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TOWN OF LEWISBORO
Westchester County, New York

Planning Board
79 Bouton Road
South Salem, New York 10590

Tel: (914) 763-5592
Fax: (914) 875-9148
Email: planning@lewisborogov.com

AGENDA

Tuesday, February 26, 2019

79 Bouton Road, South Salem
Justice Court

Note: Meeting will start at 7:30 p.m. and end at or before 11:00 p.m.

I. DECISIONS

Cal #10-15 PB, Cal #20-17WP, Cal #5-17SW
Wilder Balter Partners, NY State Route 22, Goldens Bridge, NY 10526, Sheet 5, Block 10776, Lots 19, 20 & 21 (Property Group Partners, LLC, owner of record) – Application for a 42-unit MF development on a ±35.4-acre parcel.

Cal#10-18PB
Sanz Residence, 15 Sullivan Road, Waccabuc, NY 10597, Sheet 12, Block 11137, Lot 31 (Stephanie and Parris Sanz, owner of record) and Sheet 12, Block 11137, Lot 117 (North Salem Open Land Foundation, owner of record) - Application for lot line change.

II. PUBLIC HEARING

Cal #08-17PB
Oakridge Commons, 450 Oakridge Common, South Salem, NY 10590, Sheet 49D, Block 9829, Lot 10 (Smith Ridge Associates, owner of record) - Application for Site Plan Review for installation of a car wash bay and day care center.

III. SKETCH PLAN REVIEWS

Cal #10-17PB
Mercedes Benz of Goldens Bridge, 321 Main Street, Goldens Bridge, NY 10526, Sheet 4E, Block 11135, Lots 1, 2, 3, 4, 6 & 7 (Charisma Holding Corp., owner of record); Sheet 4E, Block 11135, Lot 5 (Spencemorg, LLC., owner of record) and Sheet 4E, Block 11137, Lot 42 (Robert Castelli, owner of record) – Application for Site Plan Review for additions to existing auto showroom and service buildings, additional parking spaces and construction of a parking garage.

Cal# 1-19PB, 2-19WP, and 2-19SW
Goncalves Residence, Duffy's Bridge Road, Katonah, NY 10536, Sheet 2, Block 10516, Lot 001 – Application for construction of a single-family residence on an undeveloped lot.

IV. WETLAND VIOLATION

Cal #01-18WV, #76-18WP
Potz Residence, 1178 Route 35, South Salem, NY 10590, Sheet 27, Block 10805, Lot 29 (Siegfried and Karen Potz, owner of record)

V. SITE DEVELOPMENT PLAN

Cal #08-18PB, #81-18WP, #10-18SW
Waccabuc Country Club, 90 Mead Street, Waccabuc NY 10597, Sheet 22, Block 10802, Lots 61 & 37 (Waccabuc Country Club, owner of record) – Application for Waiver of Site Development Plan Procedures for a wash facility and bulk storage.

VI. MINUTES OF January 16, 2018; MINUTES OF February 27, 2018; MINUTES OF March 20, 2018; MINUTES OF March 27, 2018; MINUTES OF April 17, 2018, MINUTES OF June 19, 2018, MINUTES OF July 21, 2018 MINUTES OF August 14, 2018; MINUTES OF August 21, 2018; MINUTES OF September 11, 2018; MINUTES OF October 16, 2018; MINUTES OF November 20, 2018; MINUTES OF December 18, 2018; MINUTES OF January 15, 2019 and MINUTES OF January 24, 2019.

VII. NEXT MEETING DATE: March 19, 2019

INSITE
ENGINEERING, SURVEYING &
LANDSCAPE ARCHITECTURE, P.C.

February 7, 2019

Mr. Zaw Thein
Westchester County Department of Health
25 Moore Avenue
Mount Kisco, New York 10549

RE: Wilder Balter Partners, Inc
Application for Water System Approval
NYS Route 22
Lewisboro, New York
TM# 5-10765-19, 20, and 21

Dear Mr. Thein:

Enclosed please find three (3) copies of the following in support of the Application for Approval of Plans for a Public Water Supply Improvement:

- Well 2,3,4 copper test results.
- Drawings HD-1 through HD-11, last revised February 6, 2019.
- Water Facilities Engineer's Report dated February 6, 2019.
- Well 3 asbestos & lead results.
- 72-hour Pumping Test Program on Wells 1 & 2 prepared by WSA.
- Letter report to Zaw Thein dated February 4, 2019.

In response to the remaining outstanding comments offered in your letter dated November 16, 2018, we offer the following:

Source Development:

1. Per discussion with your department, well 1 is proposed to be included in the water supply. Please see additional testing & reports prepared by WSP.
2. Please find additional testing results for well 3 for asbestos & well 2, 3, & 4 for copper.
3. Please find additional testing results for well 3 for lead.
4. Additional iron sampling for well 2 will be provided at a later date.
5. Based on correspondence with the well driller, no solder was used in the installation of the well casing as indicated in note 4 of the Well Detail on Drawing HD-10 & section 3 of the Engineer's Report.
6. A chart has been provided on the Well Detail on Drawing, HD-10, which includes the following details for each proposed well:

a. Well head elevation.
b. Pitless unit specifications.
c. Steel casing specifications and thickness and weight.
d. Grout thickness and depth.

Engineer's Report:

7. A fixture count analysis has been provided in the Water Facilities Engineer's Report to support the calculated peak hourly flow found in Appendix C.

8. The well pump sizing calculations included in Appendix A of the Water Facilities Engineer's Report have been revised to include loss from all water treatment equipment. The calculations have been itemized for hydraulic loss at each treatment unit.

9. The well pump sizing calculations provided demonstrate that the pumping capacity does not exceed the established stabilized yield of each well at the calculated total dynamic head.

10. A summary of the static pressure & operating pressure can be found in Section 7 of the Engineer's Report. Supporting calculations can be found in Section 7 & Appendix C.

11. The following design calculation for the disinfection system has been provided in the Water Facilities Engineer's Report in Section 5.2:

    a. Proposed chemical concentration.
    b. Required mixing ratio.
    c. Chemical metering pump sizing.

12. CT calculation for 4-log inactivation:

    a. The water storage tank volume is not used to achieve the required CT.
    b. The volume in the main has been provided with detail calculation in Appendix B of the Water Facilities Engineer's Report.
    c. The CT compliance location has been specified as entry point on the Water Building Detail and Water System Schematic on drawing HD-10.

13. The proposed chlorine analyzer specifications and manufacturer's cut sheets have been provided in Appendix B of the enclosed Water Facilities Engineer's Report.

14. The water supply piping (PVC DR-18, HDPE) manufacturer's cut sheet and NSF-61 compliance has been provided in Appendix C of the enclosed Water Facilities Engineer's Report.

Plans:

15. Water distribution main installation:

    a. Stationing corresponding to the profiles for the water lines has been added to drawings HD-2 & HD-3.
    b. Profiles for the well service lines have been added to HD-7.
    c. Concrete anchors have been shown on the plan & profile where water lines are to be installed on steep slopes. The drawings also note that the joints on steep slopes shall be restrained joints.
    d. Isolation valves have been provided at every 500 foot interval on both the project plans and profiles.

e. The plans have been revised to show an encasement at the requested watermain crossing with the gravity sewer line. The encasement is placed to the point where it regains 10 feet horizontal separation from the sewer pipe.
f. The flushing hydrant detail on drawing HD-11 has been revised to show the hydrant terminating above grade.
g. The water main has been revised to end at a capped end.

16. The fire storage tank is discussed in section 8.0 of the Engineer's Report.

17. The storage tank overflow pipe termination has been provided on the project plans on drawing HD-3. The Water Storage Tank Overflow Splash Pad Detail on drawing HD-11 shows a minimum 12 inches above finished grade with a 24-mesh non-corrodible screen.

18. The Potable Water Storage Tank Detail on drawing HD-11 shows the tank inlet & outlet on opposite sides of the tank as requested.

19. A flushing hydrant has been provided near the Water Building below the storage tank to allow for cleaning and maintenance without using water distribution piping.

20. The Water System Flow Schematic shown on drawing HD-10 has been revised to specify raw water tap locations, entry point tap location and continuous chlorine analyzer location.

21. The installation location of an audible and visible alarm in addition to an autodialer has been provided on the project plans.

22. The emergency generator is specified on drawing HD-2. Calculations are provided in Appendix F of the Engineer's Report.

23. An equipment schedule for all water treatment system equipment has been provided on drawing HD-10 in a tabulated format. The table includes applicable design information of the proposed unit.

24. Per year discussion with Eric Schlobohm, PE our office, the Water & Sewer Plans can be a single drawing set.

25. The plans have been revised to show well #4 as an existing well.

The enclosed information is provided for review of the Application for Approval of Plans for a Public Water Supply Improvement. If you have any question concerning this application or require additional information, please do not hesitate to contact our office.

Very truly yours,

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

By: _____
Jeffrey J. Contelmo, P.E.
Senior Principal Engineer

JJC/EMS/amk

Enclosures

Insite File No. 15246.100

Cc: John Bainlardi via email
Stacey Stieber via email

WILDER BALTER PARTNERS

72-HOUR PUMPING TEST PROGRAM ON WELLS 1 AND 2

ROUTE 22 PROPERTY
LEWISBORO, NY

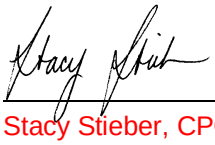
PROJECT NO.: 31401464.000
DATE: FEBRUARY 2019

LBG HYDROGEOLOGIC & ENGINEERING SERVICES, P.C.
MEMBER OF WSP
4 RESEARCH DRIVE, SUITE 204
SHELTON, CT 06484

TEL.: +1 (203) 929-8555
WSP.COM

SIGNATURES

PREPARED BY:



Stacy Stieber, CPG, PG(NY)
Lead Hydrogeologist

REVIEWED BY:



Thomas P. Cusack, CPG, PG(NY)
Senior Supervising Hydrogeologist

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TABLE 2: Summary of Daily Precipitation 3

FIGURE

FIGURE 1 Site Location Map

APPENDICES - AT END OF REPORT

1.0 INTRODUCTION

The following report contains the results of the 72-hour pumping test completed by LBG Hydrogeologic & Engineering Services, P.C., member of WSP (LBGHES), on Wells 1 and 2 located on the Wilder Balter Partners, Inc. property on Route 22 in Lewisboro, New York (figure 1). The January 2019 simultaneous pumping test was conducted on Wells 1 and 2 following a meeting with the Westchester County Department of Health (WCDH) in December 2018 where it was recommended that a test be conducted on these two wells to demonstrate that they could be pumped concurrently to meet the project's maximum daily water demand of 12.8 gpm

2.0 WATER DEMAND

The project is proposing to develop 42 residential units with a combined bedroom count for these units of 84 bedrooms. Based on the water demand requirement of 110 gpd (gallons per day) per bedroom, the average water demand for the project is 9,240 gpd or 6.4 gpm (gallons per minute). The maximum daily water demand, or twice the average daily demand, is 18,480 gpd or 12.8 gpm.

3.0 WELL CONSTRUCTION

Wells 1 and 2 were drilled by P.F. Beal & Sons, Inc. in 1987 on the project site. Copies of the original well logs are included in Appendix I. Well 1 was originally completed with 30 feet of 6-inch diameter well casing set into bedrock and was drilled to a total depth of 525 feet. Well 2 was complete with 64 feet of 6-inch diameter well casing set into bedrock and was drilled to a total depth of 605 feet in the bedrock.

The original casing length in Well 1 did not meet the current Health Department requirement of a minimum of 50 feet for a public water supply well. Therefore, in January 2019, Frey Well Drilling, Inc. was retained to replace the well casing in Well 1. The original casing was removed and 60 feet of 6-inch diameter casing was installed and grouted in Well 1. A summary of the work conducted on Well 1 in January 2019 is included in Appendix I.

4.0 PUMPING TEST PROGRAM

The simultaneous pumping test on Wells 1 and 2 was conducted between January 28 and 31, 2019. During the pumping test program, water-level measurements were collected from the two bedrock pumping wells, Wells 1 and 2, and the two other existing onsite wells, Wells 3 and 4. The locations of the onsite wells are shown on figure 1.

Water-level measuring equipment was installed by LBGHES on January 18, 2019 to collect background water-level data prior to the start of pumping in the onsite wells. On January 28, the 72-hour pumping test on Wells 1 and 2 began with the start of the pump in Well 1 at 10:56, followed by the start of the pump in Well 2 at 16:20. The wells were pumped concurrently for three days until shut down of the test at 22:40 on January 31. Water-level recovery measurements were collected after the end of pumping from Well 1 and 2 and removal of the water-level monitoring equipment was completed on February 4, 2019.

Hydrographs and summary tables of water-level measurements collected from the pumping wells are provided in Appendix II, and the hydrographs and a summary table of water-level measurements collected from the onsite monitoring Wells 3 and 4 are in Appendix III.

The discharge location used during the test period for the pumping wells was placed approximately 280 feet west of Well 2 (figure 1). The discharge location was sited to allow the water to flow west off the project site to prevent artificial recharge of the bedrock aquifer during the test. The well discharge rates were measured using a calibrated bucket and stop watch at the end of their respective discharge hoses.

A summary of the historical monthly precipitation totals from the Westchester County Airport Climate Station from February 2018 through January 2019 and the monthly precipitation normals from 1981-2010 for that station are included in the table below.

Table 1: Monthly Precipitation Totals from Westchester County AP Station

Month	Westchester County AP Station (inches)	30-Year Normals (inches)
February 2018	5.35	2.99
March 2018	2.56	4.52
April 2018	4.94	4.40
May 2018	3.33	4.12
June 2018	3.53	4.25
July 2018	4.21	3.71
August 2018	7.93	4.16
September 2018	9.12	4.72
October 2018	4.51	4.41
November 2018	6.17	3.97
December 2018	6.44	4.32
January 2018	4.42	3.78
Total	**62.51**	**49.35**

Daily precipitation totals from the Westchester AP station during the data collection period are included on the table below and the precipitation totals are shown on the hydrographs for reference.

Table 2: Summary of Daily Precipitation

Date	Westchester County AP Daily Precipitation (inches)
1/18/2019	0
1/19/2019	0.21
1/20/2019	1.02
1/21/2019	0
1/22/2019	0
1/23/2019	0
1/24/2019	1.68
1/25/2019	0
1/26/2019	0
1/27/2019	0
1/28/2019	0
1/29/2019	0.37
1/30/2019	0.01
1/31/2019	0
2/1/2019	0
2/2/2019	0

Some water level rise was observed in the onsite wells following the precipitation event on January 24. The rising trend continued until January 27 when the water-level trend leveled. The precipitation received on January 29 during the test period of 0.38 inch did not appear to have effect on the water-level trends in the onsite wells, possibly because the low temperatures and the frozen ground at that time prevented immediate infiltration.

Water samples were collected from Well 1 during the 72-hour pumping test for analysis for all parameters required by the NYSDOH Sanitary Code Part 5, Subpart 5-1. Microscopic particulate analysis (MPA) and giardia and cryptosporidium samples were also collected from Well 1 to assess the potential for groundwater under the direct influence of surface water (GWUDI) because the well is located within 200 feet of a surface-water feature. The MPA sample was collected from the well using the EPA Consensus Method which requires the flow of water through a filter at 1 gpm for a time period ranging from 8 to 24 hours. The water samples were taken to Envirotest Laboratories, Inc. located in Newburgh, New York for analysis. The results of the analyses for Well 1 are pending and will be provided in an addendum to this report.

Well 2 had been previously sampled for Part 5 parameters and MPA, giardia and cryptosporidium. Follow up samples were collected for asbestos, turbidity, iron and lead per comments received from WCDH. The results of the analyses for Well 2 are also pending and will be provided in an addendum to this report.

5.0 72-HOUR PUMPING TEST ON WELLS 1 AND 2

A simultaneous 72-hour pumping test on Wells 1 and 2 was conducted between January 28 through 31, 2019 to demonstrate the combined yield of the wells. The test began at 10:56 on January 28 with the start of the pump in Well 1. Initially, the start of Well 2 was intended for 12:00, however, a wiring issue with the pump in Well 2 delayed the start on until 16:20 on January 28.

The wells were pumped until 22:40 on January 31. The pumping period was extended beyond the 72-hour mark to compensate for a period of reduced pumping rate which occurred in Well 1 following a generator shut down in the early morning of January 30. The final stabilized pumping rates in Wells 1 and 2 at the end of the pumping test period were 7.5 gpm and 6.5 gpm for a combined 14.0 gpm or 20,160 gpd.

5.1 Well 1

The pump in Well 1 was started at 10:56 on January 28, 2019. The static water level in Well 1 prior to the start of pumping was 7.89 feet below top of casing (ft btoc). The pumping rate in Well 1 was set at 7.5 gpm at the start of the test. The pumping rate declined slightly to 7.3 gpm after the start of Well 2 on the afternoon of January 28, and was 6.8 gpm by the following morning of January 29. The MPA filtration sample was set up on the discharge line for Well 1 and filtration was started at 15:40. The filtration unit caused a fluctuation in the rate of Well 1 which required a rate adjustment. The pumping rate in Well 1 was increased back to 7.5 gpm at that time.

On the morning of January 30, the generator powering Wells 1 and 2 shut down briefly from 3:09 to 3:19. The pumping rate in Well 1 was affected when the generator was restarted, and the pumping rate in Well 1 after the restart was 4.5 gpm. The change in rate was noted when the MPA filter was being removed from the well and the pumping rate of readjusted to 7.5 gpm in Well 1 at 8:50 on January 30. As a result of this period of reduced pumping rate Well 1 from 3:19 to 8:50, the pumping period on Wells 1 and 2 was extended 6+ hours on January 31.

The pumping rate in Well 1 remained at 7.5 gpm for the duration of the test period until the test was ended at 22:40 on January 31. The final water level in Well 1 at the end of the test was 193.08 ft btoc for a total drawdown of 185.19 feet. The water-level change over the last six hours of pumping in Well 1 was 0.09 foot which meets the stabilization criteria of less than 0.5 foot per 100 feet of available drawdown in the well. Because the water-level trend was slightly downward at the end of the test period, a 180-day water-level drawdown projection was completed for Well 1 using the data from the final six hours of the test to assess the water level in the well after 180 days of continuous pumping. A copy of the 180-day water-level drawdown projection graph is included in Appendix II. Based on the projection graph, the water level in the well after 180 days is 206.99 ft btoc, leaving a significant amount of available drawdown of approximately 318 feet of in the water column which supports that the well can maintain a yield of 7.5 gpm.

The water level in Well 1 after shut down of the well pump reached 90% recovery to its pre-test level approximately seven hours after the end of the test.

5.2 Well 2

The pump in Well 2 was started at 16:20 on January 28, 2019, 5 hours and 24 minutes after the start of pumping in Well 1. The static water level in Well 2 prior to the start of pumping in Well 1 was 3.25 ft btoc. At the

time the test on Well 2 was started, the water level in Well 2 had declined to 7.79 ft btoc, for a drawdown of 4.54 feet from pumping in Well 1.

The pumping rate in Well 2 was set at 7.5 gpm at the start of pumping. The pumping rate in Well 2 declined as a result of the loss of pressure head over the pump and reached 6.5 gpm on January 30 where it remained until the end of the test.

On the morning of January 30, the generator powering Wells 1 and 2 shut down briefly from 3:09 to 3:19. The pumping rate in Well 2 was not affected when the generator was restarted, however, the change in pumping rate in Well 1 at that time of the generator restart and the rate increase in Well 1 at 8:50 can be seen in the water-level trend on the hydrograph of Well 2.

The final water level in Well 2 at the end of the test at 22:40 on January 31 was 132.37 ft btoc, for a total drawdown of 129.54 feet. The water-level change over the last six hours of pumping in Well 2 was 1.69 feet which meets the stabilization criteria of less than 0.5 foot per 100 feet of available drawdown in the well. Because the water-level trend was slightly downward at the end of the test period, a 180-day water-level drawdown projection was completed for Well 2 using the data from the final six hours of the test to assess the water level in the well after 180 days of continuous pumping. A copy of the 180-day water-level drawdown projection graph is included in Appendix II. Based on the projection graph, the water level in the well after 180 days is 219.58 ft btoc, leaving a significant amount of available drawdown of approximately 385 feet in the water column which supports that the well can maintain a yield of 6.5 gpm.

The water level in Well 2 after shut down of the well pump reached 90% recovery to its pre-test level approximately six hours after the end of the test.

6.0 MONITORING WELLS

Water-level measurements were collected from two onsite monitoring wells, Wells 3 and 4, during the pumping test conducted on Well 1 and 2. During the background data collection period, the water levels in Wells 3 and 4 showed a rising trend as a result of the precipitation received on January 24. The rising trend leveled off around January 27 and the water levels remained consistent until a slight drawdown trend began on January 29. The slight declining trend continued through the end of the data collection period on February 4.

In Well 3, the declining in trend was interrupted by a slight rise of about 0.5 foot which corresponds to the end of pumping Wells 1 and 2 and is attributed to pumping of these wells at a combined rate of 14.0 gpm. In Well 4, the declining in trend flattened for a brief period corresponding to the end of pumping Wells 1 and 2. No rise in water level in Well 4 occurred and the downward trend resumed shortly afterwards. However, the brief flattening of the downward trend is attributed to Wells 1 and 2 and the interference from the these wells appears to be approximately 0.1 foot in Well 4.

7.0 WATER QUALITY

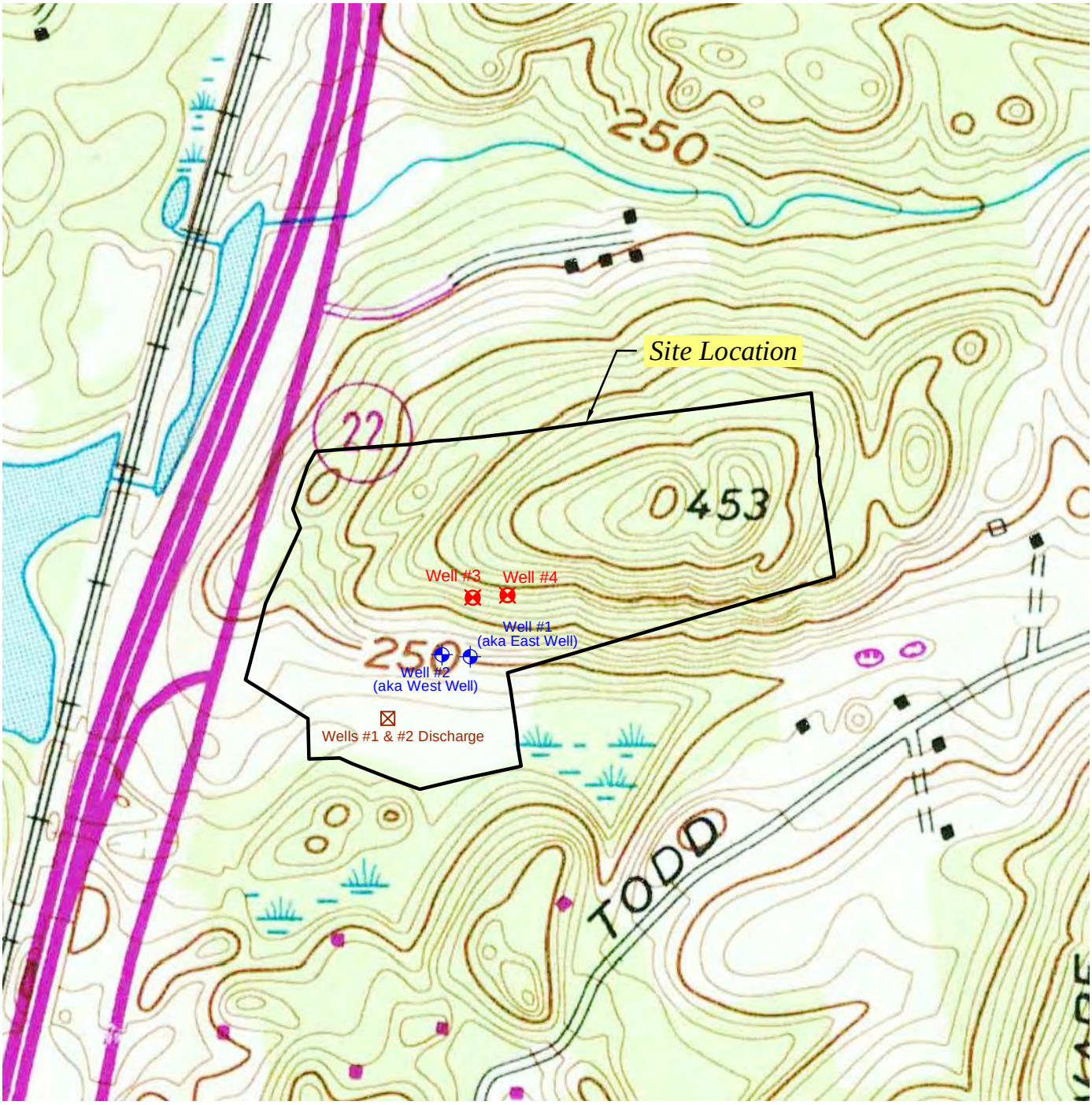
Water samples were collected from Well 1 during the 72-hour pumping test for analysis for all parameters required by the NYSDOH Sanitary Code Part 5, Subpart 5-1 and for MPA and giardia and cryptosporidium analysis to assess the potential for GWUDI because the well is located within 200 feet of a surface-water feature. The MPA sample was collected from the well using the EPA Consensus Method which requires the flow of water through a filter at 1 gpm for a time period ranging from 8 to 24 hours. The water samples were taken to Envirotest Laboratories, Inc. located in Newburgh, New York for analysis. The results of the analyses for Well 1 are pending and will be provided in an addendum to this report.

Well 2 had been previously sampled for Part 5 parameters and MPA, giardia and cryptosporidium in July 2018. Follow up samples were collected for asbestos, turbidity, iron and lead per comments received from WCDH. The results of the analyses for Well 2 are also pending and will be provided in an addendum to this report.

8.0 CONCLUSIONS

- A simultaneous 72-hour pumping test was conducted on Wells 1 and 2 between January 28 and 31, 2019. The stabilized pumping rates for Wells 2 and 4 at the end of the test period were 6.5 gpm and 7.5 gpm, respectively, for a combined 14.0 gpm. The wells demonstrated 6+ hours of stabilized yield and water-level drawdown at their respective pumping rates. The 180-day water-level drawdown projections for both wells also show a significant amount of available drawdown in the wells after 180 days of pumping, supporting that the wells can maintain these pumping rates.
- The combined yield of Wells 2 and 4 of 14.0 gpm or 20,160 gpd is more than sufficient to meet twice the average water demand of 84 bedrooms of 18,480 gpd.
- Water-level recovery measurements were collected after the shutdown of the pumping tests. Wells 1 and 2 both achieved 90% recovery approximately seven hours after the end of pumping.
- Water-level measurements were collected from the onsite monitoring Wells 3 and 4 during the test on Wells 1 and 2. Water-level interference of 0.5 foot in Well 3 and 0.1 foot in Well 4 were measured that is attributed to pumping in Wells 1 and 2 at a combined rate of 14.0 gpm. This demonstrates that there is limited hydraulic interconnection between Wells 1 and 2 and Wells 3 and 4 and that there should be no concerns with pumping these wells together in the future.
- Water samples were collected from Well 1 during the 72-hour pumping test. The water samples were submitted to Envirotest Laboratories, Inc. in Newburgh, New York for analysis for all parameters listed in the NYSDOH Sanitary Code, Part 5, Subpart 5-1 and for MPA, giardia and cryptosporidium analysis. The results of the analyses for Well 1 are pending and will be provided in an addendum to this report.
- Well 2 had been previously sampled for Part 5 parameters and MPA, giardia and cryptosporidium in July 2018. Follow up samples were collected for asbestos, turbidity, iron and lead per comments received from WCDH. The results of the analyses for Well 2 are also pending and will be provided in an addendum to this report.

FIGURE



SOURCE: USGS TOPOGRAPHIC QUADRANGLE CROTON FALLS, NEW YORK (PHOTOREVISED 1981).

