

*CITY OF BEACON*  
*One Municipal Plaza - Courtroom*  
*BEACON, NEW YORK 12508*  
*Phone (845) 838-5002 Fax (845) 838-5026*

The Zoning Board of Appeals will meet on **Tuesday, September 17, 2019** in the Municipal Center Courtroom. A training work session will take place at 7:00 p.m. and the regular meeting will begin immediately thereafter, but not later than at 7:30 PM.

1. Continue review of application submitted by 23-28 Creek Drive, LLC, 23-28 Creek Drive, Tax Grid No. 30-6054-37-037625-00, Fishkill Creek Development (FCD) Zoning District, to construct a mixed use development with eight apartments and 20,000 sq. ft. of commercial space which requires relief from the following:
  - 1) Section 223-26(F) to provide 93 parking spaces  
*(113 parking spaces required)*
  - 2) Section 223-4.14(C) for apartment size of 2,750 sq. ft. for two of the units *(2,000 sq. ft. maximum permitted)*
  - 3) Section 223-1.14(F) for a four story building  
*(three stories maximum permitted)*
  - 4) Section 223-1.14(F) for a building height of 53 ft.-4 in.  
*(40 ft. maximum permitted)*
2. Application submitted by Robert Vye, 19 South Elm Street, Tax Grid No. 30-5954-27-813875-00, R1-5 Zoning District, for relief from Section 223-17(E) to construct a 425 sq. ft. detached garage *(300 sq. ft. maximum permitted)*

**City of Beacon Planning Board**  
**9/17/2019**

**Title:**

**23-28 Creek Drive**

**Subject:**

Continue review of application submitted by 23-28 Creek Drive, LLC, 23-28 Creek Drive, Tax Grid No. 30-6054-37-037625-00, Fishkill Creek Development (FCD) Zoning District, to construct a mixed use development with eight apartments and 20,000 sq. ft. of commercial space which requires relief from the following:

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- 3) Section 223-1.14(F) for a four story building  
*(three stories maximum permitted)*
- 4) Section 223-1.14(F) for a building height of 53 ft.-4 in.  
*(40 ft. maximum permitted)*

**Background:**

**ATTACHMENTS:**

Description	Type
23-28 Creek Drive ZBA Supplemental Submission with Exhibits	Cover Memo/Letter



445 Hamilton Avenue, 14th Floor  
White Plains, New York 10601  
T 914 761 1300  
F 914 761 5372  
cuddyfeder.com

Taylor M. Palmer  
tpalmer@cuddyfeder.com

July 29, 2019

**VIA EMAIL AND**  
**HAND DELIVERY**

Hon. Robert Lanier  
and Members of the Zoning Board of Appeals  
City of Beacon  
1 Municipal Plaza  
Beacon, New York 12508

Re: Application for Area Variances – Mixed-Use Development – Supplemental Submission  
Premises: 23-28 Creek Drive, Beacon, New York (Tax ID: 6054-37-037625)

Dear Chairman Lanier and Members of the Zoning Board of Appeals:

On behalf of 23-28 Creek Drive, LLC (the “Applicant”), we respectfully submit this letter in furtherance of the above-referenced Application. This letter also provides information in response to comments the Applicant received from the public and from this Board and its consultants at the initial Public Hearing session held on Tuesday, July 16<sup>th</sup> (the “ZBA Public Hearing”).

**RESPONSES TO PUBLIC COMMENTS & ZONING BOARD MEMBER COMMENTS:**

***A. Public Comments in Support of the Project:***

The Applicant has received tremendous support for the mixed-uses and the public benefits proposed for the Premises. As this Board is aware, the Applicant has received more than thirty (30) letters of support and approval recommendation, which includes support from owners of parcels that are adjacent to and abutting the Property, and others from throughout the surrounding neighborhood and in the community.<sup>1</sup> In addition to the above supportive comments and the Applicant’s responses to public comments at the ZBA Public Hearing, the following provides additional details regarding the Applicant’s Parking & Traffic Study in further support of the Applicant’s request for a parking variance.

***B. Parking & Traffic Study:***

As was discussed at the ZBA Public Hearing, as part of the Coordinated SEQRA review conducted by the Planning Board as Lead Agency, the Applicant retained the services of Maser Consulting,

<sup>1</sup> Note: As noted at the ZBA Public Hearing, copies of the letters of support were submitted to the ZBA Secretary on July 16, 2019 and July 17, 2019 by e-mail to be incorporated as part of the official record of proceedings. We understand that additional letters of support are forthcoming, copies of which will be provided to the ZBA Secretary for the record as well.



July 29, 2019

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P.A., in order to review the traffic and parking impacts of the Project. Enclosed as **Exhibit A**, please find a copy of the Parking and Traffic Impact Study prepared by Maser Consulting P.A., dated March 25, 2019 (the "PTIS"),<sup>2</sup> which confirms that "... the 93 proposed parking spaces will sufficiently meet the parking needs of the development." See PTIS at page 5.<sup>3</sup>

As detailed in the Applicant's June 25, 2019 submission, the Applicant proposes to provide 93 total parking spaces on the Premises, including 80 spaces for the proposed 20,000 sq. ft. commercial space and thirteen (13) spaces for the eight (8) apartment units. As more fully discussed at the ZBA Public Hearing and was discussed with the Planning Board's Traffic Consultant during the SEQRA review, it is respectfully submitted that 93 parking spaces will *overpark* the Premises. Indeed, the PTIS provides that "... in comparison to the nearby CMS District and Linkage District[s] the City Code would only require 48 and 58 spaces respectively, which is a reasonable comparison due to the Project's proximity to Main Street and these districts." See PTIS at page 4. At the same time, the complimentary land uses also allow for shared parking on the Premises, and the property is also adjacent to the City's new large public off-street parking area located northeast of Churchill Street and south of the Hudson Valley Brewery building.

Provided the above, following a four (4) month SEQR Public Hearing, the Planning Board adopted a Negative Declaration on July 9, 2019, and determined that the entire action, including the requested variances, *will have no potential significant adverse environmental impacts*. See **Exhibit B** – Negative Declaration.<sup>4</sup> As noted at the ZBA Public Hearing, the Planning Board also issued an Advisory Opinion dated July 11, 2019, which provides in relevant part that:

"The Fishkill Creek Development zone relies on general parking standards, while the

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<sup>2</sup> **Note:** The enclosed PTIS updated the Applicant's original PTIS dated July 26, 2018 in order to reflect the increased commercial space and the reduction in the total number of residential apartment units that are included in the Project before this board.

<sup>3</sup> **Note:** Also enclosed in **Exhibit A (Tabs 2 & 3)** are copies of the Traffic Consultant's response to comments from the Planning Board's Traffic Consultant during the SEQR review (**Tab 2**), as well as a copy of the signage plan requested by the Planning Board (**Tab 3**) for additional reference.

<sup>4</sup> **Note:** The Negative Declaration adopted by the Planning Board on July 9, 2019 also determines that the building design will not have a significant adverse environmental impact on aesthetic resources, providing in relevant part that:

The Proposed Action will not result in the obstruction, elimination or significant screening of one or more official designated scenic views. The Proposed Action will be visible from Fishkill Creek but the aesthetics of the site will be far improved from the existing condition of the DPW facility. Further, public viewing of Fishkill Creek from the Site will be enhanced by providing a Greenway Trail segment and a public park at the south end of the site.





July 29, 2019  
Page -3-

similar mixed use Linkage and CMS zoning districts would require far fewer spaces, and in this case the commercial space is the main factor in the parking requirement. A shared parking situation will exist because some of the employees will live and work on site, and the commercial operation will take not be operating when some residents are at home. Lastly fewer parking spaces would cut down on the amount of impervious surfaces and add more accessible greenspace. After careful consideration, members unanimously supported and send a positive recommendation with regard to the parking variance.”

See **Exhibit C**.<sup>5</sup>

Notwithstanding the above, in response to comments from this Board at the ZBA Public Hearing, the Applicant also prepared the enclosed plan entitled “Additional Parking Diagram”, which shows a parking-compliant layout for the off-street parking area. See **Exhibit D**. As shown on the enclosed Parking Diagram, given site constraints and the parking requirements for the proposed expanded commercial use, the additional off-street parking would be continued south along the site into the proposed greenspace. As noted on the enclosed Parking Diagram, some of the impacts of the additional parking area would include a reduction in the landscaped buffer for the Greenway Trail and a significant reduction in greenspace, as well as the need for additional stormwater management and additional retaining walls. As identified herein, and more fully considered during the SEQRA review, the PTIS confirms that shared parking and zoning requirements for similarly situated zoning districts require significantly less parking for the commercial use on the Premises. Accordingly, it is respectfully submitted that the parking shown on the enclosed Parking Diagram would result in more impacts than what is proposed by the Applicant, and that the Project’s proposed plan provides more than sufficient parking for the mixed-uses proposed for the Premises.

As detailed above, is respectfully submitted that the proposed access to the Premises allows for safe and efficient flow of both vehicles and pedestrians through the site and that the Project is sufficiently parked for the complimentary uses.

#### **COMPLIANCE WITH THE STATE ENVIRONMENTAL QUALITY REVIEW Act:**

The Proposed Action is a Unlisted Action under SEQR, and has undergone Coordinated Review with the Planning Board acting as lead agency. A Full Environmental Assessment Form was

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<sup>5</sup> **Note:** For additional reference, a copy of the Planning Board’s referral comments to the City Council are included in **Exhibit C**, as noted at the ZBA Public Hearing.



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submitted to this Board as well as the Planning Board at the beginning of the application process. The Planning Board, at its meeting on July 9, 2019, issued a Negative Declaration and findings that the proposed Project will not have any potentially significant adverse impacts upon the environment. This concludes the SEQR review process for the Project.

**SUMMARY:**

For all the foregoing reasons, the Applicant respectfully submits that, under the test provided by the law, the issuance of the area variances is justified. The Applicant respectfully submits that there is no harm to the community that weighs against the benefit to the Applicant, and that the proposed variances are the minimum area variances that meet the Applicant's needs and at the same time fully protects the character of the neighborhood and the health, safety and welfare of the community. Further, the adoption of instant area variances would not, of course, end the City's review. Indeed the Applicant must also appear again for continued review and additional Public Hearings before the City Council regarding the Concept Plan, as well as at the Planning Board for continued Site Plan Review and a Site Plan Public Hearing.

In further support of this Application, we respectfully submit seven (7) sets of the instant letter and the following documentation:<sup>6</sup>

**Exhibit A:** Parking and Traffic Impact Study;

**Tab 1:** Parking and Traffic Impact Study prepared by Maser Consulting P.A., dated March 25, 2019;

**Tab 2:** Maser Consulting P.A. Response to Planning Board Traffic Consultant Comments dated April 30, 2019; and

**Tab 3:** Traffic Signage Plan.

**Exhibit B:** SEQR Negative Declaration Adopted by Planning Board on July 9, 2019;

**Exhibit C:** Planning Board Referral Letters to ZBA and City Council, dated July 11, 2019; and

**Exhibit D:** Additional Parking Plan entitled "Additional Parking Diagram", prepared by Aryeh Siegel, Architect, dated July 22, 2019.

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<sup>6</sup> A CD-ROM containing the enclosures referenced herein is also enclosed.



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Should the ZBA or City Staff have any questions or comments with regard to the foregoing, please do not hesitate to contact me. Thank you for your attention to and consideration of this matter. We look forward to appearing before this Board on August 20<sup>th</sup> for the continued Public Hearing regarding this Application.

Very truly yours,



Taylor M. Palmer

Enclosures;

cc: Drew Victoria Gamils Esq., Attorney to the Zoning Board of Appeals  
Dave Buckley, Building Inspector  
Aryeh J. Siegel, Architect  
Michael A. Bodendorf, P.E., Hudson Land Design  
Maser Consulting, P.A.  
23-28 Creek Drive, LLC

# Exhibit A



**1**



Engineers  
Planners  
Surveyors  
Landscape Architects  
Environmental Scientists

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[www.maserconsulting.com](http://www.maserconsulting.com)

March 26, 2019

**VIA E-MAIL**

Mr. Rodney Weber  
Weber Projects III, LLC  
11 Creek Drive, Suite 102A  
Beacon, NY 12508

Re: 23-28 Creek Drive LLC  
23-28 Creek Drive (Former City DPW Property)  
City of Beacon, Dutchess County, New York  
MC Project No. 14000477B

Dear Mr. Weber:

This report has been prepared to evaluate the potential traffic impacts associated with the proposed 23-28 Creek Drive development as revised, which is planned to be developed on property located on the south side of Churchill Street west of Creek Drive and east of the Fishkill Creek in the City of Beacon, New York, which was formerly occupied by the City of Beacon Department of Public Works. The revised proposal for the site consists of a live/work environment with a total of 8 apartment units and approximately 20,000 square feet of office/commercial space that will accommodate a maximum of 80 employees. The proposed project will be incorporated into the previously approved and occupied 7 Creek Drive (aka Churchill Street Apartments) and 11 Creek Drive (aka Factory Lofts) developments. It should be noted that the 7 Creek Drive development is now planned to have 10 fewer apartment units than what was previously approved.

This report provides a full analysis of the traffic impacts associated with the full development proposed for the site and addresses specific comments from the City of Beacon Planning Board and its consultants. As shown on Figure No. 1, access to the development is proposed via the driveway connection to Churchill Street constructed as part of the 7 Creek Drive project aligning opposite the driveway to the municipal parking lot on the north side of Churchill Street. Under future conditions, Creek Drive will provide emergency access to all three properties.

A Design Year of 2022 has been utilized in completing the traffic analysis in order to evaluate future traffic conditions associated with this proposed development.



1. Existing and Future Traffic Conditions Without the Project (Figures No. 2 through 9)

Manual traffic counts were collected by representatives of Maser Consulting, P.A. on Wednesday March 1 and Thursday March 2, 2017 for the AM and PM Peak Hours to determine the existing traffic volume conditions at the intersections of East Main Street at Churchill Street and Churchill Street at Creek Drive. These traffic counts were then compared to traffic volume data from the previous traffic studies conducted by our office for the 7 Creek Drive project. The resulting Year 2017 Existing Traffic Volumes are shown on Figures No. 2 and 3 for the Weekday Peak AM Hour and Weekday Peak PM Hour, respectively. The following provides a description of the study area roadways.

Main Street is a City street that consists of one lane in each direction. The roadway intersects with both Tioronda Avenue and Churchill Street at two unsignalized “T” shaped intersections separated by approximately 75 ft. Sidewalks and on-street parking are provided on both sides of the roadway. In the vicinity of the Tioronda Avenue and Churchill Street intersections Main Street has a sharp horizontal curve where parking is not permitted on the east side of the roadway.

Churchill Street is a City street that consists of one lane in each direction and traverses in a northwest/southeast direction between unsignalized intersections with Main Street and Spring Valley Road. The roadway also has an unsignalized intersection with Creek Drive that is located approximately 150 ft. southeast of the Main Street intersection. Immediately west of the Creek Drive intersection there is also an exempt railroad crossing of Churchill Street. There is a sidewalk on the south side of Churchill Street beginning at Spring Valley Road and continuing for a distance of approximately 265 ft terminating in the area of the 7 Creek Drive site.

Creek Drive is an existing roadway that begins at its unsignalized intersection with Churchill Street. The roadway runs in a southwesterly direction from this intersection to the access of the former City of Beacon Department of Public Works Property where the roadway terminates. The roadway width varies between 18 ft. and 24 ft. This roadway will remain to be utilized as an emergency access only to the 7 Creek Drive, 11 Creek Drive and the proposed 23-28 Creek Drive developments.

In order to assess future traffic conditions both with and without the project, the existing traffic volumes were projected to a 2022 Design Year using a background growth factor of 4.0% per year to account for any additional traffic generated by projects in the area. The 2022 Projected Traffic Volumes are shown on Figures No. 4 and 5. In addition, traffic for the 11 Creek Drive and 7 Creek Drive projects were also accounted for as well as traffic for other proposed or approved projects along Main Street. Traffic associated with these



other nearby developments are summarized on the Figures No. 6 and 7. The Other Development Traffic Volumes were combined with the 2022 Projected Traffic Volumes in order to obtain the future 2022 No-Build Traffic Volumes, which are shown on Figures No. 8 and 9 for each of the peak hours.

2. Future Traffic Conditions with Proposed Project (Figures No. 10 through 15, Tables 1 and 2)

Estimates of the amount of traffic to be generated by the proposed development were made based on data provided by the Institute of Transportation Engineers (ITE) in their publication entitled Trip Generation, 10<sup>th</sup> Edition dated 2017. These estimates, which are based on ITE Land Use Category 220 – Multifamily Low-Rise Residential and Land Use Category 710 – General Office Building are summarized in Table No. 1. Note that the trip generation estimates for the office use have been based on the 80 employees proposed for the office use. The estimates indicate that the 23-28 Creek Drive development can be expected to generate approximately 45 total trips (35 entering/10 exiting) during the AM Peak Hour and approximately 51 total trips (13 entering/38 exiting) during the PM Peak Hour.

As previously indicated, the 7 Creek Drive project will have 10 fewer apartments than previously planned and approved. The 8 apartments proposed as part of the revised 23-28 Creek Drive project will replace these 10 previously approved apartments, generally resulting in similar trip generation to the previously approved 7 Creek Drive development. As a result, only the office/commercial space traffic generation will be new to the site and the roadway system. However, for the purpose of the capacity analysis, this reduction in the number of apartments in the 7 Creek Drive development has not been considered and therefore provides a somewhat conservative analysis.

It should also be noted that there is potential for employees of the proposed office use to also live at the site in the proposed apartments, which would result in lower total trip generation for the site. However, no “internal-trip” credit has been taken to account for this in the analysis contained here-in resulting in a somewhat conservative analysis of future conditions with the proposed development.

The estimated site generated traffic volumes were applied to the roadway network based on the Arrival and Departure distributions identified on Figures No. 10 and 11. The resulting Site Generated Traffic Volumes, summarized on Figures No. 12 and 13, were added to the No-Build Traffic Volumes to obtain the 2022 Build Traffic Volumes shown on Figures No. 14 and 15 for each of the peak hours.





Capacity analyses were conducted utilizing the Existing, No-Build and Build Traffic Volumes to determine the existing and future operating conditions in the vicinity of the site. The results of these analyses are shown in Table No. 2, which indicates that the site generated traffic can be accommodated on the area roadways without significant impacts to operating conditions at the study area intersections.

3. On-site Circulation and Parking

Access to the proposed 23-28 Creek Drive development will be provided from Churchill Street via the existing driveway connection constructed for the 7 Creek Drive and 11 Creek Drive developments located opposite the Churchill Street municipal parking lot. This will result in all traffic to and from the 23-28 Creek Drive development traveling through the existing parking areas for the 7 & 11 Creek Drive sites in order to access the proposed development. The access roadway through the sites will be a minimum of 25 ft. wide and will sufficiently accommodate all traffic entering and exiting all three sites. Furthermore, this access roadway will be a low speed roadway that will allow for safe and efficient flow of both vehicles and pedestrians through the site. It should also be noted that prior approvals for the 7 & 11 Creek Drive developments required that only a single point of access be provided to these properties via Churchill Street with Creek Drive providing emergency access only because of Creek Drive's proximity to the railroad crossing, the hill approaching Main Street and the Main Street/Churchill Street intersection. Furthermore, it is not unusual to serve a mixed-use project, such as is proposed, with a single entrance and exit.

Based on the City Code a total of 113 parking spaces are required for the proposed uses. However, based on the expected uses the proposed 23-28 Creek Drive development will provide a total of 93 parking spaces separate from those parking spaces already present at the 7 & 11 Creek Drive developments. The parking proposed for the site is based on providing one parking space per employee and/or visitor (assuming all drive) of the office use for a total of 80 spaces plus an additional 13 parking spaces for the residential apartments as required by the City Code. It is also noted that in comparison to the nearby CMS District and Linkage District the City Code would only require 48 and 58 spaces respectively, which is a reasonable comparison due to the Project's proximity to Main Street and these districts. Furthermore, it is also anticipated that some of the employees of the office use will also live in the apartments at the site which would further reduce the parking demand. Likewise, the residential and office land uses are complimentary land uses that allow for shared parking between the uses since the peak parking demand for office use will typically occur between the hours of 9:00 AM and 5:00 PM when the



residential uses have lower parking utilization. Based on this, we believe the 93 proposed parking spaces will sufficiently meet the parking needs of the development.

4. Recommendations

Our observations of existing roadway conditions in the vicinity of the site as well as our analysis of existing and future traffic volumes indicate several potential area improvements. Some of these improvements were also recommended as part of the 7 Creek Drive project but have yet to be completed. These include the following.

- Restripe the existing faded double yellow centerline for the length of Churchill Street
- Install an “Intersection Ahead” sign on the westbound Churchill Street approach in advance of Creek Road.
- Restripe the existing faded crosswalk crossing Churchill Street at the Main Street intersection.

5. Other Considerations

In addition to the above recommendations, and not specific to this development, based on observed traffic volumes and operating conditions, other potential future improvements have been identified. The potential exists to create an all-way stop intersection at the intersection of Main Street & Tioronda Avenue since the existing peak hour traffic volumes indicate that the intersection currently meets the requirements provided in the Manual for Uniform Traffic Control Devices (MUTCD). This would be the logical location for an all-way stop intersection since it is the current location of the pedestrian crosswalk crossing Main Street. A new sidewalk bump out, which would require the elimination of 1 to 2 parking spaces, would have to be constructed on the north side of Main Street in order to provide a place to post the new stop sign in the westbound direction and could be used as a landing for a second crosswalk on this westbound intersection approach.

In addition, it should be noted that although right turns are prohibited from Churchill Street onto Main Street, this movement is regularly made by motorists. Based on a review of the intersection there may be some opportunity to modify the northern curb line on Churchill Street in order to formally permit this movement, however the availability of Right-of-Way would have to be determined if such a modification was considered. If the No Right Turn restriction is to remain it should be better enforced with additional signage and pavement markings.



Mr. Rodney Weber  
MC Project No. 14000477B  
March 26, 2019  
Page 6 of 6

Regardless of the above recommendations for potential future improvements in the vicinity of the Project, the site generated traffic resulting from the 8 newly proposed apartment units and 20,000 square feet of office/commercial space can be accommodated on the area roadways without significant impacts to operating conditions in the vicinity of the site. The minor signing and striping improvements identified in Item 3 above should be completed prior to completion of this development.

Very truly yours,

MASER CONSULTING P.A.

A handwritten signature in black ink, appearing to read 'Philip J. Grealy'.

Philip J. Grealy, Ph.D., P.E.  
Principal Associate/Department Manager

A handwritten signature in black ink, appearing to read 'Richard G. D'Andrea'.

