LAW OFFICES OF GRACE & GRACE

The Grace Building
360 Underhill Avenue
Yorktown Heights, New York 10598-4517
(914) 962-6100 * Fax (914) 962-6181

Michael J. Grace *
William J. Grace

E.mail Gracelaw1@aol.com

July 12, 2023

Hon. Thomas Diana and Members of the Town Board
Town of Yorktown
363 Underhill Avenue
Yorktown Heights, New York 10598

Town Clerk's Office
JUL 14 2023
Diana L. Quast, Town Clerk
Town of Yorktown, New York

Re: Request for a Change of Zone
Property Known as Section 6.14 block 1 lot 2
Creative Living

Dear Hon. Sirs and Madams:

Our office has been retained to help guide the owners of the above referenced property who wish to redevelop the property as a mixed use of commercial recreation (present use) and residential, common wall housing.

The site consists of 49.6 acres and presently is used for commercial recreation. i.e. ball fields and is zoned R1-80 (single family residential on minimum lots of 80,000 square feet). It is located in the far northeast corner of the town and borders both the town of Somers to the east and the Town of Carmel to the north .

The site presently is accessed from Navajo Road to the west and Route 6N to the north. The site consists of NYS DEC mapped wetlands, some steep slopes to the north and large swaths of flat open space presently used as ball fields.

The site has been before the Town Board and the Planning Board in the past for approvals for the existing use and proposed construction of athletic domes. The on-site wetlands have been delineated and verified under prior land use applications before the Town and NYSDEC.

The applicant seeks to construct the following: 23000 square foot athletic facility, 5500 square foot club house and a multifamily building proximate to the Navajo entrance to the property; together with two clusters of multifamily buildings. The first cluster would consists of three buildings containing 24 units in one building and two buildings of 27 units.

A second cluster of four buildings; two with 22 units and two with 42 units would be located at the far northeast corner of the property. The total unit count for the site would be 254 units. This would result in a density of approximately 8000 square feet of land per living unit. This is less dense then the proposed Underhill Farms development and the recently approved and under construction residential development on the corner of 118 and 202. This density is also consistent with the surrounding neighborhood. Multifamily developments in the vicinity include Jefferson Village to the south and Coach and Four to the west/

The plan contemplates reserving large swaths of open space between the clusters of housing and a lengthy landscaped/ open space promenade entrance from Route 6N.

The developer is offering to provide alternative architectural treatments to each ot the individual housing clusters to ensure an aesthetically pleasing development.

Impacts/Benefits of the Project

It is clear that the request herein is to allow for a significant increase in the allowable density on the site. Notwithstanding it is our belief that the redevelopment of the property as proposed will generate significant benefits for the Town and in particular the local Route 6N corridor.

It is understood that the issues along the Route 6N corridor have eluded pragmatic, executable solutions in the past. These issues include traffic control, the need for sewers, storm water control and economic viability. Some if not all of these issues are inter-related and have defied solutions primarily due to the historic evolution of the development of the corridor, which was small lot, summer bungalow development. Along the shore of Oseola Lake are long term empty, dilapidated buildings. The impediment toward constructive redevelopment of the corridor is the lack of sewers, storm water infrastructure and the fact that most lots are small individually held lots that lack the critical mass so as to provide an economic incentive to provide individually the needed public infrastructure to make redevelopment of these small lots economically viable.

It is believed that the present application presents a unique opportunity for the Town to obtain public infrastructure to incentivize the redevelopment of the 6N corridor. The developer is willing to install sewer infrastructure along Route 6N to Hill Blvd. The developer has also had some preliminary discussions with the owner of Award Enterprises, Inc. property which consists of approximately 3 acres on the north shore of Osceola Lake to be used for regional recreation in conjunction with the proposed development.

Furthermore it is believed that appropriate wetland mitigation and regeneration on the site, an investment possible with the increase of allowable density, will help provide additional regional storm water detention.

The above are significant benefits only made available through the redevelopment of the property. In brief the project if approved is a significantly large enough critical mass to allow for

the investment in much needed and sought after public infrastructure along the Route 6 N corridor. Without this project the problems along the 6N corridor will continue to defy resolution.

In regard to the impacts of the development we believe same are negligible. As to the first and perhaps most obvious concern, i.e. traffic. The site as stated will be accessed from both Route 6N and Navajo Road. Both roads which are more then adequate to handle all the anticipated traffic flows. Both roads are arterial roadways designed to handle regional traffic flows. As to the 6N corridor traffic calming roadside improvements can be created in conjunction with the sewer infrastructure installation and design. Several road improvements have been suggested by the project's traffic consultant, Colliers Engineering & Design, and will be implemented per the attached letter. These improvements include traffic signal upgrades as well as lane re-striping. Again this project presents a unique opportunity to explore concrete, pragmatic, and executable solutions to the long term problems of the Route 6N corridor that have forever defied resolution.

It is anticipated that the entire development will have no visual impact on the neighborhood as most if not all of the development will be set back on the site and out of view. In fact with a newly developed promenade entrance the development is anticipated to enhance the neighborhood aesthetics.

In short it is submitted that this project's benefits to the Town and the surrounding environs we believe outweighs by large measure any adverse impacts. This project we believe presents a long desired opportunity to resolve many of the regional problems of the 6N corridor.

Proposed Zoning

After careful analysis of the available zoning classifications presently in the Yorktown Code the zoning classifications which would allow the proposed development is the Commercial Recreational which allows residential uses based upon the R3 density calculations. It is therefore requested that the Board consider the particularities of the project, its potential benefits to the Town and the uniqueness of the property in adopting the commercial residential zoning classification to be applied to this project and property.

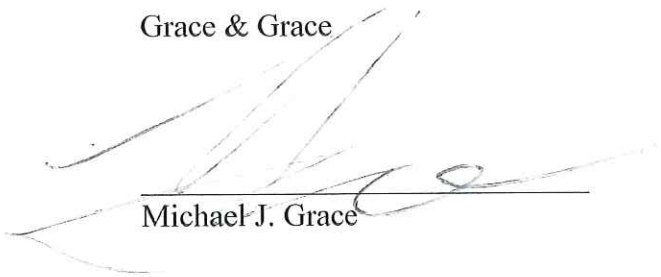
Attached herewith is a Long Form Environmental Form as per the State Environmental Review Act, alternative architectural renderings of the proposed buildings, a proposed site plan lay out and a schedule of proposed density and bulk parameters, the later shown in comparison to existing code districts and development guidelines.

Lastly is the application fee of One Hundred dollars.

We request that this matter be put on one of your agendas for discussion and referral as is deemed appropriate

Very Truly yours, etc.

Grace & Grace



Michael J. Grace

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: Creative Living		
Project Location (describe, and attach a general location map): 3000 Navajo Street, Yorktown, NY		
Brief Description of Proposed Action (include purpose or need): Creative Living Development is seeking to redevelop an existing commercial athletic field facility into a mixed use development consisting of a 296-unit multifamily residential development known as Hidden Valley and the redevelopment of the Yorktown Sports Complex with new commercial indoor / outdoor athletic facilities. As part of the project it is proposed to expand the Town and County sewer district to allow an offsite sewer improvement project that would bring sewers to the Lake Osceola area. The property is situated in the R1-80 zoning district and is approximately 49.6 +/- combined acres. There are onsite NYSDEC wetlands and it is within the 100 year floodplain. Some stormwater management basins will be located within the 100' NYSDEC wetland adjacent area.		
Name of Applicant/Sponsor: CJ Diven	Telephone: E-Mail: cjd@divlongproperties.com	
Address:		
City/PO:	State:	Zip Code:
Project Contact (if not same as sponsor; give name and title/role): Richard Williams, Jr., PE, Insite Engineering, Surveying and Landscape Architecture, PC	Telephone: 845-225-9690 E-Mail: rwilliams@insite-eng.com	
Address: 3 Garrett Place		
City/PO: Carmel	State: NY	Zip Code: 10512
Property Owner (if not same as sponsor):	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	Town Board Approval - Zoning Amendment, Sewer District Expansion	
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	ABACA - Architecture Planning Board - Site Plan, Subdivision Building Department - Floodplain Development Permit	
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No	NYSDEC - General Permit 0-20-001 and Wetland Permit	
e. County agencies ☑Yes ☐No	WCDOH, Sewer District Expansion, Subdivision, Sewer Main	
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDOT - Improvements to US Route 6N	
h. Federal agencies ☑Yes ☐No	Army Corps of Engineers - Potential Individual Wetland Permit	

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?
R1-80 Residential

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? To be determined

C.4. Existing community services.

a. In what school district is the project site located? Yorktown Central School District

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

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

d. What parks serve the project site?
Donald J. Trump State Park, FDR State 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)? Mixed use commercial and residential

b. a. Total acreage of the site of the proposed action? 49.6 +/- acres
b. Total acreage to be physically disturbed? 20.0 +/- acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 49.6 +/- 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)
Mixed use development subdivision
ii. Is a cluster/conservation layout proposed? ☑ Yes ☐ No
iii. Number of lots proposed? 3
iv. Minimum and maximum proposed lot sizes? Minimum 10.3 Maximum 25.6

e. Will the proposed action be constructed in multiple phases? ☑ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated 4
- Anticipated commencement date of phase 1 (including demolition) Jan month 2025 year
- Anticipated completion date of final phase Jan month 2027 year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:
The improvement to the Yorktown Sports Complex are anticipated to begin upon receipt of project approvals with the construction of the residential component beginning shortly thereafter.

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				296
At completion of all phases				296

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

If Yes,

i. Total number of structures 2

ii. Dimensions (in feet) of largest proposed structure: 35 height; 115 width; and 200 length

iii. Approximate extent of building space to be heated or cooled: 23,000 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 quality and quantity treatment

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

iii. If other than water, identify the type of impounded/contained liquids and their source. Not applicable

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

v. Dimensions of the proposed dam or impounding structure: N/A height; N/A length

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

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): NYSDEC Wetland A-4 also designated as Federal Waters

_____

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:

There is approximately 2,000 s.f. of wetland disturbance on the property to allow access to the northern sports fields. The applicant is proposing to relocate the road to provide access to the multifamily development, which will create 2,200 s.f. of fill within Wetland A4 and create a 2,200 s.f. portion of fill . The previously placed 2,000 s.f. of fill will be removed and the wetland will be restored in this location. This will also need an ACOE Nationwide #29 permit and a water quality cert.

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☑No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☑No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance:

Mitigation areas are proposed to offset the proposed disturbance activities within the adjacent areas including native vegetation and seed mixes, and invasive species removal. Mitigation areas will be created per the existing Order on Consent.

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: 53,115 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: Yorktown Consolidated Water District #1
- 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: Watermain extension from local mains on Navajo Street and NYS Route 6N.
- Source(s) of supply for the district: Amawalk Reservoir and Catskill Aqueduct.

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: Not Applicable

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: N/A gallons/minute.

d. Will the proposed action generate liquid wastes? ☑Yes ☐No

If Yes:

i. Total anticipated liquid waste generation per day: 53,115 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: Peekskill Wastewater Treatment Facility.
- Name of district: Peekskill Sanitary Sewer 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? (Both Town of Yorktown and County Sewer District Expansion is 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: Gravity and sewer forcemains will be constructed to service the project site and Lake Osceola portion of Town and will be constructed between the project site and terminal manhole in Hill Boulevard.

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

N/A

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: N/A

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?

387,684 Square feet or 8.9 acres (impervious surface)

2,167,458 Square feet or 49.6 acres (parcel size)

ii. Describe types of new point sources. Discharges from proposed stormwater management practices used to treat stormwater quality and quantity, as quantified in the Construction General Permit SWPPP.

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)?

Onsite stormwater management practices

- If to surface waters, identify receiving water bodies or wetlands: Onsite DEC Wetland A-4
- 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)

Construction equipment will be used during construction

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

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

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☑Yes ☐No

Please refer to report prepared by Colliers, attached under separate cover.

If Yes:

i. When is the peak traffic expected (Check all that apply): ☑ Morning ☑ Evening ☑ Weekend

☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing 139 Proposed 515 residential 116 sports Net increase/decrease +492

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☑No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☑Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☑Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☑Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action:

Using the DOE numbers of 22.5Kwh per sqft, it is 90,000kwh per year

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

Con Edison

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: 7:30 am - 11pm
- Saturday: 7:30 am - 11pm
- Sunday: 7:30 am - 11pm
- Holidays: 7:30 am - 11pm

ii. During Operations:

- Monday - Friday: 7:30 am - 11pm
- Saturday: 7:30 am - 11pm
- Sunday: 7:30 am - 11pm
- Holidays: 7:30 am - 11pm

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 activities between the hours of 7am and 8pm Monday - Friday and 9am and 5pm Saturday. Noise levels will remain the same on the existing sports fields.

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

Describe: Existing vegetation will be preserved to the maximum extent possible.

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:

Proposed building mounted lights and post mounted lights, all dark sky compliant aimed downward.

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

Describe: Existing vegetation will be preserved to the maximum extent possible.

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☑ Yes ☐ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: 60 tons per life of project (unit of time)
- Operation : 1 tons per week (unit of time)

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

- Construction: wood will be reclycled
- Operation: county recycling

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

- Construction: dumpsters
- Operation: dumpsters

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): Recreation

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	4.5 AC +/-	8.9 AC +/-	+ 4.4 AC +/-
• Forested	11.1 AC +/-	4 AC +/-	- 7.1 AC +/-
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0 AC	0 AC	0 AC
• Agricultural (includes active orchards, field, greenhouse etc.)	0 AC	0 AC	0 AC
• Surface water features (lakes, ponds, streams, rivers, etc.)	0.3 AC	0.3 AC	0 AC
• Wetlands (freshwater or tidal)	19.2 AC +/-	19.12 AC +/-	-0.08 AC
• Non-vegetated (bare rock, earth or fill)	0 AC	0 AC	0 AC
• Other Describe: Lawn/ Sports fields Stormwater Basins Wetland Mitigation Areas	14.2 AC +/- 0.3 AC +/- 0.4 AC +/-	12.7 AC +/- 0.8 AC +/- 2.7 AC +/-	-1.5 AC +/- + 0..5 AC +/- + 2.3 AC +/-

c. Is the project site presently used by members of the community for public recreation? ☑ Yes ☐ No

i. If Yes: explain: Navajo Fields is currently used for soccer, baseball, softball and other sports.

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:

Creative Kids Childcare Center on Route 6

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? greater than 6.5 feet

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

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

RdB Ridgebury Complex	23 %
WdB Woodbridge Loam	17 %
Pw Pompton Silt Loam	13 %

d. What is the average depth to the water table on the project site? Average: 1 feet

e. Drainage status of project site soils:
☑ Well Drained: 15 % of site
☑ Moderately Well Drained: 30 % of site
☑ Poorly Drained 34 % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 17 % of site
☑ 10-15%: 14 % of site
☐ 15% or greater: 68 % 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 864-625 Classification C
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, NYS Wetland, Federal Waters, Fe... Approximate Size NYS Wetland (in a...
- Wetland No. (if regulated by DEC) A-4

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: Principal Aquifer

m. Identify the predominant wildlife species that occupy or use the project site:

American Robin	Raccoon	Gray Squirrel
Whitetail Deer	Oppossum	Rabbit

n. Does the project site contain a designated significant natural community? ☐Yes ☑No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑No

If Yes:

i. Species and listing (endangered or threatened): _____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☑No

If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☑No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

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: Donald J. Trump State Park / Taconic State Parkway

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): State Park

iii. Distance between project and resource: 1 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: Richard D. Williams, PE
Senior Principal Engineer
Insite Engineering, Surveying and Landscape Architecture, PC

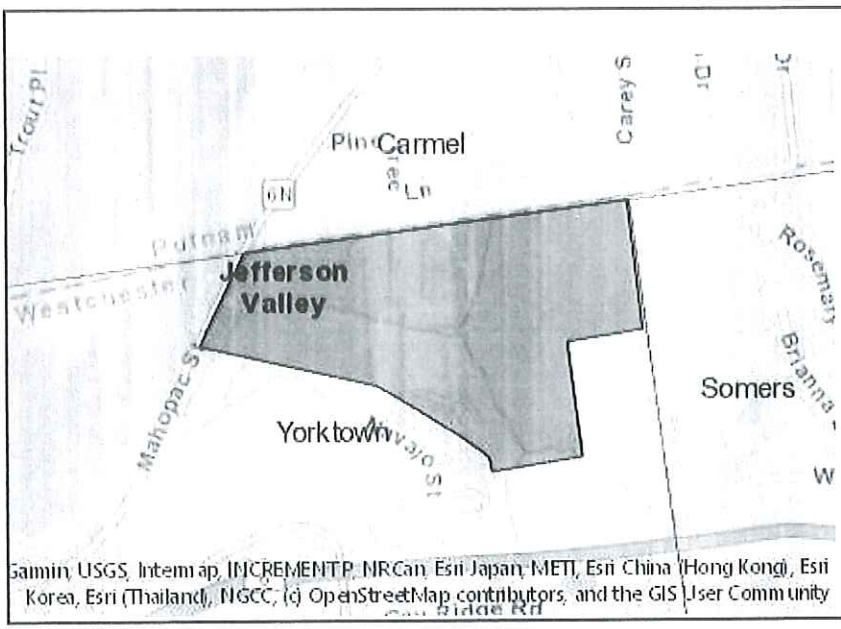
Date _____

Signature _____ Title _____

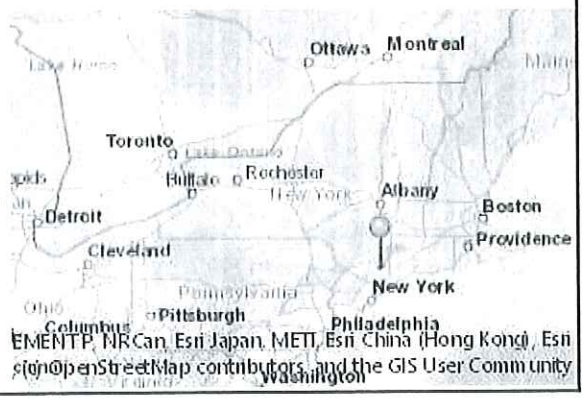
PRINT FORM

EAF Mapper Summary Report

Wednesday, April 19, 2023 9:20 AM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources 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]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	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]	864-625
E.2.h.iv [Surface Water Features - Stream Classification]	C
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters, NYS Wetland
E.2.h.iv [Surface Water Features - Wetlands Size]	NYS Wetland (in acres):224.6
E.2.h.iv [Surface Water Features - DEC Wetlands Number]	A-4
E.2.h.v [Impaired Water Bodies]	No

E.2.i. [Floodway]	Digital mapping data are not availabl are incomplete. Refer to EAF Workbook.
E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	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

LEGEND

	EXISTING PROPERTY LINE
	EXISTING EASEMENT
	EXISTING STONE WALL
	EXISTING UNIT TOWN
	EXISTING GATE
	EXISTING WOOD FENCE
	EXISTING CHAIN LINK FENCE
	EXISTING CONCRETE CURB
	EXISTING DROP IN CONCRETE CURB
	EXISTING DEPRESSED WALLS
	EXISTING CONCRETE CURB
	EXISTING DROP IN CONCRETE CURB
	EXISTING DEPRESSED WALLS
	EXISTING UTILITY POLE
	EXISTING UTILITY PAD & RISERS
	EXISTING PARKING DETAIL BUS
	EXISTING SIGN
	EXISTING LIGHT POLE
	EXISTING ATTACHMENT
	EXISTING WATERCOURSE
	EXISTING EDGE OF WATER
	EXISTING WETLAND FLAG & BOUNDARY
	EXISTING WETLAND BUFFER
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING SPOT GRADE
	EXISTING DEPRESSED PIPE
	EXISTING WELLS

GRAPHIC SCALE

1 IN. = 50 FT.

NO.	DATE	REVISION	BY

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE P.C.