LEGEND

PROPERTY BOUNDARY

PUMPING WELL

ONSITE MONITORING WELL

APPROXIMATE WELL DISCHARGE LOCATION



QUADRANGLE LOCATION



0 500

SCALE IN FEET

WILDER BALTER PARTNERS
ROUTE 22
LEWISBORO, NEW YORK

SITE LOCATION MAP

DATE	REVISED

PREPARED BY:
LBG HYDROGEOLOGIC & ENGINEERING SERVICES, P.C.
Professional Geologists & Environmental Engineers
Member of WSP
4 Research Drive
Suite 204
Shelton, Connecticut 06484
(203) 929-8555

DRAWN:	RAC	CHECKED:	SS	DATE:	02/04/19	FIGURE:	1

O:\DWG\Wilder Balter Partners\2019\F1_SLM_Discharge.dwg, Layout1, 2/4/2019 4:27:09 PM, PDF-XChange for AcroPlot Pro

APPENDIX I

COUNTRY EPICURE

WESTCHESTER COUNTY DEPARTMENT OF HEALTH
Division of Environmental Quality

WELL COMPLETION REPORT

This report is to be completed be well driller and submitted to Health Department, together with laboratory report of analysis of water sample indicating water is of satisfactory bacterial quality, before certificate of construction compliance is issued.

Well construction to be in accordance with Bulletin SD-62
"RULES & REGULATIONS RELATING TO INDIVIDUAL WATER SUPPLIES"

Well #1

LOCATION: MUNICIPALITY: Goldens Bridge SECTION: _____ BLOCK: _____ LOT: _____

WELL OWNER: Country Epicure, Route 22, Goldens Bridge, NY
Name — Street Address — City and Town

WELL DRILLER: P.F. Beal & Sons, Inc., PO Box B., Brewster, NY
Name — Street Address — City and Town

CASING DETAILS	YIELD TEST	WATER LEVEL	SCREEN DETAILS
Length: 30' Feet	___ Bailed or X Pumped 6 Hours	(measure from land surface) Static: 30 Feet	Make:
Diameter: 6 Inches	Yield: 5 G.P.M.	When ~~Bailed~~ or Pumped 505 Feet	Length: Ft. / Slot Size
Kind: Heavy Duty ~~Seamless Steel~~			Diameter In.

TOTAL DEPTH OF WELL: 525 FEET

WELL LOG

Depth From Ground Surface	Give description of formations penetrated, such as: peat, silt, sand, gravel, clay, hardpan, shale, sandstone, granite, etc. Include size of gravel (diam.) and sand (fine, medium, coarse), color of material, structure (loose, packed cemented, soft, hard). For example: 0 ft. to 27 ft. fine, packed, yellow sand. 27 ft. to 134 ft. gray granite.
0 Ft. to 8 Ft.	Drilling in overburden clay and boulders
Ft. to Ft.	Hit rock at 8 feet
8 Ft. to 30 Ft.	Drilling inrock, set casing, grouted.
30 Ft. to 525 Ft.	Drilling in rock granite.
Ft. to Ft.	
Ft. to Ft.	
Ft. to Ft.	
Ft. to Ft.	

Date Well Was Completed: 3/24/87 **Date of Report:** 6/4/87

Well Driller: _____

COUNTRY EPICURE

WESTCHESTER COUNTY DEPARTMENT OF HEALTH
Division of Environmental Quality

WELL COMPLETION REPORT

his report is to be completed be well driller and submitted to Health Department, together with aboratory report of analysis of water sample indicating water is of satisfactory bacterial uality, before certificate of construction compliance is issued.

Well construction to be in accordance with Bulletin SD-62
"RULES & REGULATIONS RELATING TO INDIVIDUAL WATER SUPPLIES"

Well #2

OCATION: MUNICIPALITY: Goldens Bridge SECTION: _____ BLOCK: _____ LOT: _____

LL OWNER: Country Epicure, Route 22, Goldens Bridge, NY
Name — Street Address — City and Town

LL DRILLER: P.F. Beal & Sons, Inc., PO Box B., Brewster, NY
Name — Street Address — City and Town

CASING DETAILS	YIELD TEST	WATER LEVEL	SCREEN DETAILS
ngth: 64 Feet	___ Bailed or X Pumped 6 Hours	(measure from land surface) Static: 35 Feet	Make:
ameter: 6 Inches	Yield: 5 G.P.M.	When Bailed or Pumped 585 Feet	Length: Ft. / Slot Size
nd: Heavy Duty Seamless Steel			Diameter In.

TAL DEPTH OF WELL: 605' FEET

WELL LOG

Depth From ound Surface	Give description of formations penetrated, such as: peat, silt, sand, gravel, clay, hardpan, shale, sandstone, granite, etc. Include size of gravel (diam.) and sand (fine, medium, coarse), color of material, structure (loose, packed cemented, soft, hard). For example: 0 ft. to 27 ft. fine, packed, yellow sand. 27 ft. to 134 ft. gray granite.
0 Ft. to 35 Ft.	Drilling in clay and boulders
Ft. to Ft.	Hit rock at 35 feet
5 Ft. to 64 Ft.	Drilling in rock, set casing, grouted.
4 Ft. to 605 Ft.	Drilling in rock granite.
Ft. to Ft.	
Ft. to Ft.	
Ft. to Ft.	
Ft. to Ft.	

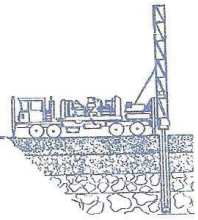
te Well Was Completed: 3/26/87 Date of Report: 6/4/87

Well Driller: _____

Phone 716-937-7977
FAX 716-937-9390

Frey Well Drilling, Inc.

GAS WELLS • WATER WELLS • ROCK DRILLING 4" to 36"



11565 BROADWAY
ALDEN, NEW YORK 14004

February 5, 2019

TO WHOM IT MAY CONCERN;

RE: Golden Bridge New York water well

Below please find a summary of workmanship done to the existing well at Golden Bridge rd., in Lewisboro, New York according to Department of Environmental Conservation Standards, as regulated by Frey Well Drilling Registration number NYRD10009.

No solder, glue or any contaminants used in construction of this well.

The well was reamed from 6 inch diameter to 10 inch diameter to 58 feet to rock to enable a 2 inch annulus of bentonite grout around the 6 inch casing that was centered in the 10 inch diameter shaft.

The finished hole size is 6 inch diameter to 520 feet.

The construction material is as follows:

1.) 6 inch diameter new steel plain end casing supplied by Victory Steel
2.) 6 inch diameter protective drill shoe on bottom of first casing joint
3.) Wyoming Bentonite supplied by Haliburton providing ANSI appropriate Grout
4.) Drilling Rig used was 2018 Foremost DR12 dual Rotary Drill rig
5.) Drillers were: National Ground Water Certified Master Driller William Frey, 140985, with Certified Master Driller Michael Frey assisting.

If you have any further questions, please do not hesitate to contact us.

Sincerely,

Bonnie Frey

for William Frey –MGWC
FREY WELL DRILLING INC.

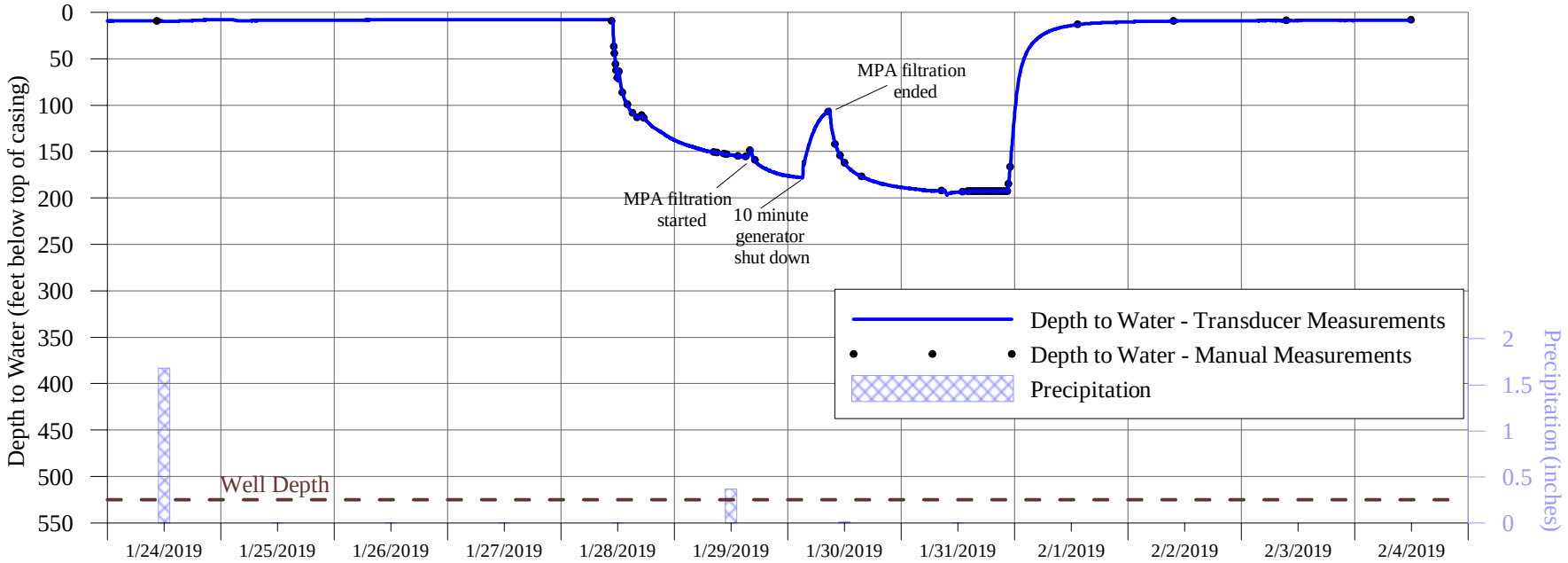
SUBMITTALS ATTACHED
WF;baf

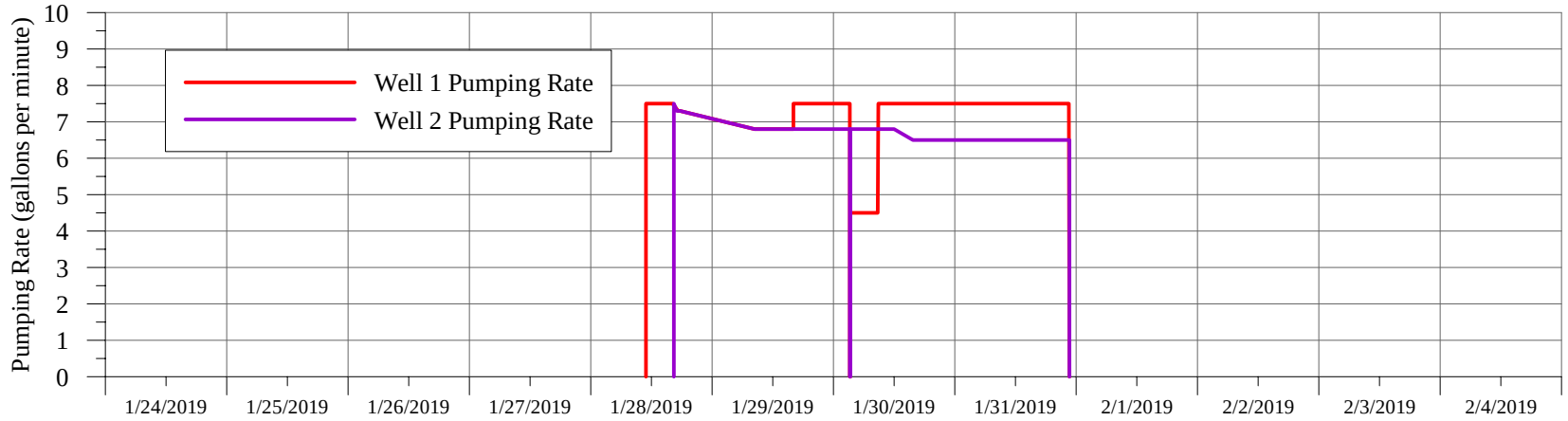
APPENDIX II

WELL 1

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from the Onsite Well 1, During 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

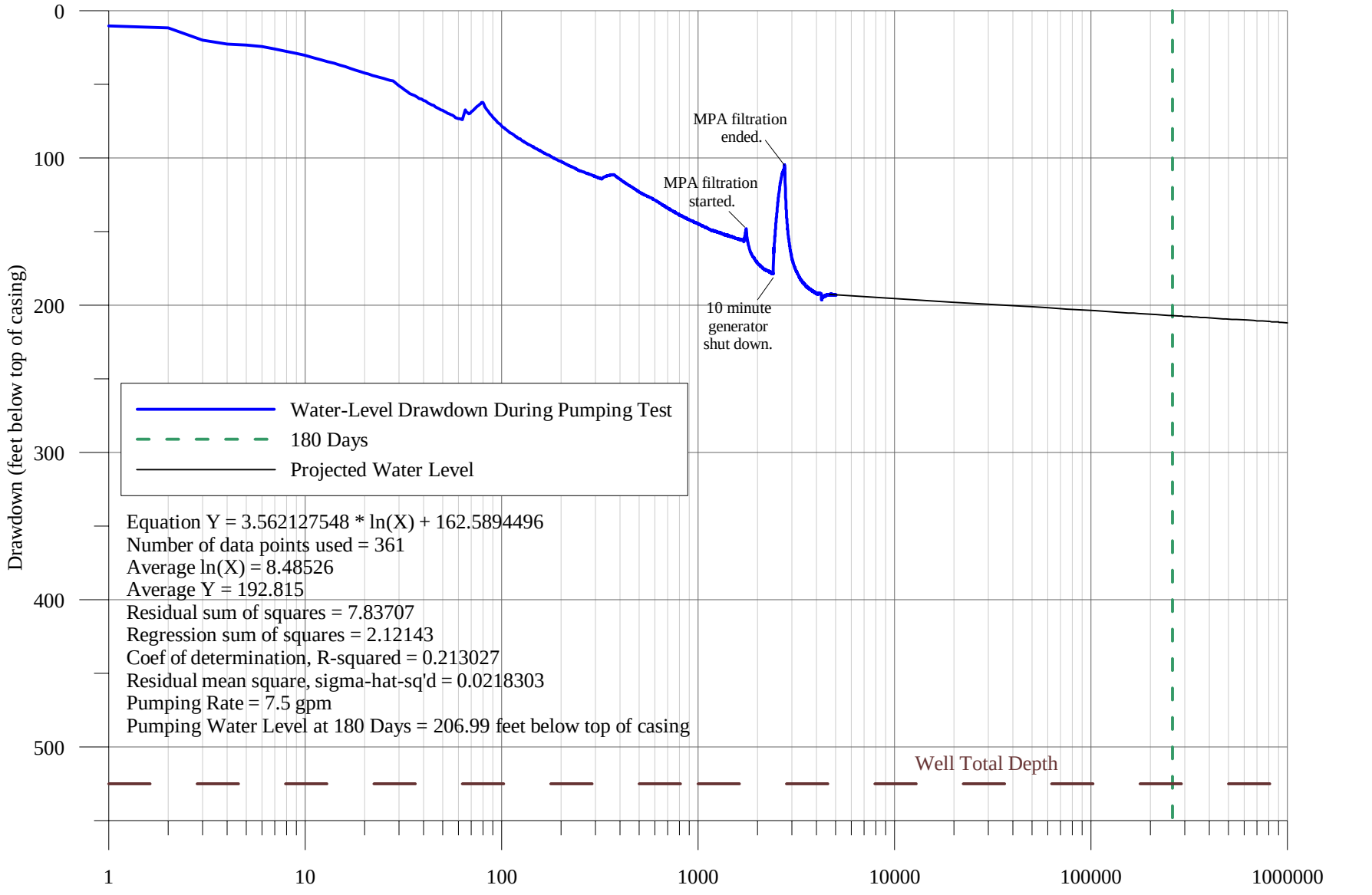




LBG Hydrogeologic & Engineering Services, P.C.

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Water-Level Drawdown Projection from Measurements Collected from Pumping Well 1, During Pumping Test on Wells 1 and 2, January 28 Through January 31, 2018



LBG Hydrogeologic & Engineering Services, P.C.

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Well 1 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
1/24/2019	0:00	9.52			
1/24/2019	1:00	9.50			
1/24/2019	2:00	9.49			
1/24/2019	3:00	9.47			
1/24/2019	4:00	9.41			
1/24/2019	5:00	9.40			
1/24/2019	6:00	9.33			
1/24/2019	7:00	9.30			
1/24/2019	8:00	9.36			
1/24/2019	9:00	9.49			
1/24/2019	10:00	9.52			
1/24/2019	11:00	9.55			
1/24/2019	12:00	9.62			
1/24/2019	13:00	9.72			
1/24/2019	14:00	9.79			
1/24/2019	15:00	9.62			
1/24/2019	16:00	9.40			
1/24/2019	17:00	9.20			
1/24/2019	18:00	8.87			
1/24/2019	19:00	8.59			
1/24/2019	20:00	8.44			
1/24/2019	21:00	8.37			
1/24/2019	22:00	8.16			
1/24/2019	23:00	8.12			
1/25/2019	0:00	8.05			
1/25/2019	1:00	8.01			
1/25/2019	2:00	8.01			
1/25/2019	3:00	8.50			
1/25/2019	4:00	9.10			
1/25/2019	5:00	9.04			
1/25/2019	6:00	9.03			
1/25/2019	7:00	8.95			
1/25/2019	8:00	8.93			
1/25/2019	9:00	8.87			
1/25/2019	10:00	8.89			
1/25/2019	11:00	8.87			
1/25/2019	12:00	8.82			
1/25/2019	13:00	8.85			
1/25/2019	14:00	8.75			
1/25/2019	15:00	8.77			
1/25/2019	16:00	8.76			
1/25/2019	17:00	8.72			
1/25/2019	18:00	8.68			
1/25/2019	19:00	8.64			
1/25/2019	20:00	8.59			
1/25/2019	21:00	8.57			
1/25/2019	22:00	8.54			
1/25/2019	23:00	8.55			
1/26/2019	0:00	8.54			
1/26/2019	1:00	8.57			
1/26/2019	2:00	8.54			
1/26/2019	3:00	8.54			

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Well 1 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
1/26/2019	4:00	8.44			
1/26/2019	5:00	8.41			
1/26/2019	6:00	8.40			
1/26/2019	7:00	8.31			
1/26/2019	8:00	8.31			
1/26/2019	9:00	8.30			
1/26/2019	10:00	8.25			
1/26/2019	11:00	8.22			
1/26/2019	12:00	8.21			
1/26/2019	13:00	8.21			
1/26/2019	14:00	8.22			
1/26/2019	15:00	8.18			
1/26/2019	16:00	8.23			
1/26/2019	17:00	8.12			
1/26/2019	18:00	8.12			
1/26/2019	19:00	8.15			
1/26/2019	20:00	8.04			
1/26/2019	21:00	8.05			
1/26/2019	22:00	8.03			
1/26/2019	23:00	8.01			
1/27/2019	0:00	7.99			
1/27/2019	1:00	7.95			
1/27/2019	2:00	8.00			
1/27/2019	3:00	8.00			
1/27/2019	4:00	7.96			
1/27/2019	5:00	7.93			
1/27/2019	6:00	7.90			
1/27/2019	7:00	7.88			
1/27/2019	8:00	7.83			
1/27/2019	9:00	7.87			
1/27/2019	10:00	7.84			
1/27/2019	11:00	7.79			
1/27/2019	12:00	7.84			
1/27/2019	13:00	7.77			
1/27/2019	14:00	7.80			
1/27/2019	15:00	7.81			
1/27/2019	16:00	7.80			
1/27/2019	17:00	7.81			
1/27/2019	18:00	7.82			
1/27/2019	19:00	7.80			
1/27/2019	20:00	7.80			
1/27/2019	21:00	7.78			
1/27/2019	22:00	7.81			
1/27/2019	23:00	7.77			
1/28/2019	0:00	7.72			
1/28/2019	1:00	7.77			
1/28/2019	2:00	7.83			
1/28/2019	3:00	7.81			
1/28/2019	4:00	7.80			
1/28/2019	5:00	7.79			
1/28/2019	6:00	7.81			
1/28/2019	7:00	7.78			

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Well 1 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
1/28/2019	8:00	7.79			
1/28/2019	9:00	7.78			
1/28/2019	10:00	7.78			
1/28/2019	10:55	7.89			
1/28/2019	10:56	10.23	1	2.34	Pump in Well 1 started.
1/28/2019	10:57	11.57	2	3.68	Pumping rate adjusted to 7.5 gpm.
1/28/2019	10:58	20.03	3	12.14	Pumping rate 7.5 gpm.
1/28/2019	10:59	22.67	4	14.78	
1/28/2019	11:00	23.36	5	15.47	Pumping rate 7.5 gpm.
1/28/2019	11:01	24.18	6	16.29	
1/28/2019	11:02	25.89	7	18.00	Pumping rate 7.5 gpm.
1/28/2019	11:03	27.56	8	19.67	
1/28/2019	11:04	29.05	9	21.16	Pumping rate 7.5 gpm.
1/28/2019	11:05	30.40	10	22.51	
1/28/2019	11:06	31.94	11	24.05	Pumping rate 7.5 gpm.
1/28/2019	11:07	33.18	12	25.29	
1/28/2019	11:08	34.70	13	26.81	Pumping rate 7.5 gpm.
1/28/2019	11:09	35.62	14	27.73	
1/28/2019	11:10	36.85	15	28.96	Pumping rate 7.5 gpm.
1/28/2019	11:15	42.29	20	34.40	
1/28/2019	11:20	46.05	25	38.16	Pumping rate 7.5 gpm.
1/28/2019	11:25	50.90	30	43.01	
1/28/2019	11:30	56.97	35	49.08	Pumping rate 7.5 gpm.
1/28/2019	11:35	60.94	40	53.05	
1/28/2019	11:40	64.28	45	56.39	Pumping rate 7.5 gpm.
1/28/2019	11:45	67.60	50	59.71	
1/28/2019	11:50	70.55	55	62.66	Pumping rate 7.5 gpm.
1/28/2019	11:55	73.41	60	65.52	
1/28/2019	12:00	67.27	65	59.38	Pumping rate 7.5 gpm.
1/28/2019	13:00	87.78	125	79.89	
1/28/2019	14:00	100.08	185	92.19	Pumping rate 7.5 gpm.
1/28/2019	15:00	108.29	245	100.40	
1/28/2019	16:00	113.04	305	105.15	Pumping rate 7.5 gpm.
1/28/2019	16:20	113.95	325	106.06	Pump in Well 2 started.
1/28/2019	17:00	111.45	365	103.56	
1/28/2019	18:00	116.93	425	109.04	Pumping rate 7.3 gpm.
1/28/2019	19:00	122.06	485	114.17	
1/28/2019	20:00	125.58	545	117.69	
1/28/2019	21:00	128.77	605	120.88	
1/28/2019	22:00	132.31	665	124.42	
1/28/2019	23:00	135.43	725	127.54	
1/29/2019	0:00	137.89	785	130.00	
1/29/2019	1:00	140.19	845	132.30	
1/29/2019	2:00	141.87	905	133.98	
1/29/2019	3:00	143.86	965	135.97	
1/29/2019	4:00	145.37	1025	137.48	
1/29/2019	5:00	147.03	1085	139.14	
1/29/2019	6:00	148.53	1145	140.64	
1/29/2019	7:00	149.50	1205	141.61	
1/29/2019	8:00	150.56	1265	142.67	Pumping rate 6.8 gpm.
1/29/2019	9:00	151.57	1325	143.68	
1/29/2019	10:00	152.28	1385	144.39	Pumping rate 6.8 gpm.

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Well 1 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
1/29/2019	11:00	152.95	1445	145.06	
1/29/2019	12:00	153.87	1505	145.98	Pumping rate 6.8 gpm.
1/29/2019	13:00	154.66	1565	146.77	
1/29/2019	14:00	155.09	1625	147.20	Pumping rate 6.8 gpm.
1/29/2019	15:00	155.79	1685	147.90	
1/29/2019	15:00	155.79	1685	147.90	MPA filtration started on Well 1.
1/29/2019	16:00	149.43	1745	141.54	Rate adjustment, increase to 7.5 gpm.
1/29/2019	17:00	159.52	1805	151.63	Pumping rate 7.5 gpm.
1/29/2019	18:00	165.03	1865	157.14	
1/29/2019	19:00	168.10	1925	160.21	Pumping rate 7.5 gpm.
1/29/2019	20:00	170.62	1985	162.73	
1/29/2019	21:00	172.46	2045	164.57	
1/29/2019	22:00	174.37	2105	166.48	
1/29/2019	23:00	175.43	2165	167.54	
1/30/2019	0:00	176.31	2225	168.42	
1/30/2019	1:00	176.90	2285	169.01	
1/30/2019	2:00	177.67	2345	169.78	
1/30/2019	3:00	178.29	2405	170.40	Pumping rate 7.5 gpm.
1/30/2019	3:09	172.15	2414	164.26	Generator stopped.
1/30/2019	3:19	160.98	2424	153.09	Generator restarted.
1/30/2019	4:00	150.15	2465	142.26	Pumping rate 4.5 gpm.
1/30/2019	5:00	133.73	2525	125.84	
1/30/2019	6:00	121.63	2585	113.74	Pumping rate 4.5 gpm.
1/30/2019	7:00	113.60	2645	105.71	
1/30/2019	8:00	108.80	2705	100.91	Pumping rate 4.5 gpm.
1/30/2019	8:45	105.48	2750	97.59	MPA filtration ended.
1/30/2019	8:50	104.48	2755	96.59	Pumping rate increased to 7.5 gpm.
1/30/2019	9:00	115.12	2765	107.23	Pumping rate 7.5 gpm.
1/30/2019	10:00	142.09	2825	134.20	
1/30/2019	11:00	154.61	2885	146.72	Pumping rate 7.5 gpm.
1/30/2019	12:00	162.88	2945	154.99	
1/30/2019	13:00	168.53	3005	160.64	Pumping rate 7.5 gpm.
1/30/2019	14:00	172.67	3065	164.78	
1/30/2019	15:00	175.56	3125	167.67	Pumping rate 7.5 gpm.
1/30/2019	16:00	178.23	3185	170.34	
1/30/2019	17:00	180.35	3245	172.46	Pumping rate 7.5 gpm.
1/30/2019	18:00	182.32	3305	174.43	
1/30/2019	19:00	183.55	3365	175.66	Pumping rate 7.5 gpm.
1/30/2019	20:00	184.92	3425	177.03	
1/30/2019	21:00	186.00	3485	178.11	
1/30/2019	22:00	187.21	3545	179.32	
1/30/2019	23:00	187.86	3605	179.97	
1/31/2019	0:00	188.57	3665	180.68	
1/31/2019	1:00	189.50	3725	181.61	
1/31/2019	2:00	190.02	3785	182.13	
1/31/2019	3:00	190.38	3845	182.49	
1/31/2019	4:00	191.23	3905	183.34	
1/31/2019	5:00	191.66	3965	183.77	
1/31/2019	6:00	192.07	4025	184.18	
1/31/2019	7:00	192.02	4085	184.13	
1/31/2019	8:00	192.10	4145	184.21	
1/31/2019	9:00	192.50	4205	184.61	Pumping rate 7.5 gpm.