Richard G. D'Andrea, P.E., PTOE  
Project Engineer

PJG/rgd  
Enclosures  
cc:

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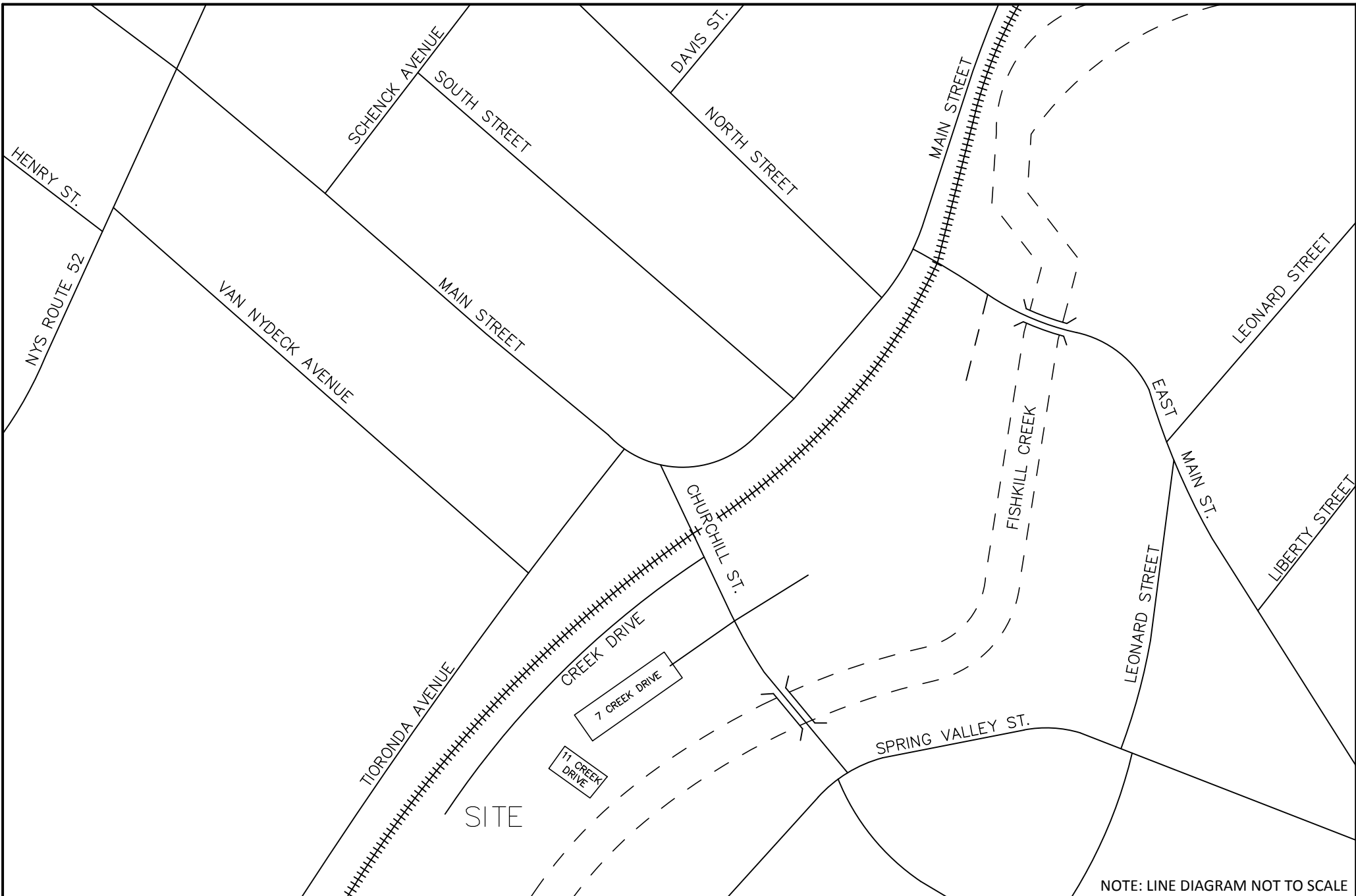
## ***23-28 CREEK DRIVE***

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# **APPENDIX A**

## **FIGURES**





NOTE: LINE DIAGRAM NOT TO SCALE



Consulting, Municipal & Environmental Engineers  
Planners ■ Surveyors ■ Landscape Architects  
State of N.Y. Certificate of Authorization: 0008671

WESTCHESTER OFFICE

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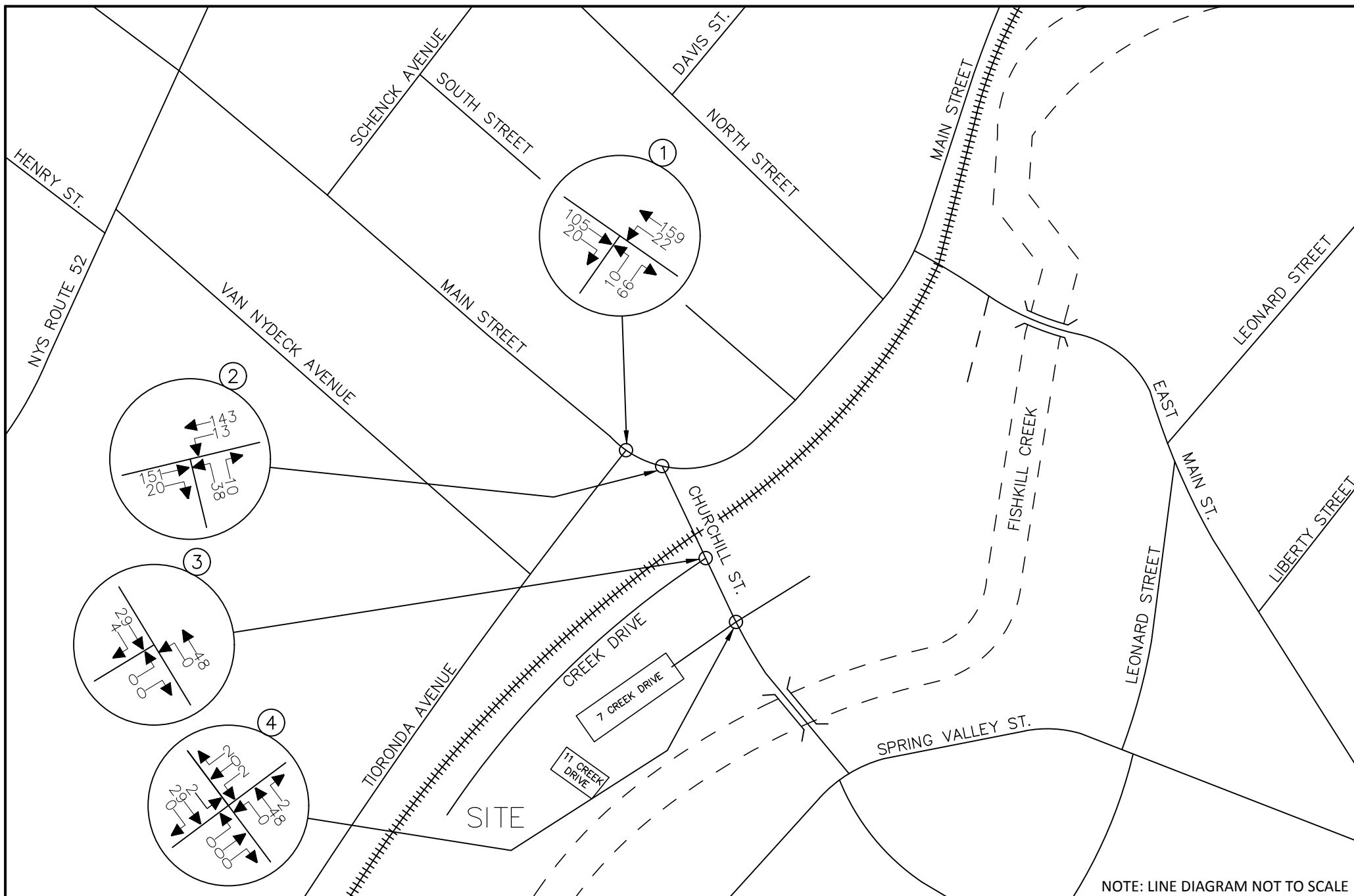
email: solutions @ maserconsulting.com

23-28 CREEK DRIVE  
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

SITE LOCATION MAP



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	
1	



NOTE: LINE DIAGRAM NOT TO SCALE



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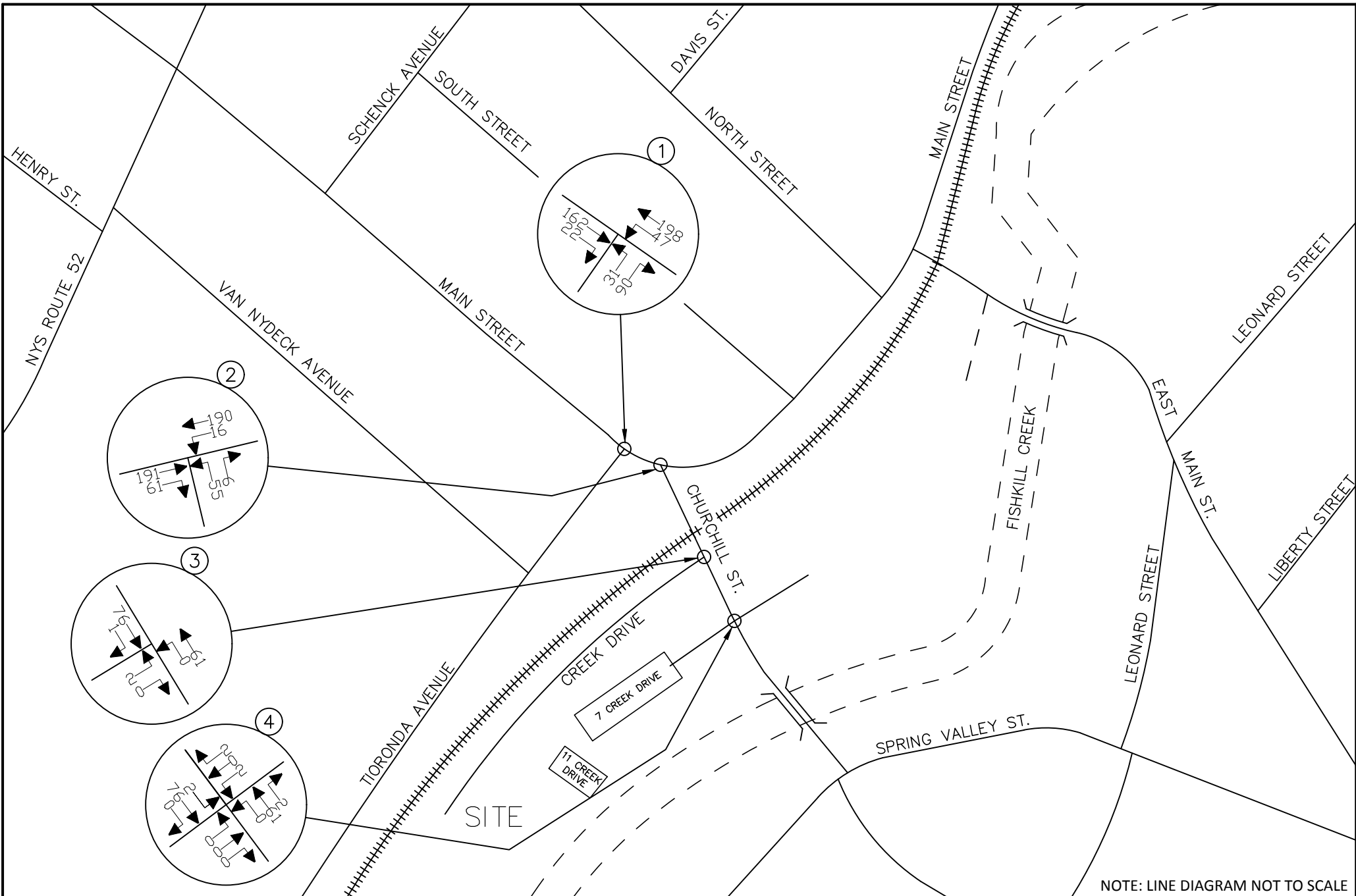
23-28 CREEK DRIVE  
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

2017 EXISTING TRAFFIC VOLUMES  
WEEKDAY PEAK AM HOUR



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	
2	

New Jersey New York Pennsylvania Virginia  
Customer Loyalty through Client Satisfaction



Consulting, Municipal & Environmental Engineers  
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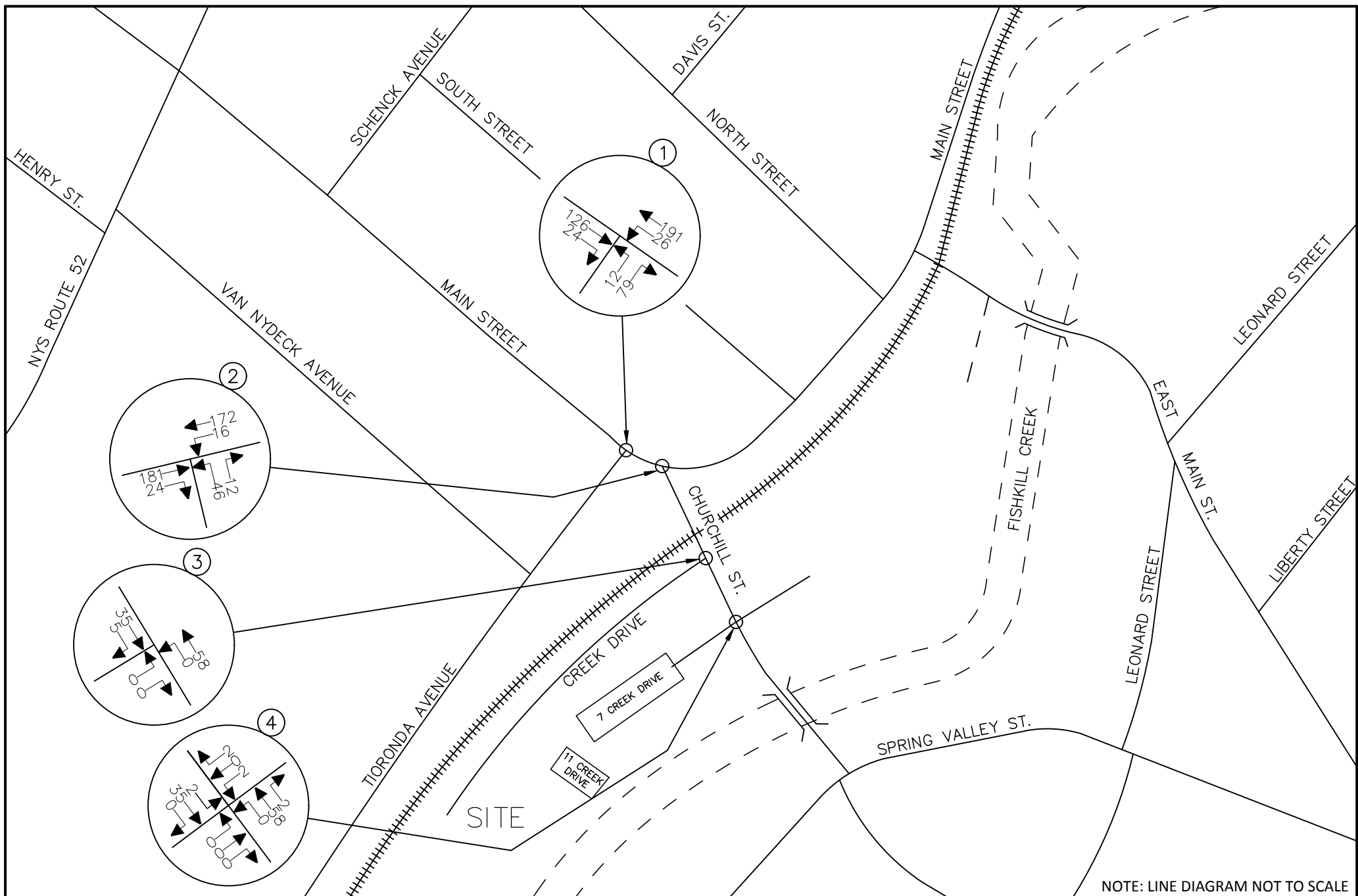
23-28 CREEK DRIVE  
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

2017 EXISTING TRAFFIC VOLUMES  
WEEKDAY PEAK PM HOUR



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	
3	

New Jersey New York Pennsylvania Virginia  
Customer Loyalty through Client Satisfaction



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New Jersey New York Pennsylvania Virginia  
Customer Loyalty through Client Satisfaction

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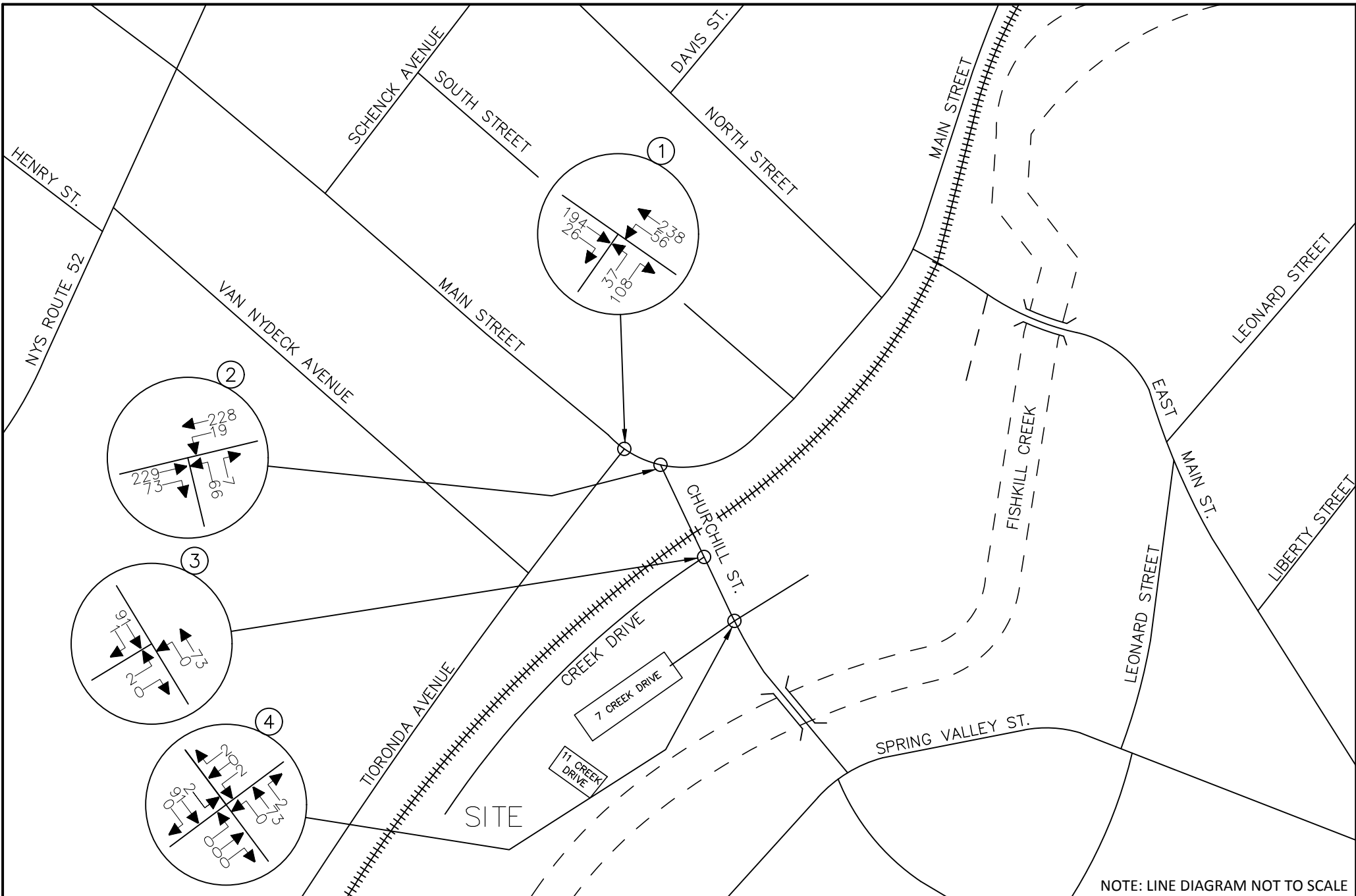
23-28 CREEK DRIVE  
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

2022 PROJECTED TRAFFIC VOLUMES  
WEEKDAY PEAK AM HOUR



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	
4	





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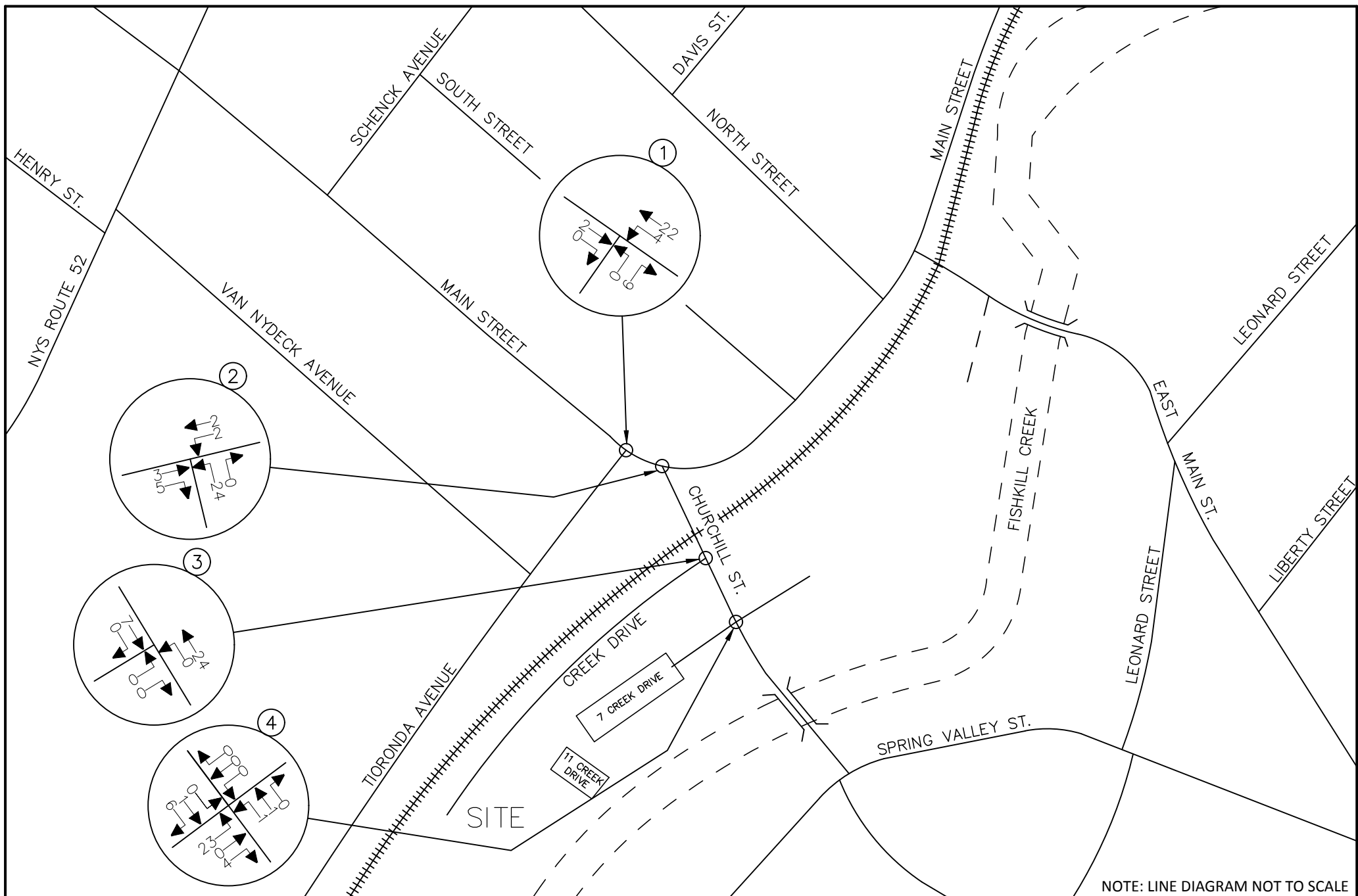
email: solutions @ maserconsulting.com

23-28 CREEK DRIVE  
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

2022 PROJECTED TRAFFIC VOLUMES  
WEEKDAY PEAK PM HOUR



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	
5	



Consulting, Municipal & Environmental Engineers  
 Planners ■ Surveyors ■ Landscape Architects  
 State of N.Y. Certificate of Authorization: 0008671

New Jersey New York Pennsylvania Virginia  
 Customer Loyalty through Client Satisfaction

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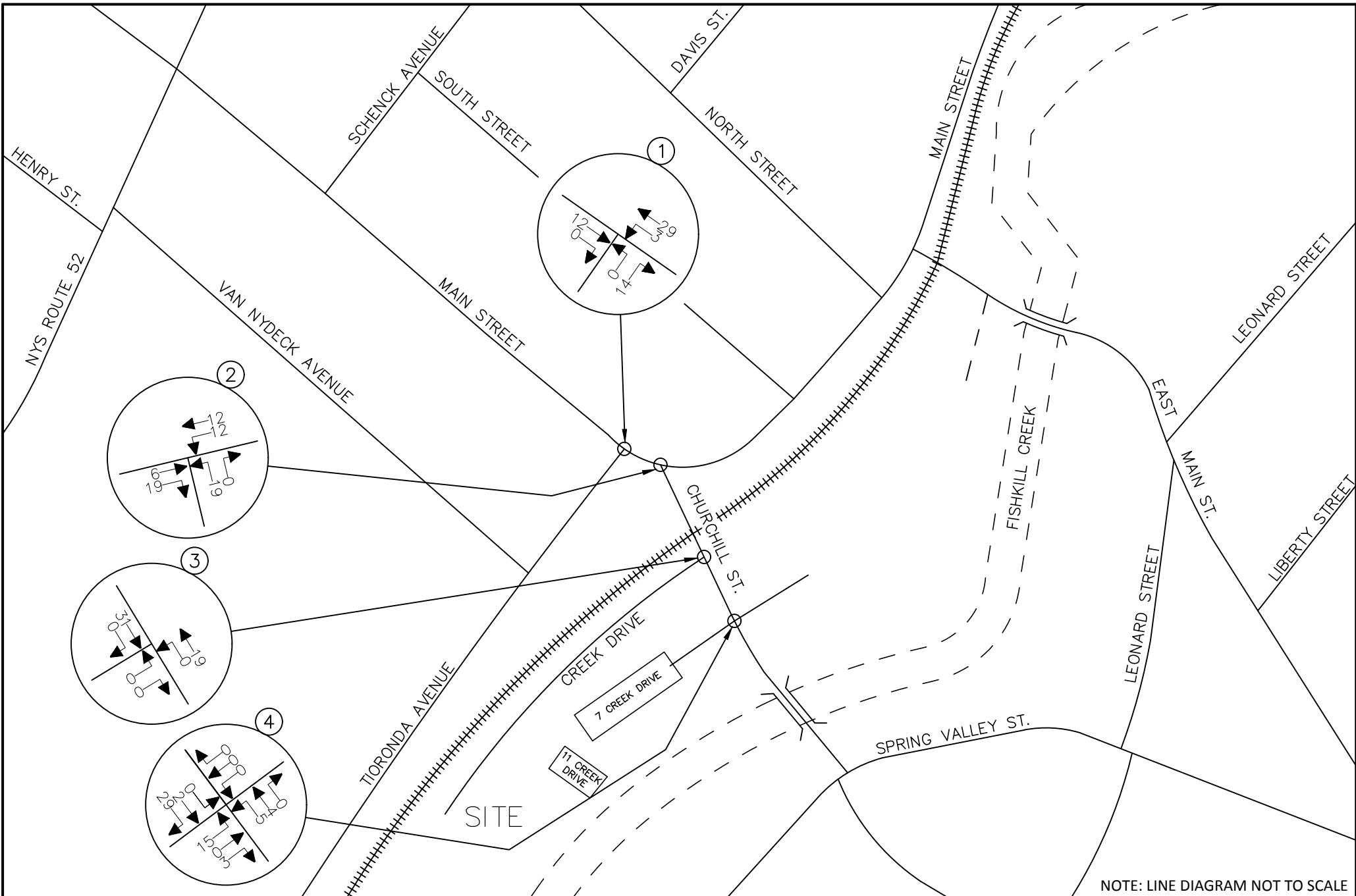
email: solutions @ maserconsulting.com

23-28 CREEK DRIVE  
 CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

TOTAL OTHER DEVELOPMENT TRAFFIC VOLUMES  
 WEEKDAY PEAK AM HOUR



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	
6	



NOTE: LINE DIAGRAM NOT TO SCALE



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New Jersey New York Pennsylvania Virginia  
Customer Loyalty through Client Satisfaction