PROJECT:
HIDDEN VALLEY

DRAWING:
EXISTING CONDITIONS PLAN

PROJECT NUMBER	2024.3.100	PROJECT MANAGER	D.D.W.
DATE	7.11.23	DRAWN BY	S.W.R.
SCALE	1" = 50'	CHECKED BY	A.D.T.

DRAWING NO. EX-1 SHEET 1/1

Hidden

Valleys

A

B

C

LOCATION MAP SCALE 1" = 1,000'±

OWNER:

SITE DATA:

TECHNICAL NOTES:

1. Property line, existing conditions and topography shown hereon are taken from [illegible] survey prepared by Dale Steinmetz, surveyor, for Crestline Living Development dated July 6, 2022.
2. Topography shown hereon derived from Aerial Mapping Plan provided by the Geographic Information Office (GIO) of New York State Office for Technology.
3. Existing wetlands boundary lines from [illegible] as shown on Site Plan of Crestline Development dated 10-21-19.
4. Approximately 150 year flood plain boundary taken from FEMA Flood Insurance Rate Map [illegible]
5. Proposed fences to be installed on each lot where indicated.
6. A connection to public sewer will be necessary to support the proposed development as contemplated herein. See the Project Narrative in both the Town of Carmel and Westchester County Pomfret Sanitary Sewer District as shown hereon.
7. The sewer to be treated/conveyed to [illegible] as shown on Preliminary Engineering Plans.
8. The multi-family townhouses is proposed for 144 two-bedroom units and 126 three-bedroom units for a total of 270 units.
9. The overall water use under demand is based on 270 one bedroom units at 110 gpd/unit, 126 two-bedroom units at 220 gpd/unit, and the Putnam County Campus Plaza to have members of 3 persons and the equivalent of 2 persons

LEGEND

- EXISTING PROPERTY LINE
- EXISTING RETAINING WALL & ACCESSORY
- EXISTING TREE LINE, HEDGEROW AND BRUSH LINE
- EXISTING 75' LOCAL BUFFER
- EXISTING WOODS/WETLAND
- PROPOSED PROPERTY LINE
- PROPOSED TREE LINE/BRUSH LINE
- PROPOSED LIMIT OF SIDEWALK
- PROPOSED SIGN LOCATION
- PROPOSED SPEAKERS FOR MUSIC CONCERT VARIETY
- PROPOSED WETLAND MITIGATION AREA

GRAPHIC SCALE

(IN FEET)
1 inch = 80 ft.

INSITE
ENGINEERING SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 228-1866
(845) 228-1877 fax
www.insite-engr.com

PROJECT
HIDDEN VALLEY

DRAWING
OVERALL LAYOUT PLAN

PROJECT NUMBER	2021.1720	PROJECT MANAGER	M.D.W.
DATE	5-11-23	DRAWN BY	S.A.P.
SCALE	1" = 80'	CHECKED BY	K.M.C.

DRAWING NO. (1)-1 SHEET 1 OF 1

ALTERATION OF THIS DOCUMENT UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW

400 Columbus Avenue, Suite 180E
Valhalla, New York 10595
Main: 877 627 3772

Colliers
Engineering
& Design

July 7, 2023

Mr. CJ Diven
Creative Living Development
3000 Navajo Street
Yorktown Heights, NY 10598

Creative Living Development - 3000 Navajo Street
Colliers Engineering & Design Project No. 23006609A

Dear Mr. Diven,

As requested, we have compiled traffic volume data and prepared a summary of preliminary trip estimates and analysis for the proposed mixed-use development located on Navajo Street and NYS Route 6N in the Town of Yorktown, New York. The development is proposed to consist of 254 multi-family dwelling units, a 5,500 square foot Club House, a 23,000 square foot indoor athletic facility, a 4,000 square foot commercial space, and existing athletic fields, which will be modified and expanded. Access will be provided via a driveway connection to Navajo Street, which in turn connects with US Route 6. Also, as discussed in more detail below, a secondary access connection to NYS Route 6N should also be provided to accommodate the full development of the property. The site location is shown on Figure No. 1.

Existing Traffic Conditions Data (Figures No. 2 and 3)

All existing conditions traffic data for both US Route 6 and NYS Route 6N and Navajo Street were obtained from previous traffic studies and data published the New York State Department of Transportation (NYSDOT). These data were summarized for the peak hours for Weekday AM and PM Peak Hours. Figures No. 2 and 3 show the Existing Traffic Volumes for each of the peak hours. Note that additional Saturday data will have to be collected and analyzed in future more detailed studies.

Preliminary Trip Estimates (Table No. 1)

Estimates of the expected trip generation for each of the peak hours were identified utilizing data published by the Institute of Transportation Engineers (ITE). Table No. 1 summarizes the expected trip generation for each of the Weekday and Saturday peak hours. Note that for the purposes of these estimates, no credit was taken for any internal trips or pass-by trips associated with any of the proposed facilities.

Projected Traffic Volumes and Preliminary Analysis (Figures No. 4 through 17; Table No. 2)

1. Traffic Volumes

   Figures No. 4 and 5 show the Projected Traffic Volumes for a 2026 Design Year, which were developed by applying a background growth factor of 1% per year applied to the existing traffic volumes. Figures No. 6 and 7 show the Anticipated Residential Arrival and Departure

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Distributions for the site and Figures No. 8 and 9 Anticipated Other Uses Arrival and Departure Distributions for the site.

Utilizing the trip generation estimates described above and projecting the existing traffic volumes to a future design year, the traffic volumes at the intersection of US Route 6 and Navajo Street and NYS Route 6N and the site access, were each developed.

Figures No. 10 and 11 show the Residential Site Generated Traffic Volumes and Figures No. 12 and 13 show the Other Uses Site Generated Traffic Volumes. These Site Generated Traffic Volumes were combined with the Projected 2026 No-Build Traffic Volumes to obtain the 2026 Build Traffic Volumes. The 2026 No-Build and Build Traffic Volumes are shown on Figures No. 14 and 15 and Figures No. 16 and 17, respectively.

2. Preliminary Traffic Capacity Analysis

It was necessary to perform capacity analyses in order to determine existing and future traffic operating conditions at the study area intersections. The following is a brief description of the analysis method utilized:

Signalized Intersection Capacity Analysis

The capacity analysis for a signalized intersection was performed in accordance with the procedures described in the Highway Capacity Manual, 6th Edition, dated 2016, published by the Transportation Research Board. The terminology used in identifying traffic flow conditions is Levels of Service. A Level of Service "A" represents the best condition and a Level of Service "F" represents the worst condition. A Level of Service "C" is generally used as a design standard while a Level of Service "D" is acceptable during peak periods. A Level of Service "E" represents an operation near capacity. In order to identify an intersection's Level of Service, the average amount of vehicle delay is computed for each approach to the intersection as well as for the overall intersection.

Unsignalized Intersection Capacity Analysis

The unsignalized intersection capacity analysis method utilized in this report was also performed in accordance with the procedures described in the Highway Capacity Manual, 6th Edition, dated 2016. The procedure is based on total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. The average total delay for any particular critical movement is a function of the service rate or capacity of the approach and the degree of saturation. In order to identify the Level of Service, the average amount of vehicle delay is computed for each critical movement to the intersection.

Using these procedures, a capacity analysis was conducted for each intersection for the Existing, No-Build, and Build conditions.

Based on the preliminary results as shown in Table No. 2, the following should be noted:

- The access at Navajo Street and US Route 6 contains an existing left turn lane on US Route 6, which may have to be modified/restriped to increase the left turn stacking for entering

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vehicles. This location will also have to be monitored for potential signalization to accommodate the full Build volumes.

- An access connection from NYS Route 6N to the site is recommended for the full build-out of the site and will have to be phased in accordingly as part of the development. The intersection of NYS Route 6N and the proposed site access was analyzed. This intersection would have to be reviewed in more detail; however, the potential widening for separate right and left turn lanes on NYS Route 6N should be considered as part of the NYSDOT Highway Work Permit review.

Other Anticipated Offsite Improvements

Based on our knowledge of the area and the expected amount of peak hour trip generation, it is also anticipated that some additional traffic improvements may be required at other area intersections. These improvements would likely include:

- Upgrading Navajo Street at the intersection of the access to the multi-family development and related sight distance, pavement marking improvements, and some widening of the existing roadway to provide an increased roadway width to allow separate turn lanes and to accommodate emergency vehicles.

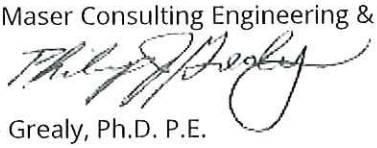
- Traffic signal upgrades at the intersection of US Route 6 and Curry Street/NYS Route 6N and US Route 6 and Mahopac Avenue (video detection).

- At the intersection of NYS Route 6N and East Main Street/Mahopac Street, this intersection would have to be reviewed for potential signalization.

The above represents our initial recommendations based on historical data and our knowledge of the area. As the project advances, more detailed data collection and analyses will have to be undertaken to provide a more complete evaluation of each of the intersections.

Sincerely,

Colliers Engineering & Design CT, P.C.
(DBA Maser Consulting Engineering & Land Surveying)



Philip Grealy, Ph.D. P.E.
Geographic Discipline Leader

R:\Projects\2023\23006609A\Correspondence\OUT\230707_Diven Letter.docx

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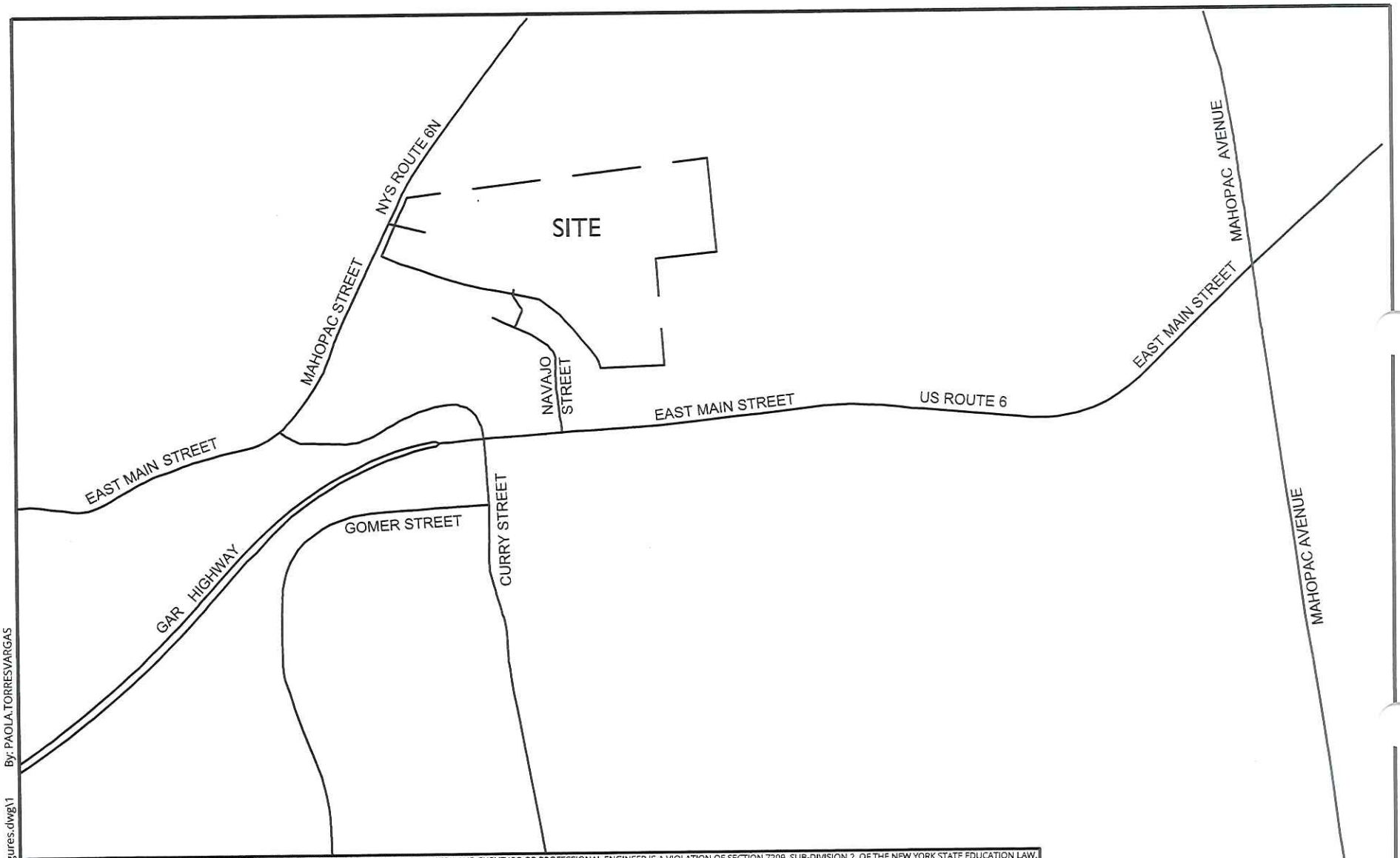
Creative Living Development

Appendix A | Traffic Figures



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Colliers Engineering & Design

www.colliersengineering.com

Doing Business as MASER CONSULTING

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REV	DATE	DRAWN BY	DESCRIPTION
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CREATIVE LIVING DEVELOPMENT

TOWN OF YORKTOWN
WESTCHESTER COUNTY
NEW YORK STATE

811 PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE

STATE REQUIRED FILE NUMBER

FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

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WESTCHESTER
400 Columbus Avenue, Suite 180E
Valhalla, NY 10595
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DRAWING NAME: 230612PTV_FIGURES

