375	16%		20		20	-9	386
	SL	126	127					0		127
	WR	119	120					0		120
	WT	0	0					0		0
	WL	60	61	6%		8		8	-3	66
	NR	48	48		6%		1	1		49
	NT	243	245		16%		2	2	-1	246
	NL	0	0					0		0
	ER	0	0					0		0
	ET	0	0					0		0
	EL	0	0					0		0
2	North Street/ 143 North St Driveway									
	SR	12	12	17%		21		21	-12	21
	ST	393	397					0		397
	SL		0					0		0
	WR		0					0		0
	WT		0					0		0
	WL		0					0		0
	NR		0					0		0
	NT	342	345					0		345
	NL	16	16	26%		33		33	-16	33
	ER	5	5		26%		3	3	-5	3
	ET		0					0		0
	EL	1	1		17%		2	2	-1	2
3	North Street/ Lansing Street									
	SR		0					0		0
	ST	354	358		16%		2	2	-3	357
	SL	42	42		10%		1	1	-2	41
	WR	29	29	10%		13		13	-6	36
	WT		0					0		0
	WL	69	70	10%		13		13		83
	NR	91	92		10%		1	1		93
	NT	329	332	16%		20		20	-10	342
	NL		0					0		0
	ER		0					0		0
	ET		0					0		0
	EL		0					0		0
4	North Street/ Perrine Street									
	SR	48	48	10%		13		13		61
	ST	381	385		20%		2	2	-3	384
	SL	0	0					0		0
	WR	0	0					0		0
	WT	0	0					0		0
	WL	0	0					0		0
	NR	4	4					0		4
	NT	379	383	16%		20		20	-9	394
	NL	31	31	26%		33		33		64
	ER	21	21		26%		3	3		24
	ET	1	1					0		1
	EL	47	47		10%		1	1	-1	47
5	North Street/ Seymour Street									
	SR	28	28		5%		1	1		29
	ST	347	350		32%		4	4	-3	351
	SL	19	19		9%		1	1		20
	WR	20	20	9%		11		11	-1	30
	WT	88	89					0		89
	WL	31	31					0		31
	NR	28	28					0		28
	NT	334	337	32%		40		40	-7	370
	NL	18	18					0		18
	ER	25	25					0		25
	ET	92	93					0		93
	EL	46	46	5%		6		6	-1	51

Project: Auburn Community Hospital Health Campus
Location: City of Auburn, NY
Peak Hour: Weekday AM
Condition: Proposed Action

Figure:		3a	4a	5				6		7
			# of Years							
			1							
Location Number	Intersection	2026 Collected Volumes	No-Build Volumes 1.00%	Trip Generation and Distribution				Total Site Trips	143 North Trips	Full Build Volumes
				Enter Dist. %	Exit Dist. %	Trips IN 125	Trips OUT 12			
6	Perrine Street/ State Street									
	SR	3	3					0		3
	ST	178	180					0		180
	SL	17	17	7%		9		9		26
	WR	27	27		7%		1	1		28
	WT	37	37		2%		0	0		37
	WL	8	8		7%		1	1		9
	NR	10	10	7%		9		9	-1	18
	NT	130	131					0		131
	NL	18	18					0		18
	ER	38	38					0		38
	ET	34	34	2%		3		3		37
	EL	15	15					0		15
7	Lansing Street/ Grant Ave									
	SR	36	36	12%		15		15	-4	47
	ST	426	430					0		430
	SL		0					0		0
	WR		0					0		0
	WT		0					0		0
	WL		0					0		0
	NR		0					0		0
	NT	474	479					0		479
	NL	11	11	8%		10		10	-2	19
	ER	12	12		8%		1	1	-1	12
	ET		0					0		0
	EL	29	29		12%		1	1	-1	29
8	Perrine Street/ Proposed Driveway									
	SR		0		16%		2	2		2
	ST		0					0		0
	SL		0		36%		4	4		4
	WR		0	36%		45		45		45
	WT	79	80					0		80
	WL		0					0		0
	NR		0					0		0
	NT		0					0		0
	NL		0					0		0
	ER		0					0		0
	ET	69	70					0	-1	69
	EL		0	16%		20		20		20
9	North Street/ Park Ave									
	SR		0	5%		6		6		6
	ST		0	17%		21		21		21
	SL		0					0		0
	WR		0					0		0
	WT		0					0		0
	WL		0					0		0
	NR		0					0		0
	NT		0		17%		2	2		2
	NL		0					0		0
	ER		0					0		0
	ET		0					0		0
	EL		0		5%		1	1		1

Project: Auburn Community Hospital Health Campus
Location: City of Auburn, NY
Peak Hour: Weekday PM
Condition: Proposed Action

Figure: 3b 4b 5 7

# of Years: 1

Location Number	Intersection	2026 Collected Volumes	No-Build Volumes 1.00%	Trip Generation and Distribution				Total Site Trips	143 North Trips	Full Build Volumes
				Enter Dist. %	Exit Dist. %	Trips IN 13	Trips OUT 115			
1	North Street/ Standart Ave									
	SR	0	0					0		0
	ST	282	285	16%		2		2	-2	285
	SL	130	131					0		131
	WR	170	172					0		172
	WT	0	0					0		0
	WL	102	103	6%		1		1		104
	NR	102	103		6%		7	7	-3	107
	NT	391	395		16%		18	18	-8	405
	NL	0	0					0		0
	ER	0	0					0		0
	ET	0	0					0		0
	EL	0	0					0		0
2	North Street/ 143 North St Driveway									
	SR	2	2	17%		2		2	-2	2
	ST	402	406					0		406
	SL		0					0		0
	WR		0					0		0
	WT		0					0		0
	WL		0					0		0
	NR		0					0		0
	NT	479	484					0		484
	NL	2	2	26%		3		3	-2	3
	ER	18	18		26%		30	30	-18	30
	ET		0					0		0
	EL	11	11		17%		20	20	-11	20
3	North Street/ Lansing Street									
	SR		0					0		0
	ST	407	411		16%		18	18	-11	418
	SL	13	13		10%		12	12	-7	18
	WR	50	51	10%		1		1		52
	WT		0					0		0
	WL	124	125	10%		1		1		126
	NR	42	42		10%		12	12		54
	NT	427	431	16%		2		2	-2	431
	NL		0					0		0
	ER		0					0		0
	ET		0					0		0
	EL		0					0		0
4	North Street/ Perrine Street									
	SR	73	74	10%		1		1	-2	73
	ST	456	461		20%		23	23	-9	475
	SL	0	0					0		0
	WR	0	0					0		0
	WT	0	0					0		0
	WL	0	0					0		0
	NR	0	0					0		0
	NT	441	445	16%		2		2	-2	445
	NL	27	27	26%		3		3		30
	ER	29	29		26%		30	30		59
	ET	0	0					0		0
	EL	33	33		10%		12	12		45
5	North Street/ Seymour Street									
	SR	53	54		5%		6	6	-1	59
	ST	382	386		32%		37	37	-6	417
	SL	24	24		9%		10	10	-2	32
	WR	21	21	9%		1		1		22
	WT	97	98					0		98
	WL	32	32					0		32
	NR	44	44					0		44
	NT	397	401	32%		4		4	-2	403
	NL	46	46					0		46
	ER	54	55					0		55
	ET	129	130					0		130
	EL	49	49	5%		1		1		50

Project: Auburn Community Hospital Health Campus
Location: City of Auburn, NY
Peak Hour: Weekday PM
Condition: Proposed Action

Figure: 3b 4b 5 7

# of Years: 1

Location Number	Intersection	2026 Collected Volumes	No-Build Volumes 1.00%	Trip Generation and Distribution				Total Site Trips	143 North Trips	Full Build Volumes
				Enter Dist. %	Exit Dist. %	Trips IN 13	Trips OUT 115			
6	Perrine Street/ State Street									
	SR	3	3					0		3
	ST	147	148					0		148
	SL	11	11	7%		1		1		12
	WR	28	28		7%		8	8	-1	35
	WT	44	44		2%		2	2		46
	WL	12	12		7%		8	8	-1	19
	NR	11	11	7%		1		1		12
	NT	178	180					0		180
	NL	17	17					0		17
	ER	27	27					0		27
	ET	22	22	2%		0		0		22
	EL	6	6					0		6
7	Lansing Street/ Grant Ave									
	SR	37	37	12%		2		2		39
	ST	710	717					0		717
	SL		0					0		0
	WR		0					0		0
	WT		0					0		0
	WL		0					0		0
	NR		0					0		0
	NT	773	781					0		781
	NL	8	8	8%		1		1		9
	ER	15	15		8%		9	9	-3	21
	ET		0					0		0
	EL	23	23		12%		14	14	-4	33
8	Perrine Street/ Proposed Driveway									
	SR		0		16%		18	18		18
	ST		0					0		0
	SL		0		36%		41	41		41
	WR		0	36%		5		5		5
	WT	100	101					0	-2	99
	WL		0					0		0
	NR		0					0		0
	NT		0					0		0
	NL		0					0		0
	ER		0					0		0
	ET	62	63					0		63
	EL		0	16%		2		2		2
9	North Street/ Park Ave									
	SR		0	5%		1		1		1
	ST		0	17%		2		2		2
	SL		0					0		0
	WR		0					0		0
	WT		0					0		0
	WL		0					0		0
	NR		0					0		0
	NT		0		17%		20	20		20
	NL		0					0		0
	ER		0					0		0
	ET		0					0		0
	EL		0		5%		6	6		6

PROJECT DETAILS

Project Name:	Auburn Community Hospital Health Campus	Type of Project:	
Project No:		City:	
Country:		Built-up Area(Sq.ft):	
Analyst Name:	Amy Dake	Clients Name:	
Date:	3/23/2026	ZIP/Postal Code:	
State/Province:		No. of Scenarios:	2
Analysis Region:			

SCENARIO SUMMARY

Scenarios	Name	No. of Land Uses	Phases of Development	No. of Years to Project Traffic	User Group	Estimated New Vehicle Trips		
						Entry	Exit	Total
Scenario - 1	AM Peak	1	1	0		125	12	137
Scenario - 1	PM Peak	1	1	0		13	115	128

Scenario - 1

Scenario Name: AM Peak
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
720(1) - Medical-Dental Office Building -	General	Employees	162	Weekday, Peak Hour of	Average	125	12	137
Data Source: Trip Generation Manual, 12th Ed	Urban/Suburban			Adjacent Street Traffic,	0.85	91%	9%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
720(1) - Medical-Dental Office Building - Within/Near Hospital Campus	100	100	1	1	91	9

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
720(1) - Medical-Dental Office Building - Within/Near Hospital Campus	125	12	0	0	125	12
	137		0		137	

Scenario - 2

Scenario Name: PM Peak
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
720(1) - Medical-Dental Office Building -	General	Employees	162	Weekday, Peak Hour of	Average	13	115	128
Data Source: Trip Generation Manual, 12th Ed	Urban/Suburban			Adjacent Street Traffic,	0.79	10%	90%	

VEHICLE TO PERSON TRIP CONVERSION

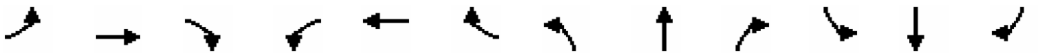
BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
720(1) - Medical-Dental Office Building - Within/Near Hospital Campus	100	100	1	1	10	90

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
720(1) - Medical-Dental Office Building - Within/Near Hospital Campus	13	115	0	0	13	115
	128		0		128	

APPENDIX C: LOS CALCULATIONS – EXISTING CONDITIONS

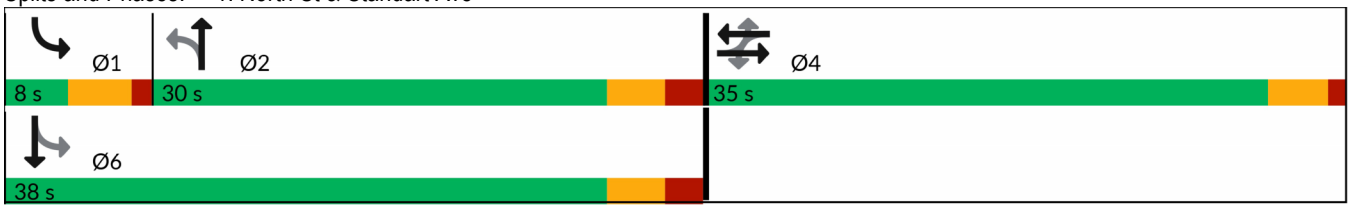


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	60	0	119	0	243	48	126	371	0
Future Volume (vph)	0	0	0	60	0	119	0	243	48	126	371	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.910			0.975				
Flt Protected					0.984						0.987	
Satd. Flow (prot)	0	1900	0	0	1652	0	0	3147	0	0	3418	0
Flt Permitted					0.907						0.703	
Satd. Flow (perm)	0	1900	0	0	1522	0	0	3147	0	0	2435	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					145			34				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		167			331			1725			287	
Travel Time (s)		3.8			7.5			39.2			6.5	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	7%	0%	1%	0%	13%	6%	2%	5%	0%
Adj. Flow (vph)	0	0	0	73	0	145	0	296	59	154	452	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	218	0	0	355	0	0	606	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			4			2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		2	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	22.0	22.0		22.0	22.0		30.0	30.0		8.0	30.0	
Minimum Split (s)	26.2	26.2		26.2	26.2		35.2	35.2		12.5	35.2	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		8.0	38.0	
Total Split (%)	47.9%	47.9%		47.9%	47.9%		41.1%	41.1%		11.0%	52.1%	
Maximum Green (s)	30.8	30.8		30.8	30.8		24.8	24.8		3.5	32.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.5	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.2			4.2			5.2			5.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	4.5	4.5		4.5	4.5		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)					22.0			24.8			32.8	
Actuated g/C Ratio					0.34			0.39			0.51	
v/c Ratio					0.35			0.28			0.47	
Control Delay (s/veh)					7.8			12.9			11.1	
Queue Delay					0.0			0.0			0.0	
Total Delay (s/veh)					7.8			12.9			11.1	
LOS					A			B			B	
Approach Delay (s/veh)					7.8			13.0			11.2	
Approach LOS					A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 73			
Actuated Cycle Length: 64.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay (s/veh): 11.1		Intersection LOS: B	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: North St & Standart Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	5	16	342	393	12
Future Volume (vph)	1	5	16	342	393	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.884				0.996	
Flt Protected	0.993			0.998		
Satd. Flow (prot)	1668	0	0	3260	3367	0
Flt Permitted	0.993			0.998		
Satd. Flow (perm)	1668	0	0	3260	3367	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	199			90	1725	
Travel Time (s)	4.5			2.0	39.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	11%	7%	0%
Adj. Flow (vph)	1	6	20	428	491	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	0	448	506	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	5	16	342	393	12
Future Vol, veh/h	1	5	16	342	393	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	11	7	0
Mvmt Flow	1	6	20	428	491	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	753	253	506	0	-	0
Stage 1	499	-	-	-	-	-
Stage 2	254	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	350	752	1069	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	343	752	1069	-	-	-
Mov Cap-2 Maneuver	343	-	-	-	-	-
Stage 1	569	-	-	-	-	-
Stage 2	771	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.81	0.53	0
HCM LOS	B		

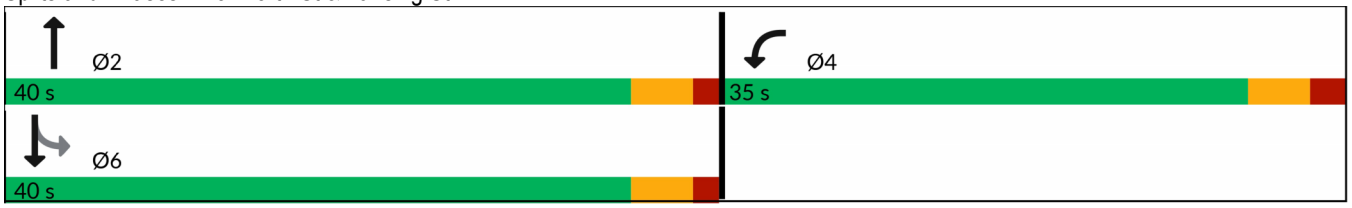
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	161	-	627	-	-
HCM Lane V/C Ratio	0.019	-	0.012	-	-
HCM Control Delay (s/veh)	8.4	0.2	10.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

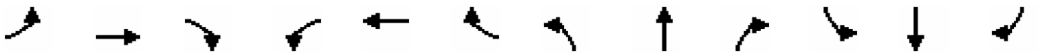
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	69	29	329	91	42	354
Future Volume (vph)	69	29	329	91	42	354
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.960		0.968			
Flt Protected	0.966					0.995
Satd. Flow (prot)	1625	0	3157	0	0	3374
Flt Permitted	0.966					0.868
Satd. Flow (perm)	1625	0	3157	0	0	2943
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	34		63			
Link Speed (mph)	30		30			30
Link Distance (ft)	585		196			90
Travel Time (s)	13.3		4.5			2.0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	12%	0%	12%	6%	2%	7%
Adj. Flow (vph)	85	36	406	112	52	437
Shared Lane Traffic (%)						
Lane Group Flow (vph)	121	0	518	0	0	489
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases					6	
Detector Phase	4		2		6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	27.5		24.0		20.0	20.0
Total Split (s)	35.0		40.0		40.0	40.0
Total Split (%)	46.7%		53.3%		53.3%	53.3%
Maximum Green (s)	29.5		35.0		35.0	35.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	2.0		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.5		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		0.2		0.2	0.2
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		8.0			
Flash Dont Walk (s)	15.0		11.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	10.4		39.1			39.1
Actuated g/C Ratio	0.19		0.70			0.70
v/c Ratio	0.36		0.23			0.23
Control Delay (s/veh)	18.5		4.0			4.6
Queue Delay	0.0		0.0			0.0
Total Delay (s/veh)	18.5		4.0			4.6
LOS	B		A			A
Approach Delay (s/veh)	18.6		4.1			4.7
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 55.8			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay (s/veh): 5.9		Intersection LOS: A	
Intersection Capacity Utilization 46.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: North St & Lansing St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	1	21	0	0	0	31	379	4	0	381	48
Future Volume (vph)	47	1	21	0	0	0	31	379	4	0	381	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.959						0.999			0.983	
Flt Protected		0.967						0.996				
Satd. Flow (prot)	0	1735	0	0	1900	0	0	3230	0	0	3299	0
Flt Permitted		0.967						0.996				
Satd. Flow (perm)	0	1735	0	0	1900	0	0	3230	0	0	3299	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1485			208			873			196	
Travel Time (s)		33.8			0.0			19.8			4.5	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	3%	12%	0%	0%	8%	4%
Adj. Flow (vph)	58	1	26	0	0	0	38	468	5	0	470	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	0	0	0	511	0	0	529	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			0			0	
Link Offset(ft)		0			15			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	1	21	0	0	0	31	379	4	0	381	48
Future Vol, veh/h	47	1	21	0	0	0	31	379	4	0	381	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	0	0	5	0	0	0	3	12	0	0	8	4
Mvmt Flow	58	1	26	0	0	0	38	468	5	0	470	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	810	1049	265	783	1077	236	530	0	0	473	0	0
Stage 1	500	500	-	547	547	-	-	-	-	-	-	-
Stage 2	310	549	-	236	530	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	7	7.5	6.5	6.9	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.35	3.5	4	3.3	2.23	-	-	2.2	-	-
Pot Cap-1 Maneuver	275	229	725	288	221	771	1027	-	-	1100	-	-
Stage 1	527	546	-	494	521	-	-	-	-	-	-	-
Stage 2	680	519	-	752	530	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	263	219	725	264	211	771	1027	-	-	1100	-	-
Mov Cap-2 Maneuver	263	219	-	264	211	-	-	-	-	-	-	-
Stage 1	527	546	-	473	498	-	-	-	-	-	-	-
Stage 2	651	497	-	723	530	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	19.97	0	0.94	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	266	-	-	325	-	1100	-	-
HCM Lane V/C Ratio	0.037	-	-	0.262	-	-	-	-
HCM Control Delay (s/veh)	8.6	0.3	-	20	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1	-	0	-	-

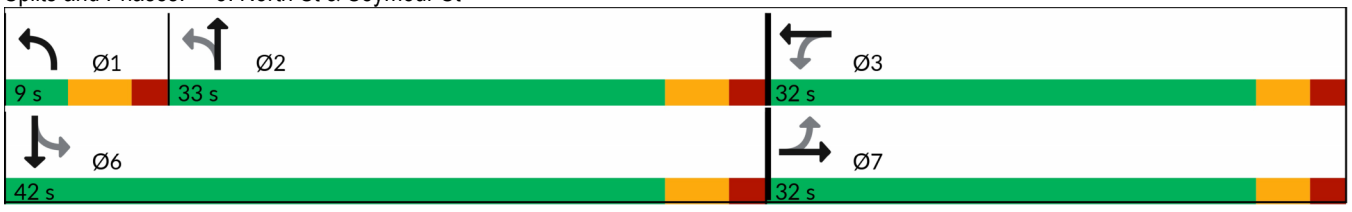
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	92	25	31	88	20	18	334	28	19	347	28
Future Volume (vph)	46	92	25	31	88	20	18	334	28	19	347	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.979			0.980			0.989			0.989	
Flt Protected		0.986			0.989			0.998			0.998	
Satd. Flow (prot)	0	1744	0	0	1745	0	0	3170	0	0	3268	0
Flt Permitted		0.883			0.910			0.924			0.924	
Satd. Flow (perm)	0	1562	0	0	1605	0	0	2935	0	0	3025	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			13			14			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		341			331			256			873	
Travel Time (s)		7.8			7.5			5.8			19.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	4%	5%	8%	5%	7%	0%	0%	12%	25%	5%	10%	0%
Adj. Flow (vph)	57	114	31	38	109	25	22	412	35	23	428	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	202	0	0	172	0	0	469	0	0	486	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		7			3		1!	2			6!	
Permitted Phases	7			3			2			6		
Detector Phase	7	7		3	3		1	2		6	6	
Switch Phase												

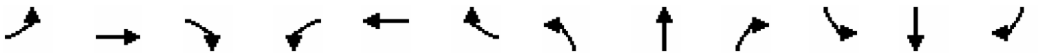
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	12.0	12.0		12.0	12.0		4.0	12.0		12.0	12.0	
Minimum Split (s)	17.0	17.0		17.0	17.0		9.5	17.5		17.5	17.5	
Total Split (s)	32.0	32.0		32.0	32.0		9.0	33.0		42.0	42.0	
Total Split (%)	43.2%	43.2%		43.2%	43.2%		12.2%	44.6%		56.8%	56.8%	
Maximum Green (s)	27.0	27.0		27.0	27.0		3.5	27.5		36.5	36.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.5			5.5	
Lead/Lag							Lead	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	6.0	6.0		6.0	6.0		1.0	6.0		6.0	6.0	
Recall Mode	None	None		None	None		None	None		Max	Max	
Walk Time (s)	13.0	13.0		13.0	13.0			16.0		16.0	16.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		16.0			16.0			36.6			36.6	
Actuated g/C Ratio		0.25			0.25			0.58			0.58	
v/c Ratio		0.49			0.41			0.27			0.27	
Control Delay (s/veh)		23.0			21.0			7.5			7.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		23.0			21.0			7.5			7.4	
LOS		C			C			A			A	
Approach Delay (s/veh)		23.0			21.1			7.5			7.5	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 63.1			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay (s/veh): 11.6		Intersection LOS: B	
Intersection Capacity Utilization 46.5%		ICU Level of Service A	
Analysis Period (min) 15			

! Phase conflict between lane groups.

Splits and Phases: 5: North St & Seymour St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	34	38	8	37	27	18	130	10	17	178	3
Future Volume (vph)	15	34	38	8	37	27	18	130	10	17	178	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941			0.950			0.992			0.998	
Flt Protected		0.991			0.994			0.994			0.996	
Satd. Flow (prot)	0	1600	0	0	1723	0	0	1734	0	0	1766	0
Flt Permitted		0.917			0.943			0.951			0.967	
Satd. Flow (perm)	0	1481	0	0	1634	0	0	1659	0	0	1714	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			28			11			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			1485			423			379	
Travel Time (s)		6.7			33.8			9.6			8.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	27%	3%	11%	0%	3%	7%	0%	9%	10%	12%	6%	33%
Adj. Flow (vph)	19	42	47	10	46	33	22	160	12	21	220	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	0	0	89	0	0	194	0	0	245	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	17.0	17.0		17.0	17.0		70.0	70.0		70.0	70.0	
Total Split (%)	19.5%	19.5%		19.5%	19.5%		80.5%	80.5%		80.5%	80.5%	
Maximum Green (s)	12.0	12.0		12.0	12.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.8			6.8			15.5			15.5	
Actuated g/C Ratio		0.23			0.23			0.53			0.53	
v/c Ratio		0.28			0.21			0.21			0.26	
Control Delay (s/veh)		8.7			8.2			6.2			6.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		8.7			8.2			6.2			6.7	
LOS		A			A			A			A	
Approach Delay (s/veh)		8.8			8.2			6.2			6.7	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 87			
Actuated Cycle Length: 29			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.29			
Intersection Signal Delay (s/veh): 7.1		Intersection LOS: A	
Intersection Capacity Utilization 29.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: State St & Perrine St

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	29	12	11	474	426	36
Future Volume (vph)	29	12	11	474	426	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.961				0.988	
Flt Protected	0.966			0.999		
Satd. Flow (prot)	1724	0	0	3504	3471	0
Flt Permitted	0.966			0.999		
Satd. Flow (perm)	1724	0	0	3504	3471	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			330	272	
Travel Time (s)	10.1			7.5	6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	8%	0%	3%	3%	0%
Adj. Flow (vph)	32	13	12	515	463	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	0	527	502	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.0%		ICU Level of Service A	
Analysis Period (min) 15			

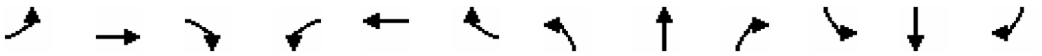
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	12	11	474	426	36
Future Vol, veh/h	29	12	11	474	426	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	0	3	3	0
Mvmt Flow	32	13	12	515	463	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	764	251	502	0	-	0
Stage 1	483	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Critical Hdwy	6.8	7.06	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.38	2.2	-	-	-
Pot Cap-1 Maneuver	344	731	1073	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	340	731	1073	-	-	-
Mov Cap-2 Maneuver	340	-	-	-	-	-
Stage 1	584	-	-	-	-	-
Stage 2	747	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	15.05	0.29	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	82	-	403	-	-
HCM Lane V/C Ratio	0.011	-	0.111	-	-
HCM Control Delay (s/veh)	8.4	0.1	15	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

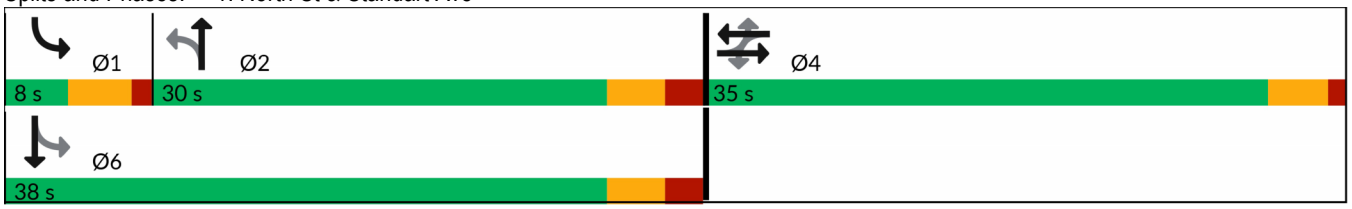


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	102	0	170	0	391	102	130	282	0
Future Volume (vph)	0	0	0	102	0	170	0	391	102	130	282	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.916			0.969				
Flt Protected					0.982						0.984	
Satd. Flow (prot)	0	1900	0	0	1692	0	0	3308	0	0	3481	0
Flt Permitted					0.886						0.625	
Satd. Flow (perm)	0	1900	0	0	1527	0	0	3308	0	0	2211	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					142			48				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		167			331			1725			287	
Travel Time (s)		3.8			7.5			39.2			6.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	7%	1%	0%	3%	0%
Adj. Flow (vph)	0	0	0	112	0	187	0	430	112	143	310	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	299	0	0	542	0	0	453	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			4			2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		2	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	22.0	22.0		22.0	22.0		30.0	30.0		8.0	30.0	
Minimum Split (s)	26.2	26.2		26.2	26.2		35.2	35.2		12.5	35.2	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		8.0	38.0	
Total Split (%)	47.9%	47.9%		47.9%	47.9%		41.1%	41.1%		11.0%	52.1%	
Maximum Green (s)	30.8	30.8		30.8	30.8		24.8	24.8		3.5	32.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.5	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.2			4.2			5.2			5.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	4.5	4.5		4.5	4.5		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)					22.0			24.8			32.8	
Actuated g/C Ratio					0.34			0.39			0.51	
v/c Ratio					0.48			0.41			0.38	
Control Delay (s/veh)					11.6			14.2			10.1	
Queue Delay					0.0			0.0			0.0	
Total Delay (s/veh)					11.6			14.2			10.1	
LOS					B			B			B	
Approach Delay (s/veh)					11.6			14.2			10.2	
Approach LOS					B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 73			
Actuated Cycle Length: 64.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay (s/veh): 12.2		Intersection LOS: B	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: North St & Standart Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	11	18	2	479	402	2
Future Volume (vph)	11	18	2	479	402	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.917				0.999	
Flt Protected	0.981					
Satd. Flow (prot)	1709	0	0	3375	3536	0
Flt Permitted	0.981					
Satd. Flow (perm)	1709	0	0	3375	3536	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	199			90	1725	
Travel Time (s)	4.5			2.0	39.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	7%	2%	0%
Adj. Flow (vph)	13	21	2	564	473	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	0	0	566	475	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	18	2	479	402	2
Future Vol, veh/h	11	18	2	479	402	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	7	2	0
Mvmt Flow	13	21	2	564	473	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	761	238	475	0	-	0
Stage 1	474	-	-	-	-	-
Stage 2	286	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	346	770	1097	-	-	-
Stage 1	598	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	345	770	1097	-	-	-
Mov Cap-2 Maneuver	345	-	-	-	-	-
Stage 1	597	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	12.34	0.06	0
HCM LOS	B		

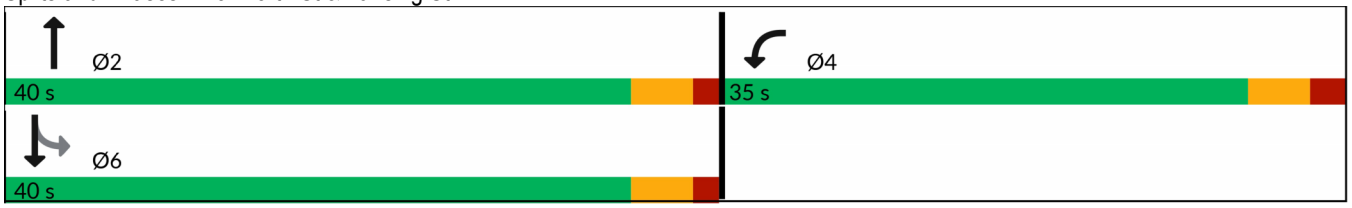
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	15	-	525	-	-
HCM Lane V/C Ratio	0.002	-	0.065	-	-
HCM Control Delay (s/veh)	8.3	0	12.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

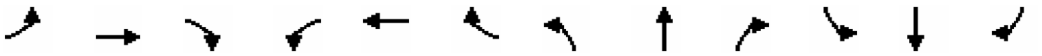
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	124	50	427	42	13	407
Future Volume (vph)	124	50	427	42	13	407
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.961		0.987			
Flt Protected	0.966					0.998
Satd. Flow (prot)	1680	0	3344	0	0	3534
Flt Permitted	0.966					0.937
Satd. Flow (perm)	1680	0	3344	0	0	3318
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	32		18			
Link Speed (mph)	30		30			30
Link Distance (ft)	585		196			90
Travel Time (s)	13.3		4.5			2.0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	7%	0%	7%	2%	0%	2%
Adj. Flow (vph)	146	59	502	49	15	479
Shared Lane Traffic (%)						
Lane Group Flow (vph)	205	0	551	0	0	494
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases					6	
Detector Phase	4		2		6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	27.5		24.0		20.0	20.0
Total Split (s)	35.0		40.0		40.0	40.0
Total Split (%)	46.7%		53.3%		53.3%	53.3%
Maximum Green (s)	29.5		35.0		35.0	35.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	2.0		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.5		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		0.2		0.2	0.2
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		8.0			
Flash Dont Walk (s)	15.0		11.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	12.0		35.0			35.0
Actuated g/C Ratio	0.21		0.61			0.61
v/c Ratio	0.54		0.26			0.24
Control Delay (s/veh)	22.9		5.8			5.8
Queue Delay	0.0		0.0			0.0
Total Delay (s/veh)	22.9		5.8			5.8
LOS	C		A			A
Approach Delay (s/veh)	22.9		5.8			5.9
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 57.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 8.6		Intersection LOS: A	
Intersection Capacity Utilization 39.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: North St & Lansing St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	29	0	0	0	27	441	0	0	456	73
Future Volume (vph)	33	0	29	0	0	0	27	441	0	0	456	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.937									0.979	
Flt Protected		0.974						0.997				
Satd. Flow (prot)	0	1734	0	0	1900	0	0	3376	0	0	3440	0
Flt Permitted		0.974						0.997				
Satd. Flow (perm)	0	1734	0	0	1900	0	0	3376	0	0	3440	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1485			208			873			196	
Travel Time (s)		33.8			0.0			19.8			4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	3%	1%
Adj. Flow (vph)	37	0	32	0	0	0	30	490	0	0	507	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	69	0	0	0	0	0	520	0	0	588	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			0			0	
Link Offset(ft)		0			15			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.5%		ICU Level of Service A	
Analysis Period (min) 15			

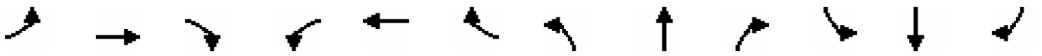
Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	0	29	0	0	0	27	441	0	0	456	73
Future Vol, veh/h	33	0	29	0	0	0	27	441	0	0	456	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	7	0	0	3	1
Mvmt Flow	37	0	32	0	0	0	30	490	0	0	507	81

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	852	1097	294	803	1138	245	588	0	0	490	0	0
Stage 1	547	547	-	550	550	-	-	-	-	-	-	-
Stage 2	305	550	-	253	588	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	256	215	709	278	203	762	997	-	-	1084	-	-
Stage 1	494	521	-	492	519	-	-	-	-	-	-	-
Stage 2	685	519	-	734	499	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	247	207	709	256	196	762	997	-	-	1084	-	-
Mov Cap-2 Maneuver	247	207	-	256	196	-	-	-	-	-	-	-
Stage 1	494	521	-	475	501	-	-	-	-	-	-	-
Stage 2	661	501	-	701	499	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	17.54	0	0.76	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	208	-	-	356	-	1084	-	-
HCM Lane V/C Ratio	0.03	-	-	0.194	-	-	-	-
HCM Control Delay (s/veh)	8.7	0.3	-	17.5	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	-	0	-	-



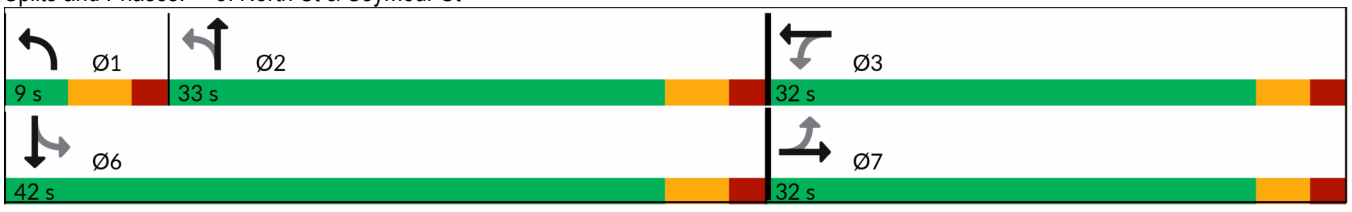
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	129	54	32	97	21	46	397	44	24	382	53
Future Volume (vph)	49	129	54	32	97	21	46	397	44	24	382	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.968			0.981			0.987			0.983	
Flt Protected		0.990			0.989			0.995			0.997	
Satd. Flow (prot)	0	1821	0	0	1843	0	0	3289	0	0	3424	0
Flt Permitted		0.909			0.903			0.867			0.913	
Satd. Flow (perm)	0	1672	0	0	1683	0	0	2866	0	0	3136	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			13			17			27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		341			331			256			873	
Travel Time (s)		7.8			7.5			5.8			19.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	8%	14%	0%	4%	0%
Adj. Flow (vph)	55	145	61	36	109	24	52	446	49	27	429	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	261	0	0	169	0	0	547	0	0	516	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		7			3		1!	2			6!	
Permitted Phases	7			3			2			6		
Detector Phase	7	7		3	3		1	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	12.0	12.0		12.0	12.0		4.0	12.0		12.0	12.0	
Minimum Split (s)	17.0	17.0		17.0	17.0		9.5	17.5		17.5	17.5	
Total Split (s)	32.0	32.0		32.0	32.0		9.0	33.0		42.0	42.0	
Total Split (%)	43.2%	43.2%		43.2%	43.2%		12.2%	44.6%		56.8%	56.8%	
Maximum Green (s)	27.0	27.0		27.0	27.0		3.5	27.5		36.5	36.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.5			5.5	
Lead/Lag							Lead	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	6.0	6.0		6.0	6.0		1.0	6.0		6.0	6.0	
Recall Mode	None	None		None	None		None	None		Max	Max	
Walk Time (s)	13.0	13.0		13.0	13.0			16.0		16.0	16.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		17.6			17.6			36.7			36.7	
Actuated g/C Ratio		0.27			0.27			0.57			0.57	
v/c Ratio		0.55			0.36			0.33			0.28	
Control Delay (s/veh)		22.8			19.4			8.8			8.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		22.8			19.4			8.8			8.1	
LOS		C			B			A			A	
Approach Delay (s/veh)		22.9			19.4			8.8			8.2	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 64.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 12.3		Intersection LOS: B	
Intersection Capacity Utilization 57.1%		ICU Level of Service B	
Analysis Period (min) 15			

! Phase conflict between lane groups.

Splits and Phases: 5: North St & Seymour St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	22	27	12	44	28	17	178	11	11	147	3
Future Volume (vph)	6	22	27	12	44	28	17	178	11	11	147	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.934			0.955			0.992			0.998	
Flt Protected		0.994			0.993			0.996			0.996	
Satd. Flow (prot)	0	1764	0	0	1778	0	0	1830	0	0	1872	0
Flt Permitted		0.945			0.936			0.971			0.974	
Satd. Flow (perm)	0	1677	0	0	1676	0	0	1784	0	0	1830	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			24			8			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			1485			423			379	
Travel Time (s)		6.7			33.8			9.6			8.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%	0%	3%	0%	0%	1%	0%
Adj. Flow (vph)	7	25	31	14	50	32	19	202	13	13	167	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	96	0	0	234	0	0	183	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	20.0	20.0		20.0	20.0		70.0	70.0		70.0	70.0	
Total Split (%)	22.2%	22.2%		22.2%	22.2%		77.8%	77.8%		77.8%	77.8%	
Maximum Green (s)	15.0	15.0		15.0	15.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.8			6.8			16.8			16.8	
Actuated g/C Ratio		0.23			0.23			0.56			0.56	
v/c Ratio		0.15			0.24			0.23			0.17	
Control Delay (s/veh)		6.8			9.0			6.0			5.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		6.8			9.0			6.0			5.9	
LOS		A			A			A			A	
Approach Delay (s/veh)		6.8			9.1			6.1			6.0	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 30.1			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.24			
Intersection Signal Delay (s/veh): 6.6		Intersection LOS: A	
Intersection Capacity Utilization 30.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: State St & Perrine St

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	15	8	773	710	37
Future Volume (vph)	23	15	8	773	710	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.948				0.993	
Flt Protected	0.970					
Satd. Flow (prot)	1747	0	0	3570	3551	0
Flt Permitted	0.970					
Satd. Flow (perm)	1747	0	0	3570	3551	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			330	272	
Travel Time (s)	10.1			7.5	6.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	13%	1%	1%	0%
Adj. Flow (vph)	24	15	8	797	732	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	0	805	770	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

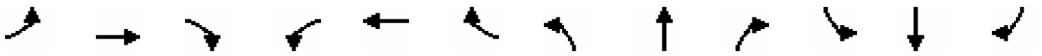
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	15	8	773	710	37
Future Vol, veh/h	23	15	8	773	710	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	13	1	1	0
Mvmt Flow	24	15	8	797	732	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1166	385	770	0	-	0
Stage 1	751	-	-	-	-	-
Stage 2	415	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.36	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.33	-	-	-
Pot Cap-1 Maneuver	190	619	772	-	-	-
Stage 1	432	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	187	619	772	-	-	-
Mov Cap-2 Maneuver	187	-	-	-	-	-
Stage 1	426	-	-	-	-	-
Stage 2	641	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	21.39	0.23	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	37	-	259	-	-
HCM Lane V/C Ratio	0.011	-	0.151	-	-
HCM Control Delay (s/veh)	9.7	0.1	21.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

APPENDIX D: LOS CALCULATIONS – BACKGROUND CONDITIONS

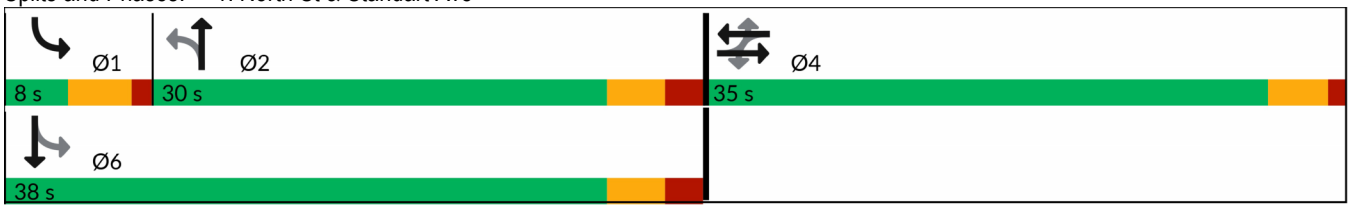


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	61	0	120	0	245	48	127	375	0
Future Volume (vph)	0	0	0	61	0	120	0	245	48	127	375	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.910			0.975				
Flt Protected					0.983						0.987	
Satd. Flow (prot)	0	1900	0	0	1650	0	0	3147	0	0	3418	0
Flt Permitted					0.907						0.701	
Satd. Flow (perm)	0	1900	0	0	1522	0	0	3147	0	0	2428	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					146			34				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		167			331			1725			287	
Travel Time (s)		3.8			7.5			39.2			6.5	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	7%	0%	1%	0%	13%	6%	2%	5%	0%
Adj. Flow (vph)	0	0	0	74	0	146	0	299	59	155	457	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	220	0	0	358	0	0	612	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			4			2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		2	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	22.0	22.0		22.0	22.0		30.0	30.0		8.0	30.0	
Minimum Split (s)	26.2	26.2		26.2	26.2		35.2	35.2		12.5	35.2	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		8.0	38.0	
Total Split (%)	47.9%	47.9%		47.9%	47.9%		41.1%	41.1%		11.0%	52.1%	
Maximum Green (s)	30.8	30.8		30.8	30.8		24.8	24.8		3.5	32.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.5	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.2			4.2			5.2			5.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	4.5	4.5		4.5	4.5		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)					22.0			24.8			32.8	
Actuated g/C Ratio					0.34			0.39			0.51	
v/c Ratio					0.35			0.28			0.47	
Control Delay (s/veh)					7.8			13.0			11.2	
Queue Delay					0.0			0.0			0.0	
Total Delay (s/veh)					7.8			13.0			11.2	
LOS					A			B			B	
Approach Delay (s/veh)					7.9			13.0			11.2	
Approach LOS					A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 73			
Actuated Cycle Length: 64.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay (s/veh): 11.2		Intersection LOS: B	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: North St & Standart Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	5	16	345	397	12
Future Volume (vph)	1	5	16	345	397	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.884				0.996	
Flt Protected	0.993			0.998		
Satd. Flow (prot)	1668	0	0	3260	3367	0
Flt Permitted	0.993			0.998		
Satd. Flow (perm)	1668	0	0	3260	3367	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	199			90	1725	
Travel Time (s)	4.5			2.0	39.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	11%	7%	0%
Adj. Flow (vph)	1	6	20	431	496	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	0	451	511	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	5	16	345	397	12
Future Vol, veh/h	1	5	16	345	397	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	11	7	0
Mvmt Flow	1	6	20	431	496	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	759	256	511	0	-	0
Stage 1	504	-	-	-	-	-
Stage 2	256	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	347	750	1064	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	339	750	1064	-	-	-
Mov Cap-2 Maneuver	339	-	-	-	-	-
Stage 1	565	-	-	-	-	-
Stage 2	770	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.84	0.53	0
HCM LOS	B		

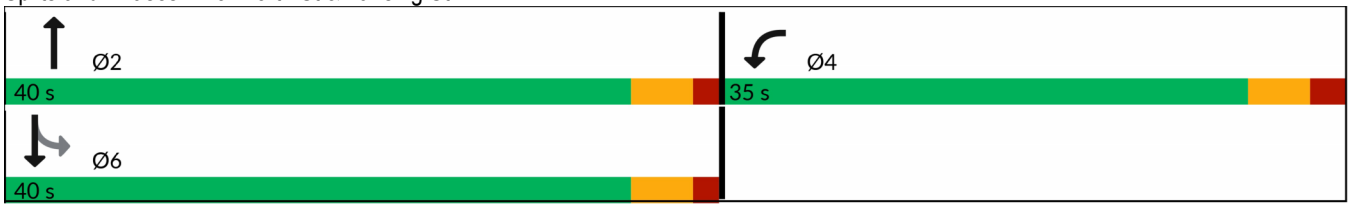
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	160	-	624	-	-
HCM Lane V/C Ratio	0.019	-	0.012	-	-
HCM Control Delay (s/veh)	8.4	0.2	10.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

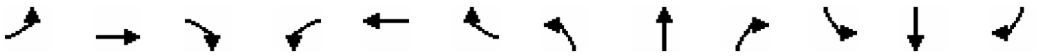
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	70	29	332	92	42	358
Future Volume (vph)	70	29	332	92	42	358
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.960		0.967			
Flt Protected	0.966					0.995
Satd. Flow (prot)	1625	0	3154	0	0	3374
Flt Permitted	0.966					0.867
Satd. Flow (perm)	1625	0	3154	0	0	2940
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	33		63			
Link Speed (mph)	30		30			30
Link Distance (ft)	585		196			90
Travel Time (s)	13.3		4.5			2.0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	12%	0%	12%	6%	2%	7%
Adj. Flow (vph)	86	36	410	114	52	442
Shared Lane Traffic (%)						
Lane Group Flow (vph)	122	0	524	0	0	494
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases					6	
Detector Phase	4		2		6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	27.5		24.0		20.0	20.0
Total Split (s)	35.0		40.0		40.0	40.0
Total Split (%)	46.7%		53.3%		53.3%	53.3%
Maximum Green (s)	29.5		35.0		35.0	35.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	2.0		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.5		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		0.2		0.2	0.2
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		8.0			
Flash Dont Walk (s)	15.0		11.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	10.4		39.1			39.1
Actuated g/C Ratio	0.19		0.70			0.70
v/c Ratio	0.37		0.23			0.23
Control Delay (s/veh)	18.8		4.0			4.7
Queue Delay	0.0		0.0			0.0
Total Delay (s/veh)	18.8		4.0			4.7
LOS	B		A			A
Approach Delay (s/veh)	18.8		4.1			4.7
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 55.8			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay (s/veh): 5.9		Intersection LOS: A	
Intersection Capacity Utilization 46.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: North St & Lansing St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	1	21	0	0	0	31	383	4	0	385	48
Future Volume (vph)	47	1	21	0	0	0	31	383	4	0	385	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.959						0.999			0.983	
Flt Protected		0.967						0.996				
Satd. Flow (prot)	0	1735	0	0	1900	0	0	3230	0	0	3299	0
Flt Permitted		0.967						0.996				
Satd. Flow (perm)	0	1735	0	0	1900	0	0	3230	0	0	3299	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1485			208			873			196	
Travel Time (s)		33.8			0.0			19.8			4.5	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	3%	12%	0%	0%	8%	4%
Adj. Flow (vph)	58	1	26	0	0	0	38	473	5	0	475	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	0	0	0	516	0	0	534	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			0			0	
Link Offset(ft)		0			15			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	1	21	0	0	0	31	383	4	0	385	48
Future Vol, veh/h	47	1	21	0	0	0	31	383	4	0	385	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	0	0	5	0	0	0	3	12	0	0	8	4
Mvmt Flow	58	1	26	0	0	0	38	473	5	0	475	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	818	1059	267	790	1086	239	535	0	0	478	0	0
Stage 1	505	505	-	552	552	-	-	-	-	-	-	-
Stage 2	313	554	-	238	535	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	7	7.5	6.5	6.9	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.35	3.5	4	3.3	2.23	-	-	2.2	-	-
Pot Cap-1 Maneuver	271	226	722	284	218	768	1022	-	-	1095	-	-
Stage 1	523	544	-	491	518	-	-	-	-	-	-	-
Stage 2	678	517	-	749	527	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	260	216	722	261	209	768	1022	-	-	1095	-	-
Mov Cap-2 Maneuver	260	216	-	261	209	-	-	-	-	-	-	-
Stage 1	523	544	-	470	496	-	-	-	-	-	-	-
Stage 2	649	495	-	721	527	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	20.2	0	0.94	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	263	-	-	321	-	1095	-	-
HCM Lane V/C Ratio	0.037	-	-	0.265	-	-	-	-
HCM Control Delay (s/veh)	8.7	0.3	-	20.2	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1	-	0	-	-

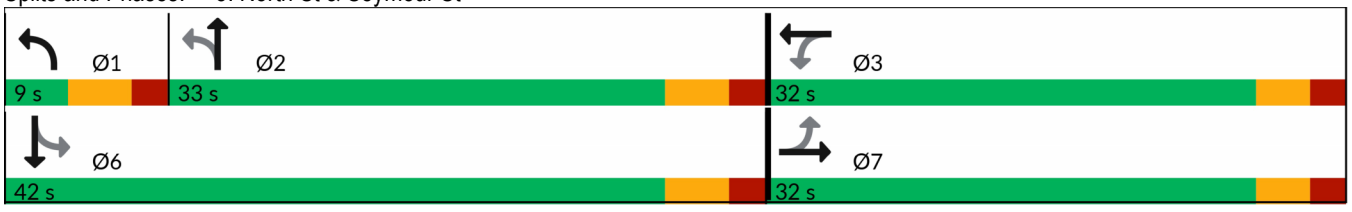
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	93	25	31	89	20	18	337	28	19	350	28
Future Volume (vph)	46	93	25	31	89	20	18	337	28	19	350	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.979			0.980			0.989			0.989	
Flt Protected		0.986			0.989			0.998			0.998	
Satd. Flow (prot)	0	1744	0	0	1745	0	0	3170	0	0	3267	0
Flt Permitted		0.883			0.910			0.924			0.924	
Satd. Flow (perm)	0	1562	0	0	1605	0	0	2935	0	0	3025	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			13			14			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		341			331			256			873	
Travel Time (s)		7.8			7.5			5.8			19.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	4%	5%	8%	5%	7%	0%	0%	12%	25%	5%	10%	0%
Adj. Flow (vph)	57	115	31	38	110	25	22	416	35	23	432	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	203	0	0	173	0	0	473	0	0	490	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		7			3		1!	2			6!	
Permitted Phases	7			3			2			6		
Detector Phase	7	7		3	3		1	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	12.0	12.0		12.0	12.0		4.0	12.0		12.0	12.0	
Minimum Split (s)	17.0	17.0		17.0	17.0		9.5	17.5		17.5	17.5	
Total Split (s)	32.0	32.0		32.0	32.0		9.0	33.0		42.0	42.0	
Total Split (%)	43.2%	43.2%		43.2%	43.2%		12.2%	44.6%		56.8%	56.8%	
Maximum Green (s)	27.0	27.0		27.0	27.0		3.5	27.5		36.5	36.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.5			5.5	
Lead/Lag							Lead	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	6.0	6.0		6.0	6.0		1.0	6.0		6.0	6.0	
Recall Mode	None	None		None	None		None	None		Max	Max	
Walk Time (s)	13.0	13.0		13.0	13.0			16.0		16.0	16.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		16.0			16.0			36.6			36.6	
Actuated g/C Ratio		0.25			0.25			0.58			0.58	
v/c Ratio		0.50			0.41			0.27			0.27	
Control Delay (s/veh)		23.0			21.0			7.5			7.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		23.0			21.0			7.5			7.5	
LOS		C			C			A			A	
Approach Delay (s/veh)		23.0			21.1			7.5			7.5	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 63.1			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay (s/veh): 11.6		Intersection LOS: B	
Intersection Capacity Utilization 46.6%		ICU Level of Service A	
Analysis Period (min) 15			

! Phase conflict between lane groups.

Splits and Phases: 5: North St & Seymour St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	34	38	8	37	27	18	131	10	17	180	3
Future Volume (vph)	15	34	38	8	37	27	18	131	10	17	180	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941			0.950			0.992			0.998	
Flt Protected		0.991			0.994			0.994			0.996	
Satd. Flow (prot)	0	1600	0	0	1723	0	0	1734	0	0	1766	0
Flt Permitted		0.917			0.943			0.951			0.967	
Satd. Flow (perm)	0	1481	0	0	1634	0	0	1659	0	0	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			28			11			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			1485			423			379	
Travel Time (s)		6.7			33.8			9.6			8.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	27%	3%	11%	0%	3%	7%	0%	9%	10%	12%	6%	33%
Adj. Flow (vph)	19	42	47	10	46	33	22	162	12	21	222	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	0	0	89	0	0	196	0	0	247	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	17.0	17.0		17.0	17.0		70.0	70.0		70.0	70.0	
Total Split (%)	19.5%	19.5%		19.5%	19.5%		80.5%	80.5%		80.5%	80.5%	
Maximum Green (s)	12.0	12.0		12.0	12.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.8			6.8			15.5			15.5	
Actuated g/C Ratio		0.23			0.23			0.53			0.53	
v/c Ratio		0.28			0.22			0.21			0.26	
Control Delay (s/veh)		8.8			8.2			6.2			6.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		8.8			8.2			6.2			6.7	
LOS		A			A			A			A	
Approach Delay (s/veh)		8.8			8.2			6.2			6.7	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 87			
Actuated Cycle Length: 29			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.29			
Intersection Signal Delay (s/veh): 7.1		Intersection LOS: A	
Intersection Capacity Utilization 29.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: State St & Perrine St

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	29	12	11	479	430	36
Future Volume (vph)	29	12	11	479	430	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.961				0.988	
Flt Protected	0.966			0.999		
Satd. Flow (prot)	1724	0	0	3504	3471	0
Flt Permitted	0.966			0.999		
Satd. Flow (perm)	1724	0	0	3504	3471	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			330	272	
Travel Time (s)	10.1			7.5	6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	8%	0%	3%	3%	0%
Adj. Flow (vph)	32	13	12	521	467	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	0	533	506	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.1%		ICU Level of Service A	
Analysis Period (min) 15			

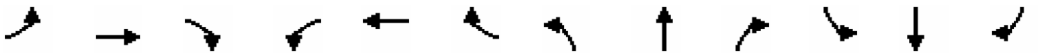
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	12	11	479	430	36
Future Vol, veh/h	29	12	11	479	430	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	0	3	3	0
Mvmt Flow	32	13	12	521	467	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	771	253	507	0	-	0
Stage 1	487	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.8	7.06	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.38	2.2	-	-	-
Pot Cap-1 Maneuver	341	728	1069	-	-	-
Stage 1	589	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	336	728	1069	-	-	-
Mov Cap-2 Maneuver	336	-	-	-	-	-
Stage 1	582	-	-	-	-	-
Stage 2	745	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	15.15	0.29	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	81	-	399	-	-
HCM Lane V/C Ratio	0.011	-	0.112	-	-
HCM Control Delay (s/veh)	8.4	0.1	15.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

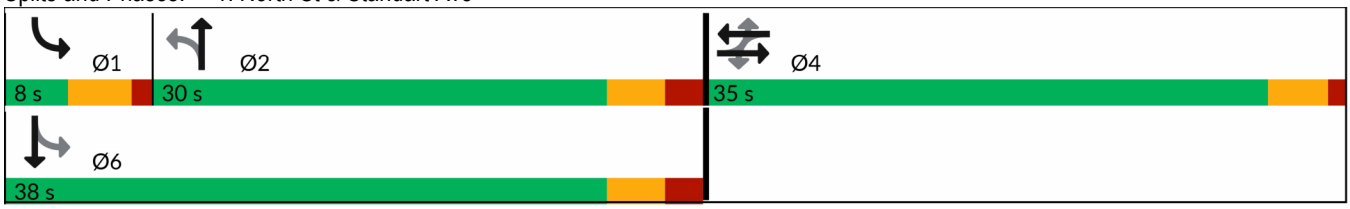


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	103	0	172	0	395	103	131	285	0
Future Volume (vph)	0	0	0	103	0	172	0	395	103	131	285	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.916			0.969				
Flt Protected					0.982						0.984	
Satd. Flow (prot)	0	1900	0	0	1692	0	0	3308	0	0	3481	0
Flt Permitted					0.885						0.622	
Satd. Flow (perm)	0	1900	0	0	1525	0	0	3308	0	0	2200	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					143			48				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		167			331			1725			287	
Travel Time (s)		3.8			7.5			39.2			6.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	7%	1%	0%	3%	0%
Adj. Flow (vph)	0	0	0	113	0	189	0	434	113	144	313	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	302	0	0	547	0	0	457	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			4			2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		2	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	22.0	22.0		22.0	22.0		30.0	30.0		8.0	30.0	
Minimum Split (s)	26.2	26.2		26.2	26.2		35.2	35.2		12.5	35.2	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		8.0	38.0	
Total Split (%)	47.9%	47.9%		47.9%	47.9%		41.1%	41.1%		11.0%	52.1%	
Maximum Green (s)	30.8	30.8		30.8	30.8		24.8	24.8		3.5	32.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.5	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.2			4.2			5.2			5.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	4.5	4.5		4.5	4.5		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)					22.0			24.8			32.8	
Actuated g/C Ratio					0.34			0.39			0.51	
v/c Ratio					0.49			0.41			0.38	
Control Delay (s/veh)					11.7			14.2			10.2	
Queue Delay					0.0			0.0			0.0	
Total Delay (s/veh)					11.7			14.2			10.2	
LOS					B			B			B	
Approach Delay (s/veh)					11.7			14.3			10.2	
Approach LOS					B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 73			
Actuated Cycle Length: 64.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay (s/veh): 12.3		Intersection LOS: B	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: North St & Standart Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	11	18	2	484	406	2
Future Volume (vph)	11	18	2	484	406	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.917				0.999	
Flt Protected	0.981					
Satd. Flow (prot)	1709	0	0	3375	3536	0
Flt Permitted	0.981					
Satd. Flow (perm)	1709	0	0	3375	3536	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	199			90	1725	
Travel Time (s)	4.5			2.0	39.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	7%	2%	0%
Adj. Flow (vph)	13	21	2	569	478	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	0	0	571	480	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	18	2	484	406	2
Future Vol, veh/h	11	18	2	484	406	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	7	2	0
Mvmt Flow	13	21	2	569	478	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	768	240	480	0	-	0
Stage 1	479	-	-	-	-	-
Stage 2	289	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	342	767	1093	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	740	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	341	767	1093	-	-	-
Mov Cap-2 Maneuver	341	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	740	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	12.4	0.06	0
HCM LOS	B		

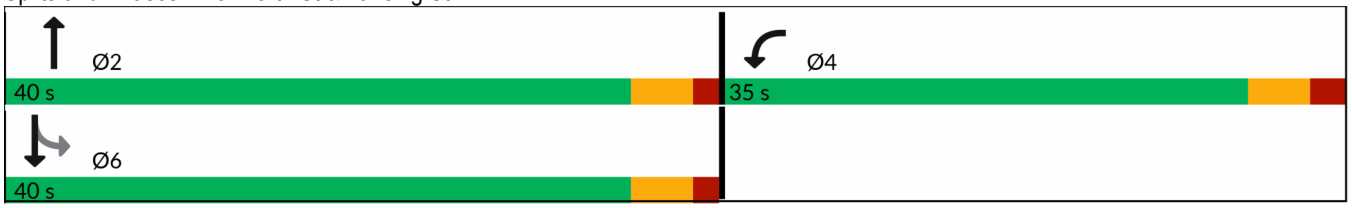
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	15	-	521	-	-
HCM Lane V/C Ratio	0.002	-	0.066	-	-
HCM Control Delay (s/veh)	8.3	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

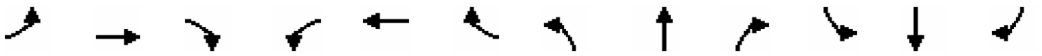
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	125	51	431	42	13	411
Future Volume (vph)	125	51	431	42	13	411
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.961		0.987			
Flt Protected	0.966					0.998
Satd. Flow (prot)	1680	0	3344	0	0	3534
Flt Permitted	0.966					0.937
Satd. Flow (perm)	1680	0	3344	0	0	3318
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	32		18			
Link Speed (mph)	30		30			30
Link Distance (ft)	585		196			90
Travel Time (s)	13.3		4.5			2.0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	7%	0%	7%	2%	0%	2%
Adj. Flow (vph)	147	60	507	49	15	484
Shared Lane Traffic (%)						
Lane Group Flow (vph)	207	0	556	0	0	499
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases					6	
Detector Phase	4		2		6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	27.5		24.0		20.0	20.0
Total Split (s)	35.0		40.0		40.0	40.0
Total Split (%)	46.7%		53.3%		53.3%	53.3%
Maximum Green (s)	29.5		35.0		35.0	35.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	2.0		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.5		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		0.2		0.2	0.2
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		8.0			
Flash Dont Walk (s)	15.0		11.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	12.0		35.0			35.0
Actuated g/C Ratio	0.21		0.61			0.61
v/c Ratio	0.55		0.27			0.24
Control Delay (s/veh)	22.9		5.8			5.9
Queue Delay	0.0		0.0			0.0
Total Delay (s/veh)	22.9		5.8			5.9
LOS	C		A			A
Approach Delay (s/veh)	23.0		5.9			5.9
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 57.6			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 8.7		Intersection LOS: A	
Intersection Capacity Utilization 39.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: North St & Lansing St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	29	0	0	0	27	445	0	0	461	74
Future Volume (vph)	33	0	29	0	0	0	27	445	0	0	461	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.937									0.979	
Flt Protected		0.974						0.997				
Satd. Flow (prot)	0	1734	0	0	1900	0	0	3376	0	0	3440	0
Flt Permitted		0.974						0.997				
Satd. Flow (perm)	0	1734	0	0	1900	0	0	3376	0	0	3440	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1485			208			873			196	
Travel Time (s)		33.8			0.0			19.8			4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	3%	1%
Adj. Flow (vph)	37	0	32	0	0	0	30	494	0	0	512	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	69	0	0	0	0	0	524	0	0	594	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			0			0	
Link Offset(ft)		0			15			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	0	29	0	0	0	27	445	0	0	461	74
Future Vol, veh/h	33	0	29	0	0	0	27	445	0	0	461	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	7	0	0	3	1
Mvmt Flow	37	0	32	0	0	0	30	494	0	0	512	82

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	861	1108	297	811	1149	247	594	0	0	494	0	0
Stage 1	553	553	-	554	554	-	-	-	-	-	-	-
Stage 2	307	554	-	256	594	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	253	212	705	275	200	759	992	-	-	1080	-	-
Stage 1	490	517	-	489	517	-	-	-	-	-	-	-
Stage 2	683	517	-	732	496	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	244	204	705	253	193	759	992	-	-	1080	-	-
Mov Cap-2 Maneuver	244	204	-	253	193	-	-	-	-	-	-	-
Stage 1	490	517	-	472	499	-	-	-	-	-	-	-
Stage 2	659	499	-	698	496	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	17.73	0	0.76	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	206	-	-	351	-	1080	-	-
HCM Lane V/C Ratio	0.03	-	-	0.196	-	-	-	-
HCM Control Delay (s/veh)	8.7	0.3	-	17.7	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	-	0	-	-

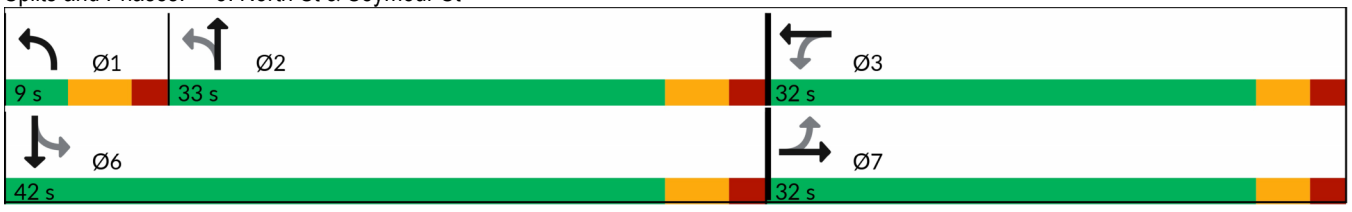
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	130	55	32	98	21	46	401	44	24	386	54
Future Volume (vph)	49	130	55	32	98	21	46	401	44	24	386	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.968			0.981			0.987			0.982	
Flt Protected		0.990			0.990			0.995			0.997	
Satd. Flow (prot)	0	1821	0	0	1845	0	0	3289	0	0	3421	0
Flt Permitted		0.909			0.903			0.867			0.913	
Satd. Flow (perm)	0	1672	0	0	1683	0	0	2866	0	0	3132	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			13			17			27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		341			331			256			873	
Travel Time (s)		7.8			7.5			5.8			19.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	8%	14%	0%	4%	0%
Adj. Flow (vph)	55	146	62	36	110	24	52	451	49	27	434	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	263	0	0	170	0	0	552	0	0	522	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		7			3		1!	2			6!	
Permitted Phases	7			3			2			6		
Detector Phase	7	7		3	3		1	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	12.0	12.0		12.0	12.0		4.0	12.0		12.0	12.0	
Minimum Split (s)	17.0	17.0		17.0	17.0		9.5	17.5		17.5	17.5	
Total Split (s)	32.0	32.0		32.0	32.0		9.0	33.0		42.0	42.0	
Total Split (%)	43.2%	43.2%		43.2%	43.2%		12.2%	44.6%		56.8%	56.8%	
Maximum Green (s)	27.0	27.0		27.0	27.0		3.5	27.5		36.5	36.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.5			5.5	
Lead/Lag							Lead	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	6.0	6.0		6.0	6.0		1.0	6.0		6.0	6.0	
Recall Mode	None	None		None	None		None	None		Max	Max	
Walk Time (s)	13.0	13.0		13.0	13.0			16.0		16.0	16.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		17.6			17.6			36.7			36.7	
Actuated g/C Ratio		0.27			0.27			0.57			0.57	
v/c Ratio		0.55			0.36			0.33			0.29	
Control Delay (s/veh)		22.8			19.4			8.8			8.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		22.8			19.4			8.8			8.2	
LOS		C			B			A			A	
Approach Delay (s/veh)		22.8			19.4			8.9			8.3	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 64.9			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 12.3		Intersection LOS: B	
Intersection Capacity Utilization 57.5%		ICU Level of Service B	
Analysis Period (min) 15			

! Phase conflict between lane groups.

Splits and Phases: 5: North St & Seymour St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	22	27	12	44	28	17	180	11	11	148	3
Future Volume (vph)	6	22	27	12	44	28	17	180	11	11	148	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.934			0.955			0.993			0.998	
Flt Protected		0.994			0.993			0.996			0.996	
Satd. Flow (prot)	0	1764	0	0	1778	0	0	1832	0	0	1872	0
Flt Permitted		0.945			0.936			0.971			0.974	
Satd. Flow (perm)	0	1677	0	0	1676	0	0	1786	0	0	1830	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			24			8			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			1485			423			379	
Travel Time (s)		6.7			33.8			9.6			8.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%	0%	3%	0%	0%	1%	0%
Adj. Flow (vph)	7	25	31	14	50	32	19	205	13	13	168	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	96	0	0	237	0	0	184	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	20.0	20.0		20.0	20.0		70.0	70.0		70.0	70.0	
Total Split (%)	22.2%	22.2%		22.2%	22.2%		77.8%	77.8%		77.8%	77.8%	
Maximum Green (s)	15.0	15.0		15.0	15.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.7			6.7			16.8			16.8	
Actuated g/C Ratio		0.22			0.22			0.56			0.56	
v/c Ratio		0.15			0.24			0.23			0.18	
Control Delay (s/veh)		6.8			9.1			6.1			5.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		6.8			9.1			6.1			5.9	
LOS		A			A			A			A	
Approach Delay (s/veh)		6.9			9.1			6.1			5.9	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 30.1			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.24			
Intersection Signal Delay (s/veh): 6.6		Intersection LOS: A	
Intersection Capacity Utilization 30.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: State St & Perrine St

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	15	8	781	717	37
Future Volume (vph)	23	15	8	781	717	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.948				0.993	
Flt Protected	0.970					
Satd. Flow (prot)	1747	0	0	3570	3551	0
Flt Permitted	0.970					
Satd. Flow (perm)	1747	0	0	3570	3551	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			330	272	
Travel Time (s)	10.1			7.5	6.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	13%	1%	1%	0%
Adj. Flow (vph)	24	15	8	805	739	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	0	813	777	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

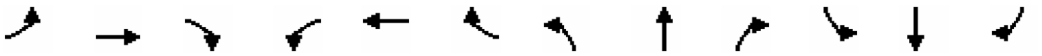
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	15	8	781	717	37
Future Vol, veh/h	23	15	8	781	717	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	13	1	1	0
Mvmt Flow	24	15	8	805	739	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1177	389	777	0	-	0
Stage 1	758	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.36	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.33	-	-	-
Pot Cap-1 Maneuver	187	616	767	-	-	-
Stage 1	429	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	184	616	767	-	-	-
Mov Cap-2 Maneuver	184	-	-	-	-	-
Stage 1	423	-	-	-	-	-
Stage 2	638	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	21.68	0.23	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	37	-	255	-	-
HCM Lane V/C Ratio	0.011	-	0.154	-	-
HCM Control Delay (s/veh)	9.7	0.1	21.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

APPENDIX E: LOS CALCULATIONS – FULL BUILD CONDITIONS

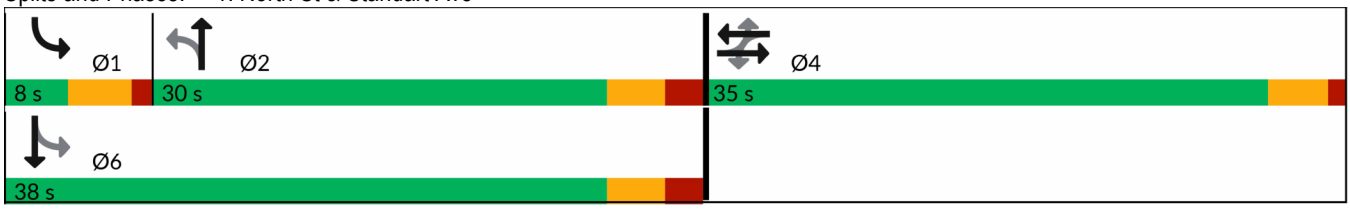


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	66	0	120	0	246	49	127	386	0
Future Volume (vph)	0	0	0	66	0	120	0	246	49	127	386	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.913			0.975				
Flt Protected					0.983						0.988	
Satd. Flow (prot)	0	1900	0	0	1654	0	0	3147	0	0	3421	0
Flt Permitted					0.900						0.703	
Satd. Flow (perm)	0	1900	0	0	1514	0	0	3147	0	0	2434	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					146			35				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		167			331			1647			287	
Travel Time (s)		3.8			7.5			37.4			6.5	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	7%	0%	1%	0%	13%	6%	2%	5%	0%
Adj. Flow (vph)	0	0	0	80	0	146	0	300	60	155	471	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	226	0	0	360	0	0	626	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			4			2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		2	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	22.0	22.0		22.0	22.0		30.0	30.0		8.0	30.0	
Minimum Split (s)	26.2	26.2		26.2	26.2		35.2	35.2		12.5	35.2	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		8.0	38.0	
Total Split (%)	47.9%	47.9%		47.9%	47.9%		41.1%	41.1%		11.0%	52.1%	
Maximum Green (s)	30.8	30.8		30.8	30.8		24.8	24.8		3.5	32.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.5	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.2			4.2			5.2			5.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	4.5	4.5		4.5	4.5		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)					22.0			24.8			32.8	
Actuated g/C Ratio					0.34			0.39			0.51	
v/c Ratio					0.36			0.29			0.48	
Control Delay (s/veh)					8.1			13.0			11.3	
Queue Delay					0.0			0.0			0.0	
Total Delay (s/veh)					8.1			13.0			11.3	
LOS					A			B			B	
Approach Delay (s/veh)					8.2			13.0			11.4	
Approach LOS					A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 73			
Actuated Cycle Length: 64.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay (s/veh): 11.3		Intersection LOS: B	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: North St & Standart Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	3	33	345	397	21
Future Volume (vph)	2	3	33	345	397	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.923				0.993	
Flt Protected	0.979			0.996		
Satd. Flow (prot)	1717	0	0	3267	3361	0
Flt Permitted	0.979			0.996		
Satd. Flow (perm)	1717	0	0	3267	3361	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	199			169	1647	
Travel Time (s)	4.5			2.0	39.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	11%	7%	0%
Adj. Flow (vph)	3	4	41	431	496	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	0	472	522	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	3	33	345	397	21
Future Vol, veh/h	2	3	33	345	397	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	11	7	0
Mvmt Flow	3	4	41	431	496	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	808	261	523	0	-	0
Stage 1	509	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	323	744	1054	-	-	-
Stage 1	574	-	-	-	-	-
Stage 2	733	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	309	744	1054	-	-	-
Mov Cap-2 Maneuver	309	-	-	-	-	-
Stage 1	549	-	-	-	-	-
Stage 2	733	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	12.67	1.04	0
HCM LOS	B		

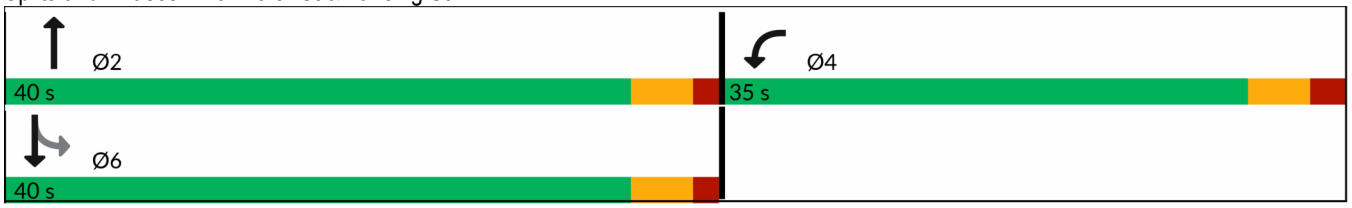
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	314	-	476	-	-
HCM Lane V/C Ratio	0.039	-	0.013	-	-
HCM Control Delay (s/veh)	8.6	0.3	12.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

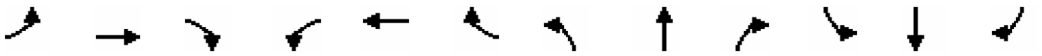
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	83	36	342	93	41	357
Future Volume (vph)	83	36	342	93	41	357
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.959		0.968			
Flt Protected	0.966					0.995
Satd. Flow (prot)	1624	0	3156	0	0	3373
Flt Permitted	0.966					0.867
Satd. Flow (perm)	1624	0	3156	0	0	2939
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	34		62			
Link Speed (mph)	30		30			30
Link Distance (ft)	585		196			169
Travel Time (s)	13.3		4.5			3.8
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	12%	0%	12%	6%	2%	7%
Adj. Flow (vph)	102	44	422	115	51	441
Shared Lane Traffic (%)						
Lane Group Flow (vph)	146	0	537	0	0	492
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases					6	
Detector Phase	4		2		6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	27.5		24.0		20.0	20.0
Total Split (s)	35.0		40.0		40.0	40.0
Total Split (%)	46.7%		53.3%		53.3%	53.3%
Maximum Green (s)	29.5		35.0		35.0	35.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	2.0		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.5		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		0.2		0.2	0.2
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		8.0			
Flash Dont Walk (s)	15.0		11.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	10.7		39.1			39.1
Actuated g/C Ratio	0.19		0.70			0.70
v/c Ratio	0.43		0.24			0.24
Control Delay (s/veh)	19.9		4.3			4.9
Queue Delay	0.0		0.0			0.0
Total Delay (s/veh)	19.9		4.3			4.9
LOS	B		A			A
Approach Delay (s/veh)	20.0		4.3			4.9
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 56.2			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay (s/veh): 6.5		Intersection LOS: A	
Intersection Capacity Utilization 46.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: North St & Lansing St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	1	24	0	0	0	64	394	4	0	384	61
Future Volume (vph)	47	1	24	0	0	0	64	394	4	0	384	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.954						0.999			0.980	
Flt Protected		0.968						0.993				
Satd. Flow (prot)	0	1726	0	0	1900	0	0	3237	0	0	3292	0
Flt Permitted		0.968						0.993				
Satd. Flow (perm)	0	1726	0	0	1900	0	0	3237	0	0	3292	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		671			208			873			196	
Travel Time (s)		33.8			0.0			19.8			4.5	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	3%	12%	0%	0%	8%	4%
Adj. Flow (vph)	58	1	30	0	0	0	79	486	5	0	474	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	0	0	0	570	0	0	549	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			0			0	
Link Offset(ft)		0			15			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.6%		ICU Level of Service A	
Analysis Period (min) 15			

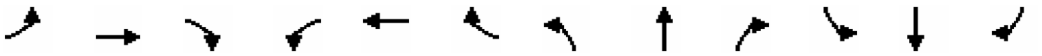
Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	1	24	0	0	0	64	394	4	0	384	61
Future Vol, veh/h	47	1	24	0	0	0	64	394	4	0	384	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	0	0	5	0	0	0	3	12	0	0	8	4
Mvmt Flow	58	1	30	0	0	0	79	486	5	0	474	75

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	913	1161	275	885	1196	246	549	0	0	491	0	0
Stage 1	512	512	-	647	647	-	-	-	-	-	-	-
Stage 2	401	649	-	238	549	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	7	7.5	6.5	6.9	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.35	3.5	4	3.3	2.23	-	-	2.2	-	-
Pot Cap-1 Maneuver	232	197	714	243	188	761	1009	-	-	1082	-	-
Stage 1	518	540	-	431	470	-	-	-	-	-	-	-
Stage 2	602	468	-	750	519	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	211	179	714	210	171	761	1009	-	-	1082	-	-
Mov Cap-2 Maneuver	211	179	-	210	171	-	-	-	-	-	-	-
Stage 1	518	540	-	392	427	-	-	-	-	-	-	-
Stage 2	547	426	-	717	519	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	24.28	0	1.75	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	492	-	-	274	-	1082	-	-
HCM Lane V/C Ratio	0.078	-	-	0.324	-	-	-	-
HCM Control Delay (s/veh)	8.9	0.6	-	24.3	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1.4	-	0	-	-



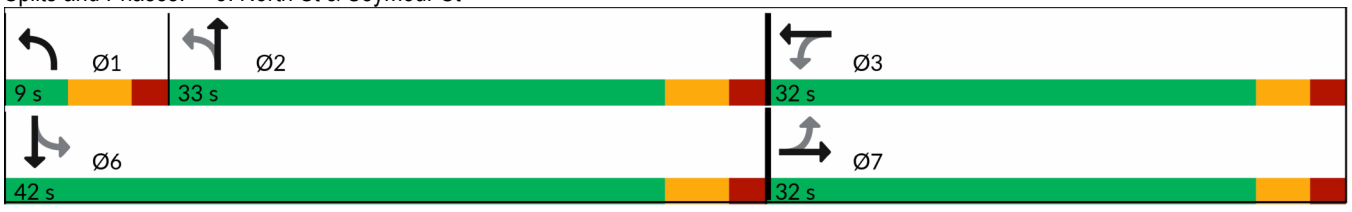
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	93	25	31	89	30	18	370	28	20	351	29
Future Volume (vph)	51	93	25	31	89	30	18	370	28	20	351	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.980			0.973			0.990			0.989	
Flt Protected		0.985			0.990			0.998			0.997	
Satd. Flow (prot)	0	1744	0	0	1740	0	0	3174	0	0	3265	0
Flt Permitted		0.865			0.914			0.926			0.918	
Satd. Flow (perm)	0	1532	0	0	1606	0	0	2945	0	0	3006	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			19			12			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		341			331			256			873	
Travel Time (s)		7.8			7.5			5.8			19.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	4%	5%	8%	5%	7%	0%	0%	12%	25%	5%	10%	0%
Adj. Flow (vph)	63	115	31	38	110	37	22	457	35	25	433	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	209	0	0	185	0	0	514	0	0	494	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		7			3		1!	2			6!	
Permitted Phases	7			3			2			6		
Detector Phase	7	7		3	3		1	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	12.0	12.0		12.0	12.0		4.0	12.0		12.0	12.0	
Minimum Split (s)	17.0	17.0		17.0	17.0		9.5	17.5		17.5	17.5	
Total Split (s)	32.0	32.0		32.0	32.0		9.0	33.0		42.0	42.0	
Total Split (%)	43.2%	43.2%		43.2%	43.2%		12.2%	44.6%		56.8%	56.8%	
Maximum Green (s)	27.0	27.0		27.0	27.0		3.5	27.5		36.5	36.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.5			5.5	
Lead/Lag							Lead	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	6.0	6.0		6.0	6.0		1.0	6.0		6.0	6.0	
Recall Mode	None	None		None	None		None	None		Max	Max	
Walk Time (s)	13.0	13.0		13.0	13.0			16.0		16.0	16.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		16.3			16.3			36.6			36.6	
Actuated g/C Ratio		0.26			0.26			0.58			0.58	
v/c Ratio		0.51			0.43			0.30			0.28	
Control Delay (s/veh)		23.5			20.6			7.9			7.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		23.5			20.6			7.9			7.7	
LOS		C			C			A			A	
Approach Delay (s/veh)		23.5			20.6			7.9			7.8	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 63.5			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay (s/veh): 11.9		Intersection LOS: B	
Intersection Capacity Utilization 48.8%		ICU Level of Service A	
Analysis Period (min) 15			

! Phase conflict between lane groups.

Splits and Phases: 5: North St & Seymour St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	37	38	9	37	28	18	131	18	26	180	3
Future Volume (vph)	15	37	38	9	37	28	18	131	18	26	180	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.943			0.949			0.986			0.998	
Flt Protected		0.992			0.994			0.995			0.994	
Satd. Flow (prot)	0	1610	0	0	1721	0	0	1724	0	0	1759	0
Flt Permitted		0.919			0.938			0.952			0.947	
Satd. Flow (perm)	0	1491	0	0	1624	0	0	1649	0	0	1676	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			29			20			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			813			423			379	
Travel Time (s)		6.7			18.5			9.6			8.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	27%	3%	11%	0%	3%	7%	0%	9%	10%	12%	6%	33%
Adj. Flow (vph)	19	46	47	11	46	35	22	162	22	32	222	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	112	0	0	92	0	0	206	0	0	258	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	17.0	17.0		17.0	17.0		70.0	70.0		70.0	70.0	
Total Split (%)	19.5%	19.5%		19.5%	19.5%		80.5%	80.5%		80.5%	80.5%	
Maximum Green (s)	12.0	12.0		12.0	12.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.9			6.9			15.6			15.6	
Actuated g/C Ratio		0.24			0.24			0.53			0.53	
v/c Ratio		0.29			0.22			0.23			0.28	
Control Delay (s/veh)		9.2			8.4			6.1			6.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		9.2			8.4			6.1			6.8	
LOS		A			A			A			A	
Approach Delay (s/veh)		9.2			8.4			6.1			6.9	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 87			
Actuated Cycle Length: 29.2			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.30			
Intersection Signal Delay (s/veh): 7.2		Intersection LOS: A	
Intersection Capacity Utilization 31.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: State St & Perrine St

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	29	12	19	479	430	47
Future Volume (vph)	29	12	19	479	430	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.961				0.985	
Flt Protected	0.966			0.998		
Satd. Flow (prot)	1724	0	0	3502	3462	0
Flt Permitted	0.966			0.998		
Satd. Flow (perm)	1724	0	0	3502	3462	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			330	272	
Travel Time (s)	10.1			7.5	6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	8%	0%	3%	3%	0%
Adj. Flow (vph)	32	13	21	521	467	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	0	542	518	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.1%		ICU Level of Service A	
Analysis Period (min) 15			

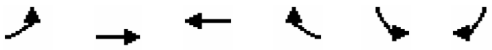
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	12	19	479	430	47
Future Vol, veh/h	29	12	19	479	430	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	0	3	3	0
Mvmt Flow	32	13	21	521	467	51

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	795	259	518	0	-	0
Stage 1	493	-	-	-	-	-
Stage 2	302	-	-	-	-	-
Critical Hdwy	6.8	7.06	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.38	2.2	-	-	-
Pot Cap-1 Maneuver	329	722	1058	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	322	722	1058	-	-	-
Mov Cap-2 Maneuver	322	-	-	-	-	-
Stage 1	572	-	-	-	-	-
Stage 2	730	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	15.6	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	137	-	384	-	-
HCM Lane V/C Ratio	0.02	-	0.116	-	-
HCM Control Delay (s/veh)	8.5	0.2	15.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	69	80	45	4	2
Future Volume (vph)	20	69	80	45	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.951		0.961	
Flt Protected		0.989			0.966	
Satd. Flow (prot)	0	1856	1739	0	1729	0
Flt Permitted		0.989			0.966	
Satd. Flow (perm)	0	1856	1739	0	1729	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		813	671		362	
Travel Time (s)		18.5	15.3		8.2	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	2%	1%	5%	2%	2%	2%
Adj. Flow (vph)	25	85	99	56	5	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	110	155	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	69	80	45	4	2
Future Vol, veh/h	20	69	80	45	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	1	5	2	2	2
Mvmt Flow	25	85	99	56	5	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	154	0	-	0	261	127
Stage 1	-	-	-	-	127	-
Stage 2	-	-	-	-	135	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1426	-	-	-	728	924
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	892	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1426	-	-	-	715	924
Mov Cap-2 Maneuver	-	-	-	-	715	-
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	892	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.7	0	9.7
HCM LOS			A

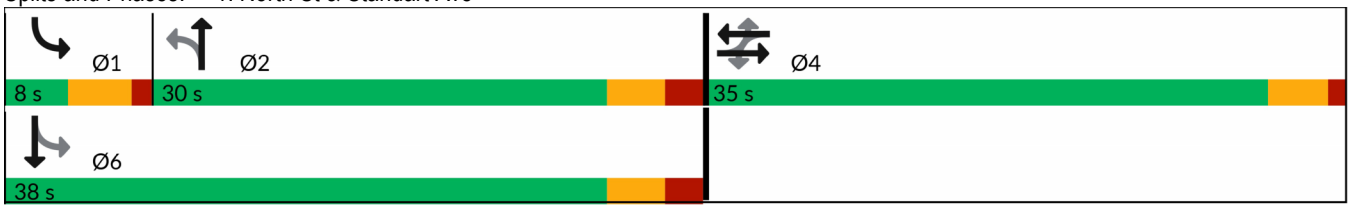
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	404	-	-	-	773
HCM Lane V/C Ratio	0.017	-	-	-	0.01
HCM Control Delay (s/veh)	7.6	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	104	0	172	0	405	107	131	285	0
Future Volume (vph)	0	0	0	104	0	172	0	405	107	131	285	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.916			0.969				
Flt Protected					0.982						0.984	
Satd. Flow (prot)	0	1900	0	0	1692	0	0	3308	0	0	3481	0
Flt Permitted					0.885						0.617	
Satd. Flow (perm)	0	1900	0	0	1525	0	0	3308	0	0	2183	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					141			50				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		167			331			1639			287	
Travel Time (s)		3.8			7.5			37.3			6.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	7%	1%	0%	3%	0%
Adj. Flow (vph)	0	0	0	114	0	189	0	445	118	144	313	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	303	0	0	563	0	0	457	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			4			2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		2	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	22.0	22.0		22.0	22.0		30.0	30.0		8.0	30.0	
Minimum Split (s)	26.2	26.2		26.2	26.2		35.2	35.2		12.5	35.2	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		8.0	38.0	
Total Split (%)	47.9%	47.9%		47.9%	47.9%		41.1%	41.1%		11.0%	52.1%	
Maximum Green (s)	30.8	30.8		30.8	30.8		24.8	24.8		3.5	32.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.5	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.2			4.2			5.2			5.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	4.5	4.5		4.5	4.5		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)					22.0			24.8			32.8	
Actuated g/C Ratio					0.34			0.39			0.51	
v/c Ratio					0.49			0.43			0.39	
Control Delay (s/veh)					11.8			14.3			10.2	
Queue Delay					0.0			0.0			0.0	
Total Delay (s/veh)					11.8			14.3			10.2	
LOS					B			B			B	
Approach Delay (s/veh)					11.9			14.4			10.2	
Approach LOS					B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 73			
Actuated Cycle Length: 64.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay (s/veh): 12.4		Intersection LOS: B	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: North St & Standart Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	30	3	484	406	2
Future Volume (vph)	20	30	3	484	406	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.920				0.999	
Flt Protected	0.980					
Satd. Flow (prot)	1713	0	0	3375	3536	0
Flt Permitted	0.980					
Satd. Flow (perm)	1713	0	0	3375	3536	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	199			176	1639	
Travel Time (s)	4.5			2.0	39.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	7%	2%	0%
Adj. Flow (vph)	24	35	4	569	478	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	0	0	573	480	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	30	3	484	406	2
Future Vol, veh/h	20	30	3	484	406	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	7	2	0
Mvmt Flow	24	35	4	569	478	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	771	240	480	0	-	0
Stage 1	479	-	-	-	-	-
Stage 2	292	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	341	767	1093	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	340	767	1093	-	-	-
Mov Cap-2 Maneuver	340	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	738	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	12.97	0.08	0
HCM LOS	B		

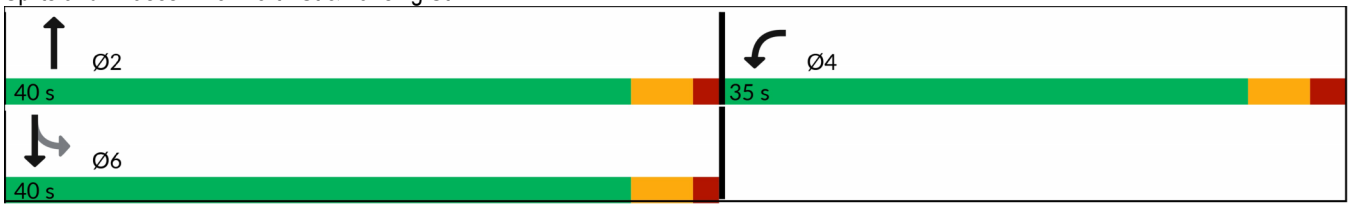
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	22	-	510	-	-
HCM Lane V/C Ratio	0.003	-	0.115	-	-
HCM Control Delay (s/veh)	8.3	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

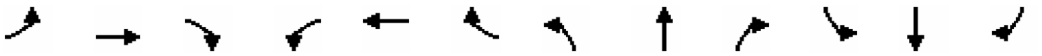
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	126	52	431	54	18	418
Future Volume (vph)	126	52	431	54	18	418
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.961		0.983			
Flt Protected	0.966					0.998
Satd. Flow (prot)	1681	0	3334	0	0	3535
Flt Permitted	0.966					0.926
Satd. Flow (perm)	1681	0	3334	0	0	3280
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	33		24			
Link Speed (mph)	30		30			30
Link Distance (ft)	585		196			176
Travel Time (s)	13.3		4.5			4.0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	7%	0%	7%	2%	0%	2%
Adj. Flow (vph)	148	61	507	64	21	492
Shared Lane Traffic (%)						
Lane Group Flow (vph)	209	0	571	0	0	513
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases					6	
Detector Phase	4		2		6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	27.5		24.0		20.0	20.0
Total Split (s)	35.0		40.0		40.0	40.0
Total Split (%)	46.7%		53.3%		53.3%	53.3%
Maximum Green (s)	29.5		35.0		35.0	35.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	2.0		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.5		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		0.2		0.2	0.2
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		8.0			
Flash Dont Walk (s)	15.0		11.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	12.1		35.0			35.0
Actuated g/C Ratio	0.21		0.61			0.61
v/c Ratio	0.55		0.28			0.25
Control Delay (s/veh)	22.9		5.8			6.0
Queue Delay	0.0		0.0			0.0
Total Delay (s/veh)	22.9		5.8			6.0
LOS	C		A			A
Approach Delay (s/veh)	23.0		5.9			6.0
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 57.6			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 8.7		Intersection LOS: A	
Intersection Capacity Utilization 43.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: North St & Lansing St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	0	59	0	0	0	30	445	0	0	475	73
Future Volume (vph)	45	0	59	0	0	0	30	445	0	0	475	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.923									0.980	
Flt Protected		0.979						0.997				
Satd. Flow (prot)	0	1717	0	0	1900	0	0	3378	0	0	3444	0
Flt Permitted		0.979						0.997				
Satd. Flow (perm)	0	1717	0	0	1900	0	0	3378	0	0	3444	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		732			208			873			196	
Travel Time (s)		33.8			0.0			19.8			4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	3%	1%
Adj. Flow (vph)	50	0	66	0	0	0	33	494	0	0	528	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	116	0	0	0	0	0	527	0	0	609	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			0			0	
Link Offset(ft)		0			15			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	0	59	0	0	0	30	445	0	0	475	73
Future Vol, veh/h	45	0	59	0	0	0	30	445	0	0	475	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	7	0	0	3	1
Mvmt Flow	50	0	66	0	0	0	33	494	0	0	528	81

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	882	1129	304	825	1170	247	609	0	0	494	0	0
Stage 1	568	568	-	561	561	-	-	-	-	-	-	-
Stage 2	314	561	-	264	609	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	244	206	698	268	195	759	980	-	-	1080	-	-
Stage 1	480	509	-	485	513	-	-	-	-	-	-	-
Stage 2	677	513	-	724	489	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	234	197	698	233	187	759	980	-	-	1080	-	-
Mov Cap-2 Maneuver	234	197	-	233	187	-	-	-	-	-	-	-
Stage 1	480	509	-	465	493	-	-	-	-	-	-	-
Stage 2	650	493	-	656	489	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	18.78	0	0.84	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	227	-	-	376	-	1080	-	-
HCM Lane V/C Ratio	0.034	-	-	0.307	-	-	-	-
HCM Control Delay (s/veh)	8.8	0.3	-	18.8	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.3	-	0	-	-

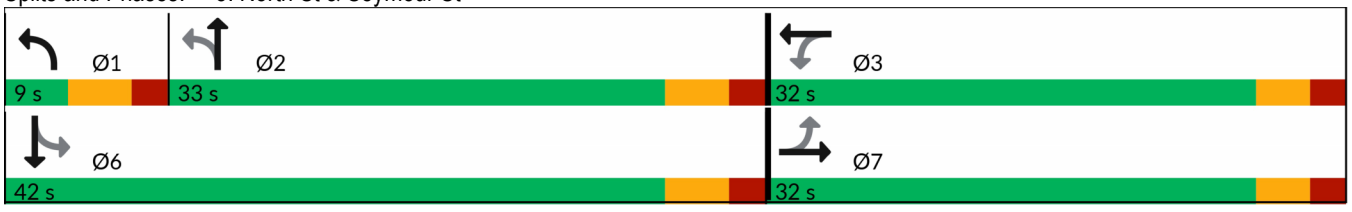
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	130	55	32	98	22	46	403	44	32	417	59
Future Volume (vph)	50	130	55	32	98	22	46	403	44	32	417	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.968			0.980			0.987			0.983	
Flt Protected		0.990			0.990			0.995			0.997	
Satd. Flow (prot)	0	1821	0	0	1843	0	0	3289	0	0	3425	0
Flt Permitted		0.908			0.904			0.860			0.898	
Satd. Flow (perm)	0	1670	0	0	1683	0	0	2843	0	0	3085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			13			17			27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		341			331			256			873	
Travel Time (s)		7.8			7.5			5.8			19.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	8%	14%	0%	4%	0%
Adj. Flow (vph)	56	146	62	36	110	25	52	453	49	36	469	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	264	0	0	171	0	0	554	0	0	571	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		7			3		1!	2			6!	
Permitted Phases	7			3			2			6		
Detector Phase	7	7		3	3		1	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	12.0	12.0		12.0	12.0		4.0	12.0		12.0	12.0	
Minimum Split (s)	17.0	17.0		17.0	17.0		9.5	17.5		17.5	17.5	
Total Split (s)	32.0	32.0		32.0	32.0		9.0	33.0		42.0	42.0	
Total Split (%)	43.2%	43.2%		43.2%	43.2%		12.2%	44.6%		56.8%	56.8%	
Maximum Green (s)	27.0	27.0		27.0	27.0		3.5	27.5		36.5	36.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.5			5.5	
Lead/Lag							Lead	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	6.0	6.0		6.0	6.0		1.0	6.0		6.0	6.0	
Recall Mode	None	None		None	None		None	None		Max	Max	
Walk Time (s)	13.0	13.0		13.0	13.0			16.0		16.0	16.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		17.7			17.7			36.7			36.7	
Actuated g/C Ratio		0.27			0.27			0.57			0.57	
v/c Ratio		0.55			0.36			0.34			0.32	
Control Delay (s/veh)		22.8			19.4			8.9			8.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		22.8			19.4			8.9			8.5	
LOS		C			B			A			A	
Approach Delay (s/veh)		22.9			19.4			8.9			8.6	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 64.9			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 12.3		Intersection LOS: B	
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			

! Phase conflict between lane groups.

Splits and Phases: 5: North St & Seymour St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	22	27	19	46	35	17	180	12	12	148	3
Future Volume (vph)	6	22	27	19	46	35	17	180	12	12	148	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.934			0.953			0.992			0.998	
Flt Protected		0.994			0.990			0.996			0.996	
Satd. Flow (prot)	0	1764	0	0	1768	0	0	1830	0	0	1872	0
Flt Permitted		0.942			0.917			0.971			0.971	
Satd. Flow (perm)	0	1672	0	0	1637	0	0	1784	0	0	1825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			26			9			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			753			423			379	
Travel Time (s)		6.7			17.1			9.6			8.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%	0%	3%	0%	0%	1%	0%
Adj. Flow (vph)	7	25	31	22	52	40	19	205	14	14	168	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	114	0	0	238	0	0	185	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	20.0	20.0		20.0	20.0		70.0	70.0		70.0	70.0	
Total Split (%)	22.2%	22.2%		22.2%	22.2%		77.8%	77.8%		77.8%	77.8%	
Maximum Green (s)	15.0	15.0		15.0	15.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		7.0			7.0			16.0			16.0	
Actuated g/C Ratio		0.24			0.24			0.54			0.54	
v/c Ratio		0.15			0.28			0.24			0.18	
Control Delay (s/veh)		6.7			9.4			6.3			6.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		6.7			9.4			6.3			6.2	
LOS		A			A			A			A	
Approach Delay (s/veh)		6.7			9.5			6.4			6.2	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 29.5			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.28			
Intersection Signal Delay (s/veh): 7.0		Intersection LOS: A	
Intersection Capacity Utilization 32.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: State St & Perrine St

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	33	21	9	781	717	39
Future Volume (vph)	33	21	9	781	717	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.947				0.992	
Flt Protected	0.971			0.999		
Satd. Flow (prot)	1747	0	0	3566	3547	0
Flt Permitted	0.971			0.999		
Satd. Flow (perm)	1747	0	0	3566	3547	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			330	272	
Travel Time (s)	10.1			7.5	6.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	13%	1%	1%	0%
Adj. Flow (vph)	34	22	9	805	739	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	56	0	0	814	779	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.9%		ICU Level of Service A	
Analysis Period (min) 15			

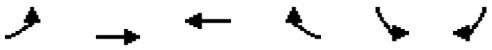
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	33	21	9	781	717	39
Future Vol, veh/h	33	21	9	781	717	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	13	1	1	0
Mvmt Flow	34	22	9	805	739	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1180	390	779	0	-	0
Stage 1	759	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.36	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.33	-	-	-
Pot Cap-1 Maneuver	186	615	766	-	-	-
Stage 1	428	-	-	-	-	-
Stage 2	636	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	183	615	766	-	-	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	421	-	-	-	-	-
Stage 2	636	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	23.3	0.26	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	41	-	252	-	-
HCM Lane V/C Ratio	0.012	-	0.221	-	-
HCM Control Delay (s/veh)	9.8	0.1	23.3	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	63	99	5	41	18
Future Volume (vph)	2	63	99	5	41	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.994		0.958	
Flt Protected		0.999			0.967	
Satd. Flow (prot)	0	1897	1869	0	1726	0
Flt Permitted		0.999			0.967	
Satd. Flow (perm)	0	1897	1869	0	1726	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		753	732		491	
Travel Time (s)		17.1	16.6		11.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	1%	2%	2%	2%
Adj. Flow (vph)	2	68	108	5	45	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	70	113	0	65	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	63	99	5	41	18
Future Vol, veh/h	2	63	99	5	41	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	1	2	2	2
Mvmt Flow	2	68	108	5	45	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	113	0	-	0	183	110
Stage 1	-	-	-	-	110	-
Stage 2	-	-	-	-	73	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1476	-	-	-	806	943
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	950	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1476	-	-	-	805	943
Mov Cap-2 Maneuver	-	-	-	-	805	-
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	950	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.23	0	9.62
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	55	-	-	-	843
HCM Lane V/C Ratio	0.001	-	-	-	0.076
HCM Control Delay (s/veh)	7.4	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Exhibit G

Legend

- Project Location
- Remediation Parcels

Remediation Sites

- Active Sites
- No-Action Sites
- Closed Sites

Remediation Sites Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: NYSDEC

PASSERO architecture engineering

Service Credits:

1. The NYS DEC asks to be credited in derived products., Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Microsoft, Vantor

Date: 3/9/2026

Exhibit H

Legend

- Project Location

Soils

Hydrologic Group Rating

- C
- N/A

Soil Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: NRCS Web Soil Survey

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Date: 3/9/2026

Exhibit I

Legend

- Project Location
- 0.2% Annual Chance Flood Hazard
- 1% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Area with Reduced Risk Due to Levee
- Special Floodway

FEMA Flood Areas Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: FEMA FIRMette 36011C0305E

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Date: 3/9/2026

Exhibit J

Legend

- Project Location
- Principal Aquifers

Principal Aquifer Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: NYS GIS Clearinghouse

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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Microsoft, Vantor

Date: 3/9/2026

Legend

- Project Location
- Sole Source Aquifers

Sole Source Aquifer Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: NYS GIS Clearinghouse

PASSERO architecture engineering

Service Credits:

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Vantor

Date: 3/9/2026

PASSERO
engineering architecture

[redacted]
Rochester, NY 14614
585.[redacted] | passero.com

April 14, 2026

City of Auburn Planning Board
City of Auburn Code Enforcement Office
24 South Street
Auburn, NY 13021

Re: Site Plan Review Application - Proposed Auburn Community Hospital Health Campus: Perrine Street / North Street (NYS Route 34) / West Park Avenue City of Auburn, Cayuga County, New York Tax IDs [redacted]

Dear Members of the Planning Board,

On behalf of the applicant, Park Grove Realty, LLC, Passero Associates is submitting this application for Site Plan Review for the proposed Auburn Community Hospital Health Campus located in the City of Auburn, Cayuga County, New York.

Project Description

The proposed project involves the combination of four parcels to facilitate the redevelopment of approximately 5.4 acres located along Perrine Street, North Street (NYS Route 34), and West Park Avenue. Development of the site will include demolition of existing buildings within the proposed disturbance area, followed by construction of a new three-story medical office building with an approximate 30,700 square foot footprint and a total building area of approximately 80,750 square feet. The facility will provide medical office space, patient access areas, and associated support services supporting Auburn Medical Center.

Site improvements will include construction of internal access drives, parking areas, sidewalks, landscaping, and utility connections necessary to support the proposed building and site operations.

Zoning Compliance

The project site is located within the General Commercial zoning district according to the City of Auburn Zoning Code. Medical office facilities and associated professional services are a permitted use within this district. The proposed development is consistent with the intent of the General Commercial district, which supports a range of commercial and service-oriented uses that serve the surrounding community. The project has been designed to comply with applicable zoning requirements including building setbacks, parking requirements, and site design standards.

Comprehensive Plan Alignment

The proposed project is consistent with the goals and recommendations of the City of Auburn Comprehensive Plan, which encourages investment in healthcare services, redevelopment of underutilized properties, and continued economic development within the city. The development of a new medical office building supporting Auburn Medical Center represents reinvestment in existing community infrastructure and will contribute to the continued provision of healthcare services for residents of Auburn and the surrounding region.

Submission Materials

As part of this application, the following materials are being submitted for Planning Board review:

- Letter of Intent
- Site Plan Review Application
- Full Environmental Assessment Form
- Site Plans
- Subdivision Map
- Architectural Floor Plans
- Architectural Elevations
- Engineer's Report
- SWPPP Report
- Traffic Impact Report
- NYSEG Will Serve Letter
- $250 Review Fee (Separate Cover)

If you have any questions or require additional information, please contact me at (585) 760-8565. Thank you for your consideration.

Sincerely,

Andrew Burns
Professional Engineer | Project Manager

CITY OF AUBURN, NY

"History's Hometown"

SITE PLAN REVIEW

APPLICATION

Return completed application, all required materials to, and the applicable fee to:
Code Enforcement Office ● Memorial City Hall ● 24 South Street ● Auburn, New York 13021

For assistance call the Office of Planning and Economic Development at (315) 255-4118.

Submission Checklist

Office Use	☐ **MINOR** SITE PLAN REVIEW REQUIREMENTS:
☐ ☐ ☐ ☐ ☐ ☐ ☐	1) Fee: $100.00 2) One (1) copy of the application 3) One (1) copy of the Environmental Assessment Form. Please utilize the NYS Dept. of Environmental Conservation EAF Mapper tool available at https://gisservices.dec.ny.gov/eafmapper/ 4) One (1) copy of an original Instrument Survey Map that show current site conditions. 5) Three (3) copies of a scaled site plan (see attached Site Plan Checklist). 6) One (1) copy of scaled elevations of proposed structures, or façade renovation to existing structures, as applicable. 7) Digital versions of all documents in portable document format (PDF) files via email or file transfer.
Office Use	☒ **MAJOR** SITE PLAN REVIEW REQUIREMENTS:
☐ ☐ ☐ ☐	**All of the above documents, 2-7, plus:** 1) Fee: $250.00 2) One (1) copy of scaled floor plans for all proposed buildings. 3) Color renderings or other type of visual aids depicting the proposed development in its built condition. 4) Stormwater drainage report, including calculations, or Stormwater Pollution Prevention Plan, as applicable.

IMPORTANT

All above materials must be submitted by the appropriate due date to be included on the Planning Board Agenda (see schedule below). Certain plans may have to be stamped by a design professional licensed in the State of New York. The City, as needed for review purposes, may require additional information regarding a project.

[For Office Use Only]

Address:_____ Project Name:_____

Date Submitted:_____ Fee:_____ Received By:_____

Doc ID: e6f06af9d5b8f304786ceadfb9884592dc84ddb7

CITY OF AUBURN, NY

"History's Hometown"

SITE PLAN REVIEW

Project Information

(Please Type or Print)

1. Applicant: Andrew Bodewes Company Name: Park Grove Reality LLC

   Address: [redacted] City/State: Rochester, NY Zip: 14607

   Email: [redacted] Phone: (585) 435-4766

   Interest in Property: ☐ Owner ☐ Lessee ☒ Other, Explain Agent

2. Project Name: Auburn Community Hospital Health Campus

3. Project Address(es): [redacted] Auburn, Cayuga County NY

4. Tax Map Number(s): [redacted].

5. Present Zoning District: C - General Commercial

6. Property within Historic District: ☐ Yes ☒ No

7. Property within Flood Zone: ☐ X ☐ A ☐ AE ☒ Other, Explain Not within a Flood Zone

8. Detailed Project Description (Please attach separately):

   A detailed project description shall include, but not be limited to, the following information: Project acreage; existing and proposed uses and their hours of operation; total square footage; square footage of individual project components; square footage of existing and proposed impervious surface; existing and proposed dwelling units; height of existing and proposed structure(s) in feet and stories; and the number of existing and proposed parking spaces; façade renovations; and identifying how the site is accessed.

9. Anticipated Construction Period: November 2026 to December 2027

Consultant Contact Information

1. Plan Preparer*: Andrew Burns, PE

   *A New York State Licensed Design Professional, i.e. Landscape Architect (RLA), Engineer (PE), and/or Architect (RA) must prepare all plans for Major Site Plan Review.

   Address: [redacted] City/State: Rochester, NY Zip: 14614

   Email: [redacted] Phone: 585-760-8565; ext: 306

2. Surveyor: Alan Snyder, PLS

   Address: 242 W Main Street, Suite 100 City/State: Rochester, NY Zip: 14614

   Email: [redacted] Phone: 585-760-8536; ext:116

Doc ID: e6f06af9d5b8f304786ceadfb9884924c84ddb7

CITY OF AUBURN, NY

"History's Hometown"

SITE PLAN REVIEW

3. Attorney: _____

   Address: _____ City/State: _____ Zip: _____

   Email: _____ Phone: _____

4. Other: _____ Role: _____

   Address: _____ City/State: _____ Zip: _____

   Email: _____ Phone: _____

Certification / Authorization

APPLICANT: I certify that the information supplied on this application is complete and accurate, and that the project described, if approved, will be completed in accordance with the terms and conditions of said approval.

Signature: _____ Date: 04 / 13 / 2026

OWNER (if other than applicant): I have read and familiarized myself with the contents of this application and do hereby consent to its submission and processing.

Signature: _____ Date: 04 / 13 / 2026

Doc ID: e6f06af9d5b8f304786ceadfb9884924c84ddb7

City of Auburn Planning Board 2026 Master Schedule

Meetings: 1st Tuesday of Every Month at 6:30pm
Except where noted

Completed applications are due on the 2nd Tuesday of the month prior to the next month's Planning Board Meeting.

Planning Board Meeting	Completed Application Deadline
January 6, 2026	December 9, 2025
February 3, 2026	January 13, 2026
March 3, 2026	February 10, 2026
April 7, 2026	March 10, 2026
May 5, 2026	April 14, 2026
June 2, 2026	May 12, 2026
July 7, 2026	June 9, 2026
August 4, 2026	July 11, 2026
September 1, 2026	August 11, 2026
October 6, 2026	September 8, 2026
November 3, 2026	October 13, 2026
December 1, 2026	November 10, 2026

Doc ID: e6f06af9d5b8f304786ceadfb9884592dc84ddb7

CITY OF AUBURN, NY

"History's Hometown"

SITE PLAN REVIEW

INFORMATION and INSTRUCTIONS

The following minimum information is required as part of the site plan application, unless specifically waived by the Planning Board. Items marked by an asterisk (*) may be waived on applications for minor site plan review as determined by the Design Review Committee.

1. Survey of the property signed by a New York State Licensed Surveyor and which includes the following items:
    - A. Property lines with metes and bounds and with North arrow indicated
    - B. Centerline and edge of pavement
    - C. Street right of way
    - D. Location of all existing trees of greater than a five (5) inch caliper*
    - E. Proposed and existing contour lines at one (1) foot intervals (Identify all slopes in excess of 10%. Contours to be to USGS Datum.*
    - F. Location of Federal Floodway or Federal Floodplain*
    - G. All existing easements
    - H. All existing structures
    - I. All existing Utilities: electric, gas, telephone, cable, water, sewer, etc.*

2. Layout plan with:
    - A. Dimensions of all proposed structure(s) and/or those to be modified.
        1) Show distances from front side and rear property lines
    - B. Parking areas with dimensions, including:
        1) Size of proposed spaces
        2) Proposal of striping
        3) Number of existing and proposed spaces
        4) Number of existing and proposed handicapped spaces
        5) Loading areas*
        6) Aisles
        7) Extent and type of curbing
        8) Location of curb cuts, exits and entrances
        9) Proposal for snow storage*
    - C. Sidewalks and provisions for pedestrian access
    - D. All existing or proposed outside storage, including:
        1) Location of any outside trash receptacles, recycling containers, and proposed screening
        2) Location, size and type of all proposed utilities*
    - E. Proposed signage to include signage both on the building and any existing or proposed freestanding signage and the type of illumination proposed, including all directional signs to be used on site*
    - F. Location of any outside equipment including generators, HVAC and the like*
    - G. Location of closest fire hydrant*
    - H. Detail drawings sufficient to provide complete information on all planned new or modified elements of the site including:
        1. Fence details*
        2. Curbing sizes and types*
        3. Paving materials, thicknesses, etc.*
        4. Under ground and above ground utility structures*

3. Landscaping plan with:
    - A. All existing and/or proposed landscaping and planters*
    - B. Planting schedules with number, type and sizes*

Doc ID: e6f06af9d5b8f304786ceadfb9884592484dd67

4. Drainage plan including all existing and proposed drainage structures.
   A. Show inverts and pipe sizes*
   B. Details of proposed structures*

5. Storm water management plan (meeting NYS Phase II SPDES) including erosion and sedimentation control*
   A. Storm water management structures*

6. Lighting plan with all existing and/or proposed site lighting, both on the building and on the site.
   A. Include pole types and pole height*
   B. Fixture and lamp type and wattage*

7. Photometric plan with foot-candle levels when light extends to ten (10) feet onto adjacent property*

8. Elevations to scale of all sides of structure(s) to be added or modified including:
   A. Building materials and colors
   B. Any rooftop HVAC or other equipment
   C. Height of building from lowest grade

9. Attach a Short Environmental Assessment Form (EAF). (Type I and some unlisted actions will require a long form.)

Doc ID: e6f06af9d5b8f304786ceadfb9884592 4c84ddb7

Title	Auburn MOB Site Plan Application
File name	Site_Plan_Applica...ity_of_Auburn.pdf
Document ID	e6f06af9d5b8f304786ceadfb96945924c84ddb7
Audit trail date format	MM / DD / YYYY
Status	Signed

Document History

SENT	**04 / 13 / 2026** 14:03:24 UTC	Sent for signature to Andrew Bodewes (abodewes@parkgrovellc.com) and Jason Lesch (jlesch@auburnhospital.org) from cmays@parkgrovellc.com IP: 65.124.179.11
VIEWED	**04 / 13 / 2026** 14:10:46 UTC	Viewed by Jason Lesch (jlesch@auburnhospital.org) IP: 40.129.95.218
VIEWED	**04 / 13 / 2026** 14:14:39 UTC	Viewed by Andrew Bodewes (abodewes@parkgrovellc.com) IP: 71.77.141.47
SIGNED	**04 / 13 / 2026** 14:14:54 UTC	Signed by Andrew Bodewes (abodewes@parkgrovellc.com) IP: 71.77.141.47
SIGNED	**04 / 13 / 2026** 14:29:19 UTC	Signed by Jason Lesch (jlesch@auburnhospital.org) IP: 40.129.95.218
COMPLETED	**04 / 13 / 2026** 14:29:19 UTC	The document has been completed.

SURVEY NOTES:

THE HORIZONTAL DATUM IS REFERENCED TO NAD-83 ON THE N.Y.S. PLANE COORDINATE SYSTEM, BEARINGS SHOWN HERON ARE REFERENCED TO GRID. DISTANCES SHOWN ARE GROUND. SURVEY WORK FOR THIS MAP WAS COMPLETED TO AN ACCURACY OF 1 PART IN 10,000 (1:10,00) OR BETTER.

THE VERTICAL DATUM IS REFERENCED TO NAVD-88

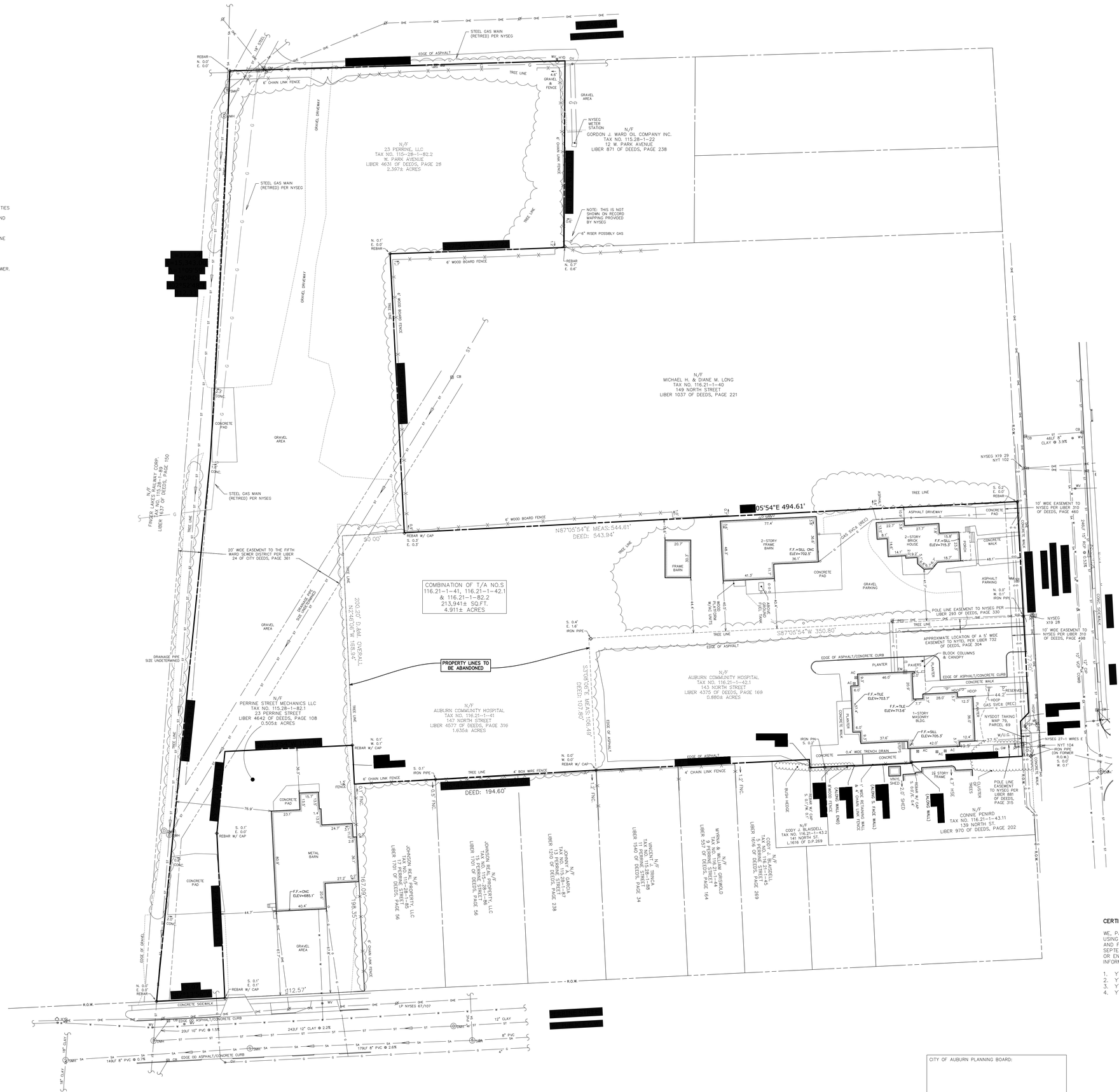
HORIZONTAL AND VERTICAL DATUM WERE MEASURED USING RTK GPS ON THE NYS NETWORK.