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Well 1 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
1/31/2019	10:00	195.25	4265	187.36	Part 5 samples collected.
1/31/2019	11:00	194.51	4325	186.62	Pumping rate 7.5 gpm.
1/31/2019	12:00	193.87	4385	185.98	
1/31/2019	13:00	193.23	4445	185.34	Pumping rate 7.5 gpm.
1/31/2019	14:00	193.40	4505	185.51	
1/31/2019	15:00	192.89	4565	185.00	Pumping rate 7.5 gpm.
1/31/2019	16:00	192.86	4625	184.97	
1/31/2019	16:40	192.99	4665	185.10	Six hours prior to shut down.
1/31/2019	17:00	192.60	4685	184.71	Pumping rate 7.5 gpm.
1/31/2019	18:00	192.91	4745	185.02	
1/31/2019	19:00	192.74	4805	184.85	Pumping rate 7.5 gpm.
1/31/2019	20:00	192.95	4865	185.06	
1/31/2019	21:00	193.03	4925	185.14	Pumping rate 7.5 gpm.
1/31/2019	22:00	193.37	4985	185.48	
1/31/2019	22:39	193.08	5024	185.19	Pumping rate 7.5 gpm.
1/31/2019	22:40	187.63	-1	179.74	Pump in Well 1 shut down.
1/31/2019	22:41	186.23	-2	178.34	
1/31/2019	22:42	185.44	-3	177.55	
1/31/2019	22:43	184.43	-4	176.54	
1/31/2019	22:44	183.41	-5	175.52	
1/31/2019	22:45	182.41	-6	174.52	
1/31/2019	22:46	181.34	-7	173.45	
1/31/2019	22:47	180.38	-8	172.49	
1/31/2019	22:48	179.38	-9	171.49	
1/31/2019	22:49	178.36	-10	170.47	
1/31/2019	22:50	177.40	-11	169.51	
1/31/2019	22:51	176.42	-12	168.53	
1/31/2019	22:52	175.42	-13	167.53	
1/31/2019	22:53	174.47	-14	166.58	
1/31/2019	22:54	173.50	-15	165.61	
1/31/2019	23:00	167.51	-21	159.62	
1/31/2019	23:05	162.49	-26	154.60	
1/31/2019	23:10	157.40	-31	149.51	
1/31/2019	23:15	152.23	-36	144.34	
1/31/2019	23:20	147.26	-41	139.37	
1/31/2019	23:25	142.39	-46	134.50	
1/31/2019	23:30	137.60	-51	129.71	
1/31/2019	23:35	132.21	-56	124.32	
1/31/2019	23:40	127.10	-61	119.21	
2/1/2019	0:00	107.66	-81	99.77	
2/1/2019	1:00	67.82	-141	59.93	
2/1/2019	2:00	49.21	-201	41.32	
2/1/2019	3:00	38.84	-261	30.95	
2/1/2019	4:00	32.08	-321	24.19	
2/1/2019	5:00	27.37	-381	19.48	
2/1/2019	6:00	23.83	-441	15.94	>90% recovery to pre-test level
2/1/2019	7:00	21.15	-501	13.26	
2/1/2019	8:00	19.08	-561	11.19	
2/1/2019	9:00	17.49	-621	9.60	
2/1/2019	10:00	16.26	-681	8.37	
2/1/2019	11:00	15.14	-741	7.25	
2/1/2019	12:00	14.26	-801	6.37	

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Well 1 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
2/1/2019	13:00	13.55	-861	5.66	
2/1/2019	14:00	12.96	-921	5.07	
2/1/2019	15:00	12.44	-981	4.55	
2/1/2019	16:00	12.04	-1041	4.15	
2/1/2019	17:00	11.73	-1101	3.84	
2/1/2019	18:00	11.42	-1161	3.53	
2/1/2019	19:00	11.20	-1221	3.31	
2/1/2019	20:00	11.02	-1281	3.13	
2/1/2019	21:00	10.86	-1341	2.97	
2/1/2019	22:00	10.67	-1401	2.78	
2/1/2019	23:00	10.54	-1461	2.65	
2/2/2019	0:00	10.37	-1521	2.48	
2/2/2019	1:00	10.22	-1581	2.33	
2/2/2019	2:00	10.10	-1641	2.21	
2/2/2019	3:00	9.99	-1701	2.10	
2/2/2019	4:00	9.90	-1761	2.01	
2/2/2019	5:00	9.83	-1821	1.94	
2/2/2019	6:00	9.68	-1881	1.79	
2/2/2019	7:00	9.69	-1941	1.80	
2/2/2019	8:00	9.66	-2001	1.77	
2/2/2019	9:00	9.66	-2061	1.77	
2/2/2019	10:00	9.53	-2121	1.64	
2/2/2019	11:00	9.49	-2181	1.60	
2/2/2019	12:00	9.43	-2241	1.54	
2/2/2019	13:00	9.35	-2301	1.46	
2/2/2019	14:00	9.28	-2361	1.39	
2/2/2019	15:00	9.22	-2421	1.33	
2/2/2019	16:00	9.19	-2481	1.30	
2/2/2019	17:00	9.18	-2541	1.29	
2/2/2019	18:00	9.15	-2601	1.26	
2/2/2019	19:00	9.20	-2661	1.31	
2/2/2019	20:00	9.20	-2721	1.31	
2/2/2019	21:00	9.20	-2781	1.31	
2/2/2019	22:00	9.21	-2841	1.32	
2/2/2019	23:00	9.17	-2901	1.28	
2/3/2019	0:00	9.16	-2961	1.27	
2/3/2019	1:00	9.07	-3021	1.18	
2/3/2019	2:00	9.00	-3081	1.11	
2/3/2019	3:00	8.97	-3141	1.08	
2/3/2019	4:00	8.90	-3201	1.01	
2/3/2019	5:00	8.92	-3261	1.03	
2/3/2019	6:00	8.89	-3321	1.00	
2/3/2019	7:00	8.94	-3381	1.05	
2/3/2019	8:00	8.94	-3441	1.05	
2/3/2019	9:00	8.95	-3501	1.06	
2/3/2019	10:00	9.01	-3561	1.12	
2/3/2019	11:00	8.95	-3621	1.06	
2/3/2019	12:00	8.96	-3681	1.07	
2/3/2019	13:00	8.87	-3741	0.98	
2/3/2019	14:00	8.79	-3801	0.90	
2/3/2019	15:00	8.78	-3861	0.89	
2/3/2019	16:00	8.79	-3921	0.90	

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Well 1 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
2/3/2019	17:00	8.80	-3981	0.91	
2/3/2019	18:00	8.81	-4041	0.92	
2/3/2019	19:00	8.83	-4101	0.94	
2/3/2019	20:00	8.84	-4161	0.95	
2/3/2019	21:00	8.93	-4221	1.04	
2/3/2019	22:00	8.92	-4281	1.03	
2/3/2019	23:00	8.90	-4341	1.01	
2/4/2019	0:00	8.89	-4401	1.00	
2/4/2019	1:00	8.83	-4461	0.94	
2/4/2019	2:00	8.82	-4521	0.93	
2/4/2019	3:00	8.76	-4581	0.87	
2/4/2019	4:00	8.73	-4641	0.84	
2/4/2019	5:00	8.64	-4701	0.75	
2/4/2019	6:00	8.67	-4761	0.78	
2/4/2019	7:00	8.71	-4821	0.82	
2/4/2019	8:00	8.71	-4881	0.82	
2/4/2019	9:00	8.78	-4941	0.89	
2/4/2019	10:00	8.78	-5001	0.89	
2/4/2019	11:00	8.78	-5061	0.89	Pressure transducer removed from well.

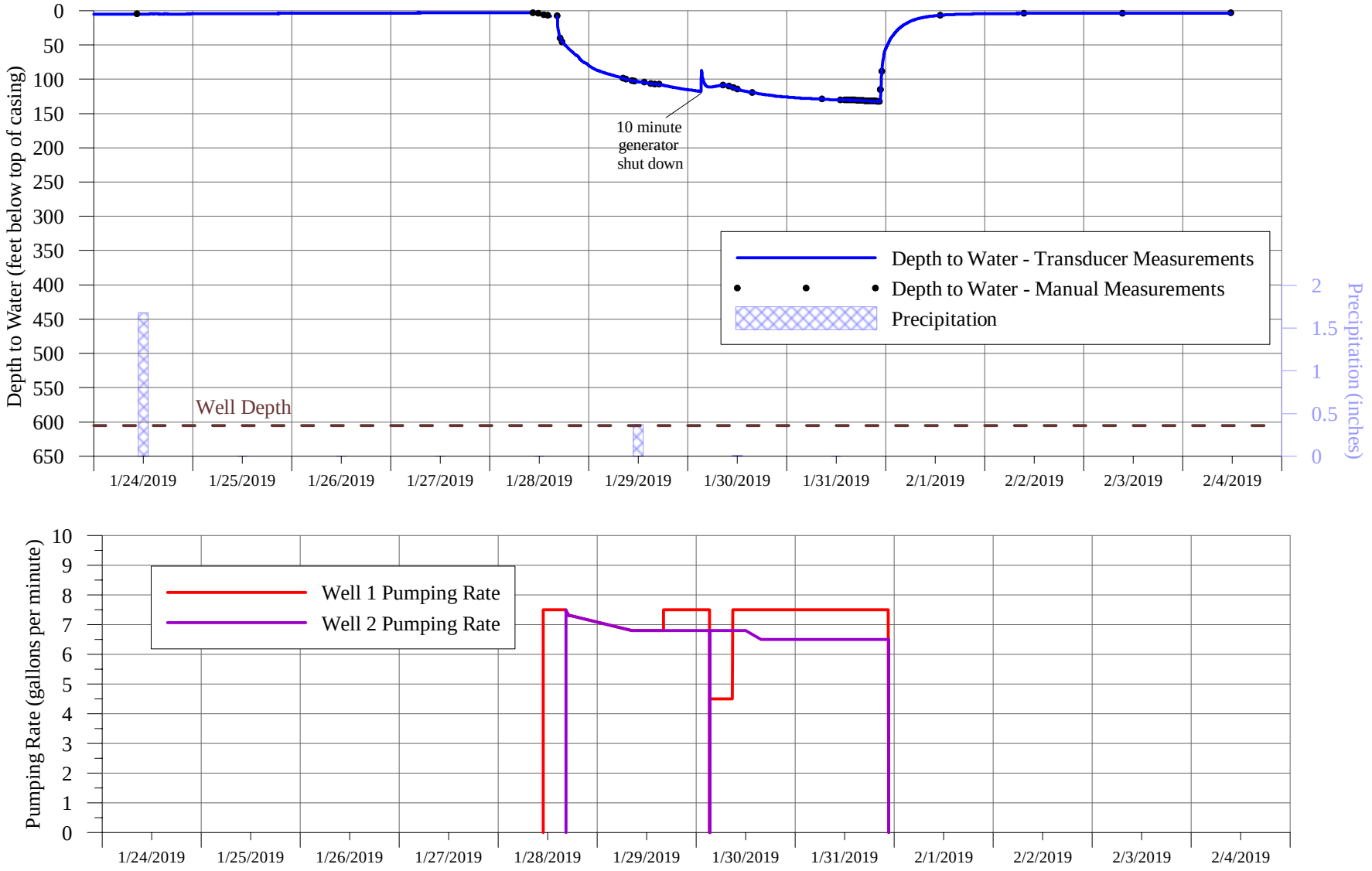
ft btoc feet below top of casing
gpm gallons per minute

H:\Wilder Balter\Lewisboro\2019\72-Hour Pumping Test - Wells 1 and 2\Well 1 WL table.docx

WELL 2

WILDER BALTER PARTNERS, INC.
ROUTE 22
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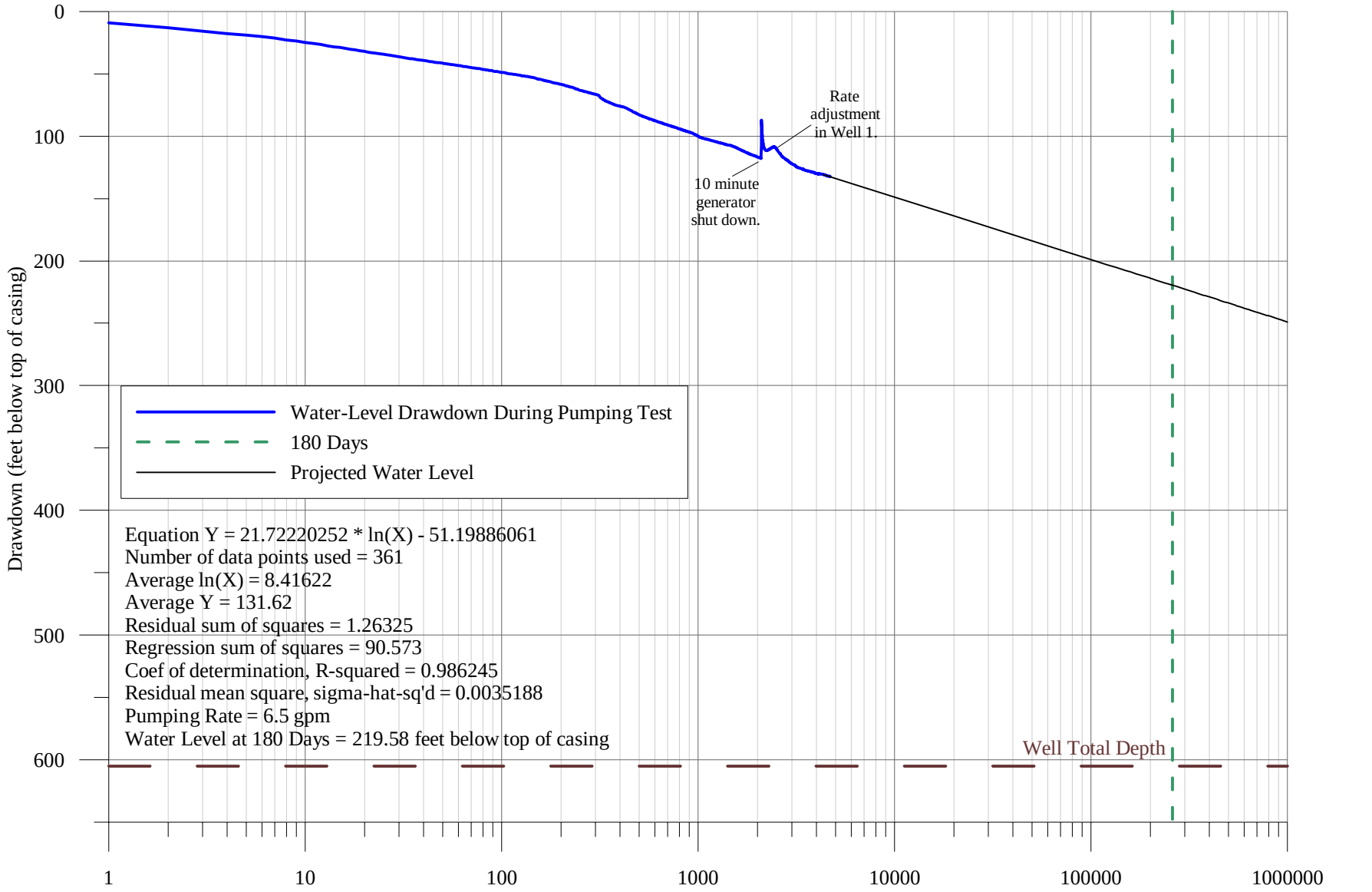
Hydrograph of Water-Level Measurements Collected from the Onsite Well 2, During 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019



LBG Hydrogeologic & Engineering Services, P.C.

WILDER BALTER PARTNERS, INC.
ROUTE 22
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Water-Level Drawdown Projection from Measurements Collected from Pumping Well 2, During Pumping Test on Wells 1 and 2, January 28 Through January 31, 2018



LBG Hydrogeologic & Engineering Services, P.C.

WILDER BALTER PARTNERS, INC.
ROUTE 22
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Summary of Water-Level Measurements Collected from Well 2 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
1/24/2019	0:00	4.89	--	--	
1/24/2019	1:00	4.89	--	--	
1/24/2019	2:00	4.88	--	--	
1/24/2019	3:00	4.87	--	--	
1/24/2019	4:00	4.86	--	--	
1/24/2019	5:00	4.84	--	--	
1/24/2019	6:00	4.84	--	--	
1/24/2019	7:00	4.82	--	--	
1/24/2019	8:00	4.81	--	--	
1/24/2019	9:00	4.92	--	--	
1/24/2019	10:00	5.16	--	--	
1/24/2019	11:00	5.08	--	--	
1/24/2019	12:00	5.24	--	--	
1/24/2019	13:00	5.32	--	--	
1/24/2019	14:00	4.77	--	--	
1/24/2019	15:00	4.75	--	--	
1/24/2019	16:00	4.81	--	--	
1/24/2019	17:00	4.79	--	--	
1/24/2019	18:00	4.79	--	--	
1/24/2019	19:00	4.82	--	--	
1/24/2019	20:00	4.84	--	--	
1/24/2019	21:00	4.81	--	--	
1/24/2019	22:00	4.80	--	--	
1/24/2019	23:00	4.79	--	--	
1/25/2019	0:00	4.77	--	--	
1/25/2019	1:00	4.75	--	--	
1/25/2019	2:00	4.72	--	--	
1/25/2019	3:00	4.68	--	--	
1/25/2019	4:00	4.65	--	--	
1/25/2019	5:00	4.60	--	--	
1/25/2019	6:00	4.59	--	--	
1/25/2019	7:00	4.54	--	--	
1/25/2019	8:00	4.49	--	--	
1/25/2019	9:00	4.46	--	--	
1/25/2019	10:00	4.43	--	--	
1/25/2019	11:00	4.40	--	--	
1/25/2019	12:00	4.36	--	--	
1/25/2019	13:00	4.32	--	--	
1/25/2019	14:00	4.30	--	--	
1/25/2019	15:00	4.28	--	--	
1/25/2019	16:00	4.24	--	--	
1/25/2019	17:00	4.22	--	--	
1/25/2019	18:00	4.17	--	--	
1/25/2019	19:00	4.14	--	--	
1/25/2019	20:00	4.09	--	--	
1/25/2019	21:00	4.06	--	--	
1/25/2019	22:00	4.03	--	--	
1/25/2019	23:00	4.01	--	--	
1/26/2019	0:00	3.98	--	--	
1/26/2019	1:00	3.95	--	--	
1/26/2019	2:00	3.90	--	--	

WILDER BALTER PARTNERS, INC.
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Summary of Water-Level Measurements Collected from Well 2 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
1/26/2019	3:00	3.89	--	--	
1/26/2019	4:00	3.86	--	--	
1/26/2019	5:00	3.84	--	--	
1/26/2019	6:00	3.80	--	--	
1/26/2019	7:00	3.76	--	--	
1/26/2019	8:00	3.73	--	--	
1/26/2019	9:00	3.71	--	--	
1/26/2019	10:00	3.68	--	--	
1/26/2019	11:00	3.66	--	--	
1/26/2019	12:00	3.62	--	--	
1/26/2019	13:00	3.62	--	--	
1/26/2019	14:00	3.60	--	--	
1/26/2019	15:00	3.57	--	--	
1/26/2019	16:00	3.58	--	--	
1/26/2019	17:00	3.55	--	--	
1/26/2019	18:00	3.53	--	--	
1/26/2019	19:00	3.51	--	--	
1/26/2019	20:00	3.51	--	--	
1/26/2019	21:00	3.48	--	--	
1/26/2019	22:00	3.47	--	--	
1/26/2019	23:00	3.43	--	--	
1/27/2019	0:00	3.43	--	--	
1/27/2019	1:00	3.42	--	--	
1/27/2019	2:00	3.40	--	--	
1/27/2019	3:00	3.39	--	--	
1/27/2019	4:00	3.38	--	--	
1/27/2019	5:00	3.36	--	--	
1/27/2019	6:00	3.35	--	--	
1/27/2019	7:00	3.35	--	--	
1/27/2019	8:00	3.32	--	--	
1/27/2019	9:00	3.30	--	--	
1/27/2019	10:00	3.29	--	--	
1/27/2019	11:00	3.27	--	--	
1/27/2019	12:00	3.27	--	--	
1/27/2019	13:00	3.28	--	--	
1/27/2019	14:00	3.26	--	--	
1/27/2019	15:00	3.27	--	--	
1/27/2019	16:00	3.26	--	--	
1/27/2019	17:00	3.26	--	--	
1/27/2019	18:00	3.26	--	--	
1/27/2019	19:00	3.25	--	--	
1/27/2019	20:00	3.26	--	--	
1/27/2019	21:00	3.25	--	--	
1/27/2019	22:00	3.25	--	--	
1/27/2019	23:00	3.25	--	--	
1/28/2019	0:00	3.25	--	--	
1/28/2019	1:00	3.24	--	--	
1/28/2019	2:00	3.25	--	--	
1/28/2019	3:00	3.25	--	--	
1/28/2019	4:00	3.24	--	--	
1/28/2019	5:00	3.26	--	--	

WILDER BALTER PARTNERS, INC.
ROUTE 22
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Summary of Water-Level Measurements Collected from Well 2 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
1/28/2019	6:00	3.24	--	--	
1/28/2019	7:00	3.24	--	--	
1/28/2019	8:00	3.26	--	--	
1/28/2019	9:00	3.25	--	--	
1/28/2019	10:00	3.25	--	--	Well 1 pump started at 10:40.
1/28/2019	11:43	4.28	--	--	
1/28/2019	13:05	6.18	--	--	
1/28/2019	14:40	7.96	--	--	Wring issue with Well 2 pump delayed startup.
1/28/2019	16:19	7.79	--	--	
1/28/2019	16:20	9.03	1	6.20	Pump in Well 2 started
1/28/2019	16:21	13.06	2	10.23	Pumping rate adjusted to 7.5 gpm.
1/28/2019	16:22	15.77	3	12.94	
1/28/2019	16:23	17.77	4	14.94	Pumping rate 7.5 gpm.
1/28/2019	16:24	18.78	5	15.95	
1/28/2019	16:25	20.15	6	17.32	Pumping rate 7.5 gpm.
1/28/2019	16:26	21.49	7	18.66	
1/28/2019	16:27	22.73	8	19.90	Pumping rate 7.5 gpm.
1/28/2019	16:28	23.81	9	20.98	
1/28/2019	16:29	24.83	10	22.00	Pumping rate 7.5 gpm.
1/28/2019	16:30	25.79	11	22.96	
1/28/2019	16:31	26.62	12	23.79	Pumping rate 7.5 gpm.
1/28/2019	16:32	27.49	13	24.66	
1/28/2019	16:33	28.29	14	25.46	Pumping rate 7.5 gpm.
1/28/2019	16:34	28.99	15	26.16	
1/28/2019	16:40	32.60	21	29.77	Pumping rate 7.5 gpm.
1/28/2019	16:50	36.78	31	33.95	
1/28/2019	17:00	39.57	41	36.74	Pumping rate 7.5 gpm.
1/28/2019	17:10	41.80	51	38.97	Pumping rate 7.3 gpm.
1/28/2019	17:20	43.50	61	40.67	
1/28/2019	18:00	48.96	101	46.13	Pumping rate 7.3 gpm.
1/28/2019	19:00	54.98	161	52.15	
1/28/2019	20:00	60.30	221	57.47	Pumping rate 7.3 gpm.
1/28/2019	21:00	65.25	281	62.42	
1/28/2019	22:00	71.94	341	69.11	
1/28/2019	23:00	75.97	401	73.14	
1/29/2019	0:00	80.03	461	77.20	
1/29/2019	1:00	84.00	521	81.17	
1/29/2019	2:00	86.72	581	83.89	
1/29/2019	3:00	89.08	641	86.25	
1/29/2019	4:00	91.13	701	88.30	
1/29/2019	5:00	92.87	761	90.04	
1/29/2019	6:00	94.62	821	91.79	Pumping rate 6.8 gpm.
1/29/2019	7:00	96.33	881	93.50	
1/29/2019	8:00	97.84	941	95.01	Pumping rate 6.8 gpm.
1/29/2019	9:00	100.13	1001	97.30	
1/29/2019	10:00	101.70	1061	98.87	Pumping rate 6.8 gpm.
1/29/2019	11:00	102.63	1121	99.80	
1/29/2019	12:00	103.66	1181	100.83	Pumping rate 6.8 gpm.
1/29/2019	13:00	104.63	1241	101.80	
1/29/2019	14:00	105.53	1301	102.70	Pumping rate 6.8 gpm.
1/29/2019	15:00	106.35	1361	103.52	

WILDER BALTER PARTNERS, INC.
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Summary of Water-Level Measurements Collected from Well 2 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
1/29/2019	16:00	107.18	1421	104.35	Pumping rate 6.8 gpm.
1/29/2019	17:00	107.68	1481	104.85	
1/29/2019	18:00	108.82	1541	105.99	Pumping rate 6.8 gpm.
1/29/2019	19:00	110.11	1601	107.28	
1/29/2019	20:00	111.36	1661	108.53	Pumping rate 6.8 gpm.
1/29/2019	21:00	112.38	1721	109.55	
1/29/2019	22:00	113.45	1781	110.62	
1/29/2019	23:00	114.56	1841	111.73	
1/30/2019	0:00	115.32	1901	112.49	
1/30/2019	1:00	115.97	1961	113.14	
1/30/2019	2:00	116.97	2021	114.14	
1/30/2019	3:00	117.60	2081	114.77	Pumping rate 6.8 gpm.
1/30/2019	3:09	117.62	2090	114.79	Generator shut down.
1/30/2019	3:19	90.71	2100	87.88	Generator restarted
1/30/2019	4:00	106.27	2141	103.44	Pumping rate 6.8 gpm.
1/30/2019	5:00	111.39	2201	108.56	
1/30/2019	6:00	111.10	2261	108.27	
1/30/2019	7:00	110.02	2321	107.19	
1/30/2019	8:00	109.04	2381	106.21	Pumping rate 6.8 gpm.
1/30/2019	9:00	108.37	2441	105.54	
1/30/2019	10:00	110.14	2501	107.31	Pumping rate 6.8 gpm.
1/30/2019	11:00	112.41	2561	109.58	
1/30/2019	12:00	114.42	2621	111.59	Pumping rate 6.8 gpm.
1/30/2019	13:00	116.46	2681	113.63	
1/30/2019	14:00	117.62	2741	114.79	Pumping rate 6.8 gpm.
1/30/2019	15:00	118.70	2801	115.87	
1/30/2019	16:00	119.70	2861	116.87	Pumping rate 6.5 gpm.
1/30/2019	17:00	120.84	2921	118.01	
1/30/2019	18:00	121.88	2981	119.05	
1/30/2019	19:00	122.69	3041	119.86	
1/30/2019	20:00	123.45	3101	120.62	
1/30/2019	21:00	124.43	3161	121.60	
1/30/2019	22:00	125.21	3221	122.38	
1/30/2019	23:00	125.54	3281	122.71	
1/31/2019	0:00	125.94	3341	123.11	
1/31/2019	1:00	126.35	3401	123.52	
1/31/2019	2:00	126.95	3461	124.12	
1/31/2019	3:00	127.37	3521	124.54	
1/31/2019	4:00	127.66	3581	124.83	
1/31/2019	5:00	127.97	3641	125.14	
1/31/2019	6:00	128.30	3701	125.47	
1/31/2019	7:00	128.60	3761	125.77	Pumping rate 6.5 gpm.
1/31/2019	8:00	128.79	3821	125.96	
1/31/2019	9:00	129.02	3881	126.19	Pumping rate 6.5 gpm.
1/31/2019	10:00	129.60	3941	126.77	
1/31/2019	11:00	129.98	4001	127.15	Pumping rate 6.5 gpm.
1/31/2019	12:00	130.15	4061	127.32	
1/31/2019	13:00	130.20	4121	127.37	Pumping rate 6.5 gpm.
1/31/2019	14:00	130.26	4181	127.43	
1/31/2019	15:00	130.41	4241	127.58	Pumping rate 6.5 gpm.
1/31/2019	16:00	130.63	4301	127.80	

