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Principal Emeritus:
RICHARD D. McGOEY, P.E. (NY & PA)

TOWN OF NEWBURGH
PLANNING BOARD
TECHNICAL REVIEW COMMENTS

PROJECT:	**OVERLOOK FARMS A FARRELL COMMUNITY (Hudson Place)**
PROJECT NO.:	**19-23**
PROJECT LOCATION:	**SECTION 9, BLOCK 1, LOT 10, 11, 12, 56.21, 56.22**
REVIEW DATE:	**26 MARCH 2021**
MEETING DATE:	**1 APRIL 2021**
PROJECT REPRESENTATIVE:	**JMC ENGINEERING**

1. This office circulated the Planning Board's Notice of Intent for Lead Agency on 3 February 2021. With the exception of the Marlborough Central School District no other correspondence has been received back to this office. Marlborough Central School District has requested a meeting with this office regarding the project. Planning Board is in a position to declare itself Lead Agency for the environmental review of the project.

2. This office awaits the submission of an SWPPP and Stormwater Management Plan in compliance with Town of Newburgh and NYSDEC requirements.

3. The project requires a Flood Plain Development Permit information pertaining to the flood plain impacts is identified as being under preparation by the Applicants representative.

4. Design reports for the water main extension with hydrants and Sewage Treatment Plant should be provided to the Planning Board.

5. It is requested that all materials being sent to outside agencies be copied to the Planning Board for their file.

6. Check grading in the vicinity of DMH-C-5. Specifically the 492 contour.

7. Grading in the vicinity of DMH-D-4 should be evaluated for potential impacts to adjoining properties.

8. Location of hydrants should be reviewed with the Code Enforcement Department as well as Jurisdictional Fire Department.

9. Highway Superintendents comments on the Morris Drive emergency access drive should be received.

10. A Restraint Joint Table should be added to the Detail Sheet in compliance with the Town of Newburgh's requirements.

11. Water service connections to the proposed retail building, sewage treatment building and clubhouse should be depicted.

12. Standard detail requiring potable water to be shut off if fire lines are terminated at the structure.

Respectfully submitted,

McGoey, Hauser and Edsall
Consulting Engineers, D.P.C.

Patrick J. Hines
Principal

PJH/kbw

TOWN OF NEWBURGH
APPLICATION FOR
SUBDIVISION/SITE PLAN REVIEW

RETURN TO: Town of Newburgh Planning Board
308 Gardnertown Road
Newburgh, New York 12550

DATE RECEIVED: _____ **TOWN FILE NO:**_____
(Application fee returnable with this application)

1. **Title of Subdivision/Site Plan (Project name):**
   Overlook Farms a Farrell Community

2. **Owner of Lands to be reviewed:**
   Name Farrell Communities at Overlook Ponds LLC
   Address P.O. Box 14
   Bridgehampton, NY 11932
   Phone (631) 537-1068

3. **Applicant Information (If different than owner):**
   Name _____
   Address _____
   _____
   _____
   Representative _____
   Phone _____
   Fax _____
   Email _____

4. **Subdivision/Site Plan prepared by:**
   Name JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC
   Address 120 Bedford Road
   Armonk, NY 10504
   Phone/Fax (914) 273-5225

5. **Location of lands to be reviewed:**
   Route 9W

6. **Zone** R-3/B **Fire District** Middle Hope Fire District
   Acreage 32.71 **School District** Marlboro School District

7. **Tax Map: Section** 09 **Block** 1 **Lot** 10, 11, 12, 56.21 and 56.22

8. **Project Description and Purpose of Review:**
   Number of existing lots 5 **Number of proposed lots** 1
   Lot line change Merger of Lots
   Site plan review To locate rental apartment complex with senior housing, retail and private sewage treatment
   Clearing and grading 28.00 ac
   Other _____

PROVIDE A WRITTEN SINGLE PAGE DESCRIPTION OR NARRATIVE OF THE PROJECT

9. **Easements or other restrictions on property:**
   (Describe generally) Wetlands, Flood Plain and Streams

10. **The undersigned hereby requests approval by the Planning Board of the above identified application and scheduling for an appearance on an agenda:**

Signature Farrell Communities at Overlook Ponds LLC **Title** President
By: Joseph Farrell

Date: 3-17-21

NOTE: **If property abuts and has its access to a County or State Highway or road, the following information must be placed on the subdivision map or site plan: entrance location, entrance profile, sizing of pipe (minimum length of pipe to be 24 feet).**

The applicant will also be required to submit an additional set of plans, narrative letter and EAF if referral to the Orange County Planning Department is required under General Municipal Law Section 239.

PROXY

(OWNER) Joseph Farrell **, DEPOSES AND SAYS THAT HE/~~SHE~~** is Managing Member of Farrell Communities at Overlook Ponds LLC which has an office at

RESIDES AT 1601 Veterans Memorial Highway

IN THE COUNTY OF Suffolk

AND STATE OF New York

AND THAT HE/~~SHE~~ IS THE OWNER IN FEE OF

Overlook Farms a Farrell Community

WHICH IS THE PREMISES DESCRIBED IN THE FOREGOING APPLICATION AS DESCRIBED THEREIN TO THE TOWN OF NEWBURGH PLANNING BOARD AND Hanig & Schutzman **IS AUTHORIZED TO REPRESENT THEM AT MEETINGS OF SAID BOARD.**

DATED: 3.17.24

OWNERS SIGNATURE

Farrell Communities at Overlook Ponds LLC

Joseph G. Farrell, Jr.

OWNERS NAME (printed)

by: Joseph Farrell

JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC

WITNESS' SIGNATURE

Jillian DeGrenier

WITNESS' NAME (printed)

NAMES OF ADDITIONAL REPRESENTATIVES

ARCHITECTURAL REVIEW FORM
TOWN OF NEWBURGH PLANNING BOARD

DATE: March 16, 2021

NAME OF PROJECT: Overlook Farms a Farrell Community

The applicant is to submit in writing the following items prior to signing of the site plans.

EXTERIOR FINISH (skin of the building):

Type (steel, wood, block, split block, etc.)

Vinyl siding with pvc trim

COLOR OF THE EXTERIOR OF BUILDING:

Red, White, Dark Gray, Light Gray

ACCENT TRIM:

Location: Edges

Color: Gray

Type (material): PVC

PARAPET (all roof top mechanicals are to be screened on all four sides):

Mechanical equipment will be inside and not on roofs

ROOF:

Type (gabled, flat, etc.): Gabled, Flat

Material (shingles, metal, tar & sand, etc.): Asphalt Shingles and built-up

Color: Charcoal

WINDOWS/SHUTTERS:

Color (also trim if different): Windows - Gray

Type: Vinyl Clad Wood

DOORS:

Color: Gray with Glass

Type (if different than standard door entrée): N / A

SIGN:

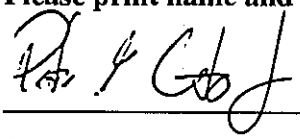
Color: N / A

Material: N / A

Square footage of signage of site: N / A

Architect - Peter F. Gaito & Associates

Please print name and title (owner, agent, builder, superintendent of job, etc.)



Signature

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.

Name of Action or Project: Overlook Farms a Farrell Community		
Project Location (describe, and attach a general location map): 5417 Route 9W Newburgh, NY [Sec. 09, Block 01, Lots 10, 11, 12, 56.21 and 56.22]		
Brief Description of Proposed Action (include purpose or need): The proposed action is comprised of three components: Residential Development consisting of eleven (11) twelve(12) unit buildings, one (1) eleven (11) unit building and three (3) twenty (20) unit buildings for a total of fifteen (15) buildings with two hundred and three (203) units. The residential portion of the site will include recreation area for the development with a clubhouse, pool, tennis courts and dog park. There will also be a main driveway and associated parking for the units. 25,000 sf retail building with associated parking, as well as a private sewage treatment facility which will serve the site and nearby off-site properties/developments.		
Name of Applicant/Sponsor: Farrell Communities at Overlook Ponds LLC	Telephone: (631) 537-1068 E-Mail: zags1413@gmail.com	
Address: P.O. Box 14		
City/PO: Bridgehampton	State: NY	Zip Code: 11932
Project Contact (if not same as sponsor; give name and title/role): Mr. Stephen Zagoren	Telephone: (631) 537-1068 E-Mail: zags1413@gmail.com	
Address:		
City/PO: Armonk	State:	Zip Code:
Property Owner (if not same as sponsor): See attachment	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

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	Town Planning Board: Site Plan Approval	10/23/2019
c. City, Town or Village Zoning Board of Appeals ☐Yes☑No		
d. Other local agencies ☑Yes☐No	Building Department: Building Permit, Sewer Main Extension	TBD
e. County agencies ☑Yes☐No	Health Department: Water Main Extension	TBD
f. Regional agencies ☐Yes☑No		
g. State agencies ☑Yes☐No	NYSDEC: SPDES General Permits	TBD
h. Federal agencies ☑Yes☐No	ACOE Wetland Permitted, FEMA CLOMR	TBD

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

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?
R-3 - Residence District and B - Business District

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? Marlboro School District

b. What police or other public protection forces serve the project site?
Town of Newburgh Police Department

c. Which fire protection and emergency medical services serve the project site?
Middle Hope Fire Department

d. What parks serve the project site?
Cronomer Hill County 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)? Residential, commercial (retail), and private sewage treatment facility

b. a. Total acreage of the site of the proposed action? 32.71 acres
b. Total acreage to be physically disturbed? 28 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 32.71 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)
Residential, commercial (retail), and sanitary treatment facility.
ii. Is a cluster/conservation layout proposed? ☐ Yes ☑ No
iii. Number of lots proposed? 1
iv. Minimum and maximum proposed lot sizes? Minimum 32.71 acres Maximum 32.71 acres

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 18 months
ii. If Yes:
- Total number of phases anticipated 1
- Anticipated commencement date of phase 1 (including demolition) 10 month 2021 year
- Anticipated completion date of final phase 4 month 2023 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				203
At completion of all phases				203

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No

If Yes,

i. Total number of structures 3

ii. Dimensions (in feet) of largest proposed structure: 30 height; 185 width; and 135 length

iii. Approximate extent of building space to be heated or cooled: 25,000 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: Stormwater Basins/Stormwater Management Practices and Floodplain volume storage

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☑ Surface water streams ☑ Other specify: Stormwater

iii. If other than water, identify the type of impounded/contained liquids and their source.

iv. Approximate size of the proposed impoundment. Volume: TBD million gallons; surface area: TBD acres

v. Dimensions of the proposed dam or impounding structure: TBD height; TBD length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

Earthwork, rip-rap stone, and outlet control structures/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.

iv. 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:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): Fresh Water Pond: PUBHh

Riverines/Streams: R5UBH and R4SBC, wetland

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:
Some areas will have a stream relocated and/or piped to existing outlet locations. Ponds will be maintained as features for residential development. Wetland disturbance amounting to 0.3 acres.

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☑ Yes ☐ No
If Yes, describe: Earthwork within and around streams, wetland and man made pond

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: TBD
- expected acreage of aquatic vegetation remaining after project completion: TBD
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): Modification of existing man made irrigation pond and earthwork for residential development
- proposed method of plant removal: Excavation
- if chemical/herbicide treatment will be used, specify product(s): -

v. Describe any proposed reclamation/mitigation following disturbance:
Recreation of stream bed in some areas. Disturbed areas will be vegetated (or seeded) with erosion control vegetation/grass.

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: ±32,040 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: Chadwick Lake
- 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:
  Water supply will be extended to the proposed building locations on site (approximately 18 buildings).
- Source(s) of supply for the district: Lake Washington, Catskill Aqueduct, Brown's Pond

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: ±32,040 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 wastewater.

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐ Yes ☑ No
If Yes:

- Name of wastewater treatment plant to be used:
- 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: Farrell Communities at Overlook Ponds
- Date application submitted or anticipated: TBD
- What is the receiving water for the wastewater discharge? On-Site Stream: R4SBC

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):
Proposed private sewage treatment facility to be designed and constructed

vi. Describe any plans or designs to capture, recycle or reuse liquid waste:
TBD

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

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?
_____ Square feet or 11.85 acres (impervious surface)
_____ Square feet or 32.71 acres (parcel size)

ii. Describe types of new point sources. Curbs, swales, retaining walls, and pipes.

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)?
On-site stormwater management practices and on-site surface waters.

- If to surface waters, identify receiving water bodies or wetlands:
Freshwater man made ponds (PUBHh).
- 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): TBD

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): TBD

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

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): Two semi-trailers per day

iii. Parking spaces: Existing 25 Proposed 573 Net increase/decrease +548

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: New access driveway will be created, including re-striping and modification to Route 9W.

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: TBD

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other): Local utility

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 - 7 PM
- Saturday: 9 AM - 5 PM
- Sunday: None
- Holidays: None

ii. During Operations:

- Monday - Friday: 24/7
- Saturday: 24/7
- Sunday: 24/7
- Holidays: 24/7

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:

Construction equipment during temporary construction process, during permitted construction hours.

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe:

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:

Building security lighting and lighting along proposed roadways. Fixtures will be high efficiency LED down lighting.

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe:

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):

Typical landscape treatment as required to maintain the lawns and plant materials.

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: TBD tons per _____ (unit of time)
- Operation : ±10-15 (retail) tons per month (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: Debris recycling will be in accordance with all applicable local requirements.
- Operation: Recycling will be in accordance with applicable County requirements.

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: Private hauler
- Operation: Private hauler

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	1.85	12.52	+10.67
• Forested	3.30	0.41	-2.89
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	25.27	0	-25.27
• Surface water features (lakes, ponds, streams, rivers, etc.)	1.71	1.52	-0.19
• Wetlands (freshwater or tidal)	0.58	0.28	-0.30
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: Landscaping	0	17.98	+17.98

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:

_____

_____

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:

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

a. What is the average depth to bedrock on the project site? 0-5 feet

b. Are there bedrock outcroppings on the project site? ☑Yes ☐No
If Yes, what proportion of the site is comprised of bedrock outcroppings? 1 %

c. Predominant soil type(s) present on project site:

BnB (C/D)	36.78 %
BnC (C/D)	36.40 %
UH (A)	13.05 %

d. What is the average depth to the water table on the project site? Average: 4 feet

e. Drainage status of project site soils:

☑ Well Drained:	86.23 % of site
☐ Moderately Well Drained:	0 % of site
☑ Poorly Drained	13.77 % of site

f. Approximate proportion of proposed action site with slopes:

☑ 0-10%:	40.61 % of site
☑ 10-15%:	19.65 % of site
☑ 15% or greater:	39.74 % 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 862-374 Classification C
- Lakes or Ponds: Name Man made Classification N/A
- Wetlands: Name Federal Wetland Approximate Size 0.58 acre
- Wetland No. (if regulated by DEC) N/A

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? ☐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: _____

m. Identify the predominant wildlife species that occupy or use the project site:
Typical suburban 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):
Indiana Bat

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: ORAN001

b. Are agricultural lands consisting of highly productive soils present? ☑Yes ☐No
i. If Yes: acreage(s) on project site? 10
ii. Source(s) of soil rating(s): agriculture.ny.gov and USDA NRCS Web Soil Survey

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: _____

iii. Brief description of attributes on which listing is based:

_____

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

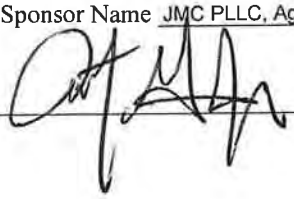
Attach any additional information which may be needed to clarify your project.

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.

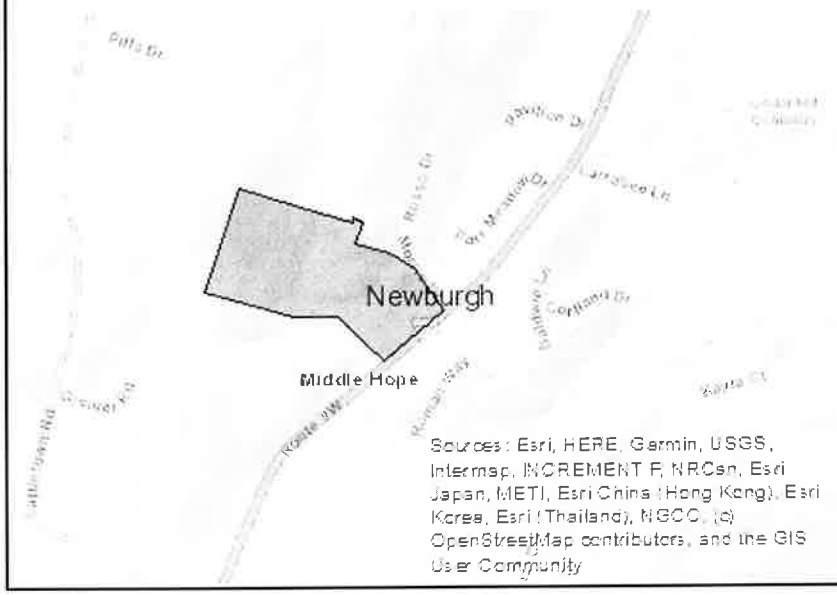
Applicant/Sponsor Name JMC PLLC, Agent Date 10/23/2019, revised 3/19/2021

Signature  Title Associate Principal

PRINT FORM

EAF Mapper Summary Report

Wednesday, October 16, 2019 4:05 PM



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 in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	Yes
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]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	862-374
E.2.h.iv [Surface Water Features - Stream Classification]	C
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	Yes
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]	~~Yes~~ No, based on site specific evaluation by Ecological Solutions, LLC.
E.2.o. [Endangered or Threatened Species - Name]	~~Indiana Bat~~
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	Yes
E.3.a. [Agricultural District]	ORAN001
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]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

Threatened and Endangered Species Habitat Suitability Assessment Report

Overlook Farms a Farrell Community
5417 Route 9W
Town of Newburgh, Orange County, NY

February 19, 2021

Prepared by:

Michael Nowicki
Ecological Solutions, LLC
PO Box 291
West Wardsboro, VT 05360
(203) 910-4716

1.0 INTRODUCTION

The project involves the construction of a 15 building residential development including a clubhouse, pool, tennis courts, dogpark and 25,000 sf of retail space as well as associated private sewage treatment facility on an existing farm site totaling 32.71 acres located at 5417 Route 9W in the Town of Newburgh, Orange County, New York (*Figure 1*).

A Habitat Suitability Assessment was completed for four listed species including the small whorled pogonia (*Isotria medeoloides*), Indiana bat (*Myotis sodalis*), Northern long-eared bat (*Myotis septentrionalis*), and bog turtle (*Glyptemys muhlenbergii*) and as part of the environmental review for the project and the US Fish and Wildlife Service species list for the site and New York State Department of Environmental Conservation (NYSDEC) Environmental Resource Mapper (*Attachment 1 and 2*). Field assessments were completed during August 2018 to determine whether suitable habitat for these species is present on the site. The project area is an apple orchard with a man made pond and farm ditches and patches of wooded fringe areas.

Habitat cover types were also observed and are described below.

TABLE 1
COVER TYPES IDENTIFIED ON THE SITE

NO.		ACRES	PROPOSED IMPACTS
1	Wetland/Waterbodies	2.29	0.49
2	Rich Mesophytic Forest	3.30	2.89
3	Agricultural Land	25.27	12.75
4	Previously Developed Area	1.85	1.85
Total		32.71	17.98

Detailed descriptions of each natural cover type are outlined below.

Wetland/Waterbodies - The wetland can be characterized as a small wet meadow which is supplied hydrology from a farm pond that is located on the site. The wetland flows through the site via culverts to a ditch. The wetlands are scrub/shrub containing red-osier dogwood, spicebush, multiflora rose, and sensitive fern.

Rich Mesophytic Forest - The wooded areas contains small oaks (red, pin), maples (red, sugar), and black cherry trees in the 4-6 inch dbh range.

Agricultural Land - The site is occupied by 25.27 acres of apple orchard.

2.0 HABITAT SUITABILITY ASSESSMENT/CONCLUSION

2.1 Small whorled pogonia

The small whorled pogonia is a member of the orchid family. It usually has a single grayish-green stem that grows about 10 inches tall when in flower and about 14 inches when bearing fruit. The plant is named for the whorl of five or six leaves near the top of the stem and beneath the flower. The leaves are grayish-green, somewhat oblong and 1 to 3.5 inches long. The single or paired greenish-yellow flowers are about 0.5 to 1 inch long and appear in May or June. The fruit, an upright ellipsoid capsule, appears later in the year. This orchid grows in older hardwood stands of beech, birch, maple, oak, and hickory that have an open understory. Sometimes it grows in stands of softwoods such as hemlock. It prefers acidic soils with a thick layer of dead leaves, often on slopes near small streams.

Conclusion - There is no potential habitat for this species since there is no older growth forest in the project area which is young wooded area.

2.2 Indiana bats

The Indiana bat typically hibernates in caves/mines in the winter and roosts under bark or in tree crevices in the spring, summer, and fall. Suitable potential summer roosting habitat is characterized by trees (dead, dying, or alive) or snags with exfoliating or defoliating bark, or containing cracks or crevices that could potentially be used by Indiana bats as a roost. The minimum diameter of roost trees observed to date is 2.5 inches for males and 4.3 inches for females. However, maternity colonies generally use trees greater than or equal to 9 inches dbh. Overall, roost tree structure appears to be more important to Indiana bats than a particular tree species or habitat type. Females appear to be more habitat specific than males presumably because of the warmer temperature requirements associated with gestation and rearing of young. As a result, they are generally found at lower elevations than males may be found. Roosts are warmed by direct exposure to solar radiation, thus trees exposed to extended periods of direct sunlight are preferred over those in shaded areas. However, shaded roosts may be preferred in very hot conditions. As larger trees afford a greater thermal mass for heat retention, they appear to be preferred over smaller trees.

Streams associated with floodplain forests, and impounded water bodies (ponds, wetlands, reservoirs, etc.) where abundant supplies of flying insects are likely found provide preferred foraging habitat for Indiana bats, some of which may fly up to 2-5 miles from upland roosts on a regular basis. Indiana bats also forage within the canopy of upland forests, over clearings with early successional vegetation (*e.g.,* old fields), along the borders of croplands, along wooded fencerows, and over farm ponds in pastures. While Indiana bats appear to forage in a wide variety of habitats, they seem to tend to stay fairly close to tree cover.

Conclusion - The proposed project will impact approximately 2.89 acres of lightly wooded area on the site containing trees as previously described. None of the trees that will be removed contain the characteristics associated with roosting by this species. Impacts to this species are unlikely

and there is no adverse impact that will occur from tree removal. The Applicant will employ the following conservation measures for bats that may forage in the area of the site:

• Site lighting is anticipated after development of the site. To avoid impacts to foraging bats street lighting on the site will use approved light fixtures that have tops that direct light down to minimize light pollution and not interfere with potential bat foraging activities;
• Implementing soil conservation and dust control best management practices, such as watering dry disturbed soil areas to keep dust down, and using staked, recessed silt fence and anti tracking pads to prevent erosion and sedimentation in surface waters on the site, and;
• Prior to clearing, the limits of proposed clearing will be clearly demarcated on the site with orange construction fencing (or similar) to prevent inadvertent overclearing of the site.

These measures will result in avoiding and minimizing potential adverse effects to Indiana bats as well as Northern long-eared bats that have a similar niche as the Indiana bat.

2.3 Northern long-eared bat

Winter Habitat: Same as the Indiana bat northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. They typically use large caves or mines with large passages and entrances; constant temperatures; and high humidity with no air currents. Specific areas where they hibernate have very high humidity, so much so that droplets of water are often seen on their fur. Within hibernacula, surveyors find them in small crevices or cracks, often with only the nose and ears visible.

Summer Habitat: During summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. Males and non-reproductive females may also roost in cooler places, like caves and mines. This bat seems opportunistic in selecting roosts, using tree species based on suitability to retain bark or provide cavities or crevices. It has also been found, rarely, roosting in structures like barns and sheds.

Feeding Habits: Northern long-eared bats emerge at dusk to fly through the understory of forested hillsides and ridges feeding on moths, flies, leafhoppers, caddisflies, and beetles, which they catch while in flight using echolocation. This bat also feeds by gleaning motionless insects from vegetation and water surfaces.

Conclusion - The northern long eared bat requires/occupies practically the same habitat niche as the Indiana bat. Impacts to habitat and mitigation would be consistent with the recommendations for the Indiana bat.

2.4 Bog turtle

According to the U.S. Fish and Wildlife Service, in the 2001 Bog Turtle (*Clemmys muhlenbergii*), Northern Population Recovery Plan. Hadley, Massachusetts. 103 pp. last revised on April 13, 2006 bog turtle habitat is recognized by three criteria:

1. **Suitable hydrology**. Bog turtle wetlands are typically spring-fed with shallow surface water or saturated soils present year-round, although in summer the wet area(s) may be restricted to near spring head(s). Typically these wetlands are interspersed with dry and wet pockets. There is often subsurface flow. In addition, shallow rivulets (less than 4 inches deep) or pseudo-rivulets are often present.

2. **Suitable soils**. Usually a bottom substrate of permanently saturated organic or mineral soils. These are often soft, mucky-like soils (this does not refer to a technical soil type); you will usually sink to your ankles (3-5 inches) or deeper in muck, although in degraded wetlands or summers of dry years this may be limited to areas near spring heads or drainage ditches. In some portions of the species' range, the soft substrate consists of scattered pockets of peat instead of muck.

3. **Suitable vegetation**. Dominant vegetation of low grasses and sedges (in emergent wetlands), often with a scrub-shrub wetland component. Common emergent vegetation includes, but is not limited to: tussock sedge (*Carex stricta*), soft rush (*Juncus effusus*), rice cut grass (*Leersia oryzoides*), sensitive fern (*Onoclea sensibilis*), tearthumbs (*Polygonum spp.*), jewelweeds (*Impatiens spp*.), arrowheads (*Saggitaria spp.*), skunk cabbage (*Symplocarpus foetidus*), panic grasses (*Panicum spp*.), other sedges (*Carex spp.*), spike rushes (*Eleocharis spp.*), grass-of-Parnassus (*Parnassia glauca*), shrubby cinquefoil (*Dasiphora fruticosa*), sweet-flag (*Acorus calamus*), and in disturbed sites, reed canary grass (*Phalaris arundinacea*) or purple loosestrife (*Lythrum salicaria*). Common scrub-shrub species include alder (*Alnus spp.*), red maple (*Acer rubrum*), willow (*Salix spp*.), tamarack (*Larix laricina*), and in disturbed sites, multiflora rose (*Rosa multiflora*). Some forested wetland habitats are suitable given hydrology, soils and/or historic land use. These forested wetlands include red maple, tamarack, and cedar swamps.

Conclusion - The wetlands delineated on the site are dry at the surface with no groundwater flow, seeps, or rivulets. Soils are dry at the surface with no mucky component. There is no potential bog turtle habitat on or in the vicinity of the site.

3.0 PHOTOGRAPHS

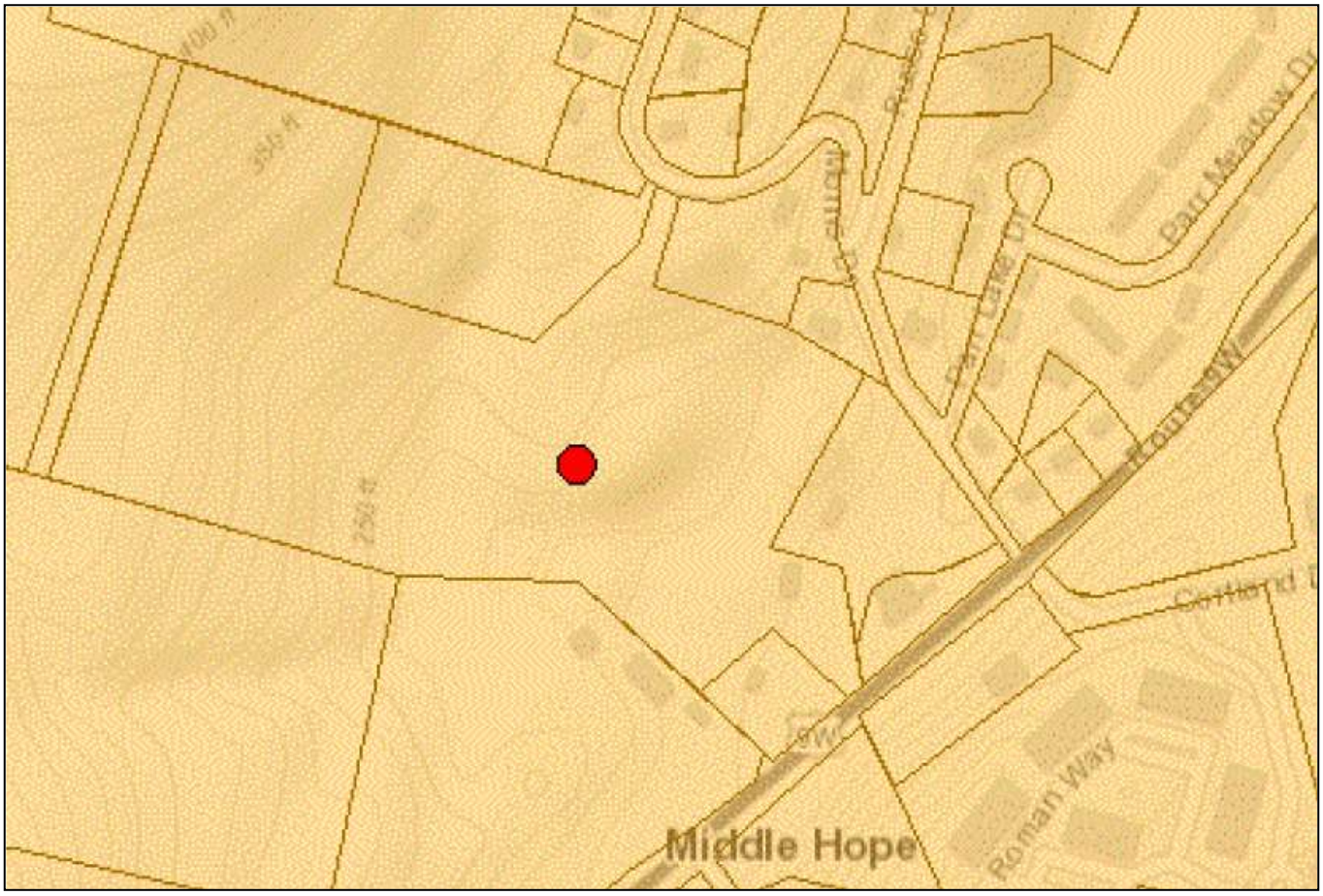
Proposed Project Area (Existing Orchard)

Proposed Project Area (Existing Orchard)

Existing Farm Pond

Farm Pond Outlet

Figure 1 Location Map



Attachment 1 - USFWS List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
http://www.fws.gov/northeast/nyfo/es/section7.htm

In Reply Refer To: February 19, 2021
Consultation Code: 05E1NY00-2021-SLI-1557
Event Code: 05E1NY00-2021-E-04879
Project Name: Hudson Place

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Services wind

energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

Project Summary

Consultation Code: 05E1NY00-2021-SLI-1557
Event Code: 05E1NY00-2021-E-04879
Project Name: Hudson Place
Project Type: DEVELOPMENT
Project Description: Multifamily residential development
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.56819776250006,-74.0009731305916,14z

Counties: Orange County, New York

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Reptiles

NAME	STATUS
Bog Turtle *Clemmys muhlenbergii* Population: Wherever found, except GA, NC, SC, TN, VA No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6962	Threatened

Flowering Plants

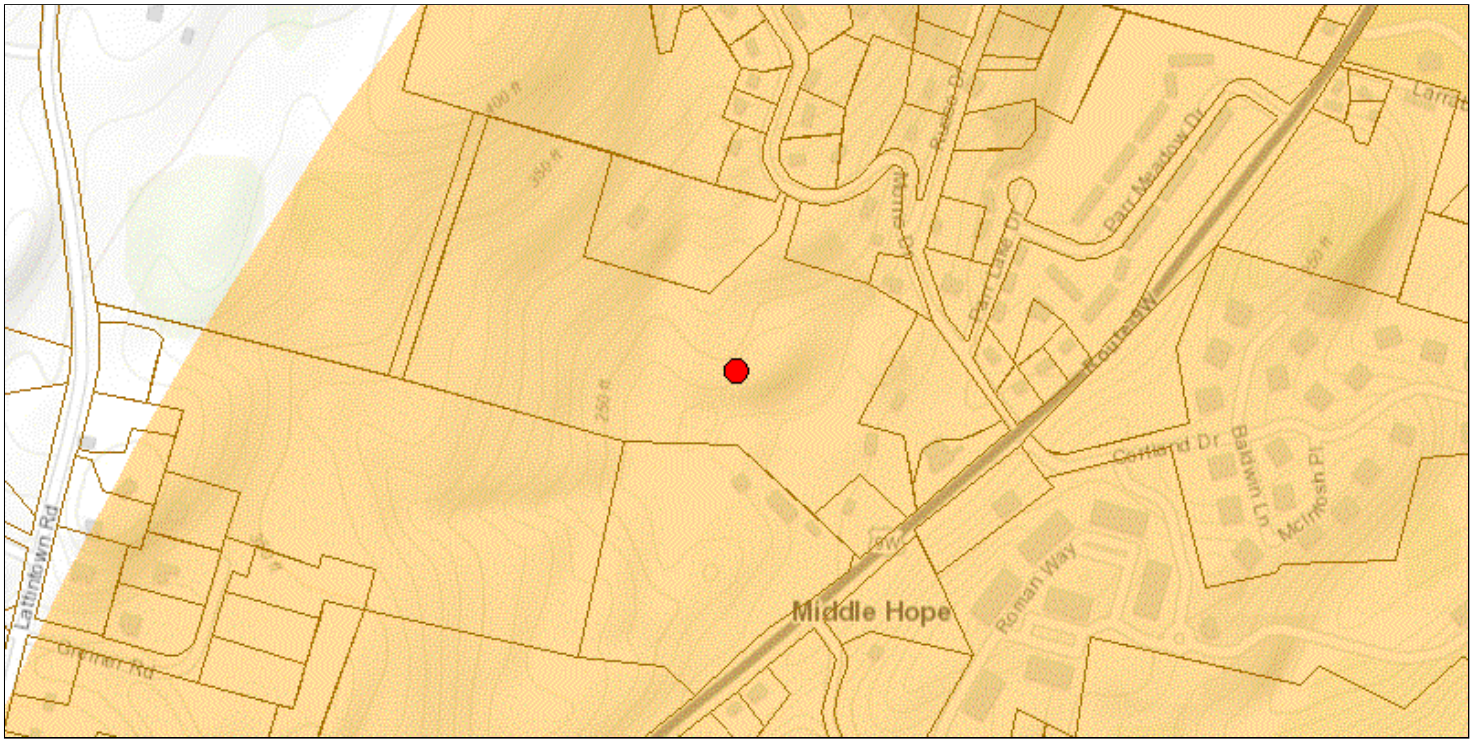
NAME	STATUS
Small Whorled Pogonia *Isotria medeoloides* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1890	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Attachment 2 - ERM

Environmental Resource Mapper



The coordinates of the point you clicked on are:

UTM 18	**Easng:**	583434.676	**Northing:**	4602273.898
Longitude/Latude	**Longitude:**	-73.999	**Latude:**	41.568

The approximate address of the point you clicked on is:
12550, Newburgh, New York

County: Orange
Town: Newburgh
USGS Quad: WAPPINGERS FALLS

DEC Region

Region 3:
(Lower Hudson Valley) Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester counes. F or more informaon visit hp://w ww.dec.ny.gov/about/607.html.

Rare Plants and Rare Animals

This locaon is in the vicinity of State-Listed Bats

Naonal W etands Inventory

Aribut e: undefined
Type: undefined

Acres: undefined

For more informaon about the Na onal W etands Inventory wetlands visit **hp://w ww.fws.gov/wetlands/**

If your project or acon is within or near an ar ea with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the acon ma y be harmful to the species or its habitat.

If your project or acon is within or near an ar ea with rare plants and/or significant natural communies, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdicon.

Please refer to the "Need a Permit?" tab for permit informaon or other authoriz aons r egarding these natural resources.

Disclaimer: If you are considering a project or acon in, or near , a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreaonal Riv ers, are currently not included on the maps.

TRAFFIC STUDY

OVERLOOK FARMS A FARRELL COMMUNITY

ROUTE 9W
TOWN OF NEWBURGH, NEW YORK

Prepared for: **Farrell Communities at Overlook Ponds LLC**
2317 Montauk Highway
Bridgehampton, NY 11932

Prepared by:

JMC Project **17088**

Date: December 9, 2020
Revised: March 19, 2021

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LIST OF APPENDICES

I. INTRODUCTION

This Traffic Study has been prepared to assess existing conditions as well as future traffic operations in association with the proposed development located in the southwest corner of the US 9W & Morris Drive intersection in the Town of Newburgh, NY. The location of the site is illustrated on the figures included in Appendix B. This study has been revised to address comments mentioned in the Creighton Manning review letter dated 01/15/2021.

The 32.7 acre site includes the Overlook Farm Market property and three adjacent residential parcels. The applicant proposes to raze the existing buildings and construct 216 market-rate residential apartments. Out of the 216 total apartments, 23 units are proposed to be designated for senior market-rate housing. The applicant also proposes to construct a 25,000 square foot retail building and a sewage treatment facility to serve the development.

The subject property provides a single two-way driveway along Morris Drive for the Overlook Farm Market adjacent to the US 9W and Morris Drive with Cortland Drive intersection as well as two additional driveways connecting to Morris Drive in other locations along the roadway. The subject property currently has three driveway connections along US 9W with two of them for the Overlook Farm Market.

As part of the proposed development, the Applicant proposes to reduce the number of site accesses significantly from 6 under existing conditions to 2 under proposed conditions. The development proposes a primary driveway along US 9W between its intersections Oak Street and Morris Drive / Cortland Drive. The development also proposes a secondary driveway along Morris Drive located further west along Morris Drive compared to existing conditions which provides greater separation from the existing signalized intersection of US 9W and Morris Drive with Cortland Drive. Additionally, the development proposes an emergency access driveway along Morris Drive.

II. EXISTING CONDITIONS

A. Existing Roadway Network

JMC performed field reconnaissance at the site and adjoining roadway network in order to gather existing conditions data. The field work included a determination of lane widths, striping, horizontal and vertical alignments, signs, speed limits, pedestrian activities, traffic flows, on street parking, sidewalks, curbing, etc.

US 9W is an north/south highway which is under the jurisdiction of the New York State Department of Transportation (NYSDOT). US 9W extend north to Albany and south to Fort Montgomery. Within the study area, US 9W generally provides one travel lane in each direction and widens in the vicinity of the Carter Avenue and Morris Drive and Cortland Drive intersection to provide additional turning lanes. The roadway has a posted speed limit of 55 mph north of Lattintown Road which is reduced to 40 mph south of this location within the study area. On-street parking is generally prohibited within the study area.

Carter Avenue is a north/south roadway which connects to Lattintown Road in the north and US 9W in the south. The road is under the jurisdiction of the Town of Newburgh and provides one travel lane in each direction. The road has a posted speed limit of 35 mph.

Lattintown Road is generally a north/south roadway which traverses east/west near its southern terminus. Lattintown Road connects to US 9W in the south and Milton Turnpike in the north. Within the study area, the roadway is under the jurisdiction of the Town of Newburgh and provides one travel lane in each direction. The road has a posted speed limit of 30 mph within the study area.

Oak Street is a Town roadway which traverses in an east/west direction between US 9W in the west and River Road in the east. Oak Street provides one travel lane in each direction and has a posted speed limit of 30 mph.

Morris Drive is a Town roadway which traverses in an east/west direction connecting to US 9W in the east and terminating in the west. Morris Drive provides one travel lane in each direction and has a posted speed limit of 30 mph.

Cortland Drive is a private roadway which traverses in an east/west direction. The roadway provides one travel lane in each direction.

Old Post Road is a north/south roadway which is under the jurisdiction of the Town of Newburgh within the study area. It provides one travel lane in each direction. The roadway has a posted speed limit of 40 mph and parking is generally prohibited on both sides of the street.

In order to evaluate the changes in traffic associated with the proposed development, the following intersections have been analyzed:

1. US 9W & Carter Avenue
2. US 9W & Lattintown Road
3. US 9W & Oak Street
4. US 9W & Site Driveway A
5. US 9W & Morris Drive with Cortland Drive
6. US 9W & Old Post Road
7. Morris Drive & Site Driveway B

The intersection of US 9W and Carter Avenue is a three-legged signalized intersection. US 9W northbound provides a separate left turn lane and a single thru lane. US 9W southbound provides a single thru lane with shared right turns. Carter Avenue provides a single approach lane with shared left and right turns onto US 9W.

At the intersection of US 9W and Lattintown Road, US 9W provides a single travel lane in each direction with shared turning movements. Lattintown Road provides a single approach lane with shared left and right turning movements onto US 9W. The intersection

is an unsignalized 'T'-type intersection and the Lattintown Road approach is controlled by a stop sign.

Oak Street intersects US 9W at a three-legged unsignalized intersection. US 9W provides a single travel lane in both directions with shared turning movements. Oak Street provides a single lane approach with shared turning movements onto US 9W. Oak Street is stop sign controlled.

Site Driveway A is proposed to intersect US 9W as a three-legged intersection. US 9W currently provides one travel lane in each direction. The development proposes to widen US 9W to construct a US 9W southbound right turn lane as well as US 9W northbound left turn lane. The Site Driveway A proposes a separate left turn lane and a shared thru/right turn lane. As part of the development, the Applicant proposes to install a traffic signal at this intersection.

Morris Drive and Cortland Drive intersect US 9W at a four-way signalized intersection. US 9W southbound provides a separate left turn lane and a shared thru/right turn lane. US 9W northbound provides a separate left turn lane, a single thru lane and a channelized right turn lane. Cortland Drive provides a separate left turn lane and a single thru lane with shared turning movements. Morris Drive currently provides a single approach lane with shared turning movements. As part of the development, the Applicant proposes to widen Morris Drive to provide a separate left turn lane and a single thru lane with shared right turns.

The intersection of US 9W and Old Post Road is a three-legged unsignalized intersection. US 9W provides a single travel lane with shared turning movements in each direction. Old Post Road provides a single approach lane with shared turning movements. Old Post Road is controlled by a stop sign.

Site Driveway B is proposed to intersect Morris Drive at an unsignalized three-way intersection. Morris Drive provides one travel lane with shared turning movements in each

direction. Site Driveway B is proposed to provide a single egress lane with shared turning movements. Site Driveway B is controlled by a stop sign.

B. Existing Volumes

Traffic counts were performed at the studied intersections in order to quantify and analyze existing peak hour volumes as well as to establish base conditions for projecting future operations. The counts included pedestrian activities and truck traffic.

Traffic counts were conducted from 7:00 – 9:00 AM and 4:00 – 6:00 PM on Thursday, January 30, 2020 for all the studied intersections except for the proposed site driveways. Traffic counts were also conducted on Saturday, February 1, 2020 from 12:00 – 2:00 PM for all the studied intersections except for the proposed site driveways. The peak hour volumes occurred between 7:00-8:00 AM during the weekday morning, 4:30-5:30 PM during the weekday PM, and 12:15-1:15 PM during the Saturday midday. The intersection traffic count data is included in Appendix C. The peak hour volumes from the traffic counts at the intersections were increased and balanced conservatively where applicable. The peak hour volumes are shown on Figures 1 thru 3 "2020 Existing Volumes". All figures are included in Appendix B.

C. Intersection Analysis Methodology

The intersections have been analyzed based on the methodologies of the Highway Capacity Manual, 6th Edition. Information derived from the manual relative to the level of service criteria is provided below.

1. Level-of-Service Criteria for Signalized Intersections

Levels of Service (LOS) for signalized intersections are defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to

control, geometrics, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road. Only the portion of total delay attributed to the control facility is quantified. This delay is called control delay. Control delay includes the delays of initial deceleration, move-up time in the queue, stops, and reacceleration. In this chapter, control delay may also be referred to as signal delay. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a peak 15-minute analysis period. Delay is a complex measure and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the volume/capacity (*v/c)* ratio for the lane group in question.

LOS A describes operations with very low control delay, up to 10 seconds per vehicle. This level of services occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

LOS B describes operations with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both.

LOS C describes operations with control delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both.

LOS D describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high *v/c* ratios. Many vehicles stop, and the proportion of vehicles not stopping declines.

LOS E describes operations with control delay greater than 55 and up to 80 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

LOS F describes operations with control delay in excess of 80 seconds per vehicle and/or the arrival flow rates exceed the capacity of the intersection. It will also occur at high *v/c* ratios below 1.0 with many individual cycle failures.

The LOS criteria for signalized intersections are presented below.

Signalized Level of Service Criteria		
Control Delay (Seconds/Vehicle)	**LOS by Volume-to-Capacity Ratio**	
	v/c ≤ 1.0	**v/c > 1.0**
≤10	A	F
>10 and ≤20	B	F
>20 and ≤35	C	F
>35 and ≤55	D	F
>55 and ≤80	E	F
>80	F	F

For approach-based and intersection wide assessments, LOS is defined solely by control delay.

If the volume-to-capacity (v/c) is greater than 1.0, the LOS is considered an F, even if the delays are lower than 80 seconds.

2. Level of Service for Unsignalized Intersections

The Levels of Service (LOS) for Two Way Stop Control (TWSC) and All Way Stop Control (AWSC) intersections are determined by the computed or measured control delay and are defined for each minor movement. LOS is not defined for the intersection as a whole for TWSC intersections. LOS criteria are presented below.

Unsignalized Level of Service Criteria		
Control Delay (Seconds/Vehicle)	**LOS by Volume-to-Capacity Ratio**	
	v/c ≤ 1.0	**v/c > 1.0**
≤10	A	F
>10 and ≤15	B	F
>15 and ≤25	C	F
>25 and ≤35	D	F
>35 and ≤50	E	F
>50	F	F

If the volume-to-capacity (v/c) is greater than 1.0, the LOS is considered an F, even if the delays are lower than 50 seconds.

Average control delay less than 10 seconds/vehicle are defined as LOS A. Follow-up times of less than 5 seconds/vehicle have been measured when there is no conflicting traffic, so control delays of less than 10 seconds/vehicle are appropriate for low flow conditions.

The LOS criteria for unsignalized intersections are somewhat different than the criteria used for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. A number of driver behavior considerations combine to make delays at signalized intersections less onerous than delays at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, whereas drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at an unsignalized intersections versus that at signalized intersections. For these reasons, it is

considered that the control delay threshold for any given LOS would be less for an unsignalized intersection than it would be for a signalized intersection.

D. Existing Operations

The intersection capacity analyses based on existing volumes and conditions are shown on Tables 2, 3, and 4. The specific volume/capacity ratios, delay for average vehicle in seconds and the associated levels of service are summarized for each lane group, the approach as well as the overall intersection as applicable on Tables 2, 3, and 4. All tables are included in Appendix A.

During the peak weekday morning hour, the Lattintown Road approach to its intersection with US 9W operates at a level of service D. The Oak Street approach to its intersection with US 9W operates at a level of service D. At the intersection of US 9W and Morris Drive with Cortland Drive, the Morris Drive and Cortland Drive approaches and lanes operate at a level of service D. The Old Post Road approach to its intersection with US 9W operates at a level of service D. All other movements at the studied intersections operate at a level of service C or better during the peak weekday AM hour.

During the peak weekday afternoon hour, the Oak Street approach operates at a level of service F. At the intersection of US 9W and Morris Drive with Cortland Drive, the Morris Drive and Cortland Drive approaches and lanes operate at a level of service D. At the intersection of US 9W and Old Post Road, the Old Post Road approach operates at a level of service D. All other movements at the studied intersections operate at a level of service C or better during the peak weekday PM hour.

During the Saturday midday hour, the Oak Street approach operates at a level of service D. At the intersection of US 9W and Morris Drive with Cortland Drive, the Morris Drive and Cortland Drive approaches and lanes operate at a level of service D. All other movements at the studied intersections operate at a level of service C or better during the peak Saturday midday hour.

III. PROJECTED CONDITIONS

A. No-Build Volumes

In order to project future traffic increases to the 2025 design year, the existing volumes were increased by a general growth rate of 1% per year compounded annually. The traffic volumes associated with the proposed Gas Land Petroleum Gas Station and Convenience Store located at 5200 US 9W as well as the proposed Cortland Commons located at 5452 US 9W have been included in this study. The traffic volumes associated with the Danskammer Power Plant modernization are not anticipated to result in a significant amount of traffic within the study area so the traffic volumes associated with this development are considered within the general growth volumes of this study. The resulting 2025 no-build volumes represent traffic operations in 2025 without the development of the site.

As part of the Cortland Commons development, proposed pedestrian improvements are to be implemented at the intersection of US 9W and Cortland Drive which include a new pedestrian crossing across Cortland Drive with associated pedestrian signal timing. These improvements have been included in our no-build conditions.

During the peak weekday AM hour, the US 9W northbound approach at the intersection of US 9W & Carter Avenue is projected to increase in delay to operate at a level of service B under no-build conditions. Additionally, the US 9W southbound approach at the US 9W intersection with Carter Avenue is projected to increase in delay to operate at a level of service C. At the intersection of US 9W and Morris Drive with Cortland Drive, the US 9W southbound approach and left turn lane are projected to increase in delay to operate at a level of service B under no-build conditions. The Old Post Road approach to US 9W is projected to increase in delay to operate at a level of service E. All other movements at the studied intersections under no-build conditions are projected to operate at the same

levels of service as experienced under existing conditions during the peak weekday AM hour.

During the peak weekday PM hour, the US 9W northbound approach at its intersection with Carter Avenue is projected to increase in delay to operate at a level of service B under no-build conditions. The Lattintown Road approach is projected to increase in delay to operate at a level of service D. At the intersection of US 9W and Cortland Drive, the US 9W southbound left turn is projected to increase in delay to operate at a level of service B. All other movements at the studied intersections under no-build conditions are projected to operate at the same levels of service as experienced under existing conditions during the peak weekday PM hour.

During the peak Saturday midday hour, the US 9W northbound approach at its intersection with Lattintown Road is projected to increase in delay to operate at a level of B under no-build conditions. All other movements at the studied intersections under no-build conditions are projected to operate at the same levels of service as experienced under existing conditions during the peak Saturday midday hour.

B. Build Volumes

The projected traffic associated with the proposed development is based on information published by the ITE in its publication "Trip Generation Manual, 10th Edition." For the purposes of this study, the 25,000 square foot retail building is assumed to be a supermarket use. Table 1 shows the traffic volumes associated with the proposed development. Table 1 incorporates internal trip capture which are traffic volumes that travel between the different proposed uses on the property without traveling outside the property. Additionally, Table 1 incorporates pass-by trips for the commercial uses which are trips that typically drive past or near the subject property and will patronize the development when it is completed. It should be noted that based on ITE data, a significant portion of the peak hour trips generated for the supermarket use are attracted as pass-by or diverted link trips. ITE data shows that a supermarket use can anticipate 36% of its peak

weekday PM to be pass-by or diverted link trips. To provide a conservative analysis, the pass-by percentage was capped at 25% for the proposed uses. The proposed development will result in approximately 127, 242, and 260 primary trips during the peak weekday AM, PM, and Saturday midday hours, respectively. This study provides a conservative analysis since a credit of the traffic volumes related to existing uses to be removed on the property as part of the proposed development have not been considered. The pass-by and primary volumes for the proposed development have been shown in the figures in Appendix B.

As discussed above, the development proposes to reduce the number of site accesses. The development proposes a primary driveway along US 9W between its intersections Oak Street and Morris Drive / Cortland Drive. The development also proposes a secondary driveway along Morris Drive located further west along Morris Drive which provides greater separation compared to existing conditions from the existing signalized intersection of US 9W and Morris Drive with Cortland Drive. Additionally, the development proposes an emergency access driveway along Morris Drive.

The primary volumes were routed through the studied intersections based on existing traffic volumes as well as consideration of the arrival & departure patterns of the site traffic. The pass-by volumes were routed through the studied intersections based on existing traffic volumes. Adding the proposed development related traffic to the 2025 no-build traffic volumes results in 2025 Build Volumes which reflect projected volumes after the completion and occupancy of the development.

C. Traffic Signal Warrant Analysis

Our office prepared a traffic signal warrant analysis of the intersection of US 9W & the proposed site driveway (Site Driveway A) to determine if a traffic signal is warranted at the intersection. The traffic signal warrant analysis is based on the 9 Traffic Signal Warrants as detailed in the "Manual on Uniform Traffic Control Devices for Streets and Highways, 2009 Edition (MUTCD)".

Turning movement counts were conducted at the nearby intersection of US 9W and Oak Street from 7:00 – 9:00 AM and 4:00 – 6:00 PM on Thursday, January 30, 2020 and utilized for the proposed site driveway intersection along US 9W. These counts were analyzed to provide hourly traffic volumes during the counted time periods. The hourly counted traffic volumes were adjusted proportionally based on record NYSDOT traffic volumes along US 9W to supplement the hourly counted traffic volumes to obtain base traffic volume data on a weekday between 6:00 AM and 7:00 PM. The existing volumes for the intersection of US 9W and the proposed site driveway are shown in the attached Table W-1 for volumes along US 9W (major street approaches to the intersection). Table W-1 projects the traffic volumes at the intersection to the 2025 design year. The existing volumes along the roadway was increased by a general growth rate of 1% per year compounded annually which is the same growth rate utilized in throughout this study. The other development volumes for the Gas Land Petroleum Gas Station and Convenience Store and the Cortland Commons have been incorporated in the traffic volume table. The proposed development volumes were added to the general growth volumes and other development volumes to obtain the 2025 design year volumes at the intersection. The proposed development volumes were projected for the minor approach to the intersection based on ITE data.