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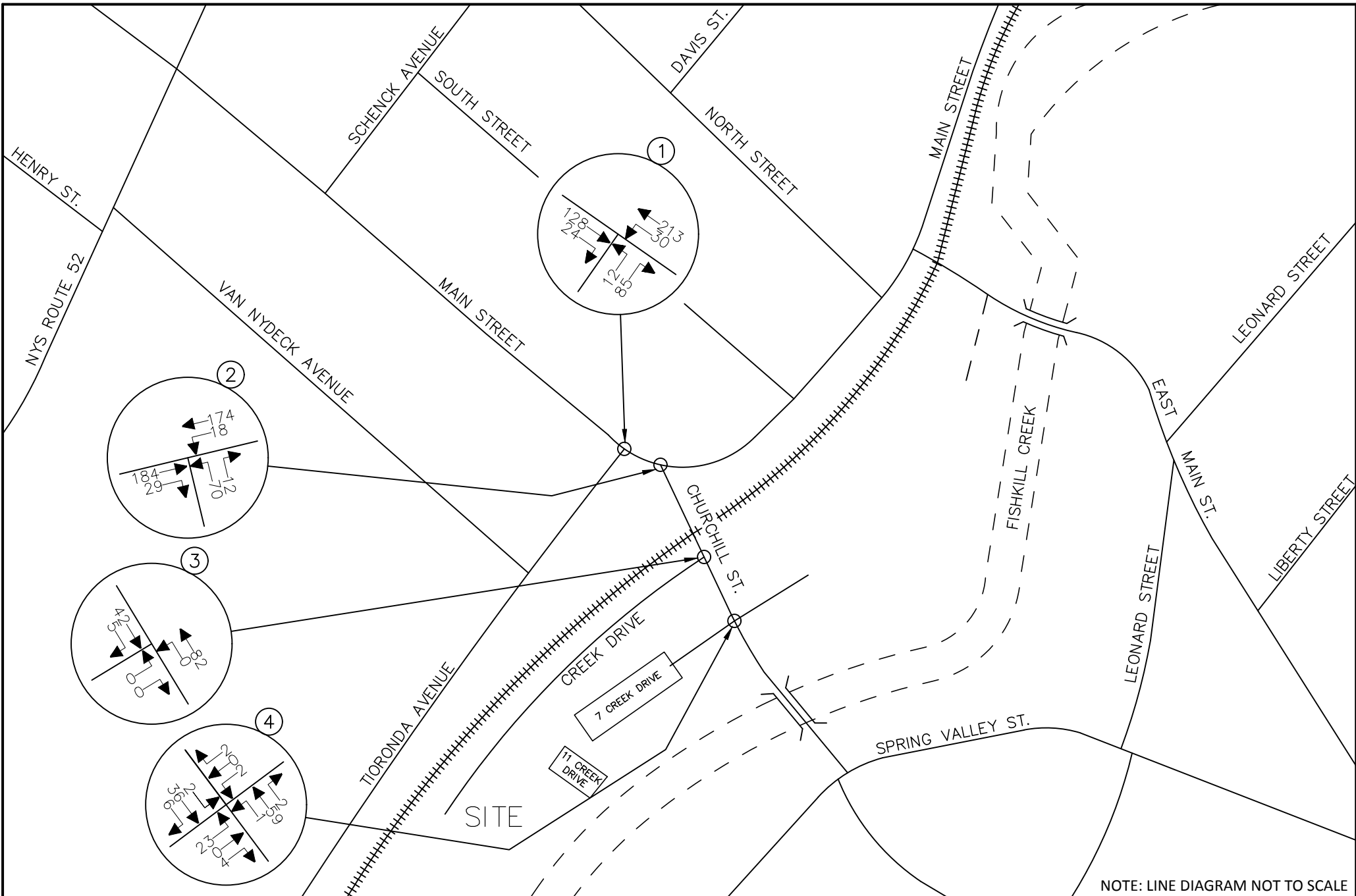
email: solutions @ maserconsulting.com

23-28 CREEK DRIVE  
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

TOTAL OTHER DEVELOPMENT TRAFFIC VOLUMES  
WEEKDAY PEAK PM HOUR



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	
7	



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Planners ■ Surveyors ■ Landscape Architects  
State of N.Y. Certificate of Authorization: 0008671

#### WESTCHESTER OFFICE

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Hawthorne, NY 10532  
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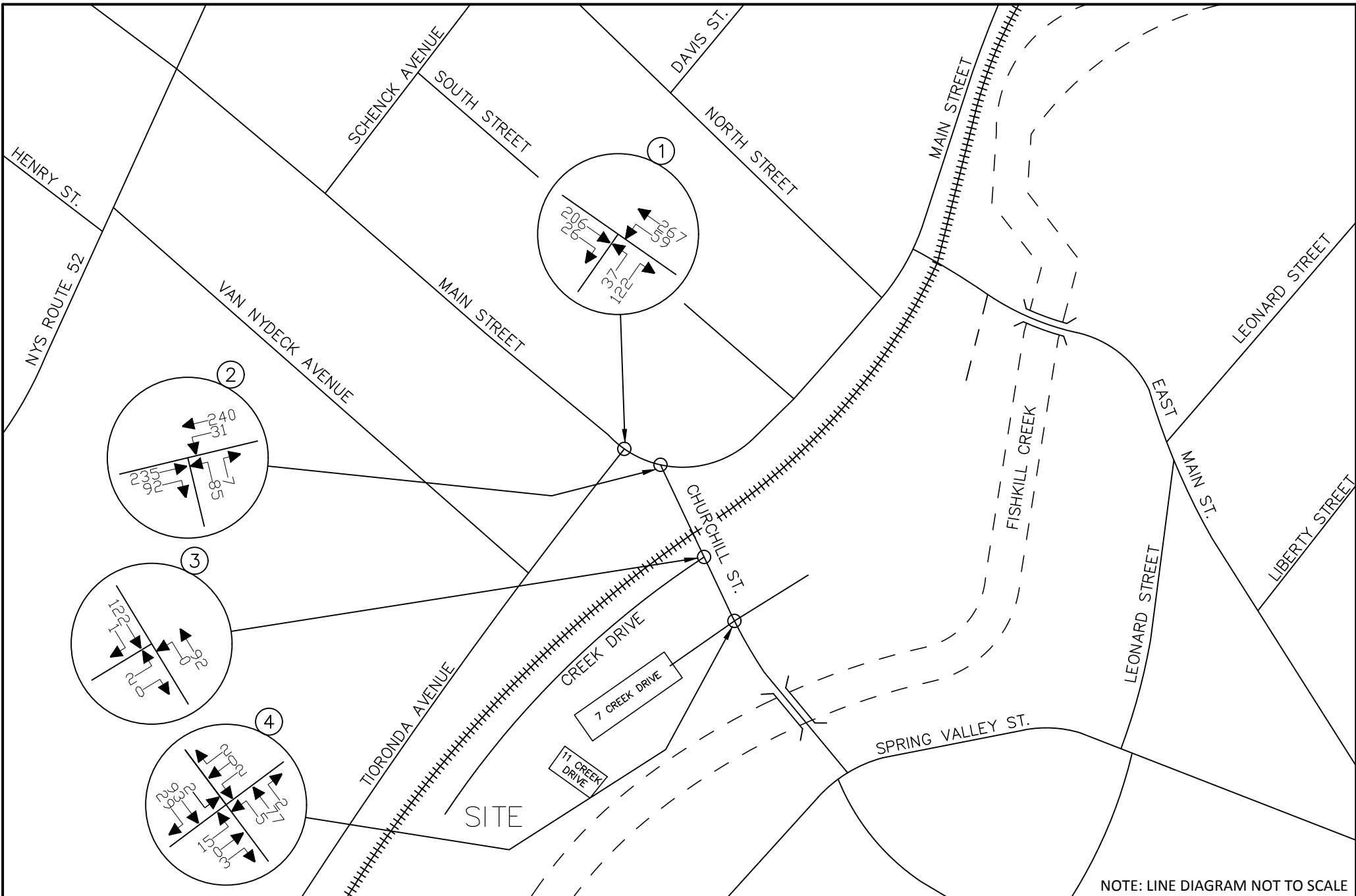
23-28 CREEK DRIVE  
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

2022 NO-BUILD TRAFFIC VOLUMES  
WEEKDAY PEAK AM HOUR



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	
8	

New Jersey New York Pennsylvania Virginia  
Customer Loyalty through Client Satisfaction



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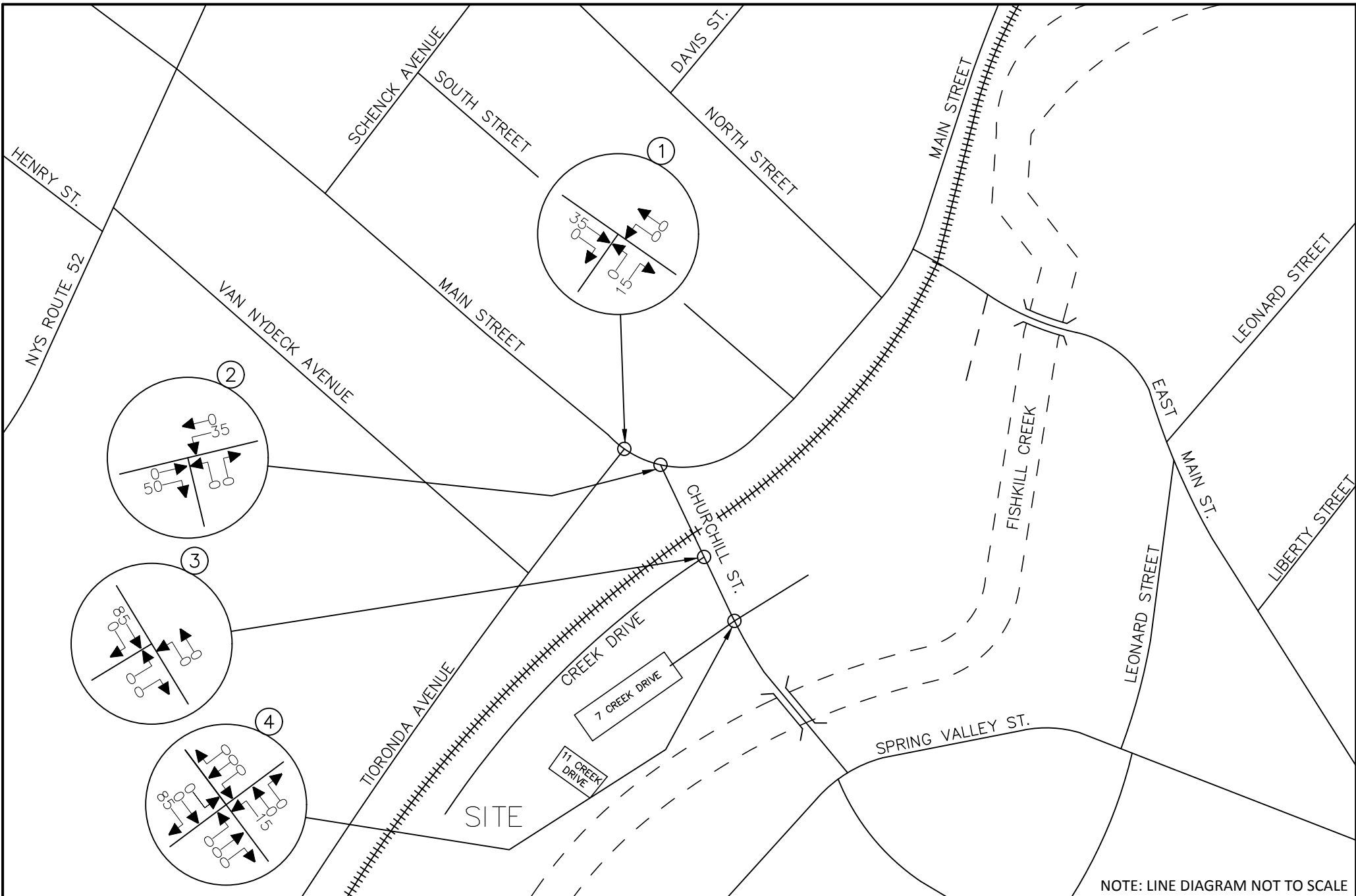
23-28 CREEK DRIVE  
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

2022 NO-BUILD TRAFFIC VOLUMES  
WEEKDAY PEAK PM HOUR



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	
9	

New Jersey New York Pennsylvania Virginia  
Customer Loyalty through Client Satisfaction



NOTE: LINE DIAGRAM NOT TO SCALE



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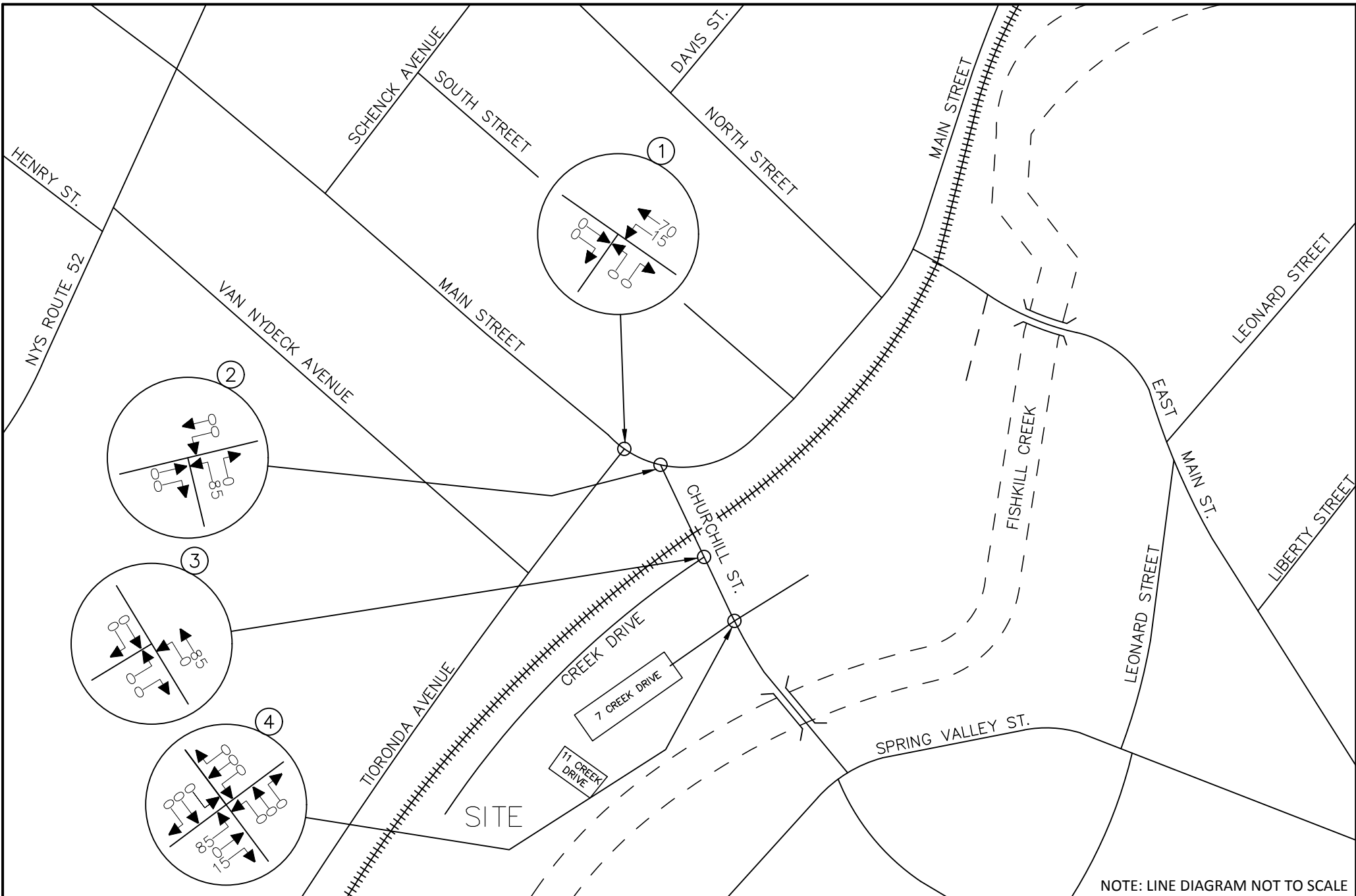
email: solutions @ maserconsulting.com

23-28 CREEK DRIVE  
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

ARRIVAL DISTRIBUTION  
(EXPRESSED AS A %)



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	
10	



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23-28 CREEK DRIVE  
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

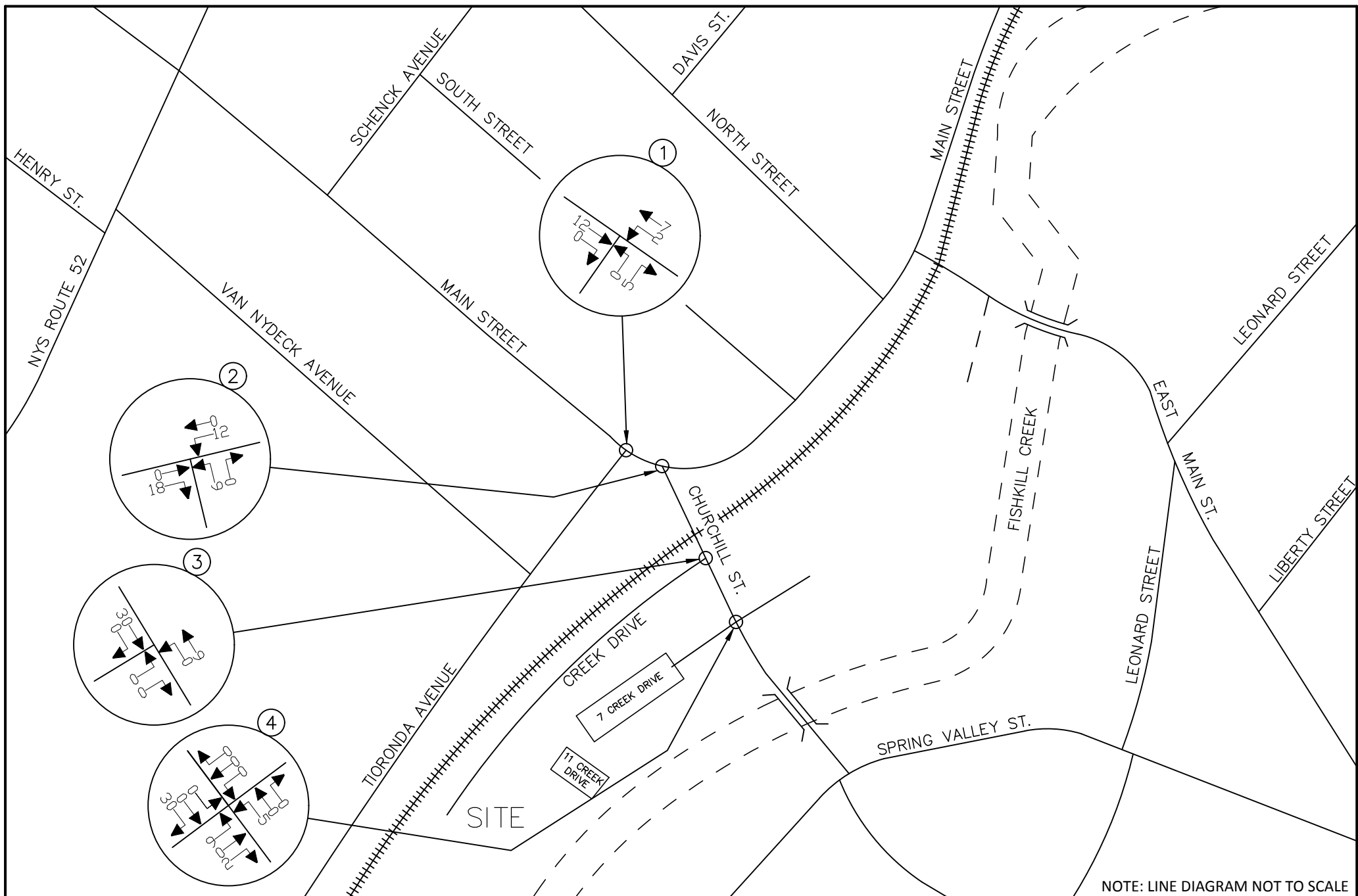
DEPARTURE DISTRIBUTION  
(EXPRESSED AS A %)



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	
11	

New Jersey New York Pennsylvania Virginia  
Customer Loyalty through Client Satisfaction





NOTE: LINE DIAGRAM NOT TO SCALE



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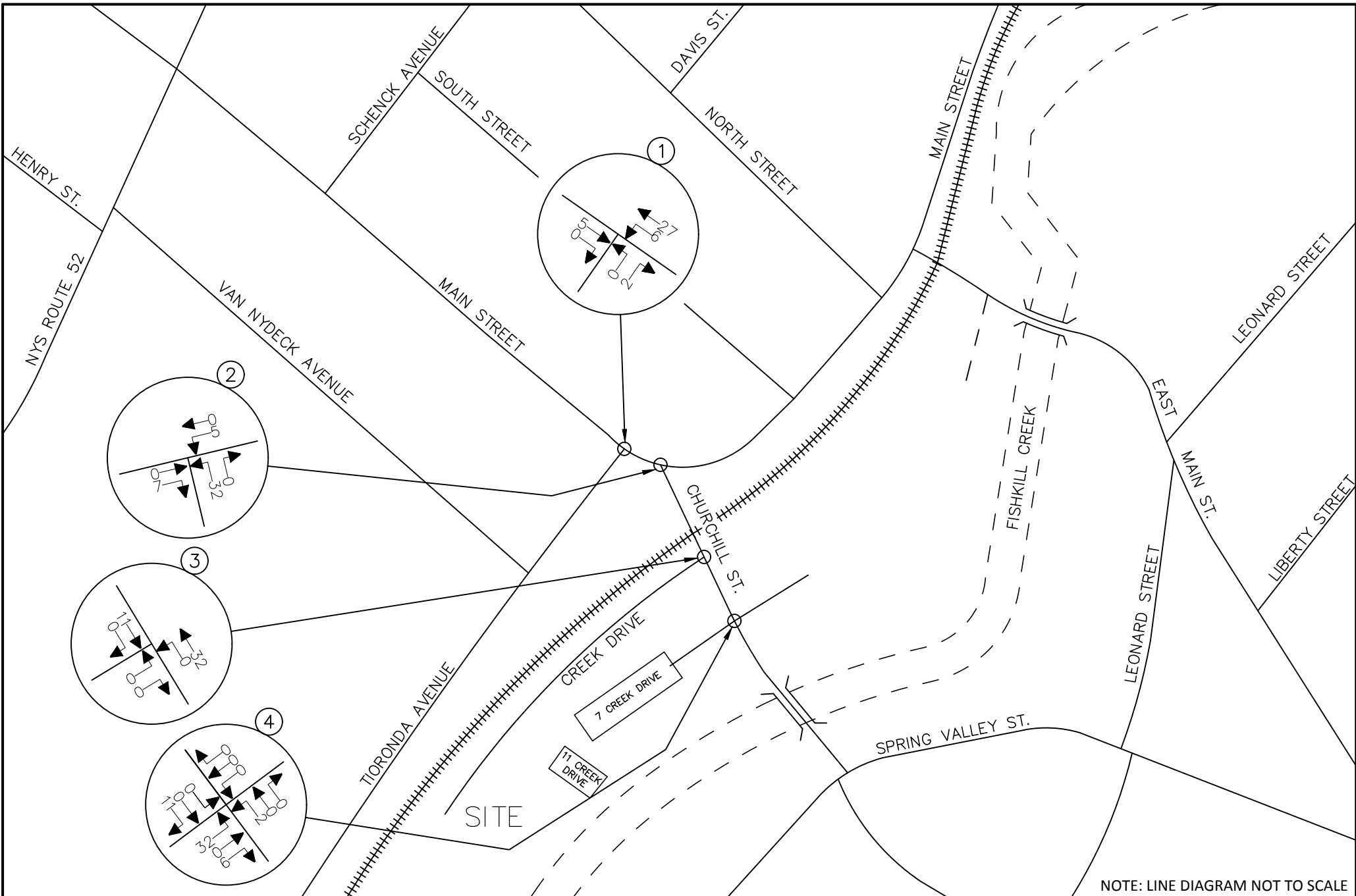
email: solutions @ maserconsulting.com

23-28 CREEK DRIVE  
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

SITE GENERATED TRAFFIC VOLUMES  
WEEKDAY PEAK AM HOUR



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	



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New Jersey New York Pennsylvania Virginia  
Customer Loyalty through Client Satisfaction

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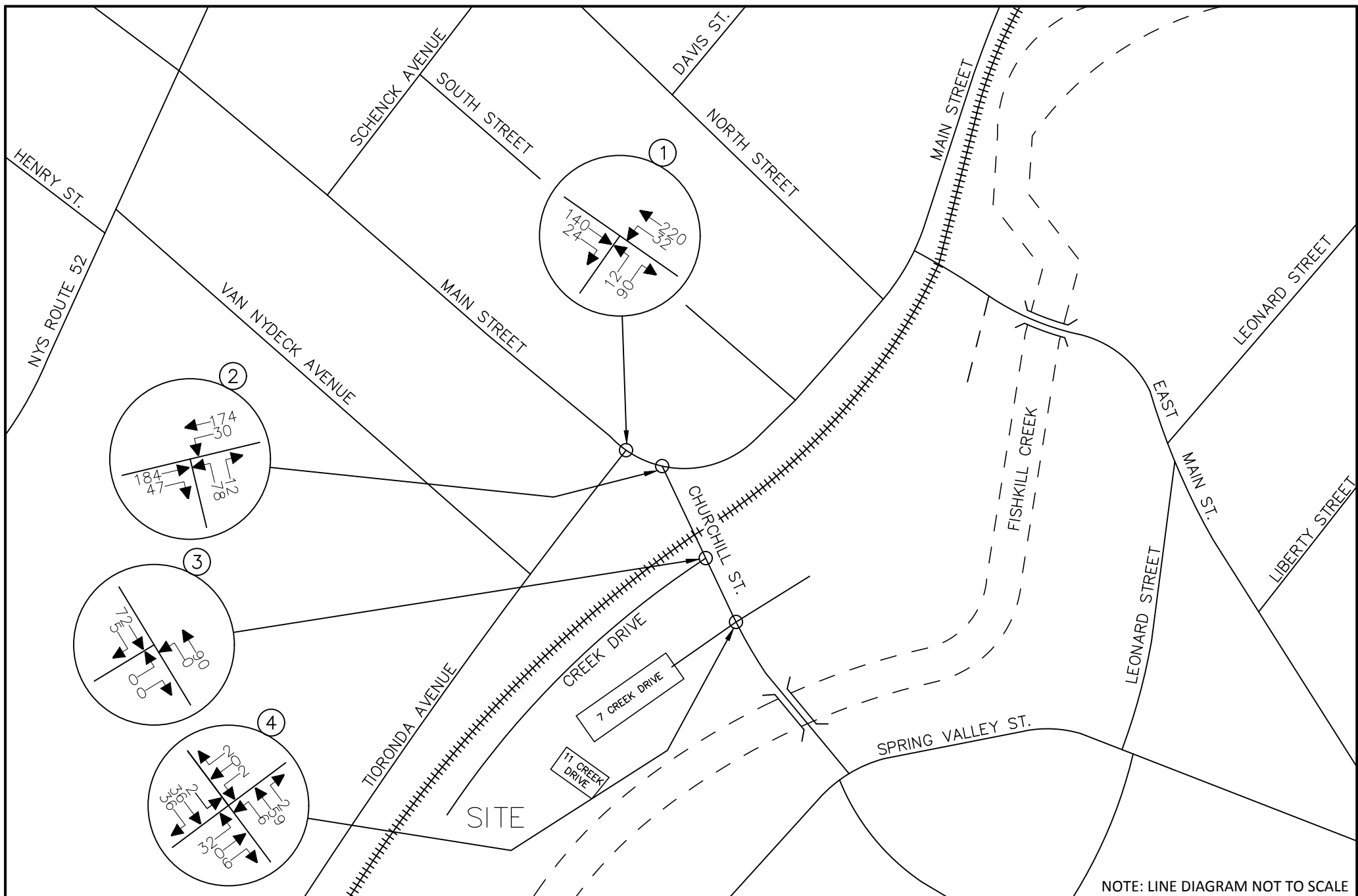
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23-28 CREEK DRIVE  
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