WILDER BALTER PARTNERS, INC.
ROUTE 22
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Summary of Water-Level Measurements Collected from Well 2 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
1/31/2019	16:40	130.68	4341	127.85	Six hours prior to shut down of the pump.
1/31/2019	17:00	130.78	4361	127.95	
1/31/2019	18:00	131.12	4421	128.29	Pumping rate 6.5 gpm.
1/31/2019	19:00	131.46	4481	128.63	
1/31/2019	20:00	131.79	4541	128.96	Pumping rate 6.5 gpm.
1/31/2019	21:00	132.03	4601	129.20	
1/31/2019	22:00	132.21	4661	129.38	Pumping rate 6.5 gpm.
1/31/2019	22:39	132.36	4700	129.53	
1/31/2019	22:40	132.37	4701	129.54	Pumping rate 6.5 gpm.
1/31/2019	22:41	131.57	-1	128.74	Shut down pump in Well 2.
1/31/2019	22:42	127.84	-2	125.01	
1/31/2019	22:43	124.50	-3	121.67	
1/31/2019	22:44	121.41	-4	118.58	
1/31/2019	22:45	118.50	-5	115.67	
1/31/2019	22:46	115.72	-6	112.89	
1/31/2019	22:47	113.11	-7	110.28	
1/31/2019	22:48	110.63	-8	107.80	
1/31/2019	22:49	108.23	-9	105.40	
1/31/2019	22:50	105.90	-10	103.07	
1/31/2019	22:51	103.73	-11	100.90	
1/31/2019	22:52	101.66	-12	98.83	
1/31/2019	22:53	99.68	-13	96.85	
1/31/2019	22:54	97.83	-14	95.00	
1/31/2019	22:55	96.12	-15	93.29	
1/31/2019	23:00	88.78	-20	85.95	
2/1/2019	0:00	54.50	-80	51.67	
2/1/2019	1:00	42.31	-140	39.48	
2/1/2019	2:00	33.75	-200	30.92	
2/1/2019	3:00	27.15	-260	24.32	
2/1/2019	4:00	22.23	-320	19.40	
2/1/2019	5:00	18.39	-380	15.56	
2/1/2019	6:00	15.35	-440	12.52	>90% recovery to pre-test level
2/1/2019	7:00	13.10	-500	10.27	
2/1/2019	8:00	11.27	-560	8.44	
2/1/2019	9:00	9.95	-620	7.12	
2/1/2019	10:00	8.88	-680	6.05	
2/1/2019	11:00	8.05	-740	5.22	
2/1/2019	12:00	7.37	-800	4.54	
2/1/2019	13:00	6.80	-860	3.97	
2/1/2019	14:00	6.35	-920	3.52	
2/1/2019	15:00	5.97	-980	3.14	
2/1/2019	16:00	5.69	-1040	2.86	
2/1/2019	17:00	5.44	-1100	2.61	
2/1/2019	18:00	5.23	-1160	2.40	
2/1/2019	19:00	5.15	-1220	2.32	
2/1/2019	20:00	4.94	-1280	2.11	
2/1/2019	21:00	4.81	-1340	1.98	
2/1/2019	22:00	4.71	-1400	1.88	
2/1/2019	23:00	4.59	-1460	1.76	
2/2/2019	0:00	4.51	-1520	1.68	
2/2/2019	1:00	4.42	-1580	1.59	

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Well 2 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
2/2/2019	2:00	4.35	-1640	1.52	
2/2/2019	3:00	4.29	-1700	1.46	
2/2/2019	4:00	4.22	-1760	1.39	
2/2/2019	5:00	4.18	-1820	1.35	
2/2/2019	6:00	4.12	-1880	1.29	
2/2/2019	7:00	4.10	-1940	1.27	
2/2/2019	8:00	4.08	-2000	1.25	
2/2/2019	9:00	4.02	-2060	1.19	
2/2/2019	10:00	4.00	-2120	1.17	
2/2/2019	11:00	3.96	-2180	1.13	
2/2/2019	12:00	3.90	-2240	1.07	
2/2/2019	13:00	3.88	-2300	1.05	
2/2/2019	14:00	3.85	-2360	1.02	
2/2/2019	15:00	3.82	-2420	0.99	
2/2/2019	16:00	3.81	-2480	0.98	
2/2/2019	17:00	3.80	-2540	0.97	
2/2/2019	18:00	3.80	-2600	0.97	
2/2/2019	19:00	3.80	-2660	0.97	
2/2/2019	20:00	3.79	-2720	0.96	
2/2/2019	21:00	3.80	-2780	0.97	
2/2/2019	22:00	3.82	-2840	0.99	
2/2/2019	23:00	3.79	-2900	0.96	
2/3/2019	0:00	3.78	-2960	0.95	
2/3/2019	1:00	3.76	-3020	0.93	
2/3/2019	2:00	3.74	-3080	0.91	
2/3/2019	3:00	3.73	-3140	0.90	
2/3/2019	4:00	3.68	-3200	0.85	
2/3/2019	5:00	3.67	-3260	0.84	
2/3/2019	6:00	3.67	-3320	0.84	
2/3/2019	7:00	3.68	-3380	0.85	
2/3/2019	8:00	3.73	-3440	0.90	
2/3/2019	9:00	3.67	-3500	0.84	
2/3/2019	10:00	3.69	-3560	0.86	
2/3/2019	11:00	3.66	-3620	0.83	
2/3/2019	12:00	3.66	-3680	0.83	
2/3/2019	13:00	3.64	-3740	0.81	
2/3/2019	14:00	3.63	-3800	0.80	
2/3/2019	15:00	3.60	-3860	0.77	
2/3/2019	16:00	3.62	-3920	0.79	
2/3/2019	17:00	3.61	-3980	0.78	
2/3/2019	18:00	3.62	-4040	0.79	
2/3/2019	19:00	3.64	-4100	0.81	
2/3/2019	20:00	3.66	-4160	0.83	
2/3/2019	21:00	3.65	-4220	0.82	
2/3/2019	22:00	3.65	-4280	0.82	
2/3/2019	23:00	3.63	-4340	0.80	
2/4/2019	0:00	3.64	-4400	0.81	
2/4/2019	1:00	3.61	-4460	0.78	
2/4/2019	2:00	3.59	-4520	0.76	
2/4/2019	3:00	3.58	-4580	0.75	
2/4/2019	4:00	3.58	-4640	0.75	

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Well 2 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Depth to Water (ft btoc)	Elapsed Time (minutes)	Drawdown (feet)	Comments
2/4/2019	5:00	3.57	-4700	0.74	
2/4/2019	6:00	3.56	-4760	0.73	
2/4/2019	7:00	3.58	-4820	0.75	
2/4/2019	8:00	3.58	-4880	0.75	
2/4/2019	9:00	3.60	-4940	0.77	
2/4/2019	10:00	3.61	-5000	0.78	
2/4/2019	11:00	3.61	-5060	0.78	Pressure transducer removed from well.

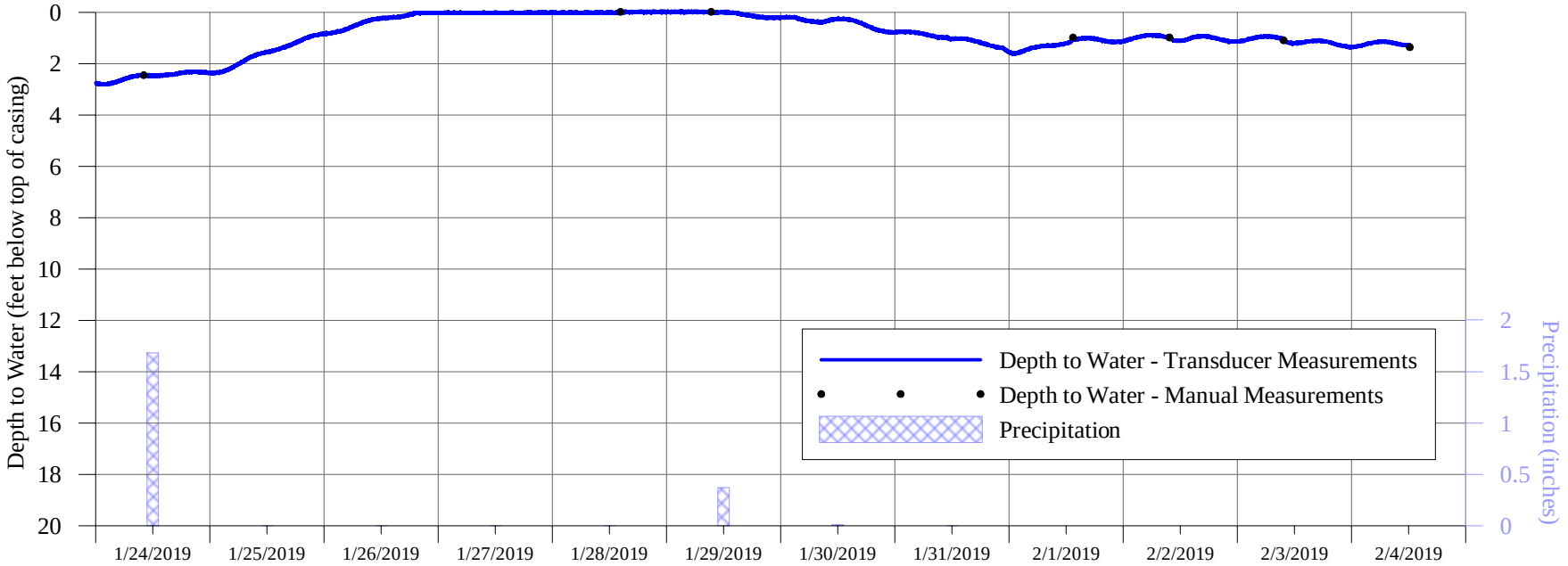
ft btoc feet below top of casing
gpm gallons per minute

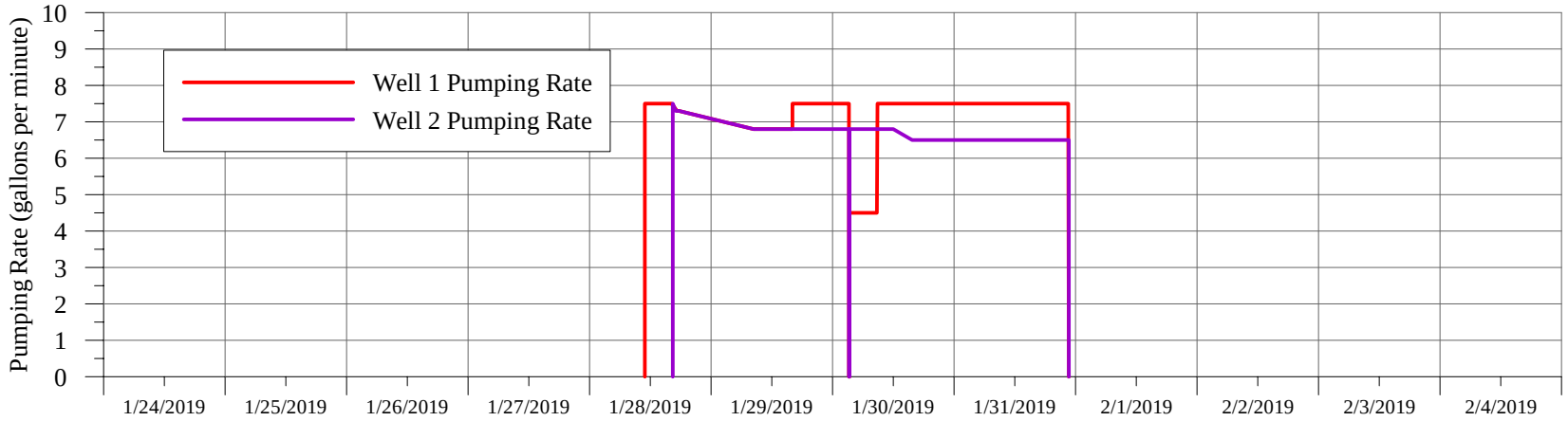
H:\Wilder Balter\Lewisboro\2019\72-Hour Pumping Test - Wells 1 and 2\Well 2 WL table.docx

APPENDIX III

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from the Onsite Well 3, During 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

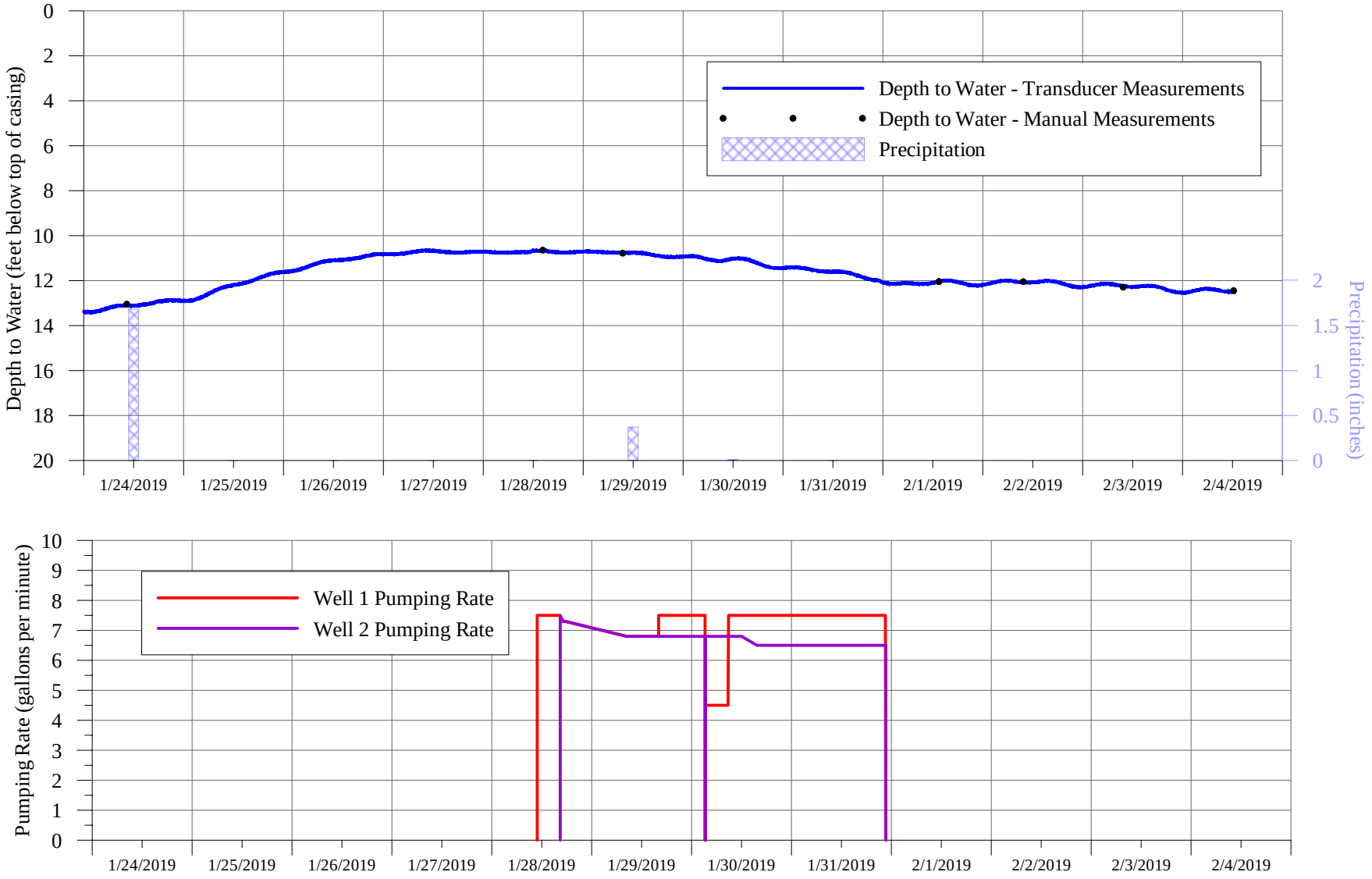




LBG Hydrogeologic & Engineering Services, P.C.

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from the Onsite Well 4, During 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019



LBG Hydrogeologic & Engineering Services, P.C.

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Wells 3 and 4 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Well 3 Depth to Water (ft btoc)	Well 4 Depth to Water (ft btoc)
1/24/2019	0:00	2.75	13.37
1/24/2019	1:00	2.80	13.40
1/24/2019	2:00	2.78	13.39
1/24/2019	3:00	2.79	13.38
1/24/2019	4:00	2.72	13.35
1/24/2019	5:00	2.66	13.28
1/24/2019	6:00	2.58	13.21
1/24/2019	7:00	2.53	13.15
1/24/2019	8:00	2.50	13.12
1/24/2019	9:00	2.49	13.10
1/24/2019	10:00	2.45	13.10
1/24/2019	11:00	2.45	13.12
1/24/2019	12:00	2.45	13.11
1/24/2019	13:00	2.48	13.09
1/24/2019	14:00	2.46	13.07
1/24/2019	15:00	2.48	13.03
1/24/2019	16:00	2.45	13.02
1/24/2019	17:00	2.39	12.97
1/24/2019	18:00	2.36	12.92
1/24/2019	19:00	2.34	12.88
1/24/2019	20:00	2.33	12.91
1/24/2019	21:00	2.32	12.85
1/24/2019	22:00	2.33	12.89
1/24/2019	23:00	2.32	12.89
1/25/2019	0:00	2.35	12.92
1/25/2019	1:00	2.35	12.91
1/25/2019	2:00	2.32	12.91
1/25/2019	3:00	2.29	12.82
1/25/2019	4:00	2.21	12.77
1/25/2019	5:00	2.14	12.68
1/25/2019	6:00	2.00	12.58
1/25/2019	7:00	1.92	12.49
1/25/2019	8:00	1.79	12.42
1/25/2019	9:00	1.70	12.30
1/25/2019	10:00	1.63	12.29
1/25/2019	11:00	1.57	12.25
1/25/2019	12:00	1.56	12.21
1/25/2019	13:00	1.52	12.17
1/25/2019	14:00	1.47	12.15
1/25/2019	15:00	1.39	12.09
1/25/2019	16:00	1.34	12.04
1/25/2019	17:00	1.28	11.97
1/25/2019	18:00	1.19	11.89
1/25/2019	19:00	1.09	11.80
1/25/2019	20:00	1.01	11.77
1/25/2019	21:00	0.96	11.71
1/25/2019	22:00	0.91	11.65
1/25/2019	23:00	0.86	11.64
1/26/2019	0:00	0.82	11.62
1/26/2019	1:00	0.81	11.57
1/26/2019	2:00	0.80	11.57
1/26/2019	3:00	0.78	11.54

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Wells 3 and 4 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Well 3 Depth to Water (ft btoc)	Well 4 Depth to Water (ft btoc)
1/26/2019	4:00	0.70	11.49
1/26/2019	5:00	0.63	11.44
1/26/2019	6:00	0.56	11.38
1/26/2019	7:00	0.49	11.30
1/26/2019	8:00	0.43	11.24
1/26/2019	9:00	0.33	11.17
1/26/2019	10:00	0.27	11.13
1/26/2019	11:00	0.27	11.09
1/26/2019	12:00	0.24	11.12
1/26/2019	13:00	0.24	11.09
1/26/2019	14:00	0.19	11.07
1/26/2019	15:00	0.20	11.07
1/26/2019	16:00	0.15	11.03
1/26/2019	17:00	0.14	11.01
1/26/2019	18:00	0.09	10.98
1/26/2019	19:00	0.07	10.92
1/26/2019	20:00	0.02	10.90
1/26/2019	21:00	0.04	10.88
1/26/2019	22:00	0.01	10.85
1/26/2019	23:00	0.03	10.80
1/27/2019	0:00	0.04	10.83
1/27/2019	1:00	0.03	10.83
1/27/2019	2:00	0.00	10.81
1/27/2019	3:00	0.03	10.84
1/27/2019	4:00	0.00	10.82
1/27/2019	5:00	0.01	10.80
1/27/2019	6:00	0.00	10.79
1/27/2019	7:00	0.04	10.74
1/27/2019	8:00	0.03	10.69
1/27/2019	9:00	0.02	10.66
1/27/2019	10:00	0.02	10.67
1/27/2019	11:00	0.03	10.66
1/27/2019	12:00	0.03	10.68
1/27/2019	13:00	0.02	10.70
1/27/2019	14:00	0.02	10.72
1/27/2019	15:00	0.01	10.71
1/27/2019	16:00	0.00	10.75
1/27/2019	17:00	0.02	10.76
1/27/2019	18:00	0.02	10.76
1/27/2019	19:00	0.02	10.75
1/27/2019	20:00	0.03	10.74
1/27/2019	21:00	0.00	10.75
1/27/2019	22:00	0.00	10.73
1/27/2019	23:00	0.03	10.72
1/28/2019	0:00	0.01	10.72
1/28/2019	1:00	0.02	10.72
1/28/2019	2:00	0.00	10.74
1/28/2019	3:00	0.02	10.76
1/28/2019	4:00	0.01	10.76
1/28/2019	5:00	0.03	10.74
1/28/2019	6:00	0.02	10.77
1/28/2019	7:00	0.02	10.75

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Wells 3 and 4 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Well 3 Depth to Water (ft btoc)	Well 4 Depth to Water (ft btoc)
1/28/2019	8:00	0.02	10.74
1/28/2019	9:00	0.00	10.72
1/28/2019	10:00	0.02	10.72
1/28/2019	11:00	0.00	10.74
1/28/2019	12:00	0.02	10.69
1/28/2019	13:00	0.00	10.67
1/28/2019	14:00	0.01	10.68
1/28/2019	15:00	0.00	10.69
1/28/2019	16:00	0.00	10.71
1/28/2019	17:00	0.00	10.74
1/28/2019	18:00	0.00	10.75
1/28/2019	19:00	0.00	10.75
1/28/2019	20:00	0.00	10.78
1/28/2019	21:00	0.00	10.74
1/28/2019	22:00	0.00	10.74
1/28/2019	23:00	0.00	10.72
1/29/2019	0:00	0.00	10.72
1/29/2019	1:00	0.00	10.70
1/29/2019	2:00	0.00	10.70
1/29/2019	3:00	0.00	10.72
1/29/2019	4:00	0.00	10.71
1/29/2019	5:00	0.00	10.73
1/29/2019	6:00	0.00	10.73
1/29/2019	7:00	0.00	10.73
1/29/2019	8:00	0.01	10.76
1/29/2019	9:00	0.00	10.74
1/29/2019	10:00	0.02	10.76
1/29/2019	11:00	0.01	10.74
1/29/2019	12:00	0.01	10.76
1/29/2019	13:00	0.01	10.75
1/29/2019	14:00	0.01	10.78
1/29/2019	15:00	0.07	10.79
1/29/2019	16:00	0.11	10.86
1/29/2019	17:00	0.11	10.90
1/29/2019	18:00	0.14	10.92
1/29/2019	19:00	0.16	10.93
1/29/2019	20:00	0.19	10.94
1/29/2019	21:00	0.20	10.98
1/29/2019	22:00	0.21	10.95
1/29/2019	23:00	0.23	10.95
1/30/2019	0:00	0.21	10.95
1/30/2019	1:00	0.22	10.93
1/30/2019	2:00	0.18	10.92
1/30/2019	3:00	0.22	10.91
1/30/2019	4:00	0.26	10.98
1/30/2019	5:00	0.31	11.00
1/30/2019	6:00	0.35	11.07
1/30/2019	7:00	0.38	11.09
1/30/2019	8:00	0.39	11.10
1/30/2019	9:00	0.36	11.14
1/30/2019	10:00	0.31	11.08
1/30/2019	11:00	0.28	11.08

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Wells 3 and 4 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Well 3 Depth to Water (ft btoc)	Well 4 Depth to Water (ft btoc)
1/30/2019	12:00	0.23	11.05
1/30/2019	13:00	0.25	11.00
1/30/2019	14:00	0.27	11.02
1/30/2019	15:00	0.30	11.07
1/30/2019	16:00	0.38	11.09
1/30/2019	17:00	0.45	11.19
1/30/2019	18:00	0.52	11.21
1/30/2019	19:00	0.58	11.30
1/30/2019	20:00	0.67	11.38
1/30/2019	21:00	0.73	11.40
1/30/2019	22:00	0.78	11.42
1/30/2019	23:00	0.77	11.46
1/31/2019	0:00	0.77	11.46
1/31/2019	1:00	0.76	11.42
1/31/2019	2:00	0.76	11.40
1/31/2019	3:00	0.76	11.43
1/31/2019	4:00	0.78	11.46
1/31/2019	5:00	0.81	11.44
1/31/2019	6:00	0.85	11.47
1/31/2019	7:00	0.89	11.52
1/31/2019	8:00	0.91	11.55
1/31/2019	9:00	0.95	11.59
1/31/2019	10:00	0.98	11.61
1/31/2019	11:00	0.99	11.62
1/31/2019	12:00	1.03	11.61
1/31/2019	13:00	1.01	11.61
1/31/2019	14:00	1.01	11.61
1/31/2019	15:00	1.05	11.63
1/31/2019	16:00	1.08	11.65
1/31/2019	17:00	1.12	11.73
1/31/2019	18:00	1.20	11.78
1/31/2019	19:00	1.20	11.85
1/31/2019	20:00	1.29	11.93
1/31/2019	21:00	1.33	11.97
1/31/2019	22:00	1.37	11.99
1/31/2019	23:00	1.44	12.01
2/1/2019	0:00	1.56	12.08
2/1/2019	1:00	1.60	12.14
2/1/2019	2:00	1.59	12.13
2/1/2019	3:00	1.50	12.12
2/1/2019	4:00	1.46	12.12
2/1/2019	5:00	1.37	12.10
2/1/2019	6:00	1.35	12.10
2/1/2019	7:00	1.31	12.11
2/1/2019	8:00	1.31	12.14
2/1/2019	9:00	1.28	12.15
2/1/2019	10:00	1.28	12.16
2/1/2019	11:00	1.24	12.13
2/1/2019	12:00	1.20	12.09
2/1/2019	13:00	1.11	12.06
2/1/2019	14:00	1.06	12.02
2/1/2019	15:00	1.04	12.00

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Wells 3 and 4 During the 72-Hour Pumping Test Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Well 3 Depth to Water (ft btoc)	Well 4 Depth to Water (ft btoc)
2/1/2019	16:00	1.04	11.99
2/1/2019	17:00	1.01	12.03
2/1/2019	18:00	1.05	12.05
2/1/2019	19:00	1.06	12.07
2/1/2019	20:00	1.12	12.16
2/1/2019	21:00	1.14	12.18
2/1/2019	22:00	1.17	12.21
2/1/2019	23:00	1.15	12.22
2/2/2019	0:00	1.14	12.18
2/2/2019	1:00	1.08	12.17
2/2/2019	2:00	1.02	12.11
2/2/2019	3:00	0.97	12.06
2/2/2019	4:00	0.93	12.05
2/2/2019	5:00	0.90	12.03
2/2/2019	6:00	0.88	12.03
2/2/2019	7:00	0.91	12.03
2/2/2019	8:00	0.93	12.04
2/2/2019	9:00	0.97	12.07
2/2/2019	10:00	1.01	12.06
2/2/2019	11:00	1.11	12.09
2/2/2019	12:00	1.11	12.09
2/2/2019	13:00	1.08	12.08
2/2/2019	14:00	1.05	12.06
2/2/2019	15:00	0.96	12.04
2/2/2019	16:00	0.94	12.02
2/2/2019	17:00	0.94	12.03
2/2/2019	18:00	0.94	12.07
2/2/2019	19:00	0.98	12.12
2/2/2019	20:00	1.04	12.16
2/2/2019	21:00	1.09	12.25
2/2/2019	22:00	1.14	12.27
2/2/2019	23:00	1.15	12.30
2/3/2019	0:00	1.16	12.30
2/3/2019	1:00	1.11	12.27
2/3/2019	2:00	1.08	12.24
2/3/2019	3:00	1.00	12.21
2/3/2019	4:00	0.98	12.16
2/3/2019	5:00	0.94	12.14
2/3/2019	6:00	0.92	12.13
2/3/2019	7:00	0.94	12.13
2/3/2019	8:00	0.96	12.20
2/3/2019	9:00	1.00	12.22
2/3/2019	10:00	1.12	12.24
2/3/2019	11:00	1.18	12.29
2/3/2019	12:00	1.20	12.29
2/3/2019	13:00	1.18	12.27
2/3/2019	14:00	1.18	12.28
2/3/2019	15:00	1.15	12.23
2/3/2019	16:00	1.10	12.25
2/3/2019	17:00	1.09	12.24
2/3/2019	18:00	1.13	12.28
2/3/2019	19:00	1.17	12.33

WILDER BALTER PARTNERS, INC.
ROUTE 22
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Wells 3 and 4 During the 72-Hour Pumping Test
Conducted on Wells 1 and 2, January 28 Through 31, 2019

Date	Time	Well 3 Depth to Water (ft btoc)	Well 4 Depth to Water (ft btoc)
2/3/2019	20:00	1.23	12.44
2/3/2019	21:00	1.27	12.46
2/3/2019	22:00	1.33	12.51
2/3/2019	23:00	1.32	12.54
2/4/2019	0:00	1.37	12.54
2/4/2019	1:00	1.33	12.52
2/4/2019	2:00	1.30	12.49
2/4/2019	3:00	1.26	12.44
2/4/2019	4:00	1.21	12.41
2/4/2019	5:00	1.16	12.36
2/4/2019	6:00	1.14	12.38
2/4/2019	7:00	1.14	12.37
2/4/2019	8:00	1.17	12.40
2/4/2019	9:00	1.24	12.44
2/4/2019	10:00	1.26	12.49
2/4/2019	11:00	1.28	12.50
2/4/2019	12:00	1.29	12.51

ft btoc feet below top of casing

H:\Wilder Balter\Lewisboro\2019\72-Hour Pumping Test - Wells 1 and 2\Well 3 and 4 WL table.docx

ARCHITECTURE AND COMMUNITY APPEARANCE REVIEW COUNCIL

TOWN OF LEWISBORO

RECEIVED
FEB 21 REC'D
TOWN CLERK
TOWN OF LEWISBORO
2019

CAL. NO. 10-17-ACARC/PB (rev'd February 13, 2019)

Applicant(s):		John Bainlardi, Wilder Balter
Owner(s) of Record:		Property Group Partners, LLC
Reason for Referral:		Planning Board
Tax Map I.D. and zone:		Sheet 5, Block 10776, Lots 19, 20 & 21; CC-20 and R-4A
Address:		NY State Route 22, Goldens Bridge
Decision Date:		February 13, 2019
The Vote:	To Approve:	Virginia LoBosco, Chair Rose Bonanno Christine Carrié Alan Kaufman Craig Pillon
Presentation by:		John Bainlardi, Wilder Balter
Nature of Application:		Application for 42 rental apartments and signage
Evidence Presented:		The following drawings were presented: Layout and Landscape Plan (SP-1), Insite Engineering, dated 9/27/18; Architectural drawings (A4-01.01, A4-02.01, A4-03.01, A4-04.01 (twice), L & M Design, dated 12/11/18; and two sign designs (15 sf and 20 sf), Sign Extreme. undated

Based on the foregoing, the members of ACARC resolved to approve the revised elevations (plans dated 12/11/18) which update Buildings 3, 4 & 5 from central hall access to the "Bridleside-style" individual entry-style buildings; seconded by Ms. Bonanno. [Previously approved details such as the roofing, siding, fenestration and lighting can be seen in the ACARC Resolution from September 13, 2017.]