SHEET TITLE: SITE MODEL
FIELD BOOK: XX PAGE: XX

SHEET NUMBER: 1

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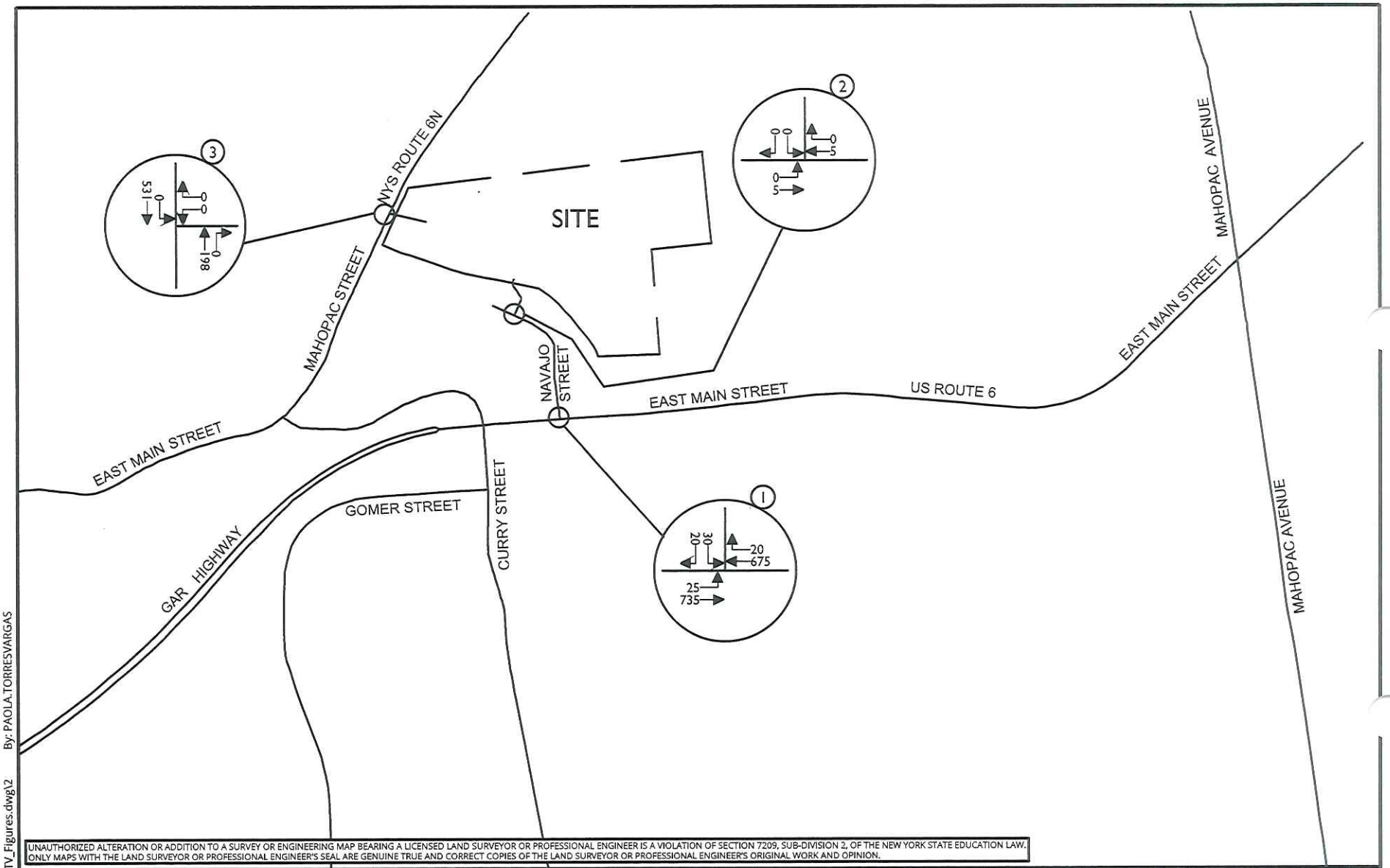

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SHEET TITLE: 2023 EXISTING TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR

FIELD BOOK: XX PAGE: XX

SHEET NUMBER: 2

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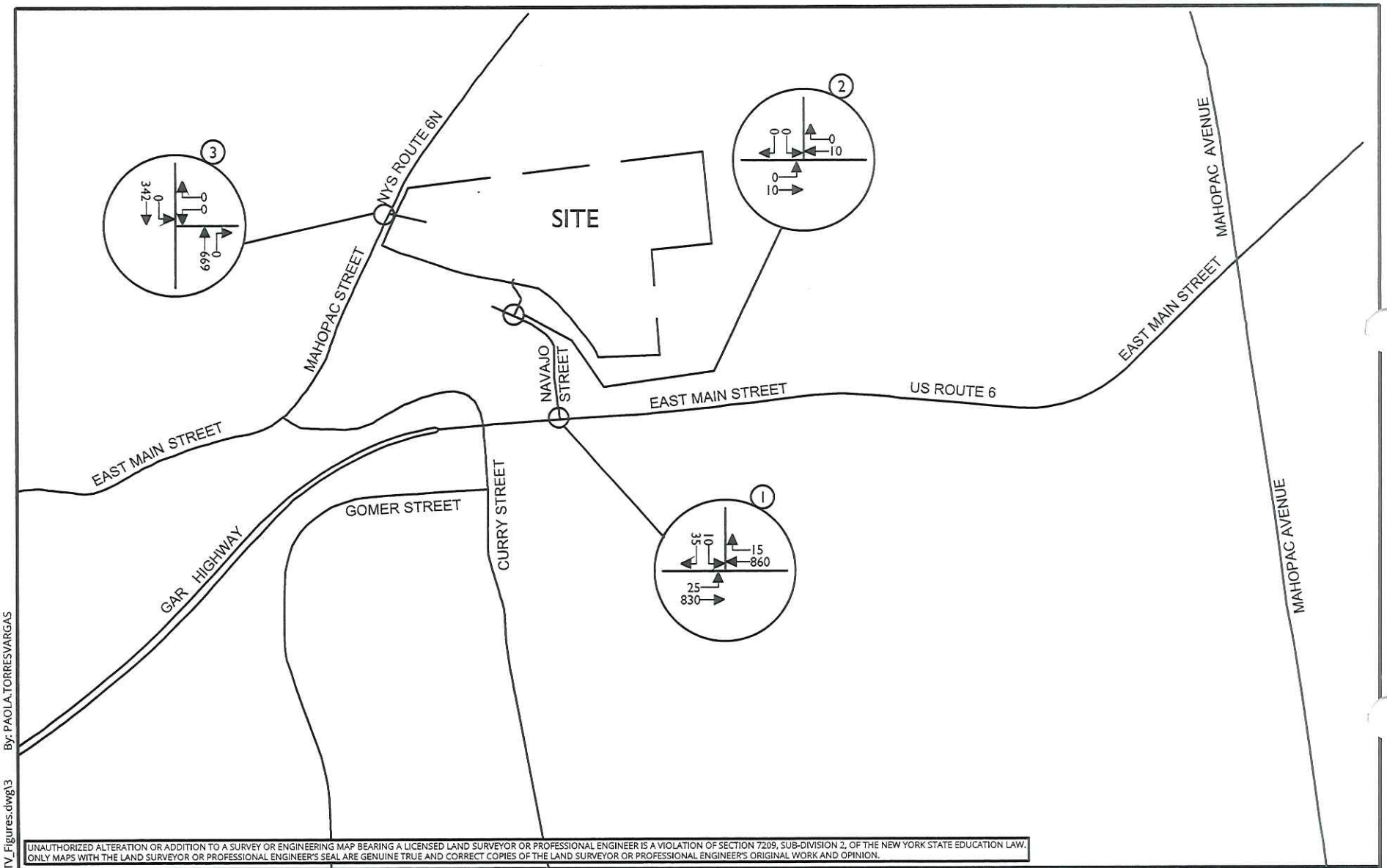

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SHEET TITLE: 2023 EXISTING TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR

FIELD BOOK: XX PAGE: XX

SHEET NUMBER: 3

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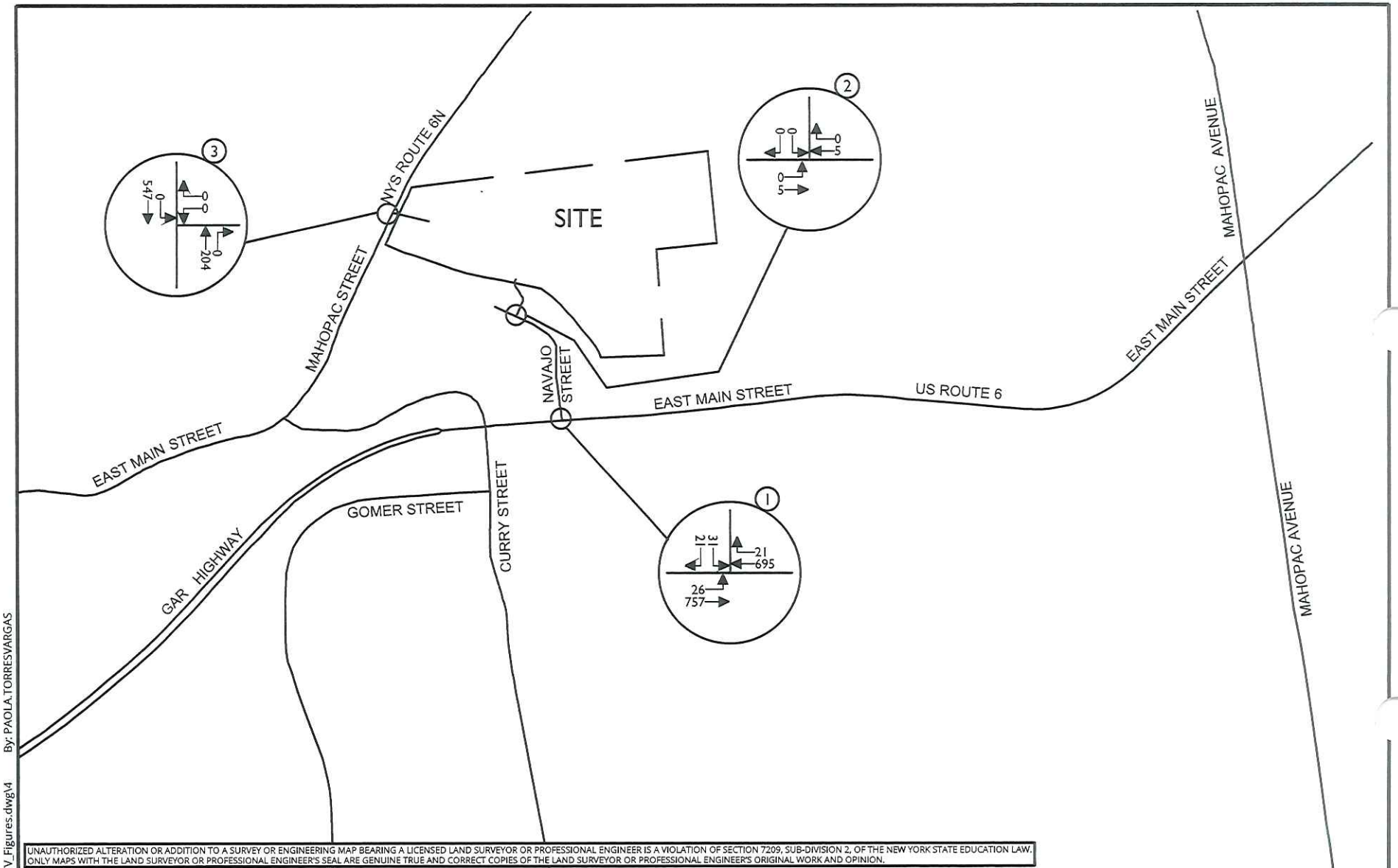

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SHEET TITLE: 2026 PROJECTED TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR
FIELD BOOK: XX PAGE: XX

SHEET NUMBER: 4

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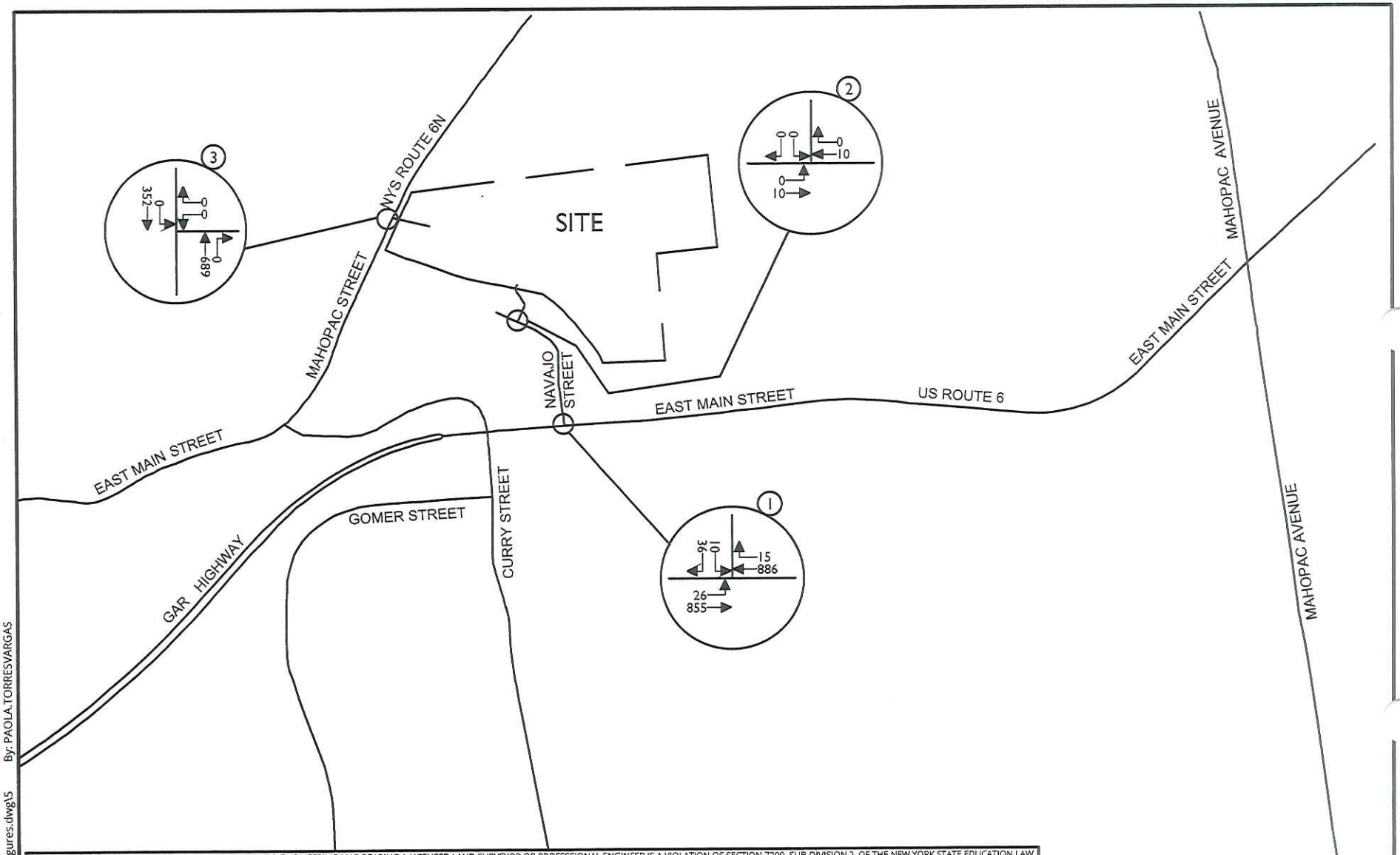

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SHEET TITLE: 2026 PROJECTED TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR
FIELD BOOK: XX PAGE: XX

SHEET NUMBER: 5

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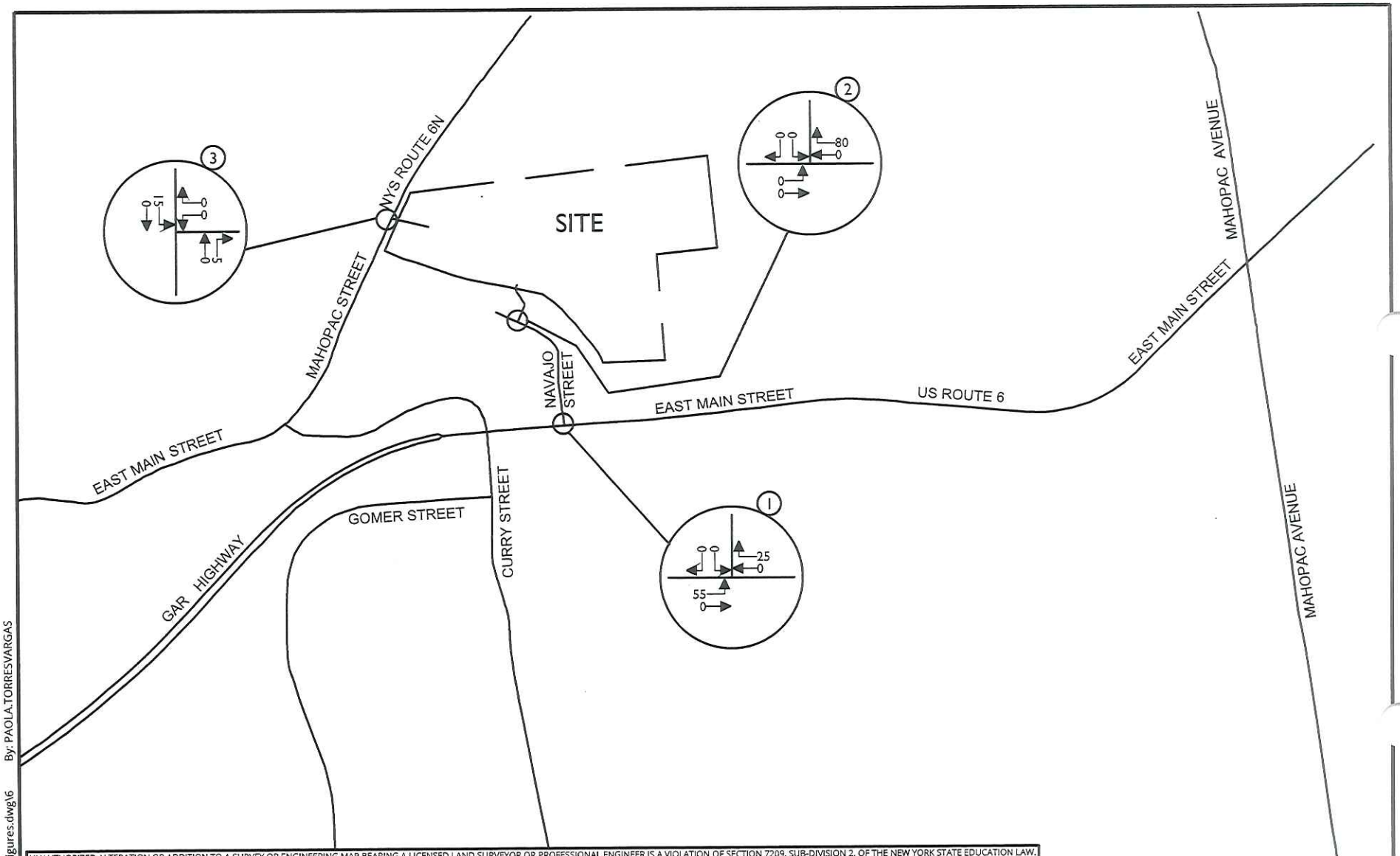