SITE GENERATED TRAFFIC VOLUMES  
WEEKDAY PEAK PM HOUR



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	
13	



NOTE: LINE DIAGRAM NOT TO SCALE



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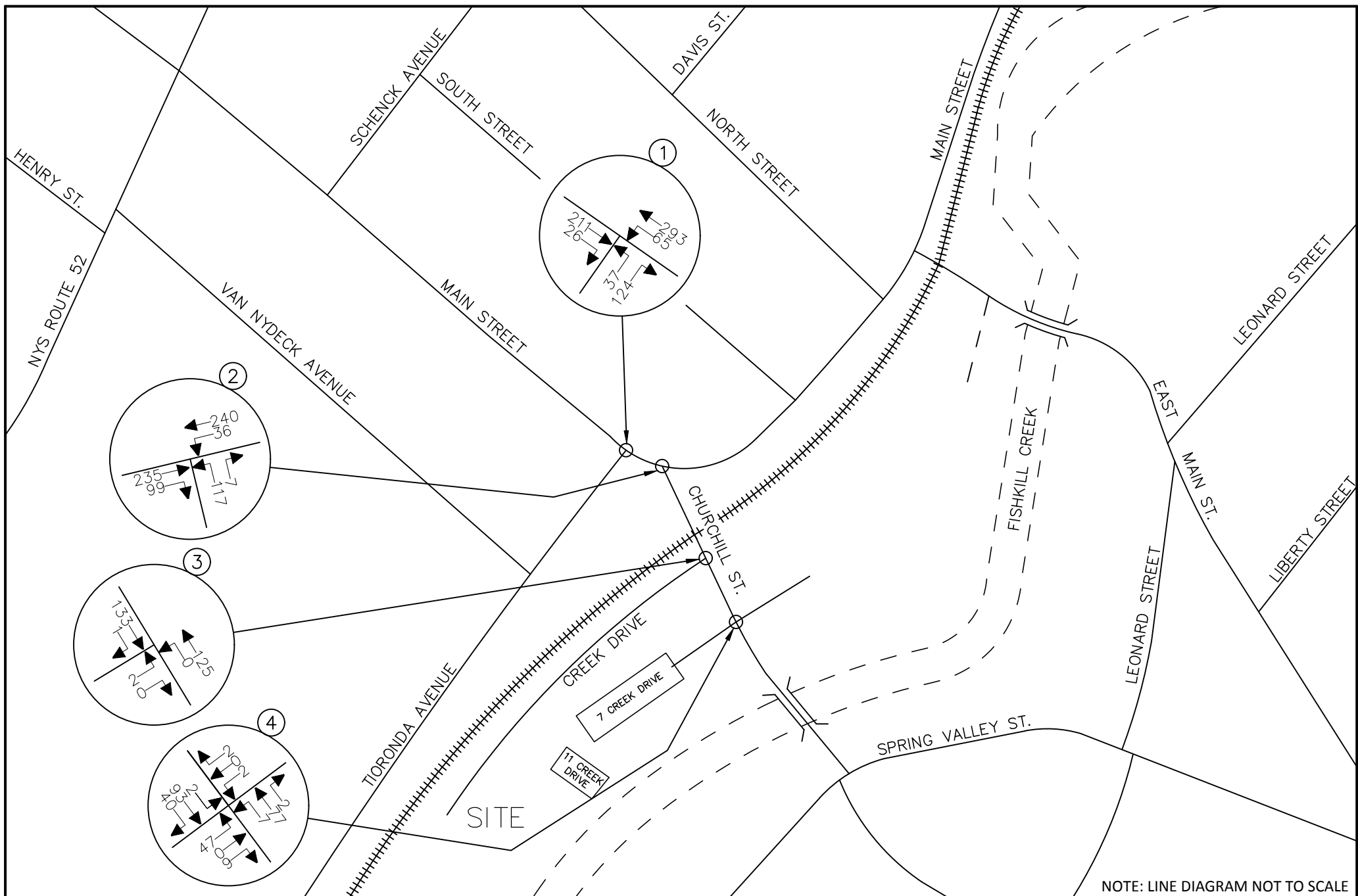
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23-28 CREEK DRIVE  
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

2022 BUILD TRAFFIC VOLUMES  
WEEKDAY PEAK AM HOUR



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	



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New Jersey New York Pennsylvania Virginia  
Customer Loyalty through Client Satisfaction



JOB NUMBER:	DATE:
14000477B	3/18/19
FIGURE NUMBER:	
15	



## ***23-28 CREEK DRIVE***

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## **APPENDIX B**

## **TABLES**

TABLE NO. 1

**HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED  
SITE GENERATED TRAFFIC VOLUMES**

<b>23-28 CREEK DRIVE BEACON, NY</b>	<b>ENTRY</b>		<b>EXIT</b>	
	<b>HTGR*</b>	<b>VOLUME</b>	<b>HTGR*</b>	<b>VOLUME</b>
<b>APARTMENT (8 DWELLING UNITS)</b>				
PEAK AM HOUR	0.13	1	0.38	3
PEAK PM HOUR	0.50	4	0.25	2
<b>COMMERCIAL OFFICE (80 EMPLOYEES)</b>				
PEAK AM HOUR	0.43	34	0.09	7
PEAK PM HOUR	0.11	9	0.45	36
<b>TOTAL</b>				
PEAK AM HOUR	-	35	-	10
PEAK PM HOUR	-	13	-	38

NOTES:

- 1) \* HTGR-HOURLY TRIP GENERATION RATES EXPRESSED IN TERMS OF TRIPS PER DWELLING UNIT FOR LAND USE - 220 APARTMENT AND EXPRESSED IN TERM OF TRIPS PER EMPLOYEE FOR LAND USE - 710 GENERAL OFFICE BUILDING BASED ON THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) PUBLICATION ENTITLED "TRIP GENERATION", 10TH EDITION, 2017

**TABLE NO. 2**  
**LEVEL OF SERVICE SUMMARY TABLE**

					2017 EXISTING		2022 NO BUILD		2022 BUILD	
					AM	PM	AM	PM	AM	PM
1	TIORONDA AVENUE & MAIN STREET				UNSIGNALIZED					
		TIORONDA AVENUE	NEB	LR	A [9.8]	B [12.0]	B [10.3]	B [14.3]	B [10.5]	B [14.7]
		MAIN STREET	WB	LT	A [7.6]	A [7.8]	A [7.6]	A [7.9]	A [7.7]	A [8.0]
2	CHURCHILL STREET & MAIN STREET				UNSIGNALIZED					
		CHURCHILL STREET	NB	LR	B [12.1]	B [14.7]	B [14.7]	C [21.3]	C [16.1]	D [28.2]
		MAIN STREET	WB	LT	A [7.7]	A [7.9]	A [7.8]	A [8.1]	A [7.9]	A [8.2]
3	CREEK ROAD & CHURCHILL STREET				UNSIGNALIZED					
		CREEK ROAD	NEB	LR	A [8.7]	A [9.4]	A [8.9]	B [10.0]	A [9.2]	B [10.3]
		CHURCHILL STREET	NB	LT	A [7.3]	A [7.4]	A [7.3]	A [7.5]	A [7.4]	A [7.5]
4	CHURCHILL STREET & BEACON CITY MUNICIPAL LOT/SITE ACCESS				UNSIGNALIZED					
		SITE ACCESS	NEB	LTR	A [0.0]	A [0.0]	A [9.3]	B [10.1]	A [9.6]	B [10.5]
		CHURCHILL STREET	NB	LTR	A [0.0]	A [0.0]	A [7.3]	A [7.5]	A [7.4]	A [7.6]
		CHURCHILL STREET	SB	LTR	A [7.3]	A [7.4]	A [7.4]	A [7.4]	A [7.4]	A [7.4]
		BEACON CITY MUNICIPAL LOT	SWB	LTR	A [8.8]	A [9.1]	A [9.0]	A [9.5]	A [9.1]	A [9.5]

**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. SEE APPENDIX "C" FOR DETAILS OF LEVEL OF SERVICE AND DELAY.





## ***23-28 CREEK DRIVE***

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## **APPENDIX C**

## **LEVEL OF SERVICE STANDARDS**

## **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, 6<sup>th</sup> Edition* published by the Transportation Research Board.

**Exhibit 19-8**

<b>Control Delay (s/veh)</b>	<b>LOS by Volume-to-Capacity Ratio</b>	
	<b>v/c ≤1.0</b>	<b>v/c &gt;1.0</b>
≤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.

## **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, 6<sup>th</sup> Edition* published by the Transportation Research Board.

**Exhibit 20-2**

<b>Control Delay (s/veh)</b>	<b>LOS by Volume-to-Capacity Ratio</b>	
	<b>v/c ≤ 1.0</b>	<b>v/c &gt; 1.0</b>
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.

## **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, 6<sup>th</sup> Edition* published by the Transportation Research Board.

**Exhibit 21-8**

<b>Control Delay (s/veh)</b>	<b>LOS by Volume-to-Capacity Ratio</b>	
	<b>v/c ≤1.0</b>	<b>v/c &gt;1.0</b>
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.



## ***23-28 CREEK DRIVE***

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## **APPENDIX D**

## **CAPACITY ANALYSIS**

2017 Existing Traffic Volumes  
1: Tioronda Avenue & Main Street

AM Peak Hour  
9/20/2017



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	105	20	22	159	10	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	12
Grade (%)	0%			0%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.979				0.883	
Flt Protected				0.994	0.993	
Satd. Flow (prot)	1436	0	0	1458	1303	0
Flt Permitted				0.994	0.993	
Satd. Flow (perm)	1436	0	0	1458	1303	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	458			77	419	
Travel Time (s)	10.4			1.8	9.5	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Parking (#/hr)	5			5	5	
Adj. Flow (vph)	122	23	26	185	12	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	145	0	0	211	89	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	13	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.35	1.14	1.14	1.35	1.33	1.17
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: CBD

Control Type: Unsignalized



2017 Existing Traffic Volumes  
1: Tioronda Avenue & Main Street

AM Peak Hour  
9/20/2017

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NEL	NER
Vol, veh/h	105	20	22	159	10	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	4	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	122	23	26	185	12	77

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	145	0	370	134
Stage 1	-	-	-	-	134	-
Stage 2	-	-	-	-	236	-
Critical Hdwy	-	-	4.12	-	7.22	6.62
Critical Hdwy Stg 1	-	-	-	-	6.22	-
Critical Hdwy Stg 2	-	-	-	-	6.22	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1437	-	581	901
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	762	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1437	-	569	901
Mov Cap-2 Maneuver	-	-	-	-	569	-
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	747	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.9	9.8
HCM LOS	A		

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	837	-	-	1437	-
HCM Lane V/C Ratio	0.106	-	-	0.018	-
HCM Control Delay (s)	9.8	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

2017 Existing Traffic Volumes  
2: Churchill Street & Main Street

AM Peak Hour  
9/20/2017

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↱	
Volume (vph)	151	20	13	143	38	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			0%	7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.984				0.972	
Flt Protected				0.996	0.962	
Satd. Flow (prot)	1650	0	0	1670	1513	0
Flt Permitted				0.996	0.962	
Satd. Flow (perm)	1650	0	0	1670	1513	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	77			535	147	
Travel Time (s)	1.8			12.2	3.3	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	180	24	15	170	45	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	204	0	0	185	57	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.20	1.20
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					










2017 Existing Traffic Volumes  
2: Churchill Street & Main Street

AM Peak Hour  
9/20/2017

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	151	20	13	143	38	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	7	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	180	24	15	170	45	12
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	204	0	393	192
Stage 1	-	-	-	-	192	-
Stage 2	-	-	-	-	201	-
Critical Hdwy	-	-	4.12	-	7.82	6.92
Critical Hdwy Stg 1	-	-	-	-	6.82	-
Critical Hdwy Stg 2	-	-	-	-	6.82	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1368	-	525	818
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	770	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1368	-	519	818
Mov Cap-2 Maneuver	-	-	-	-	519	-
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	761	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.6		12.1	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	562	-	-	1368	-	
HCM Lane V/C Ratio	0.102	-	-	0.011	-	
HCM Control Delay (s)	12.1	-	-	7.7	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0	-	

2017 Existing Traffic Volumes  
3: Creek Road & Churchill Street

AM Peak Hour  
9/20/2017

						
Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Volume (vph)	1	48	29	4	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		3%	-5%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.983		0.932	
Flt Protected		0.999			0.976	
Satd. Flow (prot)	0	1833	1877	0	1694	0
Flt Permitted		0.999			0.976	
Satd. Flow (perm)	0	1833	1877	0	1694	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		82	147		244	
Travel Time (s)		1.9	3.3		5.5	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	1	58	35	5	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	59	40	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					

2017 Existing Traffic Volumes  
3: Creek Road & Churchill Street

AM Peak Hour  
9/20/2017

















Intersection						
Int Delay, s/veh	0.3					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	1	48	29	4	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-5	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	58	35	5	1	1
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	40	0	-	0	97	37
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	60	-
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	1570	-	-	-	902	1035
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	963	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1570	-	-	-	901	1035
Mov Cap-2 Maneuver	-	-	-	-	901	-
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	962	-
Approach	NB		SB		NE	
HCM Control Delay, s	0.1		0		8.7	
HCM LOS					A	
Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR	
Capacity (veh/h)	963	1570	-	-	-	
HCM Lane V/C Ratio	0.003	0.001	-	-	-	
HCM Control Delay (s)	8.7	7.3	0	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	0	-	-	-	

## 2017 Existing Traffic Volumes

AM Peak Hour

## 4: Site Access/One East Main Street Access &amp; Churchill Street

9/20/2017

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	48	2	2	29	0	0	0	0	2	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			3%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995									0.932	
Flt Protected					0.997						0.976	
Satd. Flow (prot)	0	1881	0	0	1829	0	0	1863	0	0	1694	0
Flt Permitted					0.997						0.976	
Satd. Flow (perm)	0	1881	0	0	1829	0	0	1863	0	0	1694	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		233			82			214			133	
Travel Time (s)		5.3			1.9			4.9			3.0	
Peak Hour Factor	0.83	0.83	0.92	0.92	0.83	0.83	0.83	0.92	0.83	0.92	0.92	0.92
Adj. Flow (vph)	0	58	2	2	35	0	0	0	0	2	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	60	0	0	37	0	0	0	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
<b>Intersection Summary</b>												
Area Type:	Other											
Control Type:	Unsignalized											

2017 Existing Traffic Volumes  
4: Site Access/One East Main Street Access & Churchill Street

AM Peak Hour

9/20/2017

Intersection												
Int Delay, s/veh	0.5											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Vol, veh/h	0	48	2	2	29	0	0	0	0	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	0	-	-	0	-
Peak Hour Factor	83	83	92	92	83	83	83	92	83	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	58	2	2	35	0	0	0	0	2	0	2
Major/Minor	Major1			Major2			Minor2			Minor1		
Conflicting Flow All	35	0	0	60	0	0	99	99	35	98	98	59
Stage 1	-	-	-	-	-	-	39	39	-	59	59	-
Stage 2	-	-	-	-	-	-	60	60	-	39	39	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1576	-	-	1544	-	-	883	791	1038	884	792	1007
Stage 1	-	-	-	-	-	-	976	862	-	953	846	-
Stage 2	-	-	-	-	-	-	951	845	-	976	862	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1576	-	-	1544	-	-	880	790	1038	883	791	1007
Mov Cap-2 Maneuver	-	-	-	-	-	-	880	790	-	883	791	-
Stage 1	-	-	-	-	-	-	976	861	-	953	846	-
Stage 2	-	-	-	-	-	-	949	845	-	975	861	-
Approach	NB			SB			NE			SW		
HCM Control Delay, s	0			0.4			0			8.8		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NELn1	NBL	NBT	NBR	SBL	SBT	SBRSWLn1					
Capacity (veh/h)	-	1576	-	-	1544	-	941					
HCM Lane V/C Ratio	-	-	-	-	0.001	-	0.005					
HCM Control Delay (s)	0	0	-	-	7.3	0	8.8					
HCM Lane LOS	A	A	-	-	A	A	A					
HCM 95th %tile Q(veh)	-	0	-	-	0	-	0					



2022 No-Build Traffic Volumes  
1: Tioronda Avenue & Main Street

AM Peak Hour  
07/26/2018



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	128	24	30	213	12	85
Future Volume (vph)	128	24	30	213	12	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	12
Grade (%)	0%			0%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.979				0.882	
Flt Protected				0.994	0.994	
Satd. Flow (prot)	1436	0	0	1458	1302	0
Flt Permitted				0.994	0.994	
Satd. Flow (perm)	1436	0	0	1458	1302	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	458			77	419	
Travel Time (s)	10.4			1.8	9.5	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Parking (#/hr)	5			5	5	
Adj. Flow (vph)	149	28	35	248	14	99
Shared Lane Traffic (%)						
Lane Group Flow (vph)	177	0	0	283	113	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	13	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.35	1.14	1.14	1.35	1.33	1.17
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Intersection Capacity Utilization 40.0% ICU Level of Service A




Analysis Period (min) 15

2022 No-Build Traffic Volumes  
1: Tioronda Avenue & Main Street

AM Peak Hour  
07/26/2018

Intersection

Int Delay, s/veh 2.5

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	128	24	30	213	12	85
Future Vol, veh/h	128	24	30	213	12	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	4	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	28	35	248	14	99










Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	177
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1399
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1399
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.9	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	786	-	-	1399	-
HCM Lane V/C Ratio	0.143	-	-	0.025	-
HCM Control Delay (s)	10.3	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-




2022 No-Build Traffic Volumes  
2: Churchill Street & Main Street

AM Peak Hour  
07/26/2018

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	184	29	18	174	70	12
Future Volume (vph)	184	29	18	174	70	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			0%	7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981				0.981	
Flt Protected				0.995	0.959	
Satd. Flow (prot)	1645	0	0	1668	1522	0
Flt Permitted				0.995	0.959	
Satd. Flow (perm)	1645	0	0	1668	1522	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	77			535	147	
Travel Time (s)	1.8			12.2	3.3	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	219	35	21	207	83	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	254	0	0	228	97	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.20	1.20
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					
Intersection Capacity Utilization	38.6%			ICU Level of Service A		
Analysis Period (min)	15					

2022 No-Build Traffic Volumes  
2: Churchill Street & Main Street










AM Peak Hour  
07/26/2018

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	184	29	18	174	70	12
Future Vol, veh/h	184	29	18	174	70	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	7	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	219	35	21	207	83	14
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	254	0	486	237
Stage 1	-	-	-	-	237	-
Stage 2	-	-	-	-	249	-
Critical Hdwy	-	-	4.12	-	7.82	6.92
Critical Hdwy Stg 1	-	-	-	-	6.82	-
Critical Hdwy Stg 2	-	-	-	-	6.82	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1311	-	447	766
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	719	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1311	-	439	766
Mov Cap-2 Maneuver	-	-	-	-	439	-
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	719	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.7		14.7	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	468	-	-	1311	-	
HCM Lane V/C Ratio	0.209	-	-	0.016	-	
HCM Control Delay (s)	14.7	-	-	7.8	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-	

2022 No-Build Traffic Volumes  
3: Creek Road & Churchill Street

AM Peak Hour

07/26/2018




						
Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	1	82	42	5	1	1
Future Volume (vph)	1	82	42	5	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		3%	-5%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.986		0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	1835	1883	0	1694	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	1835	1883	0	1694	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		82	147		244	
Travel Time (s)		1.9	3.3		5.5	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	1	99	51	6	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	100	57	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	15.1%			ICU Level of Service A		
Analysis Period (min)	15					

2022 No-Build Traffic Volumes  
3: Creek Road & Churchill Street

AM Peak Hour  
07/26/2018

Intersection

Int Delay, s/veh 0.2

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	1	82	42	5	1	1
Future Vol, veh/h	1	82	42	5	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-5	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	99	51	6	1	1

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	57	0	0 155 54
Stage 1	-	-	- 54 -
Stage 2	-	-	- 101 -
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	1547	-	- 836 1013
Stage 1	-	-	- 969 -
Stage 2	-	-	- 923 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1547	-	- 835 1013
Mov Cap-2 Maneuver	-	-	- 835 -
Stage 1	-	-	- 968 -
Stage 2	-	-	- 923 -

Approach	NB	SB	NE
HCM Control Delay, s	0.1	0	8.9
HCM LOS			A

















Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	915	1547	-	-	-
HCM Lane V/C Ratio	0.003	0.001	-	-	-
HCM Control Delay (s)	8.9	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

2022 No-Build Traffic Volumes

AM Peak Hour

4: Site Access/One East Mains Street Access & Churchill Street

07/26/2018

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	1	59	2	2	36	6	23	0	4	2	0	2
Future Volume (vph)	1	59	2	2	36	6	23	0	4	2	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			3%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.982			0.980			0.932	
Flt Protected		0.999			0.998			0.959			0.976	
Satd. Flow (prot)	0	1881	0	0	1798	0	0	1751	0	0	1694	0
Flt Permitted		0.999			0.998			0.959			0.976	
Satd. Flow (perm)	0	1881	0	0	1798	0	0	1751	0	0	1694	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		233			82			214			159	
Travel Time (s)		5.3			1.9			4.9			3.6	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	1	71	2	2	43	7	28	0	5	2	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	74	0	0	52	0	0	33	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 13.6%





ICU Level of Service A

Analysis Period (min) 15

2022 No-Build Traffic Volumes  
4: Site Access/One East Mains Street Access & Churchill Street

AM Peak Hour

07/26/2018

Intersection												
Int Delay, s/veh	2.2											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	1	59	2	2	36	6	23	0	4	2	0	2
Future Vol, veh/h	1	59	2	2	36	6	23	0	4	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	71	2	2	43	7	28	0	5	2	0	2

Major/Minor	Major1			Major2			Minor2			Minor1		
Conflicting Flow All	50	0	0	73	0	0	126	126	47	127	128	72
Stage 1	-	-	-	-	-	-	51	51	-	74	74	-
Stage 2	-	-	-	-	-	-	75	75	-	53	54	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1557	-	-	1527	-	-	848	764	1022	846	763	990
Stage 1	-	-	-	-	-	-	962	852	-	935	833	-
Stage 2	-	-	-	-	-	-	934	833	-	960	850	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1557	-	-	1527	-	-	845	762	1022	841	761	990
Mov Cap-2 Maneuver	-	-	-	-	-	-	845	762	-	841	761	-
Stage 1	-	-	-	-	-	-	961	851	-	934	832	-
Stage 2	-	-	-	-	-	-	931	832	-	955	849	-

Approach	NB	SB	NE	SW
HCM Control Delay, s	0.1	0.3	9.3	9
HCM LOS			A	A










  

Minor Lane/Major Mvmt	NELn1	NBL	NBT	NBR	SBL	SBT	SBR	SWLn1
Capacity (veh/h)	867	1557	-	-	1527	-	-	909
HCM Lane V/C Ratio	0.038	0.001	-	-	0.002	-	-	0.005
HCM Control Delay (s)	9.3	7.3	0	-	7.4	0	-	9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0



2022 Build Traffic Volumes  
1: Tioronda Avenue & Main Street

AM Peak Hour  
03/25/2019

						
Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	140	24	32	220	12	90
Future Volume (vph)	140	24	32	220	12	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	12
Grade (%)	0%			0%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.980				0.881	
Flt Protected				0.994	0.994	
Satd. Flow (prot)	1438	0	0	1458	1301	0
Flt Permitted				0.994	0.994	
Satd. Flow (perm)	1438	0	0	1458	1301	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	458			77	419	
Travel Time (s)	10.4			1.8	9.5	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Parking (#/hr)	5			5	5	
Adj. Flow (vph)	163	28	37	256	14	105
Shared Lane Traffic (%)						
Lane Group Flow (vph)	191	0	0	293	119	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	13	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.35	1.14	1.14	1.35	1.33	1.17
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↰			↱	↰	↱
Traffic Vol, veh/h	140	24	32	220	12	90
Future Vol, veh/h	140	24	32	220	12	90
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 StorageQ#	-	-	-	0	0	-
Grade, %	0	-	-	0	4	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	163	28	37	256	14	105










Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0 191	0 507 177
Stage 1	-	- -	- 177 -
Stage 2	-	- -	- 330 -
Critical Hdwy	-	- 4.12	- 7.22 6.62
Critical Hdwy Stg 1	-	- -	- 6.22 -
Critical Hdwy Stg 2	-	- -	- 6.22 -
Follow-up Hdwy	-	- 2.218	- 3.518 3.318
Pot Cap-1 Maneuver	-	- 1383	- 469 849
Stage 1	-	- -	- 821 -
Stage 2	-	- -	- 677 -
Platoon blocked, %	-	- -	- -
Mov Cap-1 Maneuver	-	- 1383	- 454 849
Mov Cap-2 Maneuver	-	- -	- 454 -
Stage 1	-	- -	- 796 -
Stage 2	-	- -	- 677 -