REFERENCE:

1. MAP PREPARED BY WATKINS LAND SURVEYING, PLLC ENTITLED, "SUBDIVISION SURVEY MAP FOR THE LANDS OF BRIAN M. POLCOVICH" DATED FEBRUARY 26, 2025 FILED IN THE OFFICE OF THE CAYUGA COUNTY CLERK AS MAP NO. 2025-67
2. N.Y.S.D.O.T. ACQUISITION MAP, DATED DECEMBER 18, 2006 MAP NO. 79, PARCEL NO. 69
3. ABSTRACT PREPARED BY OWASCO ABSTRACT CORP. DATED DECEMBER 19, 2024 ABSTRACT NO. 24-1323
4. ABSTRACT PREPARED BY OWASCO ABSTRACT CORP. DATED FEBRUARY 11, 2025 ABSTRACT NO. 25-222
5. ABSTRACT PREPARED BY STEWART TITLE INSURANCE COMPANY DATED APRIL 17, 2023 ABSTRACT NO. 8124967
6. DEEDS FILED IN THE OFFICE OF THE CAYUGA COUNTY CLERK SHOW HEREON
7. NO TITLE REPORT PROVIDED
8. NO ZONING REPORT PROVIDED

SITE NOTES:

1. THERE ARE NO WETLANDS LOCATED ON THE SUBJECT PROPERTIES PER THE NEW YORK STATE DEPARTMENT OF CONSERVATION ENVIRONMENTAL RESOURCE MAPPER OR THE NATIONAL WETLAND INVENTORY
2. THE SUBJECT PARCELS ARE NOT LOCATED WITHIN A FLOOD HAZARD AREA, THE PARCELS ARE LOCATED WITHIN FLOOD ZONE X, DEFINES AS AREAS DETERMINES TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FEMA FIRM MAP NO. 36011C0305E WITH AN EFFECTIVE DATE OF AUGUST 2, 2007.
3. THE VACANT PARCEL: TAX ACCT. NO. 115.28-1-82 MAY BE SUBJECT TO SEWER RIGHTS TO THE FIFTH WARD SEWER. UNABLE TO REVIEW LIBER 24 OF CITY DEEDS, PAGE d361



GRAPHIC SCALE
30 0 15 30 60
1" = 30'

NAD-83

Know what's **below.** **Call** before you dig.

ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL INKED OR EMBOSSED SEAL AND INKED SIGNATURE SHALL BE CONSIDERED A TRUE AND VALID COPY.

CERTIFICATION INDICATED HEREON SHALL RUN ONLY TO THE PERSON FOR WHOM THE SURVEY IS PREPARED, AND ON HIS BEHALF TO THE AGENCIES LISTED HEREON. CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.

CERTIFICATION:

WE, PASSERO ASSOCIATES, CERTIFY THAT THIS MAP WAS PREPARED USING PORTIONS OF THE REFERENCE MATERIAL AS LISTED HEREON AND FROM NOTES OF AN INSTRUMENT SURVEY COMPLETED SEPTEMBER 19, 2025. THIS PARCEL IS SUBJECT TO ANY EASEMENTS OR ENCUMBRANCES OF RECORD. NO CERTIFICATION IS EXTENDED TO INFORMATION NOT REFERENCED.

1. YTBD
2. YTBD
3. YTBD
4. YTBD

CITY OF AUBURN PLANNING BOARD:

ALAN J. SNYDER N.Y.S.P.L.S. NO. 051080 DATE
asnyder@passero.com

ABBREVIATION TABLE	
BLDG.	BUILDING
C.L.F.	CHAIN LINK FENCE
CNC.	CONCRETE
E.O.P.	EDGE OF PAVEMENT
MEAS.	MEASURES
R.O.W.	RIGHT OF WAY
STKF.	STOCKADE FENCE

LEGEND	
CB	CATCHBASIN
CO	CLEANOUT (UNKNOWN TYPE)
DCO	CLEANOUT DRAINAGE SEWER
SCO	CLEANOUT SANITARY SEWER
	END SECTION DRAINAGE PIPE
GV	GAS VALVE
HYD	HYDRANT
LP	LIGHTPOLE
MH	MANHOLE (UNKNOWN TYPE)
EMH	MANHOLE ELECTRIC
MH	MANHOLE DRAINAGE INLET
DMH	MANHOLE DRAINAGE SEWER
SMH	MANHOLE SANITARY SEWER
TMH	MANHOLE TELE/COMM
	SIGN POST (SINGLE)
SP	TRAFFIC LIGHT SPAN POLE
	TREE CONIFEROUS
	TREE DECIDUOUS
PP	UTILITY POLE
GW	UTILITY POLE ANCHOR WIRE
	UTILITY POLE WITH LIGHT
WS	WATER SERVICE
WV	WATER VALVE
HH	IRRIGATION CONTROL VALVE

Passero Associates
Rochester, NY • Fernandina Beach, FL
www.passero.com

Revisions

No.	Date	By	Description

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS IN VIOLATION OF STATE EDUCATION LAW ARTICLE 145 SECTION 7209 AND ARTICLE 147 SECTION 7307. THESE PLANS ARE COPYRIGHT PROTECTED ©

City of Auburn - Not to Scale

Passero Associates
242 WEST MAIN STREET, SUITE 100 (585) 325-1000
ROCHESTER, NY 14614 Fax: (585) 760-8580
Principal-in-Charge Gary W. Passero, PE
Project Manager Alan J. Snyder, PLS
Drafted by Evan J. Corteville

Client:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER NY, 14607
ATTENTION: ANDREW BODEWES

SUBDIVISION MAP
INTENDING TO COMBINE
THE FOLLOWING:

143 NORTH STREET
& 147 NORTH STREET,
NOW OR FORMERLY OF:
AUBURN COMMUNITY HOSPITAL
BEING TAX ACCT. NO.S
1[redacted]

AND

VACANT LAND ON
[redacted]
NOW OR FORMERLY OF:
[redacted]
BEING TAX ACCT. NO.
[redacted]

CITY OF AUBURN, CAYUGA COUNTY,
NEW YORK STATE

Project No.
20255046.0001

Drawing No. SUB-1
Sheet No. 1 of 1

Scale: 1" = 30'

Date APRIL, 2026

Y:\PROJECTS-NEW\2025\20255046\20255046.0001\01_CAD-BIM-MODELS\SURVEY\20255046.0001 AUBURN MSB SUB.DWG 4/9/2026 2:04 PM Evan Corteville

4/10/2026 11:07:10 AM

C1 FIRST FLOOR PLAN - OVERALL BY DEPARTMENTS
1/8" = 1'-0"

DEPARTMENT LEGEND

- 01 - ORTHOPEDICS
- 10 – REGISTRATION & WAITING
- 11 - SHARED SUPPORT
- 12 - STAFF SUPPORT
- 13 - BUILDING SUPPORT
- 14 – PUBLIC CIRCULATION
- 15 – STAFF CIRCULATION

2' 8'
0' 4' 16'

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REVISION SCHEDULE

NAME	DATE

PARK GROVE REALTY

ACH HEALTH CAMPUS
[redacted], AUBURN, NEW YORK

DATE:	APRIL 10, 2026
PROJECT:	24089
OTHER:	
DRAWN BY:	Author

FIRST FLOOR PLAN - OVERALL

A110.

4/10/2026 11:07:54 AM

C1 SECOND FLOOR PLAN - OVERALL BY DEPARTMENTS
1/8" = 1'-0"

DEPARTMENT LEGEND

- 02 - ENDOCRINOLOGY
- 03 - NEUROSCIENCE
- 04 – OUTPATIENT LABORATORY
- 05 – IMAGING
- 10 – REGISTRATION & WAITING
- 11 - SHARED SUPPORT
- 12 - STAFF SUPPORT
- 13 - BUILDING SUPPORT
- 14 – PUBLIC CIRCULATION
- 15 – STAFF CIRCULATION

0' 4' 8' 16'

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REVISION SCHEDULE

NAME	DATE
FS-01	

PARK GROVE REALTY
ACH HEALTH CAMPUS [redacted] AUBURN, NEW YORK

DATE:	APRIL 10, 2026
PROJECT:	24089
OTHER:	
DRAWN BY:	Author

SECOND FLOOR PLAN - OVERALL

A120.

4/10/2026 11:08:20 AM

C1 THIRD FLOOR PLAN - OVERALL BY DEPARTMENTS
1/8" = 1'-0"

DEPARTMENT LEGEND

- 06 – CARDIOLOGY
- 07 – PRIMARY CARE
- 10 – REGISTRATION & WAITING
- 11 - SHARED SUPPORT
- 12 - STAFF SUPPORT
- 13 - BUILDING SUPPORT
- 14 – PUBLIC CIRCULATION
- 15 – STAFF CIRCULATION

0' 2' 4' 8' 16'

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REVISION SCHEDULE

NAME	DATE
FS-01	

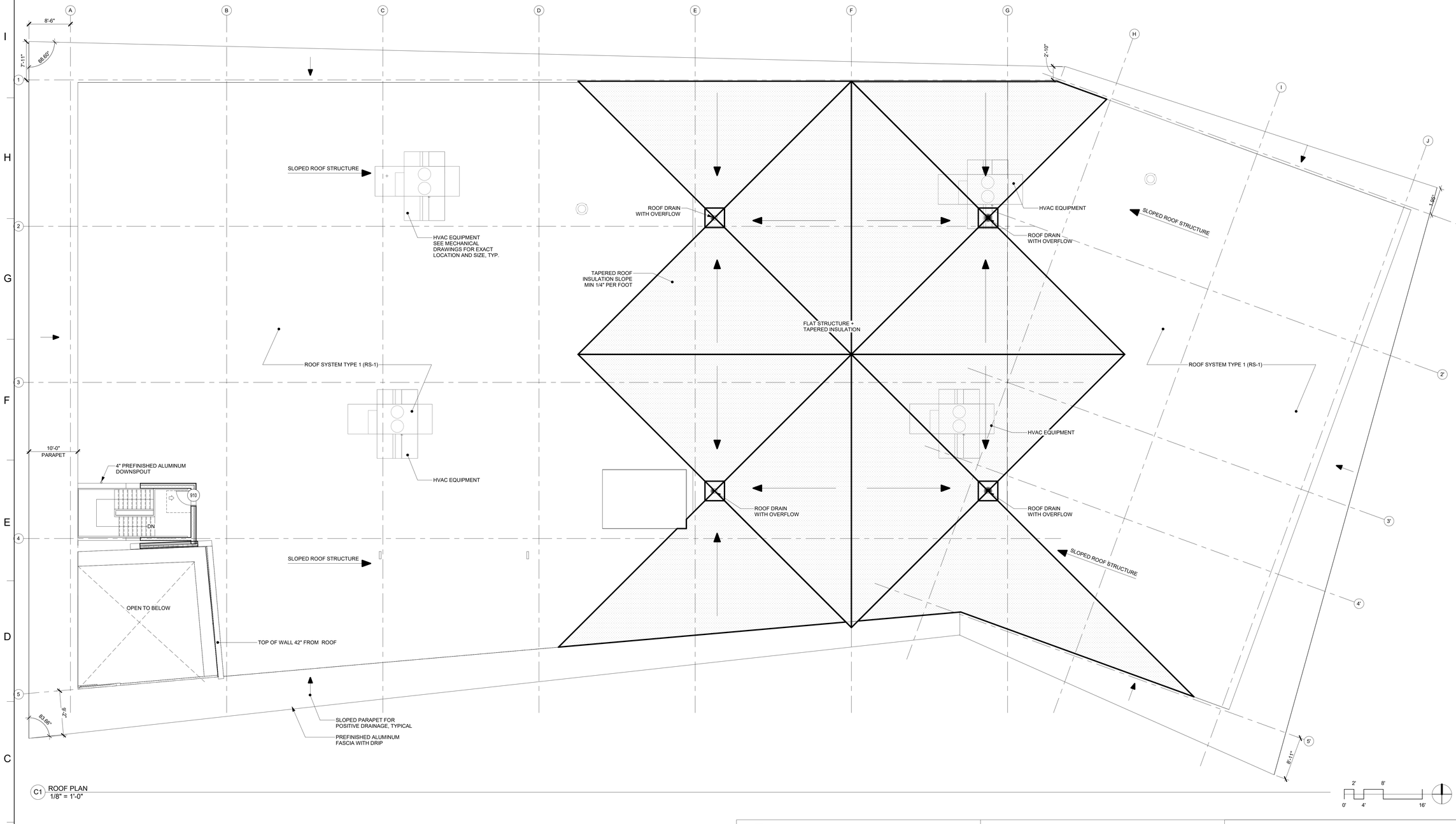
PARK GROVE REALTY
ACH HEALTH CAMPUS
AUBURN, NEW YORK [redacted]

DATE:	APRIL 10, 2026
PROJECT:	24089
OTHER:	
DRAWN BY:	Author

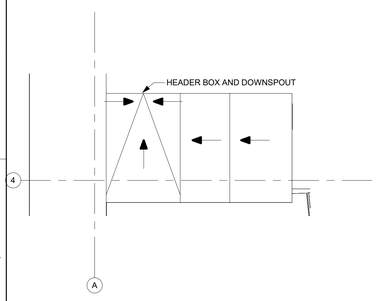
THIRD FLOOR PLAN - OVERALL

A130.

4/10/2026 11:08:21 AM



C1 ROOF PLAN
1/8" = 1'-0"



A1 STAIR 1 PENTHOUSE ROOF PLAN
1/8" = 1'-0"

KEYED ROOF NOTES

00

ROOF LEGEND

- ROOF VENT
- ROOF DRAIN
- EXHAUST FAN (EF)
- ROOF TOP UNIT (RTU)
- ROOF CONDENSING UNIT (RCU)
- AIR COOLED CONDENSING UNIT (ACCU)
- DUCTLESS SPLIT CONDENSING UNIT (DSCU)
- + x" DEPTH OF ROOF INSULATION
- ROOF WALKWAY PAD
- SNOW GUARDS
- ROOF HATCH

GENERAL ROOF NOTES

1. CONTRACTOR TO PROVIDE CRICKETS AROUND ALL NEW ROOF CURBS AND NEW EQUIPMENT TAPERED AT A MINIMUM OF 1/4" PER FOOT TO ASSURE THE POSITIVE FLOW OF WATER. THIS NOTE APPLIES TO NEW ROOF CURBS AND NEW EQUIPMENT CONSTRUCTED ON BOTH NEW AND EXISTING ROOFS. CRICKET ROOF SYSTEM TO MATCH THE CONSTRUCTION OF THE ADJACENT ROOF.

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REVISION SCHEDULE

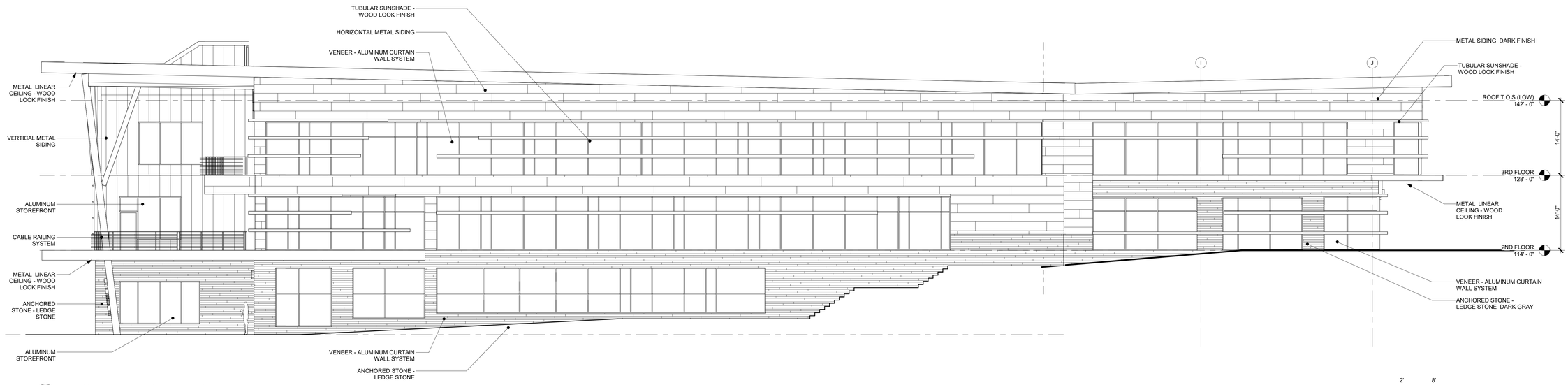
NAME	DATE

PARK GROVE REALTY
ACH HEALTH CAMPUS
[redacted], AUBURN, NEW YORK

DATE:	APRIL 10, 2026
PROJECT:	24089
OTHER:	
DRAWN BY:	BRB

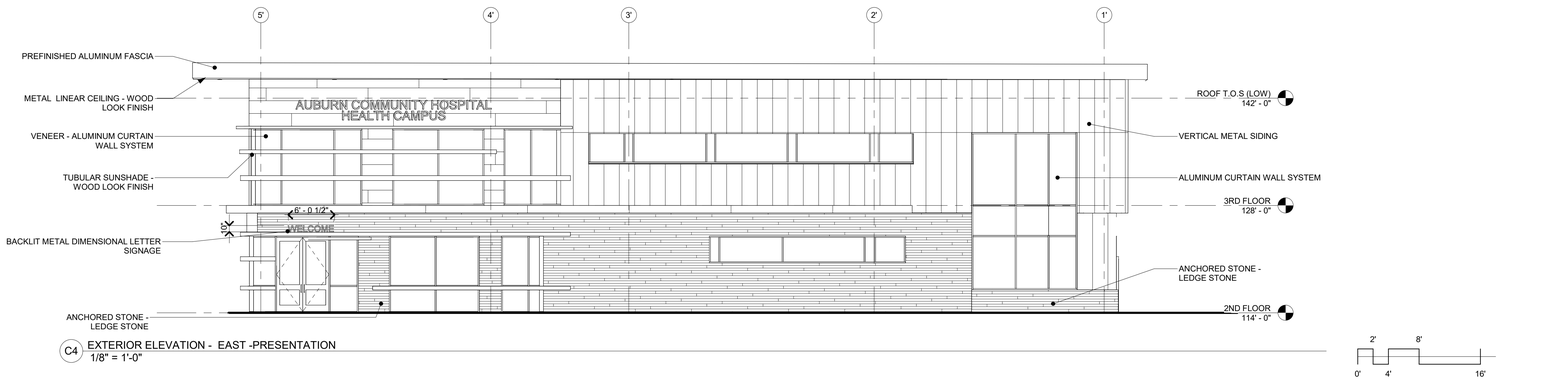
ROOF PLAN

A190



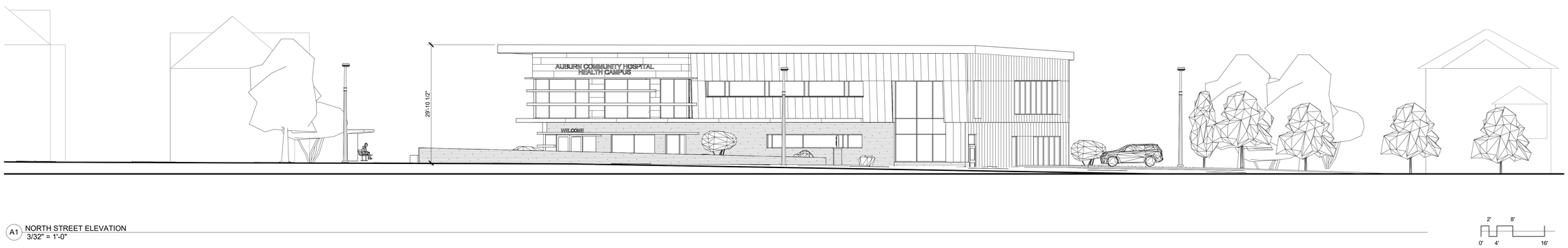
F1 EXTERIOR ELEVATION -SOUTH - PRESENTATION
1/8" = 1'-0"

2' 8'
0' 4' 16'



C4 EXTERIOR ELEVATION - EAST -PRESENTATION
1/8" = 1'-0"

2' 8'
0' 4' 16'



A1 NORTH STREET ELEVATION
3/32" = 1'-0"

2' 8'
0' 4' 16'

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REVISION SCHEDULE

NAME	DATE

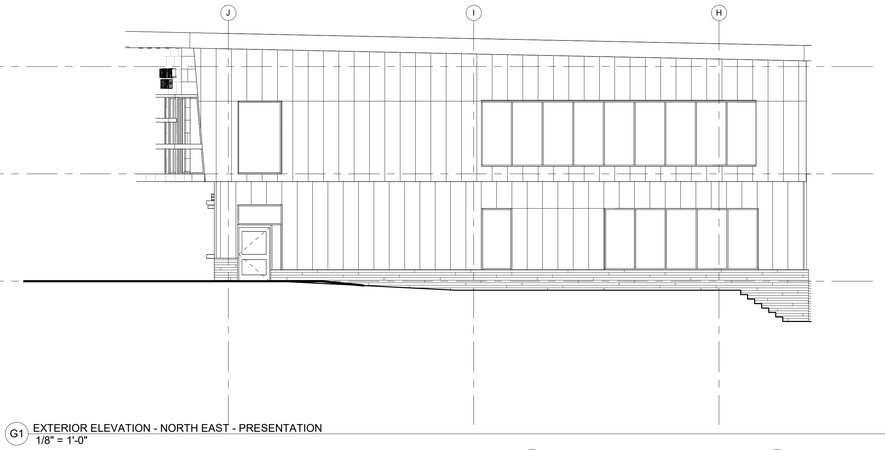
PARK GROVE REALTY
ACH HEALTH CAMPUS [redacted] AUBURN, NEW YORK

DATE:	APRIL 10, 2026
PROJECT:	
OTHER:	
DRAWN BY:	

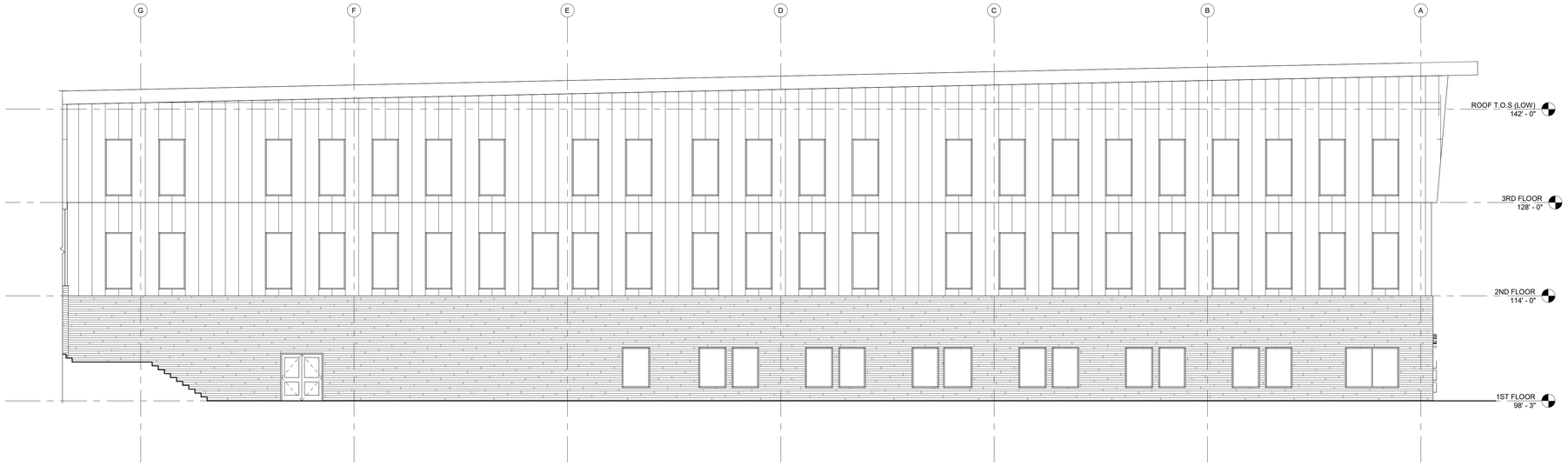
EXTERIOR ELEVATIONS

A20.1

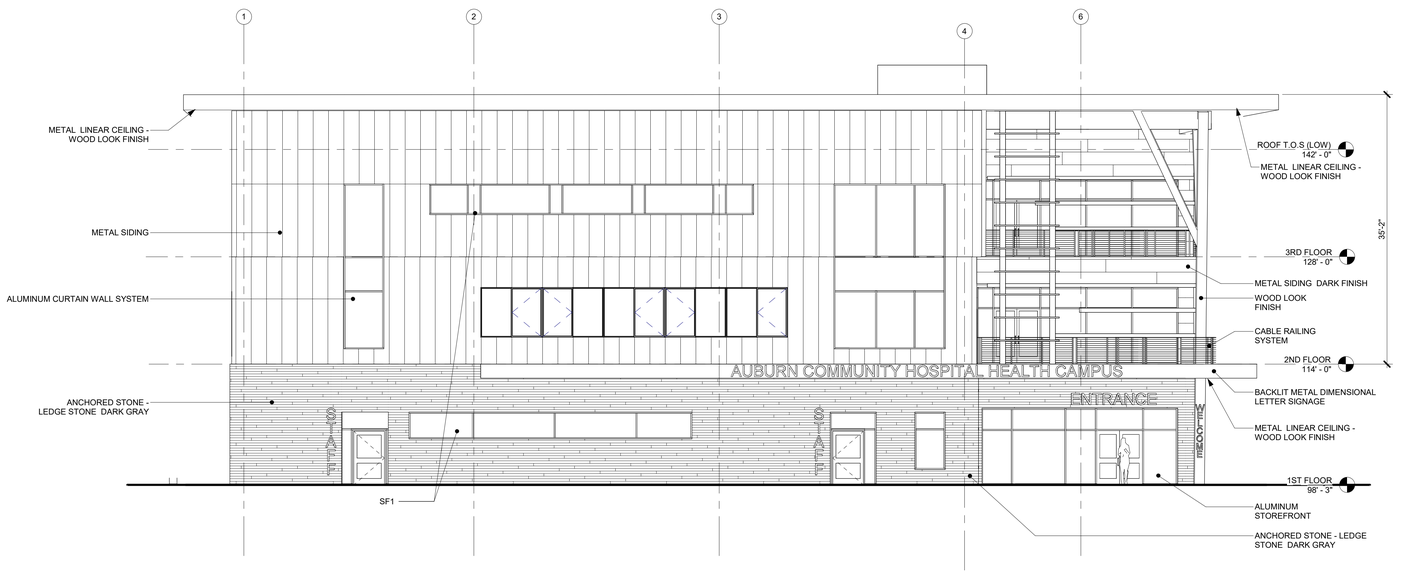
4/13/2026 5:50:54 PM



G1 EXTERIOR ELEVATION - NORTH EAST - PRESENTATION
1/8" = 1'-0"



D1 EXTERIOR ELEVATION - NORTH - PRESENTATION
1/8" = 1'-0"



A5 EXTERIOR ELEVATION - WEST - PRESENTATION
1/8" = 1'-0"

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REVISION SCHEDULE

NAME	DATE

PARK GROVE REALTY

ACH HEALTH CAMPUS

[redacted], AUBURN, NEW YORK

DATE:	APRIL 10, 2026
PROJECT:	24089
OTHER:	
DRAWN BY:	BRB

EXTERIOR ELEVATIONS

A20.2

ENGINEER'S REPORT

20255046.0001

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

AUBURN, NY

PREPARED FOR:
Park Grove Reality, LLC
46 Prince Street
Rochester, NY 14607

242 West Main Street, Suite 100 | Rochester, NY 14614 | 585.325.1000 | www.passero.com

PASSERO
engineering architecture

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1.0 INTRODUCTION

This Engineer's Report has been compiled by Passero Associates on behalf of Park Grove Realty, LLC in the effort of redeveloping and combining the properties located at [redacted]. The project is located in the C-General Commercial Zoning District and is adjacent to the Auburn Community Hospital. Of the total proposed project area totaling 5.417 acres, 1.60 acres is currently occupied by the Auburn Medical Hospital Lab Services building and two residential housing buildings with associated parking.

The proposed Auburn Community Hospital Health Campus Project consists of constructing a three-story 80,750 square feet medical office building which will provide medical office space, patient access areas, and associated support services supporting the Auburn Community Hospital. The project will include an associated parking lot, the installation of required utilities and infrastructure, sidewalks connecting to the proposed bus shelter at the North Street right of way, and a stormwater management area.

This Engineer's Report contains a comprehensive overview of the proposed redevelopment project, including an analysis of existing and proposed conditions as well as a review of the applicable zoning regulations.

An existing ariel photograph and USGS Quadrangle Map are provided in Appendices A and F, respectively.

2.0 LAND USE & ZONING

2.1 Site Data and Zoning

SITE DATA	
TAX ACCOUNT NUMBER:	115.28-1-82.1, 116.21-1-41, 116.21-1-42.1, 115-28-1-82.2
PARCEL ADDRESS:	23 PERRINE ST., 147 NORTH ST., 143 NORTH ST. W. PARK AVENUE
MUNICIPALITY:	CITY OF AUBURN
COUNTY:	CAYUGA
TOTAL PARCEL AREA:	5.417 ACRES
AREA OF DISTURBANCE:	4.912 ACRES
EXISTING ZONING:	C-GENERAL COMMERCIAL
PROPOSED ZONING:	C-GENERAL COMMERCIAL
EXISTING USE:	MIXED USE
PROPOSED USE:	MEDICAL OFFICE BUILDING

ZONING DATA	REQUIRED	PROPOSED
ZONING DISTRICT: C-GENERAL COMMERCIAL		
LOT		
WIDTH	75'	208'
AREA	20,000 SF	235,965 SF
COVERAGE	80% MAX	78.80%
BUILDING		
SETBACK - FRONT	20'	67.2
SETBACK - SIDE	10'	18'
SETBACK - REAR	10'	311.6'
HEIGHT	35' MAX.	30'
PARKING		
SETBACK	10'	10'
STALLS QTY	2 PER 1,000 SF=162	202
STALL SIZE - PERPENDICULAR	9' x 18'	9'X18'
DRIVE AISLE WIDTH - 90 DEG	24'	24'/26'

3.0 EXISTING CONDITIONS

3.1 Land Cover and Soils

Soils within the project area were reviewed for their hydrologic soil group in accordance with the USDA's NRCS Soil Survey. The soil groups present on site are summarized below and the soils map can be found in Appendix B:

Table 1: *Hydrologic Soil Group Table*

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CeB	Cazenovia silt loam, 2 to 8 percent slopes	C	1.8	34.4%
Uc	Urban land-Cazenovia complex, 2 to 8 percent slopes		3.5	65.6%
Totals for Area of Interest			**5.3**	**100.0%**

3.2 Wetlands / Creeks

The site was reviewed for the existence of federal and state regulated wetlands within the property boundaries. Federal wetlands were researched using the National Wetlands Inventory (NWI) using an online U.S. Fish and Wildlife website search. State regulated wetlands were researched using the NYSDEC's online Environmental Resource Mapper website. Review of the mapping indicates there are not federal or state wetlands on site. Refer to Appendix C for the federal and state regulated wetlands mapping.

3.3 NYSDEC Environmental Resources

The NYSDEC has an Environmental Resource Mapper on its website. The Environmental Resource Mapper is an interactive mapping application that can be used to identify some of New York State's natural resources and environmental features that are state protected, or of conservation concern. It displays the following:

1. Animals and plants that are rare in New York, including those listed as Endangered or Threatened (generalized locations). [Updated May 2008]
2. Significant natural communities, such as rare or high-quality forests, wetlands, and other habitat types.
3. New York's streams, rivers, lakes, and ponds; water quality classifications are also displayed

According to this database, there are not rare and endangered animals in the vicinity of the project and there are natural communities near the project site but are not on site.

3.4 Floodplain

According to FEMA's National Flood Hazard FIRMette Mapper, the site is not located in a floodplain per community panel no. 36011C0305E dated 08/02/200. Refer to Appendix E for the FIRMette map of the site.

3.5 State Historic Preservation Office Review

The site was reviewed for the presence of archeological sensitive areas using online GIS tools found at the NYS Historic Preservation Office (SHPO). The Cultural Resource Information System mapping of the area found no archeo-sensitive areas on the parcel. The SHPO map and letter of no impact is included in Appendix G.

4.0 TRAFFIC

This development will generate traffic that will be distributed to the surrounding road network. A traffic study was completed for the Auburn Community Hospital Health Campus development by Passero Associates. The results of this comprehensive study determined that the existing transportation network can adequately accommodate the projected traffic volumes and result in minor impacts to study area intersections with noted mitigation in place that can be found in Appendix K.

5.0 UTILITIES

5.1 Sanitary Sewer

The proposed building will be served by a new private 6" polyvinyl chloride (PVC) sewer pipe that will connect to the existing 8" PVC public sewer main that runs parallel along Perrine Street. The loading rate for the proposed sanitary main per the NYS Design Standard for Intermediate Sized Wastewater Treatment Systems is described below:

Table 2: *Sanitary Demand*

Building Information	Dependent Factor	Amount	Loading Rate (Per NYSDEC)	Load
Hospital	Per Outpatient	378	30	11340 gpd
		Total:	**11340 gpd**	**(7.88 gpm)**
		Peak Flow (Peak Factor of 4):		**31.5 gpm**

The proposed sanitary sewer system is to include a 6" PVC lateral which will ultimately be conveyed to the existing sanitary sewer main in the Perrine Street right of way. Manning's equation was used to calculate pipe capacity of the sewers for this project, and compared to the flow anticipated from the project to ensure the system will have ample capacity.

Table 3: *Sanitary Pipe Capacity*

Sanitary Lateral Capacity check using Manning's Equation		
Proposed Use	***Manning's Maximum flow***	***Proposed Flow***
6" Sanitary Sewer Pipes	$Q = A(1.49/n)(A/P)^{(2/3)}S^{0.5}$ Q=0.20(1.49/0.011)(0.20/1.57)^(2/3)*.01^(0.5) ***Q= 0.69 ft^3/s = 308 gpm***	**31.5 gpm**

A=Flow Area (sf) n=Manning's Roughness Coefficient (unitless) P=wetted perimeter (ft) (for maximum flow this equals the pipe circumference = 2πR) S=slope of channel (ft/ft)

Based on the table above, the sanitary sewer system can handle the proposed flows.

5.2 Water

The proposed development will connect to the existing 12" CIP water main in the North Street right of way. The public water main extension for this project will be a 12"x8" reducer/expander to connect the new 8" single water service to the proposed building for domestic, fire suppression within the building, and private hydrants. Meter and backflow preventers will be provided within the building. A new private 6" Class 52 DIP fire main will exit the building and serve one hydrant on the north side of the building. The proposed water services will be constructed in accordance with the latest City of Auburn and AWWA standards and specifications. The existing water pressure used to model the proposed distribution system was derived by examining existing simulated fire flow test/supply curve data provided by the City of Auburn (included in Appendix J):

Hydrant at 182 North Street (#276)

1. P_{st} = 66 psi
2. P_{res} = 60 psi
3. Q_{ob} = 1,190 gpm
4. Q_{20} = 3,575 gpm
5. Elevation=± 720'

The water distribution system was analyzed for two conditions:

6. Peak Domestic Demand
7. Peak Fire Demand

Pressures were calculated using WaterCAD analysis software and the resulting pressures for the demand scenarios are as follows (See Appendix I for WaterCAD calculations).

Table 4: *Water Demand*

Building Information	Dependent Factor	Amount	Loading Rate	Domestic Demand
Hospital	Per Office	233	3.00 gpm	699 gpm
			Total Domestic Demand:	699 gpm
			Lowest Pressure (35 psi minimum):	63 psi
Building/ Infrastructure	**Dependent Factor**	**Amount**	**Loading Rate**	**Fire Demand**
Hospital	Per Office	233	3 gpm	699 gpm
Sprinkler	Building	1	250 gpm	250 gpm
Hydrant	Each	1	1000 gpm	1000 gpm
			Total Fire Demand:	1949 gpm
			Lowest pressure (20 psi minimum):	44 psi

As shown above the existing water systems have the capacity to support the proposed development for domestic water and fire flow.

5.3 Gas & Electric

There is a gas and electric service on North Street that have ample capacity to serve the proposed project. The existing buildings have several connections to the existing services in North Street that will be removed. New service connections are anticipated in similar locations to the existing utilities in North Street.

6.0 DRAINAGE

6.1 Stormwater Quantity

Drainage calculations have been completed for the proposed development. The site was analyzed for existing and proposed drainage patterns and the runoff generated under each condition. A summary of the pre vs post runoff conditions are provided below.

Table 5: *Stormwater Runoff Comparison*

Summary Table			
Water Quantity			
	Existing	**Proposed**	**Reduction (%)**
1-Year Runoff (cfs)	10.59	6.940	34.47%
10-Year Runoff (cfs)	27.93	25.64	8.20%
100-Year Runoff (cfs)	60.540	50.41	16.73%

Water Quality		
	Required	**Provided**
Water Quality Volume (WQv) (acre-ft)	0.091	0.091
Minimum Allowable Runoff Reduction Volume (RRv) (acre-ft)	0.011	0.091
Channel Protection Volume (CPv) (acre-ft)	0.319	0.408
Qp (cfs)	13.880	12.630
Qf (cfs)	30.130	23.780

The pre vs post runoff comparison table shows the proposed stormwater management areas can achieve the NYS requirement of matching or reducing existing runoff conditions.

6.2 Stormwater Quality

The project will be serviced by a network of private storm sewers which will convey stormwater runoff to stormwater management practices. The project proposes the use of underground stormwater conveyance system to meet the stormwater quality control requirements based on Chapter 9 of the *New York State Stormwater Management Design Manual, 2015* for Water Quality Volume (WQv). It will also meet the stormwater quantity requirements based on Chapter 9 of the *New York State Stormwater Management Design Manual, 2015* criteria for Channel Protection Volume (Cpv), Overbank Flood (Qf), and Extreme Storm (Qr) conditions. The stormwater quantity will include detention ponds with deep pools to reduce the peak rate of runoff from the site.

7.0 PARKING

The municipality has specific parking requirements per use. The parking requirements for this project are based on town code Article 305-48 Off-street parking and loading and are detailed below:

Table 6: *Parking Stall Requirements*

Required Parking	
Town code Section: 305-48	
2 Spaces Per 1,000 S.F.	
81 X 2 Spaces = 162 Spaces	
Proposed Parking	
Parking Spaces	202 Spaces

The total amount of proposed parking for this project meets the town requirements.

8.0 FIRE DEPARTMENT ACCESS/FIRE CODE

The municipalities Fire department can access the site from W. Park Avenue, North Street, and Perrine Street. The project includes on private hydrant located along the north end of the building. The proposed medical office building will have proper access and will have a sprinkler system to meet all the latest building and fire codes. A fire truck turning movement map is provided in Appendix 'H', and shows there is ample room for a fire apparatus to maneuver the site designed using criteria found in Appendix D of the NYS Fire Code.

9.0 LIGHTING, LANDSCAPING AND SIGNAGE

9.1 Landscaping

Trees and other plants chosen for the facility will meet the municipality standards and compliment the local landscape. No invasive species will be selected. Landscaping will meet the requirements set by municipality.

9.2 Lighting

All new lighting fixtures will be used for the project. The fixtures will be shielded and dark sky compliant to prevent light from spilling onto neighboring properties.

9.3 Signage

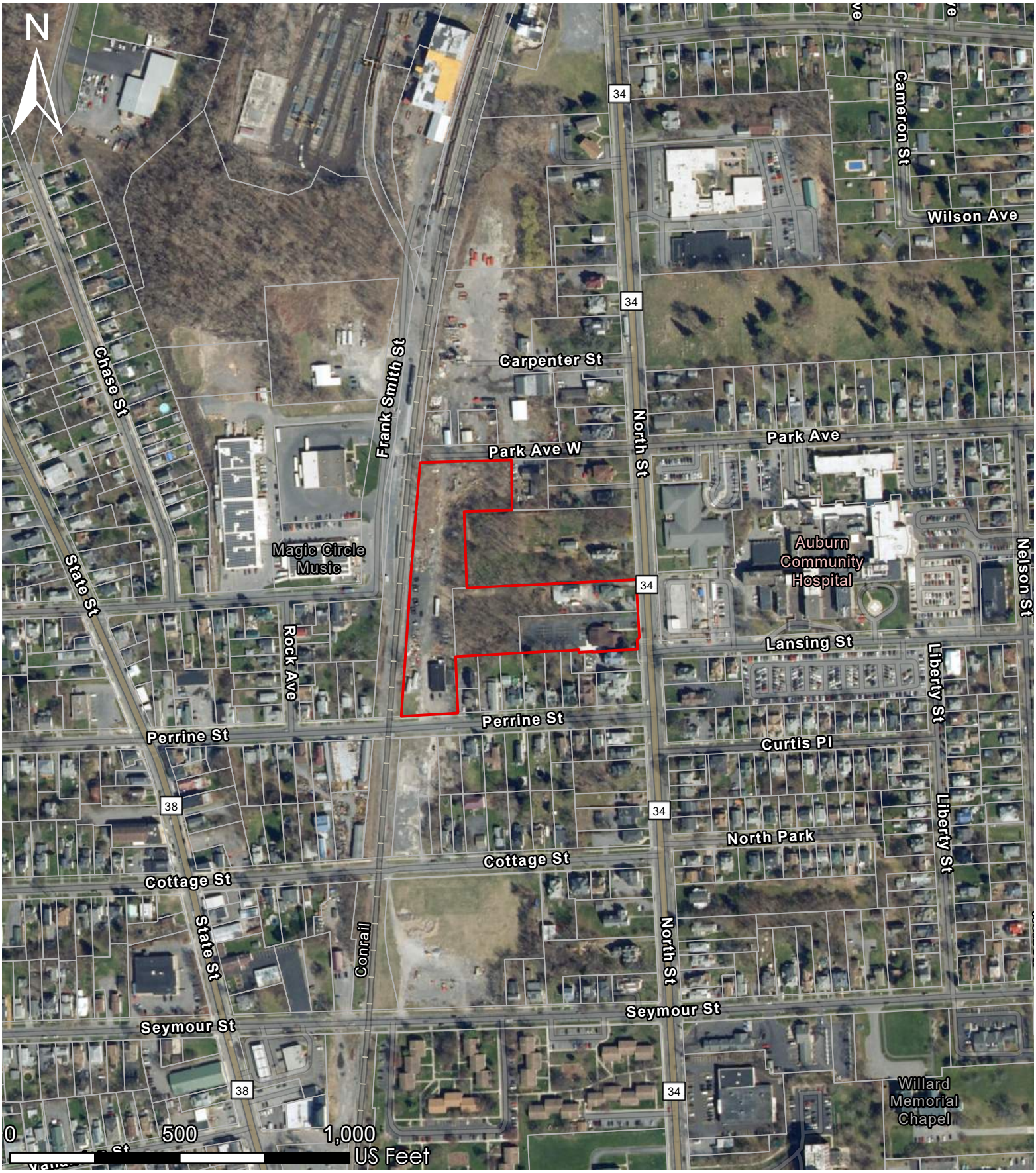
Handicap parking signs will be provided per ADA requirements.

10.0 SUMMARY

In summary, the proposed project will provide a benefit to the community and provide a medical office space, patient access areas, and associated support services in the area. The traffic generated during peak times will have no detrimental impact on the adjacent intersections or road network. The proposed use "fits" in relation to adjacent property uses and the town's comprehensive plan and specific zoning code for this parcel. The project is seeking preliminary approval.

APPENDICES

APPENDIX A: AERIAL PHOTO



Legend

- Project Location
- Parcels

Location Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: Cayuga County GIS

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Service Credits:

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Vantor

Date: 4/10/2026

APPENDIX B: SOILS MAP

Legend

- Project Location

Soils

Hydrologic Group Rating

- C
- N/A

Soil Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: NRCS Web Soil Survey

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Service Credits:

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Microsoft, Vantor

Date: 3/9/2026

APPENDIX C: NYSDEC RESROUCE MAP

Legend

- Streams & Rivers
- Project Location
- Informational Freshwater Wetland Mapping
- 100ft Buffer
- Previously Mapped Freshwater Wetlands
- NYS Natural Heritage Communities
- Rare Plants & Animals

Environmental Resource Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: Environmental Resource Mapper

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architecture engineering

Service Credits:

New York State Department of Environmental Conservation, NYSDEC, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Microsoft, Vantor

Date: 4/10/2026

APPENDIX D: WETLANDS MAP

Legend

- Project Location
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

USFWS National Wetlands Inventory

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: U.S. Fish and Wildlife Service

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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Vantor

Date: 4/10/2026

APPENDIX E: FEMA MAP

Legend

- Project Location
- 0.2% Annual Chance Flood Hazard
- 1% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Area with Reduced Risk Due to Levee
- Special Floodway

FEMA Flood Areas Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: FEMA FIRMette 36011C0305E

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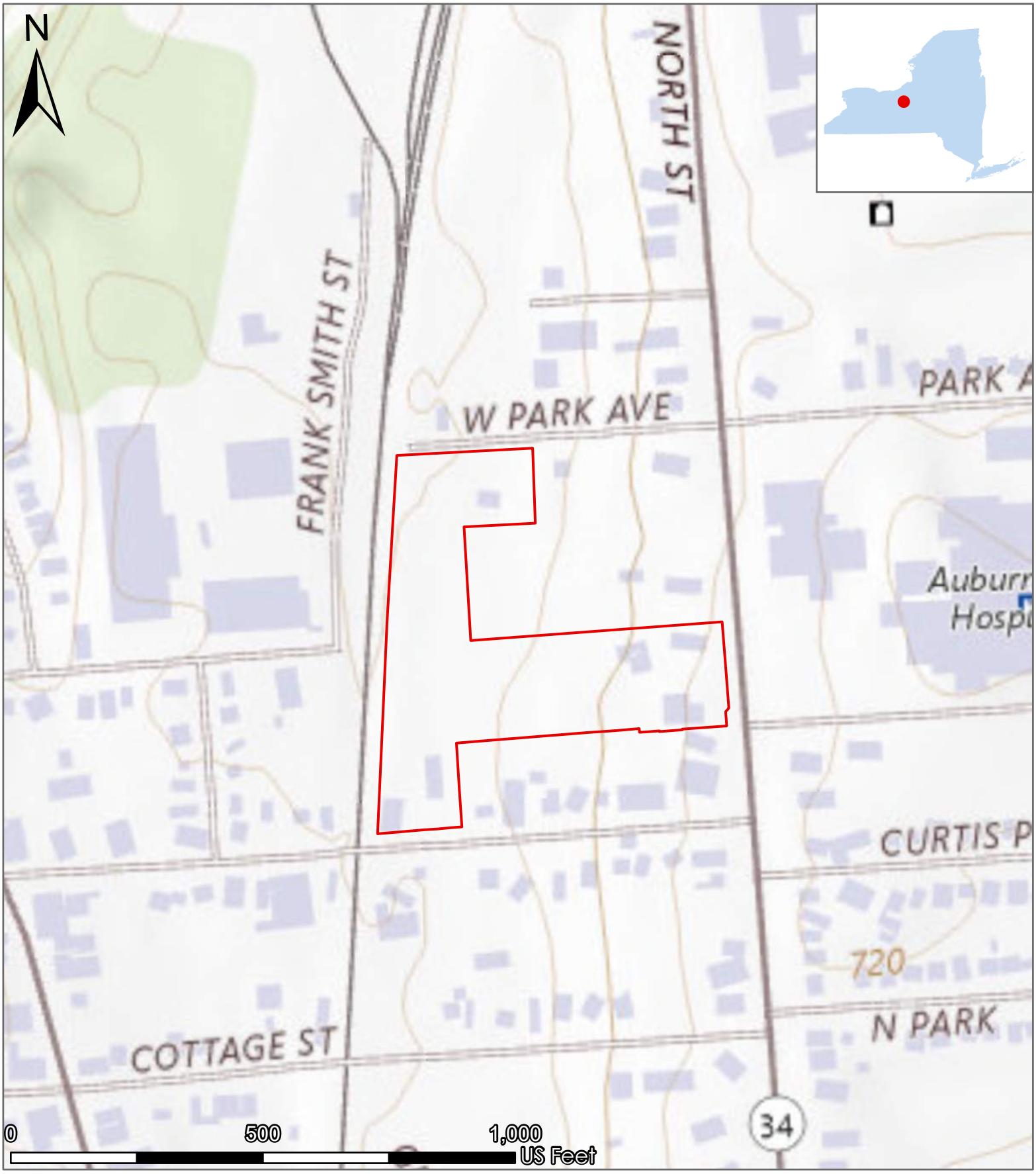
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Microsoft, Vantor

Date: 4/10/2026

APPENDIX F: USGS QUADRANGLE MAP



Legend

Project Location

USGS Quadrangle Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: United States Geological Survey

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Service Credits:

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information. Data refreshed October 27, 2025.

Date: 4/10/2026

APPENDIX G: ARCHEOLOGICAL SENSITIVE AREA

Legend

- Project Location
- National Register Building Listings

Historic Building Districts

- Eligible
- Listed

Historic Building Points

- Eligible
- Listed

Archeological Sensitive Areas

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: Cultural Resource Information System

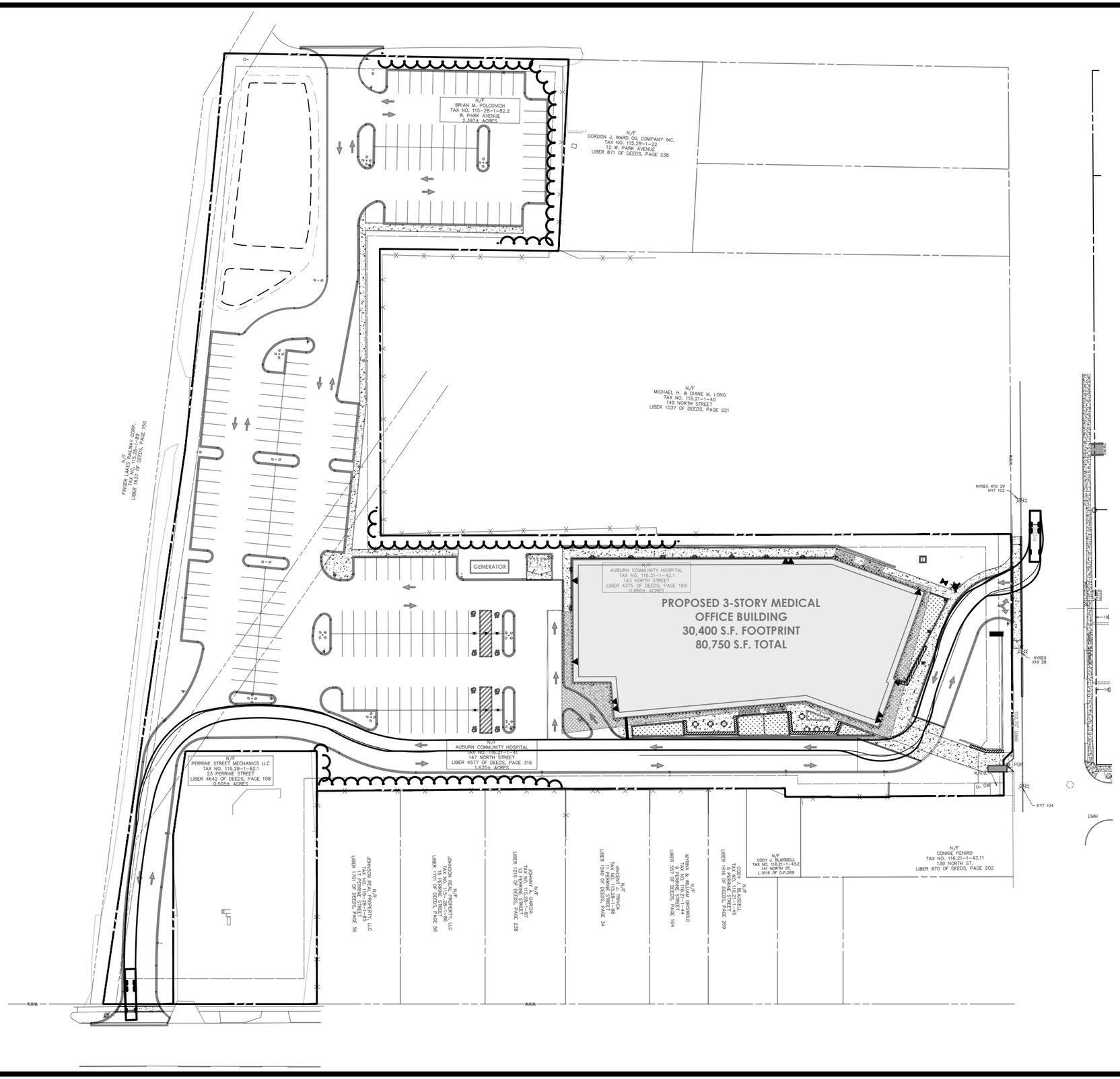
PASSERO architecture engineering

Service Credits:

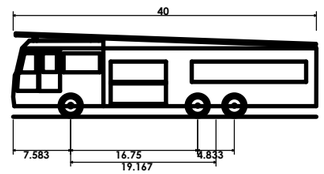
Division for Historic Preservation, New York State Office of Parks, Recreation and Historic Preservation, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Microsoft, Vantor

Date: 4/10/2026

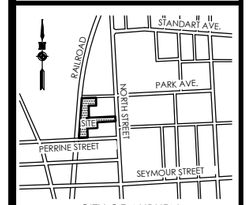
APPENDIX H: FIRE TRUCK TURNING ANALYSIS



HORIZONTAL SCALE: 1"=40'



E-ONE HP100 Aerial	
Overall Length	40.000ft
Overall Width	8.333ft
Overall Body Height	11.000ft
Min Body Ground Clearance	1.393ft
Track Width	8.333ft
Lock-to-lock time	6.00s
Max Wheel Angle	45.00°



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100 (585) 325-1000
ROCHESTER, NY 14614 FAX: (585) 325-1691
PROJECT MANAGER EDMUND MARTIN, P.E.
PROJECT ENGINEER ANDREW BURNS, P.E.
DESIGNER JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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FIRE TRUCK TURNING MOVEMENT

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: C-001

DATE: **APRIL 2026**

DESIGN DEVELOPMENT

Y:\PROJECTS-NEW\2025\20255046\20255046.0001\01_CAD-BIM-MODELS\CIVIL\20255046.01_ACCESS.DWG 4/13/2026 12:08 PM Jacob Lewis

APPENDIX I: SITE LIGHTING PLAN

APPENDIX J: WATERCAD ANALYSIS

LUMINAIRE SCHEDULE

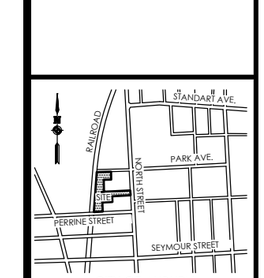
Symbol	Quantity	Manufacturer	Catalog Number	Description	Lumens Per Lamp	Wattage	Plot
	3	Lithonia Lighting	DSX1 LED P1 30K 70CRI T3M	D-Series Size 1 Area Luminaire P1 Performance Package 3000K CCT 70 CRI Type 3 Medium	7287	101.8	Max: 6099cd
	15	Lithonia Lighting	DSX1 LED P1 30K 70CRI T3M	D-Series Size 1 Area Luminaire P1 Performance Package 3000K CCT 70 CRI Type 3 Medium	7287	50.9	Max: 6099cd
	8	Lithonia Lighting	DSX1 LED P1 30K 70CRI T3M	D-Series Size 1 Area Luminaire P1 Performance Package 3000K CCT 70 CRI Type 3 Medium	7287	203.6	Max: 6099cd
	5	Lithonia Lighting	DSXB LED 16C 350 50K SYM	D-SERIES BOLLARD WITH 16 5000K LEDS OPERATED AT 350mA AND SYMMETRIC DISTRIBUTION	1685	20	Max: 651cd
	30	Lithonia Lighting	WDGE1 LED P1 30K 80CRI VW	WDGE1 LED WITH P1 - PERFORMANCE PACKAGE, 3000K, 80CRI, VISUAL COMFORT WIDE OPTIC	1163	10.0002	Max: 877cd

LEGEND - LIGHTING:

———1 FC ———

———0.5 FC ———

HORIZONTAL SCALE: 1"=40'



CITY OF AUBURN

LOCATION SKETCH

N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100 (585) 325-1000
ROCHESTER, NY 14614 FAX: (585) 325-1691

PROJECT MANAGER EDMUND MARTIN, P.E.
PROJECT ENGINEER ANDREW BURNS, P.E.
DESIGNER JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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LIGHTING PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-107**

DATE: **APRIL 2026**

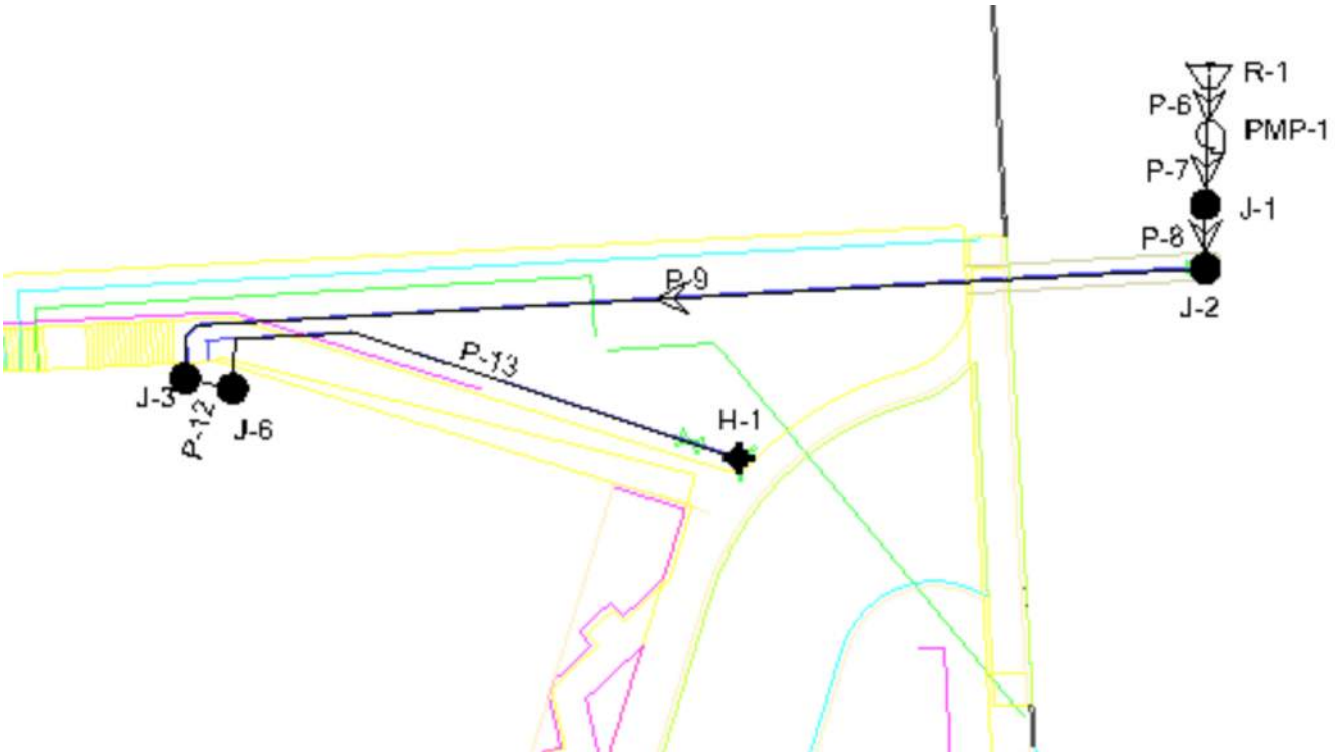
DESIGN DEVELOPMENT

Y:\PROJECTS-NEW\2025\20255046\20255046.0001\01_CAD-BIM-MODELS\CIVIL\20255046.01_LAND_LIGHT.DWG 4/13/2026 12:11 PM Jacob Lewis

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

Hydraulic Model Properties

Title	AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
Engineer	ANDREW BURNS
Company	PASSERO ASSOCIATES
Date	4/9/2026
Notes	



AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
Scenario: Domestic

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Pressure Head (ft)
J-1	710.00	0	64	147.22
J-2	710.00	0	64	147.20
J-3	709.75	699	63	144.90

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Diameter (in)	Material	Hazen Williams C	Flow (gpm)	Pressure Loss (psi)
P-6	R-1	PMP-1	48.0	Ductile Iron	150.0	699	0.0
P-7	PMP-1	J-1	12.0	Ductile Iron	110.0	699	0.0
P-8	J-1	J-2	12.0	Ductile Iron	110.0	699	0.0
P-9	J-2	J-3	8.0	Ductile Iron	110.0	699	1.1

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

Scenario: Domestic

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Pump Definition	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
PMP-1	710.00	Pump Definition - 1	857.23	699	147.23

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	710.00	699	710.00

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
Scenario: Fire

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Pressure Head (ft)
J-1	710.00	0	51	117.76
J-2	710.00	0	51	117.63
J-3	709.75	699	44	100.87
J-6	709.75	250	43	100.53

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Diameter (in)	Material	Hazen Williams C	Flow (gpm)	Pressure Loss (psi)
P-6	R-1	PMP-1	48.0	Ductile Iron	150.0	1,949	0.0
P-7	PMP-1	J-1	12.0	Ductile Iron	110.0	1,949	0.1
P-8	J-1	J-2	12.0	Ductile Iron	110.0	1,949	0.1
P-9	J-2	J-3	8.0	Ductile Iron	110.0	1,949	7.4
P-12	J-3	J-6	8.0	Ductile Iron	110.0	1,250	0.1
P-13	J-6	H-1	6.0	Ductile Iron	110.0	1,000	4.7

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

Scenario: Fire

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Pump Definition	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
PMP-1	710.00	Pump Definition - 1	827.88	1,949	117.88

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	710.00	1,949	710.00

APPENDIX K: TRAFFIC IMPACT STUDY (SEPARATE COVER)

APPENDIX L: SWPPP REPORT (SEPARATE COVER)

SWPPP REPORT

April 10, 2026

20255046.0001

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

AUBURN, NY

PREPARED FOR:
Park Grove Realty, LLC
[redacted] Street
Rochester, NY 14607

242 West Main Street, Suite 100 | Rochester, NY 14614 | 585.325.1000 | www.passero.com

PASSERO engineering architecture

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1.0 EXECUTIVE SUMMARY

The proposed project is located along the North Street (NYS Route 34), W. Park Avenue, and Perrine Street right of ways in the City of Auburn, NY. The project involves the subdivision of four parcels (Tax Account Numbers [redacted]) situated on approximately 5.42 acres in order to redevelop the site. The redevelopment of the site will include the demolition of the existing buildings and infrastructure on the site followed by the construction of a Medical Office Building with a ± 30,400 sq. ft. footprint and a total building area of ± 80,750 sq. ft. Site improvements will include internal access drives, parking areas, sidewalks, landscaping and utility connections to serve the proposed building.

Stormwater generally drains to western boundaries of the site via sheet flow and shallow concentrated flow where it discharges either to the adjacent property or to the Perrine Street right of way, ultimately entering into the Fifth Ward Sewer District infrastructure.

Under developed conditions runoff generally flows to the proposed bioretention area located in the northwestern corner of the site. The stormwater management area will be discharged to the West. With stormwater storage and controlled outflow, there is a net decrease in the 1-year, 10-year, and 100-year storm events. Additionally, the site uses green infrastructure practices to meet NYSDEC stormwater quality minimum requirements, which include water quality volume, runoff reduction volume, and channel protection volume. The summary table below shows the site water quantity and quality comparison between existing and proposed conditions:

Table 1: *Summary Table*

Summary Table

Water Quantity

	Existing	Proposed	Reduction (%)
1-Year Runoff (cfs)	10.59	6.940	34.47%
10-Year Runoff (cfs)	27.93	25.64	8.20%
100-Year Runoff (cfs)	60.540	50.41	16.73%

Water Quality

	Required	Provided
Water Quality Volume (WQv) (acre-ft)	0.091	0.091
Minimum Allowable Runoff Reduction Volume (RRv) (acre-ft)	0.011	0.091
Channel Protection Volume (CPv) (acre-ft)	0.319	0.408
Qp (cfs)	13.880	12.630
Qf (cfs)	30.130	23.780

2.0 INTRODUCTION

The proposed project is located along the North Street (NYS Route 34), W. Park Avenue, and Perrine Street right of ways in the City of Auburn, NY. The project involves the subdivision of three parcels (Tax Account Numbers [redacted]) situated on approximately 5.42 acres in order to redevelop the site. The redevelopment of the site will include the demolition of the existing buildings and infrastructure on the site followed by the construction of a Medical Office Building with a ± 30,400 sq. ft. footprint and a total building area of ± 80,750 sq. ft. Site improvements will include internal access drives, parking areas, sidewalks, landscaping and utility connections to serve the proposed building.

Public sewer, water, gas, electric and telecommunications/cable will be newly connected along North Street (NYS Route 34) and Perrine Street.

The provided Stormwater Pollution Prevention Plan (SWPPP) materials adhere to the State Pollutant Discharge Elimination System (SPDES) General Permit (GP-0-25-01) for Stormwater Discharges from Construction Activity. The guidelines specified by the *New York State Stormwater Management Design Manual, July 2024* (SWDM) were used to analyze the proposed stormwater management facilities for this project. Erosion and Sediment controls were designed in conformance with New York Standards and Specifications for Erosion and Sediment Controls. A copy of the SWPPP preparer certification form is included in Appendix N.

A copy of this SWPPP and associated inspection logs will be kept on site in the proposed office space and job trailer/SWPPP mailbox.

Owner/Operator
Park Grove Realty, LLC
46 Prince Street
Rochester, NY 14607
Contact: Andrew Bodewes

SWPPP Preparer
Passero Associates
242 West Main Street. Suite 100
Rochester, NY 14614
(585) 325-1000
Contact: Andrew Burns, P.E.

3.0 EXISTING SITE CONDITIONS

3.1 Topography/ Drainage

The parcel has varied land cover, which ranges from existing impervious, to woods. The land also varies in slope throughout the site, with slopes between 1% to 10%.

Stormwater generally drains to the West via sheet flow and shallow concentrated flow where it discharges either to the adjacent property owned by the Finger Lakes Railway Corporation or to the Perrine Street right of way, ultimately entering into the Fifth Ward Sewer District infrastructure.

There are two drainage areas on site that drain to two separate analysis points see below for descriptions of the existing drainage area:

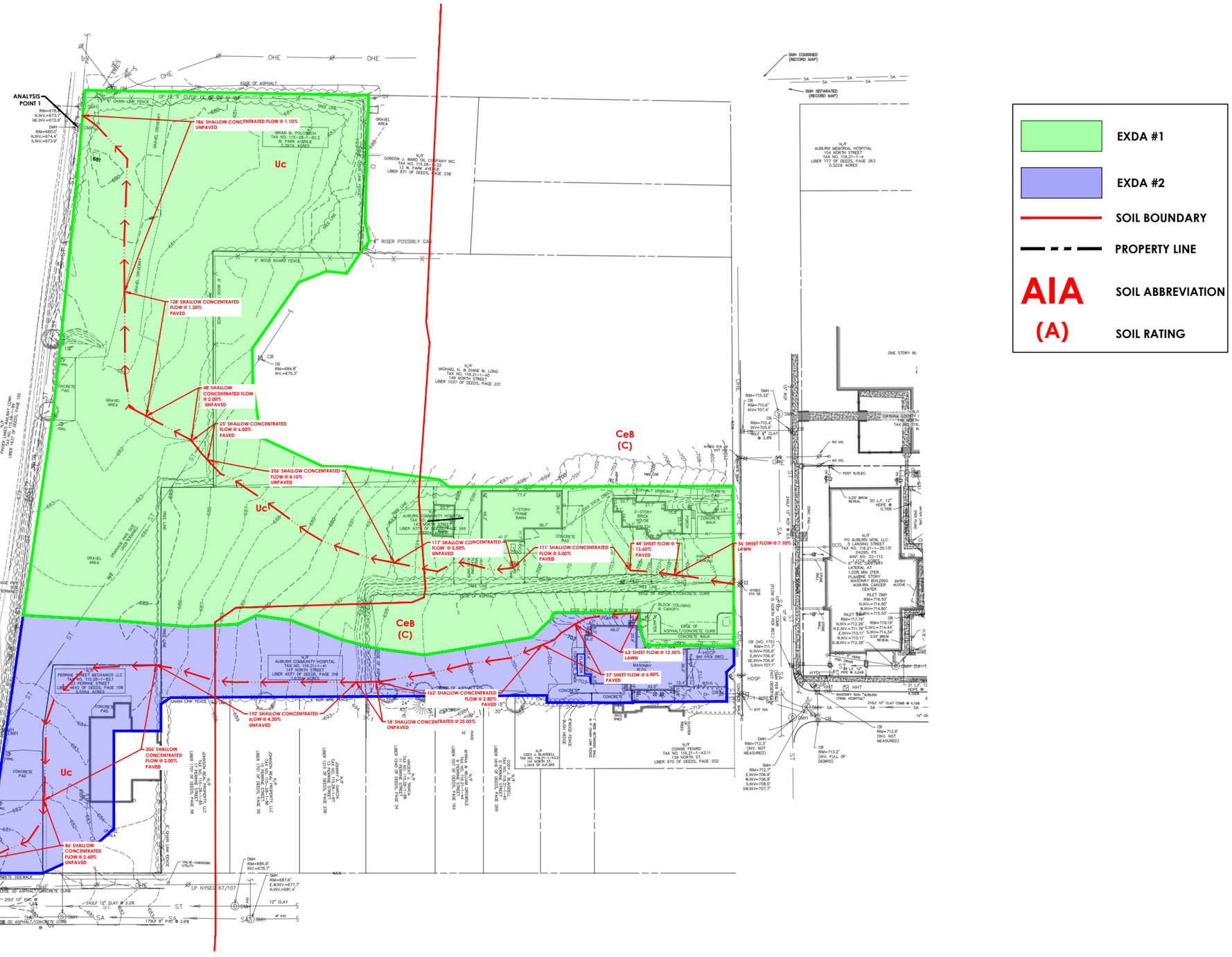
Existing Drainage Area 1:

This area encompasses the northern portion of the site, encompassing existing buildings and pavement areas, woods and gravel areas. In total the area is 4.20 acres. Stormwater generally sheet and shallow concentrated flows from East to West flowing to existing infrastructure in the adjacent property owned by the Finger Lakes Railway Corporation to analysis point 1 which ultimately terminates at the Fifth Ward Sewer District Infrastructure.

Existing Drainage Area 2:

This area encompasses the southern portion of the site, encompassing existing buildings and pavement areas, woods and gravel areas. In total the area is 1.43 acres. Stormwater generally sheet and shallow concentrated flows from East to West towards the Perrine Street right of way into existing infrastructure to analysis point 2, ultimately terminating at the Fifth Ward Sewer District Infrastructure.

The provided existing drainage map graphically shows this drainage area, as well as the other hydraulic characteristics:



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AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

EXISTING DRAINAGE MAP

20255046.0001

APRIL, 2026

CITY OF AUBURN, NY

3.2 Wetlands/Tributary

The site was reviewed for the existence of federal and state regulated wetlands within the property boundaries. Federal wetlands were researched using the National Wetlands Inventory (NWI) using an online U.S. Fish and Wildlife website search. State regulated wetlands were researched using the NYSDEC's online Environmental Resource Mapper website. Refer to Appendix D and E for the federal and state regulated wetlands mapping. In addition to online mapping, a wetland delineation report was conducted.

Online wetland mapping is shown in appendix D and E.

3.3 Floodplain

Floodplains were researched using the online Firmette tools found at FEMA Map Service Center. Review of the mapping indicates the subject parcels are not located with a flood hazard area. The parcels are located within Flood Zone X, defined as areas determined to be outside the 0.2% annual chance floodplain per FEMA Map 36011C0305E dated August 2, 2007.

Appendix G provides the FEMA Firmette maps showing the location of the floodplains.

3.4 NYSDEC Environmental Resources

The NYSDEC has an Environmental Resource Mapper on its website. The Environmental Resource Mapper is an interactive mapping application that can be used to identify some of New York State's natural resources and environmental features that are state protected, or of conservation concern. It displays the following:

- Animals and plants that are rare in New York, including those listed as Endangered or Threatened (generalized locations). [Updated May 2008]
- Significant natural communities, such as rare or high-quality forests, wetlands, and other habitat types.
- New York's streams, rivers, lakes, and ponds; water quality classifications are also displayed

According to this database, there are no potential for rare and endangered animals in the vicinity of the project. The environmental mapper is shown on Appendix D.

3.5 State Historic Preservation Office Review

The site was reviewed for the presence of an archeological sensitive area within the property boundary. The archeo-sensitive areas were located using online GIS tools found at the NYS Historic Preservation Office (SHPO).

It was determined that site is not within archeological-sensitive area but is adjacent to properties either listed or eligible for the National or State Register of Historic Places. The archeological sensitive areas map is included in Appendix H.

4.0 DEVELOPED SITE CONDITIONS

The site will be segmented into three proposed drainage areas. See below for a description of these drainage areas:

4.1 Proposed Drainage Area 1:

This area encompasses the majority of the proposed building, parking area and sidewalks. In total the area is 4.05 acres Stormwater will sheet flow to proposed stormwater infrastructure located on site which ultimately discharge to the proposed bioretention area. Here stormwater first discharges to the proposed forebay where sediment is allowed to settle out. It then overflows a rip rap spillway into the bioretention area where stormwater will filter through filter media and enter underdrain and enter into the outlet control structure. From the outlet control structure stormwater is conveyed to existing infrastructure on the adjacent property owned by the Finger Lakes Railway Corporation to analysis point 1 which ultimately terminates at the Fifth Ward Sewer District Infrastructure.

4.2 Proposed Drainage Area 2:

This area encompasses a portion of the proposed access road. In total the area is 0.92 acres. Stormwater will sheet flow to proposed stormwater infrastructure located in the Perrine Street right of way into existing infrastructure to analysis point 2, ultimately terminating at the Fifth Ward Sewer District Infrastructure.

4.3 Proposed Drainage Area 3:

This area encompasses offsite areas that under existing conditions flow onto our site. In total the area is 0.66 acres. Stormwater sheet flows to proposed stormwater infrastructure that will divert this water to conveyed to existing infrastructure on the adjacent property owned by the Finger Lakes Railway Corporation to analysis point 1 which ultimately terminates at the Fifth Ward Sewer District Infrastructure.

The proposed drainage map provided graphically shows this drainage area, as well as the other hydraulic characteristics:

50 0 25 50 100

HORIZONTAL SCALE: 1"=50'

N

PRDA #1

PRDA #2

PRDA #3

SOIL BOUNDARY

PROPERTY LINE

AIA — SOIL ABBREVIATION

(A) — SOIL RATING

94' CHANNEL FLOW @ 1.00%
12" HDPE

28' CHANNEL FLOW @ 3.97%
12" HDPE

ANALYSIS POINT 1

111' CHANNEL FLOW @ 3.64%
12" HDPE

560' SHALLOW CONCENTRATED FLOW @ 4.50%
UNPAVED

100' SHEET FLOW @ 7.00%
LAWN

CeB
(C)

197' CHANNEL FLOW @ 1.00%
12" HDPE

125' CHANNEL FLOW @ 3.00%
12" HDPE

PROPOSED 3-STORY MEDICAL
OFFICE BUILDING
30,400 S.F. FOOTPRINT
80,750 S.F. TOTAL

231' SHEET FLOW @ 8.00%
PAVED

210' CHANNEL FLOW @ 1.00%
12" HDPE

12' SHEET FLOW @ 25.00%
LAWN

70' SHEET FLOW @ 5.00%
LAWN

88' SHEET FLOW @ 2.20%
PAVED

47' SHALLOW CONCENTRATED @ 2.10%
PAVED

67' SHEET FLOW @ 7.10%
UNPAVED

28' SHEET FLOW @ 2.00%
PAVED

ANALYSIS POINT 2

N/F
AUBURN MEMORIAL HOSPITAL
154 NORTH STREET
TAX NO. 116.21-1-4
LIBER 777 OF DEEDS, PAGE 283
0.3226 ACRES

N/F
GORDON J. IRANI OIL COMPANY INC.
TAX NO. 115.15-1-22
12 W. GENESEE AVENUE
LIBER 871 OF DEEDS, PAGE 238

N/F
MICHAEL H. & DIANE M. LONG
TAX NO. ____
149 NORTH STREET
LIBER 1037 OF DEEDS, PAGE 221

N/F
CODY A. BLASDELL
TAX NO. 116.21-1-43.2
130 NORTH ST.
L.1616 OF D.P.389

N/F
CONNIE PENDRO
TAX NO. 116.21-1-43.11
130 NORTH ST.
LIBER 970 OF DEEDS, PAGE 202

N/F
PC AUBURN MOB, LLC
5 LANSING STREET
TAX NO. 116.21-1-35.131
MAP NO. 32-112
1.117± ACRES

ONE STORY MASONRY BUILDING
AUBURN CANCER CENTER

ONE STORY BUILDI

CAYUGA COUNTY REA
TAX NO. 116.21-
1.88 ACRE

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

PROPOSED DRAINAGE MAP

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20255046.0001

APRIL, 2026

CITY OF AUBURN, NY

5.0 STORMWATER QUALITY

Stormwater quality requirements will be achieved using green infrastructure practices as well as standard stormwater practices. Chapter 5 of the NYSDEC Stormwater Management Design Manual was used to design the green infrastructure for this project. The design manual outlines which practices are best suited for specific scenarios, and how to properly size these practices. Water Quality Volume (WQv) and Runoff Reduction Volume (RRv) requirements are met using green infrastructure practices as well as other standard stormwater management practices.

This project will use filtration - bioretention to meet all NYSDEC requirements for stormwater quality.

5.1 Infrastructure Practice Type Example: Filtration - Bioretention:

The bioretention areas shown on the plans will treat runoff from a portion of the proposed roads, roofs, and parking areas. Water will discharge to a forebay where settlement is allowed time to settle out. The forebay will discharge via a rip rap lined overflow to the bioretention area where Water will filter through the soil media to underdrains, which connect to outlet control structures. A rip-rap lined overflow weir will be utilized to ensure excessive ponding does not occur in the filtration-bioretention area during extreme storm events which will allow stormwater to overflow the basin.

Table 2: *Stormwater Quality Comparison*

Water Quality		
Description:	**Required**	**Provided**
WQv Total (acre-ft)	0.091	0.091
Min RRv Total (acre-ft)	0.011	0.091
CPv Total (acre-ft)	0.319	0.408
Qp Total (cfs)	13.880	12.630
Qf Total (cfs)	30.130	23.780

See the Appendix I for all green infrastructure calculations, and see the green infrastructure map below which details the catchment areas that go to each GI practice:

6.0 STORMWATER QUANTITY & CLIMATE CHANGE

The proposed development will increase impervious area on site, which increases the rate of stormwater runoff from the site. This runoff must be reduced to a rate that is less than the offsite flow rate during existing conditions. Reduction for this project is achieved through a new stormwater management area that will be used to release stormwater runoff at a controlled rate via an outlet control structure.

See the comparison table below for the sites analysis points under existing and proposed conditions:

Table 3: *Stormwater Quantity Comparison*

Runoff Comparison Table				
Analysis Point:	**Condition:**	**Runoff (cfs)**		
		1 year	**10 year**	**100 year**
Analysis Point 1	EXISTING	3.00	9.05	20.88
	PROPOSED	2.01	9.04	19.64
	PERCENT REDUCTION	**33.00%**	**0.11%**	**5.94%**
Analysis Point 2	EXISTING	2.35	5.00	9.53
	PROPOSED	2.13	3.97	6.99
	PERCENT REDUCTION	**9.36%**	**20.60%**	**26.65%**
Total Site	EXISTING	5.24	13.88	30.13
	PROPOSED	2.8	12.63	23.78
	PERCENT REDUCTION	**46.56%**	**9.01%**	**21.08%**

As shown above, the proposed design meets the requirements of stormwater management by releasing the water at a reduced rate that does not lead to erosion or high levels or pollution. Refer to Appendix K for the HydroCAD analysis and the breakdown of each hydrograph.

6.1 Considerations for Climate Change

In accordance with Part III.A.2 of the General Permit, considerations must be made in SWPPP design to account for ongoing climate change across NYS. This SWPPP considered the following physical risks pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490.

- Increasing temperatures and increasing precipitation
- Increasing variability in precipitation, including chance of drought
- Increasing frequency and severity of flooding and rising sea levels
- Increasing storm surge and shifting ecologies.

The following methods to consider and implement resiliency to combat climate change in NYS are below:

- *Accurate Rainfall Data* – This SWPPP utilizes the most up-to-date rainfall data provided by the "Extreme Precipitation in New York & New England" tool managed by Cornell University. This data is important for proper stormwater design of infrastructure to meet modern climate conditions.

7.0 CONSTRUCTION EROSION CONTROL PRACTICES & INSPECTIONS

The Owner is responsible for having monthly inspections of the storm water management facility completed. The inspections shall review and document the following at a minimum: visual inspection of the outlet structure, check of the outlets for excessive sediment accumulation, burrowing, vegetation degradation, or any other issues of concern. A certified copy of the annual summary of inspections report will be provided to the City of Auburn by the first of December. The owner is also responsible for having SWPPP inspections once per week once disturbance of the site starts. Copies of the SWPPP inspection reports will be sent to the City, owner, and contractor and deficiencies should be addressed immediately.

Several erosion control practices will be utilized during construction by the contractor under direct supervision by the owner and a qualified SWPPP inspector (S.W.T.). These practices are explained below and shown in detail in the appendix of this report and the construction plans:

- Silt Fence → Silt fencing shall be installed at the toe of all slopes along the perimeter of the disturbed areas and at the toe of slope for any soil stock pile areas. Also, a row of silt fence will be installed around the perimeter of all wetlands in an effort to delineate its boundary. The fencing will be installed in accordance with the NYSDEC construction standards and at the instruction of this plan. The silt fencing shall be buried in the ground at least 6 inches. The contractor shall provide continued monitoring to ensure the silt fencing remains intact, and shall repair as needed. When the silt accumulates to greater than 1/3 the height of the fence the contractor shall remove and dispose of the silt.

- Stabilized Construction Entrance → The existing project entrance shall serve as the construction entrance to the project. The contractor shall ensure that mud is not tracked onto the adjacent roadways and that the stone entrance properly removes mud and debris from construction vehicles.

- Drop Inlet Protection → All field inlets and catch basins shall have inlet protection in accordance with the detail the Appendix. Drop Inlet protection can be removed from catch basins in the roadway when the sub base is installed, and from the field inlets when the adjacent area is brought to final grade and stabilized.

- Seeding and Stabilization → The contractor shall seed and stabilize all disturbed areas not to be worked for 7 days. Stabilization measures may include but are not limited to straw mulching, wood chip mulching, jute mesh and hydroseeding. The SMA and adjacent areas shall be stabilized immediately following their shaping and installation. All embankments greater than 3:1 shall be stabilized with jute mesh. The timeline requirements for stabilization are below:

    - If not in a listed impaired watershed AND site is NOT under a 5-acre wavier, 14 days.
    - If inside an impaired watershed OR utilizing a 5-acre wavier, 7 days.
    - During the winter months, including sites under winter shutdown, 3 days.

- Check Dam → 24 inch high stone check dams will be installed in all temporary and permanent diversion swales. The check dams will be installed every 2 vertical feet. Once the site is stabilized, these check dams will be removed.

- Truck Washdown area → a truck washdown area will be provided adjacent to the construction entrance. This area will be constructed such that it drains to a sediment basin immediately adjacent prior to discharging offsite.

- Winter Shutdown → The contractor may request to enter winter shutdown provided the contractor has fulfilled the requirements set forth in the NYSDEC Blue Book Standard and Specifications for Winter Stabilization contained in Appendix Q of this report. The certified SWPPP inspector will then perform an inspection and upon agreement with the contractor's practice, shall complete the "Notice to reduce Frequency of SPDES Site Inspections" Form contained in Appendix Q of this report. The form will then be submitted to the regulatory MS4 (or NYSDEC regional office should there be no MS4 for the project area) for review. After the regulatory MS4 or NYSDEC regional office has approved the request, the site will enter winter shutdown and SPDES site inspections may drop to monthly. Should the certified SWPPP inspector find any problems during winter shutdown, the contractor is liable to correct the issues on site in the same timely manner as an active project

Additional measures may be required during construction at the guidance of the owner or certified SWPPP Inspector. The contractor shall begin to make all adjustments to the erosion control within 24 hours of receipt of any deficiencies. The owner will be responsible for providing weekly reports when the site disturbance totals less than 5 acres. Inspections are to be completed by a qualified inspector in accordance with the GP-0-25-001, during construction to the City of Auburn.

If the developer of site plans to increase the disturbance greater than 5 acres at any given time, a 5 acre waiver must be submitted to the NYSDEC and approval granted prior to reaching this limit. The developer must adhere to the conditions set forth in the SPDES General Permit GP-0-25-001 Part II.D.3, located as Appendix K of this report. The conditions of Part II.D.3 are outlined below:

1. The owner or operator shall have a qualified inspector conduct at least two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

2. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within three (3) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated July 2024.

3. In areas where soil disturbance and compaction due to construction activities has taken place and the final product is to be pervious soils, lawns, or soils underlying a pervious man-made surface (i.e. pervious pavement, etc) the contractor is required to restore the soil per table 5.2 of the NYSDEC Stormwater Design Manual (see below).

Table 5.2 Soil Restoration Requirements

Type of Soil Disturbance	Soil Restoration Requirement		Comments/Examples
No soil disturbance	Restoration not permitted		Preservation of Natural Features
Minimal soil disturbance	Restoration not required		Clearing and grubbing
Areas where topsoil is stripped only - no change in grade	HSG A &B	HSG C&D	Protect area from any ongoing construction activities.
	apply 6 inches of topsoil	Aerate* and apply 6 inches of topsoil	
Areas of cut or fill	HSG A &B	HSG C & D	
	Aerate and apply 6 inches of topsoil	Apply full Soil Restoration **	
Heavy traffic areas on site (especially in a zone 5-25 ft around buildings but not within a 5 ft perimeter around foundation walls)	Apply full Soil Restoration** de-compaction and compost enhancement)		
Areas where Runoff Reduction and/or Infiltration practices are applied	Restoration not required but may be applied to enhance the reduction specified for appropriate practices.		Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single-phase operation fence area
Redevelopment projects	Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area as well as existing pervious areas.		

*Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.

** Refer to latest version of NYSDEC Deep-Ripping and Decompaction.

4. The owner or operator shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

5. The owner or operator shall install any additional site-specific practices needed to protect water quality.

Any modifications to the SWPPP will be reported and approved by the City in writing prior to implementation. See Appendix A for additional SWPPP information. The owner is responsible for having a qualified operator on site at all times who has at least 4 hours of erosion control training in accordance with the GP-0-25-001. Once the site has achieved 80% stabilization and ground cover, the City may sign off on the Notice of Termination prior to submission to the NYSDEC. Removal of all temporary erosion and sediment control practices is required prior to demobilization.

8.0 POST CONSTRUCTION

The owner of the subject project will be responsible for all post construction practices. The contact information for the owner is illustrated on the cover of this plan as well as the design plans for the project. The post construction practices include performing annual inspections of the SMAs to ensure proper working conditions and ensure continual stabilized cover of all project areas to 80% cover, minimum. All applicable inspection and maintenance activities shall continue until the 80% cover is met. Any silt removal will be disposed either off site or on site and immediately stabilized in accordance with the practices of this plan.

Additionally, annual monitoring of the storm sewer structures will be provided by the owner to ensure that they are functioning properly. All documentation related to this SWPPP and post construction monitoring reports, shall be kept by the owner for five years after project completion. These inspections will be certified by a Professional Engineer and a copy of the inspection report will be furnished to the City.

Additionally, annual monitoring of the storm sewer structures will be:

POST-CONSTRUCTION STORMWATER MANAGEMENT MAINTENANCE LIST

Practice	Requirement	Frequency
Project Area (entirety)	Contact and engage NYS Licensed Professional Engineer (PE) for Annual stormwater inspection per requirement of maintenance agreement with Dutchess County.	Annually.
Project area grass areas	Inspect for patchy/un-stabilized grass areas. Reseed as necessary	Monthly or as indicated by annual inspection report.
Project area pavement areas	Inspect for contaminants, trash and broken/damaged pavement. Soak up, remove and repair as necessary.	Weekly or as indicated by annual inspection report.
Storm structures	Clean/remove trash/blockages.	As found or as indicated by annual inspection report.
Filtration bio-retention	Inspect for bare soil, blocked inlets, sediment accumulation, and vegetation level. Remove sediment and reseed as necessary.	Annually or as indicated by annual inspection report.

All documentation related to this SWPPP and post construction monitoring reports shall be kept by the owner for five years after project completion. These inspections will be certified by a Professional Engineer and a copy of the inspection report will be furnished to the City.

9.0 SUMMARY

The proposed project requires stormwater management practices which conform to NYSDEC regulations. The proposed standard stormwater management practices will also result in a net decrease in peak runoff from the site while meeting the NYSDEC requirements for Runoff Reduction, Water Quality and Channel Protection. Continued monitoring of the practices included in this plan will be provided by the owner and a designated SWPPP Inspector.

The following appendices of this report illustrate the additional requirements and specifications for stormwater pollution prevention. All practices included in this report and incorporated in the proposed project have been designed in compliance with the NYS Storm Water Design Manual and NYS Standards and Specifications for Erosion and Sediment Control.

APPENDICES

APPENDIX A: SWPPP PRACTICES PROCEDURES AND CERTIFICATIONS

STORMWATER POLLUTION PREVENTION PLAN

SITE DESCRIPTION			
Project Name and Location: (Latitude, Longitude, or Address)	Auburn Community Hospital Health Campus 23 Perrine Street, 147 North Street, 143 North Street W Park Avenue Auburn, NY 13021	Owner Name and Address:	Park Grove Realty, LLC 46 Prince Street Rochester, NY 14607
Description: (Purpose and Types of Soil Disturbing Activities)	Demolition of the existing buildings and infrastructure on the site followed by the construction of a Medical Office Building with a ± 30,400 sq. ft. footprint and a total building area of ± 80,750 sq. ft. Site improvements will include internal access drives, parking areas, sidewalks, landscaping and utility connections to serve the proposed building.		
Runoff Coefficient/Soils Conditions:	The runoff coefficient impervious area is 0.9 and 0.2 for the grass areas. The soils on-site consist of Cazenovia silt loam with hydrologic soil class "C" and Urban land-Cazenovia complex.		
Site Area:	5.41 acres		

Sequence of Major Activities

The order of activities will be as follows:

1. **Install silt fences, stabilized construction entrance and other erosion control measures.**
2. **Protect vegetation to remain.**
3. **Construct temporary sediment basins including grading, and stabilization.**
4. **Demolish existing buildings and pavement areas.**
5. **Strip and stockpile topsoil as necessary.**
6. **Conduct mass earth moving activities.**
7. **Install utilities including storm sewers.**
8. **Box parking lot and access drives.**
9. **Install parking and access drive subbase and continue monitoring of erosion control.**
10. **Stabilize disturbed areas and stockpiles within 7 days of last construction activity in all areas.**
11. **Construct filtration bioretenion area.**
12. **Final grading, seeding, and mulching of all disturbed areas.**
13. **When all work areas are complete and the entire areas are stabilized, remove the erosion control measures.**

Name of Receiving Waters:	Fifth Ward Sewer District

CONTROLS

Erosion and Sediment Controls

Stabilization Practices

Temporary Stabilization - Topsoil will be replaced onsite or removed from the site. Disturbed portions of the site where construction activity temporarily ceases for at least 7 days will be stabilized with temporary seed and mulch no later than 7 days from the last construction activity in that area. The temporary seed shall be Rye (grain) applied at the rate of 120 pounds per acre. Prior to seeding, 2,000 pounds per acre of ground agricultural limestone and 1,000 pounds per acre of 10-10-10 fertilizer shall be applied. If applicable, areas of the site which are to be paved will be temporarily stabilized by applying geotextile and stone sub-base until bituminous pavement can be applied.

Permanent Stabilization - Disturbed portions of the site where construction activities permanently cease shall be stabilized with permanent seed no later than 7 days after the last construction activity. The permanent seed mix shall be as indicated on the plans and specifications.

Stormwater Management

The proposed Infiltration basin will provide stormwater quality and siltation control post construction. The areas which are not graded as part of this project will remain untouched. When construction has been completed all surfaces will be restored and erosion control measures removed after all turf areas are established. After construction has been completed the siltation basins will be cleaned of all construction debris, then filled and stabilized.

Post Construction Stormwater Management/Maintenance Procedures

Once the stormwater management areas are permanently stabilized and operating properly, an annual inspection is required. This shall consist of:

- A visual inspection of the outlet structure and removal of any debris that may affect its performance.
- A visual inspection of the earthen berm. Signs of erosion or areas lacking vegetation should be identified and corrected.
- Provide a report summarizing the above to the Town in a format acceptable to their office.
- See attached GP-01-25-001 for additional inspection requirements
- Stormwater management areas shall be maintained a minimum of 3 times per growing season.

OTHER CONTROLS

Waste Disposal:

Waste Material - All waste material will be collected and stored in a metal dumpster rented from a NYSDEC approved hauler, which is a licensed solid waste management company. The dumpster will meet all local and state solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied a minimum of once per week or more often if necessary, and the trash will be hauled to a NYSDEC approved dump. No construction waste material will be buried on site. All personnel will be instructed regarding the correct procedures for waste disposal. Notices stating these practices will be posted in the office trailer and the individual who manages the day-to-day operations will be responsible for seeing that these procedures are followed.

Hazardous Waste – All hazardous waste materials will be disposed of in a manner specified by local and state regulations or by the manufacturer. Site personnel will be instructed in these practices and the individual who manages the day-to-day operations will be responsible for seeing that these practices are followed.

Sanitary Waste – If portable units are used, all sanitary waste will be collected from the portable units a minimum of three times per week by a licensed sanitary waste management contractor, as required by local regulation.

Offsite Vehicle Tracking:

The paved streets adjacent to the site will be swept daily to remove any excess mud, dirt, or rock tracked from the site. Dump trucks hauling material from the construction site will be covered with a tarpaulin.

TIMING OF CONTROLS/MEASURES

As indicated in the Sequence of Major Activities, the erosion and sedimentation control measures, including silt fence, will be constructed prior to clearing or grading of any other portions of the site. Areas where construction activity temporarily ceases for more than 7 days will be stabilized with a temporary seed and mulch within 7 days of the last disturbance. Once construction activity ceases permanently in an area, that area will be stabilized with permanent seed and mulch.

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

The stormwater collection and discharge complies with the NYSDEC requirements of the New York State Stormwater Management Design Manual.

MAINTENANCE/INSPECTION PROCEDURES

Erosion and Sediment Control Inspection and Maintenance Practices

These are the inspection and maintenance practices that will be used to maintain erosion and sediment controls:

- All control measures will be inspected at least once each week if there is 5 acres or less of disturbance. Twice a week if more than 5 acres is disturbed.
- All measures will be maintained in good working order; if a repair is necessary; it will be initiated within 24 hours or report.
- Built-up sediment will be removed from silt fence when it has reached one-third the height of the fence.
- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and health of growth.
- A maintenance inspection report will be made after each inspection. A copy of the report form to be completed by the inspector is attached.
- The site superintendent will select individuals who will be responsible for inspections, maintenance and repair activities, and filling out the inspection and maintenance report.
- Personnel selected for inspection and maintenance responsibilities will receive training from the site superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used on-site in good working order.

Non-Stormwater Discharges

No non-stormwater discharges will occur from the site during the period, except the following:
It is expected that the following non-storm water discharges will occur from the site during the construction period:

- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated groundwater (from dewatering excavation).

INVENTORY FOR POLLUTION PREVENTION PLAN

The materials or substances listed below are expected to be present on-site during construction:

Select Granular Fill	Topsoil	HDPE Pipe
Precast Concrete	Mulch	Construction Signs
Concrete	Joint Sealant	Sign Panels & Sign Supports
Seed	Electric Cable	Metal Frames & Grates
Steel Conduit	Asphalt Tack Coat	SDR-35 PVC Pipe
Subbase Course	Asphalt Concrete	

SPILL PREVENTION

Material Management Practices

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

Good Housekeeping:

The following good housekeeping practices will be followed on-site during the construction project:

- An effort will be made to store only enough product required to do the job.
- All materials stored on-site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposing of the container.
- Manufacturers' recommendations for proper use and disposal will be followed.
- The site superintendent will inspect daily to ensure proper use and disposal of materials on-site.

Hazardous Products:

These practices are used to reduce the risks associated with hazardous materials:

- Products will be kept in original containers unless they are not re-sealable.
- Original labels and material safety data will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and state recommended methods of proper disposal will be followed.

SPILL PREVENTION (Continued)

Product Specific Practices

The following product specific practices will be followed on-site:

Petroleum Products:

All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Fuel oil for construction machinery will be stored in an above-ground tank with a suitable containment system. Material safety data sheets will be filed in the site superintendent's trailer. Any asphalt substances used on-site will be applied according to the manufacturer's recommendations.

Fertilizers:

Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to stormwater. The contents of any partially used bags of fertilizer will be transferred to resealable plastic bags to avoid spills.

Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system, but will be properly disposed of according to manufacturers' instructions or state and local regulations.

Concrete Trucks:

Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on site.

Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area on-site. Equipment and materials will include but not be limited to brooms, dust pans, mops, rags, gloves, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with hazardous substance.
- Reportable spills of any petroleum-based material will be reported to the appropriate state or local government agency.
- The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
- The site superintendent responsible for the day-to-day operations will be the spill prevention and cleanup coordinator. He will designate at least three other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the office trailer on-site.

POLLUTION PREVENTION PLAN CERTIFICATION

I certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP for the construction site identified in such SWPPP as a condition of authorization to discharge stormwater. I also understand that the operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards.

Signed:_____
Owner

Date:_____

CONTRACTOR'S CERTIFICATION

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

Signature	For	Responsible for
Trained Contractor _____ Date:_____		
_____ Date:_____		
_____ Date:_____		
_____ Date:_____		
_____ Date:_____		

Signature	For	Responsible for
_____ Date:_____		
_____ Date:_____		
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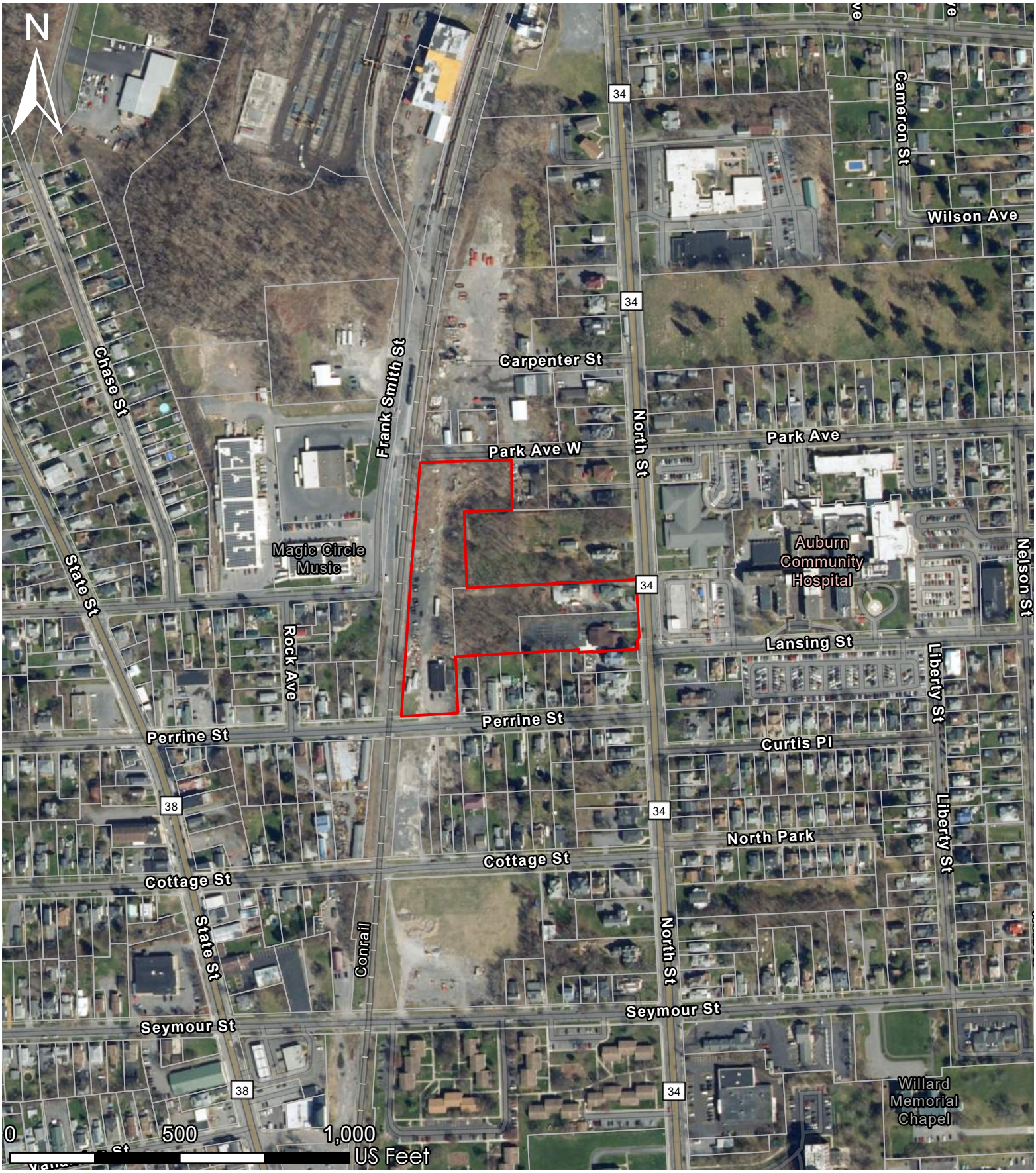
_____ Date:_____		

APPENDIX B: AERIAL PHOTOGRAPH



Legend

- Project Location
- Parcels

Location Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: Cayuga County GIS

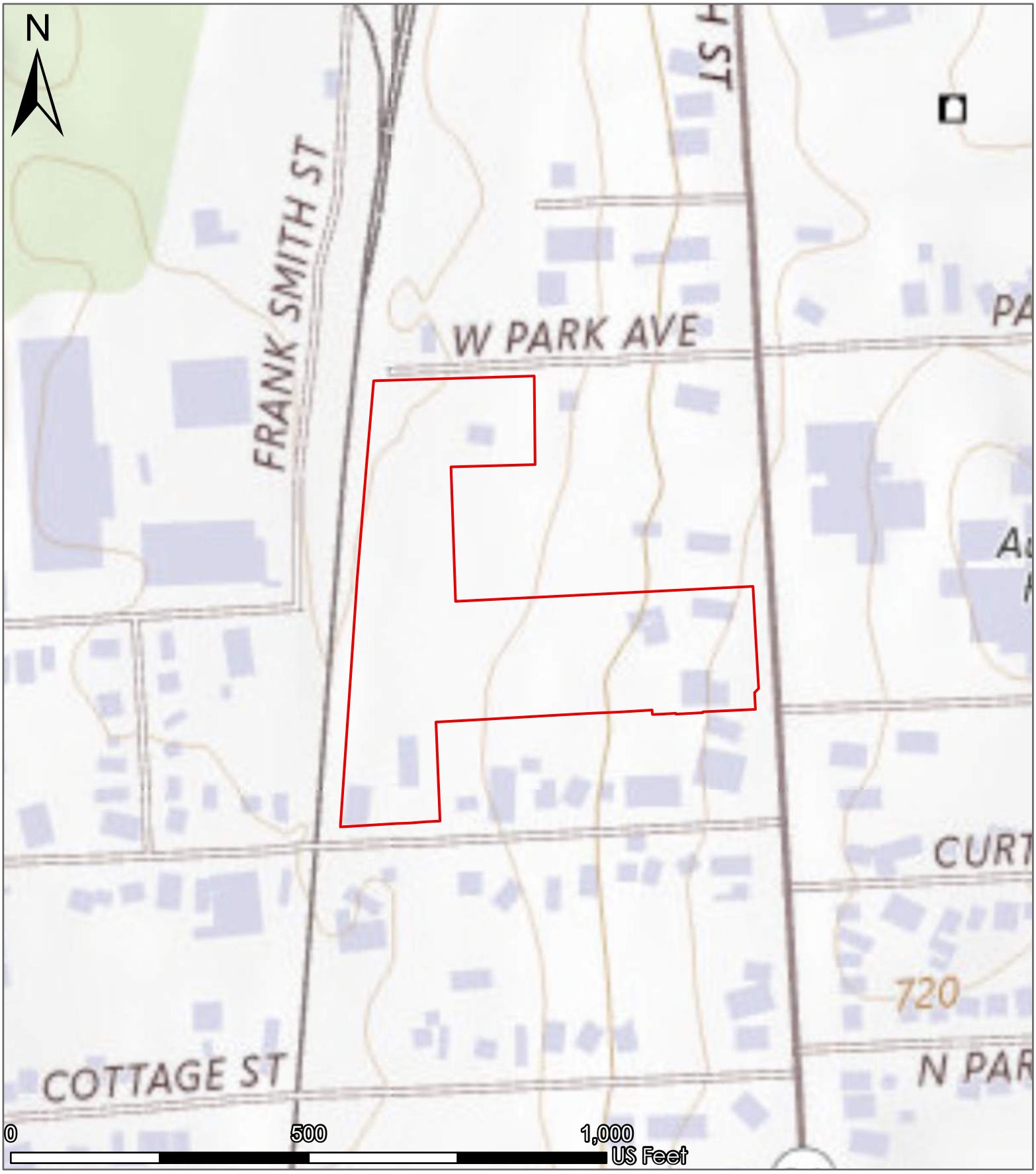
PASSERO
architecture engineering

Service Credits:

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Vantor

Date: 4/10/2026

APPENDIX C: USGS QUADRANGLE MAP



Legend

Project Location

USGS Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: United States Geological Survey

PASSERO
architecture engineering

Service Credits:

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information. Data refreshed October 27, 2025.