By motion Virginia LoBosco; seconded Rose Bonanno; In favor: Rose Bonanno, Christine Carrié, Alan Kaufman, Virginia LoBosco and Craig Pillon.

Based on the foregoing, the members of ACARC resolved to approve the proposed wooden, up lit development identification sign, measuring 40"H x 83"W x 12"D, topped by a 5" white moulding, located along the Wilder Balter access road, 60' from Route 22, with a background color of Benjamin Moore Avon Green and carved 10.75" gold paint letters reading "LEWISBORO COMMONS." The sign is to sit atop a base of local stone and the applicant will supply ACARC with final capstone details.

[2/19/19 - The Building Inspector determined the CC-20 sign guidelines are to be followed and the sign shall not exceed 20 sf.]

By motion Virginia LoBosco; seconded Alan Kaufman; In favor: Rose Bonanno, Christine Carrié, Alan Kaufman, Virginia LoBosco and Craig Pillon.

Virginia LoBosco, Chair

Dated in South Salem, New York
This 21th day of February, 2019

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of the Lewisboro Planning Board

CC: Ciorsdan Conran
Judson Siebert, Esq.
Joseph Angiello

RECEIVED
LEWISBORO
JAN 17 2019
PLANNING
BOARD

FROM: Parris Sanz

DATE: January 16, 2019

RE: Lot Line Change
Sanz/North Salem Open Land Foundation
15 Sullivan Road Sheet 12, Block 11137, Lot 31
Waccabuc Road Sheet 12, Block 11137, Lot 117

This memorandum is submitted in response to the comments reflected in the memorandum to Chairman Kerner and Members of the Lewisboro Planning Board dated January 9, 2019, prepared by Jan K. Johannessen and Joseph M. Cermele, Town Consulting Professionals, regarding the lot line change referenced above (hereinafter referred to as the "Kellard Sessions Memo").

The Comments section of the Kellard Sessions Memo indicates as follows: "In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein." Accordingly, the three Comments from the Kellard Sessions Memo are set forth below, along with annotated responses to each Comment set forth in brackets.

Comments:

1. On behalf of the Planning Board, the applicant should complete Part 2 of the Short EAF for review.

   [A completed Part 2 of the Short EAF accompanies this memorandum.]

2. The applicant has inadvertently marked the incorrect Planning Board applications that apply; Waiver of Site Development Plan Procedures is not required. The application form should be revised to check Steps 1 and 3 Subdivision Plat Approval. Historically, the Planning Board has not required applicants to submit Step 2 of the application form and has not issued Preliminary Subdivision Approval for lot line realignments.

   [A corrected first page of the Planning Board application form accompanies this memorandum, which checks Steps 1 and 3 for Subdivision Plat Approval.]

3. The subdivision plat has been prepared in compliance with Town requirements; we have no comments on the plat at this time.

   [This comment requires no response by the applicant.]

Nine copies of this memorandum and the accompanying documentation are being provided to Chairman Kerner and Members of the Lewisboro Planning Board for their consideration of the referenced lot line change to be addressed further at the Planning Board meeting scheduled for February 26, 2019.

Respectfully submitted,

Parris Sanz

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

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.

1. Impact on Land
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)
If "Yes", answer questions a - j. If "No", move on to Section 2.

☑ NO ☐ 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	☐	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☐	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☐	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☐	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☐	☐
h. Other impacts: _____		☐	☐

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	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

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 - l. 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	☐	☐
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	☐	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☐
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	☐	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☐	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☐	☐
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	☐	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☐	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☐	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☐	☐

l. Other impacts: _____		☐	☐

4. Impact on groundwater

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 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	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	☐	☐
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	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
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	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
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	☐	☐
h. Other impacts: _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	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	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

g. Other impacts: _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	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_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
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	☐	☐
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	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑ NO ☐ YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	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	☐	☐
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	☐	☐
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	☐	☐
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	☐	☐

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	☐	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☐	☐
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	☐	☐
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	☐	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☐	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources
The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑NO ☐YES
If "Yes", answer questions a - h. If "No", move on to Section 9.

	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	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, E1b	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
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	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	E1 a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

9. Impact on Aesthetic Resources
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.) ☑ NO ☐ YES
If "Yes", answer questions a - g. If "No", go to Section 10.

	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	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
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	☐ ☐	☐ ☐
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	☐ ☐	☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____		☐	☐

10. Impact on Historic and Archeological Resources
The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.) ☑ NO ☐ YES
If "Yes", answer questions a - e. If "No", go to Section 11.

	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	☐	☐
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	☐	☐
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	☐	☐

d. Other impacts: _____ _____		☐	☐
e. 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	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
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	☐	☐

11. Impact on Open Space and Recreation

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.

☑ NO ☐ 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 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	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____ _____		☐	☐

12. Impact on Critical Environmental Areas

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.

☑ NO ☐ 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 a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
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	☐	☐
c. Other impacts: _____ _____		☐	☐

13. Impact on Transportation
The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. 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	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____ _____		☐	☐

14. Impact on Energy
The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. 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	☐	☐
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	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
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 1. 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	☐	☐
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	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

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.) ☑ NO ☐ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	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	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
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	☐	☐
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	☐	☐
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	☐	☐
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	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
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	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. (See Part 1. C.1, C.2. and C.3.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", go to Section 18.

	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	☐	☐
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	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
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	☐	☐
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	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. (See Part 1. C.2, C.3, D.2, E.3) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	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	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
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	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

TOWN OF LEWISBORO PLANNING BOARD

79 Bouton Road, South Salem, NY 10590 Tel: (914) 763-5592 Email: planning@lewisborogov.com

10-1BPB

Step I app fee pd 12/17/18 & escrow established

Site Development Plan/Subdivision Plat Application – Check all that apply:

Waiver of Site Development Plan Procedures	☐				
Site Development Plan Approval	Step I ☐		Step II ☐		
Special Use Permit Approval	Step I ☐		Step II ☐		
Subdivision Plat Approval	Step I ☑		Step II ☐	Step III	☒

Project Information

Project Name: Sanz/North Salem Open Land Foundation Lot Line Change

Project Address: 15 Sullivan Road (Tax Lot 31) & No# Waccabuc Road (Tax Lot 117)

Gross Parcel Area: 111 ac. Zoning District: R4 Sheet(s): 12 Block (s): 11137 Lot(s): 31 & 117

Project Description: Both parties wish to change the configuration of a portion of their mutual property. The property swap is not equal. Tax Lot 31 intends to convey 1.634 acres while Tax Lot 117 will convey 0.950 acres.

Is the site located within 500 feet of any Town boundary?	YES ☑	NO ☐
Is the site located within the New York City Watershed?	YES ☑	NO ☐
Is the site located on a State or County Highway?	YES ☑	NO ☐

Does the proposed action require any other permits/approvals from other agencies/departments?

Town Board	☐	ZBA	☐	Building Dept.	☐	Town Highway	☐
ACARC	☐	NYSDEC	☐	NYCDEP	☐	WCDH	☑
NYSDOT	☐	Town Wetland	☐	Town Stormwater	☐		

Other _____

Owner's Information

Name: Parris Sanz Email: parris.sanz@gmail.com

Address: 15 Sullivan Road, Goldens Brdige, NY 10526 Phone: (914)874-3352

Applicant's Information (if different)

Name: _____ Email: _____

Address: _____ Phone: _____

Authorized Agent's Information

Name: Jeffrey DeRosa Email: jderosa@insite-eng.com

Address: 3 Garrett Place, Carmel, NY 10512 Phone: (845)225-9690

THE APPLICANT understands that any application is considered complete only when all information and documents required have been submitted and received by the Planning Board. The applicant further understands that the applicant is responsible for the payment of all application and review fees incurred by the Planning Board.

THE UNDERSIGNED WARRANTS the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge and belief, and authorizes visitation and inspection of the subject property by the Town of Lewisboro and its agents.

APPLICANT'S SIGNATURE _____ DATE _____

OWNER'S SIGNATURE _____ DATE 12/17/18

KELLARD SESSIONS

John Kellard, P.E.
David Sessions, RLA, AICP
Joseph M. Cermele, P.E., CFM
Jan K. Johannessen, AICP

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board

CC: Ciorsdan Conran
Judson Siebert, Esq.
Joseph Angiello

FROM: Jan K. Johannessen, AICP
Joseph M. Cermele, P.E., CFM
Town Consulting Professionals

DATE: February 20, 2019

RE: Oakridge Commons Shopping Center – Car Wash
450 Oakridge Commons
Sheet 49, Block 9829, Lot 10

PROJECT DESCRIPTION

The applicant is proposing improvements to the Oakridge Commons Shopping Center to occur in four (4) phases; Phases 1, 2 and 4 have been previously approved by the Planning Board. This memorandum relates to Phase 3 only, which includes the construction of a 17.3' x 36' car wash to adjoin the existing gas station building, along with an expansion and reconfiguration of the parking lot and related signage.

SEQRA

The proposed action is an Unlisted Action under the State Environmental Quality Review Act (SEQRA) and a coordinated review is not required. The Planning Board issued a Negative Declaration on February 27, 2018 in connection with Phases 3 and 4.

PHASE 3: CAR WASH

This office has reviewed the letter prepared by Delaware Engineering, dated February 5, 2019. In general, we find that the letter does not address the Board's concern regarding the wastewater treatment plant's ability to treat the effluent from the proposed carwash. To address the issue at hand, the letter should resolve whether the applicant's reported discharge concentrations and flow rates, inclusive of the chemicals, detergents, sediment, chlorides, oils, and greases expected from the effluent of the carwash, are accurate. The letter must specifically state whether plant operations and the level of treatment will be impacted by the added flows and whether added flows from the car wash will have an adverse impact on the quality of effluent as discharged from the plant.

If approved, we agree with the writer that sampling of the effluent will be required; however, a testing protocol should be provided (specify the frequency of sampling and what the effluent is being tested for). The testing should be the responsibility of the property owner (not the Town, as indicated) and must be coordinated with the plant operator. Further, the Town shall have the right to require additional testing, if deemed necessary, at the sole expenses of the property owner.

DOCUMENTS REVIEWED:

- Letter, prepared by Delaware Engineering, date February 5, 2019

JKJ/JMC/dc

T:\Lewisboro\Correspondence\2019-02-20_LWPB_OakridgeCarWash&DayCare-Review-Memo.docx-

TO: Town of Lewisboro Planning Board

FROM: Lewisboro Conservation Advisory Council

SUBJECT: Oakridge Commons,
450 Oakridge Common
South Salem, NY 10290
Sheet 49D, Block 9829, Lot 10

DATE: January 9, 2019

The Conservation Advisory Council (CAC) reviewed the applicant's submission document of the Pure Water filtration system which is understood to be the filtration system for the car wash water output.

The CAC continues to have concerns with two aspects of the Oakridge Commons car wash. The first concern is with information about the car wash filtration system. It is clear from the PureWater documentation provided, that the system is primarily designed to provide recycled clean water to the car wash and not for the quality of the water discharged to the Oakridge septic system and watershed.

"*The primary purpose of the reclaim system is to provide quality water to the wash so that the water can be re-used within the wash…"*

"The reclaim system is not designed to meet a specific effluent…"

"TSS, FOG, and BOD are typically the main concerns of municipalities receiving the effluent from a car wash. Given the type of processes used by PureWater Reclaim System, ***there is no effect on total dissolved solids (TDS), pH or temperature. There may be little or no effect on certain chemicals dissolved in the water, emulsified or dissolved oils and non-settleable solids".***

"*The discharge is sent to a separate, customer supplied wastewater treatment device, or directly to sewer or leach field. The PureWater Reclaim System does not treat or affect minerals or chemicals dissolved in the water, emulsified or dissolved oils, non-settleable solids, the BOD/COD content, ph, or temperature of the water that is discharged."*

"The estimated discharge quality from the PureWater Reclaim System may or may not be acceptable for direct discharge to sewer or a leach field"

(TSS = Total Suspended Solids, FOG = Fat, Oil and Grease and BOD = Biochemical Oxygen Demand which is an indicator of Organic content. Missing altogether is COD which is Chemical Oxygen Demand)

The CAC presumes that the Oakridge sewer/septic system was designed for typical household effluents and not for chemicals (**unknown at this time**), wax, grease, oil and other substances used in a car wash. Therefore, the CAC is concerned that effluent coming from the car wash could pose a risk to the water system and watershed at Oakridge. **The CAC would like to have the Town of Lewisboro and its consultant for the Oakridge water and septic system determine whether that system was designed for these kinds of effluents and if the system can adequately remove them without damage to the water and the septic system itself**.

Second, the CAC has concerns about the outflow capacity calculations. The following excerpt from the January CAC minutes summarizes the CAC's concern: "*The document titled " Site Engineering Report" prepared by Redniss & Mead, Inc only addresses the waste water management for the addition of the day care center and does not address the impact of adding a car wash. Even so, this report indicates that with the addition of the day care center, the waste water system would be in the 80% + range of capacity using average daily out flow. If the calculation used maximum average out flow for the calculation, the waste water system would be over 90% of capacity, again without the addition of the car wash. The CAC would like the site engineering to include the impact of the car wash and use maximum average sewage out flow and the water demand."*

Delaware Engineering, D.P.C.

28 Madison Avenue Extension
Albany, New York 12203

Tel: 518.452.1290
Fax: 518.452.1335

February 5, 2019

Town of Lewisboro Planning Board
Jerome Kerner, Chairman, AIA
79 Bouton Road
South Salem, New York 10590

Re: Oakridge Commons Car Wash Wastewater Review

Dear Planning Board:

We have reviewed the documents submitted by Bibbo Associates, LLP regarding the proposed car wash in regard to the wastewater effluent and its potential impact to the Oakridge wastewater treatment plant and determined that the car wash effluent will have a small impact to the Oakridge wastewater treatment plant.

We have reviewed the estimate of flows (347 gpd) that will be generated and agree that the amounts are reasonable for a car wash with a recycle system.

We have reviewed the proposed treatment system and agree that the concentrations of FOB, TSS, BOD can be in the ranges estimated by the applicant.

Chlorides from salt and phosphates from detergents are other parameters that are expected from the car wash and could impact the wastewater treatment plant.

If the Planning Board approves the car wash, we recommend the Town review the detail design of the treatment system and inspect its installation. Additionally, an operating permit should be issued to the car wash to allow the Town to routinely sample the wastewater effluent to ensure that the actual discharge is in conformance with the design expectations.

The wastewater treatment plant does have strict discharge limits and it will be important to regularly monitor the discharge of the car wash to make sure parameters such as chlorides, phosphates, or TSS do not affect the wastewater treatment plant in the future.

Sincerely,

Delaware Engineering, DPC

Roberto Flores

Roberto Flores, P.E.
Senior Project Manager

TO: Town of Lewisboro Planning Board

FROM: Lewisboro Conservation Advisory Council

SUBJECT: Mercedes Benz of Goldens Bridge

DATE: February 9, 2019

The Conservation Advisory Council (CAC) reviewed the applicant's submission of a sketch plan for additions to existing showroom, service building and parking.

The various changes to the Mercedes Benz site include significant additions to the amount of impervious surface area. Automobile discharges, either from drips, runoff, weather or from car washing, can contain grease, oil, salt and other chemicals and substances. Given the hilly topography, there is also the possibility of substantial runoff to neighboring properties.

The CAC would like to see included in the sketch plan reviews and final public hearing presentation plans that would ensure that runoff from the site does not contaminate surrounding soils and water with *TSS, FOG, and BOD/COD.* The CAC would also like to see included in these reviews plans to contain runoff from the site so that surrounding properties are not impacted.

(TSS = Total Suspended Solids, FOG = Fat, Oil and Grease and BOD = Biochemical Oxygen Demand which is an indicator of Organic content. Missing altogether is COD which is Chemical Oxygen Demand)

Site Planning
Civil Engineering
Landscape Architecture
Land Surveying
Transportation Engineering
Environmental Studies
Entitlements
Construction Services
3D Visualization
Laser Scanning

February 5, 2019

Chairman Jerome Kerner and Members of the Board
Town of Lewisboro Planning Board
79 Bouton Road
South Salem, NY 10590

RE: JMC Project 16124
Mercedes-Benz of Goldens Bridge
321 Main Street (NYS Rte. 22)
Town of Lewisboro, New York

Dear Chairman Kerner and Members of the Board:

We are pleased to provide the following information in response to the memorandum prepared by Kellard Sessions, dated December 13, 2018, letter prepared by Frederick P. Clark Associates, Inc., dated January 8, 2019 and email from NYSDOT, dated December 27, 2018 for the above noted project to address the comments towards receiving a Negative Declaration to complete the SEQRA process:

1. JMC Drawing C-600 "Site Lighting Plan", Revision 2, 02/05/2019 (6 full sets, 3 half scale sets).
2. JMC Traffic Study, revised 02/05/2019 (9 sets).
3. Email from the Westchester County Department of Health, dated January 31, 2019 (9 sets).

For your convenience we have identified the comments noted in the above comment memorandum, letter and email, which are followed by our responses below.

Memorandum prepared by Kellard Sessions, dated January 9, 2019:

Required Approvals/Referrals

Comment No. 1

Site Development Plan Approval is required from the Planning Board; it is recommended that a public hearing be conducted.

Response No. 1

So noted.

Comment No. 2

Several area variances will be required from the Zoning Board of Appeals (ZBA).

Response No. 2

The official list of variances has been received from the Building Inspector in his letter to the Planning Board dated January 8th. We anticipate a submission to the Town Zoning Board of Appeals this week.

Comment No. 3

Town Board Approval is required to amend the underlying Zoning District of Lots 5 and 42 from RB and R-1/2A, respectively, to GB. If this is to be considered by the Town Board, it is recommended that the adjacent Lot 9 (not part of the application) also be rezoned from RB to GB.

Response No. 3

We are looking forward to proceeding to the Town Board for feedback even though the negative declaration has not been issued. We anticipate a submission to the Town Board this week.

Comment No. 4

The application has been referred to the Architecture and Community Appearance Review Council (ACARC) for review and approval of the proposed building expansions and signage.

Response No. 4

The project appeared before the ACARC last July and was conceptually approved contingent upon submission of a landscaping plan and a negative declaration by the Planning Board. Once the negative declaration is issued, we will proceed to the ACARC for approval.

Comment No. 6

Approval is required from the Westchester County Department of Health (WCDH) for the proposed septic system and potable wells.

Response No. 6

Refer to the enclosed email from the Westchester County Department of Health, dated January 31, 2019 which indicates that the review has been completed and that the construction permit is ready to be issued, conditional upon the approval of the modifications of the water supply system. The Westchester County Department of Health also received the "No Objection" from the NYCDEP for the septic system modifications. However, they cannot forward the letter until the water supply permit has been approved.

We have discussed the existing wells with the Westchester County Department of Health and have been directed that a separate submission for that permit can be made at a later time once the buildings are designed since the permit will depend on reuse of new existing internal water treatment systems, water storage equipment, etc.

Comment No. 7

Approval is required from the New York City Department of Environmental Protection (NYCDEP) for review of a Stormwater Pollution Prevention Plan (SWPPP).

Response No. 7

The SWPPP, Site Plans and Building Drawings have been provided to the NYCDEP for review. Comments have not yet been received.

Comment No. 8

Approval from the New York State Department of Transportation (NYSDOT) is required for access onto NYS Route 22 and work within the right-of-way.

Response No. 8

The project has been submitted to NYSDOT for the roadway work permit and the use and occupancy permit for improvements within the right of way. This submission discusses the reponses to the NYSDOT comments.

Comment No. 9

The owner/applicant will require coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002).

Response No. 9

So noted, coverage will be applied for once the SWPPP has been approved by the MS4.

Comment No. 10

If the sewage design flow from the site is greater than 1,000 gpd, coverage is required under GP-0-05-001.

Response No. 10

A sewage design flow greater than 1,000 gallons per day is not anticipated therefore this permit will not be required.

Comment No. 11

The application has been referred to the Westchester County Planning Board under Section 239-m of General Municipal Law; the County Planning Board offered no comments.

Response No. 11

So noted.

Part 2 and 3 EAF Review

There were no comments regarding the Part 2 and Part 3 EAF during the January 15th Planning Board meeting therefore we feel it is complete and acceptable.

Site Plan Review Comments:

Comment No. 1

We continue to recommend that the submitted lighting plan be revised to provide the minimal amount of lighting necessary to provide a safe and secure site, while protecting neighboring properties and public streets/places from over-lighting and glare. While some minor adjustments have been made, we continue to be concerned regarding light intensity along the front of the showroom building (exceeds 19 f.c.). The applicant should consider reducing the illuminance levels in this area to be consistent with the remainder of the site. We offer the following additional comments regarding the lighting plan:

a. *As previously requested, please provide manufacturer cut sheets for each proposed light fixture.*
b. *A note is provided on the lighting plan which identifies a "15-degree tilt pole quick mount bracket." All fixtures must be permanently positioned in the downward facing position; therefore, no tilt brackets should be utilized. Please provide a detail of the proposed mounting bracket.*
c. *A building mounted light has been included proximate to the driveway off Anderson Lane; however, it is not reflected in the photometric analysis (0.0 fc under light fixture).*
d. *There appears to be some inconsistency in photometric analysis, particularly between illuminance levels shown on and off-site. For instance, within the southerly driveway, the proposed illuminance level is 6.2 fc on one side of the property line and 2.5 just 5-feet away on the other side of the line; this situation is repeated elsewhere on-site. Further, several of the building-mounted lights are not included within the photometric analysis.*
e. *We note that no building mounted lights are provided on the service building; please confirm.*

Response No. 1

JMC Drawing C-600 "Site Lighting Plan" reflects the changes as requested above. The illuminance levels have been more evenly distributed. The manufacturer cut sheets for each proposed light fixture are shown on the plan. The tilt pole mount has been removed so that all fixtures point downward. The smaller/more dense lighting level

grids have been removed since they may be confusing when also showing the regular grid. There are no proposed lights for the Service Building other than small life safety lights over doorways.

Comment No. 2

As previously noted, neither entry drive provides the required platform area and exceeds maximum permitted grades. Further, both the NYSDOT and the Planning Board's consulting traffic engineer have recommended the elimination of one (1) of the two (2) driveways off NYS Route 22. The Planning Board should continue to evaluate access to the site.

Response No. 2

A lengthy discussion took place during the January 15th Planning Board meeting. We explained that the two access driveways are required for the vehicle delivery carrier to enter and exit the site. The Planning Board and the consulting traffic engineer agreed that the two driveways would be necessary.

Comment No. 3

As previously noted, the plan proposes "No-Parking Fire Lane" signs along the property frontage on Route 22. The ability to enforce this shall be confirmed with the Planning Board Attorney.

Response No. 3

So noted. The Planning Board Attorney should confirm this at the next Planning Board meeting.

Comment No. 4

As previously noted, the applicant has prepared a SWPPP and Erosion and Sediment Control Plan to comply with Chapter 189, Stormwater Management and Erosion and Sediment Control of the Town Code. The project will require review and approval of the SWPPP by the NYCDEP for compliance with the "Rules & Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources". Finally, the project will require coverage under NYSDEC General Permit, GP-0-15-002 for Stormwater Discharges from Construction Activity. We will reserve comment until the necessary reports and analysis are provided and initially reviewed by the NYCDEP. Preliminarily, we offer the following:

a. *The previously proposed rain gardens have been replaced with planted depressions to provide water quality treatment. The stormwater improvements located in Route 22 will likely require a license agreement from the NYSDOT. The applicant should continue to update the Board in this regard. As requested, a landscape plan has been provided for the Board's consideration.*
b. *Given the level of disturbance and terrain of the site, the applicant has acknowledged the need to provide temporary sediment basins at strategic locations to prevent the off-site transport of sediment laden stormwater runoff. Sizing calculations in accordance with the New York State Stormwater Management Design Manual shall be provided as the SWPPP is developed.*

c. *As previously requested, the applicant has provided a draft post-construction stormwater management maintenance agreement for review by the Town.*

Response No. 4

So noted. The SWPPP, Site Plans and Building Drawings have been provided to the NYCDEP, NYSDOT and Town's consultants for review. Comments have not yet been received.

Comment No. 5

As previously requested, the plans shall include drainage profiles for all conveyance systems. The applicant has indicated that they will be provided as the SWPPP is further developed.

Response No. 5

Storm Profiles shall be provided at a later date once comments are received from NYCDEP as the SWPPP is further developed.

Comment No. 6

As previously requested, the plan proposes a retaining wall and safety fence at several locations that shall be detailed on the plans.

Response No. 6

Similar to the previous approval process for the project, the retaining wall and safety fence design drawings will be prepared by a licensed structural engineer and submitted for review the under separate cover once the lots are rezoned, variances are received, etc.

Frederick P. Clark Associates, Inc. Review Memorandum, dated 01/08/2019:

Traffic Review Comment No. 1

Existing Conditions - The eastbound right turn volume at the intersection of NYS Route 138 and Connector Road should be 113 vehicles not 13 vehicles during the weekday morning peak hour. This should be corrected in the analysis.

Traffic Review Response No. 1

The traffic volume has been revised. The revised study's traffic volume figures and analyses have been revised accordingly.

Traffic Review Comment No. 2

Accident History - The latest available three-years of accident data should be provided and summarized in a tabular format for all Study Area intersections and links. Any high accident locations should be identified.

Traffic Review Response No. 2

Our office requested accidents from the Town's police department as described above. The Town's response dated 01/22/2019 to our request states that the Lewisboro Police do not have any record of accidents involved at the requested locations. Subsequently, we have requested accidents from the State as well for the same locations; however, we have not received a response from the State at this time.