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SHEET TITLE: RESIDENTIAL ARRIVAL DISTRIBUTION (EXPRESSED AS %)
FIELD BOOK: XX PAGE: XX
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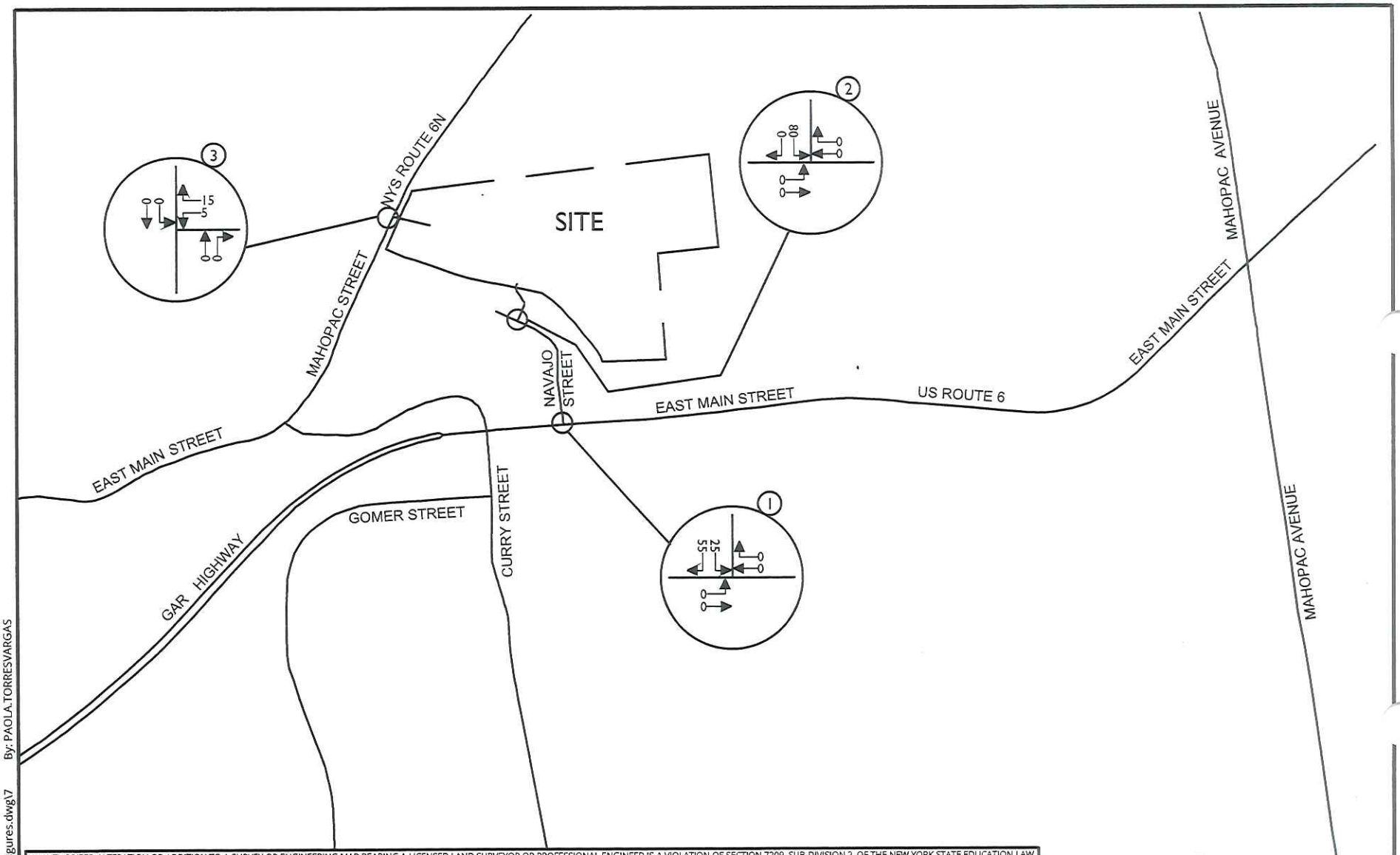

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SHEET TITLE: RESIDENTIAL DEPARTURE DISTRIBUTION (EXPRESSED AS %)
FIELD BOOK: XX PAGE: XX

SHEET NUMBER: 7

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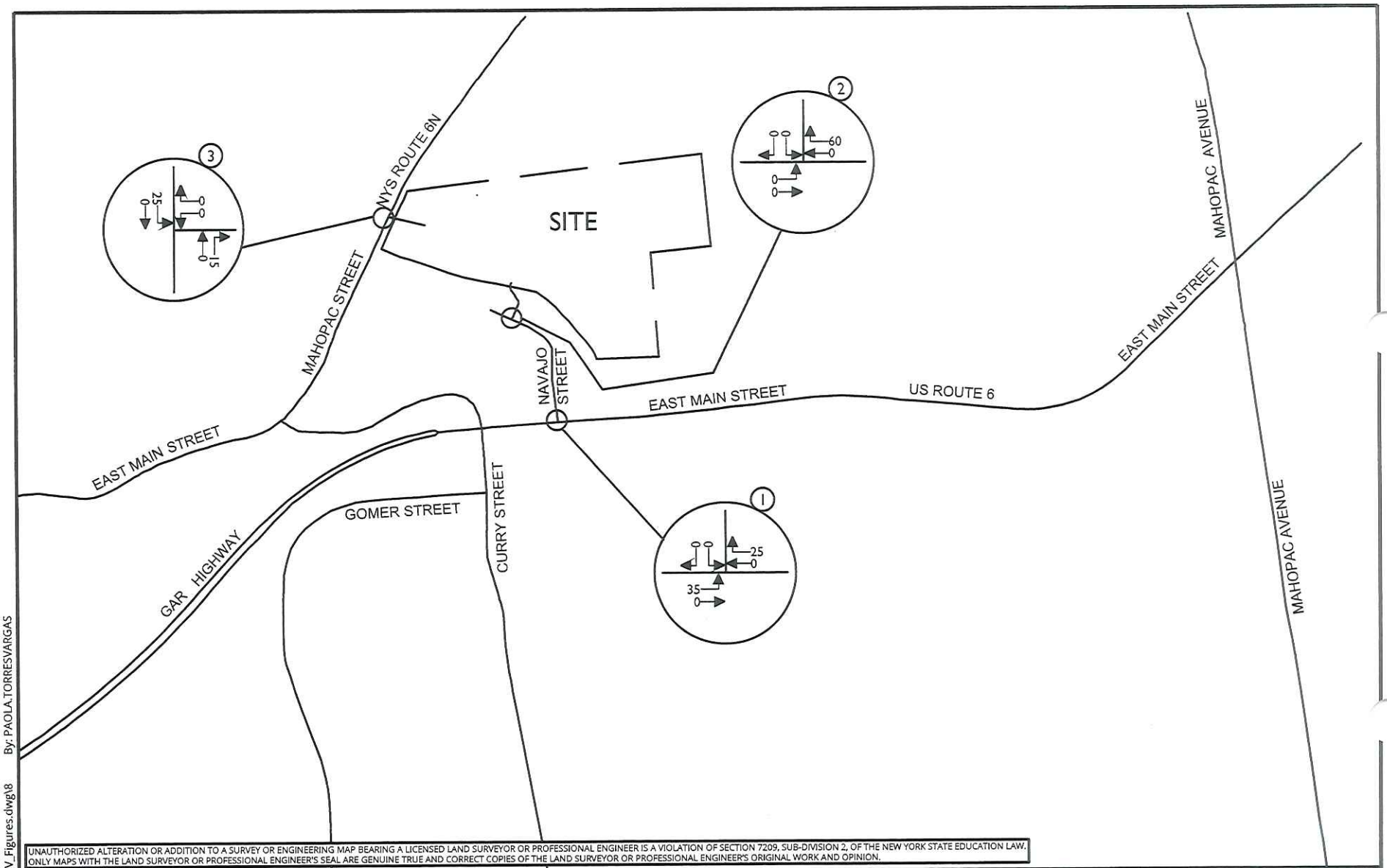

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OTHER USES ARRIVAL DISTRIBUTION (EXPRESSED AS %)

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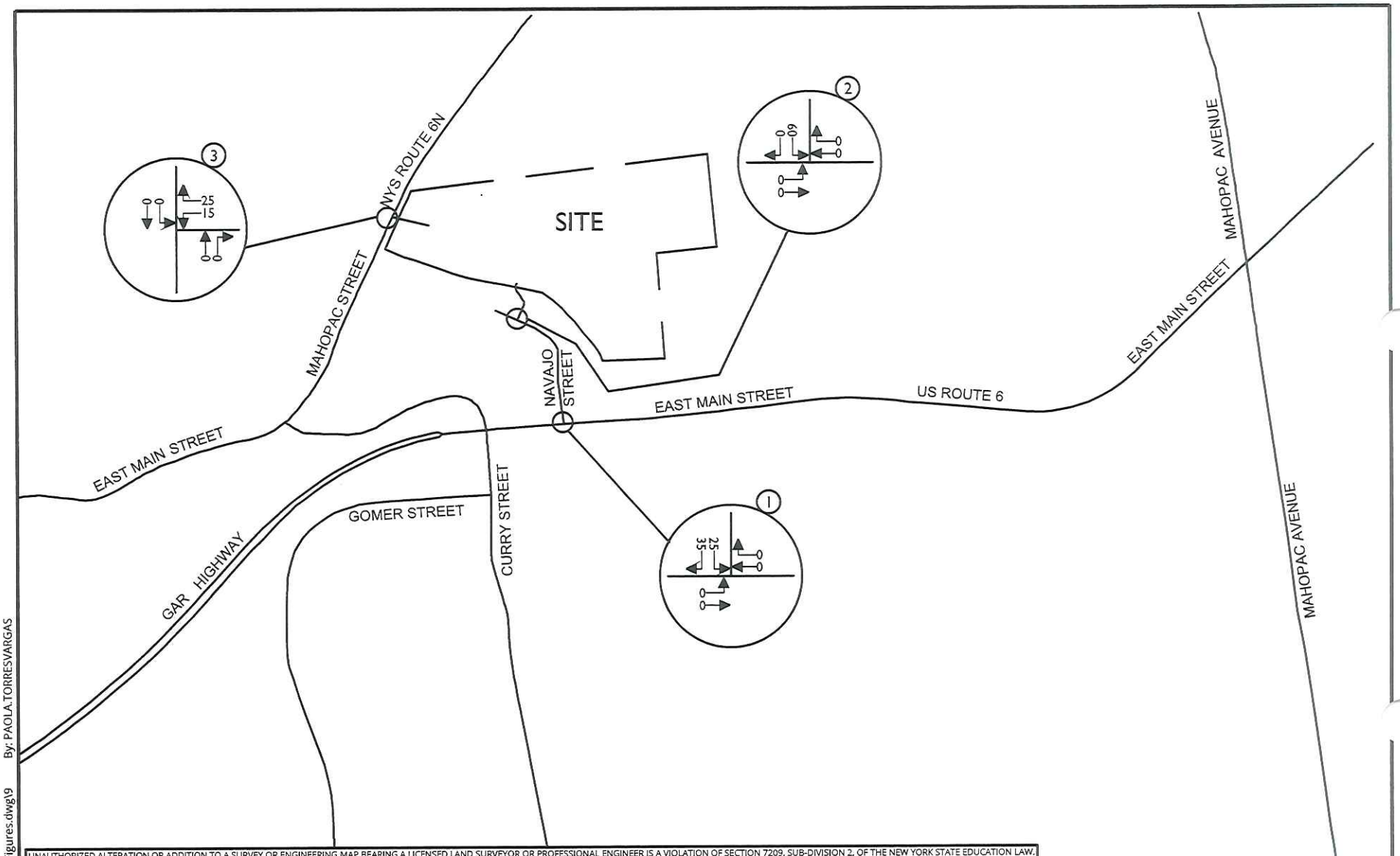

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SHEET NUMBER: 9

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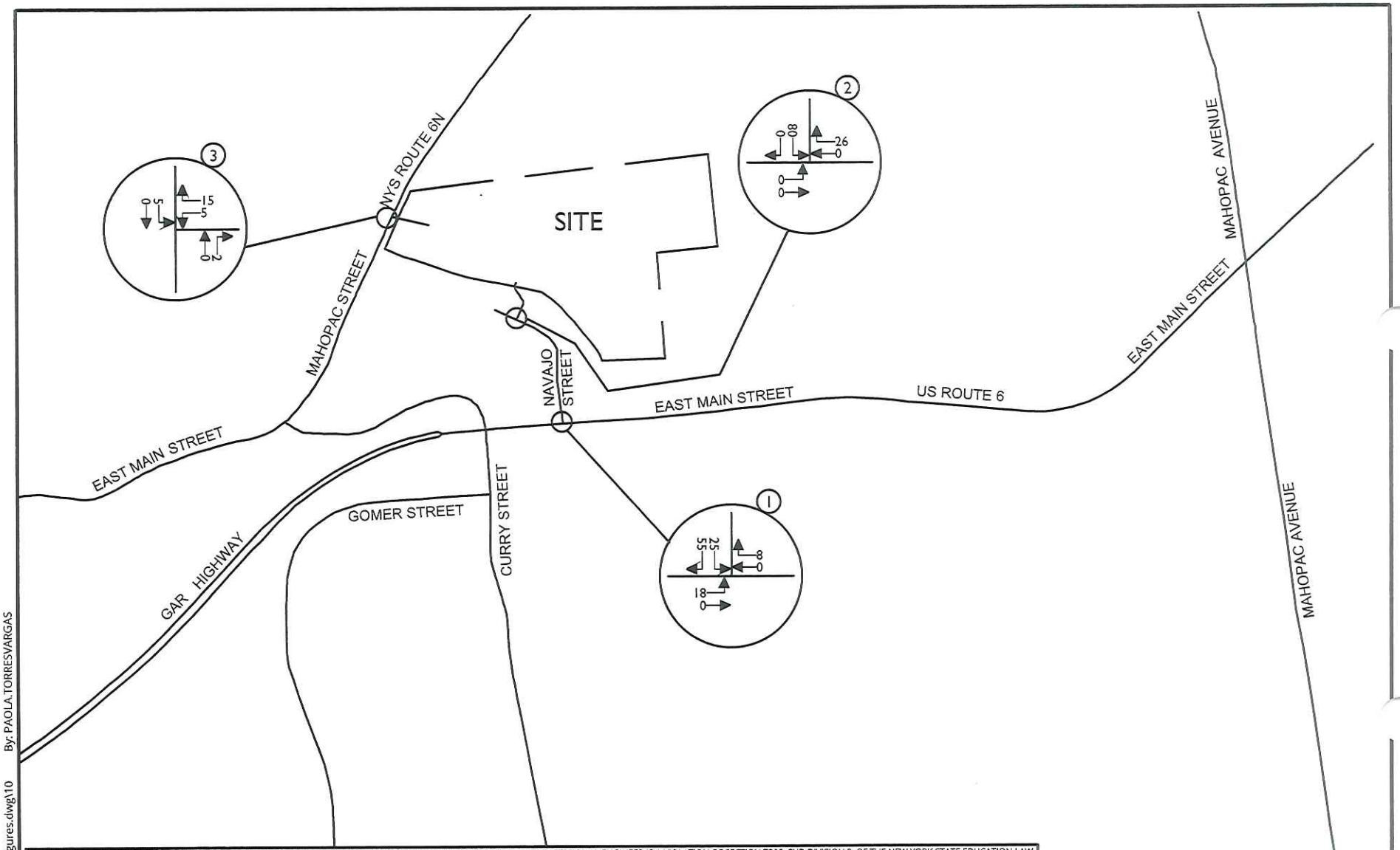

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SHEET TITLE: RESIDENTIAL SITE GENERATED TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR
FIELD BOOK: XX PAGE: XX