For the purposes of the traffic signal warrant analysis, the proposed site driveway was assumed as a one lane approach to its intersection with US 9W because the one lane approach would be the likely alternative if the approach were to be controlled via a stop sign. The US 9W approaches were assumed to have two lanes in each direction because a left turn lane is proposed for the US 9W northbound approach while a right turn lane is proposed for the US 9W southbound approach.

1. **<u>Traffic Signal Warrant 1 – Eight-Hour Vehicular Volume (Satisfied)</u>**

   Based on the MUTCD, Warrant 1 is satisfied when minimum hourly vehicular volume thresholds are meet for at least eight hours on an average day. Table W-1 depicts the Eight-Hour Vehicular Volume Traffic Signal Warrant Analysis for the studied intersection noting the specific minimum thresholds which need to be met. As

mentioned above, the site driveway (minor approach) was assumed to be a one lane approach since this would be the likely alternative if the approach were to unsignalized. Based on Table W-1, the 2025 design year hourly vehicular volumes meet the minimum hourly volumes for 10 hours on an average day. Furthermore, Traffic Signal Warrant 1 is satisfied at the studied intersection under the 2025 design year volumes. The Applicant will coordinate with NYSDOT for approval of a traffic signal and install the proposed traffic signal at the Applicant's expense.

2. <u>Traffic Signal Warrant 2 – Four-Hour Vehicular Volume (Satisfied)</u>

Warrant 2 is satisfied when plotted points representing the vehicles per hour on the major street and the corresponding vehicles per hour on the minor street are located above the applicable curve as shown on Figure 4C-1 in the MUTCD for a minimum of 4 hours on an average day.

Attached Figure W-1 plots the all the 2025 design year hourly vehicular volumes mentioned for Warrant 1 on MUTCD Figure 4C-1. As shown in the Figure W-1, the hourly vehicular volume points at 8:00 AM and from 2:00 PM to 6:00 PM are above the 2 lane & 1 lane curve which represents the major street having one lane in each direction and the minor street having a one lane approach. Furthermore, Traffic Signal Warrant 2 is satisfied at the studied intersection.

3. <u>Traffic Signal Warrant 3 – Peak Hour (Satisfied)</u>

Warrant 3 is satisfied when plotted points representing the vehicles per hour on the major street and the corresponding vehicles per hour on the minor street are located above the applicable curve as shown on Figure 4C-3 in the MUTCD for a minimum of 1 hour on an average day.

Attached Figure W-1 plots the all the 2025 design year hourly vehicular volumes mentioned for Warrant 1 on MUTCD Figure 4C-3. As shown in the Figure W-1, the

hourly vehicular volume points from 3:00 PM to 6:00 PM are above the 2 lane & 1 lane curve. Furthermore, Traffic Signal Warrant 3 is satisfied at the studied intersection.

4. Traffic Signal Warrant 4 – Pedestrian Volume (Not Satisfied)

Warrant 4 is satisfied when plotted points representing the vehicles per hour on the major street and the corresponding pedestrian per hour crossing the major street are located above the curve as shown on Figure 4C-5 in the MUTCD for a minimum of 4 hours on an average day. Warrant 4 is also satisfied when plotted points representing the vehicles per hour on the major street and the corresponding pedestrian per hour crossing the major street are located above the curve as shown on Figure 4C-7 in the MUTCD for a minimum of 1 hour on an average day.

As shown on Figure 4C-5, a minimum of 107 pedestrians per hour crossing the major street is needed to satisfy the Warrant for the Pedestrian Four-Hour Volume. As shown on Figure 4C-7, a minimum of 133 pedestrians per hour crossing the major street is needed to satisfy the Warrant for the Pedestrian Peak Hour.

Based on the turning movement counts, there were no observed pedestrian crossings across US 9W at its intersection with Cortland Drive or Oak Street. Warrant 4 is not satisfied since the counted number of pedestrians does not meet the minimum number of pedestrians per hour depicted in Figure 4C-5 or 4C-7.

5. Traffic Signal Warrant 5 – School Crossing (Not Satisfied)

Warrant 5 is satisfied when there is no adequate gaps in the vehicular traffic along the major street for school children to cross the major street. The warrant discusses a minimum of 20 school children crossing the street during the highest crossing hour.

As mentioned above for Warrant 4, there were no observed pedestrian crossings

across US 9W which is below the minimum of 20 school children. Since the threshold was not met, Warrant 5 is not satisfied.

6. Traffic Signal Warrant 6 – Coordinated Signal System (Not Satisfied)

Warrant 6 relates to an intersection located within a coordinated traffic signal system where the signal system does not provide the necessary degree of platooning.

The only signalized intersection in close proximity of the US 9W and Proposed Site driveway intersection is the intersection of US 9W and Morris Drive with Cortland Drive which is not coordinated with other intersections along US 9W. Due to its close proximity, the site driveway intersection if warranted for signalization would be coordinated with the traffic signal at the intersection of US 9W and Morris Drive with Cortland Drive. The other traffic signals along US 9W are located over 2,000 feet away from the site driveway or Cortland Drive intersections and would have no noticeable effects to platooning. Therefore, Warrant 6 is not satisfied.

7. Traffic Signal Warrant 7 – Crash Experience (Not Satisfied)

Warrant 7 is satisfied if five or more crashes, of types susceptible to correction by the installation of a traffic control signal, have occurred within a 12-month period.

Our office has requested accident reports from New York State Department of Transportation along US 9W between its intersections with Morris Drive and Oak Street during a three year period from 03/01/2017 to 02/29/2020. The data from the accident reports have been provided in tabular format and are shown on Table AR-1 within Appendix A.

There were twelve reported accidents during the three year period along US 9W between Morris Drive and Oak Street. Of the ten accidents, one was a rear end accident and 7 accidents involved an animal which would not be corrected by the

installation of a traffic signal. The remaining 2 accidents is less than the five accidents over a 12-month period. Since there were only 2 accidents that could be corrected by the installation, this does not meet the threshold and Warrant 7 is not satisfied.

8. Traffic Signal Warrant 8 – Roadway Network (Not Satisfied)

Warrant 8 relates to the intersection of two or more major routes. The proposed site driveway is not a major route. Therefore, Warrant 8 is not satisfied.

9. Traffic Signal Warrant 9 – Intersection Near a Crossing (Not Satisfied)

Warrant 9 relates to an intersection near an at-grade train track crossing. A train track crossing does not exist near the studied intersection. Warrant 9 is not satisfied.

IV. FINDINGS & CONCLUSION

As previously mentioned, the Applicant proposes several traffic improvements as part of the proposed development. These improvements include:

1. The widening of US 9W to construct a US 9W southbound right turn lane into the proposed development
2. Installation of a US 9W northbound left turn lane for access into the proposed development
3. Installation of a new fully actuated traffic signal at the intersection of US 9W and the proposed Site Driveway A
4. Widening of Morris Drive to provide separate left turn lane and a single thru lane with shared right turns at the intersection of US 9W and Morris Drive with Cortland Drive
5. Modification of the existing traffic signal at the intersection of US 9W and Morris Drive with Cortland Drive to a fully actuated traffic signal
6. Time-based coordination between the traffic signals along US 9W at Morris Drive and

the proposed Site Driveway A

7. Traffic signal timing improvements at the intersection of US 9W and Morris Drive with Cortland Drive to have a reduced cycle length

Intersection capacity analysis computed based on the Build volumes with the proposed improvements indicate that the studied intersection will operate at similar levels of service as projected for the No-Build volumes. Projected operations with the proposed development are shown on Tables 2, 3, and 4.

During the peak weekday AM hour, the overall intersection of US 9W and Carter Avenue is projected increase in delay from a level of service B under no-build conditions to a level of service C under build conditions. The US 9W northbound left turn at its intersection with Carter Avenue is projected to increase in delay from a level of service C under no-build conditions to a level of service D under build conditions while the US 9W northbound thru movement is projected to increase in delay from a level of service A under no-build conditions to a level of service B under build conditions. The Lattintown approach to US 9W is projected to increase in delay from a level of service D under no-build conditions to a level of service E under build conditions. The overall intersection of US 9W and Site Driveway A is projected to operate at a level of service B and Site Driveway A is projected to operate a level a level of service D while the US 9W approaches and lanes are projected to operate at a level of service B or better. The overall intersection of US 9W and Morris Drive is projected to increase in delay to operate at a level of service C while the US 9W northbound approach and thru lane are projected to increase in delay to operate at a level of service C. The proposed site driveway along Morris Drive is projected to operate at a level of service A. All other movements at the studied intersections under build conditions with the proposed improvements are projected to operate at the same levels of service as projected under no-build conditions during the peak weekday AM hour.

During the peak weekday PM hour, the Lattintown approach to US 9W is projected to increase in delay from a level of service D under no-build conditions to a level of service E under build conditions. The overall intersection of US 9W and Site Driveway A is projected to operate at a

level of service B and Site Driveway A is projected to operate a level a level of service D while the US 9W approaches and lanes are projected to operate at a level of service B or better. At the intersection of US 9W and Morris Drive, the US 9W northbound left turn lane is projected to increase in delay to operate at a level of service B. The Old Post Road approach to US 9W is projected to increase in delay from a level of service D under no-build conditions to a level of service E under build conditions. The proposed site driveway along Morris Drive is projected to operate at a level of service A. All other movements at the studied intersections under build conditions with the proposed improvements are projected to operate at the same levels of service as projected under no-build conditions during the peak weekday PM hour.

During the peak Saturday midday hour, the Lattintown Road approach to US 9W is projected to increase in delay from a level of service C under no-build conditions to a level of service E under build conditions. The Oak Street approach to US 9W is projected to increase in delay from a level of service D under no-build conditions to a level of service E under build conditions. The overall intersection of US 9W and Site Driveway A is projected to operate at a level of service B and Site Driveway A is projected to operate a level a level of service D while the US 9W approaches and lanes are projected to operate at a level of service B or better. At the intersection of US 9W and Morris Drive, the US 9W northbound approach and thru/right lane as well as the US 9W southbound approach and thru/right lane are projected to increase in delay to operate at a level of service B. The Old Post Road approach to US 9W is projected to increase in delay from a level of service C under no-build conditions to a level of service D under build conditions. The proposed site driveway along Morris Drive is projected to operate at a level of service A. All other movements at the studied intersections under build conditions with the proposed improvements are projected to operate at the same levels of service as projected under no-build conditions during the peak Saturday midday hour.

It is the professional opinion of JMC that the proposed development of the site containing 216 residential apartments and a 25,000 square foot retail building (assumed to be a supermarket in this study) will not have a significant impact on traffic operations along US 9W with the proposed improvements.

Respectfully submitted,
JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC

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Senior Project Manager

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Senior Designer III

APPENDIX A

TABLES

TABLE 1

PROPOSED DEVELOPMENT VOLUMES[1]

DESCRIPTION	PEAK WEEKDAY AM HOUR			PEAK WEEKDAY PM HOUR			PEAK SATURDAY MIDDAY HOUR		
	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
a. Proposed 180 Unit Multifamily Housing Driveway Volumes (ITE Code 221)[2]	16	45	61	48	30	78	40	42	82
b. Proposed 23 Unit Independent Living Driveway Volumes (ITE Code 252)[3]	2	3	5	4	4	8	5	3	8
c. Proposed 25,000 SF Supermarket Driveway Volumes (ITE Code 850)[4]	58	38	96	118	113	231	132	127	259
d. Total Development Driveway Volumes (Row d = Row a + Row b + Row c)	76	86	162	170	147	317	177	172	349
e. Proposed Residential Internal Capture Volumes[5] (AM=15%, PM=15%, Sat=15%)	3	3	6	5	5	10	7	7	14
f. Proposed Supermarket Pass-By Volumes (AM=25%, PM=25%, Sat=25%)	14	9	23	28	27	55	31	30	61
g. Proposed Residential Primary Volumes (Row g = Row a + Row b - Row e)	15	45	60	47	29	76	38	38	76
h. Proposed Supermarket Primary Volumes (Row h = Row c - Row e - Row f)	41	26	67	85	81	166	94	90	184
i. Total Primary Volumes (Row i = Row g + Row h)	56	71	127	132	110	242	132	128	260

Notes:

(1) Trip generation is based on Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition.

(2) Multifamily Housing (Mid-Rise) (ITE Code 221) is defined by ITE as multifamily housing including apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors).

(3) Senior Adult Housing-Attached (ITE Code 252) is defined by ITE as consisting of attached independent living developments which may include limited social or recreational services.

(4) Supermarket (ITE Code 850) is defined by ITE as a retail store selling a complete assortment of food, food preparation and wrapping materials, and household cleaning items.

(5) Residential internal volumes reflect trips traveling between the proposed residential and supermarket uses on the subject property.

TABLE 2

INTERSECTION OPERATIONS-PEAK WEEKDAY AM HOUR

INTERSECTION	APPROACH	LANE GROUP	2020 EXISTING			2025 NO BUILD			2025 BUILD		
			V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)
1. US 9W & Carter Avenue (Signalized)	EASTBOUND (Carter Ave)	LEFT/RIGHT	0.82	28.2	C	0.84	32.7	C	0.85	34.9	C
	NORTHBOUND (US 9W)	LEFT	0.18	28.0	C	0.24	33.0	C	0.25	35.4	D
		THRU	0.73	8.4	A	0.78	9.7	A	0.79	10.2	B
		COMPOSITE	-	9.4	A	-	11.0	B	-	11.6	B
	SOUTHBOUND (US 9W)	THRU/RIGHT	0.92	17.9	B	0.93	23.7	C	0.94	26.8	C
	INTERSECTION	COMPOSITE	-	15.3	B	-	18.8	B	-	20.7	C
2. US 9W & Lattintown Road (Unsignalized)	EASTBOUND (Lattintown Rd)	LEFT/RIGHT	0.30	26.2	D	0.37	32.2	D	0.43	37.7	E
	NORTHBOUND (US 9W)	THRU/LEFT	0.03	10.2	B	0.03	10.6	B	0.03	10.9	B
	SOUTHBOUND (US 9W)	THRU/RIGHT	-	-	-	-	-	-	-	-	-
3. US 9W & Oak Street (Unsignalized)	EASTBOUND (Northbound US 9W)	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	WESTBOUND (Southbound US 9W)	THRU/LEFT	0.00	10.7	B	0.00	11.1	B	0.00	11.3	B
	NORTHBOUND (Oak St)	LEFT/RIGHT	0.06	25.4	D	0.07	30.1	D	0.08	32.4	D
4. US 9W & Site Driveway A (Unsignalized With Improvements by Overlook Ponds)	EASTBOUND (Northbound US 9W)	LEFT							0.06	10.8	B
		THRU							-	-	-
	WESTBOUND (Southbound US 9W)	THRU		N/A			N/A		-	-	-
		RIGHT							-	-	-
	SOUTHBOUND (Site DWY A)	LEFT/RIGHT							0.47	46.8	E
4a. US 9W & Site Driveway A (Signalized With Improvements by Overlook Ponds)	EASTBOUND (Northbound US 9W)	LEFT							0.13	11.8	B
		THRU							0.71	7.0	A
		COMPOSITE							-	7.2	A
	WESTBOUND (Southbound US 9W)	THRU							0.80	15.0	B
		RIGHT		N/A			N/A		0.02	4.2	A
		COMPOSITE							-	14.8	B
	SOUTHBOUND (Site DWY A)	LEFT							0.28	48.1	D
		RIGHT							0.39	45.8	D
		COMPOSITE							-	46.5	D
	INTERSECTION	COMPOSITE							-	12.2	B
5. US 9W & Morris Drive / Cortland Drive (Signalized)	EASTBOUND (Northbound US 9W)	LEFT	0.02	6.9	A						
		THRU	0.71	13.1	B						
		RIGHT	-	-	-						
		COMPOSITE	-	13.0	B		N/A			N/A	
	WESTBOUND (Southbound US 9W)	LEFT	0.04	9.3	A						
		THRU/RIGHT	0.60	10.0	B						
		COMPOSITE	-	10.0	A						
	NORTHBOUND (Cortland Dr)	LEFT	0.52	50.7	D						
		THRU/RIGHT	0.30	48.5	D						
		COMPOSITE	-	50.0	D						
	SOUTHBOUND (Morris Dr)	LEFT/THRU/RIGHT	0.25	48.4	D						
	INTERSECTION	COMPOSITE	-	15.6	B						

TABLE 2

INTERSECTION OPERATIONS-PEAK WEEKDAY AM HOUR

INTERSECTION	APPROACH	LANE GROUP	2020 EXISTING			2025 NO BUILD			2025 BUILD		
			V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)
5a. US 9W & Morris Drive / Cortland Drive (Signalized With Improvements by Others)	EASTBOUND (Northbound US 9W)	LEFT				0.02	8.2	A			
		THRU				0.79	17.1	B			
		RIGHT				-	-	-			
		COMPOSITE				-	17.0	B			
	WESTBOUND (Southbound US 9W)	LEFT				0.08	12.9	B			
		THRU/RIGHT				0.65	11.5	B			
		COMPOSITE		N/A		-	11.5	B		N/A	
	NORTHBOUND (Cortland Dr)	LEFT				0.59	51.4	D			
		THRU/RIGHT				0.29	48.4	D			
		COMPOSITE				-	50.6	D			
	SOUTHBOUND (Morris Dr)	LEFT/THRU/RIGHT				0.24	48.3	D			
	INTERSECTION	COMPOSITE				-	18.3	B			
5b. US 9W & Morris Drive / Cortland Drive (Signalized With Improvements by Overlook Ponds)	EASTBOUND (Northbound US 9W)	LEFT							0.02	10.6	B
		THRU							0.83	21.8	C
		RIGHT							-	-	-
		COMPOSITE							-	21.7	C
	WESTBOUND (Southbound US 9W)	LEFT							0.10	16.6	B
		THRU/RIGHT							0.69	14.5	B
		COMPOSITE		N/A			N/A		-	14.5	B
	NORTHBOUND (Cortland Dr)	LEFT							0.60	53.3	D
		THRU/RIGHT							0.23	46.6	D
		COMPOSITE							-	51.4	D
	SOUTHBOUND (Morris Dr)	LEFT							0.08	48.5	D
		THRU/RIGHT							0.22	46.6	D
		COMPOSITE							-	47.0	D
	INTERSECTION	COMPOSITE							-	21.9	C
5c. US 9W & Morris Drive / Cortland Drive (Signalized With Traffic Signal Timing Improvements)	EASTBOUND (Northbound US 9W)	LEFT							0.03	11.0	B
		THRU							0.88	25.5	C
		RIGHT							-	-	-
		COMPOSITE							-	25.4	C
	WESTBOUND (Southbound US 9W)	LEFT							0.11	17.3	B
		THRU/RIGHT							0.73	15.7	B
		COMPOSITE		N/A			N/A		-	15.8	B
	NORTHBOUND (Cortland Dr)	LEFT							0.56	44.5	D
		THRU/RIGHT							0.23	39.0	D
		COMPOSITE							-	42.9	D
	SOUTHBOUND (Morris Dr)	LEFT							0.07	40.5	D
		THRU/RIGHT							0.21	38.9	D
		COMPOSITE							-	39.3	D
	INTERSECTION	COMPOSITE							-	23.2	C
6. US 9W & Old Post Road (Unsignalized)	WESTBOUND (Old Post Rd)	LEFT/RIGHT	0.12	30.6	D	0.14	36.1	E	0.19	43.0	E
	NORTHBOUND (US 9W)	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	SOUTHBOUND (US 9W)	THRU/LEFT	0.03	10.6	B	0.04	10.9	B	0.04	11.1	B
7. Morris Drive & Site Driveway B (Unsignalized)	EASTBOUND (Site DWY B)	LEFT/RIGHT							0.01	8.6	A
	NORTHBOUND (Morris Dr)	THRU/LEFT		N/A			N/A		0.01	7.3	A
	SOUTHBOUND (Morris Dr)	THRU/RIGHT							-	-	-

Notes:

(1) V/C represents volume/capacity ratio

(2) Delay is average seconds delay per vehicle

(3) LOS represents level of service

TABLE 3

INTERSECTION OPERATIONS-PEAK WEEKDAY PM HOUR

INTERSECTION	APPROACH	LANE GROUP	2020 EXISTING			2025 NO BUILD			2025 BUILD		
			V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)
1. US 9W & Carter Avenue (Signalized)	EASTBOUND (Carter Ave)	LEFT/RIGHT	0.78	26.9	C	0.79	29.1	C	0.79	30.6	C
	NORTHBOUND (US 9W)	LEFT	0.60	23.6	C	0.71	27.4	C	0.75	29.4	C
		THRU	0.81	7.1	A	0.88	8.7	A	0.91	9.6	A
		COMPOSITE	-	9.8	A	-	11.7	B	-	12.6	B
	SOUTHBOUND (US 9W)	THRU/RIGHT	0.90	14.9	B	0.91	15.7	B	0.92	16.8	B
	INTERSECTION	COMPOSITE	-	12.8	B	-	14.3	B	-	15.3	B
2. US 9W & Lattintown Road (Unsignalized)	EASTBOUND (Lattintown Rd)	LEFT/RIGHT	0.16	23.0	C	0.21	29.1	D	0.33	44.4	E
	NORTHBOUND (US 9W)	THRU/LEFT	0.10	10.2	B	0.11	10.7	B	0.12	11.1	B
	SOUTHBOUND (US 9W)	THRU/RIGHT	-	-	-	-	-	-	-	-	-
3. US 9W & Oak Street (Unsignalized)	EASTBOUND (Northbound US 9W)	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	WESTBOUND (Southbound US 9W)	THRU/LEFT	0.01	10.3	B	0.01	10.8	B	0.01	11.2	B
	NORTHBOUND (Oak St)	LEFT/RIGHT	0.03	55.1	F	0.04	75.7	F	0.05	92.9	F
4. US 9W & Site Driveway A (Unsignalized With Improvements by Overlook Ponds)	EASTBOUND (Northbound US 9W)	LEFT							0.15	11.5	B
		THRU							-	-	-
	WESTBOUND (Southbound US 9W)	THRU							-	-	-
		RIGHT		N/A			N/A		-	-	-
	SOUTHBOUND (Site DWY A)	LEFT/RIGHT							0.97	148.6	F
4a. US 9W & Site Driveway A (Signalized With Improvements by Overlook Ponds)	EASTBOUND (Northbound US 9W)	LEFT							0.30	13.5	B
		THRU							0.78	9.0	A
		COMPOSITE							-	9.3	A
	WESTBOUND (Southbound US 9W)	THRU							0.80	15.8	B
		RIGHT		N/A			N/A		0.04	4.9	A
		COMPOSITE							-	15.3	B
	SOUTHBOUND (Site DWY A)	LEFT							0.37	48.4	D
		RIGHT							0.46	44.8	D
		COMPOSITE							-	45.9	D
	INTERSECTION	COMPOSITE							-	13.6	B
5. US 9W & Morris Drive / Cortland Drive (Signalized)	EASTBOUND (Northbound US 9W)	LEFT	0.08	7.3	A						
		THRU	0.66	11.6	B						
		RIGHT	-	-	-						
		COMPOSITE	-	11.4	B						
	WESTBOUND (Southbound US 9W)	LEFT	0.05	8.0	A		N/A			N/A	
		THRU/RIGHT	0.62	11.0	B						
		COMPOSITE	-	10.9	B						
	NORTHBOUND (Cortland Dr)	LEFT	0.24	49.4	D						
		THRU/RIGHT	0.52	54.1	D						
		COMPOSITE	-	50.8	D						
	SOUTHBOUND (Morris Dr)	LEFT/THRU/RIGHT	0.17	48.8	D						
	INTERSECTION	COMPOSITE	-	13.2	B						

TABLE 3

INTERSECTION OPERATIONS-PEAK WEEKDAY PM HOUR

INTERSECTION	APPROACH	LANE GROUP	2020 EXISTING			2025 NO BUILD			2025 BUILD		
			V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)
5a. US 9W & Morris Drive / Cortland Drive (Signalized With Improvements by Others)	EASTBOUND (Northbound US 9W)	LEFT				0.09	8.4	A			
		THRU				0.75	15.0	B			
		RIGHT				-	-	-			
		COMPOSITE				-	14.8	B			
	WESTBOUND (Southbound US 9W)	LEFT				0.11	11.1	B			
		THRU/RIGHT				0.66	12.2	B			
		COMPOSITE		N/A		-	12.2	B		N/A	
	NORTHBOUND (Cortland Dr)	LEFT				0.48	51.5	D			
		THRU/RIGHT				0.55	54.7	D			
		COMPOSITE				-	52.1	D			
	SOUTHBOUND (Morris Dr)	LEFT/THRU/RIGHT				0.18	48.8	D			
	INTERSECTION	COMPOSITE				-	16.1	B			
5b. US 9W & Morris Drive / Cortland Drive Signalized With Improvements by Overlook Ponds)	EASTBOUND (Northbound US 9W)	LEFT							0.10	10.2	B
		THRU							0.78	16.6	B
		RIGHT							-	-	-
		COMPOSITE							-	16.4	B
	WESTBOUND (Southbound US 9W)	LEFT							0.12	12.6	B
		THRU/RIGHT							0.71	14.2	B
		COMPOSITE		N/A			N/A		-	14.2	B
	NORTHBOUND (Cortland Dr)	LEFT							0.52	53.3	D
		THRU/RIGHT							0.16	48.1	D
		COMPOSITE							-	52.1	D
	SOUTHBOUND (Morris Dr)	LEFT							0.18	50.0	D
		THRU/RIGHT							0.21	48.3	D
		COMPOSITE							-	49.1	D
	INTERSECTION	COMPOSITE							-	18.4	B
5c. US 9W & Morris Drive / Cortland Drive (Signalized With Traffic Signal Timing Improvements)	EASTBOUND (Northbound US 9W)	LEFT							0.11	10.8	B
		THRU							0.82	18.7	B
		RIGHT							-	-	-
		COMPOSITE							-	18.4	B
	WESTBOUND (Southbound US 9W)	LEFT							0.13	13.3	B
		THRU/RIGHT							0.75	15.6	B
		COMPOSITE		N/A			N/A		-	15.5	B
	NORTHBOUND (Cortland Dr)	LEFT							0.48	45.8	D
		THRU/RIGHT							0.16	41.4	D
		COMPOSITE							-	44.8	D
	SOUTHBOUND (Morris Dr)	LEFT							0.17	43.0	D
		THRU/RIGHT							0.20	41.6	D
		COMPOSITE							-	42.3	D
	INTERSECTION	COMPOSITE							-	19.3	B
6. US 9W & Old Post Road (Unsignalized)	WESTBOUND (Old Post Rd)	LEFT/RIGHT	0.17	26.3	D	0.21	31.3	D	0.26	47.5	E
	NORTHBOUND (US 9W)	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	SOUTHBOUND (US 9W)	THRU/LEFT	0.02	10.6	B	0.03	11.0	B	0.03	11.3	B
7. Morris Drive & Site Driveway B (Unsignalized)	EASTBOUND (Site DWY B)	LEFT/RIGHT							0.04	8.6	A
	NORTHBOUND (Morris Dr)	THRU/LEFT		N/A			N/A		0.02	7.3	A
	SOUTHBOUND (Morris Dr)	THRU/RIGHT							-	-	-

Notes:

(1) V/C represents volume/capacity ratio

(2) Delay is average seconds delay per vehicle

(3) LOS represents level of service

TABLE 4

INTERSECTION OPERATIONS-PEAK SATURDAY MIDDAY HOUR

INTERSECTION	APPROACH	LANE GROUP	2020 EXISTING			2025 NO BUILD			2025 BUILD		
			V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)
1. US 9W & Carter Avenue (Signalized)	EASTBOUND (Carter Ave)	LEFT/RIGHT	0.76	24.0	C	0.77	26.9	C	0.78	28.7	C
	NORTHBOUND (US 9W)	LEFT	0.37	20.8	C	0.46	24.8	C	0.49	26.7	C
		THRU	0.58	5.4	A	0.65	6.1	A	0.68	6.3	A
		COMPOSITE	-	7.8	A	-	8.9	A	-	9.2	A
	SOUTHBOUND (US 9W)	THRU/RIGHT	0.88	14.7	B	0.90	15.6	B	0.91	15.9	B
	INTERSECTION	COMPOSITE	-	12.1	B	-	13.3	B	-	13.7	B
2. US 9W & Lattintown Road (Unsignalized)	EASTBOUND (Lattintown Rd)	LEFT/RIGHT	0.19	18.9	C	0.25	23.6	C	0.35	32.0	D
	NORTHBOUND (US 9W)	THRU/LEFT	0.05	9.5	A	0.06	10.0	B	0.06	10.4	B
	SOUTHBOUND (US 9W)	THRU/RIGHT	-	-	-	-	-	-	-	-	-
3. US 9W & Oak Street (Unsignalized)	EASTBOUND (Northbound US 9W)	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	WESTBOUND (Southbound US 9W)	THRU/LEFT	0.00	9.2	A	0.00	9.6	A	0.00	9.9	A
	NORTHBOUND (Oak St)	LEFT/RIGHT	0.04	26.4	D	0.05	33.7	D	0.06	41.3	E
4. US 9W & Site Driveway A (Unsignalized With Improvements by Overlook Ponds)	EASTBOUND (Northbound US 9W)	LEFT							0.12	10.3	B
		THRU							-	-	-
	WESTBOUND (SouthboundUS 9W)	THRU							-	-	-
		RIGHT		N/A			N/A		-	-	-
	SOUTHBOUND (Site DWY A)	LEFT/RIGHT							0.61	46.3	E
4a. US 9W & Site Driveway A (Signalized With Improvements by Overlook Ponds)	EASTBOUND (Northbound US 9W)	LEFT							0.21	6.9	A
		THRU							0.54	4.6	A
		COMPOSITE							-	4.8	A
	WESTBOUND (Southbound US 9W)	THRU							0.62	10.3	B
		RIGHT		N/A			N/A		0.04	4.9	A
		COMPOSITE							-	10.0	B
	SOUTHBOUND (Site DWY A)	LEFT							0.42	49.1	D
		RIGHT							0.54	46.5	D
		COMPOSITE							-	47.3	D
	INTERSECTION	COMPOSITE							-	10.0	B
5. US 9W & Morris Drive / Cortland Drive (Signalized)	EASTBOUND (Northbound US 9W)	LEFT	0.03	5.4	A						
		THRU	0.47	7.8	A						
		RIGHT	-	-	-						
		COMPOSITE	-	7.7	A						
	WESTBOUND (Southbound US 9W)	LEFT	0.01	5.5	A						
		THRU/RIGHT	0.47	8.3	A		N/A			N/A	
		COMPOSITE	-	8.3	A						
	NORTHBOUND (Cortland Dr)	LEFT	0.31	49.2	D						
		THRU/RIGHT	0.10	47.7	D						
		COMPOSITE	-	49.0	D						
	SOUTHBOUND (Morris Dr)	LEFT/THRU/RIGHT	0.13	48.0	D						
	INTERSECTION	COMPOSITE	-	10.8	B						

TABLE 4

INTERSECTION OPERATIONS-PEAK SATURDAY MIDDAY HOUR

INTERSECTION	APPROACH	LANE GROUP	2020 EXISTING			2025 NO BUILD			2025 BUILD		
			V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)
5a. US 9W & Morris Drive / Cortland Drive (Signalized With Improvements by Others)	EASTBOUND (Northbound US 9W)	LEFT				0.04	5.9	A			
		THRU				0.56	9.9	A			
		RIGHT				-	-	-			
		COMPOSITE				-	9.7	A			
	WESTBOUND (Southbound US 9W)	LEFT				0.05	6.4	A			
		THRU/RIGHT				0.51	9.0	A			
		COMPOSITE		N/A		-	8.9	A		N/A	
	NORTHBOUND (Cortland Dr)	LEFT				0.55	51.6	D			
		THRU/RIGHT				0.10	47.8	D			
		COMPOSITE				-	51.1	D			
	SOUTHBOUND (Morris Dr)	LEFT/THRU/RIGHT				0.13	48.1	D			
	INTERSECTION	COMPOSITE				-	13.1	B			
5b. US 9W & Morris Drive / Cortland Drive (Signalized With Improvements by Overlook Ponds)	EASTBOUND (Northbound US 9W)	LEFT							0.05	7.4	A
		THRU							0.59	11.5	B
		RIGHT							-	-	-
		COMPOSITE							-	11.4	B
	WESTBOUND (Southbound US 9W)	LEFT							0.05	7.7	A
		THRU/RIGHT							0.57	11.1	B
		COMPOSITE		N/A			N/A		-	11.0	B
	NORTHBOUND (Cortland Dr)	LEFT							0.56	52.8	D
		THRU/RIGHT							0.12	46.9	D
		COMPOSITE							-	51.8	D
	SOUTHBOUND (Morris Dr)	LEFT							0.18	48.8	D
		THRU/RIGHT							0.17	47.2	D
		COMPOSITE							-	48.1	D
	INTERSECTION	COMPOSITE							-	15.7	B
5c. US 9W & Morris Drive / Cortland Drive (Signalized With Traffic Signal Timing Improvements)	EASTBOUND (Northbound US 9W)	LEFT							0.05	7.8	A
		THRU							0.62	12.4	B
		RIGHT							-	-	-
		COMPOSITE							-	12.2	B
	WESTBOUND (Southbound US 9W)	LEFT							0.06	8.1	A
		THRU/RIGHT							0.60	11.8	B
		COMPOSITE		N/A			N/A		-	11.7	B
	NORTHBOUND (Cortland Dr)	LEFT							0.53	45.2	D
		THRU/RIGHT							0.18	40.5	D
		COMPOSITE							-	44.0	D
	SOUTHBOUND (Morris Dr)	LEFT							0.17	42.3	D
		THRU/RIGHT							0.17	40.4	D
		COMPOSITE							-	41.4	D
	INTERSECTION	COMPOSITE							-	15.7	B
6. US 9W & Old Post Road (Unsignalized)	WESTBOUND (Old Post Rd)	LEFT/RIGHT	0.10	20.5	C	0.13	24.4	C	0.20	30.3	D
	NORTHBOUND (US 9W)	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	SOUTHBOUND (US 9W)	THRU/LEFT	0.01	8.9	A	0.01	9.1	A	0.01	9.3	A
7. Morris Drive & Site Driveway B (Unsignalized)	EASTBOUND (Site DWY B)	LEFT/RIGHT							0.04	8.6	A
	NORTHBOUND (Morris Dr)	THRU/LEFT		N/A			N/A		0.02	7.3	A
	SOUTHBOUND (Morris Dr)	THRU/RIGHT							-	-	-

Notes:

(1) V/C represents volume/capacity ratio

(2) Delay is average seconds delay per vehicle

(3) LOS represents level of service

TABLE W-1

US 9W & Proposed Site Driveway
100% Columns Eight-Hour Vehicular Volume Traffic Signal Warrant Analysis

Time	2020 Existing Volumes[1]	2025 General Growth Volumes	Other Development Volumes[2]	Proposed Development Volumes		2025 Design Year Volumes		2021 Design Year Warrant #1 Satisfied	
	Major	Major	Major	Major	Minor	Major	Minor		
	US 9W	US 9W	US 9W	US 9W	Site Driveway	US 9W	Site Driveway	$A_{100\%}$[3]	$B_{100\%}$[4]
6:00-7:00 AM	1,172	1,232	45	27	25	1,304	25	NO	NO
7:00-8:00 AM	1,651	1,735	64	58	77	1,857	77	NO	YES
8:00-9:00 AM	1,376	1,446	53	82	86	1,581	86	NO	YES
9:00-10:00 AM	1,187	1,247	55	77	69	1,379	69	NO	NO
10:00-11:00 AM	953	1,002	44	74	66	1,120	66	NO	NO
11:00-12:00 PM	1,060	1,114	49	91	82	1,254	82	NO	YES
12:00-1:00 PM	1,100	1,156	51	101	89	1,308	89	NO	YES
1:00-2:00 PM	1,078	1,133	78	100	87	1,311	87	NO	YES
2:00-3:00 PM	1,175	1,235	85	105	92	1,425	92	NO	YES
3:00-4:00 PM	1,486	1,562	108	113	101	1,783	101	NO	YES
4:00-5:00 PM	1,648	1,732	116	159	123	2,007	123	NO	YES
5:00-6:00 PM	1,701	1,788	120	165	127	2,073	127	NO	YES
6:00-7:00 PM	1,170	1,230	83	132	118	1,445	118	NO	YES
TOTAL HOURS SATISFIED								0	10
REQUIRED EIGHT HOURS SATISFIED[5]								NO	YES

Notes:

(1) Turning movement counts were conducted on Thursday, January 30, 2020 from 7:00 – 9:00 AM and 4:00 – 6:00 PM. The hourly counted traffic volumes were adjusted proportionally based on record NYSDOT traffic volumes along US 9W to supplement the hourly counted traffic volumes to obtain base traffic volume data on a weekday between 6:00 AM and 7:00 PM.

(2) Other Development Volumes include Gas Land Petroleum Gas Station and Convenience Store located at 5200 US 9W as well as the proposed Cortland Commons located at 5452 US 9W.

(3) Warrant 1 Condition A is satisfied when there are 600 vehicles per hour or more on a major street having two lanes in each approach and there are 150 vehicles per hour or more on the minor street approach having a one lane approach.

(3) Warrant 1 Condition B is satisfied when there are 900 vehicles per hour or more on a major street having two lanes in each approach and there are 75 vehicles per hour or more on the minor street approach having a one lane approach.

(5) Warrant 1 is satisfied if either Condition A or Condition B are satisfied for 8 hours.

TABLE AR-1

ROADWAY NAME: US 9W
BETWEEN: Oak Street & Cortland Drive / Morris Drive
SEGMENT LENGTH: 0.17 Miles

TOTAL ACCIDENTS: 10
TIME PERIOD: 03/01/2017 - 02/29/2020

Day of Week	Number	%
Sunday	1	10
Monday	4	40
Tuesday	2	20
Wednesday	1	10
Thursday	1	10
Friday		
Saturday	1	10
Time of Day	**Number**	**%**
6 am-10 am	1	10
10 am-4 pm	1	10
4 pm-7 pm	3	30
7 pm-12 Mid	3	30
12 Mid-6 am	2	20
Weather	**Number**	**%**
Clear	6	60
Cloudy	4	40
Fog		
Rain		
Sleet/Snow		
Pavement	**Number**	**%**
Dry	10	100
Snow/Ice		
Wet		
Light Conditions	**Number**	**%**
Day	4	40
Night	6	60
Dawn/Dusk		

Accident Type	Number	%
Rear End	1	10
Sideswipe	1	10
Left Turn		
Right Turn		
Right Angle		
Overtaking	1	10
Animal	7	70
Pedestrian		
Fixed Object		
Unknown		
Severity	**Number**	**%**
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only	10	100
Time of Year	**Number**	**%**
Winter (Dec-Feb)	1	10
Spring (Mar-May)	1	10
Summer (June-Aug)	3	30
Fall (Sep-Nov)	5	50
Contributing Factors	**Number**	**%**
Animal's Action	7.00	70
Lane Usage Improper	0.50	5
Following Too Closely	1.00	10
Passing Too Closely	0.50	5
Driver Inattention	0.50	5
Turning Improperly	1.00	10
Unknown		

Accident Rate Calculations

Total Volume:	18,350	vehicles per day (AADT Source: JMC base counts)
	6.70	Million Vehicles per Year
	3.3	Average number of accidents per year
	2.99	Accident Rate in accidents per Million Vehicle Miles (MVM)
	2.25	NYSDOT Mean collision rate (Urban Mainline 2-Lanes Undivided)

APPENDIX B

FIGURES

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

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OVERLOOK PONDS

5417 ROUTE 9W

JMC PROJECT: 17088

2020 EXISTING VOLUMES

PEAK WEEKDAY AM HOUR (7:00 - 8:00)

SCALE: 1" = 800'

REVISED: 03/08/2021
DATE: 12/09/2020

FIGURE: 01

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3

US 9W
& OAK STREET

4

US 9W
& SITE DRIVEWAY A

5

US 9W
& MORRIS DRIVE
/ CORTLAND DRIVE

7

MORRIS DRIVE
& SITE DRIVEWAY B

6

US 9W
& OLD POST ROAD
/ MAYGAR ROAD

1

US 9W
& CARTER AVENUE

2

US 9W
& LATTINTOWN ROAD

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JMC PROJECT: 17088

2020 EXISTING VOLUMES

PEAK WEEKDAY PM HOUR (4:30 - 5:30)

SCALE: 1" = 800'

REVISED: 03/08/2021
DATE: 12/09/2020

FIGURE: 02

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3

US 9W
& OAK STREET

4

US 9W
& SITE DRIVEWAY A

5

US 9W
& MORRIS DRIVE
/ CORTLAND DRIVE

7

MORRIS DRIVE
& SITE DRIVEWAY B

6

US 9W
& OLD POST ROAD
/ MAYGAR ROAD

1

US 9W
& CARTER AVENUE

2

US 9W
& LATTINTOWN ROAD

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5417 ROUTE 9W

TOWN OF NEWBURGH, NEW YORK

JMC PROJECT: 17088

SCALE: 1" = 800'

2020 EXISTING VOLUMES

PEAK SATURDAY MIDDAY HOUR (12:15 - 1:15)

REVISED: 03/08/2021
DATE: 12/09/2020

FIGURE: 03

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

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5417 ROUTE 9W

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JMC PROJECT: 17088

2025 GENERAL GROWTH VOLUMES

PEAK WEEKDAY AM HOUR

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 04

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

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JMC PROJECT: 17088

2025 GENERAL GROWTH VOLUMES

PEAK WEEKDAY PM HOUR

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 05

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3

US 9W
& OAK STREET

4

US 9W
& SITE DRIVEWAY A

5

US 9W
& MORRIS DRIVE
/ CORTLAND DRIVE

7

MORRIS DRIVE
& SITE DRIVEWAY B

6

US 9W
& OLD POST ROAD
/ MAYGAR ROAD

1

US 9W
& CARTER AVENUE

2

US 9W
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5417 ROUTE 9W

TOWN OF NEWBURGH, NEW YORK

JMC PROJECT: 17088

2025 GENERAL GROWTH VOLUMES

PEAK SATURDAY MIDDAY HOUR

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 06

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

LEGEND: PEAK WEEKDAY AM HOUR / WEEKDAY PM HOUR / SATURDAY MIDDAY HOUR

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OVERLOOK PONDS
5417 ROUTE 9W
TOWN OF NEWBURGH, NEW YORK

OTHER DEVELOPMENT VOLUMES
GAS LAND PETROLEUM GAS STATION AND CONVENIENCE MARKET
JMC PROJECT: 17088

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 07

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

LEGEND: PEAK WEEKDAY AM HOUR / WEEKDAY PM HOUR / SATURDAY MIDDAY HOUR

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JMC PROJECT: 17088

OTHER DEVELOPMENT VOLUMES

CORTLAND COMMONS

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 08

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

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OVERLOOK PONDS

5417 ROUTE 9W

JMC PROJECT: 17088

2025 NO BUILD VOLUMES

PEAK WEEKDAY AM HOUR (7:00 - 8:00)

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 09

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3

US 9W
& OAK STREET

4

US 9W
& SITE DRIVEWAY A

5

US 9W
& MORRIS DRIVE
/ CORTLAND DRIVE

7

MORRIS DRIVE
& SITE DRIVEWAY B

6

US 9W
& OLD POST ROAD
/ MAYGAR ROAD

1

US 9W
& CARTER AVENUE

2

US 9W
& LATTINTOWN ROAD

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JMC PROJECT: 17088

SCALE: 1" = 800'

OVERLOOK PONDS

5417 ROUTE 9W

2025 NO BUILD VOLUMES

PEAK WEEKDAY PM HOUR (4:30 - 5:30)

REVISED: 03/08/2021
DATE: 12/09/2020

FIGURE: 10

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3

US 9W
& OAK STREET

4

US 9W
& SITE DRIVEWAY A

5

US 9W
& MORRIS DRIVE
/ CORTLAND DRIVE

7

MORRIS DRIVE
& SITE DRIVEWAY B

6

US 9W
& OLD POST ROAD
/ MAYGAR ROAD

1

US 9W
& CARTER AVENUE

2

US 9W
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5417 ROUTE 9W

TOWN OF NEWBURGH, NEW YORK

JMC PROJECT: 17088

SCALE: 1" = 800'

2025 NO BUILD VOLUMES

PEAK SATURDAY MIDDAY HOUR (12:15 - 1:15)

REVISED: 03/08/2021
DATE: 12/09/2020

FIGURE: 11

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

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JMC PROJECT: 17088

RESIDENTIAL PRIMARY TRIP DISTRIBUTION

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 12

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

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TOWN OF NEWBURGH, NEW YORK

JMC PROJECT: 17088

RESIDENTIAL PRIMARY VOLUMES

PEAK WEEKDAY AM HOUR

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 13

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

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OVERLOOK PONDS

5417 ROUTE 9W

JMC PROJECT: 17088

SCALE: 1" = 800'

RESIDENTIAL PRIMARY VOLUMES

PEAK WEEKDAY PM HOUR

REVISED: 03/08/2021
DATE: 12/09/2020

FIGURE: 14

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

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OVERLOOK PONDS

5417 ROUTE 9W

TOWN OF NEWBURGH, NEW YORK

JMC PROJECT: 17088

RESIDENTIAL PRIMARY VOLUMES

PEAK SATURDAY MIDDAY HOUR

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 15

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

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OVERLOOK PONDS

5417 ROUTE 9W

SUPERMARKET PRIMARY TRIP DISTRIBUTION

JMC PROJECT: 17088

SCALE: 1" = 800'

REVISED: 03/08/2021
DATE: 12/09/2020

FIGURE: 16

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3

US 9W
& OAK STREET

4

US 9W
& SITE DRIVEWAY A

5

US 9W
& MORRIS DRIVE
/ CORTLAND DRIVE

7

MORRIS DRIVE
& SITE DRIVEWAY B

6

US 9W
& OLD POST ROAD
/ MAYGAR ROAD

1

US 9W
& CARTER AVENUE

2

US 9W
& LATTINTOWN ROAD

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OVERLOOK PONDS

5417 ROUTE 9W

TOWN OF NEWBURGH, NEW YORK

JMC PROJECT: 17088

SUPERMARKET PRIMARY VOLUMES

PEAK WEEKDAY AM HOUR

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 17

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

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OVERLOOK PONDS

5417 ROUTE 9W

JMC PROJECT: 17088

SUPERMARKET PRIMARY VOLUMES

PEAK WEEKDAY PM HOUR

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 18

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

JMC
120 BEDFORD RD
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OVERLOOK PONDS

5417 ROUTE 9W

TOWN OF NEWBURGH, NEW YORK

JMC PROJECT: 17088

SUPERMARKET PRIMARY VOLUMES

PEAK SATURDAY MIDDAY HOUR

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 19

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

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OVERLOOK PONDS

5417 ROUTE 9W

TOWN OF NEWBURGH, NEW YORK

JMC PROJECT: 17088

SUPERMARKET PASS-BY TRIP DISTRIBUTIONS

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 20

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

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OVERLOOK PONDS

5417 ROUTE 9W

TOWN OF NEWBURGH, NEW YORK

JMC PROJECT: 17088

SUPERMARKET PASS-BY VOLUMES

PEAK WEEKDAY AM HOUR

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 21

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

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OVERLOOK PONDS

5417 ROUTE 9W

TOWN OF NEWBURGH, NEW YORK

JMC PROJECT: 17088

SUPERMARKET PASS-BY VOLUMES

PEAK WEEKDAY PM HOUR

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 22

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3

US 9W
& OAK STREET

4

US 9W
& SITE DRIVEWAY A

5

US 9W
& MORRIS DRIVE
/ CORTLAND DRIVE

7

MORRIS DRIVE
& SITE DRIVEWAY B

6

US 9W
& OLD POST ROAD
/ MAYGAR ROAD

1

US 9W
& CARTER AVENUE

2

US 9W
& LATTINTOWN ROAD

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TOWN OF NEWBURGH, NEW YORK

OVERLOOK PONDS

5417 ROUTE 9W

JMC PROJECT: 17088

SUPERMARKET PASS-BY VOLUMES

PEAK SATURDAY MIDDAY HOUR

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 23

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3

US 9W
& OAK STREET

4

US 9W
& SITE DRIVEWAY A

5

US 9W
& MORRIS DRIVE
/ CORTLAND DRIVE

7

MORRIS DRIVE
& SITE DRIVEWAY B

6

US 9W
& OLD POST ROAD
/ MAYGAR ROAD

1

US 9W
& CARTER AVENUE

2

US 9W
& LATTINTOWN ROAD

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TOWN OF NEWBURGH, NEW YORK

OVERLOOK PONDS

5417 ROUTE 9W

JMC PROJECT: 17088

2025 BUILD VOLUMES

PEAK WEEKDAY AM HOUR (7:00 - 8:00)

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 24

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3

US 9W
& OAK STREET

4

US 9W
& SITE DRIVEWAY A

5

US 9W
& MORRIS DRIVE
/ CORTLAND DRIVE

7

MORRIS DRIVE
& SITE DRIVEWAY B

6

US 9W
& OLD POST ROAD
/ MAYGAR ROAD

1

US 9W
& CARTER AVENUE

2

US 9W
& LATTINTOWN ROAD

JMC
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OVERLOOK PONDS

5417 ROUTE 9W

TOWN OF NEWBURGH, NEW YORK

JMC PROJECT: 17088

2025 BUILD VOLUMES

PEAK WEEKDAY PM HOUR (4:30 - 5:30)

REVISED: 03/08/2021
DATE: 12/09/2020

SCALE: 1" = 800'

FIGURE: 25

17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

3 US 9W & OAK STREET

4 US 9W & SITE DRIVEWAY A

5 US 9W & MORRIS DRIVE / CORTLAND DRIVE

7 MORRIS DRIVE & SITE DRIVEWAY B

6 US 9W & OLD POST ROAD / MAYGAR ROAD

1 US 9W & CARTER AVENUE

2 US 9W & LATTINTOWN ROAD

OVERLOOK PONDS

5417 ROUTE 9W

TOWN OF NEWBURGH, NEW YORK

2025 BUILD VOLUMES

PEAK SATURDAY MIDDAY HOUR (12:15 - 1:15)

JMC PROJECT: 17088

SCALE: 1" = 800'

REVISED: 03/08/2021
DATE: 12/09/2020

FIGURE: 26

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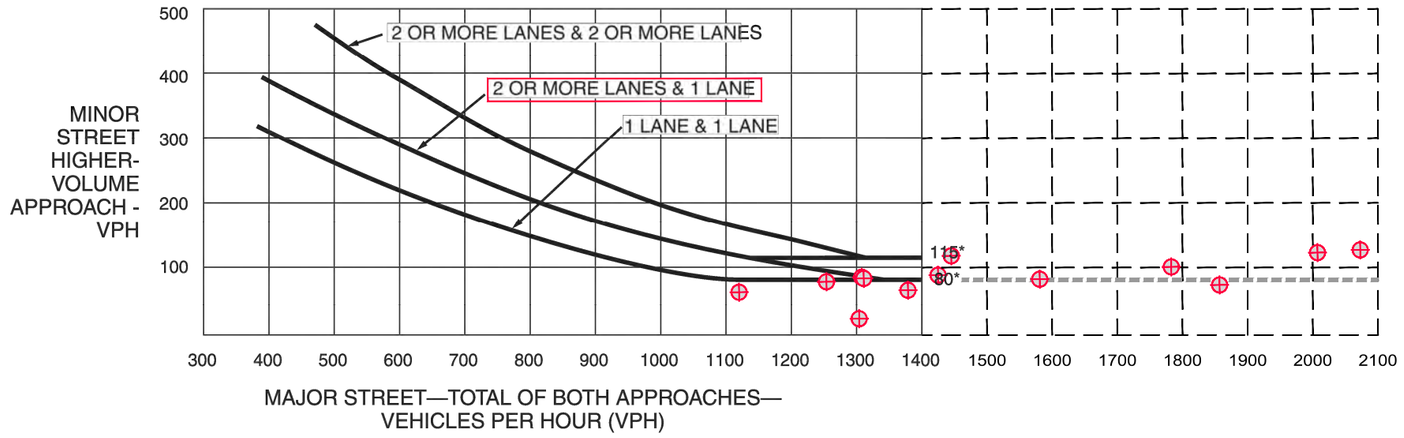
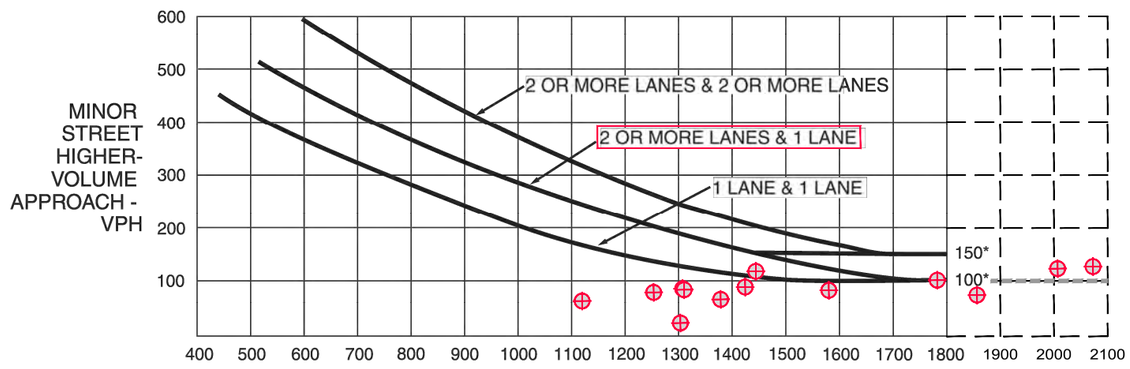
17088-TRAFFIC-FIG.dwg; TRAFFIC-FIGS.tab