Approach	EB	WB	NE
HCM Control Delay, s 0		1	10.5
HCM LOS			B

Minor Lane/Major MvmNELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	770	-	- 1383	-
HCM Lane V/C Ratio	0.154	-	- 0.027	-
HCM Control Delay (s)	10.5	-	- 7.7	0
HCM Lane LOS	B	-	- A	A
HCM 95th %tile Q(veh)	0.5	-	- 0.1	-

2022 Build Traffic Volumes  
2: Churchill Street & Main Street

AM Peak Hour  
03/25/2019

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	184	47	30	174	78	12
Future Volume (vph)	184	47	30	174	78	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			0%	7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973				0.982	
Flt Protected				0.993	0.958	
Satd. Flow (prot)	1631	0	0	1665	1522	0
Flt Permitted				0.993	0.958	
Satd. Flow (perm)	1631	0	0	1665	1522	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	77			535	147	
Travel Time (s)	1.8			12.2	3.3	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	219	56	36	207	93	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	275	0	0	243	107	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.20	1.20
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					










2022 Build Traffic Volumes  
2: Churchill Street & Main Street

AM Peak Hour  
03/25/2019

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰ ↱ ↱ ↱ ↱ ↱					
Traffic Vol, veh/h	184	47	30	174	78	12
Future Vol, veh/h	184	47	30	174	78	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		- None	
Storage Length	-	-	-	-	0	-
Veh in Median Storage	0	-	-	0	0	-
Grade, %	0	-	-	0	7	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	219	56	36	207	93	14
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	275	0	526	247
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	279	-
Critical Hdwy	-	-	4.12	-	7.82	6.92
Critical Hdwy Stg 1	-	-	-	-	6.82	-
Critical Hdwy Stg 2	-	-	-	-	6.82	-
Follow-up Hdwy	-	-2.218	-	-3.518	3.318	
Pot Cap-1 Maneuver	-	- 1288	-	417	755	
Stage 1	-	-	-	- 721	-	
Stage 2	-	-	-	- 689	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	-	- 1288	-	404	755	
Mov Cap-2 Maneuver	-	-	-	404	-	
Stage 1	-	-	-	- 698	-	
Stage 2	-	-	-	- 689	-	
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.2		16.1		
HCM LOS	C					
Minor Lane/Major Mvm	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	431	-	- 1288	-	-	
HCM Lane V/C Ratio	0.249	-	- 0.028	-	-	
HCM Control Delay (s)	16.1	-	- 7.9	0		
HCM Lane LOS	C	-	- A	A		
HCM 95th %tile Q(veh)	1	-	- 0.1	-		




2022 Build Traffic Volumes  
3: Creek Road & Churchill Street

AM Peak Hour  
03/25/2019

						
Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	1	90	72	5	1	1
Future Volume (vph)	1	90	72	5	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		3%	-5%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.991		0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	1835	1892	0	1694	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	1835	1892	0	1694	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		82	147		244	
Travel Time (s)		1.9	3.3		5.5	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	1	108	87	6	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	109	93	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

2022 Build Traffic Volumes  
3: Creek Road & Churchill Street

AM Peak Hour  
03/25/2019

















Intersection						
Int Delay, s/veh	0.2					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	1	90	72	5	1	1
Future Vol, veh/h	1	90	72	5	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		- None	
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	0	-	0	-	-
Grade, %	-	3	-5	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	108	87	6	1	1
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	93	0	-	0	200	90
Stage 1	-	-	-	-	90	-
Stage 2	-	-	-	-	110	-
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	1501	-	-	-	789	968
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	915	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1501	-	-	-	788	968
Mov Cap-2 Maneuver	-	-	-	-	788	-
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	915	-
Approach	NB		SB		NE	
HCM Control Delay, s	9.1		0		9.2	
HCM LOS					A	
Minor Lane/Major Mvm	NELn1	NBL	NBT	SBT	SBR	
Capacity (veh/h)		869	1501	-	-	-
HCM Lane V/C Ratio		0.003	0.001	-	-	-
HCM Control Delay (s)		9.2	7.4	0	-	-
HCM Lane LOS		A	A	A	-	-
HCM 95th %tile Q(veh)		0	0	-	-	-

## 2022 Build Traffic Volumes

AM Peak Hour

## 4: Site Access/One East Mains Street Access &amp; Churchill Street

03/25/2019

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	6	59	2	2	36	36	32	0	6	2	0	2
Future Volume (vph)	6	59	2	2	36	36	32	0	6	2	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			3%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.934			0.979			0.932	
Flt Protected		0.996			0.999			0.959			0.976	
Satd. Flow (prot)	0	1877	0	0	1712	0	0	1749	0	0	1694	0
Flt Permitted		0.996			0.999			0.959			0.976	
Satd. Flow (perm)	0	1877	0	0	1712	0	0	1749	0	0	1694	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		233			82			214			159	
Travel Time (s)		5.3			1.9			4.9			3.6	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	7	71	2	2	43	43	39	0	7	2	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	0	0	88	0	0	46	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

2022 Build Traffic Volumes  
 4: Site Access/One East Mains Street Access & Churchill Street

AM Peak Hour  
 03/25/2019

Intersection												
Int Delay, s/veh	2.5											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	59	2	2	36	36	32	0	6	2	0	2
Future Vol, veh/h	6	59	2	2	36	36	32	0	6	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	71	2	2	43	43	39	0	7	2	0	2
Major/Minor	Major1		Major2		Minor2		Minor1					
Conflicting Flow All	86	0	0	73	0	0	156	156	65	158	176	72
Stage 1	-	-	-	-	-	-	69	69	-	86	86	-
Stage 2	-	-	-	-	-	-	87	87	-	72	90	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1510	-	-	1527	-	-	810	736	999	808	717	990
Stage 1	-	-	-	-	-	-	941	837	-	922	824	-
Stage 2	-	-	-	-	-	-	921	823	-	938	820	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1510	-	-	1527	-	-	804	732	999	798	713	990
Mov Cap-2 Maneuver	-	-	-	-	-	-	804	732	-	798	713	-
Stage 1	-	-	-	-	-	-	936	836	-	917	820	-
Stage 2	-	-	-	-	-	-	914	819	-	930	819	-
Approach	NB		SB		NE		SW					
HCM Control Delay, s	9.7		0.2		9.6		9.1					
HCM LOS					A		A					
Minor Lane/Major Mvm	NELn1	NBL	NBT	NBR	SBL	SBT	SBWLn1					
Capacity (veh/h)		830	1510	-	-	1527	-	-	884			
HCM Lane V/C Ratio		0.055	0.005	-	-	0.002	-	-	0.005			
HCM Control Delay (s)		9.6	7.4	0	-	7.4	0	-	9.1			
HCM Lane LOS		A	A	A	-	A	A	-	A			
HCM 95th %tile Q(veh)		0.2	0	-	-	0	-	-	0			



2017 Existing Traffic Volumes  
1: Tioronda Avenue & Main Street

PM Peak Hour  
9/20/2017



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	162	22	47	198	31	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	12
Grade (%)	0%			0%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.984				0.899	
Flt Protected				0.991	0.987	
Satd. Flow (prot)	1443	0	0	1454	1318	0
Flt Permitted				0.991	0.987	
Satd. Flow (perm)	1443	0	0	1454	1318	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	458			77	419	
Travel Time (s)	10.4			1.8	9.5	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Parking (#/hr)	5			5	5	
Adj. Flow (vph)	191	26	55	233	36	106
Shared Lane Traffic (%)						
Lane Group Flow (vph)	217	0	0	288	142	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	13	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.35	1.14	1.14	1.35	1.33	1.17
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: CBD  
Control Type: Unsignalized  
Intersection Capacity Utilization 43.5% ICU Level of Service A  
Analysis Period (min) 15

2017 Existing Traffic Volumes  
1: Tioronda Avenue & Main Street

PM Peak Hour  
9/20/2017

Intersection

Int Delay, s/veh 3.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Vol, veh/h	162	22	47	198	31	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	4	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	191	26	55	233	36	106

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	216	0	548	204
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	344	-
Critical Hdwy	-	-	4.12	-	7.22	6.62
Critical Hdwy Stg 1	-	-	-	-	6.22	-
Critical Hdwy Stg 2	-	-	-	-	6.22	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1354	-	440	818
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	665	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1354	-	419	818
Mov Cap-2 Maneuver	-	-	-	-	419	-
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	634	-

Approach	EB	WB	NE
HCM Control Delay, s	0	1.5	12
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	658	-	-	1354	-
HCM Lane V/C Ratio	0.216	-	-	0.041	-
HCM Control Delay (s)	12	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

2017 Existing Traffic Volumes  
2: Churchill Street & Main Street

PM Peak Hour  
9/20/2017

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↱	
Volume (vph)	191	61	16	190	55	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			0%	7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.967				0.986	
Flt Protected				0.996	0.957	
Satd. Flow (prot)	1621	0	0	1670	1527	0
Flt Permitted				0.996	0.957	
Satd. Flow (perm)	1621	0	0	1670	1527	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	77			535	147	
Travel Time (s)	1.8			12.2	3.3	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	220	70	18	218	63	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	290	0	0	236	70	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.20	1.20
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type: Unsignalized						
Intersection Capacity Utilization 36.3%				ICU Level of Service A		
Analysis Period (min) 15						










2017 Existing Traffic Volumes  
2: Churchill Street & Main Street

PM Peak Hour  
9/20/2017

Intersection						
Int Delay, s/veh	2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	191	61	16	190	55	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	7	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	220	70	18	218	63	7
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	290	0	510	255
Stage 1	-	-	-	-	255	-
Stage 2	-	-	-	-	255	-
Critical Hdwy	-	-	4.12	-	7.82	6.92
Critical Hdwy Stg 1	-	-	-	-	6.82	-
Critical Hdwy Stg 2	-	-	-	-	6.82	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1272	-	429	746
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	713	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1272	-	422	746
Mov Cap-2 Maneuver	-	-	-	-	422	-
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	702	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.6		14.7	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	441	-	-	1272	-	
HCM Lane V/C Ratio	0.159	-	-	0.014	-	
HCM Control Delay (s)	14.7	-	-	7.9	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.6	-	-	0	-	

2017 Existing Traffic Volumes  
3: Creek Road & Churchill Street

PM Peak Hour  
9/20/2017

						
Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Volume (vph)	1	61	76	1	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		3%	-5%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	1833	1907	0	1770	0
Flt Permitted		0.999			0.950	
Satd. Flow (perm)	0	1833	1907	0	1770	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		82	147		244	
Travel Time (s)		1.9	3.3		5.5	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	1	75	94	1	2	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	76	95	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 14.1%			ICU Level of Service A			
Analysis Period (min) 15						

2017 Existing Traffic Volumes  
3: Creek Road & Churchill Street

PM Peak Hour  
9/20/2017

















Intersection						
Int Delay, s/veh	0.2					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	1	61	76	1	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-5	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	75	94	1	2	0
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	95	0	-	0	172	94
Stage 1	-	-	-	-	94	-
Stage 2	-	-	-	-	78	-
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	1499	-	-	-	818	963
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	945	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1499	-	-	-	817	963
Mov Cap-2 Maneuver	-	-	-	-	817	-
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	944	-
Approach	NB		SB		NE	
HCM Control Delay, s	0.1		0		9.4	
HCM LOS					A	
Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR	
Capacity (veh/h)	817	1499	-	-	-	
HCM Lane V/C Ratio	0.003	0.001	-	-	-	
HCM Control Delay (s)	9.4	7.4	0	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	0	-	-	-	

## 2017 Existing Traffic Volumes

PM Peak Hour

## 4: Site Access/One East Main Street Access &amp; Churchill Street

9/20/2017

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	61	2	2	76	0	0	0	0	2	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			3%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996									0.932	
Flt Protected					0.999						0.976	
Satd. Flow (prot)	0	1883	0	0	1833	0	0	1863	0	0	1694	0
Flt Permitted					0.999						0.976	
Satd. Flow (perm)	0	1883	0	0	1833	0	0	1863	0	0	1694	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		233			82			214			120	
Travel Time (s)		5.3			1.9			4.9			2.7	
Peak Hour Factor	0.81	0.81	0.92	0.92	0.81	0.81	0.81	0.92	0.81	0.92	0.92	0.92
Adj. Flow (vph)	0	75	2	2	94	0	0	0	0	2	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	0	0	96	0	0	0	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	15.6%											
Analysis Period (min)	15											
	ICU Level of Service A											

2017 Existing Traffic Volumes  
4: Site Access/One East Main Street Access & Churchill Street

PM Peak Hour

9/20/2017

Intersection												
Int Delay, s/veh	0.3											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Vol, veh/h	0	61	2	2	76	0	0	0	0	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	0	-	-	0	-
Peak Hour Factor	81	81	92	92	81	81	81	92	81	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	75	2	2	94	0	0	0	0	2	0	2
Major/Minor	Major1			Major2			Minor2			Minor1		
Conflicting Flow All	94	0	0	77	0	0	175	175	94	174	174	76
Stage 1	-	-	-	-	-	-	98	98	-	76	76	-
Stage 2	-	-	-	-	-	-	77	77	-	98	98	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1500	-	-	1522	-	-	788	718	963	789	719	985
Stage 1	-	-	-	-	-	-	908	814	-	933	832	-
Stage 2	-	-	-	-	-	-	932	831	-	908	814	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1500	-	-	1522	-	-	786	717	963	788	718	985
Mov Cap-2 Maneuver	-	-	-	-	-	-	786	717	-	788	718	-
Stage 1	-	-	-	-	-	-	908	813	-	933	832	-
Stage 2	-	-	-	-	-	-	930	831	-	907	813	-
Approach	NB			SB			NE			SW		
HCM Control Delay, s	0			0.2			0			9.1		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NELn1	NBL	NBT	NBR	SBL	SBT	SBRSWLn1					
Capacity (veh/h)	-	1500	-	-	1522	-	876					
HCM Lane V/C Ratio	-	-	-	-	0.001	-	0.005					
HCM Control Delay (s)	0	0	-	-	7.4	0	9.1					
HCM Lane LOS	A	A	-	-	A	A	A					
HCM 95th %tile Q(veh)	-	0	-	-	0	-	0					



2022 No-Build Traffic Volumes  
1: Tioronda Avenue & Main Street

PM Peak Hour  
07/26/2018



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	206	26	59	267	37	122
Future Volume (vph)	206	26	59	267	37	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	12
Grade (%)	0%			0%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.985				0.897	
Flt Protected				0.991	0.988	
Satd. Flow (prot)	1445	0	0	1454	1316	0
Flt Permitted				0.991	0.988	
Satd. Flow (perm)	1445	0	0	1454	1316	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	458			77	419	
Travel Time (s)	10.4			1.8	9.5	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Parking (#/hr)	5			5	5	
Adj. Flow (vph)	242	31	69	314	44	144
Shared Lane Traffic (%)						
Lane Group Flow (vph)	273	0	0	383	188	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	13	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.35	1.14	1.14	1.35	1.33	1.17
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Intersection Capacity Utilization 53.7% ICU Level of Service A




Analysis Period (min) 15

2022 No-Build Traffic Volumes  
1: Tioronda Avenue & Main Street

PM Peak Hour  
07/26/2018

Intersection

Int Delay, s/veh 3.8

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	206	26	59	267	37	122
Future Vol, veh/h	206	26	59	267	37	122
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	4	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	242	31	69	314	44	144

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	273
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1290
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1290
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NE
HCM Control Delay, s	0	1.4	14.3
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	575	-	-	1290	-
HCM Lane V/C Ratio	0.325	-	-	0.054	-
HCM Control Delay (s)	14.3	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.4	-	-	0.2	-

2022 No-Build Traffic Volumes  
2: Churchill Street & Main Street

PM Peak Hour  
07/26/2018




	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↱	
Traffic Volume (vph)	235	92	31	240	85	7
Future Volume (vph)	235	92	31	240	85	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			0%	7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.962				0.990	
Flt Protected				0.994	0.956	
Satd. Flow (prot)	1613	0	0	1666	1531	0
Flt Permitted				0.994	0.956	
Satd. Flow (perm)	1613	0	0	1666	1531	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	77			535	147	
Travel Time (s)	1.8			12.2	3.3	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	270	106	36	276	98	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	376	0	0	312	106	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.20	1.20
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					
Intersection Capacity Utilization	51.6%			ICU Level of Service A		
Analysis Period (min)	15					

2022 No-Build Traffic Volumes  
2: Churchill Street & Main Street

PM Peak Hour  
07/26/2018

Intersection

Int Delay, s/veh 3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	235	92	31	240	85	7
Future Vol, veh/h	235	92	31	240	85	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	7	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	270	106	36	276	98	8










Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	376
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1182
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1182
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	21.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	326	-	-	1182	-
HCM Lane V/C Ratio	0.324	-	-	0.03	-
HCM Control Delay (s)	21.3	-	-	8.1	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.4	-	-	0.1	-




2022 No-Build Traffic Volumes  
3: Creek Road & Churchill Street

PM Peak Hour  
07/26/2018

						
Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	1	92	122	1	2	0
Future Volume (vph)	1	92	122	1	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		3%	-5%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				
Flt Protected					0.950	
Satd. Flow (prot)	0	1835	1907	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1835	1907	0	1770	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		82	147		244	
Travel Time (s)		1.9	3.3		5.5	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	1	114	151	1	2	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	115	152	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.97	0.97	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	16.5%			ICU Level of Service A		
Analysis Period (min)	15					

2022 No-Build Traffic Volumes  
3: Creek Road & Churchill Street

PM Peak Hour  
07/26/2018














Intersection						
Int Delay, s/veh	0.1					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	1	92	122	1	2	0
Future Vol, veh/h	1	92	122	1	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-5	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	114	151	1	2	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	152	0	-	0	268	152
Stage 1	-	-	-	-	152	-
Stage 2	-	-	-	-	116	-
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	1429	-	-	-	721	894
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	909	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1429	-	-	-	720	894
Mov Cap-2 Maneuver	-	-	-	-	720	-
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	909	-
Approach	NB		SB		NE	
HCM Control Delay, s	0.1		0		10	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR	
Capacity (veh/h)	720	1429	-	-	-	
HCM Lane V/C Ratio	0.003	0.001	-	-	-	
HCM Control Delay (s)	10	7.5	0	-	-	
HCM Lane LOS	B	A	A	-	-	
HCM 95th %tile Q(veh)	0	0	-	-	-	

## 2022 No-Build Traffic Volumes

PM Peak Hour





## 4: Site Access/One East Main Street Access &amp; Churchill Street

07/26/2018

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	5	77	2	2	93	29	15	0	3	2	0	2
Future Volume (vph)	5	77	2	2	93	29	15	0	3	2	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			3%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.968			0.977			0.932	
Flt Protected		0.997			0.999			0.960			0.976	
Satd. Flow (prot)	0	1879	0	0	1774	0	0	1747	0	0	1694	0
Flt Permitted		0.997			0.999			0.960			0.976	
Satd. Flow (perm)	0	1879	0	0	1774	0	0	1747	0	0	1694	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		233			82			214			165	
Travel Time (s)		5.3			1.9			4.9			3.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	6	95	2	2	115	36	19	0	4	2	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	153	0	0	23	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	17.3%											
Analysis Period (min)	15											
	ICU Level of Service A											

## 4: Site Access/One East Main Street Access &amp; Churchill Street

07/26/2018

Intersection												
Int Delay, s/veh	1.2											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	5	77	2	2	93	29	15	0	3	2	0	2
Future Vol, veh/h	5	77	2	2	93	29	15	0	3	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	95	2	2	115	36	19	0	4	2	0	2

Major/Minor	Major1		Major2		Minor2		Minor1					
Conflicting Flow All	151	0	0	97	0	0	246	246	133	247	263	96
Stage 1	-	-	-	-	-	-	137	137	-	108	108	-
Stage 2	-	-	-	-	-	-	109	109	-	139	155	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1430	-	-	1496	-	-	708	656	916	707	642	960
Stage 1	-	-	-	-	-	-	866	783	-	897	806	-
Stage 2	-	-	-	-	-	-	896	805	-	864	769	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1430	-	-	1496	-	-	704	653	916	701	639	960
Mov Cap-2 Maneuver	-	-	-	-	-	-	704	653	-	701	639	-
Stage 1	-	-	-	-	-	-	863	782	-	893	803	-
Stage 2	-	-	-	-	-	-	890	802	-	860	768	-

Approach	NB	SB	NE	SW
HCM Control Delay, s	0.4	0.1	10.1	9.5
HCM LOS			B	A










  

Minor Lane/Major Mvmt	NELn1	NBL	NBT	NBR	SBL	SBT	SBR	SWLn1
Capacity (veh/h)	732	1430	-	-	1496	-	-	810
HCM Lane V/C Ratio	0.03	0.004	-	-	0.002	-	-	0.006
HCM Control Delay (s)	10.1	7.5	0	-	7.4	0	-	9.5
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0



2022 Build Traffic Volumes  
1: Tioronda Avenue & Main Street

PM Peak Hour  
03/25/2019

						
Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	211	26	65	293	37	124
Future Volume (vph)	211	26	65	293	37	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	12
Grade (%)	0%			0%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.985				0.896	
Flt Protected				0.991	0.989	
Satd. Flow (prot)	1445	0	0	1454	1316	0
Flt Permitted				0.991	0.989	
Satd. Flow (perm)	1445	0	0	1454	1316	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	458			77	419	
Travel Time (s)	10.4			1.8	9.5	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Parking (#/hr)	5			5	5	
Adj. Flow (vph)	245	30	76	341	43	144
Shared Lane Traffic (%)						
Lane Group Flow (vph)	275	0	0	417	187	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	13	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.35	1.14	1.14	1.35	1.33	1.17
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	3.8					
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑	↑	↑
Traffic Vol, veh/h	211	26	65	293	37	124
Future Vol, veh/h	211	26	65	293	37	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage	0	-	-	0	0	-
Grade, %	0	-	-	0	4	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	245	30	76	341	43	144

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	275
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1288
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1288
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NE
HCM Control Delay, s	0	1.4	14.7
HCM LOS			B

Minor Lane/Major Mvm	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	557	-	-	1288	-
HCM Lane V/C Ratio	0.336	-	-	0.059	-
HCM Control Delay (s)	14.7	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.5	-	-	0.2	-

2022 Build Traffic Volumes  
2: Churchill Street & Main Street

PM Peak Hour  
03/25/2019

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↱	
Traffic Volume (vph)	235	99	36	240	117	7
Future Volume (vph)	235	99	36	240	117	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			0%	7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.960				0.993	
Flt Protected				0.994	0.955	
Satd. Flow (prot)	1609	0	0	1666	1534	0
Flt Permitted				0.994	0.955	
Satd. Flow (perm)	1609	0	0	1666	1534	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	77			535	147	
Travel Time (s)	1.8			12.2	3.3	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	280	118	43	286	139	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	398	0	0	329	147	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.20	1.20
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					










2022 Build Traffic Volumes  
2: Churchill Street & Main Street

PM Peak Hour  
03/25/2019

Intersection						
Int Delay, s/veh	5.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱		↱
Traffic Vol, veh/h	235	99	36	240	117	7
Future Vol, veh/h	235	99	36	240	117	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		- None	
Storage Length	-	-	-	-	0	-
Veh in Median Storage	0	-	-	0	0	-
Grade, %	0	-	-	0	7	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	280	118	43	286	139	8
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	398	0	711	339
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	372	-
Critical Hdwy	-	-	4.12	-	7.82	6.92
Critical Hdwy Stg 1	-	-	-	-	6.82	-
Critical Hdwy Stg 2	-	-	-	-	6.82	-
Follow-up Hdwy	-	-2.218	-	-3.518	3.318	
Pot Cap-1 Maneuver	-	- 1161	-	303	658	
Stage 1	-	-	-	-	632	-
Stage 2	-	-	-	-	603	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	- 1161	-	290	658	
Mov Cap-2 Maneuver	-	-	-	-	290	-
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	603	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.1		28.2	
HCM LOS					D	
Minor Lane/Major Mvm	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	299	-	-	1161	-	
HCM Lane V/C Ratio	0.494	-	-	0.037	-	
HCM Control Delay (s)	28.2	-	-	8.2	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	2.6	-	-	0.1	-	




2022 Build Traffic Volumes  
3: Creek Road & Churchill Street

















PM Peak Hour  
03/25/2019

						
Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	1	125	133	1	2	0
Future Volume (vph)	1	125	133	1	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		3%	-5%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				
Flt Protected					0.950	
Satd. Flow (prot)	0	1835	1907	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1835	1907	0	1770	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		82	147		244	
Travel Time (s)		1.9	3.3		5.5	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	1	151	160	1	2	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	152	161	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

2022 Build Traffic Volumes  
3: Creek Road & Churchill Street

PM Peak Hour  
03/25/2019

Intersection						
Int Delay, s/veh	0.1					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	1	125	133	1	2	0
Future Vol, veh/h	1	125	133	1	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		- None	
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	0	-	0	-	-
Grade, %	-	3	-5	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	151	160	1	2	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	161	0	-	0	314	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	153	-
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	1418	-	-	-	679	884
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	875	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1418	-	-	-	678	884
Mov Cap-2 Maneuver	-	-	-	-	678	-
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	875	-
Approach	NB	SB		NE		
HCM Control Delay, s	0.1	0		10.3		
HCM LOS	B					
Minor Lane/Major Mvm	NELn1	NBL	NBT	SBT	SBR	
Capacity (veh/h)	678	1418	-	-	-	
HCM Lane V/C Ratio	0.004	0.001	-	-	-	
HCM Control Delay (s)	10.3	7.5	0	-	-	
HCM Lane LOS	B	A	A	-	-	
HCM 95th %tile Q(veh)	0	0	-	-	-	

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	7	77	2	2	93	40	47	0	9	2	0	2
Future Volume (vph)	7	77	2	2	93	40	47	0	9	2	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			3%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.960			0.978			0.932	
Flt Protected		0.996			0.999			0.960			0.976	
Satd. Flow (prot)	0	1877	0	0	1760	0	0	1749	0	0	1694	0
Flt Permitted		0.996			0.999			0.960			0.976	
Satd. Flow (perm)	0	1877	0	0	1760	0	0	1749	0	0	1694	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		233			82			214			159	
Travel Time (s)		5.3			1.9			4.9			3.6	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	8	93	2	2	112	48	57	0	11	2	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	162	0	0	68	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

2022 Build Traffic Volumes  
 4: Site Access/One East Mains Street Access & Churchill Street

PM Peak Hour  
 03/25/2019

Intersection												
Int Delay, s/veh	2.5											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	77	2	2	93	40	47	0	9	2	0	2
Future Vol, veh/h	7	77	2	2	93	40	47	0	9	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	93	2	2	112	48	57	0	11	2	0	2
Major/Minor	Major1		Major2		Minor2		Minor1					
Conflicting Flow All	160	0	0	95	0	0	251	251	136	256	274	94
Stage 1	-	-	-	-	-	-	140	140	-	110	110	-
Stage 2	-	-	-	-	-	-	111	111	-	146	164	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1419	-	-	1499	-	-	702	652	913	697	633	963
Stage 1	-	-	-	-	-	-	863	781	-	895	804	-
Stage 2	-	-	-	-	-	-	894	804	-	857	762	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1419	-	-	1499	-	-	696	647	913	685	629	963
Mov Cap-2 Maneuver	-	-	-	-	-	-	696	647	-	685	629	-
Stage 1	-	-	-	-	-	-	858	780	-	890	799	-
Stage 2	-	-	-	-	-	-	886	799	-	846	761	-
Approach	NB		SB		NE		SW					
HCM Control Delay, s	6.6		0.1		10.5		9.5					
HCM LOS					B		A					
Minor Lane/Major Mvm	NELn1	NBL	NBT	NBR	SBL	SBT	SBWLn1					
Capacity (veh/h)		724	1419	-	-	1499	-	-	801			
HCM Lane V/C Ratio		0.093	0.006	-	-	0.002	-	-	0.006			
HCM Control Delay (s)		10.5	7.6	0	-	7.4	0	-	9.5			
HCM Lane LOS		B	A	A	-	A	A	-	A			
HCM 95th %tile Q(veh)		0.3	0	-	-	0	-	-	0			



2



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April 30, 2019

**VIA E-MAIL**

Mr. John Gunn, Chairman  
City of Beacon Planning Board  
1 Municipal Plaza  
Beacon, NY 12508

Re: 23-28 Creek Drive LLC  
City of Beacon, New York  
MC Project No. 14000477B

Dear Mr. Gunn:

We have received the comments on the Traffic Impact Study for the 23-28 Creek Drive development as presented by Creighton Manning in their April 4, 2019 letter to the Planning Board. The following provides specific responses to each of the comments presented in that letter.