SHEET NUMBER: 10

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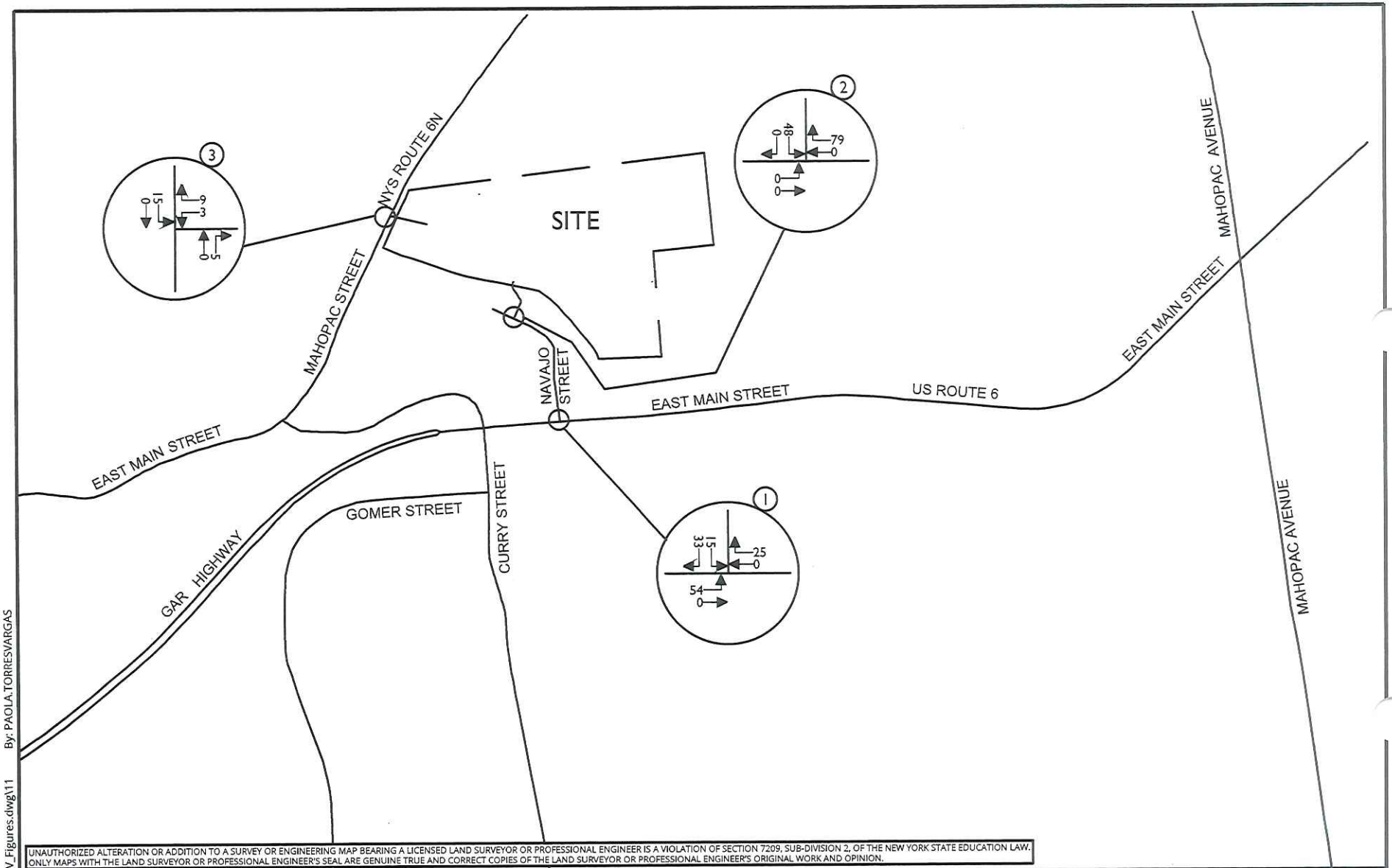

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FIELD BOOK: XX PAGE: XX

SHEET NUMBER: 11

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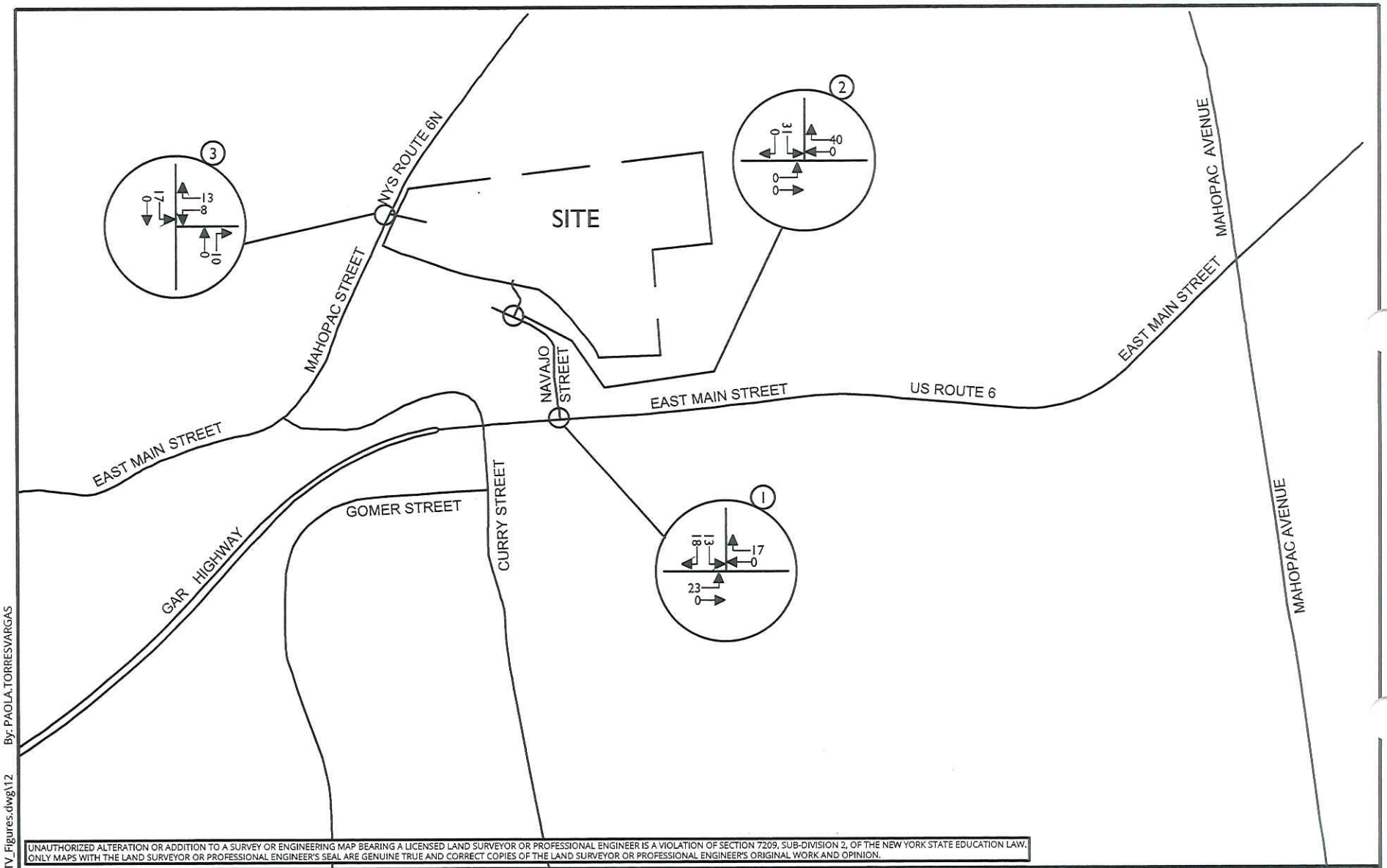

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OTHER USES SITE GENERATED TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR

SHEET NUMBER: 12

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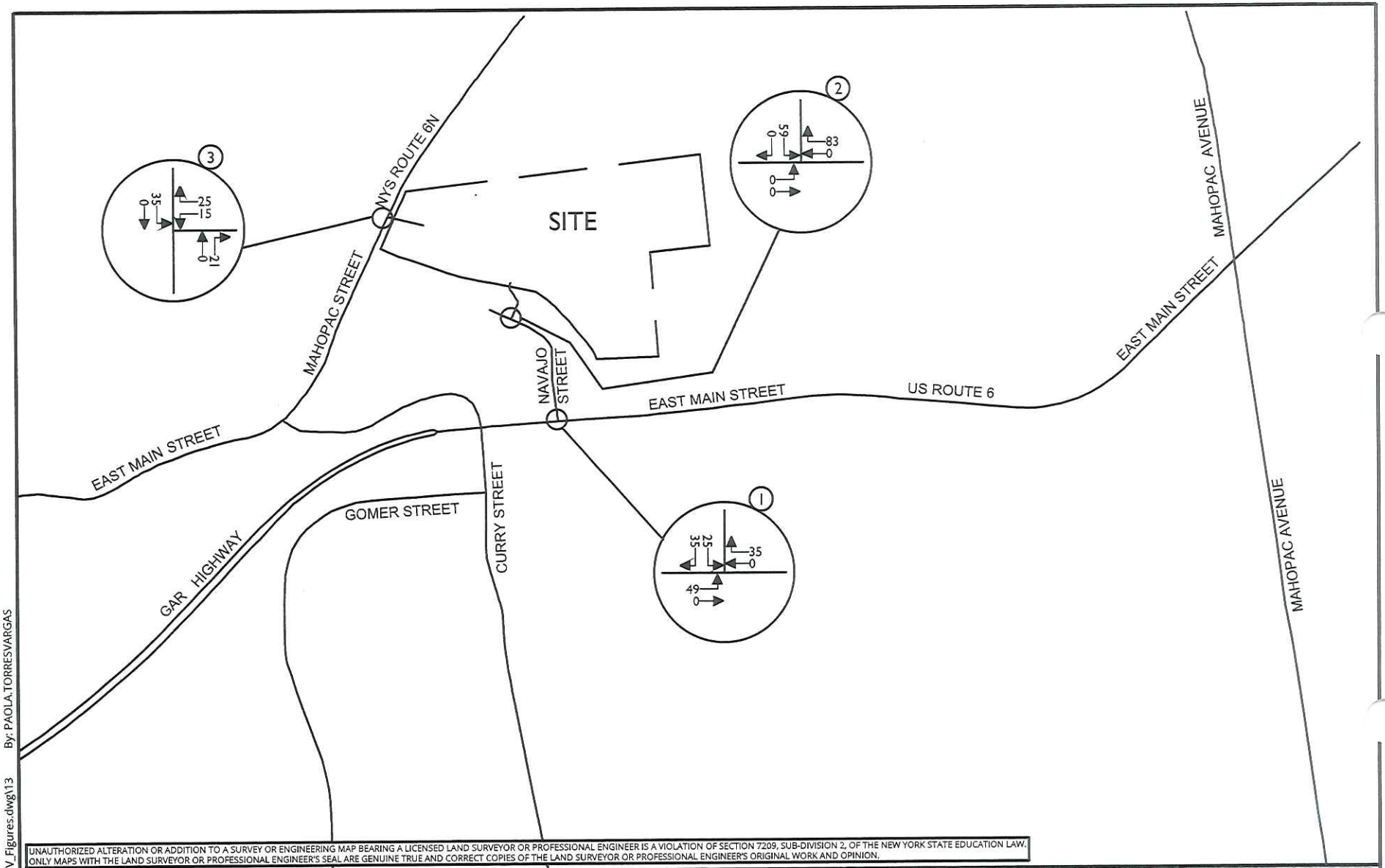

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SHEET TITLE: FIELD BOOK: XX PAGE: XX

OTHER USES SITE GENERATED TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR

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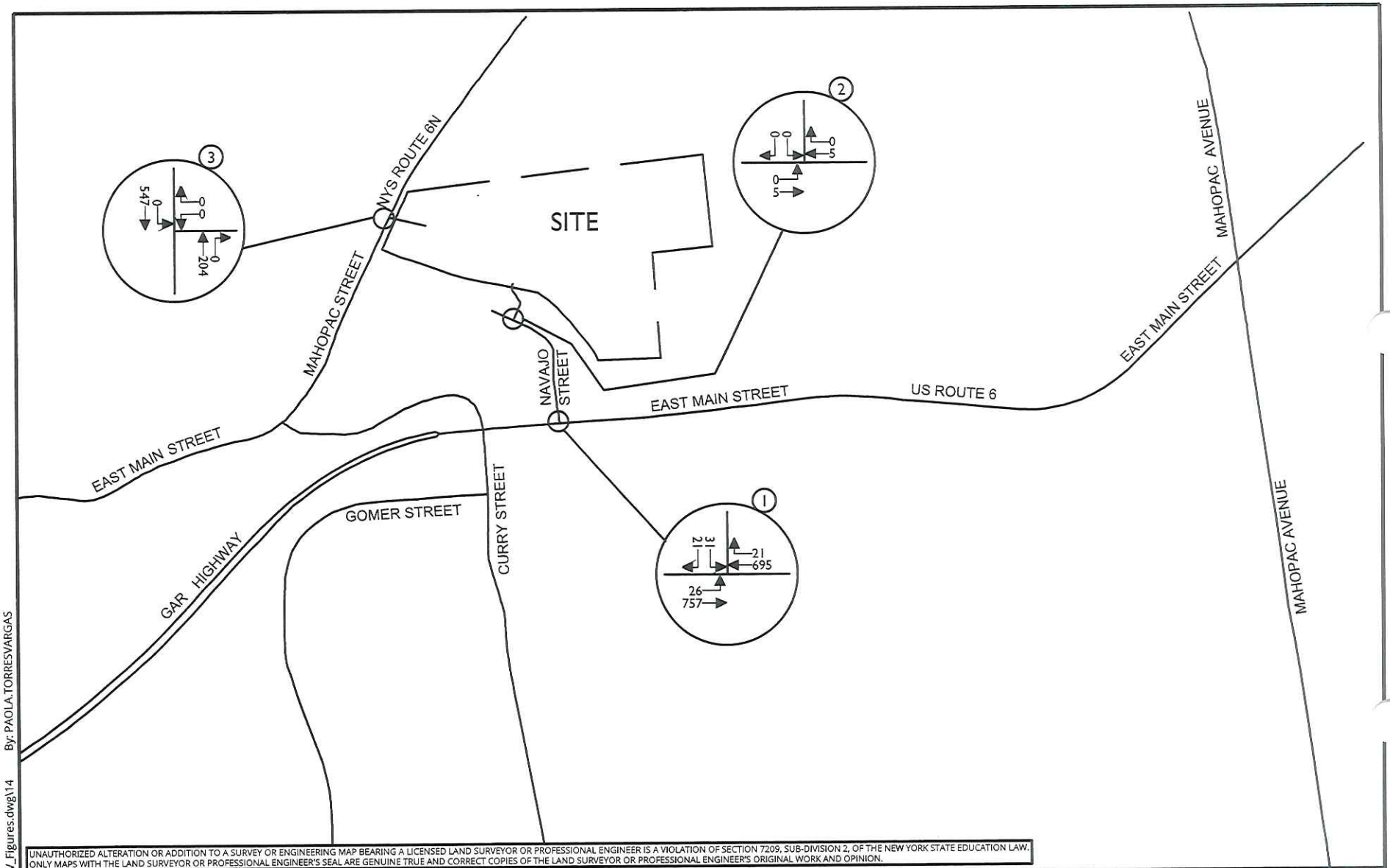

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FIELD BOOK: XX PAGE: XX
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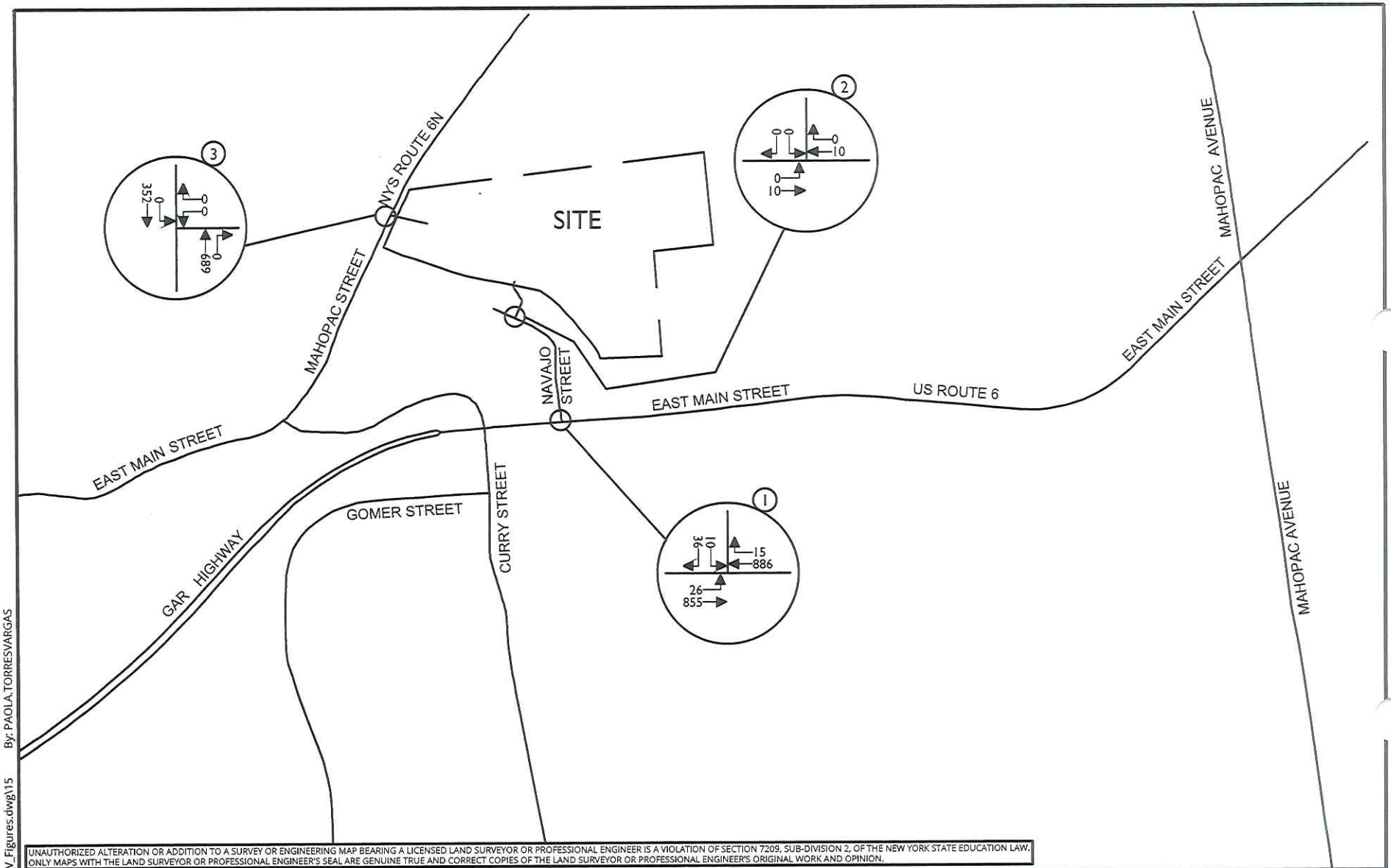