Date: 4/10/2026

APPENDIX D: ENVIRONMENTAL RESOURCE MAPPER

Legend

- Streams & Rivers
- Project Location
- Informational Freshwater Wetland Mapping
- 100ft Buffer
- Previously Mapped Freshwater Wetlands
- NYS Natural Heritage Communities
- Rare Plants & Animals

Environmental Resource Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: Environmental Resource Mapper

PASSERO
architecture engineering

Service Credits:

New York State Department of Environmental Conservation, NYSDEC, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Microsoft, Vantor

Date: 4/10/2026

APPENDIX E: WETLAND MAPPING

Legend

- Project Location
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

USFWS National Wetlands Inventory

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: U.S. Fish and Wildlife Service

PASSERO architecture engineering

Service Credits:

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Vantor

Date: 4/10/2026

APPENDIX F: SOILS MAP

Legend

- Project Location

Soils

Hydrologic Group Rating

- C
- N/A

Soil Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: NRCS Web Soil Survey

PASSERO
architecture engineering

Service Credits:

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Microsoft, Vantor

Date: 3/9/2026

APPENDIX G: FEMA MAPPING

Legend

- Project Location
- 0.2% Annual Chance Flood Hazard
- 1% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Area with Reduced Risk Due to Levee
- Special Floodway

FEMA Flood Areas Map

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: FEMA FIRMette 36011C0305E

PASSERO architecture engineering

Service Credits:

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Microsoft, Vantor

Date: 4/10/2026

APPENDIX H: ARCHEOLOGICAL SENSITIVE AREAS MAP

Legend

- Project Location
- National Register Building Listings

Historic Building Districts

- Eligible
- Listed

Historic Building Points

- Eligible
- Listed

Archeological Sensitive Areas

Maps created by: Passero Associates GIS, AV
CRS: NAD83 State Plane New York Central
Municipality: City of Auburn
Source: Cultural Resource Information System

PASSERO architecture engineering

Service Credits:

Division for Historic Preservation, New York State Office of Parks, Recreation and Historic Preservation, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, New York State, Microsoft, Vantor

Date: 4/10/2026

APPENDIX I: HYDROCAD CALCULATIONS

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point	
Smoothing	Yes
State	New York
Location	New York, United States
Latitude	42.941 degrees North
Longitude	76.569 degrees West
Elevation	200 feet
Date/Time	Tue Mar 24 2026 16:24:15 GMT-0400 (Eastern Daylight Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.27	0.41	0.52	0.68	0.84	1.04	**1yr**	0.73	0.93	1.17	1.40	1.66	1.95	2.19	**1yr**	1.72	2.11	2.52	3.04	3.50	**1yr**
2yr	0.32	0.49	0.61	0.81	1.01	1.25	**2yr**	0.88	1.13	1.41	1.67	1.96	2.28	2.55	**2yr**	2.02	2.46	2.88	3.44	3.96	**2yr**
5yr	0.38	0.59	0.74	0.99	1.27	1.56	**5yr**	1.09	1.40	1.77	2.09	2.44	2.80	3.15	**5yr**	2.48	3.03	3.53	4.13	4.74	**5yr**
10yr	0.43	0.67	0.85	1.16	1.50	1.86	**10yr**	1.30	1.64	2.11	2.49	2.87	3.28	3.69	**10yr**	2.90	3.55	4.12	4.74	5.43	**10yr**
25yr	0.51	0.81	1.03	1.42	1.89	2.35	**25yr**	1.63	2.03	2.65	3.11	3.57	4.03	4.55	**25yr**	3.56	4.38	5.05	5.69	6.50	**25yr**
50yr	0.57	0.92	1.18	1.66	2.24	2.80	**50yr**	1.94	2.40	3.17	3.70	4.22	4.71	5.34	**50yr**	4.17	5.14	5.90	6.54	7.44	**50yr**
100yr	0.66	1.07	1.38	1.96	2.67	3.34	**100yr**	2.30	2.83	3.77	4.38	4.96	5.51	6.27	**100yr**	4.88	6.03	6.88	7.52	8.53	**100yr**
200yr	0.76	1.23	1.60	2.30	3.18	3.98	**200yr**	2.74	3.34	4.50	5.20	5.85	6.44	7.36	**200yr**	5.70	7.07	8.04	8.64	9.78	**200yr**
500yr	0.91	1.50	1.96	2.85	4.00	5.03	**500yr**	3.45	4.17	5.66	6.51	7.27	7.94	9.10	**500yr**	7.02	8.75	9.87	10.38	11.73	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.35	0.43	0.58	0.71	0.78	**1yr**	0.61	0.77	0.84	1.03	1.40	1.74	2.04	**1yr**	1.54	1.96	2.35	2.89	3.28	**1yr**
2yr	0.31	0.48	0.59	0.80	0.99	1.10	**2yr**	0.86	1.08	1.23	1.51	1.84	2.22	2.51	**2yr**	1.96	2.41	2.85	3.40	3.91	**2yr**
5yr	0.35	0.54	0.67	0.93	1.18	1.33	**5yr**	1.02	1.30	1.46	1.79	2.20	2.68	2.99	**5yr**	2.37	2.87	3.39	3.93	4.57	**5yr**
10yr	0.39	0.60	0.74	1.03	1.33	1.51	**10yr**	1.15	1.47	1.65	2.01	2.48	3.04	3.41	**10yr**	2.69	3.28	3.87	4.40	5.12	**10yr**
25yr	0.44	0.67	0.83	1.19	1.57	1.79	**25yr**	1.35	1.75	1.96	2.35	2.88	3.56	4.04	**25yr**	3.15	3.89	4.60	5.13	5.93	**25yr**
50yr	0.48	0.73	0.91	1.31	1.76	2.03	**50yr**	1.52	1.99	2.23	2.64	3.21	4.03	4.62	**50yr**	3.56	4.44	5.23	5.77	6.64	**50yr**
100yr	0.53	0.80	1.01	1.45	1.99	2.32	**100yr**	1.72	2.27	2.54	2.96	3.59	4.54	5.28	**100yr**	4.02	5.07	5.97	6.45	7.42	**100yr**
200yr	0.59	0.88	1.12	1.62	2.26	2.67	**200yr**	1.95	2.61	2.89	3.32	4.01	5.11	6.02	**200yr**	4.52	5.78	6.79	7.23	8.31	**200yr**
500yr	0.71	1.05	1.36	1.97	2.80	3.22	**500yr**	2.42	3.15	3.46	3.88	4.64	5.99	7.16	**500yr**	5.30	6.89	8.09	8.38	9.64	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.30	0.46	0.56	0.75	0.93	1.04	**1yr**	0.80	1.02	1.16	1.46	1.78	2.10	2.36	**1yr**	1.86	2.27	2.67	3.19	3.70	**1yr**
2yr	0.34	0.52	0.64	0.87	1.07	1.19	**2yr**	0.92	1.17	1.32	1.64	2.01	2.34	2.61	**2yr**	2.07	2.51	2.96	3.54	4.06	**2yr**
5yr	0.41	0.63	0.78	1.06	1.35	1.54	**5yr**	1.17	1.51	1.69	2.08	2.51	2.92	3.30	**5yr**	2.59	3.18	3.66	4.34	4.92	**5yr**
10yr	0.48	0.73	0.91	1.27	1.64	1.89	**10yr**	1.42	1.85	2.05	2.53	3.05	3.47	3.94	**10yr**	3.07	3.79	4.34	5.09	5.73	**10yr**
25yr	0.60	0.91	1.13	1.62	2.13	2.48	**25yr**	1.84	2.43	2.65	3.29	3.94	4.35	4.99	**25yr**	3.85	4.80	5.46	6.29	7.00	**25yr**
50yr	0.71	1.08	1.34	1.93	2.59	3.04	**50yr**	2.24	2.97	3.22	4.01	4.78	5.19	5.97	**50yr**	4.59	5.75	6.48	7.09	8.17	**50yr**
100yr	0.84	1.27	1.60	2.31	3.16	3.72	**100yr**	2.73	3.64	3.92	4.89	5.81	6.18	7.16	**100yr**	5.47	6.89	7.68	8.27	9.53	**100yr**
200yr	1.00	1.51	1.91	2.77	3.86	4.56	**200yr**	3.33	4.46	4.76	5.98	7.07	7.36	8.57	**200yr**	6.51	8.24	9.12	9.64	11.12	**200yr**
500yr	1.28	1.91	2.45	3.57	5.07	5.97	**500yr**	4.38	5.83	6.15	7.78	9.18	9.29	10.88	**500yr**	8.22	10.46	11.44	11.79	13.64	**500yr**

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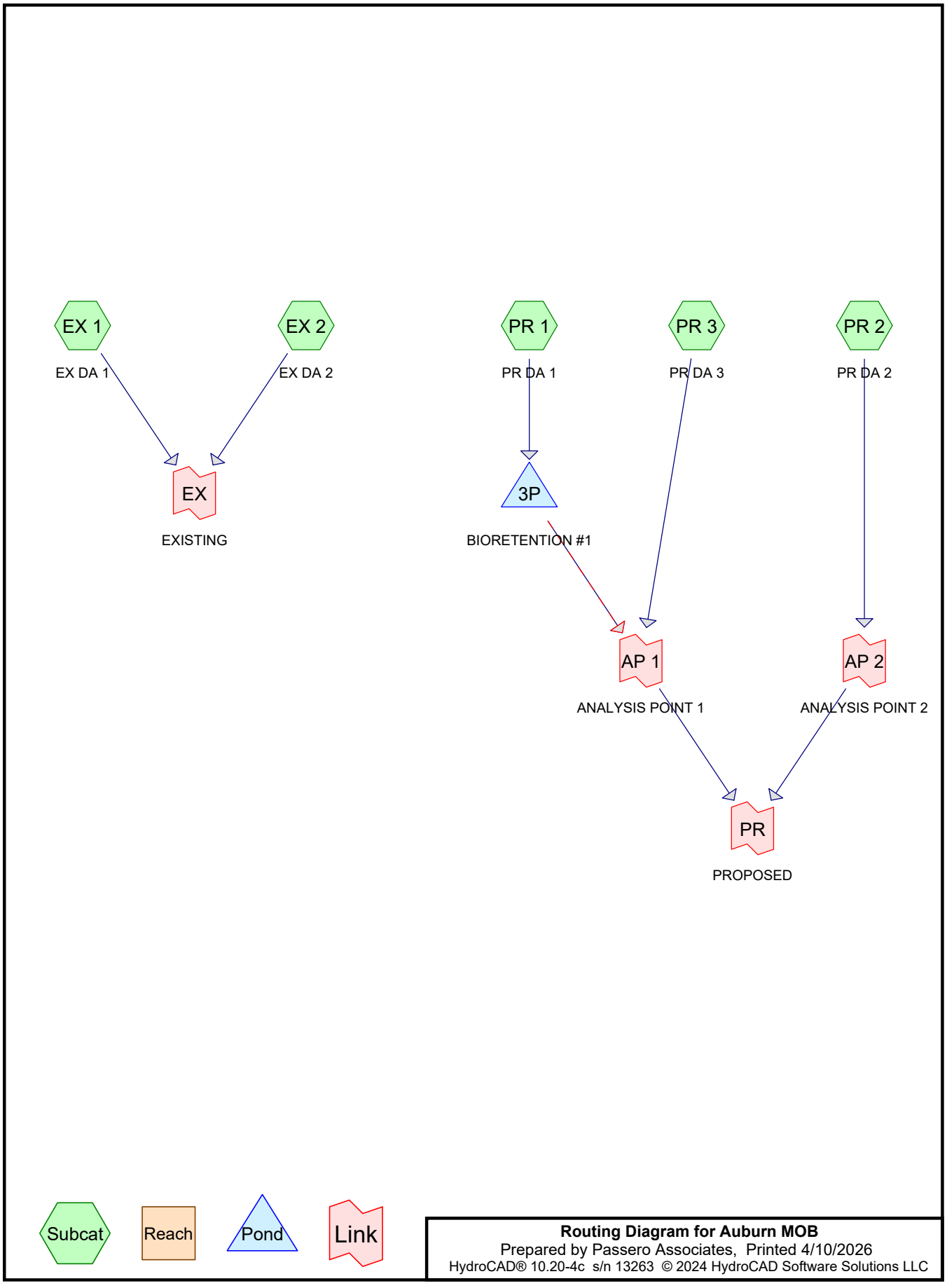
EX 1
EX 2
EX DA 1
EX DA 2
EX
EXISTING
PR 1
PR 3
PR 2
PR DA 1
PR DA 3
PR DA 2
3P
BIORETENTION #1
AP 1
AP 2
ANALYSIS POINT 1
ANALYSIS POINT 2
PR
PROPOSED
Subcat
Reach
Pond
Link
Routing Diagram for Auburn MOB
Prepared by Passero Associates, Printed 4/10/2026
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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC	P2 (inches)
1	1-YEAR	Type II 24-hr		Default	24.00	1	1.95	2	2.28
2	10-YEAR	Type II 24-hr		Default	24.00	1	3.28	2	2.28
3	100-YEAR	Type II 24-hr		Default	24.00	1	5.51	2	2.28

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.654	74	>75% Grass cover, Good, HSG C (EX 1, EX 2, PR 1, PR 2, PR 3)
1.346	80	>75% Grass cover, Good, HSG D (EX 1, EX 2, PR 1, PR 2, PR 3)
1.890	98	Paved parking, HSG C (EX 1, EX 2, PR 1, PR 2)
3.611	98	Paved parking, HSG D (EX 1, EX 2, PR 1, PR 2)
1.467	70	Woods, Good, HSG C (EX 1, EX 2, PR 1)
1.304	77	Woods, Good, HSG D (EX 1, EX 2, PR 3)
11.272	**86**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
5.011	HSG C	EX 1, EX 2, PR 1, PR 2, PR 3
6.261	HSG D	EX 1, EX 2, PR 1, PR 2, PR 3
0.000	Other	
11.272		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	1.654	1.346	0.000	3.000	>75% Grass cover, Good	EX 1, EX 2, PR 1, PR 2, PR 3
0.000	0.000	1.890	3.611	0.000	5.501	Paved parking	EX 1, EX 2, PR 1, PR 2
0.000	0.000	1.467	1.304	0.000	2.771	Woods, Good	EX 1, EX 2, PR 1, PR 3
0.000	**0.000**	**5.011**	**6.261**	**0.000**	**11.272**	**TOTAL AREA**	

Time span=1.00-48.00 hrs, dt=0.01 hrs, 4701 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method

Subcatchment EX 1: EX DA 1 Runoff Area=4.206 ac 20.23% Impervious Runoff Depth=0.49"
Flow Length=921' Tc=10.0 min CN=79 Runoff=3.00 cfs 0.173 af

Subcatchment EX 2: EX DA 2 Runoff Area=1.430 ac 63.78% Impervious Runoff Depth=0.99"
Flow Length=764' Tc=7.9 min CN=89 Runoff=2.35 cfs 0.118 af

Subcatchment PR 1: PR DA 1 Runoff Area=4.053 ac 73.82% Impervious Runoff Depth=1.27"
Flow Length=813' Tc=6.5 min CN=93 Runoff=8.78 cfs 0.429 af

Subcatchment PR 2: PR DA 2 Runoff Area=0.919 ac 81.18% Impervious Runoff Depth=1.35"
Flow Length=222' Tc=6.0 min CN=94 Runoff=2.13 cfs 0.103 af

Subcatchment PR 3: PR DA 3 Runoff Area=0.664 ac 0.00% Impervious Runoff Depth=0.42"
Flow Length=893' Tc=11.2 min CN=77 Runoff=0.37 cfs 0.023 af

Pond 3P: BIORETENTION#1 Peak Elev=679.82' Storage=7,516 cf Inflow=8.78 cfs 0.429 af
Primary=1.78 cfs 0.429 af Secondary=0.00 cfs 0.000 af Outflow=1.78 cfs 0.429 af

Link AP 1: ANALYSIS POINT 1 Inflow=2.01 cfs 0.452 af
Primary=2.01 cfs 0.452 af

Link AP 2: ANALYSIS POINT 2 Inflow=2.13 cfs 0.103 af
Primary=2.13 cfs 0.103 af

Link EX: EXISTING Inflow=5.24 cfs 0.291 af
Primary=5.24 cfs 0.291 af

Link PR: PROPOSED Inflow=2.80 cfs 0.555 af
Primary=2.80 cfs 0.555 af

Total Runoff Area = 11.272 ac Runoff Volume = 0.846 af Average Runoff Depth = 0.90"
51.20% Pervious = 5.771 ac 48.80% Impervious = 5.501 ac

Summary for Subcatchment EX 1: EX DA 1

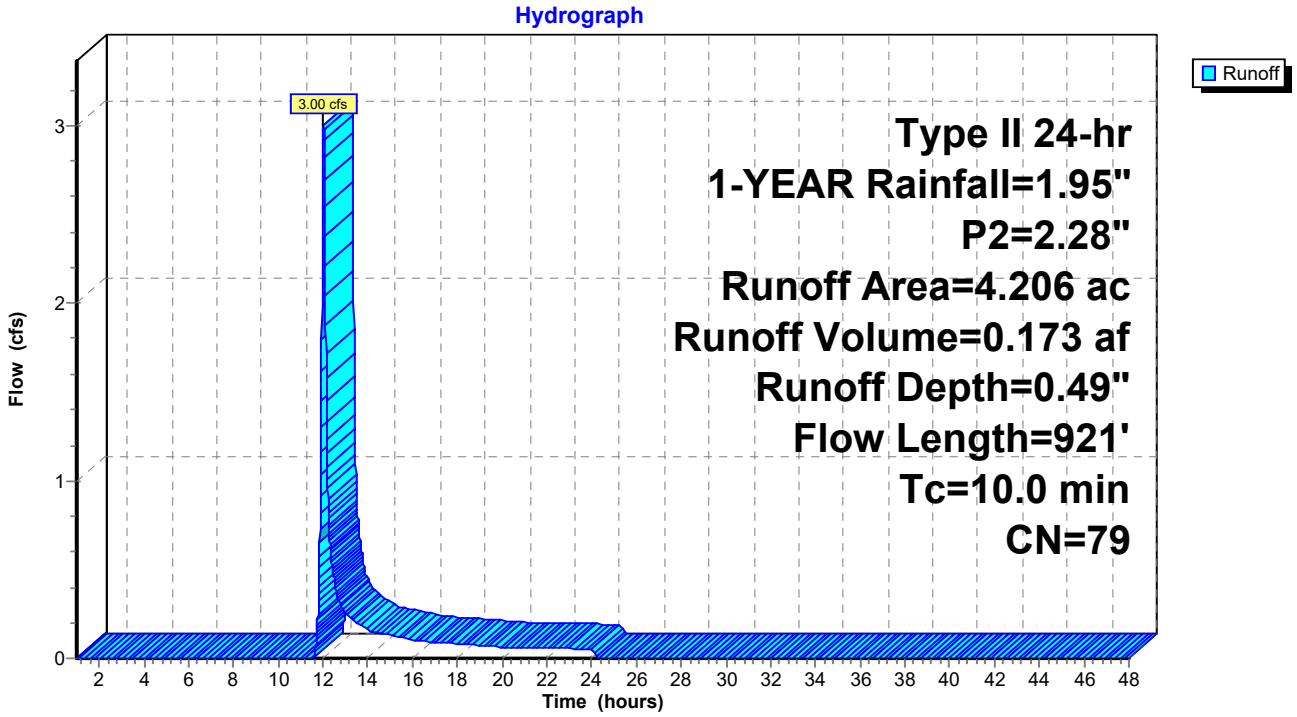
Runoff = 3.00 cfs @ 12.03 hrs, Volume= 0.173 af, Depth= 0.49"
Routed to Link EX : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-YEAR Rainfall=1.95", P2=2.28"

Area (ac)	CN	Description
1.095	74	>75% Grass cover, Good, HSG C
0.164	98	Paved parking, HSG C
1.233	70	Woods, Good, HSG C
0.238	80	>75% Grass cover, Good, HSG D
0.687	98	Paved parking, HSG D
0.789	77	Woods, Good, HSG D
4.206	79	Weighted Average
3.355		79.77% Pervious Area
0.851		20.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	56	0.0710	0.21		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.3	44	0.1360	2.12		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.4	111	0.0500	4.54		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.5	117	0.0550	3.78		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.1	206	0.0410	3.26		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
0.1	25	0.0600	4.97		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.4	48	0.0200	2.28		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.0	128	0.0120	2.22		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
1.8	186	0.0110	1.69		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
10.0	921	Total			

Subcatchment EX 1: EX DA 1



Summary for Subcatchment EX 2: EX DA 2

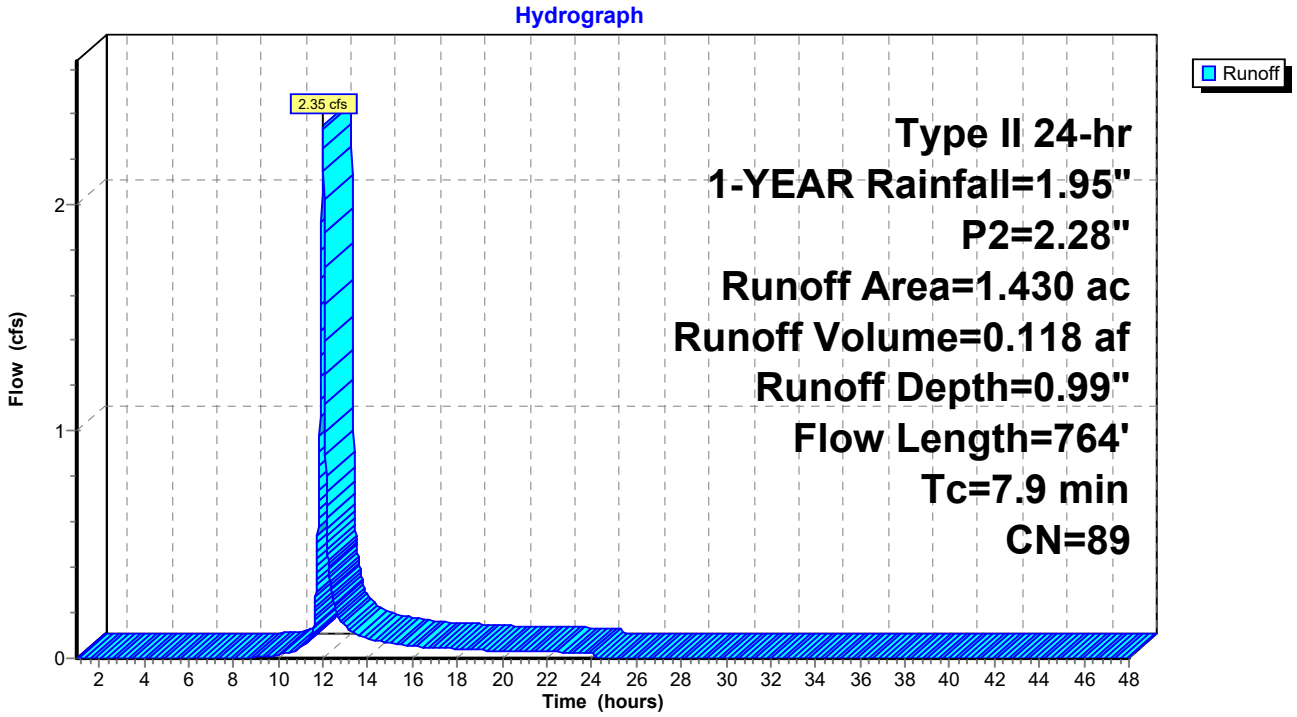
Runoff = 2.35 cfs @ 12.00 hrs, Volume= 0.118 af, Depth= 0.99"
Routed to Link EX : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-YEAR Rainfall=1.95", P2=2.28"

Area (ac)	CN	Description
0.122	74	>75% Grass cover, Good, HSG C
0.343	98	Paved parking, HSG C
0.224	70	Woods, Good, HSG C
0.079	80	>75% Grass cover, Good, HSG D
0.569	98	Paved parking, HSG D
0.093	77	Woods, Good, HSG D
1.430	89	Weighted Average
0.518		36.22% Pervious Area
0.912		63.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	63	0.1250	0.27		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.4	37	0.0540	1.42		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.8	162	0.0280	3.40		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.0	18	0.2500	8.05		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.0	192	0.0420	3.30		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.2	206	0.0200	2.87		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.6	86	0.0260	2.60		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
7.9	764	Total			

Subcatchment EX 2: EX DA 2



Summary for Subcatchment PR 1: PR DA 1

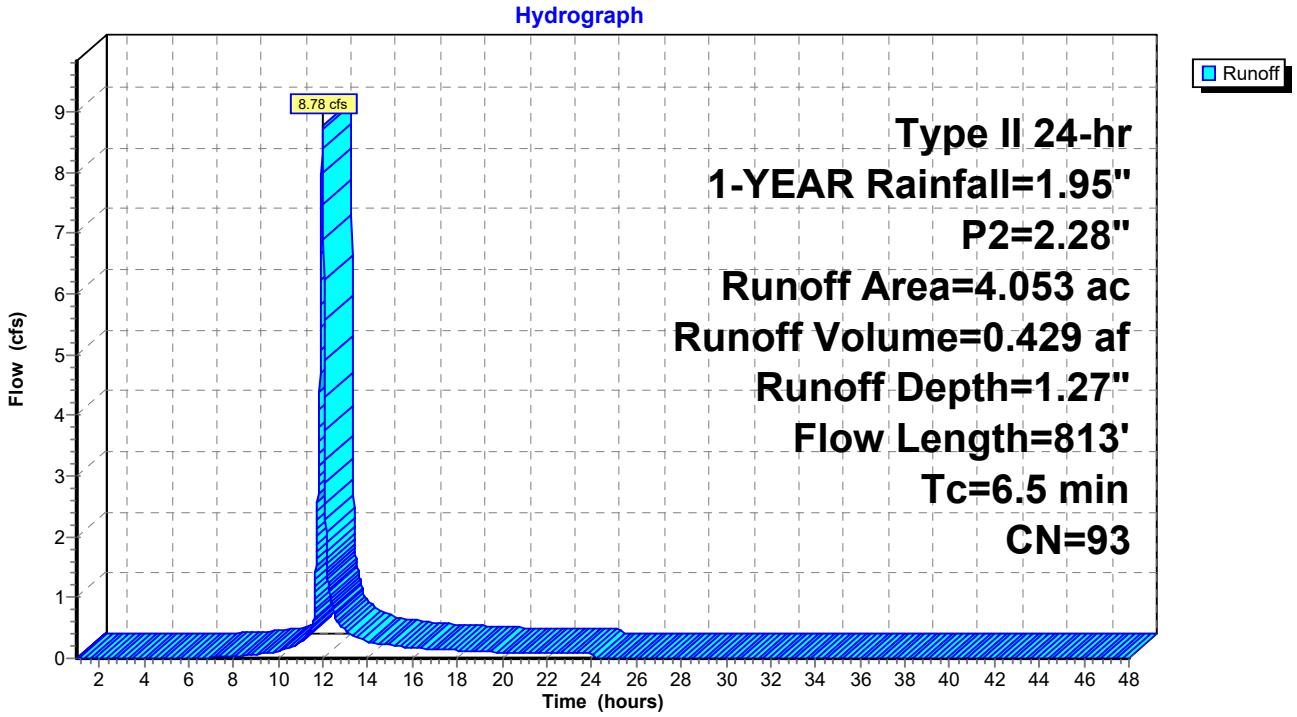
Runoff = 8.78 cfs @ 11.98 hrs, Volume= 0.429 af, Depth= 1.27"
Routed to Pond 3P : BIORETENTION #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-YEAR Rainfall=1.95", P2=2.28"

Area (ac)	CN	Description
0.774	80	>75% Grass cover, Good, HSG D
0.277	74	>75% Grass cover, Good, HSG C
1.774	98	Paved parking, HSG D
1.218	98	Paved parking, HSG C
0.010	70	Woods, Good, HSG C
4.053	93	Weighted Average
1.061		26.18% Pervious Area
2.992		73.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0600	0.19		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.6	231	0.0860	5.95		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Paved Kv= 20.3 fps
0.7	210	0.0100	4.91	3.86	**Pipe Channel, PIPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.2	125	0.0300	8.51	6.69	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.7	197	0.0100	4.91	3.86	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
6.5	813	Total			

Subcatchment PR 1: PR DA 1



Summary for Subcatchment PR 2: PR DA 2

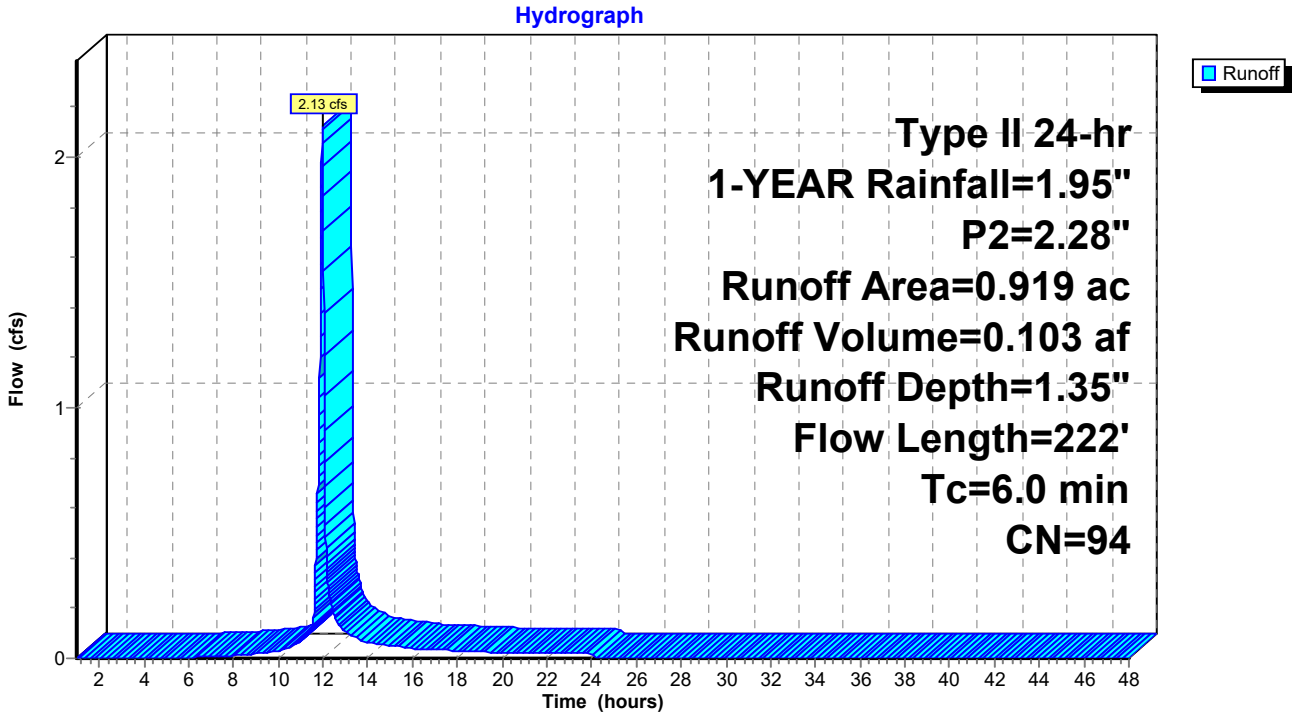
Runoff = 2.13 cfs @ 11.97 hrs, Volume= 0.103 af, Depth= 1.35"
Routed to Link AP 2 : ANALYSIS POINT 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-YEAR Rainfall=1.95", P2=2.28"

Area (ac)	CN	Description
0.132	80	>75% Grass cover, Good, HSG D
0.041	74	>75% Grass cover, Good, HSG C
0.581	98	Paved parking, HSG D
0.165	98	Paved parking, HSG C
0.919	94	Weighted Average
0.173		18.82% Pervious Area
0.746		81.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	12	0.2500	0.18		**Sheet Flow, SHEET** Grass: Dense n= 0.240 P2= 2.28"
1.2	88	0.0220	1.18		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.3	47	0.0220	3.01		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	47	0.0210	2.33		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Unpaved Kv= 16.1 fps
0.2	28	0.0200	2.87		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Paved Kv= 20.3 fps
3.1	222	Total, Increased to minimum Tc = 6.0 min			

Subcatchment PR 2: PR DA 2



Summary for Subcatchment PR 3: PR DA 3

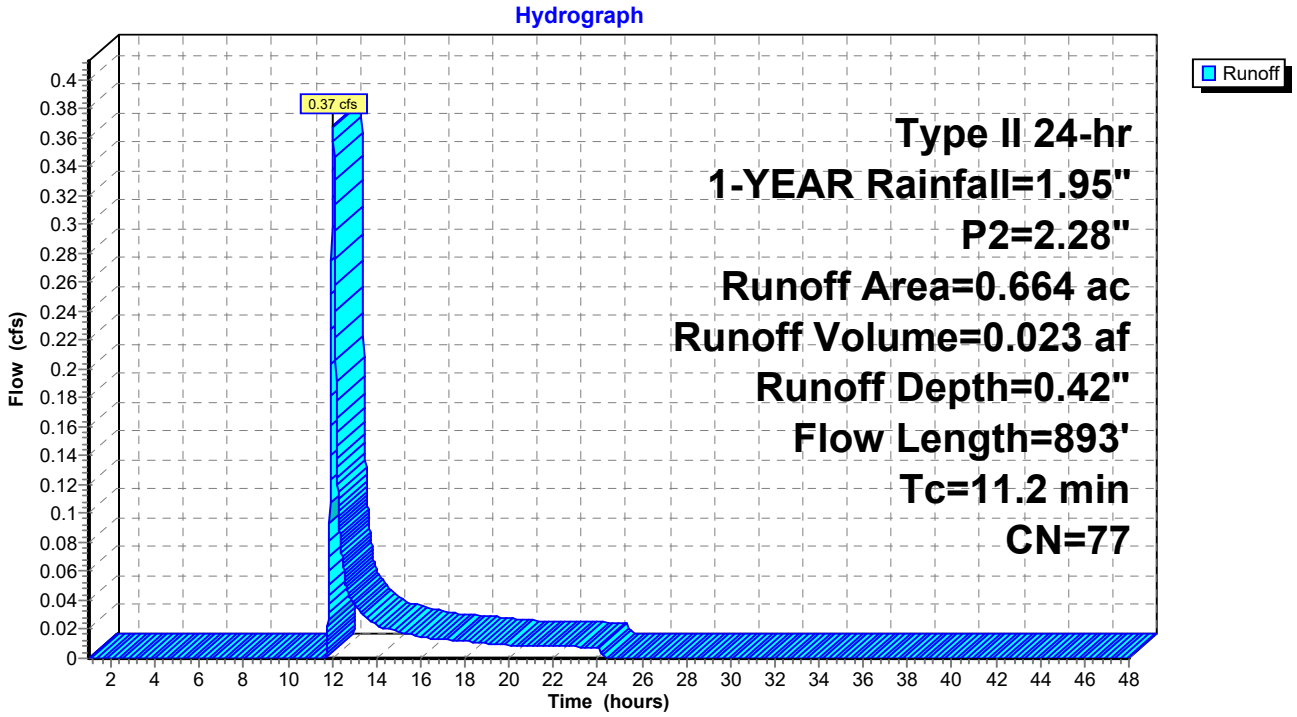
Runoff = 0.37 cfs @ 12.05 hrs, Volume= 0.023 af, Depth= 0.42"
Routed to Link AP 1 : ANALYSIS POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-YEAR Rainfall=1.95", P2=2.28"

Area (ac)	CN	Description
0.119	74	>75% Grass cover, Good, HSG C
0.123	80	>75% Grass cover, Good, HSG D
0.422	77	Woods, Good, HSG D
0.664	77	Weighted Average
0.664		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0500	0.21		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
2.7	560	0.0450	3.42		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Unpaved Kv= 16.1 fps
0.2	111	0.0364	9.38	7.36	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.3	94	0.0100	4.91	3.86	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.0	28	0.3970	30.96	24.32	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
11.2	893	Total			

Subcatchment PR 3: PR DA 3



Summary for Pond 3P: BIORETENTION #1

Inflow Area = 4.053 ac, 73.82% Impervious, Inflow Depth = 1.27" for 1-YEAR event
Inflow = 8.78 cfs @ 11.98 hrs, Volume= 0.429 af
Outflow = 1.78 cfs @ 12.15 hrs, Volume= 0.429 af, Atten= 80%, Lag= 10.6 min
Primary = 1.78 cfs @ 12.15 hrs, Volume= 0.429 af
Routed to Link AP 1 : ANALYSIS POINT 1
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Routed to Link AP 1 : ANALYSIS POINT 1

Routing by Sim-Route method, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 679.82' @ 12.15 hrs Surf.Area= 9,418 sf Storage= 7,516 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 130.8 min (939.3 - 808.4)

Volume	Invert	Avail.Storage	Storage Description
#1	679.00'	22,813 cf	**Bioretention (Irregular)**Listed below (Recalc)
#2	678.00'	3,226 cf	**Forebay (Irregular)**Listed below (Recalc)
		26,039 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
679.00	7,575	365.0	0	0	7,575
680.00	8,721	385.0	8,141	8,141	8,826
681.00	9,906	404.0	9,307	17,448	10,083
681.50	11,573	429.0	5,364	22,813	11,753

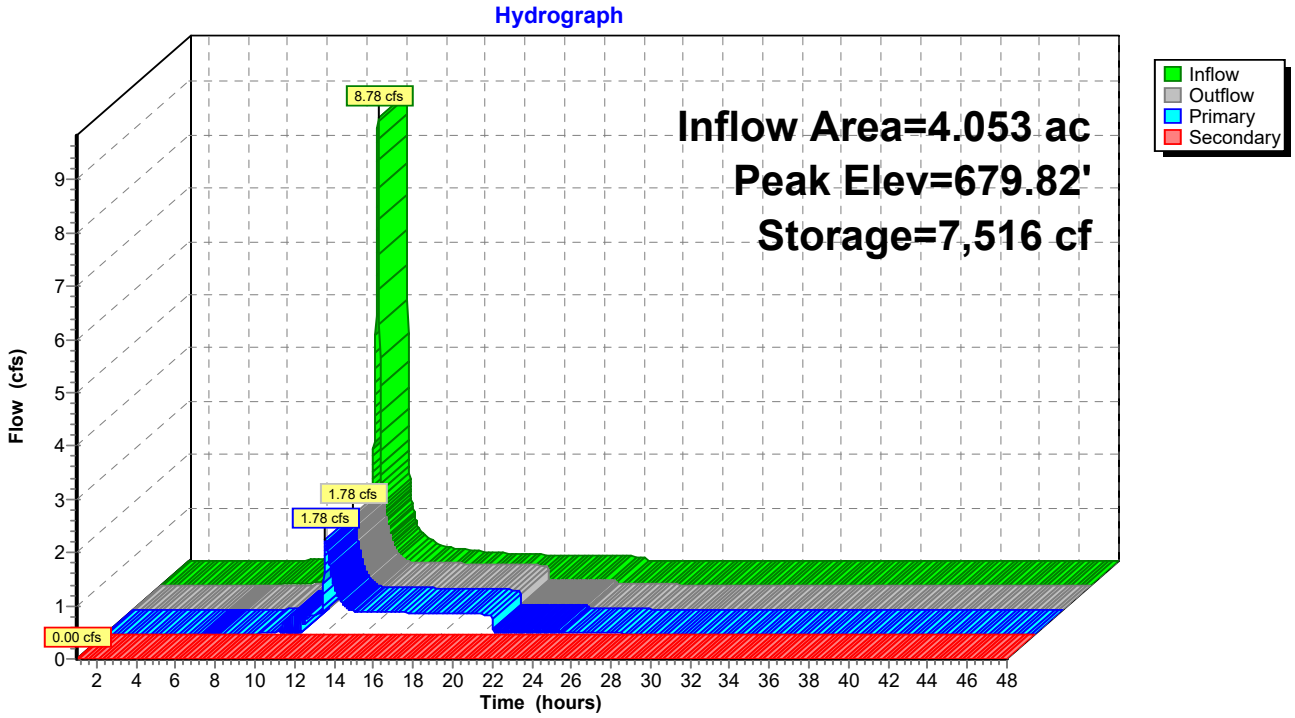
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
678.00	218	62.0	0	0	218
679.00	514	105.0	356	356	796
680.00	1,012	139.0	749	1,105	1,467
681.00	1,457	157.0	1,228	2,332	1,916
681.50	2,139	183.0	894	3,226	2,625

Device	Routing	Invert	Outlet Devices
#1	Device 3	678.00'	**2.000 in/hr Exfiltration over Surface area**
#2	Secondary	680.50'	**5.0' long + 3.0 '/' SideZ x 16.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Primary	675.50'	**12.0" Round Culvert** L= 28.0' Ke= 0.500 Inlet / Outlet Invert= 675.50' / 674.40' S= 0.0393 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#4	Device 3	679.70'	**30.0" x 30.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.78 cfs @ 12.15 hrs HW=679.82' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Passes 1.78 cfs of 7.39 cfs potential flow)
  └─**1=Exfiltration** (Exfiltration Controls 0.44 cfs)
  └─**4=Orifice/Grate** (Weir Controls 1.35 cfs @ 1.13 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=678.00' TW=0.00' (Dynamic Tailwater)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3P: BIORETENTION #1



Stage-Discharge for Pond 3P: BIORETENTION #1

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
678.00	0.00	0.00	0.00
678.05	0.01	0.01	0.00
678.10	0.01	0.01	0.00
678.15	0.01	0.01	0.00
678.20	0.01	0.01	0.00
678.25	0.01	0.01	0.00
678.30	0.01	0.01	0.00
678.35	0.01	0.01	0.00
678.40	0.01	0.01	0.00
678.45	0.02	0.02	0.00
678.50	0.02	0.02	0.00
678.55	0.02	0.02	0.00
678.60	0.02	0.02	0.00
678.65	0.02	0.02	0.00
678.70	0.02	0.02	0.00
678.75	0.02	0.02	0.00
678.80	0.02	0.02	0.00
678.85	0.02	0.02	0.00
678.90	0.02	0.02	0.00
678.95	0.02	0.02	0.00
679.00	0.37	0.37	0.00
679.05	0.38	0.38	0.00
679.10	0.38	0.38	0.00
679.15	0.39	0.39	0.00
679.20	0.39	0.39	0.00
679.25	0.39	0.39	0.00
679.30	0.40	0.40	0.00
679.35	0.40	0.40	0.00
679.40	0.40	0.40	0.00
679.45	0.41	0.41	0.00
679.50	0.41	0.41	0.00
679.55	0.41	0.41	0.00
679.60	0.42	0.42	0.00
679.65	0.42	0.42	0.00
679.70	0.43	0.43	0.00
679.75	0.80	0.80	0.00
679.80	1.47	1.47	0.00
679.85	2.34	2.34	0.00
679.90	3.37	3.37	0.00
679.95	4.53	4.53	0.00
680.00	5.82	5.82	0.00
680.05	7.23	7.23	0.00
680.10	7.66	7.66	0.00
680.15	7.70	7.70	0.00
680.20	7.75	7.75	0.00
680.25	7.80	7.80	0.00
680.30	7.84	7.84	0.00
680.35	7.89	7.89	0.00
680.40	7.93	7.93	0.00
680.45	7.98	7.98	0.00
680.50	8.02	8.02	0.00
680.55	8.22	8.07	0.15
680.60	8.55	8.11	0.44
680.65	8.99	8.15	0.83
680.70	9.51	8.20	1.31
680.75	10.12	8.24	1.88
680.80	10.81	8.29	2.53
680.85	11.59	8.33	3.26
680.90	12.44	8.37	4.07
680.95	13.37	8.41	4.96
681.00	14.37	8.46	5.92
681.05	15.46	8.50	6.96
681.10	16.62	8.54	8.08
681.15	17.81	8.58	9.23
681.20	19.07	8.62	10.45
681.25	20.39	8.66	11.73
681.30	21.78	8.71	13.07
681.35	23.30	8.75	14.55
681.40	24.90	8.79	16.11
681.45	26.57	8.83	17.75
681.50	**28.33**	**8.87**	**19.46**

Stage-Area-Storage for Pond 3P: BIORETENTION #1

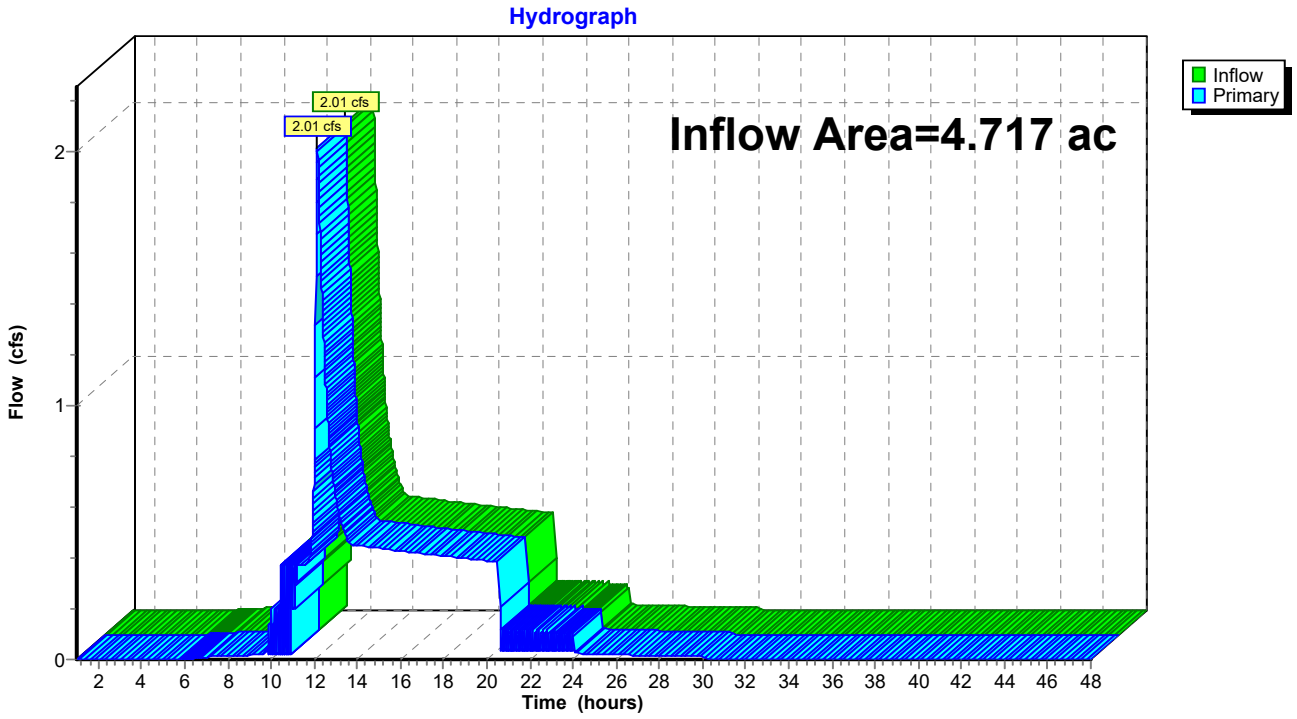
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
678.00	218	0
678.05	230	11
678.10	242	23
678.15	254	35
678.20	267	48
678.25	280	62
678.30	294	76
678.35	307	91
678.40	321	107
678.45	336	124
678.50	350	141
678.55	365	159
678.60	381	177
678.65	396	197
678.70	412	217
678.75	428	238
678.80	445	260
678.85	462	282
678.90	479	306
678.95	496	330
679.00	8,089	356
679.05	8,165	762
679.10	8,242	1,172
679.15	8,320	1,586
679.20	8,398	2,004
679.25	8,477	2,426
679.30	8,556	2,852
679.35	8,636	3,282
679.40	8,717	3,715
679.45	8,798	4,153
679.50	8,880	4,595
679.55	8,963	5,041
679.60	9,046	5,492
679.65	9,129	5,946
679.70	9,214	6,404
679.75	9,299	6,867
679.80	9,384	7,334
679.85	9,471	7,806
679.90	9,557	8,281
679.95	9,645	8,761
680.00	9,733	9,246
680.05	9,811	9,735
680.10	9,889	10,227
680.15	9,968	10,723
680.20	10,046	11,224
680.25	10,126	11,728
680.30	10,206	12,236
680.35	10,286	12,749
680.40	10,366	13,265
680.45	10,447	13,785
680.50	10,528	14,310
680.55	10,610	14,838
680.60	10,692	15,371
680.65	10,775	15,907
680.70	10,858	16,448
680.75	10,941	16,993
680.80	11,024	17,542
680.85	11,109	18,096
680.90	11,193	18,653
680.95	11,278	19,215
681.00	11,363	19,781
681.05	11,586	20,355
681.10	11,812	20,940
681.15	12,040	21,536
681.20	12,271	22,144
681.25	12,505	22,763
681.30	12,741	23,394
681.35	12,980	24,037
681.40	13,221	24,692
681.45	13,465	25,359
681.50	**13,712**	**26,039**

Summary for Link AP 1: ANALYSIS POINT 1

Inflow Area = 4.717 ac, 63.43% Impervious, Inflow Depth = 1.15" for 1-YEAR event
Inflow = 2.01 cfs @ 12.14 hrs, Volume= 0.452 af
Primary = 2.01 cfs @ 12.15 hrs, Volume= 0.452 af, Atten= 0%, Lag= 0.6 min
Routed to Link PR : PROPOSED

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link AP 1: ANALYSIS POINT 1

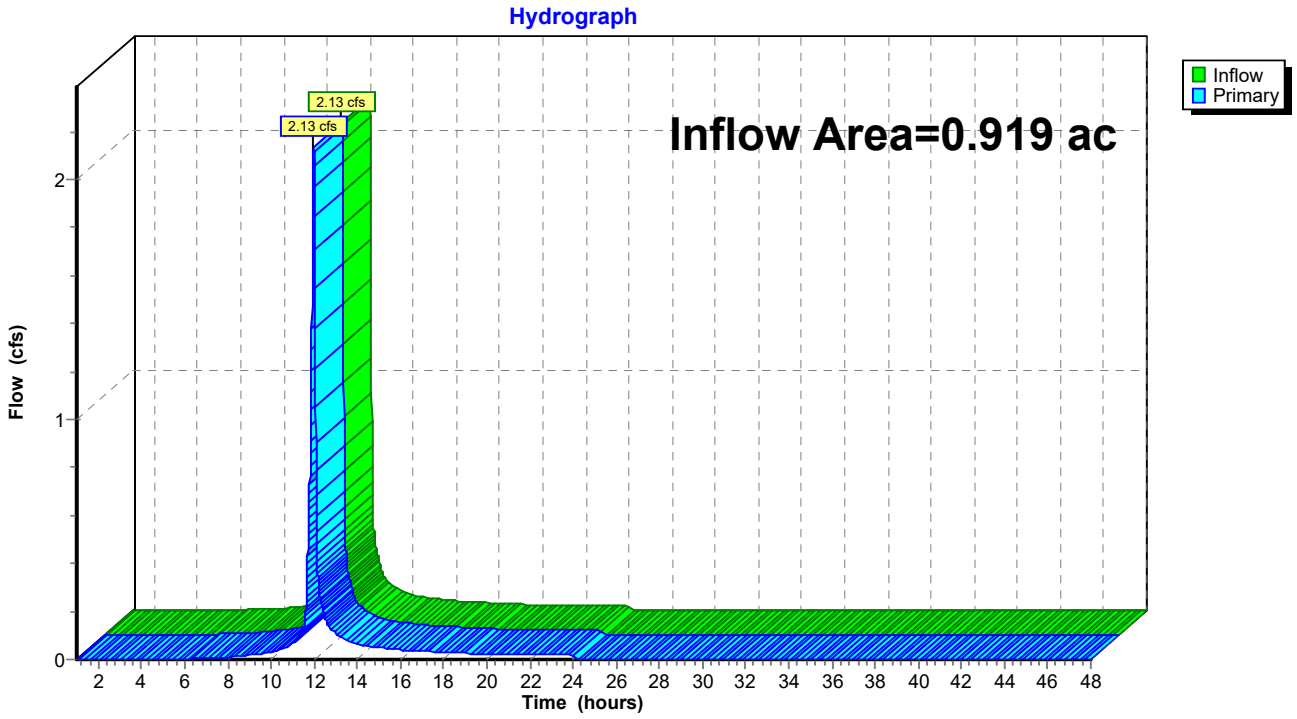


Summary for Link AP 2: ANALYSIS POINT 2

Inflow Area = 0.919 ac, 81.18% Impervious, Inflow Depth = 1.35" for 1-YEAR event
Inflow = 2.13 cfs @ 11.97 hrs, Volume= 0.103 af
Primary = 2.13 cfs @ 11.98 hrs, Volume= 0.103 af, Atten= 0%, Lag= 0.6 min
Routed to Link PR : PROPOSED

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link AP 2: ANALYSIS POINT 2

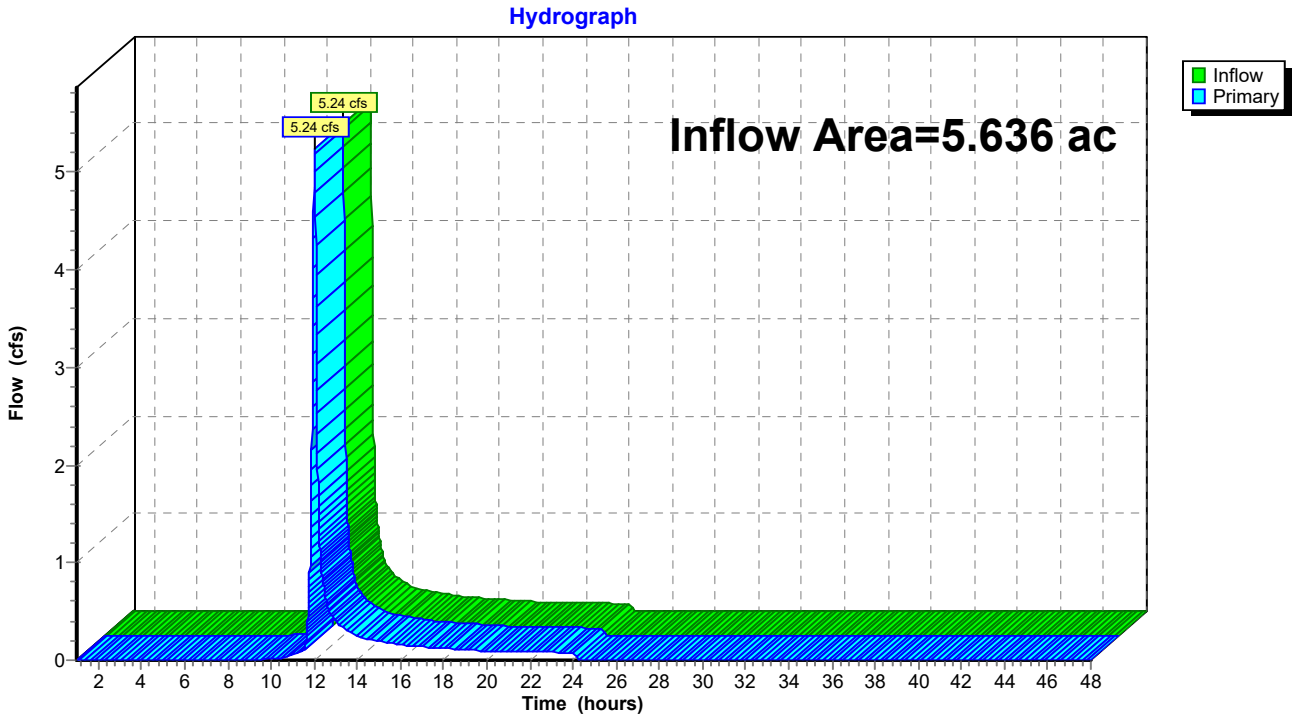


Summary for Link EX: EXISTING

Inflow Area = 5.636 ac, 31.28% Impervious, Inflow Depth = 0.62" for 1-YEAR event
Inflow = 5.24 cfs @ 12.01 hrs, Volume= 0.291 af
Primary = 5.24 cfs @ 12.02 hrs, Volume= 0.291 af, Atten= 0%, Lag= 0.6 min

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link EX: EXISTING

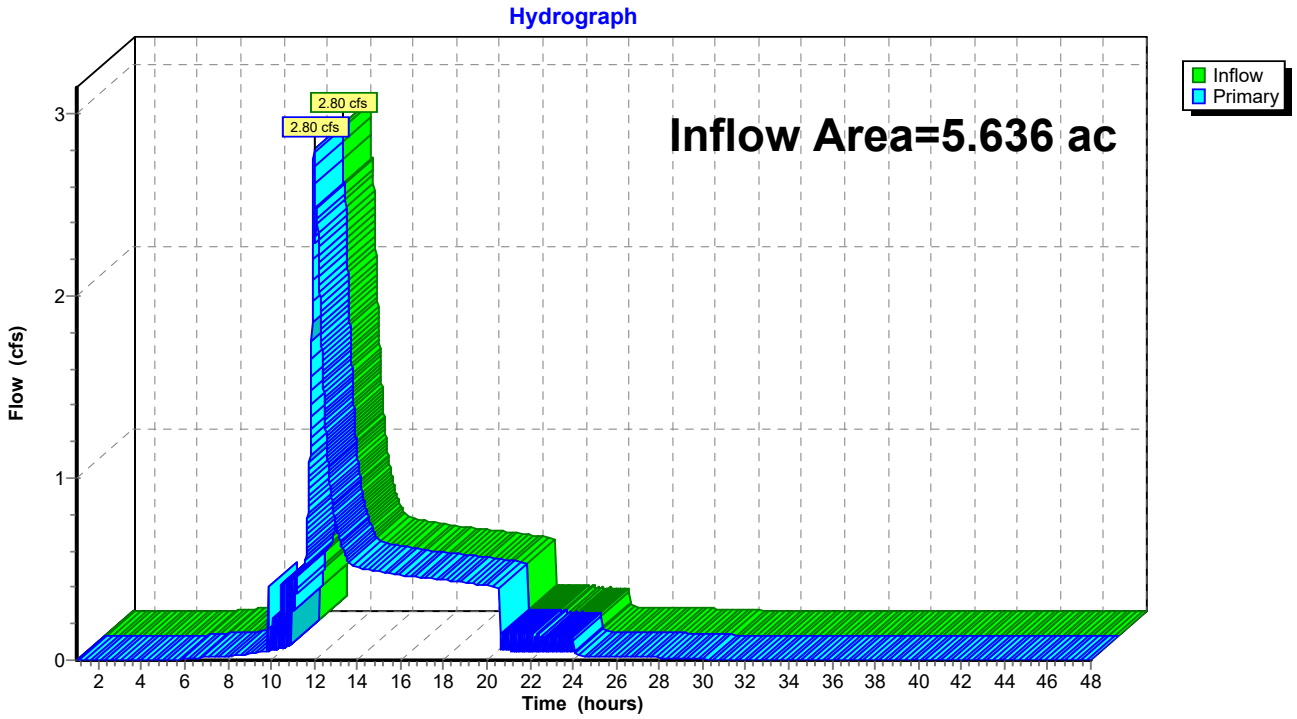


Summary for Link PR: PROPOSED

Inflow Area = 5.636 ac, 66.32% Impervious, Inflow Depth = 1.18" for 1-YEAR event
Inflow = 2.80 cfs @ 11.99 hrs, Volume= 0.555 af
Primary = 2.80 cfs @ 12.00 hrs, Volume= 0.555 af, Atten= 0%, Lag= 0.6 min

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link PR: PROPOSED



Time span=1.00-48.00 hrs, dt=0.01 hrs, 4701 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method

Subcatchment EX 1: EX DA 1 Runoff Area=4.206 ac 20.23% Impervious Runoff Depth=1.40"
Flow Length=921' Tc=10.0 min CN=79 Runoff=9.05 cfs 0.490 af

Subcatchment EX 2: EX DA 2 Runoff Area=1.430 ac 63.78% Impervious Runoff Depth=2.15"
Flow Length=764' Tc=7.9 min CN=89 Runoff=5.00 cfs 0.257 af

Subcatchment PR 1: PR DA 1 Runoff Area=4.053 ac 73.82% Impervious Runoff Depth=2.52"
Flow Length=813' Tc=6.5 min CN=93 Runoff=16.78 cfs 0.852 af

Subcatchment PR 2: PR DA 2 Runoff Area=0.919 ac 81.18% Impervious Runoff Depth=2.62"
Flow Length=222' Tc=6.0 min CN=94 Runoff=3.97 cfs 0.201 af

Subcatchment PR 3: PR DA 3 Runoff Area=0.664 ac 0.00% Impervious Runoff Depth=1.27"
Flow Length=893' Tc=11.2 min CN=77 Runoff=1.23 cfs 0.070 af

Pond 3P: BIORETENTION#1 Peak Elev=680.29' Storage=12,148 cf Inflow=16.78 cfs 0.852 af
Primary=7.83 cfs 0.852 af Secondary=0.00 cfs 0.000 af Outflow=7.83 cfs 0.852 af

Link AP 1: ANALYSIS POINT 1 Inflow=9.04 cfs 0.922 af
Primary=9.04 cfs 0.922 af

Link AP 2: ANALYSIS POINT 2 Inflow=3.97 cfs 0.201 af
Primary=3.97 cfs 0.201 af

Link EX: EXISTING Inflow=13.88 cfs 0.746 af
Primary=13.88 cfs 0.746 af

Link PR: PROPOSED Inflow=12.63 cfs 1.123 af
Primary=12.63 cfs 1.123 af

Total Runoff Area = 11.272 ac Runoff Volume = 1.869 af Average Runoff Depth = 1.99"
51.20% Pervious = 5.771 ac 48.80% Impervious = 5.501 ac

Summary for Subcatchment EX 1: EX DA 1

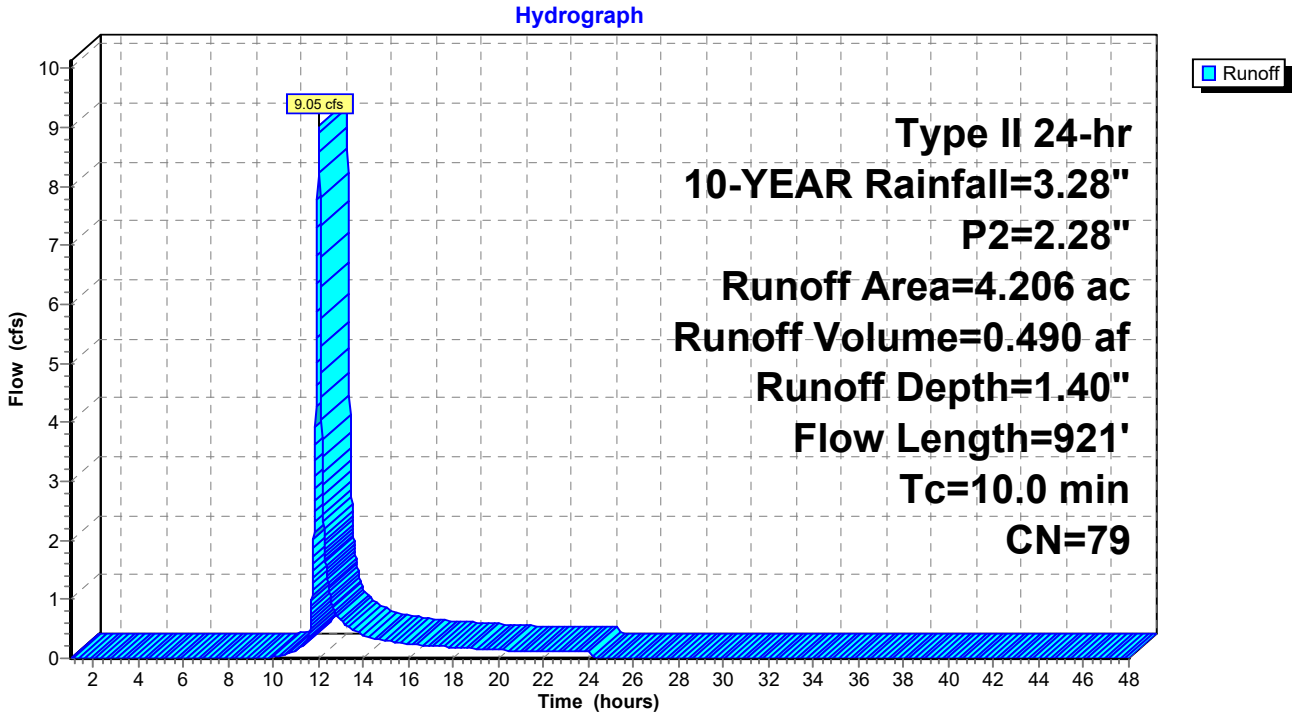
Runoff = 9.05 cfs @ 12.02 hrs, Volume= 0.490 af, Depth= 1.40"
Routed to Link EX : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YEAR Rainfall=3.28", P2=2.28"

Area (ac)	CN	Description
1.095	74	>75% Grass cover, Good, HSG C
0.164	98	Paved parking, HSG C
1.233	70	Woods, Good, HSG C
0.238	80	>75% Grass cover, Good, HSG D
0.687	98	Paved parking, HSG D
0.789	77	Woods, Good, HSG D
4.206	79	Weighted Average
3.355		79.77% Pervious Area
0.851		20.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	56	0.0710	0.21		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.3	44	0.1360	2.12		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.4	111	0.0500	4.54		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.5	117	0.0550	3.78		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.1	206	0.0410	3.26		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
0.1	25	0.0600	4.97		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.4	48	0.0200	2.28		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.0	128	0.0120	2.22		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
1.8	186	0.0110	1.69		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
10.0	921	Total			

Subcatchment EX 1: EX DA 1



Summary for Subcatchment EX 2: EX DA 2

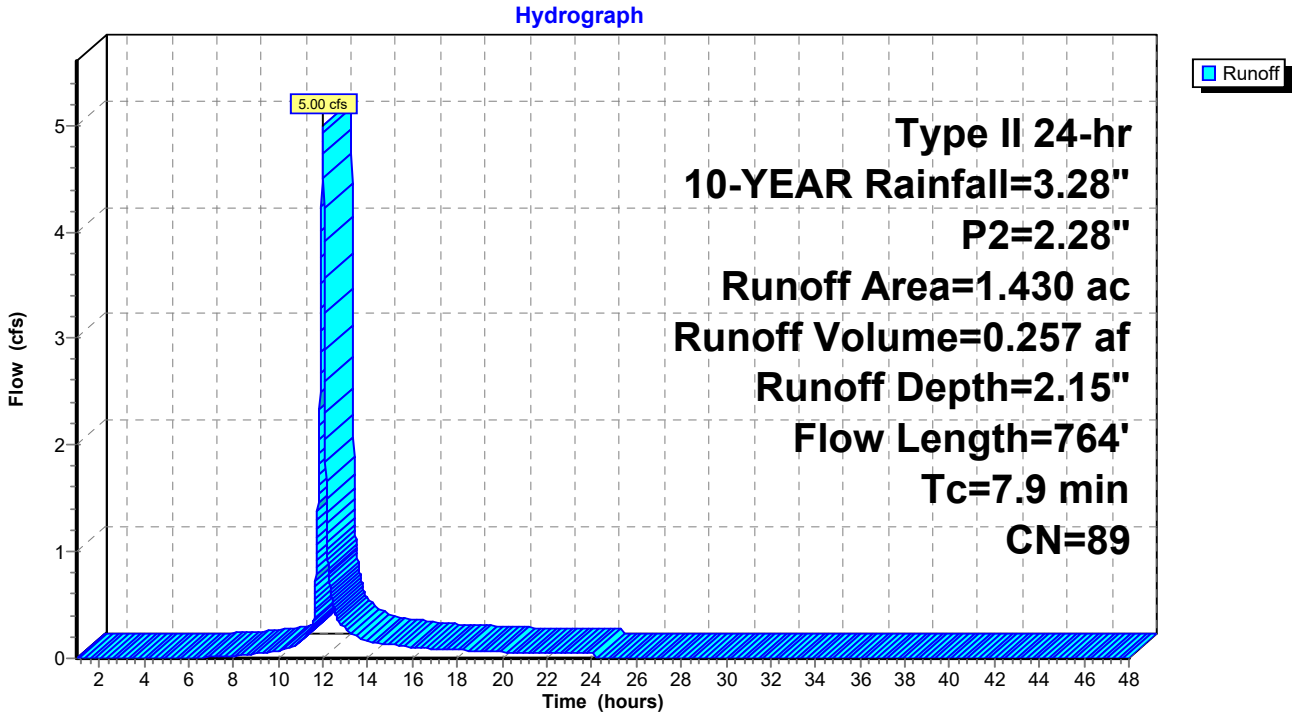
Runoff = 5.00 cfs @ 11.99 hrs, Volume= 0.257 af, Depth= 2.15"
Routed to Link EX : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YEAR Rainfall=3.28", P2=2.28"

Area (ac)	CN	Description
0.122	74	>75% Grass cover, Good, HSG C
0.343	98	Paved parking, HSG C
0.224	70	Woods, Good, HSG C
0.079	80	>75% Grass cover, Good, HSG D
0.569	98	Paved parking, HSG D
0.093	77	Woods, Good, HSG D
1.430	89	Weighted Average
0.518		36.22% Pervious Area
0.912		63.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	63	0.1250	0.27		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.4	37	0.0540	1.42		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.8	162	0.0280	3.40		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.0	18	0.2500	8.05		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.0	192	0.0420	3.30		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.2	206	0.0200	2.87		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.6	86	0.0260	2.60		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
7.9	764	Total			

Subcatchment EX 2: EX DA 2



Summary for Subcatchment PR 1: PR DA 1

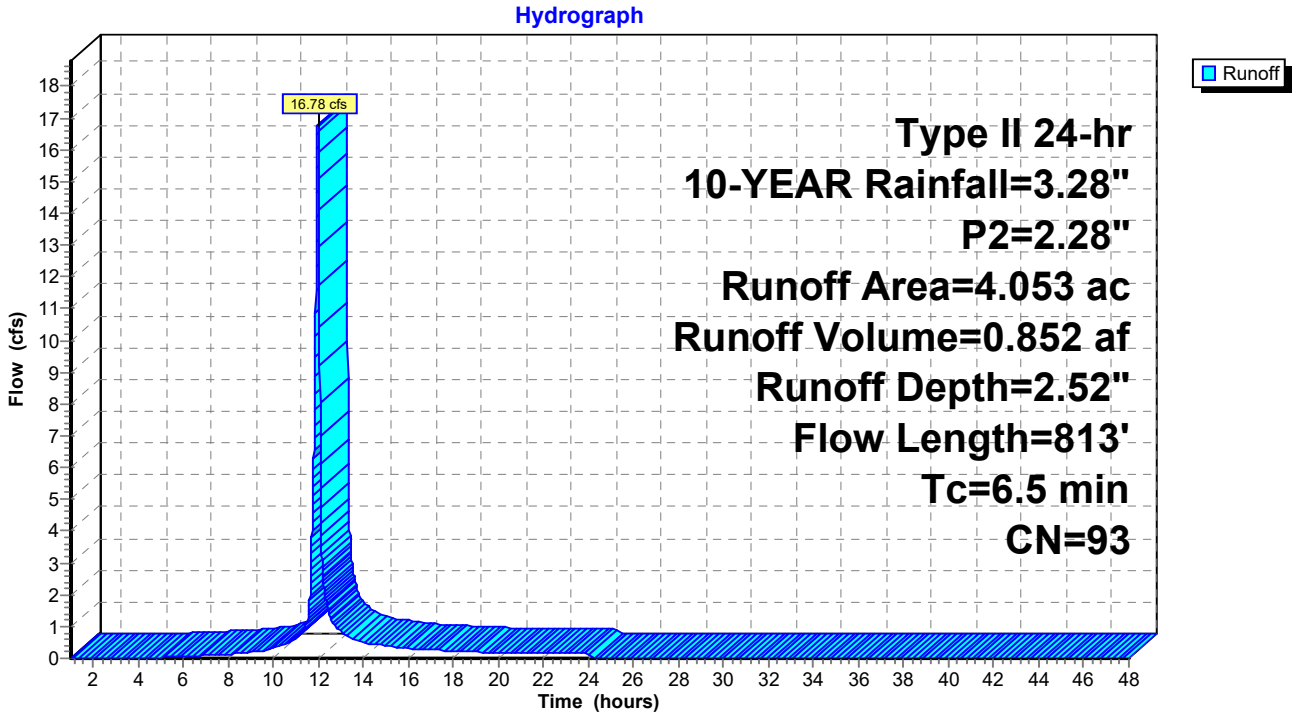
Runoff = 16.78 cfs @ 11.97 hrs, Volume= 0.852 af, Depth= 2.52"
Routed to Pond 3P : BIORETENTION #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YEAR Rainfall=3.28", P2=2.28"

Area (ac)	CN	Description
0.774	80	>75% Grass cover, Good, HSG D
0.277	74	>75% Grass cover, Good, HSG C
1.774	98	Paved parking, HSG D
1.218	98	Paved parking, HSG C
0.010	70	Woods, Good, HSG C
4.053	93	Weighted Average
1.061		26.18% Pervious Area
2.992		73.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0600	0.19		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.6	231	0.0860	5.95		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Paved Kv= 20.3 fps
0.7	210	0.0100	4.91	3.86	**Pipe Channel, PIPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.2	125	0.0300	8.51	6.69	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.7	197	0.0100	4.91	3.86	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
6.5	813	Total			

Subcatchment PR 1: PR DA 1



Summary for Subcatchment PR 2: PR DA 2

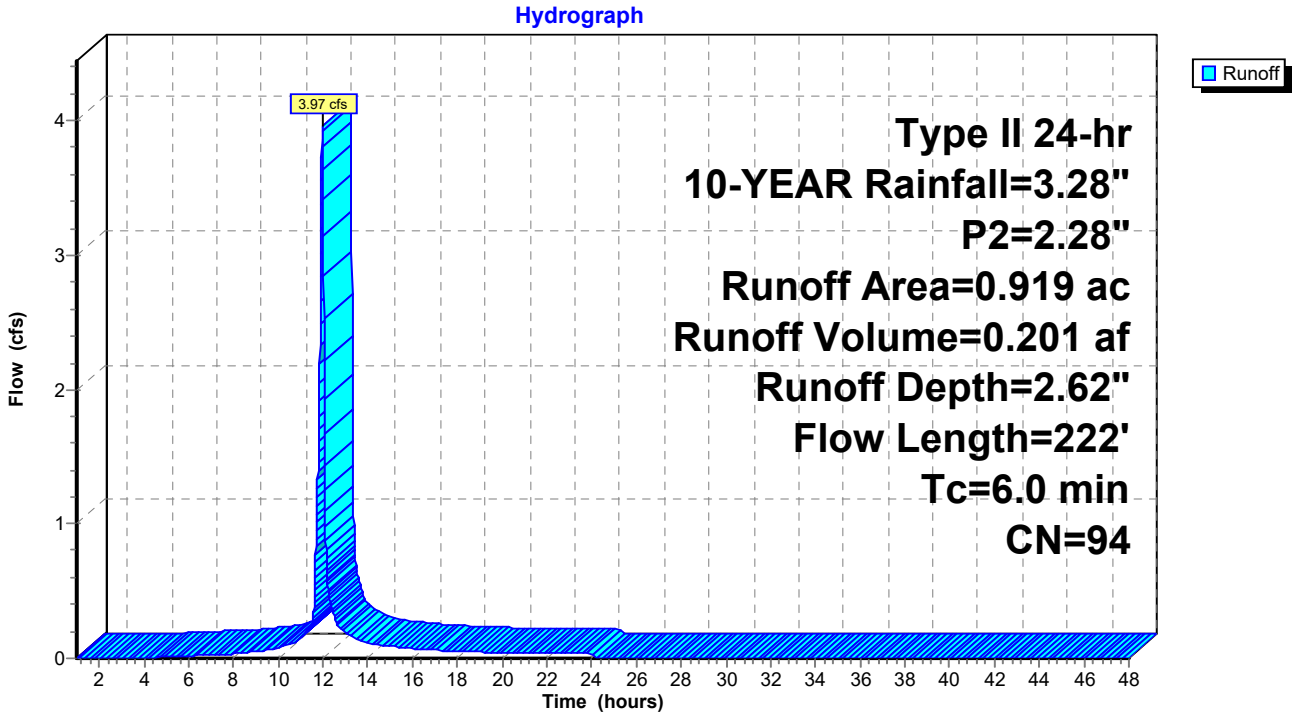
Runoff = 3.97 cfs @ 11.97 hrs, Volume= 0.201 af, Depth= 2.62"
Routed to Link AP 2 : ANALYSIS POINT 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YEAR Rainfall=3.28", P2=2.28"

Area (ac)	CN	Description
0.132	80	>75% Grass cover, Good, HSG D
0.041	74	>75% Grass cover, Good, HSG C
0.581	98	Paved parking, HSG D
0.165	98	Paved parking, HSG C
0.919	94	Weighted Average
0.173		18.82% Pervious Area
0.746		81.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	12	0.2500	0.18		**Sheet Flow, SHEET** Grass: Dense n= 0.240 P2= 2.28"
1.2	88	0.0220	1.18		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.3	47	0.0220	3.01		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	47	0.0210	2.33		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Unpaved Kv= 16.1 fps
0.2	28	0.0200	2.87		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Paved Kv= 20.3 fps
3.1	222	Total, Increased to minimum Tc = 6.0 min			

Subcatchment PR 2: PR DA 2



Summary for Subcatchment PR 3: PR DA 3

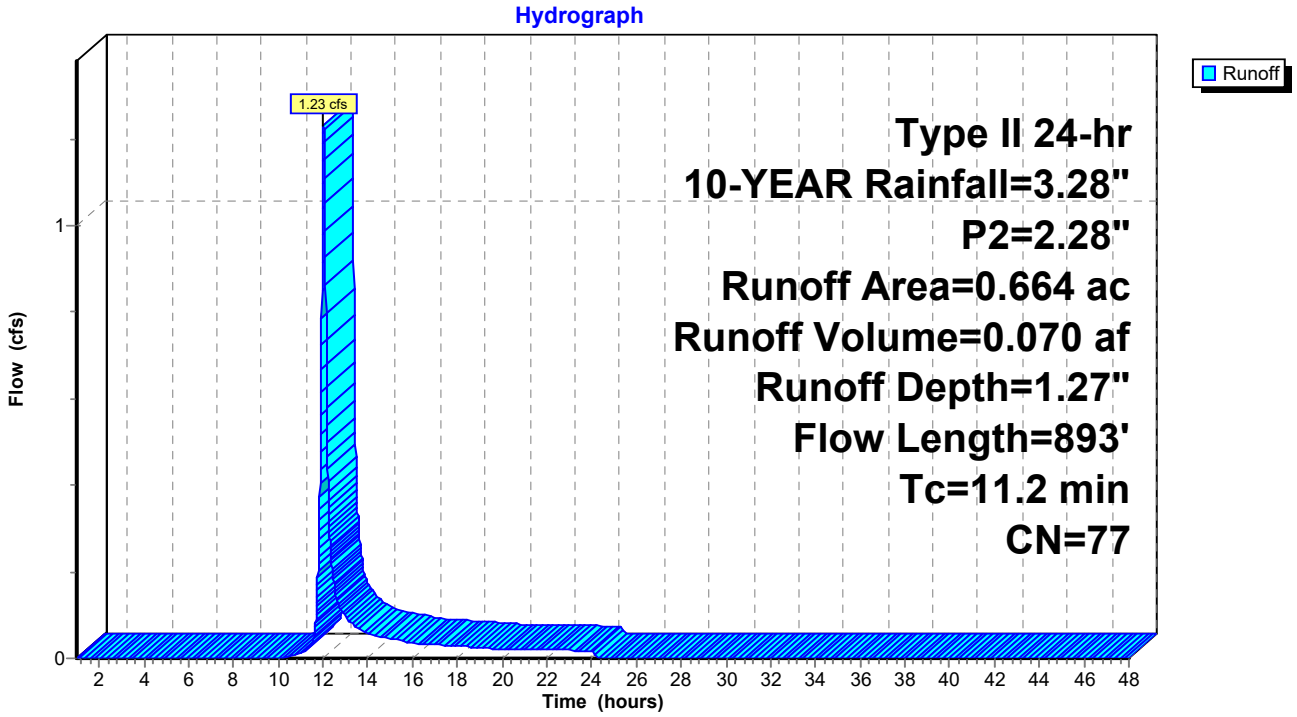
Runoff = 1.23 cfs @ 12.03 hrs, Volume= 0.070 af, Depth= 1.27"
Routed to Link AP 1 : ANALYSIS POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YEAR Rainfall=3.28", P2=2.28"

Area (ac)	CN	Description
0.119	74	>75% Grass cover, Good, HSG C
0.123	80	>75% Grass cover, Good, HSG D
0.422	77	Woods, Good, HSG D
0.664	77	Weighted Average
0.664		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0500	0.21		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
2.7	560	0.0450	3.42		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Unpaved Kv= 16.1 fps
0.2	111	0.0364	9.38	7.36	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.3	94	0.0100	4.91	3.86	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.0	28	0.3970	30.96	24.32	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
11.2	893	Total			

Subcatchment PR 3: PR DA 3



Summary for Pond 3P: BIORETENTION #1

Inflow Area = 4.053 ac, 73.82% Impervious, Inflow Depth = 2.52" for 10-YEAR event
Inflow = 16.78 cfs @ 11.97 hrs, Volume= 0.852 af
Outflow = 7.83 cfs @ 12.08 hrs, Volume= 0.852 af, Atten= 53%, Lag= 6.1 min
Primary = 7.83 cfs @ 12.08 hrs, Volume= 0.852 af
Routed to Link AP 1 : ANALYSIS POINT 1
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Routed to Link AP 1 : ANALYSIS POINT 1

Routing by Sim-Route method, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 680.29' @ 12.08 hrs Surf.Area= 10,192 sf Storage= 12,148 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 98.8 min (887.9 - 789.1)

Volume	Invert	Avail.Storage	Storage Description
#1	679.00'	22,813 cf	**Bioretention (Irregular)**Listed below (Recalc)
#2	678.00'	3,226 cf	**Forebay (Irregular)**Listed below (Recalc)
		26,039 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
679.00	7,575	365.0	0	0	7,575
680.00	8,721	385.0	8,141	8,141	8,826
681.00	9,906	404.0	9,307	17,448	10,083
681.50	11,573	429.0	5,364	22,813	11,753

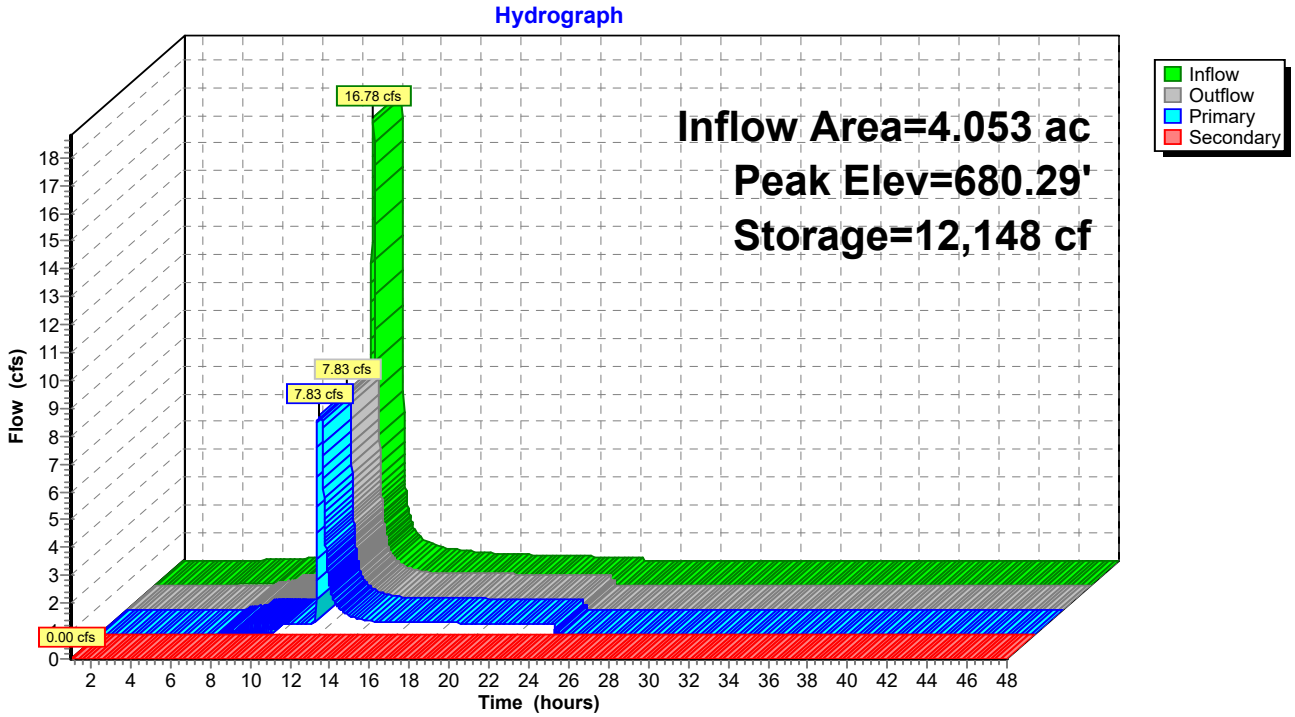
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
678.00	218	62.0	0	0	218
679.00	514	105.0	356	356	796
680.00	1,012	139.0	749	1,105	1,467
681.00	1,457	157.0	1,228	2,332	1,916
681.50	2,139	183.0	894	3,226	2,625

Device	Routing	Invert	Outlet Devices
#1	Device 3	678.00'	**2.000 in/hr Exfiltration over Surface area**
#2	Secondary	680.50'	**5.0' long + 3.0 '/' SideZ x 16.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Primary	675.50'	**12.0" Round Culvert** L= 28.0' Ke= 0.500 Inlet / Outlet Invert= 675.50' / 674.40' S= 0.0393 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#4	Device 3	679.70'	**30.0" x 30.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=7.83 cfs @ 12.08 hrs HW=680.29' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Inlet Controls 7.83 cfs @ 9.97 fps)
  └─**1=Exfiltration** (Passes < 0.47 cfs potential flow)
  └─**4=Orifice/Grate** (Passes < 14.86 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=678.00' TW=0.00' (Dynamic Tailwater)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3P: BIORETENTION #1



Stage-Discharge for Pond 3P: BIORETENTION #1

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
678.00	0.00	0.00	0.00
678.05	0.01	0.01	0.00
678.10	0.01	0.01	0.00
678.15	0.01	0.01	0.00
678.20	0.01	0.01	0.00
678.25	0.01	0.01	0.00
678.30	0.01	0.01	0.00
678.35	0.01	0.01	0.00
678.40	0.01	0.01	0.00
678.45	0.02	0.02	0.00
678.50	0.02	0.02	0.00
678.55	0.02	0.02	0.00
678.60	0.02	0.02	0.00
678.65	0.02	0.02	0.00
678.70	0.02	0.02	0.00
678.75	0.02	0.02	0.00
678.80	0.02	0.02	0.00
678.85	0.02	0.02	0.00
678.90	0.02	0.02	0.00
678.95	0.02	0.02	0.00
679.00	0.37	0.37	0.00
679.05	0.38	0.38	0.00
679.10	0.38	0.38	0.00
679.15	0.39	0.39	0.00
679.20	0.39	0.39	0.00
679.25	0.39	0.39	0.00
679.30	0.40	0.40	0.00
679.35	0.40	0.40	0.00
679.40	0.40	0.40	0.00
679.45	0.41	0.41	0.00
679.50	0.41	0.41	0.00
679.55	0.41	0.41	0.00
679.60	0.42	0.42	0.00
679.65	0.42	0.42	0.00
679.70	0.43	0.43	0.00
679.75	0.80	0.80	0.00
679.80	1.47	1.47	0.00
679.85	2.34	2.34	0.00
679.90	3.37	3.37	0.00
679.95	4.53	4.53	0.00
680.00	5.82	5.82	0.00
680.05	7.23	7.23	0.00
680.10	7.66	7.66	0.00
680.15	7.70	7.70	0.00
680.20	7.75	7.75	0.00
680.25	7.80	7.80	0.00
680.30	7.84	7.84	0.00
680.35	7.89	7.89	0.00
680.40	7.93	7.93	0.00
680.45	7.98	7.98	0.00
680.50	8.02	8.02	0.00
680.55	8.22	8.07	0.15
680.60	8.55	8.11	0.44
680.65	8.99	8.15	0.83
680.70	9.51	8.20	1.31
680.75	10.12	8.24	1.88
680.80	10.81	8.29	2.53
680.85	11.59	8.33	3.26
680.90	12.44	8.37	4.07
680.95	13.37	8.41	4.96
681.00	14.37	8.46	5.92
681.05	15.46	8.50	6.96
681.10	16.62	8.54	8.08
681.15	17.81	8.58	9.23
681.20	19.07	8.62	10.45
681.25	20.39	8.66	11.73
681.30	21.78	8.71	13.07
681.35	23.30	8.75	14.55
681.40	24.90	8.79	16.11
681.45	26.57	8.83	17.75
681.50	**28.33**	**8.87**	**19.46**

Stage-Area-Storage for Pond 3P: BIORETENTION #1

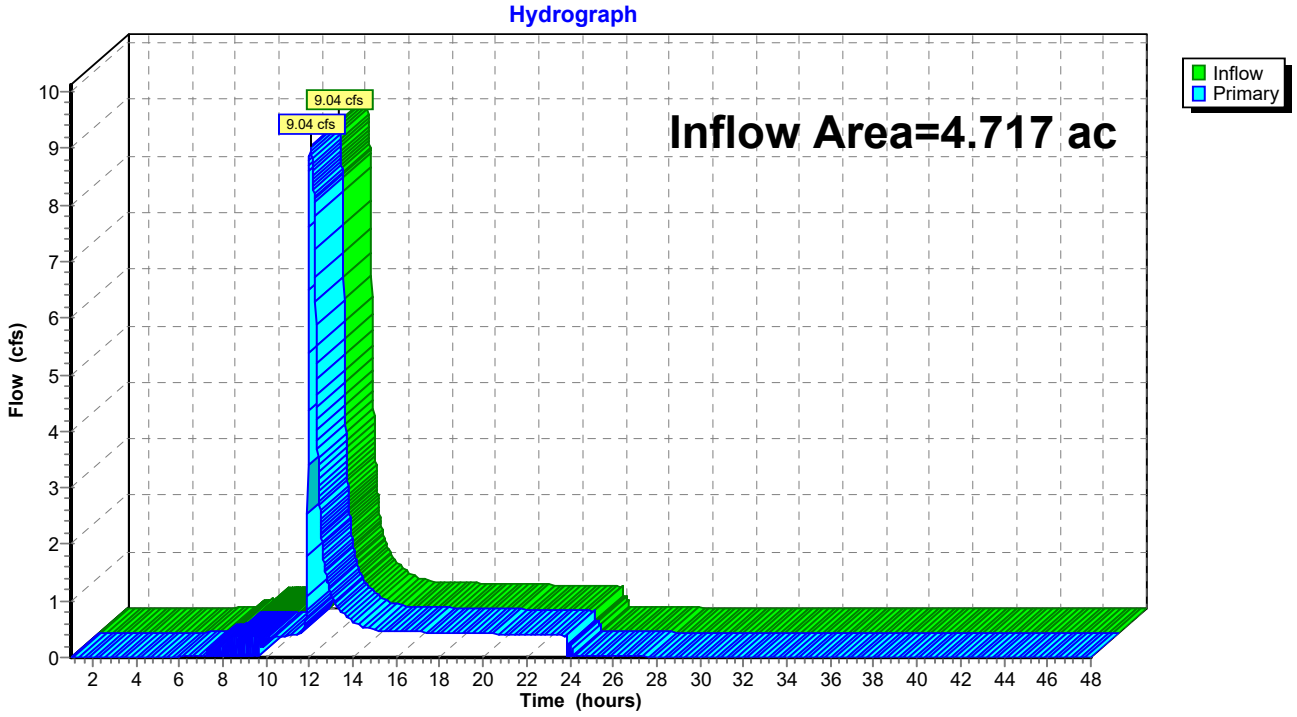
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
678.00	218	0
678.05	230	11
678.10	242	23
678.15	254	35
678.20	267	48
678.25	280	62
678.30	294	76
678.35	307	91
678.40	321	107
678.45	336	124
678.50	350	141
678.55	365	159
678.60	381	177
678.65	396	197
678.70	412	217
678.75	428	238
678.80	445	260
678.85	462	282
678.90	479	306
678.95	496	330
679.00	8,089	356
679.05	8,165	762
679.10	8,242	1,172
679.15	8,320	1,586
679.20	8,398	2,004
679.25	8,477	2,426
679.30	8,556	2,852
679.35	8,636	3,282
679.40	8,717	3,715
679.45	8,798	4,153
679.50	8,880	4,595
679.55	8,963	5,041
679.60	9,046	5,492
679.65	9,129	5,946
679.70	9,214	6,404
679.75	9,299	6,867
679.80	9,384	7,334
679.85	9,471	7,806
679.90	9,557	8,281
679.95	9,645	8,761
680.00	9,733	9,246
680.05	9,811	9,735
680.10	9,889	10,227
680.15	9,968	10,723
680.20	10,046	11,224
680.25	10,126	11,728
680.30	10,206	12,236
680.35	10,286	12,749
680.40	10,366	13,265
680.45	10,447	13,785
680.50	10,528	14,310
680.55	10,610	14,838
680.60	10,692	15,371
680.65	10,775	15,907
680.70	10,858	16,448
680.75	10,941	16,993
680.80	11,024	17,542
680.85	11,109	18,096
680.90	11,193	18,653
680.95	11,278	19,215
681.00	11,363	19,781
681.05	11,586	20,355
681.10	11,812	20,940
681.15	12,040	21,536
681.20	12,271	22,144
681.25	12,505	22,763
681.30	12,741	23,394
681.35	12,980	24,037
681.40	13,221	24,692
681.45	13,465	25,359
681.50	**13,712**	**26,039**

Summary for Link AP 1: ANALYSIS POINT 1

Inflow Area = 4.717 ac, 63.43% Impervious, Inflow Depth = 2.35" for 10-YEAR event
Inflow = 9.04 cfs @ 12.04 hrs, Volume= 0.922 af
Primary = 9.04 cfs @ 12.05 hrs, Volume= 0.922 af, Atten= 0%, Lag= 0.6 min
Routed to Link PR : PROPOSED

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link AP 1: ANALYSIS POINT 1

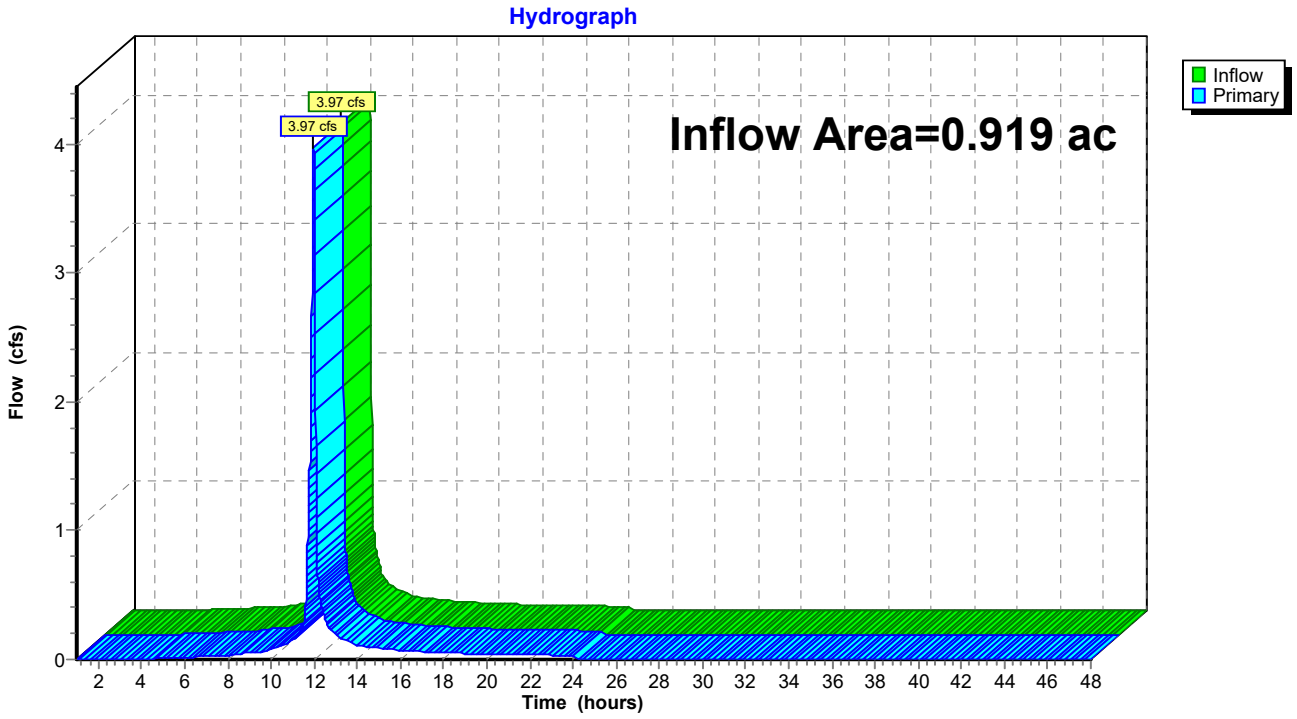


Summary for Link AP 2: ANALYSIS POINT 2

Inflow Area = 0.919 ac, 81.18% Impervious, Inflow Depth = 2.62" for 10-YEAR event
Inflow = 3.97 cfs @ 11.97 hrs, Volume= 0.201 af
Primary = 3.97 cfs @ 11.98 hrs, Volume= 0.201 af, Atten= 0%, Lag= 0.6 min
Routed to Link PR : PROPOSED

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link AP 2: ANALYSIS POINT 2

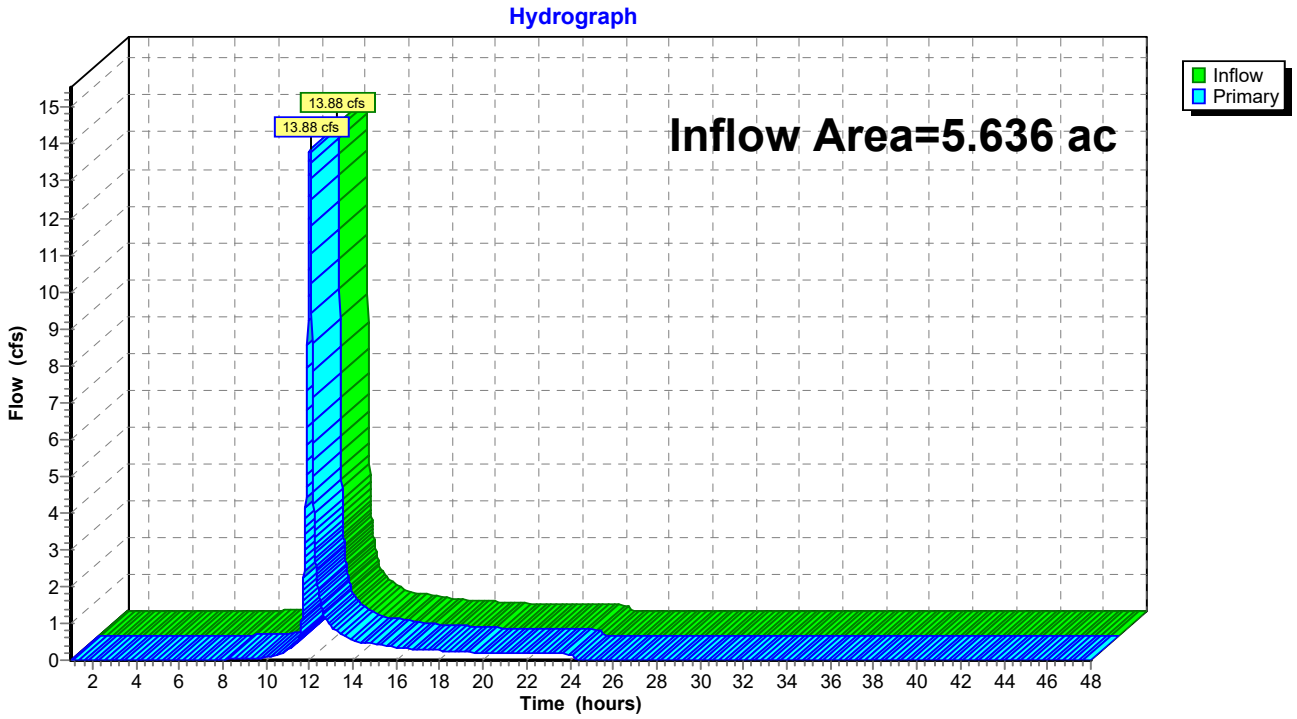


Summary for Link EX: EXISTING

Inflow Area = 5.636 ac, 31.28% Impervious, Inflow Depth = 1.59" for 10-YEAR event
Inflow = 13.88 cfs @ 12.01 hrs, Volume= 0.746 af
Primary = 13.88 cfs @ 12.02 hrs, Volume= 0.746 af, Atten= 0%, Lag= 0.6 min

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link EX: EXISTING

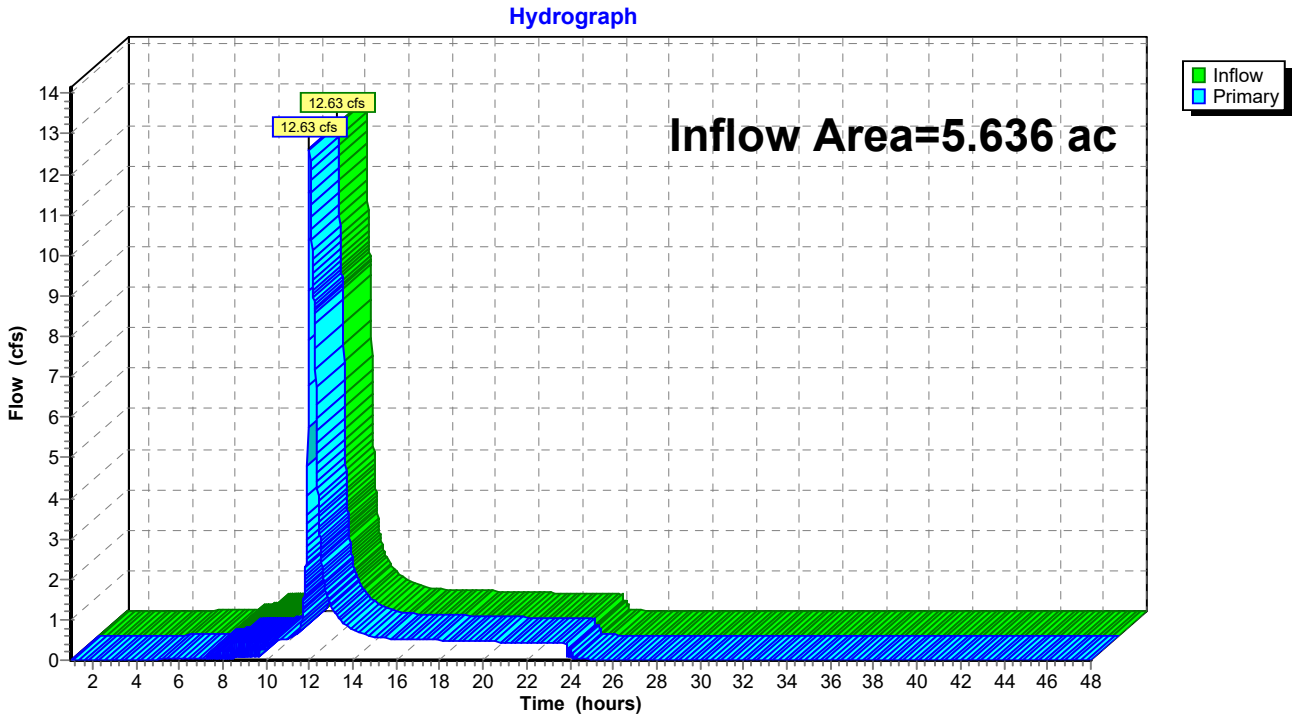


Summary for Link PR: PROPOSED

Inflow Area = 5.636 ac, 66.32% Impervious, Inflow Depth = 2.39" for 10-YEAR event
Inflow = 12.63 cfs @ 11.99 hrs, Volume= 1.123 af
Primary = 12.63 cfs @ 12.00 hrs, Volume= 1.123 af, Atten= 0%, Lag= 0.6 min

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link PR: PROPOSED



Time span=1.00-48.00 hrs, dt=0.01 hrs, 4701 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method

Subcatchment EX 1: EX DA 1 Runoff Area=4.206 ac 20.23% Impervious Runoff Depth=3.25"
Flow Length=921' Tc=10.0 min CN=79 Runoff=20.88 cfs 1.138 af

Subcatchment EX 2: EX DA 2 Runoff Area=1.430 ac 63.78% Impervious Runoff Depth=4.26"
Flow Length=764' Tc=7.9 min CN=89 Runoff=9.53 cfs 0.508 af

Subcatchment PR 1: PR DA 1 Runoff Area=4.053 ac 73.82% Impervious Runoff Depth=4.70"
Flow Length=813' Tc=6.5 min CN=93 Runoff=30.01 cfs 1.587 af

Subcatchment PR 2: PR DA 2 Runoff Area=0.919 ac 81.18% Impervious Runoff Depth=4.81"
Flow Length=222' Tc=6.0 min CN=94 Runoff=6.99 cfs 0.368 af

Subcatchment PR 3: PR DA 3 Runoff Area=0.664 ac 0.00% Impervious Runoff Depth=3.06"
Flow Length=893' Tc=11.2 min CN=77 Runoff=2.99 cfs 0.169 af

Pond 3P: BIORETENTION#1 Peak Elev=681.11' Storage=21,023 cf Inflow=30.01 cfs 1.587 af
Primary=8.55 cfs 1.457 af Secondary=8.24 cfs 0.130 af Outflow=16.78 cfs 1.587 af

Link AP 1: ANALYSIS POINT 1 Inflow=19.63 cfs 1.756 af
Primary=19.63 cfs 1.756 af

Link AP 2: ANALYSIS POINT 2 Inflow=6.99 cfs 0.368 af
Primary=6.99 cfs 0.368 af

Link EX: EXISTING Inflow=30.13 cfs 1.645 af
Primary=30.13 cfs 1.645 af

Link PR: PROPOSED Inflow=23.78 cfs 2.125 af
Primary=23.78 cfs 2.125 af

Total Runoff Area = 11.272 ac Runoff Volume = 3.770 af Average Runoff Depth = 4.01"
51.20% Pervious = 5.771 ac 48.80% Impervious = 5.501 ac

Summary for Subcatchment EX 1: EX DA 1

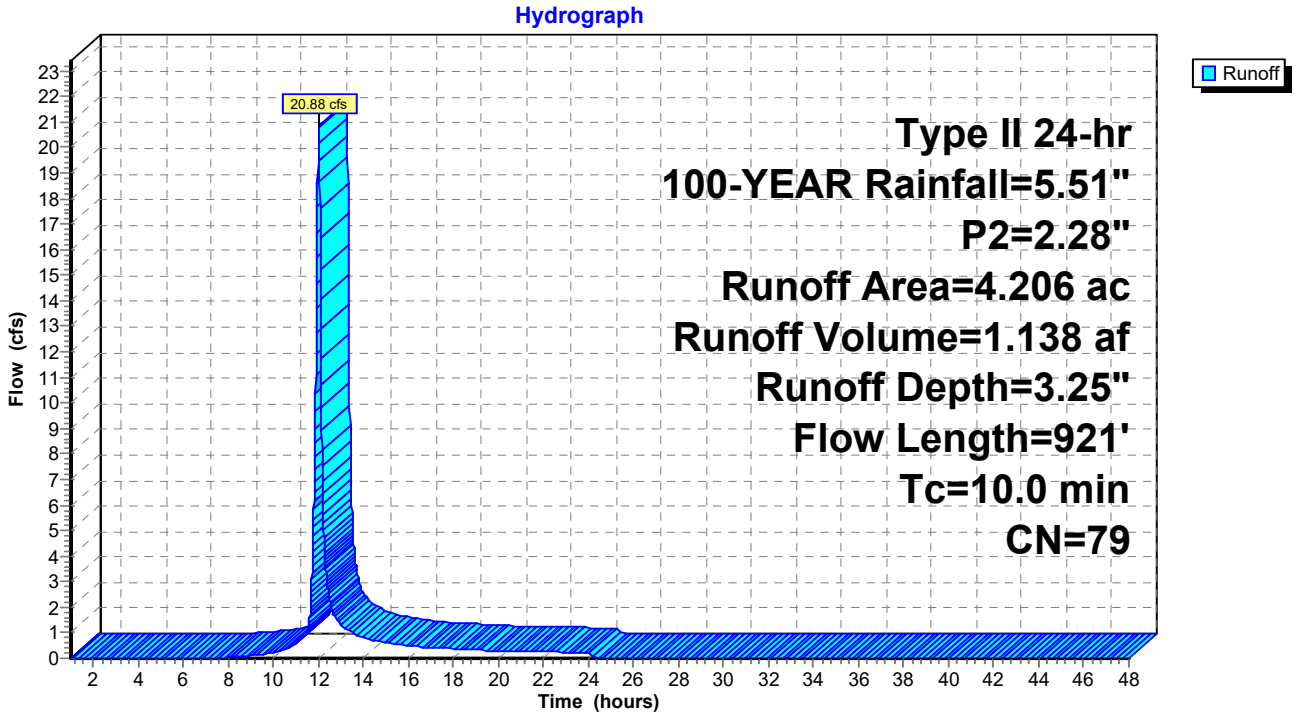
Runoff = 20.88 cfs @ 12.02 hrs, Volume= 1.138 af, Depth= 3.25"
Routed to Link EX : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=5.51", P2=2.28"

Area (ac)	CN	Description
1.095	74	>75% Grass cover, Good, HSG C
0.164	98	Paved parking, HSG C
1.233	70	Woods, Good, HSG C
0.238	80	>75% Grass cover, Good, HSG D
0.687	98	Paved parking, HSG D
0.789	77	Woods, Good, HSG D
4.206	79	Weighted Average
3.355		79.77% Pervious Area
0.851		20.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	56	0.0710	0.21		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.3	44	0.1360	2.12		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.4	111	0.0500	4.54		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.5	117	0.0550	3.78		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.1	206	0.0410	3.26		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
0.1	25	0.0600	4.97		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.4	48	0.0200	2.28		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.0	128	0.0120	2.22		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
1.8	186	0.0110	1.69		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
10.0	921	Total			

Subcatchment EX 1: EX DA 1



Summary for Subcatchment EX 2: EX DA 2

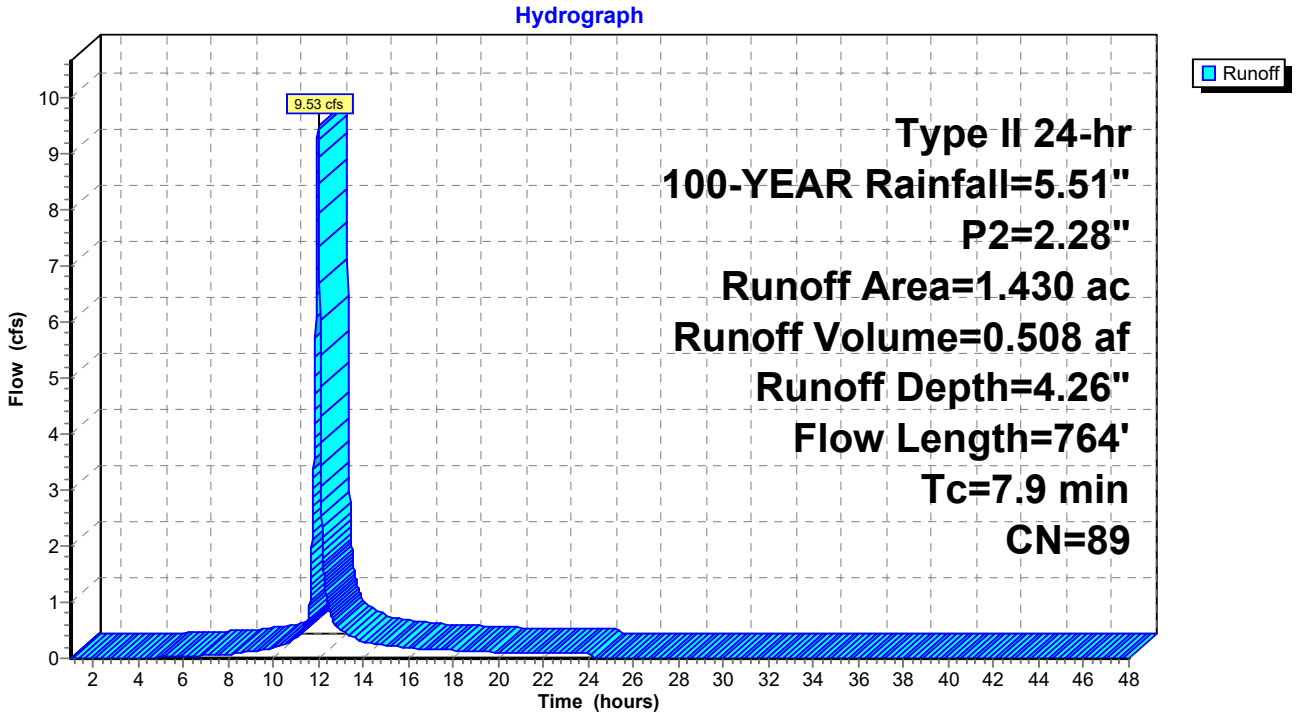
Runoff = 9.53 cfs @ 11.99 hrs, Volume= 0.508 af, Depth= 4.26"
Routed to Link EX : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=5.51", P2=2.28"

Area (ac)	CN	Description
0.122	74	>75% Grass cover, Good, HSG C
0.343	98	Paved parking, HSG C
0.224	70	Woods, Good, HSG C
0.079	80	>75% Grass cover, Good, HSG D
0.569	98	Paved parking, HSG D
0.093	77	Woods, Good, HSG D
1.430	89	Weighted Average
0.518		36.22% Pervious Area
0.912		63.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	63	0.1250	0.27		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.4	37	0.0540	1.42		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.8	162	0.0280	3.40		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.0	18	0.2500	8.05		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.0	192	0.0420	3.30		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
1.2	206	0.0200	2.87		**Shallow Concentrated Flow, SHALLOW** Paved Kv= 20.3 fps
0.6	86	0.0260	2.60		**Shallow Concentrated Flow, SHALLOW** Unpaved Kv= 16.1 fps
7.9	764	Total			

Subcatchment EX 2: EX DA 2



Summary for Subcatchment PR 1: PR DA 1

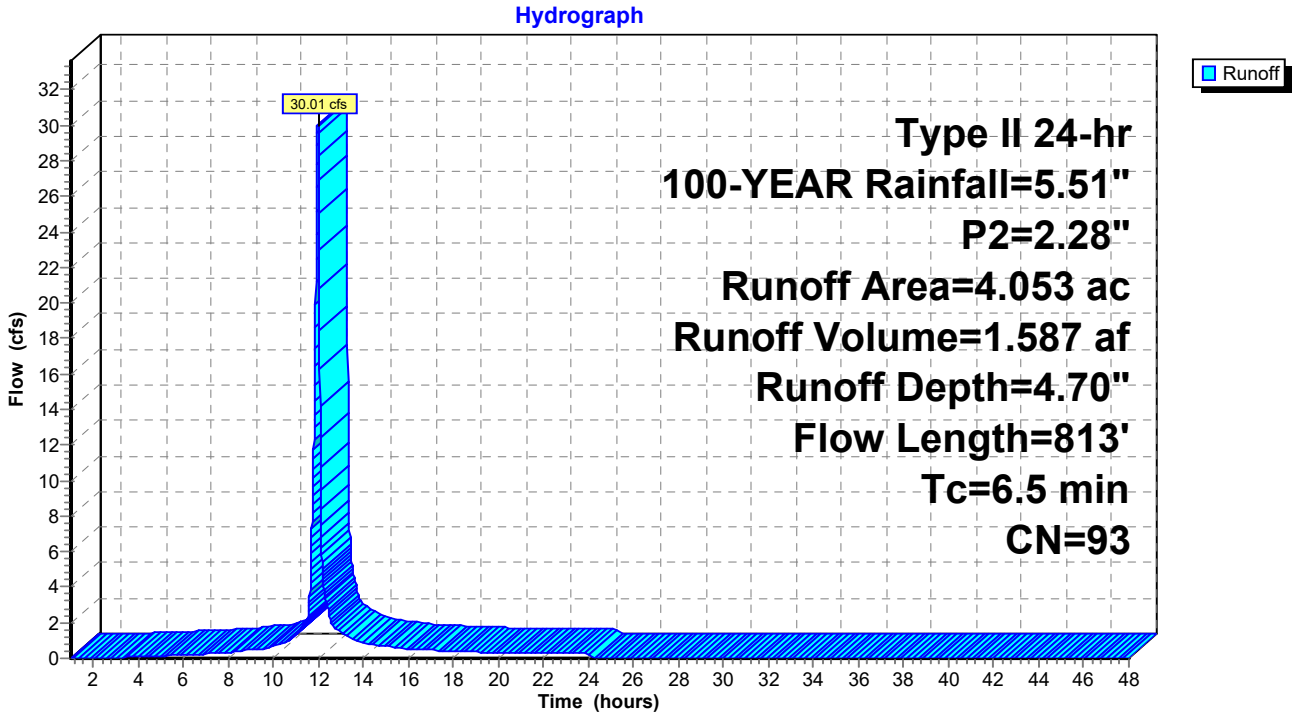
Runoff = 30.01 cfs @ 11.97 hrs, Volume= 1.587 af, Depth= 4.70"
Routed to Pond 3P : BIORETENTION #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=5.51", P2=2.28"

Area (ac)	CN	Description
0.774	80	>75% Grass cover, Good, HSG D
0.277	74	>75% Grass cover, Good, HSG C
1.774	98	Paved parking, HSG D
1.218	98	Paved parking, HSG C
0.010	70	Woods, Good, HSG C
4.053	93	Weighted Average
1.061		26.18% Pervious Area
2.992		73.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0600	0.19		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
0.6	231	0.0860	5.95		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Paved Kv= 20.3 fps
0.7	210	0.0100	4.91	3.86	**Pipe Channel, PIPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.2	125	0.0300	8.51	6.69	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.7	197	0.0100	4.91	3.86	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
6.5	813	Total			

Subcatchment PR 1: PR DA 1



Summary for Subcatchment PR 2: PR DA 2

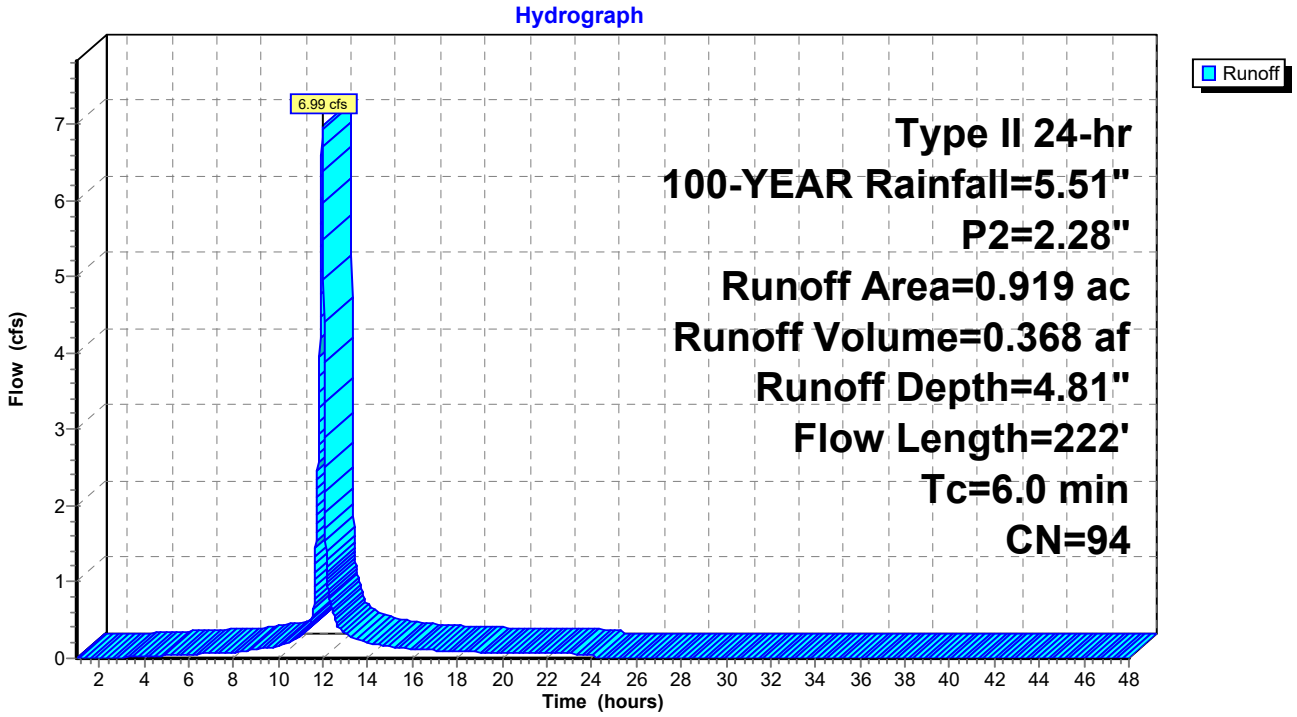
Runoff = 6.99 cfs @ 11.97 hrs, Volume= 0.368 af, Depth= 4.81"
Routed to Link AP 2 : ANALYSIS POINT 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=5.51", P2=2.28"

Area (ac)	CN	Description
0.132	80	>75% Grass cover, Good, HSG D
0.041	74	>75% Grass cover, Good, HSG C
0.581	98	Paved parking, HSG D
0.165	98	Paved parking, HSG C
0.919	94	Weighted Average
0.173		18.82% Pervious Area
0.746		81.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	12	0.2500	0.18		**Sheet Flow, SHEET** Grass: Dense n= 0.240 P2= 2.28"
1.2	88	0.0220	1.18		**Sheet Flow, SHEET** Smooth surfaces n= 0.011 P2= 2.28"
0.3	47	0.0220	3.01		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	47	0.0210	2.33		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Unpaved Kv= 16.1 fps
0.2	28	0.0200	2.87		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Paved Kv= 20.3 fps
3.1	222	Total, Increased to minimum Tc = 6.0 min			

Subcatchment PR 2: PR DA 2



Summary for Subcatchment PR 3: PR DA 3

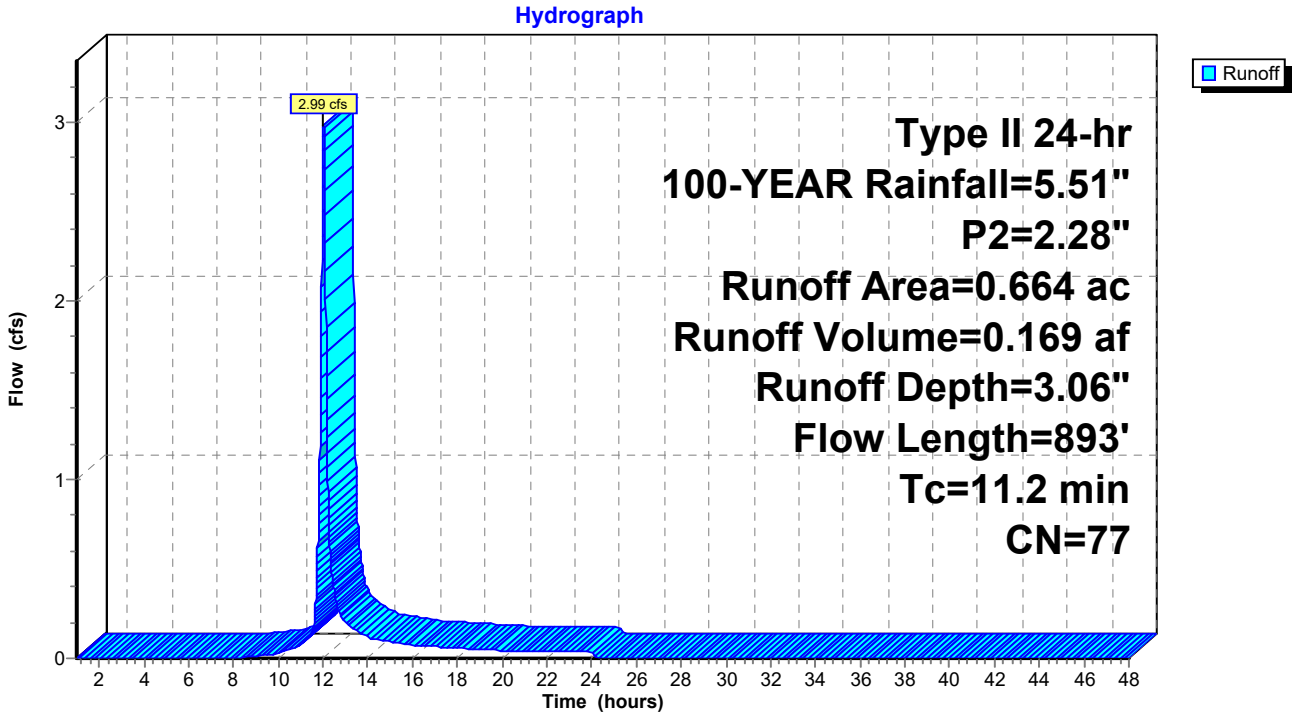
Runoff = 2.99 cfs @ 12.03 hrs, Volume= 0.169 af, Depth= 3.06"
Routed to Link AP 1 : ANALYSIS POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-YEAR Rainfall=5.51", P2=2.28"

Area (ac)	CN	Description
0.119	74	>75% Grass cover, Good, HSG C
0.123	80	>75% Grass cover, Good, HSG D
0.422	77	Woods, Good, HSG D
0.664	77	Weighted Average
0.664		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0500	0.21		**Sheet Flow, SHEET** Grass: Short n= 0.150 P2= 2.28"
2.7	560	0.0450	3.42		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Unpaved Kv= 16.1 fps
0.2	111	0.0364	9.38	7.36	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.3	94	0.0100	4.91	3.86	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.0	28	0.3970	30.96	24.32	**Pipe Channel, 12" HDPE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
11.2	893	Total			

Subcatchment PR 3: PR DA 3



Summary for Pond 3P: BIORETENTION #1

Inflow Area = 4.053 ac, 73.82% Impervious, Inflow Depth = 4.70" for 100-YEAR event
Inflow = 30.01 cfs @ 11.97 hrs, Volume= 1.587 af
Outflow = 16.78 cfs @ 12.06 hrs, Volume= 1.587 af, Atten= 44%, Lag= 5.4 min
Primary = 8.55 cfs @ 12.06 hrs, Volume= 1.457 af
Routed to Link AP 1 : ANALYSIS POINT 1
Secondary = 8.24 cfs @ 12.06 hrs, Volume= 0.130 af
Routed to Link AP 1 : ANALYSIS POINT 1

Routing by Sim-Route method, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 681.11' @ 12.06 hrs Surf.Area= 11,844 sf Storage= 21,023 cf

Plug-Flow detention time= 83.2 min calculated for 1.587 af (100% of inflow)
Center-of-Mass det. time= 83.3 min (855.7 - 772.4)

Volume	Invert	Avail.Storage	Storage Description
#1	679.00'	22,813 cf	**Bioretention (Irregular)**Listed below (Recalc)
#2	678.00'	3,226 cf	**Forebay (Irregular)**Listed below (Recalc)
		26,039 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
679.00	7,575	365.0	0	0	7,575
680.00	8,721	385.0	8,141	8,141	8,826
681.00	9,906	404.0	9,307	17,448	10,083
681.50	11,573	429.0	5,364	22,813	11,753

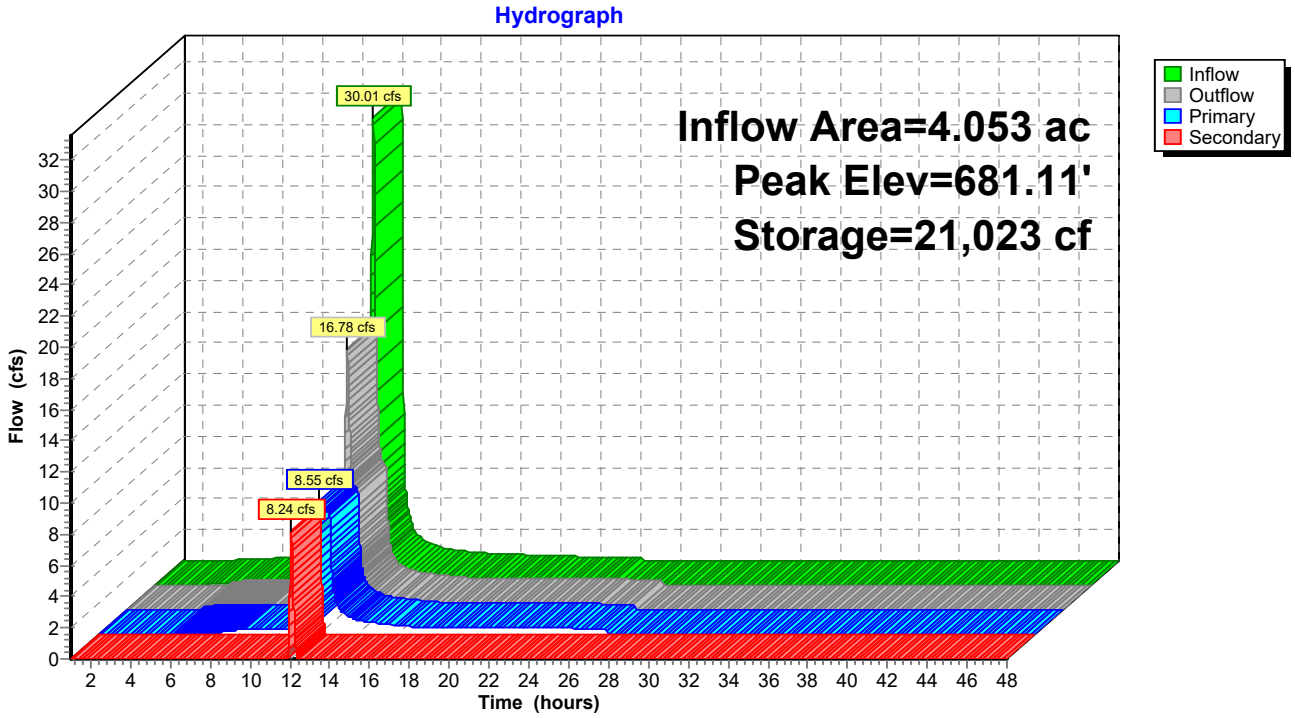
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
678.00	218	62.0	0	0	218
679.00	514	105.0	356	356	796
680.00	1,012	139.0	749	1,105	1,467
681.00	1,457	157.0	1,228	2,332	1,916
681.50	2,139	183.0	894	3,226	2,625