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

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TOWN OF NEWBURGH, NEW YORK

TRAFFIC SIGNAL WARRANT 2 & 3 ANALYSES

JMC PROJECT: 17088
DATE: 03/08/2021
SCALE: N.T.S.
FIGURE: W-1

17088-WARRANT-ANALYSIS.dwg; 4-HR & PEAK-HR.tab

APPENDIX C

TURNING MOVEMENT COUNTS

DATE:	01-30-2020 & 02-01-2020	CALCULATIONS - DO NOT EDIT THIS SHEET	JOB NO:	17088
PERIOD:	Weekday: 7-9 & 4-6 Sat: 12-2		NAME:	Traffic Databank
LOCATION:	US 9W & Carter Avenue		INT #:	1

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL	3		46	14	217			183	1				464						
	TRUCK	0		2	4	12			11	1										
7:15 - 7:30 AM	TOTAL	8		50	13	210			193	0				474						
	TRUCK	0		1	0	14			10	0										
7:30 - 7:45 AM	TOTAL	5		51	8	180			206	0				450						
	TRUCK	0		4	1	17			15	0										
7:45 - 8:00 AM	TOTAL	9		44	10	192			166	1				422						
	TRUCK	1		0	0	20			14	0										
8:00 - 8:15 AM	TOTAL	5		39	18	185			177	0				424						
	TRUCK	0		1	2	21			19	0										
8:15 - 8:30 AM	TOTAL	3		46	9	148			155	0				361						
	TRUCK	0		0	0	20			11	0										
8:30 - 8:45 AM	TOTAL	5		46	11	154			199	0				415						
	TRUCK	1		0	2	10			22	0										
8:45 - 9:00 AM	TOTAL	4		41	15	139			160	0				359						
	TRUCK	3		1	4	13			9	0										
12:00 - 12:15 PM	TOTAL	7		39	34	168			176	1				425			2		2	
	TRUCK	0		1	0	5			4	0										
12:15 - 12:30 PM	TOTAL	4		33	33	167			182	1				420						
	TRUCK	0		0	0	2			3	0										
12:30 - 12:45 PM	TOTAL	6		35	33	167			174	0				415						
	TRUCK	0		0	1	5			3	0										
12:45 - 1:00 PM	TOTAL	1		33	28	143			150	0				355						
	TRUCK	0		0	0	3			4	0										
1:00 - 1:15 PM	TOTAL	3		29	29	189			156	1				407						
	TRUCK	0		0	0	1			2	0										
1:15 - 1:30 PM	TOTAL	4		36	23	168			149	0				380						
	TRUCK	0		0	0	7			3	0										
1:30 - 1:45 PM	TOTAL	1		34	40	169			142	0				386						
	TRUCK	0		1	0	3			3	0										
1:45 - 2:00 PM	TOTAL	4		27	43	171			151	0				396						
	TRUCK	0		0	0	3			2	0										

4:00 - 4:15 PM	TOTAL	5		35	44	206			167	1				458						
	TRUCK	1		2	0	8			10	0										
4:15 - 4:30 PM	TOTAL	9		26	38	224			174	2				473						
	TRUCK	0		4	2	12			12	1										
4:30 - 4:45 PM	TOTAL	2		36	52	239			187	0				516						
	TRUCK	0		1	2	13			7	0										
4:45 - 5:00 PM	TOTAL	7		34	48	248			193	0				530						
	TRUCK	1		1	0	4			12	0										
5:00 - 5:15 PM	TOTAL	7		21	41	258			170	0				497						
	TRUCK	1		1	0	9			11	0										
5:15 - 5:30 PM	TOTAL	4		24	51	235			211	0				525						
	TRUCK	0		0	0	1			3	0										
5:30 - 5:45 PM	TOTAL	2		30	51	205			192	0				480						
	TRUCK	0		0	0	8			2	0										
5:45 - 6:00 PM	TOTAL	4		25	49	209			177	0				464						
	TRUCK	0		0	0	3			5	0										

1: Carter Ave EB - Left
2:
3: Carter Ave EB - Right
4: US 9W NB - Left
5: US 9W NB - Thru
6:
7:
8: US 9W SB - Thru
9: US 9W SB - Right
10:
11:
12:

A: Cross US 9W South Side of INT
B: Cross US 9W North Side of INT
C: Cross Carter West Side of INT
D: Cross Carter EastSide of INT

DATE:	01-30-2020 & 02-01-2020
PERIOD:	Weekday: 7-9 & 4-6 Sat: 12-2
LOCATION:	US 9W & Carter Avenue

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

JOB NO:	17088
NAME:	Traffic Databank
INT #:	1

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL	25		191	45	799			748	2				1,810						
	TRUCK	4%		4%	11%	8%			7%	50%										0.95
7:15 - 8:15 AM	TOTAL	27		184	49	767			742	1				1,770						
	TRUCK	4%		3%	6%	9%			8%	0%										0.93
7:30 - 8:30 AM	TOTAL	22		180	45	705			704	1				1,657						
	TRUCK	5%		3%	7%	11%			8%	0%										0.92
7:45 - 8:45 AM	TOTAL	22		175	48	679			697	1				1,622						
	TRUCK	9%		1%	8%	10%			9%	0%										0.96
8:00 - 9:00 AM	TOTAL	17		172	53	626			691					1,559						
	TRUCK	24%		1%	15%	10%			9%											0.92
12:00 - 1:00 PM	TOTAL	18		140	128	645			682	2				1,615			2		2	
	TRUCK	0%		1%	1%	2%			2%	0%										0.95
12:15 - 1:15 PM	TOTAL	14		130	123	666			662	2				1,597						
	TRUCK	0%		0%	1%	2%			2%	0%										0.95
12:30 - 1:30 PM	TOTAL	14		133	113	667			629	1				1,557						
	TRUCK	0%		0%	1%	2%			2%	0%										0.94
12:45 - 1:45 PM	TOTAL	9		132	120	669			597	1				1,528						
	TRUCK	0%		1%	0%	2%			2%	0%										0.94
1:00 - 2:00 PM	TOTAL	12		126	135	697			598	1				1,569						
	TRUCK	0%		1%	0%	2%			2%	0%										0.96
4:00 - 5:00 PM	TOTAL	23		131	182	917			721	3				1,977						
	TRUCK	9%		6%	2%	4%			6%	33%										0.93
4:15 - 5:15 PM	TOTAL	25		117	179	969			724	2				2,016						
	TRUCK	8%		6%	2%	4%			6%	50%										0.95
4:30 - 5:30 PM	TOTAL	20		115	192	980			761					2,068						
	TRUCK	10%		3%	1%	3%			4%											0.98
4:45 - 5:45 PM	TOTAL	20		109	191	946			766					2,032						
	TRUCK	10%		2%	0%	2%			4%											0.96
5:00 - 6:00 PM	TOTAL	17		100	192	907			750					1,966						
	TRUCK	6%		1%	0%	2%			3%											0.94

DATE:	01-30-2020 & 02-01-2020	CALCULATIONS - DO NOT EDIT THIS SHEET	JOB NO:	17088
PERIOD:	Weekday: 7-9 & 4-6 Sat: 12-2		NAME:	Traffic Databank
LOCATION:	US 9W & Lattintown Road		INT #:	2

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL	6		11	3	224		205	3					452						
	TRUCK	1		2	1	18		14	1											
7:15 - 7:30 AM	TOTAL	8		12	5	212		215	2					454						
	TRUCK	1		0	1	20		20	0											
7:30 - 7:45 AM	TOTAL	3		17	3	202		225	6					456						
	TRUCK	1		1	0	21		14	0											
7:45 - 8:00 AM	TOTAL	2		12	7	170		198	3					392						
	TRUCK	0		0	0	15		16	2											
8:00 - 8:15 AM	TOTAL	6		16	9	174		182	4					391						
	TRUCK	0		0	1	21		14	1											
8:15 - 8:30 AM	TOTAL	4		17	10	146		187	1					365						
	TRUCK	0		4	6	18		13	1											
8:30 - 8:45 AM	TOTAL	8		14	7	132		181	3					345						
	TRUCK	0		1	1	18		8	1											
8:45 - 9:00 AM	TOTAL	9		11	6	143		184	3					356						
	TRUCK	0		0	0	13		10	0											
12:00 - 12:15 PM	TOTAL	2		8	17	142		167	6					342						
	TRUCK	0		0	2	5		3	0											
12:15 - 12:30 PM	TOTAL	4		14	8	177		187	9					399						
	TRUCK	0		1	0	4		2	0											
12:30 - 12:45 PM	TOTAL	3		14	13	155		149	1					335						
	TRUCK	0		1	0	1		1	0											
12:45 - 1:00 PM	TOTAL	3		7	10	146		136	4					306						
	TRUCK	0		0	0	7		6	0											
1:00 - 1:15 PM	TOTAL	3		6	7	176		160	4					356						
	TRUCK	0		0	1	1		3	0											
1:15 - 1:30 PM	TOTAL	3		6	8	150		138	6					311						
	TRUCK	0		0	0	5		3	0											
1:30 - 1:45 PM	TOTAL	6		7	6	169		148	6					342						
	TRUCK	0		0	0	4		3	0											
1:45 - 2:00 PM	TOTAL	3		8	14	155		135	9					324						
	TRUCK	0		0	0	1		0	0											

4:00 - 4:15 PM	TOTAL	3		10	14	188		167	3					385						
	TRUCK	1		2	1	8		14	0											
4:15 - 4:30 PM	TOTAL	2		8	16	211		201	6					444						
	TRUCK	0		2	1	5		17	0											
4:30 - 4:45 PM	TOTAL	2		8	15	239		196	6					466						
	TRUCK	0		0	1	11		7	0											
4:45 - 5:00 PM	TOTAL	2		8	22	232		213	11					488						
	TRUCK	0		2	0	8		16	1											
5:00 - 5:15 PM	TOTAL	1		5	16	255		197	3					477						
	TRUCK	0		1	0	9		14	0											
5:15 - 5:30 PM	TOTAL	2		9	21	231		216	9					488						
	TRUCK	0		0	0	2		1	0											
5:30 - 5:45 PM	TOTAL	2		6	27	201		209	4					449						
	TRUCK	0		0	0	7		5	0											
5:45 - 6:00 PM	TOTAL	4		14	15	200		201	6					440						
	TRUCK	0		0	0	4		3	0											

1: Lattintown Rd EB - Left
2:
3: Lattintown Rd EB - Right
4: US 9W NB - Left
5: US 9W NB - Thru
6:
7:
8: US 9W SB - Thru
9: US 9W SB - Right
10:
11:
12:

A: Cross Lattintown West Side Int
B: Cross 9W South Side of Int
C: Cross 9W North Side of Int
D: Cross Lattintown East Side Int

DATE:	01-30-2020 & 02-01-2020	JOB NO:	17088
PERIOD:	Weekday: 7-9 & 4-6 Sat: 12-2	NAME:	Traffic Databank
LOCATION:	US 9W & Lattintown Road	INT #:	2

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL	19		52	18	808		843	14					1,754						
	TRUCK	16%		6%	11%	9%		8%	21%											0.96
7:15 - 8:15 AM	TOTAL	19		57	24	758		820	15					1,693						
	TRUCK	11%		2%	8%	10%		8%	20%											0.93
7:30 - 8:30 AM	TOTAL	15		62	29	692		792	14					1,604						
	TRUCK	7%		8%	24%	11%		7%	29%											0.88
7:45 - 8:45 AM	TOTAL	20		59	33	622		748	11					1,493						
	TRUCK	0%		8%	24%	12%		7%	45%											0.95
8:00 - 9:00 AM	TOTAL	27		58	32	595		734	11					1,457						
	TRUCK	0%		9%	25%	12%		6%	27%											0.93
12:00 - 1:00 PM	TOTAL	12		43	48	620		639	20					1,382						
	TRUCK	0%		5%	4%	3%		2%	0%											0.87
12:15 - 1:15 PM	TOTAL	13		41	38	654		632	18					1,396						
	TRUCK	0%		5%	3%	2%		2%	0%											0.87
12:30 - 1:30 PM	TOTAL	12		33	38	627		583	15					1,308						
	TRUCK	0%		3%	3%	2%		2%	0%											0.92
12:45 - 1:45 PM	TOTAL	15		26	31	641		582	20					1,315						
	TRUCK	0%		0%	3%	3%		3%	0%											0.92
1:00 - 2:00 PM	TOTAL	15		27	35	650		581	25					1,333						
	TRUCK	0%		0%	3%	2%		2%	0%											0.94
4:00 - 5:00 PM	TOTAL	9		34	67	870		777	26					1,783						
	TRUCK	11%		18%	4%	4%		7%	4%											0.91
4:15 - 5:15 PM	TOTAL	7		29	69	937		807	26					1,875						
	TRUCK	0%		17%	3%	4%		7%	4%											0.96
4:30 - 5:30 PM	TOTAL	7		30	74	957		822	29					1,919						
	TRUCK	0%		10%	1%	3%		5%	3%											0.98
4:45 - 5:45 PM	TOTAL	7		28	86	919		835	27					1,902						
	TRUCK	0%		11%	0%	3%		4%	4%											0.97
5:00 - 6:00 PM	TOTAL	9		34	79	887		823	22					1,854						
	TRUCK	0%		3%	0%	2%		3%	0%											0.95

DATE:	01-30-2020 & 02-01-2020	CALCULATIONS - DO NOT EDIT THIS SHEET	JOB NO:	17088
PERIOD:	Weekday: 7-9 & 4-6 Sat: 12-2		NAME:	Traffic Databank
LOCATION:	US 9W & Oak Street		INT #:	3

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL	0		2		218	0	1	201					422						
	TRUCK	0		1		21	0	1	15											
7:15 - 7:30 AM	TOTAL	0		6		212	1	0	214					433						
	TRUCK	0		0		22	0	0	20											
7:30 - 7:45 AM	TOTAL	1		0		212	0	1	231					445						
	TRUCK	0		0		26	0	0	14											
7:45 - 8:00 AM	TOTAL	1		0		162	1	0	191					355						
	TRUCK	0		0		19	0	0	17											
8:00 - 8:15 AM	TOTAL	0		1		176	0	0	184					361						
	TRUCK	0		0		19	0	0	18											
8:15 - 8:30 AM	TOTAL	2		2		156	2	1	190					353						
	TRUCK	1		0		23	1	0	20											
8:30 - 8:45 AM	TOTAL	1		2		148	0	1	182					334						
	TRUCK	0		1		17	0	1	13											
8:45 - 9:00 AM	TOTAL	1		1		146	0	1	185					334						
	TRUCK	0		0		12	0	0	14											
12:00 - 12:15 PM	TOTAL	1		2		144	1	0	172					320						
	TRUCK	0		0		6	0	0	3											
12:15 - 12:30 PM	TOTAL	1		1		168	1	1	189					361						
	TRUCK	0		0		1	0	0	2											
12:30 - 12:45 PM	TOTAL	0		1		155	0	1	147					304						
	TRUCK	0		0		1	0	0	1											
12:45 - 1:00 PM	TOTAL	2		0		154	1	0	137					294						
	TRUCK	0		0		6	0	0	5											
1:00 - 1:15 PM	TOTAL	1		0		160	3	0	159					323						
	TRUCK	0		0		2	0	0	3											
1:15 - 1:30 PM	TOTAL	1		1		151	2	0	142					297						
	TRUCK	0		0		4	0	0	3											
1:30 - 1:45 PM	TOTAL	2		1		175	0	0	147					325						
	TRUCK	0		0		4	0	0	4											
1:45 - 2:00 PM	TOTAL	0		0		164	1	1	143					309						
	TRUCK	0		0		1	0	0	0											

4:00 - 4:15 PM	TOTAL	1		0		179	2	1	171					354						
	TRUCK	0		0		9	0	0	15											
4:15 - 4:30 PM	TOTAL	0		2		205	0	1	206					414						
	TRUCK	0		0		6	0	0	17											
4:30 - 4:45 PM	TOTAL	0		0		242	2	0	198					442						
	TRUCK	0		0		10	0	0	6											
4:45 - 5:00 PM	TOTAL	0		0		225	1	0	218					444						
	TRUCK	0		0		10	0	0	19											
5:00 - 5:15 PM	TOTAL	1		0		253	1	2	198					455						
	TRUCK	0		0		8	0	0	13											
5:15 - 5:30 PM	TOTAL	1		0		244	2	1	222					470						
	TRUCK	0		0		3	0	0	3											
5:30 - 5:45 PM	TOTAL	2		0		179	1	1	207					390						
	TRUCK	0		0		7	0	0	3											
5:45 - 6:00 PM	TOTAL	1		0		204	1	1	189					396						
	TRUCK	0		0		6	0	0	2											

1: Oak St WB - Left
2:
3: Oak St WB - Right
4:
5: NY 9W NB - Thru
6: NY 9W NB - Right
7: NY 9W SB - Left
8: NY 9W SB - Thru
9:
10:
11:
12:

A: Cross Oak West Side Int
B: Cross 9W South Side of Int
C: Cross 9W North Side of Int
D: Cross Oak East Side Int

DATE:	01-30-2020 & 02-01-2020
PERIOD:	Weekday: 7-9 & 4-6 Sat: 12-2
LOCATION:	US 9W & Oak Street

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

JOB NO:	17088
NAME:	Traffic Databank
INT #:	3

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL	2		8		804	2	2	837					1,655						
	TRUCK	0%		13%		11%	0%	50%	8%											0.93
7:15 - 8:15 AM	TOTAL	2		7		762	2	1	820					1,594						
	TRUCK	0%		0%		11%	0%	0%	8%											0.90
7:30 - 8:30 AM	TOTAL	4		3		706	3	2	796					1,514						
	TRUCK	25%		0%		12%	33%	0%	9%											0.85
7:45 - 8:45 AM	TOTAL	4		5		642	3	2	747					1,403						
	TRUCK	25%		20%		12%	33%	50%	9%											0.97
8:00 - 9:00 AM	TOTAL	4		6		626	2	3	741					1,382						
	TRUCK	25%		17%		11%	50%	33%	9%											0.96
12:00 - 1:00 PM	TOTAL	4		4		621	3	2	645					1,279						
	TRUCK	0%		0%		2%	0%	0%	2%											0.89
12:15 - 1:15 PM	TOTAL	4		2		637	5	2	632					1,282						
	TRUCK	0%		0%		2%	0%	0%	2%											0.89
12:30 - 1:30 PM	TOTAL	4		2		620	6	1	585					1,218						
	TRUCK	0%		0%		2%	0%	0%	2%											0.94
12:45 - 1:45 PM	TOTAL	6		2		640	6		585					1,239						
	TRUCK	0%		0%		3%	0%		3%											0.95
1:00 - 2:00 PM	TOTAL	4		2		650	6	1	591					1,254						
	TRUCK	0%		0%		2%	0%	0%	2%											0.96
4:00 - 5:00 PM	TOTAL	1		2		851	5	2	793					1,654						
	TRUCK	0%		0%		4%	0%	0%	7%											0.93
4:15 - 5:15 PM	TOTAL	1		2		925	4	3	820					1,755						
	TRUCK	0%		0%		4%	0%	0%	7%											0.96
4:30 - 5:30 PM	TOTAL	2				964	6	3	836					1,811						
	TRUCK	0%				3%	0%	0%	5%											0.96
4:45 - 5:45 PM	TOTAL	4				901	5	4	845					1,759						
	TRUCK	0%				3%	0%	0%	4%											0.94
5:00 - 6:00 PM	TOTAL	5				880	5	5	816					1,711						
	TRUCK	0%				3%	0%	0%	3%											0.91

DATE:	1/30/2020 2/1/2020	**CALCULATIONS - DO NOT EDIT THIS SHEET**	JOB NO:	17088
PERIOD:	Weekday: 7-9 & 4-6 Sat: 12-2		NAME:	Traffic Databank
LOCATION:	US 9W & Morris Drive / Cortland Drive		INT #:	5

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL	2	0	7	33	0	18	2	210	5	1	176	0	454						
	TRUCK	1	0	3	0	0	2	0	18	3	1	15	0							
7:15 - 7:30 AM	TOTAL	1	0	6	23	0	14	1	217	6	3	193	0	464						
	TRUCK	0	0	1	0	0	1	0	21	2	0	18	0							
7:30 - 7:45 AM	TOTAL	3	0	12	21	0	7	2	197	12	7	191	0	452						
	TRUCK	0	0	2	0	0	0	0	24	1	0	13	0							
7:45 - 8:00 AM	TOTAL	0	1	11	20	0	4	2	153	5	2	157	0	355						
	TRUCK	0	0	1	0	0	0	0	20	0	1	14	0							
8:00 - 8:15 AM	TOTAL	3	1	4	30	1	6	5	170	4	1	154	0	379						
	TRUCK	0	0	1	0	0	0	0	18	0	1	17	0							
8:15 - 8:30 AM	TOTAL	2	0	4	15	0	7	1	149	8	1	172	1	360						
	TRUCK	0	0	0	0	0	0	0	23	1	0	20	0							
8:30 - 8:45 AM	TOTAL	2	0	9	22	0	8	2	137	6	0	143	0	329						
	TRUCK	0	0	0	0	0	0	0	17	1	0	11	0							
8:45 - 9:00 AM	TOTAL	3	0	4	17	0	7	1	144	8	2	171	0	357						
	TRUCK	1	0	0	0	0	0	0	13	0	0	17	0							
12:00 - 12:15 PM	TOTAL	1	0	7	15	0	4	4	123	14	0	153	0	321						
	TRUCK	0	0	0	0	0	0	0	5	0	0	3	0							
12:15 - 12:30 PM	TOTAL	2	0	2	13	1	3	5	149	18	3	162	0	358						
	TRUCK	0	0	0	0	0	0	0	1	0	0	3	0							
12:30 - 12:45 PM	TOTAL	2	0	3	10	0	4	3	127	24	1	138	0	312						
	TRUCK	0	0	0	0	0	0	0	1	0	0	2	0							
12:45 - 1:00 PM	TOTAL	1	1	2	11	0	3	4	133	16	0	126	0	297						
	TRUCK	0	0	0	0	0	0	0	6	0	0	4	0							
1:00 - 1:15 PM	TOTAL	0	0	5	18	0	2	5	149	15	2	131	2	329						
	TRUCK	0	0	0	0	0	0	0	1	0	0	3	0							
1:15 - 1:30 PM	TOTAL	2	0	3	14	0	3	3	134	10	4	123	1	297	1	1			2	
	TRUCK	0	0	0	0	0	0	1	3	0	0	3	0							
1:30 - 1:45 PM	TOTAL	1	0	5	15	1	1	5	155	16	7	122	2	330						
	TRUCK	0	0	1	0	0	0	0	4	0	0	3	0							
1:45 - 2:00 PM	TOTAL	2	0	6	13	0	4	8	139	11	3	121	0	307						
	TRUCK	0	0	0	0	0	0	0	1	0	0	0	0							

4:00 - 4:15 PM	TOTAL	2	0	5	8	0	1	5	161	15	4	155	0	356						
	TRUCK	0	0	1	0	0	0	0	8	0	1	14	0							
4:15 - 4:30 PM	TOTAL	1	1	7	8	1	5	9	171	23	9	195	1	431						
	TRUCK	0	0	1	0	0	0	0	6	0	1	15	0							
4:30 - 4:45 PM	TOTAL	4	1	4	15	0	5	8	197	33	4	180	2	453						
	TRUCK	0	1	1	0	0	0	0	9	0	0	6	0							
4:45 - 5:00 PM	TOTAL	3	1	3	14	0	4	6	195	24	0	201	2	453						
	TRUCK	0	1	2	0	0	0	0	7	1	0	15	0							
5:00 - 5:15 PM	TOTAL	1	0	5	9	0	4	10	223	23	7	184	0	466						
	TRUCK	0	0	0	0	0	0	0	7	0	0	12	0							
5:15 - 5:30 PM	TOTAL	0	0	7	6	0	5	8	214	16	8	211	0	475						
	TRUCK	0	0	0	0	0	0	0	3	0	0	2	0							
5:30 - 5:45 PM	TOTAL	2	0	3	8	0	1	8	153	26	10	189	1	401						
	TRUCK	0	0	0	0	0	0	0	8	0	0	2	0							
5:45 - 6:00 PM	TOTAL	1	0	8	17	0	6	7	165	20	8	176	1	409						
	TRUCK	0	0	0	0	0	0	0	4	0	0	3	0							

1: Morris Dr EB - Left
2: Morris Dr EB - Thru
3: Morris Dr EB - Right
4: Cortland Dr WB - Left
5: Cortland Dr WB - Thru
6: Cortland Dr WB - Right
7: NY 9W NB - Left
8: NY 9W NB - Thru
9: NY 9W NB - Right
10: NY 9W SB - Left
11: NY 9W SB - Thru
12: NY 9W SB - Right

A: Cross US 9W South of INT
B: Cross Morris Dr West of INT
C: Cross US 9W North of INT
D: Cross Cortland Dr East of INT

DATE:	1/30/2020 2/1/2020
PERIOD:	Weekday: 7-9 & 4-6 Sat: 12-2
LOCATION:	US 9W & Morris Drive / Cortland Drive

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

JOB NO:	17088
NAME:	Traffic Databank
INT #:	5

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL	6	1	36	97		43	7	777	28	13	717		1,725						
	TRUCK	17%	0%	19%	0%		7%	0%	11%	21%	15%	8%								0.93
7:15 - 8:15 AM	TOTAL	7	2	33	94	1	31	10	737	27	13	695		1,650						
	TRUCK	0%	0%	15%	0%	0%	3%	0%	11%	11%	15%	9%								0.89
7:30 - 8:30 AM	TOTAL	8	2	31	86	1	24	10	669	29	11	674	1	1,546						
	TRUCK	0%	0%	13%	0%	0%	0%	0%	13%	7%	18%	9%	0%							0.86
7:45 - 8:45 AM	TOTAL	7	2	28	87	1	25	10	609	23	4	626	1	1,423						
	TRUCK	0%	0%	7%	0%	0%	0%	0%	13%	9%	50%	10%	0%							0.94
8:00 - 9:00 AM	TOTAL	10	1	21	84	1	28	9	600	26	4	640	1	1,425						
	TRUCK	10%	0%	5%	0%	0%	0%	0%	12%	8%	25%	10%	0%							0.94
12:00 - 1:00 PM	TOTAL	6	1	14	49	1	14	16	532	72	4	579		1,288						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%								0.90
12:15 - 1:15 PM	TOTAL	5	1	12	52	1	12	17	558	73	6	557	2	1,296						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%	0%							0.91
12:30 - 1:30 PM	TOTAL	5	1	13	53		12	15	543	65	7	518	3	1,235	1	1			2	
	TRUCK	0%	0%	0%	0%		0%	7%	2%	0%	0%	2%	0%							0.94
12:45 - 1:45 PM	TOTAL	4	1	15	58	1	9	17	571	57	13	502	5	1,253	1	1			2	
	TRUCK	0%	0%	7%	0%	0%	0%	6%	2%	0%	0%	3%	0%							0.95
1:00 - 2:00 PM	TOTAL	5		19	60	1	10	21	577	52	16	497	5	1,263	1	1			2	
	TRUCK	0%		5%	0%	0%	0%	5%	2%	0%	0%	2%	0%							0.96
4:00 - 5:00 PM	TOTAL	10	3	19	45	1	15	28	724	95	17	731	5	1,693						
	TRUCK	0%	67%	26%	0%	0%	0%	0%	4%	1%	12%	7%	0%							0.93
4:15 - 5:15 PM	TOTAL	9	3	19	46	1	18	33	786	103	20	760	5	1,803						
	TRUCK	0%	67%	21%	0%	0%	0%	0%	4%	1%	5%	6%	0%							0.97
4:30 - 5:30 PM	TOTAL	8	2	19	44		18	32	829	96	19	776	4	1,847						
	TRUCK	0%	100%	16%	0%		0%	0%	3%	1%	0%	5%	0%							0.97
4:45 - 5:45 PM	TOTAL	6	1	18	37		14	32	785	89	25	785	3	1,795						
	TRUCK	0%	100%	11%	0%		0%	0%	3%	1%	0%	4%	0%							0.94
5:00 - 6:00 PM	TOTAL	4		23	40		16	33	755	85	33	760	2	1,751						
	TRUCK	0%		0%	0%		0%	0%	3%	0%	0%	3%	0%							0.92

DATE:	1/30/2020 2/1/2020
PERIOD:	Weekday: 7-9 & 4-6 Sat: 12-2
LOCATION:	NY 9W & Old Post Road

CALCULATIONS - DO NOT EDIT THIS SHEET

JOB NO:	17088
NAME:	Traffic Databank
INT #:	9

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL				3		2	0	221	6	3	181	0	416						
	TRUCK				1		0	0	18	2	0	14	0							
7:15 - 7:30 AM	TOTAL				1		5	0	222	5	6	188	0	427						
	TRUCK				0		0	0	13	2	0	18	0							
7:30 - 7:45 AM	TOTAL				4		2	0	210	7	4	202	0	429						
	TRUCK				0		1	0	23	3	1	15	0							
7:45 - 8:00 AM	TOTAL				0		0	0	158	1	7	152	3	321						
	TRUCK				0		0	0	15	0	3	14	1							
8:00 - 8:15 AM	TOTAL				4		2	0	167	6	1	151	1	332						
	TRUCK				1		1	0	17	0	1	16	1							
8:15 - 8:30 AM	TOTAL				3		1	1	153	3	3	164	2	330						
	TRUCK				2		0	1	19	1	2	13	1							
8:30 - 8:45 AM	TOTAL				3		3	0	135	5	1	135	0	282						
	TRUCK				1		3	0	14	4	0	6	0							
8:45 - 9:00 AM	TOTAL				4		4	0	160	3	2	171	0	344						
	TRUCK				2		1	0	12	1	0	15	0							
12:00 - 12:15 PM	TOTAL				8		4	0	118	3	0	142	0	275						
	TRUCK				0		1	0	6	0	0	1	0							
12:15 - 12:30 PM	TOTAL				4		5	0	141	8	2	159	0	319						
	TRUCK				0		1	0	1	0	0	2	0							
12:30 - 12:45 PM	TOTAL				5		2	0	130	4	1	140	0	282						
	TRUCK				0		0	0	0	0	0	3	0							
12:45 - 1:00 PM	TOTAL				1		1	0	135	5	4	123	0	269						
	TRUCK				0		0	0	7	1	0	3	0							
1:00 - 1:15 PM	TOTAL				3		1	1	131	4	1	127	0	268						
	TRUCK				0		0	0	1	0	0	3	0							
1:15 - 1:30 PM	TOTAL				3		0	0	135	2	1	125	0	266						
	TRUCK				0		0	0	2		1	3	0							
1:30 - 1:45 PM	TOTAL				4		1	0	152	4	1	124	0	286						
	TRUCK				1		0	0	5	1		3	0							
1:45 - 2:00 PM	TOTAL				3		2	0	153	3	2	113	1	277						
	TRUCK				0		0	0	1	0	1	1	0							

4:00 - 4:15 PM	TOTAL				5		4		167	7	1	151	0	335						
	TRUCK				1		0		9	0	0	14	0							
4:15 - 4:30 PM	TOTAL				5		6		180	4	3	216	0	414						
	TRUCK				1		0		6	1	0	14	0							
4:30 - 4:45 PM	TOTAL				2		11		199	5	1	187	0	405						
	TRUCK				1		0		8	0	1	6	0							
4:45 - 5:00 PM	TOTAL				3		5		199	7	4	192	1	411						
	TRUCK				0		1		7	1	1	17	0							
5:00 - 5:15 PM	TOTAL				2		6		207	7	4	190	0	416						
	TRUCK				0		0		7	0	1	10	0							
5:15 - 5:30 PM	TOTAL				1		3		219	10	5	212	0	450						
	TRUCK				0		3		4	1	0	3	0							
5:30 - 5:45 PM	TOTAL				6		8		158	4	2	200	0	378						
	TRUCK				0		0		5	1	0	3	0							
5:45 - 6:00 PM	TOTAL				5		5		163	9	4	178	0	364						
	TRUCK				0		2		6	0	0	2	0							

1:
2:
3:
4: Old Post Rd WB - Left
5:
6: Old Post Rd WB - Right
7: NY 9W NB - Left
8: NY 9W NB - Thru
9: NY 9W NB - Right
10: NY 9W SB - Left
11: NY 9W SB - Thru
12: NY 9W SB - Right

A: Cross Old Post West Side Int
B: Cross 9W South Side of Int
C: Cross 9W North Side of Int
D: Cross Old Post East Side Int

DATE:	1/30/2020 2/1/2020
PERIOD:	Weekday: 7-9 & 4-6 Sat: 12-2
LOCATION:	NY 9W & Old Post Road

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

JOB NO:	17088
NAME:	Traffic Databank
INT #:	6

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL				8		9		811	19	20	723	3	1,593						
	TRUCK				13%		11%		9%	37%	20%	8%	33%							0.93
7:15 - 8:15 AM	TOTAL				9		9		757	19	18	693	4	1,509						
	TRUCK				11%		22%		9%	26%	28%	9%	50%							0.88
7:30 - 8:30 AM	TOTAL				11		5	1	688	17	15	669	6	1,412						
	TRUCK				27%		40%	100%	11%	24%	47%	9%	50%							0.82
7:45 - 8:45 AM	TOTAL				10		6	1	613	15	12	602	6	1,265						
	TRUCK				40%		67%	100%	11%	33%	50%	8%	50%							0.95
8:00 - 9:00 AM	TOTAL				14		10	1	615	17	7	621	3	1,288						
	TRUCK				43%		50%	100%	10%	35%	43%	8%	67%							0.94
12:00 - 1:00 PM	TOTAL				18		12		524	20	7	564		1,145						
	TRUCK				0%		17%		3%	5%	0%	2%								0.90
12:15 - 1:15 PM	TOTAL				13		9	1	537	21	8	549		1,138						
	TRUCK				0%		11%	0%	2%	5%	0%	2%								0.89
12:30 - 1:30 PM	TOTAL				12		4	1	531	15	7	515		1,085						
	TRUCK				0%		0%	0%	2%	7%	14%	2%								0.96
12:45 - 1:45 PM	TOTAL				11		3	1	553	15	7	499		1,089						
	TRUCK				9%		0%	0%	3%	13%	14%	2%								0.95
1:00 - 2:00 PM	TOTAL				13		4	1	571	13	5	489	1	1,097						
	TRUCK				8%		0%	0%	2%	8%	40%	2%	0%							0.96
4:00 - 5:00 PM	TOTAL				15		26		745	23	9	746	1	1,565						
	TRUCK				20%		4%		4%	9%	22%	7%	0%							0.95
4:15 - 5:15 PM	TOTAL				12		28		785	23	12	785	1	1,646						
	TRUCK				17%		4%		4%	9%	25%	6%	0%							0.99
4:30 - 5:30 PM	TOTAL				8		25		824	29	14	781	1	1,682						
	TRUCK				13%		16%		3%	7%	21%	5%	0%							0.93
4:45 - 5:45 PM	TOTAL				12		22		783	28	15	794	1	1,655						
	TRUCK				0%		18%		3%	11%	13%	4%	0%							0.92
5:00 - 6:00 PM	TOTAL				14		22		747	30	15	780		1,608						
	TRUCK				0%		23%		3%	7%	7%	2%								0.89

DATE:	01-30-2020 & 02-01-2020
PERIOD:	Weekday: 7-9 & 4-6 Sat: 12-2

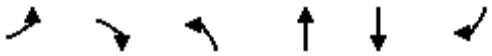
PEAK HOUR CALCULATIONS - DO NOT EDIT THIS SHEET

JOB NO:	17088
NAME:	JMC & Traffic Databank

TIME	CLASS	TOTAL INT. 1	TOTAL INT. 2	TOTAL INT. 3	TOTAL INT. 5	TOTAL INT. 6				TOTAL
7:00 - 8:00 AM	TOTAL	1,810	1,754	1,655	1,725	1,593				8,537
	TRUCK									
7:15 - 8:15 AM	TOTAL	1,770	1,693	1,594	1,650	1,509				8,216
	TRUCK									
7:30 - 8:30 AM	TOTAL	1,657	1,604	1,514	1,546	1,412				7,733
	TRUCK									
7:45 - 8:45 AM	TOTAL	1,622	1,493	1,403	1,423	1,265				7,206
	TRUCK									
8:00 - 9:00 AM	TOTAL	1,559	1,457	1,382	1,425	1,288				7,111
	TRUCK									
12:00 - 1:00 PM	TOTAL	1,615	1,382	1,279	1,288	1,145				6,709
	TRUCK									
12:15 - 1:15 PM	TOTAL	1,597	1,396	1,282	1,296	1,138				6,709
	TRUCK									
12:30 - 1:30 PM	TOTAL	1,557	1,308	1,218	1,235	1,085				6,403
	TRUCK									
12:45 - 1:45 PM	TOTAL	1,528	1,315	1,239	1,253	1,089				6,424
	TRUCK									
1:00 - 2:00 PM	TOTAL	1,569	1,333	1,254	1,263	1,097				6,516
	TRUCK									
4:00 - 5:00 PM	TOTAL	1,977	1,783	1,654	1,693	1,565				8,672
	TRUCK									
4:15 - 5:15 PM	TOTAL	2,016	1,875	1,755	1,803	1,646				9,095
	TRUCK									
4:30 - 5:30 PM	TOTAL	2,068	1,919	1,811	1,847	1,682				9,327
	TRUCK									
4:45 - 5:45 PM	TOTAL	2,032	1,902	1,759	1,795	1,655				9,143
	TRUCK									
5:00 - 6:00 PM	TOTAL	1,966	1,854	1,711	1,751	1,608				8,890
	TRUCK									

APPENDIX D

CAPACITY ANALYSES

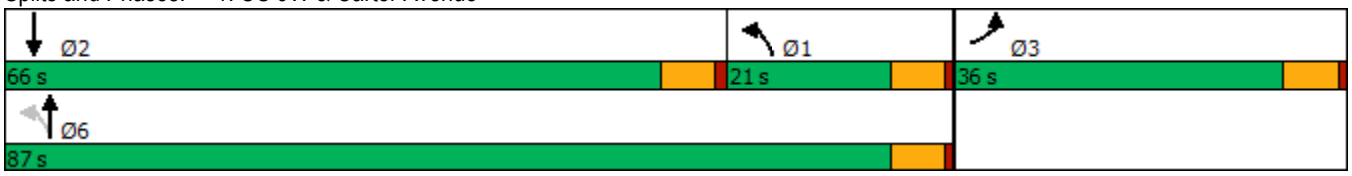


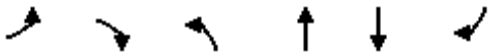
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	25	191	45	799	748	2
Future Volume (vph)	25	191	45	799	748	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	10
Grade (%)	1%			0%	0%	
Storage Length (ft)	0	0	130			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.880					
Flt Protected	0.994		0.950			
Satd. Flow (prot)	1590	0	1626	1759	1656	0
Flt Permitted	0.994		0.256			
Satd. Flow (perm)	1590	0	438	1759	1656	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	201					
Link Speed (mph)	30			40	40	
Link Distance (ft)	853			361	360	
Travel Time (s)	19.4			6.2	6.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	4%	11%	8%	7%	50%
Adj. Flow (vph)	26	201	47	841	787	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	227	0	47	841	789	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.00	1.00	1.09	1.09
Turning Speed (mph)	15	9	15			9
Number of Detectors	2		2	2	2	
Detector Template				NYSDOT	NYSDOT	
Leading Detector (ft)	78		78	78	78	
Trailing Detector (ft)	-10		-10	-10	-10	
Detector 1 Position(ft)	-10		-10	-10	-10	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	2.0		2.0	2.0	2.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	5.0		5.0	0.0	0.0	
Detector 2 Position(ft)	38		38	38	38	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	2.0		2.0	2.0	2.0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	3		1	6	2	
Permitted Phases			6			
Detector Phase	3		1	6	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	10.0	10.0	
Minimum Split (s)	11.0		11.0	16.0	16.0	
Total Split (s)	36.0		21.0	87.0	66.0	
Total Split (%)	29.3%		17.1%	70.7%	53.7%	
Maximum Green (s)	30.0		15.0	81.0	60.0	
Yellow Time (s)	5.0		5.0	5.0	5.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Recall Mode	None		None	Min	Min	
v/c Ratio	0.66		0.11	0.66	0.74	
Control Delay	18.1		3.9	8.4	15.9	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	18.1		3.9	8.4	15.9	
Queue Length 50th (ft)	12		4	138	244	
Queue Length 95th (ft)	84		15	329	490	
Internal Link Dist (ft)	773			281	280	
Turn Bay Length (ft)			130			
Base Capacity (vph)	809		643	1692	1370	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.28		0.07	0.50	0.58	

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 72.6	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 1: US 9W & Carter Avenue





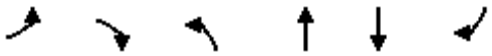
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	191	45	799	748	2
Future Volume (veh/h)	25	191	45	799	748	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1894	1894	1737	1781	1796	1796
Adj Flow Rate, veh/h	26	201	47	841	787	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	11	8	7	7
Cap, veh/h	32	246	258	1147	859	2
Arrive On Green	0.18	0.18	0.07	0.64	0.48	0.48
Sat Flow, veh/h	180	1389	1654	1781	1791	5
Grp Volume(v), veh/h	228	0	47	841	0	789
Grp Sat Flow(s),veh/h/ln	1576	0	1654	1781	0	1795
Q Serve(g_s), s	9.3	0.0	0.0	21.4	0.0	27.3
Cycle Q Clear(g_c), s	9.3	0.0	0.0	21.4	0.0	27.3
Prop In Lane	0.11	0.88	1.00			0.00
Lane Grp Cap(c), veh/h	279	0	258	1147	0	861
V/C Ratio(X)	0.82	0.00	0.18	0.73	0.00	0.92
Avail Cap(c_a), veh/h	705	0	504	2153	0	1607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	27.9	8.1	0.0	16.2
Incr Delay (d2), s/veh	2.2	0.0	0.1	0.3	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.7	5.3	0.0	9.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.8	0.0	28.0	8.4	0.0	17.9
LnGrp LOS	C	A	C	A	A	B
Approach Vol, veh/h	228			888	789	
Approach Delay, s/veh	28.8			9.4	17.9	
Approach LOS	C			A	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	38.2				49.2	17.9
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	15.0	60.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	2.0	29.3				23.4	11.3
Green Ext Time (p_c), s	0.1	2.8				3.2	0.7

Intersection Summary			
HCM 6th Ctrl Delay		15.3	
HCM 6th LOS		B	

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	19	52	18	822	869	14
Future Volume (vph)	19	52	18	822	869	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-5%			-4%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.901				0.998	
Flt Protected	0.987			0.999		
Satd. Flow (prot)	1540	0	0	1775	1735	0
Flt Permitted	0.987			0.999		
Satd. Flow (perm)	1540	0	0	1775	1735	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	1022			2082	1333	
Travel Time (s)	23.2			35.5	22.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	16%	6%	11%	9%	8%	21%
Adj. Flow (vph)	20	54	19	856	905	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	74	0	0	875	920	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.97	0.97	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	52	18	822	869	14
Future Vol, veh/h	19	52	18	822	869	14
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, %	-5	-	-	-4	2	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	16	6	11	9	8	21
Mvmt Flow	20	54	19	856	905	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1807	913	920	0	-	0
Stage 1	913	-	-	-	-	-
Stage 2	894	-	-	-	-	-
Critical Hdwy	5.56	5.76	4.21	-	-	-
Critical Hdwy Stg 1	4.56	-	-	-	-	-
Critical Hdwy Stg 2	4.56	-	-	-	-	-
Follow-up Hdwy	3.644	3.354	2.299	-	-	-
Pot Cap-1 Maneuver	132	370	706	-	-	-
Stage 1	476	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	125	370	706	-	-	-
Mov Cap-2 Maneuver	125	-	-	-	-	-
Stage 1	452	-	-	-	-	-
Stage 2	484	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	26.2	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	706	-	243	-	-
HCM Lane V/C Ratio	0.027	-	0.304	-	-
HCM Control Delay (s)	10.2	0	26.2	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	1.2	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	839	2	2	881	2	8
Future Volume (vph)	839	2	2	881	2	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)	-2%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.890	
Flt Protected					0.991	
Satd. Flow (prot)	1727	0	0	1725	1509	0
Flt Permitted					0.991	
Satd. Flow (perm)	1727	0	0	1725	1509	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	650			359	371	
Travel Time (s)	8.1			4.5	8.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	11%	50%	33%	9%	25%	17%
Adj. Flow (vph)	902	2	2	947	2	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	904	0	0	949	11	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.01	1.01	0.92	0.92
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

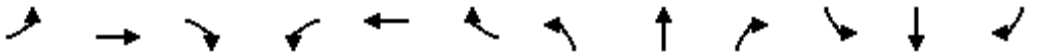
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	839	2	2	881	2	8
Future Vol, veh/h	839	2	2	881	2	8
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, %	-2	-	-	2	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	11	50	33	9	25	17
Mvmt Flow	902	2	2	947	2	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	904	0	1854	903
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	951	-
Critical Hdwy	-	-	4.43	-	6.65	6.37
Critical Hdwy Stg 1	-	-	-	-	5.65	-
Critical Hdwy Stg 2	-	-	-	-	5.65	-
Follow-up Hdwy	-	-	2.497	-	3.725	3.453
Pot Cap-1 Maneuver	-	-	638	-	71	315
Stage 1	-	-	-	-	360	-
Stage 2	-	-	-	-	341	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	638	-	71	315
Mov Cap-2 Maneuver	-	-	-	-	71	-
Stage 1	-	-	-	-	360	-
Stage 2	-	-	-	-	339	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	25.4
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	187	-	-	638	-
HCM Lane V/C Ratio	0.058	-	-	0.003	-
HCM Control Delay (s)	25.4	-	-	10.7	0
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-



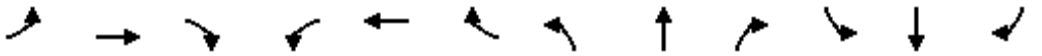
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	810	29	13	742	0	100	0	43	6	1	37
Future Volume (vph)	7	810	29	13	742	0	100	0	43	6	1	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	16	16	16
Grade (%)		1%			-2%			-3%			1%	
Storage Length (ft)	75		40	100		0	80		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	80			85			50			25		
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			0.850					0.850			0.885	
Flt Protected	0.950			0.950			0.950				0.994	
Satd. Flow (prot)	1796	1703	1328	1585	1777	0	1832	1532	0	0	1593	0
Flt Permitted	0.232			0.179			0.726				0.970	
Satd. Flow (perm)	439	1703	1328	299	1777	0	1400	1532	0	0	1554	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85					294			40	
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		250			260			201			326	
Travel Time (s)		3.1			3.2			4.6			7.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	11%	21%	15%	8%	0%	0%	0%	7%	17%	0%	19%
Adj. Flow (vph)	8	871	31	14	798	0	108	0	46	6	1	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	871	31	14	798	0	108	46	0	0	47	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	1.01	1.01	1.01	0.99	0.99	0.99	0.98	0.98	0.98	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2		1	2	
Detector Template										Left		
Leading Detector (ft)	78	0	0	78	0		78	78		20	78	
Trailing Detector (ft)	-10	0	0	-10	0		-10	-10		0	-10	
Detector 1 Position(ft)	-10	0	0	-10	0		-10	-10		0	-10	
Detector 1 Size(ft)	40	6	20	40	6		40	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	2.0	0.0	0.0	2.0	0.0		2.0	2.0		0.0	2.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	5.0	0.0	0.0	5.0	0.0		5.0	5.0		0.0	5.0	
Detector 2 Position(ft)	38			38			38	38			38	
Detector 2 Size(ft)	40			40			40	40			40	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	2.0			2.0			2.0	2.0			2.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA			NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8					
Detector Phase	5	2	2	1	6		8	8			4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	12.0	17.0	17.0	12.0	17.0		25.0	25.0			25.0	
Total Split (s)	22.0	87.0	87.0	22.0	87.0		32.0	32.0			32.0	
Total Split (%)	15.6%	61.7%	61.7%	15.6%	61.7%		22.7%	22.7%			22.7%	
Maximum Green (s)	15.0	80.0	80.0	15.0	80.0		25.0	25.0			25.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0	
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)	7.0	7.0	7.0	7.0	7.0		7.0	7.0			7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Recall Mode	None	Max	Max	None	Max		None	None			None	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							11.0	11.0			11.0	
Pedestrian Calls (#/hr)							0	0			0	
v/c Ratio	0.02	0.79	0.03	0.05	0.67		0.38	0.08			1.18	
Control Delay	6.3	23.7	0.1	6.5	16.9		48.8	0.3			217.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	6.3	23.7	0.1	6.5	16.9		48.8	0.3			217.4	
Queue Length 50th (ft)	2	409	0	3	332		72	0			~11	
Queue Length 95th (ft)	7	791	0	10	622		141	0			#97	
Internal Link Dist (ft)		170			180			121			246	
Turn Bay Length (ft)	75		40	100			80					
Base Capacity (vph)	465	1101	889	361	1183		283	544			40	
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	0.02	0.79	0.03	0.04	0.67		0.38	0.08			1.18	

Intersection Summary

Area Type: Other
Cycle Length: 141
Actuated Cycle Length: 123.9
Natural Cycle: 90
Control Type: Semi Act-Uncoord
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Cortland Drive/Morris Drive & US 9W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	810	29	13	742	0	100	0	43	6	1	37
Future Volume (veh/h)	7	810	29	13	742	0	100	0	43	6	1	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1731	1583	1754	1859	1859	2018	2018	2018	1970	1970	1970
Adj Flow Rate, veh/h	8	871	0	14	798	0	108	0	46	6	1	40
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	11	21	15	8	8	0	0	0	0	0	0
Cap, veh/h	427	1228		338	1330	0	206	0	151	45	14	126
Arrive On Green	0.01	0.71	0.00	0.02	0.72	0.00	0.09	0.00	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1804	1731	1341	1670	1859	0	1474	0	1710	96	153	1427
Grp Volume(v), veh/h	8	871	0	14	798	0	108	0	46	47	0	0
Grp Sat Flow(s),veh/h/ln	1804	1731	1341	1670	1859	0	1474	0	1710	1677	0	0
Q Serve(g_s), s	0.1	33.2	0.0	0.3	24.1	0.0	4.3	0.0	2.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	33.2	0.0	0.3	24.1	0.0	7.2	0.0	2.8	2.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.13		0.85
Lane Grp Cap(c), veh/h	427	1228		338	1330	0	206	0	151	184	0	0
V/C Ratio(X)	0.02	0.71		0.04	0.60	0.00	0.52	0.00	0.30	0.25	0.00	0.00
Avail Cap(c_a), veh/h	650	1228		534	1330	0	402	0	379	403	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.9	9.6	0.0	9.3	8.0	0.0	49.9	0.0	48.1	48.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.5	0.0	0.0	2.0	0.0	0.8	0.0	0.4	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.1	0.0	0.1	7.6	0.0	3.0	0.0	1.2	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.9	13.1	0.0	9.3	10.0	0.0	50.7	0.0	48.5	48.4	0.0	0.0
LnGrp LOS	A	B		A	B	A	D	A	D	D	A	A
Approach Vol, veh/h		879	A		812			154			47	
Approach Delay, s/veh		13.0			10.0			50.0			48.4	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	87.0		17.0	8.1	87.7		17.0				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	15.0	80.0		25.0	15.0	80.0		25.0				
Max Q Clear Time (g_c+I1), s	2.3	0.0		4.9	2.1	0.0		9.2				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.0		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		15.6	
HCM 6th LOS		B	

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	9	839	20	20	747
Future Volume (vph)	8	9	839	20	20	747
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-2%		-1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.929		0.997			
Flt Protected	0.977					0.999
Satd. Flow (prot)	1504	0	1736	0	0	1744
Flt Permitted	0.977					0.999
Satd. Flow (perm)	1504	0	1736	0	0	1744
Link Speed (mph)	30		55			55
Link Distance (ft)	946		1025			1655
Travel Time (s)	21.5		12.7			20.5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	13%	11%	9%	37%	20%	8%
Adj. Flow (vph)	9	10	902	22	22	803
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	924	0	0	825
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

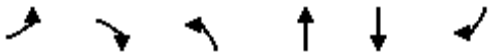
Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	9	839	20	20	747
Future Vol, veh/h	8	9	839	20	20	747
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, %	-2	-	-1	-	-	1
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	13	11	9	37	20	8
Mvmt Flow	9	10	902	22	22	803

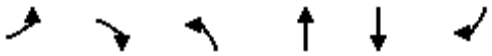
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1760	913	0	0	924	0
Stage 1	913	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Critical Hdwy	6.13	6.11	-	-	4.3	-
Critical Hdwy Stg 1	5.13	-	-	-	-	-
Critical Hdwy Stg 2	5.13	-	-	-	-	-
Follow-up Hdwy	3.617	3.399	-	-	2.38	-
Pot Cap-1 Maneuver	106	336	-	-	670	-
Stage 1	414	-	-	-	-	-
Stage 2	442	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	100	336	-	-	670	-
Mov Cap-2 Maneuver	100	-	-	-	-	-
Stage 1	414	-	-	-	-	-
Stage 2	416	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	30.6	0	0.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	159	670	-
HCM Lane V/C Ratio	-	-	0.115	0.032	-
HCM Control Delay (s)	-	-	30.6	10.6	0
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-