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FIELD BOOK: XX PAGE: XX
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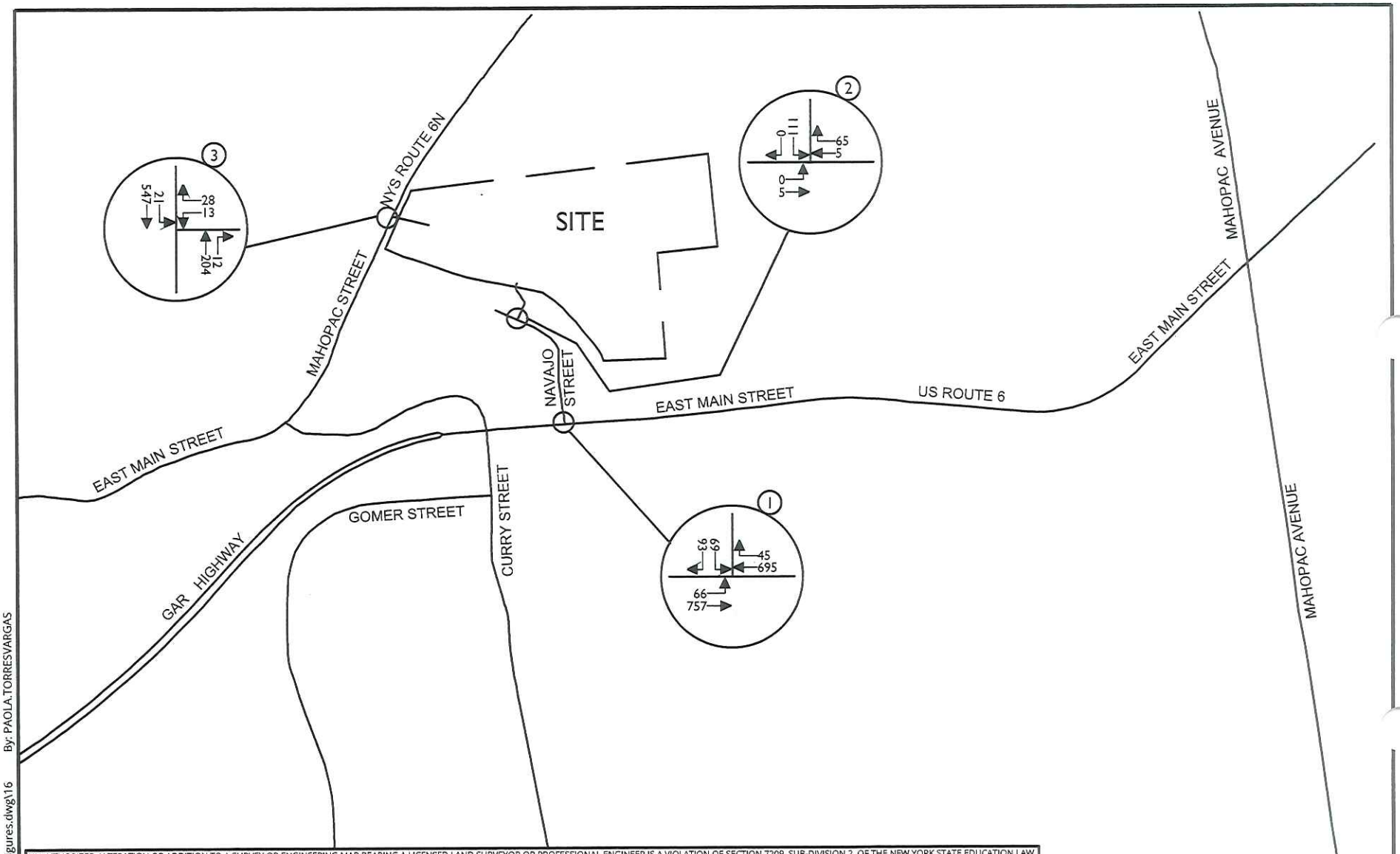

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FIELD BOOK: XX PAGE: XX

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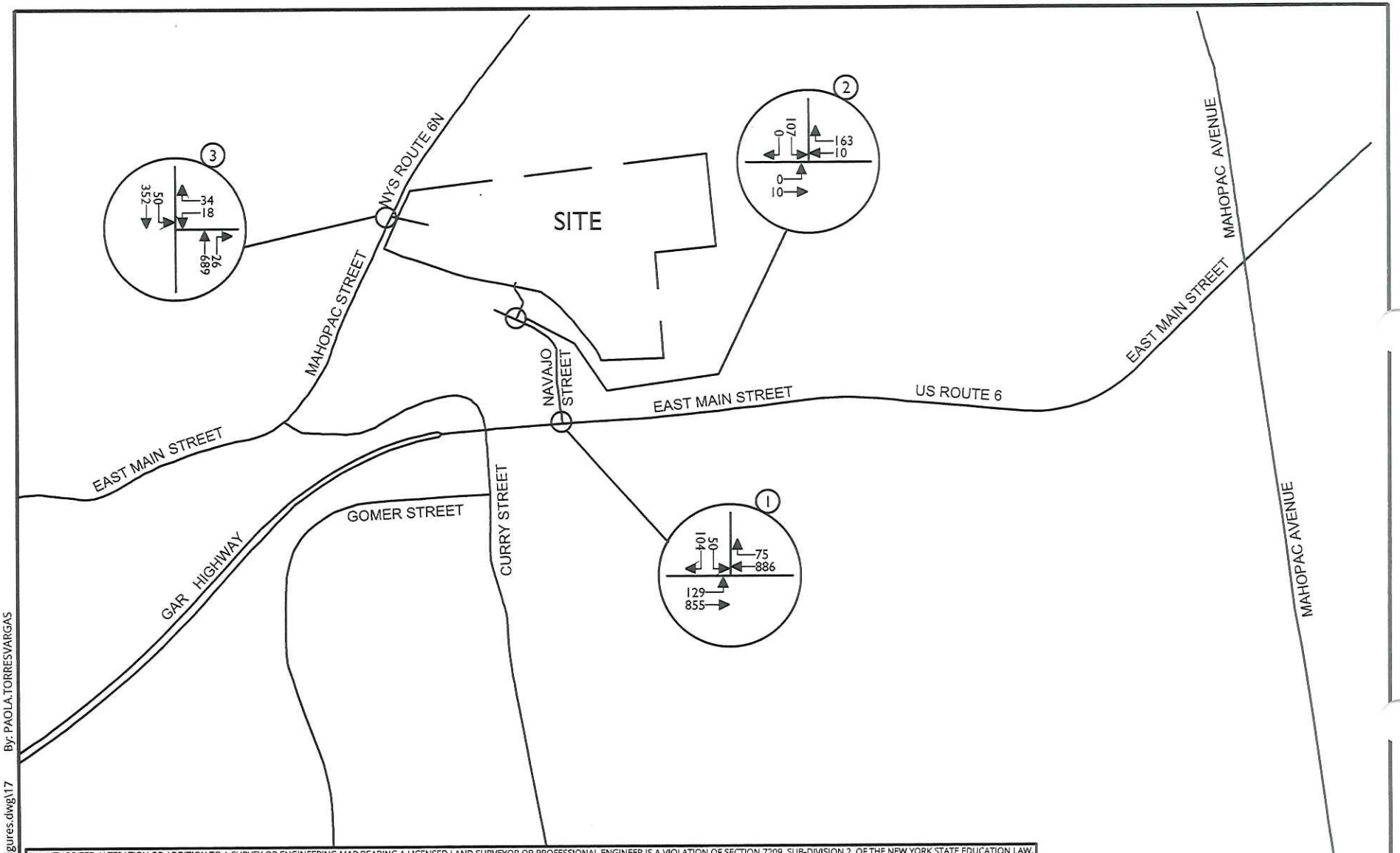

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FIELD BOOK: XX PAGE: XX

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Appendix B | Tables

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Table No. 1
Preliminary Hourly Trip Generation Rates (HTGR) and
Anticipated Site Generated Traffic Volumes

Creative Living Development Yorktown, NY	Entry		Exit		Total Trips
	HTGR[1]	Volume	HTGR[1]	Volume	
Multi-Family (254 Units)					
Weekday Peak AM Hour	0.11	32	0.34	100	132
Weekday Peak PM Hour	0.33	99	0.20	60	159
Saturday Peak Hour	0.21	61	0.21	61	122
Athletic Club (23,000 Sq. Ft.)					
Weekday Peak AM Hour	1.91	44	1.26	29	73
Weekday Peak PM Hour	3.91	90	2.39	55	145
Saturday Peak Hour	4.22	97	4.39	101	198
Multi-Purpose Recreational Fields Facility (7 Acres)					
Weekday Peak AM Hour	0.96	7	0.96	7	14
Weekday Peak PM Hour	2.89	20	2.89	20	40
Saturday Peak Hour	6.13	42	6.13	42	84
Strip Retail Plaza (4,000 Sq. Ft.)					
Weekday Peak AM Hour	3.80	15	3.80	15	30
Weekday Peak PM Hour	7.15	29	6.09	24	53
Saturday Peak Hour	3.35	13	3.22	13	26
Total					
Weekday Peak AM Hour	-	98	-	151	249
Weekday Peak PM Hour	-	238	-	159	397
Saturday Peak Hour	-	213	-	217	430

NOTES:

1) THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 11TH EDITION, 2021. ITE LAND USE CODE - 220 - MULTIFAMILY HOUSING, ITE LAND USE CODE - 493 - ATHLETIC CLUB, ITE LAND USE CODE - 435 - MULTIPURPOSE RECREATIONAL FIELDS FACILITY, ITE LAND USE CODE - 822 - STRIP RETAIL PLAZA.

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Table No. 2
Preliminary Level of Service Summary Table
Weekday Peak AM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
1	**East Main Street/US Route 6 & Navajo Street**	**Unsignalized**											
	East Main Street	EB	L	0.032	A	9.4	0.034	A	9.5	0.088	A	9.8	0.3
	Navajo Street	SB	LR	0.165	C	18	0.177	C	18.7	0.561	D	30.2	11.5
	With Turning Lane and Signalization												
	East Main Street	EB	L	-	-	-	0.08	A	6.8	0.2	A	9.5	2.7
			TT	-	-	-	0.36	A	3.1	0.36	A	3.9	0.8
		EB Approach		-	-	-	-	A	3.2	-	A	4.4	1.2
	US Route 6	WB	TR	-	-	-	0.82	A	9.7	0.91	B	14.2	4.5
	Navajo Street	SB	LR	-	-	-	0.32	B	17.8	0.66	C	21.5	3.7
		Overall		-	-	-	-	A	6.7	-	B	10.2	3.5
2	**Navajo Street & Site Access Dtiveway**	**Unsignalized**											
	Site Access Driveway	SB	LR	-	-	-	-	-	-	0.125	A	9.3	-
3	**Mahopac Street/NYS Route 6N & Site Access Driveway**	**Unsignalized**											
	Site Access Driveway	WB	LR	-	-	-	-	-	-	0.083	B	12.3	-
	NYS Route 6N	SB	LT	-	-	-	-	-	-	0.017	A	7.8	-
	With Turning Lane												
	Site Access Driveway	WB	LR	-	-	-	-	-	-	0.082	B	12.2	-
	NYS Route 6N	SB	LT	-	-	-	-	-	-	0.017	A	7.8	-

NOTES:

1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "C" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.

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Table No. 2
Preliminary Level of Service Summary Table
Weekday Peak PM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
1	East Main Street/US Route 6 & Navajo Street	Unsignalized											
	East Main Street	EB	L	0.038	B	10.2	0.04	B	10.3	0.211	B	11.9	1.6
	Navajo Street	SB	LR	0.155	C	18.5	0.164	C	19.1	0.775	F	62.6	43.5
	With Turning Lane and Signalization												
	East Main Street	EB	L	-	-	-	0.09	A	8.9	0.45	B	16	7.1
			TT	-	-	-	0.37	A	2.7	0.36	A	3.2	0.5
		EB Approach		-	-	-	-	A	2.9	-	A	4.9	2
	US Route 6	WB	TR	-	-	-	0.88	B	11.7	0.96	C	29.7	18
	Navajo Street	SB	LR	-	-	-	0.35	C	22.8	0.79	C	33.1	10.3
		Overall		-	-	-	-	A	7.7	-	B	18.3	10.6
2	Navajo Street & Site Access Dtiveway	Unsignalized											
	Site Access Driveway	SB	LR	-	-	-	-	-	-	0.131	A	9.7	-
3	Mahopac Street/NYS Route 6N & Site Access Driveway	Unsignalized											
	Site Access Driveway	WB	LR	-	-	-	-	-	-	0.204	C	21.3	-
	NYS Route 6N	SB	LT	-	-	-	-	-	-	0.065	A	9.6	-
	With Turning Lane												
	Site Access Driveway	WB	LR	-	-	-	-	-	-	0.201	C	21	-
	NYS Route 6N	SB	LT	-	-	-	-	-	-	0.065	A	9.6	-

NOTES:

1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "C" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.

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Appendix C | Levels of Service Standards

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Level of Service Standards

Level of Service for Signalized Intersections

Level of Service (LOS) can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay and volume-to-capacity (v/c) ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a measure of driver discomfort and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group.

- **LOS A** describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
- **LOS B** describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
- **LOS C** describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate.
- **LOS D** describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long.
- **LOS E** describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long.
- **LOS F** describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long.

A lane group can incur a delay less than 80 s/veh when the volume-to-capacity ratio exceeds 1.0. This condition typically occurs when the cycle length is short, the signal progression is favorable, or both. As a result, both the delay and volume-to-capacity ratio are considered when lane group LOS is established. A ratio of 1.0 or more indicates that cycle capacity is fully utilized and represents failure from a capacity perspective (just as delay in excess of 80 s/veh represents failure from a delay perspective).

The Level of Service Criteria for signalized intersections are given in Exhibit 19-8 from the *Highway Capacity Manual, 6th Edition* published by the Transportation Research Board.

Exhibit 19-8 LOS by Volume-to-Capacity Ratio

Control Delay (s/veh)	v/c ≤ 1.0	v/c ≥ 1.0
≤10	A	F
>10-20	B	F
>20-35	C	F
>35-55	D	F
>55-80	E	F
>80	F	F

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

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Level of Service Criteria
For Two-Way Stop-Controlled (TWSC) Unsignalized Intersections

Level of Service (LOS) for a two-way stop-controlled (TWSC) intersection is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns. LOS is not defined for the intersection as a whole or for major-street approaches.

The Level of Service Criteria for TWSC unsignalized intersections are given in Exhibit 20-2 from the Highway Capacity Manual, 6th Edition published by the Transportation Research Board.

Exhibit 20-2 LOS by Volume-to-Capacity Ratio

Control Delay (s/veh)	v/c ≤ 1.0	v/c ≥ 1.0
0-10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

The LOS criteria apply to each lane on a given approach and to each approach on the minor street.
LOS is not calculated for major-street approaches or for the intersection as a whole.

As Exhibit 20-2 notes, LOS F is assigned to the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay.

The Level of Service Criteria for unsignalized intersections are somewhat different from the criteria for signalized intersections.

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Level of Service Criteria
For All-Way Stop-Controlled (AWSC) Unsignalized Intersections

The Levels of Service (LOS) for all-way stop-controlled (AWSC) intersections are given in Exhibit 21-8. As the exhibit notes, LOS F is assigned if the volume-to-capacity (v/c) ratio of a lane exceeds 1.0, regardless of the control delay. For assessment of LOS at the approach and intersection levels, LOS is based solely on control delay.

The Level of Service Criteria for AWSC unsignalized intersections are given in Exhibit 21-8 from the *Highway* Capacity *Manual, 6th Edition* published by the Transportation Research Board.

Exhibit 21-8 LOS by Volume-to-Capacity Ratio

Control Delay (s/veh)	v/c ≤ 1.0	v/c ≥ 1.0
0-10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

For approaches and intersection wide assessment, LOS is defined solely by control delay.