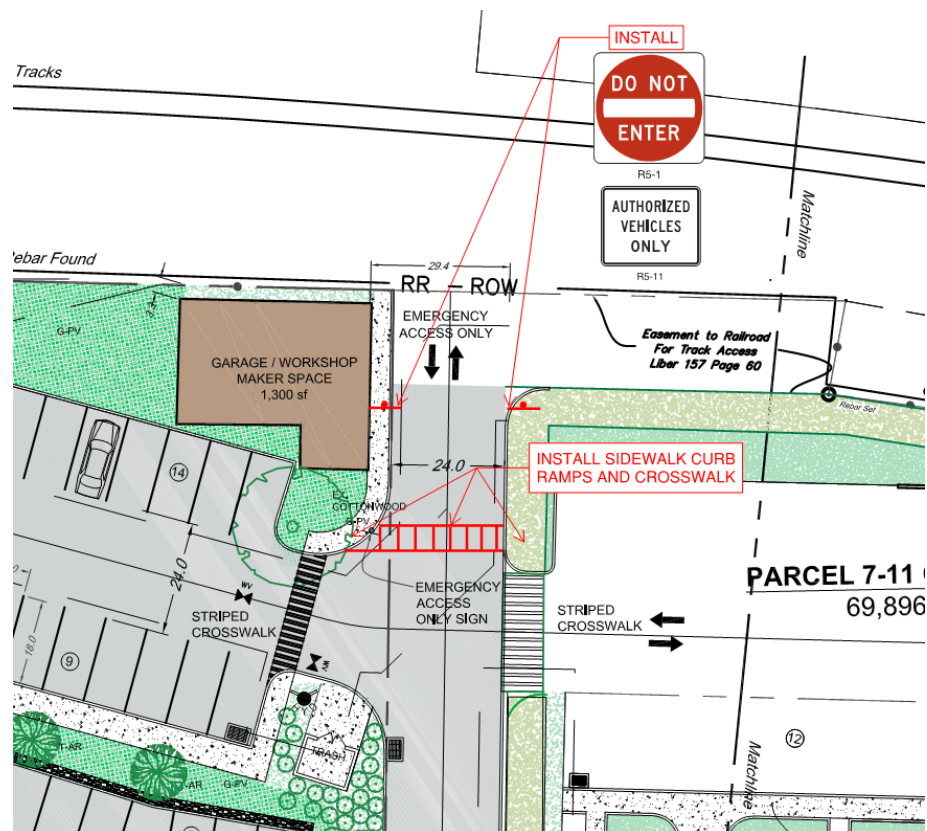
**Site Plan**

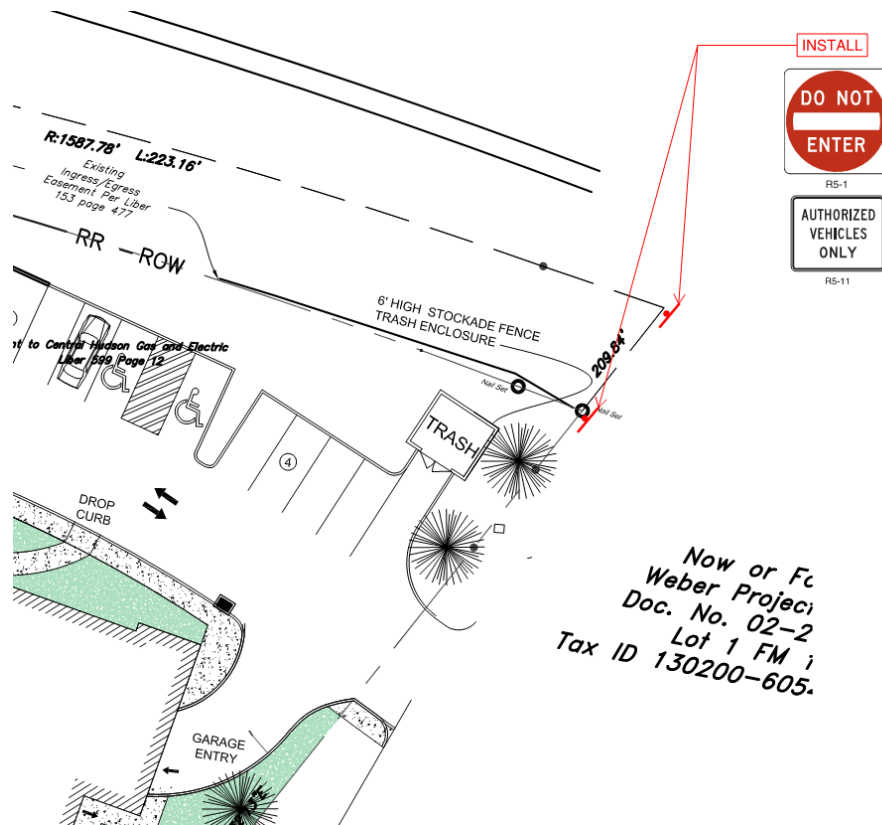
1. CM recommends that the applicant consider adding crosswalks and ramps at the internal intersection between 7-11 Creek Drive and 23-28 Creek Drive to enhance pedestrian connectivity between buildings, as shown below:

***Response: Comment noted. A crosswalk and sidewalk curb ramps will be added on the west side of the intersection. A crosswalk on the east side would lead to the proposed trash enclosure for 23-28 Creek Drive and therefore does not seem to be an appropriate location for a crosswalk. See exhibits in Item No. 2 below for proposed location of this crosswalk.***

2. CM recommends additional traffic control signs, markings, and/or other physical features to reduce the likelihood that Creek Drive is used for non-emergency access. Consideration should be given to both ends of Creek Drive so that the intended purpose of the road is clear to arriving and departing traffic, especially visitors who will not gain a sense of familiarity with the property. CM notes that Google Maps directs inbound traffic to 23 Creek Drive onto Creek Drive from Churchill Street, which is not the intended circulation. Maser should assess and provide specific recommendations.

**Response:** *“Do Not Enter” signs should be placed at the Creek Drive intersection with Churchill Street as well as the emergency access intersection with Creek Drive to designate to drivers that Creek Drive is not open to regular traffic. These signs could also be supplemented with “Authorized Vehicles Only” signs (MUTCD NO. R5-11). If desired by the City, further enforcement of the nature of this access could be implemented such as the installation of bollards or a gate that would be accessible by emergency vehicles only but would still permit pedestrian flow. The proposed signing is shown in the below exhibits.*





3. CM recommends that the applicant consider providing a bicycle rack and/or an interior bicycle storage area to accommodate future tenants who choose not to drive.

**Response:** *This will be considered as part of the Site plan approval process.*

#### Traffic Impact Letter Report

1. Maser's report relies on data that was collected in March 2017 and compared to older data collected by the firm. CM recommends that Maser provide this comparison and clarify whether an adjustment was made.

**Response:** *The older data collected by our office in the vicinity of the Site was collected during March 2014 as part of our Traffic Studies conducted for the 7 & 11 Creek Drive projects. This data was compared to the 2017 data utilizing the intersection of Main Street and Churchill Street for comparison. A comparison of the total intersection volume from the 2014 to the 2017 traffic counts is provided in the table below.*



<i>Main Street at Churchill Street 2014 vs 2014 Traffic Volume Comparison</i>		
	<i>AM Peak Hour</i>	<i>PM Peak Hour</i>
<i>2014 Traffic Counts</i>	<i>365</i>	<i>471</i>
<i>2017 Traffic Counts</i>	<i>276</i>	<i>472</i>
<i>Report Volumes</i>	<i>375</i>	<i>519</i>

*As shown in the table above the AM Peak Hour traffic volumes were found to be nearly 100 vehicles higher in 2014 as compared to 2017, while during the PM Peak Hour the 2014 and 2017 traffic counts are nearly identical when looking at the total intersection volume. However, for both peak hours, the highest observed individual turning movement traffic volumes were utilized for in the study in order to provide a somewhat conservative analysis. This resulted in a total intersection volume of 375 vehicles for the AM Peak Hour and a total intersection volume of 519 vehicles for the PM Peak Hour being utilized in the study. These volumes were then balanced to the other study area intersections.*

2. Due to the extent of development in Beacon over the past two years, performing new traffic counts to establish 2019 conditions would be the typical approach. Maser addressed this by “growing” the 2017 data at a rate of 4% annually and factoring the site-generated traffic associated with the 7 Creek Drive, 11 Creek Drive projects, which are now occupied, plus others along Main Street. CM agrees with this methodology. We request trip generation data for all development projects considered so we can confirm the adequacy of the 2022 No-Build Traffic Volumes. A tabular breakdown by project, peak-hour trips, and source would suffice.

**Response:** *As indicated in the Traffic Impact Study and the comment above the 2017 Existing Traffic Volumes were projected to the 2022 Design year utilizing a growth rate of 4% per year. In addition, traffic associated with the 7 Creek Drive, 11 Creek Drive and Beacon Theater Apartments projects were also added to the study area intersections to account for these other projects in the area of the site. A summary of the traffic associated with these Other Developments is provided below.*

<i>Other Development Traffic Volume Summary</i>					
<i>Project</i>	<i>Time Period</i>	<i>Project Generated Traffic Volumes</i>			<i>Source</i>
		<i>Entry</i>	<i>Exit</i>	<i>Total</i>	
<i>Factory Lofts 7 Creek Drive (62 Apartments)</i>	<i>AM</i>	<i>7</i>	<i>27</i>	<i>34</i>	<i>Maser Consulting, P.A. Traffic Impact Study May2, 2014</i>
	<i>PM</i>	<i>34</i>	<i>18</i>	<i>52</i>	
<i>Churchill Street Apartments 11 Creek Drive (6 Apartments)</i>	<i>AM</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>Maser Consulting, P.A. Traffic Impact Study March 27, 2014</i>
	<i>PM</i>	<i>3</i>	<i>1</i>	<i>4</i>	
<i>Beacon Theater Apartments 455 Main Street (195 Seat Theater, 2,722 SF Retail, 32 Apartments)</i>	<i>AM</i>	<i>13</i>	<i>23</i>	<i>35</i>	<i>Maser Consulting, P.A. Traffic Impact Study November 12, 2015</i>
	<i>PM</i>	<i>82</i>	<i>43</i>	<i>125</i>	

*These Other Development Traffic Volumes together with the background traffic growth result in a total growth of approximately 30% from the 2017 Existing Traffic Volumes to the 2022 No-Build Traffic Volumes at the intersection of Main Street and Churchill Street.*

- CM has reviewed Maser's site-generated trip generation calculations for the proposed development, and we find them acceptable.

***Response:*** *Comment Noted. No response required.*

- CM has reviewed Maser's arrival and departure distributions for site-generated traffic. Due to the right-turn restriction on Churchill Street at Main Street, 85% of the departure volume is assigned to the left-turn movement, which includes 35% that originated from north and east along Main Street. What route is this traffic expected to use to return to its origin?

***Response:*** *It is expected that the 35% of site generated traffic that arrives from and destined to the north would make a left turn onto Main Street and then a right turn onto Route 52 (Fishkill Avenue) to return back to the north when departing the site.*

5. The report states that the main site access driveway on Churchill Street for 7 Creek Drive and 11 Creek Drive will also serve the proposed development at 23-28 Creek Drive. The mix of uses (i.e., residential and office/commercial) means that people will be coming and going simultaneously. Based on the volume levels presented by Maser, we are not concerned from a volume and capacity perspective. However, we believe that traffic calming measures should be considered and implemented to protect the residential nature of the northerly half of the site from the office/commercial component. Maser should assess and provide specific recommendations.

***Response:*** *We agree that from a volume and capacity perspective, the volumes generated by the proposed development will not create an issue for the operation of the overall Site. We don't see these additional volumes causing a significant safety concern either, since the nature of the Site will require vehicles destined to the proposed project to travel through the existing parking areas of 7 and 11 Creek Drive, which would tend to slow speeds through this area. However, the Applicant could consider installing 1-2 speed tables and/or raised crosswalks aligning with the existing parking bay islands along the 7 Creek Drive property and/or at the existing crosswalk between the 7 and 11 Creek Drive properties. This can be determined as part of the Final Site plan Approvals.*

6. CM understands and agrees with Maser's statement regarding shared parking. Given the site's connectivity with 7 Creek Drive and 11 Creek Drive, will all off- street parking be shared amongst residents and employees? Visitors, deliveries, and service calls associated with the proposed office/commercial use could have the potential to generate a demand for parking in excess of 80 spaces. Maser should explain how these additional vehicles would be accommodated.

***Response:*** *As indicated in the study, the commercial space is anticipated to have a maximum of 80 employees and 93 parking spaces are proposed to be provided for the proposed development. During the 9 AM – 5 PM hours when the commercial use parking demand peaks and visitors, deliveries, etc. would be expected, it is anticipated that the use of the residential parking spaces by residents would be low. Therefore, these residential parking spaces could be utilized by the visitors, deliveries, etc. Similarly, during these hours it is anticipated that the 7 and 11 Creek Drive parking areas would also have vacant spaces that could be utilized as part of a typical shared parking condition.*



7. Maser's report presents two ideas for consideration beyond the application itself. The first has to do with creating an all-way stop-controlled intersection at Main Street and Tioranda Avenue. Preliminarily, CM believes the idea has merit, but we recommend further engineering analysis if the City of Beacon wants to consider it. Specifically, MUTCD Section 2B.07 should be examined and applied. Additionally, the roadway curve on Main Street should be taken into consideration to ensure that drivers would have an adequate stopping distance prior to the crosswalk since pedestrians would be crossing under the assumption that drivers will be coming to a stop.

***Response: Comment noted. If requested by the City, Maser could conduct a further analysis of the Main Street/Tironda Avenue intersection based on the MUTCD Criteria for an all-way stop.***

The second idea for consideration pertains to potentially allowing the now-illegal right-turn movement from Churchill Street onto Main Street. CM reviewed the traffic control signs on Churchill Street and we believe illegal right turns repeatedly occur because of the location of the No Right Turn sign, which is approximately 30 feet behind where drivers actually stop or pause before turning. We agree that there could be a benefit to legally permitting the movement. CM recommends that further engineering analysis be conducted if the City of Beacon wants to consider permitting the turn including a review of why the sign was originally installed. In the interim, the City of Beacon has two options, which can be done separately or together, to strengthen the turn prohibition:

- a. Consider relocating the No Right Turn sign so that it is closer to Main Street. It may be necessary to trim the mature tree at the intersection corner so the sign is not blocked by foliage.
- b. Consider installing an additional No Right Turn sign on the north side of Main Street facing drivers on Churchill Street as they contemplate their turn. CM can assist with the placement of this sign if desired.

***Response: Comment noted. Maser agrees with the assessment of these potential modifications to the Churchill Street/Main Street intersection. The Applicant would offer to make these modifications if desired by the City. Note it appears that a "No Right Turn" sign opposite the Churchill Street approach could be placed on the existing lamp post opposite the intersection or on a separate sign post in this vicinity. The height of the sign would have to be such that any parked vehicle on the north side of Main Street would not prohibit the visibility of the sign.***





8. Churchill Street approaching Main Street is controlled by a Yield sign that is set back approximately 30 feet from Main Street. However, since the intersection resembles a traditional "T" shape and does not feature a merging movement, drivers tend to treat the intersection as if it were controlled by a Stop sign. Maser's analysis treats Churchill Street as a stop-controlled approach, which CM agrees with. Given the increase in traffic (vehicles and pedestrians) on Churchill Street over the past several years, the City of Beacon may want to consider replacing the Yield sign with a Stop sign. CM can provide further guidance as needed.

***Response: Comment noted. Maser agrees with this assessment of this potential modification to the intersection. The Applicant would offer to make this modification if desired by the City.***

If you have any questions regarding the above, please do not hesitate to contact us.

Very truly yours,

MASER CONSULTING P.A.

A handwritten signature in black ink, appearing to read 'Richard D'Andrea', written over a horizontal line.

Richard G. D'Andrea, P.E., PTOE  
Principal Associate/Project Manager

RGD/ces

3







# Exhibit B

**Full Environmental Assessment Form**  
**Part 2 - Identification of Potential Project Impacts**

Agency Use Only (If applicable)	
Project :	23-28 Creek Drive
Date :	July 9, 2019

**Part 2 is to be completed by the lead agency.** Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency and the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

**Tips for completing Part 2:**

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "Yes" to a numbered question, please complete all the questions that follow in that section.
- If you answer "No" to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

<b>1. Impact on Land</b> Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1) <i>If "Yes", answer questions a - j. If "No", move on to Section 2.</i>			
	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES	
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____		<input checked="" type="checkbox"/>	<input type="checkbox"/>

**2. Impact on Geological Features**  
The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☒ NO ☐ YES  
*If "Yes", answer questions a - c. If "No", move on to Section 3.*

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____	E2g	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	<input type="checkbox"/>	<input type="checkbox"/>
c. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

**3. Impacts on Surface Water**  
The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☐ NO ☒ YES  
*If "Yes", answer questions a - i. If "No", move on to Section 4.*

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	<input checked="" type="checkbox"/>	<input type="checkbox"/>

1. Other impacts: _____ _____		<input checked="" type="checkbox"/>	<input type="checkbox"/>
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<b>4. Impact on groundwater</b> The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part I. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) <i>If "Yes", answer questions a - h. If "No", move on to Section 5.</i>			
		<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____ _____		<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b>5. Impact on Flooding</b> The proposed action may result in development on lands subject to flooding. (See Part I. E.2) <i>If "Yes", answer questions a - g. If "No", move on to Section 6.</i>			
		<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in development within a 100 year floodplain.	E2j	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in development within a 500 year floodplain.	E2k	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	<input checked="" type="checkbox"/>	<input type="checkbox"/>

g. Other impacts: _____		<input checked="" type="checkbox"/>	<input type="checkbox"/>
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<b>6. Impacts on Air</b> The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) <i>If "Yes", answer questions a - f. If "No", move on to Section 7.</i>			
		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels: i. More than 1000 tons/year of carbon dioxide (CO <sub>2</sub> ) ii. More than 3.5 tons/year of nitrous oxide (N <sub>2</sub> O) iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs) iv. More than .045 tons/year of sulfur hexafluoride (SF <sub>6</sub> ) v. More than 1000 tons/year of carbon dioxide equivalent of hydrochlorofluorocarbons (HFCs) emissions vi. 43 tons/year or more of methane	D2g D2g D2g D2g D2g D2h	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

<b>7. Impact on Plants and Animals</b> The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) <i>If "Yes", answer questions a - j. If "No", move on to Section 8.</i>			
		<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	<input checked="" type="checkbox"/>	<input type="checkbox"/>



e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____	E1b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j. Other impacts: _____		<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b>8. Impact on Agricultural Resources</b> The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES <i>If "Yes", answer questions a - h. If "No", move on to Section 9.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	E1 a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	<input type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

<b>9. Impact on Aesthetic Resources</b> The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.) If "Yes", answer questions a - g. If "No", go to Section 10.			
		<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile 1/2 -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Other impacts: _____		<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b>10. Impact on Historic and Archeological Resources</b> The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.) If "Yes", answer questions a - e. If "No", go to Section 11.			
		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical 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.	E3e	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	<input type="checkbox"/>	<input type="checkbox"/>

d. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>
If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	<input type="checkbox"/>	<input type="checkbox"/>
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	<input type="checkbox"/>	<input type="checkbox"/>

<b>11. Impact on Open Space and Recreation</b> The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan. (See Part 1. C.2.c, E.1.c., E.2.q.) If "Yes", answer questions a - e. If "No", go to Section 12.			
		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	<b>Relevant Part I Question(s)</b>	<b>No, or small impact may occur</b>	<b>Moderate to large impact may occur</b>
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b, E2h, E2m, E2o, E2n, E2p	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c, E1c, E2q	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	<input type="checkbox"/>	<input type="checkbox"/>
e. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

<b>12. Impact on Critical Environmental Areas</b> The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d) If "Yes", answer questions a - c. If "No", go to Section 13.			
		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	<b>Relevant Part I Question(s)</b>	<b>No, or small impact may occur</b>	<b>Moderate to large impact may occur</b>
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	<input type="checkbox"/>	<input type="checkbox"/>
c. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

**13. Impact on Transportation**

The proposed action may result in a change to existing transportation systems.

☐ NO☒ YES

(See Part I. D.2.j)

*If "Yes", answer questions a - f. If "No", go to Section 14.*

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action will degrade existing transit access.	D2j	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____		<input checked="" type="checkbox"/>	<input type="checkbox"/>

**14. Impact on Energy**

The proposed action may cause an increase in the use of any form of energy.

☒ NO☐ YES

(See Part I. D.2.k)

*If "Yes", answer questions a - e. If "No", go to Section 15.*

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	<input type="checkbox"/>	<input type="checkbox"/>
e. Other Impacts: _____			

**15. Impact on Noise, Odor, and Light**

The proposed action may result in an increase in noise, odors, or outdoor lighting.

☒ NO☐ YES

(See Part I. D.2.m., n., and o.)

*If "Yes", answer questions a - f. If "No", go to Section 16.*

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in routine odors for more than one hour per day.	D2o	<input type="checkbox"/>	<input type="checkbox"/>

d. The proposed action may result in light shining onto adjoining properties.	D2n	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

<b>16. Impact on Human Health</b> The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) If "Yes", answer questions a - m. If "No", go to Section 17. <div style="text-align: right;"> <input type="checkbox"/> NO      <input checked="" type="checkbox"/> YES         </div>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	<input checked="" type="checkbox"/>	<input type="checkbox"/>
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	<input checked="" type="checkbox"/>	<input type="checkbox"/>
m. Other impacts: _____		<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b>17. Consistency with Community Plans</b> The proposed action is not consistent with adopted land use plans. (See Part I. C.1, C.2. and C.3.) If "Yes", answer questions a - h. If "No", go to Section 18.			
		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	<input type="checkbox"/>	<input type="checkbox"/>
h. Other: _____		<input type="checkbox"/>	<input type="checkbox"/>

<b>18. Consistency with Community Character</b> The proposed project is inconsistent with the existing community character. (See Part I. C.2, C.3, D.2, E.3) If "Yes", answer questions a - g. If "No", proceed to Part 3.			
		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	<input type="checkbox"/>	<input type="checkbox"/>
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	<input type="checkbox"/>	<input type="checkbox"/>
g. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

**Full Environmental Assessment Form**  
**Part 3 - Evaluation of the Magnitude and Importance of Project Impacts**  
**and**  
**Determination of Significance**

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

**Reasons Supporting This Determination:**

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

Please see attached.

**Determination of Significance - Type 1 and Unlisted Actions**

SEQR Status: ☐ Type I ☒ Unlisted

Identify portions of EAF completed for this Project: ☒ Part I ☒ Part 2 ☒ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

All application materials submitted by the Applicant, memoranda from City staff and consultants, agency and public comment, and testimony from meetings held on the application.

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the \_\_\_\_\_ as lead agency that:

☒ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: 23-28 Creek Drive

Name of Lead Agency: City of Beacon Planning Board

Name of Responsible Officer in Lead Agency: John Gunn

Title of Responsible Officer: Chairman

Signature of Responsible Officer in Lead Agency:

Date: 7/10/19

Signature of Preparer (if different from Responsible Officer): Jennifer L. Gray, Esq., Keane & Beane, P.C.

Date: 7/9/19

**For Further Information:**

Contact Person: Etha Grogan, Planning Secretary

Address: 1 Municipal Plaza, Beacon, NY 12508

Telephone Number: 845-838-5002

E-mail: egrogan@cityofbeacon.org

**For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:**

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)

Other involved agencies (if any)

Applicant (if any)

Environmental Notice Bulletin: <http://www.dec.ny.gov/enb/enb.html>

**PRINT FULL FORM**



**ATTACHMENT TO  
NEGATIVE DECLARATION  
REASONS SUPPORTING DETERMINATION**

**APPLICATION FOR CONCEPT PLAN, SITE PLAN, SUBDIVISION AND  
VARIANCE APPROVALS FOR 23-28 CREEK DRIVE**

Parcel No. 6054-37-037625

**CONCLUSIONS**

Based upon a review of Parts 1 and 2 of the Full Environmental Assessment Form (EAF) and all other application materials that were submitted in support of the Proposed Action (Unlisted), along with reports from City staff and consultants, information from involved and interested agencies, and information from the public, the City of Beacon Planning Board, undergoing an coordinated review, provides the following rationale for its SEQRA Determination.