Traffic Review Comment No. 3

2021 No-Build Traffic Volumes - The Applicant used an annual growth rate of 0.5 percent, which is acceptable. They have also added traffic for the Goldens Bridge Village Centre Expansion and the WBP AFFH Multi-Family development. It should be noted that the former IBM property is currently vacant and there are preliminary discussions for a Private Boarding School to reoccupy the property. Review of the assignment for the Goldens Bridge Village Centre Expansion traffic indicated that during the weekday afternoon peak hour that the through movements at the NYS Route 22 intersections of Anderson Road, Site Driveway A and Site Driveway B should be 27 vehicles not 10 vehicles. The weekday afternoon no-build volumes for these through movements should be corrected. As noted in Comment #1, the eastbound right turn volume at the intersection of NYS Route 138 and Connector Road during the weekday morning peak hour should be corrected.

Traffic Review Response No. 3

The other development volumes for the Goldens Bridge Village Centre Expansion have been revised to 27 vehicles as commented during the peak weekday PM hour. The revised study's traffic volume figures and analyses have been revised accordingly.

Traffic Review Comment No. 4

Site Traffic Generation - Based on comments provided by New York State Department of Transportation (NYSDOT), below find a comparison table between the trip rates found at the existing Dealership and the Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition, 2017 trip rates for Land Use Code #840, Automobiles Sales (New):

Based on the existing/proposed development being a high end vehicle dealership, we believe the methodologies used by the Applicant are acceptable for purposes of completing this study.

Traffic Review Response No. 4

Comment noted. The revised traffic study includes a sensitivity analysis which utilizes the ITE trip rates for the proposed dealership. This sensitivity analysis has been included to address comments provided by the NYSDOT.

Traffic Review Comment No. 5

Site Traffic Distribution – The site traffic distribution used the analysis is reasonable.

Traffic Review Response No. 5

Comment noted.

Traffic Review Comment No. 6

2021 Build Traffic Volumes – See comments 1, 3 and 4.

Traffic Review Response No. 6

See Traffic Review Responses 1, 3 and 4 above.

Traffic Review Comment No. 7

Capacity Analysis – Based on our review of the SYNHRO files, the appropriate peak hour factors (PHF) and heavy vehicle percentages were used, with the exception of the intersection of NYS Route 22 at Site Driveway B during the peak weekday morning peak hour. The PHF should be 0.82 not 0.92. NYSDOT noted that the speed limit on that segment of NYS Route 22 is 45 mph, not 55 mph. It drops to 40 mph in only the northbound direction at the project site. Also, NYSDOT noted that the phasing was incorrect in the model. It should be Phase 1 for both eastbound and westbound NYS Route 138 and Phase 3 for the Connector Road. This should be revised. Table 3 provides the results of the HCM 6th Edition for the signalized intersection. The Applicant should also provide the Synchro results for the signalized intersection. Lastly, a storage/queue analysis tables should be provided and include the existing storages/link lengths, in feet.

Traffic Review Response No. 7

Based on the traffic counts conducted at the intersection of NY 22 and Site Driveway B, the peak hour factor (PHF) during the peak weekday AM hour is 0.92 so the use of 0.92 in our analyses is correct. The speed limit along NY 22 has been revised accordingly in our analyses. NYSDOT requires intersection capacity analysis printouts following the Highway Capacity Manual (HCM), latest edition. The Synchro analysis software requires that traffic signal phasing follow standard NEMA (National Electrical Manufacturing Association) phasing in order to provide HCM printouts. The NYSDOT timing plan for the existing traffic signal at the intersection of NY 138 and Connector Road only has Phases 1 and 3; however, we modified the phasing so that HCM printouts could be obtained from the Synchro software. This phasing modification does not alter the traffic signal timing so the traffic signal timing is the same as shown in the NYSDOT's timing plan. As requested, we have attached separate intersection operation tables for the signalized intersection of NY 138 and the Connector Road based on the Synchro printouts results. We have also provided a queuing analysis in the revised traffic study as requested.

Site Plan Review Comment No. 1

Site Access to NYS Route 22 – Typically, the NYSDOT prefers only one access drive to a State Highway. However, the Applicant is proposed two, two-lane, two-way driveways to serve the same site. Further, these two proposed driveways are located in close proximity. It is our recommendation that the Applicant consider only constructing the southerly driveway, which has a more reasonable change in grade between

NYS Route 22 and internal to the site. As part of the development of the proposed access drive(s) to NYS Route 22 the Applicant should provide available and required Intersection Sight Distance (ISD) based on criteria followed by NYSDOT.

Site Plan Review Response No. 1

The proposed site driveways along NY 22 are in the same locations as previously proposed for the prior site plan approval (Planning board Resolution No. 8-09 PB). The benefit of having the two driveways along NY 22, besides the ability to enter and exiting for either location, is that vehicle delivery truck can enter the site through one driveway and exit the property out of the other driveway. This allows the vehicle delivery truck to unload and load vehicles from within the site. This vehicle delivery truck maneuvering is depicted on Drawing C-700 "Vehicle Delivery Truck Plan". The vehicle delivery truck does not have to the ability to turn around on the property which would be required if the Applicant were to be restricted to one two-way driveway along NY 22.

Site Plan Review Comment No. 2

Site Access Drive to Anderson Lane – As part of the modifications and improvements to the Subject Property the existing access from Anderson Lane to the Subject Property will be shifted closer to Green Hill Road. As part of the relocation of the existing driveway to align with the expanded building, appropriate landscaping should be installed and maintained not to restrict sight lines for motorists exiting the facility and looking towards Green Hill Road or from Green Hill Road.

Site Plan Review Response No. 2

Agreed. JMC has prepared and submitted a Landscaping Plan to the Planning Board which takes sight distance into consideration. The corner currently has a hedge row very close to the edge of pavement and the proposed design has trees that will not grow beyond that limit in their mature state. The Planning Board has also stated that there have been no complaints or testimony given from adjacent neighbors that there is a sight distance issue.

Site Plan Review Comment No. 3

Overall Site Plan Comments – The Applicant has provided a significant detailed Plan showing access points to each building, parking areas, internal circulation for both vehicles and delivery trucks and although not noted appropriate radii to accommodate emergency vehicles. It is our opinion that the proposed improvements to the Subject Property are appropriate and will improve overall circulation internal to the site and minimize conflicts on NYS Route 22 and Green Hill Road.

Site Plan Review Response No. 3

As noted in the response to a similar comment within the Kellard Sessions memorandum above, a lengthy discussion took place during the January 15th Planning Board meeting. We explained that the two access driveways are required for the vehicle delivery carrier to enter and exit the site. The Planning Board and the consulting traffic engineer agreed that the two driveways would be necessary.

New York State Department of Transportation comments from their email, dated 12/27/2018

General Comment No. 1

We understand the methodology in your trip generation but based on ITE Land Use Code 840, the trips generated for the proposed development are on the low end. Currently, this is a dealership with low turn-over but it is possible that, within the near future, it could turn into a high turn-over, low-profit dealership. We therefore recommend that you use the ITE values to be more conservative.

General Response No. 1

The Applicant has no intention to change the existing Mercedes Benz dealership into a high turn-over, low-profit dealership. The Applicant intents to continue selling high-end vehicles after completion of the proposed redevelopment. To provide a conservative analysis and address the comment, we have provided a sensitivity analysis to the revised traffic study which utilizes ITE trip generation rates for the proposed redevelopment.

General Comment No. 2

The need for Driveway A must be justified. NYSDOT normally permits one driveway for each minor commercial property. Your trip generation methodology and/or distributions patterns has not accounted for two driveways.

General Response No. 2

See above Site Plan Review Response No. 1. The two proposed driveways along NY 22 would provide the ability for vehicle delivery trucks to unload and load on the property. The traffic volumes for the proposed redevelopment account for the two driveways along NY 22 as shown on the 2021 Build Volumes traffic figures contained in the traffic study.

General Comment No. 3

As a mitigation measure, add a Modem and a Transfer Switch to Signal W-427.

General Response No. 3

The Applicant is willing to install the modem and traffic switch to the existing traffic signal at the intersection of NY 138 and Connector Road. The specific details for these installations will be coordinated during the NYSDOT Highway Work Permit process.

General Comment No. 4

The proposed 12% grade on the driveways seems high. The Department recommends 2-6%.

General Response No. 4

The existing conditions of the project site are such that the Showroom Building is several feet higher than NYS Route 22 which results in existing driveways that are relatively steep in order to make up the grade difference in a short distance. The proposed project to expand the Showroom Building attempted to step the building by lowering the portion of the expansion by 2 feet below the existing Showroom Building in order to help lessen the driveway slopes necessary to connect the building to the roadway. In previous submissions to the Town Planning Board the slopes of the driveways exceeded 12%. The current design proposes to lower the Showroom Building expansion by one more foot so that the floor elevation is now 3 feet below the existing Showroom Building. According to Sullivan Architecture, the 3 foot difference is the greatest feasible distance that the existing building and building expansion can be separated due to internal constraints in order to make the connections for vehicles and pedestrians. The result of lowering the Showroom Building expansion elevation is that the propose southern driveway is approximately 10% slope and the northern driveway is approximately 7.4% slope which is a significant improvement to the existing driveways which exceed 10% slope. As noted in previous submissions, a variance will still be required for the driveway slopes which exceed Town requirements.

Synchro Comment No. 1

The posted speed limit on that segment of Route 22 is 45 mph (not 55 mph). It drops to 40 mph (only in the NB direction) at the project site.

Synchro Response No. 1

The speed limit along NY 22 has been revised accordingly in our analyses.

Synchro Comment No. 2

Your traffic counts do not show Heavy Vehicles. What's the source of your HV percentages? Do we have trucks to/from Anderson Lane at certain times of the day?

Synchro Response No. 2

The heavy vehicle percentages are based on traffic counts conducted at the studied intersections during the count periods discussed in the traffic study. The turning movement counts at the studied intersections have been included in the revised traffic study.

Synchro Comment No. 3

Signal W-427 is a 2-phase signal (phase 1 & 3), not a 3 phase signal.

Synchro Response No. 3

See above Traffic Review Response No. 7.

Synchro Comment No. 4

The 0.96 PHF seems high for all the approaches at Signal W-427. Can you provide quarterly counts for verification?

Synchro Response No. 4

As mentioned above in Synchro Response No. 2, we have included the turning movement counts in the revised traffic study. The Peak Hour Factors (PHF) utilized in the traffic study are depicted on the turning movement counts.

We trust that the enclosed information is sufficient for your review and we look forward to discussing this matter at the February 26th meeting. In the interim, if you have questions or require additional information, please do not hesitate to contact our office at (914) 273-5225.

Sincerely,

JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC

Stephen Spina, P.E.
Project Manager

cc: Mr. Tom Maoli
Ms. Bernadette Kopec
Mr. Chris Pelella, AIA
Mr. John Sullivan, FAIA
Michael Sirignano, Esq.
Goldens Bridge Fire Department
Lewisboro Library
Katonah Village Library
Pound Ridge Library

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From: Kunny, Anthony
To: Stephen Spina, PE
Subject: Mercedes Benz - Route 22 - Lewisboro (T)
Date: Thursday, January 31, 2019 12:07:28 PM

Stephen

This is to inform you that the OWTS permit review has been completed and that the construction permit is ready to be issued, conditional upon the approval of the modifications of the water supply system.

Once those modifications to the water system are approved the OWTS permit will be issued.

If there are any questions, please call or email.

Tony

Anthony J Kunny
Assistant Engineer
Westchester County Department of Health
25 Moore Avenue
Mt. Kisco, NY 10549
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914-864-7341 (fax)

ajk2@westchestergov.com

TRAFFIC STUDY

MERCEDES BENZ OF GOLDENS BRIDGE

321 NY 22
TOWN OF LEWISBORO, NEW YORK

Prepared for: **Celebrity Motor Car, LLC**
130 Route 10
Whippany, NJ 07981

Prepared by:

JMC Project **16124**

Date: November 16, 2018
Revised: February 5, 2019

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I. INTRODUCTION

This Traffic Study has been prepared to assess existing conditions as well as future traffic operations in association with the proposed expansion of the Mercedes Benz of Goldens Bridge car dealership located at 321 NY 22 in the Town of Lewisboro. The location of the site is illustrated on the figures included in Appendix B. This traffic study has been revised to address comments mentioned by the New York State Department of Transportation (NYSDOT) in their email dated 12/27/2018 as well as the comments by Town's Traffic Consultant (Frederick P. Clark Associates, Inc.) in their review memorandum dated 01/08/2019.

The property currently contains a 12,400 square foot Showroom Building as well as an 18,200 square foot Service Building. There are four existing curb cuts located along the property's NY 22 frontage and there are two curb cuts along Green Hill Road. Access to the property is mainly served by one of the four existing curb cuts along NY 22. The subject development area also contains a 2 story building and garage located at 5 Anderson Lane which currently has two driveways with one connecting to Anderson Lane and the other connecting to Green Hill Road. Additionally, the subject development area contains a single family house located at 46 Green Hill Road with a driveway connecting to Green Hill Road.

The project was previously approved by the Town Planning Board on October 11, 2011 and Town Zoning Board of Appeals on May 11, 2011. NYSDOT approved the roadway permit application on April 5, 2012.

The application proposes to demolish the buildings and structures located on the 5 Anderson Lane and 46 Green Hill Road properties. The existing Showroom Building is proposed to be expanded by 38,500 square feet while the existing Service Building is proposed to be expanded by 2,700 square feet. The expansion of the existing dealership proposes a total building gross floor area of 71,800 square feet. As part of the application, parking on the property will be expanded to provide additional parking spaces for customers, employees, service and vehicle inventory.

As discussed above, the subject development area has 9 total curb cuts with four along NY 22, one along Anderson Lane, and four along Green Hill Road. As part of the proposed expansion, the curb cuts along NY 22 are proposed to be consolidated from four existing to two proposed curb cuts. Additionally, the four curb cuts along Green Hill Road are proposed to be reduced to one proposed curb cut. The two proposed driveways along NY 22 will serve as the main access to the property and provide full turning movements from both driveways. The proposed driveway along Anderson Lane will be relocated from its existing location to provide access to an open parking structure for employee parking and vehicle inventory parking. The proposed driveway along Green Hill Road will improve the existing driveway serving the 46 Green Hill Road property and will provide access to the proposed vehicle inventory parking lot and a secondary access to the Service Building.

II. EXISTING CONDITIONS

A. Existing Roadway Network

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

NY 22 is a north-south roadway under the jurisdiction of the NYSDOT. It provides one travel in each direction within the study area and widens to provide additional lanes at various locations. NY 22 has a posted speed limit of 55 mph within the study area; however, the speed limit reduces to 40 mph north of the subject property.

NY 138 is an east-west roadway under the jurisdiction of the NYSDOT. It provides one travel in each direction within the study area and widens to provide additional lanes at various locations. NY 138 has a posted speed limit of 35 mph within the study area. A

connector road provides a connection between NY 22 and NY 138.

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

1. NY 22 & Connector Road
2. NY 22 & Anderson Lane
3. NY 22 & Site Driveway A
4. NY 22 & Site Driveway B
5. NY 138 & Connector Road

The connector road intersects NY 22 at an unsignalized 'T' intersection. NY 22 provides one thru lane in each direction with shared turning movements. The connector road provides a left turn lane and a separate 230 foot long right turn lane. The connector road operates under stop sign control.

The intersection of NY 22 and Anderson Lane is an unsignalized 'T' intersection. NY 22 provides one thru lane in each direction with shared turning movements. Anderson Lane provides a single approach lane with shared turning movements. Anderson Lane operates under stop sign control.

Site Driveway A is a proposed driveway to be constructed as part of the proposed expansion which connects to NY 22. NY 22 provides one travel lane in each direction and would have shared turning movements into the proposed site driveway. The proposed site driveway would be controlled by a stop sign and provide a single lane approach with shared turning movements.

Site Driveway B is an existing driveway which connects to NY 22 and would be reconstructed as part of the proposed expansion. NY 22 provides one travel lane in each direction with shared turning movements into the existing site driveway. The existing site driveway

provides a single lane approach with shared turning movements. Under proposed conditions, the site driveway would be controlled by a stop sign.

The intersection of NY 138 & the connector road is a three-legged signalized intersection. NY 138 westbound provides an 85 foot long left turn lane and a thru lane while the eastbound approach provides a single thru lane with shared turning movements. The connector road provides a left turn lane and a separate 75 foot long right turn lane.

B. Existing Volumes

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

Traffic counts were conducted from 7:00 – 9:00 AM and 4:00 – 6:00 PM for all the studied intersections on Thursday, September 27, 2018 except for the Site Driveway B intersection. The intersection of NY 22 and Site Driveway B was counted on Friday, September 28, 2018 from 7:00 to 9:00 AM as well as on Thursday, September 27, 2018 from 4:00 to 6:00 PM. Additionally, the Connector Road intersections with NY 22 and NY 138 were counted on Saturday, September 29, 2018 from 12:00 to 2:00 PM while the Site Driveway B and Anderson Lane intersections with NY 22 were counted on Saturday, September 22, 2018 from 12:00 to 2:00 PM. The traffic counts were performed while schools were in session. The peak hour volumes of the roadways occurred between 7:15 – 8:15 AM during the weekday morning, 4:30 – 5:30 PM during the weekday afternoon and 12:15 – 1:15 PM during the Saturday midday. The intersection traffic count data is included in Appendix C. The volumes are shown on Figures 1 thru 3 "2018 Existing Volumes". All figures are included in Appendix B.

C. Intersection Analysis Methodology

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

1. Level-of-Service Criteria for Signalized Intersections

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

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

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

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

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

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

LOS F describes operations with control delay in excess of 80 seconds per vehicle and/or the arrival flow rates exceed the capacity of the intersection. It will also occur at high *v/c* ratios below 1.0 with many individual cycle failures. If the volume-to-capacity (v/c) is greater than 1.0, the LOS is considered an F, even if the delays are lower than 80 seconds.

The LOS criteria for signalized intersections are presented below.

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

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

2. Level of Service for Unsignalized Intersections

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

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

For TWSC intersections, 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 the intersection as a whole at TWSC intersections. For approach-based and intersectionwide assessments at AWSC intersections and roundabouts, LOS is defined solely by control delay.

Average control delay less than 10 seconds/vehicle are defined as LOS A. Follow-up times of less than 5 seconds/vehicle have been measured when there is no conflicting traffic, so control delays of less than 10 seconds/vehicle are appropriate for low flow conditions. If the volume-to-capacity (v/c) is greater than 1.0, the LOS is considered an F, even if the delays are lower than 50 seconds.

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

D. Existing Operations

The intersection capacity analyses based on existing volumes and conditions are shown on Tables 3 thru 5. The specific volume/capacity ratios, delay for average vehicle in seconds and the associated levels of service are summarized for each lane group, the approach as

well as the overall intersection as applicable are depicted on Tables 3 - 5. All tables are included in Appendix A.

During the peak weekday morning hour, the left turn movement onto NY 22 at the intersection of NY 22 and Connector Road operates over capacity and at a level of service F. The Anderson Lane approach to its intersection with NY 22 operate at a level of service C. Site Driveway B operates at a level of service B. The overall intersection of NY 138 and Connector Road operates at a level of service A with the Connector Road approach and lanes operating at a level of service B. All other movements at the studied intersections operate at a level of service A during the peak weekday AM hour.

During the peak weekday afternoon hour, the left turn movement onto NY 22 at the intersection of NY 22 and Connector Road operates at a level of service C while the right turn movement onto NY 22 operates at a level of service B. The Anderson Lane approach to its intersection with NY 22 operate at a level of service B. Site Driveway B operates at a level of service B. The overall intersection of NY 138 and Connector Road operates at a level of service A with the NY 138 westbound left turn lane operating at a level of service B. All other movements at the studied intersections operate at a level of service A during the peak weekday PM hour.

During the peak Saturday midday hour, the left turn and right turn movements onto NY 22 at the intersection of NY 22 and Connector Road operate at a level of service B. The Anderson Lane approach to its intersection with NY 22 operate at a level of service B. Site Driveway B operates at a level of service A. The overall intersection of NY 138 and Connector Road operates at a level of service A. All other movements at the studied intersections operate at a level of service A during the peak Saturday midday hour.

III. PROJECTED CONDITIONS

A. No-Build Volumes

In order to project future traffic increases to the 2021 design year, the existing volumes were increased by a general growth rate of 0.5% per year compounded annually. Based on NYSDOT's 2016 Traffic Volume Report, the traffic volumes along NY 22 decreased from 2009 to 2015 by 0.61% per year and is estimated to decrease by an additional 0.50% for 2016. The growth rate utilized in this traffic study provides a conservative analysis based on the traffic volumes along NY 22.

Based on discussions with Town's planning consultant, this study incorporates the traffic volumes associated with the Goldens Bridge Village Centre expansion and the WBP AFFH Multi-Family development. The other development volumes are shown on figures contained within Appendix B. The traffic volumes associated with the 11 lot Falcon Ridge Subdivision have been reviewed and are considered as part of the general growth volumes within the study area. The general growth volumes plus the other development volumes result in the 2021 No-Build volumes. The intersection capacity analyses based on No-Build volumes and conditions are shown on Tables 3 thru 5 in Appendix A.

During the peak weekday AM hour, all movements at the studied intersections under the no-build conditions are projected to operate at the same levels of service as experienced under existing conditions except for one movement. The overall intersection of NY 138 and Connector Road is projected to increase in delay from a level of service A under existing conditions to a level of service B under no-build conditions during the peak weekday AM hour.

During the peak weekday PM hour, all movements at the studied intersections under the no-build conditions are projected to operate at the same levels of service as experienced under existing conditions except for three movements. At the intersection of NY 22 and

Connector Road, the NY 22 southbound left/thru lane is projected to increase in delay to operate at a level of service B under no-build conditions. At the intersection of NY 138 and Connector Road, the NY 138 eastbound thru/right lane and the NY 138 westbound approach are projected to increase in delay to operate at a level of service B under no-build conditions.

During the peak Saturday midday hour, all the turning movements at the studied intersections under no-build conditions are projected to operate at the same levels of service as experienced under existing conditions.

B. Build Volumes

The projected traffic associated with the proposed dealership expansion are based on traffic counts conducted at the existing dealership driveway along NY 22. Table 1 shows counted hourly volumes at the existing dealership driveway. As shown in Table 1, the peak hour volumes of the generator are 36, 43, and 57 trips during the weekday AM, weekday PM, and Saturday midday hours. These volumes represent peak hour volumes of the generator which do not occur during the peak hour of the roadway network with the exception of the peak weekday AM hour where the dealership volumes and roadway volumes peak during the same hour. An average trip generation rate for each peak hour per 1,000 square feet of gross floor area was calculated utilizing the existing dealership peak hour volumes. These trip generation rates were utilized to project the traffic volumes associated with the proposed car dealership. The peak hour traffic volumes for the existing car dealership and the projected traffic volumes for the proposed car dealership are shown on Table 2 contained in Appendix A. Table 2 also depicts the net additional traffic volumes between the existing and proposed car dealership. The net additional traffic volumes generated by the proposed car dealership are 49, 77, and 58 trips during the peak weekday AM, weekday PM, and Saturday midday hours, respectively.

The net additional volumes were routed through the studied intersections based on existing driveway distributions and consideration of the area roadways. The projected net additional volumes for the dealership have been shown in the figures in Appendix B. Adding the net additional traffic volumes to the No-Build volumes results in 2021 Build volumes with the proposed car dealership expansion.

Table 2 does not incorporate pass-by trips which are trips that typically drive past or near the subject property and will patronize the dealership when it is completed. This study does not take a credit for traffic associated with the two existing buildings that would be demolished as part of the proposed expansion. As mentioned above, the traffic volumes utilized for the car dealership are peak hour volumes of the generator which is superimposed on the peak hour traffic volumes of the roadway network providing a conservative analysis in this study.

Intersection capacity analysis computed based on the 2021 Build volumes with proposed dealership expansion indicate that the intersections will operate at the same levels of service as projected for the No-Build volumes except for three turning movements. During the peak weekday PM hour, the Connector Road left turn movement onto NY 22 is projected to increase in delay by 2.5 seconds from a level of service C under No-Build conditions to operate at a level of service D under Build conditions. During the peak weekday PM hour, the Anderson Lane approach to NY 22 is projected to increase in delay by 1.0 seconds from a level of service B under No-Build conditions to operate at a level of service C under Build conditions. During the peak Saturday midday hour, the Connector Road left turn movement onto NY 22 is projected to increase in delay by 0.8 seconds from a level of service B under No-Build conditions to operate at a level of service C under Build conditions. Projected operations with the proposed car dealership expansion are shown on Tables 3 thru 5 in Appendix A. The two proposed site driveways are projected to operate at a level of service B or better during all studied peak hours.

C. Sensitivity Analysis

Based on NYSDOT's comment that if this dealership were to turn into a high turn-over, low-profit dealership, we have prepared a sensitivity analysis. Traffic volumes associated with redevelopment under the sensitivity analysis are based on information published by the Institute of Transportation Engineers (ITE) in its publication "Trip Generation Manual, 10th Edition." Table S-1 shows the net difference traffic volumes between the existing dealership counted peak hour volumes and the proposed dealership based on ITE. The existing peak hour volumes shown in Table S-1 are the same existing driveway volumes shown on Table 2. As shown in Table S-1, the net additional driveway volumes from the existing dealership counted peak hour volumes to the proposed dealership based on ITE are 98, 117, and 246 trips during the peak weekday AM, weekday PM, and Saturday midday hours, respectively. Similar to the Build condition mentioned above, the sensitivity analysis volumes do not incorporate pass-by trips or take a credit for traffic associated with the two existing buildings that would be demolished as part of the proposed expansion. Additionally, the sensitivity analysis does not take credit for the fact that the existing dealership counted peak hour volumes are less than projected peak hour volumes based on ITE for the existing dealership.

The net additional driveway for the sensitivity analysis were routed through the intersections as shown in Figures S-1 thru S-4. The 2021 No-Build volumes plus the sensitivity analysis net additional driveway volumes result in the Sensitivity Analysis 2021 Build volumes which are shown on Figures S-5 thru S-7.

The intersection capacity analyses based on the Sensitivity Analysis volumes and conditions are shown on Tables 3 thru 5 in Appendix A. Intersection capacity analysis computed based on the Sensitivity Analysis 2021 Build volumes with proposed dealership expansion indicate that the intersections will operate at the same levels of service as projected for the 2021 Build volumes with proposed dealership expansion except for four turning movements. During the peak weekday AM hour, the Connector Road right turn

movement onto NY 22 is projected to increase in delay from a level of service A under Build conditions to operate at a level of service B under Sensitivity Analysis Build conditions. During the peak Saturday midday hour, both site driveways and the NY 138 westbound left turn movement are projected to increase in delay from a level of service A under Build conditions to operate at a level of service B under Sensitivity Analysis Build conditions.

IV. FINDINGS & CONCLUSION

Intersection capacity analysis computed based on the 2021 Build volumes and the Sensitivity Analysis 2021 Build volumes indicate that the intersections will operate at the same if not similar levels of service as projected for the No-Build volumes during the studied peak hours.

As commented by Frederick P. Clark Associates, Inc. in their review memorandum dated 01/08/2019, we have provided a queuing analysis with this revised traffic study. As indicated in the queuing analysis Tables 5 thru 7, the queue length projected under the build conditions will essentially remain the same as projected under the no-build condition. If any specific turning movement queue length under build conditions depicts a queue length over the available storage length, the queue length under no build conditions also depicts a queue length over the available storage length for the same movement during the studied peak hours.

Even though the left turn movement onto NY 22 from Connector Road operates at a level of service F under existing and future conditions during the peak weekday AM hour, the same movement operates at a level of service C or better under existing and future conditions during the other studied peak hours. As stated in the traffic studies for the Goldens Bridge Village Centre expansion and the WBP AFFH Multi-Family development, the traffic volumes at the intersection of NY 22 and Connector Road should be monitored for future signalization.