Device	Routing	Invert	Outlet Devices
#1	Device 3	678.00'	**2.000 in/hr Exfiltration over Surface area**
#2	Secondary	680.50'	**5.0' long + 3.0 '/' SideZ x 16.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Primary	675.50'	**12.0" Round Culvert** L= 28.0' Ke= 0.500 Inlet / Outlet Invert= 675.50' / 674.40' S= 0.0393 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#4	Device 3	679.70'	**30.0" x 30.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=8.55 cfs @ 12.06 hrs HW=681.11' TW=0.00' (Dynamic Tailwater)
└─**3=Culvert** (Inlet Controls 8.55 cfs @ 10.88 fps)
  └─**1=Exfiltration** (Passes < 0.55 cfs potential flow)
  └─**4=Orifice/Grate** (Passes < 35.69 cfs potential flow)

Secondary OutFlow Max=8.22 cfs @ 12.06 hrs HW=681.11' TW=0.00' (Dynamic Tailwater)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 8.22 cfs @ 1.99 fps)

Pond 3P: BIORETENTION #1



Stage-Discharge for Pond 3P: BIORETENTION #1

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
678.00	0.00	0.00	0.00
678.05	0.01	0.01	0.00
678.10	0.01	0.01	0.00
678.15	0.01	0.01	0.00
678.20	0.01	0.01	0.00
678.25	0.01	0.01	0.00
678.30	0.01	0.01	0.00
678.35	0.01	0.01	0.00
678.40	0.01	0.01	0.00
678.45	0.02	0.02	0.00
678.50	0.02	0.02	0.00
678.55	0.02	0.02	0.00
678.60	0.02	0.02	0.00
678.65	0.02	0.02	0.00
678.70	0.02	0.02	0.00
678.75	0.02	0.02	0.00
678.80	0.02	0.02	0.00
678.85	0.02	0.02	0.00
678.90	0.02	0.02	0.00
678.95	0.02	0.02	0.00
679.00	0.37	0.37	0.00
679.05	0.38	0.38	0.00
679.10	0.38	0.38	0.00
679.15	0.39	0.39	0.00
679.20	0.39	0.39	0.00
679.25	0.39	0.39	0.00
679.30	0.40	0.40	0.00
679.35	0.40	0.40	0.00
679.40	0.40	0.40	0.00
679.45	0.41	0.41	0.00
679.50	0.41	0.41	0.00
679.55	0.41	0.41	0.00
679.60	0.42	0.42	0.00
679.65	0.42	0.42	0.00
679.70	0.43	0.43	0.00
679.75	0.80	0.80	0.00
679.80	1.47	1.47	0.00
679.85	2.34	2.34	0.00
679.90	3.37	3.37	0.00
679.95	4.53	4.53	0.00
680.00	5.82	5.82	0.00
680.05	7.23	7.23	0.00
680.10	7.66	7.66	0.00
680.15	7.70	7.70	0.00
680.20	7.75	7.75	0.00
680.25	7.80	7.80	0.00
680.30	7.84	7.84	0.00
680.35	7.89	7.89	0.00
680.40	7.93	7.93	0.00
680.45	7.98	7.98	0.00
680.50	8.02	8.02	0.00
680.55	8.22	8.07	0.15
680.60	8.55	8.11	0.44
680.65	8.99	8.15	0.83
680.70	9.51	8.20	1.31
680.75	10.12	8.24	1.88
680.80	10.81	8.29	2.53
680.85	11.59	8.33	3.26
680.90	12.44	8.37	4.07
680.95	13.37	8.41	4.96
681.00	14.37	8.46	5.92
681.05	15.46	8.50	6.96
681.10	16.62	8.54	8.08
681.15	17.81	8.58	9.23
681.20	19.07	8.62	10.45
681.25	20.39	8.66	11.73
681.30	21.78	8.71	13.07
681.35	23.30	8.75	14.55
681.40	24.90	8.79	16.11
681.45	26.57	8.83	17.75
681.50	**28.33**	**8.87**	**19.46**

Stage-Area-Storage for Pond 3P: BIORETENTION #1

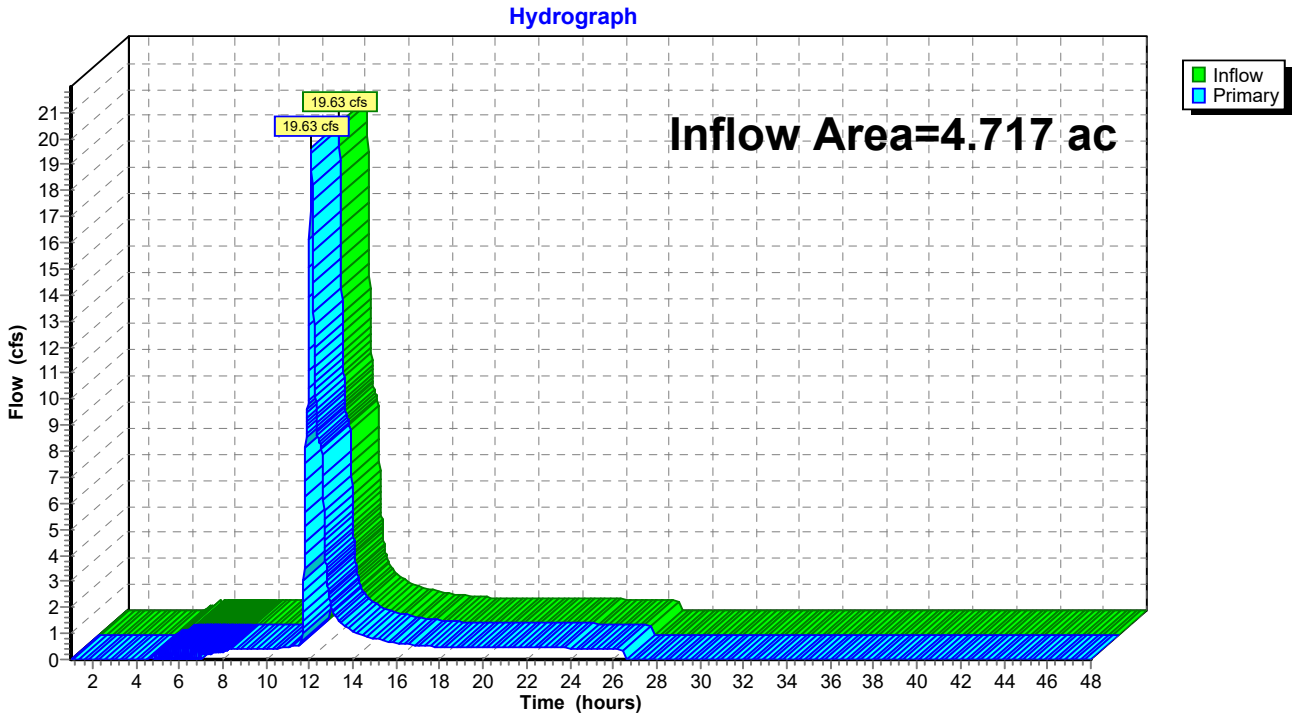
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
678.00	218	0
678.05	230	11
678.10	242	23
678.15	254	35
678.20	267	48
678.25	280	62
678.30	294	76
678.35	307	91
678.40	321	107
678.45	336	124
678.50	350	141
678.55	365	159
678.60	381	177
678.65	396	197
678.70	412	217
678.75	428	238
678.80	445	260
678.85	462	282
678.90	479	306
678.95	496	330
679.00	8,089	356
679.05	8,165	762
679.10	8,242	1,172
679.15	8,320	1,586
679.20	8,398	2,004
679.25	8,477	2,426
679.30	8,556	2,852
679.35	8,636	3,282
679.40	8,717	3,715
679.45	8,798	4,153
679.50	8,880	4,595
679.55	8,963	5,041
679.60	9,046	5,492
679.65	9,129	5,946
679.70	9,214	6,404
679.75	9,299	6,867
679.80	9,384	7,334
679.85	9,471	7,806
679.90	9,557	8,281
679.95	9,645	8,761
680.00	9,733	9,246
680.05	9,811	9,735
680.10	9,889	10,227
680.15	9,968	10,723
680.20	10,046	11,224
680.25	10,126	11,728
680.30	10,206	12,236
680.35	10,286	12,749
680.40	10,366	13,265
680.45	10,447	13,785
680.50	10,528	14,310
680.55	10,610	14,838
680.60	10,692	15,371
680.65	10,775	15,907
680.70	10,858	16,448
680.75	10,941	16,993
680.80	11,024	17,542
680.85	11,109	18,096
680.90	11,193	18,653
680.95	11,278	19,215
681.00	11,363	19,781
681.05	11,586	20,355
681.10	11,812	20,940
681.15	12,040	21,536
681.20	12,271	22,144
681.25	12,505	22,763
681.30	12,741	23,394
681.35	12,980	24,037
681.40	13,221	24,692
681.45	13,465	25,359
681.50	**13,712**	**26,039**

Summary for Link AP 1: ANALYSIS POINT 1

Inflow Area = 4.717 ac, 63.43% Impervious, Inflow Depth = 4.47" for 100-YEAR event
Inflow = 19.63 cfs @ 12.06 hrs, Volume= 1.756 af
Primary = 19.63 cfs @ 12.07 hrs, Volume= 1.756 af, Atten= 0%, Lag= 0.6 min
Routed to Link PR : PROPOSED

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link AP 1: ANALYSIS POINT 1

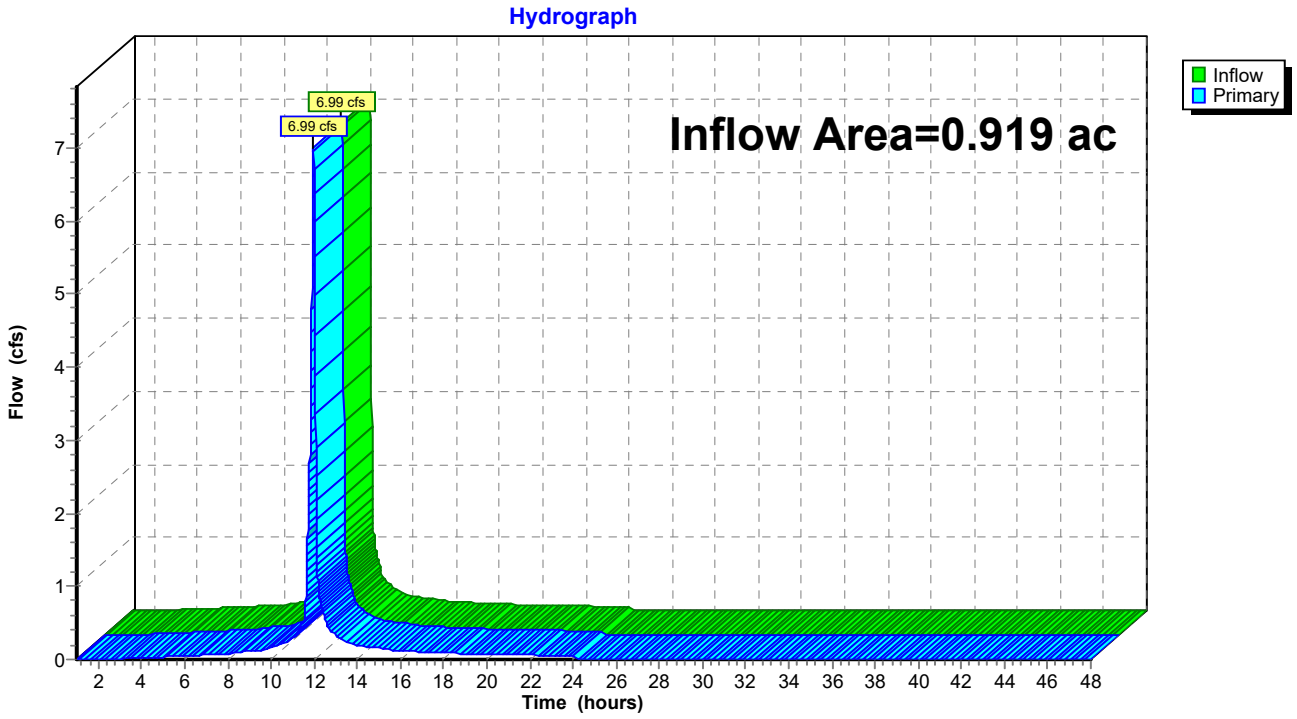


Summary for Link AP 2: ANALYSIS POINT 2

Inflow Area = 0.919 ac, 81.18% Impervious, Inflow Depth = 4.81" for 100-YEAR event
Inflow = 6.99 cfs @ 11.97 hrs, Volume= 0.368 af
Primary = 6.99 cfs @ 11.98 hrs, Volume= 0.368 af, Atten= 0%, Lag= 0.6 min
Routed to Link PR : PROPOSED

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link AP 2: ANALYSIS POINT 2

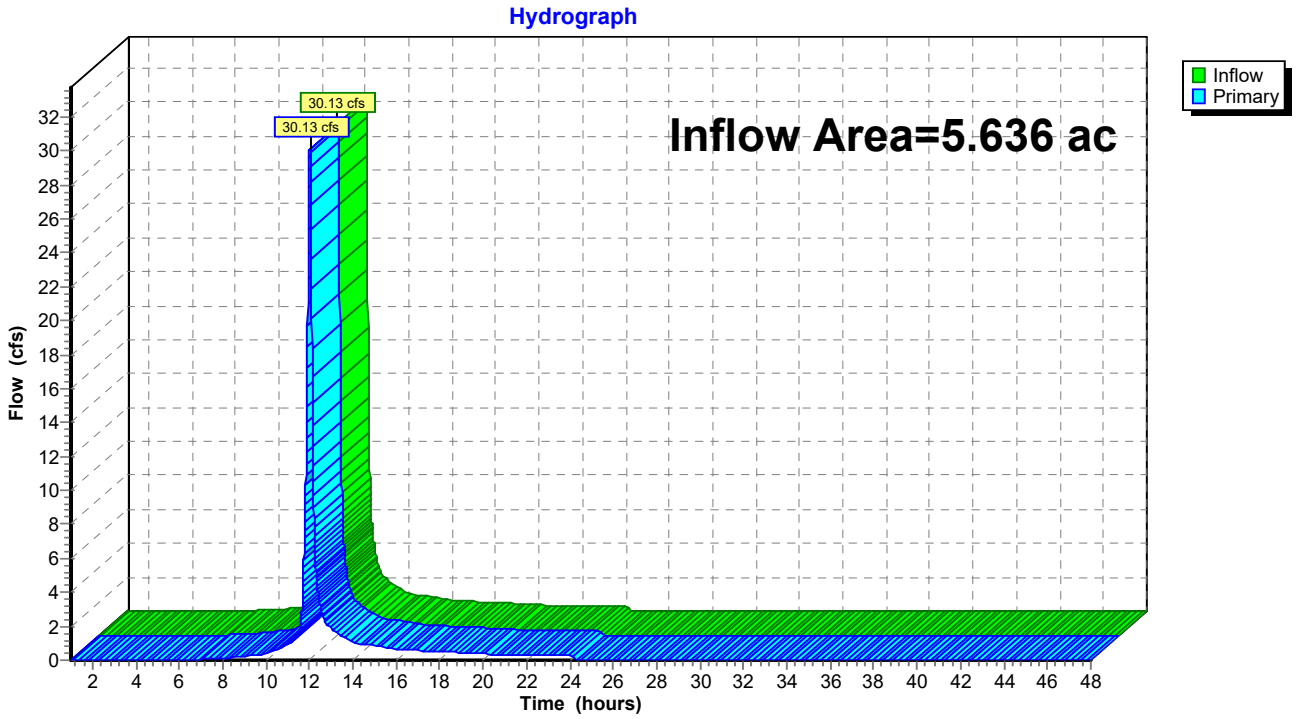


Summary for Link EX: EXISTING

Inflow Area = 5.636 ac, 31.28% Impervious, Inflow Depth = 3.50" for 100-YEAR event
Inflow = 30.13 cfs @ 12.01 hrs, Volume= 1.645 af
Primary = 30.13 cfs @ 12.02 hrs, Volume= 1.645 af, Atten= 0%, Lag= 0.6 min

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link EX: EXISTING

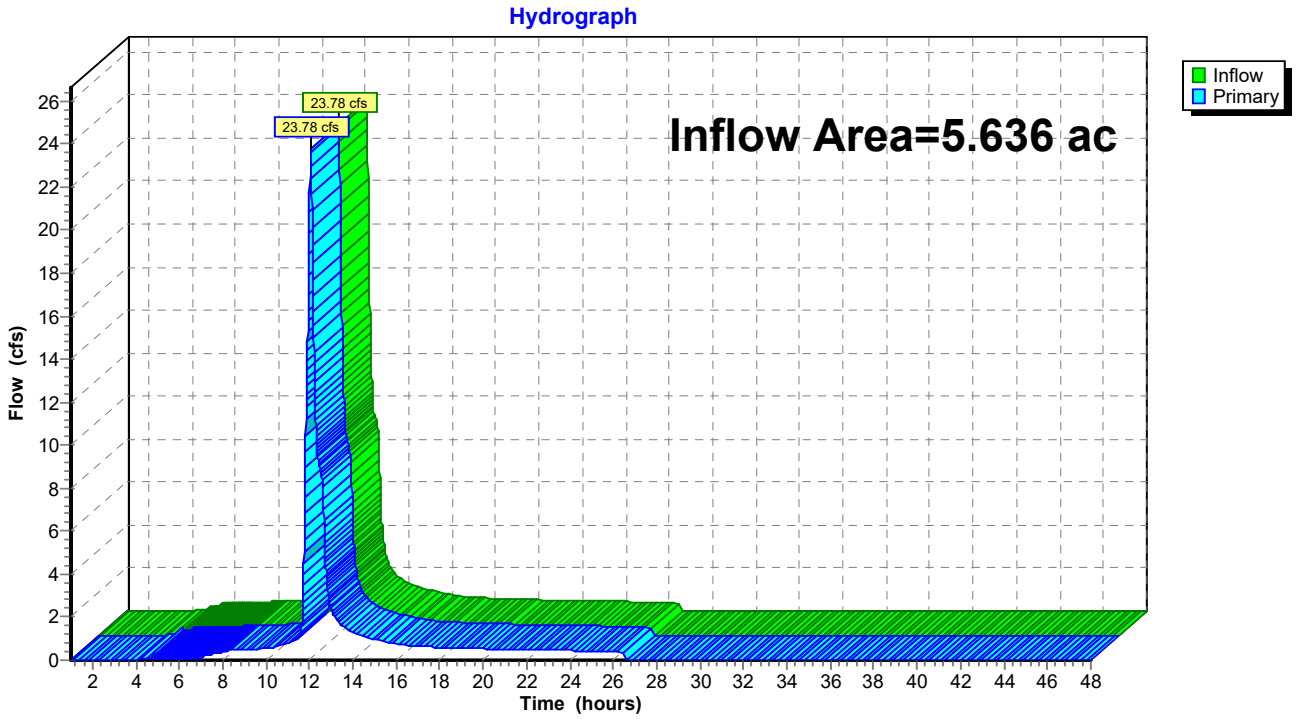


Summary for Link PR: PROPOSED

Inflow Area = 5.636 ac, 66.32% Impervious, Inflow Depth = 4.52" for 100-YEAR event
Inflow = 23.78 cfs @ 12.04 hrs, Volume= 2.125 af
Primary = 23.78 cfs @ 12.05 hrs, Volume= 2.125 af, Atten= 0%, Lag= 0.6 min

Primary outflow = Inflow, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs

Link PR: PROPOSED



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APPENDIX J: WATER QUALITY CALCULATIONS

WQv Calculation for Redevelopment

Auburn Community Hospital Health Campus

Per Section 9.2B.II, the project contains both redevelopment and development. Therefore:

TOTAL WQv = (75% WQv of Existing, Disturbed Impervious Area) or (25% WQv of Existing, Disturbed Impervious Area with Green Infrastructure) + (WQv of the new development area) Or a weighted average per 9.2.1.B.IV

Total Site Area	**4.911**	acres	Reduction in impervious area	**-0.61**	acres
Total Pre Development Impervious Area	**2.045**	acres			X<0%, use calculations below
			Percent Reduction from existing	**-29.83%**	0%<X<25% use weighted average equation
Total Post Development Impervious Area	**2.655**	acres			X>25% WQv met, skip below calculations
New Impervious Area	**0.61**	acres	(if negative, see above IC Reduction)		
Redevelopment Impervious Area	**1.572**	acres	(Value of pre and post impervious area overlap)		
90% Rainfall Event	**1**	inch			

WQv Calculation for Redevelopment

Redevelopment Section			New Development Section		
WQv = P x Rv x A / 12			WQv = P x Rv x A / 12		
where:			where:		
P = 90% Rainfall Event Number	1.0	inch	P = 90% Rainfall Event Number	1.0	inch
Rv = 0.05 + (0.009 x I)	0.95		Rv = 0.05 + (0.009 x I)	0.214	
I = Impervious Cover	100	%	I = Impervious Cover	18.27	%
A = Existing Disturbed Impervious Area	68,476	sf or	A = Area of Development	145,447	sf or
	1.57	acres		3.34	acres
25% WQv of Existing, Disturbed Impervious Area	**0.031**	ac-ft or	WQv of the Development Area	**0.060**	ac-ft or
	1,355.3	cf		**2,598.9**	cf

Total WQv	**0.091 ac-ft or 3,954.2 cf**

RRv Calculation for Redevelopment

Redevelopment Section	New Development Section			
Per Section 9.2B.II, RRv sizing criteria is not required for redevelopment	RRv min = P x Rv x Aic x S / 12			
	where:			
	P =	90% Rainfall Event Number	1.0	inch
	Rv =	0.05 + (0.009 x I)	0.950	
	I =	Impervious Cover	18.27	%
	A =	Total Area of New Impervious Cover	145,447	sf or
			0.61	acres
	S =	HSG Specific Reduction Factor =		

Soil Group	Acres	S
A		55%
B		40%
C	1.77	30%
D	3.14	20%
Weighted Avg	**0.24**	

RRv min =	0.011	ac-ft or
	496.5	cf

#	NOI Question			
28	Total Water Quality (WQv) Required		0.091 ac-ft or	3,954 cf
30	Total RRv	**Filtration Bioretention**	0.091 ac-ft or	3,955 cf
31	Is RRv Provided ≥ WQv Required?		Yes	
32	Minimum RRv		0.011 ac-ft or	497 cf
32a	Is RRv Provided ≥ Minimum RRv Required?		Yes	
33a	Total WQv Treated		ac-ft or	cf
			ac-ft or	cf
		TOTAL	0.000 ac-ft or	- cf
34	Sum of Volume Reduced & Treated		0.091 ac-ft or	3,955 cf
35	Is Sum RRv Provided and WQv Provided ≥ WQv Required?		Yes	

Filtration Bioretention (F-5)

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
1	4.91	0.83	17	0.20	3,955	1.10	0

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	0	Underdrains required
Is the contributing area to the practice a stormwater hotspot?	No	
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?	No	
Is contributing area greater than max. contributing area?	No	
Enter depth to seasonal high water table (ft)	2	
Enter depth to bedrock (ft)	2	
Is pretreatment provided, in conformance with Section 6.4.3.1	Yes	
Enter average height of ponding (ft)	0.5	
Enter depth of surface layer (inches)	3	
Enter depth of filter media (ft)	2.5	
Enter depth of drainage layer (inches)	10	
Enter slope of maintenance access (%)	5	
Enter width of maintenance access (ft)	12	

Sizing Criteria				
		Value	Units	Notes
Permeability Flow Rate	k	1	ft/day	
Filter Time	tf	2	days	
Required Filter Area	Af	1648	sf	
Enter Provided Filter Area	Af	7575	sf	
Recalculated Water Quality Volume (based on provided filter area)	WQv calc	18180	cf	

Calculate Runoff Reduction			
RRv Provided	**3,955**	***cf***	
WQv Treated	0	cf	This is the portion of the WQv that is not reduced in the practice.

Compute Channel Protection Storage Volume		
Ia for Drainage Area		
Drainage Area	CN	Area (ac)
1	93.00	4.05
2	94.00	0.92
3	77.00	0.66
Weighted CN	91.28	
Corresponding Ia = (200/CN)-2		0.191
P, Precipitation, 1yr (in)		1.83
Ia/P		0.104
Tc for Drainage Area (hr)		0.10
From Exhibit 4-II, qu (csm/in)		1000
Figure 8.5, T = 24 hr, qo/qi		0.020
Vs/Vr		0.655
Q		1.04
Cpv Required (ac-ft)		**0.319**

Size of Secondary Orifice	RISER
Elevation of Secondary Orifice	679.7
CPv Provided (ac-ft)	0.408

APPENDIX K: NYSDEC SPEDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITY (PERMIT NO. GP-0-25-001)

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL
CONSERVATION (NYSDEC)

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-25-001

Construction General Permit (CGP)

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2025 Expiration Date: January 28, 2030

Scott E. Sheeley

Chief Permit Administrator

Scott E. Sheeley JAN. 29, 2025

Authorized Signature Date

Address: NYSDEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act (CWA), and 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), *stormwater discharges* from certain *construction activities* are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or by a state permit program. New York State administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7 and 8, and Article 70, as well as 6 NYCRR Parts 621 and 750.

C*onstruction activities* constitute construction of a *point source* and, therefore, pursuant to ECL sections 17-0505, 17-0701, and 17-0803, the *owner or operator* must have coverage under a SPDES permit prior to *commencement of construction activities*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES CONSTRUCTION GENERAL PERMIT (CGP) GP-0-25-001
FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part I. How to Obtain Coverage and General Requirements

To be covered under this permit, the *owner or operator* must meet all eligibility requirements in Part I.A. and follow the requirements for obtaining permit coverage in Part I.D., F., or G.

A. Eligibility Requirements

For a *common plan of development or sale*, the *phase(s)* that meet the eligibility requirements in Part I.A. may obtain coverage under this permit even if other *phase(s)* of the same *common plan of development or sale* do not meet the eligibility requirements and require an individual SPDES permit.

1. The *owner's or operator's construction activities* involve soil disturbances of:

    a. one or more acres; or

    b. less than one acre which are part of a *common plan of development or sale* that will ultimately disturb one or more acres; or

    c. less than one acre where NYSDEC has determined that a SPDES permit is required for *stormwater discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of pollutants to *surface waters of the State*.

        i. 5,000 square feet or more, but less than one acre, and are in the New York City Watershed located east of the Hudson River, Appendix C Figure 1; or

        ii. 20,000 square feet or more, but less than one acre, within the municipal boundaries of the City of New York (NYC); or

        iii. less than 20,000 square feet which are part of a *common plan of development or sale* that will ultimately disturb 20,000 square feet or more, but less than one acre, within the municipal boundaries of NYC; or

        iv. that creates 5,000 square feet or more of *impervious area* within the municipal boundaries of NYC.

2. *Discharges* from the *owner's or operator's construction activities* are/were not:

    a. already covered by a different SPDES permit; or

    b. covered under a different SPDES permit that was denied, terminated, or revoked; or

    c. identified in an expired individual SPDES permit that was not renewed; or

    d. required to obtain an individual SPDES permit or another general SPDES permit in accordance with Part VII.K.

3. If *construction activities* may adversely affect a species that is endangered or threatened, the *owner or operator* must obtain a:

    a. permit issued pursuant to 6 NYCRR Part 182 for the project; or

    b. letter issued by NYSDEC of non-jurisdiction pursuant to 6 NYCRR Part 182 for the project.

4. If *construction activities* have the potential to affect an *historic property*, the *owner or operator* must obtain one of the following:

    a. documentation that the *construction activity* is not within an archeological buffer area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:

        i. 1-5 acres of disturbance - 20 feet; or

        ii. 5-20 acres of disturbance - 50 feet; or

iii. 20+ acres of disturbance - 100 feet.

b. NYSDEC consultation form sent to OPRHP,[1] and copied to NYSDEC's Agency Historic Preservation Officer (APO), and

i. the State Environmental Quality Review Act (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or

ii. documentation from OPRHP that the *construction activity* will result in No Impact; or

iii. documentation from OPRHP providing a determination of No Adverse Impact; or

iv. a Letter of Resolution signed by the *owner or operator*, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA).

c. documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

i. No Affect; or

ii. No Adverse Affect; or

iii. Executed Memorandum of Agreement.

d. documentation that SHPA Section 14.09 has been completed by NYSDEC or another state agency.

5. If *construction activities* are subject to SEQR, the *owner or operator* must obtain documentation that SEQR has been satisfied.

6. If *construction activities* are not subject to SEQR, but subject to the equivalent environmental review from another New York State or federal agency, the

[1] The consultation form can be submitted, along with other project information, through OPRHP's Cultural Resource Information System (CRIS) portal. If submitted through CRIS, paper copies of the consultation form need not be mailed.

owner or operator must obtain documentation that project review, pursuant to a process equivalent to SEQR from another New York State or federal agency, has been satisfied.

7. If *construction activities* require Uniform Procedures Act (UPA) Permits (see 6 NYCRR Part 621) from NYSDEC, or the equivalent from another New York State or federal agency, the *owner or operator* must:

    a. obtain all such necessary permits; or

    b. receive notification from NYSDEC pursuant to 6 NYCRR 621.3(a)(4) excepting Part I.A.7.a.

8. *Construction activities* are not eligible if they meet the following criteria in Part I.A.8.a. or b.:

    a. For linear transportation and linear utility project types, the *construction activities*:

        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

        ii. are undertaken on land with no existing *impervious cover*; and

        iii. disturb two or more acres of *steep slope*.

    b. For all other project types, the *construction activities*:

        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

        ii. are undertaken on land with no existing *impervious cover*; and

        iii. disturb one or more acres of *steep slope*.

B. Types of *Discharges* Authorized

1. The following *stormwater discharges* are authorized under this permit:

   a. *Stormwater discharges*, including *stormwater* runoff, snowmelt runoff, and surface runoff and drainage, associated with *construction activity*, are authorized under this permit provided that appropriate *stormwater* controls are designed, installed, and maintained in accordance with Part II. and Part III.

   b. *Stormwater discharges* from construction support activities at the *construction site* (including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) if the following requirements are met:

      i. The support activity is directly related to the *construction site* required to have permit coverage for *stormwater discharges*; and

      ii. The support activity is not a commercial operation, nor does it serve multiple unrelated *construction sites*; and

      iii. The support activity does not continue to operate beyond the completion of the *construction activity* at the site it supports; and

      iv. *Stormwater* controls are implemented in accordance with Part II. and Part III. for *discharges* from the support activity areas.

2. The following non-*stormwater discharges* associated with *construction activity* are authorized under this permit:

   a. Non-*stormwater discharges* listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "*Discharges* from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; and

   b. Non-*stormwater discharges* of waters to which other components have not been added that are used in accordance with the *SWPPP* to control dust or irrigate vegetation in stabilized areas; and

   c. Uncontaminated *discharges* from *dewatering* operations

3. Authorized *discharges* of *stormwater* or authorized *discharges* of non-*stormwater*, commingled with a *discharge* authorized by a different SPDES permit and/or a *discharge* that does not require SPDES permit authorization, are also authorized under this permit.

C. Prohibited *Discharges*

1. Non-*stormwater discharges* prohibited under this permit include but are not limited to:

    a. Wastewater from washout of concrete; and

    b. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials; and

    c. Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance; and

    d. Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and

    e. Toxic or hazardous substances from a spill or other release.

D. Electronic Notice of Intent (eNOI) Submittal

To receive authorization in accordance with Part I.D.3.b., the *owner or operator* must submit a complete eNOI in accordance with the requirements in Part I.D. The eNOI contains questions to: ensure eligibility requirements in Part I.A. have been met; obtain *owner or operator* contact information; obtain the total area to be disturbed and the existing/future *impervious areas* (rounded to the nearest tenth of an acre); confirm *Traditional Land Use Control MS4 Operator* jurisdiction over construction projects; satisfy the EPA eRule requirements; confirm that the Water Quality-Based Effluent Limitations in Part II. have been met; demonstrate consideration of the future risks due to climate change in accordance with Part III.A.2.; and confirm that the other *Stormwater Pollution Prevention Plan (SWPPP)* requirements in Part III. have been met.

1. An eNOI may be submitted for:

    a. *construction activities* that are not part of a *common plan of development or sale*; or

b. an entire *common plan of development or sale*; or

c. separate *phase(s)* of a *common plan of development or sale* if the following requirements are met:

    i. the *common plan of development or sale* meets the eligibility requirements of Part I.A.5. or 6.; and

    ii. the *phase(s)* meet(s) all other eligibility requirements of Part I.A.; and

    iii. Part III.C. Required *SWPPP* Components by Project Type is based on the *common plan of development or sale*, not the *phase(s)*; or

d. *tree clearing* that is associated with, or will support, a *renewable energy* generation, transmission, or storage project that meets Part I.A.5. and 6., if the *tree clearing*:

    i. meets all other eligibility requirements of Part I.A.; and

    ii. will occur in NYSDEC's Regions 3-9; and

    iii. is not within ¼ mile of a bat hibernaculum protected pursuant to 6 NYCRR Part 182; and

    iv. will occur between November 1st and March 31st.

2. As prerequisites for submitting an eNOI, the *owner or operator* must:

    a. prepare a *SWPPP* for Part I.D.1.a., b., c., or d. in accordance with Part III.; and

    b. based on the following criteria, upload the following signature forms signed in accordance with Part VII.J. to the eNOI prior to submission:

        i. for all eNOIs:

            1. the SWPPP Preparer Certification Form, Appendix F, signed by the *SWPPP* preparer; and

2. the Owner/Operator Certification Form, Appendix J, signed by the *owner or operator*; and

ii. if an eNOI includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that will *discharge* to the *MS4(s)*:

1. determine if the *Traditional Land Use Control MS4 Operator(s)* have review authority. A *Traditional Land Use Control MS4 Operator* does not have review authority where:

a. the *owner or operator* of the *construction activities* in Part I.D.2.b.ii. is the same entity as the *Traditional Land Use Control MS4 Operator* identified in Part I.D.2.b.ii.; or

b. there is a statute exempting the *owner or operator* from zoning review by the *Traditional Land Use Control MS4 Operator*; or

c. there is no such statute per Part I.D.2.b.ii.1.b., the *Traditional Land Use Control MS4 Operator* concludes, after public hearing, that it does not have zoning review authority in accordance with Legal Memorandum LU14 Updated January 2020 “Governmental Immunity from Zoning and Other Legislation”; and

2. if the *Traditional Land Use Control MS4 Operator(s)* have review authority, submit the *SWPPP* to the *Traditional Land Use Control MS4 Operator(s)* for review and have:

a. if outside the municipal boundaries of NYC: the MS4 SWPPP Acceptance Form, Appendix G, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.; or

b. if within the municipal boundaries of NYC: The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval Form, Appendix H, signed by the principal executive officer or ranking elected official from the Traditional Land Use Control MS4 Operator, or by a duly authorized representative of that person in accordance with Part VII.J.2.; and

3. if the *Traditional Land Use Control MS4 Operator* does not have review authority, have the MS4 No Jurisdiction Form, Appendix I, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.

3. Submitting an eNOI:

a. The *owner or operator* must submit a complete Notice of Intent electronically using a NYSDEC approved form.[2]

b. The *owner or operator* is authorized to *commence construction activity* as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.

i. If an eNOI is received for a *SWPPP* that deviates from one of the technical standards but demonstrates *equivalence* in accordance with Part III.B.1.a.ii. or Part III.B.2.b.ii., if the *SWPPP* includes *construction activities* that are not within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)*, and/or if the *SWPPP* includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that do not have review authority in accordance with Part I.D.2.b.ii.1., the authorization date indicated in the LOA will be 60 business days after the eNOI submission date.

[2] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

c. If *Traditional Land Use Control MS4 Operator(s)* have review authority in accordance with Part I.D.2.b.ii.2., the *owner or operator* must, within five business days of receipt of the LOA, send an electronic copy of the LOA to the *Traditional Land Use Control MS4 Operator(s)* with review authority.

E. General Requirements for *Owners or Operators* with Permit Coverage

1. As of the date the LOA is received, the *owner or operator* must make the eNOI, *SWPPP*, and LOA available for review and copying in accordance with the requirements in Part VII.H. When applicable, as of the date an updated LOA is received, the *owner or operator* must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.

2. The *owner or operator* must ensure compliance with all requirements of this permit and that the provisions of the *SWPPP*, including any changes made to the *SWPPP* in accordance with Part III.A.5., are properly implemented and maintained from the *commencement of construction activity* until:

   a. all areas of disturbance have achieved *final stabilization;* and

   b. the owner's or operator's coverage under this permit is terminated in accordance with Part V.A.5.a.

3. As of the date of the *commencement of construction activities* until Part I.E.2.a. and b. have been met, the *owner or operator* must maintain at the *construction site*, a copy of:

   a. all documentation necessary to demonstrate eligibility with this permit; and

   b. this permit; and

   c. the *SWPPP*; and

   d. the signed SWPPP Preparer Certification Form; and

   e. the signed MS4 SWPPP Acceptance Form or signed NYCDEP SWPPP Acceptance/Approval Form or signed MS4 No Jurisdiction Form (when applicable); and

   f. the signed Owner/Operator Certification Form; and

g. the eNOI; and

h. the LOA; and

i. the LOA transmittal to the Traditional Land Use Control MS4 Operator in accordance with Part I.D.3.c. (when applicable).

4. The *owner or operator* must maintain at the *construction site*, until Part I.E.2.a. and b. have been met, as of the date the documents become final or are received, a copy of the:

   a. responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7.; and

   b. inspection reports in accordance with Part IV.C.4. and 6.; and

   c. Request to Disturb Greater Than Five Acres and the Authorization Letter to Disturb Greater Than Five Acres in accordance with Part I.E.6. (when applicable); and

   d. Request to Continue Coverage and the Letter of Continued Coverage (LOCC) in accordance with Part I.F.2. and 4. (when applicable); and

   e. The updated LOA(s) in accordance with Part I.E.9. (when applicable).

5. The *owner or operator* must maintain the documents in Part I.E.3. and 4. in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the *owner or operator* must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.

6. The *owner or operator* must meet the following requirements prior to disturbing greater than five acres of soil at any one time:

   a. The *owner or operator* must submit a written Request to Disturb Greater Than Five Acres to:

i. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, if a *Traditional Land Use Control MS4 Operator* does not have review authority in accordance with Part I.D.2.b.ii.1.; or

ii. the *Traditional Land Use Control MS4 Operator*, if a *Traditional Land Use Control MS4 Operator* has review authority in accordance with Part I.D.2.b.ii.1.; or

iii. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, and each involved *Traditional Land Use Control MS4 Operator*, if the project spans multiple municipalities with more than one *Traditional Land Use Control MS4 Operator* involved with review authority in accordance with Part I.D.2.b.ii.1.

b. The written Request to Disturb Greater Than Five Acres must include:

i. The SPDES permit identification number (Permit ID); and

ii. Full technical justification demonstrating why alternative methods of construction that would result in five acres of soil disturbance or less at any one time are not feasible; and

iii. The phasing plan for the project and sequencing plans for all *phases* from the *SWPPP* in accordance with Part III.B.1.d.; and

iv. Plans with locations and details of erosion and sediment control practices such that the heightened concern for erosion when disturbing greater than five acres at one time has been addressed; and

v. Acknowledgment that "the *owner or operator* will comply with the requirements in Part IV.C.2.b."; and

vi. Acknowledgment that "the *owner or operator* will comply with the requirements in Part II.B.1.b."

c. The *owner or operator* must be in receipt of an Authorization Letter to Disturb Greater Than Five Acres, which will include when the

authorization begins and ends and indicate a maximum area (acres) of soil disturbance allowed at any one time, from:

i. NYSDEC, if Part I.E.6.a.i. or iii. apply; or

ii. the *Traditional Land Use Control MS4 Operator*, if Part I.E.6.a.ii. applies.

7. Upon a finding of significant non-compliance with the practices described in the *SWPPP* or violation of this permit, NYSDEC may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

8. If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE).[3] *Construction activity* shall not resume until written permission to do so has been received from the RWE.

9. To be authorized to implement modifications to the information previously submitted in the eNOI, the *owner or operator* must:

   a. notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI; and

   b. update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D.; and

   c. receive an updated LOA.

10. The eNOI, *SWPPP*, LOA, updated LOAs (when applicable), and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

[3] The Regional Water Manager where a DEC Region does not have a RWE.

F. Permit Coverage for *Discharges* Authorized Under GP-0-20-001

When applicable:

1. Upon the effective date of this permit, an *owner or operator* of *a construction activity*, with coverage under GP-0-20-001, will have interim coverage under GP-0-25-001 for 45 calendar days starting on the effective date of GP-0-25-001 so long as the *owner or operator* maintains compliance with all applicable requirements of this permit.

2. Within 30 calendar days of the effective date of this permit, the *owner or operator*, with coverage under GP-0-20-001, must submit a complete Request to Continue Coverage electronically using a NYSDEC approved form,[4] which contains the information identified in Part I.F.3. below, if:

   a. the *owner or operator* continues to implement the SMP component in conformance with the technical standards in place at the time of initial project authorization; and

   b. the *owner or operator* will comply with all non-design requirements of GP-0-25-001.

3. The Request to Continue Coverage form contains questions to: ensure eligibility requirements in Part I.A. have been met; verify *owner or operator* contact information; verify the permit identification number; verify the original eNOI submission ID, if applicable; verify Part I.F.2.a. and b.; verify the version of the Design Manual that the technical/design components conform to; and receive an updated Owner/Operator Certification Form, Appendix I.

4. The *owner or operator* has obtained continued coverage under GP-0-25-001 as of the date indicated in the LOCC, which is sent by NYSDEC after a complete Request to Continue Coverage form is submitted.

5. If the owner or operator does not submit the Request to Continue Coverage form in accordance with Part I.F.2. and 3., coverage under this permit is automatically terminated after interim coverage expires.

[4] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

G. Change of *Owner or Operator*

When applicable:

1. When property ownership changes, or when there is a change in operational control over the construction plans and specifications, the following process applies:

    a. The new *owner or operator* must meet the applicable prerequisites for submitting an eNOI in accordance with Part I.D.2.; and

    b. The new *owner or operator* must submit an eNOI in accordance with Part I.D.3.; and

    c. Permit coverage for the new *owner or operator* will be effective upon receipt of the LOA in accordance with Part I.D.3.b.; and

    d. The new *owner or operator*, upon receipt of their LOA, must provide their Permit ID to the original *owner or operator*; and

    e. If the original *owner or operator* will no longer be the *owner or operator* of the *construction activity* identified in the original *owner's or operator's* eNOI, the original *owner or operator*, upon receipt of the new *owner's or operator's* Permit ID in accordance with Part I.G.1.d., must submit to NYSDEC a completed eNOT in accordance with Part V. that includes the name and Permit ID of the new *owner or operator*; or

    f. If the original *owner or operator* maintains ownership of a portion of the *construction activity*, the original *owner or operator* must maintain their coverage under the permit by modifying their eNOI; modifications to the eNOI must include:

        i. the revised area of disturbance and/or *impervious area(s)*; and

        ii. the revised SMP information, if applicable; and

        iii. a narrative description of what has changed; and

        iv. the new *owner's or operator's* Permit ID for the portion of the project removed from the eNOI.

    Owners or operators must follow Part I.E.9. to modify the eNOI.

Part II. Water Quality-Based Effluent Limitations

A. Maintaining Water Quality

NYSDEC expects that compliance with the requirements of this permit will control *discharge*s necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any *discharge* to either cause or contribute to a violation of the following *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York:

1. There must be no increase in turbidity that will cause a substantial visible contrast to natural conditions; and

2. There must be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There must be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the *stormwater discharge*s authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standard,* the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this permit and document in accordance with Part IV.C.4. of this permit. To address the *water quality standard* violation the *owner or operator* must include and implement appropriate controls in the *SWPPP* to correct the problem or obtain an individual SPDES permit.

If, despite compliance with the requirements of this permit, it is demonstrated that the *stormwater discharge*s authorized by this permit are causing or contributing to a violation of *water quality standards*, or if NYSDEC determines that a modification of this permit is necessary to prevent a violation of *water quality standards*, the authorized *discharge*s will no longer be eligible for coverage under this permit, and the *owner or operator* must obtain an individual SPDES permit prior to further *discharges* from the *construction site*.

B. Effluent Limitations Applicable to *Discharges* from *Construction Activities*

*Discharge*s authorized by this permit must achieve, at a minimum, the effluent limitations in Part II.B.1.a., b., c., d., and e. These limitations represent the

degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement, and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part II.B.1.a., b., c., d., and e. and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (BB), dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in *SWPPP* the reason(s) for the deviation, or alternative design, and provide information in the *SWPPP* demonstrating that the deviation or alternative design is *equivalent* to the technical standard.

    a. **Erosion and Sediment Controls.** At a minimum, erosion and sediment controls must be selected, designed, installed, implemented, and maintained to:

        i. *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharge*s; and

        ii. Control *stormwater discharge*s, including both peak flow rates and total *stormwater* volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points; and

        iii. *Minimize* the amount of soil exposed during *construction activity*; and

        iv. *Minimize* the disturbance of *steep slope*; and

        v. *Minimize* sediment *discharge*s from the site; and

        vi. Provide and maintain *natural buffers* around surface waters, direct *stormwater* to vegetated areas and maximize *stormwater* infiltration to reduce *pollutant discharge*s, unless *infeasible*; and

        vii. *Minimize* soil compaction. *Minimizing* soil compaction is not required

where the intended function of a specific area of the site dictates that it be compacted; and

viii. Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and

ix. *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of *pollutants* that could be discharged from the site.

b. **Soil Stabilization**. In areas where soil disturbance activity has ceased, whether permanently or *temporarily ceased*, the application of soil stabilization measures must be initiated by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. For *construction sites* that *directly discharge* to one of the 303(d) segments listed in Appendix D, or are located in one of the watersheds listed in Appendix C, or are authorized to disturb greater than five acres in accordance with Part I.E.5.a.viii., the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven calendar days from the date the soil disturbance activity ceased.

c. **Dewatering**. *Discharge*s from *dewatering* activities, including *discharge*s from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

d. **Pollution Prevention Measures**. Select, design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be selected, designed, installed, implemented, and maintained to:

i. *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. Soaps, detergents and solvents cannot be used; and

ii. *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation

and to *stormwater*. *Minimization* of exposure is not required in cases where the exposure to precipitation and to *stormwater* will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of *stormwater* contamination (such as final products and materials intended for outdoor use); and

iii. Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Surface Outlets.** When discharging from basins and impoundments, the surface outlets must be designed, constructed, and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-Construction Stormwater Management Practice (SMP) Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction SMPs, in accordance with Part III.C., must select, design, install, implement, and maintain the SMPs to meet the *performance criteria* in the New York State Stormwater Management Design Manual, dated July 31, 2024 (DM), using sound engineering judgment. Where SMPs are not designed in conformance with the *performance criteria* in the DM, the *owner or operator* must include in the *SWPPP* the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity*, that requires SMPs in accordance with Part III.C., must design the practices to meet the applicable *sizing criteria* in Part II.C.2.a., b., c., or d.

a. Sizing Criteria for *New Development*

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the total WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv must be calculated in accordance with the criteria in Section 4.2 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the requirements in Part II.C.2.a.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

   In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.4 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

   1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

   2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs without detention or velocity controls; or

   3. The site *directly discharges* into a fifth order or larger water body (stream, river, or lake), or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

b. *Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watersheds

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24-hour design storm over the post-developed watershed and must be calculated in accordance with the criteria in Section 4.3 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part II.C.2.b.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include

documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.5 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs; or

3. The site *directly discharges* to tidal waters, or a fifth order or larger water body (stream, river, or lake) where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

c. *Sizing Criteria* for *Redevelopment Activity*

i. Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* must be addressed by one of the following options, as outlined in Section 9.2.1. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C) must calculate the WQv in accordance with Section 4.3 of the DM. All other *redevelopment activities* must calculate the WQv in accordance with Section 4.2 of the DM.

1. Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the DM must be applied to all newly created pervious areas; or

2. Capture and treat 100% of the required WQv, for a minimum of 25% of the disturbed redevelopment *impervious area*, by implementation of standard SMPs or reduced by application of runoff reduction techniques; or

3. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a volume-based alternative SMP, as defined in Section 9.4 of the DM; or

4. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm; or

5. Application of a combination of 1 through 4 above that provide a weighted average of at least two of the above methods. Application of this method must be in accordance with the criteria in Section 9.2.1(A)(V) of the DM; or

6. If there is an existing SMP located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 through 5 above.

ii. Channel Protection Volume (CPv) is not required if there is 0% change to hydrology that increases the *discharge* rate and volume from the project site.

iii. *Overbank* Flood Control (Qp) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

iv. Extreme Flood Control (Qf) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

d. *Sizing Criteria* for Combination of *Redevelopment Activity* and *New Development*

Construction projects, that include both *new development* and *redevelopment activity*, must use SMPs that meet the *sizing criteria* calculated as an aggregate of the *sizing criteria* in Part II.C.2.a. or b. for the *new development* portion of the project and Part II.C.2.c. for the *redevelopment activity* portion of the project.

Part III. Stormwater Pollution Prevention Plan (SWPPP)

A. General *SWPPP* Requirements

1. A *SWPPP* must be prepared and implemented by the *owner or operator* of all *construction activity* covered by this permit. All authorized *discharges* must be identified in the *SWPPP*. The *SWPPP* must document the selection, design, installation, implementation and maintenance of the control measures and

practices that will be used to meet the effluent limitations in Part II.B. and, where applicable, the SMP requirements in Part II.C.

2. The *SWPPP* must demonstrate consideration in narrative format of the future physical risks due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490, and associated guidance.

    a. The owner or operator must consider:

        i. the following physical risks due to climate change:

            (i) increasing temperature; and

            (ii) increasing precipitation; and

            (iii) increasing variability in precipitation, including chance of drought; and

            (iv) increasing frequency and severity of flooding; and

            (v) rising sea level; and

            (vi) increasing storm surge; and

            (vii) shifting ecology.

        ii. for each of the following:

            (i) overall site planning; and

            (ii) location, elevation, and sizing of:

                a. control measures and practices; and

                b. conveyance system(s); and

                c. detention system(s).

3. The *SWPPP* must describe the erosion and sediment control practices and where required, SMPs that will be used and/or constructed to reduce the *pollutants* in *stormwater discharges* and to assure compliance with the

requirements of this permit. In addition, the *SWPPP* must identify potential sources of pollution which may reasonably be expected to affect the quality of *stormwater discharges*.

4. All *SWPPPs*, that require the SMP component in accordance with Part III.B.2., must be prepared by a *qualified professional*.

5. The *owner or operator* must keep the *SWPPP* current so that, at all times, it accurately documents the erosion and sediment control practices that are being used or will be used during construction, and all SMPs that will be constructed on the site. At a minimum, the *owner or operator* must modify the *SWPPP*, including construction drawings:

   a. whenever the current provisions prove to be ineffective in *minimizing pollutants* in *stormwater discharges* from the site; and

   b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*; and

   c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* NYSDEC, or other regulatory authority; and

   d. to document the final construction conditions in an as-built drawing.

6. NYSDEC may notify the *owner or operator* at any time that the *SWPPP* does not meet one or more of the minimum requirements of this permit. The notification must be in writing and identify the provisions of the *SWPPP* that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by NYSDEC, the *owner or operator* must make the required changes to the *SWPPP* and submit written notification to NYSDEC that the changes have been made. If the *owner or operator* does not respond to NYSDEC's comments in the specified time frame, NYSDEC may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4.

7. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion and sediment control practices included in the *SWPPP* and the

contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the *SWPPP*. The *owner or operator* must have each of the contractors and subcontractors identify at least one person from their company to be *trained contractor* that will be responsible for implementation of the *SWPPP*. The *owner or operator* must ensure that at least one *trained contractor* is on site daily when soil disturbance activities are being performed.

The *owner or operator* must have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before the *commencement of construction activities*:

> "I hereby certify under penalty of law that I understand and agree to comply with the requirements of the *SWPPP* and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the *SWPPP* that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for *SWPPP* implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* must attach the certification statement(s) to the copy of the *SWPPP* that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the *SWPPP* after the *commencement of construction activities*, they must also sign the certification statement and provide the information listed above prior to performing *construction activities*.

B. Required *SWPPP* Contents

1. Erosion and sediment control component - The *owner or operator* must prepare a *SWPPP* that includes erosion and sediment control practices.

    a. Erosion and sediment control practices must be designed:

        i. in conformance with the BB; or

        ii. *equivalent* to the BB if deviating from Part III.B.1.a.i.

    b. If the erosion and sediment control practices are designed in conformance with Part III.B.1.a.ii., the *SWPPP* must include a demonstration of *equivalence* to the BB.

    c. At a minimum, the erosion and sediment control component of the *SWPPP* must include the following:

        i. Background information about the scope of the project, including the location, type and size of project; and

        ii. A site map/construction drawing(s) with north arrows for the project, including a general location map. At a minimum, the site map must show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the *stormwater discharge*(s) and receiving surface water(s); and

        iii. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG); and

        iv. A phasing plan for the project and sequencing plans for all *phases*, both of which must address clearing and grubbing, excavation and grading, utility and infrastructure installation, *final stabilization*,

and any other *construction activity* at the site that will result in soil disturbance.

1. The phasing plan must include:

    a. a map delineating and labeling the limits of soil disturbance for all *phases* of a project; and

    b. a table identifying the order and intended schedule of when each *phase* will begin and end its sequencing plan. The table must identify the total disturbed area for each *phase* at any one time and the total disturbed area for the overall project at any one time all on one timeline showing all overlapping quantities of disturbed area at any one time; and

2. A sequencing plan for a specific *phase* must include:

    a. a table indicating the order and intended schedule of *construction activities* within a *phase*, and corresponding construction drawings with a description of the work to be performed; and

    b. all permanent and *temporary stabilization* measures; and

v. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented; and

vi. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice; and

vii. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any

temporary sediment basins and structural practices that will be used to divert flows from exposed soils; and

viii. A maintenance inspection schedule for the contractor(s) and subcontractor(s) identified in Part III.A.7. to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule must be in accordance with the requirements in the BB technical standard; and

ix. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the *stormwater discharges*; and

x. A description and location of any *stormwater discharges* associated with industrial activity other than construction at the site, including, but not limited to, *stormwater discharges* from asphalt plants and concrete plants located on the *construction site*; and

xi. Identification of any elements of the design that are not in conformance with the design criteria in the BB technical standard. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. SMP component – The *owner or operator* of *construction activity* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs.

   a. SMPs must be designed in conformance with the applicable *sizing criteria* in Part II.C.2.a., c., or d.; and

   b. SMPs must be designed in conformance with the *performance criteria*:

      i. in the DM; or

      ii. *equivalent* to the DM if deviating from Part III.B.2.b.i.; or

      iii. in the New York State Stormwater Management Design Manual, dated January 2015 (2015 Design Manual), or *equivalent* to it, if the following criteria are met:

1. The eNOI is submitted in accordance with Part I.D. before January 29, 2027 for *construction activities* that are either:

    a. subject to governmental review and approval:

        i. where the *owner or operator* made any application to that governmental entity prior to the effective date of this permit; and

        ii. such application included a *SWPPP* developed using the 2015 Design Manual or *equivalent* to it; or

    b. not subject to governmental review and approval:

        i. where a fiscal allocation for the *construction activities* has been developed and approved by a governmental entity; and

        ii. the *SWPPP* was developed using the 2015 Design Manual or *equivalent* to it; and

c. If SMPs are designed in conformance with Part III.B.2.b.ii., the *SWPPP* must include the reason(s) for the deviation or alternative design and a demonstration of *equivalence* to the DM; and

d. If SMPs are designed in conformance with Part III.B.2.b.iii., the *SWPPP* must include supporting information or documentation demonstrating that Part III.B.2.b.iii.1.a. or b. apply; and

e. The SMP component of the *SWPPP* must include the following:

    i. Identification of all SMPs to be constructed as part of the project, including which option the SMP designs conform to, either Part III.B.2.b.i., ii., or iii. Include the dimensions, material specifications and installation details for each SMP; and

    ii. A site map/construction drawing(s) showing the specific location and size of each SMP; and

iii. A Stormwater Modeling and Analysis Report that includes:

(i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points; and

(ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and SMPs; and

(iii) Results of *stormwater* modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre- and post-development runoff rates and volumes for the different storm events; and

(iv) Summary table, with supporting calculations, which demonstrates that each SMP has been designed in conformance with the *sizing criteria* included in the DM; and

(v) Identification of any *sizing criteria* that is not required based on the requirements included in Part II.C.; and

(vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the DM. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the DM.

iv. Soil testing results and locations (test pits, borings); and

v. Infiltration test results, when required in accordance with Part III.B.2.a.; and

vi. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each SMP. The plan must identify the entity

that will be responsible for the long-term operation and maintenance of each practice; and

3. Enhanced Phosphorus Removal Standards - The *owner or operator* of *construction activity* identified in Table 2 of Appendix B that is located in a watershed identified in Appendix C must prepare a *SWPPP* that includes SMPs designed in conformance with the applicable *sizing criteria* in Part II.C.2.b., c., or d. and the *performance criteria* Enhanced Phosphorus Removal Standards included in the DM. At a minimum, the SMP component of the *SWPPP* must meet the requirements of Part III.B.2.

C. Required *SWPPP* Components by Project Type

Owners or operators of *construction activities*, identified in Table 1 of Appendix B, are required to prepare a *SWPPP* that only includes erosion and sediment control practices designed in accordance with Part III.B.1. *Owners or operators* of the *construction activities*, identified in Table 2 of Appendix B, must prepare a *SWPPP* that also includes SMPs designed in accordance with Part III.B.2 or 3.

For the entire area of disturbance, including the entire *common plan of development or sale* if applicable, the owner or operator must evaluate every bullet from Appendix B Table 1 and Table 2 separately. If bullets from both Table 1 and Table 2 apply, the *SWPPP* must include erosion and sediment control practices for all *construction activities* but SMPs for only those portions of the *construction activities* that fall under Table 2 bullet(s).

Part IV. Inspection and Maintenance Requirements

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures), and all SMPs identified in the *SWPPP*, are inspected and maintained in accordance with Part IV.B. and C.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity*, identified in Tables 1 and 2 of Appendix B, must have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being

implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor must:

a. if the corrective action does not require engineering design:

    i. begin implementing corrective actions within one business day; and

    ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

    i. begin the engineering design process within five business days; and

    ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

2. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. The *trained contractor* must begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.

3. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational.

C. *Qualified Inspector* Inspection Requirements

1. With the exception of the following *construction activities* identified in Tables 1 and 2 of Appendix B, a *qualified inspector* must conduct site inspections for all other *construction activities* identified in Tables 1 and 2 of Appendix B:

    a. the construction of a single-family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than or equal to five (5) acres and is

not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

b. the construction of a single-family home that involves soil disturbances of one (1) or more acres but less than or equal to five (5) acres and is not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

c. construction on *agricultural property* that involves soil disturbances of one (1) or more acres but less than five (5) acres; and

d. *construction activities* located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances of 5,000 square feet or more, but less than one acre.

2. The *qualified inspector* must conduct site inspections in accordance with the following timetable:

   a. For *construction sites* where soil disturbance activities are on-going, the *qualified inspector* must conduct a site inspection at least once every seven (7) calendar days; or

   b. For *construction sites* where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part I.E.6. to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days; or

   c. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* must conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas under the jurisdiction of a *Traditional Land Use Control MS4 Operator,* the *Traditional Land Use Control MS4 Operator* (provided the *Traditional Land Use Control MS4 Operator* is not the *owner or operator* of the *construction activity*) by hard copy or email prior to reducing the inspections to this frequency and again by hard copy or email prior to re-commencing construction; or

d. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the requirement to have the *qualified inspector* conduct inspections ceases if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1., the *Traditional Land Use Control MS4 Operator(s)* (provided the *Traditional Land Use Control MS4 Operator(s)* are not the *owners or operators* of the *construction activity*) in writing prior to the shutdown and again in writing prior to resuming *construction activity*. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* must terminate coverage by meeting the requirements of Part V; or

e. For *construction sites* involving soil disturbance of one (1) or more acres that *directly discharge* to one of the 303(d) segments listed in Appendix D or is located in one of the watersheds listed in Appendix C, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* must inspect:

   a. all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness; and

   b. all SMPs under construction to ensure that they are constructed in conformance with the *SWPPP*; and

   c. all areas of disturbance that have not achieved *final stabilization*; and

   d. all points of *discharge* to *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site*; and

   e. all points of *discharge* from the *construction site*.

4. The *qualified inspector* must prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report must include and/or address all of the following, for all *construction activities* except those listed in Part IV.C.1.:

   a. Permit identification number; and

   b. Date and time of inspection; and

   c. Name and title of person(s) performing inspection; and

   d. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and

   e. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This must include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and

   f. A description of the condition of all *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This must include identification of any *discharges* of sediment to the *surface waters of the State*; and

   g. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and

   h. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and

   i. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and

   j. Estimates, in square feet or acres, of the following areas:

i. Total area with active soil disturbance (not requiring either *temporary stabilization* or *final stabilization*); and

ii. Total area with inactive soil disturbance (requiring either *temporary stabilization* or *final stabilization*); and

iii. Total area that has achieved *temporary stabilization*; and

iv. Total area that has achieved *final stabilization*; and

k. Current stage of construction of all SMPs and identification of all *construction activity* on site that is not in conformance with the *SWPPP* and technical standards; and

l. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the SMP(s); and

m. Identification and status of all corrective actions that were required by previous inspection; and

n. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* must notify the *owner or operator*, and appropriate contractor or subcontractor identified in Part III.A.7., of any corrective actions that need to be taken. The contractor or subcontractor must:

a. if the corrective action does not require engineering design:

i. begin implementing corrective actions within one business day; and

ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

i. begin the engineering design process within five business days; and

ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

6. All inspection reports must be signed by the *qualified inspector.* In accordance with Part I.E.3., the inspection reports must be maintained on site with the *SWPPP*.

Part V. How to Terminate CGP Coverage

A. Electronic Notice of Termination (eNOT) Submittal

The eNOT contains questions to ensure requirements in Part V.A. have been met.

1. An *owner or operator* must terminate coverage when one or more of the following requirements have been met:

a. Total project completion:

i. all *construction activity* identified in the *SWPPP* has been completed; and

ii. all areas of disturbance have achieved *final stabilization*; and

iii. all temporary, structural erosion and sediment control measures have been removed; and

iv. all SMPs have been constructed in conformance with the *SWPPP* and are operational; and

v. an as-built drawing has been prepared; or

b. Planned shutdown with partial project completion:

   i. all soil disturbance activities have ceased; and

   ii. all areas disturbed as of the project shutdown date have achieved *final stabilization*; and

   iii. all temporary, structural erosion and sediment control measures have been removed; and

   iv. all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational; and

   v. an as-built drawing has been prepared; or

c. In accordance with Part I.G. Change of Owner or Operator; or

d. The *owner or operator* has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.

2. For *construction activities* that require *qualified inspector* inspections in accordance with Part IV.C.1. and have met Part V.A.1.a. or b., the *owner or operator* must have the *qualified inspector* perform a final site inspection prior to submitting the eNOT. The *qualified inspector* must, by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice(s)" certification statements on the eNOT, certify that all the requirements in Part V.A.1.a. or b. have been achieved.

3. For *construction activities* that are subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1. and meet Part V.A.1.a. or b., the *owner or operator* must have the *Traditional Land Use Control MS4 Operator(s)* sign the "MS4 Acceptance" statement on the eNOT in accordance with the requirements in Part VII.J. A *Traditional Land Use Control MS4 Operator* official, by signing this statement, determined that it is acceptable for the *owner or operator* to submit the eNOT in accordance with the requirements of this Part. A *Traditional Land Use Control MS4 Operator* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) when required in Part V.A.2.

4. For *construction activities* that require SMPs and meet Part V.A.1.a. or b., the *owner or operator* must, prior to submitting the eNOT, ensure one of the following:

    a. for SMP(s) that were constructed by a private entity, but will be owned, operated, and maintained by a public entity, the SMP(s) and any right-of-way(s) needed to operate and maintain such practice(s) have been deeded to the municipality in which the practice(s) is located; or

    b. for SMP(s) that are privately owned, but will be operated and maintained by a public entity, an executed operation and maintenance agreement is in place with the municipality that will operate and maintain the SMP(s); or

    c. for SMP(s) that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record; or

    d. for SMP(s) that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility, the *owner or operator* has policies and procedures in place that ensure operation and maintenance of the practices in accordance with the operation and maintenance plan.

5. An *owner or operator* that has met the requirements of Part V.A.1., 2., 3., and 4. must request termination of coverage under this permit by submitting a complete Notice of Termination form electronically using a NYSDEC approved form.[5]

    a. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

[5] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

Part VI. Record Retention and Reporting

A. Record Retention

The *owner or operator* must retain a copy of the documents listed in Part I.E.3. and a copy of the LOT for a period of at least five years from the date that NYSDEC accepts a complete NOT submitted in accordance with Part V.

B. Reporting

Except for the eNOI, the signature forms associated with the eNOI, and the eNOT, all other written correspondence requested by NYSDEC, including individual permit applications, must be sent to the address of the appropriate DOW (SPDES) Program contact at the Regional Office listed in Appendix E.

Part VII. Standard Permit Requirements

For the purposes of this permit, examples of contractors and subcontractors include: third-party maintenance and construction contractors.

A. Duty to Comply

The *owner or operator*, and all contractors or subcontractors, must comply with all requirements of this permit. Any non-compliance with the requirements of this permit constitutes a violation of the New York State Environmental Conservation Law (ECL), and its implementing regulations, and is grounds for enforcement action. Filing of a request for termination of coverage under this permit, or a notification of planned changes or anticipated non-compliance, does not limit, diminish or stay compliance with any requirements of this permit.

B. Need to Halt or Reduce Activity Not a Defense

The necessity to halt or reduce the *construction activity* regulated by this permit, in order to maintain compliance with the requirements of this permit, must not be a defense in an enforcement action.

C. Penalties

There are substantial criminal, civil, and administrative penalties associated with violating the requirements of this permit. Fines of up to $37,500 per day for each

violation and imprisonment for up to 15 years may be assessed depending upon the nature and degree of the offense.

D. False Statements

Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance must, upon conviction, be punished in accordance with ECL §71-1933 and or New York State Penal Law Articles 175 and 210.

E. Re-Opener Clause

Upon issuance of this permit, a determination has been made on the basis of a submitted Notice of Intent, plans, or other available information, that compliance with the specified permit requirements will reasonably protect classified water use and assure compliance with applicable *water quality standards*. Satisfaction of the requirements of this permit notwithstanding, if operation pursuant to this permit causes or contributes to a condition in contravention of State *water quality standards* or guidance values, or if NYSDEC determines that a modification is necessary to prevent impairment of the best use of the waters or to assure maintenance of *water quality standards* or compliance with other provisions of ECL Article 17 or the Clean Water Act (CWA), or any regulations adopted pursuant thereto, NYSDEC may require such modification and the Commissioner may require abatement action to be taken by the *owner or operator* and may also prohibit such operation until the modification has been implemented.

F. Duty to Mitigate

The *owner or operator*, and its contractors and subcontractors, must take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

G. Requiring Another General Permit or Individual SPDES Permit

NYSDEC may require any *owner or operator* authorized to *discharge* in accordance with this permit to apply for and obtain an individual SPDES permit or apply for authorization to *discharge* in accordance with another general SPDES permit.

1. Cases where an individual SPDES permit or authorization to discharge in accordance with another general SPDES permit may be required include, but is not limited to the following:

a. the *owner or operator* is not in compliance with the conditions of this permit or does not meet the requirements for coverage under this permit; and

b. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of *pollutants* applicable to the *point source*; and

c. new effluent limitation guidelines or new source performance standards are promulgated that are applicable to *point sources* authorized to *discharge* in accordance with this permit; and

d. existing effluent limitation guidelines or new source performance standards that are applicable to *point sources* authorized to *discharge* in accordance with this permit are modified; and

e. a water quality management plan containing requirements applicable to such *point sources* is approved by NYSDEC; and

f. circumstances have changed since the time of the request to be covered so that the *owner or operator* is no longer appropriately controlled under this permit, or either a temporary or permanent reduction or elimination of the authorized *discharge* is necessary; and

g. the *discharge* is in violation of section 17-0501 of the ECL; and

h. the *discharge(s)* is a significant contributor of *pollutants*. In making this determination, NYSDEC may consider the following factors:

   i. the location of the *discharge(s)* with respect to *surface waters of the State*; and

   ii. the size of the *discharge(s)*; and

   iii. the quantity and nature of the *pollutants discharged* to *surface waters of the State*; and

   iv. other relevant factors including compliance with other provisions of ECL Article 17, or the CWA.

2. When NYSDEC requires any *owner or operator* authorized by this permit to apply for an individual SPDES permit as provided for in this subdivision, it must notify the *owner or operator* in writing that a permit application is required. This notice must include a brief statement of the reasons for this decision, an application

form, a statement setting a time for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from the *owner's or operator's* receipt of the notification letter, whereby the authorization to *discharge* under this permit must be terminated. NYSDEC may grant additional time upon demonstration, to the satisfaction of the RWE,[6] that additional time to apply for an alternative authorization is necessary or where NYSDEC has not provided a permit determination in accordance with 6 NYCRR Part 621.

3. When an individual SPDES permit is issued to an *owner or operator* authorized to *discharge* under this permit for the same *discharge(s)*, this permit authorization for *construction activities* authorized under the individual SPDES permit is automatically terminated on the effective date of the individual SPDES permit unless termination is earlier in accordance with 6 NYCRR Part 750.

H. Duty to Provide Information

The *owner or operator* must furnish to NYSDEC, within five business days, unless otherwise set forth by NYSDEC, any information that NYSDEC may request to determine whether cause exists to determine compliance with this permit or to determine whether cause exists for requiring an individual SPDES permit in accordance with 6 NYCRR 750-1.21(e) (see Part VII.G. Requiring Another General Permit or Individual Permit).

The *owner or operator* must make available to NYSDEC, for inspection and copying, or furnish to NYSDEC within 25 business days of receipt of a NYSDEC request for such information, any information retained in accordance with this permit.

Except for Part I.D.4. and 5. and Part I.G., the following applies: where the *owner or operator* becomes aware that it failed to submit any relevant facts on the Notice of Intent, or submitted incorrect information in a Notice of Intent or in any report to NYSDEC, the *owner or operator* must submit such facts or corrected information to NYSDEC within five business days.

I. Extension

In the event a new permit is not issued and effective prior to the expiration of this permit, and this permit is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, then the *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the requirements of this permit until a new permit is issued and effective.

[6] The Regional Water Manager where a DEC Region does not have a RWE.

J. Signatories and Certification

The Notice of Intent, Notice of Termination, and reports required by this permit must be signed as provided in 40 CFR §122.22.

1. All Notices of Intent and Notices of Termination must be signed as follows:

    a. For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

        (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

        (ii) the manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for Notice of Intent or Notice of Termination requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

        Note: NYSDEC does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR §122.22(a)(1)(i). NYSDEC will presume that these responsible corporate officers have the requisite authority to sign the Notice of Intent or Notice of Termination unless the corporation has notified NYSDEC to the contrary. Corporate procedures governing authority to sign a Notice of Intent or Notice of Termination may provide for assignment or delegation to applicable corporate positions under 40 CFR §122.22(a)(1)(ii) rather than to specific individuals.

    b. For a partnership or sole proprietorship. By a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

   1. the chief executive officer of the agency; or

   2. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. All reports required by this permit, and other information requested by NYSDEC, must be signed by a person described in Part VII.J.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Part VII.J.1. or using the Duly Authorized Form, found on the DEC website; and

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

   c. The written authorization is submitted to NYSDEC.

3. Changes to authorization. If an authorization under Part VII.J.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the *construction activity*, a new authorization satisfying the requirements of Part VII.J.2. must be submitted to NYSDEC prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under Part VII.J.1. or 2. must make the following certification:

   I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who

manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

5. Electronic reporting. If documents described in Part VII.J.1. or 2. are submitted electronically by or on behalf of the *construction activity* with coverage under this permit, any person providing the electronic signature for such documents must meet all relevant requirements of this section, and must ensure that all of the relevant requirements of 40 CFR Part 3 (including, in all cases, subpart D to Part 3) (Cross-Media Electronic Reporting) and 40 CFR Part 127 (NPDES Electronic Reporting Requirements) are met for that submission.

K. Inspection and Entry

The *owner or operator* must allow NYSDEC, the USEPA Regional Administrator, the applicable county health department, or any authorized representatives of those entities, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the *discharge*, upon the presentation of credentials and other documents as may be required by law, to:

1. enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the requirements of this permit; and

2. have access to and copy at reasonable times, any records that must be kept under the requirements of this permit, including records required to be maintained for purposes of operation and maintenance; and

3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. sample or monitor at reasonable times, for the purposes of assuring general SPDES permit compliance or as otherwise authorized by the CWA or ECL, any substances or parameters at any location; and

5. enter upon the property of any contributor to the regulated facility or activity under authority of the *owner or operator*.

L. Confidentiality of Information

The following must not be held confidential: this permit, the fact sheet for this permit, the name and address of any *owner or operator*, effluent data, the Notice of Intent, and information regarding the need to obtain an individual permit or an alternative general SPDES permit. This includes information submitted on forms themselves and any attachments used to supply information required by the forms (except information submitted on usage of substances). Upon the request of the *owner or operator*, NYSDEC must make determinations of confidentiality in accordance with 6 NYCRR Part 616, except as set forth in the previous sentence. Any information accorded confidential status must be disclosed to the Regional Administrator upon his or her written request. Prior to disclosing such information to the Regional Administrator, NYSDEC will notify the Regional Administrator of the confidential status of such information.

M. Other Permits May Be Required

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

N. NYSDEC Orders or Civil Decrees/Judgments

The issuance of this permit by the NYSDEC, and the coverage under this permit by the *owner or operator*, does not supersede, revoke, or rescind any existing order on consent or civil Decree/Judgment, or modification to any such documents or to any order issued by the Commissioner, or any of the terms, conditions, or requirements contained in such order or modification therefore, unless expressly noted.

O. Property Rights

Coverage under this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations, nor does it obviate the necessity of obtaining the assent of any other jurisdiction as required by law for the *discharge* authorized.

P. Compliance with Interstate Standards

If the *construction activity* covered by this permit originates within the jurisdiction of an interstate water pollution control agency, then the *construction activity* must also comply with any applicable effluent standards or *water quality standards* promulgated by that interstate agency and as set forth in this permit for such *construction activities*.

Q. Oil and Hazardous Substance Liability

Coverage under this permit does not affect the imposition of responsibilities upon, or the institution of any legal action against, the *owner or operator* under section 311 of the CWA, which must be in conformance with regulations promulgated pursuant to section 311 governing the applicability of section 311 of the CWA to *discharges* from facilities with *NPDES* permits, nor must such issuance preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties to which the *owner or operator* is or may be subject pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. section 9601 et seq. (CERCLA).

R. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, must not be affected thereby.

S. NYSDEC Approved Forms

The *owner or operator* must provide all relevant information that is requested by NYSDEC, and required by this permit, on all NYSDEC approved forms.

APPENDIX A – Abbreviations and Definitions

Abbreviations

APO – Agency Preservation Officer
BB – New York State Standards and Specifications for Erosion and Sediment Control (Blue Book), dated November 2016
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
CPv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DM – New York State Stormwater Management Design Manual (Design Manual), dated July 31, 2024
DOW – Division of Water
EAF – Environmental Assessment Form
ECL – chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law
EPA – U.S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NYC – The City of New York
NYCDEP – The City of New York Department of Environmental Protection
NYSDEC – The New York State Department of Environmental Conservation
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RR – Runoff Reduction
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SMP – Post-Construction Stormwater Management Practice
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit. If a word is not italicized in the permit, use its common definition.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023).

Alter Hydrology from Pre- to Post-Development Conditions – the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer System – a sewer system which conveys sewage and *stormwater* through a single pipe system to a publicly owned treatment works.

Commence (Commencement of) Construction Activities – the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the *SWPPP*. See definition for "*Construction Activity(ies)*" also.

Common Plan of Development or Sale – a contiguous area where multiple separate and distinct *construction activities* are occurring, or may occur, under one plan. The "common plan" of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQR) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating *construction activities* may occur on a specific plot. A *common plan of development or sale* is comprised of two or more *phases*.

Common plan of development or sale does not include separate and distinct *construction activities* that are occurring, or may occur, under one plan that are at least 1/4 mile apart provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Construction Activity(ies) – identified within 40 CFR 122.26(b)(14)(x), 122.26(b)(15)(i), and 122.26(b)(15)(ii), any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, mechanized logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal.

Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, which is excluded from the calculation of the soil disturbance for a project. Routine maintenance includes, but is not limited to:

- Re-grading of gravel roads or parking lots; and
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of the ditch; and
- Replacement of existing culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of a ditch; and
- Replacement of existing bridges that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity beneath the bridges; and
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch); and
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*; and
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material; and
- Long-term use of equipment storage areas at or near highway maintenance facilities; and
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*; and
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts; and
- Maintenance of ski trails including brush hog use and mowing; and
- Above ground snowmaking pipe replacement; and
- Replacement of existing utility poles; etc.

Construction Site – the land area where *construction activity(ies)* will occur. See also the definitions for "*Commence (Commencement of) Construction Activities"* and "*Common Plan of Development or Sale."*

Dewatering – the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Directly Discharge(s)(ing) (to a specific surface waterbody) – runoff flows from a *construction site* by overland flow and the first point of *discharge* is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system and the first point of *discharge* from the separate storm sewer system is the specific surface waterbody.

Discharge(s)(d) – any addition of any *pollutant* to waters of the State through an outlet or *point source*.

Embankment – an earthen or rock slope that supports a road/highway.

Equivalent (Equivalence) – the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization – all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other *equivalent* stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

Historic Property – any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) – all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and compacted gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – not technologically possible, or not economically practicable and achievable considering best industry practices.

Minimize(ing)(ation) – reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. owned or operated by a State, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, *stormwater*, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA, that *discharges* to *surface waters of the State*; and

2. designed or used for collecting or conveying *stormwater*; and

3. which is not a *combined sewer system*; and

4. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Natural Buffer(s) – an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – any land disturbance that does not meet the definition of *Redevelopment Activity* included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

Nonpoint Source(s) – any source of water pollution or *pollutants* which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank – flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator – the person, persons, or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit requirements.

Performance Criteria – the six performance criteria for each group of SMPs in Chapters 5 and 6 of the technical standard, New York State Stormwater Management Design Manual (DM), dated July 31, 2024. These include feasibility, conveyance, pretreatment, treatment, landscaping, and maintenance. It does not include the *Sizing Criteria* (i.e. WQv, RRv, CPv, Qp and Qf) in Part I.C.2. of the permit.

Phase – a defined area in which *construction activities* are occurring or will occur separate from other defined area(s).

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be *discharged*.

Pollutant(s) – dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast *discharged* into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq.

Qualified Inspector – a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder or other NYSDEC endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any SMPs that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional – a person that is knowledgeable in the principles and practices of *stormwater* management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other NYSDEC endorsed individual(s). Individuals preparing *SWPPPs* that require the SMP component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the *SWPPP* that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – the disturbance and reconstruction of existing *impervious area*, including *impervious areas* that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Renewable Energy – electricity or thermal energy generated by renewable energy systems through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.

Site Limitations – site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical *site limitations* include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of *site limitations* shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – the criteria included in Part I.C.2 of the permit that are used to size SMPs. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

Steep Slope – land area designated on the current United States Department of Agriculture (USDA) Soil Survey as Soil Slope Phase D, (provided the map unit name or description is inclusive of slopes greater than 25%), or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Stormwater – that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the State.

Streambank – the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – a project specific report, including construction drawings, that among other things: describes the *construction activity(ies)*, identifies the potential sources of pollution at the *construction site*; describes and shows the *stormwater* controls that will be used to control the *pollutants* (i.e. erosion and sediment controls; for many projects, includes SMPs); and identifies procedures the *owner or operator* will implement to comply with the requirements of the permit. See Part III of the permit for a complete description of the information that must be included in the *SWPPP*.

Surface Waters of the State – shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization – exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Load (TMDL) – the sum of the allowable loads of a single *pollutant* from all contributing point and *nonpoint source*s. It is a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet *water quality standards*, and an allocation of that amount to the *pollutant's* sources. A TMDL stipulates Waste Load Allocations (WLA) for *point source discharges*, Load Allocations (LA) for *nonpoint source*s, and a margin of safety (MOS).

Traditional Land Use Control MS4 Operator – a city, town, or village with land use control authority that is authorized to *discharge* under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Trained Contractor – an employee from the contracting (construction) company, identified in Part III.A.7., that has received four (4) hours of NYSDEC endorsed training

in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.7., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity).

The *trained contractor* is responsible for the day-to-day implementation of the *SWPPP*.

Tree Clearing – *construction activities* limited to felling and removal of trees.

Tree clearing does not include hand felling and leaving the trees in place with no support from mechanized equipment, which is not considered *construction activity* requiring coverage under this permit.

Water Quality Standard – such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities* that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single-family home not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions with 25% or less *impervious cover* at total site build-out and not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that include construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.

The following *construction activities* that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

- All construction activities located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

Within the municipal boundaries of NYC:

- Stand-alone road reconstruction, where the total soil disturbance from only that road construction, is less than one (1) acre of land.

The following *construction activities*:

- Installation of underground linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation, *stormwater* retrofits, stream restoration, and resiliency projects that reconstruct shoreline areas to address sea level rise
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an *impervious cover*
- Cross-country ski trails, walking/hiking trails, and mountain biking trails, including a de minimis parking lot (maximum 10 spaces total, sized for passenger cars) with 35 feet minimum preservation of undisturbed area downgradient from the parking lot
- Dam rehabilitation (the structure of the dam itself)
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are not part of residential, commercial, or institutional development;
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path, or walking path.

Table 1 (Continued)
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities*:

- Slope stabilization
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Vegetated open space (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) that do not *alter hydrology from pre- to post-development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions
- Demolition where vegetation will be established, and no *redevelopment activity* is planned[1]
- Installation or replacement of either an overhead electric transmission line or a ski lift tower that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*.
- Solar array field areas that have tables elevated off the ground, spaced one table width apart, do not *alter hydrology from pre- to post-development conditions*, and address water quality volume and runoff reduction volume by maintaining sheet flow on slopes less than 8%.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that do not include construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions.
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary *impervious areas* that will be restored to pre-construction conditions once the *construction activity* is complete (in this context, "temporary" means the *impervious area* will be in place for two years or less)
- Other *construction activities* that do not include the construction or reconstruction of *impervious area*, and do not *alter hydrology from pre- to post-development* conditions, and are not listed in Table 2.

1. If the site is redeveloped in the future, a new eNOI must be submitted.

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Single-family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family home that disturbs five (5) or more acres of land
- Single-family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of between 20,000 square feet and one (1) acre of land within the municipal boundaries of NYC with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single-family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a *common plan of development or sale* that will ultimately disturb five (5) or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Creation of 5,000 square feet or more of *impervious area* in the municipal boundaries of NYC
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) that involves soil disturbance greater than five acres.
- Structural agricultural conservation practices as identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023) that involves soil disturbance greater than five acres and include the construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
- Facility buildings, including ski lodges, restroom buildings, pumphouses, ski lift terminals, and maintenance and groomer garages
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills; including creation of landfills or capping landfills.
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTWs, water treatment plants, and water storage tanks
- Golf courses
- Office complexes

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Permanent laydown yards and equipment storage lots
- Playgrounds that include the construction or reconstruction of *impervious area*
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surfaces
- Road construction or reconstruction, outside the municipal boundaries of NYC
- Road construction within the municipal boundaries of NYC
- Stand-alone road reconstruction, within the municipal boundaries of NYC where the total soil disturbance from that road reconstruction involves soil disturbance of one (1) acre or more of land
- Parking lot construction or reconstruction (as with all Table 2 bullets, this includes parking lots constructed as part of the *construction activities* listed in Table 1, unless a Table 1 bullet specifies otherwise)
- Athletic fields (natural grass) that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations, and well drilling pads, surfaced with *impervious cover,* and constructed as part of an overhead electric transmission line, wind-power, cell tower, oil or gas well drilling, sewer or water main, ski lift, or other linear utility project
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of a residential, commercial or institutional development
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of highway construction or reconstruction
- Solar array field areas on slopes greater than 8% that cannot maintain sheet flow using management practices identified in the BB or the DM
- Solar array field areas on slopes less than 8% that will *alter the hydrology from pre- to post-development* conditions
- Solar array field areas with tables that are not elevated high enough to achieve *final stabilization* beneath the tables
- Traditional *impervious areas* associated with solar development (e.g. roads, buildings, transformers)
- Utility pads surfaced with *impervious cover*, including electric vehicle charging stations
- All other *construction activities* that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre- to post-development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of *construction activities* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs designed in conformance with the Enhanced Phosphorus Removal Standards included in the DM technical standard.

- Entire New York City Watershed located east of the Hudson River – Figure 1
- Onondaga Lake Watershed – Figure 2
- Greenwood Lake Watershed – Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

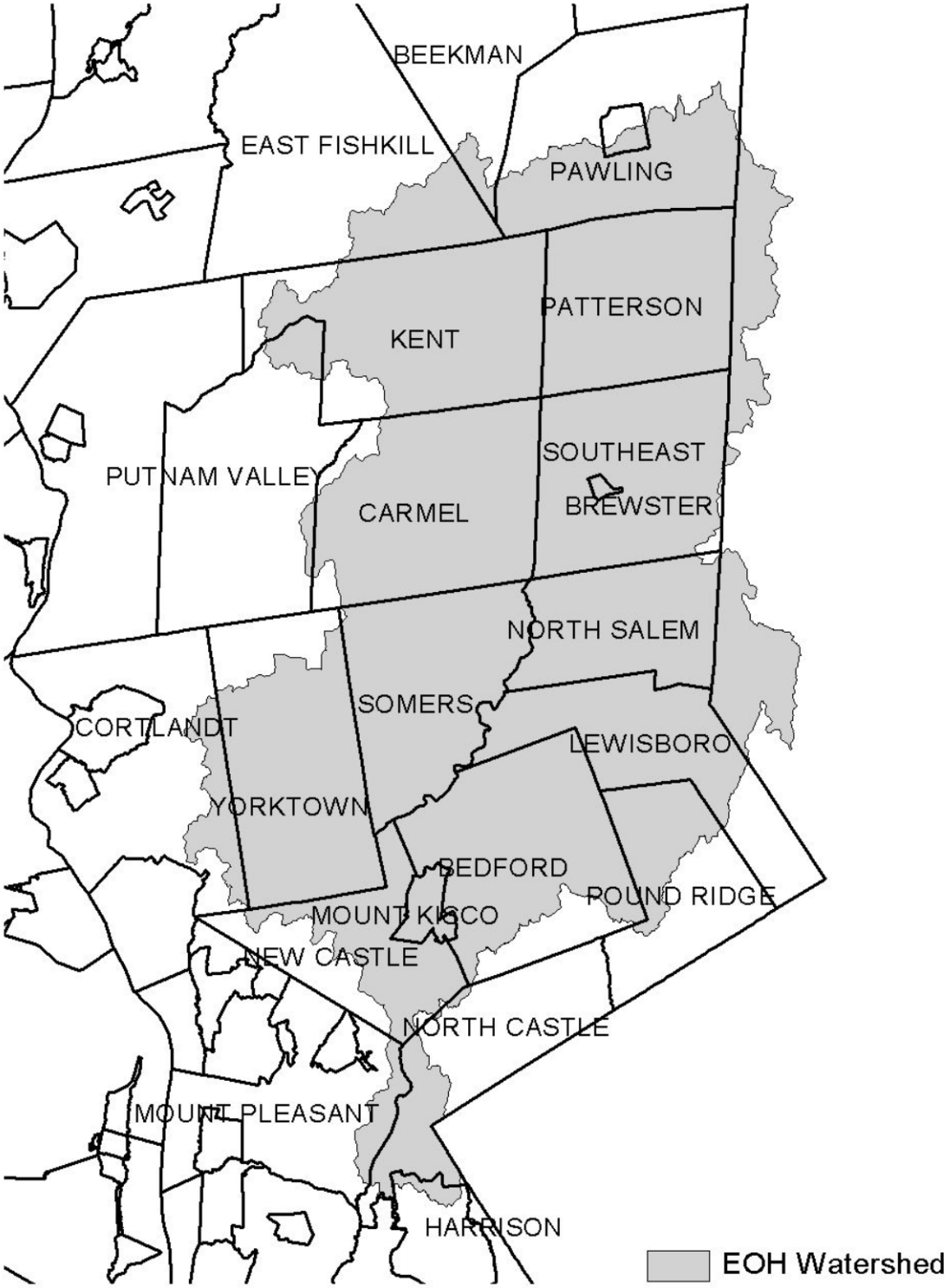


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

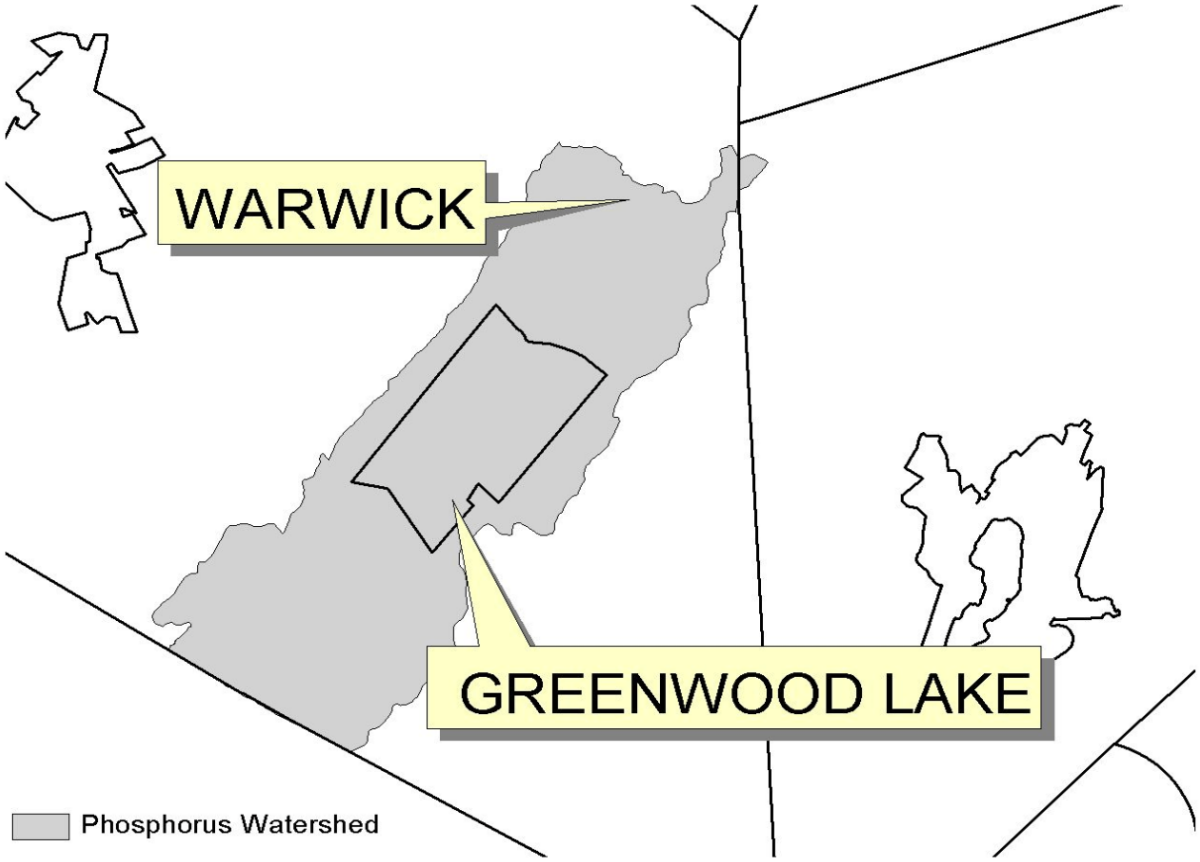


Figure 4 - Oscawana Lake Watershed

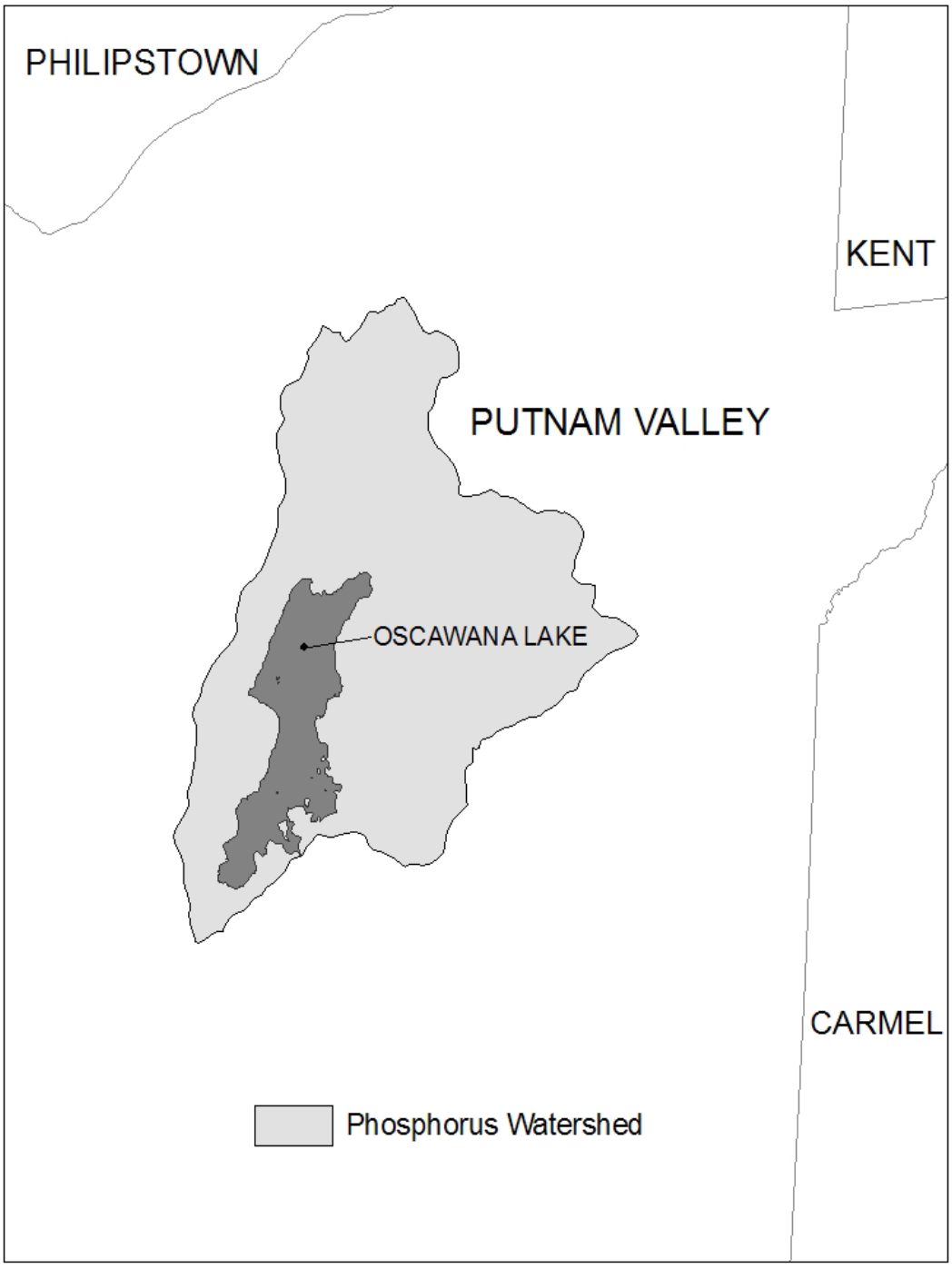
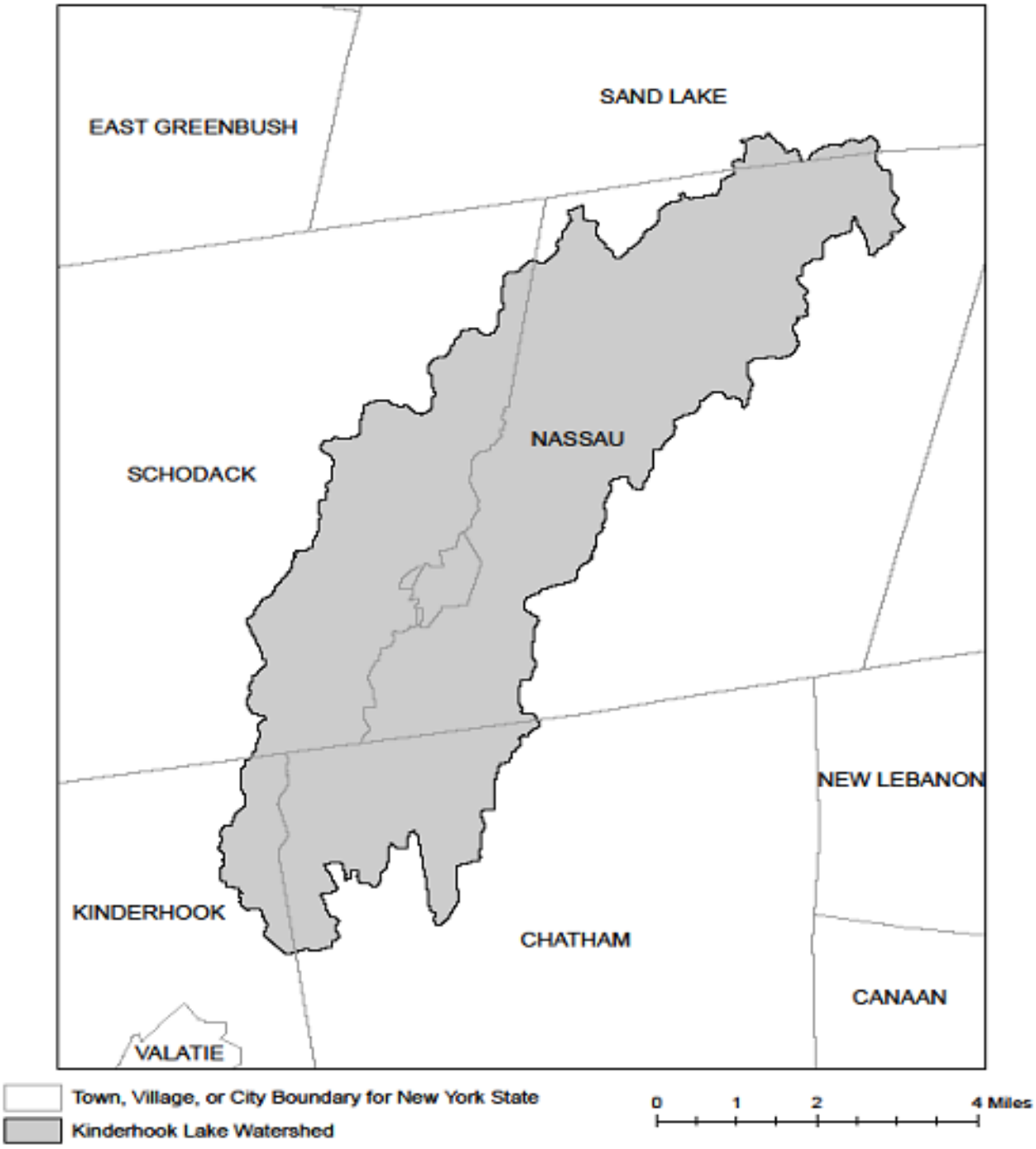


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants)

List of waterbodies impaired by *pollutants* related to *construction activity*, including turbidity, silt/sediment, and nutrients (e.g. nitrogen, phosphorus). This list is a subset of "The Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL" dated June 2020.

County	Waterbody	Pollutant
Albany	Ann Lee (Shakers) Pond, Stump Pond (1201-0096)	Phosphorus
Albany	Lawsons Lake (1301-0235)	Phosphorus
Allegany	Amity Lake, Saunders Pond (0403-0054)	Phosphorus
Allegany	Andover Pond (0403-0056)	Phosphorus
Bronx	Reservoir No.1/Lake Isle (1702-0075)	Phosphorus
Bronx	Van Cortlandt Lake (1702-0008)	Phosphorus
Broome	Blueberry, Laurel Lakes (1404-0033)	Phosphorus
Broome	Fly Pond, Deer Lake (1404-0038)	Phosphorus
Broome	Minor Tribs to Lower Susquehanna (0603-0044)	Phosphorus
Broome	Whitney Point Lake/Reservoir (0602-0004)	Phosphorus
Cattaraugus	Allegheny River/Reservoir (0201-0023)	Phosphorus
Cattaraugus	Beaver Lake/Alma Pond (0201-0073)	Phosphorus
Cattaraugus	Case Lake (0201-0020)	Phosphorus
Cattaraugus	Linlyco/Club Pond (0201-0035)	Phosphorus
Cayuga	Duck Lake (0704-0025)	Phosphorus
Cayuga	Owasco Inlet, Upper, and tribs (0706-0014)	Nutrients
Chautauqua	Chadakoin River and tribs (0202-0018)	Phosphorus
Chautauqua	Hulburt/Clymer Pond (0202-0079)	Phosphorus
Chautauqua	Middle Cassadaga Lake (0202-0002)	Phosphorus
Clinton	Great Chazy River, Lower, Main Stem (1002-0001)	Silt/Sediment
Columbia	Robinson Pond (1308-0003)	Phosphorus
Cortland	Dean Pond (0602-0077)	Phosphorus
Dutchess	Fallkill Creek (1301-0087)	Phosphorus
Dutchess	Hillside Lake (1304-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Silt/Sediment
Erie	Beeman Creek and tribs (0102-0030)	Phosphorus
Erie	Delaware Park Pond (0101-0026)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Silt/Sediment
Erie	Green Lake (0101-0038)	Phosphorus
Erie	Little Sister Creek, Lower, and tribs (0104-0045)	Phosphorus
Erie	Murder Creek, Lower, and tribs (0102-0031)	Phosphorus

Erie	Rush Creek and tribs (0104-0018)	Phosphorus
Erie	Scajaquada Creek, Lower, and tribs (0101-0023)	Phosphorus
Erie	Scajaquada Creek, Middle, and tribs (0101-0033)	Phosphorus
Erie	Scajaquada Creek, Upper, and tribs (0101-0034)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Silt/Sediment
Genesee	Bigelow Creek and tribs (0402-0016)	Phosphorus
Genesee	Black Creek, Middle, and minor tribs (0402 0028)	Phosphorus
Genesee	Black Creek, Upper, and minor tribs (0402-0048)	Phosphorus
Genesee	Bowen Brook and tribs (0102-0036)	Phosphorus
Genesee	LeRoy Reservoir (0402-0003)	Phosphorus
Genesee	Mill Pond (0402-0050)	Phosphorus
Genesee	Oak Orchard Cr, Upper, and tribs (0301-0014)	Phosphorus
Genesee	Oatka Creek, Middle, and minor tribs (0402-0031)	Phosphorus
Genessee	Tonawanda Cr, Middle, Main Stem (0102-0002)	Phosphorus
Greene	Schoharie Reservoir (1202-0012)	Silt/Sediment
Greene	Sleepy Hollow Lake (1301-0059)	Silt/Sediment
Herkimer	Steele Creek tribs (1201-0197)	Phosphorus
Herkimer	Steele Creek tribs (1201-0197)	Silt/Sediment
Kings	Hendrix Creek (1701-0006) 18	Nitrogen
Kings	Prospect Park Lake (1701-0196)	Phosphorus
Lewis	Mill Creek/South Branch, and tribs (0801-0200)	Nutrients
Livingston	Christie Creek and tribs (0402-0060)	Phosphorus
Livingston	Conesus Lake (0402-0004)	Phosphorus
Livingston	Mill Creek and minor tribs (0404-0011)	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs (0402-0033)	Phosphorus
Monroe	Buck Pond (0301-0017)	Phosphorus
Monroe	Cranberry Pond (0301-0016)	Phosphorus
Monroe	Durand, Eastman Lakes (0302-0037)	Phosphorus
Monroe	Lake Ontario Shoreline, Western (0301-0069) 9	Phosphorus
Monroe	Long Pond (0301-0015)	Phosphorus
Monroe	Mill Creek and tribs (0302-0025)	Phosphorus 2
Monroe	Mill Creek/Blue Pond Outlet and tribs (0402-0049)	Phosphorus
Monroe	Minor Tribs to Irondequoit Bay (0302-0038)	Phosphorus
Monroe	Rochester Embayment - East (0302-0002) [9]	Phosphorus
Monroe	Rochester Embayment - West (0301-0068) 9	Phosphorus
Monroe	Shipbuilders Creek and tribs (0302-0026)	Phosphorus 2
Monroe	Thomas Creek/White Brook and tribs (0302-0023)	Phosphorus

Nassau	Bannister Creek/Bay (1701-0380)	Nitrogen
Nassau	Beaver Lake (1702-0152)	Phosphorus
Nassau	Browswere Bay (1701-0383)	Nitrogen
Nassau	Camaans Pond (1701-0052)	Phosphorus
Nassau	East Meadow Brook, Upper, and tribs (1701-0211)	Silt/Sediment
Nassau	East Rockaway Channel (1701-0381)	Nitrogen
Nassau	Glen Cove Creek, Lower, and tribs (1702-0146)	Silt/Sediment
Nassau	Grant Park Pond (1701-0054)	Phosphorus
Nassau	Hempstead Bay, Broad Channel (1701-0032)	Nitrogen
Nassau	Hempstead Lake (1701-0015)	Phosphorus
Nassau	Hewlett Bay (1701-0382)	Nitrogen
Nassau	Hog Island Channel (1701-0220)	Nitrogen
Nassau	Massapequa Creek, Upper, and tribs (1701-0174)	Phosphorus
Nassau	Milburn/Parsonage Creeks, Upp, and tribs (1701-0212)	Phosphorus
Nassau	Reynolds Channel, East (1701-0215) [12]	Nitrogen
Nassau	Reynolds Channel, West (1701-0216) 12	Nitrogen
Nassau	Tidal Tribs to Hempstead Bay (1701-0218)	Nitrogen
Nassau	Tribs (fresh) to East Bay (1701-0204)	Silt/Sediment
Nassau	Tribs (fresh) to East Bay (1701-0204)	Phosphorus
Nassau	Tribs to Smith Pond/Halls Pond (1701-0221)	Phosphorus
Nassau	Woodmere Channel (1701-0219)	Nitrogen
New York	Harlem Meer (1702-0103)	Phosphorus
New York	The Lake in Central Park (1702-0105)	Phosphorus
Niagara	Bergholtz Creek and tribs (0101-0004)	Phosphorus
Niagara	Hyde Park Lake (0101-0030)	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0053) 9	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0072) 9	Phosphorus
Oneida	Ballou, Nail Creeks (1201-0203)	Phosphorus
Onondaga	Ley Creek and tribs (0702-0001) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nitrogen (NH3, NO2)
Onondaga	Onondaga Creek, Lower (0702-0023) 10	Nutrients (phosphorus)
Onondaga	Onondaga Creek, Lower, and tribs (0702-0023)	Turbidity
Onondaga	Onondaga Creek, Middle, and tribs (0702-0004)	Turbidity
Onondaga	Onondaga Creek, Upper, and tribs (0702-0024)	Turbidity
Ontario	Great Brook and minor tribs (0704-0034)	Phosphorus 2
Ontario	Great Brook and minor tribs (0704-0034)	Silt/Sediment

Ontario	Hemlock Lake Outlet and minor tribs (0402-0013)	Phosphorus
Ontario	Honeoye Lake (0402-0032)	Phosphorus
Orange	Brown Pond Reservoir (1303-0013)	Phosphorus
Orange	Lake Washington (1303-0012)	Phosphorus
Orange	Minor Tribs to Middle Wallkill (1306-0061)	Phosphorus
Orange	Monhagen Brook and tribs (1306-0074)	Phosphorus
Orange	Orange Lake (1301-0008) [16]	Phosphorus
Orange	Quaker Creek and tribs (1306-0025)	Phosphorus
Orange	Wallkill River, Middle, Main Stem (1306-0038)	Phosphorus
Orange	Wallkill River, Upper, and Minor tribs (1306-0017)	Phosphorus
Orleans	Glenvwood Lake (0301-0041)	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0070) 9	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0071) 9	Phosphorus
Oswego	Lake Neatahwanta (0701-0018)	Nutrients (phosphorus)
Oswego	Pleasant Lake (0703-0047)	Phosphorus
Putnam	Lost Lake, Putnam Lake (1302-0053)	Phosphorus
Putnam	Minor Tribs to Croton Falls Reservoir (1302-0001)	Phosphorus
Queens	Bergen Basin (1701-0009) 18	Nitrogen
Queens	Jamaica Bay, Eastern, and tribs, Queens (1701-0005) 18	Nitrogen
Queens	Kissena Lake (1702-0258)	Phosphorus
Queens	Meadow Lake (1702-0030)	Phosphorus
Queens	Shellbank Basin (1701-0001) 18	Nitrogen
Queens	Willow Lake (1702-0031)	Phosphorus
Rensselaer	Nassau Lake (1310-0001)	Phosphorus
Rensselaer	Snyders Lake (1301-0043)	Phosphorus
Richmond	Grassmere Lake/Bradys Pond (1701-0357)	Phosphorus
Rockland	Congers Lake, Swartout Lake (1501-0019)	Phosphorus
Rockland	Rockland Lake (1501-0021)	Phosphorus
Saratoga	Ballston Lake (1101-0036)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Silt/Sediment
Saratoga	Lake Lonely (1101-0034)	Phosphorus
Saratoga	Round Lake (1101-0060)	Phosphorus
Saratoga	Tribs to Lake Lonely (1101-0001)	Phosphorus
Schenectady	Collins Lake (1201-0077)	Phosphorus
Schenectady	Duane Lake (1311-0006)	Phosphorus
Schenectady Lake	Mariaville Lake (1201-0113)	Phosphorus
Schuyler	Cayuta Lake (0603-0005)	Phosphorus

Seneca	Reeder Creek and tribs (0705-0074)	Phosphorus
St.Lawrence	Black Lake Outlet, Black Lake (0906-0001)	Phosphorus
St.Lawrence	Fish Creek and minor tribs (0906-0026)	Phosphorus
Steuben	Smith Pond (0502-0012)	Phosphorus
Suffolk	Agawam Lake (1701-0117)	Phosphorus
Suffolk	Big/Little Fresh Ponds (1701-0125)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Silt/Sediment
Suffolk	Fresh Pond (1701-0241)	Phosphorus
Suffolk	Great South Bay, East (1701-0039)	Nitrogen
Suffolk	Great South Bay, Middle (1701-0040)	Nitrogen
Suffolk	Great South Bay, West (1701-0173)	Nitrogen
Suffolk	Lake Ronkonkoma (1701-0020)	Phosphorus
Suffolk	Mattituck/Marratooka Pond (1701-0129)	Phosphorus
Suffolk	Mill and Seven Ponds (1701-0113)	Phosphorus
Suffolk	Millers Pond (1702-0013)	Phosphorus
Suffolk	Moriches Bay, East (1701-0305)	Nitrogen
Suffolk	Moriches Bay, West (1701-0038)	Nitrogen
Suffolk	Quantuck Bay (1701-0042)	Nitrogen
Suffolk	Shinnecock Bay and Inlet (1701-0033)	Nitrogen
Suffolk	Tidal Tribs to West Moriches Bay (1701-0312)	Nitrogen
Sullivan	Bodine, Mongomery Lakes (1401-0091)	Phosphorus
Sullivan	Davies Lake (1402-0047)	Phosphorus
Sullivan	Evens Lake (1402-0004)	Phosphorus
Sullivan	Pleasure Lake (1402-0055)	Phosphorus
Sullivan	Swan Lake (1401-0063)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Silt/Sediment
Ulster	Ashokan Reservoir (1307-0004)	Silt/Sediment
Ulster	Esopus Creek, Lower, Main Stem (1307-0010) [17]	Turbidity
Ulster	Esopus Creek, Middle, Main Stem (1307-0003) 17	Turbidity
Ulster	Esopus Creek, Upper, and minor tribs (1307-0007)[3]	Silt/Sediment
Ulster	Wallkill River, Lower, Main Stem (1306-0027)	Phosphorus
Warren	Hague Brook and tribs (1006-0006)	Silt/Sediment
Warren	Huddle/Finkle Brooks and tribs (1006-0003)	Silt/Sediment
Warren	Indian Brook and tribs (1006-0002)	Silt/Sediment
Warren	Lake George (1006-0016) and tribs	Silt/Sediment
Warren	Tribs to Lake George, East Shore (1006-0020)	Silt/Sediment
Warren	Tribs to Lake George, Lk.George Village (1006-0008)	Silt/Sediment

Washington	Wood Cr/Champlain Canal and tribs (1005-0036)	Phosphorus
Westchester	Lake Katonah (1302-0136)	Phosphorus
Westchester	Lake Lincolndale (1302-0089)	Phosphorus
Westchester	Lake Meahagh (1301-0053)	Phosphorus
Westchester	Lake Mohegan (1301-0149)	Phosphorus
Westchester	Lake Shenorock (1302-0083)	Phosphorus
Westchester	Mamaroneck River, Lower (1702-0071)	Silt/Sediment
Westchester	Mamaroneck River, Upp, & minor tribs (1702-0123)	Silt/Sediment
Westchester	Saw Mill River (1301-0007)	Phosphorus
Westchester	Saw Mill River, Middle, and tribs (1301-0100)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Silt/Sedimnt
Westchester	Silver Lake (1702-0040)	Phosphorus
Westchester	Teatown Lake (1302-0150)	Phosphorus
Westchester	Truesdale Lake (1302-0054)	Phosphorus
Westchester	Wallace Pond (1301-0140)	Phosphorus

APPENDIX E – List of NYSDEC Regional Offices

Region	Covering the following counties:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) Permit Administrators	DIVISION OF WATER (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	220 White Plains Road, Suite 110 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7438	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7165	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7070

APPENDIX L: CONSTRUCTION SITE INSPECTION, WINTER SHUTDOWN AND SWPPP REVISION FORM

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION ACTIVITIES

Standardized Qualified Inspector Form

Project Name and Location of Project: _____ _____ _____ Municipality:_____ County: _____ Qualified Inspector: _____ Qualified Inspector Title:_____	Date:	Weather:
	Permit #: **NYR10**	
	Entry Time:	Exit Time:
5 Acre Waiver: □ Yes □ No Name of SPDES Permittee:_____ Phone: _____Fax:_____ Name of Representative on Site: _____		

Qualified Inspector's Credentials & Certification

Qualified Inspector (QI) means a person that is knowledgeable in the principles and practices of erosion and sediment control (ESC). A person is considered qualified under the following conditions:

1. A licensed Professional Engineer; licensed Landscape Architect with documented training and education in the principles and practices of ESC;
2. An individual certified in ESC by CPESC, Incorporated or any other agency endorsed by the NYS Department of Environmental Conservation Office of Water Resources;
3. An individual working under the direct supervision of a qualified licensed Professional Engineer or qualified licensed Landscape Architect with documented training and education in the principles and practices of ESC **and has** completed the four (4) hour training program in the principles and practices of erosion and sediment control from either a Soil and Water Conservation District, CPESC or any other agency endorsed by the NYS Department of Environmental Conservation Office of Water Resources. This initial training must be completed no later than May 1, 2010. After receiving the initial training, an individual working under the direct supervision of a qualified licensed Professional Engineer or qualified licensed Landscape Architect must complete four (4) hours of training every three (3) years.
4. Any other individual endorsed by the NYS Department of Environmental Conservation by written documentation.
5. Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.1

Part I. CONSTRUCTION DURATION INSPECTIONS **Page 2 of _____**

a. Important Site Notes for Contractor. Failure to maintain these requirements may be subject to fines at discretion of NYS Dept. of Environmental Conservation.

#1: Is the most recent SWPPP book & SWPPP Mailbox on site?
- Or located inside job trailer & easily accessible?

#2: Is the most recent SWPPP inspection(s) located in the mailbox or on site?

#3: If the site has a 5 acre waiver, is the phasing plan located on site?
-Is the contractor following the approved phasing plan?