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Appendix D | Capacity Analysis

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	735	675	20	30	20
Future Volume (vph)	25	735	675	20	30	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)		3%	-2%		-6%	
Storage Length (ft)	160			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.996		0.946	
Flt Protected	0.950				0.971	
Satd. Flow (prot)	1627	3254	1874	0	1762	0
Flt Permitted	0.950				0.971	
Satd. Flow (perm)	1627	3254	1874	0	1762	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1415	1877		892	
Travel Time (s)		32.2	42.7		20.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	799	734	22	33	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	799	756	0	55	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	1.11	1.11	0.99	0.99	0.96	0.96
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 46.7% ICU Level of Service A
Analysis Period (min) 15

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Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	735	675	20	30	20
Future Vol, veh/h	25	735	675	20	30	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	160	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-2	-	-6	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	799	734	22	33	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	756	0	-	0	1199	745
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	454	-
Critical Hdwy	4.13	-	-	-	5.43	5.63
Critical Hdwy Stg 1	-	-	-	-	4.23	-
Critical Hdwy Stg 2	-	-	-	-	4.63	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	853	-	-	-	285	468
Stage 1	-	-	-	-	600	-
Stage 2	-	-	-	-	706	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	853	-	-	-	276	468
Mov Cap-2 Maneuver	-	-	-	-	276	-
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	706	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	18
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	853	-	-	-	330
HCM Lane V/C Ratio	0.032	-	-	-	0.165
HCM Control Delay (s)	9.4	-	-	-	18
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	830	860	15	10	35
Future Volume (vph)	25	830	860	15	10	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)		3%	-2%		-6%	
Storage Length (ft)	160			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.998		0.895	
Flt Protected	0.950				0.989	
Satd. Flow (prot)	1627	3254	1878	0	1698	0
Flt Permitted	0.950				0.989	
Satd. Flow (perm)	1627	3254	1878	0	1698	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1415	1877		892	
Travel Time (s)		32.2	42.7		20.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	902	935	16	11	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	902	951	0	49	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	1.11	1.11	0.99	0.99	0.96	0.96
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.2%		ICU Level of Service B	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	830	860	15	10	35
Future Vol, veh/h	25	830	860	15	10	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	160	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-2	-	-6	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	902	935	16	11	38

Major/Minor	Major1			Major2		Minor2	
Conflicting Flow All	951	0	-	0	1448	943	
Stage 1	-	-	-	-	943	-	
Stage 2	-	-	-	-	505	-	
Critical Hdwy	4.13	-	-	-	5.43	5.63	
Critical Hdwy Stg 1	-	-	-	-	4.23	-	
Critical Hdwy Stg 2	-	-	-	-	4.63	-	
Follow-up Hdwy	2.219	-	-	-	3.519	3.319	
Pot Cap-1 Maneuver	720	-	-	-	215	372	
Stage 1	-	-	-	-	517	-	
Stage 2	-	-	-	-	677	-	
Platoon blocked, %			-	-	-		
Mov Cap-1 Maneuver	720	-	-	-	207	372	
Mov Cap-2 Maneuver	-	-	-	-	207	-	
Stage 1	-	-	-	-	498	-	
Stage 2	-	-	-	-	677	-	

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	720	-	-	-	316
HCM Lane V/C Ratio	0.038	-	-	-	0.155
HCM Control Delay (s)	10.2	-	-	-	18.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	26	757	695	21	31	21
Future Volume (vph)	26	757	695	21	31	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)		3%	-2%		-6%	
Storage Length (ft)	160			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.996		0.946	
Flt Protected	0.950				0.971	
Satd. Flow (prot)	1627	3254	1874	0	1762	0
Flt Permitted	0.950				0.971	
Satd. Flow (perm)	1627	3254	1874	0	1762	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1415	1877		892	
Travel Time (s)		32.2	42.7		20.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	28	823	755	23	34	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	823	778	0	57	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	1.11	1.11	0.99	0.99	0.96	0.96
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.9%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	26	757	695	21	31	21
Future Vol, veh/h	26	757	695	21	31	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	160	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-2	-	-6	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	823	755	23	34	23

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	778	0	-	0	1235	767
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	4.13	-	-	-	5.43	5.63
Critical Hdwy Stg 1	-	-	-	-	4.23	-
Critical Hdwy Stg 2	-	-	-	-	4.63	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	837	-	-	-	274	456
Stage 1	-	-	-	-	590	-
Stage 2	-	-	-	-	698	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	837	-	-	-	265	456
Mov Cap-2 Maneuver	-	-	-	-	265	-
Stage 1	-	-	-	-	571	-
Stage 2	-	-	-	-	698	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	18.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	837	-	-	-	319
HCM Lane V/C Ratio	0.034	-	-	-	0.177
HCM Control Delay (s)	9.5	-	-	-	18.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	26	855	886	15	10	36
Future Volume (vph)	26	855	886	15	10	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)		3%	-2%		-6%	
Storage Length (ft)	160			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.998		0.895	
Flt Protected	0.950				0.989	
Satd. Flow (prot)	1627	3254	1878	0	1698	0
Flt Permitted	0.950				0.989	
Satd. Flow (perm)	1627	3254	1878	0	1698	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1415	1877		892	
Travel Time (s)		32.2	42.7		20.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	28	929	963	16	11	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	929	979	0	50	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	1.11	1.11	0.99	0.99	0.96	0.96
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 57.5% ICU Level of Service B
Analysis Period (min) 15

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Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	26	855	886	15	10	36
Future Vol, veh/h	26	855	886	15	10	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	160	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-2	-	-6	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	929	963	16	11	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	979	0	-	0	1492	971
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	521	-
Critical Hdwy	4.13	-	-	-	5.43	5.63
Critical Hdwy Stg 1	-	-	-	-	4.23	-
Critical Hdwy Stg 2	-	-	-	-	4.63	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	703	-	-	-	205	360
Stage 1	-	-	-	-	506	-
Stage 2	-	-	-	-	668	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	703	-	-	-	197	360
Mov Cap-2 Maneuver	-	-	-	-	197	-
Stage 1	-	-	-	-	486	-
Stage 2	-	-	-	-	668	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	19.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	703	-	-	-	305
HCM Lane V/C Ratio	0.04	-	-	-	0.164
HCM Control Delay (s)	10.3	-	-	-	19.1
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	66	757	695	45	69	93
Future Volume (vph)	66	757	695	45	69	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)		3%	-2%		-6%	
Storage Length (ft)	160			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.992		0.923	
Flt Protected	0.950				0.979	
Satd. Flow (prot)	1627	3254	1866	0	1734	0
Flt Permitted	0.950				0.979	
Satd. Flow (perm)	1627	3254	1866	0	1734	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1415	1877		892	
Travel Time (s)		32.2	42.7		20.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	823	755	49	75	101
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	823	804	0	176	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	1.11	1.11	0.99	0.99	0.96	0.96
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 62.5% ICU Level of Service B
Analysis Period (min) 15

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Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	66	757	695	45	69	93
Future Vol, veh/h	66	757	695	45	69	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	160	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-2	-	-6	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	823	755	49	75	101

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	804	0	-	0	1336	780
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	556	-
Critical Hdwy	4.13	-	-	-	5.43	5.63
Critical Hdwy Stg 1	-	-	-	-	4.23	-
Critical Hdwy Stg 2	-	-	-	-	4.63	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	818	-	-	-	244	449
Stage 1	-	-	-	-	585	-
Stage 2	-	-	-	-	649	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	818	-	-	-	223	449
Mov Cap-2 Maneuver	-	-	-	-	223	-
Stage 1	-	-	-	-	534	-
Stage 2	-	-	-	-	649	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	30.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	818	-	-	-	314
HCM Lane V/C Ratio	0.088	-	-	-	0.561
HCM Control Delay (s)	9.8	-	-	-	30.2
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0.3	-	-	-	3.2

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	5	5	65	111	0
Future Volume (vph)	0	5	5	65	111	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-1%	-9%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.874			
Flt Protected					0.950	
Satd. Flow (prot)	0	1872	1701	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1872	1701	0	1770	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		145	892		188	
Travel Time (s)		3.3	20.3		4.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	5	5	71	121	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	5	76	0	121	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.94	0.94	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 17.1% ICU Level of Service A
Analysis Period (min) 15

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Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		⋎	
Traffic Vol, veh/h	0	5	5	65	111	0
Future Vol, veh/h	0	5	5	65	111	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, %	-	-1	-9	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	5	71	121	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	76	0	-	0	46	41
Stage 1	-	-	-	-	41	-
Stage 2	-	-	-	-	5	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1523	-	-	-	964	1030
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	1018	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1523	-	-	-	964	1030
Mov Cap-2 Maneuver	-	-	-	-	964	-
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	1018	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1523	-	-	-	964
HCM Lane V/C Ratio	-	-	-	-	0.125
HCM Control Delay (s)	0	-	-	-	9.3
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.4

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	28	204	12	21	547
Future Volume (vph)	13	28	204	12	21	547
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.908		0.993			
Flt Protected	0.984					0.998
Satd. Flow (prot)	1664	0	1726	0	0	1735
Flt Permitted	0.984					0.998
Satd. Flow (perm)	1664	0	1726	0	0	1735
Link Speed (mph)	30		30			30
Link Distance (ft)	258		1487			920
Travel Time (s)	5.9		33.8			20.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	30	222	13	23	595
Shared Lane Traffic (%)						
Lane Group Flow (vph)	44	0	235	0	0	618
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 54.7% ICU Level of Service A
Analysis Period (min) 15

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Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	28	204	12	21	547
Future Vol, veh/h	13	28	204	12	21	547
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	30	222	13	23	595

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	870	229	0	0	235	0
Stage 1	229	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	322	810	-	-	1332	-
Stage 1	809	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	314	810	-	-	1332	-
Mov Cap-2 Maneuver	314	-	-	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	511	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	540	1332	-
HCM Lane V/C Ratio	-	-	0.083	0.017	-
HCM Control Delay (s)	-	-	12.3	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	129	855	886	75	50	104
Future Volume (vph)	129	855	886	75	50	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)		3%	-2%		-6%	
Storage Length (ft)	160			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.989		0.909	
Flt Protected	0.950				0.984	
Satd. Flow (prot)	1627	3254	1861	0	1716	0
Flt Permitted	0.950				0.984	
Satd. Flow (perm)	1627	3254	1861	0	1716	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1415	1877		892	
Travel Time (s)		32.2	42.7		20.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	140	929	963	82	54	113
Shared Lane Traffic (%)						
Lane Group Flow (vph)	140	929	1045	0	167	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	1.11	1.11	0.99	0.99	0.96	0.96
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 77.5%		ICU Level of Service D	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	129	855	886	75	50	104
Future Vol, veh/h	129	855	886	75	50	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	160	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-2	-	-6	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	140	929	963	82	54	113

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1045	0	-	0	1749	1004
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	745	-
Critical Hdwy	4.13	-	-	-	5.43	5.63
Critical Hdwy Stg 1	-	-	-	-	4.23	-
Critical Hdwy Stg 2	-	-	-	-	4.63	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	664	-	-	-	153	346
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	553	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	664	-	-	-	121	346
Mov Cap-2 Maneuver	-	-	-	-	121	-
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	553	-

Approach	EB	WB	SB
HCM Control Delay, s	1.6	0	62.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	664	-	-	-	216
HCM Lane V/C Ratio	0.211	-	-	-	0.775
HCM Control Delay (s)	11.9	-	-	-	62.6
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.8	-	-	-	5.4

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	10	10	163	107	0
Future Volume (vph)	0	10	10	163	107	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-1%	-9%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.873			
Flt Protected					0.950	
Satd. Flow (prot)	0	1872	1699	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1872	1699	0	1770	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		145	892		188	
Travel Time (s)		3.3	20.3		4.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	11	11	177	116	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	11	188	0	116	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.94	0.94	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	23.2%	ICU Level of Service	A
Analysis Period (min)	15		

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Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	10	163	107	0
Future Vol, veh/h	0	10	10	163	107	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, %	-	-1	-9	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	11	177	116	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	188	0	-	0	111	100
Stage 1	-	-	-	-	100	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1386	-	-	-	886	956
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	1012	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1386	-	-	-	886	956
Mov Cap-2 Maneuver	-	-	-	-	886	-
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	1012	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1386	-	-	-	886
HCM Lane V/C Ratio	-	-	-	-	0.131
HCM Control Delay (s)	0	-	-	-	9.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.5

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	34	689	26	50	352
Future Volume (vph)	18	34	689	26	50	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.912		0.995			
Flt Protected	0.983					0.994
Satd. Flow (prot)	1670	0	1730	0	0	1728
Flt Permitted	0.983					0.994
Satd. Flow (perm)	1670	0	1730	0	0	1728
Link Speed (mph)	30		30			30
Link Distance (ft)	258		1487			920
Travel Time (s)	5.9		33.8			20.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	37	749	28	54	383
Shared Lane Traffic (%)						
Lane Group Flow (vph)	57	0	777	0	0	437
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 70.7% ICU Level of Service C
Analysis Period (min) 15

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Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	34	689	26	50	352
Future Vol, veh/h	18	34	689	26	50	352
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	37	749	28	54	383

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1254	763	0	0	777	0
Stage 1	763	-	-	-	-	-
Stage 2	491	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	190	404	-	-	839	-
Stage 1	460	-	-	-	-	-
Stage 2	615	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	174	404	-	-	839	-
Mov Cap-2 Maneuver	174	-	-	-	-	-
Stage 1	460	-	-	-	-	-
Stage 2	565	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.3	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	277	839	-
HCM Lane V/C Ratio	-	-	0.204	0.065	-
HCM Control Delay (s)	-	-	21.3	9.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	26	757	695	21	31	21
Future Volume (vph)	26	757	695	21	31	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)		3%	-2%		-6%	
Storage Length (ft)	160			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.996		0.946	
Flt Protected	0.950				0.971	
Satd. Flow (prot)	1627	3254	1874	0	1762	0
Flt Permitted	0.226				0.971	
Satd. Flow (perm)	387	3254	1874	0	1762	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			2		23	
Link Speed (mph)		30	30		30	
Link Distance (ft)		1415	1877		892	
Travel Time (s)		32.2	42.7		20.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	28	823	755	23	34	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	823	778	0	57	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	1.11	1.11	0.99	0.99	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Detector 1 Position(ft)	0	0	0		0	
Detector 1 Size(ft)	20	6	6		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	7	4	8		6	
Permitted Phases	4		8		6	
Detector Phase	7	4	8		6	
Switch Phase						

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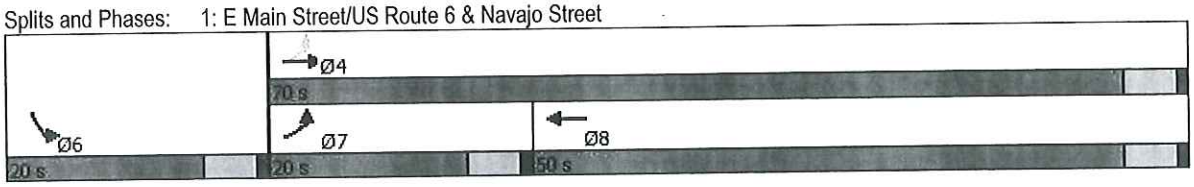
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Initial (s)	8.0	15.0	10.0		8.0	
Minimum Split (s)	16.0	30.0	30.0		16.0	
Total Split (s)	20.0	70.0	50.0		20.0	
Total Split (%)	22.2%	77.8%	55.6%		22.2%	
Maximum Green (s)	15.0	65.0	45.0		15.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.0	5.0	5.0		5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	2.0	2.0	2.0		2.0	
Recall Mode	None	Min	Min		None	
Act Effct Green (s)	40.6	43.6	39.8		8.9	
Actuated g/C Ratio	0.77	0.83	0.75		0.17	
v/c Ratio	0.06	0.31	0.55		0.18	
Control Delay	2.7	2.9	9.7		20.7	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	2.7	2.9	9.7		20.7	
LOS	A	A	A		C	
Approach Delay		2.9	9.7		20.7	
Approach LOS		A	A		C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 52.8
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 6.6 Intersection LOS: A
Intersection Capacity Utilization 52.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: E Main Street/US Route 6 & Navajo Street



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Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	28	823	778	57
v/c Ratio	0.06	0.31	0.55	0.18
Control Delay	2.7	2.9	9.7	20.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	2.7	2.9	9.7	20.7
Queue Length 50th (ft)	2	48	111	9
Queue Length 95th (ft)	7	69	366	48
Internal Link Dist (ft)		1335	1797	812
Turn Bay Length (ft)	160			
Base Capacity (vph)	688	3127	1558	571
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	0.04	0.26	0.50	0.10

Intersection Summary

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	757	695	21	31	21
Future Volume (veh/h)	26	757	695	21	31	21
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	1817	1817	1949	1949	2106	2106
Adj Flow Rate, veh/h	28	823	755	23	34	23
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	365	2290	919	28	106	71
Arrive On Green	0.05	0.66	0.49	0.49	0.09	0.09
Sat Flow, veh/h	1731	3544	1881	57	1122	759
Grp Volume(v), veh/h	28	823	0	778	58	0
Grp Sat Flow(s),veh/h/ln	1731	1726	0	1938	1913	0
Q Serve(g_s), s	0.3	4.3	0.0	14.1	1.2	0.0
Cycle Q Clear(g_c), s	0.3	4.3	0.0	14.1	1.2	0.0
Prop In Lane	1.00			0.03	0.59	0.40
Lane Grp Cap(c), veh/h	365	2290	0	947	180	0
V/C Ratio(X)	0.08	0.36	0.00	0.82	0.32	0.00
Avail Cap(c_a), veh/h	903	5445	0	2116	696	0
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	6.8	3.1	0.0	9.0	17.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.7	0.4	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	0.1	0.5	0.0	4.0	0.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	6.8	3.1	0.0	9.7	17.8	0.0
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h		851	778		58	
Approach Delay, s/veh		3.2	9.7		17.8	
Approach LOS		A	A		B	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	32.3	8.9	7.2	25.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	65.0	15.0	15.0	45.0
Max Q Clear Time (g_c+I1), s	6.3	3.2	2.3	16.1
Green Ext Time (p_c), s	4.4	0.0	0.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	6.7
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	26	855	886	15	10	36
Future Volume (vph)	26	855	886	15	10	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)		3%	-2%		-6%	
Storage Length (ft)	160			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.998		0.895	
Flt Protected	0.950				0.989	
Satd. Flow (prot)	1627	3254	1878	0	1698	0
Flt Permitted	0.164				0.989	
Satd. Flow (perm)	281	3254	1878	0	1698	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			1		39	
Link Speed (mph)		30	30		30	
Link Distance (ft)		1415	1877		892	
Travel Time (s)		32.2	42.7		20.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	28	929	963	16	11	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	929	979	0	50	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	1.11	1.11	0.99	0.99	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Detector 1 Position(ft)	0	0	0		0	
Detector 1 Size(ft)	20	6	6		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	7	4	8		6	
Permitted Phases	4		8		6	
Detector Phase	7	4	8		6	
Switch Phase						