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

Marc Petroro, PE, PTOE
Senior Project Manager

Kevin Masciovecchio, EIT
Senior Designer III

APPENDIX A

TABLES

TABLE 1

MERCEDES BENZ OF GOLDENS BRIDGE
COUNTED DRIVEWAY VOLUMES[1]

Day of Week	TIME	ENTER	EXIT	TOTAL
Weekday	7:00 - 8:00 AM	29	6	35
	7:15 - 8:15 AM[2]	**27**	**9**	**36**
	7:30 - 8:30 AM	21	11	32
	7:45 - 8:45 AM	21	9	30
	8:00 - 9:00 AM	21	10	31
Saturday	12:00 - 1:00 PM	19	14	33
	12:15 - 1:15 PM	21	18	39
	12:30 - 1:30 PM[2]	**22**	**21**	**43**
	12:45 - 1:45 PM	18	18	36
	1:00 - 2:00 PM	17	18	35
Weekday	**4:00 - 5:00 PM[2]**	**34**	**23**	**57**
	4:15 - 5:15 PM	28	27	55
	4:30 - 5:30 PM	24	30	54
	4:45 - 5:45 PM	16	29	45
	5:00 - 6:00 PM	10	28	38

Notes:
(1) JMC conducted traffic counts at the existing Mercedes Benz of Goldens Bridge driveway along NY 22. Traffic counts were conducted on 09/28/2018 between 7:00 and 9:00 AM, on 09/27/2018 between 4:00 and 6:00 PM, as well as on 09/22/2018 between 12:00 and 2:00 PM.
(2) The bold rows represent the highest counted hourly volumes which are the peak hour volumes of the generator.

TABLE 2

PROPOSED DEVELOPMENT VOLUMES

DESCRIPTION	PEAK WEEKDAY AM HOUR			PEAK WEEKDAY PM HOUR			PEAK SATURDAY MIDDAY HOUR		
	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
A. Existing 30,600 S.F. Car Dealership Driveway Volumes (JMC Counts from Table 1)[(1)]	27	9	36	34	23	57	22	21	43
B. Proposed 71,800 S.F. Car Dealership Driveway Volumes (Based on average rate per 1,000 S.F. of JMC Counts at existing dealership)[(2)]	64	21	85	80	54	134	52	49	101
C. Net Additional Driveway Volumes (Row C = Row B - Row A)	37	12	49	46	31	77	30	28	58

Notes:

(1) Existing car dealership volumes are based on traffic counts conducted by JMC at the existing site driveway for the Mercedes Benz of Goldens Bridge. Existing volumes are peak hour volumes of the generator.

(2) Proposed car dealership volumes are based on the peak hour of the generator counts at the existing car dealership. The trip generation average rate per 1,000 square feet for the existing car dealership was applied to the proposed car dealership square footage to project the proposed car dealership traffic volumes.

TABLE 3

INTERSECTION OPERATIONS-PEAK WEEKDAY AM HOUR

INTERSECTION	APPROACH	LANE GROUP	2018 EXISTING			2021 NO BUILD			2021 BUILD			2021 SENSITIVITY ANALYSIS		
			V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)
1. NY 22 & Connector Road (Unsignalized)	WESTBOUND (Connector Road)	LEFT	1.08	160.2	F	1.38	284.7	F	1.47	324.8	F	1.59	378.3	F
		RIGHT	0.07	9.5	A	0.10	9.7	A	0.12	9.9	A	0.14	10.1	B
	NORTHBOUND (NY 22)	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	0.17	8.4	A	0.20	8.6	A	0.21	8.7	A	0.22	8.8	A
2. NY 22 & Anderson Lane (Unsignalized)	WESTBOUND (Anderson Lane)	LEFT/RIGHT	0.02	18.9	C	0.02	20.4	C	0.02	21.5	C	0.02	22.5	C
	NORTHBOUND (NY 22)	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	0.00	7.4	A	0.00	7.5	A	0.00	7.6	A	0.00	7.6	A
3. NY 22 & Site Driveway A (Unsignalized)	WESTBOUND (Site Driveway A)	LEFT/RIGHT							0.02	11.3	B	0.33	11.3	B
	NORTHBOUND (NY 22)	THRU/RIGHT		N/A			N/A		-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU							0.00	7.5	A	0.01	7.6	A
4. NY 22 & Site Driveway B (Unsignalized)	WESTBOUND (Site Driveway B)	LEFT/RIGHT	0.02	10.6	B	0.02	10.8	B	0.21	10.9	B	0.03	11.3	B
	NORTHBOUND (NY 22)	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	0.01	7.4	A	0.01	7.4	A	0.01	7.4	A	0.01	7.5	A
5. NY 138 & Connector Road (Signalized)	EASTBOUND (NY 138)	THRU/RIGHT	0.25	6.1	A	0.27	6.4	A	0.28	6.5	A	0.29	6.7	A
	WESTBOUND (NY 138)	LEFT	0.20	7.7	A	0.25	8.5	A	0.26	8.8	A	0.28	9.1	A
		THRU	0.67	8.7	A	0.67	9.2	A	0.67	9.2	A	0.68	9.4	A
		COMPOSITE	-	8.6	A	-	9.0	A	-	9.1	A	-	9.3	A
	NORTHBOUND (Connector Road)	LEFT	0.60	14.4	B	0.61	14.8	B	0.61	14.9	B	0.61	14.9	B
		RIGHT	0.26	11.9	B	0.30	12.4	B	0.30	12.4	B	0.33	12.6	B
		COMPOSITE	-	13.7	B	-	14.1	B	-	14.1	B	-	14.2	B
	INTERSECTION	COMPOSITE	-	9.6	A	-	10.1	B	-	10.2	B	-	10.3	B

Notes:

(1) V/C represents volume/capacity ratio

(2) Delay is average seconds delay per vehicle

(3) LOS represents level of service

TABLE 4

INTERSECTION OPERATIONS-PEAK WEEKDAY PM HOUR

INTERSECTION	APPROACH	LANE GROUP	2018 EXISTING			2021 NO BUILD			2021 BUILD			2021 SENSITIVITY ANALYSIS		
			V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)
1. NY 22 & Connector Road (Unsignalized)	WESTBOUND (Connector Road)	LEFT	0.14	19.0	C	0.22	22.5	C	0.24	25.0	D	0.27	28.2	D
		RIGHT	0.17	12.7	B	0.23	13.4	B	0.27	14.1	B	0.26	14.0	B
	NORTHBOUND (NY 22)	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	0.15	9.9	A	0.18	10.2	B	0.20	10.5	B	0.22	10.6	B
2. NY 22 & Anderson Lane (Unsignalized)	WESTBOUND (Anderson Lane)	LEFT/RIGHT	0.09	13.3	B	0.10	14.2	B	0.10	15.2	C	0.11	15.5	C
	NORTHBOUND (NY 22)	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	0.00	8.2	A	0.00	8.3	A	0.00	8.4	A	0.00	8.4	A
3. NY 22 & Site Driveway A (Unsignalized)	WESTBOUND (Site Driveway A)	LEFT/RIGHT							0.04	10.9	B	0.10	11.2	B
	NORTHBOUND (NY 22)	THRU/RIGHT		N/A			N/A		-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU							0.01	8.5	A	0.01	8.4	A
4. NY 22 & Site Driveway B (Unsignalized)	WESTBOUND (Site Driveway B)	LEFT/RIGHT	0.05	10.3	B	0.05	10.6	B	0.07	10.8	B	0.10	11.1	B
	NORTHBOUND (NY 22)	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	0.00	8.2	A	0.00	8.3	A	0.01	8.4	A	0.01	8.4	A
5. NY 138 & Connector Road (Signalized)	EASTBOUND (NY 138)	THRU/RIGHT	0.38	9.5	A	0.43	10.3	B	0.43	10.4	B	0.43	10.6	B
	WESTBOUND (NY 138)	LEFT	0.14	10.8	B	0.21	12.1	B	0.23	12.5	B	0.23	12.7	B
		THRU	0.34	9.2	A	0.35	9.8	A	0.34	9.8	A	0.35	10.0	A
		COMPOSITE	-	9.6	A	-	10.5	B	-	10.7	B	-	10.8	B
	NORTHBOUND (Connector Road)	LEFT	0.52	8.6	A	0.52	8.4	A	0.53	8.8	A	0.54	8.7	A
		RIGHT	0.51	8.6	A	0.54	8.6	A	0.55	9.0	A	0.55	8.9	A
		COMPOSITE	-	8.6	A	-	8.5	A	-	8.9	A	-	8.8	A
	INTERSECTION	COMPOSITE	-	9.0	A	-	9.3	A	-	9.6	A	-	9.6	A

Notes:

(1) V/C represents volume/capacity ratio

(2) Delay is average seconds delay per vehicle

(3) LOS represents level of service

TABLE 5

INTERSECTION OPERATIONS-PEAK SATURDAY MIDDAY HOUR

INTERSECTION	APPROACH	LANE GROUP	2018 EXISTING			2021 NO BUILD			2021 BUILD			2021 SENSITIVITY ANALYSIS		
			V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)
1. NY 22 & Connector Road (Unsignalized)	WESTBOUND (Connector Road)	LEFT	0.08	13.4	B	0.10	14.2	B	0.11	15.0	C	0.14	18.1	C
		RIGHT	0.11	10.2	B	0.12	10.3	B	0.14	10.5	B	0.20	11.2	B
	NORTHBOUND (NY 22)	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	0.10	8.6	A	0.11	8.7	A	0.13	8.8	A	0.16	9.1	A
2. NY 22 & Anderson Lane (Unsignalized)	WESTBOUND (Anderson Lane)	LEFT/RIGHT	0.02	10.4	B	0.02	10.7	B	0.02	11.0	B	0.03	12.2	B
	NORTHBOUND (NY 22)	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	0.00	8.8	A	0.00	8.8	A	0.00	8.9	A	0.00	9.2	A
3. NY 22 & Site Driveway A (Unsignalized)	WESTBOUND (Site Driveway A)	LEFT/RIGHT							0.03	9.7	A	0.13	10.7	B
	NORTHBOUND (NY 22)	THRU/RIGHT		N/A			N/A		-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU							0.00	7.7	A	0.02	8.0	A
4. NY 22 & Site Driveway B (Unsignalized)	WESTBOUND (Site Driveway B)	LEFT/RIGHT	0.02	9.4	A	0.03	9.5	A	.0.35	9.6	A	0.09	10.2	B
	NORTHBOUND (NY 22)	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	0.00	7.6	A	0.00	7.7	A	0.01	7.7	A	0.01	7.9	A
5. NY 138 & Connector Road (Signalized)	EASTBOUND (NY 138)	THRU/RIGHT	0.25	7.3	A	0.27	7.7	A	0.28	7.9	A	0.33	8.4	A
	WESTBOUND (NY 138)	LEFT	0.15	8.4	A	0.18	9.0	A	0.20	9.3	A	0.24	10.2	B
		THRU	0.24	7.3	A	0.25	7.6	A	0.25	7.7	A	0.26	8.0	A
		COMPOSITE	-	7.7	A	-	8.2	A	-	8.4	A	-	9.0	A
	NORTHBOUND (Connector Road)	LEFT	0.42	8.6	A	0.42	8.4	A	0.43	8.4	A	0.45	8.4	A
		RIGHT	0.49	9.1	A	0.50	9.0	A	0.50	9.0	A	0.51	8.9	A
		COMPOSITE	-	8.8	A	-	8.8	A	-	8.7	A	-	8.7	A
	INTERSECTION	COMPOSITE	-	8.3	A	-	8.4	A	-	8.5	A	-	8.7	A

Notes:

(1) V/C represents volume/capacity ratio

(2) Delay is average seconds delay per vehicle

(3) LOS represents level of service

TABLE 6

QUEUEING ANALYSIS-PEAK WEEKDAY AM HOUR

INTERSECTION	APPROACH	LANE GROUP	STORAGE LENGTH[(2)]	2018 EXISTING[(2)]		2021 NO BUILD[(2)]		2021 BUILD[(2)]		2021 SENSITIVITY ANALYSIS[(2)]	
				50%	95%	50%	95%	50%	95%	50%	95%
1. NY 22 & Connector Road (Unsignalized)	WESTBOUND (Connector Road)	LEFT	750	-	208	-	278	-	293	-	310
		RIGHT	200	-	5	-	8	-	10	-	13
	NORTHBOUND (NY 22)	THRU/RIGHT	4,100	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	450	-	15	-	20	-	20	-	20
2. NY 22 & Anderson Lane (Unsignalized)	WESTBOUND (Anderson Lane)	LEFT/RIGHT	225	-	3	-	3	-	3	-	3
	NORTHBOUND (NY 22)	THRU/RIGHT	450	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	2,570	-	0	-	0	-	0	-	0
3. NY 22 & Site Driveway A (Unsignalized)	WESTBOUND (Site Driveway A)	LEFT/RIGHT	30	-	-	-	-	-	3	-	3
	NORTHBOUND (NY 22)	THRU/RIGHT	180	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	2,390	-	0	-	0	-	0	-	0
4. NY 22 & Site Driveway B (Unsignalized)	WESTBOUND (Site Driveway B)	LEFT/RIGHT	30	-	0	-	0	-	3	-	3
	NORTHBOUND (NY 22)	THRU/RIGHT	310	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	2,215	-	0	-	0	-	0	-	0
5. NY 138 & Connector Road (Signalized)	EASTBOUND (NY 138)	THRU/RIGHT	720	11	49	11	52	11	53	12	54
	WESTBOUND (NY 138)	LEFT	85	20	65	26	80	27	84	30	88
		THRU	960	117	286	123	303	124	305	131	307
	NORTHBOUND (Connector Road)	LEFT	75	58	166	64	176	65	179	68	181
		RIGHT	750	0	30	0	33	0	33	0	35

Notes:

(1) Vehicle length is equal to 25 feet

(2) Storage and Queue Lengths are in feet

TABLE 7

QUEUEING ANALYSIS-PEAK WEEKDAY PM HOUR

INTERSECTION	APPROACH	LANE GROUP	STORAGE LENGTH[(2)]	2018 EXISTING[(2)]		2021 NO BUILD[(2)]		2021 BUILD[(2)]		2021 SENSITIVITY ANALYSIS[(2)]	
				50%	95%	50%	95%	50%	95%	50%	95%
1. NY 22 & Connector Road (Unsignalized)	WESTBOUND (Connector Road)	LEFT	750	-	13	-	20	-	23	-	28
		RIGHT	200	-	15	-	23	-	28	-	25
	NORTHBOUND (NY 22)	THRU/RIGHT	4,100	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	450	-	13	-	18	-	18	-	23
2. NY 22 & Anderson Lane (Unsignalized)	WESTBOUND (Anderson Lane)	LEFT/RIGHT	225	-	8	-	8	-	8	-	10
	NORTHBOUND (NY 22)	THRU/RIGHT	450	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	2,570	-	0	-	0	-	0	-	0
3. NY 22 & Site Driveway A (Unsignalized)	WESTBOUND (Site Driveway A)	LEFT/RIGHT	30	-	-	-	-	-	3	-	8
	NORTHBOUND (NY 22)	THRU/RIGHT	180	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	2,390	-	0	-	0	-	0	-	0
4. NY 22 & Site Driveway B (Unsignalized)	WESTBOUND (Site Driveway B)	LEFT/RIGHT	30	-	5	-	5	-	5	-	8
	NORTHBOUND (NY 22)	THRU/RIGHT	310	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	2,215	-	0	-	0	-	0	-	0
5. NY 138 & Connector Road (Signalized)	EASTBOUND (NY 138)	THRU/RIGHT	720	16	66	18	72	19	74	19	75
	WESTBOUND (Connector Road)	LEFT	85	9	38	14	52	16	58	16	57
		THRU	960	29	88	32	94	33	95	33	96
	NORTHBOUND (Connector Road)	LEFT	75	45	112	49	119	51	125	53	128
		RIGHT	750	6	39	8	45	9	47	10	49

Notes:

(1) Vehicle length is equal to 25 feet

(2) Storage and Queue Lengths are in feet

TABLE 8

QUEUEING ANALYSIS-PEAK SATURDAY MIDDAY HOUR

INTERSECTION	APPROACH	LANE GROUP	STORAGE LENGTH[(2)]	2018 EXISTING[(2)]		2021 NO BUILD[(2)]		2021 BUILD[(2)]		2021 SENSITIVITY ANALYSIS[(2)]	
				50%	95%	50%	95%	50%	95%	50%	95%
1. NY 22 & Connector Road (Unsignalized)	WESTBOUND (Connector Road)	LEFT	750	-	8	-	8	-	10	-	13
		RIGHT	200	-	10	-	10	-	13	-	18
	NORTHBOUND (NY 22)	THRU/RIGHT	4,100	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	450	-	8	-	10	-	10	-	15
2. NY 22 & Anderson Lane (Unsignalized)	WESTBOUND (Anderson Lane)	LEFT/RIGHT	225	-	3	-	3	-	3	-	3
	NORTHBOUND (NY 22)	THRU/RIGHT	450	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	2,570	-	0	-	0	-	0	-	0
3. NY 22 & Site Driveway A (Unsignalized)	WESTBOUND (Site Driveway A)	LEFT/RIGHT	30	-	-	-	-	-	3	-	10
	NORTHBOUND (NY 22)	THRU/RIGHT	180	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	2,390	-	0	-	0	-	0	-	3
4. NY 22 & Site Driveway B (Unsignalized)	WESTBOUND (Site Driveway B)	LEFT/RIGHT	30	-	3	-	3	-	3	-	8
	NORTHBOUND (NY 22)	THRU/RIGHT	310	-	-	-	-	-	-	-	-
	SOUTHBOUND (NY 22)	LEFT/THRU	2,215	-	0	-	0	-	0	-	0
5. NY 138 & Connector Road (Signalized)	EASTBOUND (NY 138)	THRU/RIGHT	720	6	34	6	37	6	38	7	40
	WESTBOUND (Connector Road)	LEFT	85	11	39	13	47	14	49	17	56
		THRU	960	19	57	20	61	20	62	22	64
	NORTHBOUND (Connector Road)	LEFT	75	27	72	29	79	30	82	33	94
		RIGHT	750	0	27	0	29	0	30	0	31

Notes:

(1) Vehicle length is equal to 25 feet

(2) Storage and Queue Lengths are in feet

TABLE S-1

SENSITIVITY ANALYSIS DEVELOPMENT VOLUMES

DESCRIPTION	PEAK WEEKDAY AM HOUR			PEAK WEEKDAY PM HOUR			PEAK SATURDAY MIDDAY HOUR		
	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
A. Existing 30,600 S.F. Car Dealership Driveway Volumes (JMC Counts from Table 1)[(1)]	27	9	36	34	23	57	22	21	43
B. Proposed 71,800 S.F. Car Dealership Driveway Volumes (ITE Code 840)[(2)]	98	36	134	70	104	174	145	144	289
C. Net Additional Driveway Volumes (Row C = Row B - Row A)	71	27	98	36	81	117	123	123	246

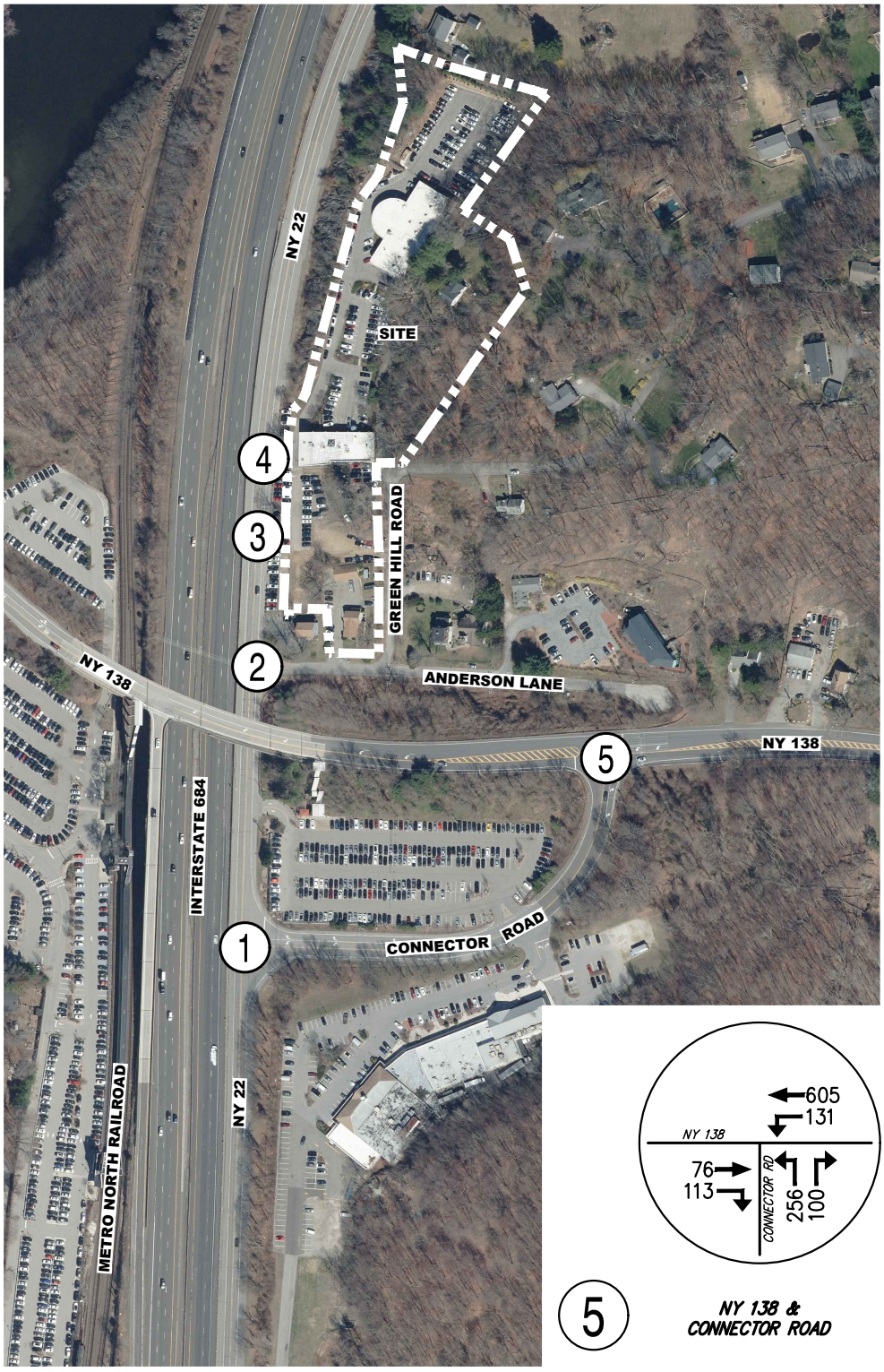
Notes:

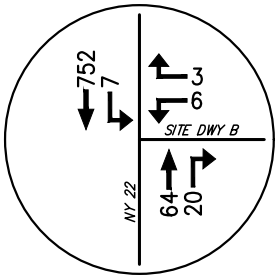
(1) Existing car dealership volumes are based on traffic counts conducted by JMC at the existing site driveway for the Mercedes Benz of Goldens Bridge. Existing volumes are peak hour volumes of the generator.

(2) Automobiles Sales (New) (ITE Code 840) is defined by ITE as a new automobile sales dealership where the primary business is the sale or leasing of new cars; however automobile services, parts sales, and used car sales may also be available.

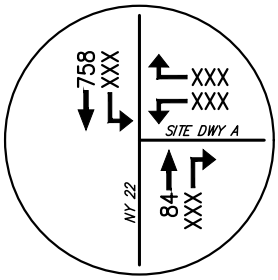
APPENDIX B

FIGURES

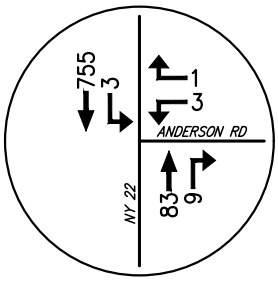




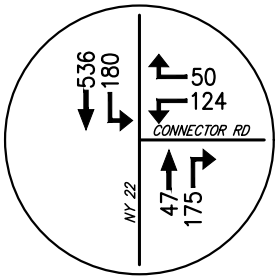
4 **NY 22 & SITE DRIVEWAY B**



3 **NY 22 & SITE DRIVEWAY A**



2 **NY 22 & ANDERSON ROAD**



1 **NY 22 & CONNECTOR ROAD**

5 **NY 138 & CONNECTOR ROAD**

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

2018 EXISTING VOLUMES

PEAK WEEKDAY AM HOUR (7:15 - 8:15)

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 01 — SCALE: 1" = 800'

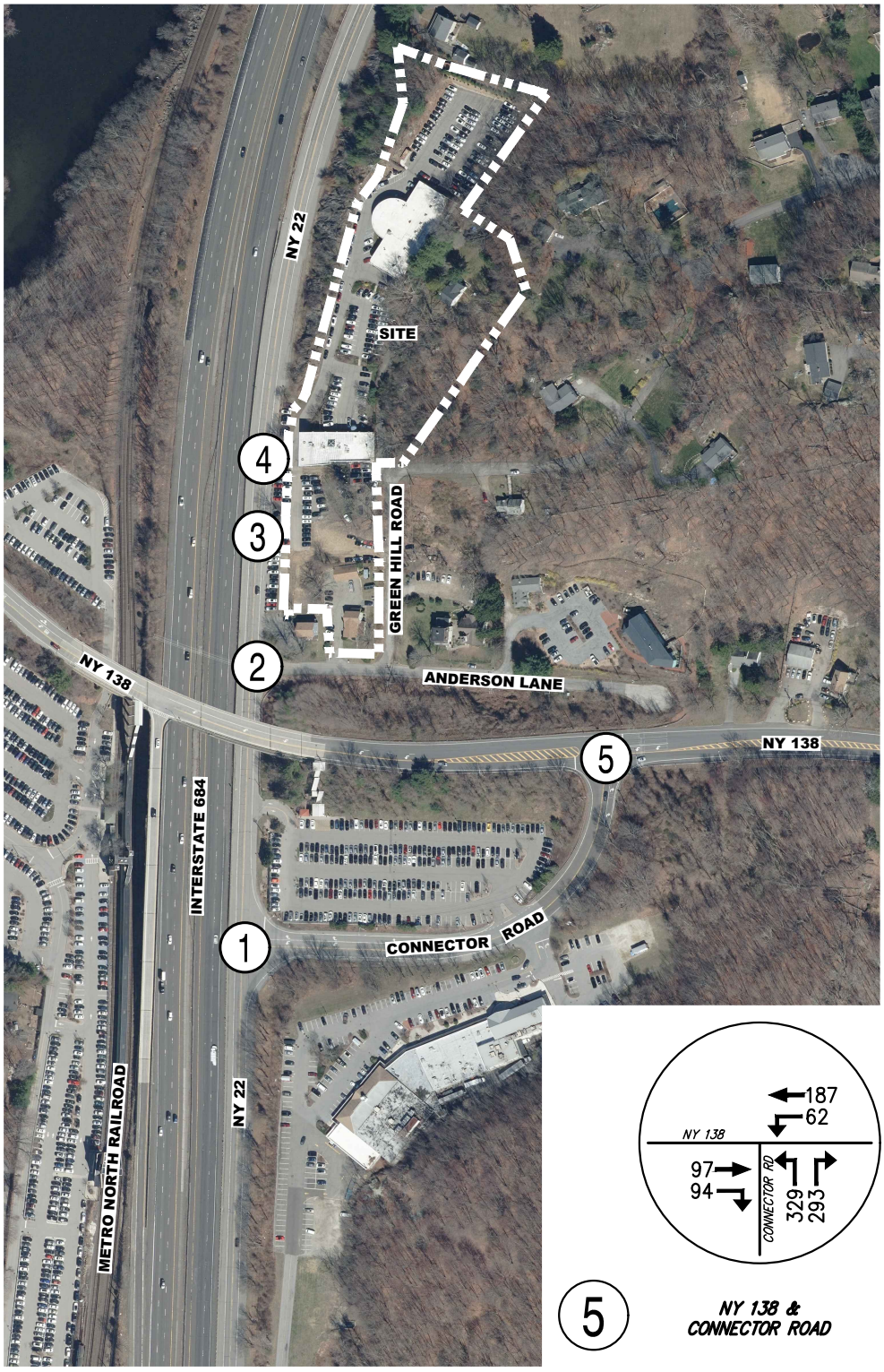
120 BEDFORD RD
ARMONK
NY 10504

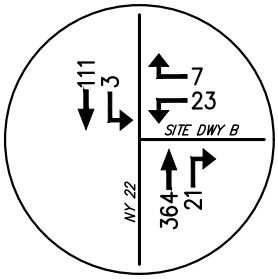
(914) 273-5225
fax 273-2102

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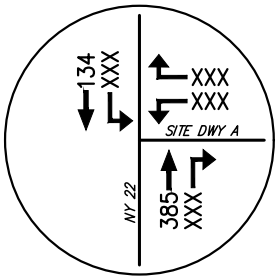
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