LIST OF DEFICIENCES NOTED BY INSPECTOR:
-
-
-
-
-
-
-

CONTRACTOR TO REFER TO ATTACHED SKETCH DRAWING FOR LOCATIONS, AS WELL AS FOLLOWING SHEETS.

b. Other Permit Required Reporting

Maintaining Water Quality - *Attach Color Photographs of the site documenting discharge points and site conditions.*
Describe the condition of runoff at all points of discharge.
Is there an increase in turbidity causing a substantial visible contrast to natural conditions? _____
Is there residue from oil and floating substances, visible oil film, or globules or grease? _____
Is there evidence of silt deposition from project in a stream, wetland, or other water body? _____
If yes, where? _____remedial measure needed? _____
Provide a description of the conditions of all natural water bodies within or immediately adjacent to the project. _____

Area of Disturbance
Total area of disturbance (as shown on sketch plan and not including areas that have temporary or permanent stabilization measures applied) _____
Are all disturbances within the limits of the SWPPP? _____

Weather Conditions
A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
_____
_____

General Housekeeping
Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?_____
Is construction impacting the adjacent property? _____
Is dust adequately controlled?_____
Describe corrective action(s): _____
Date correction needed: _____

c. Runoff Controls *Direct runoff away from exposed soil surfaces and control water that falls onto the site*

Runoff conveyance systems ☐ N A
Are all runoff conveyance systems called for in the SWPPP installed, stabilized and working? _____
If not, what specific areas need detailing?_____
With minimum side slopes 2H:1V or flatter? _____ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring? _____Sediment-laden runoff directed to sediment trapping structure? _____
Describe corrective action(s): _____
Date correction needed: _____

Runoff Control Structures ☐ N A
Have all required runoff control structures (rock outlets and aprons) been installed and constructed per plan and according to the Blue Book?_____ Installed concurrently with pipe installation? _____
Describe corrective action(s): _____
Date correction needed: _____

Temporary Stream or Channel Crossing ☐ N A
Have construction crossings at concentrated flow areas been culverted?_____
Describe corrective action(s): _____
Date correction needed: _____

Stone Check Dam ☐ N A
Installed per standards? _____ channel stable (flow is not eroding soil underneath or around the structure). _____does sediment need to be removed? _____
Describe corrective action(s): _____
Date correction needed: _____

Excavation Dewatering ☐ N A
1. Flowing water ☐ N A – Upstream berm (sandbags, inflatable dams, etc. with one-foot minimum freeboard) and downstream berms are installed per plan? _____and functioning? (clean water from upstream pool is being pumped to the downstream pool)?
_____
2. Sediment laden water from work area ☐ N A - Is being discharged to a silt-trapping device? _____
3. Groundwater from excavations ☐ N A - is being managed properly (sumps and sediment control)? _____
Describe corrective action(s): _____
Date correction needed: _____

d. Soil Stabilization *Basic erosion control is achieved by covering all bare ground areas.*

Topsoil and Spoil Stockpiles ☐ N A
Stabilized - sediment controls at downhill slope? _____
Describe corrective action(s): _____
Date correction needed: _____

Revegetation/Stabilization ☐ N A
Has temporary or permanent seeding *and* mulch (as shown on site sketch plan) been applied to areas that have been inactive for 14 days or less (or, inactive for 7 days if over 5 acres disturbed)?_____
Has soil preparation been applied as specified in the SWPPP and in accordance with the Blue Book (Assure that all the necessary soil testing/fertilizer/lime, topsoil, decompaction has been applied)?
_____
Have rolled erosion control products specified for steep slopes or channels been installed? _____
Describe corrective action(s): _____
Date correction needed: _____

e. Sediment Controls

Stabilized Construction Entrance ☐ N A
Stone is clean and all access areas covered (entrances, construction routes, materials storage areas, equipment parking)?_____ Tracking onto public streets is minimized and cleaned daily? _____
Describe:_____
Date correction needed: _____

Silt Fence □ N A

Installed on contour? not across conveyance channels?_____ At least 10 feet from toe of slope?_____At appropriate spacing intervals based on slope?_____Wrapped ends for continuous support?_____Fabric is tight, without rips or frayed areas?_____Posts are stable?_____ buried 6 inches minimum?_____Any "bulges"?_____
Describe:_____
_____
Date correction needed: _____

Temporary Sediment Trap □ N A

Is outlet structure constructed properly?_____geotextile fabric has been placed beneath rock fill?_____Maintenance – depth of sediment in basin? _____ 50% capacity?
_____
Describe:_____
_____
Date correction needed: _____

Temporary Sediment Basin □ N A

Is basin and outlet structure constructed per the approved plan? _____
Are basin side slopes stabilized with seed/mulch?
_____
Maintenance – depth of sediment in basin? _____ 50% capacity?
_____
Describe:_____
_____
Date correction needed: _____

Drop Inlet Protection □ N A

Type(s) of inlet control? _____
Installed per Blue Book specifications: drainage area (typically 1 acre)? _____
Appropriate for location? _____
Describe:_____
_____
Date correction needed: _____

f. Digital Color Photographs of Deficient BMPs

The *qualified inspector* shall attach paper color copies of the digital photographs to this inspection report of deficient BMPs with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions.

g. Digital Color Photographs of BMPs that have been Corrected

The *qualified inspector* shall attach paper color copies of the digital photographs to this inspection report of corrected BMPs with date stamp, that clearly show the condition of the practice(s) after the corrective actions has been completed.

h. Post-Construction Stormwater Management

Report of any corrective action(s) that must be taken to install, correct, repair, replace or maintain any deficiencies identified with the construction of the post-construction stormwater management practice(s).
Report the current phase of construction of all post-construction stormwater management practice(s) and whether the installation appears to be geometrically consistent with the approved hydraulic design (e.g. the pond, the outlet structure, orifice, pipe sizing and slope is geometrically consistent with the SWPPP):_____

_____
_____
_____

i. Revisions to SWPPP

When the owner or operator becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any other report, or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or impervious area) which were not reflected in the original NOI submitted to the Department and/or the MS4, they shall promptly submit such facts or information. Failure of the owner or operator to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a permit violation (GP-0-10-001 PartVII.G)

_____
_____
_____
_____

j. Inspection Notes and Signature

Inspection Notes:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Standardized Qualified Inspector Form

PART I. j. Signature

GP-0-10-001 Part VII.Q

Articles 175 and 210 of the New York State Penal Law provide for Criminal penalty of a fine and/or imprisonment for falsifying forms and reports required by this permit.

_____ _____

Qualified Inspector (print name) **Date of Inspection**

_____

Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Title: _____ Address: _____

Phone: _____ Email: _____

CPESC#: _____

Stormwater Training Number for *Trained Individuals*: _____
P.E. or L.A. Supervisor Name for *Trained Individuals*:_____

Compliance certification:

Received and reviewed by_____Title:_____

The above signed acknowledges receipt of this inspection report

STANDARD AND SPECIFICATIONS FOR WINTER STABILIZATION

Definition & Scope

A temporary site specific, enhanced erosion and sediment control plan to manage runoff and sediment at the site during construction activities in the winter months to protect off-site water resources.

Conditions Where Practice Applies

This standard applies to all construction activities involved with ongoing land disturbance and exposure between November 15th to the following April 1st.

Design Criteria

1. Prepare a snow management plan with adequate storage for snow and control of melt water, requiring cleared snow to be stored in a manner not affecting ongoing construction activities.

2. Enlarge and stabilize access points to provide for snow management and stockpiling. Snow management activities must not destroy or degrade installed erosion and sediment control practices.

3. A minimum 25 foot buffer shall be maintained from all perimeter controls such as silt fence. Mark silt fence with tall stakes that are visible above the snow pack.

4. Edges of disturbed areas that drain to a waterbody within 100 feet will have 2 rows of silt fence, 5 feet apart, installed on the contour.

5. Drainage structures must be kept open and free of snow and ice dams. All debris, ice dams, or debris from plowing operations, that restrict the flow of runoff and meltwater, shall be removed.

6. Sediment barriers must be installed at all appropriate perimeter and sensitive locations. Silt fence and other practices requiring earth disturbance must be installed before the ground freezes.

7. Soil stockpiles must be protected by the use of established vegetation, anchored straw mulch, rolled stabilization matting, or other durable covering. A barrier must be installed at least 15 feet from the toe of the stockpile to prevent soil migration and to capture loose soil.

8. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures should be initiated by the end of the next business day and completed within three (3) days. Rolled erosion control blankets must be used on all slopes 3 horizontal to 1 vertical or steeper.

9. If straw mulch alone is used for temporary stabilization, it shall be applied at double the standard rate of 2 tons per acre, making the application rate 4 tons per acre. Other manufactured mulches should be applied at double the manufacturer's recommended rate.

10. To ensure adequate stabilization of disturbed soil in advance of a melt event, areas of disturbed soil should be stabilized at the end of each work day unless:

    a. work will resume within 24 hours in the same area and no precipitation is forecast or;

    b. the work is in disturbed areas that collect and retain runoff, such as open utility trenches, foundation excavations, or water management areas.

11. Use stone paths to stabilize access perimeters of buildings under construction and areas where construction vehicle traffic is anticipated. Stone paths should be a minimum 10 feet in width but wider as necessary to accommodate equipment.

Maintenance

The site shall be inspected frequently to ensure that the erosion and sediment control plan is performing its winter stabilization function. If the site will not have earth disturbing activities ongoing during the "winter season", **all** bare exposed soil must be stabilized by established vegetation, straw or other acceptable mulch, matting, rock, or other approved material such as rolled erosion control products. Seeding of areas with mulch cover is preferred but seeding alone is not acceptable for proper stabilization.

Compliance inspections must be performed and reports filed properly in accordance with the SWPPP for all sites under a winter shutdown.

References

1. Northeastern Illinois Soil and Sedimentation Control Steering Committee. October 1981. Procedures and Standards for Urban Soil Erosion and Sediment Control in Illinois.
2. J.F. Rushing, V.M. Moore, J.S. Tingle, Q. Mason, and T. McCaffery, 2005. Dust Abatement Methods for Lines of Communication and Base Camps in Temperate Climates. ERDC/GSL TR-05-23, October 2005.

CONR 8
(1/21)

SPDES STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REVISION

JOB STAMP

Date: _____

Day of Week: S M T W T F S

Sheet No. ____ of ____

This form is to be used when revisions to the current Stormwater Pollution Prevention Plan (SWPPP) are required by SPDES General Permit for Stormwater Discharges from Construction Activity. The completed form must be filed in the Engineer's Field Office.

Reason for the Revision(s): Revision(s) were requested by NYSDEC: ☐ Yes ☐ No

Describe the Revision(s) to the SWPPP:

Engineer-in-Charge Signature: _____

EICs Name & Title: _____

Date Completed: _____

Print Form

Copy to Contractor: _____

APPENDIX M: MS4 SWPPP ACCEPTANCE FORM

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information	
1. Owner/Operator Name:	Park Grove Realty, LLC
2. Contact Person:	Andrew Bodewes
3. Street Address:	46 Prince Street
4. City/State/Zip:	Rochester, NY 14607
II. Project Site Information	
5. Project/Site Name:	Auburn Community Hospital Health Campus
6. Street Address:	23 Perrine Street, 147 North Street, 143 North Street W Park Avenue
7. City/State/Zip:	Auburn, NY 13021
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information	
8. SWPPP Reviewed by:	
9. Title/Position:	
10. Date Final SWPPP Reviewed and Accepted:	
IV. Regulated MS4 Information	
11. Name of MS4 Operator:	
12. MS4 SPDES Permit Identification Number: NYR20A	
13. Street Address:	
14. City/State/Zip:	
15. Telephone Number:	

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name[1]:

Title/Position:

Signature:

Date:

VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

(NYSDEC - MS4 SWPPP Acceptance Form - January 2025)

APPENDIX N: NOTICE OF INTENT, SWPPP PREPARER CERTIFICATION, OWNER CERTIFICATION FORMS.

Construction General Permit (CGP) Electronic Notice of Intent (eNOI) GP-0-25-001

version 1.17

(Submission #: HQM-SF4T-KB52S, version 1)

Details

Originally Started By	Pamela Freeman
Alternate Identifier	Auburn Community Hospital Health Campus—Region 7
Submission ID	HQM-SF4T-KB52S
Status	Draft

Form Input

Eligibility

Disturbance Threshold

1. Will the construction activity involve soil disturbances listed in Part I.A.1 of GP-0-25-001?
Yes

1.a. Will any runoff from the site enter a sewer system classified as a combined sewer?
No

1.b. Is this a remediation project being done under a Department approved work plan (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) with a SWPPP which meets the substantive requirements of GP-0-25-001?
No

1.c. Is the construction activity related to a stormwater discharge that does not require a permit as described in 40 CFR 122.3(e), e.g. non-point source agriculture or silviculture activities?
No

Other SPDES Permits

2. Will the discharge from the construction activity meet all conditions listed in Part I.A.2 of GP-0-25-001?
Yes

Threatened and Endangered Species

3. Will the construction activity potentially adversely affect a species that is endangered or threatened per Part I.A.3.?
No

State Historic Preservation Act (SHPA)

4. Is the construction activity designated by the Commissioner of the Office of Parks, Recreation and Historic Preservation (OPRHP), pursuant to 9 NYCRR §§428.12 or 428.13 as exempt from the SHPA review (see Attachment 2 of the Letter of Resolution between NYSDEC and OPRHP, dated January 9, 2015)?
No

4.a. Will the construction activity:

a) occur within an archeologically sensitive area indicated on the sensitivity map, or

b) have the potential to affect a property that is listed or determined to be eligible for listing on the Na or State Registers of Historic Places, or

c) include a new permanent building on the construction site within the following distances from a building, structure, or object that is more than 50 years old and OPRHP, a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determinec historically/archeologically significant building, structure, or object:

- 1-5 acres of disturbance—20 feet
- 5-20 acres of disturbance—50 feet
- 20+ acres of disturbance—100 feet?

No

4.b. Is there documentation at the construction site demonstrating:

a) that the construction activity is not within an archeologically sensitive area indicated on the sensiti map, and that the construction activity is not immediately adjacent to a property listed or determined t eligible for listing on the National or State Registers of Historic Places, and

b) that there is no new permanent building to be built on the construction site within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the construction site within those parameters that OPRHP, a Historic Preserva Commission of a Certified Local Government, or a qualified preservation professional has determinec the building, structure, or object more than 50 years old is not historically/archeologically significant:

- 1-5 acres of disturbance – 20 feet
- 5-20 acres of disturbance – 50 feet
- 20+ acres of disturbance – 100 feet?

Yes

State Environmental Quality Review (SEQR)

5. Is the construction activity subject to SEQR (Part I.A.5.), or the equivalent environmental review from another NYS or federal agency (Part I.A.6.)?
Yes

5.a. Has the owner/operator obtained documentation that the project review pursuant to SEQR, or the equivalent, has been satisfied per Part I.A.5. or I.A.6. of GP-0-25-001?
Yes

Uniform Procedures Act (UPA) Permits

6. Has the owner/operator obtained all necessary UPA permits from NYSDEC, or the equivalent from another NYS or federal agency per Part I.A.7.a. of GP-0-25-001? Select "Yes" if no UPA permits, or the equivalent, are required for this construction activity.
Yes

Steep Slope

7. Is the construction activity within the watershed of surface waters of the State classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website?
No

Owner/Operator Information

8. Owner/Operator Name
Park Grove Realty

9. Owner/Operator Contact Person Information

First and Last Name	Phone	E-mail
Andrew Bodewes	585-435-4766	abodewes@parkgrovellc.com

10. Owner/Operator Mailing Address
46 Prince Street
Rochester, NY 14607
USA

11. Is the billing contact different from the Owner/Operator Contact?
No

12. What type of organization is the owner/operator?
Other: Private Entity

Site Information

13. Project/Site Name
Auburn Community Hospital Health Campus

14. Site Address
23 Peerine Street, 147 North Street, 143 North St., 1 West Park
Auburn, NY 13021
Cayuga

DEC Region
7

15. Site Latitude & Longitude
42.9411661,-76.56771619999999

Project Details

16. This eNOI submission is for:
A construction activity not part of a common plan of development or sale in accordance with Part I.D.1.a.

17. Does the project type fall under Table 1 or Table 2 of Appendix B of GP-0-25-001? If any portion of the construction activity falls under Table 2, regardless of the size of the disturbance, select "Table 2".
Table 2

18. Consistent with Part III.B.1.c.i. of GP-0-25-001, provide a concise overview of the project. Describe existing and proposed conditions, and include any other relevant information.
Demolition of the existing buildings and infrastructure on the site followed by the construction of a Medical Office Building with a +/- 30,400 sq. ft. footprint and a total building area of +/- 80,750 sq. ft. Site improvements will include internal access drives, parking areas, sidewalks, landscaping and utility connections to serve the proposed building.

Enter the total project site acreage, the acreage to be disturbed, and the future impervious area (acreage) within the disturbed area, rounded to the nearest tenth of an acre.

19. Total Site Area (acres)
5.4

20. Total Area to be Disturbed (acres)
5.0

21. Existing Impervious Area to be Disturbed (acres)
2.1

22. Future Impervious Area Within Disturbed Area (acres)
2.6

Nature of the project:
Redevelopment with increase in impervious area

23. Do you plan to disturb more than 5 acres of soil at any one time?
No

---

24. Indicate the percentage (%) of each Hydrologic Soil Group(HSG) at the site.

A (%)
0

B (%)
0

C (%)
33

D (%)
67

25. Enter the planned start and end dates of the disturbance activities.

Start Date
04/01/2027

End Date
04/01/2028

26. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.
Owasco River

27. Type of waterbody identified in question 26?
River Off Site

28. Has the surface waterbody in question 26 been identified as a 303(d) segment in Appendix D of GP-0-25-001?
No

29. Is this project located in one of the Watersheds identified in Appendix C of GP-0-25-001?
No

30. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area?
No

31. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)?
Yes

31.a. What is the name of the municipality/entity that owns the separate storm sewer system? If the separate sewer system is owned by an MS4 Operator, enter the MS4 Operator name.
Fifth Ward Sewer District

32. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law?
No

33. Is this property owned by a state authority, state agency, federal government or local government?
No

Required SWPPP Components

General SWPPP Requirements

34. Has a SWPPP been developed in conformance with the requirements in Part III. of GP-0-25-001?
Yes

35. Does the SWPPP demonstrate consideration of the future physical risks due to climate change pursuant to the CRRA, 6 NYCRR Part 490, and associated guidance per Part III.A.2. of GP-0-25-001?
Yes

36. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)?
Yes

37. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the NYS Stormwater Management Design Manual?
Yes

37.a. Which version of the NYS Stormwater Management Design Manual was used to develop the SWPPP?
2024

SWPPP Preparer

39. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:
Professional Engineer (P.E.)

40. Name of the person who prepared the SWPPP
Andrew Burns

41. SWPPP Preparer Organization Name
Passero Associates

42. SWPPP Preparer Contact Information

First and Last Name	Phone	E-mail
Andrew Burns	585-325-1000	aburns@passero.com

43. SWPPP Preparer Address

242 West Main St., S100

Rochester, NY 14614

Download SWPPP Preparer Certification Form

Please take the following steps to prepare and upload your preparer certification form:

1) Click on the link below to download a blank certification form
2) The certified SWPPP preparer should sign this form
3) Upload the completed form
Download SWPPP Preparer Certification Form

44. Please upload the SWPPP Preparer Certification

Auburn appf_swppcertform.pdf - 04/13/2026 12:49 PM

Comment

NONE PROVIDED

44.a. Has the SWPPP Preparer Certification Form been signed by the SWPPP preparer in accordance with Part VII.J of GP-0-25-001?
Yes

Erosion & Sediment Control Criteria

45. Has a construction sequence schedule for the planned management practices been prepared?
Yes

Post-Construction Criteria

Site Planning and Soil Restoration

46. Identify all site planning practices that were used to prepare the final site plan/layout for the project.
Locating Development in Less Sensitive Areas

47. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6 ("Soil Restoration") of the Design Manual.
All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).

Water Quality Criteria

49. Water Quality Sizing Criteria

Total WQv required (acre-feet)	Total RRv provided (acre-feet)	Minimum RRv (acre-feet)	Total WQv provided (acre-feet)	Sum of RRv and WQv provided
0.091	0.091			0.091

Water Quantity Criteria

50. Per Section 9.2.1.C.VI and VII of the 2024 Design Manual, is there 0% change to hydrology that increases the discharge rate and volume from the project site?
No

51. Does one of the waiver conditions apply to the channel protection for this construction activity?
No

51.b.i. CPv Required (acre-feet)
0.319

51.b.ii. CPv Provided (acre-feet)
0.408

52. Does one of the waiver conditions apply to the Qp and Qf for this construction activity?
No

Overbank Flood Control Criteria (Qp)

52.b.i. Pre-Development (CFS)
13.880

52.b.ii. Post-Development (CFS)
12.630

Total Extreme Flood Control Criteria (Qf)

52.b.iii. Pre-Development (CFS)
30.130

52.b.iv. Post-Development (CFS)
23.780

Operation and Maintenance

53. Has a long-term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed?
Yes

53.a. Identify the entity responsible for the long-term Operation and Maintenance.
Owner

Post-Construction SMP Identification

54. Post-Construction RR Techniques and Standard SMPs

RR Techniques and SMPs	Contributing Impervious Area (acres)	Total Contributing Area (acres)
Filtration Bioretention (F-5)	3.0	

55. Alternative SMPs

Type of Alternative SMP	Manufacturer of the Alternative SMP	Name of the Alternative SMP	Contributing Impervious Area (acres)
NONE PROVIDED	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*

Other Permits

56. Identify other permits, existing and new, that are required for this project/facility.
None

57. Is this NOI for a change in owner/operator per Part I.G.?
No

MS4 SWPPP Acceptance

59. Will the construction activities be within the municipal boundary(ies) of Traditional Land Use Control MS4 Operator(s) and discharge to the MS4(s)?
Yes

59.a. Which form is required per Part I.D.2.b.ii.?
MS4 SWPPP Acceptance Form

MS4 SWPPP Acceptance Form Download

Download the MS4 SWPPP Acceptance Form from the link below.
MS4 SWPPP Acceptance Form

60. MS4 Acceptance or No Jurisdiction Form Upload

NONE PROVIDED

Comment

NONE PROVIDED

60.a. Has the form been signed by the principal executive officer or ranking elected official—or duly authorized representative of that person—in accordance with Part VII.J. and submitted along with this NOI?
Yes

Owner/Operator Certification

Owner/Operator Certification Form Download

Download the Owner/Operator Certification Form by clicking the link below.
Owner/Operator Certification Form

61. Upload Owner/Operator Certification Form

> Auburn appj_operatorcertform.pdf - 04/13/2026 01:16 PM
> **Comment**
> *NONE PROVIDED*

61.a. Has the Owner/Operator Certification Form from Appendix J been signed by the owner/operator, or a representative of the owner/operator in accordance with Part VII.J of GP-0-25-001 and uploaded to the eNOI?
Yes

Additional Project Information

62. Enter any additional pertinent project information in the text box below.
NONE PROVIDED

Attachments

Date	Attachment Name	Context	User
4/13/2026 1:16 PM	Auburn appj_operatorcertform.pdf	Attachment	Pamela Freeman
4/13/2026 12:49 PM	Auburn appf_swppcertform.pdf	Attachment	Pamela Freeman

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: Auburn Community Hospital Health Campus

eNOI Submission ID: _____

eNOI Submitted by: ☐ **Owner/Operator** ☑ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Andrew		Bodewes
Owner/Operator First Name	MI	Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:	Auburn Community Hospital Health Campus
eNOI Submission ID:	
Owner/Operator Name:	Park Grove Realty, LLC

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Andrew		Burns
SWPPP Preparer First Name	MI	SWPPP Preparer Last Name

Signature Date

Revised: January 2025

APPENDIX O: NOTICE OF TERMINATION

eNOT Qualified Inspector Certification – Final Stabilization

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.i., ii., and iii. or CGP Part V.A.1.b.i., ii., and iii. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector:

b. Title/Position:

c. Signature:

d. Date:

eNOT Qualified Inspector Certification – SMPs

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.iv. or CGP Part V.A.1.b.iv. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector:

b. Title/Position:

c. Signature:

d. Date:

eNOT MS4 Acceptance

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Traditional Land Use Control MS4 Operator Information

a. Name of MS4 Operator:

b. MS4 SPDES Permit ID Number: NYR20A

c. Street Address:

d. City/State/Zip:

e. Telephone Number:

IV. Certification Statement

I have determined that it is acceptable for the owner or operator of the construction project identified above to submit the electronic Notice of Termination in accordance with CGP Part V. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.:

b. Title/Position:

c. Signature:

d. Date:

eNOT Owner or Operator Certification

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I certify that I have met the requirements of CGP Part V.A.1., 2., 3., and 4. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Owner or Operator:

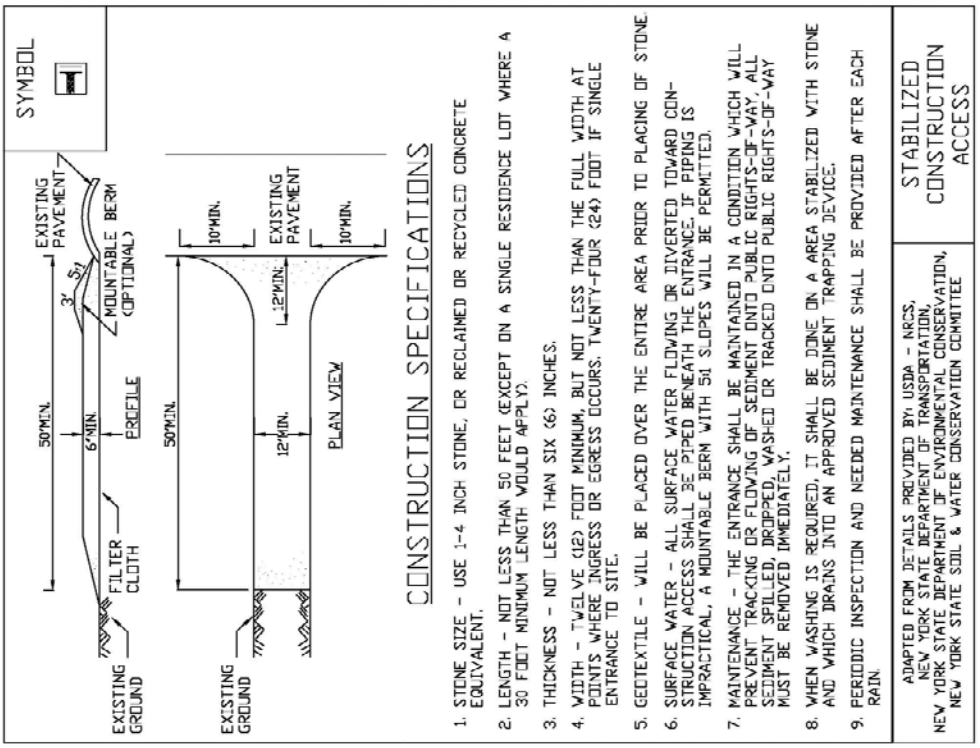
b. Title/Position:

c. Signature:

d. Date:

APPENDIX P: EROSION CONTROL DETAILS

Figure D.5
Construction Details for Stabilized Construction Entrance and Silt



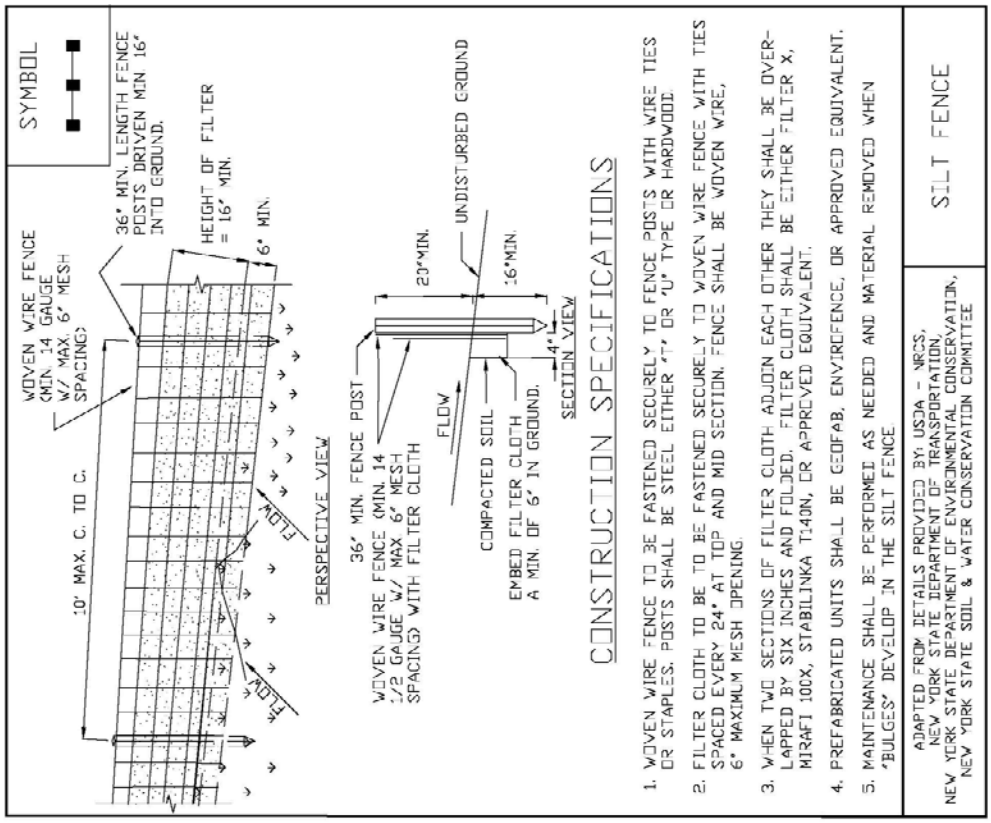


Figure 5.32
Fabric Drop Inlet Protection

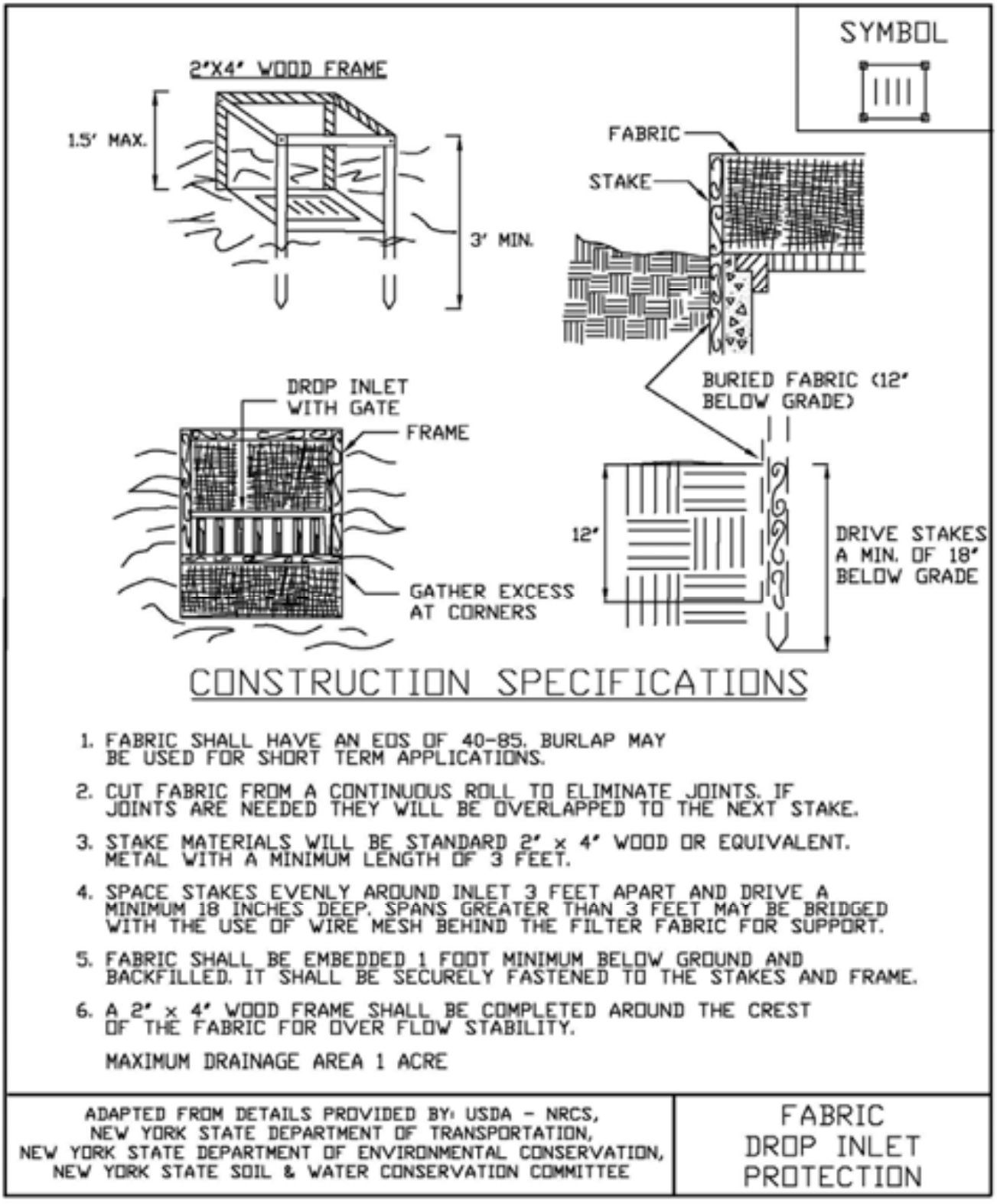
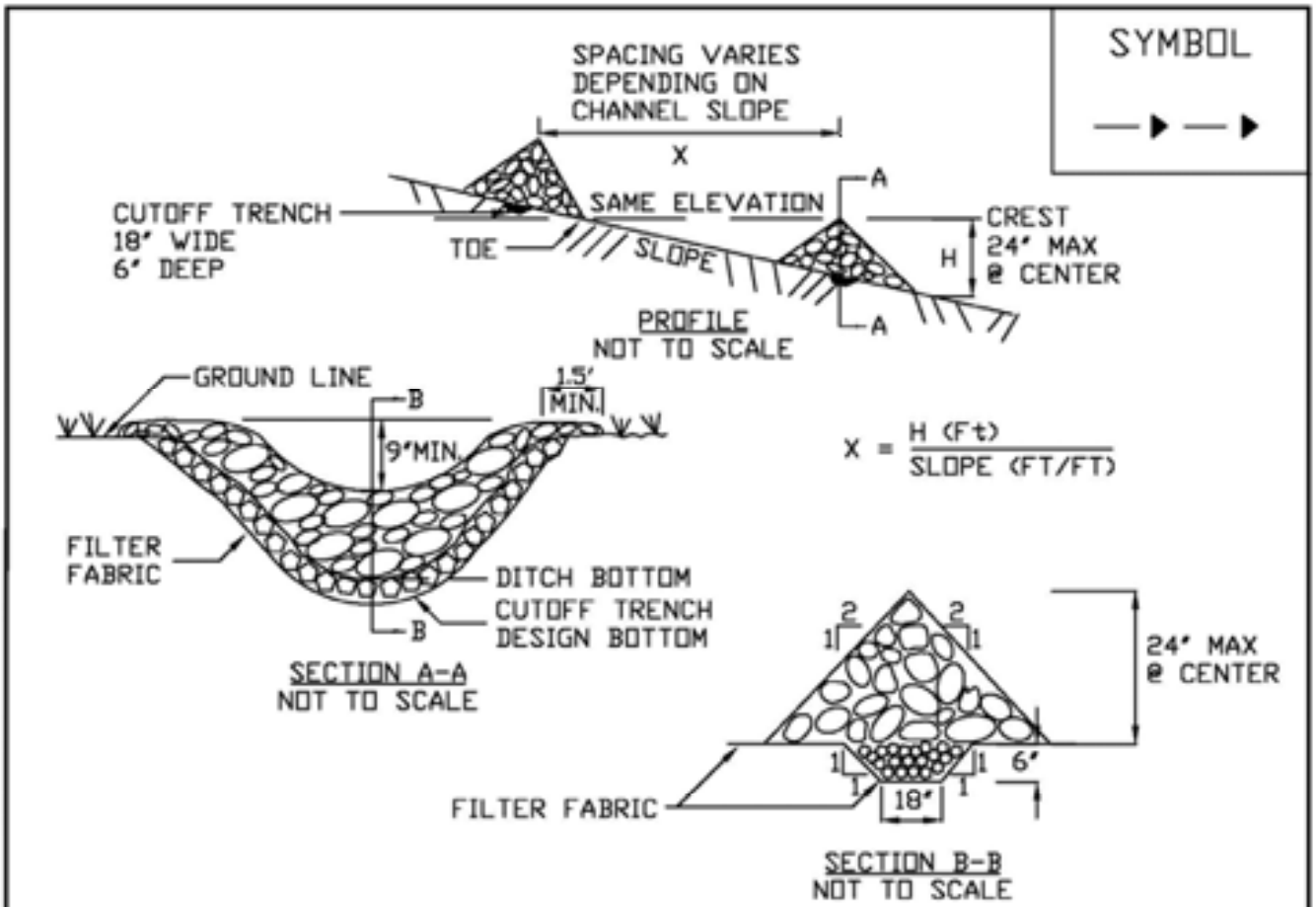


Figure 3.1
Stone Check Dam Detail



CONSTRUCTION SPECIFICATIONS

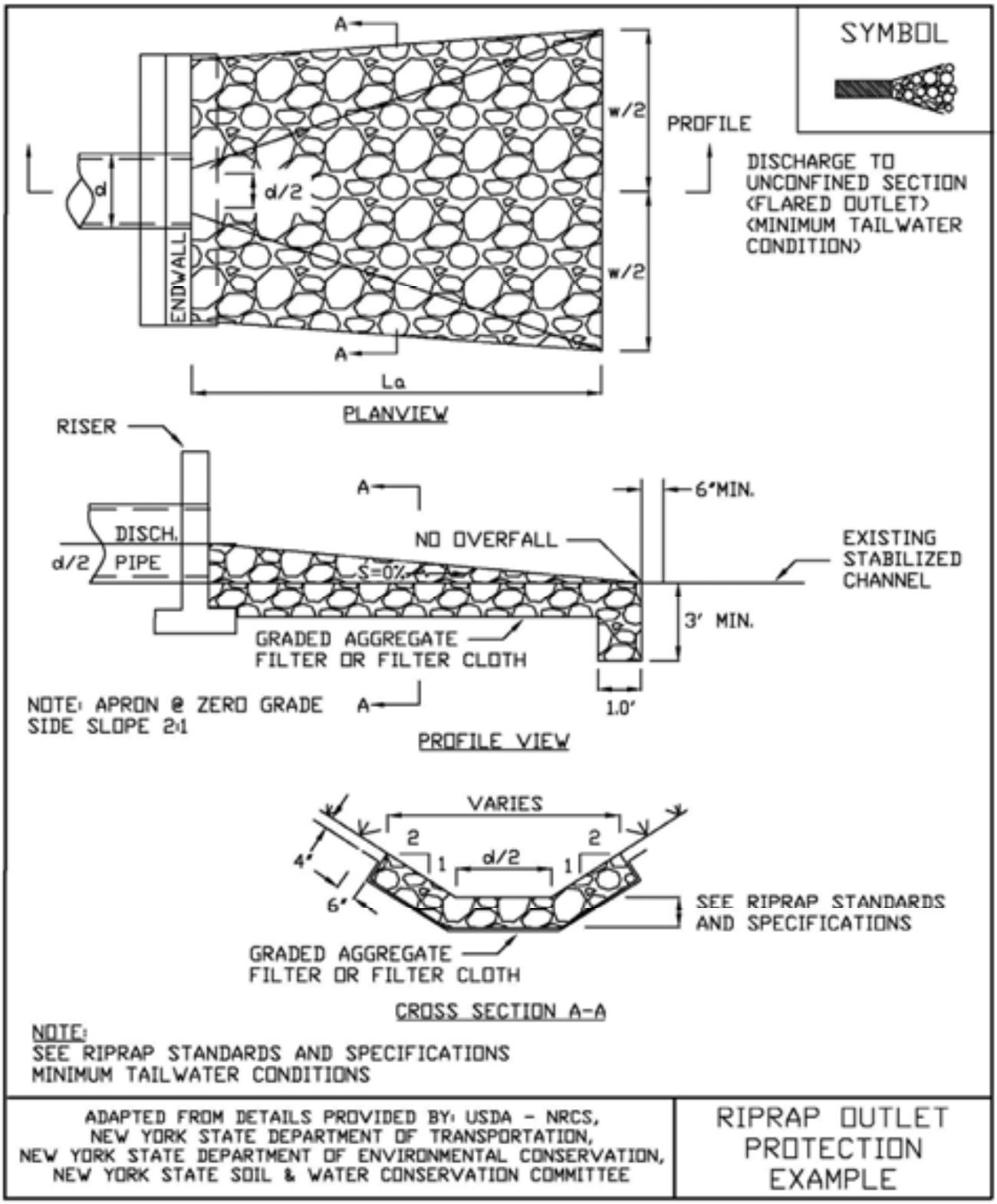
1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS,
NEW YORK STATE DEPARTMENT OF TRANSPORTATION,
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

STONE CHECK DAM

Figure 3.18
Riprap Outlet Protection Detail (1)



APPENDIX Q: MAINTENANCE/CONSTRUCTION INSPECTION REPORTS

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

MAINTENANCE GUIDANCE

Stormwater Management Practices

March 31, 2017

FINAL

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3.7. Bioretention – Level 2 Inspections and Triggers for Level 3 59

3.8. Green Roof – Level 2 Inspections and Triggers for Level 3 61

3.9. Permeable Pavement – Level 2 Inspections and Triggers for Level 3 62

3.10. Ponds & Wetlands – Level 2 Inspections and Triggers for Level 3 64

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2.7. Bioretention

Areas of Bioretention

Key areas to inspect for Bioretention include the following:

- BR 1. Drainage Area
- BR 2. Inlets
- BR 3. Bioretention Ponding Area
- BR 4. Vegetation
- BR 5. Outlets

Note: The category of Bioretention includes:

- Bioretention cells – areas of soil, mulch, and vegetation that treat runoff
- Dry swales – long, linear bioretention cells, sometimes with check dams along a mildly sloping swale
- Rain gardens – usually small-scale bioretention practices on residential or small commercial properties

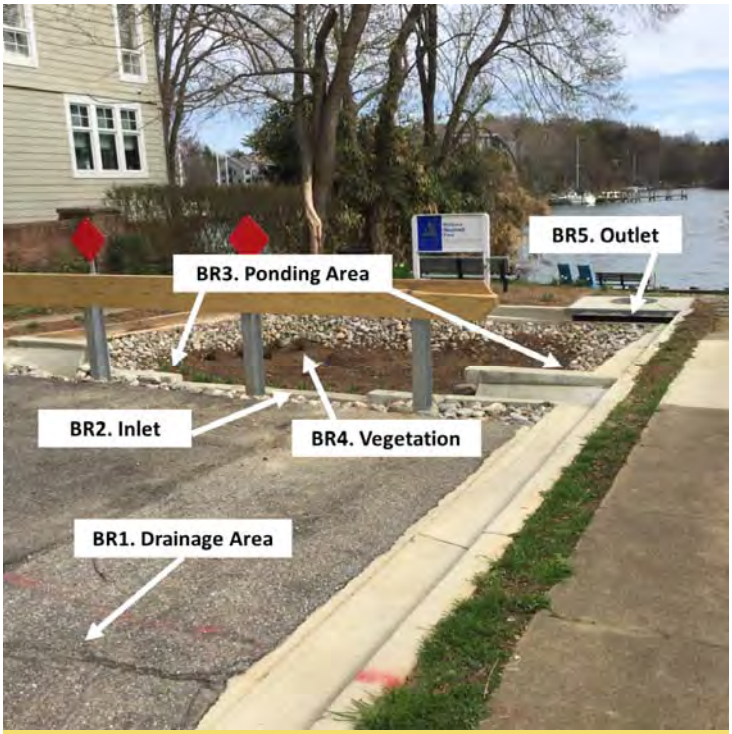

Figure 2.7.1. Key Areas for Level 1 Inspection of Bioretention

- Stormwater planters – usually in more urban settings, with soil and plants in a concrete box that receives roof runoff or perhaps other water from the site
- Tree pits – also a more urban practice where the bioretention is confined within some sort of box (e.g., concrete) and places along road curbs or other areas to treat runoff

For the purposes of this chapter, the term “Bioretention cell” will be used to generally describe these practices.

Bioretention Level 1 Inspection

The Level 1 Inspection focuses on the Drainage Area (BR1), Inlets (BR2), Bioretention Ponding Area (BR3), Vegetation (BR4), and Outlets (BR5). This inspection should be conducted on a regular basis, with an early spring inspection to ensure that the practice has survived the winter, particularly if there has been a significant amount of snow. An inspection during the growing season or in the early fall is also recommended to check on the health of vegetation.

BR 1. Drainage Area

Description: The drainage area sends runoff to and is uphill from the Bioretention cell. When it rains, water runs off and flows to the Bioretention cell and ponds within the cell temporarily (usually for no more than 48 hours). Sometimes, the runoff will contain dirt, grit, grass clippings, oil, or other substances that SHOULD NOT be directed to the Bioretention area.

Instruction: Look for areas that are uphill from the Bioretention cell. Consult **Table 2.7.1** below.

Table 2.7.1 BR Drainage Area

Problem (Check if Present)		Follow-Up Actions
	☐ Bare soil, erosion of the ground (rills washing out the dirt)	☐ Seed and mulch areas of bare soil to establish vegetation. ☐ Fill in erosion areas with soil, compact, and seed and straw to establish vegetation. ☐ If a rill or small channel is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Large areas of soil have been eroded, or larger channels are forming. May require rerouting of flow paths.
	☐ Piles of grass clippings, mulch, dirt, salt, or other materials	☐ Remove or cover piles of grass clippings, mulch, dirt, etc. ☐ Other:
	☐ Open containers of oil, grease, paint, or other substances	☐ Cover or properly dispose of materials; consult your local solid waste authority for guidance on materials that may be toxic or hazardous. ☐ Other:

BR 2. Inlets

Description: The inlets to a Bioretention cell are where water flows into the cell. Depending on the design, water can flow in through:

- Curb cuts or openings in a parking lot or roadway
- Pipes or ditches that carry water into the Bioretention cell from the drainage area
- Flow directly over the land surface (known as “sheetflow”), sometimes across a strip of rock or stone

Figure 2.7.2 Bioretention Cell Inlets

CSN, 2013

Instruction: Stand in the Bioretention cell itself and look for all the places where water flows in. Often there will be multiple points of inflow to the practice. Consult **Table 2.7.2** below for possible problems.

Table 2.7.2 BR Inlets

Problem (Check if Present)	Follow-Up Actions
 ☐ Inlets collect grit and debris or grass/weeds. Some water may not be getting into the Bioretention cell. The objective is to have a clear pathway for water to flow into the cell.	☐ Use a flat shovel to remove grit and debris (especially at curb inlets or openings). Parking lots generate fine grit that will accumulate at these spots. ☐ Pull out clumps of growing grass or weeds and scoop out the soil or grit that the plants are growing in. ☐ Remove any grass clippings, leaves, sticks, and other debris that is collecting at inlets. ☐ For pipes and ditches, remove sediment and debris that is partially blocking the pipe or ditch opening where it enters the Bioretention cell. ☐ Dispose of all material properly where it will not re-enter the Bioretention cell. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Inlets are blocked to the extent that most of the water does not seem to be entering the Bioretention cell.
 ☐ Some or all of the inlets are eroding so that rills, gullies, and other erosion is present, or there is bare dirt that is washing into the Bioretention cell.	☐ For small areas of erosion, smooth out the eroded part and apply rock or stone (e.g., river cobble) to prevent further erosion. Usually, filter fabric is placed under the rock or stone. ☐ In some cases, reseeding and applying erosion-control matting can be used to prevent further erosion. Some of these materials may be available at a garden center, but it may be best to consult a landscape contractor. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Erosion is occurring at most of the inlets, and it looks like there is too much water that is concentrating at these points. The inlet design may have to be modified.

BR 3. Bioretention Ponding Area

Description: The ponding area fills up with water during a rainstorm. If you picture the Bioretention cell as a bathtub, there is the *bottom* (usually flat surface), *side slopes* (areas that slope down to the bottom from the surrounding ground), and *berms or structures that control the depth to which water ponds.*

Instruction: Examine the entire Bioretention surface and side slopes. Consult the table below for possible problems.

Table 2.7.3 BR Ponding Area

Problem (Check if Present)	Follow-Up Actions
 ☐ Mulch (if used) needs to be replaced or replenished. The mulch layer had decomposed or is less than 1-inch thick.	☐ Add new mulch to a total depth (including any existing mulch that is left) of 2 to 3 inches. The mulch should be shredded hardwood mulch that is less likely to float away during rainstorms. ☐ Avoid adding too much mulch so that inlets are obstructed or certain areas become higher than the rest of the Bioretention surface. ☐ Other:
 ☐ Minor areas of sediment, grit, trash, or other debris are accumulating on the bottom.	☐ Use a shovel to scoop out minor areas of sediment or grit, especially in the spring after winter sanding materials may wash in and accumulate. Dispose of the material where it cannot re-enter the Bioretention cell. ☐ If removing the material creates a hole or low area, fill with soil mix that matches original mix and cover with mulch so that the Bioretention surface area is as flat as possible. ☐ Remove trash, vegetative debris, and other undesirable materials. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Sediment has accumulated more than 2-inches deep and covers 25% or more of the Bioretention surface. ☐ Kick-Out to Level 2 Inspection: The Bioretention cell is too densely vegetated to assess sediment accumulation or ponding; see BR-4, Vegetation.

 ☐ There is erosion in the bottom or on the side slopes. Water seems to be carving out rills as it flows across the Bioretention surface or on the slopes, or sinkholes are forming in certain areas. ☐ Source: Stormwater Maintenance, LLC.	☐ Try filling the eroded areas with clean topsoil or sand, and cover with mulch. ☐ If the problem recurs, you may have to use stone (e.g., river cobble) to fill in problem areas. ☐ If the erosion is on a side slope, fill with clay that can be compacted and seed and mulch the area. ☐ Other: ☐ Kick-Out to Level 2 Inspection: The problem persists or the erosion is more than 3-inches deep and seems to be an issue with how water enters and moves through the Bioretention cell. ☐ Kick-Out to Level 2 Inspection: The problem does not seem to be caused by flowing water, but a collapse or sinking of the surface (e.g., “sinkhole”) due to some underground problem.
 ☐ The bottom of the Bioretention cell is not flat, and the water pools at one end, along an edge, or in certain pockets. The whole bottom is not uniformly covered with water. See design plan to verify that Bioretention surface is intended to be flat. Check during or immediately after a rainstorm.	☐ If the problem is minor (just small, isolated areas are not covered with water), try raking the surface OR adding mulch to low spots to create a more level surface. You may need to remove and replace plantings in order to properly even off the surface. ☐ Check the surface with a string and bubble level to get the surface as flat as possible. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Ponding water is isolated to less than half of the Bioretention surface area, and there seem to be elevation differences of more than a couple of inches across the surface.
 ☐ Water stands on the surface more than 72 hours after a rainstorm and /or wetland-type vegetation is present. The Bioretention cell does not appear to be draining properly.	☐ Kick-Out to Level 2 Inspection: This is generally a serious problem, and it will be necessary to activate a Level 2 Inspection.

BR 4. Vegetation

Description: The health of vegetation within the Bioretention cell is perhaps the most critical maintenance item for the property owner or responsible party. Many Bioretention cells become overgrown, and "desirable" vegetation becomes choked out by weeds and invasive plants. It is important to know what the Bioretention cell is supposed to look like and what plants seem to be thriving or doing poorly. Periodic maintenance of vegetation will prevent larger problems that are more difficult and costly to manage.

Instruction: Examine all Bioretention cell vegetation. Consult the table below for possible problems.

Table 2.7.4 BR Vegetation

Problem (Check if Present)	Follow-Up Actions
 ☐ Vegetation requires regular maintenance—pulling weeds, removing dead and diseased plants, replacing mulch around plants, adding plants to fill in areas that are not well vegetated, etc.	☐ If you can identify which plants are weeds or not intended to be part of the planting plan, eliminate these, preferably by hand pulling. ☐ If weeds are widespread, check with the local stormwater authority and/or Extension Office about proper use of herbicides for areas connected with the flow of water. ☐ Even vegetation that is intended to be present can become large, overgrown, and/or crowd out surrounding plants. Prune and thin accordingly. ☐ If weeds or invasive plants have overtaken the whole Bioretention cell, bush-hog the entire area before seedheads form in the spring. It will be necessary to remove the root mat manually or with appropriate herbicides, as noted above. ☐ Re-plant with species that are aesthetically pleasing and seem to be doing well in the Bioretention cell. ☐ Other: ☐ Kick-Out to Level 2 Inspection: You are unsure of the original planting design, or the vegetation maintenance task is beyond your capabilities of time, expertise, or resources. If you are unsure of the health of the vegetation (e.g. salt damage, invasives, which plants are undesirable) or the appropriate season to conduct vegetation management, consult a landscape professional before undertaking any cutting, pruning, mowing, or brush hogging.
 ☐ Vegetation is too thin, is not healthy, and there are many spots that are not well vegetated.	☐ The original plants are likely not suited for the actual conditions within the Bioretention cell. If you are knowledgeable about plants, select and plant more appropriate vegetation (preferably native plants) so that almost the entire surface area will be covered by the end of the second growing season. ☐ Other: ☐ Kick-Out to Level 2 Inspection: For all but small practices (e.g., rain gardens), this task will likely require a landscape design professional or horticulturalist.

BR 5. Outlets

Description: Outlets are where water leaves the Bioretention cell when there is too much ponded water. There are various ways that outlets are configured. They can be a yard drain type of structure in the Bioretention cell itself or a rock weir where water flows during large storms. Many Bioretention practices have an underdrain, which is like a French drain, that helps the Bioretention cell drain properly after storms. The underdrain pipe may “daylight” (come to the ground surface) at some point downhill from the Bioretention cell.

Instruction: Examine outlets that release water out of the Bioretention cell. Consult the table below for possible problems.

Table 2.7.5 BR Outlets

Problem (Check if Present)	Follow-Up Actions
☐ Erosion at outlet	☐ Add stone to reduce the impact from the water flowing out of the outlet pipe or weir during storms. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Rills have formed and erosion problem becomes more severe.
 ☐ Outlet obstructed with mulch, sediment, debris, trash, etc.	☐ Remove the debris and dispose of it where it cannot re-enter the Bioretention cell. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Outlet is completely clogged or obstructed; there is too much material to remove by hand or with simple hand tools.

2.8. Green Roof

Areas of the Green Roof

Key areas to inspect for green roofs include the following:

GR 1. Vegetation and Surface
GR 2. Overflows and Drains

Note: Green Roofs consist of green infrastructure practices applied on rooftops, wherein stormwater is filtered through a vegetated planting bed. Green Roofs are a unique practice in that they are often covered by a professional ongoing maintenance contract, and their design is highly variable depending on the specific product. This section highlights some key inspection items.

Figure 2.8.1. Key Areas for Level 1 Inspection of Green Roof

3.6. Tree Planting – Level 2 Inspections and Triggers for Level 3

A Level 2 Tree Planting inspection should be conducted periodically during the growing season by the Cooperative Extension or an arborist.

Table 3.6.1 Level 2 Inspection: TREE PLANTING	
Recommended Repairs	**Triggers for Level 3 Inspection**
Observed Condition: Appearance of fungus or pest damage	
Condition 1: Fungus, discoloration, browning leaves or holes in leaves Check with arborist or other tree professional about the best way to proceed. This requires a Level 3 inspection. Condition 2: Burrowing insects, holes Check with arborist or other tree professional about the best way to proceed. This requires a Level 3 inspection.	• Any concerns about how to address infestation or disease

3.7. Bioretention – Level 2 Inspections and Triggers for Level 3

The most likely triggers for a Level 3 Inspection for Bioretention are:

- Standing water, clogged media
- Vegetation management
- Bioretention does not conform to original design plan in surface area or storage.
- Severe erosion of filter bed, inlets, or around outlets
- Significant sediment accumulation, indicating an uncontrolled source of sediment

Table 3.7.1 Level 2 Inspection: BIORETENTION NOTE: Key Source for this Information *(CSN, 2013)*	
Recommended Repairs	**Triggers for Level 3 Inspection**
Observed Condition: Water Stands on Surface for More than 72 Hours after Storm	
Condition 1: Small pockets of standing water Use a soil probe or auger to examine the soil profile. If isolated areas have accumulated grit, fines, or vegetative debris or have bad soil media, try scraping off top 3 inches of media and replacing with clean material. Also check to see that surface is level and water is not ponding selectively in certain areas. Condition 2: Standing water is widespread or covers entire surface Requires diagnosis and resolution of problem: • Clogged underdrain? • Filter fabric between soil media and underdrain stone? • Need to install underdrain if not present? • Too much sediment/grit washing in from drainage area? • Too much ponding depth? • Improper soil media?	• Soil media is clogged and problem is not evident from Level 2 inspection. • Level 2 inspection identifies problem, but it cannot be resolved easily or is associated with the original design of the practice.

Observed Condition: Vegetation is sparse or out of control	
Condition 1: Original design planting plan seems good but has not been maintained, so there are many invasives and/or dead plants Will require some horticultural experience to restore vegetation to intended condition by weeding, pruning, removing plants, and adding new plants. Condition 2: Original design planting plan is unknown or cannot be actualized A landscape architect or horticulturalist will be needed to redo the planting plan. Will likely require analysis of soil pH, moisture, organic content, sun/shade, and other conditions to make sure plants match conditions. Plan should include invasive plant management and maintenance plan to include mulching, watering, disease intervention, periodic thinning/pruning, etc.	• Vegetation deviates significantly from original planting plan; Bioretention has been neglected and suffered from deferred maintenance. • Owner/responsible party does not know how to maintain the practice.
Observed Condition: Bioretention does not conform to original design plan in surface area or storage	
Condition 1: Level 2 Inspection reveals that practice is too small based on design dimension, does not have adequate storage (e.g., ponding depth) based on the plan, and/or does not treat the drainage area runoff as indicated on the plan Small areas of deviation can be corrected by the property owner or responsible party, but it is likely that a Qualified Professional will have to revisit the design and attempt a redesign that meets original objectives or that can be resubmitted to the municipality for approval.	• More than a 25% departure from the approved plan in surface area, storage, or drainage area; sometimes less than this threshold at the discretion of the Level 2 inspector.
Observed Condition: Severe erosion of filter bed, inlets, or around outlets	
Condition 1: Erosion at inlets The lining (e.g., grass, matting, stone, rock) may not be adequate for the actual flow velocities coming through the inlets. First line of defense is to try a more non-erosive lining and/or to extend the lining further down to where inlet slopes meet the Bioretention surface. If problem persists, analysis by a Qualified Professional is warranted. Condition 2: Erosion of Bioretention filter bed This is often caused by “preferential flow paths” through and along the Bioretention surface. The source of flow should be analyzed and methods employed to dissipate energy and disperse the flow (e.g., check dams, rock splash pads). Condition 3: Erosion on side slopes Again, the issue is likely linked with unanticipated flow paths down the side slopes (probably overland flow that concentrates as it hits the edge of the slope). For small or isolated areas, try filling, compacting, and re-establishing healthy ground cover vegetation. If the problem is more widespread, further analysis is required to determine how to redirect the flow.	• Erosion (rills, gullies) is more than 12 inches deep at inlets or the filter bed or more than 3 inches deep on side slopes. • If the issue is not caused by moving water but some sort of subsurface defect. This may manifest as a sinkhole or linear depression and be associated with problems with the underdrain stone or pipe or underlying soil.
Observed Condition: Significant sediment accumulation, indicating an uncontrolled source of sediment	
Condition 1: Isolated areas of sediment accumulation, generally less than 3-inches deep Sediment source may be from a one-time or isolated event. Remove accumulated sediment and top 2 to 3 inches of Bioretention soil media; replace with clean material. Check drainage area for any ongoing sources of sediment. Condition 2: Majority of the surface is caked with “hard pan” (thin layer of clogging material) or accumulated sediment that is 3-inches deep or more This can be caused by an improper construction sequence (drainage area not fully stabilized prior to installation of Bioretention soil media) or another chronic source of sediment in the drainage area. Augering several holes down through the media can indicate how severe the problem is; often the damage is confined to the first several inches of soil media. Removing and replacing this top layer (or to the depth where sediment incursion is seen in auger holes) can be adequate, as long as the problem does not recur.	• More than 2 inches of accumulated sediment cover 25% or more of the Bioretention surface area. • “Hard pan” of thin, crusty layer covers majority of Bioretention surface area and seems to be impeding flow of water down through the soil media. • New sources of sediment seem to be accumulating with each significant rainfall event.

3.10. Ponds & Wetlands – Level 2 Inspections and Triggers for Level 3

The most likely triggers for a Level 3 Inspection for Ponds and Wetlands are:

- Severe erosion
- Excessive algae or aquatic plants
- Settlement and pipe corrosion
- Major sediment buildup

Table 3.10.1 Level Inspection: PONDS and WETLANDS

Recommended Repairs and Required Skills	Triggers for Level 3 Inspection
Observed Condition: Bare Soil or Erosion in the Drainage Area	
Condition 1: Extensive problem spots, but no channels or rills forming Reseed problem areas. If problem persists or grass does not take, consider hiring a landscape contractor. Condition 2: Problem is extensive, and rills/channels are beginning to form May be necessary to divert or redirect water that is causing the erosion problem. If it appears that simple regrading—such as installing a berm or leveling a low spot–will fix the problem, make repairs and ensure that the problem is repaired after the next storm.	• Large rills or gullies are forming in the drainage area. • An attempt to regrade the drainage area has been unsuccessful. • Fixing the problem would require major regrading (i.e., redirecting more than a 100-square-foot area. • It is not clear why the problem is occurring.
Observed Condition: Manholes or Inlet Pipe Buried or Covered with Vegetation	
Condition 1: Nearest manhole and inlet pipe not found Consult as-built drawings to get to closest suspected location and use metal detector to search for metal manhole cover. If unsuccessful, identify nearest drain inlets and approximate pipe direction to locate next manhole. Condition 2: Manhole located and inspected Never enter a manhole, except by following confined-space entry protocols. If outlet pipe is not visible or greater than 25% full of sediment/debris or trash, it will typically require a qualified contractor to flush, clean and clear blockages. Condition 3: Inlet pipe not found at pond Clear vegetation and brush that may be covering the inlet pipe. Buried inlet pipes may be found through use of a metal probe. Condition 4: Inlet pipe buried in sediment or blocked by vegetation Once located, the pipe path can be cleared of vegetation with brush hook or other brush tools. Light digging may clear sediment from the end of the pipe.	• To locate buried manholes and lost storm lines, it is sometimes necessary to hire a pipeline inspection contractor with televising equipment or ground-penetrating radar and enter at the closest upstream access point. • Locating a buried inlet pipe may require wading in the edge of the pond and using a metal probe and brush axe to find and expose the pipe. • If other than light digging is necessary to remove accumulated sediment, a contractor with heavy equipment may be required.

Table 3.10.1 Level Inspection: PONDS and WETLANDS	
Recommended Repairs and Required Skills	**Triggers for Level 3 Inspection**
Observed Condition: Pipe or Headwall Settlement, Erosion, Corrosion or Failure	
Condition 1: Pipe or headwall settlement or failure Severe sinkholes, settlement or corrosion should be kicked out to Level 3 Inspection. Condition 2: Flow not confined to pipe and visible outside pipe wall With flashlight, observe the inside of the pipe and note its condition. Take photographs. Look for sinkholes developing that indicate pipe failure beneath the surface. Kick out to Level 3 inspection.	• Where blockages are visible, a decision is needed on whether to clear them or leave in place. If a third of the pipe is full of sediment, it should be removed by a contractor with pipe-cleaning equipment. • Corrosion of inlet pipes that allows flow around the pipe exterior is a structural concern because it can lead to settlement, sinkholes and undermining pond embankment. Evidence of this type of failure may require specialized pipe-inspection equipment and investigation by an engineer.
Observed Condition: Pond Conditions	
Condition 1: Pond pre-treatment zone is full of sediment or not constructed as shown on as-built drawings. Condition 2: Excessive buildup of sediment or overgrowth If the pre-treatment area or pond pool is overgrown or filled with sediment so that the original design is compromised, corrective measures are required. If plants have died, then replanting is necessary. If none of the original design exists due to alteration or sediment, kick out to Level 3 inspection.	• It may require inspection by an engineer to determine next steps for clearing, replanting or reconstruction. • Erosion or settlement such that design has been compromised should be reviewed by an engineer. Recurring erosion may require redesign and/or regrading to direct flow away from eroding area. • If sediment has filled more than 50% of the pond's capacity, dredging is likely needed and should be evaluated by a qualified contractor. • Removal or control of excessive algae or aquatic plants can be assessed by a qualified pond maintenance company.

Bioretention Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Facility area cleared		
If designed as exfilter, soil testing for permeability		
Facility location staked out		
2. Excavation		
Size and location		
Lateral slopes completely level		
If designed as exfilter, ensure that excavation does not compact susoils.		
Longitudinal slopes within design range		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
3. Structural Components		
Stone diaphragm installed correctly		
Outlets installed correctly		
Underdrain		
Pretreatment devices installed		
Soil bed composition and texture		
4. Vegetation		
Complies with planting specs		
Topsoil adequate in composition and placement		
Adequate erosion control measures in place		
5. Final Inspection		
Dimensions		
Proper stone diaphragm		
Proper outlet		
Soil/ filter bed permeability testing		
Effective stand of vegetation and stabilization		
Construction generated sediments removed		
Contributing watershed stabilized before flow is diverted to the practice		

Comments:

Actions to be Taken:

April 8, 2026

20255046.0001

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS

CITY OF AUBURN, NY

PREPARED FOR:
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APPENDICES

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1.0 EXECUTIVE SUMMARY

The purpose of this report is to evaluate the potential traffic impacts related to the proposed medical office located at 143-147 North Street in the City of Auburn, NY. Within this report, the operating characteristics of the proposed access points and impacts to the adjacent roadway network are evaluated. Mitigating measures are identified, if needed, to minimize operational concerns. To define traffic impact, this analysis establishes existing baseline traffic conditions, projects background traffic flow including area growth, and determines the traffic operations that would result from the proposed project. All figures and supporting calculations are included at the end of this report.

Project Location and Description

The project site is located along the west side of North Street to the north of Perrine Street, in the City of Auburn, Cayuga County, NY. The project comprises the following aspects:

- **Site Status:** Currently, a portion of the site is occupied by an existing medical office building and two single family homes but most of the site is occupied by vacant undeveloped land.
- **Site Boundary:**
  - **North:** Single Family Home.
  - **East:** North Street.
  - **South:** An existing medical office building and single family homes along Perrine St.
  - **West:** Railroad tracks.
- **Vicinity Land Uses:** There is a mix of land uses, including residential, medical, and service.

The proposed development consists of constructing a ±80,750 square foot (SF) three-story medical office building. The proposed building will contain ±54 offices and employ 162 staff members. The existing medical office building and single family homes on the property will be demolished as a part of the proposed development. Access to the proposed development will be provided via the existing driveway along North St, which will be redesigned as a part of the proposed project. Additionally, one proposed driveway will be constructed along Perrine St and another proposed driveway will be constructed along W Park Ave.

Study Area

To ensure a comprehensive analysis of potential traffic impacts, a study area was selected consisting of the following intersections. **Figure 1** illustrates the study area and project location.

1. North Street/Standart Avenue
2. North Street/143 North Street Driveway
3. North Street/Lansing Street
4. North Street/Perrine Street
5. North Street/Seymour Street
6. Perrine Street/State Street
7. Lansing Street/Grant Avenue

Existing and Background Conditions

Turning movement traffic counts were collected by Passero Associates on Wednesday, March 11, 2026, between 7:00-9:00 AM for the weekday AM peak period and 4:00-6:00 PM for the weekday PM peak period by Passero Associates at the study area intersections listed in Section 2.3. The peak hour traffic periods generally occurred between 7:45-8:45 AM for the AM peak hour, and 4:00-5:00 PM for the PM peak hour at the study intersections; these time periods were used for analysis purposes in this study.

The weekday turning movement count data was collected on a typical weekday while local schools were in session. No adverse weather conditions impacted the traffic counts. The traffic volumes were reviewed to confirm accuracy, seasonality, and relative balance between intersections. No seasonality adjustment was required. The actual differences in traffic volumes can be attributed to temporal variations in traffic volumes as well as activity related to driveways located in the segments between the study intersections.

Construction of the proposed project is anticipated to reach full build-out within approximately one year depending on market conditions.

To account for normal increases in background traffic growth, including any unforeseen developments in the study area, a growth rate of 1.0% was applied to the existing traffic volumes for the build out period.

Conclusions and Recommendations

This Traffic Impact Study identified and evaluated the potential traffic impacts that can be expected from the proposed medical office located at 143-147 North Street in the City of Auburn, NY. The results of this comprehensive study determined that the existing transportation network can adequately accommodate the projected traffic volumes and resulting minor impacts to study area intersections. The following sets forth the conclusions and recommendations based upon the results of the analyses:

1. The proposed project is estimated to generate 125 entering and 12 exiting vehicle trips during the AM peak hour, and 13 entering and 115 exiting vehicle trips during the PM peak hour.

2. Based on the results of crash analysis, there are no inherent safety deficiencies at any of the study intersections.

3. All movements generally operate at an acceptable LOS D or better under existing, projected background, and full build conditions (with proposed development) during both peak hours at all study intersections. No changes in level of service are anticipated at any of the study intersections.

4. The proposed driveway along Perrine St should consist of one enter and one exit lane.

5. The proposed driveway along W Park Ave should consist of one enter and one exit lane.

6. Pursuant to the State Environmental Quality Review Act (SEQRA), this detailed analysis demonstrates that the proposed project does not result in any significant adverse traffic impacts even at full development

2.0 INTRODUCTION

2.1 Study Purpose and Objectives

The purpose of this report is to evaluate the potential traffic impacts related to the proposed medical office located at 143-147 North Street in the City of Auburn, NY. Within this report, the operating characteristics of the proposed access points and impacts to the adjacent roadway network are evaluated. Mitigating measures are identified, if needed, to minimize operational concerns. To define traffic impact, this analysis establishes existing baseline traffic conditions, projects background traffic flow including area growth, and determines the traffic operations that would result from the proposed project. All figures and supporting calculations are included at the end of this report.

2.2 Project Location

The project site is located along the west side of North Street to the north of Perrine Street, in the City of Auburn, Cayuga County, NY. The project comprises the following aspects:

- **Site Status:** Currently, a portion of the site is occupied by an existing medical office building and two single family homes but most of the site is occupied by vacant undeveloped land.
- **Site Boundary:**
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  - **East:** North Street.
  - **South:** An existing medical office building and single family homes along Perrine St.
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- **Vicinity Land Uses:** There is a mix of land uses, including residential, medical, and service.

2.3 Study Area

To ensure a comprehensive analysis of potential traffic impacts, a study area was selected consisting of the following intersections. **Figure 1** illustrates the study area and project location.

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3. North Street/Lansing Street
4. North Street/Perrine Street
5. North Street/Seymour Street
6. Perrine Street/State Street
7. Lansing Street/Grant Avenue

3.0 TRANSPORTATION SETTING

3.1 Description of Study Area Roadways

The information outlined in **Table 1** provides a description of the existing roadway network within the study area. **Figure 2** illustrates the lane geometry and traffic controls at each of the study intersections and the Annual Average Daily Traffic (AADT) volumes on the study roadways. The AADTs, in vehicles per day (vpd), reflect the most recently collected data obtained from the NYSDOT or Passero Associates.

Table 1: *Existing Highway System*

Roadway	Class[1]	Agency[2]	Speed	Typical Cross Section[3]	AADT
North Street (NY-34)	14	NYSDOT	30 mph	4-lane undivided	10,487 (NYSDOT 2023)
Standart Avenue	17	City of Auburn	30 mph	2-lane undivided	7,378 (NYSDOT 2024)
Lansing Street	19	City of Auburn	30 mph	2-lane undivided	2,432 (Passero 2026)
Perrine Street	19	City of Auburn	30 mph	2-lane undivided	2,083 (NYSDOT 2022)
State Street (NY-38)	17	NYSDOT	30 mph	2-lane undivided	3,154 (NYSDOT 2024)
Grant Avenue (NY-5)	14	NYSDOT	30 mph	4-lane undivided	16,920 (NYSDOT 2023)

1. Functional Classification.
2. Roadway ownership.
3. Excludes turning lanes at intersections.

Functional classification of roadways is determined by the NYSDOT and the Federal Highway Administration (FHWA). Both the NYSDOT and FHWA groups roads, streets, and highways into different classes based on how they are used. This is called functional classification. Roads and streets do not work alone to move traffic. Instead, they form a network. Functional classification defines how each road or street fits into this network, how it provides access to nearby properties, and whether it is in an urban or rural area. In the study area, all the roadways are classified as urban.

The primary functional classification within the study area:

- Principal Arterial (Class 14)
- Major Collector (Class 17)
- Local (Class 19)

3.2 Description of Multimodal Network

Table 2 summarizes the traffic controls, pedestrian, bicycle, and transit accommodations within the study area.

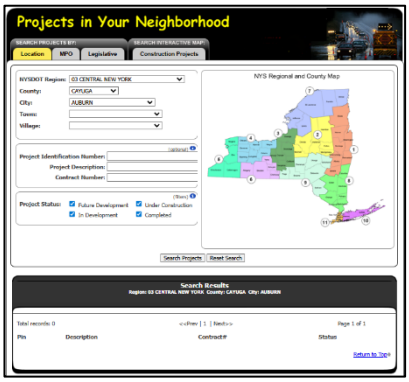
Table 2: *Multimodal Network*

Intersection	Traffic Control	Pedestrian			Bicycle		Transit
		Sidewalk	Crosswalk	Ped Signal	Lane	Other	
North St/Standart Ave	Signal	Fully present	Yes	No	No	In lane	Bus Route Aub 3
North St/143 North St Driveway	Sign	Fully present	No	No	No	In lane	No
North St/Lansing St	Signal	Fully present	Yes	Yes	No	In lane	Bus Route Aub 3
North St/Perrine St	Sign	Fully present	No	No	No	In lane	Bus Route Aub 3

Intersection	Traffic Control	Pedestrian			Bicycle		Transit
		Sidewalk	Crosswalk	Ped Signal	Lane	Other	
North St/Seymour St	Signal	Fully present	Yes	Yes	No	In lane	Bus Route Aub 3
Perine St/State St	Signal	Fully present	Yes	Yes	No	In lane	Bus Route Aub 3 & Aub 38
Lansing St/Grant Ave	Sign	Fully present	Yes	No	No	In lane	No

3.3 Planned/Programmed Highway Improvements

The NYSDOT *Projects in Your Neighborhood* web portal was reviewed and it was determined that there are no planned or ongoing projects within the study area.



4.0 EXISTING CONDITIONS ANALYSIS

4.1 Peak Intervals for Analysis

Given the functional characteristics of the corridors, adjacent land uses, and the proposed land use for the project site, the peak hours selected for analysis are the weekday morning (AM) and weekday afternoon (PM) peak periods. The combination of site traffic and adjacent street traffic produces the greatest demand during these time periods.

4.2 Existing Traffic Volume Data

Turning movement traffic counts were collected by Passero Associates on Wednesday, March 11, 2026, between 7:00-9:00 AM for the weekday AM peak period and 4:00-6:00 PM for the weekday PM peak period by Passero Associates at the study area intersections listed in Section 2.3. The peak hour traffic periods generally occurred between 7:45-8:45 AM for the AM peak hour, and 4:00-5:00 PM for the PM peak hour at the study intersections; these time periods were used for analysis purposes in this study.

The weekday turning movement count data was collected on a typical weekday while local schools were in session. No adverse weather conditions impacted the traffic counts. The traffic volumes were reviewed to confirm accuracy, seasonality, and relative balance between intersections. No seasonality adjustment was required. The actual differences in traffic volumes can be attributed to temporal variations in traffic volumes as well as activity related to driveways located in the segments between the study intersections. **Figures 3a and 3b** illustrate the 2026 existing balanced conditions for the AM and PM peak hours, respectively.

4.3 Field Observations

The study intersections were observed during peak intervals to assess current traffic operations. Signal timing and phasing information was obtained from the NYSDOT to determine peak hour phasing plans and phase durations during

each interval at the signalized intersections with the exception of the State St/Perrine St intersection. The City of Auburn did not have any signal timings for this intersection. Therefore, signal timing and phasing information for the State St/Perrine St intersection was obtained by Passero Associates in the field to determine peak hour phasing and phase durations during each peak hour. This information was used to support and/or calibrate capacity analysis models described in detail later in this report.

4.4 Existing Crash Investigation

The Federal Highway Administration (FHWA) and local agencies, such as NYSDOT, have adopted the Safe Systems Approach to roadway safety. This approach prioritizes the elimination of crashes that result in death and serious injuries. The safety evaluation process follows three general components: identification of safety problems, development of potential safety strategies, and selection and implementation of strategies.

Intersections are evaluated using the Potential for Safety Improvement (PSI) and Safety Performance Function (SPF) methodology described in the latest American Association of State Highway Transportation Officials (AASHTO) *Highway Safety Manual (2010)*, FHWA *Road Safety Fundamentals (2017)*, NYSDOT *Yellow Book (2023)*, and NYSDOT *Red Book (2023)*. The accompanying SPF worksheet can be obtained from the NYSDOT Crash Analysis Toolbox. NYSDOT defines PSI and SPF as:

- **Potential for Safety Improvement (PSI)** A comparison of the site-specific safety performance compared to the statewide average using either observed or expected crashes depending on whether traffic volume is available.
- **Safety Performance Function (SPF)** An equation used to estimate or predict the average crash frequency per year at a location as a function of traffic volume and, in some cases, roadway or intersection characteristics (e.g., number of lanes, traffic control, or type of median).

To support this effort on a site-level scale, Passero obtained crash history data using MV-104 Police Accident Reports provided by the NYSDOT *Crash Location & Engineering Analysis & Reporting (CLEAR)* database from **February 28, 2022, to February 28, 2025.**

Table 3 provides a summary of the crashes that occurred within the study area and resulting PSI. SPF Prediction, Expected Crashes, and Excess Expected Crashes are shown as crashes per year. NYSDOT suggests that intersections with positive values under Excess Expected Crashes per year greater than 5.0000 for total crashes and 1.0000 for injury crashes should be evaluated further for potential safety improvements.

Table 3: *Intersection Crash Rate Analysis*

Intersection	Crashes		SPF Prediction		Expected Crashes		Excess Expected Crashes	
	Total	Injury	Total	Injury	Total	Injury	Total	Injury
North St/Standart Ave	15	1	4.0785	1.6755	4.8403	0.8288	0.7619	-0.8467
North St/143 North St Driveway	0	0	0.5861	0.1633	0.2712	0.1170	-0.3149	-0.0464
North St/Lansing St	10	3	1.8355	0.6119	2.9456	0.7936	1.1101	0.1817
North St/Perrine St	5	1	1.1689	0.3416	1.5165	0.3379	0.3477	-0.0038
North St/Seymour St	28	6	3.2075	1.3148	8.0444	1.7073	4.8370	0.3925
Perrine St/State St	4	1	2.2054	0.8424	1.5111	0.4951	-0.6943	-0.3473
Lansing St/Grant Ave	0	0	0.5950	0.1343	0.2731	0.1013	-0.3219	-0.0330

North St/Standart Ave: The following crashes occurred at this intersection: rear end (5), left turn (2), right angle (2), right turn (1), and sideswipe (5). The following crash patterns were reported:

- Rear End
  - Northbound (three crashes)
- Sideswipe
  - Northbound (three crashes)

The reported rear end crashes (33%) are characteristic of moderate to heavily trafficked signalized intersections. The causes of the rear end crashes were generally driver inattention, driver error, unsafe speeds, or following too closely. The causes of the sideswipe crashes were generally driver inattention, unsafe lane changes, or turning improperly. Given the causes of the crash patterns and the low PSI values, no geometric improvements are recommended.

North St/143 North St Driveway: No crashes occurred at this intersection during the study period.

North St/Lansing St: The following crashes occurred at this intersection: left turn (1), right angle (1), sideswipe (6), fixed object (1), and bicycle/pedestrian (1). The only crash pattern reported was three southbound sideswipe crashes.

The causes of the sideswipe crashes were generally driver inattention or unsafe lane changes. Given the causes of the crash patterns and the low PSI values, no geometric improvements are recommended.

North St/Perrine St: The following crashes occurred at this intersection: rear end (1), left turn (1), and right angle (3). The only crash pattern reported was three eastbound right angle crashes.

The causes of the sideswipe crashes were generally driver inattention or failure to yield right of way. Given the causes of the crash patterns and the low PSI values, no geometric improvements are recommended.

North St/Seymour St: The following crashes occurred at this intersection: rear end (7), left turn (9), right angle (7), sideswipe (2), fixed object (1), and bicycle/pedestrian (2). The following crash patterns were reported:

- Left Turn
  - Northbound (five crashes)
  - Southbound (four crashes)
- Rear End
  - Southbound (three crashes)
  - Eastbound (three crashes)
- Right Angle
  - Northbound (three crashes)
  - Southbound (three crashes)

The reported rear end crashes (25%) are characteristic of moderate to heavily trafficked signalized intersections. The causes of the rear end crashes were generally driver inattention, driver error, unsafe speeds, or following too closely. The causes of the left turn crashes were generally driver inattention, failure to yield right of way, or disregard of traffic control device. The causes of the right angle crashes were generally driver inattention, disregard of traffic control device, or driver inexperience. Given the causes of the crash patterns and the low PSI values, no geometric improvements are recommended.

Perrine St/State St: The following crashes occurred at this intersection: rear end (1), right angle (3), sideswipe (1), fixed object (1), and bicycle/pedestrian (1). No crash patterns were reported at this intersection. Given the negative PSI values and that no discernible crash patterns exist, no geometric improvements are recommended.

Lansing St/Grant Ave: The following crashes occurred at this intersection: right angle (1), sideswipe (1), and backing (1). No crash patterns were reported at this intersection. Given the negative PSI values and that no discernible crash patterns exist, no geometric improvements are recommended.

5.0 BACKGROUND (NO BUILD) CONDITIONS

Construction of the proposed project is anticipated to reach full build-out within approximately one year depending on market conditions. The widely accepted methodology for preparing traffic impact studies requires that any projects in the study area that are currently approved and/or under construction must be considered in the traffic analysis. Projects that are contemplated but not yet approved are not included in a traffic analysis. Local municipal personnel were contacted to discuss any other specific projects that are currently approved or under construction that would generate additional traffic in the study area. No such information was provided.

A review of available historical NYSDOT traffic volume data in the vicinity of the site indicates that traffic has decreased between 2015 and 2025. To account for normal increases in background traffic growth, including any unforeseen developments in the study area, a growth rate of 1.0% was applied to the existing traffic volumes for the build out period. **Figures 4a & 4b** depict the 2027 peak hour background traffic volumes for the AM and PM peak hours, respectively.

6.0 PROPOSED DEVELOPMENT CONDITIONS

6.1 Project Description

The proposed development consists of constructing a ±80,750 square foot (SF) three-story medical office building. The proposed building will contain ±54 offices and employ 162 staff members. The existing medical office building and single family homes on the property will be demolished as a part of the proposed development. Access to the proposed development will be provided via the existing driveway along North St, which will be redesigned as a part of the proposed project. Additionally, one proposed driveway will be constructed along Perrine St and another proposed driveway will be constructed along W Park Ave.

6.2 Proposed Traffic Generation

The volume of traffic generated by a site is dependent on the intended land use and size of the development. Trip generation is an estimate of the number of trips generated by a specific building or land use. These trips represent the volume of traffic entering and exiting the development. *Trip Generation Manual* (12th Edition) published by the Institute of Transportation Engineers (ITE) is used as a reference for this information. The trip rate for the peak hour of the generator may or may not coincide in time or volume with the trip rate for the peak hour of adjacent street traffic. Volumes generated during the peak hour of the adjacent street traffic and proposed land uses, in this case, the weekday commuter AM and PM peak hours, represent a more critical volume when analyzing the capacity of the system; those intervals will provide the basis of this analysis.

Table 4: *Site Generated Trips*

Description	ITE Land Use Code	Size	AM Peak Hour		PM Peak Hour	
			Enter	Exit	Enter	Exit
Medical-Dental Office Building	720	162 Employees	125	12	13	115

The proposed project is estimated to generate 125 entering and 12 exiting vehicle trips during the AM peak hour, and 13 entering and 115 exiting vehicle trips during the PM peak hour.

6.3 Trip Distribution

The cumulative effect of site-generated traffic on the transportation network is dependent on the origins and destinations of that traffic and the location of the access drives serving the site. The proposed arrival and departure distribution of traffic generated by the proposed project is considered a function of several parameters, including:

- Residential and employment centers using US Census data.
- Surrounding roadway network.
- Site layout and access locations.
- Existing traffic patterns.
- Existing traffic conditions and controls.

Figure 5 shows the anticipated trip distribution pattern percentage for the project site. **Figures 6a and 6b** illustrate the peak hour project site-generated traffic during the AM and PM peak hours, respectively, based on the percentages in **Figure 5.**

6.4 Full Development Volumes

The proposed design hour traffic volumes are developed for the peak hours by combining the background traffic conditions (**Figures 4a & 4b**) and the new site-generated traffic volumes (**Figures 6a & 6b**) to yield the traffic volumes under full development conditions. It should be noted that since the existing medical office on the proposed site will be demolished, the existing site trips generated by this development have been subtracted from the full build traffic volumes. **Figures 7a & 7b** illustrate total anticipated full build peak hour volumes for the AM and PM peak hours, respectively.

7.0 TRAFFIC OPERATIONS AND ANALYSIS

7.1 Description of Capacity Analysis

Capacity analysis is a technique used for determining a measure of effectiveness for a section of roadway and/or intersection based on the number of vehicles during a specific time period. The measure of effectiveness used for the capacity analysis is referred to as a Level of Service (LOS). Levels of service are calculated to provide an indication of the amount of delay that a motorist experiences while traveling along a roadway or through an intersection. Since the most amount of delay to motorists usually occurs at intersections, capacity analysis focuses on intersections, as opposed to highway segments.

The standard procedure for capacity analysis of signalized and unsignalized intersections is outlined in the *Highway Capacity Manual (HCM) 7th Edition* published by the Transportation Research Board (TRB). Traffic analysis software,

Synchro 12, which is based on procedures and methodologies contained in the HCM, was used to analyze operating conditions at study area intersections. The procedure yields a level of service based on the HCM as an indicator of how well intersections operate.

Six levels of service are defined for analysis purposes. They are assigned letter designations, from A to F, with LOS A representing the conditions with little to no delay, and LOS F conditions with very long delays. Suggested ranges of service capacity and an explanation of levels of service are included in the Appendices. LOS C or better is desirable, but LOS D for signalized locations and LOS E for unsignalized locations are generally thresholds of acceptable operation during peak periods so long as the volume to capacity ratio (v/c) is below 1.0. **Table 5** depicts level of service criteria for both signalized and unsignalized intersections and associated delays per vehicle in seconds.

Table 5: *Level of Service Criteria*

Level of Service	Signalized Control	Unsignalized Control
A	< 10	< 10
B	10 – 20	10 – 15
C	20 – 35	15 – 25
D	35 – 55	25 – 35
E	55 – 80	35 – 50
F	> 80	> 50

Level of service for signalized intersections is defined in terms of delay specifically, average total delay per vehicle for a 15-minute analysis period. Level of service for unsignalized intersections, however, are different from a signalized intersection. The primary reason for this is driver expectation that a signalized intersection is designed to carry higher volumes than an unsignalized intersection. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable than they are at signals.

The v/c ratio, also referred to as degree of saturation, represents the sufficiency of an intersection to accommodate the vehicular demand. A v/c ratio less than 0.85 generally indicates that adequate capacity is available, and vehicles are not expected to experience significant queues and delays. As the v/c ratio approaches 1.0, traffic flow may become unstable, and delay and queuing conditions may occur.

7.2 Capacity Analysis Results

Existing and background operating conditions during the peak study periods are evaluated to determine a basis for comparison with the projected future conditions. The future traffic conditions generated by the project were analyzed to assess the operation of the study area intersections. Capacity results for existing, background, and full build conditions are listed in **Table 6**. The discussion following the table summarizes capacity conditions. The detailed Synchro capacity analysis worksheets are provided after this report.

Table 6: *Capacity Analysis Results*

INTERSECTION	2026 EXISTING CONDITIONS						2027 BACKGROUND CONDITIONS						2027 FULL BUILD CONDITIONS					
	AM			PM			AM			PM			AM			PM		
	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c
1. North St at Standart Ave (S)																		
EB - Standart Ave	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
WB - Standart Ave	A	7.8	0.35	B	11.6	0.48	A	7.8	0.35	B	11.7	0.49	A	8.1	0.36	B	11.8	0.49
NB - North St	B	12.9	0.28	B	14.2	0.41	B	13.0	0.28	B	14.2	0.41	B	13.0	0.29	B	14.3	0.43
SB - North St	B	11.1	0.47	B	10.1	0.38	B	11.2	0.47	B	10.2	0.38	B	11.3	0.48	B	10.2	0.39
Overall LOS	**B**	**11.1**	**0.47**	**B**	**12.2**	**0.49**	**B**	**11.2**	**0.48**	**B**	**12.3**	**0.49**	**B**	**11.3**	**0.49**	**B**	**12.4**	**0.49**
2. North St at Exist Driveway (U)																		
EB - Exist Driveway	B	10.8	0.01	B	12.3	0.07	B	10.8	0.01	B	12.4	0.07	B	12.7	0.01	B	13.0	0.12
NB Left - North St	A	8.4	0.02	A	8.3	0.00	A	8.4	0.02	A	8.3	0.00	A	8.6	0.04	A	8.3	0.00
3. North St at Lansing St (S)																		
WB - Lansing St	B	18.5	0.36	C	22.9	0.54	B	18.8	0.37	C	22.9	0.55	B	19.9	0.43	C	22.9	0.55
NB - North St	A	4.0	0.23	A	5.8	0.26	A	4.0	0.23	A	5.8	0.27	A	4.3	0.24	A	5.8	0.28
SB - North St	A	4.6	0.23	A	5.8	0.24	A	4.7	0.23	A	5.9	0.24	A	4.9	0.24	A	6.0	0.25
Overall LOS	**A**	**5.9**	**0.37**	**A**	**8.6**	**0.55**	**A**	**5.9**	**0.37**	**A**	**8.7**	**0.55**	**A**	**6.5**	**0.43**	**A**	**8.7**	**0.55**
4. North St at Perrine St (U)																		
EB - Perrine St	C	20.0	0.26	C	17.5	0.19	C	20.2	0.27	C	17.7	0.20	C	24.3	0.32	C	18.8	0.31
WB - Exist Driveway	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
NB Left - North St	A	8.6	0.04	A	8.7	0.03	A	8.7	0.04	A	8.7	0.03	A	8.9	0.08	A	8.8	0.03
SB Left - North St	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
5. North St at Seymour St (S)																		
EB - Seymour St	C	23.0	0.49	C	22.8	0.55	C	23.0	0.50	C	22.8	0.55	C	23.5	0.51	C	22.8	0.55
WB - Seymour St	C	21.0	0.41	B	19.4	0.36	C	21.0	0.41	B	19.4	0.36	C	20.6	0.43	B	19.4	0.36
NB - North St	A	7.5	0.27	A	8.8	0.33	A	7.5	0.27	A	8.8	0.33	A	7.9	0.30	A	8.9	0.34
SB - North St	A	7.4	0.27	A	8.1	0.28	A	7.5	0.27	A	8.2	0.29	A	7.7	0.28	A	8.5	0.32
Overall LOS	**B**	**11.6**	**0.57**	**B**	**12.3**	**0.56**	**B**	**11.6**	**0.50**	**B**	**12.3**	**0.56**	**B**	**11.9**	**0.52**	**B**	**12.3**	**0.56**
6. State St at Perrine St (S)																		
EB - Perrine St	A	8.7	0.28	A	6.8	0.15	A	8.8	0.28	A	6.8	0.15	A	9.2	0.29	A	6.7	0.15
WB - Perrine St	A	8.2	0.21	A	9.0	0.24	A	8.2	0.22	A	9.1	0.24	A	8.4	0.22	A	9.4	0.28
NB - State St	A	6.2	0.21	A	6.0	0.23	A	6.2	0.21	A	6.1	0.23	A	6.1	0.23	A	6.3	0.24
SB - State St	A	6.7	0.26	A	5.9	0.17	A	6.7	0.26	A	5.9	0.18	A	6.8	0.28	A	6.2	0.18
Overall LOS	**A**	**7.1**	**0.29**	**A**	**6.6**	**0.24**	**A**	**7.1**	**0.29**	**A**	**6.6**	**0.24**	**A**	**7.2**	**0.30**	**A**	**7.0**	**0.28**
7. Lansing St at Grant Ave (U)																		
EB - Lansing St	C	15.0	0.11	C	21.4	0.15	C	15.2	0.11	C	21.7	0.15	C	15.6	0.12	C	23.3	0.22
NB Left - Grant Ave	A	8.4	0.01	A	9.7	0.01	A	8.4	0.01	A	9.7	0.01	A	8.5	0.02	A	9.8	0.01
8. Perrine St at Proposed Driveway (U)																		
EB Left - Perrine St	N/A			N/A			N/A			N/A			A	7.6	0.02	A	7.4	0.00
SB - Proposed Driveway													A	9.7	0.01	A	9.6	0.08

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound

N/A = Approach does not exist and/or was not analyzed during this condition

1. North St at Standart Ave (Signalized)
All approaches operate at an acceptable LOS B or better under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

2. North St at 143 North St Driveway (Signalized)
All approaches operate at an acceptable LOS B or better under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

3. North St at Lansing St (Signalized)
All approaches operate at an acceptable LOS C or better under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

4. North St at Perrine St (Unsignalized)
All approaches operate at an acceptable LOS C or better under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

5. North St at Seymour St (Signalized)
All approaches operate at an acceptable LOS C or better under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

6. State St at Perrine St (Signalized)
All approaches operate at an acceptable LOS A under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

7. Lansing St at Grant Ave (Unsignalized)
All approaches operate at an acceptable LOS C or better under all conditions during both peak hours. No changes in level of service are anticipated and no improvements are warranted nor recommended at this location.

8. Perrine St at Proposed Driveway (Signalized)
All approaches operate at an acceptable LOS A under full build conditions during both peak hours. The proposed westerly driveway should consist of one enter and one exit lane

8.0 CONCLUSIONS AND RECOMMENDATIONS

This Traffic Impact Study identified and evaluated the potential traffic impacts that can be expected from the proposed medical office located at 143-147 North Street in the City of Auburn, NY. The results of this comprehensive study determined that the existing transportation network can adequately accommodate the projected traffic volumes and resulting minor impacts to study area intersections. The following sets forth the conclusions and recommendations based upon the results of the analyses:

1. The proposed project is estimated to generate 125 entering and 12 exiting vehicle trips during the AM peak hour, and 13 entering and 115 exiting vehicle trips during the PM peak hour.

2. Based on the results of crash analysis, there are no inherent safety deficiencies at any of the study intersections.

3. All movements generally operate at an acceptable LOS D or better under existing, projected background, and full build conditions (with proposed development) during both peak hours at all study intersections. No changes in level of service are anticipated at any of the study intersections.

4. The proposed driveway along Perrine St should consist of one enter and one exit lane.

5. The proposed driveway along W Park Ave should consist of one enter and one exit lane.

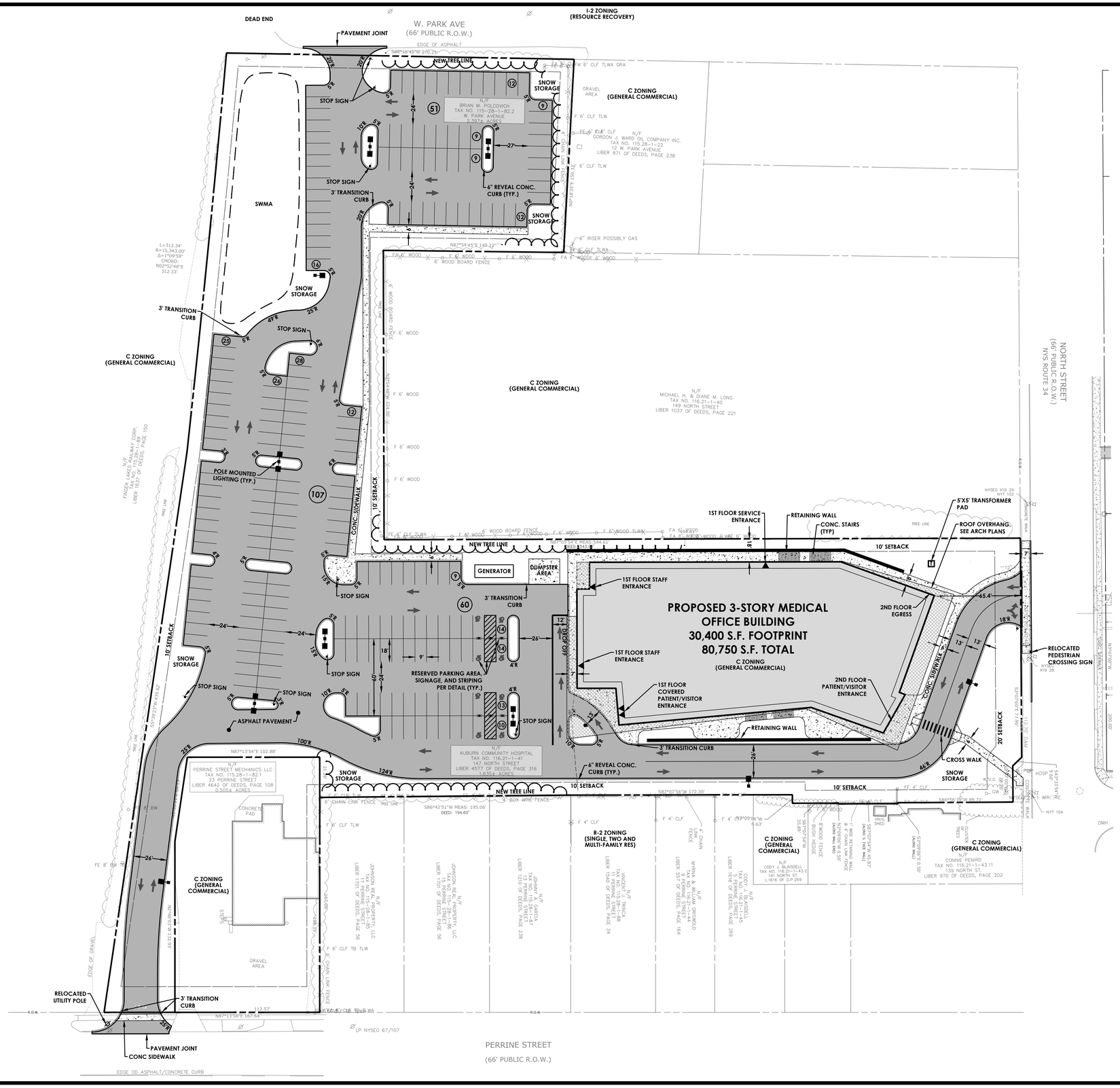
6. Pursuant to the State Environmental Quality Review Act (SEQRA), this detailed analysis demonstrates that the proposed project does not result in any significant adverse traffic impacts even at full development.

9.0 REFERENCES

- Synchro 12 Software. Cubic ITS.
- Highway Capacity Manual (7th Edition). Transportation Research Board (TRB). Washington, DC. 2022.
- Trip Generation Manual (12th Edition). Institute of Transportation Engineers (ITE). Washington, DC. 2025.
- Trip Generation Handbook (3rd Edition). Institute of Transportation Engineers (ITE). Washington, DC. 2017.
- OnTheMap. United States Census Bureau. 2024.
- Traffic Data Viewer. New York State Department of Transportation (NYSDOT). 2024.
- Highway Functional Classification Concepts, Criteria, and Procedures. Federal Highway Administration (FHWA). 2023.
- Manual on Uniform Traffic Control Devices (11th Edition). Federal Highway Administration. 2023

10.0 FIGURES

Figures 1 through 7b are included on the following pages.



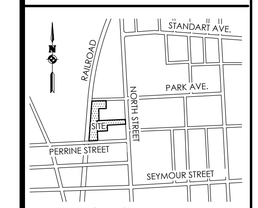
LEGEND - SITE:

- PROPERTY BOUNDARY
- R.O.W. — RIGHT OF WAY
- EXISTING CENTER LINE ROAD
- SETBACK
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- EXISTING BUILDING
- PROPOSED BUILDING
- (14) PROPOSED PARKING COUNT
- PROPOSED CONCRETE
- PROPOSED ACCESS RAMP
- PROPOSED PAVEMENT STRIPING
- PROPOSED CURB
- PROPOSED SIGN
- EXISTING SIGN
- PROPOSED LIGHT POLE
- PROPOSED FENCE
- PROPOSED BUILDING MOUNTED LIGHT

40 0 20 40 80

HORIZONTAL SCALE: 1"=40'

N



CITY OF AUBURN

LOCATION SKETCH

N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100 (585) 325-1000
ROCHESTER, NY 14614 FAX: (585) 325-1691
PROJECT MANAGER ANDREW BURNS, P.E.
PROJECT ENGINEER ANDREW BURNS, P.E.
DESIGNER JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

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SITE PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-102**

DATE: **MARCH 2026**

SCHEMATIC DESIGN

Y:\PROJECTS-NEW\2025\20255046\20255046.0001\01_CAD-BIM-MODELS\CIVIL\20255046.01_SITE.DWG 4/6/2026 4:07 PM Shari Kiels

Figure 1

PASSERO engineering architecture

0 500 1,000 2,000 Feet

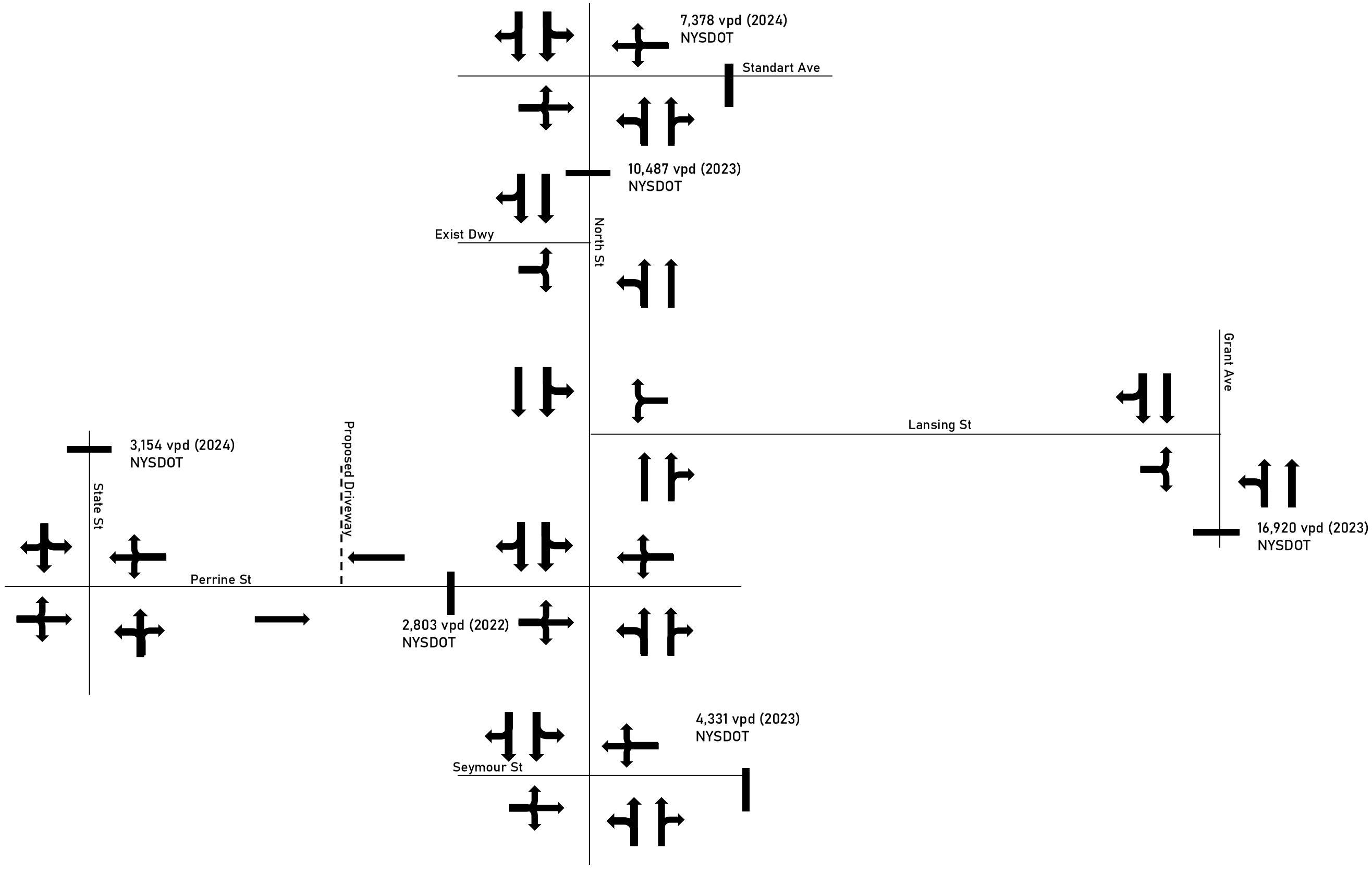
N

Auburn Community Hospital Health Campus |
Cayuga County, City of Auburn, NY

Site Location and Study Area

Key:
- # Study Intersection
- # Proposed Intersection
- Study Area
- Project Location

Project Number: 20255046.0001



PASSERO engineering architecture

242 West Main Street, Suite 100
Rochester, NY 14614

Lane Geometry and Average Daily Traffic

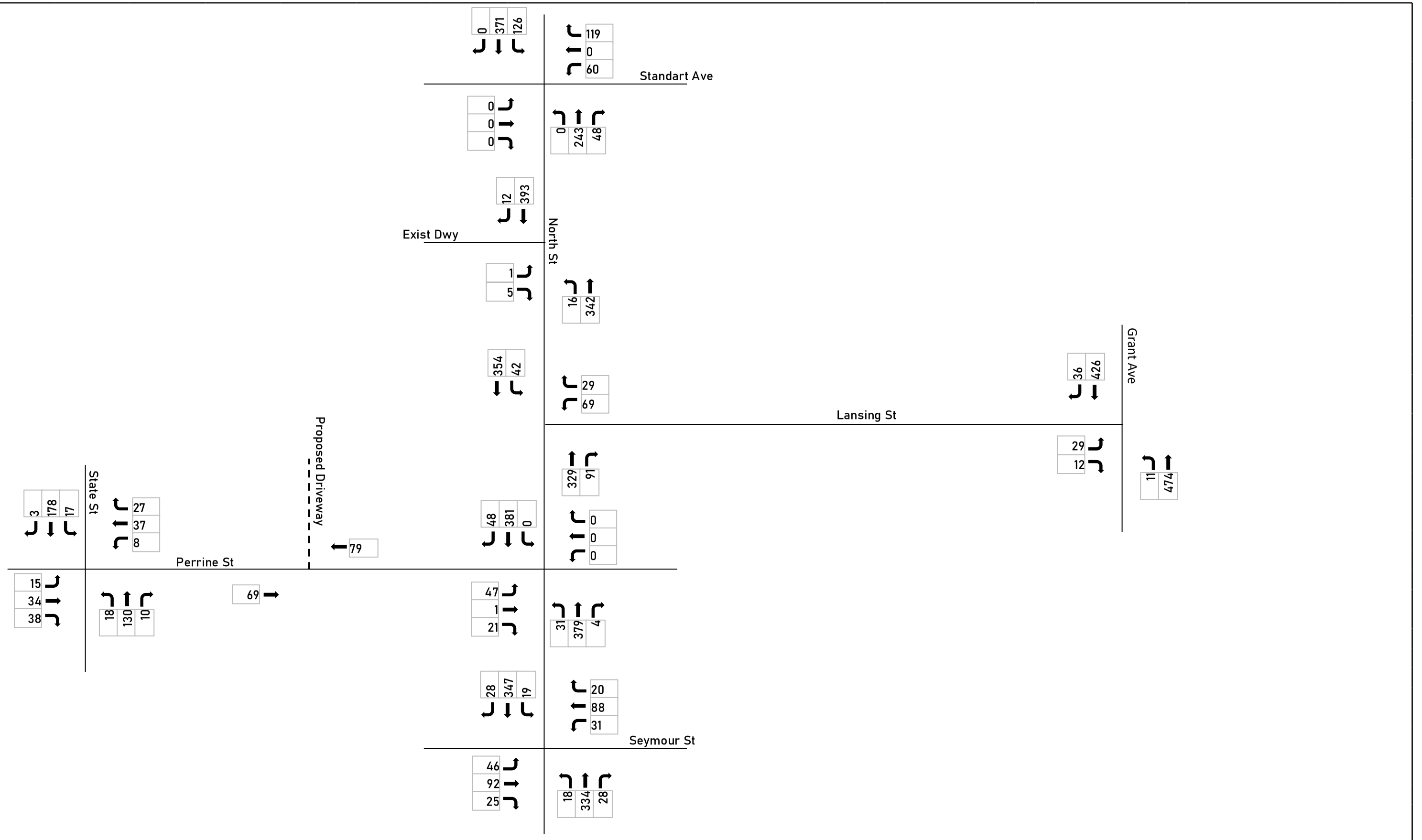
Auburn Community Hospital Health Campus

City of Auburn, NY

Notes:

Figure 2

PN: 20255046.0001



2026 Existing Conditions - Weekday AM Peak Hour

Auburn Community Hospital Health Campus

City of Auburn, NY

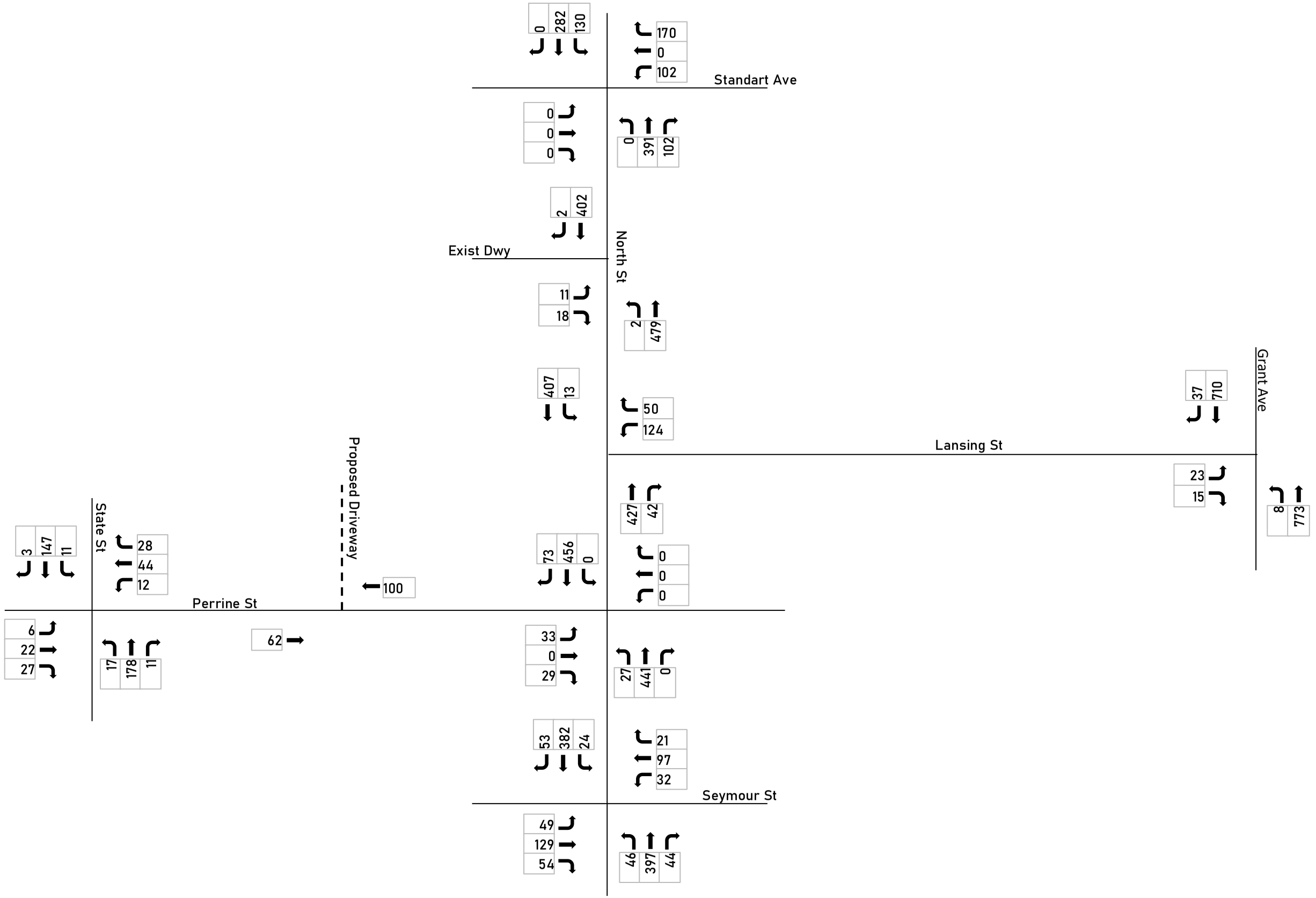
PASSERO engineering architecture

242 West Main Street, Suite 100
Rochester, NY 14614

Notes:

Figure 3a

PN: 20255046.0001



2026 Existing Conditions - Weekday PM Peak Hour

Auburn Community Hospital Health Campus

City of Auburn, NY

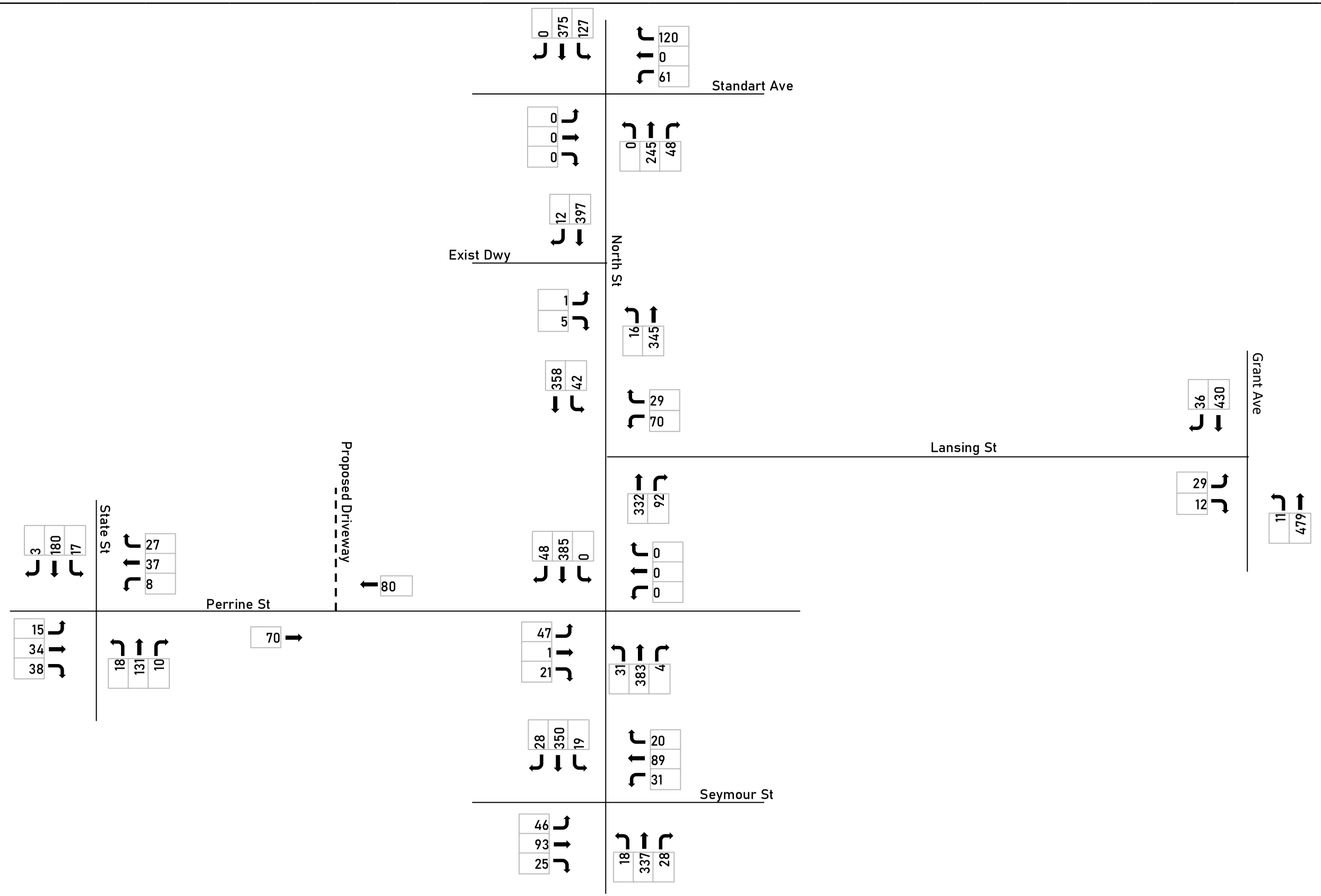
Notes:

Figure 3b

PN: 20255046.0001

PASSERO engineering architecture

242 West Main Street, Suite 100
Rochester, NY 14614



2027 Background Conditions - Weekday AM Peak Hour

Auburn Community Hospital Health Campus

City of Auburn, NY

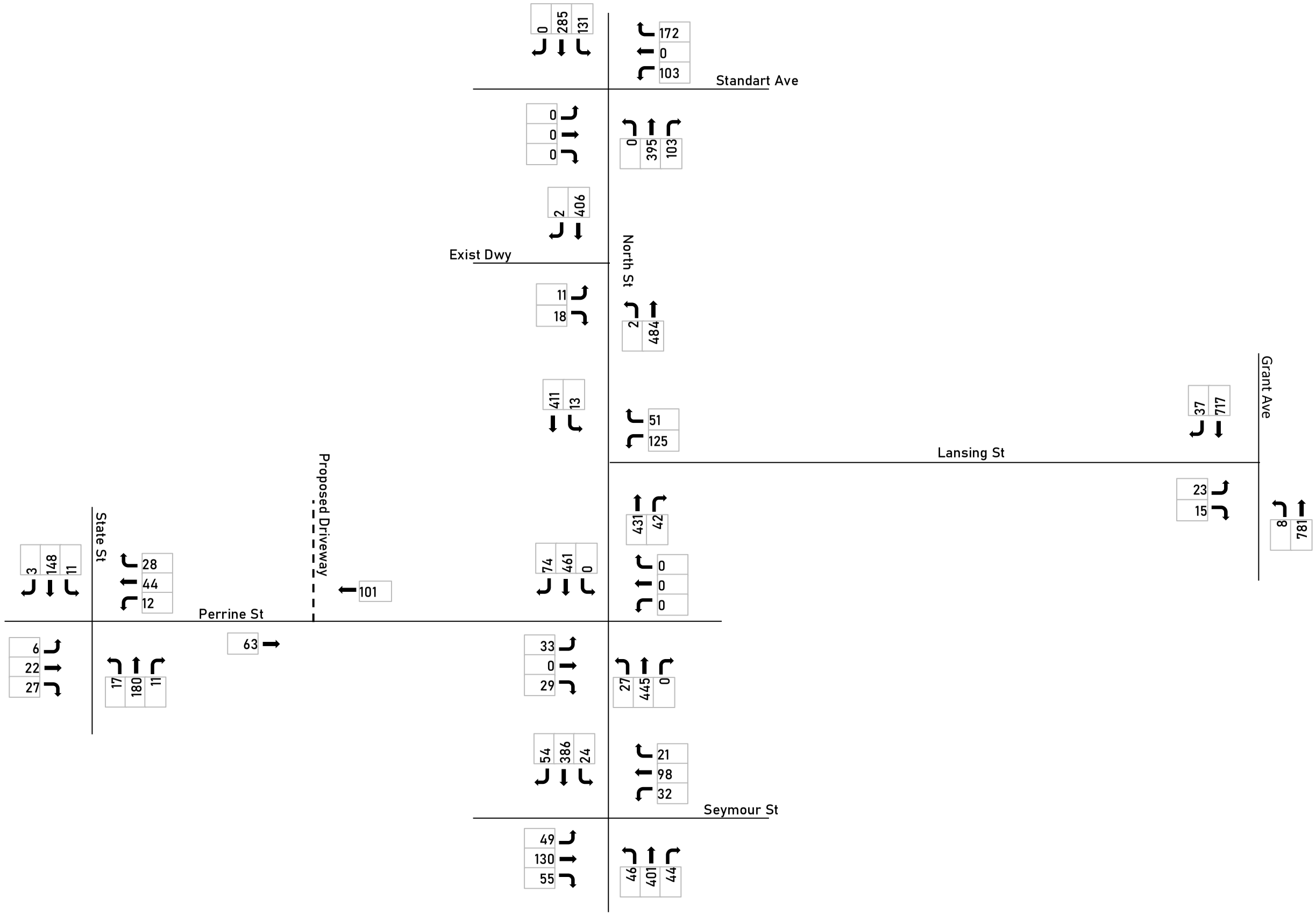
Notes:

Figure 4a

PN: 20255046.0001

PASSERO engineering architecture

242 West Main Street, Suite 100
Rochester, NY 14614



2027 Background Conditions - Weekday PM Peak Hour

Auburn Community Hospital Health Campus

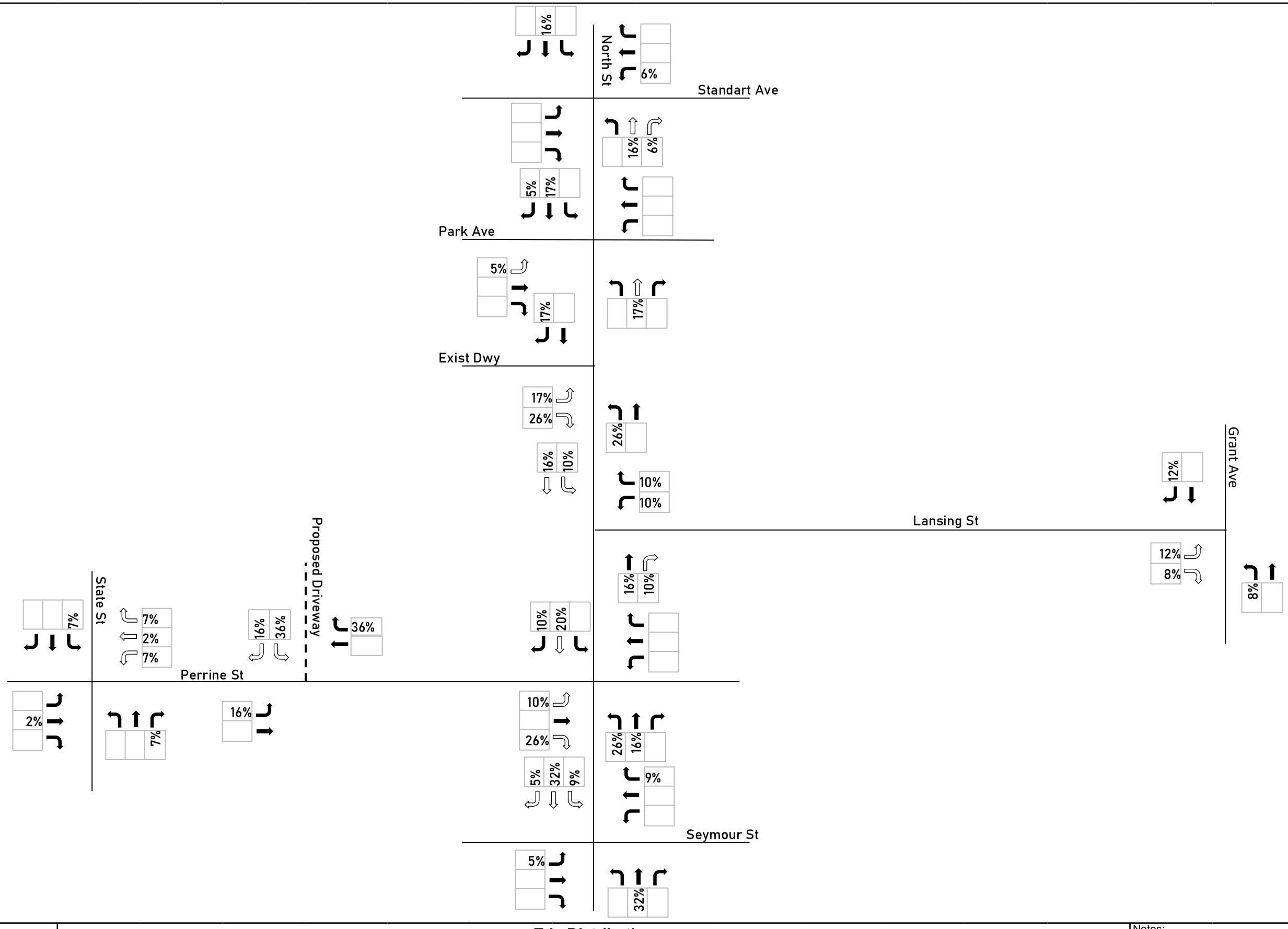
City of Auburn, NY

Notes:

Figure 4b

PN: 20255046.0001

PASSERO engineering architecture
242 West Main Street, Suite 100
Rochester, NY 14614



Trip Distribution

Auburn Community Hospital Health Campus

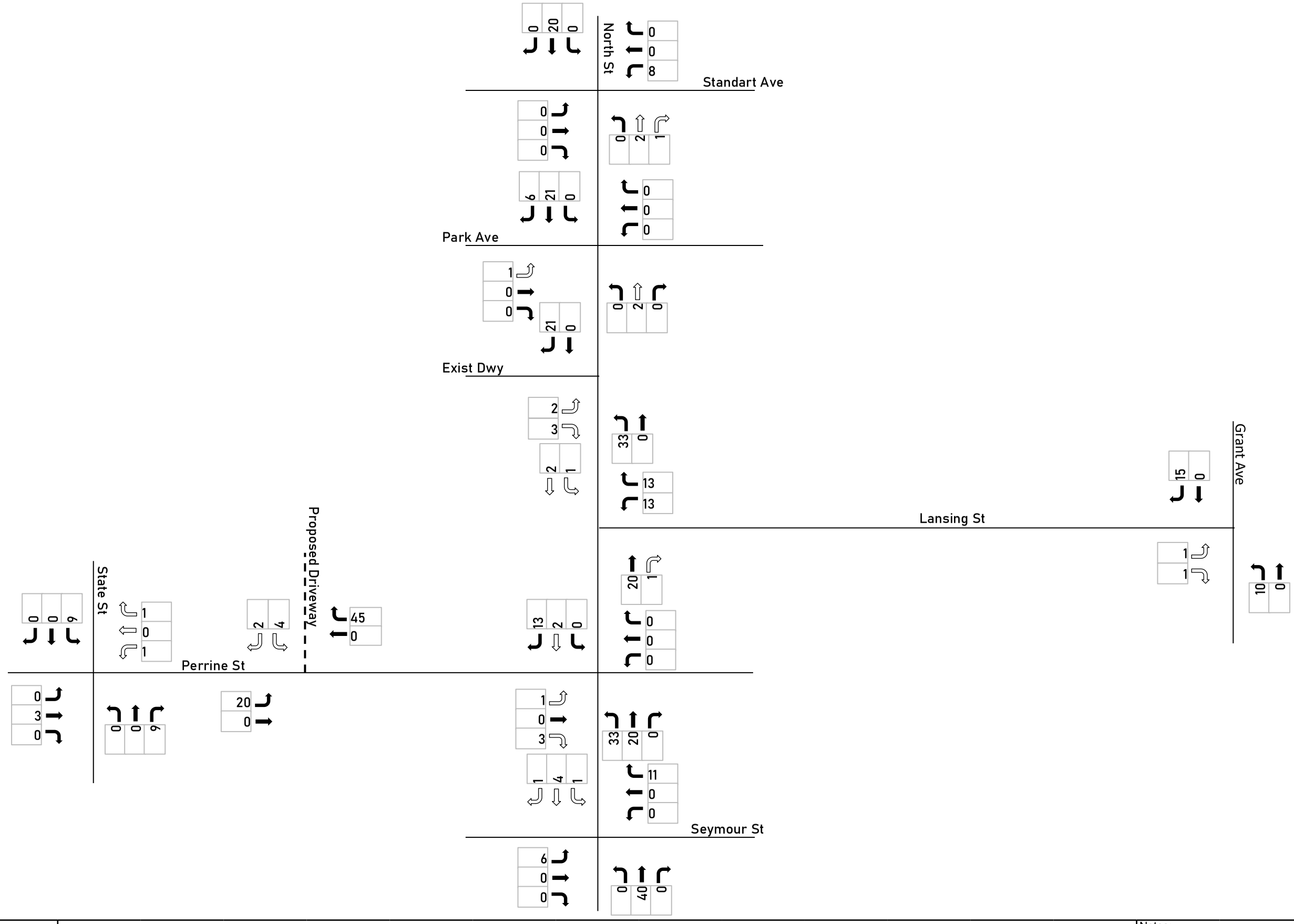
City of Auburn, NY

Notes:

Figure 5

PN: 20255046.0001

PASSERO engineering architecture
242 West Main Street, Suite 100
Rochester, NY 14614



Total Site Trip Assignment - Weekday AM Peak Hour

Auburn Community Hospital Health Campus

City of Auburn, NY

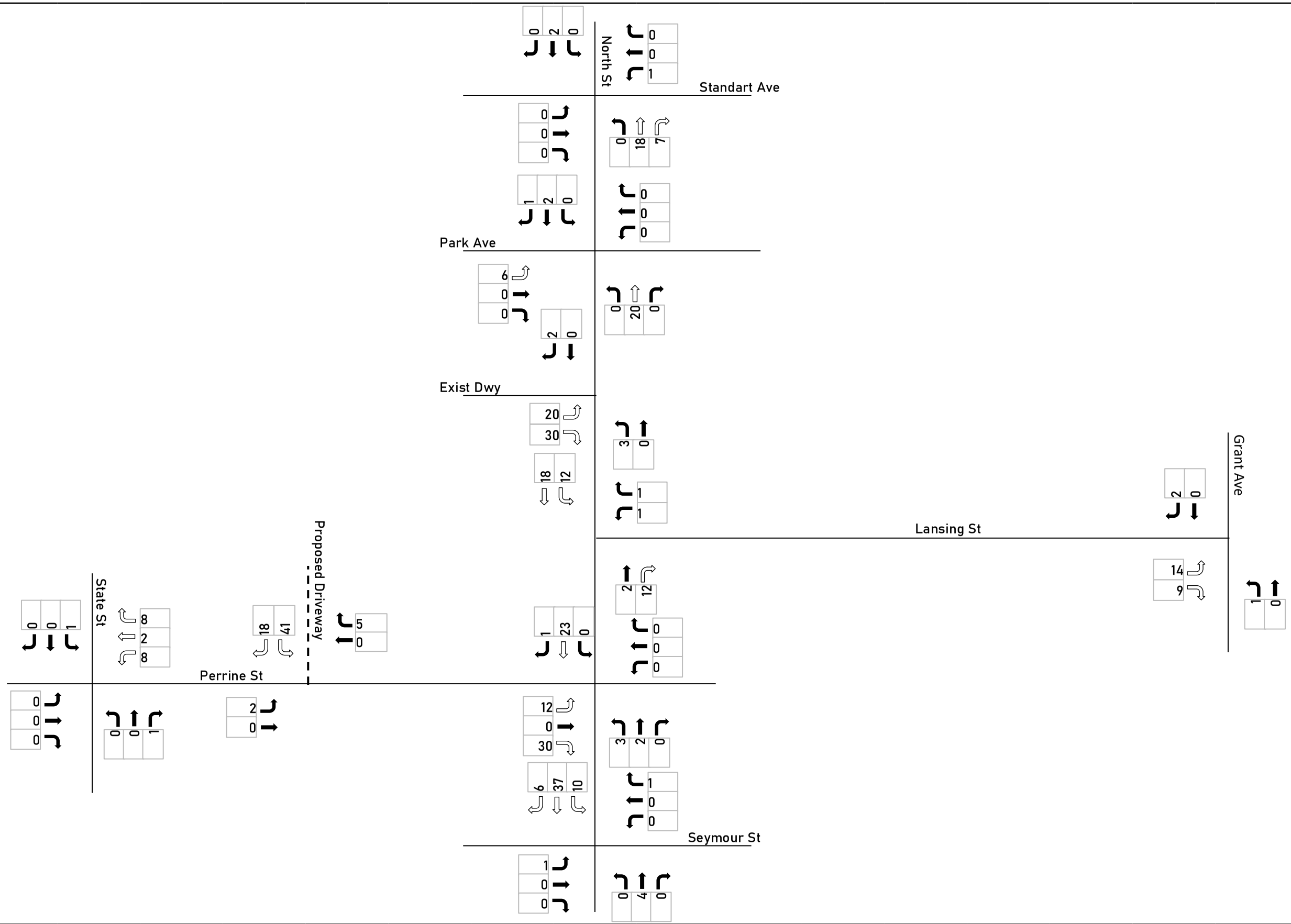
Notes:

Figure 6a

PN: 20255046.0001

PASSERO engineering architecture

242 West Main Street, Suite 100
Rochester, NY 14614



PASSERO engineering architecture

242 West Main Street, Suite 100
Rochester, NY 14614

Total Site Trip Assignment - Weekday PM Peak Hour

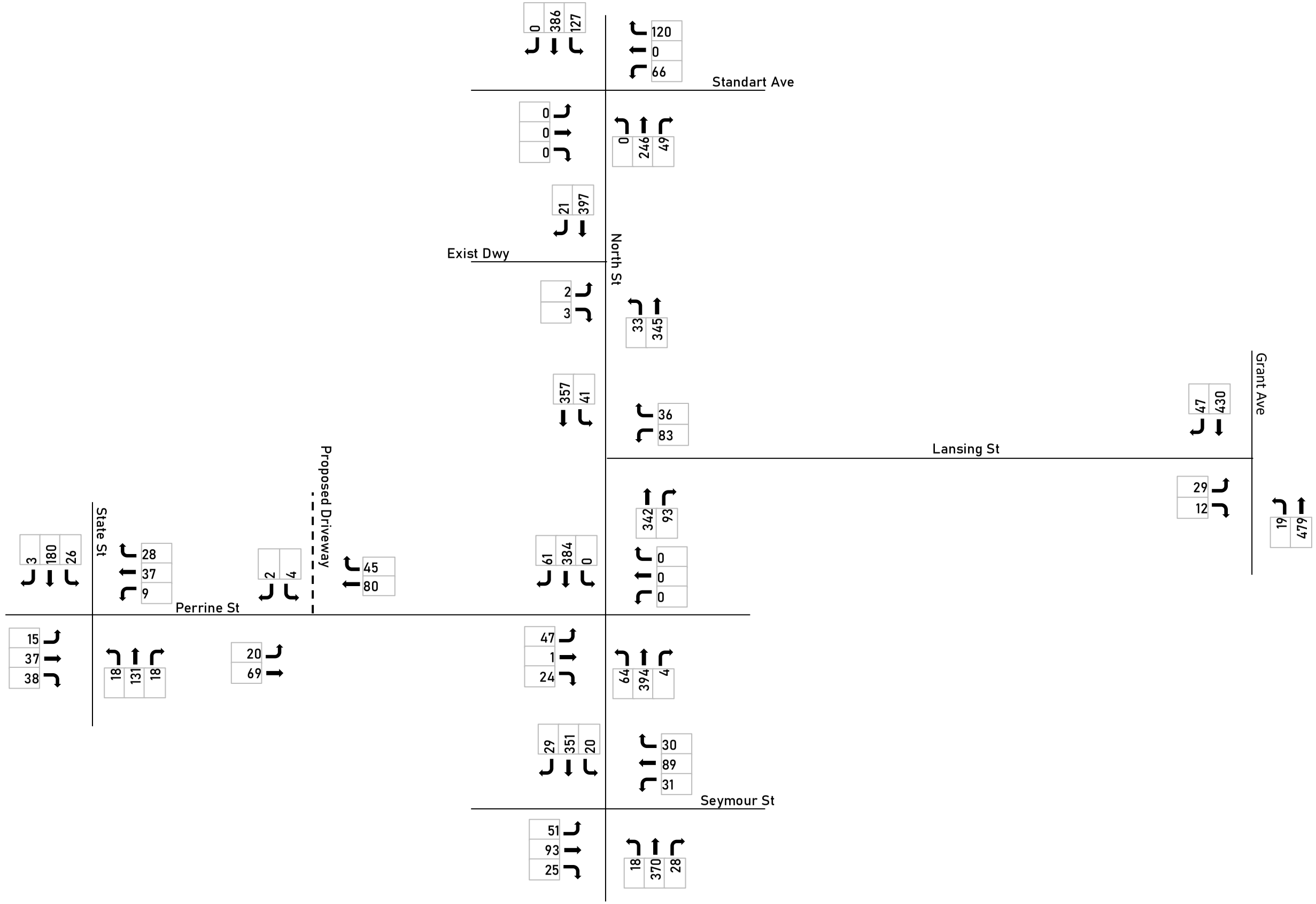
Auburn Community Hospital Health Campus

City of Auburn, NY

Notes:

Figure 6b

PN: 20255046.0001



2027 Full Build Conditions - Weekday AM Peak Hour

Auburn Community Hospital Health Campus

City of Auburn, NY

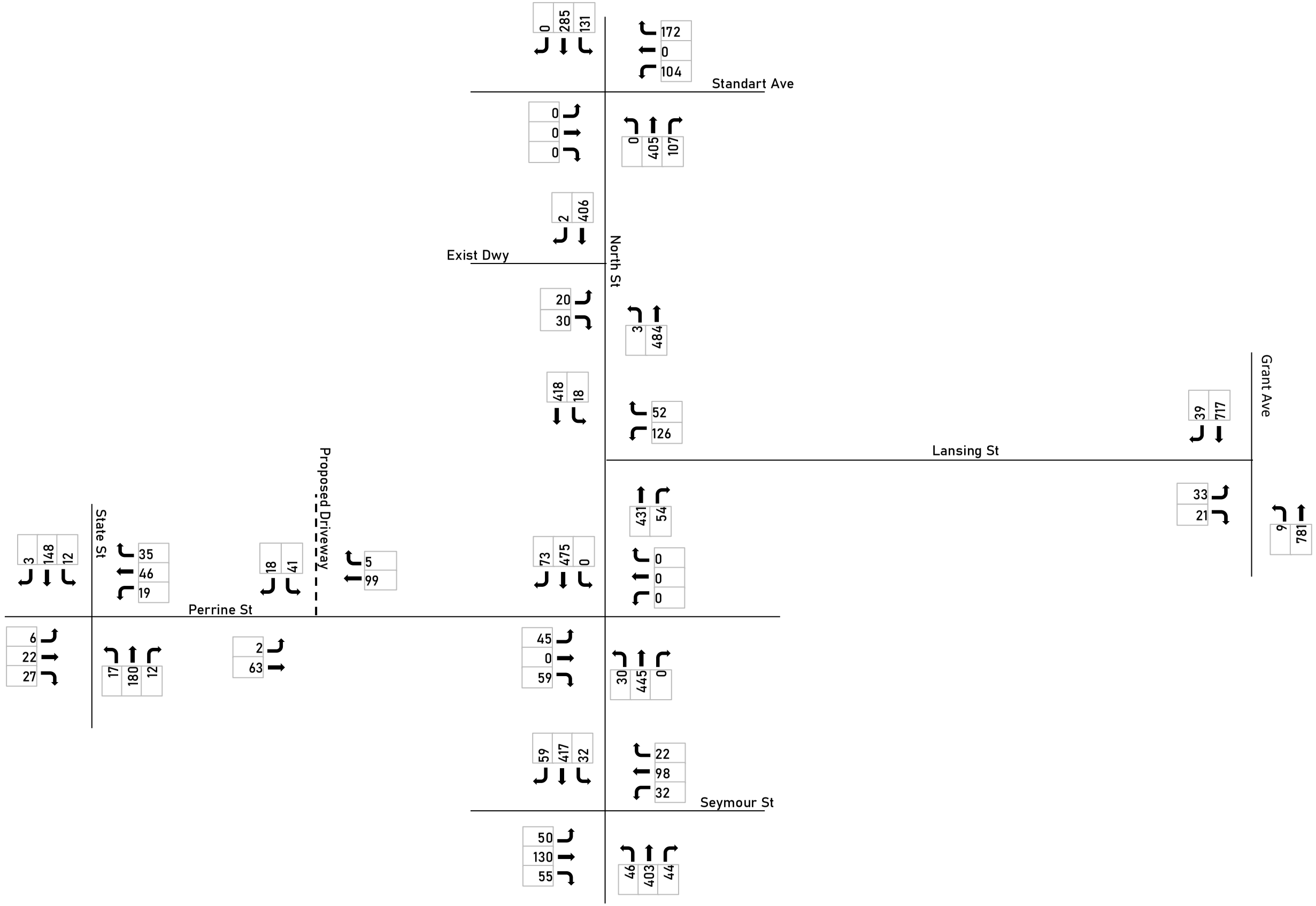
PASSERO engineering architecture

242 West Main Street, Suite 100
Rochester, NY 14614

Notes:

Figure 7a

PN: 20255046.0001



2027 Full Build Conditions - Weekday PM Peak Hour

Auburn Community Hospital Health Campus

City of Auburn, NY

Notes:

Figure 7b

PN: 20255046.0001

PASSERO engineering architecture

242 West Main Street, Suite 100
Rochester, NY 14614

APPENDICES

APPENDIX A: EXISTING TRAFFIC COUNT DATA

Project Name Auburn Medical Office
Location Name North St at Standart Ave
Classification 7:00 AM
Project Date(s) 3/11/2026

		North St				Standart Ave				South St								
		North				East				South				West				
Date	Start Time	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Intersection Total
03/11/2026	7:00 AM	13	66	0	0	8	0	26	0	0	63	5	0	0	0	0	0	181
03/11/2026	7:15 AM	15	69	0	0	13	0	26	0	0	50	6	0	0	0	0	0	179
03/11/2026	7:30 AM	19	101	0	0	12	0	28	0	0	49	13	0	0	0	0	0	222
03/11/2026	7:45 AM	30	124	0	0	16	0	31	0	0	81	12	0	0	0	0	0	294
03/11/2026	7 AM Hourly Total	77	360	0	0	49	0	111	0	0	243	36	0	0	0	0	0	876
03/11/2026	8:00 AM	30	78	0	0	13	0	28	0	0	55	9	0	0	0	0	0	213
03/11/2026	8:15 AM	34	83	0	0	17	0	24	0	0	49	8	0	0	0	0	0	215
03/11/2026	8:30 AM	32	86	0	0	14	0	36	0	0	58	19	0	0	0	0	0	245
03/11/2026	8:45 AM	27	97	0	0	18	0	29	0	0	63	22	0	0	0	0	0	256
03/11/2026	8 AM Hourly Total	123	344	0	0	62	0	117	0	0	225	58	0	0	0	0	0	929
03/11/2026	4:00 PM	30	81	0	0	17	0	35	0	0	133	28	0	0	0	0	0	324
03/11/2026	4:15 PM	37	59	0	0	27	0	48	0	0	93	23	0	0	0	0	0	287
03/11/2026	4:30 PM	32	70	0	0	32	0	46	0	0	95	27	0	0	0	0	0	302
03/11/2026	4:45 PM	31	72	0	0	26	0	41	0	0	70	24	0	0	0	0	0	264
03/11/2026	4 PM Hourly Total	130	282	0	0	102	0	170	0	0	391	102	0	0	0	0	0	1177
03/11/2026	5:00 PM	24	76	0	0	31	0	34	0	0	69	15	0	0	0	0	0	249
03/11/2026	5:15 PM	23	58	0	0	22	0	31	0	0	68	19	0	0	0	0	0	221
03/11/2026	5:30 PM	32	59	0	0	15	0	30	0	0	54	16	0	0	0	0	0	206
03/11/2026	5:45 PM	27	59	0	0	18	0	32	0	1	50	17	0	0	0	1	0	205
03/11/2026	5 PM Hourly Total	106	252	0	0	86	0	127	0	1	241	67	0	0	0	1	0	881
03/11/2026	Project Total	436	1238	0	0	299	0	525	0	1	1100	263	0	0	0	1	0	3863

		North St				Standart Ave				South St								
		North				East				South				West				
Date	Start Time	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Intersection Total
03/11/2026	7:45 AM	30	124	0	0	16	0	31	0	0	81	12	0	0	0	0	0	294
03/11/2026	8:00 AM	30	78	0	0	13	0	28	0	0	55	9	0	0	0	0	0	213
03/11/2026	8:15 AM	34	83	0	0	17	0	24	0	0	49	8	0	0	0	0	0	215
03/11/2026	8:30 AM	32	86	0	0	14	0	36	0	0	58	19	0	0	0	0	0	245
03/11/2026	**AM PEAK HOUR**	**126**	**371**	**0**	**0**	**60**	**0**	**119**	**0**	**0**	**243**	**48**	**0**	**0**	**0**	**0**	**0**	**967** PHF = **0.82**
	HV%	1.6%	5.1%	#DIV/0!	#DIV/0!	6.7%	#DIV/0!	0.8%	#DIV/0!	#DIV/0!	13.2%	6.3%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

03/11/2026	4:00 PM	30	81	0	0	17	0	35	0	0	133	28	0	0	0	0	0	324
03/11/2026	4:15 PM	37	59	0	0	27	0	48	0	0	93	23	0	0	0	0	0	287
03/11/2026	4:30 PM	32	70	0	0	32	0	46	0	0	95	27	0	0	0	0	0	302
03/11/2026	4:45 PM	31	72	0	0	26	0	41	0	0	70	24	0	0	0	0	0	264
03/11/2026	**PM PEAK HOUR**	**130**	**282**	**0**	**0**	**102**	**0**	**170**	**0**	**0**	**391**	**102**	**0**	**0**	**0**	**0**	**0**	**1177** PHF = **0.91**
	HV%	0.0%	2.8%	#DIV/0!	#DIV/0!	1.0%	#DIV/0!	0.6%	#DIV/0!	#DIV/0!	7.4%	1.0%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

N
North St
E
Standart Ave
W
S
South St

Project Name Auburn Medical Office
Location Name North St at 143 North St
Classification 2 Class & NVC
Project Date(s) 3/11/2026

		North St North			North St South			143 North St Driveway West			
Date	**Start Time**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Left**	**Right**	**U-Turn**	**Intersection Total**
03/11/2026	7:00 AM	71	4	0	2	76	0	0	0	0	153
03/11/2026	7:15 AM	75	2	0	1	56	0	1	1	0	136
03/11/2026	7:30 AM	111	2	0	4	66	0	1	0	0	184
03/11/2026	7:45 AM	116	4	0	10	108	0	0	1	0	239
03/11/2026	7 AM Hourly Total	373	12	0	17	306	0	2	2	0	712
03/11/2026	8:00 AM	87	3	0	3	73	0	0	1	0	167
03/11/2026	8:15 AM	90	2	0	1	64	0	1	1	0	159
03/11/2026	8:30 AM	100	3	0	2	97	0	0	2	0	204
03/11/2026	8:45 AM	107	0	0	3	94	0	2	2	0	208
03/11/2026	8 AM Hourly Total	384	8	0	9	328	0	3	6	0	738
03/11/2026	4:00 PM	103	2	0	0	152	0	5	8	0	270
03/11/2026	4:15 PM	87	0	0	2	115	0	6	9	0	219
03/11/2026	4:30 PM	121	0	0	0	111	0	0	0	0	232
03/11/2026	4:45 PM	91	0	0	0	101	0	0	1	0	193
03/11/2026	4 PM Hourly Total	402	2	0	2	479	0	11	18	0	914
03/11/2026	5:00 PM	120	0	0	0	98	0	1	1	0	220
03/11/2026	5:15 PM	89	0	0	0	81	0	0	0	0	170
03/11/2026	5:30 PM	74	0	0	0	75	0	0	0	0	149
03/11/2026	5:45 PM	69	0	0	0	68	0	0	0	0	137
03/11/2026	5 PM Hourly Total	352	0	0	0	322	0	1	1	0	676
03/11/2026	Project Total	1511	22	0	28	1435	0	17	27	0	3040

		North St North			North St South			143 North St Driveway West					
Date	**Start Time**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Left**	**Right**	**U-Turn**	**Intersection Total**		
03/11/2026	7:45 AM	116	4	0	10	108	0	0	1	0	239		
03/11/2026	8:00 AM	87	3	0	3	73	0	0	1	0	167		
03/11/2026	8:15 AM	90	2	0	1	64	0	1	1	0	159		
03/11/2026	8:30 AM	100	3	0	2	97	0	0	2	0	204		
03/11/2026	**AM PEAK HOUR**	**393**	**12**	**0**	**16**	**342**	**0**	**1**	**5**	**0**	**769**	PHF =	**0.80**
	HV%	6.6%	0.0%	#DIV/0!	0.0%	11.1%	#DIV/0!	0.0%	0.0%	#DIV/0!			

03/11/2026	4:00 PM	103	2	0	0	152	0	5	8	0	270		
03/11/2026	4:15 PM	87	0	0	2	115	0	6	9	0	219		
03/11/2026	4:30 PM	121	0	0	0	111	0	0	0	0	232		
03/11/2026	4:45 PM	91	0	0	0	101	0	0	1	0	193		
03/11/2026	**PM PEAK HOUR**	**402**	**2**	**0**	**2**	**479**	**0**	**11**	**18**	**0**	**914**	PHF =	**0.85**
	HV%	2.0%	0.0%	#DIV/0!	0.0%	6.5%	#DIV/0!	0.0%	0.0%	#DIV/0!			

N
North St
W
143 North St Driveway
S
North St

Project Name Auburn Medical Office
Location Name North St at Lansing St
Classification 2 Class & NVC
Project Date(s) 3/11/2026

		North St North			Lansing St East			North St South			
Date	**Start Time**	**Left**	**Thru**	**U-Turn**	**Left**	**Right**	**U-Turn**	**Thru**	**Right**	**U-Turn**	**Intersection Total**
03/11/2026	7:00 AM	11	61	0	23	8	0	70	19	0	192
03/11/2026	7:15 AM	7	68	0	18	7	0	50	15	0	165
03/11/2026	7:30 AM	18	93	0	15	6	0	64	25	0	221
03/11/2026	7:45 AM	12	103	0	16	7	0	112	32	0	282
03/11/2026	7 AM Hourly Total	48	325	0	72	28	0	296	91	0	860
03/11/2026	8:00 AM	13	74	0	19	6	0	68	22	0	202
03/11/2026	8:15 AM	8	84	0	13	7	0	60	19	0	191
03/11/2026	8:30 AM	9	93	0	21	9	0	89	18	0	239
03/11/2026	8:45 AM	13	95	0	19	4	0	95	28	0	254
03/11/2026	8 AM Hourly Total	43	346	0	72	26	0	312	87	0	886
03/11/2026	4:00 PM	4	105	0	41	28	0	124	10	0	312
03/11/2026	4:15 PM	3	93	0	33	9	0	107	14	0	259
03/11/2026	4:30 PM	3	119	0	31	9	0	101	6	0	269
03/11/2026	4:45 PM	3	90	0	19	4	0	95	12	0	223
03/11/2026	4 PM Hourly Total	13	407	0	124	50	0	427	42	0	1063
03/11/2026	5:00 PM	2	117	0	27	11	0	89	12	0	258
03/11/2026	5:15 PM	5	85	0	17	5	0	77	8	0	197
03/11/2026	5:30 PM	1	73	0	19	0	0	76	13	0	182
03/11/2026	5:45 PM	2	64	0	16	7	0	60	11	0	160
03/11/2026	5 PM Hourly Total	10	339	0	79	23	0	302	44	0	797
03/11/2026	Project Total	114	1417	0	347	127	0	1337	264	0	3606

		North St North			Lansing St East			North St South					
Date	**Start Time**	**Left**	**Thru**	**U-Turn**	**Left**	**Right**	**U-Turn**	**Thru**	**Right**	**U-Turn**	**Intersection Total**		
03/11/2026	7:45 AM	12	103	0	16	7	0	112	32	0	282		
03/11/2026	8:00 AM	13	74	0	19	6	0	68	22	0	202		
03/11/2026	8:15 AM	8	84	0	13	7	0	60	19	0	191		
03/11/2026	8:30 AM	9	93	0	21	9	0	89	18	0	239		
03/11/2026	**AM PEAK HOUR**	**42**	**354**	**0**	**69**	**29**	**0**	**329**	**91**	**0**	**914**	PHF =	**0.81**
	HV%	2.4%	7.1%	#DIV/0!	11.6%	0.0%	#DIV/0!	11.6%	5.5%	#DIV/0!			

03/11/2026	4:00 PM	4	105	0	41	28	0	124	10	0	312		
03/11/2026	4:15 PM	3	93	0	33	9	0	107	14	0	259		
03/11/2026	4:30 PM	3	119	0	31	9	0	101	6	0	269		
03/11/2026	4:45 PM	3	90	0	19	4	0	95	12	0	223		
03/11/2026	**PM PEAK HOUR**	**13**	**407**	**0**	**124**	**50**	**0**	**427**	**42**	**0**	**1063**	PHF =	**0.85**
	HV%	0.0%	2.0%	#DIV/0!	6.5%	0.0%	#DIV/0!	7.3%	2.4%	#DIV/0!			

W
N
North St
S
North St
E
Lansing St

Project Name Auburn Medical Office
Location Name North St at Perrine St
Classification 2 Class & NVC
Project Date(s) 3/11/2026

		North St								North St				Perrine St				
		North				East				South				West				
Date	Start Time	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Intersection Total
03/11/2026	7:00 AM	0	81	4	0	0	0	0	0	5	76	0	0	9	0	4	0	179
03/11/2026	7:15 AM	0	85	2	0	0	0	0	0	5	57	0	0	8	0	1	0	158
03/11/2026	7:30 AM	0	101	6	0	0	0	0	0	8	76	0	0	13	0	6	0	210
03/11/2026	7:45 AM	0	112	12	0	0	0	0	0	5	138	0	0	6	0	7	0	280
03/11/2026	7 AM Hourly Total	0	379	24	0	0	0	0	0	23	347	0	0	36	0	18	0	827
03/11/2026	8:00 AM	0	81	11	0	0	0	0	0	8	83	0	0	9	0	4	0	196
03/11/2026	8:15 AM	0	90	10	0	0	0	0	0	10	71	3	0	8	1	2	0	195
03/11/2026	8:30 AM	0	98	15	0	0	0	0	0	8	87	1	0	24	0	8	0	241
03/11/2026	8:45 AM	0	100	15	0	0	0	0	0	6	108	0	0	13	0	7	0	249
03/11/2026	8 AM Hourly Total	0	369	51	0	0	0	0	0	32	349	4	0	54	1	21	0	881
03/11/2026	4:00 PM	0	128	17	0	0	0	0	0	5	133	0	0	5	0	7	0	295
03/11/2026	4:15 PM	0	101	23	0	0	0	0	0	9	110	0	0	9	0	9	0	261
03/11/2026	4:30 PM	0	132	19	0	0	0	0	0	6	101	0	0	7	0	8	0	273
03/11/2026	4:45 PM	0	95	14	0	0	0	0	0	7	97	0	0	12	0	5	0	230
03/11/2026	4 PM Hourly Total	0	456	73	0	0	0	0	0	27	441	0	0	33	0	29	0	1059
03/11/2026	5:00 PM	0	122	22	0	0	0	0	0	6	87	0	0	14	0	5	1	257
03/11/2026	5:15 PM	0	89	14	0	0	0	0	0	8	76	0	0	9	0	6	0	202
03/11/2026	5:30 PM	0	83	8	0	0	0	0	0	2	76	0	0	13	0	8	0	190
03/11/2026	5:45 PM	0	63	19	0	0	0	0	0	6	57	0	0	14	0	5	0	164
03/11/2026	5 PM Hourly Total	0	357	63	0	0	0	0	0	22	296	0	0	50	0	24	1	813
03/11/2026	Project Total	0	1561	211	0	0	0	0	0	104	1433	4	0	173	1	92	1	3580

		North St								North St				Perrine St				
		North				East				South				West				
Date	Start Time	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Intersection Total
03/11/2026	7:45 AM	0	112	12	0	0	0	0	0	5	138	0	0	6	0	7	0	280
03/11/2026	8:00 AM	0	81	11	0	0	0	0	0	8	83	0	0	9	0	4	0	196
03/11/2026	8:15 AM	0	90	10	0	0	0	0	0	10	71	3	0	8	1	2	0	195
03/11/2026	8:30 AM	0	98	15	0	0	0	0	0	8	87	1	0	24	0	8	0	241
03/11/2026	**AM PEAK HOUR**	**0**	**381**	**48**	**0**	**0**	**0**	**0**	**0**	**31**	**379**	**4**	**0**	**47**	**1**	**21**	**0**	**912**
	HV%	#DIV/0!	8.1%	4.2%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	3.2%	11.6%	0.0%	#DIV/0!	0.0%	0.0%	4.8%	#DIV/0!	

PHF = **0.81**

03/11/2026	4:00 PM	0	128	17	0	0	0	0	0	5	133	0	0	5	0	7	0	295
03/11/2026	4:15 PM	0	101	23	0	0	0	0	0	9	110	0	0	9	0	9	0	261
03/11/2026	4:30 PM	0	132	19	0	0	0	0	0	6	101	0	0	7	0	8	0	273
03/11/2026	4:45 PM	0	95	14	0	0	0	0	0	7	97	0	0	12	0	5	0	230
03/11/2026	**PM PEAK HOUR**	**0**	**456**	**73**	**0**	**0**	**0**	**0**	**0**	**27**	**441**	**0**	**0**	**33**	**0**	**29**	**0**	**1059**
	HV%	#DIV/0!	3.3%	1.4%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.0%	7.3%	#DIV/0!	#DIV/0!	0.0%	#DIV/0!	0.0%	#DIV/0!	

PHF = **0.90**

E
S
North St
W
Perrine St
N
North St

Project Name Auburn Medical Office
Location Name North St at Seymour St
Classificatiom 2 Class & NVC
Project Date(s) 3/11/2026

		North St North				Seymour St East				South St South				Seymour St West				
Date	**Start Time**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Intersection Total**
03/11/2026	7:00 AM	1	68	13	0	5	13	3	0	2	65	4	0	8	15	7	0	204
03/11/2026	7:15 AM	7	72	7	0	1	11	5	0	5	52	6	0	8	18	5	0	197
03/11/2026	7:30 AM	8	85	9	0	4	17	7	0	9	69	10	0	13	27	14	0	272
03/11/2026	7:45 AM	6	105	7	0	9	27	8	0	4	114	5	0	13	29	7	0	334
03/11/2026	7 AM Hourly Total	22	330	36	0	19	68	23	0	20	300	25	0	42	89	33	0	1007
03/11/2026	8:00 AM	9	73	6	0	5	23	8	0	4	69	11	0	8	17	5	0	238
03/11/2026	8:15 AM	1	75	7	0	7	18	2	0	3	68	8	0	12	22	7	0	230
03/11/2026	8:30 AM	3	94	8	0	10	20	2	0	7	83	4	0	13	24	6	0	274
03/11/2026	8:45 AM	4	105	8	0	10	23	7	0	5	95	6	0	9	41	6	0	319
03/11/2026	8 AM Hourly Total	17	347	29	0	32	84	19	0	19	315	29	0	42	104	24	0	1061
03/11/2026	4:00 PM	5	113	19	0	10	21	3	0	7	126	14	0	16	24	13	0	371
03/11/2026	4:15 PM	11	86	9	0	8	26	9	0	18	93	6	0	12	33	13	0	324
03/11/2026	4:30 PM	3	102	15	0	6	22	5	0	10	90	13	0	10	32	15	0	323
03/11/2026	4:45 PM	5	81	10	0	8	28	4	0	11	88	11	0	11	40	13	0	310
03/11/2026	4 PM Hourly Total	24	382	53	0	32	97	21	0	46	397	44	0	49	129	54	0	1328
03/11/2026	5:00 PM	6	98	17	0	6	28	8	0	9	78	15	0	9	27	15	0	316
03/11/2026	5:15 PM	5	77	11	0	7	28	10	0	19	65	10	0	12	41	11	0	296
03/11/2026	5:30 PM	6	67	8	0	6	29	3	0	7	67	11	0	8	30	7	0	249
03/11/2026	5:45 PM	4	62	7	0	5	25	5	0	12	48	10	0	4	24	11	0	217
03/11/2026	5 PM Hourly Total	21	304	43	0	24	110	26	0	47	258	46	0	33	122	44	0	1078
03/11/2026	Project Total	84	1363	161	0	107	359	89	0	132	1270	144	0	166	444	155	0	4474

		North St North				Seymour St East				South St South				Seymour St West				
Date	**Start Time**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Intersection Total**
03/11/2026	7:45 AM	6	105	7	0	9	27	8	0	4	114	5	0	13	29	7	0	334
03/11/2026	8:00 AM	9	73	6	0	5	23	8	0	4	69	11	0	8	17	5	0	238
03/11/2026	8:15 AM	1	75	7	0	7	18	2	0	3	68	8	0	12	22	7	0	230
03/11/2026	8:30 AM	3	94	8	0	10	20	2	0	7	83	4	0	13	24	6	0	274
03/11/2026	**AM PEAK HOUR**	**19**	**347**	**28**	**0**	**31**	**88**	**20**	**0**	**18**	**334**	**28**	**0**	**46**	**92**	**25**	**0**	**1076**
	HV%	5.3%	10.4%	0.0%	#DIV/0!	0.0%	6.8%	5.0%	#DIV/0!	0.0%	12.0%	25.0%	#DIV/0!	4.3%	5.4%	8.0%	#DIV/0!	

PHF = **0.81**

03/11/2026	4:00 PM	5	113	19	0	10	21	3	0	7	126	14	0	16	24	13	0	371
03/11/2026	4:15 PM	11	86	9	0	8	26	9	0	18	93	6	0	12	33	13	0	324
03/11/2026	4:30 PM	3	102	15	0	6	22	5	0	10	90	13	0	10	32	15	0	323
03/11/2026	4:45 PM	5	81	10	0	8	28	4	0	11	88	11	0	11	40	13	0	310
03/11/2026	**PM PEAK HOUR**	**24**	**382**	**53**	**0**	**32**	**97**	**21**	**0**	**46**	**397**	**44**	**0**	**49**	**129**	**54**	**0**	**1328**
	HV%	0.0%	4.2%	0.0%	#DIV/0!	0.0%	0.0%	0.0%	#DIV/0!	0.0%	8.3%	13.6%	#DIV/0!	0.0%	0.0%	0.0%	#DIV/0!	

PHF = **0.89**

S
South St
E
Seymour St
W
Seymour St
N
North St

Project Name Auburn Medical Office
Location Name Perrine St at State St
Classification 2 Class & NVC
Project Date(s) 3/11/2026

		State St North				Perrine St East				State St South				Perrine St West				
Date	**Start Time**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Intersection Total**
03/11/2026	7:00 AM	3	24	0	0	0	6	2	0	0	17	3	0	1	3	3	0	62
03/11/2026	7:15 AM	2	48	1	0	0	2	2	0	1	14	1	0	0	7	3	0	81
03/11/2026	7:30 AM	6	51	0	0	6	1	10	0	2	28	1	0	1	6	2	0	114
03/11/2026	7:45 AM	2	66	2	0	2	3	10	0	3	33	3	0	0	5	5	0	134
03/11/2026	7 AM Hourly Total	13	189	3	0	8	12	24	0	6	92	8	0	2	21	13	0	391
03/11/2026	8:00 AM	6	42	0	0	2	9	5	0	3	40	3	0	2	2	2	0	116
03/11/2026	8:15 AM	2	28	1	0	3	14	7	0	4	31	2	0	1	7	6	0	106
03/11/2026	8:30 AM	7	42	0	0	1	11	5	0	8	26	2	0	12	20	25	0	159
03/11/2026	8:45 AM	0	40	0	0	4	10	5	0	3	25	5	0	7	11	12	0	122
03/11/2026	8 AM Hourly Total	15	152	1	0	10	44	22	0	18	122	12	0	22	40	45	0	503
03/11/2026	4:00 PM	3	48	2	0	2	10	4	0	1	57	1	0	2	5	8	0	143
03/11/2026	4:15 PM	2	33	1	0	4	11	10	0	4	49	4	0	3	6	2	0	129
03/11/2026	4:30 PM	3	35	0	0	5	12	6	0	6	32	2	0	0	4	8	0	113
03/11/2026	4:45 PM	3	31	0	0	1	11	8	0	6	40	4	0	1	7	9	0	121
03/11/2026	4 PM Hourly Total	11	147	3	0	12	44	28	0	17	178	11	0	6	22	27	0	506
03/11/2026	5:00 PM	6	35	2	0	2	14	7	0	6	31	1	0	1	7	10	0	122
03/11/2026	5:15 PM	3	40	1	0	7	11	6	0	5	33	6	0	0	9	7	0	128
03/11/2026	5:30 PM	2	33	3	0	1	9	1	0	7	37	3	0	2	14	6	0	118
03/11/2026	5:45 PM	8	23	1	0	2	12	5	0	0	26	2	0	0	9	5	0	93
03/11/2026	5 PM Hourly Total	19	131	7	0	12	46	19	0	18	127	12	0	3	39	28	0	461
03/11/2026	Project Total	58	619	14	0	42	146	93	0	59	519	43	0	33	122	113	0	1861

		State St North				Perrine St East				State St South				Perrine St West					
Date	**Start Time**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Intersection Total**	
03/11/2026	7:45 AM	2	66	2	0	2	3	10	0	3	33	3	0	0	5	5	0	134	
03/11/2026	8:00 AM	6	42	0	0	2	9	5	0	3	40	3	0	2	2	2	0	116	
03/11/2026	8:15 AM	2	28	1	0	3	14	7	0	4	31	2	0	1	7	6	0	106	
03/11/2026	8:30 AM	7	42	0	0	1	11	5	0	8	26	2	0	12	20	25	0	159	
03/11/2026	**AM PEAK HOUR**	**17**	**178**	**3**	**0**	**8**	**37**	**27**	**0**	**18**	**130**	**10**	**0**	**15**	**34**	**38**	**0**	**515**	PHF = **0.81**
	HV%	11.8%	5.6%	33.3%	#DIV/0!	0.0%	2.7%	7.4%	#DIV/0!	0.0%	9.2%	10.0%	#DIV/0!	26.7%	2.9%	10.5%	#DIV/0!		

03/11/2026	4:00 PM	3	48	2	0	2	10	4	0	1	57	1	0	2	5	8	0	143	
03/11/2026	4:15 PM	2	33	1	0	4	11	10	0	4	49	4	0	3	6	2	0	129	
03/11/2026	4:30 PM	3	35	0	0	5	12	6	0	6	32	2	0	0	4	8	0	113	
03/11/2026	4:45 PM	3	31	0	0	1	11	8	0	6	40	4	0	1	7	9	0	121	
03/11/2026	**PM PEAK HOUR**	**11**	**147**	**3**	**0**	**12**	**44**	**28**	**0**	**17**	**178**	**11**	**0**	**6**	**22**	**27**	**0**	**506**	PHF = **0.88**
	HV%	0.0%	1.4%	0.0%	#DIV/0!	0.0%	0.0%	3.6%	#DIV/0!	0.0%	2.8%	0.0%	#DIV/0!	0.0%	0.0%	0.0%	#DIV/0!		

S
State St
E
Perrine St
W
Perrine St
N
State St

Project Name Auburn Medical Office
Location Name Lansing St at Grant Ave
Classification 2 Class & NVC
Project Date(s) 3/11/2026

		Grant Ave North			Grant Ave South			Lansing Ave West			
Date	**Start Time**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Left**	**Right**	**U-Turn**	**Intersection Total**
03/11/2026	7:00 AM	79	4	0	3	92	0	5	8	0	191
03/11/2026	7:15 AM	88	4	0	0	103	0	6	1	0	202
03/11/2026	7:30 AM	97	15	0	4	112	0	1	2	0	231
03/11/2026	7:45 AM	121	19	0	5	112	0	8	3	0	268
03/11/2026	7 AM Hourly Total	385	42	0	12	419	0	20	14	0	892
03/11/2026	8:00 AM	106	6	0	2	122	0	5	5	0	246
03/11/2026	8:15 AM	93	8	0	2	115	0	5	2	0	225
03/11/2026	8:30 AM	106	3	0	2	125	0	11	2	0	249
03/11/2026	8:45 AM	113	15	0	7	146	0	5	2	0	288
03/11/2026	8 AM Hourly Total	418	32	0	13	508	0	26	11	0	1008
03/11/2026	4:00 PM	168	5	0	1	206	0	7	6	0	393
03/11/2026	4:15 PM	175	9	0	2	208	0	6	4	0	404
03/11/2026	4:30 PM	181	11	0	2	174	0	3	3	0	374
03/11/2026	4:45 PM	186	12	0	3	185	0	7	2	0	395
03/11/2026	4 PM Hourly Total	710	37	0	8	773	0	23	15	0	1566
03/11/2026	5:00 PM	221	10	0	3	163	0	6	7	0	410
03/11/2026	5:15 PM	187	12	0	1	172	0	6	1	0	379
03/11/2026	5:30 PM	174	8	0	1	148	0	8	3	0	342
03/11/2026	5:45 PM	158	8	0	4	111	0	2	3	0	286
03/11/2026	5 PM Hourly Total	740	38	0	9	594	0	22	14	0	1417
03/11/2026	Project Total	2253	149	0	42	2294	0	91	54	0	4883

		Grant Ave North			Grant Ave South			Lansing Ave West				
Date	**Start Time**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Left**	**Right**	**U-Turn**	**Intersection Total**	
03/11/2026	7:45 AM	121	19	0	5	112	0	8	3	0	268	
03/11/2026	8:00 AM	106	6	0	2	122	0	5	5	0	246	
03/11/2026	8:15 AM	93	8	0	2	115	0	5	2	0	225	
03/11/2026	8:30 AM	106	3	0	2	125	0	11	2	0	249	
03/11/2026	**AM PEAK HOUR**	**426**	**36**	**0**	**11**	**474**	**0**	**29**	**12**	**0**	**988**	PHF = **0.92**
	HV%	2.8%	0.0%	#DIV/0!	0.0%	3.4%	#DIV/0!	0.0%	8.3%	#DIV/0!		

03/11/2026	4:00 PM	168	5	0	1	206	0	7	6	0	393	
03/11/2026	4:15 PM	175	9	0	2	208	0	6	4	0	404	
03/11/2026	4:30 PM	181	11	0	2	174	0	3	3	0	374	
03/11/2026	4:45 PM	186	12	0	3	185	0	7	2	0	395	
03/11/2026	**PM PEAK HOUR**	**710**	**37**	**0**	**8**	**773**	**0**	**23**	**15**	**0**	**1566**	PHF = **0.97**
	HV%	1.0%	0.0%	#DIV/0!	12.5%	0.9%	#DIV/0!	0.0%	0.0%	#DIV/0!		

N
Grant Ave
W
Lansing Ave
S
Grant Ave

APPENDIX B: MISCELLANEOUS CALCULATIONS

Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green	4	12	12			12	12	
Gap, Ext	1	6	6			6	6	
Max 1	9	29	32			42	32	
Max 2								
Yel Clearance	3.5	3.5	3	3.5	3.5	3.5	3	3.5
Red Clearance	2	2	2	1.5	1.5	2	2	1.5
Walk		16	13			16	13	
Ped Clearance		13	18			13	18	
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								

Options [1.1.2]

	1	2	3	4	5	6	7	8
Enable	ON	ON	ON			ON	ON	
Min Recall								
Max Recall						ON		
Ped Recall								
Soft Recall								
Lock Calls		ON	ON				ON	
Auto Flash Entry								
Auto Flash Exit								
Dual Entry		ON	ON			ON	ON	
Enable Simul Gap	ON	ON	ON	ON	ON	ON	ON	ON
Gaurantee Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								

Options+ [1.1.3]

	1	2	3	4	5	6	7	8
Reservice								
PedClr Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Call Phase								
Conflicting Phase								
Omit Yellow								
Ped Delay								
Grn/Ped Delay								

1901 34 @ SEYMOUR

Coordination Patterns [2.4] and Coordination Split Tables [2.7.1]

Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq
1	0	0	1	1	13	0	0	13	1	25	0	0	0	1	37	0	0	0	1
2	0	0	2	1	14	0	0	14	1	26	0	0	0	1	38	0	0	0	1
3	0	0	3	1	15	0	0	15	1	27	0	0	0	1	39	0	0	0	1
4	0	0	4	1	16	0	0	16	1	28	0	0	0	1	40	0	0	0	1
5	0	0	5	1	17	0	0	17	1	29	0	0	0	1	41	0	0	0	1
6	0	0	6	1	18	0	0	18	1	30	0	0	0	1	42	0	0	0	1
7	0	0	7	1	19	0	0	19	1	31	0	0	0	1	43	0	0	0	1
8	0	0	8	1	20	0	0	20	1	32	0	0	0	1	44	0	0	0	1
9	0	0	9	1	21	0	0	21	1	33	0	0	0	1	45	0	0	0	1
10	0	0	10	1	22	0	0	22	1	34	0	0	0	1	46	0	0	0	1
11	0	0	11	1	23	0	0	23	1	35	0	0	0	1	47	0	0	0	1
12	0	0	12	1	24	0	0	24	1	36	0	0	0	1	48	0	0	0	1

Split		1	2	3	4	5	6	7	8	Split		1	2	3	4	5	6	7	8
1	Coor	0	0	0	0	0	0	0	0	13	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
2	Coor	0	0	0	0	0	0	0	0	14	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
3	Coor	0	0	0	0	0	0	0	0	15	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
4	Coor	0	0	0	0	0	0	0	0	16	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
5	Coor	0	0	0	0	0	0	0	0	17	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
6	Coor	0	0	0	0	0	0	0	0	18	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
7	Coor	0	0	0	0	0	0	0	0	19	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
8	Coor	0	0	0	0	0	0	0	0	20	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
9	Coor	0	0	0	0	0	0	0	0	21	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
10	Coor	0	0	0	0	0	0	0	0	22	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
11	Coor	0	0	0	0	0	0	0	0	23	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
12	Coor	0	0	0	0	0	0	0	0	24	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON

Page#	
1	8 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
1A&1B	16 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
2	Overlaps; Channel Settings; Coord Alt Table+ (values not associated with time-of-day)
3	Detection; Sample Time and Unit Parameters related to detection
4	Preemption and Alternate Phase Time and Phase Options
5	Annual Schedule
6	Day Plans; Action Tables; Coord Alt Table+ (values varied by time-of-day)
7	Communications; Secutiry; I/O Setup
8	Misc - Events/Alarms; Call/Inhibit/Redirect; P/OLAP Auto Flash; CIC; Misc Unit Param

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Ring/Startup [1.1.4]

Phs	Ring	Start	Enable
1	1	Red	ON
2	1	Red	ON
3	1	Red	ON
4	1	Red	OFF
5	2	Red	OFF
6	2	Red	ON
7	2	Red	ON
8	2	Red	OFF

Coord Modes [2.1]

Test OpMode	0
Correction	SHRT/LNG
Maximum	MAX 1
Force-Off	Float
Closed Loop	ON
Stop-in-Walk	OFF
Auto Reset	ON
Expand Splt	
Ped Recycle	NO_RECYCLE
Before	TIMED
After	TIMED

Auto Flash [1.4.1]

Auto Flash	PH_OVLP
Flash Yel	45
Flash Red	20

Unit Params [1.2.1]

Phase Mode	STD8
IO Mode	User
Loc Flsh Start	Red
Start Flash(s)	0
Start AllRed(s)	6
Yellow < 3"	OFF
Display Time	20
Red Revert	3
MCE Timeout	0
Feature Profile	
Free Ring Seq	1
Auxswitch	STOPTM
SDLC Retry	0
TS2 Det Faults	ON
Auto Ped Clear	OFF
SDLC Retry	0

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Overlap 1-16 Program Parms & Parm+ [1.5.2.1] [1.5.2.2]

Overlap Conflict Lock	OFF	Overlap Lock Inhibit	OFF	Parent Ph Clearance	ON	Extra Included Ph	OFF

	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
1	Modifier Ø								Grn		9	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
A	Conflict Olap								Red	1.5	I	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
2	Modifier Ø								Grn		10	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
B	Conflict Olap								Red	1.5	J	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
3	Modifier Ø								Grn		11	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
C	Conflict Olap								Red	1.5	K	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
4	Modifier Ø								Grn		12	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
D	Conflict Olap								Red	1.5	L	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
5	Modifier Ø								Grn		13	Modifier Ø									Grn	
	Conflo0l								Yel	3.5		Conflict Ø									Yel	3.5
E	Conflict Olap								Red	1.5	M	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
6	Modifier Ø								Grn		14	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
F	Conflict Olap								Red	1.5	N	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
7	Modifier Ø								Grn		15	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
G	Conflict Olap								Red	1.5	O	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
8	Modifier Ø								Grn		16	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
H	Conflict Olap								Red	1.5	P	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	

Channel Settings [1.8.1]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	6	2	7	2	3	3		6															
Channel Type	VEH	VEH	VEH	VEH	PED	PED	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Channel Flash	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Alt Hz																								

Channel+ Settings [1.8.4]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Flash Red+																								
Flash Yellow+																								
Flash Green+																								
Flash Inh Red+																								
Olap Ovrd																								

Coord Transition, CoorPhs [2.5]

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	RetHld	Float	Min Veh Perm	Min Ped Perm
1	12	22							EndGRN				
2	12	22							EndGRN				
3	12	22							EndGRN				
4	12	22							EndGRN				
5	12	22							EndGRN				
6	12	22							EndGRN				
7	12	22							EndGRN				
8	12	22							EndGRN				
9	12	22							EndGRN				
10	12	22							EndGRN				
11	12	22							EndGRN				
12	12	22							EndGRN				
13	12	22							EndGRN				
14	12	22							EndGRN				
15	12	22							EndGRN				
16	12	22							EndGRN				
17	12	22							EndGRN				
18	12	22							EndGRN				
19	12	22							EndGRN				
20	12	22							EndGRN				
21	12	22							EndGRN				
22	12	22							EndGRN				
23	12	22							EndGRN				
24	12	22							EndGRN				
25									BegGRN				
26									BegGRN				
27									BegGRN				
28									BegGRN				
29									BegGRN				
30									BegGRN				
31									BegGRN				
32									BegGRN				
33									BegGRN				
34									BegGRN				
35									BegGRN				
36									BegGRN				
37									BegGRN				
38									BegGRN				
39									BegGRN				
40									BegGRN				
41									BegGRN				
42									BegGRN				
43									BegGRN				
44									BegGRN				
45									BegGRN				
46									BegGRN				
47									BegGRN				
48									BegGRN				

Channel Params[1.8.3]

C1 IO Mode	User	Single BIU Map	DEFAULT	Invert Rail Input	OFF

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
1	1						45	50	2
2	6						45	50	2
3	3						45	50	2
4	7						45	50	2
5	2						45	50	2
6							45	50	2
7							45	50	2
8							45	50	2
9							45	50	2
10							45	50	2
11							45	50	2
12							45	50	2
13							45	50	2
14							45	50	2
15							45	50	2
16							45	50	2
17							45	50	2
18							45	50	2
19							45	50	
20							45	50	
21							45	50	
22							45	50	
23							45	50	
24							45	50	
25							45	50	
26							45	50	
27							45	50	
28							45	50	
29							45	50	
30							45	50	
31							45	50	
32							45	50	

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
33							45	50	
34							45	50	
35							45	50	
36							45	50	
37							45	50	
38							45	50	
39							45	50	
40							45	50	
41							45	50	
42							45	50	
43							45	50	
44							45	50	
45							45	50	
46							45	50	
47							45	50	
48							45	50	
49							45	50	
50							45	50	
51							45	50	
52							45	50	
53							45	50	
54							45	50	
55							45	50	
56							45	50	
57							45	50	
58							45	50	
59							45	50	
60							45	50	
61							45	50	
62							45	50	
63							45	50	
64							45	50	

Vehicle Options 1-64 [5.2]

Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol
1	ON	ON		ON				
2	ON	ON		ON				
3	ON	ON		ON				
4	ON	ON		ON				
5	ON	ON		ON				
6	ON	ON		ON				
7	ON	ON		ON				
8	ON	ON		ON				
9	ON	ON		ON				
10	ON	ON		ON				
11	ON	ON		ON				
12	ON	ON		ON				
13	ON	ON		ON				
14	ON	ON		ON				
15	ON	ON		ON				
16	ON	ON		ON				
17	ON	ON		ON				
18	ON	ON		ON				
19	ON	ON		ON				
20	ON	ON		ON				
21	ON	ON		ON				
22	ON	ON		ON				
23	ON	ON		ON				
24	ON	ON		ON				
25	ON	ON		ON				
26	ON	ON		ON				
27	ON	ON		ON				
28	ON	ON		ON				
29	ON	ON		ON				
30	ON	ON		ON				
31	ON	ON		ON				
32	ON	ON		ON				

Vehicle Options 1-64 [5.2]

Det #	vol	occ	Yell Lock	Red Lock	Ext	Add Init	Que	Call
33					ON	ON		ON
34					ON	ON		ON
35					ON	ON		ON
36					ON	ON		ON
37					ON	ON		ON
38					ON	ON		ON
39					ON	ON		ON
40					ON	ON		ON
41					ON	ON		ON
42					ON	ON		ON
43					ON	ON		ON
44					ON	ON		ON
45					ON	ON		ON
46					ON	ON		ON
47					ON	ON		ON
48					ON	ON		ON
49					ON	ON		ON
50					ON	ON		ON
51					ON	ON		ON
52					ON	ON		ON
53					ON	ON		ON
54					ON	ON		ON
55					ON	ON		ON
56					ON	ON		ON
57					ON	ON		ON
58					ON	ON		ON
59					ON	ON		ON
60					ON	ON		ON
61					ON	ON		ON
62					ON	ON		ON
63					ON	ON		ON
64					ON	ON		ON

Parameters+ 1-64 [5.3]

Det #	oc G	oc Y	oc R	Dlay 1	Dlay 2	Type	Src
1						NORM	
2						NORM	
3						NORM	
4						NORM	
5						NORM	
6						NORM	
7						NORM	
8						NORM	
9						NORM	
10						NORM	
11						NORM	
12						NORM	
13						NORM	
14						NORM	
15						NORM	
16						NORM	
17						NORM	
18						NORM	
19						NORM	
20						NORM	
21						NORM	
22						NORM	
23						NORM	
24						NORM	
25						NORM	
26						NORM	
27						NORM	
28						NORM	
29						NORM	
30						NORM	
31						NORM	
32						NORM	

Parameters+ 1-64 [5.3]

Det #	occ Grn	occ Yell	occ Red	Dlay 1	Dlay 2	Type	Src
33						NORM	
34						NORM	
35						NORM	
36						NORM	
37						NORM	
38						NORM	
39						NORM	
40						NORM	
41						NORM	
42						NORM	
43						NORM	
44						NORM	
45						NORM	
46						NORM	
47						NORM	
48						NORM	
49						NORM	
50						NORM	
51						NORM	
52						NORM	
53						NORM	
54						NORM	
55						NORM	
56						NORM	
57						NORM	
58						NORM	
59						NORM	
60						NORM	
61						NORM	
62						NORM	
63						NORM	
64						NORM	

Ped Det Parms [5.4]

Det #	Call Ø	No Act	Max Pres	Err Cnt
1	2		15	
2	2		15	
3	3		15	
4	3		15	
5			15	
6			15	
7			15	
8			15	

Unit Paramters [1.2.1]

TS2 Det Faults		ON

Vol/Occ Report Parm [1.5.8]

Vol/Occ Period Minutes	0
Vol/Occ Period Minutes	15

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Preemption Times [3.1], Options+ [3.6]

Pre #	Enable	Type	Output	Delay	MinDura
1	ON	RAIL	Dwell		
2	ON	RAIL	Dwell		
3	ON	EMERG	Dwell		
4	ON	EMERG	Dwell		
5	ON	EMERG	Dwell		
6	ON	EMERG	Dwell		

Pre #	MaxPres	MinGrn	MinWlk	PedClr	Co+Pre
1					ON
2					ON
3					ON
4					ON
5					ON
6					ON

Pre #	Track Grn	Min Dwell	Ext Dwell	PedClr+	Yel
1		2			
2		2			
3		2			
4		2			
5		2			
6		2			

Pre #	Red	Pattern	Skip
1			OFF
2			OFF
3			OFF
4			OFF
5			OFF
6			OFF

Low Priority Preempts

Pre #	Type	Min	Max
7	OFF		
8	OFF		
9	OFF		
10	OFF		

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	PRE
Max Seek Track Time	
Max Seek Dwell Time	

Channel Parameters [1.8.3]

D Conn Mappings	OFF
Pre Invert Rail Input	None

Track Clear Phases [3.2], Track Clear Overlaps+ [3.5]

Pre #	Track Phases				Track Overlaps											
1																
2																
3																
4																
5																
6																

Dwell Phases [3.2] and Overlaps+ [3.5]

Pre #														
1	Phases													
	Overlaps													
	Peds													
2	Phases													
	Overlaps													
	Peds													
3	Phases													
	Overlaps													
	Peds													
4	Phases													
	Overlaps													
	Peds													
5	Phases													
	Overlaps													
	Peds													
6	Phases													
	Overlaps													
	Peds													

Exit Phases [3.2]

Pre #	Exit Phase			
1				
2				
3				
4				
5				
6				

Preemption 1, Options+ [3.6]

Pre #	Lock	Override Auto Flsh		Override Higher		Flsh Dwell	Link
1	ON		ON		ON		OFF	
2	ON		ON		ON		OFF	
3	ON		ON		ON		OFF	
4	ON		ON		ON		OFF	
5	ON		ON		ON		OFF	
6	ON		ON		ON		OFF	

Alt# 1 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	ON	ON	ON	ON	ON	ON	ON	ON
Soft Recall								
Dual Enrty								
Enabl SimGap	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Annual Schedule [4.3] **Month of Year** **Day of Week** **Date** **Day Plan** **Link To**

	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Day Plan	Link To
1																																																			1	
2																																																			1	
3																																																			1	
4																																																			1	
5																																																			1	
6																																																			1	
7																																																			1	
8																																																			1	
9																																																			1	
10																																																			1	
11																																																			1	
12																																																			1	
13																																																			1	
14																																																			1	
15																																																			1	
16																																																			1	
17																																																			1	
18																																																			1	
19																																																			1	
20																																																			1	
21																																																			1	
22																																																			1	
23																																																			1	
24																																																			1	

Day Plans [4.4]

Day Plan 1

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 2

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 3

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 4

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 5

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 6

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 7

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 8

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 9

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 10

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 11

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 12

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 13

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 14

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 15

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Action Table [4.5]

Act#	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
48												
98												
99												
100	255											

Coord Alternate Tables - Pat+ [2.6]

							Overlap Off									
Pat#	ØOpt	ØTime	DetG	Call Inh	CIC	CNA1	1	2	3	4	5	6	7	8	Dia	Max2
1															DFT	
2															DFT	
3															DFT	
4															DFT	
5															DFT	
6															DFT	
7															DFT	
8															DFT	
9															DFT	
10															DFT	
11															DFT	
12															DFT	
13															DFT	
14															DFT	
15															DFT	
16															DFT	
17															DFT	
18															DFT	
19															DFT	
20															DFT	
21															DFT	
22															DFT	
23															DFT	
24															DFT	
25															DFT	
26															DFT	
27															DFT	
28															DFT	
29															DFT	
30															DFT	
31															DFT	
32															DFT	
33															DFT	
34															DFT	
35															DFT	
36															DFT	
37															DFT	
38															DFT	
39															DFT	
40															DFT	
41															DFT	
42															DFT	
43															DFT	
44															DFT	
45															DFT	
46															DFT	
47															DFT	
48															DFT	

#	Event / Alarm	Ev	Alr
1	Power Up Alarm.	ON	ON
2	Stop Timing	ON	ON
3	TS1 Cabinet Door	ON	ON
4	Coordination Failure	ON	ON
5	External Alarm # 1	ON	ON
6	External Alarm # 2	ON	ON
7	External Alarm # 3	ON	ON
8	External Alarm # 4	ON	ON
9	Closed Loop Disabled	ON	ON
10	External Alarm # 5	ON	ON
11	External Alarm # 6	ON	ON
12	Manual Control Enable	ON	ON
13	Coord Free Input	ON	ON
14	Local Flash Input	ON	ON
15	MMU Flash	ON	ON
16	CMU Flash	ON	ON
17	Cycle Fault	ON	ON
18	Cycle Failure	ON	ON
19	Coordination Fault	ON	ON
20	Controller Fault	ON	ON
21	Detector SDLC Failure	ON	ON
22	MMU SDLC Failure	ON	ON
23	Critical SDLC Failure	ON	ON
24	Reserved	ON	ON
25	EEPROM CRC Fault	ON	ON
26	Detector Diagnostic Failure	ON	ON
27	BIU Detector Failure	ON	ON
28	Queue detector alarm	ON	ON
29	Ped Detector Fault	ON	ON
30	Coord Diagnostic Fault	ON	ON
41	TempAlert Probe Ch. A	ON	ON
42	TempAlert Probe Ch. B	ON	ON
47	Coord Active	ON	ON
48	Preempt Active	ON	ON
49	Preempt 1 Input	ON	ON
50	Preempt 2 Input	ON	ON
51	Preempt 3 Input	ON	ON
52	Preempt 4 Input	ON	ON
53	Preempt 5 Input	ON	ON
54	Preempt 6 Input	ON	ON
55	Preempt 7 Input	ON	ON
56	Preempt 8 Input	ON	ON
57	Preempt 9 Input	ON	ON
58	Preempt 10 Input	ON	ON
61	In Transition	ON	ON
81	FIO Status Alarm	ON	ON

Call Phases[1.1.5]

Ø	Phases Called By Ø			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1						1								
2						2								
3						3								
4						4								
5						5								
6						6								
7						7								
8						8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1						1								
2						2								
3						3								
4						4								
5						5								
6						6								
7						7								
8						8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Auto Flash Phase/Olap Settings [1.4.2]

Yel Ø								
Yel (olaps)								

Unit Parameters [1.2.1]

Allow Skip Yellow	OFF	Max Cycle Time	
TOD Dim Enable	OFF	Cycle Fault Action	Alarm
Tone Disable	OFF		
Diamond Mode	4Ph		
Backup Time (s)	900		
Disable Init Ped	OFF		
Cycle Fault Action	Alarm		
Enable Run Timer	ON		

1901 34 @ SEYMOUR 01/07/26 Page 8

C1-USER IO Map [1.8.9.1 In]

I1-1	1	Veh Call 1
I1-2	2	Veh Call 2
I1-3	3	Veh Call 3
I1-4	4	Veh Call 4
I1-5	5	Veh Call 5
I1-6	189	Unused
I1-7	189	Unused
I1-8	189	Unused
I2-1	189	Unused
I2-2	189	Unused
I2-3	189	Unused
I2-4	189	Unused
I2-5	129	Ped Call 1
I2-6	130	Ped Call 2
I2-7	131	Ped Call 3
I2-8	132	Ped Call 4
I3-1	189	Unused
I3-2	189	Unused
I3-3	189	Unused
I3-4	189	Unused
I3-5	189	Unused
I3-6	189	Unused
I3-7	189	Unused
I3-8	189	Unused
I4-1	189	
I4-2		
I4-3		
I4-4		
I4-5	189	Unused
I4-6	189	Unused
I4-7	229	33xCMUStop
I4-8	228	33xFlashSns
I5-1	189	Unused
I5-2	189	Unused
I5-3	189	Unused
I5-4	189	Unused
I5-5	189	Unused
I5-6	189	Unused
I5-7	189	Unused
I5-8	189	Unused
I6-1	189	Unused
I6-2	189	Unused
I6-3	189	Unused
I6-4	189	Unused
I6-5	189	Unused
I6-6	189	Unused
I6-7	189	Unused
I6-8	189	Unused

C1-USER IO Map [1.8.9.2 Out]

O1-1	1	Ch1 Red
O1-2	49	Ch1 Green
O1-3	2	Ch2 Red
O1-4	26	Ch2 Yellow
O1-5	50	Ch2 Green
O1-6	3	Ch3 Red
O1-7	27	Ch3 Yellow
O1-8	51	Ch3 Green
O2-1	4	Ch4 Red
O2-2	52	Ch4 Green
O2-3	5	Ch5 Red
O2-4	29	Ch5 Yellow
O2-5	53	Ch5 Green
O2-6	6	Ch6 Red
O2-7	30	Ch6 Yellow
O2-8	54	Ch6 Green
O3-1	7	Ch7 Red
O3-2	55	Ch7 Green
O3-3	8	Ch8 Red
O3-4	32	Ch8 Yellow
O3-5	56	Ch8 Green
O3-6	9	Ch9 Red
O3-7	33	Ch9 Yellow
O3-8	57	Ch9 Green
O4-1	10	Ch10 Red
O4-2	58	Ch10 Green
O4-3	11	Ch11 Red
O4-4	35	Ch11 Yellow
O4-5	59	Ch11 Green
O4-6	12	Ch12 Red
O4-7	36	Ch12 Yellow
O4-8	60	Ch12 Green
O5-1	28	Ch4 Yellow
O5-2	34	Ch10 Yellow
O5-3	25	Ch1 Yellow
O5-4	31	Ch7 Yellow
O5-5	115	Not Used
O5-6	115	Not Used
O5-7	115	Not Used
O5-8	114	Watchdog
O6-1	115	Not Used
O6-2	115	Not Used
O6-3	13	Ch13 Red
O6-4	37	Ch13 Yellow
O6-5	61	Ch13 Green
O6-6	14	Ch14 Red
O6-7	38	Ch14 Yellow
O6-8	62	Ch14 Green

C1-USER IO Map [1.8.9.2 Out]

O7-1	115	Not Used
O7-2	115	Not Used
O7-3	115	Not Used
O7-4	115	Not Used
O7-5	115	Not Used
O7-6	115	Not Used
O7-7	115	Not Used
O7-8	115	Not Used

C11S-USER IO Map [1.8.9.1 In]

I4-1		
I4-2		
I4-3		
I4-4		
I7-1	189	Unused
I7-2	189	Unused
I7-3	189	Unused
I7-4	189	Unused
I7-5	189	Unused
I7-6	189	Unused
I7-7	189	Unused
I7-8	189	Unused
I8-1	189	Unused
I8-2	189	Unused
I8-3	189	Unused
I8-4	189	Unused
I8-5	189	Unused
I8-6	189	Unused
I8-7	189	Unused
I8-8	189	Unused

C11S-USER IO Map [1.8.9.2 Out]

O8-1	115	Not Used
O8-2	115	Not Used
O8-3	115	Not Used
O8-4	115	Not Used
O8-5	115	Not Used
O8-6	115	Not Used
O8-7	115	Not Used
O8-8	115	Not Used

IO Logic [1.8.7]

Op1	Result		O1Fcn	Inv1	Src1	IO1	Fun1	O2Fcn	Inv2	Src2	IO2	Fun2	O3Fcn	Inv3	Src3	IO3	Fun3	Dly	Sec
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0

Security Access Levels [8.2]

1	SWLOAD
2	SECURE
3	None
4	None
5	None
6	None
7	None
8	None
9	None
10	None
11	None
12	None
13	None
14	None
15	None
16	None
17	None
18	None
19	None
20	None
21	None
22	None
23	None
24	None
25	None
26	None
27	None
28	None
29	None
30	None
31	None
32	None
33	None
34	None
35	None
36	None
37	None
38	None
39	None
40	None
41	None
42	None
43	None
44	None
45	None
46	None
47	None
48	None
49	None
50	None
51	None
52	None
53	None
54	None
55	None
56	None
57	None
58	None
59	None
60	None
61	None
62	None
63	None
64	None

Com Parameters [6.1]

Station ID	1901
Group ID	0
Master ID	0
Backup Time	900

SysUp Modem [6.1]

Enable Modem	None
Idle Time	0
Dial Time	0
Tel:	
Alt:	

2070 Port Parms [6.2]

Port	Baud Rate	FCM
SP1	9600	6
SP2	9600	6
SP3	19200	6
SP4	38400	6
SP5	1200	0
SP6	1200	0
SP7	1200	0
SP8	1200	0

2070 IP 1 Addressing [6.5]

	Addressing			
Addr	192	168	10	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	10	1
Port	###			

2070 IP 2 Addressing [6.5]

	Addressing			
Addr	192	168	10	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	10	1
Port	5001			

2070 Port Binding Ports [6.6]

	Port	Echo	Mode
ASYNC1	SP1	None	0
ASYNC2	SP2	None	0
ASYNC3	SP3	None	0
ASYNC4	SP4	None	0
SYNC1	SP5S	SYNC3	OFF
SYNC2	OFF	SYNC4	OFF

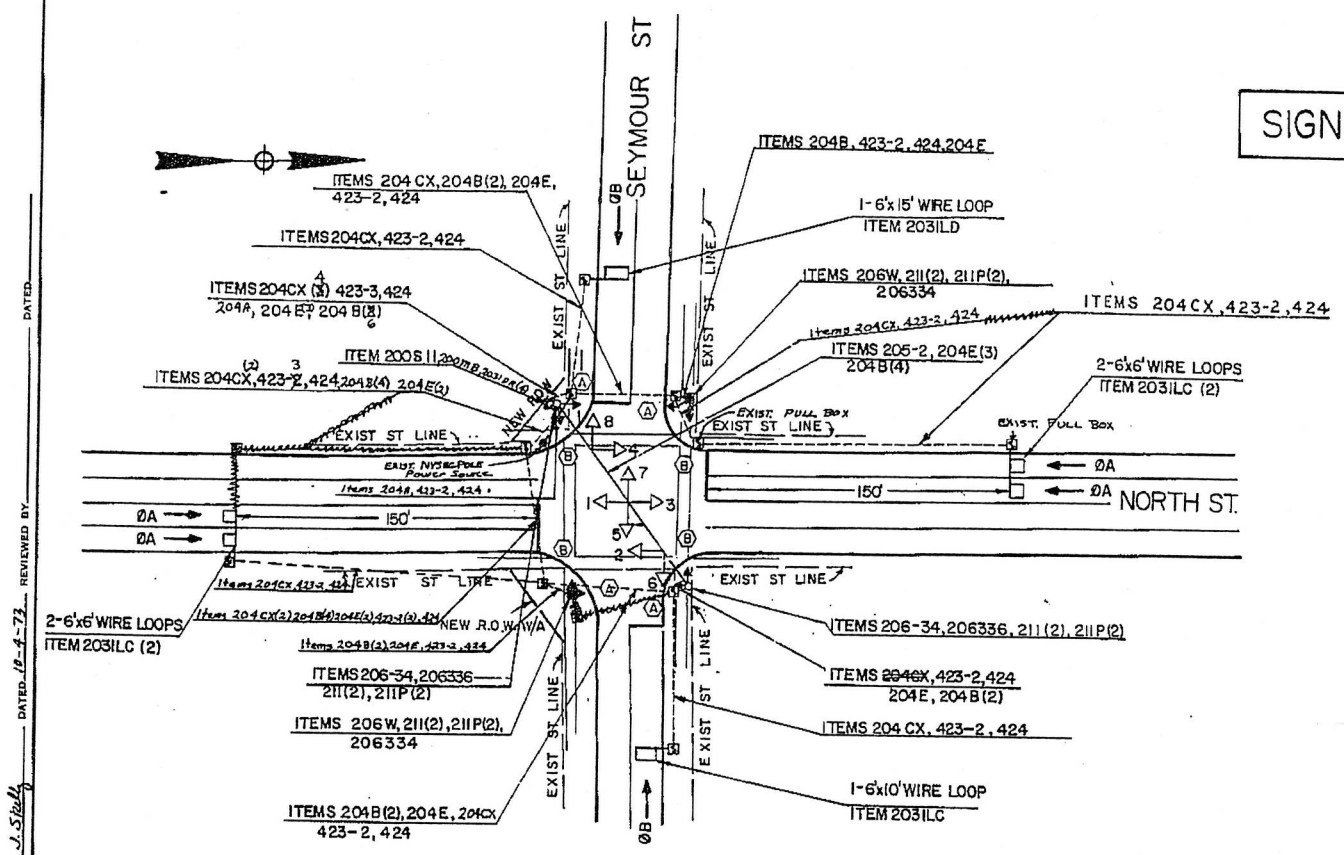
2070 Port Binding Functions [6.6]

Functio	Channel	Functio	Channel
TS2/CVN	None	SYSUp	ASYNC2
CMU/MM	None	SYSDow	ASYNC1
Opticom	None	Shell	None
Loop De	None		
GPS	None		

F.A.R.C. 74-2 F.A.C. 74-2, 3, 4, 5

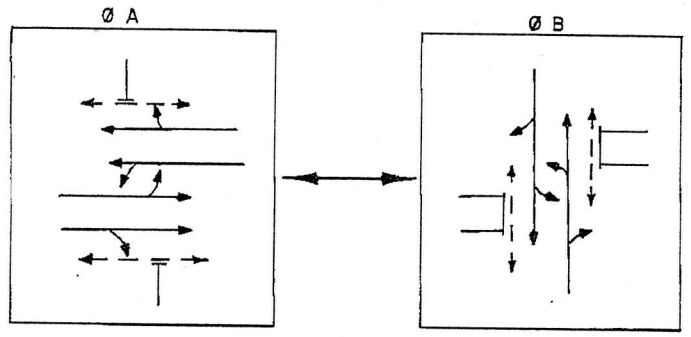
FED. ROAD REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.		165 RI	249
CITY OF AUBURN				
NORTH STREET ARTERIAL				

SIGNAL NO IA



TRAFFIC SIGNAL LEGEND	
S	PULL BOX, ITEMS 102DRS, 30C2, 102333
▷	TRAFFIC SIGNAL FACE, ITEMS 202AB(2), AABB
C	CONTROLLER (POLE MTD) ITEM 200S
▶	PEDESTRIAN "WALK-DON'T WALK" SIGNAL HEAD- ITEM 211

SEQUENCE OF OPERATION



TABLE

ESTIMATE OF QUANTITIES

ITEM NO	DESCRIPTION	UNIT	QUANTITY
3002	FRAMES & GRATES CASTING (3.3 S.F.)	S.F.	~~33.0~~ 26.4
102 DRS	PULL BOXES	L.F.	~~36.0~~ 32.0
*102333	PULL BOX EXCAVATION & BACKFILL	EA.	~~10~~ 8
200SII	SOLID STATE CONTROLLER	EA.	1
202AB	TRAFFIC SIGNAL HEAD, TWO WAY, FACES A, B	EA.	2
202AABB	TRAFFIC SIGNAL HEAD FOUR WAY, FACES A, A, B, B	EA.	1
2031DR	INDUCTANCE LOOP VEHICLE DETECTOR	EA.	4
*423-3	GALVANIZED RIGID STEEL CONDUIT 3" I.D.	L.F.	~~10~~ 42.9
*424	CONDUIT EXCAVATION & BACKFILL	L.F.	~~576~~ 422.8
204A	POWER CABLE, TWO CONDUCTOR, NO. 10	L.F.	~~100~~ 86.0
204CX	CABLE, TWO CONDUCTOR, NO 14 SHIELDED	L.F.	~~765~~ 841.0
204E	CABLE SEVEN CONDUCTOR, NO14 SHIELDED	L.F.	~~1050~~ 650.0
205-2	SPAN WIRE ASSEMBLY, TWO PTS. OF ATTACHMENT	EA.	1
206-34	STEEL SIGNAL POLE, 34FT. LONG	EA.	2
206336	SIGNAL POLE EXCAVATION AND CONCRETE FOR FOUNDATION	EA.	2
* 423-2	GALVANIZED RIGID STEEL CONDUIT, 2" I.D.	L.F.	~~660~~ 654.3
*2031LC	WIRE LOOP FOR INDUCTANCE LOOP VEHICLE DETECTOR UNIT, 20'-40' PERIMETER	EA	5
* 2031LD	WIRE LOOP FOR INDUCTANCE LOOP VEHICLE DETECTOR UNIT, OVER 40' PERIMETER	EA	1
* 204B	CABLE, TWO CONDUCTOR NO. 14	EA.	~~860~~ 950.0
* 206W	PEDESTRIAN SIGNAL POLE, 18' LONG	EA.	2
* 211	PEDESTRIAN "WALK-DON'T WALK" SIGNAL HEAD	EA.	8
* 211P	PEDESTRIAN PUSH BUTTON WITH SIGN	EA.	8
*206334	SIGNAL POLE EXCAVATION AND CONCRETE FOR FOUNDATION	EA.	2
200 MB	METER BASE INSTALLATION & WIRING	EA.	1

* OUT OF SEQUENCE

→ 28' Above Ground
6' Below Ground

TABLE OF OPERATION

FACE	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G		
PHASE:	1	2	3	4	5	6	7	8	⟨A⟩	⟨B⟩
A	G	G	G	G	R	R	R	R	DW†	DW
1 ST CL TO B	Y	Y	Y	Y	R	R	R	R	DW	DW
2 ND CL TO B	R	R	R	R	R	R	R	R	DW	DW
B	R	R	R	R	G	G	G	G	DW	DW†
1 ST CL TO A	R	R	R	R	Y	Y	Y	Y	DW	DW
2 ND CL TO A	R	R	R	R	R	R	R	R	DW	DW
FLASHER	FY	FY	FY	FY	FR	FR	FR	FR		

† "THIS WILL BE FLASHING "WALK" FOLLOWED BY A FLASHING "DON'T WALK" PEDESTRIAN CLEARANCE INTERVAL IF A PEDESTRIAN PUSH BUTTON HAS BEEN ACTUATED.

12" LENS

8" LENS

As Built Revisions
1) Revise Final Table of Quantities
2) Modify intersection to reflect AS-BUILT Quantity locations.

SIGNAL NO IA AT
NORTH ST & SEYMOUR ST

DWG. NO.	SCALE	SHEET NO.
TS-9	1" = 40'	

IN CHARGE OF ____ CHECKED BY J. Stelly DATED 12-4-73 REVIEWED BY ____ DATED ____

DESIGNED BY R. Lansdown DATED 12-4-73

SIGNAL NO 1A COUNTY Cayuga

SWITCH PACK	FUNCTION	FACE NOS	FLASH PLUG	INDICATIONS	TERMINAL WIRING BOARD	
					TERMINAL	WIRE COLOR CODE
SP 1	ϕ1	3	W		SP 1R	
				~~Y~~	SP 1Y	14/19C-1-B
				~~G~~	SP 1G	14/19C-1-BL
				GRND WIRE	GRND BUS	14/19C-1-BL/B
SP 2	ϕ6	1,2	R	R	SP 2R	14/19C-1-R
				Y	SP 2Y	14/19C-1-O
				G	SP 2G	14/19C-1-G
				GRND WIRE	GRND BUS	14/19C-1-W
SP 3	ϕ2	3,4	R	R	SP 3R	14/19C-1-R/B
				Y	SP 3Y	14/19C-1-O/B
				G	SP 3G	14/19C-1-G/B
				GRND WIRE	GRND BUS	14/19C-1-W/B
SP 4	ϕ7	5,6	R	R	SP 4R	14/19C-1-R/W
				Y	SP 4Y	14/19C-1-BL/W
				G	SP 4G	14/19C-1-G/W
				GRND WIRE	GRND BUS	14/19C-1-B/W
SP 5	Ped A (ϕ2)		W	Walk	SP 5R	
					SP 5Y	
				Don't Walk	SP 5G	
				GRND WIRE	GRND BUS	
SP 6	Ped B (ϕ3)		W	Walk	SP 6R	
					SP 6Y	
				Don't Walk	SP 6G	
				GRND WIRE	GRND BUS	
SP 7	ϕ3	7,8	R	R	SP 7R	14/19C-1-B/R
				Y	SP 7Y	14/19C-1-O/R
				G	SP 7G	14/19C-1-BL/R
				GRND WIRE	GRND BUS	14/19C-1-W/R
SP 8					SP 8R	
					SP 8Y	
					SP 8G	
				GRND WIRE	GRND BUS	
SP 9					SP 9R	
					SP 9Y	
					SP 9G	
				GRND WIRE	GRND BUS	
SP 10					SP 10R	
					SP 10Y	
					SP 10G	
				GRND WIRE	GRND BUS	
SP 11					SP 11R	
					SP 11Y	
					SP 11G	
				GRND WIRE	GRND BUS	
SP 12					SP 12R	
					SP 12Y	
					SP 12G	
				GRND WIRE	GRND BUS	
SP 13					SP 13R	
					SP 13Y	
					SP 13G	
				GRND WIRE	GRND BUS	
SP 14					SP 14R	
					SP 14Y	
					SP 14G	
				GRND WIRE	GRND BUS	
SP 15					SP 15R	
					SP 15Y	
					SP 15G	
				GRND WIRE	GRND BUS	
SP 16					SP 16R	
					SP 16Y	
					SP 16G	
				GRND WIRE	GRND BUS	

no changes to existing wiring

Seymour - Rt 34

84-1 (12/80)

NEMA 170

STUDY NO: 3830047
FILE: 75-5-3-3

SIGNAL OPERATION SPECIFICATIONS
TABLE OF SWITCH PACKS

17 SIGNAL NO. | CAYUGA COUNTY | 9/21/83 DATE | PAGE 4 OF ____ PAGES 7

CONFLICT MONITOR	SWITCH PACK	FUNCTION	FACE NUMBERS	INDICATIONS	TERMINAL WIRING BOARD Terminal	Wire Color Code
Diodes to be Cut (List Below)*	SP 1	ϕ1 Y		R	SP 1 R	Wired as per field
				Y	SP 1 Y	
				G	SP 1 G	
				Grnd Wire	Grnd Bus	
1-5 6-7	SP 2	ϕ6			SP 2 R	
					SP 2 Y	
					SP 2 G	
				Grnd Wire	Grnd Bus	
	SP 3	ϕ2			SP 3 R	
					SP 3 Y	
					SP 3 G	
				Grnd Wire	Grnd Bus	
	SP 4	ϕ7			SP 4 R	
					SP 4 Y	
					SP 4 G	
				Grnd Wire	Grnd Bus	
	SP 5	Ped A W ϕ2		Fl. DW	SP 5 R	
				—	SP 5 Y	
				Fl. W	SP 5 G	
				Grnd Wire	Grnd Bus	
	SP 6	Ped B W ϕ3		Fl. DW	SP 6 R	
				—	SP 6 Y	
				Fl. W	SP 6 G	
				Grnd Wire	Grnd Bus	
	SP 7	ϕ3 R		R	SP 7 R	
				Y	SP 7 Y	
				G	SP 7 G	
				Grnd Wire	Grnd Bus	
	SP 8				SP 8 R	
					SP 8 Y	
					SP 8 G	
				Grnd Wire	Grnd Bus	
	SP 9				SP 9 R	
					SP 9 Y	
					SP 9 G	
				Grnd Wire	Grnd Bus	
To Omit Yellow Monitoring — Add Jumpers — (List Below) 5 6	SP 10	ϕ5			SP 10 R	
					SP 10 Y	
					SP 10 G	
				Grnd Wire	Grnd Bus	
	SP 11	TELL TALE			SP 11 R	
				Blue Light	SP 11 Y	
					SP 11 G	
			Blue Light	Grnd Wire	Grnd Bus	
	SP 12				Grnd Bus	
					SP 12 R	
					SP 12 Y	
					SP 12 G	
				Grnd Wire	Grnd Bus	

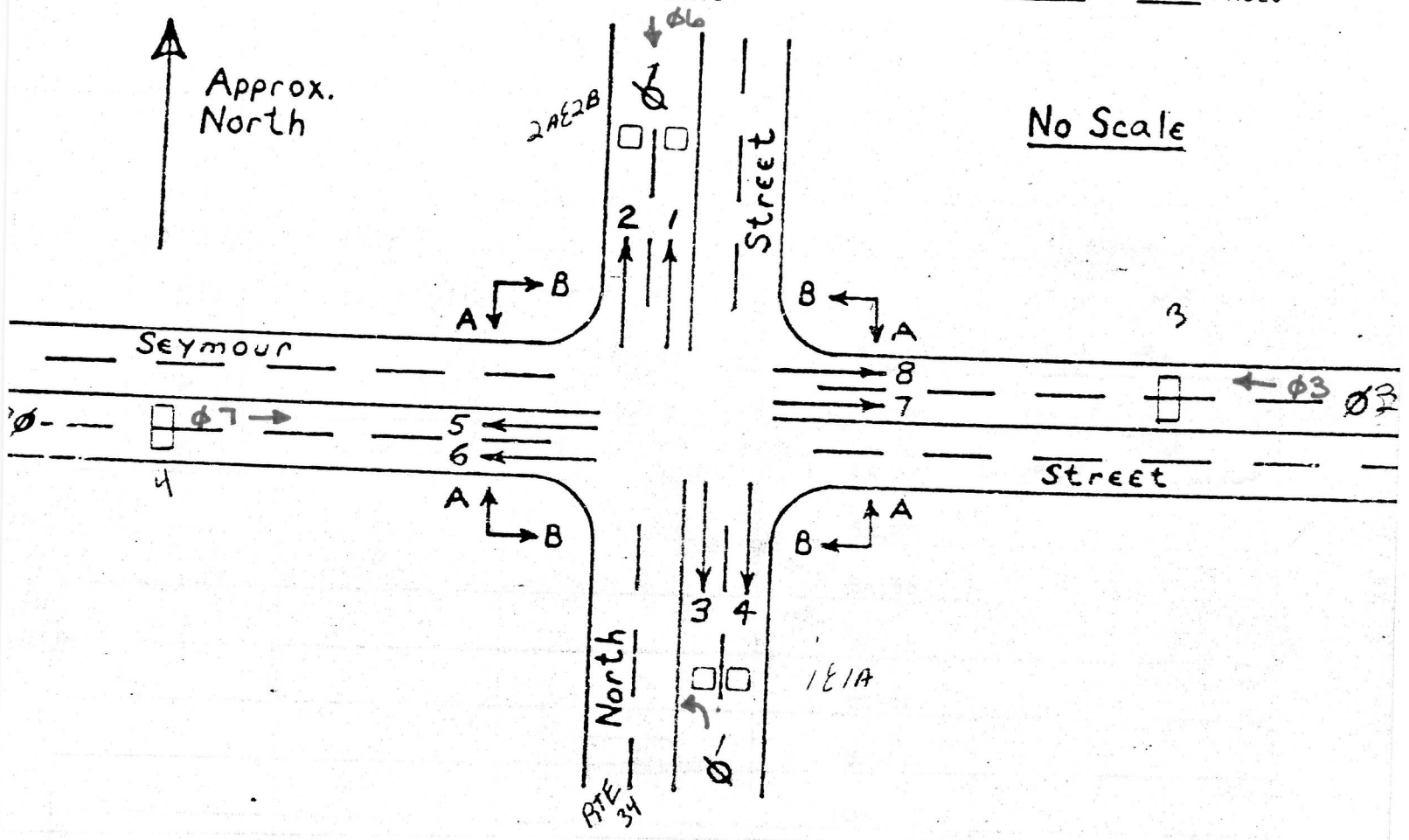
*This list reflects those pairs of switch packs which may display green indications concurrently.

STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC ENGINEERING AND SAFETY

CASE: 23300 47
FILE: 75-5-3-3

SIGNAL OPERATION SPECIFICATIONS (CONTINUED)

1A — SIGNAL NO. | Cayuga — COUNTY | 9/21/83 — DATE | PAGE 2 OF 1 PAGES



FACES

Phase	1,2,3,4	5,6,7,8	A	B
1				
1st Clearance to 2	Green	Red	DONT WALK*	DONT WALK
2nd Clearance to 2	Yellow	Red	DONT WALK	DONT WALK
	Red	Red	DONT WALK	DONT WALK
2				
1st Clearance to 1	Red	Green	DONT WALK	DONT WALK*
2nd Clearance to 1	Red	Yellow	DONT WALK	DONT WALK
	Red	Red	DONT WALK	DONT WALK
Emergency	Flashing Yellow	Flashing Red	Inoperative	Inoperative

* This will be a flashing "WALK" followed by a flashing "DONT WALK" and "DONT WALK" interval upon actuation of a pedestrian push-button.

01-1(12/80)

NEMA 170

STUDY NO 38700477
FILE: 75-5-3-3

SIGNAL OPERATION SPECIFICATIONS
TABLE OF INPUT WIRING

1A
SIGNAL NO

CAYUGA
COUNTY

9/21/83
DATE

PAGE 3 OF 7 PAGES

FUNCTION	DETECTOR NUMBER	DETECTOR TYPE	TERMINALS	REMARKS
Ø1	1	pt. loop	1A,1B	N.B. Rt 34
Ø6	2	pt. loop	2A,2B	S.B. Rt 34
Ø3	3	pt. loop	3A,3B	W.B. Seymour
Ø7	4	pt. loop	4A,4B	E.B. Seymour
			5A,5B	
			6A,6B	
			7A,7B	
			8A,8B	
			9A,9B	
			10A,10B	
			11A,11B	
			12A,12B	
Ø X 62	ped A	push button	13A,13B	crossing Seymour
Ø3	ped B	push button	14A,14B	crossing Rt 34
			15A,15B	
			16A,16B	

NOTES:

Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green		15		10		15		
Gap, Ext				3				
Max 1		40		35		40		
Max 2								
Yel Clearance		3.5		3.5		3.5		
Red Clearance		1.5		2		1.5		
Walk		8		7				
Ped Clearance		11		15				
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								

Options [1.1.2]

	1	2	3	4	5	6	7	8
Enable		ON		ON		ON		
Min Recall								
Max Recall		ON				ON		
Ped Recall								
Soft Recall		ON				ON		
Lock Calls								
Auto Flash Entry								
Auto Flash Exit								
Dual Entry		ON				ON		
Enable Simul Gap	ON	ON	ON	ON	ON	ON	ON	ON
Gaurantee Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								

Options+ [1.1.3]

	1	2	3	4	5	6	7	8
Reservice								
PedClr Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Call Phase								
Conflicting Phase								
Omit Yellow								
Ped Delay								
Grn/Ped Delay				5				

1918 34 @ LANSING

Coordination Patterns [2.4] and Coordination Split Tables [2.7.1]

Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq
1	0	0	1	1	13	0	0	13	1	25	0	0	0	1	37	0	0	0	1
2	0	0	2	1	14	0	0	14	1	26	0	0	0	1	38	0	0	0	1
3	0	0	3	1	15	0	0	15	1	27	0	0	0	1	39	0	0	0	1
4	0	0	4	1	16	0	0	16	1	28	0	0	0	1	40	0	0	0	1
5	0	0	5	1	17	0	0	17	1	29	0	0	0	1	41	0	0	0	1
6	0	0	6	1	18	0	0	18	1	30	0	0	0	1	42	0	0	0	1
7	0	0	7	1	19	0	0	19	1	31	0	0	0	1	43	0	0	0	1
8	0	0	8	1	20	0	0	20	1	32	0	0	0	1	44	0	0	0	1
9	0	0	9	1	21	0	0	21	1	33	0	0	0	1	45	0	0	0	1
10	0	0	10	1	22	0	0	22	1	34	0	0	0	1	46	0	0	0	1
11	0	0	11	1	23	0	0	23	1	35	0	0	0	1	47	0	0	0	1
12	0	0	12	1	24	0	0	24	1	36	0	0	0	1	48	0	0	0	1

Split		1	2	3	4	5	6	7	8	Split		1	2	3	4	5	6	7	8
1	Coor	0	0	0	0	0	0	0	0	13	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
2	Coor	0	0	0	0	0	0	0	0	14	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
3	Coor	0	0	0	0	0	0	0	0	15	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
4	Coor	0	0	0	0	0	0	0	0	16	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
5	Coor	0	0	0	0	0	0	0	0	17	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
6	Coor	0	0	0	0	0	0	0	0	18	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
7	Coor	0	0	0	0	0	0	0	0	19	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
8	Coor	0	0	0	0	0	0	0	0	20	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
9	Coor	0	0	0	0	0	0	0	0	21	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
10	Coor	0	0	0	0	0	0	0	0	22	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
11	Coor	0	0	0	0	0	0	0	0	23	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
12	Coor	0	0	0	0	0	0	0	0	24	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON

Page#	
1	8 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
1A&1B	16 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
2	Overlaps; Channel Settings; Coord Alt Table+ (values not associated with time-of-day)
3	Detection; Sample Time and Unit Parameters related to detection
4	Preemption and Alternate Phase Time and Phase Options
5	Annual Schedule
6	Day Plans; Action Tables; Coord Alt Table+ (values varied by time-of-day)
7	Communications; Secutiry; I/O Setup
8	Misc - Events/Alarms; Call/Inhibit/Redirect; P/OLAP Auto Flash; CIC; Misc Unit Param

1918

Ring/Startup [1.1.4]

Phs	Ring	Start	Enable
1	1	Red	OFF
2	1	Red	ON
3	1	Red	OFF
4	1	Red	ON
5	2	Red	OFF
6	2	Red	ON
7	2	Red	OFF
8	2	Red	OFF

Coord Modes [2.1]

Test OpMode	0
Correction	SHRT/LNG
Maximum	MAX 1
Force-Off	Float
Closed Loop	ON
Stop-in-Walk	OFF
Auto Reset	ON
Expand Splt	
Ped Recycle	NO_RECYCLE
Before	TIMED
After	TIMED

Auto Flash [1.4.1]

Auto Flash	Channel
Flash Yel	45
Flash Red	20

Unit Params [1.2.1]

Phase Mode	STD8
IO Mode	User
Loc Flsh Start	Red
Start Flash(s)	0
Start AllRed(s)	6
Yellow < 3"	OFF
Display Time	20
Red Revert	3
MCE Timeout	0
Feature Profile	
Free Ring Seq	1
Auxswitch	STOPTM
SDLC Retry	0
TS2 Det Faults	ON
Auto Ped Clear	OFF
SDLC Retry	0

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Overlap 1-16 Program Parms & Parm+ [1.5.2.1] [1.5.2.2]

Overlap Conflict Lock	OFF	Overlap Lock Inhibit	OFF	Parent Ph Clearance	ON	Extra Included Ph	OFF

	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
1	Modifier Ø								Grn		9	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
A	Conflict Olap								Red	1.5	I	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
2	Modifier Ø								Grn		10	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
B	Conflict Olap								Red	1.5	J	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
3	Modifier Ø								Grn		11	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
C	Conflict Olap								Red	1.5	K	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
4	Modifier Ø								Grn		12	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
D	Conflict Olap								Red	1.5	L	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
5	Modifier Ø								Grn		13	Modifier Ø									Grn	
	Conflo0l								Yel	3.5		Conflict Ø									Yel	3.5
E	Conflict Olap								Red	1.5	M	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
6	Modifier Ø								Grn		14	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
F	Conflict Olap								Red	1.5	N	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
7	Modifier Ø								Grn		15	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
G	Conflict Olap								Red	1.5	O	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
8	Modifier Ø								Grn		16	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
H	Conflict Olap								Red	1.5	P	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	

Channel Settings [1.8.1]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	2	4	6	2	4	4																		
Channel Type	VEH	VEH	VEH	PED	PED	PED	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Channel Flash	YEL	Red	YEL	DRK	DRK	DRK	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Alt Hz																								

Channel+ Settings [1.8.4]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Flash Red+																								
Flash Yellow+																								
Flash Green+																								
Flash Inh Red+																								
Olap Ovrd																								

Coord Transition, CoorPhs [2.5]

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	RetHld	Float	Min Veh Perm	Min Ped Perm
1	12	22							EndGRN				
2	12	22							EndGRN				
3	12	22							EndGRN				
4	12	22							EndGRN				
5	12	22							EndGRN				
6	12	22							EndGRN				
7	12	22							EndGRN				
8	12	22							EndGRN				
9	12	22							EndGRN				
10	12	22							EndGRN				
11	12	22							EndGRN				
12	12	22							EndGRN				
13	12	22							EndGRN				
14	12	22							EndGRN				
15	12	22							EndGRN				
16	12	22							EndGRN				
17	12	22							EndGRN				
18	12	22							EndGRN				
19	12	22							EndGRN				
20	12	22							EndGRN				
21	12	22							EndGRN				
22	12	22							EndGRN				
23	12	22							EndGRN				
24	12	22							EndGRN				
25									BegGRN				
26									BegGRN				
27									BegGRN				
28									BegGRN				
29									BegGRN				
30									BegGRN				
31									BegGRN				
32									BegGRN				
33									BegGRN				
34									BegGRN				
35									BegGRN				
36									BegGRN				
37									BegGRN				
38									BegGRN				
39									BegGRN				
40									BegGRN				
41									BegGRN				
42									BegGRN				
43									BegGRN				
44									BegGRN				
45									BegGRN				
46									BegGRN				
47									BegGRN				
48									BegGRN				

Channel Params[1.8.3]

C1 IO Mode	User	Single BIU Map	DEFAULT	Invert Rail Input	OFF

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
1	4						45	50	2
2							45	50	2
3							45	50	2
4							45	50	2
5							45	50	2
6							45	50	2
7							45	50	2
8							45	50	2
9							45	50	2
10							45	50	2
11							45	50	2
12							45	50	2
13							45	50	2
14							45	50	2
15							45	50	2
16							45	50	2
17							45	50	2
18							45	50	2
19							45	50	
20							45	50	
21							45	50	
22							45	50	
23							45	50	
24							45	50	
25							45	50	
26							45	50	
27							45	50	
28							45	50	
29							45	50	
30							45	50	
31							45	50	
32							45	50	

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
33							45	50	
34							45	50	
35							45	50	
36							45	50	
37							45	50	
38							45	50	
39							45	50	
40							45	50	
41							45	50	
42							45	50	
43							45	50	
44							45	50	
45							45	50	
46							45	50	
47							45	50	
48							45	50	
49							45	50	
50							45	50	
51							45	50	
52							45	50	
53							45	50	
54							45	50	
55							45	50	
56							45	50	
57							45	50	
58							45	50	
59							45	50	
60							45	50	
61							45	50	
62							45	50	
63							45	50	
64							45	50	

Vehicle Options 1-64 [5.2]

Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol
1	ON	ON		ON				
2	ON	ON		ON				
3	ON	ON		ON				
4	ON	ON		ON				
5	ON	ON		ON				
6	ON	ON		ON				
7	ON	ON		ON				
8	ON	ON		ON				
9	ON	ON		ON				
10	ON	ON		ON				
11	ON	ON		ON				
12	ON	ON		ON				
13	ON	ON		ON				
14	ON	ON		ON				
15	ON	ON		ON				
16	ON	ON		ON				
17	ON	ON		ON				
18	ON	ON		ON				
19	ON	ON		ON				
20	ON	ON		ON				
21	ON	ON		ON				
22	ON	ON		ON				
23	ON	ON		ON				
24	ON	ON		ON				
25	ON	ON		ON				
26	ON	ON		ON				
27	ON	ON		ON				
28	ON	ON		ON				
29	ON	ON		ON				
30	ON	ON		ON				
31	ON	ON		ON				
32	ON	ON		ON				

Vehicle Options 1-64 [5.2]

Det #	vol	occ	Yell Lock	Red Lock	Ext	Add Init	Que	Call
33					ON	ON		ON
34					ON	ON		ON
35					ON	ON		ON
36					ON	ON		ON
37					ON	ON		ON
38					ON	ON		ON
39					ON	ON		ON
40					ON	ON		ON
41					ON	ON		ON
42					ON	ON		ON
43					ON	ON		ON
44					ON	ON		ON
45					ON	ON		ON
46					ON	ON		ON
47					ON	ON		ON
48					ON	ON		ON
49					ON	ON		ON
50					ON	ON		ON
51					ON	ON		ON
52					ON	ON		ON
53					ON	ON		ON
54					ON	ON		ON
55					ON	ON		ON
56					ON	ON		ON
57					ON	ON		ON
58					ON	ON		ON
59					ON	ON		ON
60					ON	ON		ON
61					ON	ON		ON
62					ON	ON		ON
63					ON	ON		ON
64					ON	ON		ON

Parameters+ 1-64 [5.3]

Det #	oc G	oc Y	oc R	Dlay 1	Dlay 2	Type	Src
1						NORM	
2						NORM	
3						NORM	
4						NORM	
5						NORM	
6						NORM	
7						NORM	
8						NORM	
9						NORM	
10						NORM	
11						NORM	
12						NORM	
13						NORM	
14						NORM	
15						NORM	
16						NORM	
17						NORM	
18						NORM	
19						NORM	
20						NORM	
21						NORM	
22						NORM	
23						NORM	
24						NORM	
25						NORM	
26						NORM	
27						NORM	
28						NORM	
29						NORM	
30						NORM	
31						NORM	
32						NORM	

Parameters+ 1-64 [5.3]

Det #	occ Grn	occ Yell	occ Red	Dlay 1	Dlay 2	Type	Src
33						NORM	
34						NORM	
35						NORM	
36						NORM	
37						NORM	
38						NORM	
39						NORM	
40						NORM	
41						NORM	
42						NORM	
43						NORM	
44						NORM	
45						NORM	
46						NORM	
47						NORM	
48						NORM	
49						NORM	
50						NORM	
51						NORM	
52						NORM	
53						NORM	
54						NORM	
55						NORM	
56						NORM	
57						NORM	
58						NORM	
59						NORM	
60						NORM	
61						NORM	
62						NORM	
63						NORM	
64						NORM	

Ped Det Parms [5.4]

Det #	Call Ø	No Act	Max Pres	Err Cnt
1	2		15	
2	4		15	
3	4		15	
4			15	
5			15	
6			15	
7			15	
8			15	

Unit Paramters [1.2.1]

TS2 Det Faults		ON

Vol/Occ Report Parm [1.5.8]

Vol/Occ Period Minutes	0
Vol/Occ Period Minutes	15

1918 34 @ LANSING

Preemption Times [3.1], Options+ [3.6]

Pre #	Enable	Type	Output	Delay	MinDura
1	ON	RAIL	Dwell		
2	ON	RAIL	Dwell		
3	ON	EMERG	Dwell		
4	ON	EMERG	Dwell		
5	ON	EMERG	Dwell		
6	ON	EMERG	Dwell		

Pre #	MaxPres	MinGrn	MinWlk	PedClr	Co+Pre
1					ON
2					ON
3					ON
4					ON
5					ON
6					ON

Pre #	Track Grn	Min Dwell	Ext Dwell	PedClr+	Yel
1		2			
2		2			
3		2			
4		2			
5		2			
6		2			

Pre #	Red	Pattern	Skip
1			OFF
2			OFF
3			OFF
4			OFF
5			OFF
6			OFF

Low Priority Preempts

Pre #	Type	Min	Max
7	OFF		
8	OFF		
9	OFF		
10	OFF		

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	PRE
Max Seek Track Time	
Max Seek Dwell Time	

Channel Parameters [1.8.3]

D Conn Mappings	OFF
Pre Invert Rail Input	None

Track Clear Phases [3.2], Track Clear Overlaps+ [3.5]

Pre #	Track Phases				Track Overlaps											
1																
2																
3																
4																
5																
6																

Dwell Phases [3.2] and Overlaps+ [3.5]

Pre #														
1	Phases													
	Overlaps													
	Peds													
2	Phases													
	Overlaps													
	Peds													
3	Phases													
	Overlaps													
	Peds													
4	Phases													
	Overlaps													
	Peds													
5	Phases													
	Overlaps													
	Peds													
6	Phases													
	Overlaps													
	Peds													

Exit Phases [3.2]

Pre #	Exit Phase			
1				
2				
3				
4				
5				
6				

Preemption 1, Options+ [3.6]

Pre #	Lock	Override Auto Flsh		Override Higher		Flsh Dwell	Link
1	ON		ON		ON		OFF	
2	ON		ON		ON		OFF	
3	ON		ON		ON		OFF	
4	ON		ON		ON		OFF	
5	ON		ON		ON		OFF	
6	ON		ON		ON		OFF	

Alt# 1 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	ON	ON	ON	ON	ON	ON	ON	ON
Soft Recall								
Dual Enrty								
Enabl SimGap	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Annual Schedule [4.3] — **Month of Year** — **Day of Week** — **Date** — **Day Plan** — **Link To**

	Month of Year												Day of Week							Date																							Day Plan	Link To
1	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
2	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
3	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
4	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
5	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
6	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
7	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
8	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
9	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
10	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
11	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
12	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
13	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
14	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
15	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
16	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
17	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
18	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
19	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
20	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
21	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
22	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
23	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	
24	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	

Day Plans [4.4]

Day Plan 1

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 2

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 3

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 4

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 5

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 6

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 7

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 8

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 9

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 10

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 11

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 12

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 13

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 14

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 15

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Action Table [4.5]

Act#	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
48												
98												
99												
100	255											

Coord Alternate Tables - Pat+ [2.6]

							Overlap Off									
Pat#	ØOpt	ØTime	DetG	Call Inh	CIC	CNA1	1	2	3	4	5	6	7	8	Dia	Max2
1															DFT	
2															DFT	
3															DFT	
4															DFT	
5															DFT	
6															DFT	
7															DFT	
8															DFT	
9															DFT	
10															DFT	
11															DFT	
12															DFT	
13															DFT	
14															DFT	
15															DFT	
16															DFT	
17															DFT	
18															DFT	
19															DFT	
20															DFT	
21															DFT	
22															DFT	
23															DFT	
24															DFT	
25															DFT	
26															DFT	
27															DFT	
28															DFT	
29															DFT	
30															DFT	
31															DFT	
32															DFT	
33															DFT	
34															DFT	
35															DFT	
36															DFT	
37															DFT	
38															DFT	
39															DFT	
40															DFT	
41															DFT	
42															DFT	
43															DFT	
44															DFT	
45															DFT	
46															DFT	
47															DFT	
48															DFT	

#	Event / Alarm	Ev	Alr
1	Power Up Alarm.	ON	ON
2	Stop Timing	ON	ON
3	TS1 Cabinet Door		
4	Coordination Failure	ON	ON
5	External Alarm # 1	ON	ON
6	External Alarm # 2	ON	ON
7	External Alarm # 3		
8	External Alarm # 4		
9	Closed Loop Disabled	ON	
10	External Alarm # 5		
11	External Alarm # 6		
12	Manual Control Enable	ON	ON
13	Coord Free Input		
14	Local Flash Input	ON	ON
15	MMU Flash		
16	CMU Flash		
17	Cycle Fault	ON	
18	Cycle Failure	ON	
19	Coordination Fault	ON	
20	Controller Fault	ON	ON
21	Detector SDLC Failure		
22	MMU SDLC Failure		
23	Critical SDLC Failure		
24	Reserved		
25	EEPROM CRC Fault	ON	ON
26	Detector Diagnostic Failure		ON
27	BIU Detector Failure	ON	ON
28	Queue detector alarm	ON	
29	Ped Detector Fault	ON	ON
30	Coord Diagnostic Fault		
41	TempAlert Probe Ch. A		
42	TempAlert Probe Ch. B		
47	Coord Active		
48	Preempt Active	ON	
49	Preempt 1 Input	ON	
50	Preempt 2 Input	ON	
51	Preempt 3 Input	ON	
52	Preempt 4 Input	ON	
53	Preempt 5 Input	ON	
54	Preempt 6 Input	ON	
55	Preempt 7 Input	ON	
56	Preempt 8 Input	ON	
57	Preempt 9 Input	ON	
58	Preempt 10 Input	ON	
61	In Transition	ON	
81	FIO Status Alarm		

Call Phases[1.1.5]

Ø	Phases Called By Ø			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø				
1						
2						
3						
4						
5						
6						
7						
8						

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø				
1						
2						
3						
4						
5						
6						
7						
8						

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Auto Flash Phase/Olap Settings [1.4.2]

Yel Ø								
Yel (olaps)								

Unit Parameters [1.2.1]

Allow Skip Yellow	OFF	Max Cycle Time	
TOD Dim Enable	OFF	Cycle Fault Action	Alarm
Tone Disable	OFF		
Diamond Mode	4Ph		
Backup Time (s)	900		
Disable Init Ped	OFF		
Cycle Fault Action	Alarm		
Enable Run Timer	ON		

1918 34 @ LANSING 01/09/26 Page 8

C1-USER IO Map [1.8.9.1 In]

I1-1	1	Veh Call 1
I1-2	189	Unused
I1-3	129	Ped Call 1
I1-4	130	Ped Call 2
I1-5	131	Ped Call 3
I1-6	189	Unused
I1-7	189	Unused
I1-8	189	Unused
I2-1	189	Unused
I2-2	189	Unused
I2-3	189	Unused
I2-4	189	Unused
I2-5	189	Unused
I2-6	189	Unused
I2-7	189	Unused
I2-8	189	Unused
I3-1	189	Unused
I3-2	189	Unused
I3-3	189	Unused
I3-4	189	Unused
I3-5	189	Unused
I3-6	189	Unused
I3-7	189	Unused
I3-8	189	Unused
I4-1	189	
I4-2		
I4-3		
I4-4		
I4-5	189	Unused
I4-6	189	Unused
I4-7	229	33xCMUStop
I4-8	228	33xFlashSns
I5-1	189	Unused
I5-2	189	Unused
I5-3	189	Unused
I5-4	189	Unused
I5-5	189	Unused
I5-6	189	Unused
I5-7	189	Unused
I5-8	189	Unused
I6-1	189	Unused
I6-2	189	Unused
I6-3	189	Unused
I6-4	189	Unused
I6-5	189	Unused
I6-6	189	Unused
I6-7	189	Unused
I6-8	189	Unused

C1-USER IO Map [1.8.9.2 Out]

O1-1	1	Ch1 Red
O1-2	49	Ch1 Green
O1-3	2	Ch2 Red
O1-4	26	Ch2 Yellow
O1-5	50	Ch2 Green
O1-6	3	Ch3 Red
O1-7	27	Ch3 Yellow
O1-8	51	Ch3 Green
O2-1	4	Ch4 Red
O2-2	52	Ch4 Green
O2-3	5	Ch5 Red
O2-4	29	Ch5 Yellow
O2-5	53	Ch5 Green
O2-6	6	Ch6 Red
O2-7	30	Ch6 Yellow
O2-8	54	Ch6 Green
O3-1	7	Ch7 Red
O3-2	55	Ch7 Green
O3-3	8	Ch8 Red
O3-4	32	Ch8 Yellow
O3-5	56	Ch8 Green
O3-6	9	Ch9 Red
O3-7	33	Ch9 Yellow
O3-8	57	Ch9 Green
O4-1	10	Ch10 Red
O4-2	58	Ch10 Green
O4-3	11	Ch11 Red
O4-4	35	Ch11 Yellow
O4-5	59	Ch11 Green
O4-6	12	Ch12 Red
O4-7	36	Ch12 Yellow
O4-8	60	Ch12 Green
O5-1	28	Ch4 Yellow
O5-2	34	Ch10 Yellow
O5-3	25	Ch1 Yellow
O5-4	31	Ch7 Yellow
O5-5	115	Not Used
O5-6	115	Not Used
O5-7	115	Not Used
O5-8	114	Watchdog
O6-1	115	Not Used
O6-2	115	Not Used
O6-3	13	Ch13 Red
O6-4	37	Ch13 Yellow
O6-5	61	Ch13 Green
O6-6	14	Ch14 Red
O6-7	38	Ch14 Yellow
O6-8	62	Ch14 Green

C1-USER IO Map [1.8.9.2 Out]

O7-1	115	Not Used
O7-2	115	Not Used
O7-3	115	Not Used
O7-4	115	Not Used
O7-5	115	Not Used
O7-6	115	Not Used
O7-7	115	Not Used
O7-8	115	Not Used

C11S-USER IO Map [1.8.9.1 In]

I4-1		
I4-2		
I4-3		
I4-4		
I7-1	189	Unused
I7-2	189	Unused
I7-3	189	Unused
I7-4	189	Unused
I7-5	189	Unused
I7-6	189	Unused
I7-7	189	Unused
I7-8	189	Unused
I8-1	189	Unused
I8-2	189	Unused
I8-3	189	Unused
I8-4	189	Unused
I8-5	189	Unused
I8-6	189	Unused
I8-7	189	Unused
I8-8	189	Unused

C11S-USER IO Map [1.8.9.2 Out]

O8-1	115	Not Used
O8-2	115	Not Used
O8-3	115	Not Used
O8-4	115	Not Used
O8-5	115	Not Used
O8-6	115	Not Used
O8-7	115	Not Used
O8-8	115	Not Used

IO Logic [1.8.7]

Op1	Result		O1Fcn	Inv1	Src1	IO1	Fun1	O2Fcn	Inv2	Src2	IO2	Fun2	O3Fcn	Inv3	Src3	IO3	Fun3	Dly	Sec
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0

Security Access Levels [8.2]

1	SWLOAD
2	SECURE
3	None
4	None
5	None
6	None
7	None
8	None
9	None
10	None
11	None
12	None
13	None
14	None
15	None
16	None
17	None
18	None
19	None
20	None
21	None
22	None
23	None
24	None
25	None
26	None
27	None
28	None
29	None
30	None
31	None
32	None
33	None
34	None
35	None
36	None
37	None
38	None
39	None
40	None
41	None
42	None
43	None
44	None
45	None
46	None
47	None
48	None
49	None
50	None
51	None
52	None
53	None
54	None
55	None
56	None
57	None
58	None
59	None
60	None
61	None
62	None
63	None
64	None

Com Parameters [6.1]

Station ID	1918
Group ID	0
Master ID	0
Backup Time	900

SysUp Modem [6.1]

Enable Modem	None
Idle Time	0
Dial Time	0
Tel:	
Alt:	

2070 Port Parms [6.2]

Port	Baud Rate	FCM
SP1	9600	6
SP2	9600	6
SP3	19200	6
SP4	38400	6
SP5	1200	0
SP6	1200	0
SP7	1200	0
SP8	1200	0

2070 IP 1 Addressing [6.5]

	Addressing			
Addr	192	168	10	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	10	1
Port	###			

2070 IP 2 Addressing [6.5]

	Addressing			
Addr	192	168	10	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	10	1
Port	5001			

2070 Port Binding Ports [6.6]

	Port	Echo	Mode
ASYNC1	SP1	None	0
ASYNC2	SP2	None	0
ASYNC3	SP3	None	0
ASYNC4	SP4	None	0
SYNC1	SP5S	SYNC3	OFF
SYNC2	OFF	SYNC4	OFF

2070 Port Binding Functions [6.6]

Functio	Channel	Functio	Channel
TS2/CVN	None	SYSUp	ASYNC2
CMU/MM	None	SYSDow	ASYNC1
Opticom	None	Shell	None
Loop De	None		
GPS	None		

NOTES:

1. THE VIDEO DETECTION SYSTEM INSTALLED UNDER ITEM 680.05010007 SHALL BE CONNECTED TO THE CONTROLLER THROUGH THE SDLC CONNECTOR (INPUTS 33 TO 64).