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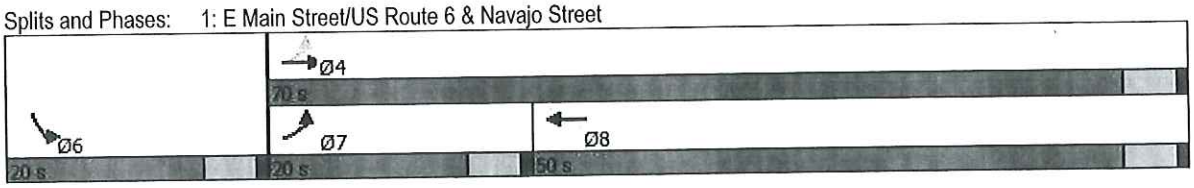
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Initial (s)	8.0	15.0	10.0		8.0	
Minimum Split (s)	16.0	30.0	30.0		16.0	
Total Split (s)	20.0	70.0	50.0		20.0	
Total Split (%)	22.2%	77.8%	55.6%		22.2%	
Maximum Green (s)	15.0	65.0	45.0		15.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.0	5.0	5.0		5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	2.0	2.0	2.0		2.0	
Recall Mode	None	Min	Min		None	
Act Effct Green (s)	57.0	59.3	54.6		8.1	
Actuated g/C Ratio	0.82	0.86	0.79		0.12	
v/c Ratio	0.07	0.33	0.66		0.21	
Control Delay	2.5	2.5	11.9		16.8	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	2.5	2.5	11.9		16.8	
LOS	A	A	B		B	
Approach Delay		2.5	11.9		16.8	
Approach LOS		A	B		B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 69.2
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 7.5 Intersection LOS: A
Intersection Capacity Utilization 62.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: E Main Street/US Route 6 & Navajo Street



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Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	28	929	979	50
v/c Ratio	0.07	0.33	0.66	0.21
Control Delay	2.5	2.5	11.9	16.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	2.5	2.5	11.9	16.8
Queue Length 50th (ft)	2	57	171	5
Queue Length 95th (ft)	7	77	#646	35
Internal Link Dist (ft)		1335	1797	812
Turn Bay Length (ft)	160			
Base Capacity (vph)	528	2975	1482	404
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	0.05	0.31	0.66	0.12

Intersection Summary

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

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	855	886	15	10	36
Future Volume (veh/h)	26	855	886	15	10	36
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	1817	1817	1949	1949	2106	2106
Adj Flow Rate, veh/h	28	929	963	16	11	39
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	310	2502	1100	18	32	113
Arrive On Green	0.05	0.72	0.58	0.58	0.08	0.08
Sat Flow, veh/h	1731	3544	1911	32	396	1402
Grp Volume(v), veh/h	28	929	0	979	51	0
Grp Sat Flow(s),veh/h/ln	1731	1726	0	1943	1834	0
Q Serve(g_s), s	0.3	5.2	0.0	22.1	1.3	0.0
Cycle Q Clear(g_c), s	0.3	5.2	0.0	22.1	1.3	0.0
Prop In Lane	1.00			0.02	0.22	0.76
Lane Grp Cap(c), veh/h	310	2502	0	1119	148	0
V/C Ratio(X)	0.09	0.37	0.00	0.88	0.35	0.00
Avail Cap(c_a), veh/h	727	4375	0	1704	536	0
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	8.9	2.7	0.0	9.3	22.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.4	0.5	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	0.1	0.7	0.0	7.0	0.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.9	2.7	0.0	11.7	22.8	0.0
LnGrp LOS	A	A	A	B	C	A
Approach Vol, veh/h		957	979		51	
Approach Delay, s/veh		2.9	11.7		22.8	
Approach LOS		A	B		C	

Timer - Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				42.2		9.1	7.6	34.5
Change Period (Y+Rc), s				5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s				65.0		15.0	15.0	45.0
Max Q Clear Time (g_c+I1), s				7.2		3.3	2.3	24.1
Green Ext Time (p_c), s				5.2		0.0	0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	66	757	695	45	69	93
Future Volume (vph)	66	757	695	45	69	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)		3%	-2%		-6%	
Storage Length (ft)	160			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.992		0.923	
Flt Protected	0.950				0.979	
Satd. Flow (prot)	1627	3254	1866	0	1734	0
Flt Permitted	0.132				0.979	
Satd. Flow (perm)	226	3254	1866	0	1734	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			5		65	
Link Speed (mph)		30	30		30	
Link Distance (ft)		1415	1877		892	
Travel Time (s)		32.2	42.7		20.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	823	755	49	75	101
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	823	804	0	176	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	1.11	1.11	0.99	0.99	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1		1	
Detector Template						
Leading Detector (ft)	35	35	35		35	
Trailing Detector (ft)	-5	-5	-5		-5	
Detector 1 Position(ft)	-5	-5	-5		-5	
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)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	7	4	8		6	
Permitted Phases	4		8		6	
Detector Phase	7	4	8		6	
Switch Phase						
Minimum Initial (s)	8.0	15.0	10.0		8.0	
Minimum Split (s)	16.0	30.0	30.0		16.0	
Total Split (s)	20.0	70.0	50.0		20.0	
Total Split (%)	22.2%	77.8%	55.6%		22.2%	
Maximum Green (s)	15.0	65.0	45.0		15.0	

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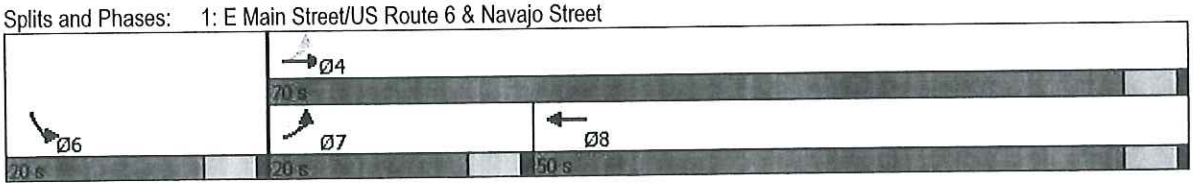
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.0	5.0	5.0		5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	2.0	2.0	2.0		2.0	
Recall Mode	None	Min	Min		None	
Act Effct Green (s)	46.3	46.3	35.8		10.4	
Actuated g/C Ratio	0.69	0.69	0.53		0.15	
v/c Ratio	0.21	0.37	0.81		0.54	
Control Delay	4.8	4.8	22.2		26.2	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	4.8	4.8	22.2		26.2	
LOS	A	A	C		C	
Approach Delay		4.8	22.2		26.2	
Approach LOS		A	C		C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 67.1
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 14.2 Intersection LOS: B
Intersection Capacity Utilization 68.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: E Main Street/US Route 6 & Navajo Street



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Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	72	823	804	176
v/c Ratio	0.21	0.37	0.81	0.54
Control Delay	4.8	4.8	22.2	26.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.8	4.8	22.2	26.2
Queue Length 50th (ft)	7	54	257	42
Queue Length 95th (ft)	21	102	#526	115
Internal Link Dist (ft)		1335	1797	812
Turn Bay Length (ft)	160			
Base Capacity (vph)	483	2977	1309	454
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	0.15	0.28	0.61	0.39

Intersection Summary

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

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	66	757	695	45	69	93
Future Volume (veh/h)	66	757	695	45	69	93
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	1817	1817	1949	1949	2106	2106
Adj Flow Rate, veh/h	72	823	755	49	75	101
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	364	2275	833	54	115	154
Arrive On Green	0.10	0.66	0.46	0.46	0.14	0.14
Sat Flow, veh/h	1731	3544	1810	117	794	1069
Grp Volume(v), veh/h	72	823	0	804	177	0
Grp Sat Flow(s),veh/h/ln	1731	1726	0	1927	1874	0
Q Serve(g_s), s	0.9	5.4	0.0	19.6	4.5	0.0
Cycle Q Clear(g_c), s	0.9	5.4	0.0	19.6	4.5	0.0
Prop In Lane	1.00			0.06	0.42	0.57
Lane Grp Cap(c), veh/h	364	2275	0	887	271	0
V/C Ratio(X)	0.20	0.36	0.00	0.91	0.65	0.00
Avail Cap(c_a), veh/h	701	4416	0	1706	553	0
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	9.4	3.9	0.0	12.7	20.5	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.5	1.0	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	0.3	1.1	0.0	6.9	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.5	3.9	0.0	14.2	21.5	0.0
LnGrp LOS	A	A	A	B	C	A
Approach Vol, veh/h		895	804		177	
Approach Delay, s/veh		4.4	14.2		21.5	
Approach LOS		A	B		C	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			38.5		12.3	10.1	28.4
Change Period (Y+Rc), s			5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s			65.0		15.0	15.0	45.0
Max Q Clear Time (g_c+I1), s			7.4		6.5	2.9	21.6
Green Ext Time (p_c), s			2.0		0.2	0.1	1.7

Intersection Summary	
HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	28	204	12	21	547
Future Volume (vph)	13	28	204	12	21	547
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Storage Length (ft)	0	0		0	50	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.908		0.993			
Flt Protected	0.984				0.950	
Satd. Flow (prot)	1664	0	1726	0	1652	1739
Flt Permitted	0.984				0.950	
Satd. Flow (perm)	1664	0	1726	0	1652	1739
Link Speed (mph)	30		30			30
Link Distance (ft)	258		1487			920
Travel Time (s)	5.9		33.8			20.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	30	222	13	23	595
Shared Lane Traffic (%)						
Lane Group Flow (vph)	44	0	235	0	23	595
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		10			10
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.8%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	28	204	12	21	547
Future Vol, veh/h	13	28	204	12	21	547
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	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	30	222	13	23	595

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	870	229	0	0	235	0
Stage 1	229	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	322	810	-	-	1332	-
Stage 1	809	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	317	810	-	-	1332	-
Mov Cap-2 Maneuver	317	-	-	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	516	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	542	1332	-
HCM Lane V/C Ratio	-	-	0.082	0.017	-
HCM Control Delay (s)	-	-	12.2	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	129	855	886	75	50	104
Future Volume (vph)	129	855	886	75	50	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)		3%	-2%		-6%	
Storage Length (ft)	160			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.989		0.909	
Flt Protected	0.950				0.984	
Satd. Flow (prot)	1627	3254	1861	0	1716	0
Flt Permitted	0.080				0.984	
Satd. Flow (perm)	137	3254	1861	0	1716	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			7		100	
Link Speed (mph)		30	30		30	
Link Distance (ft)		1415	1877		892	
Travel Time (s)		32.2	42.7		20.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	140	929	963	82	54	113
Shared Lane Traffic (%)						
Lane Group Flow (vph)	140	929	1045	0	167	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	1.11	1.11	0.99	0.99	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1		1	
Detector Template						
Leading Detector (ft)	35	35	35		35	
Trailing Detector (ft)	-5	-5	-5		-5	
Detector 1 Position(ft)	-5	-5	-5		-5	
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)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	7	4	8		6	
Permitted Phases	4		8		6	
Detector Phase	7	4	8		6	
Switch Phase						
Minimum Initial (s)	8.0	15.0	10.0		8.0	
Minimum Split (s)	16.0	30.0	30.0		16.0	
Total Split (s)	20.0	70.0	50.0		20.0	
Total Split (%)	22.2%	77.8%	55.6%		22.2%	
Maximum Green (s)	15.0	65.0	45.0		15.0	

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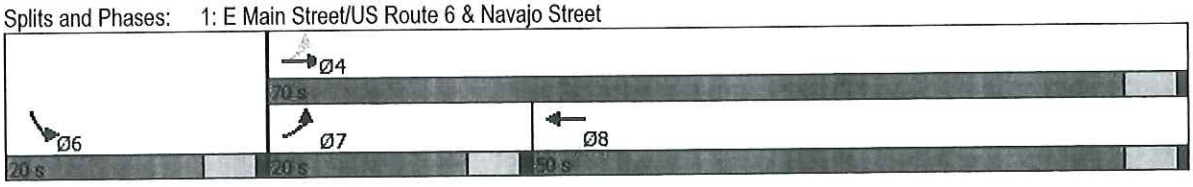
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.0	5.0	5.0		5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	2.0	2.0	2.0		2.0	
Recall Mode	None	Min	Min		None	
Act Effct Green (s)	61.0	61.0	45.2		9.4	
Actuated g/C Ratio	0.76	0.76	0.56		0.12	
v/c Ratio	0.46	0.38	1.00		0.58	
Control Delay	14.2	3.9	47.5		23.8	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	14.2	3.9	47.5		23.8	
LOS	B	A	D		C	
Approach Delay		5.3	47.5		23.8	
Approach LOS		A	D		C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 80.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 26.0 — Intersection LOS: C
Intersection Capacity Utilization 80.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: E Main Street/US Route 6 & Navajo Street



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Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	140	929	1045	167
v/c Ratio	0.46	0.38	1.00	0.58
Control Delay	14.2	3.9	47.5	23.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.2	3.9	47.5	23.8
Queue Length 50th (ft)	14	57	449	31
Queue Length 95th (ft)	75	110	#912	94
Internal Link Dist (ft)		1335	1797	812
Turn Bay Length (ft)	160			
Base Capacity (vph)	382	2640	1048	402
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	0.37	0.35	1.00	0.42

Intersection Summary

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

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	129	855	886	75	50	104
Future Volume (veh/h)	129	855	886	75	50	104
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	1817	1817	1949	1949	2106	2106
Adj Flow Rate, veh/h	140	929	963	82	54	113
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	312	2570	1006	86	68	143
Arrive On Green	0.11	0.74	0.57	0.57	0.11	0.11
Sat Flow, veh/h	1731	3544	1771	151	595	1246
Grp Volume(v), veh/h	140	929	0	1045	168	0
Grp Sat Flow(s),veh/h/ln	1731	1726	0	1922	1852	0
Q Serve(g_s), s	1.9	6.7	0.0	36.5	6.3	0.0
Cycle Q Clear(g_c), s	1.9	6.7	0.0	36.5	6.3	0.0
Prop In Lane	1.00			0.08	0.32	0.67
Lane Grp Cap(c), veh/h	312	2570	0	1092	212	0
V/C Ratio(X)	0.45	0.36	0.00	0.96	0.79	0.00
Avail Cap(c_a), veh/h	496	3167	0	1220	392	0
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	15.6	3.2	0.0	14.5	30.6	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	15.2	2.5	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	1.3	1.4	0.0	17.5	2.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.0	3.2	0.0	29.7	33.1	0.0
LnGrp LOS	B	A	A	C	C	A
Approach Vol, veh/h		1069	1045		168	
Approach Delay, s/veh		4.9	29.7		33.1	
Approach LOS		A	C		C	

Timer - Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				57.8		13.1	12.5	45.3
Change Period (Y+Rc), s				5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s				65.0		15.0	15.0	45.0
Max Q Clear Time (g_c+I1), s				8.7		8.3	3.9	38.5
Green Ext Time (p_c), s				2.3		0.2	0.2	1.8

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

Notes

User approved volume balancing among the lanes for turning movement.

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	34	689	26	50	352
Future Volume (vph)	18	34	689	26	50	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Storage Length (ft)	0	0		0	50	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.912		0.995			
Flt Protected	0.983				0.950	
Satd. Flow (prot)	1670	0	1730	0	1652	1739
Flt Permitted	0.983				0.950	
Satd. Flow (perm)	1670	0	1730	0	1652	1739
Link Speed (mph)	30		30			30
Link Distance (ft)	258		1487			920
Travel Time (s)	5.9		33.8			20.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	37	749	28	54	383
Shared Lane Traffic (%)						
Lane Group Flow (vph)	57	0	777	0	54	383
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		10			10
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 51.6% ICU Level of Service A
Analysis Period (min) 15

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Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	34	689	26	50	352
Future Vol, veh/h	18	34	689	26	50	352
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	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	37	749	28	54	383

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1254	763	0	0	777	0
Stage 1	763	-	-	-	-	-
Stage 2	491	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	190	404	-	-	839	-
Stage 1	460	-	-	-	-	-
Stage 2	615	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	178	404	-	-	839	-
Mov Cap-2 Maneuver	178	-	-	-	-	-
Stage 1	460	-	-	-	-	-
Stage 2	576	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	281	839	-
HCM Lane V/C Ratio	-	-	0.201	0.065	-
HCM Control Delay (s)	-	-	21	9.6	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-

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