**Project Description:**

The Proposed Action is to allow construction of a mixed-use development on the former City Department of Public Works (DPW) site with a total of eight (8) apartments and 20,000 square feet of commercial space (the “Proposed Action” or “Project”) on property consisting of approximately 2.81 acres adjacent to Fishkill Creek and located at 23-28 Creek Drive in the Fishkill Creek Development (FCD) Zoning District (the “Property”). The Proposed Action includes a request for approval of a Concept Plan, Site Plan and Subdivision (lot line adjustment), and the following variances: (1) parking variance to allow 93 spaces where 113 are required; (2) building height variance to allow a 4-story building where a maximum of 3-stories are permitted; (3) building height variance to allow a 53.5’ building where a maximum of 40’ is permitted; and (4) a variance to permit two (2) of the eight (8) apartments to exceed the maximum size of 2,000 square feet. A Greenway Trail segment and public park are also proposed as part of the Project.

The Proposed Action is an Unlisted action. The Planning Board opened a public hearing to consider comments on the Proposed Action on April 9, 2019. The public hearing was closed on June 11, 2019.

**Summary of Rationale for Negative Declaration**

The Proposed Action will not result in any significant adverse impacts on the environment. In summary:

- **Impact on Land: The Proposed Action will not have a significant adverse environmental impact as a result of any physical change to the project site.**

The Property is currently improved with several buildings previously used by the City DPW. The Project would include demolition of these buildings and to construct the proposed mixed-use development with grading and site work associated with such construction. Based on the information set forth herein, the Proposed Action will not have a significant adverse environmental impact as a result of physical changes to the Property.

- **Impact on Geological Features: The Proposed Action will not have a significant adverse environmental impact on any unique or unusual land forms on the site.**

There are no unique geological features on the Property.

- **Impacts on Surface Water and Groundwater: The Proposed Action will not have a significant adverse environmental impact on surface or groundwater quality or quantity.**

Since site disturbance will exceed 1-acre, a Stormwater Pollution Prevention Plan is required to obtain coverage under the NYSDEC SPDES General Permit GP-0-15-002. The Project will result in a slight decrease in impervious area as compared to existing conditions, so pursuant to NYSDEC Stormwater Manual requirements the Project requires water quality control for 25% of the impervious surface coverage, as well as erosion and sediment control measures.

A Preliminary Stormwater Pollution Prevention Plan, prepared by Hudson Land Design, has been reviewed by the Planning Board and the City Engineer. The City Engineer has confirmed that the general design of the SWPPP appears acceptable. Prior to finalizing the SWPPP, infiltration tests will need to be conducted at the locations of the two (2) proposed infiltration systems. Sizing information for the hydrodynamic separators will also be provided prior to finalizing the SWPPP.

See response re Human Health, below, concerning groundwater quality.

The Project does not include or require wastewater discharged to groundwater. The Project will be connected to the existing public water distribution and sanitary sewer systems. Water usage and liquid waste generation is anticipated to be 2,940 gallons per day. Adequate water supply and sewer capacity exist for these flows. A new sewer service connection will be provided at the proposed building and all existing service connections on-site will be disconnected to the City's mains and capped in place or removed. This will eliminate any inflow and infiltration issues that may be occurring as a result of the existing service connections.

The Proposed Action will not result in any significant adverse impact to surface or groundwater quality or quantity.

- **Impact on Flooding: The Proposed Action will not have a significant adverse environmental impact on or alter drainage flows or patterns, or surface water runoff.**

Portions of the site are within the 100 year flood plain. The Project design avoids disturbances within the flood plain to the greatest extent practicable, but some areas in the flood plain are proposed to be disturbed. A portion of the proposed building is located within the 100 year flood plan which results in 312.16 cubic yards of fill within the flood plain. In accordance with Chapter 123 (Flood Damage Prevention) of the City Code, the fill in the floodplain is mitigated near the south end of the Site where 336.72 cubic yards of existing material is proposed to be removed for a net removal of 24.56 cubic yards. This provides additional available floodplain storage post-development.

A Flood Mitigation Calculation Plan, prepared by Hudson Land Design Professional Engineering, P.C., dated March 26, 2019, last revised May 28, 2019, was submitted to the Planning Board and reviewed by the City Engineer for conformance with the requirements of Chapter 123 (Flood Damage Prevention) of the City Code. The City Engineer confirmed that the Flood Mitigation Calculation Plan is in conformance with such requirements. No disturbances are proposed within the 100 year flood way. Based on a review of the Flood Mitigation Plan, the Project is not expected to impact or change the flood plain elevation of the Fishkill Creek.

Portions of the Greenway Trail are located below the floodplain elevation so those portions of the trail could be partially inundated during flood conditions.

Fishkill Creek is classified as "C" by NYSDEC and will not require a stream bank disturbance permit. However, two proposed stormwater outfalls will require certain permits. A joint application was submitted to the U.S Army Corps of Engineers (ACOE) and NYSDEC for the Nationwide Permit for Outfall Structures in connection with the two stormwater outfalls proposed to be constructed within the bank of Fishkill Creek. NYSDEC has issued a blanket Water Quality Certification dated May 22, 2019 after determining the Project is eligible for coverage under such blanket WQC. Any modification to the stormwater outfalls as shown on the plans received by NYSDEC on May 6, 2019 will require an updated determination from NYSDEC. Thus, an individual WQC permit is not required from NYSDEC. According to the Applicant, ACOE has acknowledged that the proposed disturbances to the streambank for floodplain mitigation are not within their jurisdiction and that the proposed work must be performed in accordance with FEMA and City of Beacon Regulations.

Therefore, the Project will not have a significant adverse impact on or alter drainage flows or patterns, or surface water runoff.

- **Impact on Air: The Proposed Action will not have a significant adverse environmental impact on air quality.**

Construction activities associated with grading and excavation could result in temporary air quality impacts. Air quality in the area, however, is not expected to be significantly impacted by project construction because the construction activities will be temporary and confined to the Property. Construction vehicles will emit certain air pollutants through engine exhaust. There is also the potential for fugitive dust to be created during the construction period from site preparation activities, including removal of existing impervious surfaces and vegetation, and site grading. These unavoidable short term impacts to air quality will cease upon project completion. Construction will be conducted in accordance with all applicable federal, state and local codes.

- **Impact on Plants and Animals: The Proposed Action will not have a significant adverse environmental impact on flora or fauna.**

Approximately twenty-eight (28) trees over 6" caliper are proposed to be removed within the limits of disturbance. All other major trees are proposed to remain. A Landscape Plan has been prepared which will be finalized during the Site Plan review stage. The Landscape Plan proposes the planting of approximately twenty-eight (28) new trees.

- **Impact on Agricultural Resources: The Proposed Action will not have a significant adverse environmental impact on agricultural resources.**

There are no agricultural resources in the vicinity of the Property.

- **Impact on Aesthetic Resources: The Proposed Action will not have a significant adverse environmental impact on aesthetic resources.**

The Proposed Action will not result in the obstruction, elimination or significant screening of one or more officially designated scenic views. The Proposed Action will be visible from Fishkill Creek but the aesthetics of the site will be far improved from the existing condition of a DPW facility. Further, public viewing of Fishkill Creek from the Site will be enhanced by providing a Greenway Trail segment and a public park at the south end of the site.

- **Impact on Historic and Archeological Resources: The Proposed Action will not have a significant adverse environmental impact on historic or archeological resources.**

The Project is located in close proximity to the State and National Register eligible Upper Main Street Historic District. However, the Project is set back a distance from the Main Street/Churchill Street corridor. Moreover, the proposed architecture and

layout of the Project is not in direct conflict with the Upper Main Street Historic District.

By letter dated May 23, 2019, NYS Historic Preservation Office (SHPO) cited the Upper Main Street Historic District and found that the Project will have “No Adverse Effect” to historic and cultural resources. By email dated May 17, 2019, SHPO also confirmed that based on information concerning the historic disturbance and development on the Property, the potential for the presence of archeological resources is low.

Therefore, the Project will not have a significant adverse impact on historic or archeological resources.

- **Impact on Open Space and Recreation: The Proposed Action will not have a significant adverse environmental impact on open space and recreation.**

The area of the Proposed Action is not designated as open space by the City of Beacon. The Proposed Action will not result in the loss of a current or future recreational resource, eliminate significant open space, or result in loss of an area now used informally by the community as an open space resource.

- **Impact on Critical Environmental Areas: The Proposed Action will not have a significant adverse environmental impact on Critical Environmental Areas.**

The Proposed Action is not located in a Critical Environmental Area.

- **Impact on Transportation: The Proposed Action will not have a significant adverse environmental impact on transportation.**

The Applicant submitted a traffic report prepared by Maser Consulting P.A., dated March 25, 2019 to review the traffic impacts associated with the Project. Based on data provided by the Institute of Transportation Engineers (ITE) as contained in their publication Trip Generation, 10th Edition dated 2017, the Project is estimated to generate approximately 45 total trips during the AM Peak Hour and approximately 51 total trips during the PM Peak Hour. Capacity analyses were conducted utilizing Existing, No-Build and Build Traffic Volumes to determine the existing and future operating conditions in the vicinity of the Property. The results indicate that the site generated traffic can be accommodated on the area roadways without significant impacts to operating conditions at the study area intersections. The study area intersections included: (1) Tioronda Avenue & Main Street; (2) Churchill Street & Main Street; (3) Creek Road & Churchill Street; and (4) Churchill Street & Beacon City Municipal Lot/Site Access. The traffic report by Maser Consultant was reviewed by the City’s Traffic Engineer, Creighton Manning Engineering, LLP. Creighton Manning

generally concurred with the results after confirming that the 2017 traffic data was appropriately adjusted to account for growth and new projects since 2017.

Based on the professional traffic impact review, the Project will not create a significant adverse traffic impact.

- **Impact on Energy: The Proposed Action will not have a significant adverse environmental impact on energy.**

The existing energy infrastructure will adequately serve the additional demand. The Proposed Action does not require a new substation, or an upgrade to any existing substation.

- **Impact on Noise, Odor and Light: The Proposed Action will not have a significant adverse environmental impact as a result of objectionable odors, noise or light.**

The Proposed Action is not anticipated to generate any noxious odors. Outdoor lighting will be consistent with typical residential lighting and will include building mounted lights and pole mounted lights. All lighting shall be shielded and pointed downward. Noise impacts associated with the proposed Project will be limited to temporary impacts generated during construction. Temporary noise impacts associated with construction will be mitigated by limiting construction activities to the hours between 7:00 a.m. and 5:00 p.m Monday-Friday, and 8 a.m. – 5 p.m on Saturday. It is not anticipated that blasting will be necessary during the proposed construction. If blasting does become necessary, it will be performed in accordance with all applicable state and local requirements. In addition, there will be no significant noise impacts post-construction.

- **Impact on Human Health: The Proposed Action will not have a significant adverse environmental impact on human health from exposure to new or existing sources of contaminants.**

Based upon soil testing conducted at the site, and the findings of those tests, a spill number was opened with NYSDEC by the Applicant's environmental engineer. Remediation of the site will be conducted where petroleum contamination was found, and the potential for groundwater contamination shall be assessed during remediation. The Applicant will prepare a remediation work plan for submittal to NYSDEC in accordance with NYSDEC requirements. A copy of the remediation work plan will also be submitted to the City of Beacon for informational purposes. No building permit should be issued for the Project until site remediation has been completed as determined by NYSDEC. Any additional contamination discovered during construction which requires remediation shall be remediated in accordance with all State and local laws, rules and regulations.

- **Consistency with Community Plans and Community Character: The Proposed Action is not inconsistent with adopted community plans and community character.**

The Proposed Action is generally consistent with the Comprehensive Plan and City Zoning Code.

Based upon this information and the information in the Full Environmental Assessment Form, the Zoning Board of Appeals finds that the Proposed Action will not have any significant adverse impacts upon the environment. .

Adopted: July 9, 2019  
Beacon, New York

Motion by P. LAMBERT, seconded by R. WILLIAMS:

Gary Barrack	Voting: <u>AYE</u>	Jill Reynolds	Voting: <u>AYE</u>
David Burke	Voting: <u>EXCUSED</u>	Randall Williams	Voting: <u>AYE</u>
Patrick Lambert	Voting: <u>AYE</u>	John Gunn, Chairman	Voting: <u>AYE</u>
Rick Muscat	Voting: <u>AYE</u>		

Approved 6-0  
Denied

# Exhibit C





# Memorandum

## *Planning Board*

---

TO: Zoning Board Chairman Lanier and Zoning Board Members

FROM: Planning Board Chairman Gunn and Planning Board Members

RE: Advisory Opinion  
23-28 Creek Drive  
Applicant: 23-28 Creek Drive, LLC

DATE: July 11, 2019

The Planning Board has reviewed the application submitted by 23-28 Creek Drive for variances to allow construction of a mixed-use development with eight apartments and 20,000 sq. ft. of commercial space on the former DPW site situated on Creek Drive. A lengthy discussion took place about building height, the number of stories, and apartment size as it relates to this project. After careful consideration, members voted to remain neutral with regard to the applicant's variance requests for building height, number of stories, and apartment size.

They discussed the variance for parking and gave thought to the following factors. The Fishkill Creek Development zone relies on general parking standards, while the similar mixed use Linkage and CMS zoning districts would require far fewer spaces, and in this case the commercial space is the main factor in the parking requirement. A shared parking situation will exist because some of the employees will live and work on site, and the commercial operation will take not be operating when some residents are at home. Lastly fewer parking spaces would cut down on the amount of impervious surfaces and add more accessible greenspace. After careful consideration, members unanimously supported and send a positive recommendation with regard to the parking variance.

As always the final decision will be based on your review of the application but the Planning Board felt the aforementioned factors should be offered as an advisory viewpoint.



# Memorandum

## *Planning Board*

---

TO: Mayor Randy Casale and City Council Members

FROM: Etha Grogan  
for Planning Board Chairman Gunn and Planning Board Members

RE: 23-28 Creek Drive

DATE: July 11, 2019

As requested by the City Council in its December 3, 2018 resolution, the Planning Board, acting as Lead Agency, reviewed the 23-28 Creek Drive Concept Plan for significant environmental impacts under the State Environmental Quality Review Act (SEQRA).

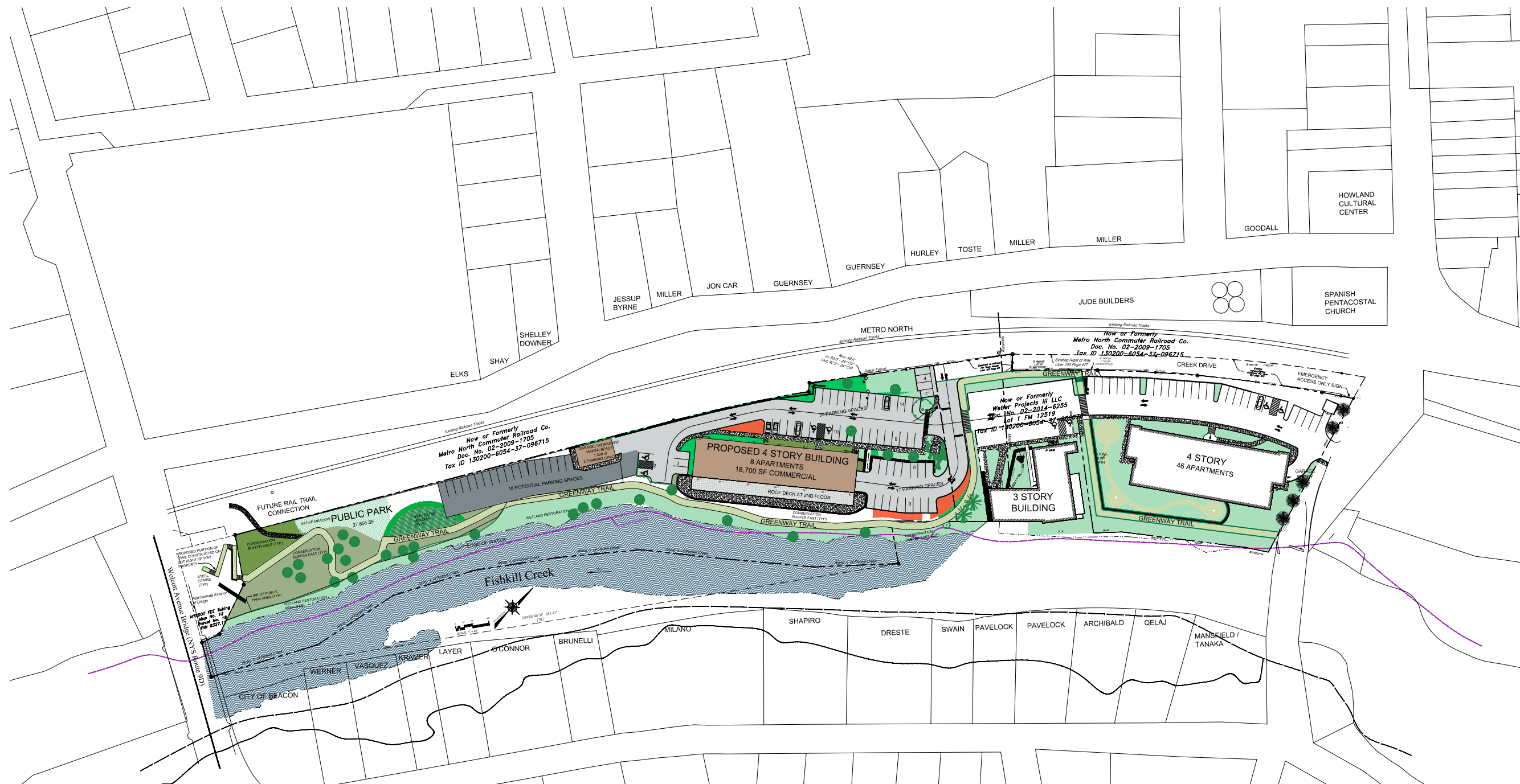
A comprehensive review took place during the Planning Board's regular meetings on March 12, 2019, April 9, 2019, May 14, 2019, June 11, 2019 and July 9, 2019. After hearing from the public and considering all the associated materials prepared in connection with the proposed action, the Planning Board at its July 9, 2019 meeting adopted a Negative Declaration, finding that the proposal will not result in any significant environmental impacts.

The City Council resolution also requested a report and recommendations on the proposed Concept Plan. At its July 9, 2019 meeting all the Planning Board members present voted to issue a positive recommendation to the Council on the current Concept Plan. The applicant has been responsive to requests for additional information and changes to the plan from the Board, City consultants, and Greenway Trail Committee. From the Planning Board's perspective, the application appears complete and satisfies the Concept Plan criteria of the Fishkill Creek Development District.

It is important to note, however, that more specific architectural, landscaping, lighting, parking, and engineering details have not yet been reviewed by the Planning Board. These and other more detailed and technical issues will be covered during the subsequent Site Plan review process.

If you have any questions, please feel free to contact me.

# Exhibit D



#### NEGATIVE IMPACTS OF POTENTIAL ADDITIONAL PARKING TO CREATE 113 TOTAL PARKING SPACES:

1. THE POTENTIAL PARKING ELIMINATES A SIGNIFICANT STORMWATER MANAGEMENT AREA - NEED TO GO UNDERGROUND OR PUSH TO THE SOUTH, FURTHER ENCROACHMENT INTO THE PARK
2. RETAINING WALL WILL BE NEEDED ON BOTH SIDES OF THE PARKING AREA AND GREENWAY TRAIL. THE TRAIL WALL MAY ENCROACH INTO THE FLOODPLAIN REQUIRING FURTHER MITIGATION
3. THE LANDSCAPED BUFFER BETWEEN THE GREENWAY TRAIL AND PARKING LOT WOULD BE ELIMINATED. A GREENWAY TRAIL VARIANCE WOULD BE REQUIRED, OR THE GREENWAY TRAIL WOULD HAVE TO MOVE CLOSER TO THE CREEK THAN IS PERMITTED
4. OVERALL GREEN SPACE WOULD BE REDUCED BY THE ADDITIONAL PARKING AREA
5. INCREASED IMPERVIOUS AREA WOULD REQUIRE FURTHER STORM WATER MANAGEMENT
6. GREEN SPACE AREA AREA IS REDUCED BY APPROXIMATELY 27%

SITE PLAN: POTENTIAL PARKING DIAGRAM

23-28 Creek Drive: Additional Parking Diagram

Mixed Use Commercial Residential

Beacon, NY

Scale: 1" = 40'

Aryeh Siegel Architect

July 22, 2019

**City of Beacon Planning Board**  
**9/17/2019**

**Title:**

**19 South Elm Street**

**Subject:**

Application submitted by Robert Vye, 19 South Elm Street, Tax Grid No. 30-5954-27-813875-00, R1-5 Zoning District, for relief from Section 223-17(E) to construct a 425 sq. ft. detached garage (*300 sq. ft. maximum permitted*)

**Background:**

**ATTACHMENTS:**

Description	Type
19 South Elm Street Application	Application
19 South Elm Street Site Plan	Map
19 South Elm Street Garage Plan	Plans

# ZONING BOARD OF APPEALS

City of Beacon, New York

## APPLICATION FOR APPEAL

OWNER: ROBERT VYE

ADDRESS: 19 ELM ST

BEACON NY 12508

TELEPHONE: 917 903 4522

E-MAIL: 1PVBOB@HVC.RR.COM

APPLICANT (if not owner): \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

E-MAIL: \_\_\_\_\_

REPRESENTED BY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

E-MAIL: \_\_\_\_\_

PROPERTY LOCATION: 19 ELM ST.

ZONING DISTRICT: R1-5

TAX MAP DESIGNATION: SECTION 5954

BLOCK 27 LOT 813875

Section of Zoning Code appealed from or Interpretation desired:

223-14E(3)

Reason supporting request:

PER REGULATIONS ONLY ALLOWED 300ft<sup>2</sup> ±  
GARAGE. WOULD LIKE A 425ft<sup>2</sup> BUILDING AS MORE USEFUL

Supporting documents submitted herewith: Site Plan, Survey, etc. as required:

SITE PLAN / SURVEY DRAWINGS & 3D RENDER

Date: 8/22/19

Robert Vye  
Owner's Signature

### Fee Schedule

AREA VARIANCE	\$ 250
USE VARIANCE	\$ 500
INTERPRETATION:	\$ 250

Robert Vye  
Applicant's Signature

**\*\*escrow fees may apply if required by Chairman\*\***

# APPLICATION PROCESSING RESTRICTION LAW

## Affidavit of Property Owner

Property Owner: ROBERT VYE / KAREN MICHEL

If owned by a corporation, partnership or organization, please list names of persons holding over 5% interest.

List all properties in the City of Beacon that you hold a 5% interest in:

43 VERPLANCK AVE

Applicant Address: 195 ELM ST. BEACON NY

Project Address: 195 ELM ST. BEACON NY

Project Tax Grid # ~~130700~~ 813875

Type of Application AREA VARIANCE

Please note that the property owner is the applicant. "Applicant" is defined as any individual who owns at least five percent (5%) interest in a corporation or partnership or other business.

I, ROBERT VYE, the undersigned owner of the above referenced property, hereby affirm that I have reviewed my records and verify that the following information is true.

1. No violations are pending for ANY parcel owned by me situated within the City of Beacon ✓
2. Violations are pending on a parcel or parcels owned by me situated within the City of Beacon
3. ALL tax payments due to the City of Beacon are current ✓
4. Tax delinquencies exist on a parcel or parcels owned by me within the City of Beacon
5. Special Assessments are outstanding on a parcel or parcels owned by me in the City of Beacon
6. ALL Special Assessments due to the City of Beacon on any parcel owned by me are current

Robert Vye

Signature of Owner

Title if owner is corporation

### Office Use Only:

Applicant has violations pending for ANY parcel owned within the City of Beacon (Building Dept.)

NO YES Initial

✓        RV

ALL taxes are current for properties in the City of Beacon are current (Tax Dept.)

       ✓ RV

ALL Special Assessments, i.e. water, sewer, fines, etc. are current (Water Billing)

✓ X RV

owed water but paid  
9-4-19

**FOR OFFICE USE ONLY**

Application #

**CITY OF BEACON**

1 Municipal Plaza, Beacon, NY

Telephone (845) 838-5000 • <http://cityofbeacon.org/>**INDIVIDUAL DISCLOSURE FORM**

(This form must accompany every land use application and every application for a building permit or certificate of occupancy submitted by any person(s))

Disclosure of the names and addresses of all persons) filing a land-use application with the City is required pursuant to Section 223-62 of the City Code of the City of Beacon. Applicants shall submit supplemental sheets for any additional information that does not fit within the below sections, identifying the Section being supplemented.

**SECTION A**Name of Applicant: ROBERT VYEAddress of Applicant: 195 ELM ST. BEACONTelephone Contact Information: 917 903 4522**SECTION B. List all owners of record of the subject property or any part thereof.**

Name	Residence or Business Address	Telephone Number	Date and Manner title was acquired	Date and place where the deed or document of conveyance was recorded or filed.
ROBERT VYE	195 ELM ST BEACON	917 903 4522	PURCHASE	12/20/2017
KAREN MICHEL	195 ELM ST BEACON	917 572 8869	PURCHASE	DUTCHESS COUNTY
				POUGHKEEPSIE NY



**SECTION B.** Is any owner of record an officer, elected or appointed, or employee of the City of Beacon or related, by marriage or otherwise, to a City Council member, planning board member, zoning board of appeals member or employee of the City of Beacon ?

☐

YES

☒

NO

If yes, list every Board, Department, Office, agency or other position with the City of Beacon with which a party has a position, unpaid or paid, or relationship and identify the agency, title, and date of hire.

Agency	Title	Date of Hire, Date Elected, or Date Appointed	Position or Nature of Relationship

**SECTION C.** If the applicant is a contract vendee, a duplicate original or photocopy of the full and complete contract of purchase, including all riders, modification and amendments thereto, shall be submitted with the application.