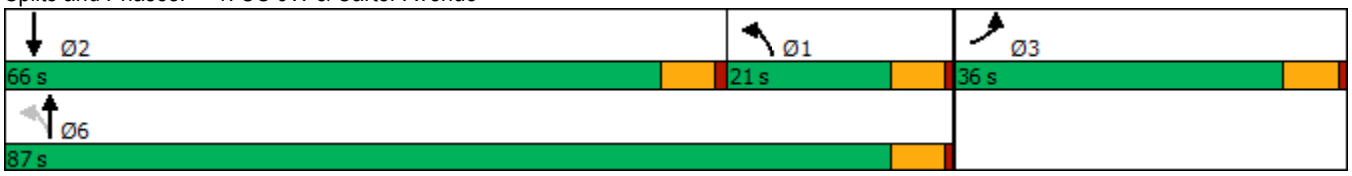
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	115	192	980	761	0
Future Volume (vph)	20	115	192	980	761	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	10
Grade (%)	1%			0%	0%	
Storage Length (ft)	0	0	130			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.885					
Flt Protected	0.993		0.950			
Satd. Flow (prot)	1597	0	1787	1845	1705	0
Flt Permitted	0.993		0.230			
Satd. Flow (perm)	1597	0	433	1845	1705	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	117					
Link Speed (mph)	30			40	40	
Link Distance (ft)	853			361	360	
Travel Time (s)	19.4			6.2	6.1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	10%	3%	1%	3%	4%	0%
Adj. Flow (vph)	20	117	196	1000	777	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	137	0	196	1000	777	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.00	1.00	1.09	1.09
Turning Speed (mph)	15	9	15			9
Number of Detectors	2		2	2	2	
Detector Template				NYSDOT	NYSDOT	
Leading Detector (ft)	78		78	78	78	
Trailing Detector (ft)	-10		-10	-10	-10	
Detector 1 Position(ft)	-10		-10	-10	-10	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	2.0		2.0	2.0	2.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	5.0		5.0	0.0	0.0	
Detector 2 Position(ft)	38		38	38	38	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	2.0		2.0	2.0	2.0	

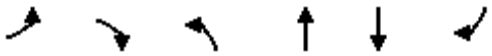


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	3		1	6	2	
Permitted Phases			6			
Detector Phase	3		1	6	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	10.0	10.0	
Minimum Split (s)	11.0		11.0	16.0	16.0	
Total Split (s)	36.0		21.0	87.0	66.0	
Total Split (%)	29.3%		17.1%	70.7%	53.7%	
Maximum Green (s)	30.0		15.0	81.0	60.0	
Yellow Time (s)	5.0		5.0	5.0	5.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Recall Mode	None		None	Min	Min	
v/c Ratio	0.54		0.45	0.74	0.81	
Control Delay	19.3		9.3	9.5	21.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	19.3		9.3	9.5	21.0	
Queue Length 50th (ft)	8		18	181	229	
Queue Length 95th (ft)	68		44	401	511	
Internal Link Dist (ft)	773			281	280	
Turn Bay Length (ft)			130			
Base Capacity (vph)	748		661	1764	1420	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.18		0.30	0.57	0.55	

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 73.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 1: US 9W & Carter Avenue





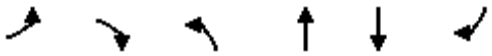
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	115	192	980	761	0
Future Volume (veh/h)	20	115	192	980	761	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1894	1894	1885	1856	1841	1841
Adj Flow Rate, veh/h	20	117	196	1000	777	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	1	3	4	4
Cap, veh/h	26	149	324	1240	868	0
Arrive On Green	0.12	0.12	0.09	0.67	0.47	0.00
Sat Flow, veh/h	218	1276	1795	1856	1841	0
Grp Volume(v), veh/h	138	0	196	1000	777	0
Grp Sat Flow(s),veh/h/ln	1505	0	1795	1856	1841	0
Q Serve(g_s), s	5.0	0.0	0.5	21.7	21.6	0.0
Cycle Q Clear(g_c), s	5.0	0.0	0.5	21.7	21.6	0.0
Prop In Lane	0.14	0.85	1.00			0.00
Lane Grp Cap(c), veh/h	176	0	324	1240	868	0
V/C Ratio(X)	0.78	0.00	0.60	0.81	0.90	0.00
Avail Cap(c_a), veh/h	809	0	646	2691	1977	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.0	0.0	22.9	6.7	13.5	0.0
Incr Delay (d2), s/veh	2.9	0.0	0.7	0.5	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	2.2	4.1	6.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.9	0.0	23.6	7.1	14.9	0.0
LnGrp LOS	C	A	C	A	B	A
Approach Vol, veh/h	138			1196	777	
Approach Delay, s/veh	26.9			9.8	14.9	
Approach LOS	C			A	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	32.3				43.3	12.5
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	15.0	60.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	2.5	23.6				23.7	7.0
Green Ext Time (p_c), s	0.4	2.8				4.3	0.4

Intersection Summary		
HCM 6th Ctrl Delay		12.8
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	30	74	975	830	29
Future Volume (vph)	7	30	74	975	830	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-5%			-4%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.890				0.995	
Flt Protected	0.991			0.996		
Satd. Flow (prot)	1535	0	0	1877	1784	0
Flt Permitted	0.991			0.996		
Satd. Flow (perm)	1535	0	0	1877	1784	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	1022			2082	1333	
Travel Time (s)	23.2			35.5	22.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	10%	1%	3%	5%	3%
Adj. Flow (vph)	7	31	76	995	847	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	0	0	1071	877	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.97	0.97	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	30	74	975	830	29
Future Vol, veh/h	7	30	74	975	830	29
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, %	-5	-	-	-4	2	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	10	1	3	5	3
Mvmt Flow	7	31	76	995	847	30

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2009	862	877	0	-	0
Stage 1	862	-	-	-	-	-
Stage 2	1147	-	-	-	-	-
Critical Hdwy	5.4	5.8	4.11	-	-	-
Critical Hdwy Stg 1	4.4	-	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.39	2.209	-	-	-
Pot Cap-1 Maneuver	115	387	774	-	-	-
Stage 1	530	-	-	-	-	-
Stage 2	420	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	90	387	774	-	-	-
Mov Cap-2 Maneuver	90	-	-	-	-	-
Stage 1	413	-	-	-	-	-
Stage 2	420	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23	0.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	774	-	238	-	-
HCM Lane V/C Ratio	0.098	-	0.159	-	-
HCM Control Delay (s)	10.2	0	23	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.6	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	976	6	3	857	2	0
Future Volume (vph)	976	6	3	857	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)	-2%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999					
Flt Protected					0.950	
Satd. Flow (prot)	1862	0	0	1792	1925	0
Flt Permitted					0.950	
Satd. Flow (perm)	1862	0	0	1792	1925	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	650			359	371	
Travel Time (s)	8.1			4.5	8.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	5%	0%	0%
Adj. Flow (vph)	1017	6	3	893	2	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1023	0	0	896	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.01	1.01	0.92	0.92
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

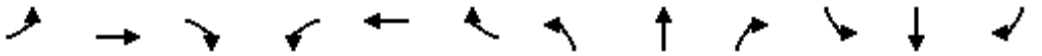
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	976	6	3	857	2	0
Future Vol, veh/h	976	6	3	857	2	0
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, %	-2	-	-	2	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	0	0	5	0	0
Mvmt Flow	1017	6	3	893	2	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1023	0	1919	1020
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	899	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	686	-	75	290
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	401	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	686	-	74	290
Mov Cap-2 Maneuver	-	-	-	-	74	-
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	397	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	55.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	74	-	-	686	-
HCM Lane V/C Ratio	0.028	-	-	0.005	-
HCM Control Delay (s)	55.1	-	-	10.3	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



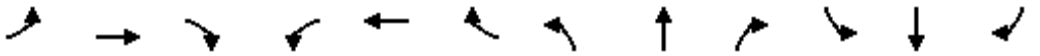
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	844	98	19	796	4	45	0	18	8	2	19
Future Volume (vph)	32	844	98	19	796	4	45	0	18	8	2	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	16	16	16
Grade (%)		1%			-2%			-3%			1%	
Storage Length (ft)	75		40	100		0	80		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	80			85			50			25		
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			0.850		0.999			0.850			0.910	
Flt Protected	0.950			0.950			0.950				0.987	
Satd. Flow (prot)	1796	1835	1591	1823	1826	0	1832	1413	0	0	1924	0
Flt Permitted	0.201			0.177			0.738				0.941	
Satd. Flow (perm)	380	1835	1591	340	1826	0	1423	1413	0	0	1835	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85					294			20	
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		250			260			201			326	
Travel Time (s)		3.1			3.2			4.6			7.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	1%	0%	5%	0%	0%	100%	16%	0%	0%	0%
Adj. Flow (vph)	33	870	101	20	821	4	46	0	19	8	2	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	870	101	20	825	0	46	19	0	0	30	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	1.01	1.01	1.01	0.99	0.99	0.99	0.98	0.98	0.98	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2		1	2	
Detector Template										Left		
Leading Detector (ft)	78	0	0	78	0		78	78		20	78	
Trailing Detector (ft)	-10	0	0	-10	0		-10	-10		0	-10	
Detector 1 Position(ft)	-10	0	0	-10	0		-10	-10		0	-10	
Detector 1 Size(ft)	40	6	20	40	6		40	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	2.0	0.0	0.0	2.0	0.0		2.0	2.0		0.0	2.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	5.0	0.0	0.0	5.0	0.0		5.0	5.0		0.0	5.0	
Detector 2 Position(ft)	38			38			38	38			38	
Detector 2 Size(ft)	40			40			40	40			40	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	2.0			2.0			2.0	2.0			2.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA			NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8					
Detector Phase	5	2	2	1	6		8	8			4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	12.0	17.0	17.0	12.0	17.0		25.0	25.0			25.0	
Total Split (s)	22.0	87.0	87.0	22.0	87.0		32.0	32.0			32.0	
Total Split (%)	15.6%	61.7%	61.7%	15.6%	61.7%		22.7%	22.7%			22.7%	
Maximum Green (s)	15.0	80.0	80.0	15.0	80.0		25.0	25.0			25.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0	
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)	7.0	7.0	7.0	7.0	7.0		7.0	7.0			7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Recall Mode	None	Max	Max	None	Max		None	None			None	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							11.0	11.0			11.0	
Pedestrian Calls (#/hr)							0	0			0	
v/c Ratio	0.11	0.75	0.10	0.07	0.71		0.19	0.04			1.36	
Control Delay	6.8	22.1	3.2	6.6	21.0		46.4	0.2			332.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	6.8	22.1	3.2	6.6	21.0		46.4	0.2			332.5	
Queue Length 50th (ft)	8	518	5	5	474		33	0			~18	
Queue Length 95th (ft)	18	714	28	12	657		71	0			#84	
Internal Link Dist (ft)		170			180			121			246	
Turn Bay Length (ft)	75		40	100			80					
Base Capacity (vph)	430	1166	1042	410	1157		281	515			22	
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	0.08	0.75	0.10	0.05	0.71		0.16	0.04			1.36	

Intersection Summary

Area Type: Other
Cycle Length: 141
Actuated Cycle Length: 126.8
Natural Cycle: 100
Control Type: Semi Act-Uncoord
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Cortland Drive/Morris Drive & US 9W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	844	98	19	796	4	45	0	18	8	2	19
Future Volume (veh/h)	32	844	98	19	796	4	45	0	18	8	2	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1850	1879	1979	1904	1904	2018	517	517	1970	1970	1970
Adj Flow Rate, veh/h	33	870	0	20	821	4	46	0	19	8	2	20
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	3	1	0	5	5	0	100	100	0	0	0
Cap, veh/h	435	1316		408	1331	6	193	0	37	58	26	89
Arrive On Green	0.03	0.71	0.00	0.02	0.70	0.70	0.08	0.00	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1804	1850	1593	1884	1893	9	1499	0	438	218	316	1068
Grp Volume(v), veh/h	33	870	0	20	0	825	46	0	19	30	0	0
Grp Sat Flow(s),veh/h/ln	1804	1850	1593	1884	0	1902	1499	0	438	1602	0	0
Q Serve(g_s), s	0.6	29.2	0.0	0.3	0.0	25.8	0.0	0.0	4.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	29.2	0.0	0.3	0.0	25.8	3.1	0.0	4.7	4.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.27		0.67
Lane Grp Cap(c), veh/h	435	1316		408	0	1338	193	0	37	174	0	0
V/C Ratio(X)	0.08	0.66		0.05	0.00	0.62	0.24	0.00	0.52	0.17	0.00	0.00
Avail Cap(c_a), veh/h	621	1316		618	0	1338	397	0	96	396	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.3	9.0	0.0	8.0	0.0	8.8	49.2	0.0	49.9	48.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.6	0.0	0.0	0.0	2.1	0.2	0.0	4.2	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	9.4	0.0	0.1	0.0	8.6	1.2	0.0	0.6	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.3	11.6	0.0	8.0	0.0	11.0	49.4	0.0	54.1	48.8	0.0	0.0
LnGrp LOS	A	B		A	A	B	D	A	D	D	A	A
Approach Vol, veh/h		903	A		845			65			30	
Approach Delay, s/veh		11.4			10.9			50.8			48.8	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	87.9		16.5	10.2	87.0		16.5				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	15.0	80.0		25.0	15.0	80.0		25.0				
Max Q Clear Time (g_c+I1), s	2.3	0.0		6.7	2.6	0.0		6.7				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		13.2	
HCM 6th LOS		B	

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	25	840	30	14	811
Future Volume (vph)	8	25	840	30	14	811
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-2%		-1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.899		0.995			
Flt Protected	0.988					0.999
Satd. Flow (prot)	1430	0	1842	0	0	1794
Flt Permitted	0.988					0.999
Satd. Flow (perm)	1430	0	1842	0	0	1794
Link Speed (mph)	30		55			55
Link Distance (ft)	946		1025			1655
Travel Time (s)	21.5		12.7			20.5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	13%	16%	3%	7%	21%	5%
Adj. Flow (vph)	9	27	903	32	15	872
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	935	0	0	887
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

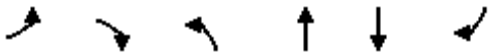
Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	25	840	30	14	811
Future Vol, veh/h	8	25	840	30	14	811
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, %	-2	-	-1	-	-	1
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	13	16	3	7	21	5
Mvmt Flow	9	27	903	32	15	872

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1821	919	0	0	935	0
Stage 1	919	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Critical Hdwy	6.13	6.16	-	-	4.31	-
Critical Hdwy Stg 1	5.13	-	-	-	-	-
Critical Hdwy Stg 2	5.13	-	-	-	-	-
Follow-up Hdwy	3.617	3.444	-	-	2.389	-
Pot Cap-1 Maneuver	98	326	-	-	660	-
Stage 1	412	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	94	326	-	-	660	-
Mov Cap-2 Maneuver	94	-	-	-	-	-
Stage 1	412	-	-	-	-	-
Stage 2	401	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.3	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	204	660	-
HCM Lane V/C Ratio	-	-	0.174	0.023	-
HCM Control Delay (s)	-	-	26.3	10.6	0
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

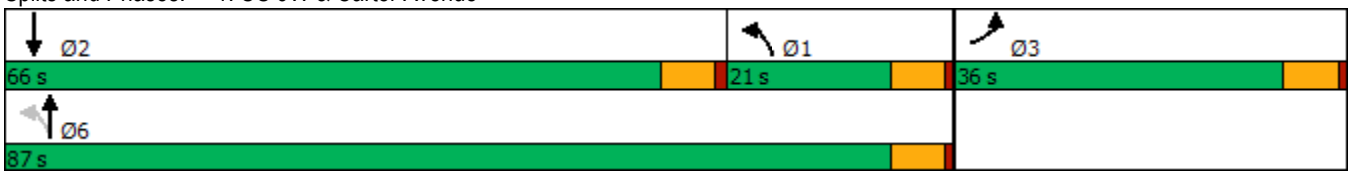


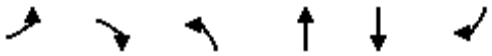
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	130	123	666	662	2
Future Volume (vph)	14	130	123	666	662	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	10
Grade (%)	1%			0%	0%	
Storage Length (ft)	0	0	130			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.878					
Flt Protected	0.995		0.950			
Satd. Flow (prot)	1652	0	1787	1863	1739	0
Flt Permitted	0.995		0.249			
Satd. Flow (perm)	1652	0	468	1863	1739	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	137					
Link Speed (mph)	30			40	40	
Link Distance (ft)	853			361	360	
Travel Time (s)	19.4			6.2	6.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	1%	2%	2%	0%
Adj. Flow (vph)	15	137	129	701	697	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	152	0	129	701	699	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.00	1.00	1.09	1.09
Turning Speed (mph)	15	9	15			9
Number of Detectors	2		2	2	2	
Detector Template				NYSDOT	NYSDOT	
Leading Detector (ft)	78		78	78	78	
Trailing Detector (ft)	-10		-10	-10	-10	
Detector 1 Position(ft)	-10		-10	-10	-10	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	2.0		2.0	2.0	2.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	5.0		5.0	0.0	0.0	
Detector 2 Position(ft)	38		38	38	38	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	2.0		2.0	2.0	2.0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	3		1	6	2	
Permitted Phases			6			
Detector Phase	3		1	6	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	10.0	10.0	
Minimum Split (s)	11.0		11.0	16.0	16.0	
Total Split (s)	36.0		21.0	87.0	66.0	
Total Split (%)	29.3%		17.1%	70.7%	53.7%	
Maximum Green (s)	30.0		15.0	81.0	60.0	
Yellow Time (s)	5.0		5.0	5.0	5.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Recall Mode	None		None	Min	Min	
v/c Ratio	0.50		0.30	0.56	0.83	
Control Delay	13.7		6.8	6.9	22.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	13.7		6.8	6.9	22.7	
Queue Length 50th (ft)	5		11	89	182	
Queue Length 95th (ft)	57		31	203	358	
Internal Link Dist (ft)	773			281	280	
Turn Bay Length (ft)			130			
Base Capacity (vph)	936		746	1863	1639	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.16		0.17	0.38	0.43	

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 58.7	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 1: US 9W & Carter Avenue





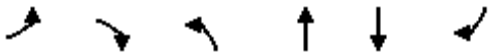
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	14	130	123	666	662	2
Future Volume (veh/h)	14	130	123	666	662	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1894	1894	1885	1870	1870	1870
Adj Flow Rate, veh/h	15	137	129	701	697	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	1	2	2	2
Cap, veh/h	20	180	351	1201	796	2
Arrive On Green	0.12	0.12	0.10	0.64	0.43	0.43
Sat Flow, veh/h	159	1454	1795	1870	1864	5
Grp Volume(v), veh/h	153	0	129	701	0	699
Grp Sat Flow(s),veh/h/ln	1624	0	1795	1870	0	1869
Q Serve(g_s), s	4.7	0.0	0.0	11.0	0.0	17.5
Cycle Q Clear(g_c), s	4.7	0.0	0.0	11.0	0.0	17.5
Prop In Lane	0.10	0.90	1.00			0.00
Lane Grp Cap(c), veh/h	201	0	351	1201	0	798
V/C Ratio(X)	0.76	0.00	0.37	0.58	0.00	0.88
Avail Cap(c_a), veh/h	952	0	701	2959	0	2191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.7	0.0	20.5	5.2	0.0	13.4
Incr Delay (d2), s/veh	2.3	0.0	0.2	0.2	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	1.2	2.0	0.0	5.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.0	0.0	20.8	5.4	0.0	14.7
LnGrp LOS	C	A	C	A	A	B
Approach Vol, veh/h	153			830	699	
Approach Delay, s/veh	24.0			7.8	14.7	
Approach LOS	C			A	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	27.9				38.9	12.3
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	15.0	60.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	2.0	19.5				13.0	6.7
Green Ext Time (p_c), s	0.2	2.4				2.4	0.5

Intersection Summary		
HCM 6th Ctrl Delay		12.1
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	41	38	654	646	18
Future Volume (vph)	13	41	38	654	646	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-5%			-4%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.898				0.996	
Flt Protected	0.988			0.997		
Satd. Flow (prot)	1609	0	0	1893	1838	0
Flt Permitted	0.988			0.997		
Satd. Flow (perm)	1609	0	0	1893	1838	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	1022			2082	1333	
Travel Time (s)	23.2			35.5	22.7	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	5%	3%	2%	2%	0%
Adj. Flow (vph)	15	47	44	752	743	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	62	0	0	796	764	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.97	0.97	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	41	38	654	646	18
Future Vol, veh/h	13	41	38	654	646	18
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, %	-5	-	-	-4	2	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	5	3	2	2	0
Mvmt Flow	15	47	44	752	743	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1594	754	764	0	-	0
Stage 1	754	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Critical Hdwy	5.4	5.75	4.13	-	-	-
Critical Hdwy Stg 1	4.4	-	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.345	2.227	-	-	-
Pot Cap-1 Maneuver	185	449	844	-	-	-
Stage 1	577	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	168	449	844	-	-	-
Mov Cap-2 Maneuver	168	-	-	-	-	-
Stage 1	525	-	-	-	-	-
Stage 2	539	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.9	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	844	-	320	-	-
HCM Lane V/C Ratio	0.052	-	0.194	-	-
HCM Control Delay (s)	9.5	0	18.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	662	5	2	660	4	2
Future Volume (vph)	662	5	2	660	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)	-2%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.955	
Flt Protected					0.968	
Satd. Flow (prot)	1880	0	0	1844	1874	0
Flt Permitted					0.968	
Satd. Flow (perm)	1880	0	0	1844	1874	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	650			359	371	
Travel Time (s)	8.1			4.5	8.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Adj. Flow (vph)	744	6	2	742	4	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	750	0	0	744	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.01	1.01	0.92	0.92
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

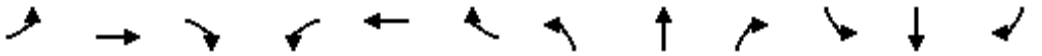
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	662	5	2	660	4	2
Future Vol, veh/h	662	5	2	660	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, %	-2	-	-	2	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	744	6	2	742	4	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	750	0	1493	747
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	746	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	868	-	137	416
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	472	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	868	-	136	416
Mov Cap-2 Maneuver	-	-	-	-	136	-
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	470	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	26.4
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	175	-	-	868	-
HCM Lane V/C Ratio	0.039	-	-	0.003	-
HCM Control Delay (s)	26.4	-	-	9.2	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



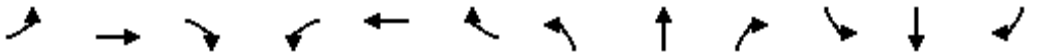
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	570	74	6	589	2	55	1	12	5	1	16
Future Volume (vph)	17	570	74	6	589	2	55	1	12	5	1	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	16	16	16
Grade (%)		1%			-2%			-3%			1%	
Storage Length (ft)	75		40	100		0	80		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	80			85			50			25		
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			0.850					0.861			0.899	
Flt Protected	0.950			0.950			0.950				0.990	
Satd. Flow (prot)	1796	1853	1607	1823	1881	0	1832	1660	0	0	1907	0
Flt Permitted	0.311			0.338			0.742				0.959	
Satd. Flow (perm)	588	1853	1607	649	1881	0	1431	1660	0	0	1847	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85					13			18	
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		250			260			201			326	
Travel Time (s)		3.1			3.2			4.6			7.4	
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%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	19	626	81	7	647	2	60	1	13	5	1	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	626	81	7	649	0	60	14	0	0	24	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	1.01	1.01	1.01	0.99	0.99	0.99	0.98	0.98	0.98	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2		1	2	
Detector Template										Left		
Leading Detector (ft)	78	0	0	78	0		78	78		20	78	
Trailing Detector (ft)	-10	0	0	-10	0		-10	-10		0	-10	
Detector 1 Position(ft)	-10	0	0	-10	0		-10	-10		0	-10	
Detector 1 Size(ft)	40	6	20	40	6		40	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	2.0	0.0	0.0	2.0	0.0		2.0	2.0		0.0	2.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	5.0	0.0	0.0	5.0	0.0		5.0	5.0		0.0	5.0	
Detector 2 Position(ft)	38			38			38	38			38	
Detector 2 Size(ft)	40			40			40	40			40	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	2.0			2.0			2.0	2.0			2.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA			NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8					
Detector Phase	5	2	2	1	6		8	8			4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	12.0	17.0	17.0	12.0	17.0		25.0	25.0			25.0	
Total Split (s)	22.0	87.0	87.0	22.0	87.0		32.0	32.0			32.0	
Total Split (%)	15.6%	61.7%	61.7%	15.6%	61.7%		22.7%	22.7%			22.7%	
Maximum Green (s)	15.0	80.0	80.0	15.0	80.0		25.0	25.0			25.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0	
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)	7.0	7.0	7.0	7.0	7.0		7.0	7.0			7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Recall Mode	None	Max	Max	None	Max		None	None			None	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							11.0	11.0			11.0	
Pedestrian Calls (#/hr)							0	0			0	
v/c Ratio	0.04	0.51	0.07	0.01	0.53		0.24	0.05			1.00	
Control Delay	6.3	12.7	1.9	6.2	14.7		46.0	20.9			219.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	6.3	12.7	1.9	6.2	14.7		46.0	20.9			219.0	
Queue Length 50th (ft)	4	217	0	2	227		38	1			6	
Queue Length 95th (ft)	12	401	19	6	423		87	20			#65	
Internal Link Dist (ft)		170			180			121			246	
Turn Bay Length (ft)	75		40	100			80					
Base Capacity (vph)	549	1235	1100	586	1217		288	345			24	
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	0.51	0.07	0.01	0.53		0.21	0.04			1.00	

Intersection Summary

Area Type: Other
Cycle Length: 141
Actuated Cycle Length: 124.2
Natural Cycle: 70
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Cortland Drive/Morris Drive & US 9W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	570	74	6	589	2	55	1	12	5	1	16
Future Volume (veh/h)	17	570	74	6	589	2	55	1	12	5	1	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1864	1894	1979	1949	1949	2018	2018	2018	1970	1970	1970
Adj Flow Rate, veh/h	19	626	0	7	647	2	60	1	13	5	1	18
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
Percent Heavy Veh, %	0	2	0	0	2	2	0	0	0	0	0	0
Cap, veh/h	547	1343		570	1377	4	196	10	136	52	22	107
Arrive On Green	0.02	0.72	0.00	0.01	0.71	0.71	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1804	1864	1605	1884	1942	6	1503	124	1606	158	264	1267
Grp Volume(v), veh/h	19	626	0	7	0	649	60	0	14	24	0	0
Grp Sat Flow(s),veh/h/ln	1804	1864	1605	1884	0	1948	1503	0	1729	1689	0	0
Q Serve(g_s), s	0.3	15.9	0.0	0.1	0.0	16.4	2.4	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	15.9	0.0	0.1	0.0	16.4	3.9	0.0	0.8	1.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.93	0.21		0.75
Lane Grp Cap(c), veh/h	547	1343		570	0	1382	196	0	146	181	0	0
V/C Ratio(X)	0.03	0.47		0.01	0.00	0.47	0.31	0.00	0.10	0.13	0.00	0.00
Avail Cap(c_a), veh/h	751	1343		804	0	1382	402	0	383	406	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.4	6.6	0.0	5.5	0.0	7.1	48.9	0.0	47.6	47.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.0	0.0	1.1	0.3	0.0	0.1	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.9	0.0	0.0	0.0	5.4	1.6	0.0	0.4	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.4	7.8	0.0	5.5	0.0	8.3	49.2	0.0	47.7	48.0	0.0	0.0
LnGrp LOS	A	A		A	A	A	D	A	D	D	A	A
Approach Vol, veh/h		645	A		656			74			24	
Approach Delay, s/veh		7.7			8.3			49.0			48.0	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	88.3		16.5	9.2	87.0		16.5				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	15.0	80.0		25.0	15.0	80.0		25.0				
Max Q Clear Time (g_c+I1), s	2.1	0.0		3.4	2.3	0.0		5.9				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		10.8
HCM 6th LOS		B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	9	564	22	8	581
Future Volume (vph)	14	9	564	22	8	581
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-2%		-1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.948		0.995			
Flt Protected	0.970					0.999
Satd. Flow (prot)	1637	0	1861	0	0	1852
Flt Permitted	0.970					0.999
Satd. Flow (perm)	1637	0	1861	0	0	1852
Link Speed (mph)	30		55			55
Link Distance (ft)	946		1025			1655
Travel Time (s)	21.5		12.7			20.5
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	11%	2%	5%	0%	2%
Adj. Flow (vph)	16	10	634	25	9	653
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	0	659	0	0	662
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

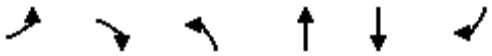
Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	9	564	22	8	581
Future Vol, veh/h	14	9	564	22	8	581
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, %	-2	-	-1	-	-	1
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	11	2	5	0	2
Mvmt Flow	16	10	634	25	9	653

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1318	647	0	0	659	0
Stage 1	647	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Critical Hdwy	6	6.11	-	-	4.1	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	203	472	-	-	939	-
Stage 1	564	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	200	472	-	-	939	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	564	-	-	-	-	-
Stage 2	543	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.5	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	258	939	-
HCM Lane V/C Ratio	-	-	0.1	0.01	-
HCM Control Delay (s)	-	-	20.5	8.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

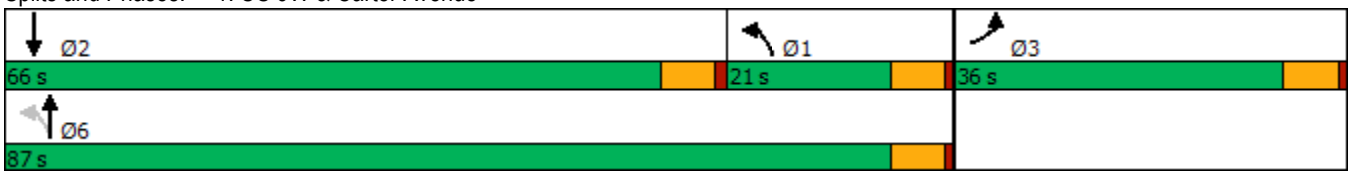


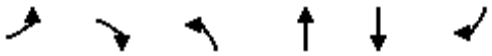
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	26	205	51	875	818	2
Future Volume (vph)	26	205	51	875	818	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	10
Grade (%)	1%			0%	0%	
Storage Length (ft)	0	0	130			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.880					
Flt Protected	0.994		0.950			
Satd. Flow (prot)	1590	0	1626	1759	1656	0
Flt Permitted	0.994		0.230			
Satd. Flow (perm)	1590	0	394	1759	1656	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	216					
Link Speed (mph)	30			40	40	
Link Distance (ft)	853			361	360	
Travel Time (s)	19.4			6.2	6.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	4%	11%	8%	7%	50%
Adj. Flow (vph)	27	216	54	921	861	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	243	0	54	921	863	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.00	1.00	1.09	1.09
Turning Speed (mph)	15	9	15			9
Number of Detectors	2		2	2	2	
Detector Template				NYSDOT	NYSDOT	
Leading Detector (ft)	78		78	78	78	
Trailing Detector (ft)	-10		-10	-10	-10	
Detector 1 Position(ft)	-10		-10	-10	-10	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	2.0		2.0	2.0	2.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	5.0		5.0	0.0	0.0	
Detector 2 Position(ft)	38		38	38	38	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	2.0		2.0	2.0	2.0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	3		1	6	2	
Permitted Phases			6			
Detector Phase	3		1	6	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	10.0	10.0	
Minimum Split (s)	11.0		11.0	16.0	16.0	
Total Split (s)	36.0		21.0	87.0	66.0	
Total Split (%)	29.3%		17.1%	70.7%	53.7%	
Maximum Green (s)	30.0		15.0	81.0	60.0	
Yellow Time (s)	5.0		5.0	5.0	5.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Recall Mode	None		None	Min	Min	
v/c Ratio	0.72		0.14	0.68	0.77	
Control Delay	20.8		4.4	8.5	18.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	20.8		4.4	8.5	18.0	
Queue Length 50th (ft)	15		5	167	293	
Queue Length 95th (ft)	88		18	430	#718	
Internal Link Dist (ft)	773			281	280	
Turn Bay Length (ft)			130			
Base Capacity (vph)	680		558	1589	1120	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.36		0.10	0.58	0.77	

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 89.3	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: US 9W & Carter Avenue





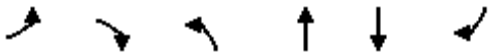
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	205	51	875	818	2
Future Volume (veh/h)	26	205	51	875	818	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1835	1835	1737	1781	1796	1159
Adj Flow Rate, veh/h	27	216	54	921	861	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	11	8	7	50
Cap, veh/h	32	257	226	1174	924	2
Arrive On Green	0.18	0.18	0.07	0.66	0.52	0.52
Sat Flow, veh/h	174	1394	1654	1781	1791	4
Grp Volume(v), veh/h	244	0	54	921	0	863
Grp Sat Flow(s),veh/h/ln	1575	0	1654	1781	0	1796
Q Serve(g_s), s	11.5	0.0	0.0	28.0	0.0	34.4
Cycle Q Clear(g_c), s	11.5	0.0	0.0	28.0	0.0	34.4
Prop In Lane	0.11	0.89	1.00			0.00
Lane Grp Cap(c), veh/h	290	0	226	1174	0	926
V/C Ratio(X)	0.84	0.00	0.24	0.78	0.00	0.93
Avail Cap(c_a), veh/h	617	0	442	1883	0	1406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.2	0.0	32.8	9.2	0.0	17.3
Incr Delay (d2), s/veh	2.5	0.0	0.2	0.4	0.0	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	0.9	7.6	0.0	13.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.7	0.0	33.0	9.7	0.0	23.7
LnGrp LOS	C	A	C	A	A	C
Approach Vol, veh/h	244			975	863	
Approach Delay, s/veh	32.7			11.0	23.7	
Approach LOS	C			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	45.5				56.5	20.1
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	15.0	60.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	2.0	36.4				30.0	13.5
Green Ext Time (p_c), s	0.1	3.2				3.7	0.7

Intersection Summary			
HCM 6th Ctrl Delay		18.8	
HCM 6th LOS		B	

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	55	19	898	943	15
Future Volume (vph)	20	55	19	898	943	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-5%			-4%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.901				0.998	
Flt Protected	0.987			0.999		
Satd. Flow (prot)	1540	0	0	1776	1735	0
Flt Permitted	0.987			0.999		
Satd. Flow (perm)	1540	0	0	1776	1735	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	1022			2082	1333	
Travel Time (s)	23.2			35.5	22.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	16%	6%	11%	9%	8%	21%
Adj. Flow (vph)	21	57	20	935	982	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	78	0	0	955	998	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.97	0.97	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	55	19	898	943	15
Future Vol, veh/h	20	55	19	898	943	15
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, %	-5	-	-	-4	2	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	16	6	11	9	8	21
Mvmt Flow	21	57	20	935	982	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1965	990	998	0	-	0
Stage 1	990	-	-	-	-	-
Stage 2	975	-	-	-	-	-
Critical Hdwy	5.56	5.76	4.21	-	-	-
Critical Hdwy Stg 1	4.56	-	-	-	-	-
Critical Hdwy Stg 2	4.56	-	-	-	-	-
Follow-up Hdwy	3.644	3.354	2.299	-	-	-
Pot Cap-1 Maneuver	109	337	659	-	-	-
Stage 1	446	-	-	-	-	-
Stage 2	452	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	102	337	659	-	-	-
Mov Cap-2 Maneuver	102	-	-	-	-	-
Stage 1	418	-	-	-	-	-
Stage 2	452	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	32.2	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	659	-	209	-	-
HCM Lane V/C Ratio	0.03	-	0.374	-	-
HCM Control Delay (s)	10.6	0	32.2	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	1.6	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	916	2	2	956	2	8
Future Volume (vph)	916	2	2	956	2	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)	-2%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.890	
Flt Protected					0.991	
Satd. Flow (prot)	1728	0	0	1725	1509	0
Flt Permitted					0.991	
Satd. Flow (perm)	1728	0	0	1725	1509	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	650			358	371	
Travel Time (s)	8.1			4.4	8.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	11%	50%	33%	9%	25%	17%
Adj. Flow (vph)	985	2	2	1028	2	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	987	0	0	1030	11	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.01	1.01	0.92	0.92
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	916	2	2	956	2	8
Future Vol, veh/h	916	2	2	956	2	8
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, %	-2	-	-	2	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	11	50	33	9	25	17
Mvmt Flow	985	2	2	1028	2	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	987	0	2018	986
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	1032	-
Critical Hdwy	-	-	4.43	-	6.65	6.37
Critical Hdwy Stg 1	-	-	-	-	5.65	-
Critical Hdwy Stg 2	-	-	-	-	5.65	-
Follow-up Hdwy	-	-	2.497	-	3.725	3.453
Pot Cap-1 Maneuver	-	-	591	-	55	282
Stage 1	-	-	-	-	328	-
Stage 2	-	-	-	-	311	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	591	-	55	282
Mov Cap-2 Maneuver	-	-	-	-	55	-
Stage 1	-	-	-	-	328	-
Stage 2	-	-	-	-	309	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	30.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	154	-	-	591	-
HCM Lane V/C Ratio	0.07	-	-	0.004	-
HCM Control Delay (s)	30.1	-	-	11.1	0
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

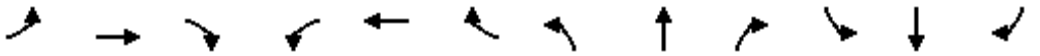
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	885	31	21	795	0	120	0	45	6	1	39
Future Volume (vph)	7	885	31	21	795	0	120	0	45	6	1	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	16	16	16
Grade (%)		1%			-2%			-3%			1%	
Storage Length (ft)	75		40	100		0	80		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	80			85			50			25		
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			0.850					0.850			0.884	
Flt Protected	0.950			0.950			0.950				0.994	
Satd. Flow (prot)	1796	1703	1328	1585	1777	0	1832	1532	0	0	1591	0
Flt Permitted	0.242			0.169			0.725				0.963	
Satd. Flow (perm)	458	1703	1328	282	1777	0	1398	1532	0	0	1541	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85					272			42	
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		250			260			201			326	
Travel Time (s)		3.1			3.2			4.6			7.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	11%	21%	15%	8%	0%	0%	0%	7%	17%	0%	19%
Adj. Flow (vph)	8	952	33	23	855	0	129	0	48	6	1	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	952	33	23	855	0	129	48	0	0	49	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	1.01	1.01	1.01	0.99	0.99	0.99	0.98	0.98	0.98	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2		1	2	
Detector Template										Left		
Leading Detector (ft)	78	0	0	78	0		78	78		20	78	
Trailing Detector (ft)	-10	0	0	-10	0		-10	-10		0	-10	
Detector 1 Position(ft)	-10	0	0	-10	0		-10	-10		0	-10	
Detector 1 Size(ft)	40	6	20	40	6		40	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	2.0	0.0	0.0	2.0	0.0		2.0	2.0		0.0	2.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	5.0	0.0	0.0	5.0	0.0		5.0	5.0		0.0	5.0	
Detector 2 Position(ft)	38			38			38	38			38	
Detector 2 Size(ft)	40			40			40	40			40	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	2.0			2.0			2.0	2.0			2.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	25.0	25.0	12.0	17.0		25.0	25.0		25.0	25.0	
Total Split (s)	22.0	87.0	87.0	22.0	87.0		32.0	32.0		32.0	32.0	
Total Split (%)	15.6%	61.7%	61.7%	15.6%	61.7%		22.7%	22.7%		22.7%	22.7%	
Maximum Green (s)	15.0	80.0	80.0	15.0	80.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	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)	7.0	7.0	7.0	7.0	7.0		7.0	7.0			7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Walk Time (s)		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	
Pedestrian Calls (#/hr)		2	2				0	0		0	0	
v/c Ratio	0.02	0.81	0.04	0.09	0.66		0.69	0.11			0.20	
Control Delay	5.1	22.9	0.1	5.4	13.4		69.0	0.5			18.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	5.1	22.9	0.1	5.4	13.4		69.0	0.5			18.5	
Queue Length 50th (ft)	1	536	0	4	272		99	0			5	
Queue Length 95th (ft)	6	#1005	0	13	683		167	0			42	
Internal Link Dist (ft)		170			180			121			246	
Turn Bay Length (ft)	75		40	100			80					
Base Capacity (vph)	514	1170	939	378	1293		300	542			364	
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	0.02	0.81	0.04	0.06	0.66		0.43	0.09			0.13	

Intersection Summary

Area Type: Other
Cycle Length: 141
Actuated Cycle Length: 117.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Cortland Drive/Morris Drive & US 9W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	885	31	21	795	0	120	0	45	6	1	39
Future Volume (veh/h)	7	885	31	21	795	0	120	0	45	6	1	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1731	1583	1754	1859	1979	2018	2018	1913	1708	1970	1677
Adj Flow Rate, veh/h	8	952	0	23	855	0	129	0	48	6	1	42
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	11	21	15	8	0	0	0	7	17	0	19
Cap, veh/h	382	1205		280	1318	0	219	0	168	44	15	141
Arrive On Green	0.01	0.70	0.00	0.02	0.71	0.00	0.10	0.00	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1804	1731	1341	1670	1859	0	1471	0	1710	88	151	1438
Grp Volume(v), veh/h	8	952	0	23	855	0	129	0	48	49	0	0
Grp Sat Flow(s),veh/h/ln	1804	1731	1341	1670	1859	0	1471	0	1710	1678	0	0
Q Serve(g_s), s	0.2	42.6	0.0	0.5	28.5	0.0	5.9	0.0	3.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	42.6	0.0	0.5	28.5	0.0	8.9	0.0	3.0	3.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.12		0.86
Lane Grp Cap(c), veh/h	382	1205		280	1318	0	219	0	168	200	0	0
V/C Ratio(X)	0.02	0.79		0.08	0.65	0.00	0.59	0.00	0.29	0.24	0.00	0.00
Avail Cap(c_a), veh/h	600	1205		460	1318	0	395	0	372	396	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.2	11.8	0.0	12.9	9.0	0.0	50.5	0.0	48.1	48.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.3	0.0	0.0	2.5	0.0	0.9	0.0	0.3	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.8	0.0	0.2	9.3	0.0	3.7	0.0	1.3	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.2	17.1	0.0	12.9	11.5	0.0	51.4	0.0	48.4	48.3	0.0	0.0
LnGrp LOS	A	B		B	B	A	D	A	D	D	A	A
Approach Vol, veh/h		960	A		878			177			49	
Approach Delay, s/veh		17.0			11.5			50.6			48.3	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	87.0		18.3	8.1	88.5		18.3				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	15.0	80.0		25.0	15.0	80.0		25.0				
Max Q Clear Time (g_c+I1), s	2.5	0.0		5.1	2.2	0.0		10.9				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.0		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		18.3	
HCM 6th LOS		B	

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	9	903	21	21	808
Future Volume (vph)	8	9	903	21	21	808
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-2%		-1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.929		0.997			
Flt Protected	0.977					0.999
Satd. Flow (prot)	1504	0	1736	0	0	1744
Flt Permitted	0.977					0.999
Satd. Flow (perm)	1504	0	1736	0	0	1744
Link Speed (mph)	30		55			55
Link Distance (ft)	946		1025			1655
Travel Time (s)	21.5		12.7			20.5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	13%	11%	9%	37%	20%	8%
Adj. Flow (vph)	9	10	971	23	23	869
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	994	0	0	892
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

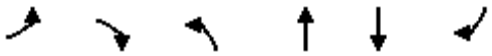
Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	9	903	21	21	808
Future Vol, veh/h	8	9	903	21	21	808
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, %	-2	-	-1	-	-	1
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	13	11	9	37	20	8
Mvmt Flow	9	10	971	23	23	869

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1898	983	0	0	994	0
Stage 1	983	-	-	-	-	-
Stage 2	915	-	-	-	-	-
Critical Hdwy	6.13	6.11	-	-	4.3	-
Critical Hdwy Stg 1	5.13	-	-	-	-	-
Critical Hdwy Stg 2	5.13	-	-	-	-	-
Follow-up Hdwy	3.617	3.399	-	-	2.38	-
Pot Cap-1 Maneuver	88	307	-	-	630	-
Stage 1	386	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	82	307	-	-	630	-
Mov Cap-2 Maneuver	82	-	-	-	-	-
Stage 1	386	-	-	-	-	-
Stage 2	384	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	36.1	0	0.3
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	134	630	-
HCM Lane V/C Ratio	-	-	0.136	0.036	-
HCM Control Delay (s)	-	-	36.1	10.9	0
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

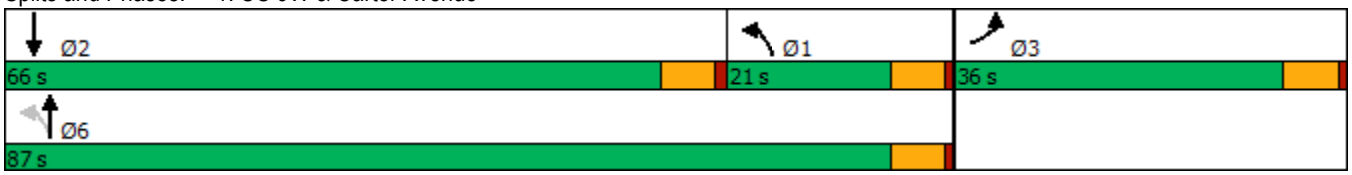


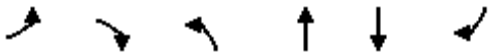
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	125	206	1088	827	0
Future Volume (vph)	21	125	206	1088	827	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	10
Grade (%)	1%			0%	0%	
Storage Length (ft)	0	0	130			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.884					
Flt Protected	0.993		0.950			
Satd. Flow (prot)	1596	0	1787	1845	1705	0
Flt Permitted	0.993		0.207			
Satd. Flow (perm)	1596	0	389	1845	1705	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	128					
Link Speed (mph)	30			40	40	
Link Distance (ft)	853			361	360	
Travel Time (s)	19.4			6.2	6.1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	10%	3%	1%	3%	4%	0%
Adj. Flow (vph)	21	128	210	1110	844	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	149	0	210	1110	844	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.00	1.00	1.09	1.09
Turning Speed (mph)	15	9	15			9
Number of Detectors	2		2	2	2	
Detector Template				NYSDOT	NYSDOT	
Leading Detector (ft)	78		78	78	78	
Trailing Detector (ft)	-10		-10	-10	-10	
Detector 1 Position(ft)	-10		-10	-10	-10	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	2.0		2.0	2.0	2.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	5.0		5.0	0.0	0.0	
Detector 2 Position(ft)	38		38	38	38	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	2.0		2.0	2.0	2.0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	3		1	6	2	
Permitted Phases			6			
Detector Phase	3		1	6	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	10.0	10.0	
Minimum Split (s)	11.0		11.0	16.0	16.0	
Total Split (s)	36.0		21.0	87.0	66.0	
Total Split (%)	29.3%		17.1%	70.7%	53.7%	
Maximum Green (s)	30.0		15.0	81.0	60.0	
Yellow Time (s)	5.0		5.0	5.0	5.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Recall Mode	None		None	Min	Min	
v/c Ratio	0.63		0.44	0.76	0.80	
Control Delay	23.5		10.0	9.5	22.9	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	23.5		10.0	9.5	22.9	
Queue Length 50th (ft)	12		20	233	346	
Queue Length 95th (ft)	73		48	537	#738	
Internal Link Dist (ft)	773			281	280	
Turn Bay Length (ft)			130			
Base Capacity (vph)	595		549	1586	1086	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.25		0.38	0.70	0.78	

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 94.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: US 9W & Carter Avenue





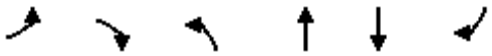
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	125	206	1088	827	0
Future Volume (veh/h)	21	125	206	1088	827	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1746	1850	1885	1856	1841	1900
Adj Flow Rate, veh/h	21	128	210	1110	844	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	10	3	1	3	4	0
Cap, veh/h	27	162	294	1263	926	0
Arrive On Green	0.13	0.13	0.08	0.68	0.50	0.00
Sat Flow, veh/h	211	1284	1795	1856	1841	0
Grp Volume(v), veh/h	150	0	210	1110	844	0
Grp Sat Flow(s),veh/h/ln	1504	0	1795	1856	1841	0
Q Serve(g_s), s	6.0	0.0	1.7	29.5	26.1	0.0
Cycle Q Clear(g_c), s	6.0	0.0	1.7	29.5	26.1	0.0
Prop In Lane	0.14	0.85	1.00			0.00
Lane Grp Cap(c), veh/h	190	0	294	1263	926	0
V/C Ratio(X)	0.79	0.00	0.71	0.88	0.91	0.00
Avail Cap(c_a), veh/h	727	0	583	2423	1780	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.3	0.0	26.2	7.9	14.1	0.0
Incr Delay (d2), s/veh	2.8	0.0	1.2	0.8	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	2.7	6.3	8.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.1	0.0	27.4	8.7	15.7	0.0
LnGrp LOS	C	A	C	A	B	A
Approach Vol, veh/h	150			1320	844	
Approach Delay, s/veh	29.1			11.7	15.7	
Approach LOS	C			B	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	37.2				48.2	13.8
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	15.0	60.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	3.7	28.1				31.5	8.0
Green Ext Time (p_c), s	0.4	3.1				5.3	0.5

Intersection Summary			
HCM 6th Ctrl Delay		14.3	
HCM 6th LOS		B	

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	32	78	1086	932	30
Future Volume (vph)	7	32	78	1086	932	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-5%			-4%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.889				0.996	
Flt Protected	0.991			0.997		
Satd. Flow (prot)	1532	0	0	1878	1785	0
Flt Permitted	0.991			0.997		
Satd. Flow (perm)	1532	0	0	1878	1785	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	1022			2082	1333	
Travel Time (s)	23.2			35.5	22.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	10%	1%	3%	5%	3%
Adj. Flow (vph)	7	33	80	1108	951	31
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	0	1188	982	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.97	0.97	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	32	78	1086	932	30
Future Vol, veh/h	7	32	78	1086	932	30
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, %	-5	-	-	-4	2	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	10	1	3	5	3
Mvmt Flow	7	33	80	1108	951	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2235	967	982	0	-	0
Stage 1	967	-	-	-	-	-
Stage 2	1268	-	-	-	-	-
Critical Hdwy	5.4	5.8	4.11	-	-	-
Critical Hdwy Stg 1	4.4	-	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.39	2.209	-	-	-
Pot Cap-1 Maneuver	88	341	707	-	-	-
Stage 1	487	-	-	-	-	-
Stage 2	380	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	62	341	707	-	-	-
Mov Cap-2 Maneuver	62	-	-	-	-	-
Stage 1	344	-	-	-	-	-
Stage 2	380	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.1	0.7	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	707	-	189	-	-
HCM Lane V/C Ratio	0.113	-	0.211	-	-
HCM Control Delay (s)	10.7	0	29.1	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.4	-	0.8	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1087	6	3	960	2	0
Future Volume (vph)	1087	6	3	960	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)	-2%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999					
Flt Protected					0.950	
Satd. Flow (prot)	1862	0	0	1792	1925	0
Flt Permitted					0.950	
Satd. Flow (perm)	1862	0	0	1792	1925	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	650			359	371	
Travel Time (s)	8.1			4.5	8.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	5%	0%	0%
Adj. Flow (vph)	1132	6	3	1000	2	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1138	0	0	1003	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.01	1.01	0.92	0.92
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1087	6	3	960	2	0
Future Vol, veh/h	1087	6	3	960	2	0
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, %	-2	-	-	2	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	0	0	5	0	0
Mvmt Flow	1132	6	3	1000	2	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1138	0	2141	1135
Stage 1	-	-	-	-	1135	-
Stage 2	-	-	-	-	1006	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	621	-	54	249
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	357	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	621	-	53	249
Mov Cap-2 Maneuver	-	-	-	-	53	-
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	353	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	75.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	53	-	-	621	-
HCM Lane V/C Ratio	0.039	-	-	0.005	-
HCM Control Delay (s)	75.7	-	-	10.8	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

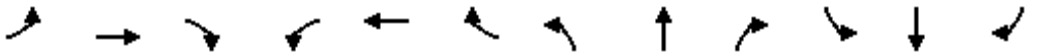
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	945	106	36	855	4	88	0	20	8	2	20
Future Volume (vph)	34	945	106	36	855	4	88	0	20	8	2	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	16	16	16
Grade (%)		1%			-2%			-3%			1%	
Storage Length (ft)	75		40	100		0	80		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	80			85			50			25		
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			0.850		0.999			0.850			0.909	
Flt Protected	0.950			0.950			0.950				0.987	
Satd. Flow (prot)	1796	1835	1591	1823	1826	0	1832	1413	0	0	1922	0
Flt Permitted	0.216			0.169			0.737				0.918	
Satd. Flow (perm)	408	1835	1591	324	1826	0	1421	1413	0	0	1788	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85					267			21	
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		250			260			201			326	
Travel Time (s)		3.1			3.2			4.6			7.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	1%	0%	5%	0%	0%	100%	16%	0%	0%	0%
Adj. Flow (vph)	35	974	109	37	881	4	91	0	21	8	2	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	974	109	37	885	0	91	21	0	0	31	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	1.01	1.01	1.01	0.99	0.99	0.99	0.98	0.98	0.98	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2		1	2	
Detector Template										Left		
Leading Detector (ft)	78	0	0	78	0		78	78		20	78	
Trailing Detector (ft)	-10	0	0	-10	0		-10	-10		0	-10	
Detector 1 Position(ft)	-10	0	0	-10	0		-10	-10		0	-10	
Detector 1 Size(ft)	40	6	20	40	6		40	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	2.0	0.0	0.0	2.0	0.0		2.0	2.0		0.0	2.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	5.0	0.0	0.0	5.0	0.0		5.0	5.0		0.0	5.0	
Detector 2 Position(ft)	38			38			38	38			38	
Detector 2 Size(ft)	40			40			40	40			40	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	2.0			2.0			2.0	2.0			2.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	25.0	25.0	12.0	17.0		25.0	25.0		25.0	25.0	
Total Split (s)	22.0	87.0	87.0	22.0	87.0		32.0	32.0		32.0	32.0	
Total Split (%)	15.6%	61.7%	61.7%	15.6%	61.7%		22.7%	22.7%		22.7%	22.7%	
Maximum Green (s)	15.0	80.0	80.0	15.0	80.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	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)	7.0	7.0	7.0	7.0	7.0		7.0	7.0			7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Walk Time (s)		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	
Pedestrian Calls (#/hr)		2	2				0	0		0	0	
v/c Ratio	0.10	0.75	0.10	0.12	0.69		0.58	0.05			0.14	
Control Delay	4.4	17.7	2.7	4.6	15.2		64.3	0.2			26.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	4.4	17.7	2.7	4.6	15.2		64.3	0.2			26.1	
Queue Length 50th (ft)	5	464	5	5	384		68	0			7	
Queue Length 95th (ft)	15	786	28	15	642		125	0			37	
Internal Link Dist (ft)		170			180			121			246	
Turn Bay Length (ft)	75		40	100			80					
Base Capacity (vph)	495	1291	1144	445	1284		312	519			409	
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	0.07	0.75	0.10	0.08	0.69		0.29	0.04			0.08	