2. THE CONTRACTOR SHALL PROGRAM THE VIDEO DETECTION ZONES AS SHOWN ON THE PLANS.

3. THE MANUFACTURER OF THE VIDEO DETECTION SYSTEM OR THEIR REPRESENTATIVE SHALL DESIGN THE VIDEO DETECTION SYSTEM LAYOUT/PLACEMENT AND SUPERVISE THE INSTALLATION AND TESTING OF THE VIDEO DETECTION EQUIPMENT.

4. THE CONTRACTOR SHALL PROVIDE 14 DAYS NOTICE TO THE REGIONAL TRAFFIC SAFETY AND MOBILITY GROUP AT (315) 426-2131 PRIOR TO INSTALLING THE VIDEO DETECTION EQUIPMENT TO CONFIRM THE OPTIMAL DETECTOR LOCATION.

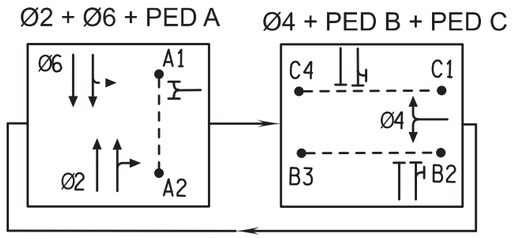
5. THE VIDEO DETECTION SYSTEM MAY BE INSTALLED AND ENABLED PRIOR TO DISABLING THE EXISTING DETECTION SYSTEM. IF THIS CAN NOT BE ACHIEVED, ALTERNATIVE METHODS OF DETECTION MUST BE ESTABLISHED AT THE CONTRACTOR'S EXPENSE. THE INTERSECTION SHALL NOT REMAIN WITHOUT DETECTION FOR MORE THAN TWO WEEKS.

6. UNDER ITEM 680.79002305 - REMOVE TRAFFIC SIGNAL INSTALLATION, LOCATION 0023. THIS ITEM SHALL INCLUDE:

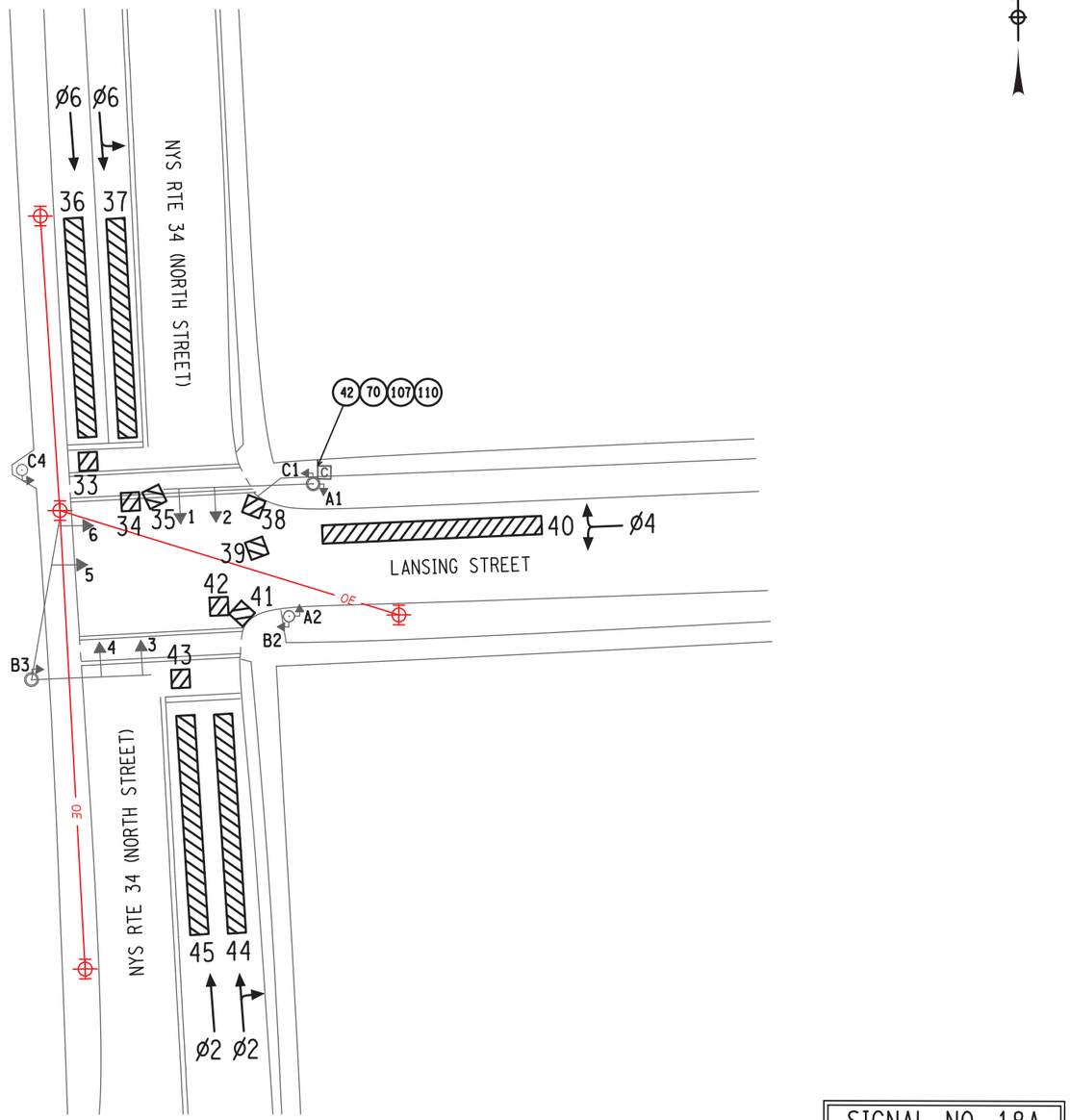
DISCONNECTION OF ALL SHIELDED LEAD-IN WIRES FROM THEIR TERMINALS. THE DISCONNECTED WIRES SHALL THEN BE COILED UP AND ABANDONED IN THE PULL BOX CLOSEST TO THE CONTROLLER CABINET. ENSURE ALL WIRES ARE LABELED WITH THE INPUT THEY WERE REMOVED FROM.

REMOVAL AND DELIVERY OF THE CONTROLLER CABINET, AND ALL ITS CONTENTS DIRECTLY TO STATE FORCES. PLEASE CONTACT NYSDOT TRAFFIC SIGNAL MAINTENANCE AT (315) 426-2131 TO SCHEDULE DROP-OFF TIME TO THE NYSDOT SIGNAL SHOP IN NORTH SYRACUSE, NY. TRAFFIC SIGNAL MAINTENANCE SHALL VERIFY ALL SIGNAL EQUIPMENT WITH QUANTITIES THAT HAVE BEEN DELIVERED FOR THIS SPECIFIC LOCATION.

THE CONTRACTOR SHALL REMOVE ALL DECOMMISSIONED PULLBOXES. EXCEPT IN ROADWAY SECTIONS, THE CONTRACTOR SHALL EXCAVATE ALL DECOMMISSIONED PULLBOXES TO A DEPTH OF 6" BELOW EXISTING GRADE AND BACKFILL WITH MATERIAL IN KIND. THE CHARACTER AND CONDITION SHALL MATCH THAT SURROUNDING THE STRUCTURE OR AOBE. FOR CLARITY OF THE PLAN, DECOMMISSIONED PULLBOXES ARE NOT SHOWN AND SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD.



PHASE DIAGRAM



ESTIMATE OF QUANTITIES				
KEY NO.	ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
42	619.1613	MAINTAIN TRAFFIC SIGNAL EQUIPMENT (REQUIREMENT C)	INTM	3
70	680.05010007	360 DEGREE CAMERA VIDEO DETECTION SYSTEM	EA	1
107	680.79002305	REMOVE TRAFFIC SIGNAL INSTALLATION - LOCATION 0023	ELOC	1
110	680.80324515	INSTALL MICROCOMPUTER CABINET	EA	1

AFFIX SEAL: ON: 7/24/2025

ALTERED BY: ON:

STATE OF NEW YORK · SCOTT ROBERT BATES · 080916 · LICENSED PROFESSIONAL ENGINEER

SIGNAL NO. 18A
CAYUGA COUNTY

AS-BUILT REVISIONS
DESCRIPTION OF ALTERATIONS:

NYS RTE 34 (NORTH STREET) AT LANSING STREET
CITY OF AUBURN
SIGNAL VIDEO DETECTION
S.H. 60-5
COUNTY: CAYUGA REGION: 03

PIN 380725
NY 34
UTILITY QUALITY LEVEL D

BRIDGES

CULVERTS

ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED

TRAFFIC SIGNAL NO. 18A - PLAN

CONTRACT NUMBER D265574

DRAWING NO. TSP-60
SHEET NO. 78

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

NEW YORK STATE Department of Transportation

DRAFTING C.DOGGETT
CHECK M. VONDEN STEINEN
PROJECT MANAGER N. BOULTON
CHECK B. LEBBON
DESIGN N. BOULTON
JOB MANAGER N. BOULTON
DESIGN SUPERVISOR P. LO GALLO
FILE NAME =
DATE/TIME = 21-JUL-2025 13:46
USER = DOTOGrebenevich

SIGNAL OPERATIONS SPECIFICATIONS
TABLE OF SWITCHPACKS

Signal No. 18A — Cayuga County

SWITCH PACK	FUNCTION	FACE NO.'s	FLASH PLUG	INDICATIONS	TERMINAL WIRING BOARD	
					TERMINAL	WIRING COLORING CODE
SP 1	Ø 2	1, 2	R	R Y G GROUND WIRE	SP 1R SP 1Y SP 1G GROUND BUS	MATCH EXISTING
SP 2	Ø 4	5, 6	R	R Y G GROUND WIRE	SP 2R SP 2Y SP 2G GROUND BUS	MATCH EXISTING
SP 3	Ø 6	3, 4	R	R Y G GROUND WIRE	SP 3R SP 3Y SP 3G GROUND BUS	MATCH EXISTING
SP 4	PED A (Ø 2)	A1 A2	W	HAND MAN GROUND WIRE	SP 4R SP 4Y SP 4G GROUND BUS	MATCH EXISTING
SP 5	PED B (Ø 4)	B2 B3	W	HAND MAN GROUND WIRE	SP 5R SP 5Y SP 5G GROUND BUS	MATCH EXISTING
SP 6	PED C (Ø 4)	C4 C1	W	HAND MAN GROUND WIRE	SP 6R SP 6Y SP 6G GROUND BUS	MATCH EXISTING
SP 7						
SP 8						
SP 9						
SP 10						
SP 11						
SP 12				GROUND WIRE	SP 12R SP 12Y SP 12G GROUND BUS	
SP 13				GROUND WIRE	SP 13R SP 13Y SP 13G GROUND BUS	
SP 14				GROUND WIRE	SP 14R SP 14Y SP 14G GROUND BUS	
SP 15				GROUND WIRE	SP 15R SP 15Y SP 15G GROUND BUS	
SP 16				GROUND WIRE	SP 16R SP 16Y SP 16G GROUND BUS	

TABLE OF OPERATIONS

PHASE \ FACE	(R)(Y)(G) 1	(R)(Y)(G) 2	(R)(Y)(G) 3	(R)(Y)(G) 4	(R)(Y)(G) 5	(R)(Y)(G) 6	PED A	PED B	PED C
	1	2	3	4	5	6	A1 - A2	B2 - B3	C1 - C4
Ø 2 + Ø 6 + PED A	G	G	G	G	R	R	DW*	DW	DW
Ø 4 + PED B + PED C	R	R	R	R	G	G	DW	DW*	DW*
EMERGENCY FLASH	FR	FR	FR	FR	FR	FR	DK	DK	DK

*UPON ACTUATION OF A PEDESTRIAN PUSH BUTTON, A "WALKING MAN" INDICATION FOLLOWED BY A FLASHING "HAND" INDICATION FOLLOWED BY A STEADY "HAND" WILL BE DISPLAYED, AND COUNTDOWN TIMER IS INITIATED.

SIGNAL OPERATIONS SPECIFICATIONS
TABLE OF INPUTS

Signal No. 18A — Cayuga County

INPUT	FUNCTION	TERMINAL BOARD WIRING / SDLC CHANNEL	SIZE	REMARKS
A1 - A2	PED A (Ø2)	1A, 1B	-	CROSSING LANSING STREET EASTERN LEG
B2 - B3	PED B (Ø4)	2A, 2B	-	CROSSING ROUTE 34 (NORTH ST) SOUTHERN LEG
C1 - C4	PED C (Ø4)	3A, 3B	-	CROSSING ROUTE 34 (NORTH ST) NORTHERN LEG
33	Ø 6	33	6' X 6'	ROUTE 34 (NORTH ST) SB THRU COUNT
34	Ø 6	34	6' X 6'	ROUTE 34 (NORTH ST) SB THRU COUNT
35	Ø 6	35	6' X 6'	ROUTE 34 (NORTH ST) SB LEFT TURN COUNT
36	Ø 6	36	6' X 60'	ROUTE 34 (NORTH ST) SB THRU PRESENCE
37	Ø 6	37	6' X 60'	ROUTE 34 (NORTH ST) SB LEFT/THRU PRESENCE
38	Ø 4	38	6' X 6'	LANSING ST WB RIGHT TURN COUNT
39	Ø 4	39	6' X 6'	LANSING ST WB LEFT TURN COUNT
40	Ø 4	40	6' X 60'	LANSING ST LEFT/RIGHT TURN PRESENCE
41	Ø 2	41	6' X 6'	ROUTE 34 (NORTH ST) NB RIGHT TURN COUNT
42	Ø 2	42	6' X 6'	ROUTE 34 (NORTH ST) NB THRU COUNT
43	Ø 2	43	6' X 6'	ROUTE 34 (NORTH ST) NB THRU COUNT
44	Ø 2	44	6' X 60'	ROUTE 34 (NORTH ST) THRU/RIGHT PRESENCE
45	Ø 2	45	6' X 60'	ROUTE 34 (NORTH ST) THRU PRESENCE

TABLE OF CLEARANCES

TO \ FROM	R	G
R	X	Y
	X	R
G	R	X
	R	X

PROJECT MANAGER N. BOULTON
CHECK M. VONDEN STEINEN
DRAFTING C. DOGGETT
CHECK B. LEBBON
DESIGN N. BOULTON
JOB MANAGER N. BOULTON
DESIGN SUPERVISOR P. LO GALLO

FILE NAME =
DATE/TIME = 22-JUL-2025 08:31
USER = DOTOGrebenevich

AFFIX SEAL: 7/24/2025
ON:

ALTERED BY:
ON:

STATE OF NEW YORK · SCOTT ROBERT BATES · 080916 · LICENSED PROFESSIONAL ENGINEER

SIGNAL NO. 18A
CAYUGA COUNTY

AS-BUILT REVISIONS
DESCRIPTION OF ALTERATIONS:

NY RTE 34 (NORTH STREET) AT LANSING STREET
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S.H. 60-5
COUNTY: ONONDAGA REGION: 03

PIN 380725
NY 34
UTILITY QUALITY LEVEL D

BRIDGES

CULVERTS

ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED

TRAFFIC SIGNAL NO. 18A - TABLES

CONTRACT NUMBER D265574

DRAWING NO. TSP-61

SHEET NO. 79

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NEW YORK STATE | Department of Transportation

Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green	8	30	22			30		
Gap, Ext			4.5					
Max 1	8	30	35			30		
Max 2								
Yel Clearance	3.5	3.2	3.2	3.5	3.5	3.2	3.5	3.5
Red Clearance	1	2	1	1.5	1.5	2	1.5	1.5
Walk								
Ped Clearance								
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								

Options [1.1.2]

	1	2	3	4	5	6	7	8
Enable	ON	ON	ON			ON		
Min Recall	ON	ON				ON		
Max Recall								
Ped Recall								
Soft Recall								
Lock Calls								
Auto Flash Entry								
Auto Flash Exit								
Dual Entry		ON		ON		ON		ON
Enable Simul Gap	ON	ON	ON	ON	ON	ON	ON	ON
Gaurantee Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								

Options+ [1.1.3]

	1	2	3	4	5	6	7	8
Reservice								
PedClr Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Call Phase								
Conflicting Phase								
Omit Yellow								
Ped Delay								
Grn/Ped Delay								

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Coordination Patterns [2.4] and Coordination Split Tables [2.7.1]

Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq
1	0	0	1	1	13	0	0	13	1	25	0	0	0	1	37	0	0	0	1
2	0	0	2	1	14	0	0	14	1	26	0	0	0	1	38	0	0	0	1
3	0	0	3	1	15	0	0	15	1	27	0	0	0	1	39	0	0	0	1
4	0	0	4	1	16	0	0	16	1	28	0	0	0	1	40	0	0	0	1
5	0	0	5	1	17	0	0	17	1	29	0	0	0	1	41	0	0	0	1
6	0	0	6	1	18	0	0	18	1	30	0	0	0	1	42	0	0	0	1
7	0	0	7	1	19	0	0	19	1	31	0	0	0	1	43	0	0	0	1
8	0	0	8	1	20	0	0	20	1	32	0	0	0	1	44	0	0	0	1
9	0	0	9	1	21	0	0	21	1	33	0	0	0	1	45	0	0	0	1
10	0	0	10	1	22	0	0	22	1	34	0	0	0	1	46	0	0	0	1
11	0	0	11	1	23	0	0	23	1	35	0	0	0	1	47	0	0	0	1
12	0	0	12	1	24	0	0	24	1	36	0	0	0	1	48	0	0	0	1

Split		1	2	3	4	5	6	7	8	Split		1	2	3	4	5	6	7	8
1	Coor	0	0	0	0	0	0	0	0	13	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
2	Coor	0	0	0	0	0	0	0	0	14	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
3	Coor	0	0	0	0	0	0	0	0	15	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
4	Coor	0	0	0	0	0	0	0	0	16	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
5	Coor	0	0	0	0	0	0	0	0	17	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
6	Coor	0	0	0	0	0	0	0	0	18	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
7	Coor	0	0	0	0	0	0	0	0	19	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
8	Coor	0	0	0	0	0	0	0	0	20	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
9	Coor	0	0	0	0	0	0	0	0	21	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
10	Coor	0	0	0	0	0	0	0	0	22	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
11	Coor	0	0	0	0	0	0	0	0	23	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
12	Coor	0	0	0	0	0	0	0	0	24	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON

Page#	
1	8 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
1A&1B	16 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
2	Overlaps; Channel Settings; Coord Alt Table+ (values not associated with time-of-day)
3	Detection; Sample Time and Unit Parameters related to detection
4	Preemption and Alternate Phase Time and Phase Options
5	Annual Schedule
6	Day Plans; Action Tables; Coord Alt Table+ (values varied by time-of-day)
7	Communications; Secutiry; I/O Setup
8	Misc - Events/Alarms; Call/Inhibit/Redirect; P/OLAP Auto Flash; CIC; Misc Unit Param

1923

Ring/Startup [1.1.4]

Phs	Ring	Start	Enable
1	1	Red	ON
2	1	Red	ON
3	1	Red	ON
4	1	Red	OFF
5	2	Red	OFF
6	2	Red	ON
7	2	Red	OFF
8	2	Red	OFF

Coord Modes [2.1]

Test OpMode	0
Correction	SHRT/LNG
Maximum	MAX 1
Force-Off	Float
Closed Loop	ON
Stop-in-Walk	OFF
Auto Reset	ON
Expand Splt	
Ped Recycle	NO_RECYCLE
Before	TIMED
After	TIMED

Auto Flash [1.4.1]

Auto Flash	PH_OVLP
Flash Yel	45
Flash Red	20

Unit Params [1.2.1]

Phase Mode	STD8
IO Mode	User
Loc Flsh Start	Red
Start Flash(s)	0
Start AllRed(s)	6
Yellow < 3"	OFF
Display Time	20
Red Revert	3
MCE Timeout	0
Feature Profile	
Free Ring Seq	1
Auxswitch	STOPTM
SDLC Retry	0
TS2 Det Faults	ON
Auto Ped Clear	OFF
SDLC Retry	0

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Overlap 1-16 Program Parms & Parm+ [1.5.2.1] [1.5.2.2]

Overlap Conflict Lock	OFF	Overlap Lock Inhibit	OFF	Parent Ph Clearance	ON	Extra Included Ph	OFF

	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
1	Modifier Ø								Grn		9	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
A	Conflict Olap								Red	1.5	I	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
2	Modifier Ø								Grn		10	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
B	Conflict Olap								Red	1.5	J	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
3	Modifier Ø								Grn		11	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
C	Conflict Olap								Red	1.5	K	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
4	Modifier Ø								Grn		12	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
D	Conflict Olap								Red	1.5	L	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
5	Modifier Ø								Grn		13	Modifier Ø									Grn	
	Conflo0l								Yel	3.5		Conflict Ø									Yel	3.5
E	Conflict Olap								Red	1.5	M	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
6	Modifier Ø								Grn		14	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
F	Conflict Olap								Red	1.5	N	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
7	Modifier Ø								Grn		15	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
G	Conflict Olap								Red	1.5	O	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
8	Modifier Ø								Grn		16	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
H	Conflict Olap								Red	1.5	P	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	

Channel Settings [1.8.1]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	2					3	3	6															
Channel Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Channel Flash	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Alt Hz																								

Channel+ Settings [1.8.4]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Flash Red+																								
Flash Yellow+																								
Flash Green+																								
Flash Inh Red+																								
Olap Ovrd																								

Coord Transition, CoorPhs [2.5]

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	RetHld	Float	Min Veh Perm	Min Ped Perm
1	12	22							EndGRN				
2	12	22							EndGRN				
3	12	22							EndGRN				
4	12	22							EndGRN				
5	12	22							EndGRN				
6	12	22							EndGRN				
7	12	22							EndGRN				
8	12	22							EndGRN				
9	12	22							EndGRN				
10	12	22							EndGRN				
11	12	22							EndGRN				
12	12	22							EndGRN				
13	12	22							EndGRN				
14	12	22							EndGRN				
15	12	22							EndGRN				
16	12	22							EndGRN				
17	12	22							EndGRN				
18	12	22							EndGRN				
19	12	22							EndGRN				
20	12	22							EndGRN				
21	12	22							EndGRN				
22	12	22							EndGRN				
23	12	22							EndGRN				
24	12	22							EndGRN				
25									BegGRN				
26									BegGRN				
27									BegGRN				
28									BegGRN				
29									BegGRN				
30									BegGRN				
31									BegGRN				
32									BegGRN				
33									BegGRN				
34									BegGRN				
35									BegGRN				
36									BegGRN				
37									BegGRN				
38									BegGRN				
39									BegGRN				
40									BegGRN				
41									BegGRN				
42									BegGRN				
43									BegGRN				
44									BegGRN				
45									BegGRN				
46									BegGRN				
47									BegGRN				
48									BegGRN				

Channel Params[1.8.3]

C1 IO Mode	User	Single BIU Map	DEFAULT	Invert Rail Input	OFF

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Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
1	3						45	50	2
2							45	50	2
3							45	50	2
4							45	50	2
5							45	50	2
6							45	50	2
7							45	50	2
8							45	50	2
9							45	50	2
10							45	50	2
11							45	50	2
12							45	50	2
13							45	50	2
14							45	50	2
15							45	50	2
16							45	50	2
17							45	50	2
18							45	50	2
19							45	50	
20							45	50	
21							45	50	
22							45	50	
23							45	50	
24							45	50	
25							45	50	
26							45	50	
27							45	50	
28							45	50	
29							45	50	
30							45	50	
31							45	50	
32							45	50	

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
33							45	50	
34							45	50	
35							45	50	
36							45	50	
37							45	50	
38							45	50	
39							45	50	
40							45	50	
41							45	50	
42							45	50	
43							45	50	
44							45	50	
45							45	50	
46							45	50	
47							45	50	
48							45	50	
49							45	50	
50							45	50	
51							45	50	
52							45	50	
53							45	50	
54							45	50	
55							45	50	
56							45	50	
57							45	50	
58							45	50	
59							45	50	
60							45	50	
61							45	50	
62							45	50	
63							45	50	
64							45	50	

Vehicle Options 1-64 [5.2]

Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol
1	ON	ON		ON				
2	ON	ON		ON				
3	ON	ON		ON				
4	ON	ON		ON				
5	ON	ON		ON				
6	ON	ON		ON				
7	ON	ON		ON				
8	ON	ON		ON				
9	ON	ON		ON				
10	ON	ON		ON				
11	ON	ON		ON				
12	ON	ON		ON				
13	ON	ON		ON				
14	ON	ON		ON				
15	ON	ON		ON				
16	ON	ON		ON				
17	ON	ON		ON				
18	ON	ON		ON				
19	ON	ON		ON				
20	ON	ON		ON				
21	ON	ON		ON				
22	ON	ON		ON				
23	ON	ON		ON				
24	ON	ON		ON				
25	ON	ON		ON				
26	ON	ON		ON				
27	ON	ON		ON				
28	ON	ON		ON				
29	ON	ON		ON				
30	ON	ON		ON				
31	ON	ON		ON				
32	ON	ON		ON				

Vehicle Options 1-64 [5.2]

Det #	vol	occ	Yell Lock	Red Lock	Ext	Add Init	Que	Call
33					ON	ON		ON
34					ON	ON		ON
35					ON	ON		ON
36					ON	ON		ON
37					ON	ON		ON
38					ON	ON		ON
39					ON	ON		ON
40					ON	ON		ON
41					ON	ON		ON
42					ON	ON		ON
43					ON	ON		ON
44					ON	ON		ON
45					ON	ON		ON
46					ON	ON		ON
47					ON	ON		ON
48					ON	ON		ON
49					ON	ON		ON
50					ON	ON		ON
51					ON	ON		ON
52					ON	ON		ON
53					ON	ON		ON
54					ON	ON		ON
55					ON	ON		ON
56					ON	ON		ON
57					ON	ON		ON
58					ON	ON		ON
59					ON	ON		ON
60					ON	ON		ON
61					ON	ON		ON
62					ON	ON		ON
63					ON	ON		ON
64					ON	ON		ON

Parameters+ 1-64 [5.3]

Det #	oc G	oc Y	oc R	Dlay 1	Dlay 2	Type	Src
1						NORM	
2						NORM	
3						NORM	
4						NORM	
5						NORM	
6						NORM	
7						NORM	
8						NORM	
9						NORM	
10						NORM	
11						NORM	
12						NORM	
13						NORM	
14						NORM	
15						NORM	
16						NORM	
17						NORM	
18						NORM	
19						NORM	
20						NORM	
21						NORM	
22						NORM	
23						NORM	
24						NORM	
25						NORM	
26						NORM	
27						NORM	
28						NORM	
29						NORM	
30						NORM	
31						NORM	
32						NORM	

Parameters+ 1-64 [5.3]

Det #	occ Grn	occ Yell	occ Red	Dlay 1	Dlay 2	Type	Src
33						NORM	
34						NORM	
35						NORM	
36						NORM	
37						NORM	
38						NORM	
39						NORM	
40						NORM	
41						NORM	
42						NORM	
43						NORM	
44						NORM	
45						NORM	
46						NORM	
47						NORM	
48						NORM	
49						NORM	
50						NORM	
51						NORM	
52						NORM	
53						NORM	
54						NORM	
55						NORM	
56						NORM	
57						NORM	
58						NORM	
59						NORM	
60						NORM	
61						NORM	
62						NORM	
63						NORM	
64						NORM	

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Ped Det Parms [5.4]

Det #	Call Ø	No Act	Max Pres	Err Cnt
1			15	
2			15	
3			15	
4			15	
5			15	
6			15	
7			15	
8			15	

Unit Paramters [1.2.1]

TS2 Det Faults		ON

Vol/Occ Report Parm [1.5.8]

Vol/Occ Period Minutes	0
Vol/Occ Period Minutes	15

Preemption Times [3.1], Options+ [3.6]

Pre #	Enable	Type	Output	Delay	MinDura
1	ON	RAIL	Dwell		
2	ON	RAIL	Dwell		
3	ON	EMERG	Dwell		
4	ON	EMERG	Dwell		
5	ON	EMERG	Dwell		
6	ON	EMERG	Dwell		

Pre #	MaxPres	MinGrn	MinWlk	PedClr	Co+Pre
1					ON
2					ON
3					ON
4					ON
5					ON
6					ON

Pre #	Track Grn	Min Dwell	Ext Dwell	PedClr+	Yel
1		2			
2		2			
3		2			
4		2			
5		2			
6		2			

Pre #	Red	Pattern	Skip
1			OFF
2			OFF
3			OFF
4			OFF
5			OFF
6			OFF

Low Priority Preempts

Pre #	Type	Min	Max
7	OFF		
8	OFF		
9	OFF		
10	OFF		

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	PRE
Max Seek Track Time	
Max Seek Dwell Time	

Channel Parameters [1.8.3]

D Conn Mappings	OFF
Pre Invert Rail Input	None

Track Clear Phases [3.2], Track Clear Overlaps+ [3.5]

Pre #	Track Phases				Track Overlaps											
1																
2																
3																
4																
5																
6																

Dwell Phases [3.2] and Overlaps+ [3.5]

Pre #														
1	Phases													
	Overlaps													
	Peds													
2	Phases													
	Overlaps													
	Peds													
3	Phases													
	Overlaps													
	Peds													
4	Phases													
	Overlaps													
	Peds													
5	Phases													
	Overlaps													
	Peds													
6	Phases													
	Overlaps													
	Peds													

Exit Phases [3.2]

Pre #	Exit Phase			
1				
2				
3				
4				
5				
6				

Preemption 1, Options+ [3.6]

Pre #	Lock	Override Auto Flsh		Override Higher		Flsh Dwell	Link
1	ON		ON		ON		OFF	
2	ON		ON		ON		OFF	
3	ON		ON		ON		OFF	
4	ON		ON		ON		OFF	
5	ON		ON		ON		OFF	
6	ON		ON		ON		OFF	

Alt# 1 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	ON	ON	ON	ON	ON	ON	ON	ON
Soft Recall								
Dual Enrty								
Enabl SimGap	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Annual Schedule [4.3] **Month of Year** **Day of Week** **Date** **Day Plan** **Link To**

	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Day Plan	Link To
1																																																			1	
2																																																			1	
3																																																			1	
4																																																			1	
5																																																			1	
6																																																			1	
7																																																			1	
8																																																			1	
9																																																			1	
10																																																			1	
11																																																			1	
12																																																			1	
13	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
14																																																		1	
15																																																			1	
16																																																			1	
17																																																			1	
18																																																			1	
19																																																			1	
20																																																			1	
21																																																			1	
22																																																			1	
23																																																			1	
24																																																			1	

Day Plans [4.4]

Day Plan 1

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 2

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 3

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 4

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 5

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 6

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 7

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 8

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 9

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 10

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 11

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 12

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 13

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 14

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 15

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Action Table [4.5]

Act#	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
48												
98												
99												
100	255											

Coord Alternate Tables - Pat+ [2.6]

							Overlap Off									
Pat#	ØOpt	ØTime	DetG	Call Inh	CIC	CNA1	1	2	3	4	5	6	7	8	Dia	Max2
1															DFT	
2															DFT	
3															DFT	
4															DFT	
5															DFT	
6															DFT	
7															DFT	
8															DFT	
9															DFT	
10															DFT	
11															DFT	
12															DFT	
13															DFT	
14															DFT	
15															DFT	
16															DFT	
17															DFT	
18															DFT	
19															DFT	
20															DFT	
21															DFT	
22															DFT	
23															DFT	
24															DFT	
25															DFT	
26															DFT	
27															DFT	
28															DFT	
29															DFT	
30															DFT	
31															DFT	
32															DFT	
33															DFT	
34															DFT	
35															DFT	
36															DFT	
37															DFT	
38															DFT	
39															DFT	
40															DFT	
41															DFT	
42															DFT	
43															DFT	
44															DFT	
45															DFT	
46															DFT	
47															DFT	
48															DFT	

#	Event / Alarm	Ev	Alr
1	Power Up Alarm.	ON	ON
2	Stop Timing	ON	ON
3	TS1 Cabinet Door	ON	ON
4	Coordination Failure	ON	ON
5	External Alarm # 1	ON	ON
6	External Alarm # 2	ON	ON
7	External Alarm # 3	ON	ON
8	External Alarm # 4	ON	ON
9	Closed Loop Disabled	ON	ON
10	External Alarm # 5	ON	ON
11	External Alarm # 6	ON	ON
12	Manual Control Enable	ON	ON
13	Coord Free Input	ON	ON
14	Local Flash Input	ON	ON
15	MMU Flash	ON	ON
16	CMU Flash	ON	ON
17	Cycle Fault	ON	ON
18	Cycle Failure	ON	ON
19	Coordination Fault	ON	ON
20	Controller Fault	ON	ON
21	Detector SDLC Failure	ON	ON
22	MMU SDLC Failure	ON	ON
23	Critical SDLC Failure	ON	ON
24	Reserved	ON	ON
25	EEPROM CRC Fault	ON	ON
26	Detector Diagnostic Failure	ON	ON
27	BIU Detector Failure	ON	ON
28	Queue detector alarm	ON	ON
29	Ped Detector Fault	ON	ON
30	Coord Diagnostic Fault	ON	ON
41	TempAlert Probe Ch. A	ON	ON
42	TempAlert Probe Ch. B	ON	ON
47	Coord Active	ON	ON
48	Preempt Active	ON	ON
49	Preempt 1 Input	ON	ON
50	Preempt 2 Input	ON	ON
51	Preempt 3 Input	ON	ON
52	Preempt 4 Input	ON	ON
53	Preempt 5 Input	ON	ON
54	Preempt 6 Input	ON	ON
55	Preempt 7 Input	ON	ON
56	Preempt 8 Input	ON	ON
57	Preempt 9 Input	ON	ON
58	Preempt 10 Input	ON	ON
61	In Transition	ON	ON
81	FIO Status Alarm	ON	ON

Call Phases[1.1.5]

Ø	Phases Called By Ø			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1						1								
2						2								
3						3								
4						4								
5						5								
6						6								
7						7								
8						8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1						1								
2						2								
3						3								
4						4								
5						5								
6						6								
7						7								
8						8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Auto Flash Phase/Olap Settings [1.4.2]

Yel Ø								
Yel (olaps)								

Unit Parameters [1.2.1]

Allow Skip Yellow	OFF	Max Cycle Time	
TOD Dim Enable	OFF	Cycle Fault Action	Alarm
Tone Disable	OFF		
Diamond Mode	4Ph		
Backup Time (s)	900		
Disable Init Ped	OFF		
Cycle Fault Action	Alarm		
Enable Run Timer	ON		

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C1-USER IO Map [1.8.9.1 In]

I1-1	1	Veh Call 1
I1-2	189	Unused
I1-3	189	Unused
I1-4	189	Unused
I1-5	189	Unused
I1-6	189	Unused
I1-7	189	Unused
I1-8	189	Unused
I2-1	189	Unused
I2-2	189	Unused
I2-3	189	Unused
I2-4	189	Unused
I2-5	189	Unused
I2-6	189	Unused
I2-7	189	Unused
I2-8	189	Unused
I3-1	189	Unused
I3-2	189	Unused
I3-3	189	Unused
I3-4	189	Unused
I3-5	189	Unused
I3-6	189	Unused
I3-7	189	Unused
I3-8	189	Unused
I4-1	189	
I4-2		
I4-3		
I4-4		
I4-5	189	Unused
I4-6	189	Unused
I4-7	229	33xCMUStop
I4-8	228	33xFlashSns
I5-1	189	Unused
I5-2	189	Unused
I5-3	189	Unused
I5-4	189	Unused
I5-5	189	Unused
I5-6	189	Unused
I5-7	189	Unused
I5-8	189	Unused
I6-1	189	Unused
I6-2	189	Unused
I6-3	189	Unused
I6-4	189	Unused
I6-5	189	Unused
I6-6	189	Unused
I6-7	189	Unused
I6-8	189	Unused

C1-USER IO Map [1.8.9.2 Out]

O1-1	1	Ch1 Red
O1-2	49	Ch1 Green
O1-3	2	Ch2 Red
O1-4	26	Ch2 Yellow
O1-5	50	Ch2 Green
O1-6	3	Ch3 Red
O1-7	27	Ch3 Yellow
O1-8	51	Ch3 Green
O2-1	4	Ch4 Red
O2-2	52	Ch4 Green
O2-3	5	Ch5 Red
O2-4	29	Ch5 Yellow
O2-5	53	Ch5 Green
O2-6	6	Ch6 Red
O2-7	30	Ch6 Yellow
O2-8	54	Ch6 Green
O3-1	7	Ch7 Red
O3-2	55	Ch7 Green
O3-3	8	Ch8 Red
O3-4	32	Ch8 Yellow
O3-5	56	Ch8 Green
O3-6	9	Ch9 Red
O3-7	33	Ch9 Yellow
O3-8	57	Ch9 Green
O4-1	10	Ch10 Red
O4-2	58	Ch10 Green
O4-3	11	Ch11 Red
O4-4	35	Ch11 Yellow
O4-5	59	Ch11 Green
O4-6	12	Ch12 Red
O4-7	36	Ch12 Yellow
O4-8	60	Ch12 Green
O5-1	28	Ch4 Yellow
O5-2	34	Ch10 Yellow
O5-3	25	Ch1 Yellow
O5-4	31	Ch7 Yellow
O5-5	115	Not Used
O5-6	115	Not Used
O5-7	115	Not Used
O5-8	114	Watchdog
O6-1	115	Not Used
O6-2	115	Not Used
O6-3	13	Ch13 Red
O6-4	37	Ch13 Yellow
O6-5	61	Ch13 Green
O6-6	14	Ch14 Red
O6-7	38	Ch14 Yellow
O6-8	62	Ch14 Green

C1-USER IO Map [1.8.9.2 Out]

O7-1	115	Not Used
O7-2	115	Not Used
O7-3	115	Not Used
O7-4	115	Not Used
O7-5	115	Not Used
O7-6	115	Not Used
O7-7	115	Not Used
O7-8	115	Not Used

C11S-USER IO Map [1.8.9.1 In]

I4-1		
I4-2		
I4-3		
I4-4		
I7-1	189	Unused
I7-2	189	Unused
I7-3	189	Unused
I7-4	189	Unused
I7-5	189	Unused
I7-6	189	Unused
I7-7	189	Unused
I7-8	189	Unused
I8-1	189	Unused
I8-2	189	Unused
I8-3	189	Unused
I8-4	189	Unused
I8-5	189	Unused
I8-6	189	Unused
I8-7	189	Unused
I8-8	189	Unused

C11S-USER IO Map [1.8.9.2 Out]

O8-1	115	Not Used
O8-2	115	Not Used
O8-3	115	Not Used
O8-4	115	Not Used
O8-5	115	Not Used
O8-6	115	Not Used
O8-7	115	Not Used
O8-8	115	Not Used

IO Logic [1.8.7]

Op1	Result		O1Fcn	Inv1	Src1	IO1	Fun1	O2Fcn	Inv2	Src2	IO2	Fun2	O3Fcn	Inv3	Src3	IO3	Fun3	Dly	Sec
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0

Security Access Levels [8.2]

1	SWLOAD
2	SECURE
3	None
4	None
5	None
6	None
7	None
8	None
9	None
10	None
11	None
12	None
13	None
14	None
15	None
16	None
17	None
18	None
19	None
20	None
21	None
22	None
23	None
24	None
25	None
26	None
27	None
28	None
29	None
30	None
31	None
32	None
33	None
34	None
35	None
36	None
37	None
38	None
39	None
40	None
41	None
42	None
43	None
44	None
45	None
46	None
47	None
48	None
49	None
50	None
51	None
52	None
53	None
54	None
55	None
56	None
57	None
58	None
59	None
60	None
61	None
62	None
63	None
64	None

Com Parameters [6.1]

Station ID	1923
Group ID	0
Master ID	0
Backup Time	900

SysUp Modem [6.1]

Enable Modem	None
Idle Time	0
Dial Time	0
Tel:	
Alt:	

2070 Port Parms [6.2]

Port	Baud Rate	FCM
SP1	9600	6
SP2	9600	6
SP3	19200	6
SP4	38400	6
SP5	1200	0
SP6	1200	0
SP7	1200	0
SP8	1200	0

2070 IP 1 Addressing [6.5]

	Addressing			
Addr	192	168	10	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	10	1
Port	###			

2070 IP 2 Addressing [6.5]

	Addressing			
Addr	192	168	10	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	10	1
Port	5001			

2070 Port Binding Ports [6.6]

	Port	Echo	Mode
ASYNC1	SP1	None	0
ASYNC2	SP2	None	0
ASYNC3	SP3	None	0
ASYNC4	SP4	None	0
SYNC1	SP5S	SYNC3	OFF
SYNC2	OFF	SYNC4	OFF

2070 Port Binding Functions [6.6]

Functio	Channel	Functio	Channel
TS2/CVN	None	SYSUp	ASYNC2
CMU/MM	None	SYSDow	ASYNC1
Opticom	None	Shell	None
Loop De	None		
GPS	None		

CLEARANCES

1. ALL SIGNALS IN THIS CONTRACT SHALL BE A MINIMUM OF 16.5 FEET ABOVE THE HIGH POINT OF THE ROADWAY, WITH ALL RED INDICATIONS LEVEL ACROSS THE INTERSECTION. NO EXCEPTIONS SHALL BE MADE FOR SIGNALS MOUNTED BELOW 16.5 FEET.

PULLBOXES

1. PULLBOXES SHALL HAVE A TWO-FOOT MINIMUM DRAINAGE BED OF NO. 2 CRUSHED STONE OR GRAVEL PLACED BELOW THE PULLBOX, AOBE. THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 680.510501 - "PULLBOX, RECTANGULAR 26" X 18" REINFORCED CONCRETE."
2. ON STANDARD SHEET NO. 680-04, ALL PULLBOXES SHALL BE SET TO 1/2 INCH BELOW GRADE WITH ALL THE SURROUNDING SURFACES, EXCEPT SIDEWALKS, WHERE THEY SHALL BE FLUSH.

PAVEMENT MARKINGS

1. PAVEMENT MARKINGS SHOWN ON THE TRAFFIC SIGNAL PLANS, UNLESS OTHERWISE NOTED, ARE FOR DESIGN PURPOSES ONLY.

CONDUITS

1. WHERE CONDUIT IS TO BE PLACED UNDER THE ROADWAY, THE CONTRACTOR SHALL USE A 3" DIAMETER CONDUIT, UNLESS OTHERWISE SHOWN ON THE PLAN SHEET.
2. ALL SIGNAL CONDUITS SHALL BE BONDED WITH A #6 BARE STRANDED COPPER GROUND WIRE.
3. ALL COUPLINGS AND BUSHINGS SHALL BE MECHANICALLY THREADED. COMPRESSION OR SLIP TYPE COUPLINGS OR BUSHINGS SHALL NOT BE ALLOWED.

UTILITIES

1. THE APPROXIMATE LOCATION OF UNDERGROUND UTILITIES MAY BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE TRUE LOCATION BEFORE COMMENCING WORK. BEFORE ANY PIPE IS PLACED, THE CONTRACTOR SHALL UNCOVER ALL UTILITIES AT PIPE CROSSINGS TO ENABLE THE ENGINEER TO VERIFY THE PROPOSED PIPE WITH GRADES SHOWN ON THE PLANS IS NOT OBSTRUCTED BY EXISTING UTILITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL UTILITY WORK WITH THE RESPECTIVE OWNERS DURING CONSTRUCTION. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS ITEMS IN THE CONTRACT.
3. ALL SIGNAL EQUIPMENT SHALL BE PLACED IN A LOCATION THAT COMPLIES WITH THE NYS HIGH VOLTAGE PROXIMITY ACT. THIS INCLUDES, BUT IS NOT LIMITED TO, KEEPING ALL SIGNAL EQUIPMENT A MINIMUM OF 10 FT FROM PRIMARY LINES, AND 2 FT FROM SECONDARY AND ALL OTHER LINES.
4. CONTRACTOR IS TO CONTACT DIG SAFELY NEW YORK AT 811 FOR MARK OUT OF ALL UNDERGROUND SIGNAL CONDUIT AND LOOP WIRE PRIOR TO ANY DIGGING. ANY BROKEN SIGNAL WIRE CANNOT BE SPLICED. A NEW RUN OF WIRE FROM THE POLE TO THE FURTHEST END MUST BE REPLACED.
5. UNDERGROUND UTILITY LOCATIONS ARE NOT GUARANTEED, NOR IS THERE ANY GUARANTEE THAT ALL EXISTING UTILITIES, WHETHER FUNCTIONAL OR ABANDONED, WITHIN THE PROJECT AREA ARE SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE STARTING WORK AND SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM THEIR WORK. CONTRACTOR SHALL NOTIFY DIG SAFELY NEW YORK AT 811 IN ACCORDANCE WITH 16 NYCRR PART 753.

LOOPS

1. IN NEW CONSTRUCTION OF ASPHALT PAVEMENTS, THE LOOP SHOULD BE PLACED BELOW THE TOP COURSE, PREFERABLY IN THE BINDER.
2. EIC SHALL RECORD LOCATIONS OF LOOPS AND LEAD-INS AND SUBMIT TO NYSDOT FOR MAINTENANCE RECORDS.
3. THIS IS ONLY A TYPICAL DETAIL AND THE LOOP LAYOUTS AND DIMENSIONS MAY VARY BASED ON INTERSECTION LOCATION. CONTRACTOR SHALL FIRST VERIFY LOOP LOCATIONS, AND DIMENSIONS ON EACH INTERSECTION TRAFFIC SIGNAL PLAN SHEET PRIOR TO BEGINNING ANY LOOP INSTALLATION WORK.

CONTRACTOR

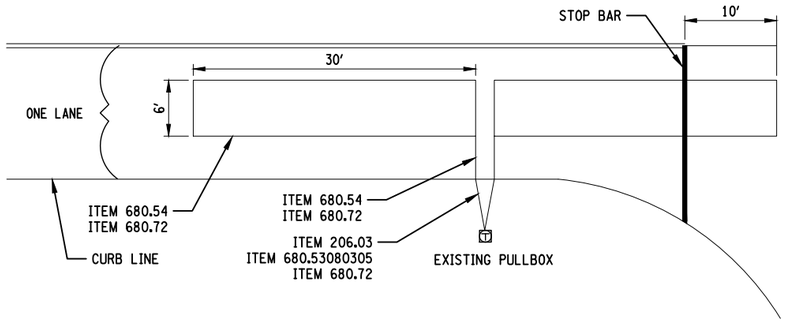
1. NO PROPOSAL WHICH MODIFIES THE APPROVED DESIGN PLAN SUGGESTED BY EITHER THE CONTRACTOR, OR CONSTRUCTION PERSONNEL SHALL BE MADE IN THE FIELD WITHOUT FIRST CONSULTING WITH THE E.I.C. THESE CHANGES INCLUDE, BUT ARE NOT LIMITED TO, 90-DEGREE BENDS IN THE CONDUITS.
2. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT THERE MAY BE OTHER CONTRACTORS WORKING WITHIN THE LIMITS OF WORK FOR THIS CONTRACT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE WORK OF THIS CONTRACT WITH THAT OF OTHERS SO THERE IS NO CONFLICT.

HIGHWAY MAINTENANCE

1. UPON COMPLETION AND ACCEPTANCE OF THIS CONTRACT, THE HIGHWAY WILL CONTINUE TO BE MAINTAINED BY THOSE AGENCIES WHICH HAD JURISDICTION PRIOR TO THIS CONTRACT.

NYSDOT FUTURE WORK

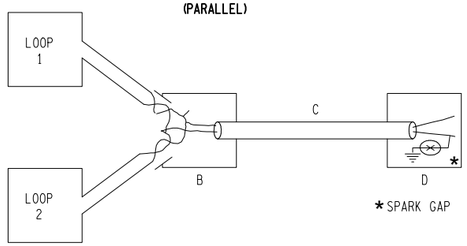
1. A COMPLETE SIGNAL REPLACEMENT PROJECT IS CURRENTLY BEING PROGRESSED BY NYSDOT REGION 3. LAYOUT OF PULLBOXES AND CONDUIT SHALL BE CONFIRMED PRIOR TO PLACEMENT TO ENSURE COMPATIBILITY WITH FINAL NYSDOT SIGNAL LAYOUT.



INDUCTANCE LOOP INSTALLATION

NOT TO SCALE

TABLE OF TRAFFIC SIGNAL QUANTITIES FOR SIGNAL NO. 23A CAYUGA COUNTY			
ITEM	DESCRIPTION	UNIT	QUANTITY
206.03	CONDUIT EXCAVATION AND BACKFILL INCLUDING SURFACE RESTORATION	LF	103
619.1613	MAINTAIN TRAFFIC SIGNAL EQUIPMENT (REQUIREMENT C)	INTM	2
680.510501	PULLBOX-RECTANGULAR, 26 X 18 INCH, REINFORCED CONCRETE	EA	2
680.520106	CONDUIT, METAL STEEL, ZINC COATED, 2"	LF	21
680.520108	CONDUIT, METAL STEEL, ZINC COATED, 3"	LF	64
680.53080305	CONDUIT, FLEXIBLE, LIQUID TIGHT NON METALLIC, 1"	LF	36
680.54	INDUCTANCE LOOP INSTALLATION	LF	82
680.72	INDUCTANCE LOOP WIRE	LF	504
680.77000105	MODIFY TRAFFIC SIGNAL INSTALLATION, LOCATION 1	ELOC	1
680.8111	TRAFFIC SIGNAL BRACKET ASSEMBLY - 1 WAY	EA	4



NOTE: THE TOTAL COMBINED LENGTH OF THE TWISTED PAIR IS 100 FEET MAX.

TWO ROAD LOOPS WHEN LOCATED ADJACENT TO EACH OTHER. THESE ENCAPSULATED LOOP AND LOOP LEAD-IN WIRES (TWISTED PAIR) ARE CONNECTED IN PARALLEL WITHIN THE CURBSIDE JUNCTION BOX AND THEN PROCEED THROUGH THE SHIELDED LEAD-IN CABLE WHICH IN TURN GOES TO THE TERMINAL BLOCK IN THE MAIN CABINET.

THE CONFIGURATION OF FIGURE 2 MAY BE EXPANDED TO ACCOMMODATE ADDITIONAL LOOPS (UP TO 4) OF THE SAME PHASE.

LEGEND

A - TWISTED PAIR LEAD-IN
B - CURBSIDE JUNCTION BOX
C - SHIELDED LEAD-IN CABLE
D - MAIN CABINET & MAIN CABINET PULL BOX
E - FLEXIBLE LIQUID-TIGHT CONDUIT

INDUCTANCE LOOP WIRING

NOT TO SCALE

C&S COMPANIES
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STATE OF NEW YORK
JEFFREY M. REINA
No. 081990
LICENSED PROFESSIONAL ENGINEER

CITY OF AUBURN NEW YORK

STANDART AVENUE
INTERSECTION WIDENING
CITY OF AUBURN
AUBURN, NY

MARK	DATE	DESCRIPTION
		REVISIONS

PROJECT NO:	155.033.001
DATE:	JUNE 2, 2025
DRAWN BY:	M. ANASTAS
DESIGNED BY:	M. ANASTAS
CHECKED BY:	J. REINA

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

TRAFFIC SIGNAL DETAILS & NOTES

TSD-01

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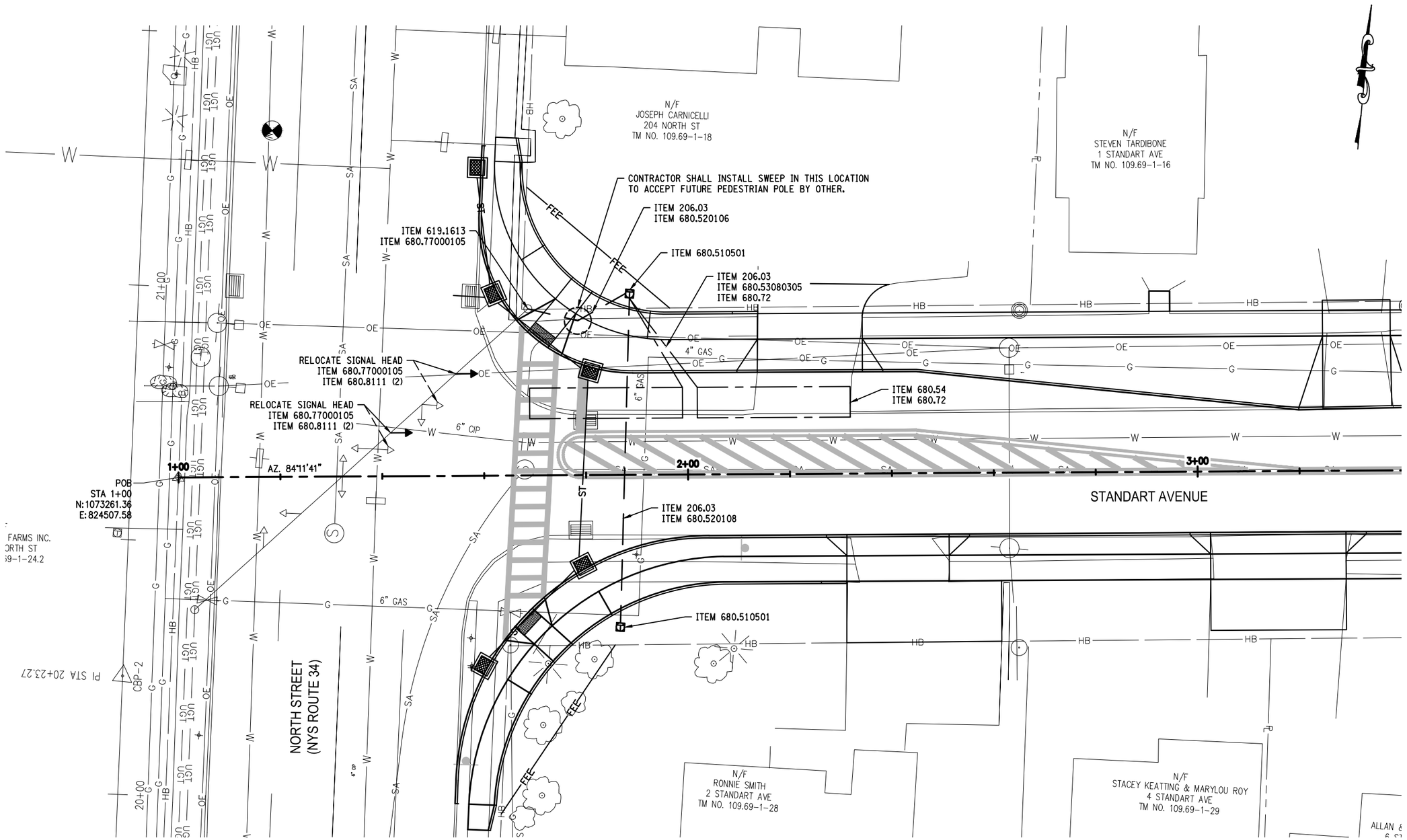

NOTE: ITEM 680.77000101 - MODIFY TRAFFIC SIGNAL EQUIPMENT, LOCATION 1 INCLUDES

1. THE RELOCATION, WIRING AND PROGRAMMING OF RELOCATING TRAFFIC SIGNALS TO LINE UP WITH ROAD WIDENING LANE.
2. PROGRAMMING AND INSTALLING NEW LOOP VEHICLE DETECTION.

SIGNAL NO. 23A
CAYUGA COUNTY

10 0 10 20

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TRAFFIC SIGNAL PLAN

TSP-01

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TABLE OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES	
			PROP.	AS-BUILT
201.06	CLEARING AND GRUBBING	LS	NEC	
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	710	
203.07	SELECT GRANULAR FILL	CY	160	
206.0201	TRENCH AND CULVERT EXCAVATION	CY	270	
206.03	CONDUIT EXCAVATION AND BACKFILL INCLUDING SURFACE RESTORATION	LF	103	
207.21	GEOTEXTILE SEPARATION	SY	565	
209.11010024	TEMPORARY CATCH BASIN INSERT TRASH, SEDIMENT, AND DEBRIS REMOVAL	EA	8	
209.2301	SEDIMENT FILTER LOG-TEMPORARY, 12"	LF	450	
304.12	SUBBASE COURSE, TYPE 2	CY	332	
404.00001	PLANT PRODUCTION QUALITY ADJUSTMENT TO WMA ITEMS	QU	24	
404.0982	9.5 F2 TOP COURSE ASPHALT, 80 SERIES COMPACTION	TON	80	
404.1989	19 F9 BINDER COURSE ASPHALT, 80 SERIES COMPACTION	TON	130	
404.2589	25 F9 BASE ASPHALT, 80 SERIES COMPACTION	TON	260	
407.0102	DILUTED TACK COAT	GAL	143	
418.7603	ASPHALT PAVEMENT JOINT ADHESIVE	LF	510	
490.30	MISCELLANEOUS COLD MILLING OF BITUMINOUS CONCRETE	SY	305	
552.17	SHIELDS AND SHORING	SF	1895	
603.77	CONCRETE COLLARS	EA	2	
603.9815	SMOOTH INTERIOR CORRUGATED POLYETHYLENE CULVERT AND STORMDRAIN 15 INCH DIAMETER	LF	106	
604.070301	ALTERING DRAINAGE STRUCTURES, LEACHING BASINS AND MANHOLES	EA	1	
604.302192	RECTANGULAR DRAINAGE STRUCTURE TYPE U FOR PARALLEL BAR #12PCB FRAME	LF	39.2	
605.0901	UNDERDRAIN FILTER TYPE 1	CY	45	
605.1701	OPTIONAL UNDERDRAIN PIPE, 4 INCH DIAMETER	LF	500	
608.0101	CONCRETE SIDEWALKS AND DRIVEWAYS	CY	38	
608.21000003	CAST IRON EMBEDDED DETECTABLE WARNING UNITS	SY	2.2	
608.020102	ASPHALT SIDEWALKS, DRIVEWAYS AND BICYCLE PATHS, AND VEGETATION CONTROL STRIPS	TON	35	
609.0212	STONE CURB NEAR VERTICAL FACE (NVF)	LF	669	
610.1605	TURF ESTABLISHMENT - PERFORMANCE	SY	600	
619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	NEC	
619.04	TYPE III CONSTRUCTION BARRICADE	EA	31	
619.1613	MAINTAIN TRAFFIC SIGNAL EQUIPMENT (REQUIREMENT C)	INTM	2	
625.01	SURVEY OPERATIONS	LS	NEC	
627.50140008	CUTTING PAVEMENT	LF	285	
637.12	ENGINEER'S FIELD OFFICE - TYPE 2	MNTH	2	
637.34	OFFICE TECHNOLOGY AND SUPPLIES	DC	1000	
645.81	TYPE A SIGN POSTS	EA	2	
647.31	RELOCATE SIGN PANEL, SIGN PANEL ASSEMBLY SIZE I (UNDER 30 SF)	EA	2	
655.0903	PARALLEL BAR FRAME 12 PCB & PARALLEL BAR GRATE 12 PCB	EA	5	
663.33	ADJUST EXISTING VALVE BOX ELEVATION	EA	1	
680.510501	PULLBOX-RECTANGULAR, 26 X 18 INCH, REINFORCED CONCRETE	EA	2	
680.520106	CONDUIT, METAL STEEL, ZINC COATED, 2"	LF	21	
680.520108	CONDUIT, METAL STEEL, ZINC COATED, 3"	LF	64	
680.53080305	CONDUIT, FLEXIBLE, LIQUID TIGHT NON METALLIC, 1"	LF	36	
680.54	INDUCTANCE LOOP INSTALLATION	LF	82	
680.72	INDUCTANCE LOOP WIRE	LF	504	
680.77000105	MODIFY TRAFFIC SIGNAL INSTALLATION, LOCATION 1	ELOC	1	
680.8111	TRAFFIC SIGNAL BRACKET ASSEMBLY - 1 WAY	EA	4	
685.1202	YELLOW EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MIL	LF	700	
685.3104	WHITE EPOXY REFLECTORIZED PAVEMENT SPECIAL STRIPES - 20 MILS PORTABLE/HAND APPLICATION	LF	700	
686.3204	YELLOW EPOXY REFLECTORIZED PAVEMENT SPECIAL STRIPES - 20 MILS PORTABLE/HAND APPLICATION	LF	600	
697.03	FIELD CHANGE PAYMENT	DC	43000	
698.04	ASPHALT PRICE ADJUSTMENT	DC	1100	
698.05	FUEL PRICE ADJUSTMENT	DC	400	
699.040001	MOBILIZATION	LS	NEC	

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INTERSECTION WIDENING
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AUBURN, NY

MARK	DATE	DESCRIPTION
		REVISIONS

PROJECT NO: 155.033.001
DATE: JUNE 2, 2025
DRAWN BY: M. ANASTAS
DESIGNED BY: M. ANASTAS
CHECKED BY: J. REINA

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ESTIMATE OF QUANTITIES

EOQ-01
SHEET 26 of 26

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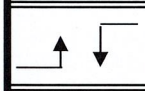
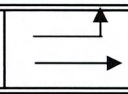
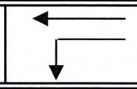
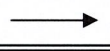
Passero Associates Engineering Architecture 242 West Main Street, Suite 100 Rochester, New York 14614 (585) 505-6010 (Phone)	**Project:** Auburn MOB	**Project No:** 20250416.0001 **Date:** 3/11/26 **Observer:** NGM **Peak:** Am

Signal Timing Worksheet

Street: State			
			33
			72
			156
			17
			35
			137
			59
			51

Street: Perrine			
			
			18
			14
			18
			15
			18
			15
			17
			18

Average Timings

			70

			17

Phasing Plan

Passero Associates Engineering Architecture 242 West Main Street, Suite 100 Rochester, New York 14614 (585) 505-6010 (Phone)	**Project:** Auburn MOB	**Project No:** 20250416.0001 **Date:** 3/11/26 **Observer:** NGM **Peak:** PM

Signal Timing Worksheet

Street: State			
↰ ↳	↓ ↳	↰ ↑	↓ ↑
			108
			104
			38
			75
			65
			41
			37
			94

Street: Perrine			
↑ ↳	⇉	↰ ↓	←
			22
			20
			19
			19
			24
			18
			22
			17

Average Timings

			70

			20

Phasing Plan

			↓9

			← →

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Auburn Community Hospital Health Campus, City of Auburn, NY
Documentation of Ambient Traffic Volume Growth

Roadway	Segment starts at	Segment end at	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Annual Growth
North St	NY-5	York St									10,318		10,487		10,422	-0.31%
Standart Ave	North St	Grant Ave						7,323		6,892			7,506	7,378		0.12%
Perrine St	North St	State St					1,919					2,083				1.65%
State St	RR X-ing	York St						4,268		2,492			2,752	3,154		-4.92%
Seymour St	North St	Grant Ave			4,847			5,132		4,356				4,331		-2.79%
Seymour St	Washington St	North St				5,699				5,954			6,666			2.26%
Grant Ave	N Fulton St	Standart Ave									17,891		16,920			-2.75%
															AVERAGE	**-0.96%**

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Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #1: North St at Standart Ave

Number of Crashes: 15
Number of Injuries: 1
Number of Fatalities: 0

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3

Intersection Type: 4 Legged
Area Type: Urban
Control Type: Signal 1-4 Lanes

	Direction					
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn		2				2
Rear-end	3	2				5
Overtaking						0
Right Angle	1			1		2
Right Turn				1		1
Head On						0
Side-swipe	3	1	1			5
Fixed Object						0
Backing						0
Other						0
Bike/Ped						0
Animal						0
Totals	7	5	1	2	0	15

PDO	14
Injury	1
Injury + PDO	
Fatal	
NR	
Total	15

Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #2: North St at 143 North St Dwy

Number of Crashes: 0
Number of Injuries: 0
Number of Fatalities: 0

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3

Intersection Type: 3 Legged
Area Type: Urban
Control Type: Sign 4 Lanes

	Direction					
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn						0
Rear-end						0
Overtaking						0
Right Angle						0
Right Turn						0
Head On						0
Side-swipe						0
Fixed Object						0
Backing						0
Other						0
Bike/Ped						0
Animal						0
Totals	0	0	0	0	0	0

PDO	
Injury	
Injury + PDO	
Fatal	
NR	
Total	0

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Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #3: North St at Lansing St

Number of Crashes: 10
Number of Injuries: 2
Number of Fatalities: 1

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3

Intersection Type: 3 Legged
Area Type: Urban
Control Type: Signal 1-4 Lanes

	Direction					
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn		1				1
Rear-end						0
Overtaking						0
Right Angle	1					1
Right Turn						0
Head On						0
Side-swipe	1	3	1	1		6
Fixed Object	1					1
Backing						0
Other						0
Bike/Ped	1					1
Animal						0
Totals	4	4	1	1	0	10

PDO	7
Injury	2
Injury + PDO	
Fatal	1
NR	
Total	10

Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #4: North St at Perrine St

Number of Crashes: 5
Number of Injuries: 1
Number of Fatalities: 0

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3
Intersection Type: 3 Legged
Area Type: Urban
Control Type: Sign 4 Lanes

	Direction					
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn			1			1
Rear-end			1			1
Overtaking						0
Right Angle			3			3
Right Turn						0
Head On						0
Side-swipe						0
Fixed Object						0
Backing						0
Other						0
Bike/Ped						0
Animal						0
Totals	0	0	5	0	0	5

PDO	4
Injury	1
Injury + PDO	
Fatal	
NR	
Total	5

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Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #5: North St at Seymour St

Number of Crashes: 28
Number of Injuries: 6
Number of Fatalities: 0

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3

Intersection Type: 4 Legged
Area Type: Urban
Control Type: Signal 1-4 Lanes

	Direction					
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn	5	4				9
Rear-end	1	3	3			7
Overtaking						0
Right Angle	3	3		1		7
Right Turn						0
Head On						0
Side-swipe	1	1				2
Fixed Object		1				1
Backing						0
Other						0
Bike/Ped	2					2
Animal						0
Totals	12	12	3	1	0	28

PDO	22
Injury	6
Injury + PDO	
Fatal	
NR	
Total	28

Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #6: State St at Perrine St

Number of Crashes: 7
Number of Injuries: 1
Number of Fatalities: 0

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3

Intersection Type: 4 Legged
Area Type: Urban
Control Type: Signal 1-4 Lanes

	Direction					Totals
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	
Left turn						0
Rear-end			1			1
Overtaking						0
Right Angle	2			1		3
Right Turn						0
Head On						0
Side-swipe			1			1
Fixed Object	1					1
Backing						0
Other						0
Bike/Ped				1		1
Animal						0
Totals	3	0	2	2	0	7

PDO	6
Injury	1
Injury + PDO	
Fatal	
NR	
Total	7

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Intersection Crash Rate Calculations

Auburn Community Hospital Health Campus

Intersection #7: Lansing St at Grant Ave

Number of Crashes: 3
Number of Injuries: 1
Number of Fatalities: 0

Start Date: February 28, 2022
End Date: February 28, 2025
Number of Years: 3
Intersection Type: 3 Legged
Area Type: Urban
Control Type: Sign 4 Lanes

	Direction					
Type	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn						0
Rear-end						0
Overtaking						0
Right Angle			1			1
Right Turn						0
Head On						0
Side-swipe		1				1
Fixed Object						0
Backing			1			1
Other						0
Bike/Ped						0
Animal						0
Totals	0	1	2	0	0	3

PDO	2
Injury	1
Injury + PDO	
Fatal	
NR	
Total	3

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

The table below is a list of the parameters used by CLEAR Safety to calculate SPFs for each facility type. There is more information in NYSDOT's "HSIP Procedures and Techniques" (also called 'The Red Book').

NOTES: TT (‡) = Major Road is Two-Way, Minor Road is Two-Way • TO (‡) = Major Road is Two-Way, Minor Road is One-Way • OT (‡) = Major Road is One-Way, Minor Road is Two-Way • OO (‡) = Major Road is One-Way, Minor Road is One-Way

Screen Type	Facility Type	Description	Area Type	Directional / Bidirectional	Number of Lanes	Median Type	Access	Major Road Operation	Minor Road Operation	Number of Approaches	Traffic Control	Ramp Type (Entrance / Exit)	Year	Severity	Long-Term Calibration Factor (CA)	Long-Term Functional Form Adjustment Factor (CB)	Constant (BC)	Coefficient for Major Road AADT (B1)	Coefficient for Minor Road AADT (B2; intersections only)	Coefficient for Hoerl Functional Form (B2; segments and ramps only)	Coefficient for Segment Length (BL)	Overdispersion parameter A (D1)	Overdispersion parameter B (D2)	Overdispersion parameter C (D3)	AADT Presence (2 = major and minor; 1 = major only; 0 = not available)
Int	111	Urban 4-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	4	Signal	N/A	*	Total Crashes	1.0000	1.0000	-7.6010	0.5390	0.4510	0.0000	0	0.3900	0.0000	0.0000	2
Int	111	Urban 4-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	4	Signal	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-8.8040	0.5690	0.4550	0.0000	0	0.3400	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
10487	7378	N/A	4.0785	0.3900	15	3	12.2355	0.1733	14.5210	4.8403	0.7619	3.8205	0.2580	7.8990	3
10487	7378	N/A	1.6755	0.3400	1	3	5.0264	0.3691	2.4863	0.8288	-0.8467	1.4654	0.2100	3.1409	2

Alpha	Beta	10th	90th	Advanced LOSS
2.5641	1.5906	1.3394	7.4912	3
2.9412	0.5697	0.6073	2.9853	2

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

The table below is a list of the parameters used by CLEAR Safety to calculate SPFs for each facility type. There is more information in NYSDOT's "HSIP Procedures and Techniques" (also called 'The Red Book').

NOTES: TT (‡) = Major Road is Two-Way, Minor Road is Two-Way • TO (‡) = Major Road is Two-Way, Minor Road is One-Way • OT (‡) = Major Road is One-Way, Minor Road is Two-Way • OO (‡) = Major Road is One-Way, Minor Road is One-Way

Screen Type	Facility Type	Description	Area Type	Directional / Bidirectional	Number of Lanes	Median Type	Access	Major Road Operation	Minor Road Operation	Number of Approaches	Traffic Control	Ramp Type (Entrance / Exit)	Year	Severity	Long-Term Calibration Factor (CA)	Long-Term Functional Form Adjustment Factor (CB)	Constant (BC)	Coefficient for Major Road AADT (B1)	Coefficient for Minor Road AADT (B2; intersections only)	Coefficient for Hoerl Functional Form (B2; segments and ramps only)	Coefficient for Segment Length (BL)	Overdispersion parameter A (D1)	Overdispersion parameter B (D2)	Overdispersion parameter C (D3)	AADT Presence (2 = major and minor; 1 = major only; 0 = not available)
Int	86	Urban 3-Leg Two-Way Stop-Controlled TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Minor Road Stop	N/A	*	Total Crashes	1.0000	1.0000	-8.1720	0.5760	0.3920	0.0000	0	0.6603	0.0000	0.0000	2
Int	86	Urban 3-Leg Two-Way Stop-Controlled TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Minor Road Stop	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-11.4600	0.7760	0.4190	0.0000	0	0.8090	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
10487	358	N/A	0.5861	0.6603	0	3	1.7583	0.4627	0.8136	0.2712	-0.3149	0.7144	-0.1283	1.3005	2
10487	358	N/A	0.1633	0.8090	0	3	0.4900	0.7161	0.3509	0.1170	-0.0464	0.2204	-0.0570	0.3837	2

Alpha	Beta	10th	90th	Advanced LOSS
1.5144	0.3870	0.1155	1.2185	2
1.2361	0.1321	0.0245	0.3569	2

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

The table below is a list of the parameters used by CLEAR Safety to calculate SPFs for each facility type. There is more information in NYSDOT's "HSIP Procedures and Techniques" (also called 'The Red Book').

NOTES: TT (‡) = Major Road is Two-Way, Minor Road is Two-Way • TO (‡) = Major Road is Two-Way, Minor Road is One-Way • OT (‡) = Major Road is One-Way, Minor Road is Two-Way • OO (‡) = Major Road is One-Way, Minor Road is One-Way

Screen Type	Facility Type	Description	Area Type	Directional / Bidirectional	Number of Lanes	Median Type	Access	Major Road Operation	Minor Road Operation	Number of Approaches	Traffic Control	Ramp Type (Entrance / Exit)	Year	Severity	Long-Term Calibration Factor (CA)	Long-Term Functional Form Adjustment Factor (CB)	Constant (BC)	Coefficient for Major Road AADT (B1)	Coefficient for Minor Road AADT (B2; intersections only)	Coefficient for Hoerl Functional Form (B2; segments and ramps only)	Coefficient for Segment Length (BL)	Overdispersion parameter A (D1)	Overdispersion parameter B (D2)	Overdispersion parameter C (D3)	AADT Presence (2 = major and minor; 1 = major only; 0 = not available)
Int	109	Urban 3-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Signal	N/A	*	Total Crashes	1.0000	1.0000	-8.6580	0.7010	0.3560	0.0000	0	0.5200	0.0000	0.0000	2
Int	109	Urban 3-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Signal	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-9.4900	0.7000	0.3230	0.0000	0	0.4795	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
10487	2432	N/A	1.8355	0.5200	10	3	5.5065	0.2588	8.8369	2.9456	1.1101	1.9854	-0.1499	3.8209	3
10487	2432	N/A	0.6119	0.4795	3	3	1.8356	0.5319	2.3807	0.7936	0.1817	0.6356	-0.0237	1.2474	3

Alpha	Beta	10th	90th	Advanced LOSS
1.9231	0.9545	0.4700	3.6030	3
2.0855	0.2934	0.1691	1.1784	3

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

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Screen Type	Facility Type	Description	Area Type	Directional / Bidirectional	Number of Lanes	Median Type	Access	Major Road Operation	Minor Road Operation	Number of Approaches	Traffic Control	Ramp Type (Entrance / Exit)	Year	Severity	Long-Term Calibration Factor (CA)	Long-Term Functional Form Adjustment Factor (CB)	Constant (BC)	Coefficient for Major Road AADT (B1)	Coefficient for Minor Road AADT (B2; intersections only)	Coefficient for Hoerl Functional Form (B2; segments and ramps only)	Coefficient for Segment Length (BL)	Overdispersion parameter A (D1)	Overdispersion parameter B (D2)	Overdispersion parameter C (D3)	AADT Presence (2 = major and minor; 1 = major only; 0 = not available)
Int	86	Urban 3-Leg Two-Way Stop-Controlled TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Minor Road Stop	N/A	*	Total Crashes	1.0000	1.0000	-8.1720	0.5760	0.3920	0.0000	0	0.6603	0.0000	0.0000	2
Int	86	Urban 3-Leg Two-Way Stop-Controlled TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Minor Road Stop	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-11.4600	0.7760	0.4190	0.0000	0	0.8090	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
10487	2083	N/A	1.1689	0.6603	5	3	3.5066	0.3016	4.5496	1.5165	0.3477	1.4248	-0.2559	2.5936	3
10487	2083	N/A	0.3416	0.8090	1	3	1.0249	0.5467	1.0136	0.3379	-0.0038	0.4609	-0.1193	0.8025	2

Alpha	Beta	10th	90th	Advanced LOSS
1.5144	0.7719	0.2304	2.4300	3
1.2361	0.2764	0.0512	0.7465	2

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

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Screen Type	Facility Type	Description	Area Type	Directional / Bidirectional	Number of Lanes	Median Type	Access	Major Road Operation	Minor Road Operation	Number of Approaches	Traffic Control	Ramp Type (Entrance / Exit)	Year	Severity	Long-Term Calibration Factor (CA)	Long-Term Functional Form Adjustment Factor (CB)	Constant (BC)	Coefficient for Major Road AADT (B1)	Coefficient for Minor Road AADT (B2; intersections only)	Coefficient for Hoerl Functional Form (B2; segments and ramps only)	Coefficient for Segment Length (BL)	Overdispersion parameter A (D1)	Overdispersion parameter B (D2)	Overdispersion parameter C (D3)	AADT Presence (2 = major and minor; 1 = major only; 0 = not available)
Int	111	Urban 4-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	4	Signal	N/A	*	Total Crashes	1.0000	1.0000	-7.6010	0.5390	0.4510	0.0000	0	0.3900	0.0000	0.0000	2
Int	111	Urban 4-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	4	Signal	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-8.8040	0.5690	0.4550	0.0000	0	0.3400	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
10487	4331	N/A	3.2075	0.3900	28	3	9.6224	0.2104	24.1332	8.0444	4.8370	3.0046	0.2029	6.2120	4
10487	4331	N/A	1.3148	0.3400	6	3	3.9445	0.4271	5.1220	1.7073	0.3925	1.1500	0.1648	2.4648	3

Alpha	Beta	10th	90th	Advanced LOSS
2.5641	1.2509	1.0533	5.8913	4
2.9412	0.4470	0.4766	2.3427	3

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

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Screen Type	Facility Type	Description	Area Type	Directional / Bidirectional	Number of Lanes	Median Type	Access	Major Road Operation	Minor Road Operation	Number of Approaches	Traffic Control	Ramp Type (Entrance / Exit)	Year	Severity	Long-Term Calibration Factor (CA)	Long-Term Functional Form Adjustment Factor (CB)	Constant (BC)	Coefficient for Major Road AADT (B1)	Coefficient for Minor Road AADT (B2; intersections only)	Coefficient for Hoerl Functional Form (B2; segments and ramps only)	Coefficient for Segment Length (BL)	Overdispersion parameter A (D1)	Overdispersion parameter B (D2)	Overdispersion parameter C (D3)	AADT Presence (2 = major and minor; 1 = major only; 0 = not available)
Int	111	Urban 4-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	4	Signal	N/A	*	Total Crashes	1.0000	1.0000	-7.6010	0.5390	0.4510	0.0000	0	0.3900	0.0000	0.0000	2
Int	111	Urban 4-Leg Signalized TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	4	Signal	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-8.8040	0.5690	0.4550	0.0000	0	0.3400	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
3154	2803	N/A	1.3794	0.3900	7	3	4.1382	0.3826	5.9052	1.9684	0.5890	1.2922	0.0872	2.6716	3
3154	2803	N/A	0.5445	0.3400	1	3	1.6335	0.6429	1.4073	0.4691	-0.0754	0.4762	0.0683	1.0207	2

Alpha	Beta	10th	90th	Advanced LOSS
2.5641	0.5380	0.4530	2.5336	3
2.9412	0.1851	0.1974	0.9702	2

Safety Performance Function (SPF) Parameters for Intersections, Ramps, and Segments

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Screen Type	Facility Type	Description	Area Type	Directional / Bidirectional	Number of Lanes	Median Type	Access	Major Road Operation	Minor Road Operation	Number of Approaches	Traffic Control	Ramp Type (Entrance / Exit)	Year	Severity	Long-Term Calibration Factor (CA)	Long-Term Functional Form Adjustment Factor (CB)	Constant (BC)	Coefficient for Major Road AADT (B1)	Coefficient for Minor Road AADT (B2; intersections only)	Coefficient for Hoerl Functional Form (B2; segments and ramps only)	Coefficient for Segment Length (BL)	Overdispersion parameter A (D1)	Overdispersion parameter B (D2)	Overdispersion parameter C (D3)	AADT Presence (2 = major and minor; 1 = major only; 0 = not available)
Int	86	Urban 3-Leg Two-Way Stop-Controlled TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Minor Road Stop	N/A	*	Total Crashes	1.0000	1.0000	-8.1720	0.5760	0.3920	0.0000	0	0.6603	0.0000	0.0000	2
Int	86	Urban 3-Leg Two-Way Stop-Controlled TT(‡)	Urban	N/A	N/A	N/A	N/A	2-way	2-way	3	Minor Road Stop	N/A	*	Fatal and Injury Crashes	1.0000	1.0000	-11.4600	0.7760	0.4190	0.0000	0	0.8090	0.0000	0.0000	2

For intersections: SPF = CA * (MajorAADT^B1 * MinorAADT^B2 * exp(BC))^CBDispersion parameter = D1

For segments and ramps: SPF = CA * (AADT^B1 * Length^BL * exp(BC+B2*AADT))^CBDispersion parameter = D1 * Length^D2 * exp(D3)

Major Road AADT (veh/day)	Minor Road AADT (veh/day)	Segment Length (miles)	SPF Prediction (crashes/year)	Dispersion Parameter	Observed Crashes (over study period)	Study Period (years)	Predicted Crashes (over study period)	EB weight (w)	Expected Crashes (over study period)	Expected Crashes (crashes/year)	Excess Expected Crashes (crashes/year)	1.5 Sigma	LOSS 1/2	LOSS 3/4	Basic LOSS
16920	926	N/A	1.1205	0.6603	3	3	3.3615	0.3106	3.1123	1.0374	-0.0831	1.3658	-0.2453	2.4863	2
16920	926	N/A	0.3526	0.8090	1	3	1.0577	0.5389	1.0311	0.3437	-0.0089	0.4757	-0.1231	0.8282	2

Alpha	Beta	10th	90th	Advanced LOSS
1.5144	0.7399	0.2208	2.3295	2
1.2361	0.2852	0.0528	0.7704	2

Project: Auburn Community Hospital Health Campus
Location: City of Auburn, NY
Peak Hour: Weekday AM
Condition: Proposed Action

Figure:		3a	4a	5				6		7
			# of Years							
			1							
Location Number	Intersection	2026 Collected Volumes	No-Build Volumes 1.00%	Trip Generation and Distribution				Total Site Trips	143 North Trips	Full Build Volumes
				Enter Dist. %	Exit Dist. %	Trips IN 125	Trips OUT 12			
1	North Street/ Standart Ave									
	SR	0	0					0		0
	ST	371	375	16%		20		20	-9	386
	SL	126	127					0		127
	WR	119	120					0		120
	WT	0	0					0		0
	WL	60	61	6%		8		8	-3	66
	NR	48	48		6%		1	1		49
	NT	243	245		16%		2	2	-1	246
	NL	0	0					0		0
	ER	0	0					0		0
	ET	0	0					0		0
	EL	0	0					0		0
2	North Street/ 143 North St Driveway									
	SR	12	12	17%		21		21	-12	21
	ST	393	397					0		397
	SL		0					0		0
	WR		0					0		0
	WT		0					0		0
	WL		0					0		0
	NR		0					0		0
	NT	342	345					0		345
	NL	16	16	26%		33		33	-16	33
	ER	5	5		26%		3	3	-5	3
	ET		0					0		0
	EL	1	1		17%		2	2	-1	2
3	North Street/ Lansing Street									
	SR		0					0		0
	ST	354	358		16%		2	2	-3	357
	SL	42	42		10%		1	1	-2	41
	WR	29	29	10%		13		13	-6	36
	WT		0					0		0
	WL	69	70	10%		13		13		83
	NR	91	92		10%		1	1		93
	NT	329	332	16%		20		20	-10	342
	NL		0					0		0
	ER		0					0		0
	ET		0					0		0
	EL		0					0		0
4	North Street/ Perrine Street									
	SR	48	48	10%		13		13		61
	ST	381	385		20%		2	2	-3	384
	SL	0	0					0		0
	WR	0	0					0		0
	WT	0	0					0		0
	WL	0	0					0		0
	NR	4	4					0		4
	NT	379	383	16%		20		20	-9	394
	NL	31	31	26%		33		33		64
	ER	21	21		26%		3	3		24
	ET	1	1					0		1
	EL	47	47		10%		1	1	-1	47
5	North Street/ Seymour Street									
	SR	28	28		5%		1	1		29
	ST	347	350		32%		4	4	-3	351
	SL	19	19		9%		1	1		20
	WR	20	20	9%		11		11	-1	30
	WT	88	89					0		89
	WL	31	31					0		31
	NR	28	28					0		28
	NT	334	337	32%		40		40	-7	370
	NL	18	18					0		18
	ER	25	25					0		25
	ET	92	93					0		93
	EL	46	46	5%		6		6	-1	51

Project: Auburn Community Hospital Health Campus
Location: City of Auburn, NY
Peak Hour: Weekday AM
Condition: Proposed Action

Figure:		3a	4a	5				6		7
			# of Years							
			1							
Location Number	Intersection	2026 Collected Volumes	No-Build Volumes 1.00%	Trip Generation and Distribution				Total Site Trips	143 North Trips	Full Build Volumes
				Enter Dist. %	Exit Dist. %	Trips IN 125	Trips OUT 12			
6	Perrine Street/ State Street									
	SR	3	3					0		3
	ST	178	180					0		180
	SL	17	17	7%		9		9		26
	WR	27	27		7%		1	1		28
	WT	37	37		2%		0	0		37
	WL	8	8		7%		1	1		9
	NR	10	10	7%		9		9	-1	18
	NT	130	131					0		131
	NL	18	18					0		18
	ER	38	38					0		38
	ET	34	34	2%		3		3		37
	EL	15	15					0		15
7	Lansing Street/ Grant Ave									
	SR	36	36	12%		15		15	-4	47
	ST	426	430					0		430
	SL		0					0		0
	WR		0					0		0
	WT		0					0		0
	WL		0					0		0
	NR		0					0		0
	NT	474	479					0		479
	NL	11	11	8%		10		10	-2	19
	ER	12	12		8%		1	1	-1	12
	ET		0					0		0
	EL	29	29		12%		1	1	-1	29
8	Perrine Street/ Proposed Driveway									
	SR		0		16%		2	2		2
	ST		0					0		0
	SL		0		36%		4	4		4
	WR		0	36%		45		45		45
	WT	79	80					0		80
	WL		0					0		0
	NR		0					0		0
	NT		0					0		0
	NL		0					0		0
	ER		0					0		0
	ET	69	70					0	-1	69
	EL		0	16%		20		20		20
9	North Street/ Park Ave									
	SR		0	5%		6		6		6
	ST		0	17%		21		21		21
	SL		0					0		0
	WR		0					0		0
	WT		0					0		0
	WL		0					0		0
	NR		0					0		0
	NT		0		17%		2	2		2
	NL		0					0		0
	ER		0					0		0
	ET		0					0		0
	EL		0		5%		1	1		1

Project: Auburn Community Hospital Health Campus
Location: City of Auburn, NY
Peak Hour: Weekday PM
Condition: Proposed Action

Figure: 3b 4b 5 7

# of Years: 1

Location Number	Intersection	2026 Collected Volumes	No-Build Volumes 1.00%	Trip Generation and Distribution				Total Site Trips	143 North Trips	Full Build Volumes
				Enter Dist. %	Exit Dist. %	Trips IN 13	Trips OUT 115			
1	North Street/ Standart Ave									
	SR	0	0					0		0
	ST	282	285	16%		2		2	-2	285
	SL	130	131					0		131
	WR	170	172					0		172
	WT	0	0					0		0
	WL	102	103	6%		1		1		104
	NR	102	103		6%		7	7	-3	107
	NT	391	395		16%		18	18	-8	405
	NL	0	0					0		0
	ER	0	0					0		0
	ET	0	0					0		0
	EL	0	0					0		0
2	North Street/ 143 North St Driveway									
	SR	2	2	17%		2		2	-2	2
	ST	402	406					0		406
	SL		0					0		0
	WR		0					0		0
	WT		0					0		0
	WL		0					0		0
	NR		0					0		0
	NT	479	484					0		484
	NL	2	2	26%		3		3	-2	3
	ER	18	18		26%		30	30	-18	30
	ET		0					0		0
	EL	11	11		17%		20	20	-11	20
3	North Street/ Lansing Street									
	SR		0					0		0
	ST	407	411		16%		18	18	-11	418
	SL	13	13		10%		12	12	-7	18
	WR	50	51	10%		1		1		52
	WT		0					0		0
	WL	124	125	10%		1		1		126
	NR	42	42		10%		12	12		54
	NT	427	431	16%		2		2	-2	431
	NL		0					0		0
	ER		0					0		0
	ET		0					0		0
	EL		0					0		0
4	North Street/ Perrine Street									
	SR	73	74	10%		1		1	-2	73
	ST	456	461		20%		23	23	-9	475
	SL	0	0					0		0
	WR	0	0					0		0
	WT	0	0					0		0
	WL	0	0					0		0
	NR	0	0					0		0
	NT	441	445	16%		2		2	-2	445
	NL	27	27	26%		3		3		30
	ER	29	29		26%		30	30		59
	ET	0	0					0		0
	EL	33	33		10%		12	12		45
5	North Street/ Seymour Street									
	SR	53	54		5%		6	6	-1	59
	ST	382	386		32%		37	37	-6	417
	SL	24	24		9%		10	10	-2	32
	WR	21	21	9%		1		1		22
	WT	97	98					0		98
	WL	32	32					0		32
	NR	44	44					0		44
	NT	397	401	32%		4		4	-2	403
	NL	46	46					0		46
	ER	54	55					0		55
	ET	129	130					0		130
	EL	49	49	5%		1		1		50

Project: Auburn Community Hospital Health Campus
Location: City of Auburn, NY
Peak Hour: Weekday PM
Condition: Proposed Action

Figure: 3b 4b 5 7

# of Years: 1

Location Number	Intersection	2026 Collected Volumes	No-Build Volumes 1.00%	Trip Generation and Distribution				Total Site Trips	143 North Trips	Full Build Volumes
				Enter Dist. %	Exit Dist. %	Trips IN 13	Trips OUT 115			
6	Perrine Street/ State Street									
	SR	3	3					0		3
	ST	147	148					0		148
	SL	11	11	7%		1		1		12
	WR	28	28		7%		8	8	-1	35
	WT	44	44		2%		2	2		46
	WL	12	12		7%		8	8	-1	19
	NR	11	11	7%		1		1		12
	NT	178	180					0		180
	NL	17	17					0		17
	ER	27	27					0		27
	ET	22	22	2%		0		0		22
	EL	6	6					0		6
7	Lansing Street/ Grant Ave									
	SR	37	37	12%		2		2		39
	ST	710	717					0		717
	SL		0					0		0
	WR		0					0		0
	WT		0					0		0
	WL		0					0		0
	NR		0					0		0
	NT	773	781					0		781
	NL	8	8	8%		1		1		9
	ER	15	15		8%		9	9	-3	21
	ET		0					0		0
	EL	23	23		12%		14	14	-4	33
8	Perrine Street/ Proposed Driveway									
	SR		0		16%		18	18		18
	ST		0					0		0
	SL		0		36%		41	41		41
	WR		0	36%		5		5		5
	WT	100	101					0	-2	99
	WL		0					0		0
	NR		0					0		0
	NT		0					0		0
	NL		0					0		0
	ER		0					0		0
	ET	62	63					0		63
	EL		0	16%		2		2		2
9	North Street/ Park Ave									
	SR		0	5%		1		1		1
	ST		0	17%		2		2		2
	SL		0					0		0
	WR		0					0		0
	WT		0					0		0
	WL		0					0		0
	NR		0					0		0
	NT		0		17%		20	20		20
	NL		0					0		0
	ER		0					0		0
	ET		0					0		0
	EL		0		5%		6	6		6

PROJECT DETAILS

Project Name:	Auburn Community Hospital Health Campus	Type of Project:	
Project No:		City:	
Country:		Built-up Area(Sq.ft):	
Analyst Name:	Amy Dake	Clients Name:	
Date:	3/23/2026	ZIP/Postal Code:	
State/Province:		No. of Scenarios:	2
Analysis Region:			

SCENARIO SUMMARY

Scenarios	Name	No. of Land Uses	Phases of Development	No. of Years to Project Traffic	User Group	Estimated New Vehicle Trips		
						Entry	Exit	Total
Scenario - 1	AM Peak	1	1	0		125	12	137
Scenario - 1	PM Peak	1	1	0		13	115	128

Scenario - 1

Scenario Name: AM Peak
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
720(1) - Medical-Dental Office Building -	General	Employees	162	Weekday, Peak Hour of	Average	125	12	137
Data Source: Trip Generation Manual, 12th Ed	Urban/Suburban			Adjacent Street Traffic,	0.85	91%	9%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
720(1) - Medical-Dental Office Building - Within/Near Hospital Campus	100	100	1	1	91	9

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
720(1) - Medical-Dental Office Building - Within/Near Hospital Campus	125	12	0	0	125	12
	137		0		137	

Scenario - 2

Scenario Name: PM Peak
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
720(1) - Medical-Dental Office Building -	General	Employees	162	Weekday, Peak Hour of	Average	13	115	128
Data Source: Trip Generation Manual, 12th Ed	Urban/Suburban			Adjacent Street Traffic,	0.79	10%	90%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
720(1) - Medical-Dental Office Building - Within/Near Hospital Campus	100	100	1	1	10	90

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
720(1) - Medical-Dental Office Building - Within/Near Hospital Campus	13	115	0	0	13	115
	128		0		128	

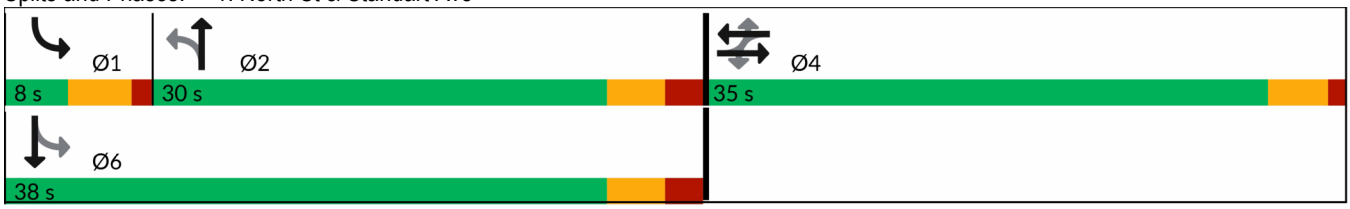
APPENDIX C: LOS CALCULATIONS – EXISTING CONDITIONS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	60	0	119	0	243	48	126	371	0
Future Volume (vph)	0	0	0	60	0	119	0	243	48	126	371	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.910			0.975				
Flt Protected					0.984						0.987	
Satd. Flow (prot)	0	1900	0	0	1652	0	0	3147	0	0	3418	0
Flt Permitted					0.907						0.703	
Satd. Flow (perm)	0	1900	0	0	1522	0	0	3147	0	0	2435	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					145			34				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		167			331			1725			287	
Travel Time (s)		3.8			7.5			39.2			6.5	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	7%	0%	1%	0%	13%	6%	2%	5%	0%
Adj. Flow (vph)	0	0	0	73	0	145	0	296	59	154	452	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	218	0	0	355	0	0	606	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			4			2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		2	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	22.0	22.0		22.0	22.0		30.0	30.0		8.0	30.0	
Minimum Split (s)	26.2	26.2		26.2	26.2		35.2	35.2		12.5	35.2	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		8.0	38.0	
Total Split (%)	47.9%	47.9%		47.9%	47.9%		41.1%	41.1%		11.0%	52.1%	
Maximum Green (s)	30.8	30.8		30.8	30.8		24.8	24.8		3.5	32.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.5	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.2			4.2			5.2			5.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	4.5	4.5		4.5	4.5		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)					22.0			24.8			32.8	
Actuated g/C Ratio					0.34			0.39			0.51	
v/c Ratio					0.35			0.28			0.47	
Control Delay (s/veh)					7.8			12.9			11.1	
Queue Delay					0.0			0.0			0.0	
Total Delay (s/veh)					7.8			12.9			11.1	
LOS					A			B			B	
Approach Delay (s/veh)					7.8			13.0			11.2	
Approach LOS					A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 73			
Actuated Cycle Length: 64.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay (s/veh): 11.1		Intersection LOS: B	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: North St & Standart Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	5	16	342	393	12
Future Volume (vph)	1	5	16	342	393	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.884				0.996	
Flt Protected	0.993			0.998		
Satd. Flow (prot)	1668	0	0	3260	3367	0
Flt Permitted	0.993			0.998		
Satd. Flow (perm)	1668	0	0	3260	3367	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	199			90	1725	
Travel Time (s)	4.5			2.0	39.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	11%	7%	0%
Adj. Flow (vph)	1	6	20	428	491	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	0	448	506	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	5	16	342	393	12
Future Vol, veh/h	1	5	16	342	393	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	11	7	0
Mvmt Flow	1	6	20	428	491	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	753	253	506	0	-	0
Stage 1	499	-	-	-	-	-
Stage 2	254	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	350	752	1069	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	343	752	1069	-	-	-
Mov Cap-2 Maneuver	343	-	-	-	-	-
Stage 1	569	-	-	-	-	-
Stage 2	771	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.81	0.53	0
HCM LOS	B		

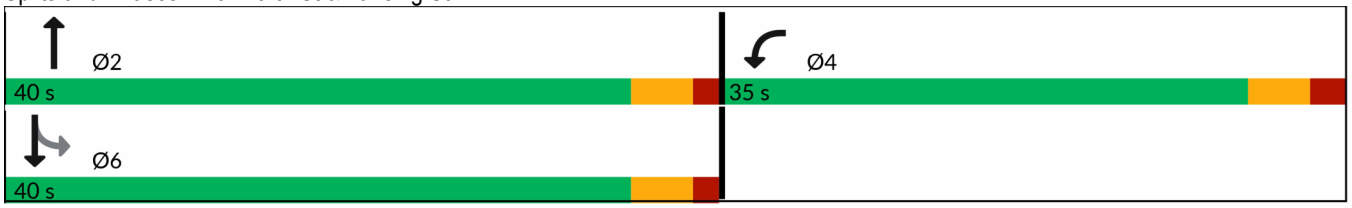
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	161	-	627	-	-
HCM Lane V/C Ratio	0.019	-	0.012	-	-
HCM Control Delay (s/veh)	8.4	0.2	10.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	69	29	329	91	42	354
Future Volume (vph)	69	29	329	91	42	354
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.960		0.968			
Flt Protected	0.966					0.995
Satd. Flow (prot)	1625	0	3157	0	0	3374
Flt Permitted	0.966					0.868
Satd. Flow (perm)	1625	0	3157	0	0	2943
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	34		63			
Link Speed (mph)	30		30			30
Link Distance (ft)	585		196			90
Travel Time (s)	13.3		4.5			2.0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	12%	0%	12%	6%	2%	7%
Adj. Flow (vph)	85	36	406	112	52	437
Shared Lane Traffic (%)						
Lane Group Flow (vph)	121	0	518	0	0	489
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases					6	
Detector Phase	4		2		6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	27.5		24.0		20.0	20.0
Total Split (s)	35.0		40.0		40.0	40.0
Total Split (%)	46.7%		53.3%		53.3%	53.3%
Maximum Green (s)	29.5		35.0		35.0	35.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	2.0		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.5		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		0.2		0.2	0.2
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		8.0			
Flash Dont Walk (s)	15.0		11.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	10.4		39.1			39.1
Actuated g/C Ratio	0.19		0.70			0.70
v/c Ratio	0.36		0.23			0.23
Control Delay (s/veh)	18.5		4.0			4.6
Queue Delay	0.0		0.0			0.0
Total Delay (s/veh)	18.5		4.0			4.6
LOS	B		A			A
Approach Delay (s/veh)	18.6		4.1			4.7
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 55.8			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay (s/veh): 5.9		Intersection LOS: A	
Intersection Capacity Utilization 46.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: North St & Lansing St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	1	21	0	0	0	31	379	4	0	381	48
Future Volume (vph)	47	1	21	0	0	0	31	379	4	0	381	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.959						0.999			0.983	
Flt Protected		0.967						0.996				
Satd. Flow (prot)	0	1735	0	0	1900	0	0	3230	0	0	3299	0
Flt Permitted		0.967						0.996				
Satd. Flow (perm)	0	1735	0	0	1900	0	0	3230	0	0	3299	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1485			208			873			196	
Travel Time (s)		33.8			0.0			19.8			4.5	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	3%	12%	0%	0%	8%	4%
Adj. Flow (vph)	58	1	26	0	0	0	38	468	5	0	470	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	0	0	0	511	0	0	529	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			0			0	
Link Offset(ft)		0			15			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	1	21	0	0	0	31	379	4	0	381	48
Future Vol, veh/h	47	1	21	0	0	0	31	379	4	0	381	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	0	0	5	0	0	0	3	12	0	0	8	4
Mvmt Flow	58	1	26	0	0	0	38	468	5	0	470	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	810	1049	265	783	1077	236	530	0	0	473	0	0
Stage 1	500	500	-	547	547	-	-	-	-	-	-	-
Stage 2	310	549	-	236	530	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	7	7.5	6.5	6.9	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.35	3.5	4	3.3	2.23	-	-	2.2	-	-
Pot Cap-1 Maneuver	275	229	725	288	221	771	1027	-	-	1100	-	-
Stage 1	527	546	-	494	521	-	-	-	-	-	-	-
Stage 2	680	519	-	752	530	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	263	219	725	264	211	771	1027	-	-	1100	-	-
Mov Cap-2 Maneuver	263	219	-	264	211	-	-	-	-	-	-	-
Stage 1	527	546	-	473	498	-	-	-	-	-	-	-
Stage 2	651	497	-	723	530	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	19.97	0	0.94	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	266	-	-	325	-	1100	-	-
HCM Lane V/C Ratio	0.037	-	-	0.262	-	-	-	-
HCM Control Delay (s/veh)	8.6	0.3	-	20	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1	-	0	-	-

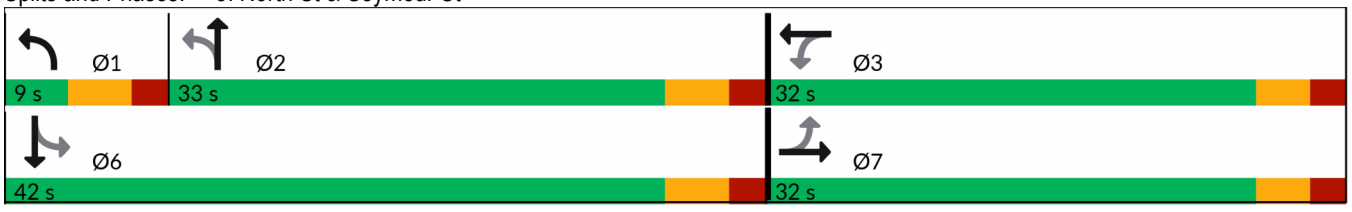
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	92	25	31	88	20	18	334	28	19	347	28
Future Volume (vph)	46	92	25	31	88	20	18	334	28	19	347	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.979			0.980			0.989			0.989	
Flt Protected		0.986			0.989			0.998			0.998	
Satd. Flow (prot)	0	1744	0	0	1745	0	0	3170	0	0	3268	0
Flt Permitted		0.883			0.910			0.924			0.924	
Satd. Flow (perm)	0	1562	0	0	1605	0	0	2935	0	0	3025	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			13			14			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		341			331			256			873	
Travel Time (s)		7.8			7.5			5.8			19.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	4%	5%	8%	5%	7%	0%	0%	12%	25%	5%	10%	0%
Adj. Flow (vph)	57	114	31	38	109	25	22	412	35	23	428	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	202	0	0	172	0	0	469	0	0	486	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		7			3		1!	2			6!	
Permitted Phases	7			3			2			6		
Detector Phase	7	7		3	3		1	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	12.0	12.0		12.0	12.0		4.0	12.0		12.0	12.0	
Minimum Split (s)	17.0	17.0		17.0	17.0		9.5	17.5		17.5	17.5	
Total Split (s)	32.0	32.0		32.0	32.0		9.0	33.0		42.0	42.0	
Total Split (%)	43.2%	43.2%		43.2%	43.2%		12.2%	44.6%		56.8%	56.8%	
Maximum Green (s)	27.0	27.0		27.0	27.0		3.5	27.5		36.5	36.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.5			5.5	
Lead/Lag							Lead	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	6.0	6.0		6.0	6.0		1.0	6.0		6.0	6.0	
Recall Mode	None	None		None	None		None	None		Max	Max	
Walk Time (s)	13.0	13.0		13.0	13.0			16.0		16.0	16.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		16.0			16.0			36.6			36.6	
Actuated g/C Ratio		0.25			0.25			0.58			0.58	
v/c Ratio		0.49			0.41			0.27			0.27	
Control Delay (s/veh)		23.0			21.0			7.5			7.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		23.0			21.0			7.5			7.4	
LOS		C			C			A			A	
Approach Delay (s/veh)		23.0			21.1			7.5			7.5	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 63.1			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay (s/veh): 11.6		Intersection LOS: B	
Intersection Capacity Utilization 46.5%		ICU Level of Service A	
Analysis Period (min) 15			

! Phase conflict between lane groups.

Splits and Phases: 5: North St & Seymour St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	34	38	8	37	27	18	130	10	17	178	3
Future Volume (vph)	15	34	38	8	37	27	18	130	10	17	178	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941			0.950			0.992			0.998	
Flt Protected		0.991			0.994			0.994			0.996	
Satd. Flow (prot)	0	1600	0	0	1723	0	0	1734	0	0	1766	0
Flt Permitted		0.917			0.943			0.951			0.967	
Satd. Flow (perm)	0	1481	0	0	1634	0	0	1659	0	0	1714	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			28			11			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			1485			423			379	
Travel Time (s)		6.7			33.8			9.6			8.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	27%	3%	11%	0%	3%	7%	0%	9%	10%	12%	6%	33%
Adj. Flow (vph)	19	42	47	10	46	33	22	160	12	21	220	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	0	0	89	0	0	194	0	0	245	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	17.0	17.0		17.0	17.0		70.0	70.0		70.0	70.0	
Total Split (%)	19.5%	19.5%		19.5%	19.5%		80.5%	80.5%		80.5%	80.5%	
Maximum Green (s)	12.0	12.0		12.0	12.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.8			6.8			15.5			15.5	
Actuated g/C Ratio		0.23			0.23			0.53			0.53	
v/c Ratio		0.28			0.21			0.21			0.26	
Control Delay (s/veh)		8.7			8.2			6.2			6.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		8.7			8.2			6.2			6.7	
LOS		A			A			A			A	
Approach Delay (s/veh)		8.8			8.2			6.2			6.7	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 87			
Actuated Cycle Length: 29			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.29			
Intersection Signal Delay (s/veh): 7.1		Intersection LOS: A	
Intersection Capacity Utilization 29.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: State St & Perrine St

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	29	12	11	474	426	36
Future Volume (vph)	29	12	11	474	426	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.961				0.988	
Flt Protected	0.966			0.999		
Satd. Flow (prot)	1724	0	0	3504	3471	0
Flt Permitted	0.966			0.999		
Satd. Flow (perm)	1724	0	0	3504	3471	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			330	272	
Travel Time (s)	10.1			7.5	6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	8%	0%	3%	3%	0%
Adj. Flow (vph)	32	13	12	515	463	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	0	527	502	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.0%		ICU Level of Service A	
Analysis Period (min) 15			

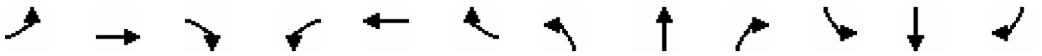
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	12	11	474	426	36
Future Vol, veh/h	29	12	11	474	426	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	0	3	3	0
Mvmt Flow	32	13	12	515	463	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	764	251	502	0	-	0
Stage 1	483	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Critical Hdwy	6.8	7.06	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.38	2.2	-	-	-
Pot Cap-1 Maneuver	344	731	1073	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	340	731	1073	-	-	-
Mov Cap-2 Maneuver	340	-	-	-	-	-
Stage 1	584	-	-	-	-	-
Stage 2	747	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	15.05	0.29	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	82	-	403	-	-
HCM Lane V/C Ratio	0.011	-	0.111	-	-
HCM Control Delay (s/veh)	8.4	0.1	15	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

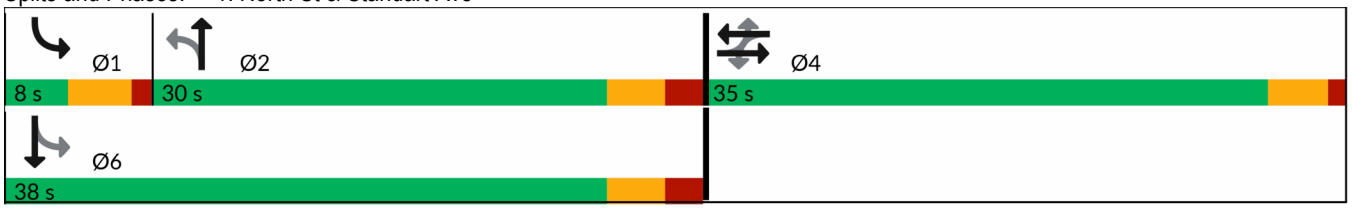


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	102	0	170	0	391	102	130	282	0
Future Volume (vph)	0	0	0	102	0	170	0	391	102	130	282	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.916			0.969				
Flt Protected					0.982						0.984	
Satd. Flow (prot)	0	1900	0	0	1692	0	0	3308	0	0	3481	0
Flt Permitted					0.886						0.625	
Satd. Flow (perm)	0	1900	0	0	1527	0	0	3308	0	0	2211	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					142			48				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		167			331			1725			287	
Travel Time (s)		3.8			7.5			39.2			6.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	7%	1%	0%	3%	0%
Adj. Flow (vph)	0	0	0	112	0	187	0	430	112	143	310	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	299	0	0	542	0	0	453	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			4			2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		2	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	22.0	22.0		22.0	22.0		30.0	30.0		8.0	30.0	
Minimum Split (s)	26.2	26.2		26.2	26.2		35.2	35.2		12.5	35.2	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		8.0	38.0	
Total Split (%)	47.9%	47.9%		47.9%	47.9%		41.1%	41.1%		11.0%	52.1%	
Maximum Green (s)	30.8	30.8		30.8	30.8		24.8	24.8		3.5	32.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.5	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.2			4.2			5.2			5.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	4.5	4.5		4.5	4.5		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)					22.0			24.8			32.8	
Actuated g/C Ratio					0.34			0.39			0.51	
v/c Ratio					0.48			0.41			0.38	
Control Delay (s/veh)					11.6			14.2			10.1	
Queue Delay					0.0			0.0			0.0	
Total Delay (s/veh)					11.6			14.2			10.1	
LOS					B			B			B	
Approach Delay (s/veh)					11.6			14.2			10.2	
Approach LOS					B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 73			
Actuated Cycle Length: 64.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay (s/veh): 12.2		Intersection LOS: B	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: North St & Standart Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	11	18	2	479	402	2
Future Volume (vph)	11	18	2	479	402	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.917				0.999	
Flt Protected	0.981					
Satd. Flow (prot)	1709	0	0	3375	3536	0
Flt Permitted	0.981					
Satd. Flow (perm)	1709	0	0	3375	3536	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	199			90	1725	
Travel Time (s)	4.5			2.0	39.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	7%	2%	0%
Adj. Flow (vph)	13	21	2	564	473	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	0	0	566	475	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	18	2	479	402	2
Future Vol, veh/h	11	18	2	479	402	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	7	2	0
Mvmt Flow	13	21	2	564	473	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	761	238	475	0	-	0
Stage 1	474	-	-	-	-	-
Stage 2	286	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	346	770	1097	-	-	-
Stage 1	598	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	345	770	1097	-	-	-
Mov Cap-2 Maneuver	345	-	-	-	-	-
Stage 1	597	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	12.34	0.06	0
HCM LOS	B		

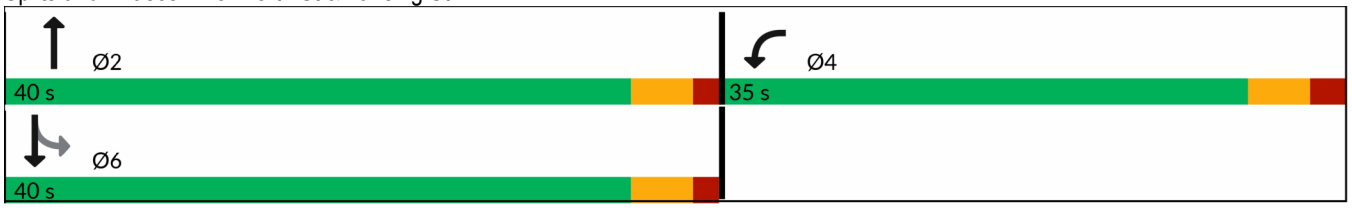
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	15	-	525	-	-
HCM Lane V/C Ratio	0.002	-	0.065	-	-
HCM Control Delay (s/veh)	8.3	0	12.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

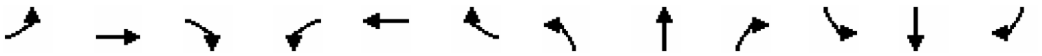
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	124	50	427	42	13	407
Future Volume (vph)	124	50	427	42	13	407
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.961		0.987			
Flt Protected	0.966					0.998
Satd. Flow (prot)	1680	0	3344	0	0	3534
Flt Permitted	0.966					0.937
Satd. Flow (perm)	1680	0	3344	0	0	3318
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	32		18			
Link Speed (mph)	30		30			30
Link Distance (ft)	585		196			90
Travel Time (s)	13.3		4.5			2.0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	7%	0%	7%	2%	0%	2%
Adj. Flow (vph)	146	59	502	49	15	479
Shared Lane Traffic (%)						
Lane Group Flow (vph)	205	0	551	0	0	494
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases					6	
Detector Phase	4		2		6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	27.5		24.0		20.0	20.0
Total Split (s)	35.0		40.0		40.0	40.0
Total Split (%)	46.7%		53.3%		53.3%	53.3%
Maximum Green (s)	29.5		35.0		35.0	35.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	2.0		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.5		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		0.2		0.2	0.2
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		8.0			
Flash Dont Walk (s)	15.0		11.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	12.0		35.0			35.0
Actuated g/C Ratio	0.21		0.61			0.61
v/c Ratio	0.54		0.26			0.24
Control Delay (s/veh)	22.9		5.8			5.8
Queue Delay	0.0		0.0			0.0
Total Delay (s/veh)	22.9		5.8			5.8
LOS	C		A			A
Approach Delay (s/veh)	22.9		5.8			5.9
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 57.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 8.6		Intersection LOS: A	
Intersection Capacity Utilization 39.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: North St & Lansing St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	29	0	0	0	27	441	0	0	456	73
Future Volume (vph)	33	0	29	0	0	0	27	441	0	0	456	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.937									0.979	
Flt Protected		0.974						0.997				
Satd. Flow (prot)	0	1734	0	0	1900	0	0	3376	0	0	3440	0
Flt Permitted		0.974						0.997				
Satd. Flow (perm)	0	1734	0	0	1900	0	0	3376	0	0	3440	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1485			208			873			196	
Travel Time (s)		33.8			0.0			19.8			4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	3%	1%
Adj. Flow (vph)	37	0	32	0	0	0	30	490	0	0	507	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	69	0	0	0	0	0	520	0	0	588	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			0			0	
Link Offset(ft)		0			15			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	0	29	0	0	0	27	441	0	0	456	73
Future Vol, veh/h	33	0	29	0	0	0	27	441	0	0	456	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	7	0	0	3	1
Mvmt Flow	37	0	32	0	0	0	30	490	0	0	507	81

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	852	1097	294	803	1138	245	588	0	0	490	0	0
Stage 1	547	547	-	550	550	-	-	-	-	-	-	-
Stage 2	305	550	-	253	588	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	256	215	709	278	203	762	997	-	-	1084	-	-
Stage 1	494	521	-	492	519	-	-	-	-	-	-	-
Stage 2	685	519	-	734	499	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	247	207	709	256	196	762	997	-	-	1084	-	-
Mov Cap-2 Maneuver	247	207	-	256	196	-	-	-	-	-	-	-
Stage 1	494	521	-	475	501	-	-	-	-	-	-	-
Stage 2	661	501	-	701	499	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	17.54	0	0.76	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	208	-	-	356	-	1084	-	-
HCM Lane V/C Ratio	0.03	-	-	0.194	-	-	-	-
HCM Control Delay (s/veh)	8.7	0.3	-	17.5	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	-	0	-	-

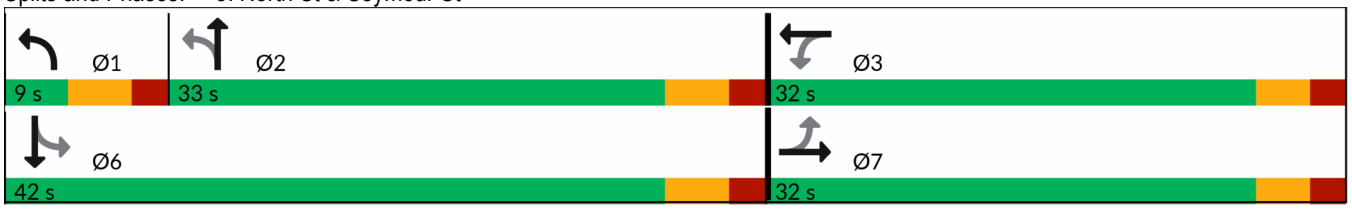
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	129	54	32	97	21	46	397	44	24	382	53
Future Volume (vph)	49	129	54	32	97	21	46	397	44	24	382	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.968			0.981			0.987			0.983	
Flt Protected		0.990			0.989			0.995			0.997	
Satd. Flow (prot)	0	1821	0	0	1843	0	0	3289	0	0	3424	0
Flt Permitted		0.909			0.903			0.867			0.913	
Satd. Flow (perm)	0	1672	0	0	1683	0	0	2866	0	0	3136	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			13			17			27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		341			331			256			873	
Travel Time (s)		7.8			7.5			5.8			19.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	8%	14%	0%	4%	0%
Adj. Flow (vph)	55	145	61	36	109	24	52	446	49	27	429	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	261	0	0	169	0	0	547	0	0	516	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		7			3		1!	2			6!	
Permitted Phases	7			3			2			6		
Detector Phase	7	7		3	3		1	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	12.0	12.0		12.0	12.0		4.0	12.0		12.0	12.0	
Minimum Split (s)	17.0	17.0		17.0	17.0		9.5	17.5		17.5	17.5	
Total Split (s)	32.0	32.0		32.0	32.0		9.0	33.0		42.0	42.0	
Total Split (%)	43.2%	43.2%		43.2%	43.2%		12.2%	44.6%		56.8%	56.8%	
Maximum Green (s)	27.0	27.0		27.0	27.0		3.5	27.5		36.5	36.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.5			5.5	
Lead/Lag							Lead	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	6.0	6.0		6.0	6.0		1.0	6.0		6.0	6.0	
Recall Mode	None	None		None	None		None	None		Max	Max	
Walk Time (s)	13.0	13.0		13.0	13.0			16.0		16.0	16.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		17.6			17.6			36.7			36.7	
Actuated g/C Ratio		0.27			0.27			0.57			0.57	
v/c Ratio		0.55			0.36			0.33			0.28	
Control Delay (s/veh)		22.8			19.4			8.8			8.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		22.8			19.4			8.8			8.1	
LOS		C			B			A			A	
Approach Delay (s/veh)		22.9			19.4			8.8			8.2	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 64.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 12.3		Intersection LOS: B	
Intersection Capacity Utilization 57.1%		ICU Level of Service B	
Analysis Period (min) 15			

! Phase conflict between lane groups.