**SECTION D.** Have the present owners entered into a contract for the sale of all or any part of the subject property and, if in the affirmative, please provide a duplicate original or photocopy of the fully and complete contract of sale, including all riders, modifications and amendments thereto.

☐

YES

☒

NO

I, ROBERT VYE being first duly sworn, according to law, deposes and says that the statements made herein are true, accurate, and complete.

(Print) ROBERT VYE

(Signature) Robert Vye

617.20  
Appendix B  
Short Environmental Assessment Form

**Instructions for Completing**

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

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

<b>Part 1 - Project and Sponsor Information</b>																		
Name of Action or Project: <b>ROBERT VYE</b>																		
Project Location (describe, and attach a location map): <b>BUILD GARAGE</b>																		
Brief Description of Proposed Action: <b>19 S ELM ST BEACON</b>																		
Name of Applicant or Sponsor: <b>ROBERT VYE</b>		Telephone: <b>917 903 4522</b>																
		E-Mail: <b>1 PV BOB@HVC.RR.COM</b>																
Address: <b>19 S. ELM ST</b>																		
City/PO: <b>BEACON</b>		State: <b>NY</b>	Zip Code: <b>12508</b>															
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			<table border="1" style="width: 100%; text-align: center;"><tr><td>NO</td><td>YES</td></tr><tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	NO	YES	<input type="checkbox"/>	<input type="checkbox"/>											
NO	YES																	
<input type="checkbox"/>	<input type="checkbox"/>																	
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval:			<table border="1" style="width: 100%; text-align: center;"><tr><td>NO</td><td>YES</td></tr><tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	NO	YES	<input type="checkbox"/>	<input type="checkbox"/>											
NO	YES																	
<input type="checkbox"/>	<input type="checkbox"/>																	
3.a. Total acreage of the site of the proposed action? <u>  .19  </u> acres																		
b. Total acreage to be physically disturbed? <u>  .001  </u> acres																		
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? <u>  .19  </u> acres																		
4. Check all land uses that occur on, adjoining and near the proposed action. <table style="width: 100%;"><tr><td><input type="checkbox"/> Urban</td><td><input type="checkbox"/> Rural (non-agriculture)</td><td><input type="checkbox"/> Industrial</td><td><input type="checkbox"/> Commercial</td><td><input checked="" type="checkbox"/> Residential (suburban)</td></tr><tr><td><input type="checkbox"/> Forest</td><td><input type="checkbox"/> Agriculture</td><td><input type="checkbox"/> Aquatic</td><td colspan="2"><input type="checkbox"/> Other (specify): _____</td></tr><tr><td><input type="checkbox"/> Parkland</td><td colspan="4"></td></tr></table>				<input type="checkbox"/> Urban	<input type="checkbox"/> Rural (non-agriculture)	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Residential (suburban)	<input type="checkbox"/> Forest	<input type="checkbox"/> Agriculture	<input type="checkbox"/> Aquatic	<input type="checkbox"/> Other (specify): _____		<input type="checkbox"/> Parkland				
<input type="checkbox"/> Urban	<input type="checkbox"/> Rural (non-agriculture)	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Residential (suburban)														
<input type="checkbox"/> Forest	<input type="checkbox"/> Agriculture	<input type="checkbox"/> Aquatic	<input type="checkbox"/> Other (specify): _____															
<input type="checkbox"/> Parkland																		

5. Is the proposed action, a. A permitted use under the zoning regulations?	NO <input type="checkbox"/>	YES <input type="checkbox"/>	N/A <input type="checkbox"/>
b. Consistent with the adopted comprehensive plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
b. Are public transportation service(s) available at or near the site of the proposed action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c. Are any pedestrian accommodations or bicycle routes available on or near site of the proposed action?	<input type="checkbox"/>	<input type="checkbox"/>	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____	NO <input type="checkbox"/>	YES <input type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: <u>N/A GARAGE</u>	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: <u>N/A GARAGE</u>	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
12. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places?	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
b. Is the proposed action located in an archeological sensitive area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: <input type="checkbox"/> Shoreline <input type="checkbox"/> Forest <input type="checkbox"/> Agricultural/grasslands <input type="checkbox"/> Early mid-successional <input type="checkbox"/> Wetland <input checked="" type="checkbox"/> Urban <input checked="" type="checkbox"/> Suburban			
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
16. Is the project site located in the 100 year flood plain?	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? <input type="checkbox"/> NO <input type="checkbox"/> YES	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: _____	<input type="checkbox"/> NO <input type="checkbox"/> YES		

18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>

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

Applicant/sponsor name: ROBERT VYLE Date: 8/22/19

Signature: *Robert Vyle*

**Part 2 - Impact Assessment.** The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	<input type="checkbox"/>	<input type="checkbox"/>
2. Will the proposed action result in a change in the use or intensity of use of land?	<input type="checkbox"/>	<input type="checkbox"/>
3. Will the proposed action impair the character or quality of the existing community?	<input type="checkbox"/>	<input type="checkbox"/>
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	<input type="checkbox"/>	<input type="checkbox"/>
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	<input type="checkbox"/>	<input type="checkbox"/>
7. Will the proposed action impact existing:	<input type="checkbox"/>	<input type="checkbox"/>
a. public / private water supplies?	<input type="checkbox"/>	<input type="checkbox"/>
b. public / private wastewater treatment utilities?	<input type="checkbox"/>	<input type="checkbox"/>
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	<input type="checkbox"/>	<input type="checkbox"/>
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	<input type="checkbox"/>	<input type="checkbox"/>

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	<input type="checkbox"/>	<input type="checkbox"/>
11. Will the proposed action create a hazard to environmental resources or human health?	<input type="checkbox"/>	<input type="checkbox"/>

**Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3.** For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

<input type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
<input type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.
<div> <div>Name of Lead Agency</div> <div>Date</div> </div>	
<div> <div>Print or Type Name of Responsible Officer in Lead Agency</div> <div>Title of Responsible Officer</div> </div>	
<div> <div>Signature of Responsible Officer in Lead Agency</div> <div>Signature of Preparer (if different from Responsible Officer)</div> </div>	

**PRINT**





**North**  
Basis of Bearings  
Document #: 02 2006 2730

lands now or formerly of  
Jacob Dorland  
Document #: 02 2017 7990  
Tax Grid ID #: 809883

5' minimum side/rear yard setback  
line for accessory buildings per  
Residential Zoning District R1-5 (typ)

chain link  
fence  
wood fence

adj.  
property  
line (typ)

N 47°11'53" E  
85.00'

5.0'

relocated  
10'x10'  
shed

wood  
steps

deck  
w/rail

cellar  
doors

13.1'

5.7'

adjacent  
garage

chain link  
fence

lands now or formerly of  
Lesley Mann & Lometa Mann  
Document #: 02 1996 4206  
Tax Grid ID #: 816880

lands now or formerly of  
Insun Kim  
Document #: 02 2006 2730  
Tax Grid ID #: 805865

N 48°08'00" W  
93.76'

proposed  
17'x25'  
garage

brick  
walk

wood  
steps

elec.  
meter

2 story  
frame  
residence

enclosed  
porch

deck  
open  
covered  
porch

wood  
steps

adjacent  
2 story  
residence

adjacent  
open  
covered  
porch

**Subject Property**  
Tax Map ID: 813875  
Document #: 02 2017 9535  
Area: 8,051.7 s.f. - 0.185 Ac.

chain link  
fence  
wood fence

paved  
drive

wood fence  
post (typ)

36.0'

conc. walk

85.24'

S 49°05'37" W

4' wide conc.  
sidewalk

adjacent  
paved  
drive

adjacent  
open  
covered  
porch

R.O.W.  
line  
(typ)

drop  
curb

overhead  
utility line  
(typ)

edge of  
pavement  
(typ)

water  
valve

granite curb  
remnants

u-pole  
#70353

u-pole  
#70354

**South Elm Street**  
(assumed R.O.W. width of 40')



(viewed northerly)

(viewed northwesterly)

(viewed northwesterly)

(viewed southeasterly)

**SURVEYOR'S NOTES:**

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2. Unauthorized alteration of an item in any way, or addition to a survey map for any person, unless acting under the direction of a licensed land surveyor, is a violation of section 7209, subdivision 2, of the New York State Education Law.
3. Only maps bearing the surveyor's signature overlaid with embossed seal are genuine true and correct copies of the surveyor's original work and opinion. Anything other than copies with an embossed seal and signature may contain unauthorized and undetectable modifications, deletions, additions, and changes, and are not to be relied upon. A copy of this document without a proper application of the surveyor's embossed seal should be assumed to be an unauthorized copy.
4. Certifications on this map signify that the map was prepared in accordance with the current existing Code of Practice for Land Surveys adopted by the New York State Association of Professional Land Surveyors, Inc. The certification is limited to persons for whom the map is prepared, to the title company, to the governmental agency, and to the lending institution listed on this map.
5. The certifications herein are not transferable.
6. The location of underground improvements or encroachments are not always known and often must be estimated. If any underground improvements or encroachments exist or are shown, the improvements or encroachments are not covered by this certificate.
7. This survey is subject to the findings of a title report and or title search.
8. Surveyed as per deeds, prior survey maps, filed maps, physical evidence and existing monumentation found at the site.
9. Subject to any conditions, restrictions, covenants and/or right-of ways/easements of record, if any.

**CERTIFICATION NOTES:**

This certification is made only to named parties for purchase and/or mortgage of herein delineated property by named purchaser. No responsibility or liability is assumed by surveyor for use of survey for any other purpose including, but not limited to, use of survey for survey affidavit, resale of property, or to any other person not listed in certification, either directly or indirectly, the setting of fences and/or any other structures in or near the property lines. Unless indicated otherwise, property corners were not set.

**CERTIFIED TO:**

I hereby certify to:  
**Karen S. Michel & Robert C. Vye**  
The City of Beacon

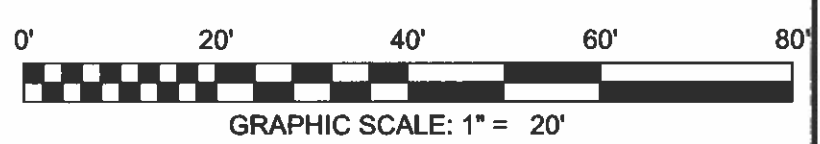
**PROPERTY LINE DETERMINATION NOTES:**

Due to the lack of discovery of survey markers as set by other surveyors in direct proximity to the subject and adjoining properties, and in lieu of said discovery, the surveyor's opinion with respect to establishing the locations of the physical improvements relative to the record lines was based on "Lines Of Possession" as follows:

The alignment of multiple fence lines along the southwesterly and northwesterly property lines, the alignment of a single fence line along the northeasterly property line, and the alignment of the sidewalk, curb, and pavement of the frontage road along the southeasterly property line, when taken in conjunction were in the surveyor's opinion coincident with the deed lines of record, and as such deemed to be acceptable evidence of possession.

**REFERENCES:**

1. The Official Tax Assessor's Maps for the City of Beacon, Dutchess County, New York.
2. Various Deeds of Record - Liber and Page as shown:



GRAPHIC SCALE: 1" = 20'

**SURVEYOR'S CERTIFICATION:**

I hereby certify to the hereon listed parties that this map represents the results of an actual on the ground field survey completed on date, 2018, per record description, of the land shown hereon, located at 19 South Elm Street, City of Beacon, County of Dutchess, State of New York, and was performed in accordance with the current existing Code of Practice for Land Surveys adopted by the New York State Association of Professional Land Surveyors, Inc. and is to the best of my knowledge, belief and information, accurate and correct. Except as shown hereon: "there are no encroachments either way across property lines; title lines and lines of actual possession are the same".

**Jonathan N. Millen, L.L.S.**

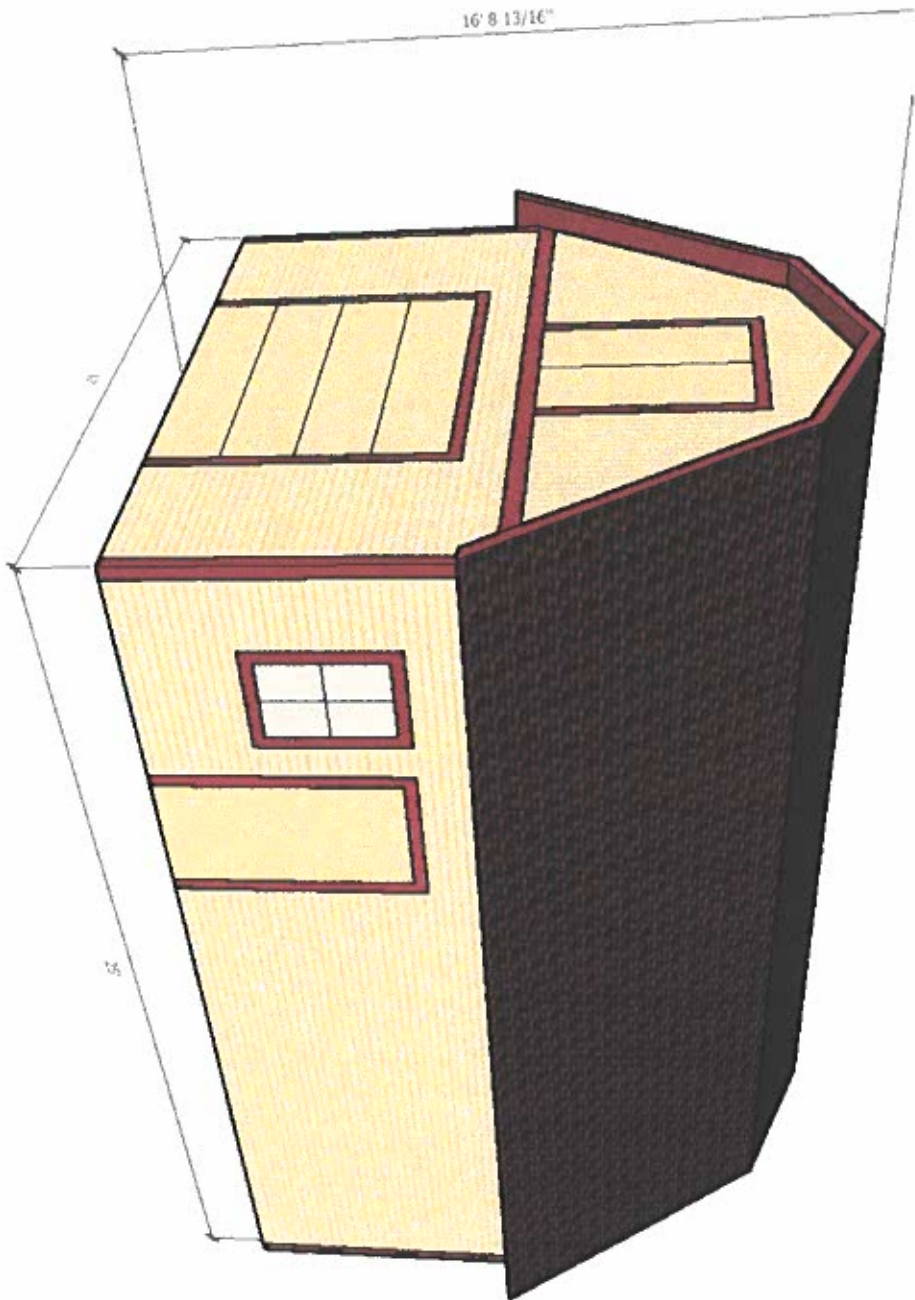
N.Y. LIC. No. 050746



**Survey & Site Plan for Proposed Garage and Shed**  
of the lands of  
**Karen S. Michel & Robert C. Vye**

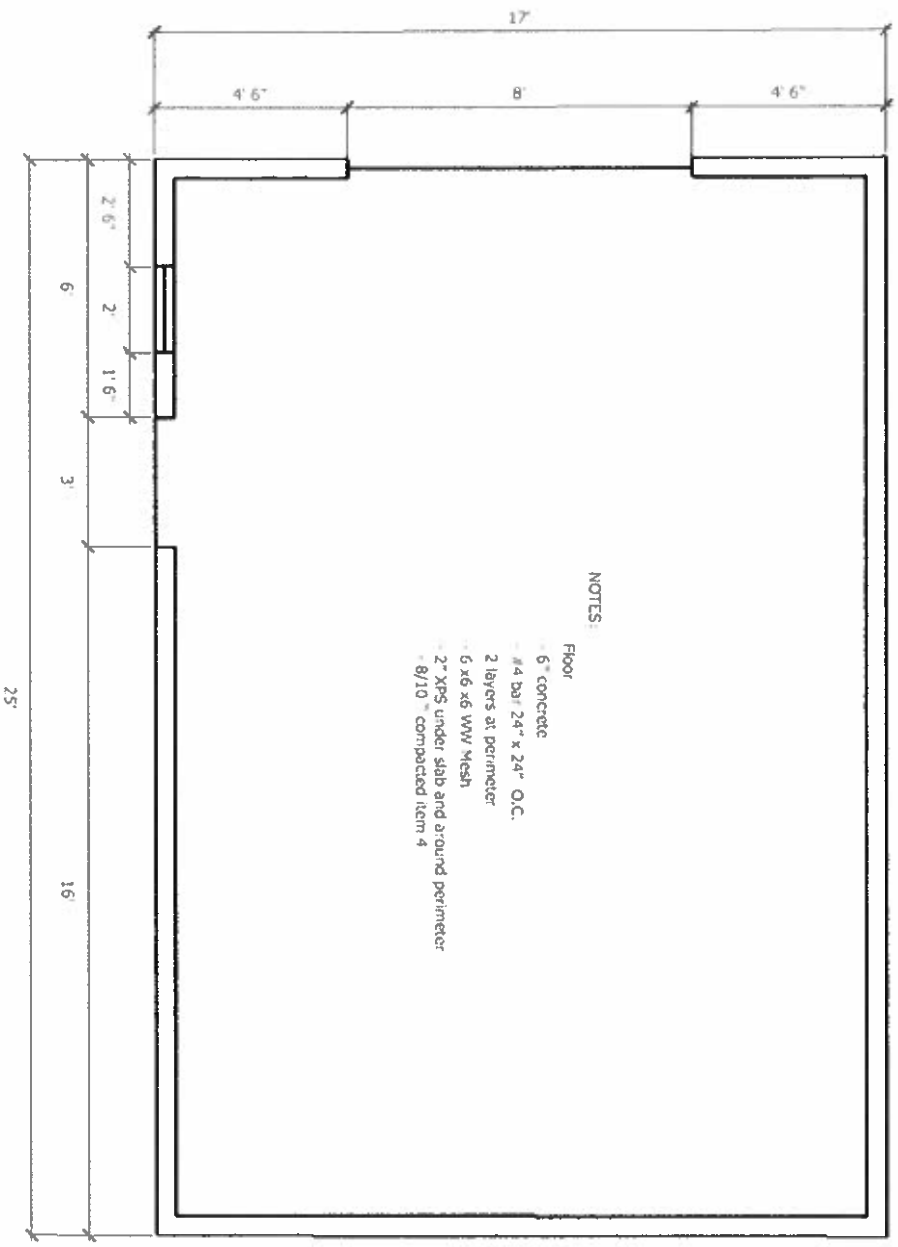
**Automated Construction Enhanced Solutions, Inc.**  
**Professional Land Surveying**  
1229 Route 300 - Suite 3 - Newburgh, NY 12550  
Office: 845.942.7198 Field: 914.906.8830 E-Mail: imillen@acesurveying.com





**Proposed Garage**

19 S Elm St. Beacon

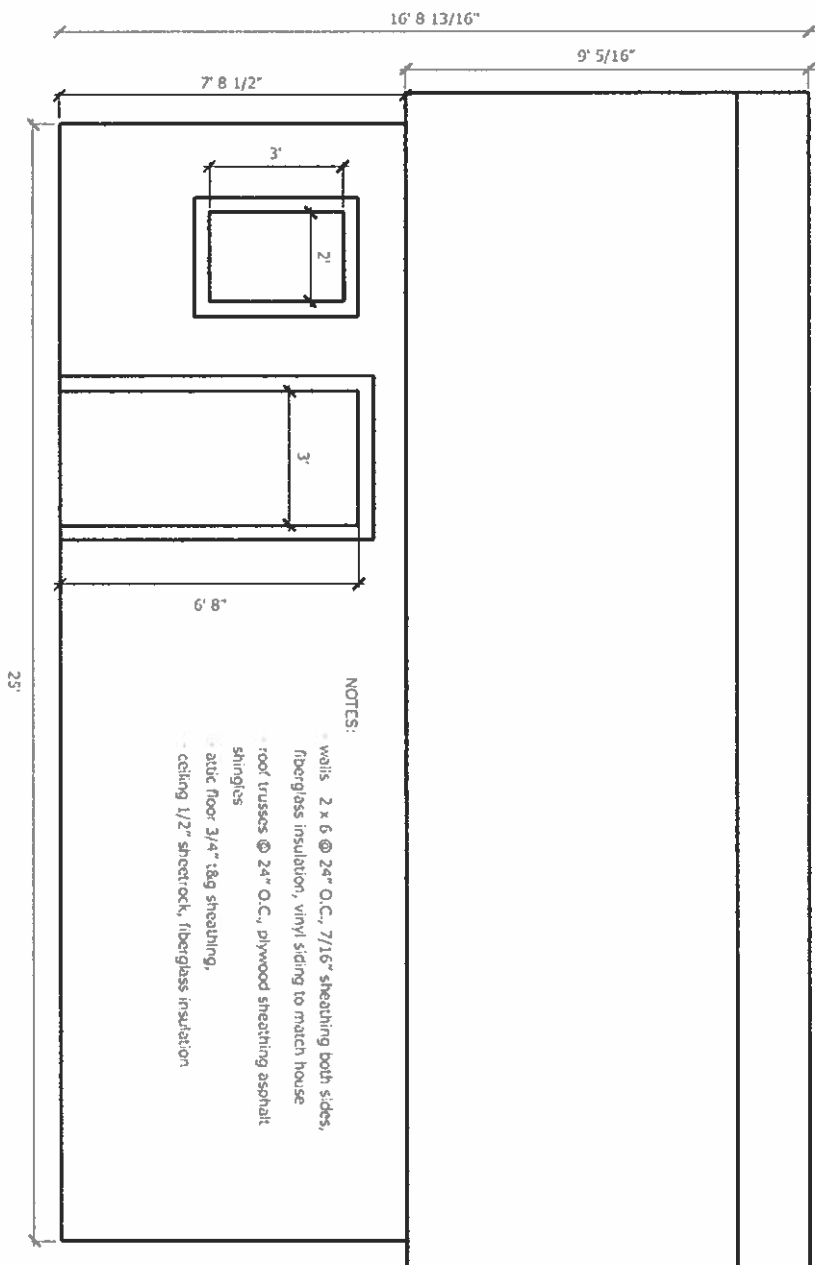


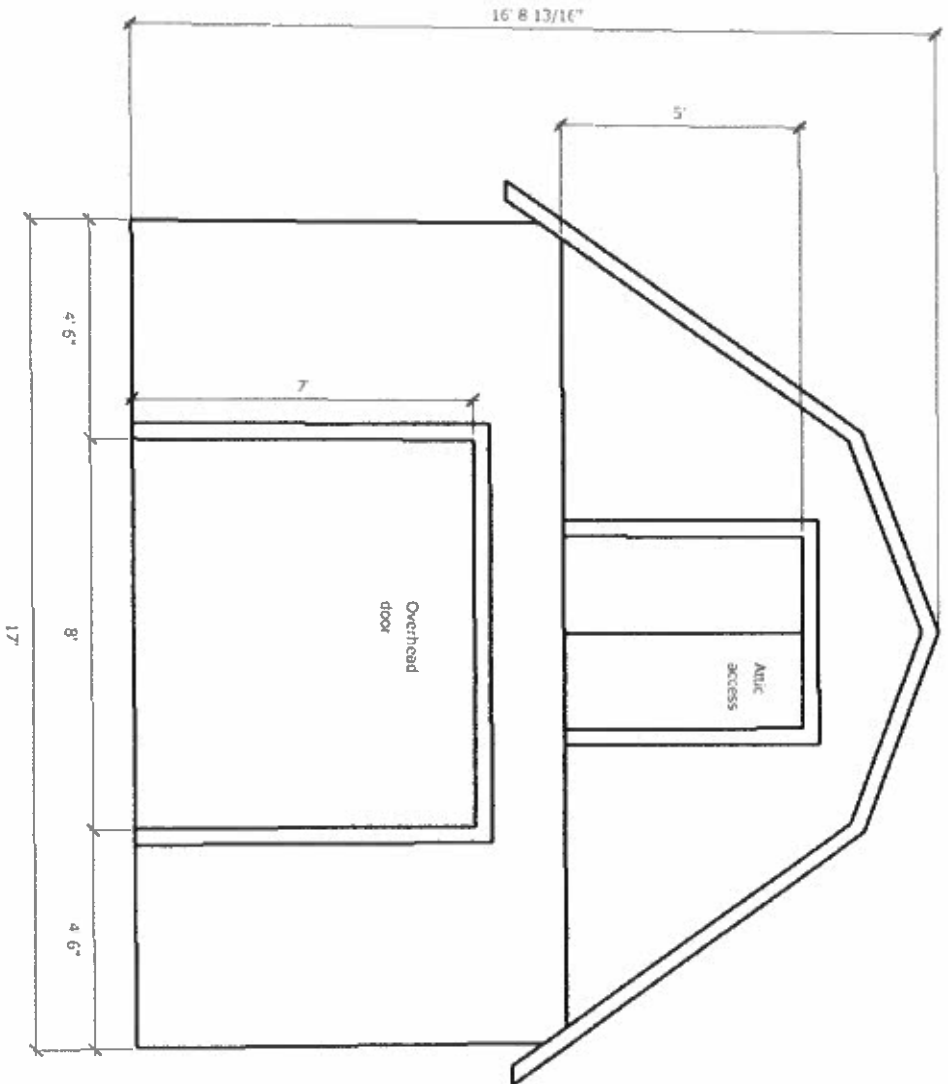
Garage Floor Plan

19 S Elm St Beacon



**Garage**  
19 S Elm St Beacon  
north elevation





**Garage**  
19 S Elm St. Beacon  
Front elevation