Intersection Summary

Area Type: Other
Cycle Length: 141
Actuated Cycle Length: 114.4
Natural Cycle: 90
Control Type: Semi Act-Uncoord

Splits and Phases: 5: Cortland Drive/Morris Drive & US 9W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	945	106	36	855	4	88	0	20	8	2	20
Future Volume (veh/h)	34	945	106	36	855	4	88	0	20	8	2	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1850	1879	1979	1904	1979	2018	517	1778	1970	1970	1970
Adj Flow Rate, veh/h	35	974	0	37	881	4	91	0	21	8	2	21
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	3	1	0	5	0	0	100	16	0	0	0
Cap, veh/h	395	1294		343	1326	6	191	0	38	57	26	91
Arrive On Green	0.03	0.70	0.00	0.03	0.70	0.70	0.09	0.00	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1804	1850	1593	1884	1893	9	1498	0	438	197	303	1050
Grp Volume(v), veh/h	35	974	0	37	0	885	91	0	21	31	0	0
Grp Sat Flow(s),veh/h/ln	1804	1850	1593	1884	0	1902	1498	0	438	1549	0	0
Q Serve(g_s), s	0.6	38.2	0.0	0.6	0.0	29.8	1.6	0.0	5.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	38.2	0.0	0.6	0.0	29.8	6.9	0.0	5.3	5.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.26		0.68
Lane Grp Cap(c), veh/h	395	1294		343	0	1332	191	0	38	174	0	0
V/C Ratio(X)	0.09	0.75		0.11	0.00	0.66	0.48	0.00	0.55	0.18	0.00	0.00
Avail Cap(c_a), veh/h	579	1294		533	0	1332	389	0	96	389	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.4	10.9	0.0	11.1	0.0	9.6	50.9	0.0	50.1	48.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.1	0.0	0.1	0.0	2.6	0.7	0.0	4.6	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	12.9	0.0	0.3	0.0	10.1	2.6	0.0	0.6	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.4	15.0	0.0	11.1	0.0	12.2	51.5	0.0	54.7	48.8	0.0	0.0
LnGrp LOS	A	B		B	A	B	D	A	D	D	A	A
Approach Vol, veh/h		1009	A		922			112			31	
Approach Delay, s/veh		14.8			12.2			52.1			48.8	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	87.0		16.9	10.4	87.1		16.9				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	15.0	80.0		25.0	15.0	80.0		25.0				
Max Q Clear Time (g_c+I1), s	2.6	0.0		7.3	2.6	0.0		8.9				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		16.1	
HCM 6th LOS		B	

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	26	916	32	15	887
Future Volume (vph)	8	26	916	32	15	887
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-2%		-1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.898		0.995			
Flt Protected	0.988					0.999
Satd. Flow (prot)	1428	0	1842	0	0	1794
Flt Permitted	0.988					0.999
Satd. Flow (perm)	1428	0	1842	0	0	1794
Link Speed (mph)	30		55			55
Link Distance (ft)	946		1025			1655
Travel Time (s)	21.5		12.7			20.5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	13%	16%	3%	7%	21%	5%
Adj. Flow (vph)	9	28	985	34	16	954
Shared Lane Traffic (%)						
Lane Group Flow (vph)	37	0	1019	0	0	970
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

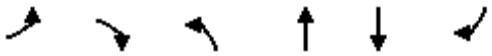
Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	26	916	32	15	887
Future Vol, veh/h	8	26	916	32	15	887
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, %	-2	-	-1	-	-	1
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	13	16	3	7	21	5
Mvmt Flow	9	28	985	34	16	954

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1988	1002	0	0	1019	0
Stage 1	1002	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Critical Hdwy	6.13	6.16	-	-	4.31	-
Critical Hdwy Stg 1	5.13	-	-	-	-	-
Critical Hdwy Stg 2	5.13	-	-	-	-	-
Follow-up Hdwy	3.617	3.444	-	-	2.389	-
Pot Cap-1 Maneuver	78	293	-	-	612	-
Stage 1	379	-	-	-	-	-
Stage 2	385	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	74	293	-	-	612	-
Mov Cap-2 Maneuver	74	-	-	-	-	-
Stage 1	379	-	-	-	-	-
Stage 2	363	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.3	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	173	612	-
HCM Lane V/C Ratio	-	-	0.211	0.026	-
HCM Control Delay (s)	-	-	31.3	11	0
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	0.8	0.1	-

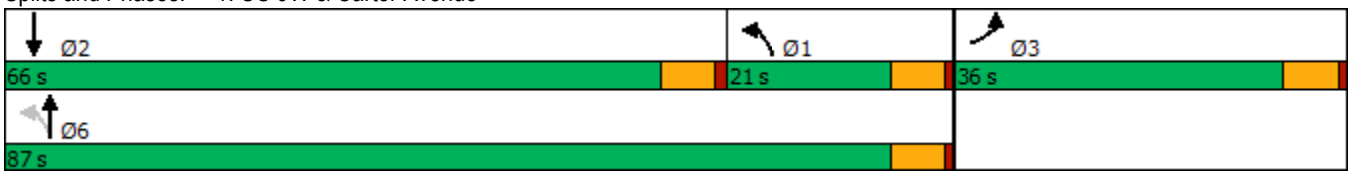


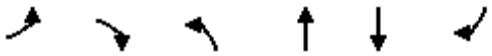
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	143	135	768	761	2
Future Volume (vph)	15	143	135	768	761	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	10
Grade (%)	1%			0%	0%	
Storage Length (ft)	0	0	130			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.878					
Flt Protected	0.995		0.950			
Satd. Flow (prot)	1652	0	1787	1863	1739	0
Flt Permitted	0.995		0.215			
Satd. Flow (perm)	1652	0	404	1863	1739	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	151					
Link Speed (mph)	30			40	40	
Link Distance (ft)	853			361	360	
Travel Time (s)	19.4			6.2	6.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	1%	2%	2%	0%
Adj. Flow (vph)	16	151	142	808	801	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	167	0	142	808	803	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.00	1.00	1.09	1.09
Turning Speed (mph)	15	9	15			9
Number of Detectors	2		2	2	2	
Detector Template				NYSDOT	NYSDOT	
Leading Detector (ft)	78		78	78	78	
Trailing Detector (ft)	-10		-10	-10	-10	
Detector 1 Position(ft)	-10		-10	-10	-10	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	2.0		2.0	2.0	2.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	5.0		5.0	0.0	0.0	
Detector 2 Position(ft)	38		38	38	38	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	2.0		2.0	2.0	2.0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	3		1	6	2	
Permitted Phases			6			
Detector Phase	3		1	6	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	10.0	10.0	
Minimum Split (s)	11.0		11.0	16.0	16.0	
Total Split (s)	36.0		21.0	87.0	66.0	
Total Split (%)	29.3%		17.1%	70.7%	53.7%	
Maximum Green (s)	30.0		15.0	81.0	60.0	
Yellow Time (s)	5.0		5.0	5.0	5.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Recall Mode	None		None	Min	Min	
v/c Ratio	0.59		0.32	0.58	0.81	
Control Delay	18.4		6.4	6.2	21.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	18.4		6.4	6.2	21.7	
Queue Length 50th (ft)	7		13	115	258	
Queue Length 95th (ft)	72		33	256	563	
Internal Link Dist (ft)	773			281	280	
Turn Bay Length (ft)			130			
Base Capacity (vph)	755		622	1753	1412	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.22		0.23	0.46	0.57	

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 77.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 1: US 9W & Carter Avenue





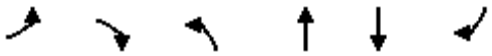
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	143	135	768	761	2
Future Volume (veh/h)	15	143	135	768	761	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1894	1894	1885	1870	1870	1900
Adj Flow Rate, veh/h	16	151	142	808	801	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	1	2	2	0
Cap, veh/h	21	195	307	1240	889	2
Arrive On Green	0.13	0.13	0.08	0.66	0.48	0.48
Sat Flow, veh/h	155	1459	1795	1870	1865	5
Grp Volume(v), veh/h	168	0	142	808	0	803
Grp Sat Flow(s),veh/h/ln	1624	0	1795	1870	0	1870
Q Serve(g_s), s	5.9	0.0	0.0	15.1	0.0	23.3
Cycle Q Clear(g_c), s	5.9	0.0	0.0	15.1	0.0	23.3
Prop In Lane	0.10	0.90	1.00			0.00
Lane Grp Cap(c), veh/h	217	0	307	1240	0	891
V/C Ratio(X)	0.77	0.00	0.46	0.65	0.00	0.90
Avail Cap(c_a), veh/h	825	0	612	2567	0	1901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	24.4	5.9	0.0	14.2
Incr Delay (d2), s/veh	2.2	0.0	0.4	0.2	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	1.7	3.2	0.0	7.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.9	0.0	24.8	6.1	0.0	15.6
LnGrp LOS	C	A	C	A	A	B
Approach Vol, veh/h	168			950	803	
Approach Delay, s/veh	26.9			8.9	15.6	
Approach LOS	C			A	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	34.1				45.1	13.9
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	15.0	60.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	2.0	25.3				17.1	7.9
Green Ext Time (p_c), s	0.3	2.9				2.9	0.5

Intersection Summary			
HCM 6th Ctrl Delay		13.3	
HCM 6th LOS		B	

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	43	40	755	745	19
Future Volume (vph)	14	43	40	755	745	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-5%			-4%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.898				0.997	
Flt Protected	0.988			0.997		
Satd. Flow (prot)	1610	0	0	1893	1839	0
Flt Permitted	0.988			0.997		
Satd. Flow (perm)	1610	0	0	1893	1839	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	1022			2082	1333	
Travel Time (s)	23.2			35.5	22.7	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	5%	3%	2%	2%	0%
Adj. Flow (vph)	16	49	46	868	856	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	65	0	0	914	878	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.97	0.97	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	43	40	755	745	19
Future Vol, veh/h	14	43	40	755	745	19
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, %	-5	-	-	-4	2	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	5	3	2	2	0
Mvmt Flow	16	49	46	868	856	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1827	867	878	0	-	0
Stage 1	867	-	-	-	-	-
Stage 2	960	-	-	-	-	-
Critical Hdwy	5.4	5.75	4.13	-	-	-
Critical Hdwy Stg 1	4.4	-	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.345	2.227	-	-	-
Pot Cap-1 Maneuver	142	392	765	-	-	-
Stage 1	528	-	-	-	-	-
Stage 2	489	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	126	392	765	-	-	-
Mov Cap-2 Maneuver	126	-	-	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	489	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.6	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	765	-	258	-	-
HCM Lane V/C Ratio	0.06	-	0.254	-	-
HCM Control Delay (s)	10	0	23.6	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	764	5	2	760	4	2
Future Volume (vph)	764	5	2	760	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)	-2%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.955	
Flt Protected					0.968	
Satd. Flow (prot)	1880	0	0	1844	1874	0
Flt Permitted					0.968	
Satd. Flow (perm)	1880	0	0	1844	1874	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	650			359	371	
Travel Time (s)	8.1			4.5	8.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Adj. Flow (vph)	858	6	2	854	4	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	864	0	0	856	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.01	1.01	0.92	0.92
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

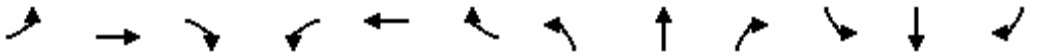
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	764	5	2	760	4	2
Future Vol, veh/h	764	5	2	760	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, %	-2	-	-	2	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	858	6	2	854	4	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	864	0	1719	861
Stage 1	-	-	-	-	861	-
Stage 2	-	-	-	-	858	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	787	-	100	358
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	419	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	787	-	100	358
Mov Cap-2 Maneuver	-	-	-	-	100	-
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	417	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	33.7
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	132	-	-	787	-
HCM Lane V/C Ratio	0.051	-	-	0.003	-
HCM Control Delay (s)	33.7	-	-	9.6	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-



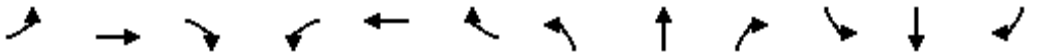
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	664	81	22	643	2	100	1	13	5	1	17
Future Volume (vph)	18	664	81	22	643	2	100	1	13	5	1	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	16	16	16
Grade (%)		1%			-2%			-3%			1%	
Storage Length (ft)	75		40	100		0	80		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	80			85			50			25		
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			0.850					0.860			0.897	
Flt Protected	0.950			0.950			0.950				0.990	
Satd. Flow (prot)	1796	1853	1607	1823	1881	0	1832	1659	0	0	1903	0
Flt Permitted	0.318			0.295			0.741				0.945	
Satd. Flow (perm)	601	1853	1607	566	1881	0	1429	1659	0	0	1816	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85					14			19	
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		250			260			201			326	
Travel Time (s)		3.1			3.2			4.6			7.4	
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%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	20	730	89	24	707	2	110	1	14	5	1	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	730	89	24	709	0	110	15	0	0	25	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	1.01	1.01	1.01	0.99	0.99	0.99	0.98	0.98	0.98	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2		1	2	
Detector Template										Left		
Leading Detector (ft)	78	0	0	78	0		78	78		20	78	
Trailing Detector (ft)	-10	0	0	-10	0		-10	-10		0	-10	
Detector 1 Position(ft)	-10	0	0	-10	0		-10	-10		0	-10	
Detector 1 Size(ft)	40	6	20	40	6		40	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	2.0	0.0	0.0	2.0	0.0		2.0	2.0		0.0	2.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	5.0	0.0	0.0	5.0	0.0		5.0	5.0		0.0	5.0	
Detector 2 Position(ft)	38			38			38	38			38	
Detector 2 Size(ft)	40			40			40	40			40	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	2.0			2.0			2.0	2.0			2.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	25.0	25.0	12.0	17.0		25.0	25.0		25.0	25.0	
Total Split (s)	22.0	87.0	87.0	22.0	87.0		32.0	32.0		32.0	32.0	
Total Split (%)	15.6%	61.7%	61.7%	15.6%	61.7%		22.7%	22.7%		22.7%	22.7%	
Maximum Green (s)	15.0	80.0	80.0	15.0	80.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	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)	7.0	7.0	7.0	7.0	7.0		7.0	7.0			7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Walk Time (s)		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	
Pedestrian Calls (#/hr)		2	2				0	0		0	0	
v/c Ratio	0.04	0.57	0.08	0.05	0.53		0.64	0.07			0.11	
Control Delay	4.4	12.5	2.1	4.4	10.8		66.6	22.2			23.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	4.4	12.5	2.1	4.4	10.8		66.6	22.2			23.8	
Queue Length 50th (ft)	3	282	1	4	172		83	1			4	
Queue Length 95th (ft)	11	466	21	12	437		146	21			31	
Internal Link Dist (ft)		170			180			121			246	
Turn Bay Length (ft)	75		40	100			80					
Base Capacity (vph)	611	1292	1146	592	1350		311	372			410	
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	0.57	0.08	0.04	0.53		0.35	0.04			0.06	

Intersection Summary

Area Type: Other
Cycle Length: 141
Actuated Cycle Length: 115.5
Natural Cycle: 75
Control Type: Semi Act-Uncoord

Splits and Phases: 5: Cortland Drive/Morris Drive & US 9W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	664	81	22	643	2	100	1	13	5	1	17
Future Volume (veh/h)	18	664	81	22	643	2	100	1	13	5	1	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1864	1894	1979	1949	1979	2018	2018	2018	1970	1970	1970
Adj Flow Rate, veh/h	20	730	0	24	707	2	110	1	14	5	1	19
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
Percent Heavy Veh, %	0	2	0	0	2	0	0	0	0	0	0	0
Cap, veh/h	505	1313		502	1374	4	200	10	141	51	22	112
Arrive On Green	0.02	0.70	0.00	0.02	0.71	0.71	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1804	1864	1605	1884	1942	5	1502	115	1613	150	255	1283
Grp Volume(v), veh/h	20	730	0	24	0	709	110	0	15	25	0	0
Grp Sat Flow(s),veh/h/ln	1804	1864	1605	1884	0	1948	1502	0	1728	1688	0	0
Q Serve(g_s), s	0.4	21.6	0.0	0.4	0.0	19.0	6.2	0.0	0.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	21.6	0.0	0.4	0.0	19.0	7.7	0.0	0.9	1.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.93	0.20		0.76
Lane Grp Cap(c), veh/h	505	1313		502	0	1377	200	0	151	185	0	0
V/C Ratio(X)	0.04	0.56		0.05	0.00	0.51	0.55	0.00	0.10	0.13	0.00	0.00
Avail Cap(c_a), veh/h	706	1313		707	0	1377	400	0	380	403	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.9	8.2	0.0	6.4	0.0	7.7	50.7	0.0	47.7	48.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.0	0.0	1.4	0.9	0.0	0.1	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	7.0	0.0	0.1	0.0	6.4	3.1	0.0	0.4	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.9	9.9	0.0	6.4	0.0	9.0	51.6	0.0	47.8	48.1	0.0	0.0
LnGrp LOS	A	A		A	A	A	D	A	D	D	A	A
Approach Vol, veh/h		750	A		733			125			25	
Approach Delay, s/veh		9.7			8.9			51.1			48.1	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	87.0		16.9	9.3	87.3		16.9				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	15.0	80.0		25.0	15.0	80.0		25.0				
Max Q Clear Time (g_c+I1), s	2.4	0.0		3.5	2.4	0.0		9.7				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.3				

Intersection Summary		
HCM 6th Ctrl Delay		13.1
HCM 6th LOS		B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	15	9	633	23	8	650
Future Volume (vph)	15	9	633	23	8	650
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-2%		-1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.950		0.995			
Flt Protected	0.969					0.999
Satd. Flow (prot)	1641	0	1861	0	0	1852
Flt Permitted	0.969					0.999
Satd. Flow (perm)	1641	0	1861	0	0	1852
Link Speed (mph)	30		55			55
Link Distance (ft)	946		1025			1655
Travel Time (s)	21.5		12.7			20.5
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	11%	2%	5%	0%	2%
Adj. Flow (vph)	17	10	711	26	9	730
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	737	0	0	739
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

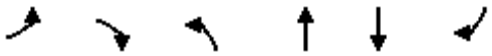
Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	9	633	23	8	650
Future Vol, veh/h	15	9	633	23	8	650
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, %	-2	-	-1	-	-	1
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	11	2	5	0	2
Mvmt Flow	17	10	711	26	9	730

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1472	724	0	0	737	0
Stage 1	724	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Critical Hdwy	6	6.11	-	-	4.1	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	166	428	-	-	878	-
Stage 1	524	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	163	428	-	-	878	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	503	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.4	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	212	878	-
HCM Lane V/C Ratio	-	-	0.127	0.01	-
HCM Control Delay (s)	-	-	24.4	9.1	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

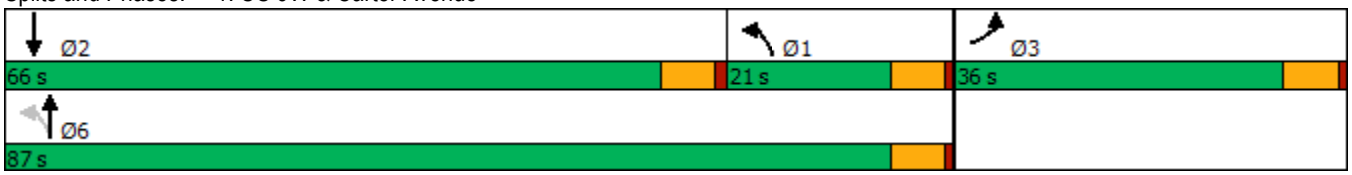


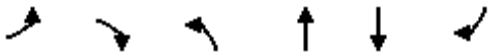
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	26	205	51	895	856	2
Future Volume (vph)	26	205	51	895	856	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	10
Grade (%)	1%			0%	0%	
Storage Length (ft)	0	0	130			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.880					
Flt Protected	0.994		0.950			
Satd. Flow (prot)	1590	0	1626	1759	1656	0
Flt Permitted	0.994		0.209			
Satd. Flow (perm)	1590	0	358	1759	1656	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	216					
Link Speed (mph)	30			40	40	
Link Distance (ft)	853			361	360	
Travel Time (s)	19.4			6.2	6.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	4%	11%	8%	7%	50%
Adj. Flow (vph)	27	216	54	942	901	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	243	0	54	942	903	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.00	1.00	1.09	1.09
Turning Speed (mph)	15	9	15			9
Number of Detectors	2		2	2	2	
Detector Template				NYSDOT	NYSDOT	
Leading Detector (ft)	78		78	78	78	
Trailing Detector (ft)	-10		-10	-10	-10	
Detector 1 Position(ft)	-10		-10	-10	-10	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	2.0		2.0	2.0	2.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	5.0		5.0	0.0	0.0	
Detector 2 Position(ft)	38		38	38	38	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	2.0		2.0	2.0	2.0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	3		1	6	2	
Permitted Phases			6			
Detector Phase	3		1	6	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	10.0	10.0	
Minimum Split (s)	11.0		11.0	16.0	16.0	
Total Split (s)	36.0		21.0	87.0	66.0	
Total Split (%)	29.3%		17.1%	70.7%	53.7%	
Maximum Green (s)	30.0		15.0	81.0	60.0	
Yellow Time (s)	5.0		5.0	5.0	5.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Recall Mode	None		None	Min	Min	
v/c Ratio	0.72		0.15	0.69	0.81	
Control Delay	20.8		4.6	8.9	19.8	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	20.8		4.6	8.9	19.8	
Queue Length 50th (ft)	15		5	176	323	
Queue Length 95th (ft)	88		18	453	#774	
Internal Link Dist (ft)	773			281	280	
Turn Bay Length (ft)			130			
Base Capacity (vph)	680		532	1589	1120	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.36		0.10	0.59	0.81	

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 89.3	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: US 9W & Carter Avenue





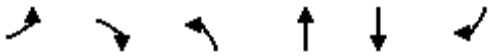
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	205	51	895	856	2
Future Volume (veh/h)	26	205	51	895	856	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1835	1835	1737	1781	1796	1159
Adj Flow Rate, veh/h	27	216	54	942	901	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	11	8	7	50
Cap, veh/h	32	255	213	1194	959	2
Arrive On Green	0.18	0.18	0.06	0.67	0.54	0.54
Sat Flow, veh/h	174	1394	1654	1781	1792	4
Grp Volume(v), veh/h	244	0	54	942	0	903
Grp Sat Flow(s),veh/h/ln	1575	0	1654	1781	0	1796
Q Serve(g_s), s	12.2	0.0	0.0	30.2	0.0	38.3
Cycle Q Clear(g_c), s	12.2	0.0	0.0	30.2	0.0	38.3
Prop In Lane	0.11	0.89	1.00			0.00
Lane Grp Cap(c), veh/h	288	0	213	1194	0	961
V/C Ratio(X)	0.85	0.00	0.25	0.79	0.00	0.94
Avail Cap(c_a), veh/h	580	0	416	1771	0	1322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.2	0.0	35.2	9.4	0.0	17.7
Incr Delay (d2), s/veh	2.7	0.0	0.2	0.8	0.0	9.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	1.0	8.5	0.0	15.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.9	0.0	35.4	10.2	0.0	26.8
LnGrp LOS	C	A	D	B	A	C
Approach Vol, veh/h	244			996	903	
Approach Delay, s/veh	34.9			11.6	26.8	
Approach LOS	C			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	49.6				60.6	20.9
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	15.0	60.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	2.0	40.3				32.2	14.2
Green Ext Time (p_c), s	0.1	3.3				3.8	0.7

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	55	19	927	986	16
Future Volume (vph)	22	55	19	927	986	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-5%			-4%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.998	
Flt Protected	0.986			0.999		
Satd. Flow (prot)	1541	0	0	1776	1735	0
Flt Permitted	0.986			0.999		
Satd. Flow (perm)	1541	0	0	1776	1735	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	1022			2082	1333	
Travel Time (s)	23.2			35.5	22.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	16%	6%	11%	9%	8%	21%
Adj. Flow (vph)	23	57	20	966	1027	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	0	0	986	1044	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.97	0.97	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	55	19	927	986	16
Future Vol, veh/h	22	55	19	927	986	16
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, %	-5	-	-	-4	2	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	16	6	11	9	8	21
Mvmt Flow	23	57	20	966	1027	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2042	1036	1044	0	-	0
Stage 1	1036	-	-	-	-	-
Stage 2	1006	-	-	-	-	-
Critical Hdwy	5.56	5.76	4.21	-	-	-
Critical Hdwy Stg 1	4.56	-	-	-	-	-
Critical Hdwy Stg 2	4.56	-	-	-	-	-
Follow-up Hdwy	3.644	3.354	2.299	-	-	-
Pot Cap-1 Maneuver	100	319	633	-	-	-
Stage 1	429	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	93	319	633	-	-	-
Mov Cap-2 Maneuver	93	-	-	-	-	-
Stage 1	400	-	-	-	-	-
Stage 2	440	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37.7	0.2	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	633	-	188	-	-
HCM Lane V/C Ratio	0.031	-	0.427	-	-
HCM Control Delay (s)	10.9	0	37.7	-	-
HCM Lane LOS	B	A	E	-	-
HCM 95th %tile Q(veh)	0.1	-	1.9	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	947	2	2	1000	2	8
Future Volume (vph)	947	2	2	1000	2	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)	-2%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.890	
Flt Protected					0.991	
Satd. Flow (prot)	1728	0	0	1725	1509	0
Flt Permitted					0.991	
Satd. Flow (perm)	1728	0	0	1725	1509	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	650			359	371	
Travel Time (s)	8.1			4.5	8.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	11%	50%	33%	9%	25%	17%
Adj. Flow (vph)	1018	2	2	1075	2	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1020	0	0	1077	11	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.01	1.01	0.92	0.92
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

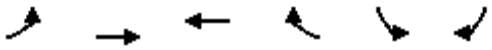
Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	947	2	2	1000	2	8
Future Vol, veh/h	947	2	2	1000	2	8
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, %	-2	-	-	2	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	11	50	33	9	25	17
Mvmt Flow	1018	2	2	1075	2	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1020	0	2098	1019
Stage 1	-	-	-	-	1019	-
Stage 2	-	-	-	-	1079	-
Critical Hdwy	-	-	4.43	-	6.65	6.37
Critical Hdwy Stg 1	-	-	-	-	5.65	-
Critical Hdwy Stg 2	-	-	-	-	5.65	-
Follow-up Hdwy	-	-	2.497	-	3.725	3.453
Pot Cap-1 Maneuver	-	-	573	-	49	269
Stage 1	-	-	-	-	316	-
Stage 2	-	-	-	-	295	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	573	-	49	269
Mov Cap-2 Maneuver	-	-	-	-	49	-
Stage 1	-	-	-	-	316	-
Stage 2	-	-	-	-	292	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	32.4
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	142	-	-	573	-
HCM Lane V/C Ratio	0.076	-	-	0.004	-
HCM Control Delay (s)	32.4	-	-	11.3	0
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	37	918	950	19	21	47
Future Volume (vph)	37	918	950	19	21	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	11	12	12
Grade (%)		1%	-1%		-3%	
Storage Length (ft)	100			115	0	50
Storage Lanes	1			1	1	0
Taper Length (ft)	185				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850	0.907	
Flt Protected	0.950				0.985	
Satd. Flow (prot)	1643	1703	1752	1538	1689	0
Flt Permitted	0.950				0.985	
Satd. Flow (perm)	1643	1703	1752	1538	1689	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		359	276		213	
Travel Time (s)		4.5	3.4		4.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	11%	9%	2%	2%	2%
Adj. Flow (vph)	40	998	1033	21	23	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	998	1033	21	74	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.10	1.01	0.99	1.04	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	918	950	19	21	47
Future Vol, veh/h	37	918	950	19	21	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	115	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	-3	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	11	9	2	2	2
Mvmt Flow	40	998	1033	21	23	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1054	0	-	0	2111	1033
Stage 1	-	-	-	-	1033	-
Stage 2	-	-	-	-	1078	-
Critical Hdwy	4.12	-	-	-	5.82	5.92
Critical Hdwy Stg 1	-	-	-	-	4.82	-
Critical Hdwy Stg 2	-	-	-	-	4.82	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	661	-	-	-	80	308
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	391	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	661	-	-	-	75	308
Mov Cap-2 Maneuver	-	-	-	-	75	-
Stage 1	-	-	-	-	383	-
Stage 2	-	-	-	-	391	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	46.8
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	661	-	-	-	157
HCM Lane V/C Ratio	0.061	-	-	-	0.471
HCM Control Delay (s)	10.8	-	-	-	46.8
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0.2	-	-	-	2.2

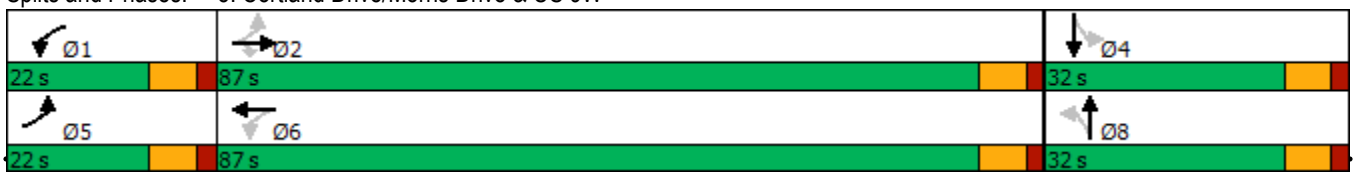
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	900	32	21	807	8	120	4	45	13	3	40
Future Volume (vph)	7	900	32	21	807	8	120	4	45	13	3	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-2%			-3%			1%	
Storage Length (ft)	75		40	100		0	80		0	0		80
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	80			85			50			80		
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			0.850		0.998			0.862			0.860	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1796	1703	1328	1585	1775	0	1832	1561	0	1484	1381	0
Flt Permitted	0.230			0.161			0.727			0.723		
Satd. Flow (perm)	435	1703	1328	269	1775	0	1402	1561	0	1129	1381	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		1			48			43	
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		250			260			201			325	
Travel Time (s)		3.1			3.2			4.6			7.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	11%	21%	15%	8%	0%	0%	0%	7%	17%	0%	19%
Adj. Flow (vph)	8	968	34	23	868	9	129	4	48	14	3	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	968	34	23	877	0	129	52	0	14	46	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	1.01	1.01	1.01	0.99	0.99	0.99	0.98	0.98	0.98	1.05	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2		2	2	
Detector Template												
Leading Detector (ft)	78	0	0	78	0		78	78		78	78	
Trailing Detector (ft)	-10	0	0	-10	0		-10	-10		-10	-10	
Detector 1 Position(ft)	-10	0	0	-10	0		-10	-10		-10	-10	
Detector 1 Size(ft)	40	6	20	40	6		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	2.0	0.0	0.0	2.0	0.0		2.0	2.0		2.0	2.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	5.0	0.0	0.0	5.0	0.0		5.0	5.0		5.0	5.0	
Detector 2 Position(ft)	38			38			38	38		38	38	
Detector 2 Size(ft)	40			40			40	40		40	40	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	2.0			2.0			2.0	2.0		2.0	2.0	

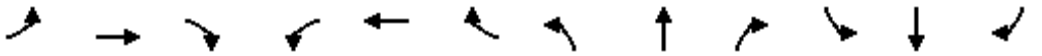
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	25.0	25.0	12.0	17.0		25.0	25.0		25.0	25.0	
Total Split (s)	22.0	87.0	87.0	22.0	87.0		32.0	32.0		32.0	32.0	
Total Split (%)	15.6%	61.7%	61.7%	15.6%	61.7%		22.7%	22.7%		22.7%	22.7%	
Maximum Green (s)	15.0	80.0	80.0	15.0	80.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	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	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Walk Time (s)		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	
Pedestrian Calls (#/hr)		2	2				0	0		0	0	
v/c Ratio	0.02	0.83	0.04	0.09	0.68		0.69	0.21		0.09	0.21	
Control Delay	5.1	23.8	0.1	5.4	13.9		68.9	16.4		47.0	17.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	5.1	23.8	0.1	5.4	13.9		68.9	16.4		47.0	17.0	
Queue Length 50th (ft)	1	556	0	4	285		99	3		10	2	
Queue Length 95th (ft)	6	#1033	0	13	721		167	40		30	38	
Internal Link Dist (ft)		170			180			121			245	
Turn Bay Length (ft)	75		40	100			80					
Base Capacity (vph)	499	1170	939	370	1292		301	372		242	330	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.02	0.83	0.04	0.06	0.68		0.43	0.14		0.06	0.14	

Intersection Summary

Area Type: Other
Cycle Length: 141
Actuated Cycle Length: 117.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Cortland Drive/Morris Drive & US 9W





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	900	32	21	807	8	120	4	45	13	3	40
Future Volume (veh/h)	7	900	32	21	807	8	120	4	45	13	3	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1731	1583	1754	1859	1979	2018	2018	1913	1642	1894	1613
Adj Flow Rate, veh/h	8	968	0	23	868	9	129	4	48	14	3	43
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	11	21	15	8	0	0	0	7	17	0	19
Cap, veh/h	334	1161		235	1255	13	215	17	209	184	14	198
Arrive On Green	0.01	0.67	0.00	0.02	0.68	0.68	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1804	1731	1341	1670	1836	19	1467	133	1597	1187	106	1516
Grp Volume(v), veh/h	8	968	0	23	0	877	129	0	52	14	0	46
Grp Sat Flow(s),veh/h/ln	1804	1731	1341	1670	0	1855	1467	0	1730	1187	0	1621
Q Serve(g_s), s	0.2	49.8	0.0	0.5	0.0	33.9	10.3	0.0	3.2	1.3	0.0	3.0
Cycle Q Clear(g_c), s	0.2	49.8	0.0	0.5	0.0	33.9	13.3	0.0	3.2	4.5	0.0	3.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.92	1.00		0.93
Lane Grp Cap(c), veh/h	334	1161		235	0	1268	215	0	226	184	0	212
V/C Ratio(X)	0.02	0.83		0.10	0.00	0.69	0.60	0.00	0.23	0.08	0.00	0.22
Avail Cap(c_a), veh/h	543	1161		408	0	1268	331	0	363	277	0	340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.6	14.7	0.0	16.6	0.0	11.3	52.3	0.0	46.4	48.5	0.0	46.4
Incr Delay (d2), s/veh	0.0	7.1	0.0	0.1	0.0	3.1	1.0	0.0	0.2	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	17.4	0.0	0.2	0.0	11.9	3.8	0.0	1.4	0.4	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.6	21.8	0.0	16.6	0.0	14.5	53.3	0.0	46.6	48.5	0.0	46.6
LnGrp LOS	B	C		B	A	B	D	A	D	D	A	D
Approach Vol, veh/h		976	A		900			181			60	
Approach Delay, s/veh		21.7			14.5			51.4			47.0	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	87.0		22.6	8.2	88.5		22.6				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	15.0	80.0		25.0	15.0	80.0		25.0				
Max Q Clear Time (g_c+I1), s	2.5	0.0		6.5	2.2	0.0		15.3				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.0		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		21.9	
HCM 6th LOS		C	

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	9	924	23	21	825
Future Volume (vph)	11	9	924	23	21	825
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-2%		-1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.939		0.997			
Flt Protected	0.973					0.999
Satd. Flow (prot)	1512	0	1736	0	0	1744
Flt Permitted	0.973					0.999
Satd. Flow (perm)	1512	0	1736	0	0	1744
Link Speed (mph)	30		55			55
Link Distance (ft)	946		1025			1655
Travel Time (s)	21.5		12.7			20.5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	13%	11%	9%	37%	20%	8%
Adj. Flow (vph)	12	10	994	25	23	887
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	1019	0	0	910
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

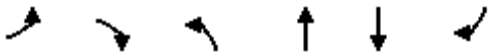
Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	9	924	23	21	825
Future Vol, veh/h	11	9	924	23	21	825
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, %	-2	-	-1	-	-	1
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	13	11	9	37	20	8
Mvmt Flow	12	10	994	25	23	887

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1940	1007	0	0	1019	0
Stage 1	1007	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Critical Hdwy	6.13	6.11	-	-	4.3	-
Critical Hdwy Stg 1	5.13	-	-	-	-	-
Critical Hdwy Stg 2	5.13	-	-	-	-	-
Follow-up Hdwy	3.617	3.399	-	-	2.38	-
Pot Cap-1 Maneuver	83	297	-	-	616	-
Stage 1	377	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	77	297	-	-	616	-
Mov Cap-2 Maneuver	77	-	-	-	-	-
Stage 1	377	-	-	-	-	-
Stage 2	376	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	43	0	0.3
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	116	616	-
HCM Lane V/C Ratio	-	-	0.185	0.037	-
HCM Control Delay (s)	-	-	43	11.1	0
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	11	13	7	46	1
Future Volume (vph)	1	11	13	7	46	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	11	11	12	12
Grade (%)	-5%			2%	-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.875				0.997	
Flt Protected	0.996			0.969		
Satd. Flow (prot)	1719	0	0	1740	1652	0
Flt Permitted	0.996			0.969		
Satd. Flow (perm)	1719	0	0	1740	1652	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	284			325	436	
Travel Time (s)	6.5			7.4	9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	0%	19%	2%
Adj. Flow (vph)	1	12	14	8	50	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	0	22	51	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.93	0.93	1.06	1.06	0.96	0.96
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

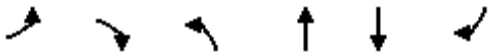
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	11	13	7	46	1
Future Vol, veh/h	1	11	13	7	46	1
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, %	-5	-	-	2	-7	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	0	19	2
Mvmt Flow	1	12	14	8	50	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	87	51	51	0	-	0
Stage 1	51	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	5.42	5.72	4.12	-	-	-
Critical Hdwy Stg 1	4.42	-	-	-	-	-
Critical Hdwy Stg 2	4.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	936	1024	1555	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	928	1024	1555	-	-	-
Mov Cap-2 Maneuver	928	-	-	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	996	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	4.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1555	-	1015	-	-
HCM Lane V/C Ratio	0.009	-	0.013	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

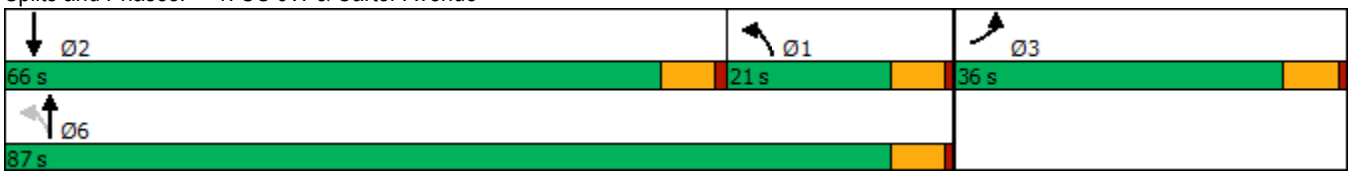


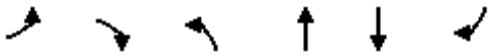
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	125	206	1141	866	0
Future Volume (vph)	21	125	206	1141	866	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	10
Grade (%)	1%			0%	0%	
Storage Length (ft)	0	0	130			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.884					
Flt Protected	0.993		0.950			
Satd. Flow (prot)	1596	0	1787	1845	1705	0
Flt Permitted	0.993		0.188			
Satd. Flow (perm)	1596	0	354	1845	1705	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	128					
Link Speed (mph)	30			40	40	
Link Distance (ft)	853			361	360	
Travel Time (s)	19.4			6.2	6.1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	10%	3%	1%	3%	4%	0%
Adj. Flow (vph)	21	128	210	1164	884	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	149	0	210	1164	884	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.00	1.00	1.09	1.09
Turning Speed (mph)	15	9	15			9
Number of Detectors	2		2	2	2	
Detector Template				NYSDOT	NYSDOT	
Leading Detector (ft)	78		78	78	78	
Trailing Detector (ft)	-10		-10	-10	-10	
Detector 1 Position(ft)	-10		-10	-10	-10	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	2.0		2.0	2.0	2.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	5.0		5.0	0.0	0.0	
Detector 2 Position(ft)	38		38	38	38	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	2.0		2.0	2.0	2.0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	3		1	6	2	
Permitted Phases			6			
Detector Phase	3		1	6	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	10.0	10.0	
Minimum Split (s)	11.0		11.0	16.0	16.0	
Total Split (s)	36.0		21.0	87.0	66.0	
Total Split (%)	29.3%		17.1%	70.7%	53.7%	
Maximum Green (s)	30.0		15.0	81.0	60.0	
Yellow Time (s)	5.0		5.0	5.0	5.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Recall Mode	None		None	Min	Min	
v/c Ratio	0.63		0.47	0.79	0.83	
Control Delay	23.7		11.6	10.8	24.6	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	23.7		11.6	10.8	24.6	
Queue Length 50th (ft)	12		20	264	380	
Queue Length 95th (ft)	73		48	623	#796	
Internal Link Dist (ft)	773			281	280	
Turn Bay Length (ft)			130			
Base Capacity (vph)	585		520	1551	1061	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.25		0.40	0.75	0.83	

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 96.7	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: US 9W & Carter Avenue





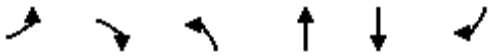
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	125	206	1141	866	0
Future Volume (veh/h)	21	125	206	1141	866	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1746	1850	1885	1856	1841	1900
Adj Flow Rate, veh/h	21	128	210	1164	884	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	10	3	1	3	4	0
Cap, veh/h	26	161	280	1282	962	0
Arrive On Green	0.13	0.13	0.08	0.69	0.52	0.00
Sat Flow, veh/h	211	1284	1795	1856	1841	0
Grp Volume(v), veh/h	150	0	210	1164	884	0
Grp Sat Flow(s),veh/h/ln	1504	0	1795	1856	1841	0
Q Serve(g_s), s	6.3	0.0	2.1	34.0	28.8	0.0
Cycle Q Clear(g_c), s	6.3	0.0	2.1	34.0	28.8	0.0
Prop In Lane	0.14	0.85	1.00			0.00
Lane Grp Cap(c), veh/h	189	0	280	1282	962	0
V/C Ratio(X)	0.79	0.00	0.75	0.91	0.92	0.00
Avail Cap(c_a), veh/h	690	0	554	2298	1689	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.8	0.0	27.9	8.4	14.3	0.0
Incr Delay (d2), s/veh	2.9	0.0	1.5	1.2	2.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	3.0	7.6	9.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.6	0.0	29.4	9.6	16.8	0.0
LnGrp LOS	C	A	C	A	B	A
Approach Vol, veh/h	150			1374	884	
Approach Delay, s/veh	30.6			12.6	16.8	
Approach LOS	C			B	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	40.2				51.2	14.2
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	15.0	60.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	4.1	30.8				36.0	8.3
Green Ext Time (p_c), s	0.4	3.3				5.9	0.5

Intersection Summary			
HCM 6th Ctrl Delay		15.3	
HCM 6th LOS		B	

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	11	32	78	1156	987	34
Future Volume (vph)	11	32	78	1156	987	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-5%			-4%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.899				0.995	
Flt Protected	0.988			0.997		
Satd. Flow (prot)	1555	0	0	1878	1784	0
Flt Permitted	0.988			0.997		
Satd. Flow (perm)	1555	0	0	1878	1784	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	1022			2082	1333	
Travel Time (s)	23.2			35.5	22.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	10%	1%	3%	5%	3%
Adj. Flow (vph)	11	33	80	1180	1007	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	44	0	0	1260	1042	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.97	0.97	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	32	78	1156	987	34
Future Vol, veh/h	11	32	78	1156	987	34
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, %	-5	-	-	-4	2	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	10	1	3	5	3
Mvmt Flow	11	33	80	1180	1007	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2365	1025	1042	0	-	0
Stage 1	1025	-	-	-	-	-
Stage 2	1340	-	-	-	-	-
Critical Hdwy	5.4	5.8	4.11	-	-	-
Critical Hdwy Stg 1	4.4	-	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.39	2.209	-	-	-
Pot Cap-1 Maneuver	76	318	671	-	-	-
Stage 1	464	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	50	318	671	-	-	-
Mov Cap-2 Maneuver	50	-	-	-	-	-
Stage 1	303	-	-	-	-	-
Stage 2	358	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	44.4	0.7	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	671	-	134	-	-
HCM Lane V/C Ratio	0.119	-	0.327	-	-
HCM Control Delay (s)	11.1	0	44.4	-	-
HCM Lane LOS	B	A	E	-	-
HCM 95th %tile Q(veh)	0.4	-	1.3	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1161	6	3	1019	2	0
Future Volume (vph)	1161	6	3	1019	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)	-2%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999					
Flt Protected					0.950	
Satd. Flow (prot)	1862	0	0	1792	1925	0
Flt Permitted					0.950	
Satd. Flow (perm)	1862	0	0	1792	1925	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	650			359	371	
Travel Time (s)	8.1			4.5	8.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	5%	0%	0%
Adj. Flow (vph)	1209	6	3	1061	2	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1215	0	0	1064	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.01	1.01	0.92	0.92
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

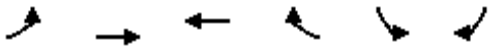
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1161	6	3	1019	2	0
Future Vol, veh/h	1161	6	3	1019	2	0
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, %	-2	-	-	2	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	0	0	5	0	0
Mvmt Flow	1209	6	3	1061	2	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1215	0	2279	1212
Stage 1	-	-	-	-	1212	-
Stage 2	-	-	-	-	1067	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	581	-	44	224
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	334	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	581	-	43	224
Mov Cap-2 Maneuver	-	-	-	-	43	-
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	330	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	92.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	43	-	-	581	-
HCM Lane V/C Ratio	0.048	-	-	0.005	-
HCM Control Delay (s)	92.9	-	-	11.2	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	86	1074	953	45	32	69
Future Volume (vph)	86	1074	953	45	32	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	11	12	12
Grade (%)		1%	-1%		-3%	
Storage Length (ft)	100			115	0	50
Storage Lanes	1			1	1	0
Taper Length (ft)	185				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850	0.908	
Flt Protected	0.950				0.984	
Satd. Flow (prot)	1643	1835	1819	1538	1689	0
Flt Permitted	0.950				0.984	
Satd. Flow (perm)	1643	1835	1819	1538	1689	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		359	275		203	
Travel Time (s)		4.5	3.4		4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	3%	5%	2%	2%	2%
Adj. Flow (vph)	93	1167	1036	49	35	75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	93	1167	1036	49	110	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.10	1.01	0.99	1.04	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

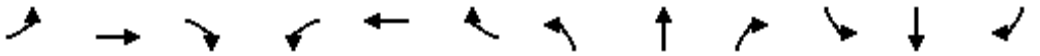
Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	86	1074	953	45	32	69
Future Vol, veh/h	86	1074	953	45	32	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	115	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	-3	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	3	5	2	2	2
Mvmt Flow	93	1167	1036	49	35	75

Major/Minor	Major1			Major2		
Conflicting Flow All	1085	0	-	0	2389	1036
Stage 1	-	-	-	-	1036	-
Stage 2	-	-	-	-	1353	-
Critical Hdwy	4.12	-	-	-	5.82	5.92
Critical Hdwy Stg 1	-	-	-	-	4.82	-
Critical Hdwy Stg 2	-	-	-	-	4.82	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	643	-	-	-	56	307
Stage 1	-	-	-	-	406	-
Stage 2	-	-	-	-	301	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	643	-	-	-	48	307
Mov Cap-2 Maneuver	-	-	-	-	48	-
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	301	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	148.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	643	-	-	-	113
HCM Lane V/C Ratio	0.145	-	-	-	0.972
HCM Control Delay (s)	11.5	-	-	-	148.6
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	6.2

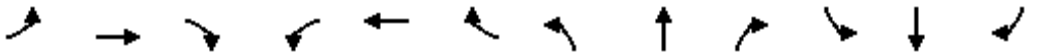


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	963	107	36	885	22	90	7	20	31	9	24
Future Volume (vph)	35	963	107	36	885	22	90	7	20	31	9	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-2%			-3%			1%	
Storage Length (ft)	75		40	100		0	80		0	0		80
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	80			85			50			25		
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			0.850		0.996			0.887			0.890	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1796	1835	1591	1823	1822	0	1832	1521	0	1736	1683	0
Flt Permitted	0.189			0.158			0.735			0.739		
Satd. Flow (perm)	357	1835	1591	303	1822	0	1417	1521	0	1351	1683	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		1			21			25	
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		250			260			201			325	
Travel Time (s)		3.1			3.2			4.6			7.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	1%	0%	5%	0%	0%	2%	16%	0%	0%	0%
Adj. Flow (vph)	36	993	110	37	912	23	93	7	21	32	9	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	993	110	37	935	0	93	28	0	32	34	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	1.01	1.01	1.01	0.99	0.99	0.99	0.98	0.98	0.98	1.05	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2		2	2	
Detector Template												
Leading Detector (ft)	78	0	0	78	0		78	78		78	78	
Trailing Detector (ft)	-10	0	0	-10	0		-10	-10		-10	-10	
Detector 1 Position(ft)	-10	0	0	-10	0		-10	-10		-10	-10	
Detector 1 Size(ft)	40	6	20	40	6		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	2.0	0.0	0.0	2.0	0.0		2.0	2.0		2.0	2.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	5.0	0.0	0.0	5.0	0.0		5.0	5.0		5.0	5.0	
Detector 2 Position(ft)	38			38			38	38		38	38	
Detector 2 Size(ft)	40			40			40	40		40	40	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	2.0			2.0			2.0	2.0		2.0	2.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	25.0	25.0	12.0	17.0		25.0	25.0		25.0	25.0	
Total Split (s)	22.0	87.0	87.0	22.0	87.0		32.0	32.0		32.0	32.0	
Total Split (%)	15.6%	61.7%	61.7%	15.6%	61.7%		22.7%	22.7%		22.7%	22.7%	
Maximum Green (s)	15.0	80.0	80.0	15.0	80.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	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	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Walk Time (s)		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	
Pedestrian Calls (#/hr)		2	2				0	0		0	0	
v/c Ratio	0.11	0.77	0.10	0.13	0.73		0.58	0.15		0.21	0.16	
Control Delay	4.6	18.4	2.8	4.8	16.7		64.6	24.8		51.1	24.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	4.6	18.4	2.8	4.8	16.7		64.6	24.8		51.1	24.3	
Queue Length 50th (ft)	5	487	6	5	432		69	5		23	6	
Queue Length 95th (ft)	15	826	28	16	728		126	34		55	38	
Internal Link Dist (ft)		170			180			121			245	
Turn Bay Length (ft)	75		40	100			80					
Base Capacity (vph)	462	1289	1143	432	1280		311	350		296	389	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.08	0.77	0.10	0.09	0.73		0.30	0.08		0.11	0.09	

Intersection Summary	
Area Type:	Other
Cycle Length: 141	
Actuated Cycle Length: 114.5	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	

Splits and Phases: 5: Cortland Drive/Morris Drive & US 9W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	963	107	36	885	22	90	7	20	31	9	24
Future Volume (veh/h)	35	963	107	36	885	22	90	7	20	31	9	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1850	1879	1979	1904	1979	2018	1988	1778	1894	1894	1894
Adj Flow Rate, veh/h	36	993	0	37	912	23	93	7	21	32	9	25
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	3	1	0	5	0	0	2	16	0	0	0
Cap, veh/h	353	1278		318	1278	32	179	43	128	178	43	120
Arrive On Green	0.03	0.69	0.00	0.03	0.69	0.69	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1804	1850	1593	1884	1849	47	1483	438	1314	1400	443	1230
Grp Volume(v), veh/h	36	993	0	37	0	935	93	0	28	32	0	34
Grp Sat Flow(s),veh/h/ln	1804	1850	1593	1884	0	1895	1483	0	1752	1400	0	1673
Q Serve(g_s), s	0.7	41.5	0.0	0.6	0.0	34.8	7.1	0.0	1.7	2.5	0.0	2.2
Cycle Q Clear(g_c), s	0.7	41.5	0.0	0.6	0.0	34.8	9.3	0.0	1.7	4.2	0.0	2.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.75	1.00		0.74
Lane Grp Cap(c), veh/h	353	1278		318	0	1310	179	0	171	178	0	163
V/C Ratio(X)	0.10	0.78		0.12	0.00	0.71	0.52	0.00	0.16	0.18	0.00	0.21
Avail Cap(c_a), veh/h	533	1278		506	0	1310	355	0	378	344	0	361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.2	11.9	0.0	12.5	0.0	10.9	52.4	0.0	47.9	49.8	0.0	48.1
Incr Delay (d2), s/veh	0.0	4.7	0.0	0.1	0.0	3.3	0.9	0.0	0.2	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	14.4	0.0	0.3	0.0	12.1	2.7	0.0	0.8	0.9	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.2	16.6	0.0	12.6	0.0	14.2	53.3	0.0	48.1	50.0	0.0	48.3
LnGrp LOS	B	B		B	A	B	D	A	D	D	A	D
Approach Vol, veh/h		1029	A		972			121			66	
Approach Delay, s/veh		16.4			14.2			52.1			49.1	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	87.0		18.3	10.4	87.0		18.3				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	15.0	80.0		25.0	15.0	80.0		25.0				
Max Q Clear Time (g_c+I1), s	2.6	0.0		6.2	2.7	0.0		11.3				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.0		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		18.4	
HCM 6th LOS		B	