Splits and Phases: 5: North St & Seymour St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	22	27	12	44	28	17	178	11	11	147	3
Future Volume (vph)	6	22	27	12	44	28	17	178	11	11	147	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.934			0.955			0.992			0.998	
Flt Protected		0.994			0.993			0.996			0.996	
Satd. Flow (prot)	0	1764	0	0	1778	0	0	1830	0	0	1872	0
Flt Permitted		0.945			0.936			0.971			0.974	
Satd. Flow (perm)	0	1677	0	0	1676	0	0	1784	0	0	1830	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			24			8			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			1485			423			379	
Travel Time (s)		6.7			33.8			9.6			8.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%	0%	3%	0%	0%	1%	0%
Adj. Flow (vph)	7	25	31	14	50	32	19	202	13	13	167	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	96	0	0	234	0	0	183	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	20.0	20.0		20.0	20.0		70.0	70.0		70.0	70.0	
Total Split (%)	22.2%	22.2%		22.2%	22.2%		77.8%	77.8%		77.8%	77.8%	
Maximum Green (s)	15.0	15.0		15.0	15.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.8			6.8			16.8			16.8	
Actuated g/C Ratio		0.23			0.23			0.56			0.56	
v/c Ratio		0.15			0.24			0.23			0.17	
Control Delay (s/veh)		6.8			9.0			6.0			5.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		6.8			9.0			6.0			5.9	
LOS		A			A			A			A	
Approach Delay (s/veh)		6.8			9.1			6.1			6.0	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 30.1			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.24			
Intersection Signal Delay (s/veh): 6.6		Intersection LOS: A	
Intersection Capacity Utilization 30.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: State St & Perrine St

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	15	8	773	710	37
Future Volume (vph)	23	15	8	773	710	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.948				0.993	
Flt Protected	0.970					
Satd. Flow (prot)	1747	0	0	3570	3551	0
Flt Permitted	0.970					
Satd. Flow (perm)	1747	0	0	3570	3551	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			330	272	
Travel Time (s)	10.1			7.5	6.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	13%	1%	1%	0%
Adj. Flow (vph)	24	15	8	797	732	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	0	805	770	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

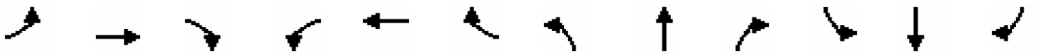
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	15	8	773	710	37
Future Vol, veh/h	23	15	8	773	710	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	13	1	1	0
Mvmt Flow	24	15	8	797	732	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1166	385	770	0	-	0
Stage 1	751	-	-	-	-	-
Stage 2	415	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.36	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.33	-	-	-
Pot Cap-1 Maneuver	190	619	772	-	-	-
Stage 1	432	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	187	619	772	-	-	-
Mov Cap-2 Maneuver	187	-	-	-	-	-
Stage 1	426	-	-	-	-	-
Stage 2	641	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	21.39	0.23	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	37	-	259	-	-
HCM Lane V/C Ratio	0.011	-	0.151	-	-
HCM Control Delay (s/veh)	9.7	0.1	21.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

APPENDIX D: LOS CALCULATIONS – BACKGROUND CONDITIONS

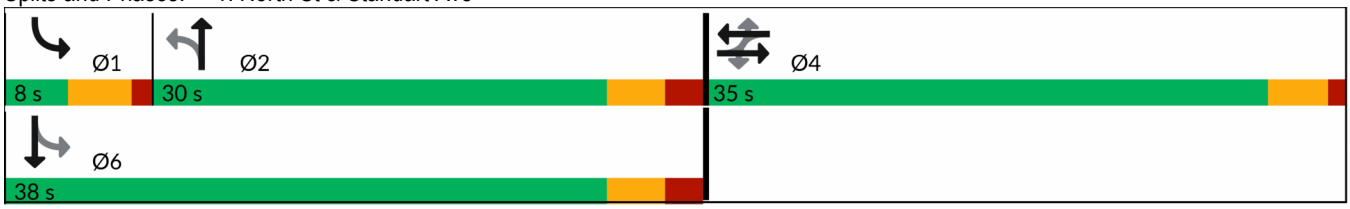


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	61	0	120	0	245	48	127	375	0
Future Volume (vph)	0	0	0	61	0	120	0	245	48	127	375	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.910			0.975				
Flt Protected					0.983						0.987	
Satd. Flow (prot)	0	1900	0	0	1650	0	0	3147	0	0	3418	0
Flt Permitted					0.907						0.701	
Satd. Flow (perm)	0	1900	0	0	1522	0	0	3147	0	0	2428	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					146			34				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		167			331			1725			287	
Travel Time (s)		3.8			7.5			39.2			6.5	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	7%	0%	1%	0%	13%	6%	2%	5%	0%
Adj. Flow (vph)	0	0	0	74	0	146	0	299	59	155	457	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	220	0	0	358	0	0	612	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			4			2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		2	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	22.0	22.0		22.0	22.0		30.0	30.0		8.0	30.0	
Minimum Split (s)	26.2	26.2		26.2	26.2		35.2	35.2		12.5	35.2	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		8.0	38.0	
Total Split (%)	47.9%	47.9%		47.9%	47.9%		41.1%	41.1%		11.0%	52.1%	
Maximum Green (s)	30.8	30.8		30.8	30.8		24.8	24.8		3.5	32.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.5	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.2			4.2			5.2			5.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	4.5	4.5		4.5	4.5		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)					22.0			24.8			32.8	
Actuated g/C Ratio					0.34			0.39			0.51	
v/c Ratio					0.35			0.28			0.47	
Control Delay (s/veh)					7.8			13.0			11.2	
Queue Delay					0.0			0.0			0.0	
Total Delay (s/veh)					7.8			13.0			11.2	
LOS					A			B			B	
Approach Delay (s/veh)					7.9			13.0			11.2	
Approach LOS					A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 73			
Actuated Cycle Length: 64.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay (s/veh): 11.2		Intersection LOS: B	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: North St & Standart Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	5	16	345	397	12
Future Volume (vph)	1	5	16	345	397	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.884				0.996	
Flt Protected	0.993			0.998		
Satd. Flow (prot)	1668	0	0	3260	3367	0
Flt Permitted	0.993			0.998		
Satd. Flow (perm)	1668	0	0	3260	3367	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	199			90	1725	
Travel Time (s)	4.5			2.0	39.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	11%	7%	0%
Adj. Flow (vph)	1	6	20	431	496	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	0	451	511	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	5	16	345	397	12
Future Vol, veh/h	1	5	16	345	397	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	11	7	0
Mvmt Flow	1	6	20	431	496	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	759	256	511	0	-	0
Stage 1	504	-	-	-	-	-
Stage 2	256	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	347	750	1064	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	339	750	1064	-	-	-
Mov Cap-2 Maneuver	339	-	-	-	-	-
Stage 1	565	-	-	-	-	-
Stage 2	770	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.84	0.53	0
HCM LOS	B		

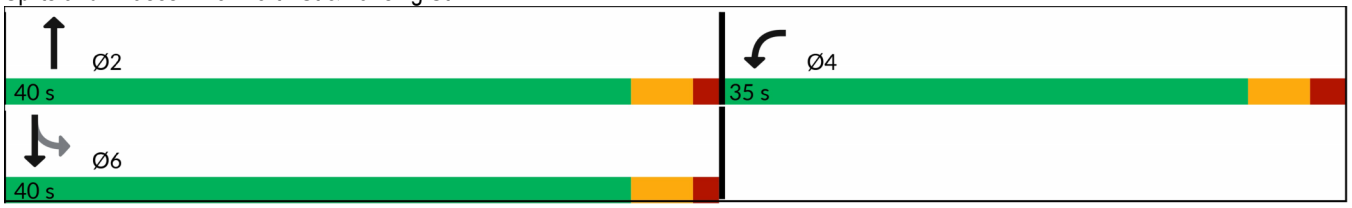
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	160	-	624	-	-
HCM Lane V/C Ratio	0.019	-	0.012	-	-
HCM Control Delay (s/veh)	8.4	0.2	10.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

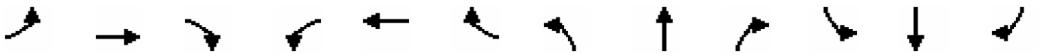
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	70	29	332	92	42	358
Future Volume (vph)	70	29	332	92	42	358
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.960		0.967			
Flt Protected	0.966					0.995
Satd. Flow (prot)	1625	0	3154	0	0	3374
Flt Permitted	0.966					0.867
Satd. Flow (perm)	1625	0	3154	0	0	2940
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	33		63			
Link Speed (mph)	30		30			30
Link Distance (ft)	585		196			90
Travel Time (s)	13.3		4.5			2.0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	12%	0%	12%	6%	2%	7%
Adj. Flow (vph)	86	36	410	114	52	442
Shared Lane Traffic (%)						
Lane Group Flow (vph)	122	0	524	0	0	494
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases					6	
Detector Phase	4		2		6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	27.5		24.0		20.0	20.0
Total Split (s)	35.0		40.0		40.0	40.0
Total Split (%)	46.7%		53.3%		53.3%	53.3%
Maximum Green (s)	29.5		35.0		35.0	35.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	2.0		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.5		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		0.2		0.2	0.2
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		8.0			
Flash Dont Walk (s)	15.0		11.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	10.4		39.1			39.1
Actuated g/C Ratio	0.19		0.70			0.70
v/c Ratio	0.37		0.23			0.23
Control Delay (s/veh)	18.8		4.0			4.7
Queue Delay	0.0		0.0			0.0
Total Delay (s/veh)	18.8		4.0			4.7
LOS	B		A			A
Approach Delay (s/veh)	18.8		4.1			4.7
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 55.8			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay (s/veh): 5.9		Intersection LOS: A	
Intersection Capacity Utilization 46.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: North St & Lansing St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	1	21	0	0	0	31	383	4	0	385	48
Future Volume (vph)	47	1	21	0	0	0	31	383	4	0	385	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.959						0.999			0.983	
Flt Protected		0.967						0.996				
Satd. Flow (prot)	0	1735	0	0	1900	0	0	3230	0	0	3299	0
Flt Permitted		0.967						0.996				
Satd. Flow (perm)	0	1735	0	0	1900	0	0	3230	0	0	3299	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1485			208			873			196	
Travel Time (s)		33.8			0.0			19.8			4.5	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	3%	12%	0%	0%	8%	4%
Adj. Flow (vph)	58	1	26	0	0	0	38	473	5	0	475	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	0	0	0	516	0	0	534	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			0			0	
Link Offset(ft)		0			15			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	1	21	0	0	0	31	383	4	0	385	48
Future Vol, veh/h	47	1	21	0	0	0	31	383	4	0	385	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	0	0	5	0	0	0	3	12	0	0	8	4
Mvmt Flow	58	1	26	0	0	0	38	473	5	0	475	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	818	1059	267	790	1086	239	535	0	0	478	0	0
Stage 1	505	505	-	552	552	-	-	-	-	-	-	-
Stage 2	313	554	-	238	535	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	7	7.5	6.5	6.9	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.35	3.5	4	3.3	2.23	-	-	2.2	-	-
Pot Cap-1 Maneuver	271	226	722	284	218	768	1022	-	-	1095	-	-
Stage 1	523	544	-	491	518	-	-	-	-	-	-	-
Stage 2	678	517	-	749	527	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	260	216	722	261	209	768	1022	-	-	1095	-	-
Mov Cap-2 Maneuver	260	216	-	261	209	-	-	-	-	-	-	-
Stage 1	523	544	-	470	496	-	-	-	-	-	-	-
Stage 2	649	495	-	721	527	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	20.2	0	0.94	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	263	-	-	321	-	1095	-	-
HCM Lane V/C Ratio	0.037	-	-	0.265	-	-	-	-
HCM Control Delay (s/veh)	8.7	0.3	-	20.2	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1	-	0	-	-

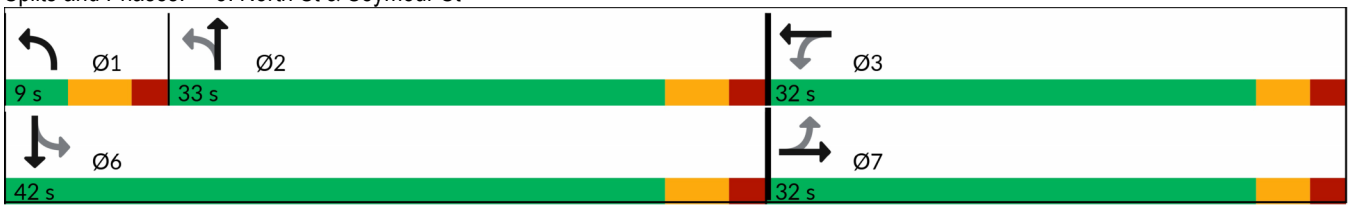
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	93	25	31	89	20	18	337	28	19	350	28
Future Volume (vph)	46	93	25	31	89	20	18	337	28	19	350	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.979			0.980			0.989			0.989	
Flt Protected		0.986			0.989			0.998			0.998	
Satd. Flow (prot)	0	1744	0	0	1745	0	0	3170	0	0	3267	0
Flt Permitted		0.883			0.910			0.924			0.924	
Satd. Flow (perm)	0	1562	0	0	1605	0	0	2935	0	0	3025	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			13			14			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		341			331			256			873	
Travel Time (s)		7.8			7.5			5.8			19.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	4%	5%	8%	5%	7%	0%	0%	12%	25%	5%	10%	0%
Adj. Flow (vph)	57	115	31	38	110	25	22	416	35	23	432	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	203	0	0	173	0	0	473	0	0	490	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		7			3		1!	2			6!	
Permitted Phases	7			3			2			6		
Detector Phase	7	7		3	3		1	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	12.0	12.0		12.0	12.0		4.0	12.0		12.0	12.0	
Minimum Split (s)	17.0	17.0		17.0	17.0		9.5	17.5		17.5	17.5	
Total Split (s)	32.0	32.0		32.0	32.0		9.0	33.0		42.0	42.0	
Total Split (%)	43.2%	43.2%		43.2%	43.2%		12.2%	44.6%		56.8%	56.8%	
Maximum Green (s)	27.0	27.0		27.0	27.0		3.5	27.5		36.5	36.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.5			5.5	
Lead/Lag							Lead	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	6.0	6.0		6.0	6.0		1.0	6.0		6.0	6.0	
Recall Mode	None	None		None	None		None	None		Max	Max	
Walk Time (s)	13.0	13.0		13.0	13.0			16.0		16.0	16.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		16.0			16.0			36.6			36.6	
Actuated g/C Ratio		0.25			0.25			0.58			0.58	
v/c Ratio		0.50			0.41			0.27			0.27	
Control Delay (s/veh)		23.0			21.0			7.5			7.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		23.0			21.0			7.5			7.5	
LOS		C			C			A			A	
Approach Delay (s/veh)		23.0			21.1			7.5			7.5	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 63.1			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay (s/veh): 11.6		Intersection LOS: B	
Intersection Capacity Utilization 46.6%		ICU Level of Service A	
Analysis Period (min) 15			

! Phase conflict between lane groups.

Splits and Phases: 5: North St & Seymour St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	34	38	8	37	27	18	131	10	17	180	3
Future Volume (vph)	15	34	38	8	37	27	18	131	10	17	180	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941			0.950			0.992			0.998	
Flt Protected		0.991			0.994			0.994			0.996	
Satd. Flow (prot)	0	1600	0	0	1723	0	0	1734	0	0	1766	0
Flt Permitted		0.917			0.943			0.951			0.967	
Satd. Flow (perm)	0	1481	0	0	1634	0	0	1659	0	0	1715	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			28			11			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			1485			423			379	
Travel Time (s)		6.7			33.8			9.6			8.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	27%	3%	11%	0%	3%	7%	0%	9%	10%	12%	6%	33%
Adj. Flow (vph)	19	42	47	10	46	33	22	162	12	21	222	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	0	0	89	0	0	196	0	0	247	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	17.0	17.0		17.0	17.0		70.0	70.0		70.0	70.0	
Total Split (%)	19.5%	19.5%		19.5%	19.5%		80.5%	80.5%		80.5%	80.5%	
Maximum Green (s)	12.0	12.0		12.0	12.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.8			6.8			15.5			15.5	
Actuated g/C Ratio		0.23			0.23			0.53			0.53	
v/c Ratio		0.28			0.22			0.21			0.26	
Control Delay (s/veh)		8.8			8.2			6.2			6.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		8.8			8.2			6.2			6.7	
LOS		A			A			A			A	
Approach Delay (s/veh)		8.8			8.2			6.2			6.7	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 87			
Actuated Cycle Length: 29			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.29			
Intersection Signal Delay (s/veh): 7.1		Intersection LOS: A	
Intersection Capacity Utilization 29.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: State St & Perrine St

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	29	12	11	479	430	36
Future Volume (vph)	29	12	11	479	430	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.961				0.988	
Flt Protected	0.966			0.999		
Satd. Flow (prot)	1724	0	0	3504	3471	0
Flt Permitted	0.966			0.999		
Satd. Flow (perm)	1724	0	0	3504	3471	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			330	272	
Travel Time (s)	10.1			7.5	6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	8%	0%	3%	3%	0%
Adj. Flow (vph)	32	13	12	521	467	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	0	533	506	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.1%		ICU Level of Service A	
Analysis Period (min) 15			

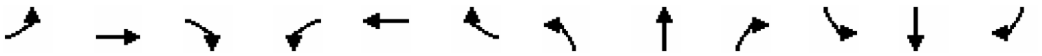
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	12	11	479	430	36
Future Vol, veh/h	29	12	11	479	430	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	0	3	3	0
Mvmt Flow	32	13	12	521	467	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	771	253	507	0	-	0
Stage 1	487	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.8	7.06	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.38	2.2	-	-	-
Pot Cap-1 Maneuver	341	728	1069	-	-	-
Stage 1	589	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	336	728	1069	-	-	-
Mov Cap-2 Maneuver	336	-	-	-	-	-
Stage 1	582	-	-	-	-	-
Stage 2	745	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	15.15	0.29	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	81	-	399	-	-
HCM Lane V/C Ratio	0.011	-	0.112	-	-
HCM Control Delay (s/veh)	8.4	0.1	15.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

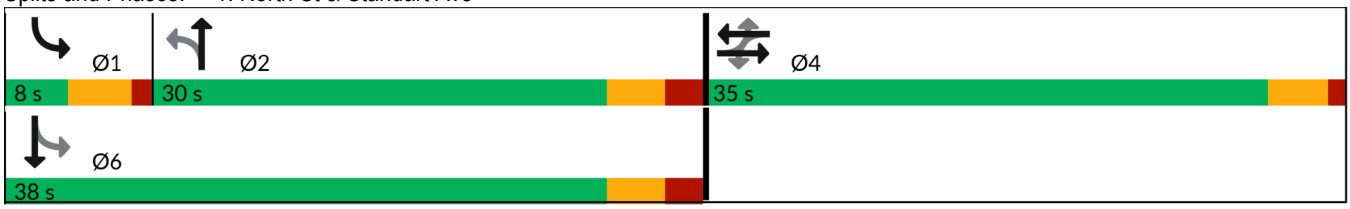


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	103	0	172	0	395	103	131	285	0
Future Volume (vph)	0	0	0	103	0	172	0	395	103	131	285	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.916			0.969				
Flt Protected					0.982						0.984	
Satd. Flow (prot)	0	1900	0	0	1692	0	0	3308	0	0	3481	0
Flt Permitted					0.885						0.622	
Satd. Flow (perm)	0	1900	0	0	1525	0	0	3308	0	0	2200	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					143			48				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		167			331			1725			287	
Travel Time (s)		3.8			7.5			39.2			6.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	7%	1%	0%	3%	0%
Adj. Flow (vph)	0	0	0	113	0	189	0	434	113	144	313	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	302	0	0	547	0	0	457	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			4			2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		2	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	22.0	22.0		22.0	22.0		30.0	30.0		8.0	30.0	
Minimum Split (s)	26.2	26.2		26.2	26.2		35.2	35.2		12.5	35.2	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		8.0	38.0	
Total Split (%)	47.9%	47.9%		47.9%	47.9%		41.1%	41.1%		11.0%	52.1%	
Maximum Green (s)	30.8	30.8		30.8	30.8		24.8	24.8		3.5	32.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.5	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.2			4.2			5.2			5.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	4.5	4.5		4.5	4.5		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)					22.0			24.8			32.8	
Actuated g/C Ratio					0.34			0.39			0.51	
v/c Ratio					0.49			0.41			0.38	
Control Delay (s/veh)					11.7			14.2			10.2	
Queue Delay					0.0			0.0			0.0	
Total Delay (s/veh)					11.7			14.2			10.2	
LOS					B			B			B	
Approach Delay (s/veh)					11.7			14.3			10.2	
Approach LOS					B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 73			
Actuated Cycle Length: 64.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay (s/veh): 12.3		Intersection LOS: B	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: North St & Standart Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	11	18	2	484	406	2
Future Volume (vph)	11	18	2	484	406	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.917				0.999	
Flt Protected	0.981					
Satd. Flow (prot)	1709	0	0	3375	3536	0
Flt Permitted	0.981					
Satd. Flow (perm)	1709	0	0	3375	3536	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	199			90	1725	
Travel Time (s)	4.5			2.0	39.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	7%	2%	0%
Adj. Flow (vph)	13	21	2	569	478	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	0	0	571	480	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	18	2	484	406	2
Future Vol, veh/h	11	18	2	484	406	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	7	2	0
Mvmt Flow	13	21	2	569	478	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	768	240	480	0	-	0
Stage 1	479	-	-	-	-	-
Stage 2	289	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	342	767	1093	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	740	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	341	767	1093	-	-	-
Mov Cap-2 Maneuver	341	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	740	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	12.4	0.06	0
HCM LOS	B		

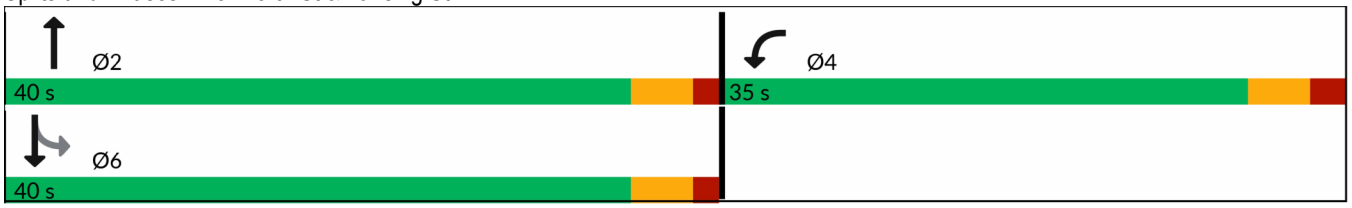
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	15	-	521	-	-
HCM Lane V/C Ratio	0.002	-	0.066	-	-
HCM Control Delay (s/veh)	8.3	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

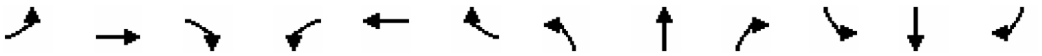
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	125	51	431	42	13	411
Future Volume (vph)	125	51	431	42	13	411
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.961		0.987			
Flt Protected	0.966					0.998
Satd. Flow (prot)	1680	0	3344	0	0	3534
Flt Permitted	0.966					0.937
Satd. Flow (perm)	1680	0	3344	0	0	3318
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	32		18			
Link Speed (mph)	30		30			30
Link Distance (ft)	585		196			90
Travel Time (s)	13.3		4.5			2.0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	7%	0%	7%	2%	0%	2%
Adj. Flow (vph)	147	60	507	49	15	484
Shared Lane Traffic (%)						
Lane Group Flow (vph)	207	0	556	0	0	499
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases					6	
Detector Phase	4		2		6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	27.5		24.0		20.0	20.0
Total Split (s)	35.0		40.0		40.0	40.0
Total Split (%)	46.7%		53.3%		53.3%	53.3%
Maximum Green (s)	29.5		35.0		35.0	35.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	2.0		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.5		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		0.2		0.2	0.2
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		8.0			
Flash Dont Walk (s)	15.0		11.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	12.0		35.0			35.0
Actuated g/C Ratio	0.21		0.61			0.61
v/c Ratio	0.55		0.27			0.24
Control Delay (s/veh)	22.9		5.8			5.9
Queue Delay	0.0		0.0			0.0
Total Delay (s/veh)	22.9		5.8			5.9
LOS	C		A			A
Approach Delay (s/veh)	23.0		5.9			5.9
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 57.6			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 8.7		Intersection LOS: A	
Intersection Capacity Utilization 39.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: North St & Lansing St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	29	0	0	0	27	445	0	0	461	74
Future Volume (vph)	33	0	29	0	0	0	27	445	0	0	461	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.937									0.979	
Flt Protected		0.974						0.997				
Satd. Flow (prot)	0	1734	0	0	1900	0	0	3376	0	0	3440	0
Flt Permitted		0.974						0.997				
Satd. Flow (perm)	0	1734	0	0	1900	0	0	3376	0	0	3440	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1485			208			873			196	
Travel Time (s)		33.8			0.0			19.8			4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	3%	1%
Adj. Flow (vph)	37	0	32	0	0	0	30	494	0	0	512	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	69	0	0	0	0	0	524	0	0	594	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			0			0	
Link Offset(ft)		0			15			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	0	29	0	0	0	27	445	0	0	461	74
Future Vol, veh/h	33	0	29	0	0	0	27	445	0	0	461	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	7	0	0	3	1
Mvmt Flow	37	0	32	0	0	0	30	494	0	0	512	82

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	861	1108	297	811	1149	247	594	0	0	494	0	0
Stage 1	553	553	-	554	554	-	-	-	-	-	-	-
Stage 2	307	554	-	256	594	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	253	212	705	275	200	759	992	-	-	1080	-	-
Stage 1	490	517	-	489	517	-	-	-	-	-	-	-
Stage 2	683	517	-	732	496	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	244	204	705	253	193	759	992	-	-	1080	-	-
Mov Cap-2 Maneuver	244	204	-	253	193	-	-	-	-	-	-	-
Stage 1	490	517	-	472	499	-	-	-	-	-	-	-
Stage 2	659	499	-	698	496	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	17.73	0	0.76	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	206	-	-	351	-	1080	-	-
HCM Lane V/C Ratio	0.03	-	-	0.196	-	-	-	-
HCM Control Delay (s/veh)	8.7	0.3	-	17.7	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	-	0	-	-

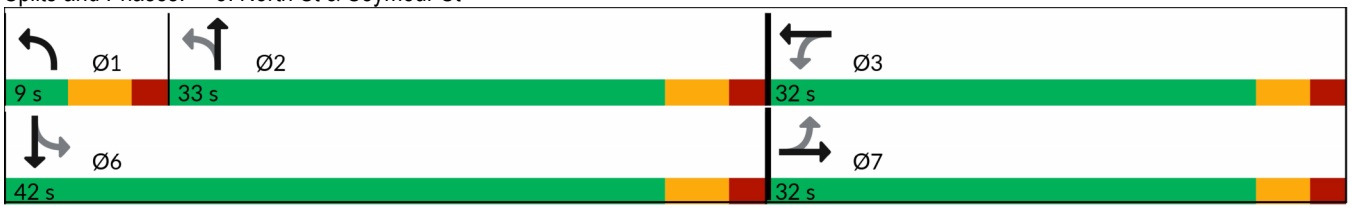
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	130	55	32	98	21	46	401	44	24	386	54
Future Volume (vph)	49	130	55	32	98	21	46	401	44	24	386	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.968			0.981			0.987			0.982	
Flt Protected		0.990			0.990			0.995			0.997	
Satd. Flow (prot)	0	1821	0	0	1845	0	0	3289	0	0	3421	0
Flt Permitted		0.909			0.903			0.867			0.913	
Satd. Flow (perm)	0	1672	0	0	1683	0	0	2866	0	0	3132	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			13			17			27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		341			331			256			873	
Travel Time (s)		7.8			7.5			5.8			19.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	8%	14%	0%	4%	0%
Adj. Flow (vph)	55	146	62	36	110	24	52	451	49	27	434	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	263	0	0	170	0	0	552	0	0	522	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		7			3		1!	2			6!	
Permitted Phases	7			3			2			6		
Detector Phase	7	7		3	3		1	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	12.0	12.0		12.0	12.0		4.0	12.0		12.0	12.0	
Minimum Split (s)	17.0	17.0		17.0	17.0		9.5	17.5		17.5	17.5	
Total Split (s)	32.0	32.0		32.0	32.0		9.0	33.0		42.0	42.0	
Total Split (%)	43.2%	43.2%		43.2%	43.2%		12.2%	44.6%		56.8%	56.8%	
Maximum Green (s)	27.0	27.0		27.0	27.0		3.5	27.5		36.5	36.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.5			5.5	
Lead/Lag							Lead	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	6.0	6.0		6.0	6.0		1.0	6.0		6.0	6.0	
Recall Mode	None	None		None	None		None	None		Max	Max	
Walk Time (s)	13.0	13.0		13.0	13.0			16.0		16.0	16.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		17.6			17.6			36.7			36.7	
Actuated g/C Ratio		0.27			0.27			0.57			0.57	
v/c Ratio		0.55			0.36			0.33			0.29	
Control Delay (s/veh)		22.8			19.4			8.8			8.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		22.8			19.4			8.8			8.2	
LOS		C			B			A			A	
Approach Delay (s/veh)		22.8			19.4			8.9			8.3	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 64.9			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 12.3		Intersection LOS: B	
Intersection Capacity Utilization 57.5%		ICU Level of Service B	
Analysis Period (min) 15			

! Phase conflict between lane groups.

Splits and Phases: 5: North St & Seymour St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	22	27	12	44	28	17	180	11	11	148	3
Future Volume (vph)	6	22	27	12	44	28	17	180	11	11	148	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.934			0.955			0.993			0.998	
Flt Protected		0.994			0.993			0.996			0.996	
Satd. Flow (prot)	0	1764	0	0	1778	0	0	1832	0	0	1872	0
Flt Permitted		0.945			0.936			0.971			0.974	
Satd. Flow (perm)	0	1677	0	0	1676	0	0	1786	0	0	1830	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			24			8			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			1485			423			379	
Travel Time (s)		6.7			33.8			9.6			8.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%	0%	3%	0%	0%	1%	0%
Adj. Flow (vph)	7	25	31	14	50	32	19	205	13	13	168	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	96	0	0	237	0	0	184	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	20.0	20.0		20.0	20.0		70.0	70.0		70.0	70.0	
Total Split (%)	22.2%	22.2%		22.2%	22.2%		77.8%	77.8%		77.8%	77.8%	
Maximum Green (s)	15.0	15.0		15.0	15.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.7			6.7			16.8			16.8	
Actuated g/C Ratio		0.22			0.22			0.56			0.56	
v/c Ratio		0.15			0.24			0.23			0.18	
Control Delay (s/veh)		6.8			9.1			6.1			5.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		6.8			9.1			6.1			5.9	
LOS		A			A			A			A	
Approach Delay (s/veh)		6.9			9.1			6.1			5.9	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 30.1			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.24			
Intersection Signal Delay (s/veh): 6.6		Intersection LOS: A	
Intersection Capacity Utilization 30.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: State St & Perrine St

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	15	8	781	717	37
Future Volume (vph)	23	15	8	781	717	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.948				0.993	
Flt Protected	0.970					
Satd. Flow (prot)	1747	0	0	3570	3551	0
Flt Permitted	0.970					
Satd. Flow (perm)	1747	0	0	3570	3551	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			330	272	
Travel Time (s)	10.1			7.5	6.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	13%	1%	1%	0%
Adj. Flow (vph)	24	15	8	805	739	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	0	813	777	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	15	8	781	717	37
Future Vol, veh/h	23	15	8	781	717	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	13	1	1	0
Mvmt Flow	24	15	8	805	739	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1177	389	777	0	-	0
Stage 1	758	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.36	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.33	-	-	-
Pot Cap-1 Maneuver	187	616	767	-	-	-
Stage 1	429	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	184	616	767	-	-	-
Mov Cap-2 Maneuver	184	-	-	-	-	-
Stage 1	423	-	-	-	-	-
Stage 2	638	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	21.68	0.23	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	37	-	255	-	-
HCM Lane V/C Ratio	0.011	-	0.154	-	-
HCM Control Delay (s/veh)	9.7	0.1	21.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

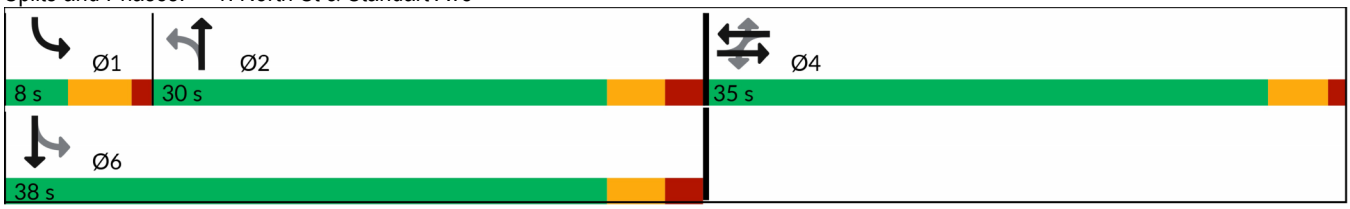
APPENDIX E: LOS CALCULATIONS – FULL BUILD CONDITIONS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	66	0	120	0	246	49	127	386	0
Future Volume (vph)	0	0	0	66	0	120	0	246	49	127	386	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.913			0.975				
Flt Protected					0.983						0.988	
Satd. Flow (prot)	0	1900	0	0	1654	0	0	3147	0	0	3421	0
Flt Permitted					0.900						0.703	
Satd. Flow (perm)	0	1900	0	0	1514	0	0	3147	0	0	2434	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					146			35				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		167			331			1647			287	
Travel Time (s)		3.8			7.5			37.4			6.5	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	7%	0%	1%	0%	13%	6%	2%	5%	0%
Adj. Flow (vph)	0	0	0	80	0	146	0	300	60	155	471	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	226	0	0	360	0	0	626	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			4			2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		2	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	22.0	22.0		22.0	22.0		30.0	30.0		8.0	30.0	
Minimum Split (s)	26.2	26.2		26.2	26.2		35.2	35.2		12.5	35.2	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		8.0	38.0	
Total Split (%)	47.9%	47.9%		47.9%	47.9%		41.1%	41.1%		11.0%	52.1%	
Maximum Green (s)	30.8	30.8		30.8	30.8		24.8	24.8		3.5	32.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.5	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.2			4.2			5.2			5.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	4.5	4.5		4.5	4.5		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)					22.0			24.8			32.8	
Actuated g/C Ratio					0.34			0.39			0.51	
v/c Ratio					0.36			0.29			0.48	
Control Delay (s/veh)					8.1			13.0			11.3	
Queue Delay					0.0			0.0			0.0	
Total Delay (s/veh)					8.1			13.0			11.3	
LOS					A			B			B	
Approach Delay (s/veh)					8.2			13.0			11.4	
Approach LOS					A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 73			
Actuated Cycle Length: 64.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay (s/veh): 11.3		Intersection LOS: B	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: North St & Standart Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	3	33	345	397	21
Future Volume (vph)	2	3	33	345	397	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.923				0.993	
Flt Protected	0.979			0.996		
Satd. Flow (prot)	1717	0	0	3267	3361	0
Flt Permitted	0.979			0.996		
Satd. Flow (perm)	1717	0	0	3267	3361	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	199			169	1647	
Travel Time (s)	4.5			2.0	39.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	11%	7%	0%
Adj. Flow (vph)	3	4	41	431	496	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	0	472	522	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	3	33	345	397	21
Future Vol, veh/h	2	3	33	345	397	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	11	7	0
Mvmt Flow	3	4	41	431	496	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	808	261	523	0	-	0
Stage 1	509	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	323	744	1054	-	-	-
Stage 1	574	-	-	-	-	-
Stage 2	733	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	309	744	1054	-	-	-
Mov Cap-2 Maneuver	309	-	-	-	-	-
Stage 1	549	-	-	-	-	-
Stage 2	733	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	12.67	1.04	0
HCM LOS	B		

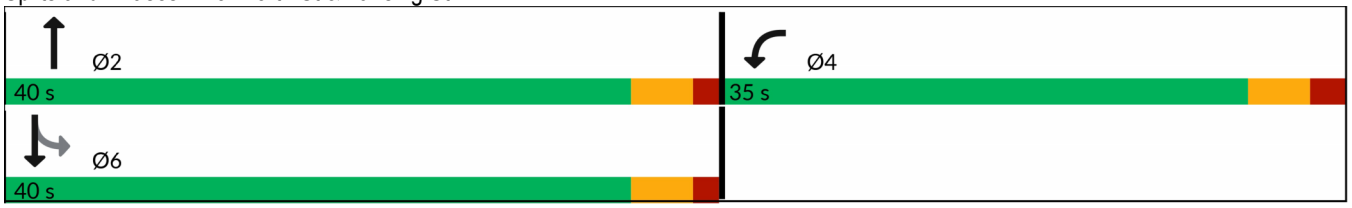
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	314	-	476	-	-
HCM Lane V/C Ratio	0.039	-	0.013	-	-
HCM Control Delay (s/veh)	8.6	0.3	12.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

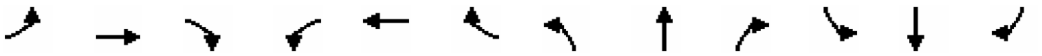
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	83	36	342	93	41	357
Future Volume (vph)	83	36	342	93	41	357
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.959		0.968			
Flt Protected	0.966					0.995
Satd. Flow (prot)	1624	0	3156	0	0	3373
Flt Permitted	0.966					0.867
Satd. Flow (perm)	1624	0	3156	0	0	2939
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	34		62			
Link Speed (mph)	30		30			30
Link Distance (ft)	585		196			169
Travel Time (s)	13.3		4.5			3.8
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	12%	0%	12%	6%	2%	7%
Adj. Flow (vph)	102	44	422	115	51	441
Shared Lane Traffic (%)						
Lane Group Flow (vph)	146	0	537	0	0	492
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases					6	
Detector Phase	4		2		6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	27.5		24.0		20.0	20.0
Total Split (s)	35.0		40.0		40.0	40.0
Total Split (%)	46.7%		53.3%		53.3%	53.3%
Maximum Green (s)	29.5		35.0		35.0	35.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	2.0		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.5		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		0.2		0.2	0.2
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		8.0			
Flash Dont Walk (s)	15.0		11.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	10.7		39.1			39.1
Actuated g/C Ratio	0.19		0.70			0.70
v/c Ratio	0.43		0.24			0.24
Control Delay (s/veh)	19.9		4.3			4.9
Queue Delay	0.0		0.0			0.0
Total Delay (s/veh)	19.9		4.3			4.9
LOS	B		A			A
Approach Delay (s/veh)	20.0		4.3			4.9
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 56.2			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay (s/veh): 6.5		Intersection LOS: A	
Intersection Capacity Utilization 46.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: North St & Lansing St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	1	24	0	0	0	64	394	4	0	384	61
Future Volume (vph)	47	1	24	0	0	0	64	394	4	0	384	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.954						0.999			0.980	
Flt Protected		0.968						0.993				
Satd. Flow (prot)	0	1726	0	0	1900	0	0	3237	0	0	3292	0
Flt Permitted		0.968						0.993				
Satd. Flow (perm)	0	1726	0	0	1900	0	0	3237	0	0	3292	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		671			208			873			196	
Travel Time (s)		33.8			0.0			19.8			4.5	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	3%	12%	0%	0%	8%	4%
Adj. Flow (vph)	58	1	30	0	0	0	79	486	5	0	474	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	0	0	0	570	0	0	549	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			0			0	
Link Offset(ft)		0			15			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	1	24	0	0	0	64	394	4	0	384	61
Future Vol, veh/h	47	1	24	0	0	0	64	394	4	0	384	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	0	0	5	0	0	0	3	12	0	0	8	4
Mvmt Flow	58	1	30	0	0	0	79	486	5	0	474	75

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	913	1161	275	885	1196	246	549	0	0	491	0	0
Stage 1	512	512	-	647	647	-	-	-	-	-	-	-
Stage 2	401	649	-	238	549	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	7	7.5	6.5	6.9	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.35	3.5	4	3.3	2.23	-	-	2.2	-	-
Pot Cap-1 Maneuver	232	197	714	243	188	761	1009	-	-	1082	-	-
Stage 1	518	540	-	431	470	-	-	-	-	-	-	-
Stage 2	602	468	-	750	519	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	211	179	714	210	171	761	1009	-	-	1082	-	-
Mov Cap-2 Maneuver	211	179	-	210	171	-	-	-	-	-	-	-
Stage 1	518	540	-	392	427	-	-	-	-	-	-	-
Stage 2	547	426	-	717	519	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	24.28	0	1.75	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	492	-	-	274	-	1082	-	-
HCM Lane V/C Ratio	0.078	-	-	0.324	-	-	-	-
HCM Control Delay (s/veh)	8.9	0.6	-	24.3	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1.4	-	0	-	-

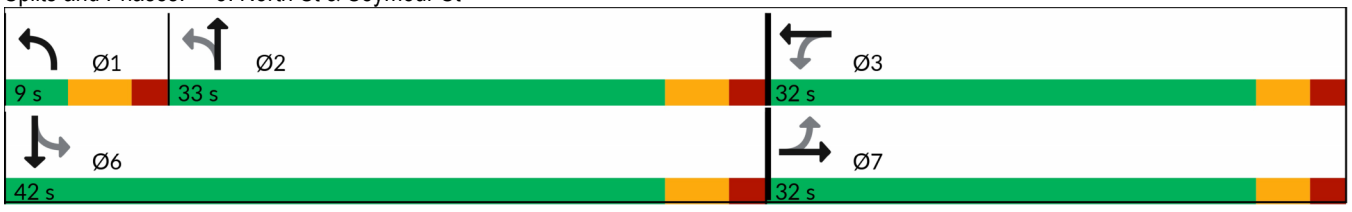
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	93	25	31	89	30	18	370	28	20	351	29
Future Volume (vph)	51	93	25	31	89	30	18	370	28	20	351	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.980			0.973			0.990			0.989	
Flt Protected		0.985			0.990			0.998			0.997	
Satd. Flow (prot)	0	1744	0	0	1740	0	0	3174	0	0	3265	0
Flt Permitted		0.865			0.914			0.926			0.918	
Satd. Flow (perm)	0	1532	0	0	1606	0	0	2945	0	0	3006	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			19			12			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		341			331			256			873	
Travel Time (s)		7.8			7.5			5.8			19.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	4%	5%	8%	5%	7%	0%	0%	12%	25%	5%	10%	0%
Adj. Flow (vph)	63	115	31	38	110	37	22	457	35	25	433	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	209	0	0	185	0	0	514	0	0	494	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		7			3		1!	2			6!	
Permitted Phases	7			3			2			6		
Detector Phase	7	7		3	3		1	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	12.0	12.0		12.0	12.0		4.0	12.0		12.0	12.0	
Minimum Split (s)	17.0	17.0		17.0	17.0		9.5	17.5		17.5	17.5	
Total Split (s)	32.0	32.0		32.0	32.0		9.0	33.0		42.0	42.0	
Total Split (%)	43.2%	43.2%		43.2%	43.2%		12.2%	44.6%		56.8%	56.8%	
Maximum Green (s)	27.0	27.0		27.0	27.0		3.5	27.5		36.5	36.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.5			5.5	
Lead/Lag							Lead	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	6.0	6.0		6.0	6.0		1.0	6.0		6.0	6.0	
Recall Mode	None	None		None	None		None	None		Max	Max	
Walk Time (s)	13.0	13.0		13.0	13.0			16.0		16.0	16.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		16.3			16.3			36.6			36.6	
Actuated g/C Ratio		0.26			0.26			0.58			0.58	
v/c Ratio		0.51			0.43			0.30			0.28	
Control Delay (s/veh)		23.5			20.6			7.9			7.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		23.5			20.6			7.9			7.7	
LOS		C			C			A			A	
Approach Delay (s/veh)		23.5			20.6			7.9			7.8	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 63.5			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay (s/veh): 11.9		Intersection LOS: B	
Intersection Capacity Utilization 48.8%		ICU Level of Service A	
Analysis Period (min) 15			

! Phase conflict between lane groups.

Splits and Phases: 5: North St & Seymour St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	37	38	9	37	28	18	131	18	26	180	3
Future Volume (vph)	15	37	38	9	37	28	18	131	18	26	180	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.943			0.949			0.986			0.998	
Flt Protected		0.992			0.994			0.995			0.994	
Satd. Flow (prot)	0	1610	0	0	1721	0	0	1724	0	0	1759	0
Flt Permitted		0.919			0.938			0.952			0.947	
Satd. Flow (perm)	0	1491	0	0	1624	0	0	1649	0	0	1676	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			29			20			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			813			423			379	
Travel Time (s)		6.7			18.5			9.6			8.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	27%	3%	11%	0%	3%	7%	0%	9%	10%	12%	6%	33%
Adj. Flow (vph)	19	46	47	11	46	35	22	162	22	32	222	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	112	0	0	92	0	0	206	0	0	258	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	17.0	17.0		17.0	17.0		70.0	70.0		70.0	70.0	
Total Split (%)	19.5%	19.5%		19.5%	19.5%		80.5%	80.5%		80.5%	80.5%	
Maximum Green (s)	12.0	12.0		12.0	12.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.9			6.9			15.6			15.6	
Actuated g/C Ratio		0.24			0.24			0.53			0.53	
v/c Ratio		0.29			0.22			0.23			0.28	
Control Delay (s/veh)		9.2			8.4			6.1			6.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		9.2			8.4			6.1			6.8	
LOS		A			A			A			A	
Approach Delay (s/veh)		9.2			8.4			6.1			6.9	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 87			
Actuated Cycle Length: 29.2			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.30			
Intersection Signal Delay (s/veh): 7.2		Intersection LOS: A	
Intersection Capacity Utilization 31.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: State St & Perrine St

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	29	12	19	479	430	47
Future Volume (vph)	29	12	19	479	430	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.961				0.985	
Flt Protected	0.966			0.998		
Satd. Flow (prot)	1724	0	0	3502	3462	0
Flt Permitted	0.966			0.998		
Satd. Flow (perm)	1724	0	0	3502	3462	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			330	272	
Travel Time (s)	10.1			7.5	6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	8%	0%	3%	3%	0%
Adj. Flow (vph)	32	13	21	521	467	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	0	542	518	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.1%		ICU Level of Service A	
Analysis Period (min) 15			

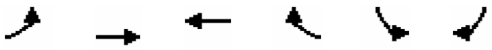
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	12	19	479	430	47
Future Vol, veh/h	29	12	19	479	430	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	0	3	3	0
Mvmt Flow	32	13	21	521	467	51

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	795	259	518	0	-	0
Stage 1	493	-	-	-	-	-
Stage 2	302	-	-	-	-	-
Critical Hdwy	6.8	7.06	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.38	2.2	-	-	-
Pot Cap-1 Maneuver	329	722	1058	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	322	722	1058	-	-	-
Mov Cap-2 Maneuver	322	-	-	-	-	-
Stage 1	572	-	-	-	-	-
Stage 2	730	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	15.6	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	137	-	384	-	-
HCM Lane V/C Ratio	0.02	-	0.116	-	-
HCM Control Delay (s/veh)	8.5	0.2	15.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	69	80	45	4	2
Future Volume (vph)	20	69	80	45	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.951		0.961	
Flt Protected		0.989			0.966	
Satd. Flow (prot)	0	1856	1739	0	1729	0
Flt Permitted		0.989			0.966	
Satd. Flow (perm)	0	1856	1739	0	1729	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		813	671		362	
Travel Time (s)		18.5	15.3		8.2	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	2%	1%	5%	2%	2%	2%
Adj. Flow (vph)	25	85	99	56	5	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	110	155	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.0%		ICU Level of Service A	
Analysis Period (min) 15			

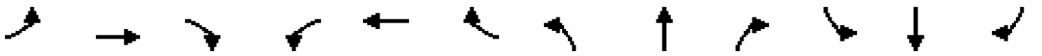
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	69	80	45	4	2
Future Vol, veh/h	20	69	80	45	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	1	5	2	2	2
Mvmt Flow	25	85	99	56	5	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	154	0	-	0	261	127
Stage 1	-	-	-	-	127	-
Stage 2	-	-	-	-	135	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1426	-	-	-	728	924
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	892	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1426	-	-	-	715	924
Mov Cap-2 Maneuver	-	-	-	-	715	-
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	892	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.7	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	404	-	-	-	773
HCM Lane V/C Ratio	0.017	-	-	-	0.01
HCM Control Delay (s/veh)	7.6	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0

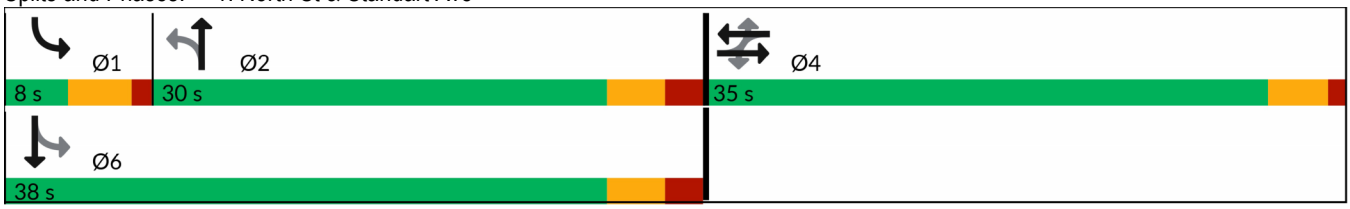


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	104	0	172	0	405	107	131	285	0
Future Volume (vph)	0	0	0	104	0	172	0	405	107	131	285	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.916			0.969				
Flt Protected					0.982						0.984	
Satd. Flow (prot)	0	1900	0	0	1692	0	0	3308	0	0	3481	0
Flt Permitted					0.885						0.617	
Satd. Flow (perm)	0	1900	0	0	1525	0	0	3308	0	0	2183	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					141			50				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		167			331			1639			287	
Travel Time (s)		3.8			7.5			37.3			6.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	7%	1%	0%	3%	0%
Adj. Flow (vph)	0	0	0	114	0	189	0	445	118	144	313	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	303	0	0	563	0	0	457	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type				Perm	NA			NA		pm+pt	NA	
Protected Phases		4			4			2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		2	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	22.0	22.0		22.0	22.0		30.0	30.0		8.0	30.0	
Minimum Split (s)	26.2	26.2		26.2	26.2		35.2	35.2		12.5	35.2	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		8.0	38.0	
Total Split (%)	47.9%	47.9%		47.9%	47.9%		41.1%	41.1%		11.0%	52.1%	
Maximum Green (s)	30.8	30.8		30.8	30.8		24.8	24.8		3.5	32.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.5	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.2			4.2			5.2			5.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	4.5	4.5		4.5	4.5		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)					22.0			24.8			32.8	
Actuated g/C Ratio					0.34			0.39			0.51	
v/c Ratio					0.49			0.43			0.39	
Control Delay (s/veh)					11.8			14.3			10.2	
Queue Delay					0.0			0.0			0.0	
Total Delay (s/veh)					11.8			14.3			10.2	
LOS					B			B			B	
Approach Delay (s/veh)					11.9			14.4			10.2	
Approach LOS					B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 73			
Actuated Cycle Length: 64.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay (s/veh): 12.4		Intersection LOS: B	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: North St & Standart Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	30	3	484	406	2
Future Volume (vph)	20	30	3	484	406	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.920				0.999	
Flt Protected	0.980					
Satd. Flow (prot)	1713	0	0	3375	3536	0
Flt Permitted	0.980					
Satd. Flow (perm)	1713	0	0	3375	3536	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	199			176	1639	
Travel Time (s)	4.5			2.0	39.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	7%	2%	0%
Adj. Flow (vph)	24	35	4	569	478	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	0	0	573	480	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	30	3	484	406	2
Future Vol, veh/h	20	30	3	484	406	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	7	2	0
Mvmt Flow	24	35	4	569	478	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	771	240	480	0	-	0
Stage 1	479	-	-	-	-	-
Stage 2	292	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	341	767	1093	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	340	767	1093	-	-	-
Mov Cap-2 Maneuver	340	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	738	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	12.97	0.08	0
HCM LOS	B		

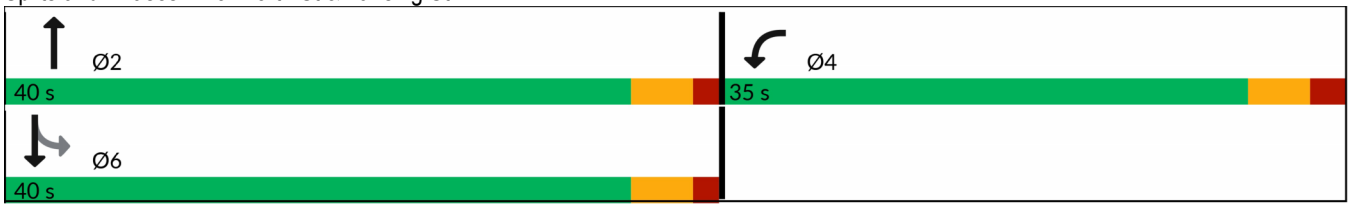
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	22	-	510	-	-
HCM Lane V/C Ratio	0.003	-	0.115	-	-
HCM Control Delay (s/veh)	8.3	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

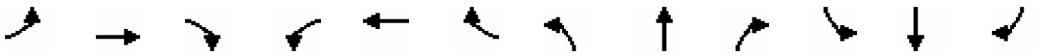
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	126	52	431	54	18	418
Future Volume (vph)	126	52	431	54	18	418
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.961		0.983			
Flt Protected	0.966					0.998
Satd. Flow (prot)	1681	0	3334	0	0	3535
Flt Permitted	0.966					0.926
Satd. Flow (perm)	1681	0	3334	0	0	3280
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	33		24			
Link Speed (mph)	30		30			30
Link Distance (ft)	585		196			176
Travel Time (s)	13.3		4.5			4.0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	7%	0%	7%	2%	0%	2%
Adj. Flow (vph)	148	61	507	64	21	492
Shared Lane Traffic (%)						
Lane Group Flow (vph)	209	0	571	0	0	513
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases					6	
Detector Phase	4		2		6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	27.5		24.0		20.0	20.0
Total Split (s)	35.0		40.0		40.0	40.0
Total Split (%)	46.7%		53.3%		53.3%	53.3%
Maximum Green (s)	29.5		35.0		35.0	35.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	2.0		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.5		5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		0.2		0.2	0.2
Recall Mode	None		Max		Max	Max
Walk Time (s)	7.0		8.0			
Flash Dont Walk (s)	15.0		11.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	12.1		35.0			35.0
Actuated g/C Ratio	0.21		0.61			0.61
v/c Ratio	0.55		0.28			0.25
Control Delay (s/veh)	22.9		5.8			6.0
Queue Delay	0.0		0.0			0.0
Total Delay (s/veh)	22.9		5.8			6.0
LOS	C		A			A
Approach Delay (s/veh)	23.0		5.9			6.0
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 57.6			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 8.7		Intersection LOS: A	
Intersection Capacity Utilization 43.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: North St & Lansing St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	0	59	0	0	0	30	445	0	0	475	73
Future Volume (vph)	45	0	59	0	0	0	30	445	0	0	475	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.923									0.980	
Flt Protected		0.979						0.997				
Satd. Flow (prot)	0	1717	0	0	1900	0	0	3378	0	0	3444	0
Flt Permitted		0.979						0.997				
Satd. Flow (perm)	0	1717	0	0	1900	0	0	3378	0	0	3444	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		732			208			873			196	
Travel Time (s)		33.8			0.0			19.8			4.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	3%	1%
Adj. Flow (vph)	50	0	66	0	0	0	33	494	0	0	528	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	116	0	0	0	0	0	527	0	0	609	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			0			0	
Link Offset(ft)		0			15			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	0	59	0	0	0	30	445	0	0	475	73
Future Vol, veh/h	45	0	59	0	0	0	30	445	0	0	475	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	7	0	0	3	1
Mvmt Flow	50	0	66	0	0	0	33	494	0	0	528	81

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	882	1129	304	825	1170	247	609	0	0	494	0	0
Stage 1	568	568	-	561	561	-	-	-	-	-	-	-
Stage 2	314	561	-	264	609	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	244	206	698	268	195	759	980	-	-	1080	-	-
Stage 1	480	509	-	485	513	-	-	-	-	-	-	-
Stage 2	677	513	-	724	489	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	234	197	698	233	187	759	980	-	-	1080	-	-
Mov Cap-2 Maneuver	234	197	-	233	187	-	-	-	-	-	-	-
Stage 1	480	509	-	465	493	-	-	-	-	-	-	-
Stage 2	650	493	-	656	489	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	18.78	0	0.84	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	227	-	-	376	-	1080	-	-
HCM Lane V/C Ratio	0.034	-	-	0.307	-	-	-	-
HCM Control Delay (s/veh)	8.8	0.3	-	18.8	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.3	-	0	-	-

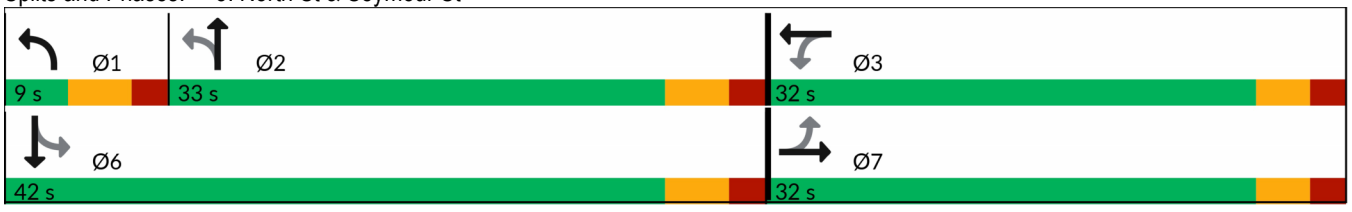
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	130	55	32	98	22	46	403	44	32	417	59
Future Volume (vph)	50	130	55	32	98	22	46	403	44	32	417	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.968			0.980			0.987			0.983	
Flt Protected		0.990			0.990			0.995			0.997	
Satd. Flow (prot)	0	1821	0	0	1843	0	0	3289	0	0	3425	0
Flt Permitted		0.908			0.904			0.860			0.898	
Satd. Flow (perm)	0	1670	0	0	1683	0	0	2843	0	0	3085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			13			17			27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		341			331			256			873	
Travel Time (s)		7.8			7.5			5.8			19.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	8%	14%	0%	4%	0%
Adj. Flow (vph)	56	146	62	36	110	25	52	453	49	36	469	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	264	0	0	171	0	0	554	0	0	571	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		7			3		1!	2			6!	
Permitted Phases	7			3			2			6		
Detector Phase	7	7		3	3		1	2		6	6	
Switch Phase												

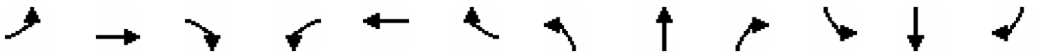
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	12.0	12.0		12.0	12.0		4.0	12.0		12.0	12.0	
Minimum Split (s)	17.0	17.0		17.0	17.0		9.5	17.5		17.5	17.5	
Total Split (s)	32.0	32.0		32.0	32.0		9.0	33.0		42.0	42.0	
Total Split (%)	43.2%	43.2%		43.2%	43.2%		12.2%	44.6%		56.8%	56.8%	
Maximum Green (s)	27.0	27.0		27.0	27.0		3.5	27.5		36.5	36.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.5			5.5	
Lead/Lag							Lead	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	6.0	6.0		6.0	6.0		1.0	6.0		6.0	6.0	
Recall Mode	None	None		None	None		None	None		Max	Max	
Walk Time (s)	13.0	13.0		13.0	13.0			16.0		16.0	16.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		17.7			17.7			36.7			36.7	
Actuated g/C Ratio		0.27			0.27			0.57			0.57	
v/c Ratio		0.55			0.36			0.34			0.32	
Control Delay (s/veh)		22.8			19.4			8.9			8.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		22.8			19.4			8.9			8.5	
LOS		C			B			A			A	
Approach Delay (s/veh)		22.9			19.4			8.9			8.6	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 64.9			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 12.3		Intersection LOS: B	
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			

! Phase conflict between lane groups.

Splits and Phases: 5: North St & Seymour St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	22	27	19	46	35	17	180	12	12	148	3
Future Volume (vph)	6	22	27	19	46	35	17	180	12	12	148	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.934			0.953			0.992			0.998	
Flt Protected		0.994			0.990			0.996			0.996	
Satd. Flow (prot)	0	1764	0	0	1768	0	0	1830	0	0	1872	0
Flt Permitted		0.942			0.917			0.971			0.971	
Satd. Flow (perm)	0	1672	0	0	1637	0	0	1784	0	0	1825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			26			9			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			753			423			379	
Travel Time (s)		6.7			17.1			9.6			8.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%	0%	3%	0%	0%	1%	0%
Adj. Flow (vph)	7	25	31	22	52	40	19	205	14	14	168	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	114	0	0	238	0	0	185	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	20.0	20.0		20.0	20.0		70.0	70.0		70.0	70.0	
Total Split (%)	22.2%	22.2%		22.2%	22.2%		77.8%	77.8%		77.8%	77.8%	
Maximum Green (s)	15.0	15.0		15.0	15.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		7.0			7.0			16.0			16.0	
Actuated g/C Ratio		0.24			0.24			0.54			0.54	
v/c Ratio		0.15			0.28			0.24			0.18	
Control Delay (s/veh)		6.7			9.4			6.3			6.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		6.7			9.4			6.3			6.2	
LOS		A			A			A			A	
Approach Delay (s/veh)		6.7			9.5			6.4			6.2	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 29.5			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.28			
Intersection Signal Delay (s/veh): 7.0		Intersection LOS: A	
Intersection Capacity Utilization 32.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: State St & Perrine St

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	33	21	9	781	717	39
Future Volume (vph)	33	21	9	781	717	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.947				0.992	
Flt Protected	0.971			0.999		
Satd. Flow (prot)	1747	0	0	3566	3547	0
Flt Permitted	0.971			0.999		
Satd. Flow (perm)	1747	0	0	3566	3547	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			330	272	
Travel Time (s)	10.1			7.5	6.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	13%	1%	1%	0%
Adj. Flow (vph)	34	22	9	805	739	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	56	0	0	814	779	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.9%		ICU Level of Service A	
Analysis Period (min) 15			

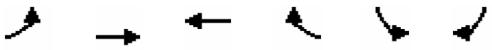
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	33	21	9	781	717	39
Future Vol, veh/h	33	21	9	781	717	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	13	1	1	0
Mvmt Flow	34	22	9	805	739	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1180	390	779	0	-	0
Stage 1	759	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.36	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.33	-	-	-
Pot Cap-1 Maneuver	186	615	766	-	-	-
Stage 1	428	-	-	-	-	-
Stage 2	636	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	183	615	766	-	-	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	421	-	-	-	-	-
Stage 2	636	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	23.3	0.26	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	41	-	252	-	-
HCM Lane V/C Ratio	0.012	-	0.221	-	-
HCM Control Delay (s/veh)	9.8	0.1	23.3	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	63	99	5	41	18
Future Volume (vph)	2	63	99	5	41	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.994		0.958	
Flt Protected		0.999			0.967	
Satd. Flow (prot)	0	1897	1869	0	1726	0
Flt Permitted		0.999			0.967	
Satd. Flow (perm)	0	1897	1869	0	1726	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		753	732		491	
Travel Time (s)		17.1	16.6		11.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	1%	2%	2%	2%
Adj. Flow (vph)	2	68	108	5	45	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	70	113	0	65	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	63	99	5	41	18
Future Vol, veh/h	2	63	99	5	41	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	1	2	2	2
Mvmt Flow	2	68	108	5	45	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	113	0	-	0	183	110
Stage 1	-	-	-	-	110	-
Stage 2	-	-	-	-	73	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1476	-	-	-	806	943
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	950	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1476	-	-	-	805	943
Mov Cap-2 Maneuver	-	-	-	-	805	-
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	950	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.23	0	9.62
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	55	-	-	-	843
HCM Lane V/C Ratio	0.001	-	-	-	0.076
HCM Control Delay (s/veh)	7.4	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

NYSEG RG&E
Part of the AVANGRID Family

February 5, 2026

Park Grove LLC
[redacted]
Auburn, NY 13021

Subject: NYSEG Will Serve of Electric Service, Park Grove LLC

NYSEG received a request for increased electric load at the location referenced above. Engineering analysis of the existing electric distribution system demonstrates that NYSEG has capacity to serve the above address subject to the following:

- Based on the information provided by the customer, they are proposing to connect approx. 555 KvA of diversified peak load.
- NYSEG's ability to serve this load may be impacted by the addition of other new electric loads.
- NYSEG'S ability to serve this load is contingent on obtaining the necessary easements for the development itself and for any upgrades to the overall circuit.

This letter does not address any costs that the customer may be obligated to pay to receive electric and is intended to address electric capacity capability only. As your project progresses, NYSEG urges you to remain in contact with us regarding project schedule, our ability to serve, and any modifications to proposed load.

Extension and installation of electric facilities are pursuant to NYSEG's tariff (Public Service Commission 119).

Sincerely,

Garrett Rozelle
Electric Field Planner

Stephanie Leone
Business Relations Manager

May 22, 2026

Nathan Herzog
Passero Associates
242 West Main Street
Suite 100
Rochester, NY 14614

Re: DEC
Auburn Medical Center
23 Perrine St, Auburn, NY 13021
26PR01840

Dear Nathan Herzog:

Thank you for continuing to consult with the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the materials submitted in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources.

We have reviewed the May 19, 2026, email correspondence. Based upon our review of the additional information, it is the OPRHP's opinion that the proposed work will have No Adverse Impact on historic resources, provided the following conditions are met:

1. A construction protection plan will be submitted to the OPRHP for review and comment prior to the commencement of construction or demolition activities.
2. A vegetative screening plan will be submitted to the OPRHP for review and comment. We recommend the use of hedges as part of this plan.

If you have any questions, feel free to contact me at abigail.rosenow@parks.ny.gov.

Sincerely,

Abigail Rosenow

Abigail Rosenow
Historic Site Restoration Coordinator
abigail.rosenow@parks.ny.gov
(518)948-3974

via e-mail only

PASSERO

242 W. Main Street, Suite 100
Rochester, NY 14614
(585) 325-1000 | passero.com

May 27, 2026

Attn: **Andrew Bodewes // Partner, Co-Founder**
Park Grove Realty
46 Prince Street Suite 2003
Rochester NY, 14607

Re: **Auburn Community Health Campus, City of Auburn, NY**
Parking Assessment & Response to Comments
Passero Project No: 20265046.0001

Dear Mr. Bodewes:

The purpose of this technical letter is to provide a Parking Demand Assessment related to the proposed Auburn Community Health Campus project located at 143-147 North Street in the City of Auburn, NY. When evaluating the parking supply needs for the proposed project, our firm projected the parking demand using nationally accepted methodology developed by the Institute of Transportation Engineers (ITE) for similar developments, as documented by the ITE Parking Generation Manual (6th Edition) and a comparison to City requirements, as set forth within Chapter 305 Zoning Article IV Supplemental Regulations Section H of the City of Auburn's Zoning Code.

1. PROJECT DESCRIPTION

The project is located in the C-General Commercial Zoning District and is adjacent to the Auburn Community Hospital. The proposed development consists of constructing a ±81,333 square foot (SF) three-story medical office building. The proposed building will contain ±54 offices and employ ±162 staff members. The existing medical office building and single family homes on the property will be demolished as a part of the proposed development. Access to the proposed development will be provided via the existing driveway along North St, which will be redesigned as a part of the proposed project. Additionally, one proposed driveway will be constructed along Perrine St and another proposed driveway will be constructed along W Park Ave.

The site plan provides ±202 parking spaces.

2. PARKING REQUIREMENTS PER MUNICIPAL CODE

Table 1 summarizes the municipal parking requirements (Section 305-Article IV-Section H). Code requirements suggest that there is a total surplus of 39 spaces.

Table 1: *Municipal Parking Requirements*

LAND USE	SCHEDULE	BUILDING INFO	CALCULATION
Healthcare Facility, Outpatient	2 spaces per 1,000 SF	81,333 SF	163 spaces

3. PARKING GENERATION

Parking generation rates published by the latest ITE *Parking Generation (6th Edition)* are typically used as the standard methodology to estimate baseline parking generation. **Table 2** summarizes the parking demand calculations.

Table 2: *Parking Generation*

LAND USE	SCHEDULE	BUILDING INFO	CALCULATION
LUC 720 Medical-Dental Office Building	2.63 spaces per 1,000 SF	81,333 SF	214 spaces
LUC 720 Medical-Dental Office Building	Fitted Curve	81,333 SF	167 spaces

The total anticipated parking demand based on the data presented in Table 2 is 167 to 214 spaces.

Considering the total supply of 202 spaces, it is Passero's professional opinion that there is adequate capacity to accommodate future needs.

4. RESPONSES TO COMMENTS

It is our understanding that there were comments related to site driveway access. These comments are addressed as follows:

a. "possible addition of a small pull off lane for vehicles turning right into the driveway. This might mean pushing the structure to the west a little to pick up enough room for a turn off lane."
Response: There are turn lane warrants that apply to when right turn lanes are needed based on the speed of the roadway, the number of travel lanes, and the volume of traffic turning right. Considering these elements, a southbound right turn lane is not warranted at the driveway location. Additionally, the Traffic Impact Report will be thoroughly reviewed by NYSDOT.

b. "make the North street entrance ingress only to minimize vehicles from turning left across north street when leaving. This would force vehicles to the intersection, increasing safety, minimizing accidents."
Response: Forcing vehicles to exit the site via Perrin Street would require two unsignalized left turn movements exiting the driveway onto Perrine St and then turn left from Perrine St to North St which may be blocked at times by northbound vehicles queued at the Lansing St traffic signal. It is also anticipated that the Lansing St traffic signal will create gaps in the northbound traffic flow that will allow left turning vehicles to exit the driveway safely and efficiently.

Please feel free to contact me directly with any questions.
Sincerely,

Amy C. Dake, P.E., PTOE
Senior Managing Traffic Engineer
adake@passero.com • 585-314-5078

PASSERO

ATTACHMENTS

May 27, 2026

Letter to
Park Grove Realty

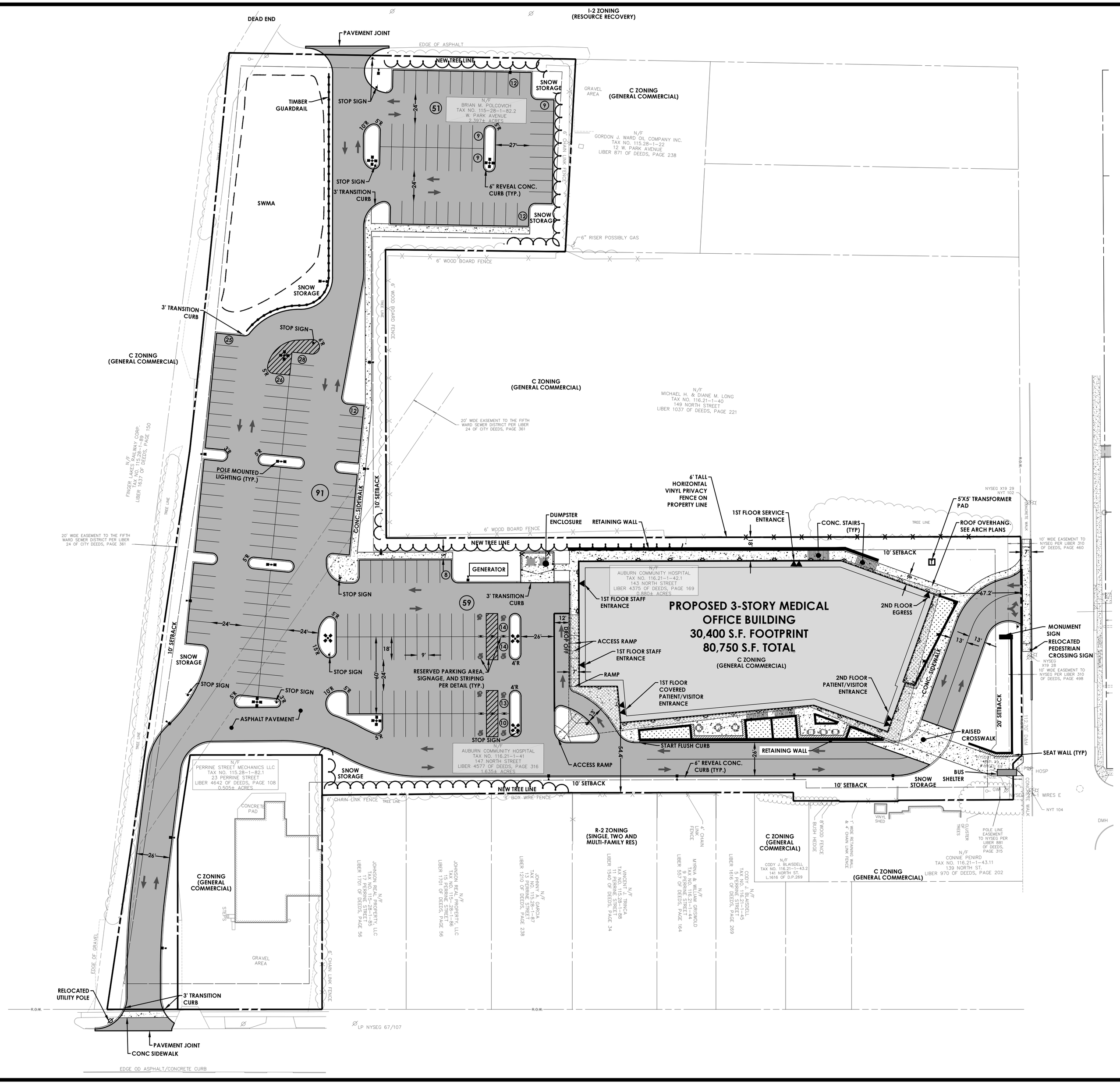
Auburn Community Health Campus

Parking Assessment

City of Auburn
Cayuga County, New York

PASSERO
engineering architecture

242 West Main Street, Suite 100 Rochester, NY 14614
T 585.325.1000 | www.srfa.net | www.passero.com



LEGEND - SITE:

- PROPERTY BOUNDARY
- R.O.W. — RIGHT OF WAY
- EXISTING CENTER LINE ROAD
- SETBACK
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- EXISTING BUILDING
- PROPOSED BUILDING
- (14) PROPOSED PARKING COUNT
- PROPOSED CONCRETE
- PROPOSED ACCESS RAMP
- PROPOSED PAVEMENT STRIPING
- PROPOSED CURB
- PROPOSED SIGN
- EXISTING SIGN
- PROPOSED LIGHT POLE
- PROPOSED TIMBER GUARD RAIL
- PROPOSED BUILDING MOUNTED LIGHT

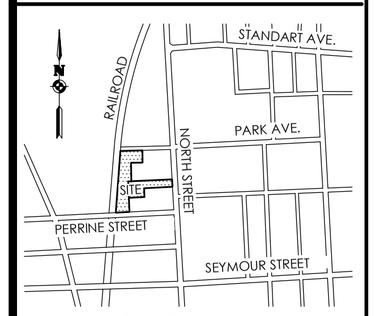
40 0 20 40 80

HORIZONTAL SCALE: 1"=40'

N

DESIGN DEVELOPMENT

PASSERO
engineering architecture



CITY OF AUBURN
LOCATION SKETCH
N.T.S.

STAMP:

CLIENT:
PARK GROVE REALTY, LLC
46 PRINCE STREET
ROCHESTER, NY 14607

Passero Associates
242 WEST MAIN ST., SUITE 100
ROCHESTER, NY 14614
(585) 325-1000
FAX: (585) 325-1691

PROJECT MANAGER — EDMUND MARTIN, P.E.
PROJECT ENGINEER — ANDREW BURNS, P.E.
DESIGNER — JACOB LEWIS, E.I.T.

NO.	DATE	BY	DESCRIPTION

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS IN VIOLATION OF STATE EDUCATION LAW ARTICLE 145 SECTION 7209 AND ARTICLE 147 SECTION 7307, THESE PLANS ARE COPYRIGHT PROTECTED. ©

SITE PLAN

AUBURN, NY

AUBURN COMMUNITY HOSPITAL HEALTH CAMPUS
MUNICIPALITY: **AUBURN**
COUNTY: **CAYUGA** STATE: **NY**

PROJECT NO.: **20255046.0001**

DRAWING NO.: **C-102**

DATE: **APRIL 2026**

Y:\PROJECTS-NEW\2025\20255046\20255046.0001\01_CAD-BIM-MODELS\CIVIL\20255046.01_SITE.DWG 5/22/2026 10:49 AM Jacob Lewis

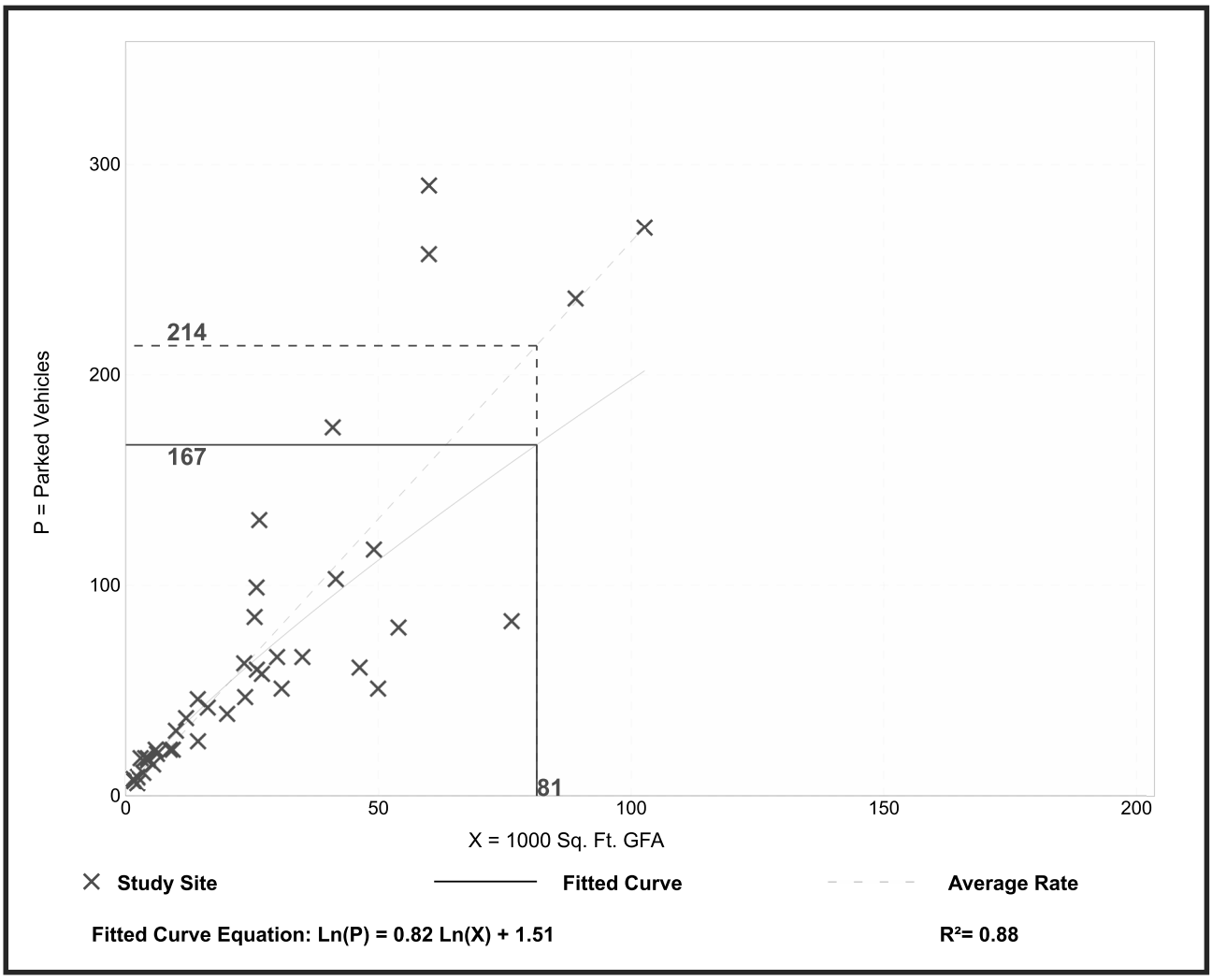
Medical-Dental Office Building - Standalone
(720)

Peak Period Parking Demand vs: **1000 Sq. Ft. GFA**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 41
Avg. 1000 Sq. Ft. GFA: 27

Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
2.63	1.02 - 5.97	2.38 / 4.28	2.28 - 2.98	1.15 (44%)

Data Plot and Equation



Parking Generation Manual, 6th Edition ● Institute of Transportation Engineers

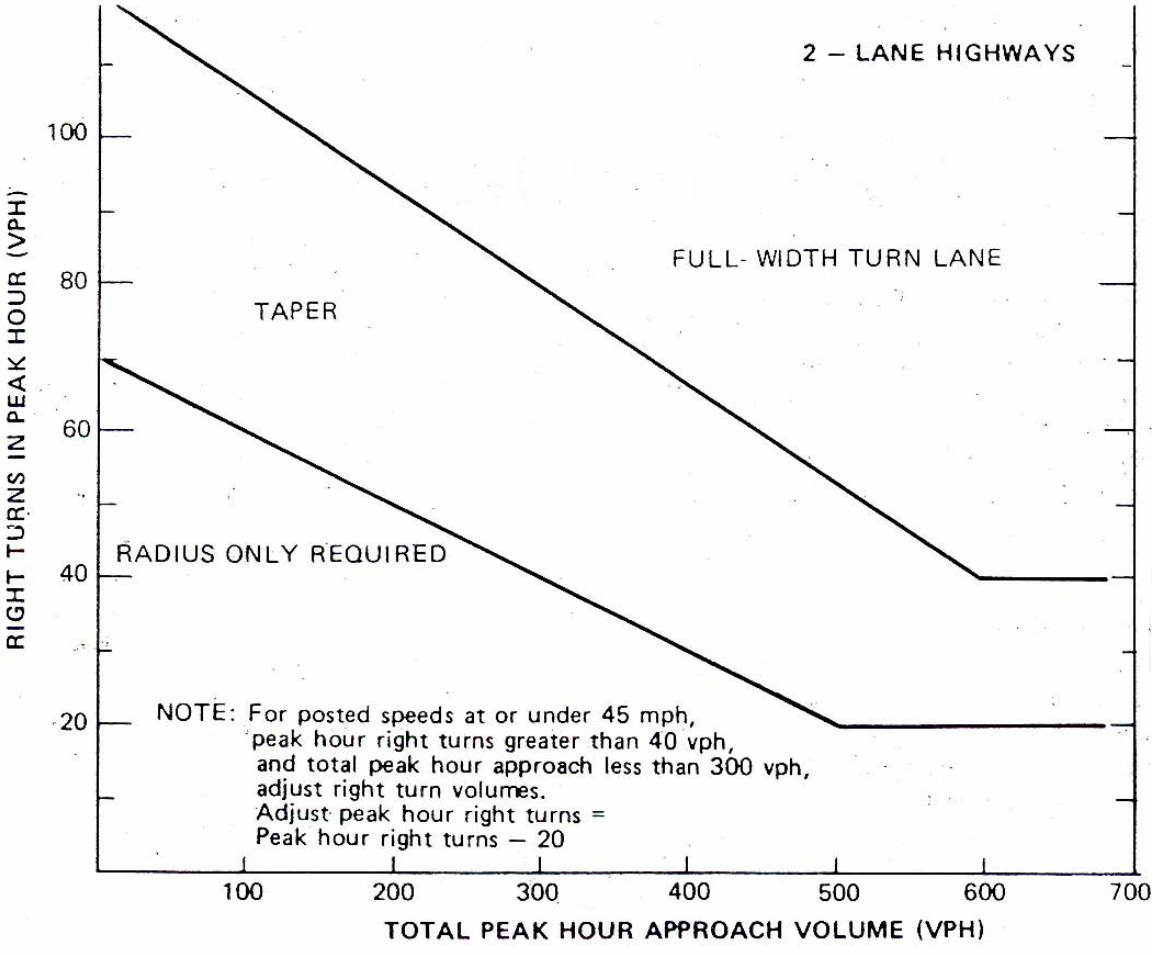
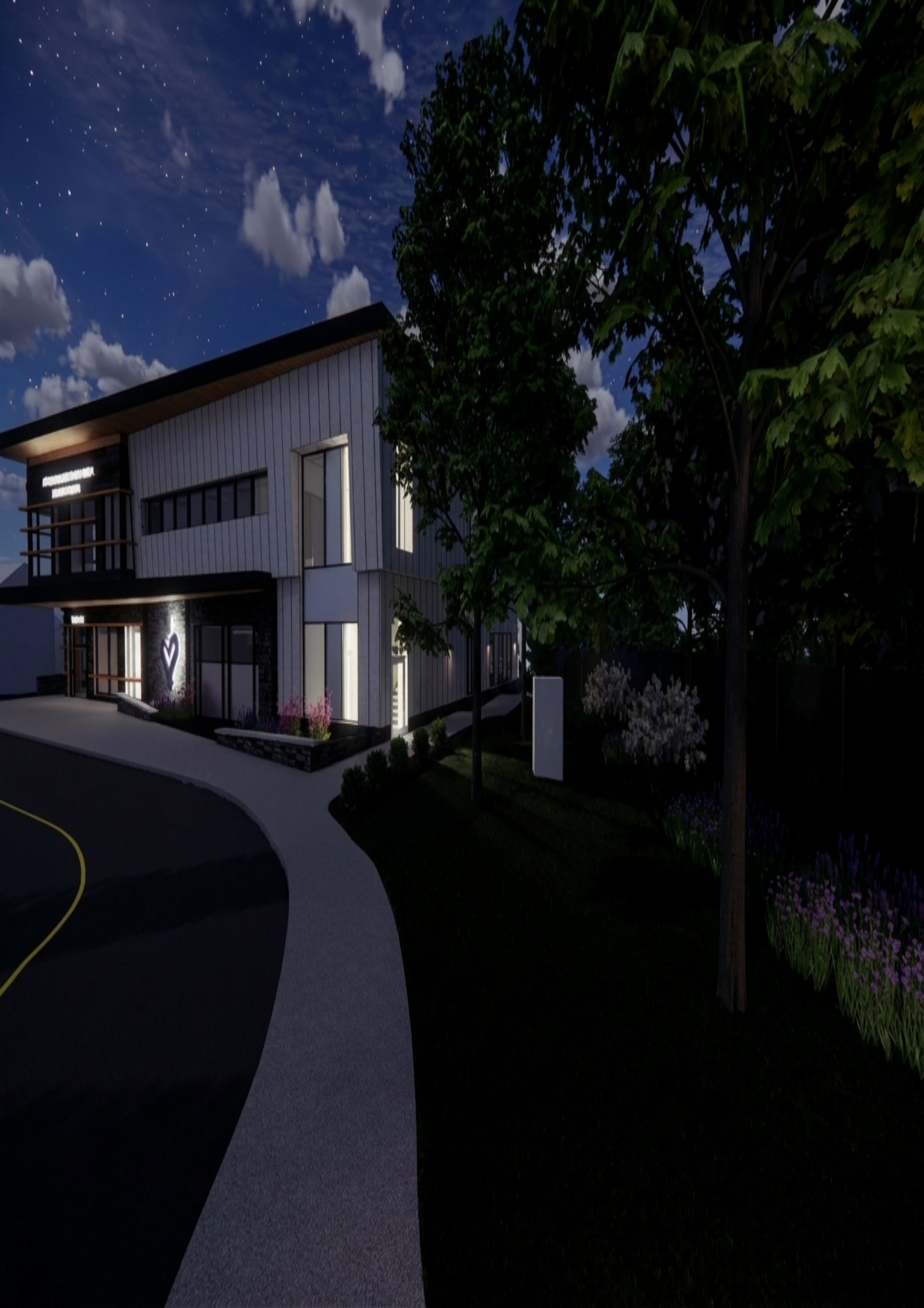
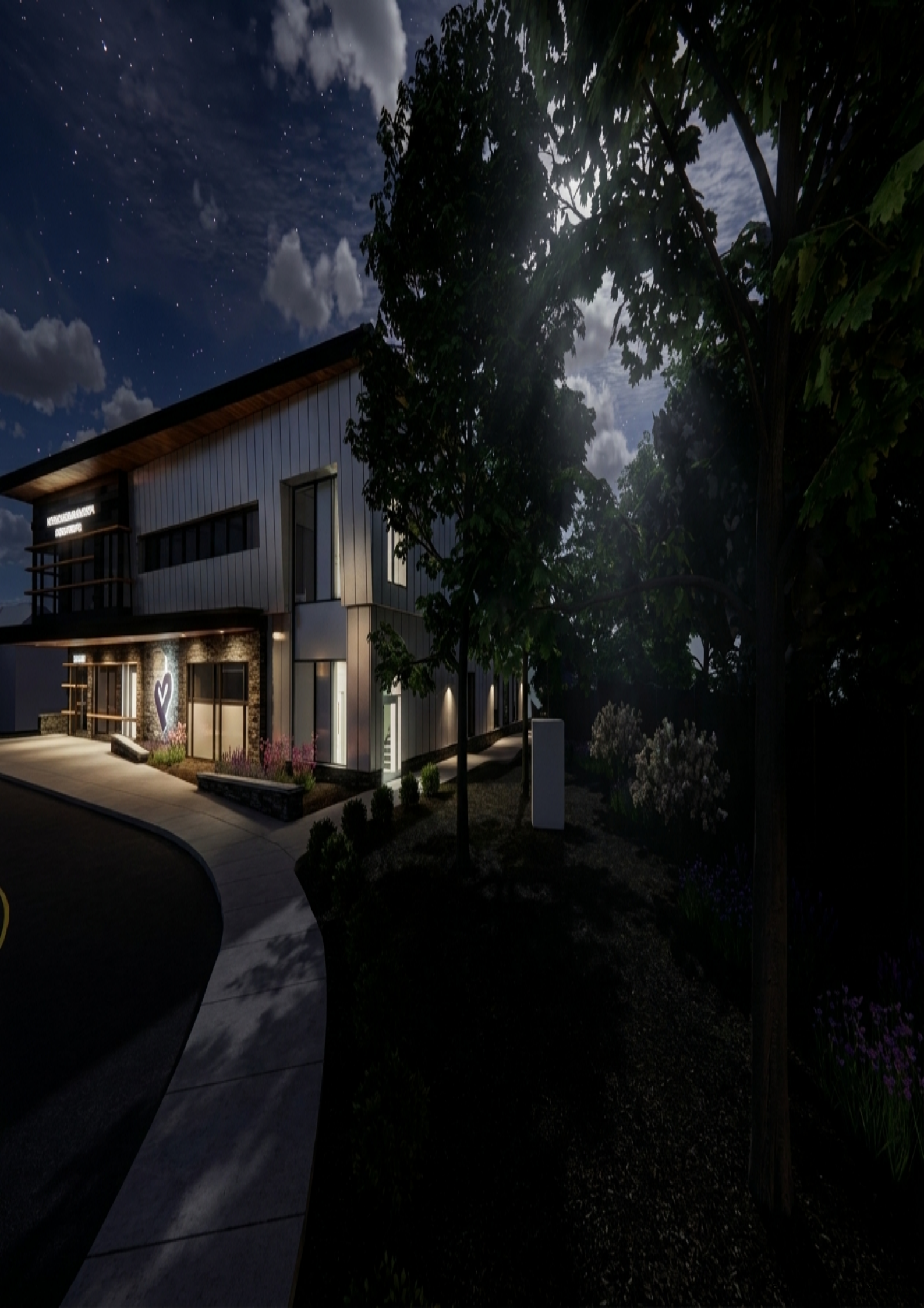


Figure 7: Cottrell's Two Lane Right Turn Treatment

AUBURN COMMUNITY HOSPITAL
HEALTH CAMPUS
WELCOME





AUBURN COMMUNITY HOSPITAL
HEALTH CAMPUS
WELCOME

AUBURN COMMUNITY HOSPITAL
HEALTH CAMPUS
WELCOME

CITY OF AUBURN, NY

"History's Hometown"

SPECIAL USE PERMIT

APPLICATION

Return completed application, all required materials to, and the applicable fee to:
Code Enforcement Office ● Memorial City Hall ● 24 South Street ● Auburn, New York 13021

For assistance call the Office of Planning and Economic Development at (315) 255-4118.

Submission Checklist

Office Use	☐ SPECIAL USE PERMIT (SUP) REQUIREMENTS:
☐	1) Required Fee*
☐	2) One (1) copy of the application
☐	3) One (1) copy of all attachments
☐	4) One (1) copy of the Environmental Assessment Form. Please utilize the NYS Dept. of Environmental Conservation EAF Mapper tool available at https://gisservices.dec.ny.gov/eafmapper/.
☐	5) Digital versions of all documents in portable document format (PDF) files via email or file transfer.

IMPORTANT

*Fees: Special Use Permit (SUP) - $150.00
SUP for Wireless Telecommunications Facility (WTF) - $5,000.00
SUP for co-location of (WTF) - $2,500.00

All above materials must be submitted by the appropriate due date to be included on the Planning Board Agenda (See schedule below). Certain plans may have to be stamped by a design professional licensed in the State of New York. The City, as needed for review purposes, may require additional information regarding a project.

[For Office Use Only]

Address:_____ Project Name:_____

Date Submitted:_____ Fee:_____ Received By:_____

Ver.080718

CITY OF AUBURN, NY

"History's Hometown"

SPECIAL USE PERMIT

Project Information

(Please Type or Print)

1. Applicant: Robin C. Casper Company Name: Next Door Properties LLC

   Address: 110 Wesley St. #164 City/State: Manlius,NY Zip: 13104

   Email: [redacted] Phone: 315-481-3507

   Interest in Property: ☒ Owner ☐ Lessee ☐ Other, Explain

2. Project Address(es): [redacted] Auburn NY, 13021

3. Tax Map Number(s): [redacted]

4. Zoning District: D Lot Size: 56x158

5. Current Use: 4 unit multi-family

6. **Proposed Use Requiring Special Use Permit:**

☐ Apartment Complex	☐ Bar	☐ Bed-and-Breakfast
☐ Cemetery	☐ Drive-Through	☒ Dwelling, Multiple Family, 5+ units
☐ Dwelling, Townhouse	☐ Flea Market	☐ Home Occupation
☐ Motor Vehicle Service Station	☐ Motor Vehicle Wash	☐ Office
☐ Residential Care Facility	☐ Taxi Dispatch Stand	☐ Tow Truck Operation
☐ Wireless Telecommunications Facility**	☐ Adult Use Business	

7. Property within Historic District: ☐ Yes ☒ No

8. Proposed use includes new construction: ☐ Yes ☒ No

9. Proposed use includes new signage: ☐ Yes ☒ No

10. Detailed Project Description (Please attach separately):

Provide specific information which describes and defines how the proposed use will be conducted and what will be involved in the day-to-day operations of the proposed use. Applicable information may include: services provided, hours of operation, days of week in operation, number of people (employees, customers, students, etc.) involved, any unique or specific traffic patterns, truck delivery schedule and operations, equipment or machinery which may be involved, or any other information which helps describe and define the proposed use and impacts it may have.

If new signage is proposed, include details of sign(s) including design, size, materials, and location.

*** For Wireless Telecommunications Facilities, Refer to Chapter 300 of the Code of the City of Auburn for additional required information.*

CITY OF AUBURN, NY

"History's Hometown"

SPECIAL USE PERMIT

Consultant Contact Information

1. Name: Robin C Casper Role: owner

   Address: 110 Wesley St. #164 City/State: Manlius,NY Zip: 13021

   Email: [redacted] Phone: 315-481-3507

2. Name: Role:

   Address: City/State: Zip:

   Email: Phone:

Certification / Authorization

APPLICANT: I certify that the information supplied on this application is complete and accurate, and that the project described, if approved, will be completed in accordance with the terms and conditions of said approval.

Signature: Date: 5/12/2026

OWNER (if other than applicant): I have read and familiarized myself with the contents of this application and do hereby consent to its submission and processing.

Signature: Date:

City of Auburn Planning Board 2024 Master Schedule

Meetings: 1st Tuesday of Every Month at 6:30pm
Except where noted

Completed applications are due on the 2nd Tuesday of the month prior to the next month's Planning Board Meeting.

Planning Board Meeting	Completed Application Deadline
January 2, 2024	December 12, 2023
February 6, 2024	January 9, 2024
March 5, 2024	February 13, 2024
April 2, 2024	March 12, 2024
May 7, 2024	April 9, 2024
June 4, 2024	May 14, 2024
July 2, 2024	June 11, 2024
August 6, 2024	July 9, 2024
September 3, 2024	August 13, 2024
October 1, 2024	September 10, 2024
November 5, 2024	October 8, 2024
December 3, 2024	November 12, 2024

Short Environmental Assessment Form
Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information

Name of Action or Project:

[redacted]. adaptive reuse Multi-family housing

Project Location (describe, and attach a location map):

[redacted]. Auburn NY, 13021

Brief Description of Proposed Action:

Proposed action consists of the interior conversion and rehabilitation of an existing four-unit residential building into a five-unit multifamily residential building within the existing building footprint. No substantial exterior expansion or land disturbance is proposed. Improvements may include interior reconfiguration, life-safety upgrades, utility modifications, and associated code compliance work necessary to obtain an updated Certificate of Occupancy. The property is located within the Downtown zoning district in Auburn. The fifth unit will be an ADA compliant apartment located in the walkout basement on the ground level.

Name of Applicant or Sponsor:	Telephone: 315-481-3507
Robin C. Casper	E-Mail: [redacted]

Address:

[redacted]

City/PO:	State:	Zip Code:
Manlius	NY	13104

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: Office of planning and economic dev. Special Use Permit	☐	☑

3. a. Total acreage of the site of the proposed action? .203 acres
   b. Total acreage to be physically disturbed? 0 acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 1.53 acres

4. Check all land uses that occur on, are adjoining or near the proposed action:

5. ☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☑ Commercial ☑ Residential (suburban)
   ☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):
   ☐ Parkland

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☑	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐

	NO	YES
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	☐	☑

	NO	YES
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?		
If Yes, identify: _____	☑	☐

	NO	YES
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	☑	☐
b. Are public transportation services available at or near the site of the proposed action?	☐	☑
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☐	☑

	NO	YES
9. Does the proposed action meet or exceed the state energy code requirements?		
If the proposed action will exceed requirements, describe design features and technologies: _____ _____	☐	☑

	NO	YES
10. Will the proposed action connect to an existing public/private water supply?		
If No, describe method for providing potable water: _____ _____	☐	☑

	NO	YES
11. Will the proposed action connect to existing wastewater utilities?		
If No, describe method for providing wastewater treatment: _____ _____	☐	☑

	NO	YES
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	☐	☑
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☐	☑

	NO	YES
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	☑	☐
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☑	☐
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ _____ _____		

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:

☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional

☐ Wetland ☑ Urban ☐ Suburban

	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	☑	☐
16. Is the project site located in the 100-year flood plan?	☑	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources?	☑	☐
If Yes,		
a. Will storm water discharges flow to adjacent properties?	☐	☐
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	☐	☐
If Yes, briefly describe: _____		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)?	☑	☐
If Yes, explain the purpose and size of the impoundment: _____		
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?	☑	☐
If Yes, describe: 706009, 706010,E706015,C706017		
20.Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?	☐	☑
If Yes, describe: _____		

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

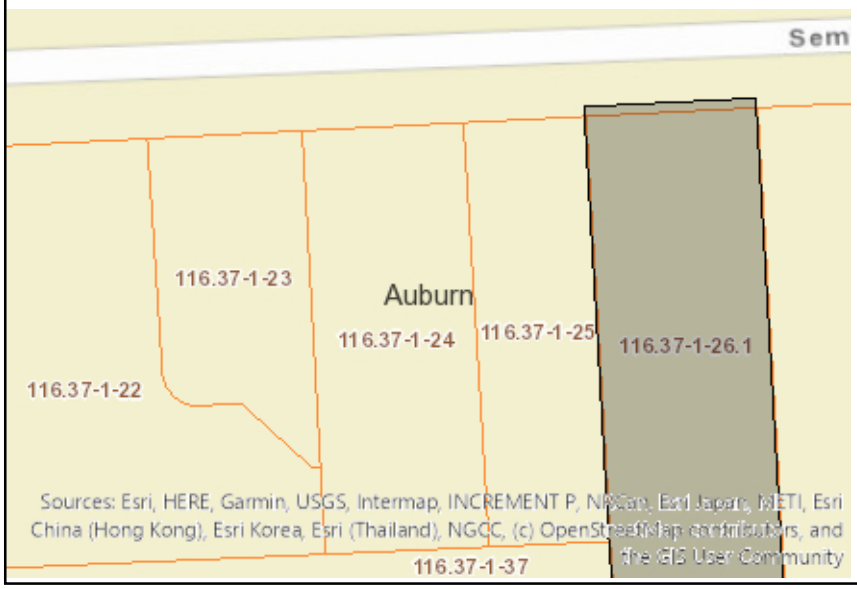
Applicant/sponsor/name: Robin C. Casper Date: 5/12/26

Signature: _____ Title: Owner

PRINT FORM

EAF Mapper Summary Report

Tuesday, May 12, 2026 11:22 AM

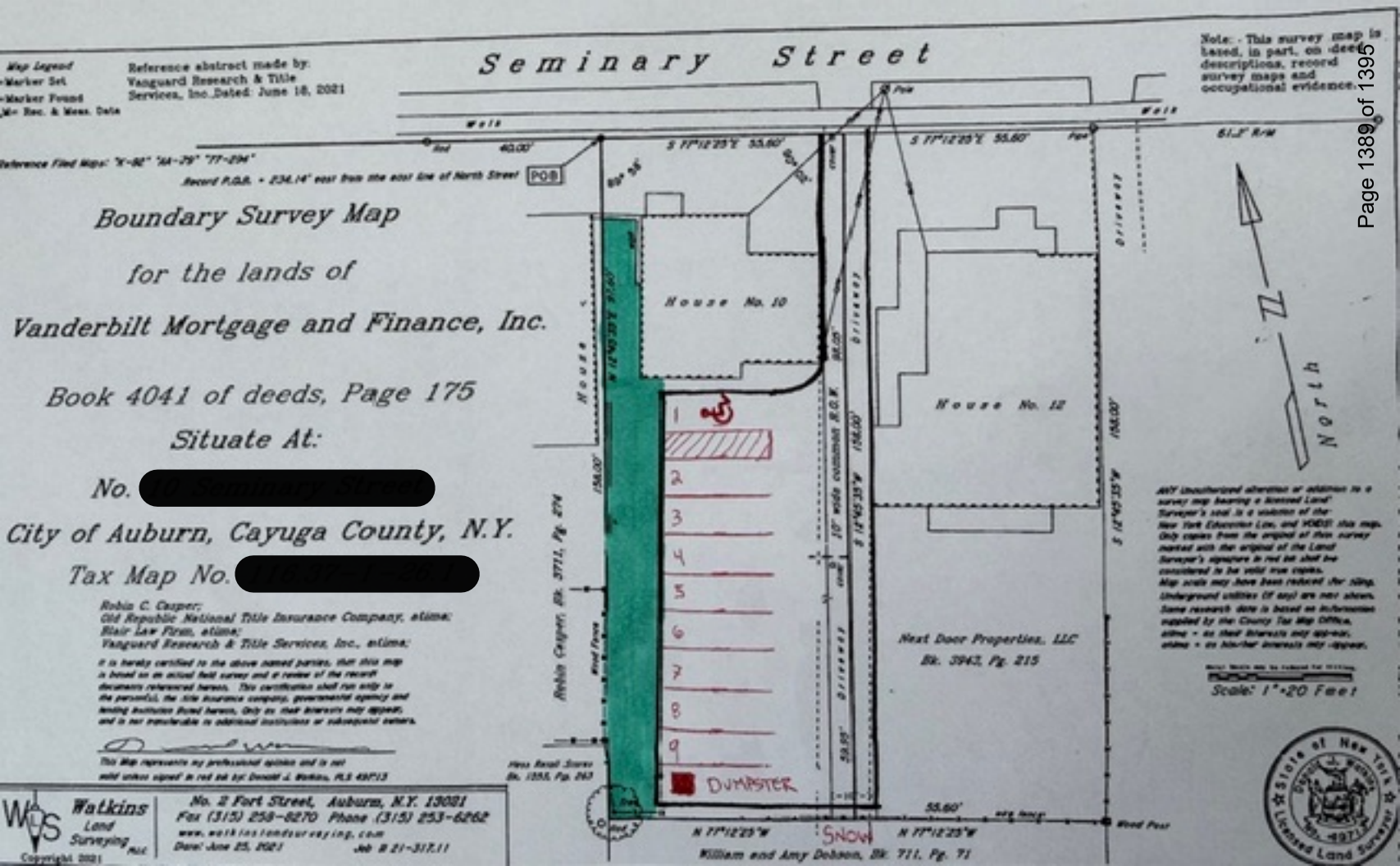


Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources to confirm data provided by the Mapper or to obtain data not provided by the Mapper.

Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	Yes
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	Yes

QUESTION #10 - Detailed project description:

Proposed project consists of the interior conversion and rehabilitation of an existing four-unit residential building into a five-unit multifamily residential building within the existing building footprint. No building expansion, new signage, or substantial site disturbance is proposed. Proposed work may include interior reconfiguration, utility modifications, fire/life safety improvements, and related code compliance upgrades necessary to obtain an updated Certificate of Occupancy. The proposed residential use is expected to generate traffic and activity consistent with typical multifamily residential occupancy. Parking will be off street. A private dumpster will be provided for tenants with pickup weekly. Property will have professional lawn/snow maintenance provided by 3rd party.


Seminary Street
Boundary Survey Map
for the lands of
Vanderbilt Mortgage and Finance, Inc.
Book 4041 of deeds, Page 175
Situate At:
No. [redacted]
City of Auburn, Cayuga County, N.Y.
Tax Map No. [redacted]
Reference abstract made by: Vanguard Research & Title Services, Inc. Dated: June 18, 2021
Note: - This survey map is based, in part, on deed descriptions, record survey maps and occupational evidence.
Map Legend
Marker Set
Marker Found
Rec. & Meas. Data
Reference Filed Maps: "K-82" "AA-29" "77-294"
Record P.O.B. = 234.14' east from the east line of North Street
POB
S 77°12'25"E 55.60'
House No. 10
House No. 12
Driveway
10' wide common R.O.W.
Robin Casper, Bk. 3711, Pg. 274
Next Door Properties, LLC
Bk. 3943, Pg. 215
Hess Retail Stores
Bk. 1355, Pg. 263
William and Amy Dobson, Bk. 711, Pg. 71
N 77°12'25"W 55.60'
DUMPSTER
SNOW
North
Scale: 1" = 20 Feet
Robin C. Casper; Old Republic National Title Insurance Company, etima; Blair Law Firm, etima; Vanguard Research & Title Services, Inc., etima;
Any unauthorized alteration or addition to a survey map bearing a licensed Land Surveyor's seal is a violation of the New York Education Law, and VOIDS this map. Only copies from the original of this survey marked with the original of the Land Surveyor's signature in red ink shall be considered to be valid true copies.
Map scale may have been reduced after filing.
Underground utilities (if any) are not shown.
Some research data is based on information supplied by the County Tax Map Office, etima = as their interests may appear, etima = as his/her interests may appear.
Watkins Land Surveying PLLC
No. 2 Fort Street, Auburn, N.Y. 13021
Fax (315) 258-8270 Phone (315) 253-6262
www.watkinslandsurveying.com
Date: June 25, 2021
Job # 21-317.11
Copyright 2021
State of New York
Licensed Land Surveyor

CITY OF AUBURN, NY

"History's Hometown"

SPECIAL USE PERMIT

APPLICATION

Return completed application, all required materials to, and the applicable fee to:
Code Enforcement Office • Memorial City Hall • 24 South Street • Auburn, New York 13021

For assistance call the Office of Planning and Economic Development at (315) 255-4118.

Submission Checklist

Office Use	☐ SPECIAL USE PERMIT (SUP) REQUIREMENTS:
☐	1) Required Fee*
☐	2) One (1) copy of the application
☐	3) One (1) copy of all attachments
☐	4) One (1) copy of the Environmental Assessment Form. Please utilize the NYS Dept. of Environmental Conservation EAF Mapper tool available at https://gisservices.dec.ny.gov/eafmapper/.
☐	5) Digital versions of all documents in portable document format (PDF) files via email or file transfer.

IMPORTANT

*Fees: Special Use Permit (SUP) - $150.00
SUP for Wireless Telecommunications Facility (WTF) - $5,000.00
SUP for co-location of (WTF) - $2,500.00

All above materials must be submitted by the appropriate due date to be included on the Planning Board Agenda (See schedule below). Certain plans may have to be stamped by a design professional licensed in the State of New York. The City, as needed for review purposes, may require additional information regarding a project.

[For Office Use Only]

Address: 6 Seminary Ave Project Name: Sene

Date Submitted: 5/12/26 Fee: 150 Received By: TB & AT

Ver.080718

CITY OF AUBURN, NY
"History's Hometown"

SPECIAL USE PERMIT

Project Information

(Please Type or Print)

1. Applicant: Robert Stearns Company Name: Stearns complete Auto Detailing
   Address: [redacted] Clark St City/State: Auburn NY Zip: 13021
   Email: [redacted] Phone: (315) 246-8824
   Interest in Property: ☐ Owner ☐ Lessee ☐ Other, Explain Rent
2. Project Address(es): 6 Seminary Ave
3. Tax Map Number(s): _____
4. Zoning District: Downtown Lot Size: _____
5. Current Use: Garage
6. **Proposed Use Requiring Special Use Permit:**

☐ Apartment Complex	☐ Bar	☐ Bed-and-Breakfast
☐ Cemetery	☐ Drive-Through	☐ Dwelling, Multiple Family, 5+ units
☐ Dwelling, Townhouse	☐ Flea Market	☐ Home Occupation
☐ Motor Vehicle Service Station	☑ Motor Vehicle Wash	☐ Office
☐ Residential Care Facility	☐ Taxi Dispatch Stand	☐ Tow Truck Operation
☐ Wireless Telecommunications Facility**	☐ Adult Use Business	

7. Property within Historic District: ☐ Yes ☑ No
8. Proposed use includes new construction: ☐ Yes ☑ No
9. Proposed use includes new signage: ☐ Yes ☑ No
10. Detailed Project Description (Please attach separately):

Provide specific information which describes and defines how the proposed use will be conducted and what will be involved in the day-to-day operations of the proposed use. Applicable information may include: services provided, hours of operation, days of week in operation, number of people (employees, customers, students, etc.) involved, any unique or specific traffic patterns, truck delivery schedule and operations, equipment or machinery which may be involved, or any other information which helps describe and define the proposed use and impacts it may have.

If new signage is proposed, include details of sign(s) including design, size, materials, and location.

*** For Wireless Telecommunications Facilities, Refer to Chapter 300 of the Code of the City of Auburn for additional required information.*

CITY OF AUBURN, NY

"History's Hometown"

SPECIAL USE PERMIT

Consultant Contact Information

1. Name:_____ Role:_____

   Address:_____ City/State:_____ Zip:_____

   Email:_____ Phone:_____

2. Name:_____ Role:_____

   Address:_____ City/State:_____ Zip:_____

   Email:_____ Phone:_____

Certification / Authorization

APPLICANT: I certify that the information supplied on this application is complete and accurate, and that the project described, if approved, will be completed in accordance with the terms and conditions of said approval.

Signature: Robert E Stevens Date: 5/12/26

OWNER (if other than applicant): I have read and familiarized myself with the contents of this application and do hereby consent to its submission and processing.

Signature:_____ Date:_____

Ver.080718

Short Environmental Assessment Form
Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information

Robert Sterns (315) 246-8824

Name of Action or Project:

Sterns Auto Detail

Project Location (describe, and attach a location map):

6 Seminary Ave, Auburn, NY

Brief Description of Proposed Action:

Small Auto Detailing Shop. Hand wash and detail clean on car at a time.

Name of Applicant or Sponsor:	Telephone: 315-246-8824
Robert Sterns	E-Mail:

Address:

6 Seminary Ave

City/PO:	State:	Zip Code:
Auburn	NY	13021

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval:	☑	☐

3. a. Total acreage of the site of the proposed action? 0.092 acres
   b. Total acreage to be physically disturbed? 0.0 acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 0.0 acres

4. Check all land uses that occur on, are adjoining or near the proposed action:

☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☑ Commercial ☐ Residential (suburban)

☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):

☐ Parkland

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☑	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐

	NO	YES
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	☐	☑

	NO	YES
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?		
If Yes, identify: _____	☑	☐

	NO	YES
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	☑	☐
b. Are public transportation services available at or near the site of the proposed action?	☐	☑
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☐	☑

	NO	YES
9. Does the proposed action meet or exceed the state energy code requirements?		
If the proposed action will exceed requirements, describe design features and technologies: _____ _____	☐	☑

	NO	YES
10. Will the proposed action connect to an existing public/private water supply?		
If No, describe method for providing potable water: _____ _____	☐	☑

	NO	YES
11. Will the proposed action connect to existing wastewater utilities?		
If No, describe method for providing wastewater treatment: _____ _____	☐	☑

	NO	YES
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	☑	☐
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☑	☐

	NO	YES
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	☑	☐
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☑	☐
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ _____ _____		

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:

☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional

☐ Wetland ☑ Urban ☐ Suburban

	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	☑	☐
16. Is the project site located in the 100-year flood plan?	☑	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources?	☑	☐
If Yes, a. Will storm water discharges flow to adjacent properties?	☑	☐
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	☑	☐
If Yes, briefly describe: _____		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment: _____	☑	☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____	☑	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____	☑	☐

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: Robert E Stearns Date: 6/25/2026

Signature: Robert E Stearns Title: _____

PRINT FORM