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	15	951	38	15	928
Future Volume (vph)	12	15	951	38	15	928
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-2%		-1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.926		0.995			
Flt Protected	0.978					0.999
Satd. Flow (prot)	1465	0	1842	0	0	1794
Flt Permitted	0.978					0.999
Satd. Flow (perm)	1465	0	1842	0	0	1794
Link Speed (mph)	30		55			55
Link Distance (ft)	946		1025			1655
Travel Time (s)	21.5		12.7			20.5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	13%	16%	3%	7%	21%	5%
Adj. Flow (vph)	13	16	1023	41	16	998
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	0	1064	0	0	1014
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

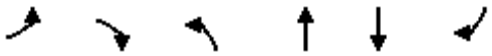
Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	15	951	38	15	928
Future Vol, veh/h	12	15	951	38	15	928
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, %	-2	-	-1	-	-	1
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	13	16	3	7	21	5
Mvmt Flow	13	16	1023	41	16	998

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2074	1044	0	0	1064	0
Stage 1	1044	-	-	-	-	-
Stage 2	1030	-	-	-	-	-
Critical Hdwy	6.13	6.16	-	-	4.31	-
Critical Hdwy Stg 1	5.13	-	-	-	-	-
Critical Hdwy Stg 2	5.13	-	-	-	-	-
Follow-up Hdwy	3.617	3.444	-	-	2.389	-
Pot Cap-1 Maneuver	69	277	-	-	588	-
Stage 1	363	-	-	-	-	-
Stage 2	368	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	65	277	-	-	588	-
Mov Cap-2 Maneuver	65	-	-	-	-	-
Stage 1	363	-	-	-	-	-
Stage 2	346	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	47.5	0	0.2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	113	588	-
HCM Lane V/C Ratio	-	-	0.257	0.027	-
HCM Control Delay (s)	-	-	47.5	11.3	0
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	1	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	34	27	38	29	2
Future Volume (vph)	2	34	27	38	29	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	11	11	12	12
Grade (%)	-5%			2%	-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.872				0.992	
Flt Protected	0.997			0.980		
Satd. Flow (prot)	1715	0	0	1767	1948	0
Flt Permitted	0.997			0.980		
Satd. Flow (perm)	1715	0	0	1767	1948	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	284			325	437	
Travel Time (s)	6.5			7.4	9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	0%	0%	2%
Adj. Flow (vph)	2	37	29	41	32	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	0	70	34	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.93	0.93	1.06	1.06	0.96	0.96
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

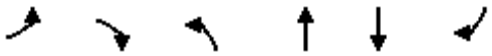
Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	34	27	38	29	2
Future Vol, veh/h	2	34	27	38	29	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, %	-5	-	-	2	-7	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	0	0	2
Mvmt Flow	2	37	29	41	32	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	132	33	34	0	-	0
Stage 1	33	-	-	-	-	-
Stage 2	99	-	-	-	-	-
Critical Hdwy	5.42	5.72	4.12	-	-	-
Critical Hdwy Stg 1	4.42	-	-	-	-	-
Critical Hdwy Stg 2	4.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	894	1045	1578	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	877	1045	1578	-	-	-
Mov Cap-2 Maneuver	877	-	-	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	951	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1578	-	1034	-	-
HCM Lane V/C Ratio	0.019	-	0.038	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-



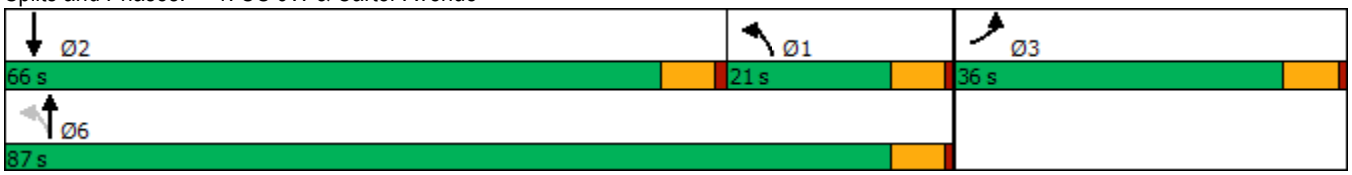
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	143	135	817	809	2
Future Volume (vph)	15	143	135	817	809	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	10
Grade (%)	1%			0%	0%	
Storage Length (ft)	0	0	130			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.878					
Flt Protected	0.995		0.950			
Satd. Flow (prot)	1652	0	1787	1863	1739	0
Flt Permitted	0.995		0.213			
Satd. Flow (perm)	1652	0	401	1863	1739	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	151					
Link Speed (mph)	30			40	40	
Link Distance (ft)	853			361	360	
Travel Time (s)	19.4			6.2	6.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	1%	2%	2%	0%
Adj. Flow (vph)	16	151	142	860	852	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	167	0	142	860	854	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.00	1.00	1.09	1.09
Turning Speed (mph)	15	9	15			9
Number of Detectors	2		2	2	2	
Detector Template				NYSDOT	NYSDOT	
Leading Detector (ft)	78		78	78	78	
Trailing Detector (ft)	-10		-10	-10	-10	
Detector 1 Position(ft)	-10		-10	-10	-10	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	2.0		2.0	2.0	2.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	5.0		5.0	0.0	0.0	
Detector 2 Position(ft)	38		38	38	38	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	2.0		2.0	2.0	2.0	

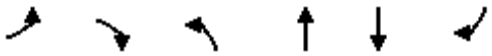
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	3		1	6	2	
Permitted Phases			6			
Detector Phase	3		1	6	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	10.0	10.0	
Minimum Split (s)	11.0		11.0	16.0	16.0	
Total Split (s)	36.0		21.0	87.0	66.0	
Total Split (%)	29.3%		17.1%	70.7%	53.7%	
Maximum Green (s)	30.0		15.0	81.0	60.0	
Yellow Time (s)	5.0		5.0	5.0	5.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Recall Mode	None		None	Min	Min	
v/c Ratio	0.62		0.33	0.59	0.78	
Control Delay	20.0		6.4	6.1	19.5	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	20.0		6.4	6.1	19.5	
Queue Length 50th (ft)	8		13	129	283	
Queue Length 95th (ft)	71		33	287	#631	
Internal Link Dist (ft)	773			281	280	
Turn Bay Length (ft)			130			
Base Capacity (vph)	674		591	1721	1213	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.25		0.24	0.50	0.70	

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 87	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: US 9W & Carter Avenue





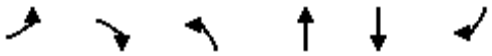
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	143	135	817	809	2
Future Volume (veh/h)	15	143	135	817	809	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1894	1894	1885	1870	1870	1900
Adj Flow Rate, veh/h	16	151	142	860	852	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	1	2	2	0
Cap, veh/h	21	194	290	1265	935	2
Arrive On Green	0.13	0.13	0.08	0.68	0.50	0.50
Sat Flow, veh/h	155	1459	1795	1870	1865	4
Grp Volume(v), veh/h	168	0	142	860	0	854
Grp Sat Flow(s),veh/h/ln	1624	0	1795	1870	0	1870
Q Serve(g_s), s	6.3	0.0	0.0	17.3	0.0	26.4
Cycle Q Clear(g_c), s	6.3	0.0	0.0	17.3	0.0	26.4
Prop In Lane	0.10	0.90	1.00			0.00
Lane Grp Cap(c), veh/h	215	0	290	1265	0	937
V/C Ratio(X)	0.78	0.00	0.49	0.68	0.00	0.91
Avail Cap(c_a), veh/h	775	0	576	2410	0	1785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.4	0.0	26.3	6.1	0.0	14.4
Incr Delay (d2), s/veh	2.3	0.0	0.5	0.2	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.8	3.8	0.0	8.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.7	0.0	26.7	6.3	0.0	15.9
LnGrp LOS	C	A	C	A	A	B
Approach Vol, veh/h	168			1002	854	
Approach Delay, s/veh	28.7			9.2	15.9	
Approach LOS	C			A	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	37.5				48.5	14.3
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	15.0	60.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	2.0	28.4				19.3	8.3
Green Ext Time (p_c), s	0.3	3.2				3.2	0.5

Intersection Summary	
HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	19	43	40	822	811	23
Future Volume (vph)	19	43	40	822	811	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-5%			-4%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.907				0.996	
Flt Protected	0.985			0.998		
Satd. Flow (prot)	1626	0	0	1895	1838	0
Flt Permitted	0.985			0.998		
Satd. Flow (perm)	1626	0	0	1895	1838	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	1022			2082	1333	
Travel Time (s)	23.2			35.5	22.7	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	5%	3%	2%	2%	0%
Adj. Flow (vph)	22	49	46	945	932	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	71	0	0	991	958	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.97	0.97	1.01	1.01
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	43	40	822	811	23
Future Vol, veh/h	19	43	40	822	811	23
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, %	-5	-	-	-4	2	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	5	3	2	2	0
Mvmt Flow	22	49	46	945	932	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1982	945	958	0	-	0
Stage 1	945	-	-	-	-	-
Stage 2	1037	-	-	-	-	-
Critical Hdwy	5.4	5.75	4.13	-	-	-
Critical Hdwy Stg 1	4.4	-	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.345	2.227	-	-	-
Pot Cap-1 Maneuver	119	357	714	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	460	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	103	357	714	-	-	-
Mov Cap-2 Maneuver	103	-	-	-	-	-
Stage 1	428	-	-	-	-	-
Stage 2	460	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	32	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	714	-	203	-	-
HCM Lane V/C Ratio	0.064	-	0.351	-	-
HCM Control Delay (s)	10.4	0	32	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.2	-	1.5	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	836	5	2	830	4	2
Future Volume (vph)	836	5	2	830	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)	-2%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.955	
Flt Protected					0.968	
Satd. Flow (prot)	1880	0	0	1844	1874	0
Flt Permitted					0.968	
Satd. Flow (perm)	1880	0	0	1844	1874	0
Link Speed (mph)	55			55	30	
Link Distance (ft)	650			359	371	
Travel Time (s)	8.1			4.5	8.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Adj. Flow (vph)	939	6	2	933	4	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	945	0	0	935	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.01	1.01	0.92	0.92
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

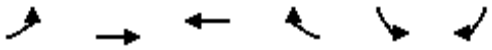
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	836	5	2	830	4	2
Future Vol, veh/h	836	5	2	830	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, %	-2	-	-	2	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	939	6	2	933	4	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	945	0	1879	942
Stage 1	-	-	-	-	942	-
Stage 2	-	-	-	-	937	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	734	-	79	322
Stage 1	-	-	-	-	382	-
Stage 2	-	-	-	-	384	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	734	-	79	322
Mov Cap-2 Maneuver	-	-	-	-	79	-
Stage 1	-	-	-	-	382	-
Stage 2	-	-	-	-	382	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	41.3
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	106	-	-	734	-
HCM Lane V/C Ratio	0.064	-	-	0.003	-
HCM Control Delay (s)	41.3	-	-	9.9	0
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	86	752	751	45	37	80
Future Volume (vph)	86	752	751	45	37	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	11	12	12
Grade (%)		1%	-1%		-3%	
Storage Length (ft)	100			115	0	50
Storage Lanes	1			1	1	0
Taper Length (ft)	185				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850	0.908	
Flt Protected	0.950				0.984	
Satd. Flow (prot)	1643	1853	1872	1538	1689	0
Flt Permitted	0.950				0.984	
Satd. Flow (perm)	1643	1853	1872	1538	1689	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		359	275		213	
Travel Time (s)		4.5	3.4		4.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	817	816	49	40	87
Shared Lane Traffic (%)						
Lane Group Flow (vph)	93	817	816	49	127	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.10	1.01	0.99	1.04	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

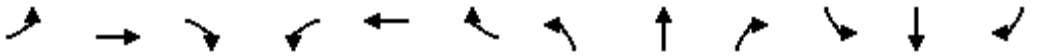
Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	86	752	751	45	37	80
Future Vol, veh/h	86	752	751	45	37	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	115	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	-3	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	817	816	49	40	87

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	865	0	-	0	1819	816			
Stage 1	-	-	-	-	816	-			
Stage 2	-	-	-	-	1003	-			
Critical Hdwy	4.12	-	-	-	5.82	5.92			
Critical Hdwy Stg 1	-	-	-	-	4.82	-			
Critical Hdwy Stg 2	-	-	-	-	4.82	-			
Follow-up Hdwy	2.218	-	-	-	3.518	3.318			
Pot Cap-1 Maneuver	778	-	-	-	116	403			
Stage 1	-	-	-	-	498	-			
Stage 2	-	-	-	-	419	-			
Platoon blocked, %		-	-	-					
Mov Cap-1 Maneuver	778	-	-	-	102	403			
Mov Cap-2 Maneuver	-	-	-	-	102	-			
Stage 1	-	-	-	-	438	-			
Stage 2	-	-	-	-	419	-			

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	46.3
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	778	-	-	-	208
HCM Lane V/C Ratio	0.12	-	-	-	0.611
HCM Control Delay (s)	10.3	-	-	-	46.3
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0.4	-	-	-	3.5



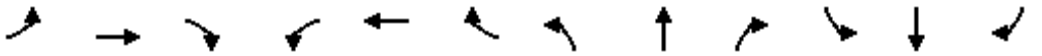
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	685	83	22	672	22	102	10	13	32	8	21
Future Volume (vph)	19	685	83	22	672	22	102	10	13	32	8	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-2%			-3%			1%	
Storage Length (ft)	75		40	100		0	80		0	0		80
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	80			85			50			25		
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			0.850		0.995			0.916			0.892	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1796	1853	1607	1823	1873	0	1832	1767	0	1736	1686	0
Flt Permitted	0.288			0.281			0.736			0.741		
Satd. Flow (perm)	544	1853	1607	539	1873	0	1419	1767	0	1354	1686	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		2			14			23	
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		250			260			201			325	
Travel Time (s)		3.1			3.2			4.6			7.4	
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%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	21	753	91	24	738	24	112	11	14	35	9	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	753	91	24	762	0	112	25	0	35	32	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	1.01	1.01	1.01	0.99	0.99	0.99	0.98	0.98	0.98	1.05	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2		2	2	
Detector Template												
Leading Detector (ft)	78	0	0	78	0		78	78		78	78	
Trailing Detector (ft)	-10	0	0	-10	0		-10	-10		-10	-10	
Detector 1 Position(ft)	-10	0	0	-10	0		-10	-10		-10	-10	
Detector 1 Size(ft)	40	6	20	40	6		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	2.0	0.0	0.0	2.0	0.0		2.0	2.0		2.0	2.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	5.0	0.0	0.0	5.0	0.0		5.0	5.0		5.0	5.0	
Detector 2 Position(ft)	38			38			38	38		38	38	
Detector 2 Size(ft)	40			40			40	40		40	40	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	2.0			2.0			2.0	2.0		2.0	2.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	25.0	25.0	12.0	17.0		25.0	25.0		25.0	25.0	
Total Split (s)	22.0	87.0	87.0	22.0	87.0		32.0	32.0		32.0	32.0	
Total Split (%)	15.6%	61.7%	61.7%	15.6%	61.7%		22.7%	22.7%		22.7%	22.7%	
Maximum Green (s)	15.0	80.0	80.0	15.0	80.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	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	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Walk Time (s)		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	
Pedestrian Calls (#/hr)		2	2				0	0		0	0	
v/c Ratio	0.05	0.58	0.08	0.05	0.57		0.65	0.11		0.21	0.14	
Control Delay	4.5	13.1	2.3	4.5	11.7		66.9	29.1		50.0	24.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	4.5	13.1	2.3	4.5	11.7		66.9	29.1		50.0	24.2	
Queue Length 50th (ft)	3	300	1	4	196		84	8		25	6	
Queue Length 95th (ft)	11	496	22	12	498		149	35		58	36	
Internal Link Dist (ft)		170			180			121			245	
Turn Bay Length (ft)	75		40	100			80					
Base Capacity (vph)	574	1289	1144	574	1342		308	395		294	384	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.04	0.58	0.08	0.04	0.57		0.36	0.06		0.12	0.08	

Intersection Summary

Area Type: Other
Cycle Length: 141
Actuated Cycle Length: 115.8
Natural Cycle: 80
Control Type: Semi Act-Uncoord

Splits and Phases: 5: Cortland Drive/Morris Drive & US 9W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	685	83	22	672	22	102	10	13	32	8	21
Future Volume (veh/h)	19	685	83	22	672	22	102	10	13	32	8	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1864	1894	1979	1949	1979	2018	2018	2018	1894	1894	1894
Adj Flow Rate, veh/h	21	753	0	24	738	24	112	11	14	35	9	23
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
Percent Heavy Veh, %	0	2	0	0	2	0	0	0	0	0	0	0
Cap, veh/h	448	1281		462	1293	42	199	88	112	198	52	132
Arrive On Green	0.02	0.69	0.00	0.02	0.69	0.69	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1804	1864	1605	1884	1877	61	1486	807	1027	1403	472	1205
Grp Volume(v), veh/h	21	753	0	24	0	762	112	0	25	35	0	32
Grp Sat Flow(s),veh/h/ln	1804	1864	1605	1884	0	1938	1486	0	1833	1403	0	1677
Q Serve(g_s), s	0.4	24.7	0.0	0.4	0.0	23.5	8.6	0.0	1.4	2.7	0.0	2.0
Cycle Q Clear(g_c), s	0.4	24.7	0.0	0.4	0.0	23.5	10.6	0.0	1.4	4.1	0.0	2.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.56	1.00		0.72
Lane Grp Cap(c), veh/h	448	1281		462	0	1335	199	0	201	198	0	184
V/C Ratio(X)	0.05	0.59		0.05	0.00	0.57	0.56	0.00	0.12	0.18	0.00	0.17
Avail Cap(c_a), veh/h	642	1281		661	0	1335	355	0	394	346	0	360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.4	9.6	0.0	7.7	0.0	9.3	51.9	0.0	46.8	48.7	0.0	47.1
Incr Delay (d2), s/veh	0.0	2.0	0.0	0.0	0.0	1.8	0.9	0.0	0.1	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	8.4	0.0	0.1	0.0	8.3	3.3	0.0	0.7	1.0	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	11.5	0.0	7.7	0.0	11.1	52.8	0.0	46.9	48.8	0.0	47.2
LnGrp LOS	A	B		A	A	B	D	A	D	D	A	D
Approach Vol, veh/h		774	A		786			137			67	
Approach Delay, s/veh		11.4			11.0			51.8			48.1	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	87.0		19.7	9.5	87.2		19.7				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	15.0	80.0		25.0	15.0	80.0		25.0				
Max Q Clear Time (g_c+I1), s	2.4	0.0		6.1	2.4	0.0		12.6				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.0		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		15.7	
HCM 6th LOS		B	

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	22	9	673	30	8	691
Future Volume (vph)	22	9	673	30	8	691
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-2%		-1%			1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.961		0.994			
Flt Protected	0.966					0.999
Satd. Flow (prot)	1670	0	1858	0	0	1852
Flt Permitted	0.966					0.999
Satd. Flow (perm)	1670	0	1858	0	0	1852
Link Speed (mph)	30		55			55
Link Distance (ft)	946		1025			1655
Travel Time (s)	21.5		12.7			20.5
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	11%	2%	5%	0%	2%
Adj. Flow (vph)	25	10	756	34	9	776
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	0	790	0	0	785
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.99	0.99	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

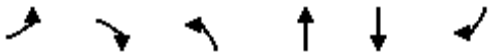
Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	9	673	30	8	691
Future Vol, veh/h	22	9	673	30	8	691
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, %	-2	-	-1	-	-	1
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	11	2	5	0	2
Mvmt Flow	25	10	756	34	9	776

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1567	773	0	0	790	0
Stage 1	773	-	-	-	-	-
Stage 2	794	-	-	-	-	-
Critical Hdwy	6	6.11	-	-	4.1	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	147	402	-	-	839	-
Stage 1	500	-	-	-	-	-
Stage 2	490	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	144	402	-	-	839	-
Mov Cap-2 Maneuver	144	-	-	-	-	-
Stage 1	500	-	-	-	-	-
Stage 2	481	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	30.3	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	177	839	-
HCM Lane V/C Ratio	-	-	0.197	0.011	-
HCM Control Delay (s)	-	-	30.3	9.3	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	39	29	21	22	3
Future Volume (vph)	2	39	29	21	22	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	11	11	12	12
Grade (%)	-5%			2%	-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.871				0.985	
Flt Protected	0.998			0.972		
Satd. Flow (prot)	1715	0	0	1747	1933	0
Flt Permitted	0.998			0.972		
Satd. Flow (perm)	1715	0	0	1747	1933	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	277			325	436	
Travel Time (s)	6.3			7.4	9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	0%	0%	2%
Adj. Flow (vph)	2	42	32	23	24	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	44	0	0	55	27	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.93	0.93	1.06	1.06	0.96	0.96
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

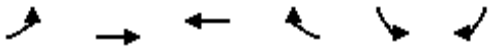
Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	39	29	21	22	3
Future Vol, veh/h	2	39	29	21	22	3
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, %	-5	-	-	2	-7	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	0	0	2
Mvmt Flow	2	42	32	23	24	3

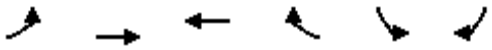
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	113	26	27	0	-	0
Stage 1	26	-	-	-	-	-
Stage 2	87	-	-	-	-	-
Critical Hdwy	5.42	5.72	4.12	-	-	-
Critical Hdwy Stg 1	4.42	-	-	-	-	-
Critical Hdwy Stg 2	4.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	912	1054	1587	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	894	1054	1587	-	-	-
Mov Cap-2 Maneuver	894	-	-	-	-	-
Stage 1	984	-	-	-	-	-
Stage 2	959	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	4.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1587	-	1045	-	-
HCM Lane V/C Ratio	0.02	-	0.043	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	37	918	950	19	21	47
Future Volume (vph)	37	918	950	19	21	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	11	12	12
Grade (%)		1%	-1%		-3%	
Storage Length (ft)	100			115	0	50
Storage Lanes	1			1	1	1
Taper Length (ft)	185				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1643	1703	1752	1538	1796	1607
Flt Permitted	0.157				0.950	
Satd. Flow (perm)	272	1703	1752	1538	1796	1607
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				13		51
Link Speed (mph)		55	55		30	
Link Distance (ft)		359	276		213	
Travel Time (s)		4.5	3.4		4.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	11%	9%	2%	2%	2%
Adj. Flow (vph)	40	998	1033	21	23	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	998	1033	21	23	51
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.10	1.01	0.99	1.04	0.98	0.98
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	2	2	2	2	2
Detector Template	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	78	78	78	78	78	78
Trailing Detector (ft)	-10	-10	-10	-10	-10	-10
Detector 1 Position(ft)	-10	-10	-10	-10	-10	-10
Detector 1 Size(ft)	40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	2.0	2.0	2.0	2.0	2.0	2.0
Detector 1 Queue (s)	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	5.0
Detector 2 Position(ft)	38	38	38	38	38	38
Detector 2 Size(ft)	40	40	40	40	40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	2.0	2.0	2.0	2.0	2.0	2.0

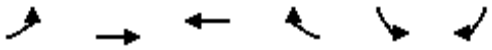


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	5
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0	5.0
Minimum Split (s)	12.0	17.0	17.0	17.0	12.0	12.0
Total Split (s)	12.0	88.0	76.0	76.0	12.0	12.0
Total Split (%)	12.0%	88.0%	76.0%	76.0%	12.0%	12.0%
Maximum Green (s)	5.0	81.0	69.0	69.0	5.0	5.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	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
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None
v/c Ratio	0.13	0.63	0.74	0.02	0.23	0.24
Control Delay	2.2	4.7	8.5	1.5	50.9	13.3
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	2.2	5.0	8.6	1.5	50.9	13.3
Queue Length 50th (ft)	0	0	174	1	14	0
Queue Length 95th (ft)	9	347	#187	m1	40	32
Internal Link Dist (ft)		279	196		133	
Turn Bay Length (ft)	100			115		50
Base Capacity (vph)	314	1573	1396	1228	102	209
Starvation Cap Reductn	0	0	12	0	0	0
Spillback Cap Reductn	0	123	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.69	0.75	0.02	0.23	0.24

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 5 (5%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
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.

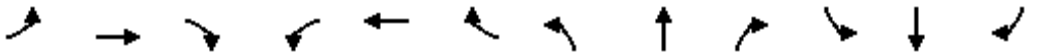
Splits and Phases: 4: US 9W & Site Driveway A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	918	950	19	21	47
Future Volume (veh/h)	37	918	950	19	21	47
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1864	1731	1804	1909	1988	1988
Adj Flow Rate, veh/h	40	998	1033	21	23	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	11	9	2	2	2
Cap, veh/h	307	1413	1286	1153	83	130
Arrive On Green	0.03	0.82	0.71	0.71	0.04	0.04
Sat Flow, veh/h	1776	1731	1804	1618	1893	1685
Grp Volume(v), veh/h	40	998	1033	21	23	51
Grp Sat Flow(s),veh/h/ln	1776	1731	1804	1618	1893	1685
Q Serve(g_s), s	0.5	25.0	38.5	0.4	1.2	2.9
Cycle Q Clear(g_c), s	0.5	25.0	38.5	0.4	1.2	2.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	307	1413	1286	1153	83	130
V/C Ratio(X)	0.13	0.71	0.80	0.02	0.28	0.39
Avail Cap(c_a), veh/h	336	1413	1286	1153	95	141
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.6	4.0	9.6	4.2	46.3	43.9
Incr Delay (d2), s/veh	0.2	3.0	5.4	0.0	1.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.8	11.5	0.1	0.6	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.8	7.0	15.0	4.2	48.1	45.8
LnGrp LOS	B	A	B	A	D	D
Approach Vol, veh/h		1038	1054		74	
Approach Delay, s/veh		7.2	14.8		46.5	
Approach LOS		A	B		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		88.6		11.4	10.4	78.3
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0
Max Green Setting (Gmax), s		81.0		5.0	5.0	69.0
Max Q Clear Time (g_c+I1), s		27.0		4.9	2.5	40.5
Green Ext Time (p_c), s		7.3		0.0	0.0	7.3

Intersection Summary	
HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B



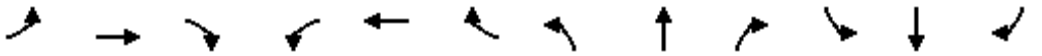
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	900	32	21	807	8	120	4	45	13	3	40
Future Volume (vph)	7	900	32	21	807	8	120	4	45	13	3	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-2%			-3%			1%	
Storage Length (ft)	75		40	100		0	80		0	0		80
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	80			85			50			80		
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			0.850		0.998			0.862			0.860	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1796	1703	1328	1585	1775	0	1832	1561	0	1484	1381	0
Flt Permitted	0.199			0.131			0.727			0.723		
Satd. Flow (perm)	376	1703	1328	219	1775	0	1402	1561	0	1129	1381	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			120		1			48			43	
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		250			260			201			325	
Travel Time (s)		3.1			3.2			4.6			7.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	11%	21%	15%	8%	0%	0%	0%	7%	17%	0%	19%
Adj. Flow (vph)	8	968	34	23	868	9	129	4	48	14	3	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	968	34	23	877	0	129	52	0	14	46	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	1.01	1.01	1.01	0.99	0.99	0.99	0.98	0.98	0.98	1.05	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	0	2	2		2	2		2	2	
Detector Template	NYSDOTNYSDOT			NYSDOTNYSDOT			NYSDOT			NYSDOT		
Leading Detector (ft)	78	78	0	78	78		78	78		78	78	
Trailing Detector (ft)	-10	-10	0	-10	-10		-10	-10		-10	-10	
Detector 1 Position(ft)	-10	-10	0	-10	-10		-10	-10		-10	-10	
Detector 1 Size(ft)	40	40	20	40	40		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	2.0	2.0	0.0	2.0	2.0		2.0	2.0		2.0	2.0	
Detector 1 Queue (s)	0.0	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	5.0		0.0	5.0	
Detector 2 Position(ft)	38	38		38	38		38	38		38	38	
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	25.0	25.0	12.0	17.0		25.0	25.0		25.0	25.0	
Total Split (s)	12.0	63.0	63.0	12.0	63.0		25.0	25.0		25.0	25.0	
Total Split (%)	12.0%	63.0%	63.0%	12.0%	63.0%		25.0%	25.0%		25.0%	25.0%	
Maximum Green (s)	5.0	56.0	56.0	5.0	56.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	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	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Walk Time (s)		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	
Pedestrian Calls (#/hr)		2	2				0	0		0	0	
v/c Ratio	0.02	0.84	0.04	0.10	0.71		0.66	0.20		0.09	0.20	
Control Delay	3.7	20.5	0.1	5.8	15.4		57.2	13.9		36.9	14.3	
Queue Delay	0.0	0.5	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	3.7	21.0	0.1	5.8	15.4		57.2	13.9		36.9	14.3	
Queue Length 50th (ft)	1	322	0	4	261		79	2		8	2	
Queue Length 95th (ft)	m1	#903	m0	12	#741		136	35		25	33	
Internal Link Dist (ft)		170			180			121			245	
Turn Bay Length (ft)	75		40	100			80					
Base Capacity (vph)	331	1146	933	224	1238		252	320		203	283	
Starvation Cap Reductn	0	27	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.02	0.87	0.04	0.10	0.71		0.51	0.16		0.07	0.16	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
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: 5: Cortland Drive/Morris Drive & US 9W



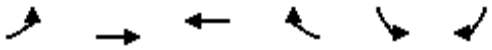
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	900	32	21	807	8	120	4	45	13	3	40
Future Volume (veh/h)	7	900	32	21	807	8	120	4	45	13	3	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1731	1583	1754	1859	1979	2018	2018	1913	1642	1894	1613
Adj Flow Rate, veh/h	8	968	0	23	868	9	129	4	48	14	3	43
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	11	21	15	8	0	0	0	7	17	0	19
Cap, veh/h	302	1097		204	1189	12	229	18	212	198	14	201
Arrive On Green	0.01	0.63	0.00	0.02	0.65	0.65	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1804	1731	1341	1670	1836	19	1467	133	1597	1187	106	1516
Grp Volume(v), veh/h	8	968	0	23	0	877	129	0	52	14	0	46
Grp Sat Flow(s),veh/h/ln	1804	1731	1341	1670	0	1855	1467	0	1730	1187	0	1621
Q Serve(g_s), s	0.2	46.5	0.0	0.5	0.0	31.6	8.6	0.0	2.7	1.1	0.0	2.5
Cycle Q Clear(g_c), s	0.2	46.5	0.0	0.5	0.0	31.6	11.1	0.0	2.7	3.8	0.0	2.5
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.92	1.00		0.93
Lane Grp Cap(c), veh/h	302	1097		204	0	1201	229	0	229	198	0	215
V/C Ratio(X)	0.03	0.88		0.11	0.00	0.73	0.56	0.00	0.23	0.07	0.00	0.21
Avail Cap(c_a), veh/h	374	1097		248	0	1201	299	0	311	254	0	292
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.0	15.2	0.0	17.2	0.0	11.8	43.7	0.0	38.8	40.5	0.0	38.7
Incr Delay (d2), s/veh	0.0	10.3	0.0	0.1	0.0	3.9	0.8	0.0	0.2	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.7	0.0	0.2	0.0	10.9	3.2	0.0	1.1	0.3	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	25.5	0.0	17.3	0.0	15.7	44.5	0.0	39.0	40.5	0.0	38.9
LnGrp LOS	B	C		B	A	B	D	A	D	D	A	D
Approach Vol, veh/h		976	A		900			181			60	
Approach Delay, s/veh		25.4			15.8			42.9			39.3	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	70.4		20.3	8.0	71.7		20.3				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	5.0	56.0		18.0	5.0	56.0		18.0				
Max Q Clear Time (g_c+I1), s	2.5	48.5		5.8	2.2	33.6		13.1				
Green Ext Time (p_c), s	0.0	2.2		0.1	0.0	2.7		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		23.2	
HCM 6th LOS		C	

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

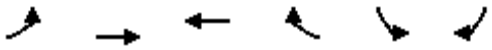


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	86	1074	953	45	32	69
Future Volume (vph)	86	1074	953	45	32	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	11	12	12
Grade (%)		1%	-1%		-3%	
Storage Length (ft)	100			115	0	50
Storage Lanes	1			1	1	1
Taper Length (ft)	185				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1643	1835	1819	1538	1796	1607
Flt Permitted	0.136				0.950	
Satd. Flow (perm)	235	1835	1819	1538	1796	1607
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				31		75
Link Speed (mph)		55	55		30	
Link Distance (ft)		359	275		203	
Travel Time (s)		4.5	3.4		4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	3%	5%	2%	2%	2%
Adj. Flow (vph)	93	1167	1036	49	35	75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	93	1167	1036	49	35	75
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.10	1.01	0.99	1.04	0.98	0.98
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	2	2	2	2	2
Detector Template	NYSDOTNYSDOTNYSDOTNYSDOTNYSDOT					
Leading Detector (ft)	78	78	78	78	78	78
Trailing Detector (ft)	-10	-10	-10	-10	-10	-10
Detector 1 Position(ft)	-10	-10	-10	-10	-10	-10
Detector 1 Size(ft)	40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	2.0	2.0	2.0	2.0	2.0	2.0
Detector 1 Queue (s)	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	5.0
Detector 2 Position(ft)	38	38	38	38	38	38
Detector 2 Size(ft)	40	40	40	40	40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	2.0	2.0	2.0	2.0	2.0	2.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	5
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0	5.0
Minimum Split (s)	12.0	17.0	17.0	17.0	12.0	12.0
Total Split (s)	12.0	88.0	76.0	76.0	12.0	12.0
Total Split (%)	12.0%	88.0%	76.0%	76.0%	12.0%	12.0%
Maximum Green (s)	5.0	81.0	69.0	69.0	5.0	5.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	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
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None
v/c Ratio	0.33	0.72	0.78	0.04	0.33	0.27
Control Delay	5.0	7.4	8.4	1.0	54.2	11.3
Queue Delay	0.0	0.9	0.3	0.0	0.0	0.0
Total Delay	5.0	8.3	8.7	1.0	54.2	11.3
Queue Length 50th (ft)	11	346	128	1	21	0
Queue Length 95th (ft)	17	467	103	m2	54	39
Internal Link Dist (ft)		279	195		123	
Turn Bay Length (ft)	100			115		50
Base Capacity (vph)	279	1626	1337	1138	106	279
Starvation Cap Reductn	0	0	40	0	0	0
Spillback Cap Reductn	0	207	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.82	0.80	0.04	0.33	0.27

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 10 (10%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

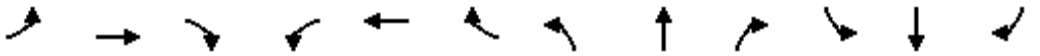
Splits and Phases: 4: US 9W & Site Driveway A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	86	1074	953	45	32	69
Future Volume (veh/h)	86	1074	953	45	32	69
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1864	1850	1864	1909	1988	1988
Adj Flow Rate, veh/h	93	1167	1036	49	35	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	3	5	2	2	2
Cap, veh/h	315	1498	1293	1123	95	162
Arrive On Green	0.05	0.81	0.69	0.69	0.05	0.05
Sat Flow, veh/h	1776	1850	1864	1618	1893	1685
Grp Volume(v), veh/h	93	1167	1036	49	35	75
Grp Sat Flow(s),veh/h/ln	1776	1850	1864	1618	1893	1685
Q Serve(g_s), s	1.3	32.5	38.3	1.0	1.8	4.2
Cycle Q Clear(g_c), s	1.3	32.5	38.3	1.0	1.8	4.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	315	1498	1293	1123	95	162
V/C Ratio(X)	0.30	0.78	0.80	0.04	0.37	0.46
Avail Cap(c_a), veh/h	322	1498	1293	1123	95	162
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	4.9	10.6	4.8	46.0	42.7
Incr Delay (d2), s/veh	0.5	4.1	5.3	0.1	2.4	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	5.7	12.4	0.3	0.9	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.5	9.0	15.8	4.9	48.4	44.8
LnGrp LOS	B	A	B	A	D	D
Approach Vol, veh/h		1260	1085		110	
Approach Delay, s/veh		9.3	15.3		45.9	
Approach LOS		A	B		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		88.0		12.0	11.6	76.4
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0
Max Green Setting (Gmax), s		81.0		5.0	5.0	69.0
Max Q Clear Time (g_c+I1), s		34.5		6.2	3.3	40.3
Green Ext Time (p_c), s		10.2		0.0	0.0	7.5

Intersection Summary	
HCM 6th Ctrl Delay	13.6
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	963	107	36	885	22	90	7	20	31	9	24
Future Volume (vph)	35	963	107	36	885	22	90	7	20	31	9	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-2%			-3%			1%	
Storage Length (ft)	75		40	100		0	80		0	0		80
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	80			85			50			25		
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			0.850		0.996			0.887			0.890	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1796	1835	1591	1823	1822	0	1832	1521	0	1736	1683	0
Flt Permitted	0.173			0.140			0.735			0.739		
Satd. Flow (perm)	327	1835	1591	269	1822	0	1417	1521	0	1351	1683	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			120		2			21			25	
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		250			260			201			325	
Travel Time (s)		3.1			3.2			4.6			7.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	1%	0%	5%	0%	0%	2%	16%	0%	0%	0%
Adj. Flow (vph)	36	993	110	37	912	23	93	7	21	32	9	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	993	110	37	935	0	93	28	0	32	34	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	1.01	1.01	1.01	0.99	0.99	0.99	0.98	0.98	0.98	1.05	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	0	2	2		2	2		2	2	
Detector Template	NYSDOTNYSDOT			NYSDOTNYSDOT			NYSDOT			NYSDOT		
Leading Detector (ft)	78	78	0	78	78		78	78		78	78	
Trailing Detector (ft)	-10	-10	0	-10	-10		-10	-10		-10	-10	
Detector 1 Position(ft)	-10	-10	-10	-10	-10		-10	-10		-10	-10	
Detector 1 Size(ft)	40	40	40	40	40		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Detector 1 Queue (s)	0.0	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	5.0		0.0	5.0	
Detector 2 Position(ft)	38	38		38	38		38	38		38	38	
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	25.0	25.0	12.0	17.0		25.0	25.0		25.0	25.0	
Total Split (s)	12.0	63.0	63.0	12.0	63.0		25.0	25.0		25.0	25.0	
Total Split (%)	12.0%	63.0%	63.0%	12.0%	63.0%		25.0%	25.0%		25.0%	25.0%	
Maximum Green (s)	5.0	56.0	56.0	5.0	56.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	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	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Walk Time (s)		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	
Pedestrian Calls (#/hr)		2	2				0	0		0	0	
v/c Ratio	0.11	0.76	0.09	0.13	0.72		0.54	0.14		0.20	0.15	
Control Delay	4.1	14.7	0.6	5.3	17.7		52.9	20.6		41.3	19.9	
Queue Delay	0.0	0.6	0.0	0.0	0.1		0.0	0.0		0.0	0.0	
Total Delay	4.1	15.3	0.6	5.3	17.8		52.9	20.6		41.3	19.9	
Queue Length 50th (ft)	2	483	1	5	415		57	4		19	5	
Queue Length 95th (ft)	m6	#868	m3	15	#795		104	29		45	32	
Internal Link Dist (ft)		170			180			121			245	
Turn Bay Length (ft)	75		40	100			80					
Base Capacity (vph)	316	1306	1167	278	1297		255	291		243	323	
Starvation Cap Reductn	0	85	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	23		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.11	0.81	0.09	0.13	0.73		0.36	0.10		0.13	0.11	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow, Master Intersection

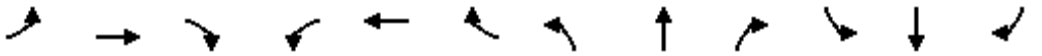
Natural Cycle: 90

Control Type: Actuated-Coordinated

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: 5: Cortland Drive/Morris Drive & US 9W



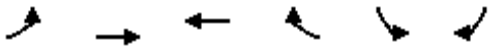
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	963	107	36	885	22	90	7	20	31	9	24
Future Volume (veh/h)	35	963	107	36	885	22	90	7	20	31	9	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1850	1879	1979	1904	1979	2018	1988	1778	1894	1894	1894
Adj Flow Rate, veh/h	36	993	0	37	912	23	93	7	21	32	9	25
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	3	1	0	5	0	0	2	16	0	0	0
Cap, veh/h	327	1218		290	1218	31	192	44	131	191	44	122
Arrive On Green	0.03	0.66	0.00	0.03	0.66	0.66	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1804	1850	1593	1884	1849	47	1483	438	1314	1400	443	1230
Grp Volume(v), veh/h	36	993	0	37	0	935	93	0	28	32	0	34
Grp Sat Flow(s),veh/h/ln	1804	1850	1593	1884	0	1895	1483	0	1752	1400	0	1673
Q Serve(g_s), s	0.6	39.6	0.0	0.6	0.0	33.2	6.1	0.0	1.5	2.1	0.0	1.9
Cycle Q Clear(g_c), s	0.6	39.6	0.0	0.6	0.0	33.2	8.0	0.0	1.5	3.6	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.75	1.00		0.74
Lane Grp Cap(c), veh/h	327	1218		290	0	1249	192	0	174	191	0	166
V/C Ratio(X)	0.11	0.82		0.13	0.00	0.75	0.48	0.00	0.16	0.17	0.00	0.20
Avail Cap(c_a), veh/h	360	1218		324	0	1249	311	0	315	303	0	301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.7	12.6	0.0	13.2	0.0	11.5	45.1	0.0	41.2	42.9	0.0	41.4
Incr Delay (d2), s/veh	0.1	6.1	0.0	0.1	0.0	4.1	0.7	0.0	0.2	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	13.8	0.0	0.3	0.0	11.6	2.3	0.0	0.6	0.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	18.7	0.0	13.3	0.0	15.6	45.8	0.0	41.4	43.0	0.0	41.6
LnGrp LOS	B	B		B	A	B	D	A	D	D	A	D
Approach Vol, veh/h		1029	A		972			121			66	
Approach Delay, s/veh		18.4			15.5			44.8			42.3	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	72.8		16.9	10.2	72.9		16.9				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	5.0	56.0		18.0	5.0	56.0		18.0				
Max Q Clear Time (g_c+I1), s	2.6	41.6		5.6	2.6	35.2		10.0				
Green Ext Time (p_c), s	0.0	3.0		0.1	0.0	3.0		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		19.3	
HCM 6th LOS		B	

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



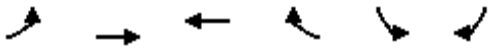
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	86	752	751	45	37	80
Future Volume (vph)	86	752	751	45	37	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	11	12	12
Grade (%)		1%	-1%		-3%	
Storage Length (ft)	100			115	0	50
Storage Lanes	1			1	1	1
Taper Length (ft)	185				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1643	1853	1872	1538	1796	1607
Flt Permitted	0.228				0.950	
Satd. Flow (perm)	394	1853	1872	1538	1796	1607
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				39		87
Link Speed (mph)		55	55		30	
Link Distance (ft)		359	275		213	
Travel Time (s)		4.5	3.4		4.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	817	816	49	40	87
Shared Lane Traffic (%)						
Lane Group Flow (vph)	93	817	816	49	40	87
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.10	1.01	0.99	1.04	0.98	0.98
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	2	2	2	2	2
Detector Template	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	78	78	78	78	78	78
Trailing Detector (ft)	-10	-10	-10	-10	-10	-10
Detector 1 Position(ft)	-10	-10	-10	-10	-10	-10
Detector 1 Size(ft)	40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	2.0	2.0	2.0	2.0	2.0	2.0
Detector 1 Queue (s)	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	5.0
Detector 2 Position(ft)	38	38	38	38	38	38
Detector 2 Size(ft)	40	40	40	40	40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	2.0	2.0	2.0	2.0	2.0	2.0
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases	5	2	6		4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	5
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0	5.0
Minimum Split (s)	12.0	17.0	17.0	17.0	12.0	12.0
Total Split (s)	12.0	88.0	76.0	76.0	12.0	12.0
Total Split (%)	12.0%	88.0%	76.0%	76.0%	12.0%	12.0%
Maximum Green (s)	5.0	81.0	69.0	69.0	5.0	5.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	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
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None
v/c Ratio	0.23	0.51	0.62	0.04	0.28	0.27
Control Delay	3.8	4.9	7.5	1.4	47.8	9.2
Queue Delay	0.0	0.1	0.1	0.0	0.0	0.0
Total Delay	3.8	4.9	7.6	1.4	47.8	9.2
Queue Length 50th (ft)	11	160	359	1	25	0
Queue Length 95th (ft)	24	270	144	m3	56	39
Internal Link Dist (ft)		279	195		133	
Turn Bay Length (ft)	100			115		50
Base Capacity (vph)	405	1641	1376	1141	141	326
Starvation Cap Reductn	0	0	55	0	0	0
Spillback Cap Reductn	0	94	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.53	0.62	0.04	0.28	0.27

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 5 (5%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

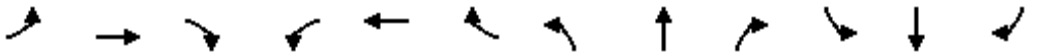
Splits and Phases: 4: US 9W & Site Driveway A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	86	752	751	45	37	80
Future Volume (veh/h)	86	752	751	45	37	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1864	1864	1909	1909	1988	1988
Adj Flow Rate, veh/h	93	817	816	49	40	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	451	1510	1325	1123	95	162
Arrive On Green	0.05	0.81	0.69	0.69	0.05	0.05
Sat Flow, veh/h	1776	1864	1909	1618	1893	1685
Grp Volume(v), veh/h	93	817	816	49	40	87
Grp Sat Flow(s),veh/h/ln	1776	1864	1909	1618	1893	1685
Q Serve(g_s), s	1.3	14.8	22.9	1.0	2.1	4.9
Cycle Q Clear(g_c), s	1.3	14.8	22.9	1.0	2.1	4.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	451	1510	1325	1123	95	162
V/C Ratio(X)	0.21	0.54	0.62	0.04	0.42	0.54
Avail Cap(c_a), veh/h	457	1510	1325	1123	95	162
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.7	3.2	8.2	4.8	46.1	43.1
Incr Delay (d2), s/veh	0.2	1.4	2.2	0.1	3.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.4	7.2	0.3	1.0	4.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	6.9	4.6	10.3	4.9	49.1	46.5
LnGrp LOS	A	A	B	A	D	D
Approach Vol, veh/h		910	865		127	
Approach Delay, s/veh		4.8	10.0		47.3	
Approach LOS		A	B		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		88.0		12.0	11.6	76.4
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0
Max Green Setting (Gmax), s		81.0		5.0	5.0	69.0
Max Q Clear Time (g_c+I1), s		16.8		6.9	3.3	24.9
Green Ext Time (p_c), s		5.0		0.0	0.0	5.2

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	B



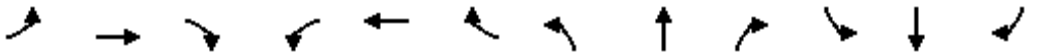
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	685	83	22	672	22	102	10	23	32	8	21
Future Volume (vph)	19	685	83	22	672	22	102	10	23	32	8	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-2%			-3%			1%	
Storage Length (ft)	75		40	100		0	80		0	0		80
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	80			85			50			25		
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			0.850		0.995			0.896			0.892	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1796	1853	1607	1823	1873	0	1832	1728	0	1736	1686	0
Flt Permitted	0.262			0.268			0.736			0.734		
Satd. Flow (perm)	495	1853	1607	514	1873	0	1419	1728	0	1341	1686	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			120		3			25			23	
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		250			260			201			325	
Travel Time (s)		3.1			3.2			4.6			7.4	
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%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	21	753	91	24	738	24	112	11	25	35	9	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	753	91	24	762	0	112	36	0	35	32	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	1.01	1.01	1.01	0.99	0.99	0.99	0.98	0.98	0.98	1.05	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	0	2	2		2	2		2	2	
Detector Template	NYSDOTNYSDOT			NYSDOTNYSDOT			NYSDOT			NYSDOT		
Leading Detector (ft)	78	78	0	78	78		78	78		78	78	
Trailing Detector (ft)	-10	-10	0	-10	-10		-10	-10		-10	-10	
Detector 1 Position(ft)	-10	-10	0	-10	-10		-10	-10		-10	-10	
Detector 1 Size(ft)	40	40	20	40	40		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	2.0	2.0	0.0	2.0	2.0		2.0	2.0		2.0	2.0	
Detector 1 Queue (s)	0.0	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	5.0		0.0	5.0	
Detector 2 Position(ft)	38	38		38	38		38	38		38	38	
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	25.0	25.0	12.0	17.0		25.0	25.0		25.0	25.0	
Total Split (s)	12.0	63.0	63.0	12.0	63.0		25.0	25.0		25.0	25.0	
Total Split (%)	12.0%	63.0%	63.0%	12.0%	63.0%		25.0%	25.0%		25.0%	25.0%	
Maximum Green (s)	5.0	56.0	56.0	5.0	56.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	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	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Walk Time (s)		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	
Pedestrian Calls (#/hr)		2	2				0	0		0	0	
v/c Ratio	0.05	0.60	0.08	0.06	0.60		0.61	0.15		0.20	0.13	
Control Delay	3.0	10.7	0.9	5.0	13.1		54.5	19.8		40.1	19.7	
Queue Delay	0.0	0.2	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	3.0	10.8	0.9	5.0	13.1		54.5	19.8		40.1	19.7	
Queue Length 50th (ft)	2	74	1	3	181		69	6		20	5	
Queue Length 95th (ft)	m3	498	10	12	487		119	33		47	31	
Internal Link Dist (ft)		170			180			121			245	
Turn Bay Length (ft)	75		40	100			80					
Base Capacity (vph)	412	1262	1132	426	1277		255	331		241	322	
Starvation Cap Reductn	0	80	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.64	0.08	0.06	0.60		0.44	0.11		0.15	0.10	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Cortland Drive/Morris Drive & US 9W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	685	83	22	672	22	102	10	23	32	8	21
Future Volume (veh/h)	19	685	83	22	672	22	102	10	23	32	8	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1864	1894	1979	1949	1979	2018	2018	2018	1894	1894	1894
Adj Flow Rate, veh/h	21	753	0	24	738	24	112	11	25	35	9	23
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
Percent Heavy Veh, %	0	2	0	0	2	0	0	0	0	0	0	0
Cap, veh/h	421	1220		434	1232	40	212	61	139	201	52	134
Arrive On Green	0.02	0.65	0.00	0.02	0.66	0.66	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1804	1864	1605	1884	1877	61	1486	548	1246	1390	472	1205
Grp Volume(v), veh/h	21	753	0	24	0	762	112	0	36	35	0	32
Grp Sat Flow(s),veh/h/ln	1804	1864	1605	1884	0	1938	1486	0	1794	1390	0	1677
Q Serve(g_s), s	0.4	23.4	0.0	0.4	0.0	22.3	7.4	0.0	1.8	2.3	0.0	1.7
Cycle Q Clear(g_c), s	0.4	23.4	0.0	0.4	0.0	22.3	9.1	0.0	1.8	4.2	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.69	1.00		0.72
Lane Grp Cap(c), veh/h	421	1220		434	0	1272	212	0	200	201	0	187
V/C Ratio(X)	0.05	0.62		0.06	0.00	0.60	0.53	0.00	0.18	0.17	0.00	0.17
Avail Cap(c_a), veh/h	472	1220		482	0	1272	314	0	323	297	0	302
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.8	10.0	0.0	8.1	0.0	9.7	44.4	0.0	40.3	42.2	0.0	40.3
Incr Delay (d2), s/veh	0.0	2.3	0.0	0.0	0.0	2.1	0.8	0.0	0.2	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	7.8	0.0	0.1	0.0	7.7	2.7	0.0	0.8	0.8	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.8	12.4	0.0	8.1	0.0	11.8	45.2	0.0	40.5	42.3	0.0	40.4
LnGrp LOS	A	B		A	A	B	D	A	D	D	A	D
Approach Vol, veh/h		774	A		786			148			67	
Approach Delay, s/veh		12.2			11.7			44.0			41.4	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	72.4		18.1	9.2	72.7		18.1				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	5.0	56.0		18.0	5.0	56.0		18.0				
Max Q Clear Time (g_c+I1), s	2.4	25.4		6.2	2.4	24.3		11.1				
Green Ext Time (p_c), s	0.0	2.2		0.1	0.0	2.3		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		15.7	
HCM 6th LOS		B	

Notes

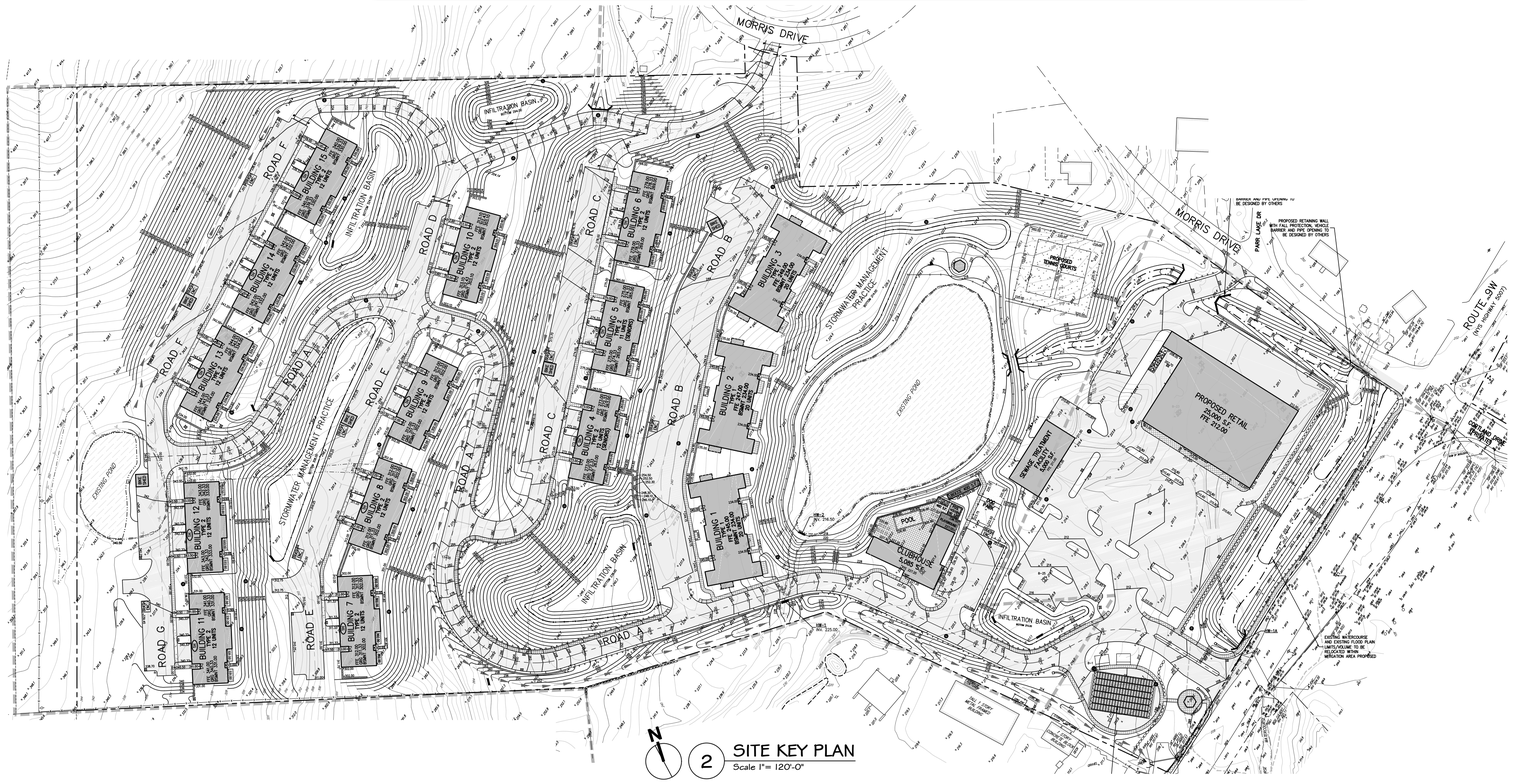
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Abbreviations

A/C	AIR CONDITIONER	ID	INSIDE DIAMETER
ACI	AMERICAN CONCRETE INSTITUTE	IM	INSULATED METAL
ACT	ACOUSTICAL CEILING TILE	INCAND	INCANDESCENT
ADD	ADDENDUM	INCL	INCLUDE(D), (ING)
ADD'L	ADDITIONAL	INFO	INFORMATION
ADJ	ADJACENT or ADJUSTABLE	INSUL	INSULATE(D), (ING), (TION)
ADMIN	ADMINISTRATION	INV	INVERT
AFF	ABOVE FINISHED FLOOR	INV EL	INVERT ELEVATION
ALUM or AL	ALUMINUM		
APPROX	APPROXIMATE	JB	JUNCTION BOX
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	JC	JANITOR'S CLOSET
		JST	JOIST
BD	BOARD	JT	JOINT
BLK	BLOCK		
BLKG	BLOCKING	LAM	LAMINATE
BM	BEAM	LAV	LAVATORY
B.O. or BO	BOTTOM OF	LLC	LEAD COATED COPPER
BP	BASE PLATE	LP	LOW POINT
CAB	CABINET	MAS	MASONRY
CB	CATCH BASIN	MAX	MAXIMUM
C.I.	CAST IRON	MC	MISCELLANEOUS CHANNEL
C.J.	CONTROL JOINT	MECH	MECHANIC(AL)
CL	CENTER LINE	MFGR	MANUFACTURE(R)
CLG	CEILING	MIN	MINIMUM
CLR	CLEAR(ANCE)	MISC	MISCELLANEOUS
CMU	CONCRETE MASONRY UNIT	MO	MASONRY OPENING
CO	CLEAN OUT	MR	MACHINE ROOM
COL	COLUMN	MTD	MOUNTED
CONC	CONCRETE	MTG	MEETING
CONFR	CONFERENCE	MTL	METAL
CONT	CONTINUOUS or CONTINUE		
CT	CERAMIC TILE	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CTR	CENTER		
		NIC	NOT IN CONTRACT
D.C.	DROPPED CURB	NOM	NOMINAL
DEPT	DEPARTMENT	NTS	NOT TO SCALE
DF	DRINKING FOUNTAIN		
DI	DRAINAGE INLET	OC	ON CENTER
DIA	DIAMETER	OD	OUTSIDE DIAMETER
DIAG	DIAGONAL	OH	OVERHEAD
DIFF	DIFFUSER	OPP	OPPOSITE
DIM	DIMENSION		
DISP	DISPENSER	PD	POLICE DEPARTMENT
DN	DOWN	PL	PLATE
DR	DRAIN	PNL	PANEL
DTL	DETAIL	PNT/PT'D	PAINT(ED)
DWG	DRAWING	PSF	POUNDS PER SQUARE FOOT
		PSI	POUNDS PER SQUARE INCH
EA	EACH	PVC	POLYVINYL CHLORIDE or COATING
E.J.	EXPANSION JOINT		
EL	ELEVATION	QT	QUARRY TILE
ELEC	ELECTRICAL or ELECTRIC	QUANT/QTY	QUANTITY
ELEV	ELEVATOR		
EMER	EMERGENCY	R	RADIUS or RISER
EP	ELECTRIC PANEL	RA	RETURN AIR
EPDM	ETHYLENE PROPYLENE DIENE MONOMER	RAD	RADIUS or RADIATOR
EQ	EQUAL	RD	ROOF DRAIN
EQUIP	EQUIPMENT	REINF	REINFORCEMENT
ETC	ETCETERA	REQD	REQUIRED
EX or EXIST	EXISTING	RET	RETURN
EXH	EXHAUST	REF	REFER
		RM	ROOM
FA	FIRE ALARM	RO	ROUGH OPENING
FAA	FIRE ALARM ANNUNCIATOR		
F.A.I.	FRESH AIR INTAKE	SAN	SANITARY
FCU	FAN COIL UNIT	SD	STORM DRAIN
FD	FLOOR DRAIN or FIRE DAMPER	SECT	SECTION
FDN	FOUNDATION	SF	SQUARE FOOT
FE	FIRE EXTINGUISHER	SFCC	STEEL FACED CONCRETE CURB
FEC	FIRE EXTINGUISHER CABINET	SIM	SIMILAR
FF	FINISH FLOOR	SPEC	SPECIFICATION
FIN	FINISH	SST/ST. STL	STAINLESS STEEL
FLR	FLOOR	ST/STOR	STORAGE
FLUOR	FLUORESCENT	STL	STEEL
FP	FIRE PROOF	STRUCT	STRUCTURAL
FT	FOOT or FEET	SW	SWITCH
FTG	FOOTING		
		T	TREAD
GA	GAUGE	THK	THICK
GALV	GALVANIZED	T.O. or T/O	TOP OF
GC	GENERAL CONTRACTOR	TOS	TOP OF STEEL OR SLAB
GL	GLASS or GLAZING	TYP	TYPICAL
GWB	GYPSUM WALL BOARD		
GYP	GYPSUM	U.N.O.	UNLESS NOTED OTHERWISE
HB	HOSE BIB	VB	VINYL BASE
HC or H/C	HANDICAPPED	VC	VIDEO CAMERA
HDWR	HARDWARE	VCT	VINYL COMPOSITION TILE
HM or H/M	HOLLOW METAL	VIF	VERIFY IN FIELD
HP	HIGH POINT		
HVAC	HEATING VENTILATING AIR CONDITIONING	WC	WATER CLOSET
		WD	WOOD
		WH	WATER HEATER
		WO	WINDOW OPENING
		WP	WATERPROOF
		WPF	WATER PER FLUSH
		WWM / WWF	WELDED WIRE MESH/FABRIC

OVERLOOK FARMS
A FARRELL COMMUNITY

5417 ROUTE 9W
NEWBURGH, NEW YORK 12550



N

2 SITE KEY PLAN
Scale 1"= 120'-0"

SYMBOLS LEGEND

- EXISTING PARTITION / WALL CONSTRUCTION TO BE REMOVED
- EXISTING PARTITION / WALL CONSTRUCTION TO REMAIN
- NEW DRYWALL PARTITION, REFER TO PLAN FOR TYPE (small scale)
- NEW FURRED DRYWALL PARTITION, REFER TO PLAN FOR TYPE
- NEW CONCRETE WALL
- AREA OF EXCAVATION
- PATCH AND REPAIR EXISTING CONSTRUCTION TO RECEIVE NEW WORK
- GLASS
- FINISH WOOD
- BLOCKING or ROUGH WOOD
- PLYWOOD (small scale)
- BATT INSULATION
- RIGID INSULATION

- Name — ROOM NAME
- 013 — ROOM NUMBER
- 0.00 S.F. — ROOM AREA IN SQ. FT.
- D-100 — DOOR NUMBER
- W-100 — WINDOW NUMBER
- ELEVATION MARK
- 1 / A100 — SECTION DESIGNATION / DRAWING NUMBER
- 1 / A100 — ELEVATION / DRAWING NUMBER
- 1 / A100 — DETAIL DESIGNATION / DRAWING NUMBER
- HC ACCESSIBLE
- REVISION CLOUD
- 2 — REVISION DESIGNATION
- ELEVATION NUMBER — INTERIOR ELEVATION DESIGNATION

DRAWING LIST

N

1 LOCATION MAP
N.T.S.

PETER F. GAITO & ASSOCIATES
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No.	Date	Revisions / Submissions
1	12/09/20	REVISED PER TOWN COMMENTS
2	03/19/21	PLANNING BOARD SUBMISSION

GENERAL NOTE

EACH CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH OTHER TRADES AND THE GENERAL CONTRACTOR, FOR ALL WORK. HE IS TO EXAMINE ALL DRAWINGS AND SPECIFICATIONS OF ALL OTHER TRADES PRIOR TO INSTALLATION OF HIS WORK. IF ANY OF HIS WORK IS CALLED FOR ON ANY OTHER DRAWINGS AND SPECIFICATIONS, IT IS THEIR RESPONSIBILITY TO PROVIDE THAT WORK WHETHER CALLED FOR ON HIS DRAWINGS OR NOT. A FULL SET OF DRAWINGS AND SPECIFICATIONS ARE ON FILE AT THE ARCHITECT'S OFFICE, FOR THEIR REVIEW.

Project Title

OVERLOOK FARMS
A FARRELL COMMUNITY

5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

TITLE SHEET

Date	09/26/18
Project ID	1901
Drawn By	KK/NA/OS
Checked By	PFG
Scale	AS NOTED

Sign and Seal

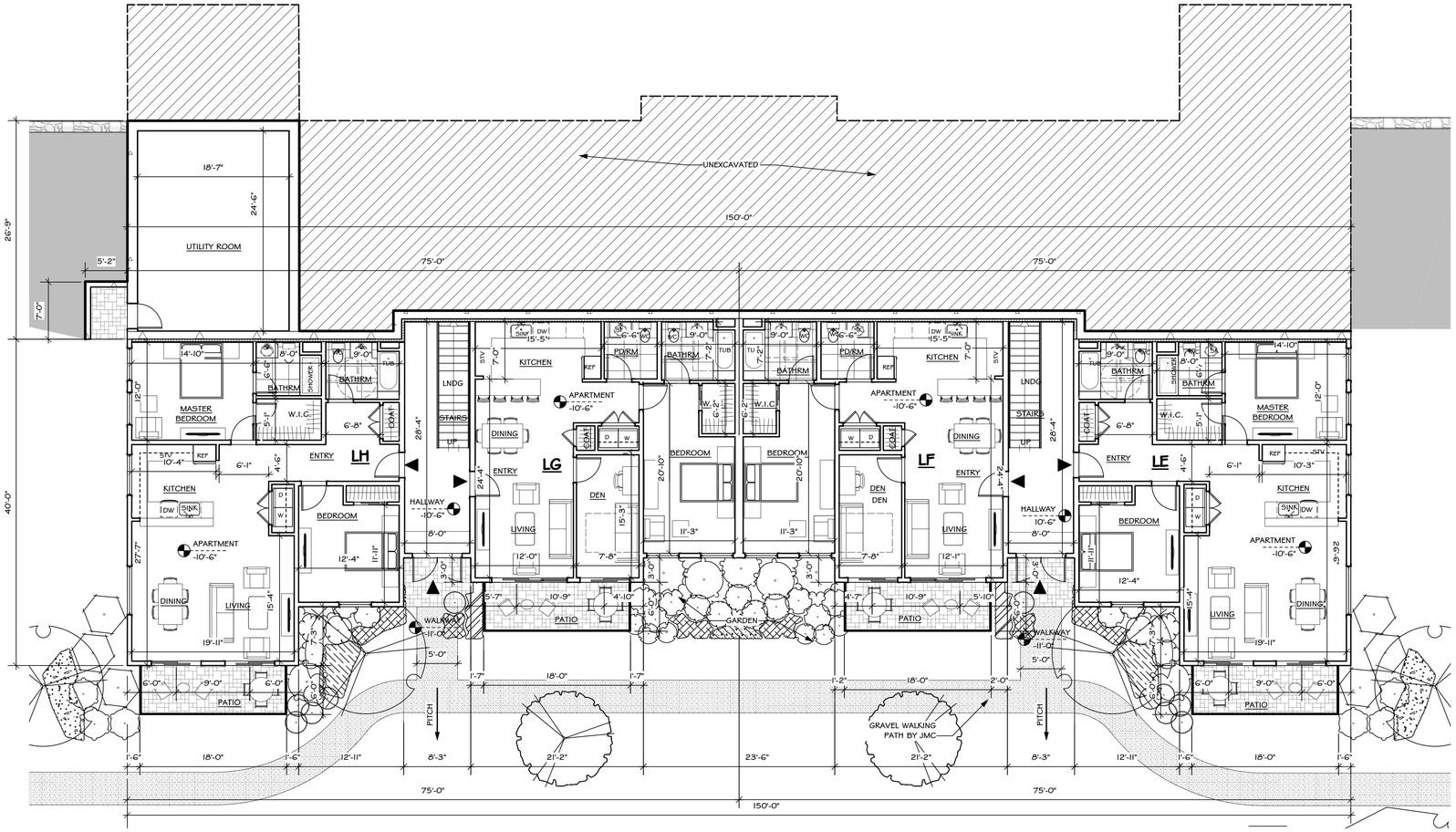
Sheet No.

T-001

1 of 21

CAD File Name: 1901 CD - PB v2020.vwx

G-Scan Label



1 BUILDING TYPE 1 - LOWER LEVEL FLOOR PLAN
Scale: 1/8" = 1'-0"

LOWER LEVEL UNIT INFORMATION			
UNIT	UNIT COUNT	UNIT TYPE SQ.FT. TOTAL	
E	1	(1 X 1,180)=	1,180 SQ.FT.
F	1	(1 X 960)=	960 SQ.FT.
G	1	(1 X 960)=	960 SQ.FT.
H	1	(1 X 1,180)=	1,180 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS FLOOR			4,280 SQ.FT.
TOTAL UNITS ON THIS FLOOR			4

BUILDING TYPE 1

SQUARE FOOTAGES	
LOWER LEVEL GROSS AREA	5,760 SQ.FT.
FIRST FLOOR GROSS AREA	9,545 SQ.FT.
SECOND FLOOR GROSS AREA	9,545 SQ.FT.
TOTAL GROSS AREA FOR THIS BLDG TYPE	24,850 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS BLDG TYPE	20,460 SQ.FT.
TOTAL UNITS ON THIS BLDG TYPE	20

UNIT INFORMATION		
UNIT TYPE	UNIT NUMBER	SQ. FT PER UNIT
1 BED	1B, 1C, 2B, 2C	775
1 BED + DEN	1F, 1G, 1F, 1G, 2F, 2G	960
2 BED	1A, 1D, 2A, 2D	1,130
2 BED	1E, 1H, 1E, 1H, 2E, 2H	1,180

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No.	Date	Revisions / Submissions
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2	03/19/21	PLANNING BOARD SUBMISSION

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Project Title
OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title
BUILDING TYPE 1 - LOWER LEVEL FLOOR PLAN

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
Sign and Seal

Sheet No.
A-100
2 of 21

CAD File Name: 1901 CD - PB v2020.vwx
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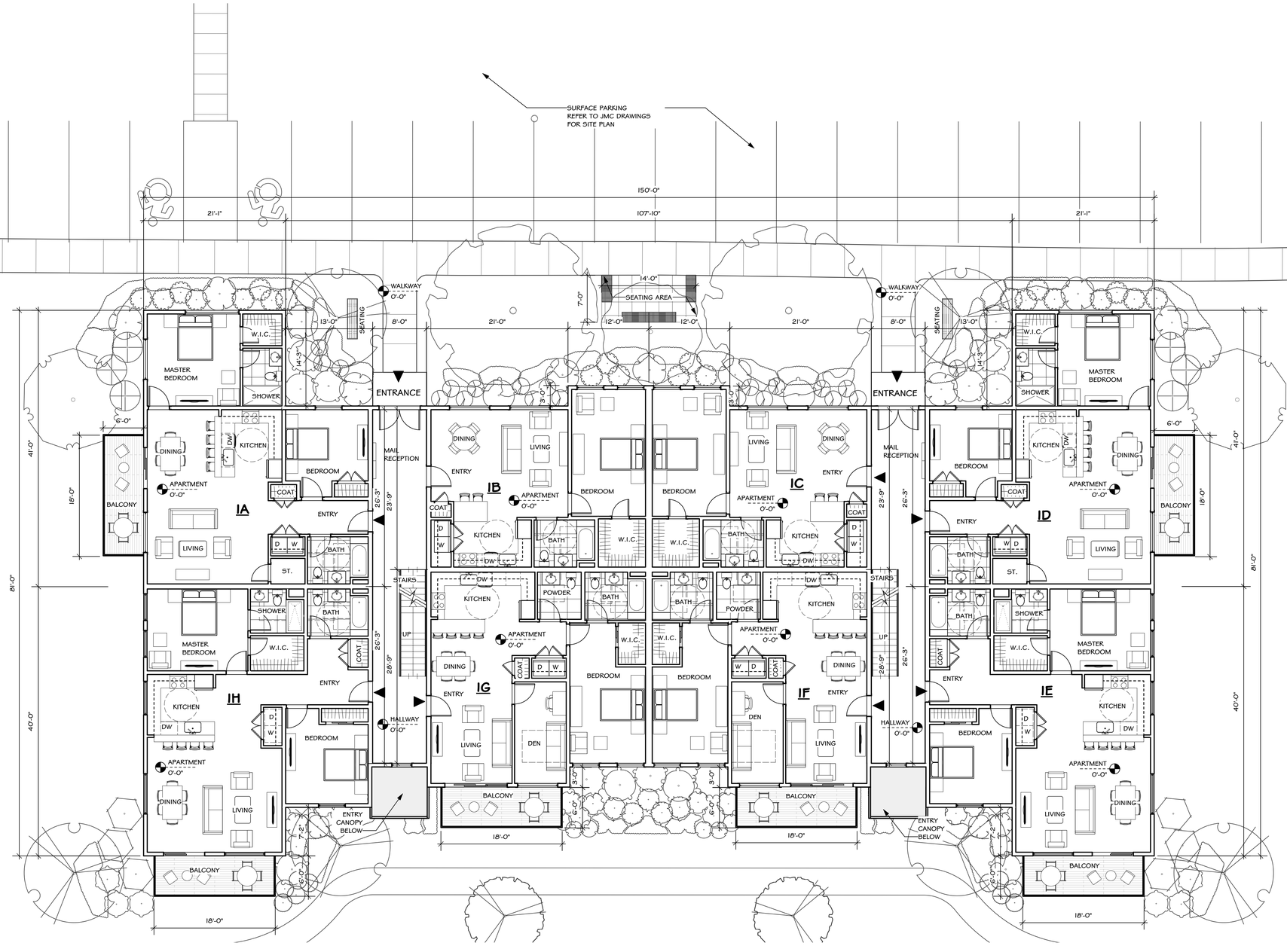

1 BUILDING TYPE 1 - FIRST FLOOR PLAN
Scale: 1/8" = 1'-0"

FIRST FLOOR UNIT INFORMATION			
UNIT	UNIT COUNT	UNIT TYPE SQ.FT. TOTAL	
A	1	(1 X 1,130)=	1,130 SQ.FT.
B	1	(1 X 775)=	775 SQ.FT.
C	1	(1 X 775)=	775 SQ.FT.
D	1	(1 X 1,130)=	1,130 SQ.FT.
E	1	(1 X 1,180)=	1,180 SQ.FT.
F	1	(1 X 960)=	960 SQ.FT.
G	1	(1 X 960)=	960 SQ.FT.
H	1	(1 X 1,180)=	1,180 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS FLOOR			8,090 SQ.FT.
TOTAL UNITS ON THIS FLOOR			8

BUILDING TYPE 1

SQUARE FOOTAGES	
LOWER LEVEL GROSS AREA	5,760 SQ.FT.
FIRST FLOOR GROSS AREA	9,545 SQ.FT.
SECOND FLOOR GROSS AREA	9,545 SQ.FT.
TOTAL GROSS AREA FOR THIS BLDG TYPE	24,850 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS BLDG TYPE	20,460 SQ.FT.
TOTAL UNITS ON THIS BLDG TYPE	20

UNIT INFORMATION		
UNIT TYPE	UNIT NUMBER	SQ. FT PER UNIT
1 BED	1B, 1C, 2B, 2C	775
1 BED + DEN	1F, 1G, 1F, 1G, 2F, 2G	960
2 BED	1A, 1D, 2A, 2D	1,130
2 BED	1E, 1H, 1E, 1H, 2E, 2H	1,180

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Project Title
OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title
BUILDING TYPE 1 - FIRST FLOOR PLAN

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
Sign and Seal

Sheet No.
A-101
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CAD File Name: 1901 CD - PB v2020.vwx
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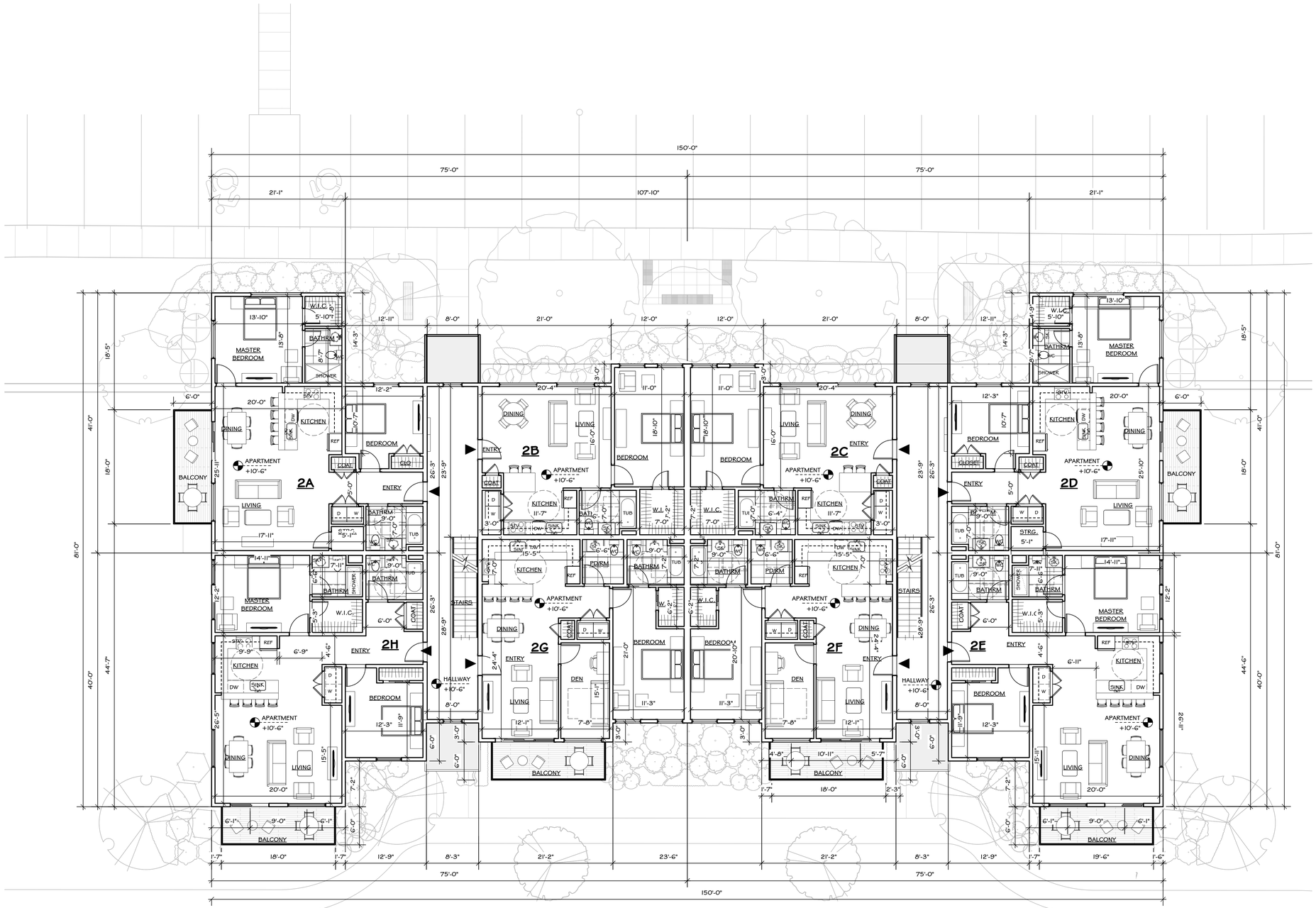

1 BUILDING TYPE 1 - SECOND FLOOR PLAN

Scale: 1/8" = 1'-0"

SECOND FLOOR UNIT INFORMATION

UNIT	UNIT COUNT	UNIT TYPE SQ.FT. TOTAL	
A	1	(1 X 1,130)=	1,130 SQ.FT.
B	1	(1 X 775)=	775 SQ.FT.
C	1	(1 X 775)=	775 SQ.FT.
D	1	(1 X 1,130)=	1,130 SQ.FT.
E	1	(1 X 1,180)=	1,180 SQ.FT.
F	1	(1 X 960)=	960 SQ.FT.
G	1	(1 X 960)=	960 SQ.FT.
H	1	(1 X 1,180)=	1,180 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS FLOOR			8,090 SQ.FT.
TOTAL UNITS ON THIS FLOOR			8

BUILDING TYPE 1

SQUARE FOOTAGES	
LOWER LEVEL GROSS AREA	5,760 SQ.FT.
FIRST FLOOR GROSS AREA	9,545 SQ.FT.
SECOND FLOOR GROSS AREA	9,545 SQ.FT.
TOTAL GROSS AREA FOR THIS BLDG TYPE	24,850 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS BLDG TYPE	20,460 SQ.FT.
TOTAL UNITS ON THIS BLDG TYPE	20

UNIT INFORMATION		
UNIT TYPE	UNIT NUMBER	SQ. FT PER UNIT
1 BED	1B, 1C, 2B, 2C	775
1 BED + DEN	1F, 1G, 1F, 1G, 2F, 2G	960
2 BED	1A, 1D, 2A, 2D	1,130
2 BED	1E, 1H, 1E, 1H, 2E, 2H	1,180

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Project Title

OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

BUILDING TYPE 1 - SECOND FLOOR PLAN

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
Sign and Seal

Sheet No.

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CAD File Name: 1901 CD - PB v2020.vwx
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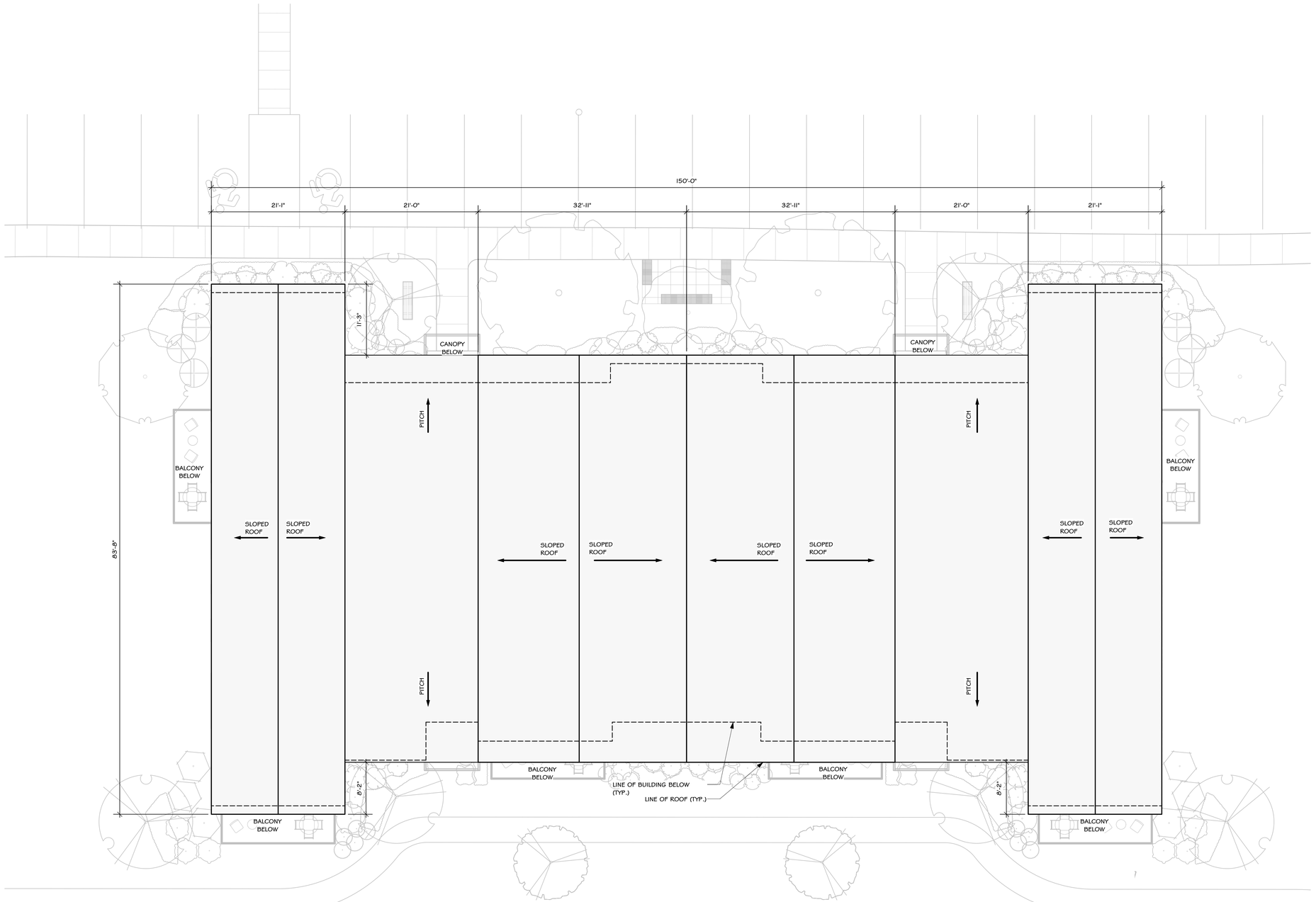

1 BUILDING TYPE 1 - ROOF PLAN
Scale: 1/8" = 1'-0"

SECOND FLOOR UNIT INFORMATION			
UNIT	UNIT COUNT	UNIT TYPE SQ.FT.	TOTAL
A	1	(1 X 1,130)=	1,130 SQ.FT.
B	1	(1 X 775)=	775 SQ.FT.
C	1	(1 X 775)=	775 SQ.FT.
D	1	(1 X 1,130)=	1,130 SQ.FT.
E	1	(1 X 1,180)=	1,180 SQ.FT.
F	1	(1 X 960)=	960 SQ.FT.
G	1	(1 X 960)=	960 SQ.FT.
H	1	(1 X 1,180)=	1,180 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS FLOOR			8,090 SQ.FT.
TOTAL UNITS ON THIS FLOOR			8

BUILDING TYPE 1

SQUARE FOOTAGES	
LOWER LEVEL GROSS AREA	5,760 SQ.FT.
FIRST FLOOR GROSS AREA	9,545 SQ.FT.
SECOND FLOOR GROSS AREA	9,545 SQ.FT.
TOTAL GROSS AREA FOR THIS BLDG TYPE	24,850 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS BLDG TYPE	20,460 SQ.FT.
TOTAL UNITS ON THIS BLDG TYPE	20

UNIT INFORMATION		
UNIT TYPE	UNIT NUMBER	SQ. FT PER UNIT
1 BED	1B, 1C, 2B, 2C	775
1 BED + DEN	1F, 1G, 1F, 1G, 2F, 2G	960
2 BED	1A, 1D, 2A, 2D	1,130
2 BED	1E, 1H, 1E, 1H, 2E, 2H	1,180

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Project Title
OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title
BUILDING TYPE 1 - ROOF PLAN

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
Sign and Seal

Sheet No.
A-103
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CAD File Name: 1901 CD - PB v2020.vwx
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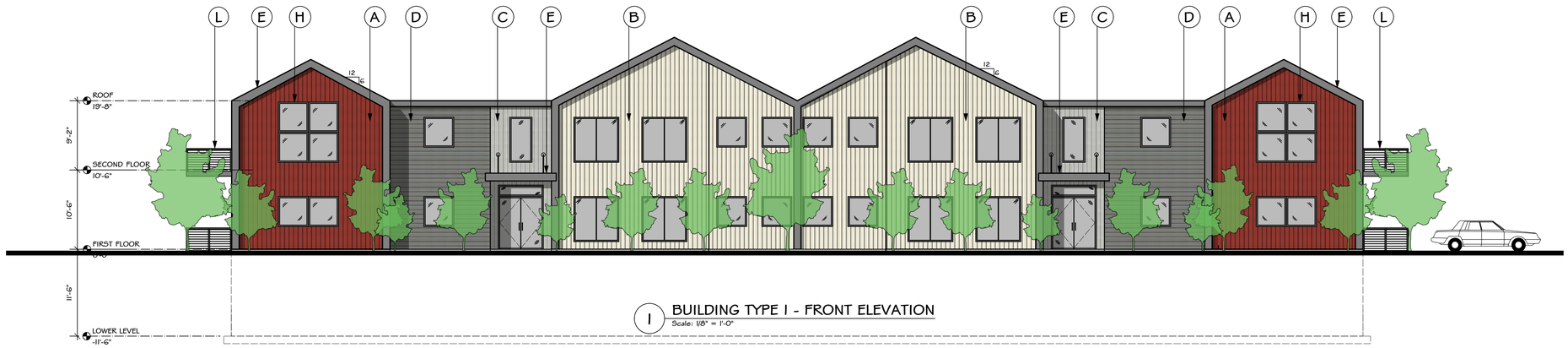
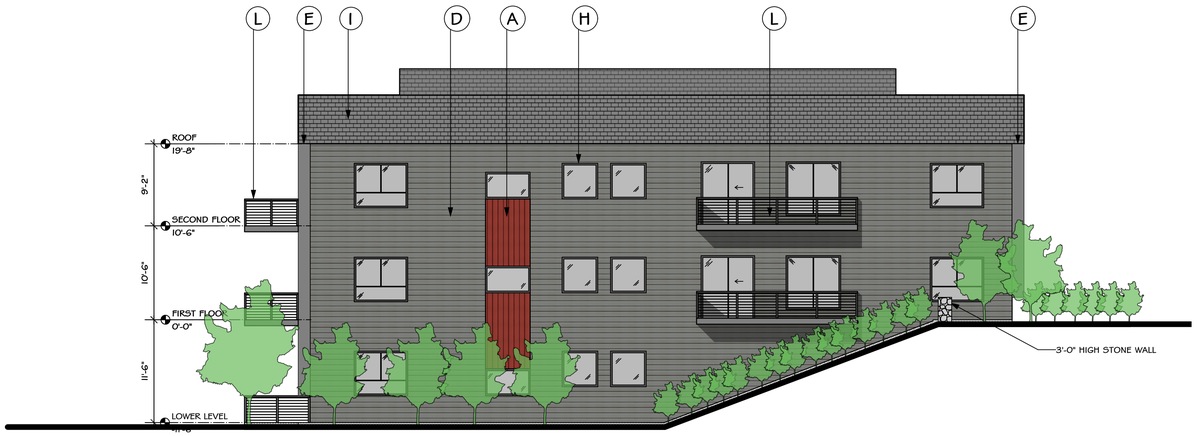


1 BUILDING TYPE 1 - FRONT ELEVATION
Scale: 1/8" = 1'-0"



2 BUILDING TYPE 1 - TYPICAL SIDE ELEVATION
Scale: 1/8" = 1'-0"

3 BUILDING TYPE 1 - REAR ELEVATION (POND VIEW)
Scale: 1/8" = 1'-0"

MATERIAL LEGEND:

A - 7" BOARD AND BATTEN VERTICAL SIDING - MELROSE
B - 7" BOARD AND BATTEN VERTICAL SIDING - SANDSTONE BEIGE
C - 7" BOARD AND BATTEN VERTICAL SIDING - STERLING GRAY
D - 7" HORIZONTAL SIDING - CHARCOAL GRAY
E - PVC TRIM - COLOR TO MATCH CHARCOAL GRAY (D)
F - PVC TRIM - COLOR TO MATCH STERLING GRAY (C)
G - PVC TRIM - COLOR TO MATCH MELROSE (A)
H - WINDOWS TO MATCH CHARCOAL GRAY PVC TRIM (E)
I - TIMBERLINE HDZ SHINGLES - CHARCOAL
J - CABLE RAILING, BASE FINISH TO MATCH MELROSE (A)
K - CABLE RAILING, BASE FINISH TO MATCH SANDSTONE BEIGE (B)
L - CABLE RAILING, BASE FINISH TO MATCH CHARCOAL GRAY (D)
M - GARAGE DOOR FINISH TO MATCH CHARCOAL GRAY (D)
N - 7" BOARD AND BATTEN VERTICAL SIDING - CHARCOAL GRAY

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Project Title

OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

BUILDING TYPE 1 - BUILDING ELEVATIONS

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
Sign and Seal

Sheet No.

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CAD File Name: 1901 CD - PB v2020.vwx
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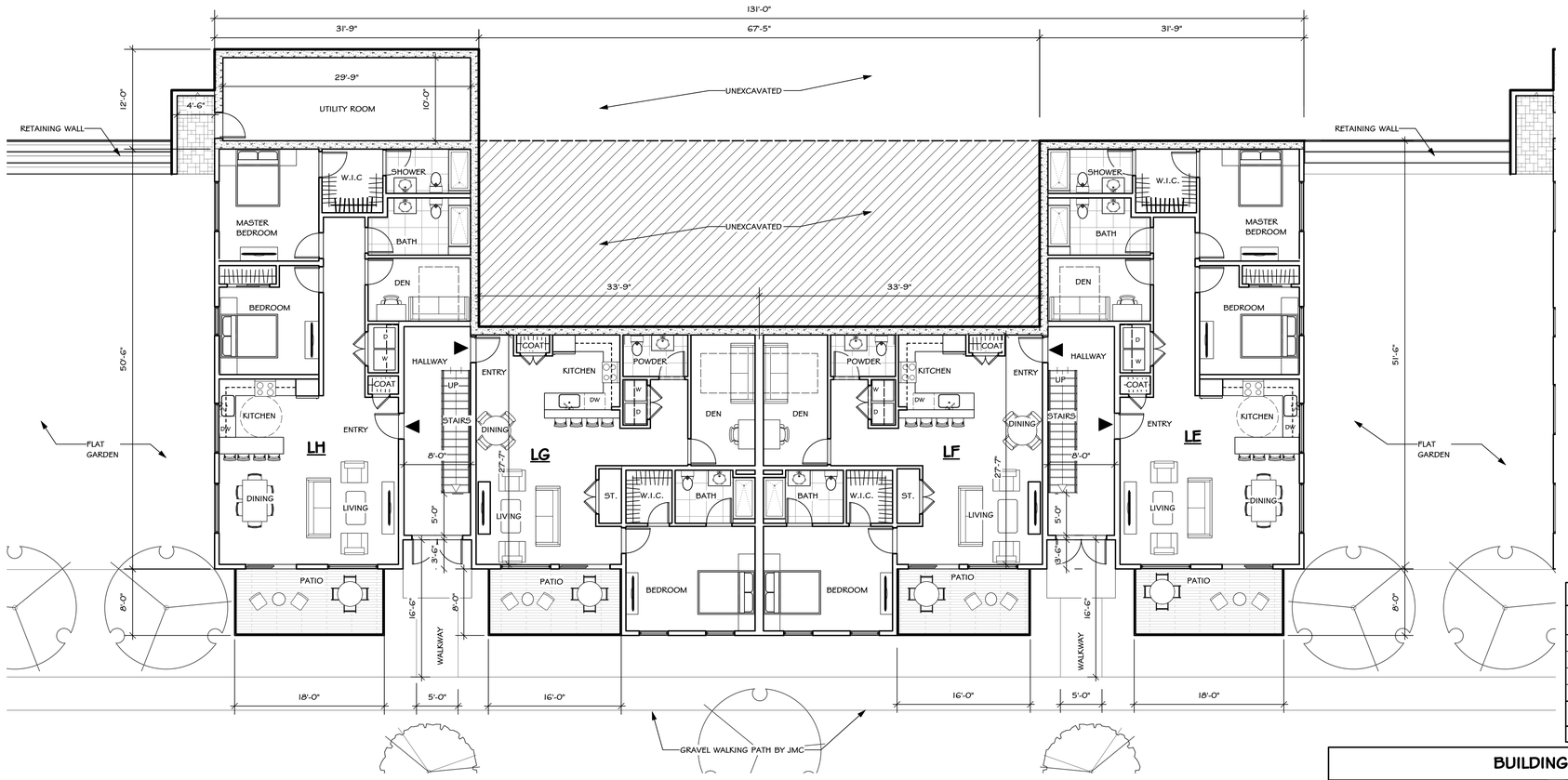

1 BUILDING TYPE 2 - LOWER LEVER FLOOR PLAN
Scale: 1/8" = 1'-0"

LOWER LEVEL UNIT INFORMATION			
UNIT	UNIT COUNT	UNIT TYPE SQ.FT. TOTAL	
E	1	(1 X 1,255)=	1,255 SQ.FT.
F	1	(1 X 1,050)=	1,050 SQ.FT.
G	1	(1 X 1,050)=	1,050 SQ.FT.
H	1	(1 X 1,255)=	1,255 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS FLOOR			4,610 SQ.FT.
TOTAL UNITS ON THIS FLOOR			4

BUILDING TYPE 2

SQUARE FOOTAGES	
LOWER LEVEL GROSS AREA	5,795 SQ.FT.
FIRST FLOOR GROSS AREA	6,425 SQ.FT.
SECOND FLOOR GROSS AREA	6,425 SQ.FT.
TOTAL GROSS AREA FOR THIS BLDG TYPE	18,645 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS BLDG TYPE	14,110 SQ.FT.
TOTAL UNITS ON THIS BLDG TYPE	12

UNIT INFORMATION		
UNIT TYPE	UNIT NUMBER	SQ. FT PER UNIT
1 BED	1B, 1C	925
1 BED + DEN	1F, 1G	1,050
2 BED	1A, 1D, 2A, 2D	1,075
2 BED + DEN	2I, 2J	1,675
2 BED + DEN	1E, 1H	1,255

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Project Title

OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

BUILDING TYPE 2 - LOWER LEVEL FLOOR PLAN

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
Sign and Seal

Sheet No.

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CAD File Name: 1901 CD - PB v2020.vwx
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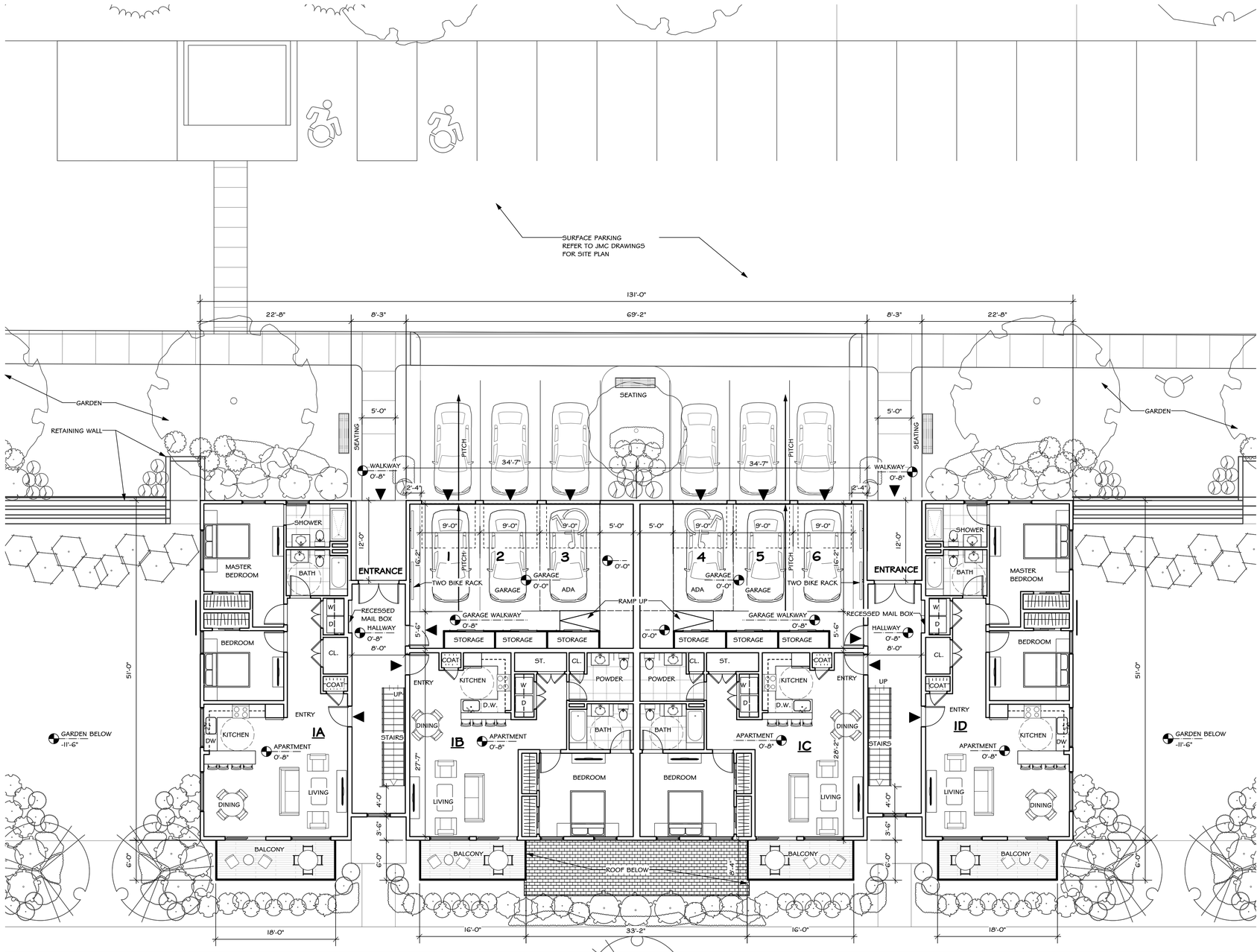

1 BUILDING TYPE 2 - FIRST FLOOR PLAN
Scale: 1/8" = 1'-0"

FIRST FLOOR UNIT INFORMATION			
UNIT	UNIT COUNT	UNIT TYPE SQ.FT. TOTAL	
A	1	(1 X 1,075)=	1,075 SQ.FT.
B	1	(1 X 925)=	925 SQ.FT.
C	1	(1 X 925)=	925 SQ.FT.
D	1	(1 X 1,075)=	1,075 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS FLOOR			4,000 SQ.FT.
TOTAL UNITS ON THIS FLOOR			4

BUILDING TYPE 2

SQUARE FOOTAGES	
LOWER LEVEL GROSS AREA	5,795 SQ.FT.
FIRST FLOOR GROSS AREA	6,425 SQ.FT.
SECOND FLOOR GROSS AREA	6,425 SQ.FT.
TOTAL GROSS AREA FOR THIS BLDG TYPE	18,645 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS BLDG TYPE	14,110 SQ.FT.
TOTAL UNITS ON THIS BLDG TYPE	12

UNIT INFORMATION		
UNIT TYPE	UNIT NUMBER	SQ. FT PER UNIT
1 BED	1B, 1C	925
1 BED + DEN	1F, 1G	1,050
2 BED	1A, 1D, 2A, 2D	1,075
2 BED + DEN	2I, 2J	1,675
2 BED + DEN	1E, 1H	1,255

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Project Title

OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

BUILDING TYPE 2 - FIRST FLOOR PLAN

Date 09/26/18
Project ID 1901
Drawn By KK/NA/OS
Checked By PFG
Scale AS NOTED
Sign and Seal

Sheet No.

A-201

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CAD File Name: 1901 CD - PB v2020.vwx
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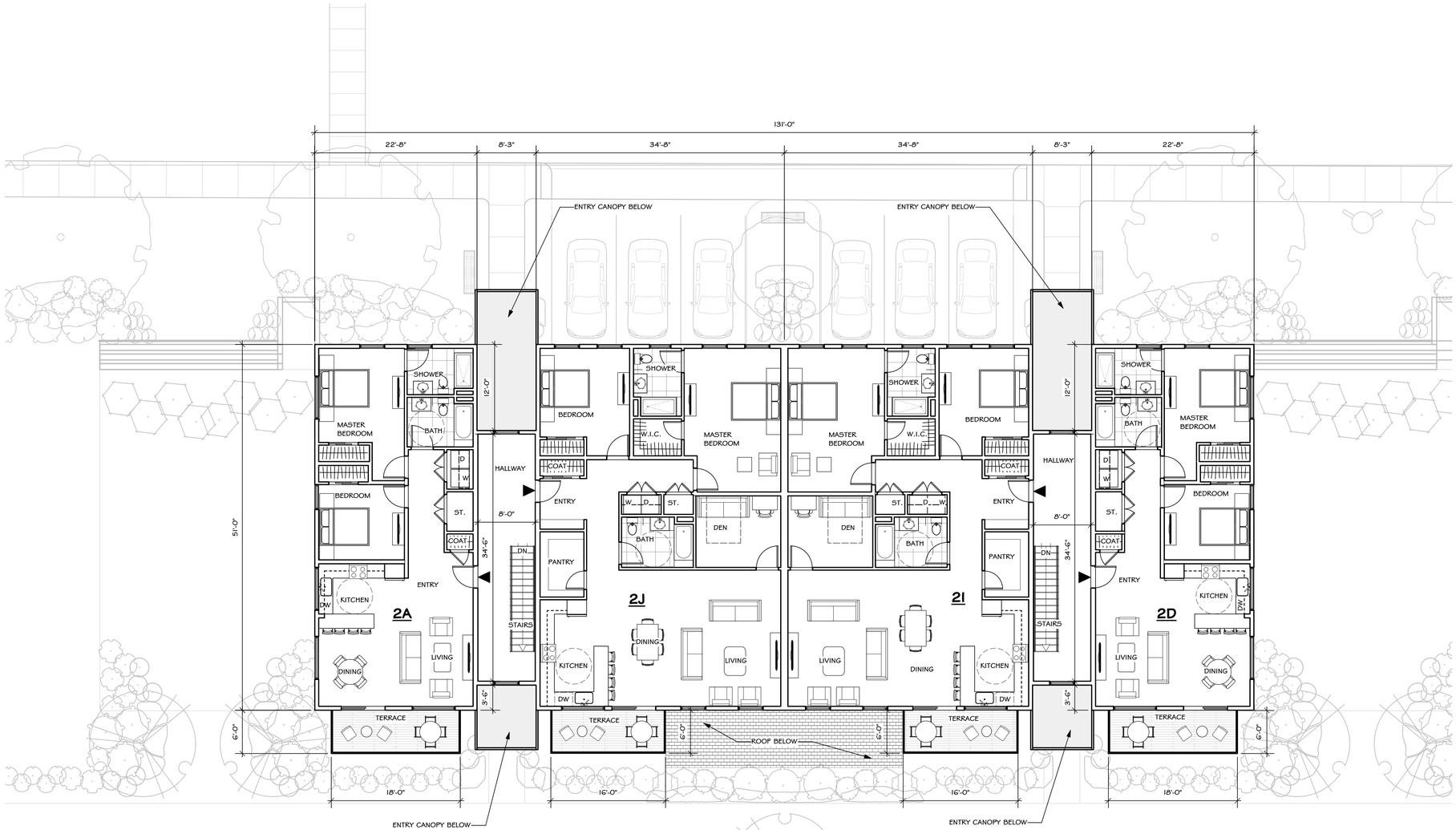

1 BUILDING TYPE 2 - SECOND FLOOR PLAN
Scale: 1/8" = 1'-0"

SECOND FLOOR UNIT INFORMATION		
UNIT	UNIT COUNT	UNIT TYPE SQ.FT. TOTAL
A	1	(1 X 1,075)= 1,075 SQ.FT.
D	1	(1 X 1,075)= 1,075 SQ.FT.
I	1	(1 X 1,675)= 1,675 SQ.FT.
J	1	(1 X 1,675)= 1,675 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS FLOOR		5,500 SQ.FT.
TOTAL UNITS ON THIS FLOOR		4

BUILDING TYPE 2

SQUARE FOOTAGES	
LOWER LEVEL GROSS AREA	5,795 SQ.FT.
FIRST FLOOR GROSS AREA	6,425 SQ.FT.
SECOND FLOOR GROSS AREA	6,425 SQ.FT.
TOTAL GROSS AREA FOR THIS BLDG TYPE	18,645 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS BLDG TYPE	14,110 SQ.FT.
TOTAL UNITS ON THIS BLDG TYPE	12

UNIT INFORMATION		
UNIT TYPE	UNIT NUMBER	SQ. FT PER UNIT
1 BED	1B, 1C	925
1 BED + DEN	1F, 1G	1,050
2 BED	1A, 1D, 2A, 2D	1,075
2 BED + DEN	2I, 2J	1,675
2 BED + DEN	1E, 1H	1,255

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Project Title
OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title
BUILDING TYPE 2 - SECOND FLOOR PLAN

Date 09/26/18
Project ID 1901
Drawn By KK/NA/OS
Checked By PFG
Scale AS NOTED
Sign and Seal

Sheet No.
A-202
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CAD File Name: 1901 CD - PB v2020.vwx
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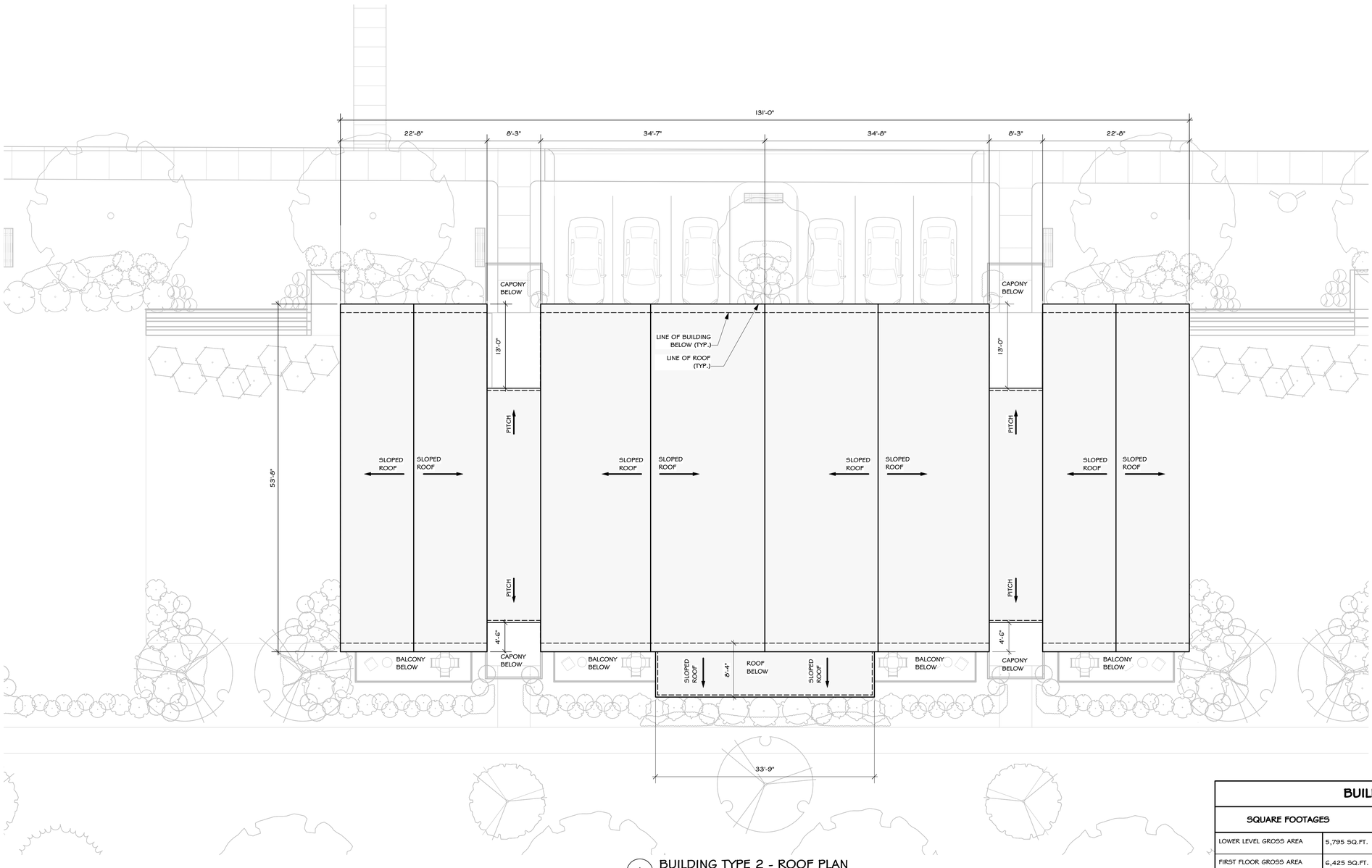

1 BUILDING TYPE 2 - ROOF PLAN
Scale: 1/8" = 1'-0"

SECOND FLOOR UNIT INFORMATION

UNIT	UNIT COUNT	UNIT TYPE SQ.FT. TOTAL	
A	1	(1 X 1,075)=	1,075 SQ.FT.
D	1	(1 X 1,075)=	1,075 SQ.FT.
I	1	(1 X 1,675)=	1,675 SQ.FT.
J	1	(1 X 1,675)=	1,675 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS FLOOR			5,500 SQ.FT.
TOTAL UNITS ON THIS FLOOR			4

BUILDING TYPE 2

SQUARE FOOTAGES	
LOWER LEVEL GROSS AREA	5,795 SQ.FT.
FIRST FLOOR GROSS AREA	6,425 SQ.FT.
SECOND FLOOR GROSS AREA	6,425 SQ.FT.
TOTAL GROSS AREA FOR THIS BLDG TYPE	18,645 SQ.FT.
TOTAL UNIT SQ. FT. FOR THIS BLDG TYPE	14,110 SQ.FT.
TOTAL UNITS ON THIS BLDG TYPE	12

UNIT INFORMATION		
UNIT TYPE	UNIT NUMBER	SQ. FT PER UNIT
1 BED	1B, 1C	925
1 BED + DEN	1F, 1G	1,050
2 BED	1A, 1D, 2A, 2D	1,075
2 BED + DEN	2I, 2J	1,675
2 BED + DEN	1E, 1H	1,255

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Project Title

OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

BUILDING TYPE 2 - ROOF PLAN

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
Sign and Seal

Sheet No.

A-203

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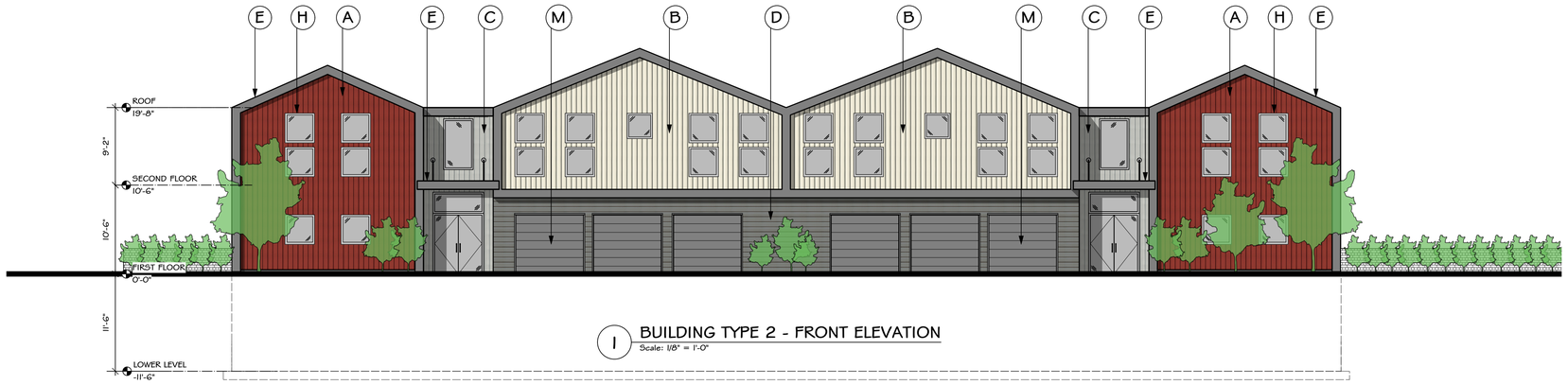
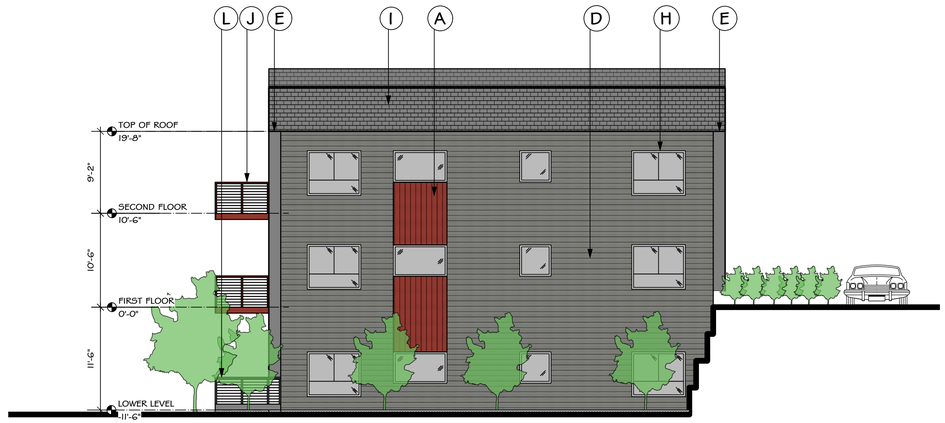
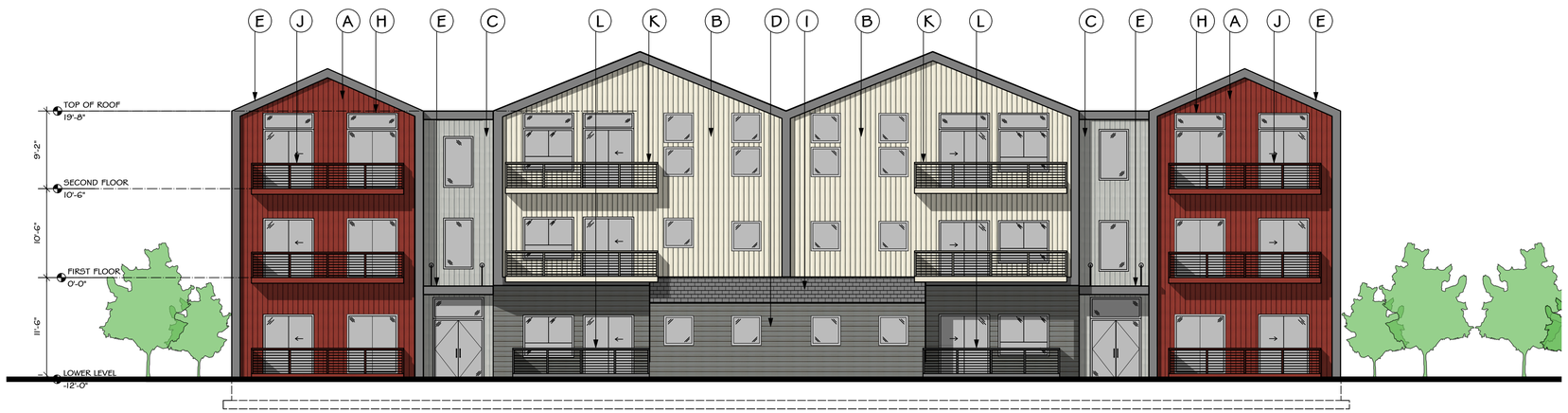
CAD File Name: 1901 CD - PB v2020.vwx
G-Scan Label



1 BUILDING TYPE 2 - FRONT ELEVATION
Scale: 1/8" = 1'-0"



2 BUILDING TYPE 2 - TYPICAL SIDE ELEVATION
Scale: 1/8" = 1'-0"



3 BUILDING TYPE 2 - REAR ELEVATION (POND VIEW)
Scale: 1/8" = 1'-0"

MATERIAL LEGEND:

A - 7" BOARD AND BATTEN VERTICAL SIDING - MELROSE
B - 7" BOARD AND BATTEN VERTICAL SIDING - SANDSTONE BEIGE
C - 7" BOARD AND BATTEN VERTICAL SIDING - STERLING GRAY
D - 7" HORIZONTAL SIDING - CHARCOAL GRAY
E - PVC TRIM - COLOR TO MATCH CHARCOAL GRAY (D)
F - PVC TRIM - COLOR TO MATCH STERLING GRAY (C)
G - PVC TRIM - COLOR TO MATCH MELROSE (A)
H - WINDOWS TO MATCH CHARCOAL GRAY PVC TRIM (E)
I - TIMBERLINE HDZ SHINGLES - CHARCOAL
J - CABLE RAILING, BASE FINISH TO MATCH MELROSE (A)
K - CABLE RAILING, BASE FINISH TO MATCH SANDSTONE BEIGE (B)
L - CABLE RAILING, BASE FINISH TO MATCH CHARCOAL GRAY (D)
M - GARAGE DOOR FINISH TO MATCH CHARCOAL GRAY (D)
N - 7" BOARD AND BATTEN VERTICAL SIDING - CHARCOAL GRAY

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OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

BUILDING TYPE 2 - BUILDING ELEVATIONS

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
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CAD File Name: 1901 CD - PB v2020.vwx
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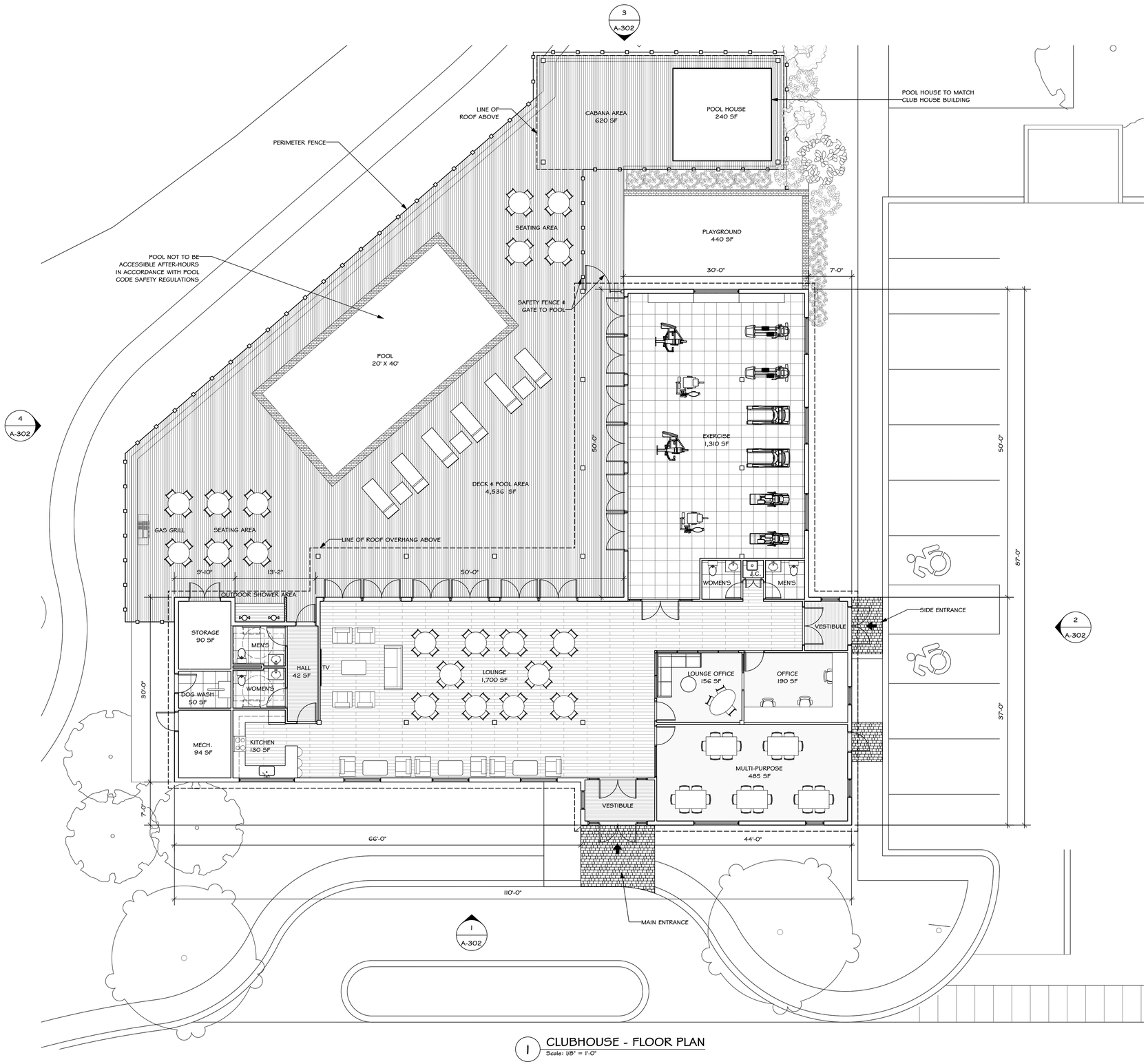

1 CLUBHOUSE - FLOOR PLAN
Scale: 1/8" = 1'-0"

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OVERLOOK FARMS
A FARRELL COMMUNITY

5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

CLUBHOUSE - FLOOR PLAN

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
Sign and Seal

Sheet No.

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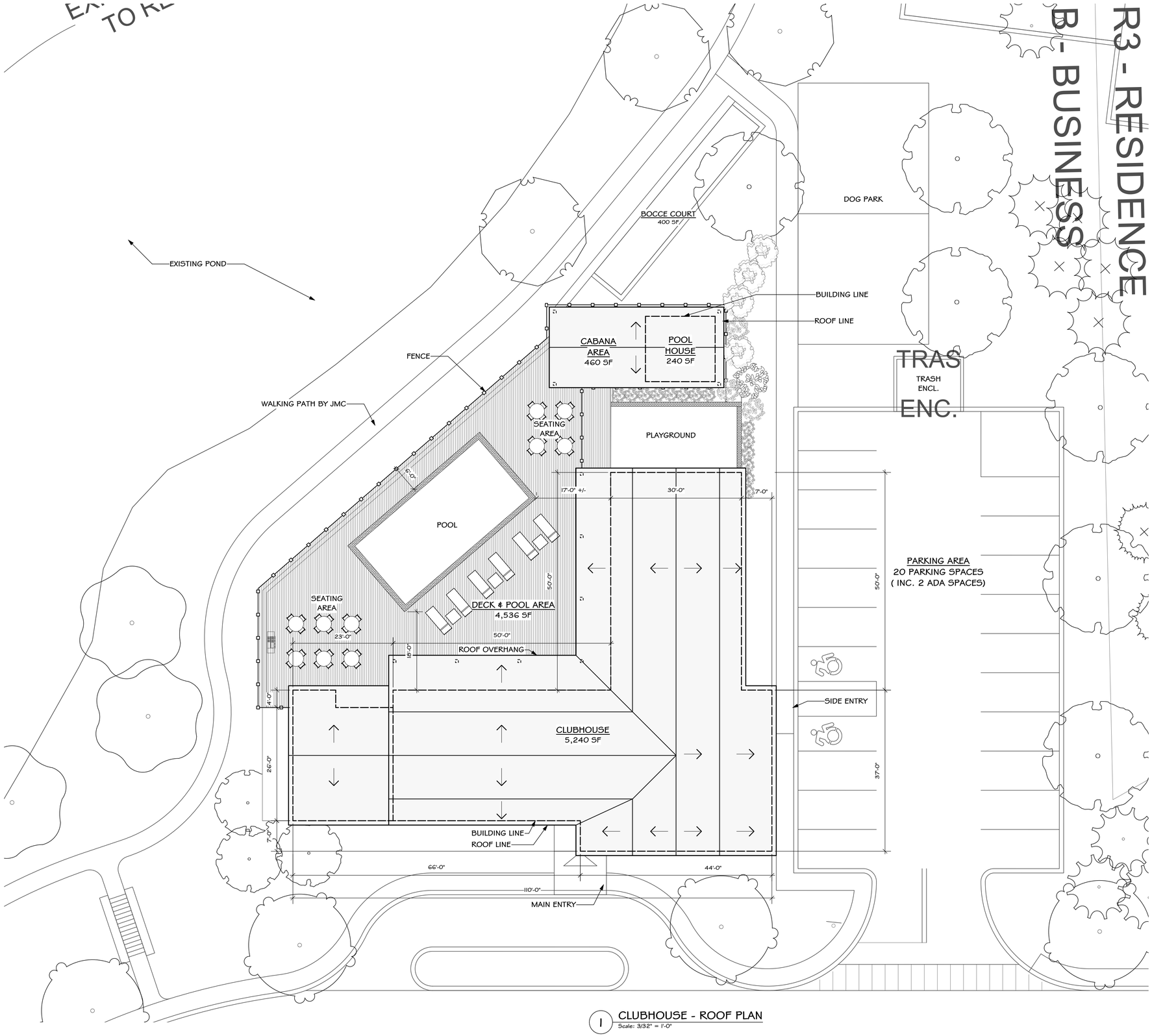
CAD File Name: 1901 CD - PB v2020.vwx
B-Scan Label



1 CLUBHOUSE - ROOF PLAN
Scale: 3/32" = 1'-0"

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A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

CLUBHOUSE - ROOF PLAN

Date	09/26/18
Project ID	1901
Drawn By	KK/NA/OS
Checked By	PFG
Scale	AS NOTED

Sign and Seal

Sheet No.

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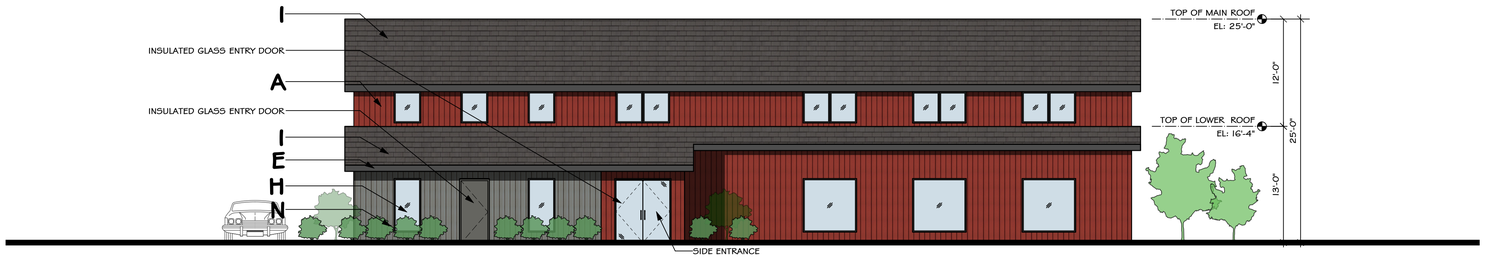
CAD File Name: 1901 CD - PB v2020.vwx
B-Scan Label

1 CLUBHOUSE - SOUTH ELEVATION (FRONT ENTRANCE)
Scale: 1/8" = 1'-0"



2 CLUBHOUSE - EAST ELEVATION (SIDE ENTRANCE)
Scale: 1/8" = 1'-0"

3 CLUBHOUSE - NORTH ELEVATION (POOL SIDE)
Scale: 1/8" = 1'-0"

4 CLUBHOUSE - WEST ELEVATION
Scale: 1/8" = 1'-0"

MATERIAL LEGEND:

A - 7" BOARD AND BATTEN VERTICAL SIDING - MELROSE
B - 7" BOARD AND BATTEN VERTICAL SIDING - SANDSTONE BEIGE
C - 7" BOARD AND BATTEN VERTICAL SIDING - STERLING GRAY
D - 7" HORIZONTAL SIDING - CHARCOAL GRAY
E - PVC TRIM - COLOR TO MATCH CHARCOAL GRAY (D)
F - PVC TRIM - COLOR TO MATCH STERLING GRAY (C)
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H - WINDOWS TO MATCH CHARCOAL GRAY PVC TRIM (E)
I - TIMBERLINE HDZ SHINGLES - CHARCOAL
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K - CABLE RAILING, BASE FINISH TO MATCH SANDSTONE BEIGE (B)
L - CABLE RAILING, BASE FINISH TO MATCH CHARCOAL GRAY (D)
M - GARAGE DOOR FINISH TO MATCH CHARCOAL GRAY (D)
N - 7" BOARD AND BATTEN VERTICAL SIDING - CHARCOAL GRAY

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OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

CLUBHOUSE -
BUILDING ELEVATIONS

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
Sign and Seal

Sheet No.

A-302

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CAD File Name: 1901 CD - PB v2020.vwx
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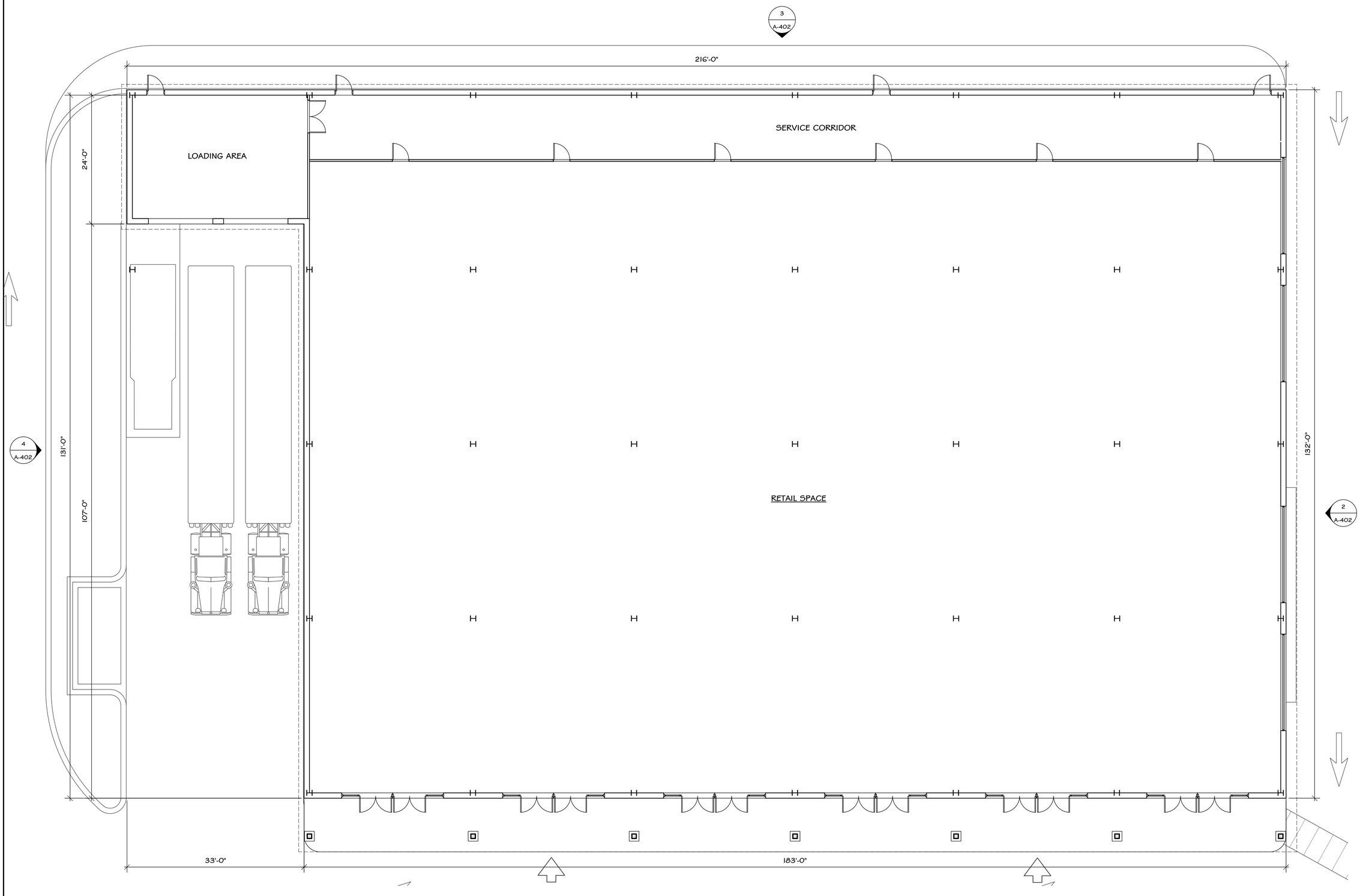

1
A-402

1 RETAIL BUILDING - FLOOR PLAN

Scale: 1/8" = 1'-0"

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OVERLOOK FARMS
A FARRELL COMMUNITY

5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

RETAIL BUILDING - FLOOR PLAN

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
Sign and Seal

Sheet No.

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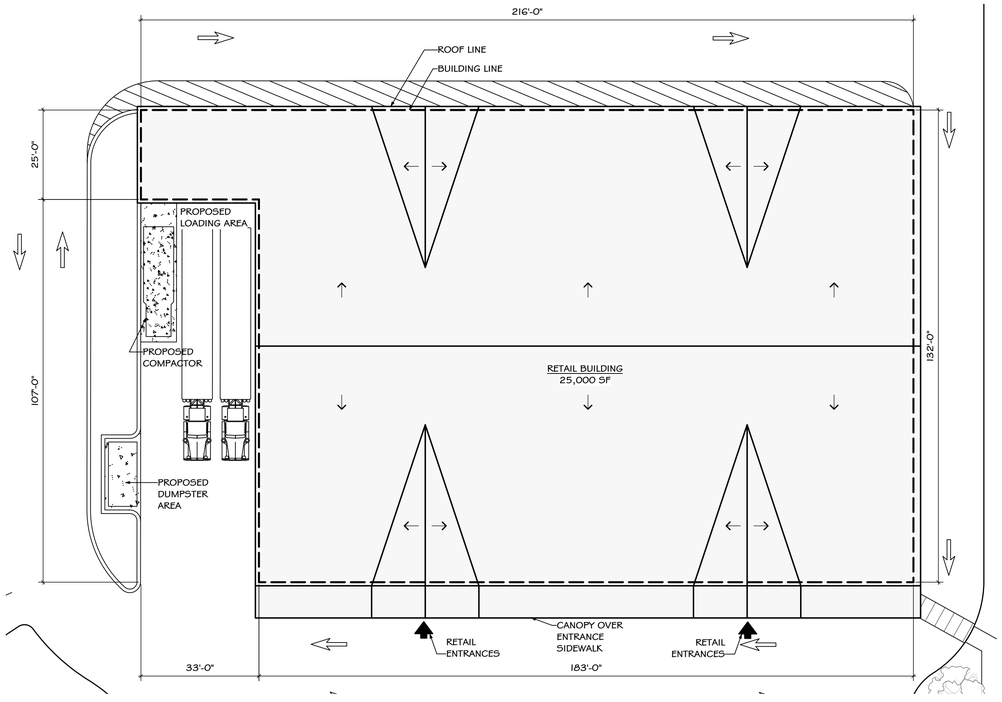
CAD File Name: 1901 CD - PB v2020.vwx
B-Scan Label



1 RETAIL BUILDING - ROOF PLAN

Scale: 1" = 20'-0"

NOTE:

1. FOR SITE PLAN REFER TO JMC DRAWINGS

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OVERLOOK FARMS
A FARRELL COMMUNITY

5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

RETAIL BUILDING - ROOF PLAN

Date	09/26/18
Project ID	1901
Drawn By	KK/NA/OS
Checked By	PFG
Scale	AS NOTED

Sign and Seal

Sheet No.

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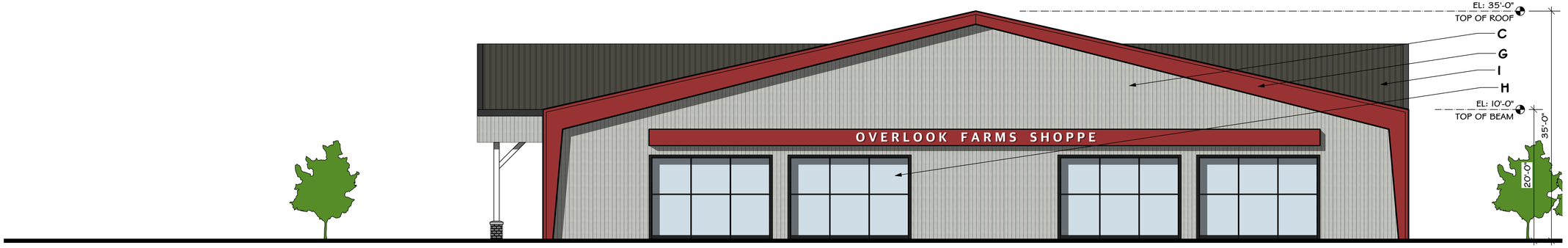
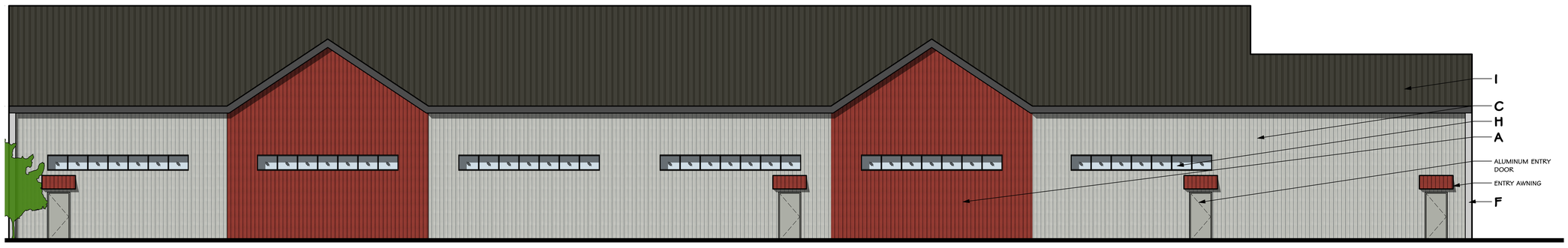
CAD File Name: 1901 CD - PB v2020.vwx

B-Scan Label

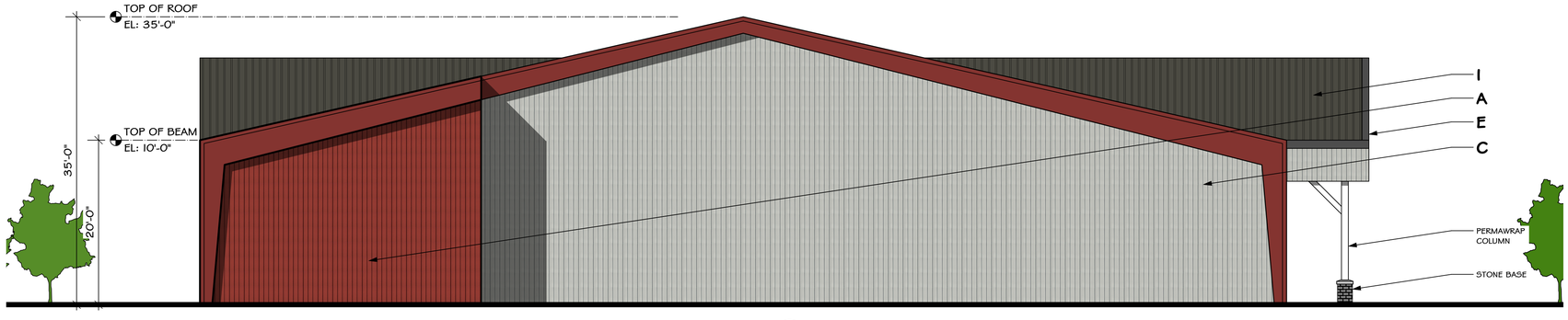
1 SOUTH ELEVATION (MAIN ENTRANCE)
Scale: 1/8" = 1'-0"



2 EAST ELEVATION (@ ROUTE 9W)
Scale: 1/8" = 1'-0"



3 NORTH ELEVATION (@ MORRIS DRIVE)
Scale: 1/8" = 1'-0"



4 WEST ELEVATION
Scale: 1/8" = 1'-0"

MATERIAL LEGEND:

A - 7" BOARD AND BATTEN VERTICAL SIDING - MELROSE
B - 7" BOARD AND BATTEN VERTICAL SIDING - SANDSTONE BEIGE
C - 7" BOARD AND BATTEN VERTICAL SIDING - STERLING GRAY
D - 7" HORIZONTAL SIDING - CHARCOAL GRAY
E - PVC TRIM - COLOR TO MATCH CHARCOAL GRAY (D)
F - PVC TRIM - COLOR TO MATCH STERLING GRAY (C)
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H - WINDOWS TO MATCH CHARCOAL GRAY PVC TRIM (E)
I - TIMBERLINE HDZ SHINGLES - CHARCOAL
J - CABLE RAILING, BASE FINISH TO MATCH MELROSE (A)
K - CABLE RAILING, BASE FINISH TO MATCH SANDSTONE BEIGE (B)
L - CABLE RAILING, BASE FINISH TO MATCH CHARCOAL GRAY (D)
M - GARAGE DOOR FINISH TO MATCH CHARCOAL GRAY (D)
N - 7" BOARD AND BATTEN VERTICAL SIDING - CHARCOAL GRAY

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OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

RETAIL BUILDING - BUILDING ELEVATIONS

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
Sign and Seal

Sheet No.

A-402

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CAD File Name: 1901 CD - PB v2020.vwx
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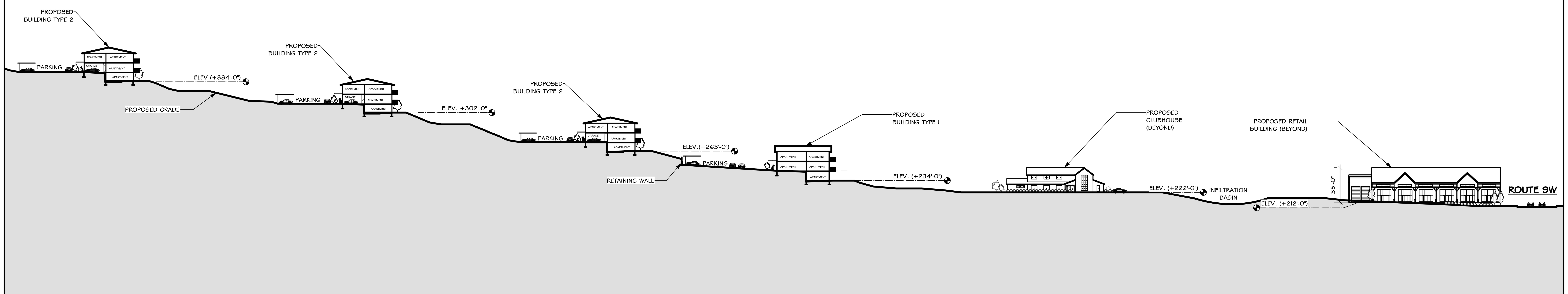
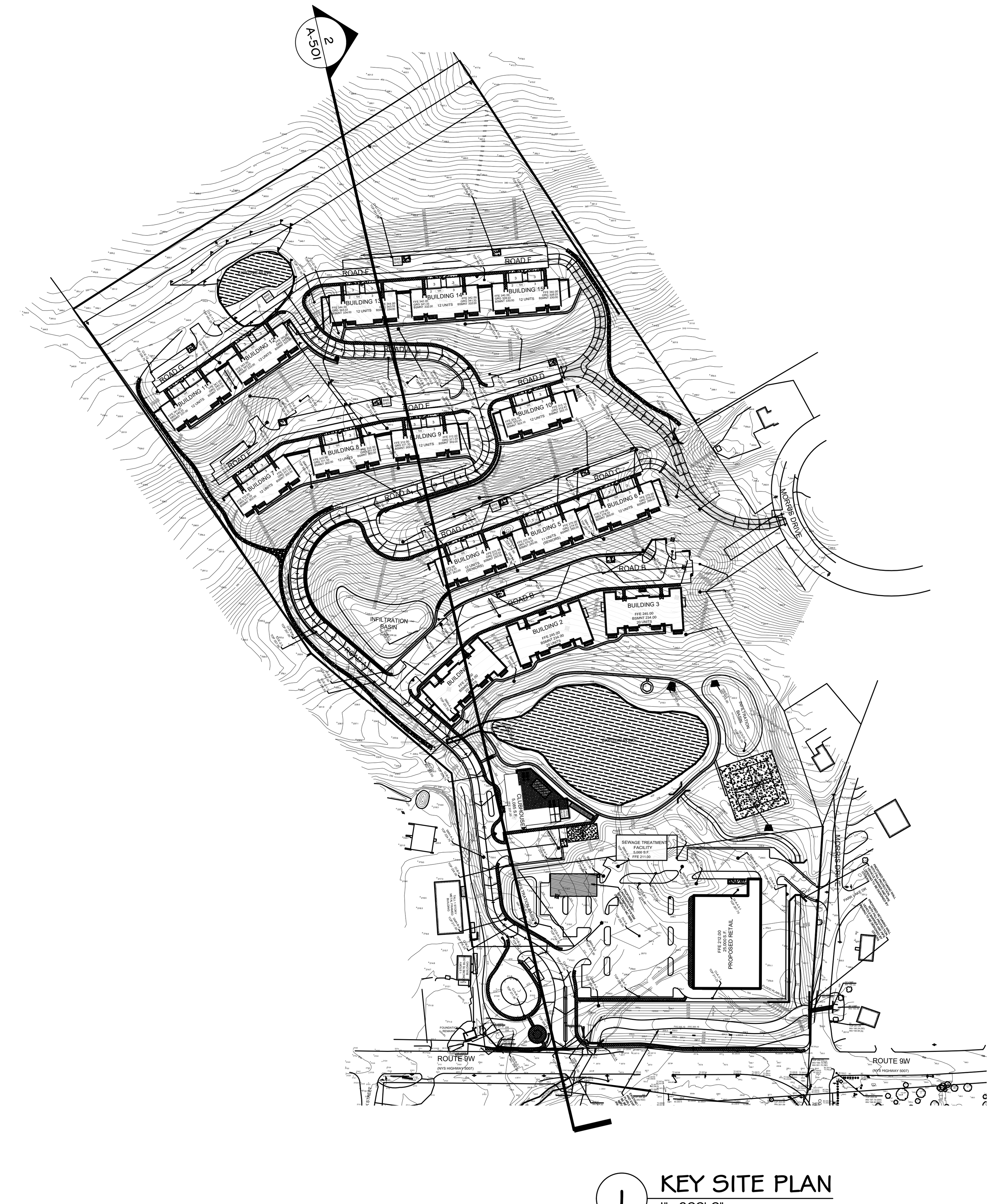


2 SITE SECTION
Scale: 1" = 50'-0"



1 KEY SITE PLAN
1"=200'-0"

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OVERLOOK FARMS
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NEWBURGH, NEW YORK 12550

Sheet Title

SITE SECTION

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
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Scale: AS NOTED
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Sheet No.
A-500
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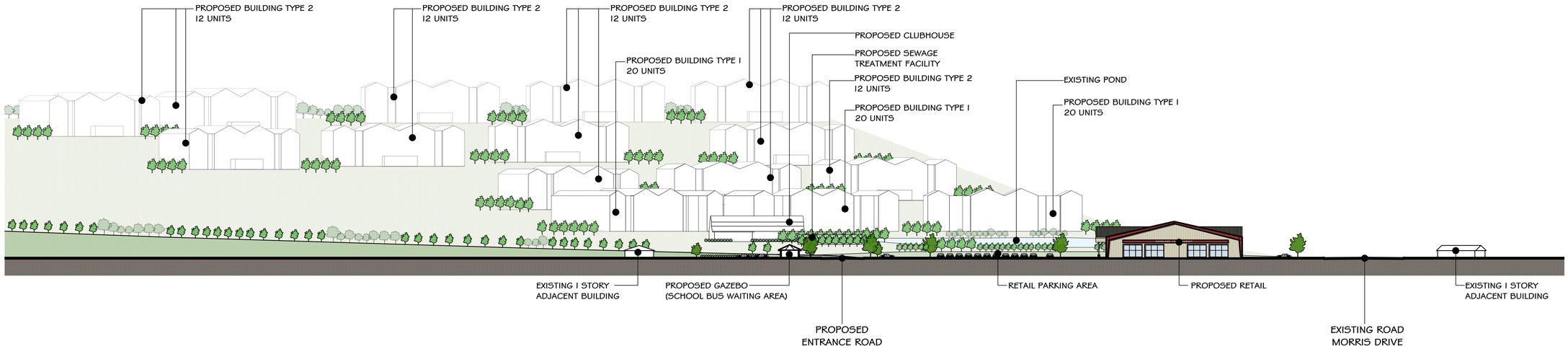

1 STREETSCAPE & STREET FACADE @ ROUTE 9W ELEVATION
Scale: 1" = 50'-0"

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OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

STREETSCAPE &
STREET FACADE @
ROUTE 9W ELEVATION

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
Sign and Seal

Sheet No.

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CAD File Name: 1901 CD - PB v2020.vwx
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1 PERSPECTIVE RENDER FROM ROUTE 9W
N.T.S.

2 PERSPECTIVE RENDER FROM ROUTE 9W ENTRANCE
N.T.S.

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5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

ROUTE 9W PERSPECTIVES

Date: 09/26/18
Project ID: 1901
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Sign and Seal

Sheet No.

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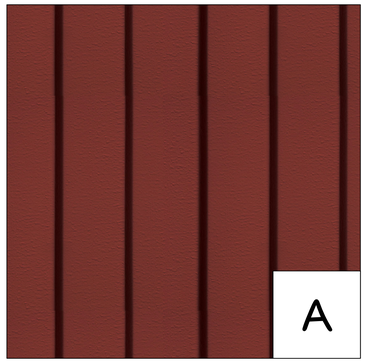
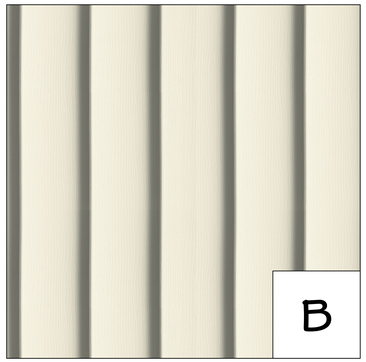
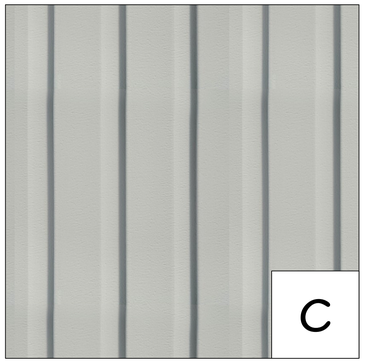
CAD File Name: 1901 CD - PB v2020.vwx
B-Scan Label



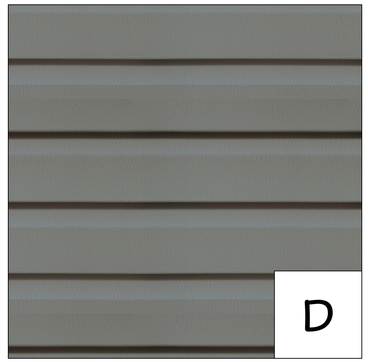
A - 7" BOARD AND BATTEN VERTICAL SIDING - MELROSE



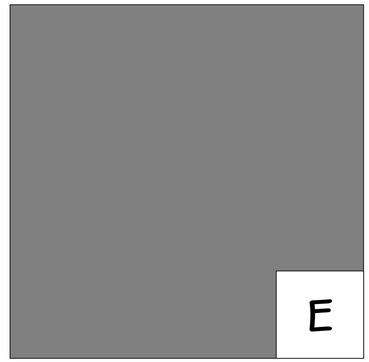
B - 7" BOARD AND BATTEN VERTICAL SIDING - SANDSTONE BEIGE



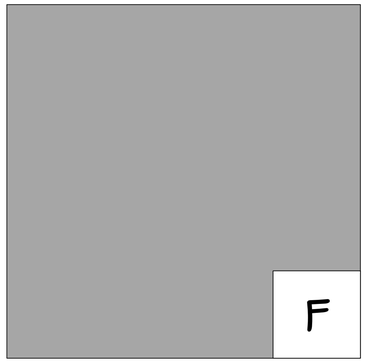
C - C - 7" BOARD AND BATTEN VERTICAL SIDING - STERLING GRAY



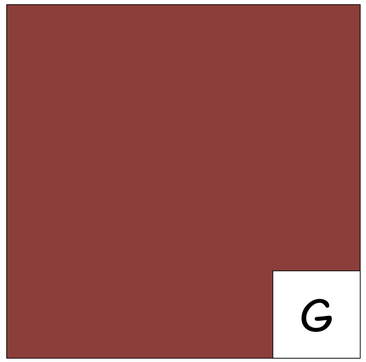
D - 7" HORIZONTAL SIDING - CHARCOAL GRAY



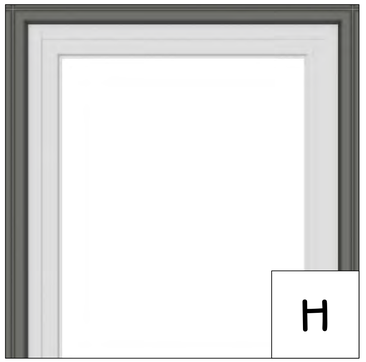
E - PVC TRIM - COLOR TO MATCH CHARCOAL GRAY (D)



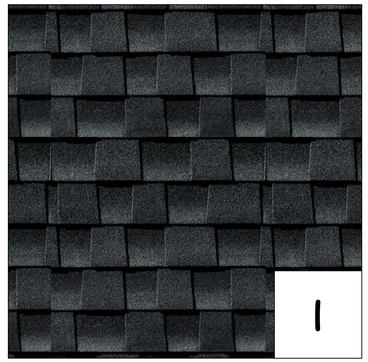
F - PVC TRIM - COLOR TO MATCH STERLING GRAY (C)



G - PVC TRIM - COLOR TO MATCH MELROSE (A)



H - WINDOWS TO MATCH CHARCOAL GRAY PVC TRIM (E)

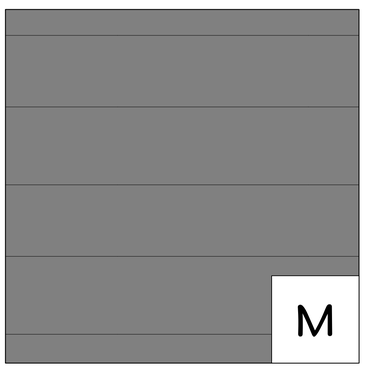


I - TIMBERLINE HDZ SHINGLES - CHARCOAL

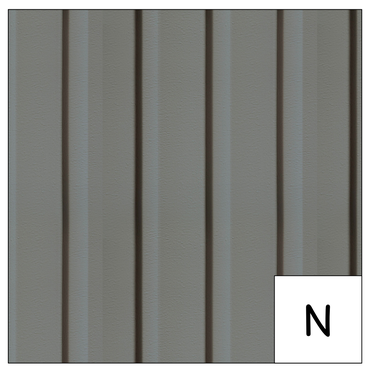
J - CABLE RAILING, BASE FINISH TO MATCH MELROSE (A)

K - CABLE RAILING, BASE FINISH TO MATCH SANDSTONE BEIGE (B)

L - CABLE RAILING, BASE FINISH TO MATCH CHARCOAL GRAY (D)



M - GARAGE DOOR FINISH TO MATCH CHARCOAL GRAY (D)



D - 7" VERTICAL SIDING - CHARCOAL GRAY

MATERIAL LEGEND:

A - 7" BOARD AND BATTEN VERTICAL SIDING - MELROSE
B - 7" BOARD AND BATTEN VERTICAL SIDING - SANDSTONE BEIGE
C - 7" BOARD AND BATTEN VERTICAL SIDING - STERLING GRAY
D - 7" HORIZONTAL SIDING - CHARCOAL GRAY
E - PVC TRIM - COLOR TO MATCH CHARCOAL GRAY (D)
F - PVC TRIM - COLOR TO MATCH STERLING GRAY (C)
G - PVC TRIM - COLOR TO MATCH MELROSE (A)
H - WINDOWS TO MATCH CHARCOAL GRAY PVC TRIM (E)
I - TIMBERLINE HDZ SHINGLES - CHARCOAL
J - CABLE RAILING, BASE FINISH TO MATCH MELROSE (A)
K - CABLE RAILING, BASE FINISH TO MATCH SANDSTONE BEIGE (B)
L - CABLE RAILING, BASE FINISH TO MATCH CHARCOAL GRAY (D)
M - GARAGE DOOR FINISH TO MATCH CHARCOAL GRAY (D)
N - 7" BOARD AND BATTEN VERTICAL SIDING - CHARCOAL GRAY

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No.	Date	Revisions / Submissions
1	12/09/20	REVISED PER TOWN COMMENTS
2	03/19/21	PLANNING BOARD SUBMISSION

GENERAL NOTE

EACH CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH OTHER TRADES AND THE GENERAL CONTRACTOR, FOR ALL WORK. HE IS TO EXAMINE ALL DRAWINGS AND SPECIFICATIONS OF ALL OTHER TRADES PRIOR TO INSTALLATION OF HIS WORK. IF ANY OF HIS WORK IS CALLED FOR ON ANY OTHER DRAWINGS AND SPECIFICATIONS, IT IS THEIR RESPONSIBILITY TO PROVIDE THAT WORK WHETHER CALLED FOR ON HIS DRAWINGS OR NOT. A FULL SET OF DRAWINGS AND SPECIFICATIONS ARE ON FILE AT THE ARCHITECT'S OFFICE, FOR THEIR REVIEW.

Project Title

OVERLOOK FARMS
A FARRELL COMMUNITY
5417 ROUTE 9W
NEWBURGH, NEW YORK 12550

Sheet Title

MATERIAL LEGEND

Date: 09/26/18
Project ID: 1901
Drawn By: KK/NA/OS
Checked By: PFG
Scale: AS NOTED
Sign and Seal

Sheet No.

A-600

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CAD File Name: 1901 CD - PB v2020.vwx
B-Scan Label