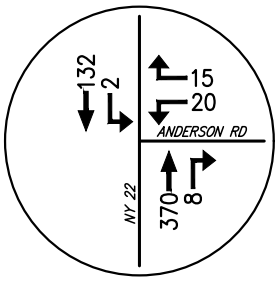




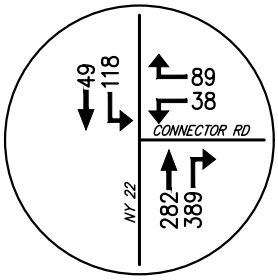
4 NY 22 & SITE DRIVEWAY B



3 NY 22 & SITE DRIVEWAY A



2 NY 22 & ANDERSON ROAD



1 NY 22 & CONNECTOR ROAD

5 NY 138 & CONNECTOR ROAD

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

2018 EXISTING VOLUMES

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

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 02 — SCALE: 1" = 800'

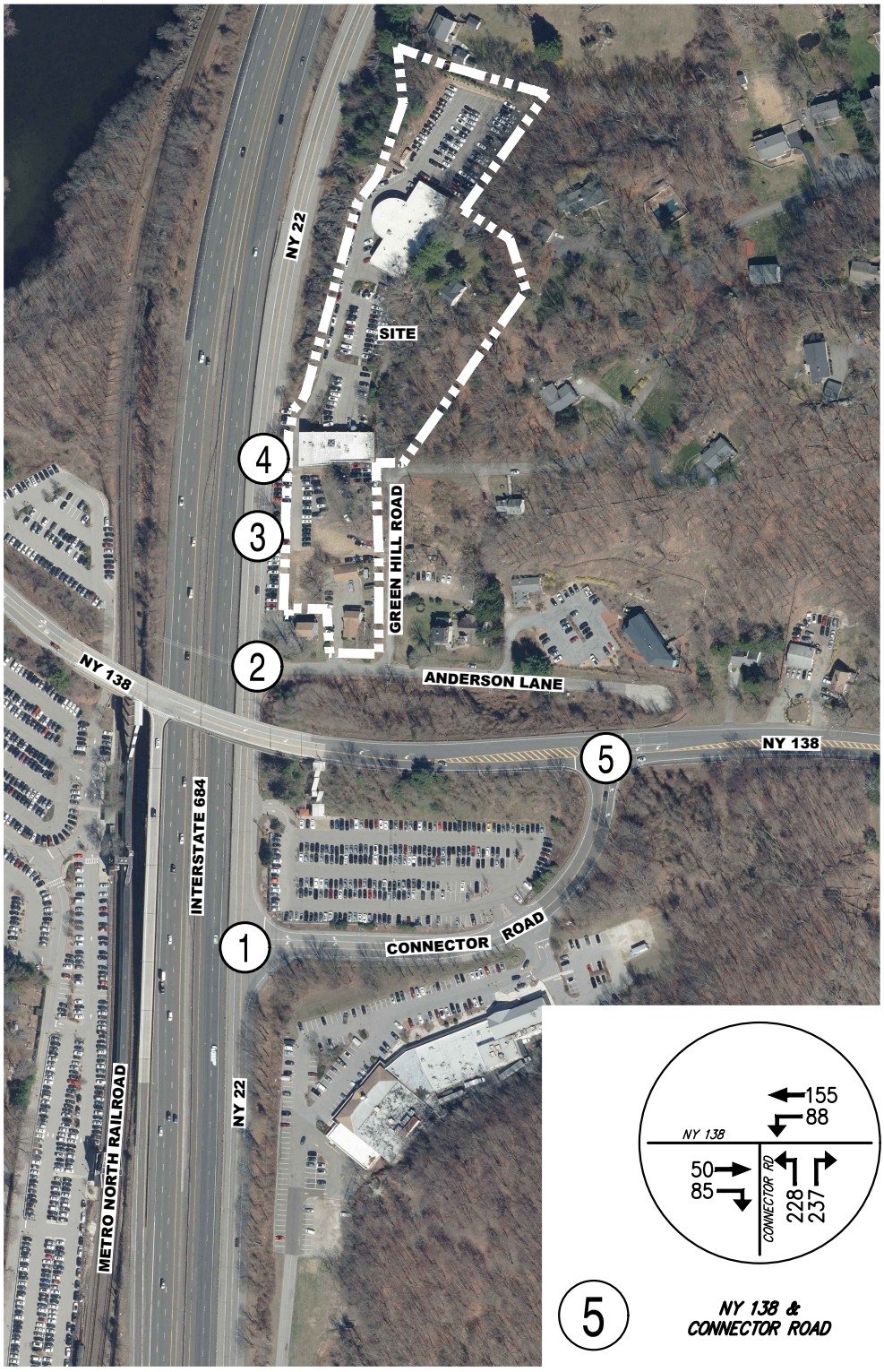
120 BEDFORD RD
ARMONK
NY 10504

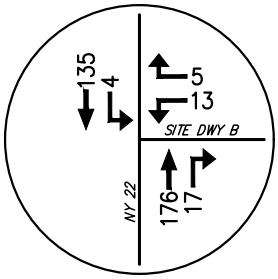
(914) 273-5225
fax 273-2102

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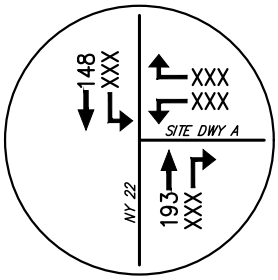
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

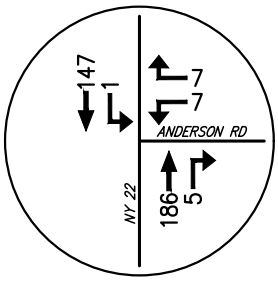




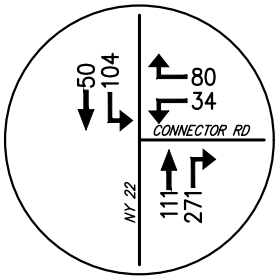
4 NY 22 & SITE DRIVEWAY B



3 NY 22 & SITE DRIVEWAY A



2 NY 22 & ANDERSON ROAD



1 NY 22 & CONNECTOR ROAD

5 NY 138 & CONNECTOR ROAD

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

2018 EXISTING VOLUMES

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

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 03 — SCALE: 1" = 800'

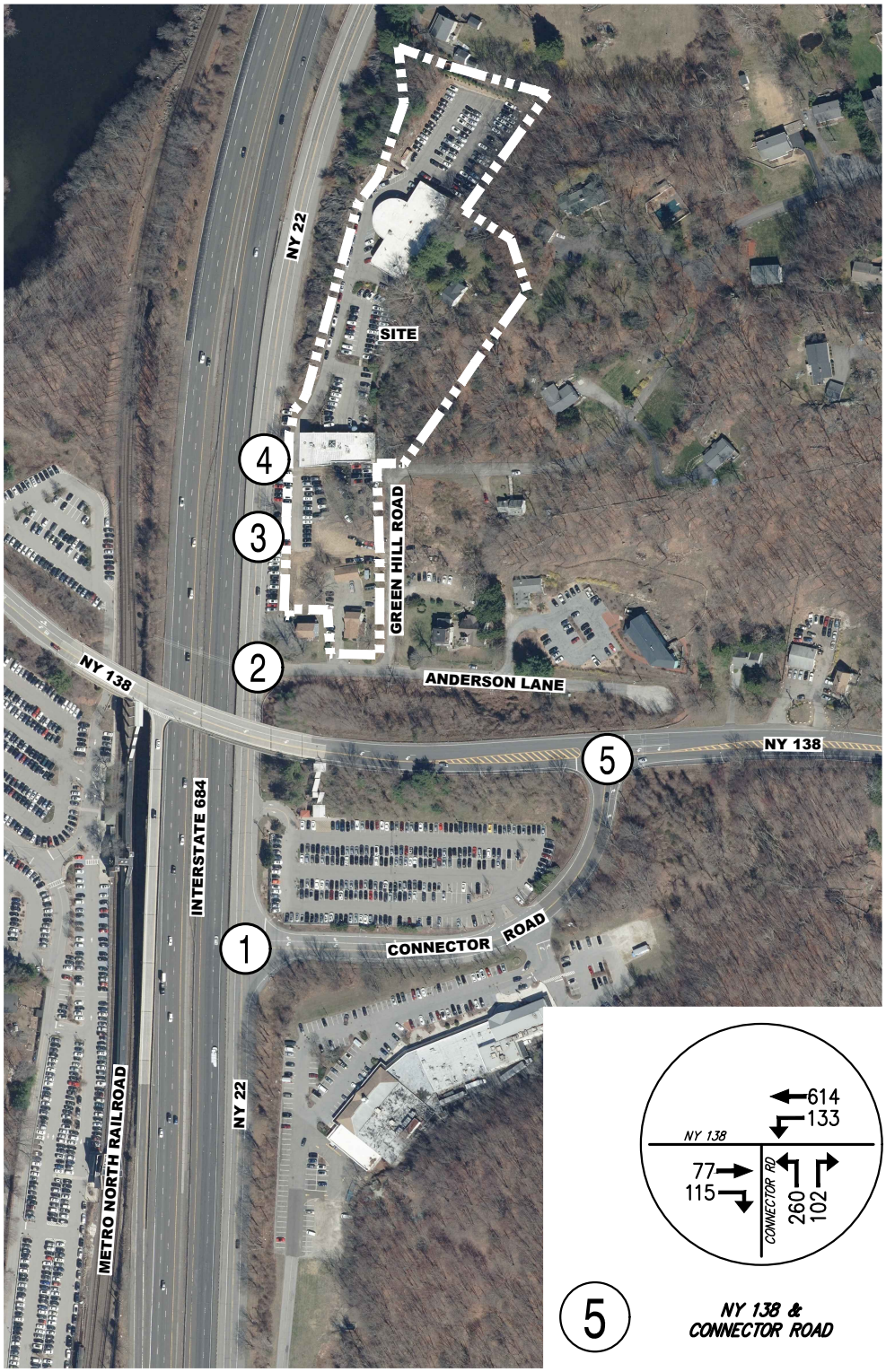
120 BEDFORD RD
ARMONK
NY 10504

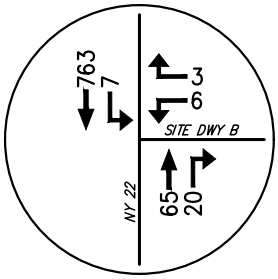
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fax 273-2102

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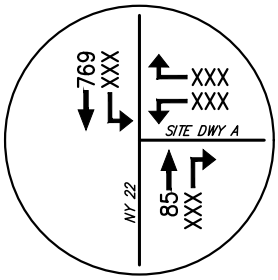
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

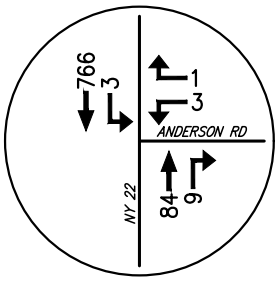




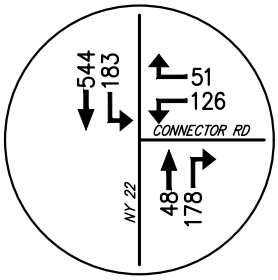
4 NY 22 & SITE DRIVEWAY B



3 NY 22 & SITE DRIVEWAY A



2 NY 22 & ANDERSON ROAD



1 NY 22 & CONNECTOR ROAD

5 NY 138 & CONNECTOR ROAD

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

2021 GENERAL GROWTH VOLUMES

PEAK WEEKDAY AM HOUR

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 04 — SCALE: 1" = 800'

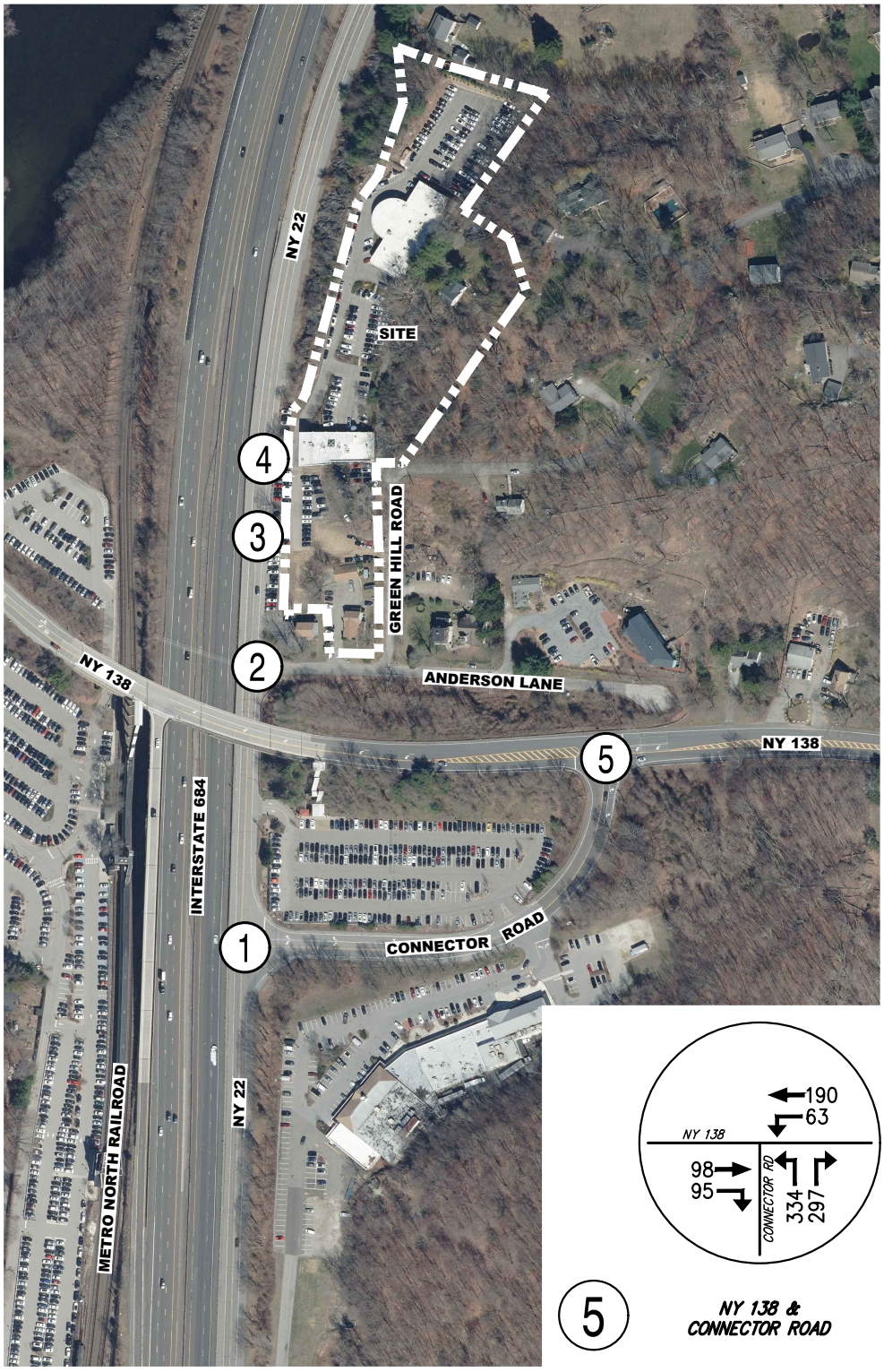
120 BEDFORD RD
ARMONK
NY 10504

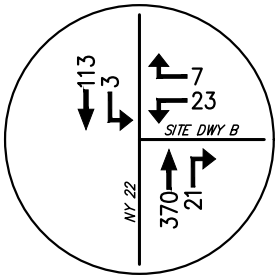
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fax 273-2102

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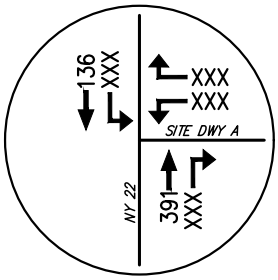
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

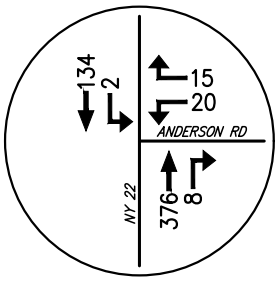




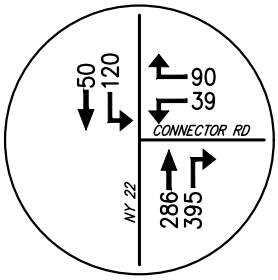
4 **NY 22 & SITE DRIVEWAY B**



3 **NY 22 & SITE DRIVEWAY A**



2 **NY 22 & ANDERSON ROAD**



1 **NY 22 & CONNECTOR ROAD**

5 **NY 138 & CONNECTOR ROAD**

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

2021 GENERAL GROWTH VOLUMES

PEAK WEEKDAY PM HOUR

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 05 — SCALE: 1" = 800'

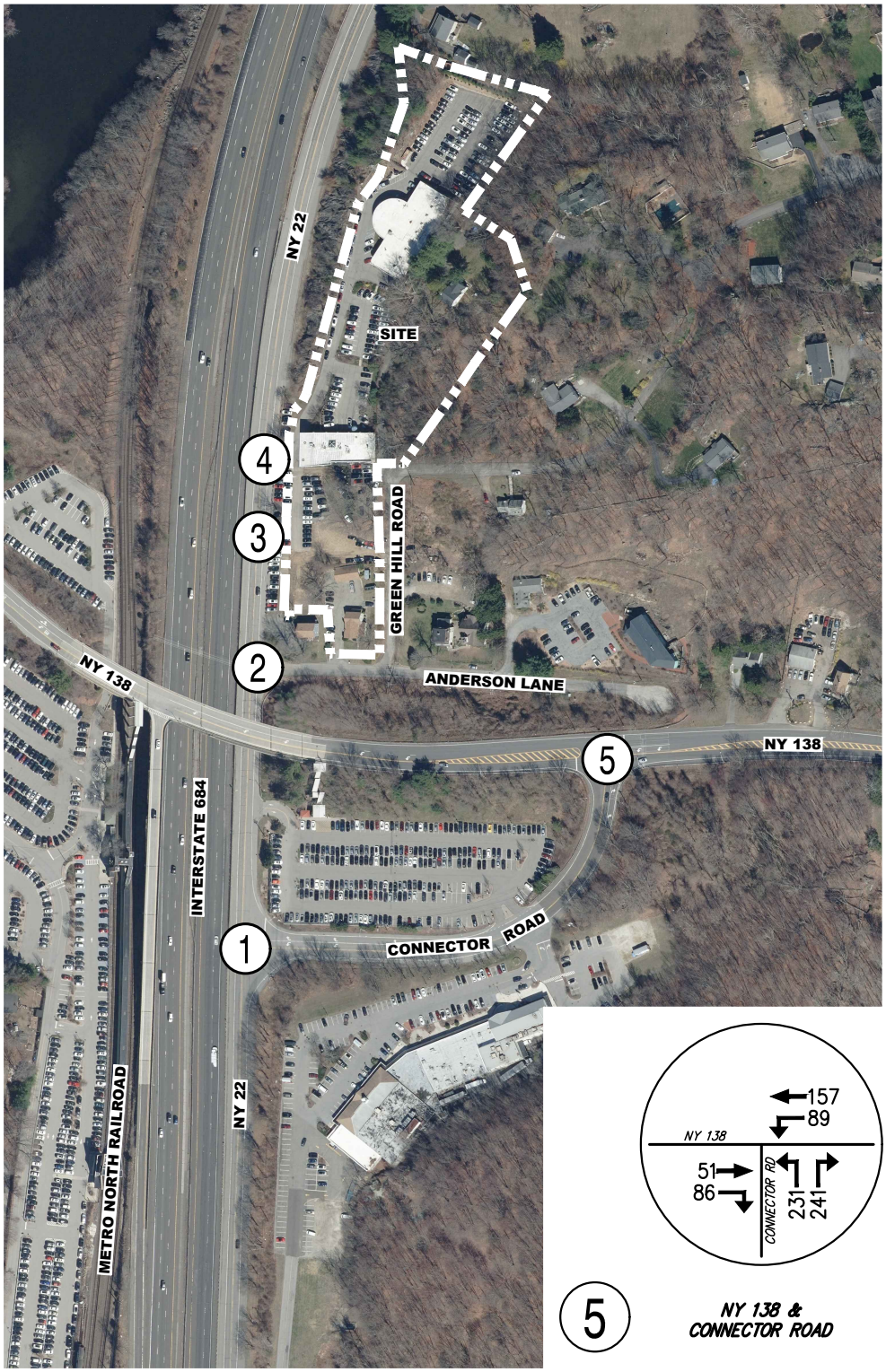
120 BEDFORD RD
ARMONK
NY 10504

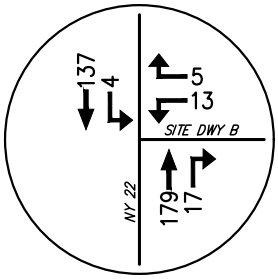
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fax 273-2102

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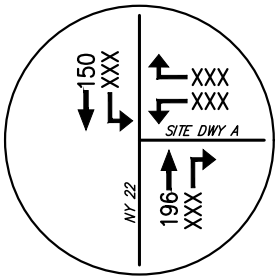
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

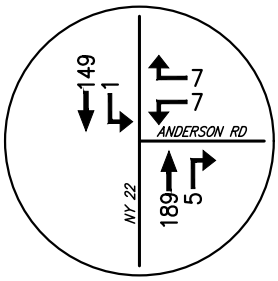




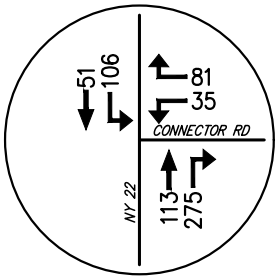
4 NY 22 & SITE DRIVEWAY B



3 NY 22 & SITE DRIVEWAY A



2 NY 22 & ANDERSON ROAD



1 NY 22 & CONNECTOR ROAD

5 NY 138 & CONNECTOR ROAD

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

2021 GENERAL GROWTH VOLUMES

PEAK SATURDAY HOUR

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 06 — SCALE: 1" = 800'

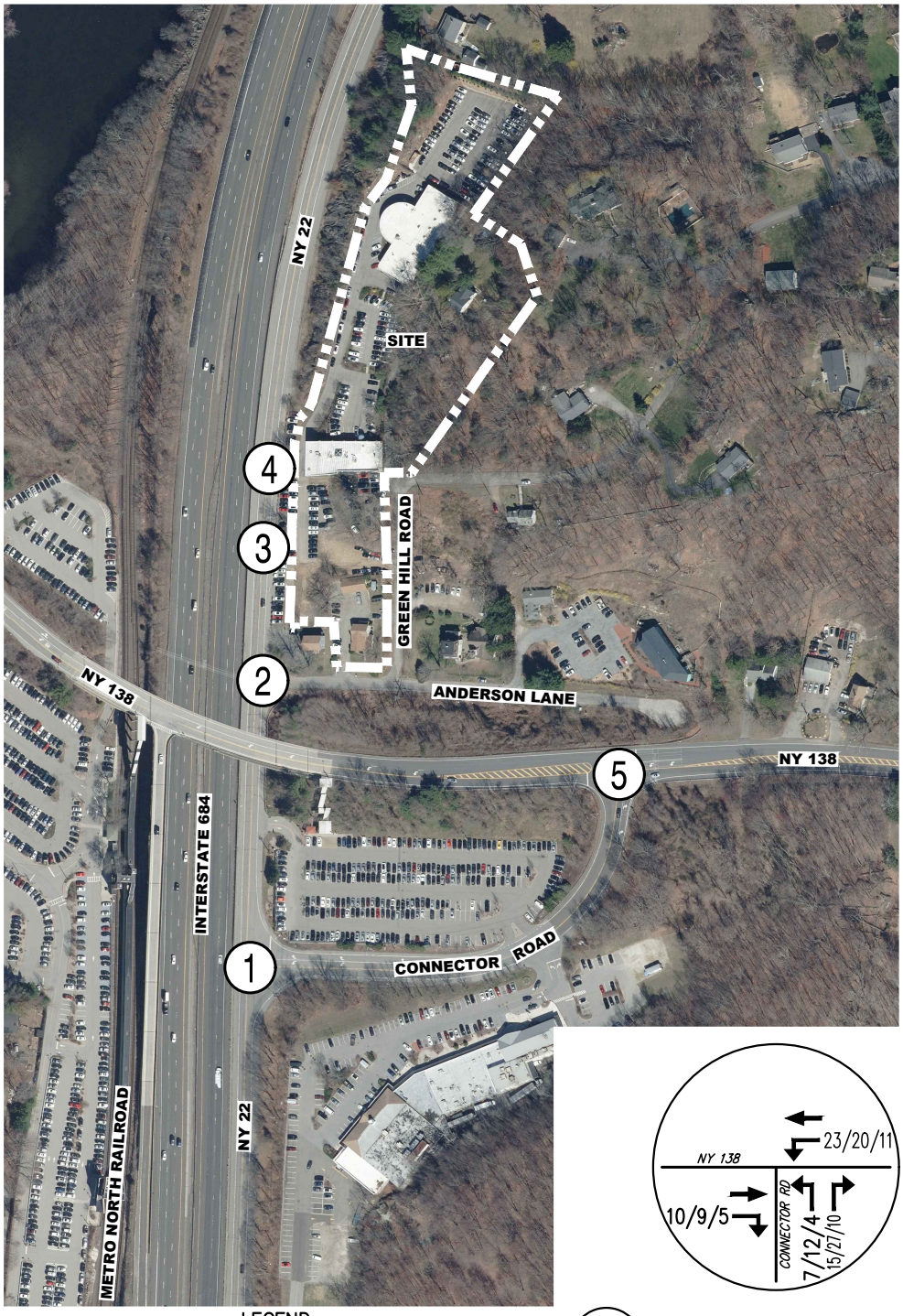
120 BEDFORD RD
ARMONK
NY 10504

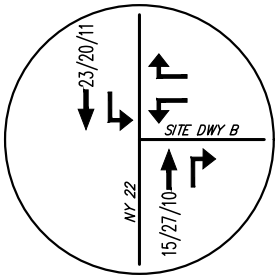
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fax 273-2102

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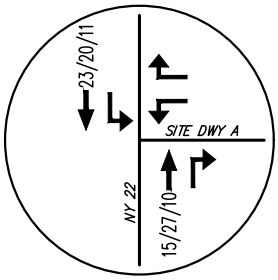
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

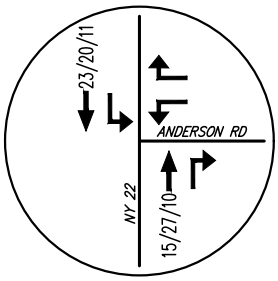




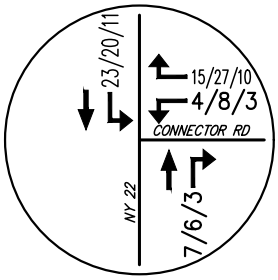
4 **NY 22 & SITE DRIVEWAY B**



3 **NY 22 & SITE DRIVEWAY A**



2 **NY 22 & ANDERSON ROAD**



1 **NY 22 & CONNECTOR ROAD**

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

5 **NY 138 & CONNECTOR ROAD**

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

OTHER DEVELOPMENT VOLUMES

GOLDENS BRIDGE VILLAGE CENTRE

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 07 — SCALE: 1" = 800'

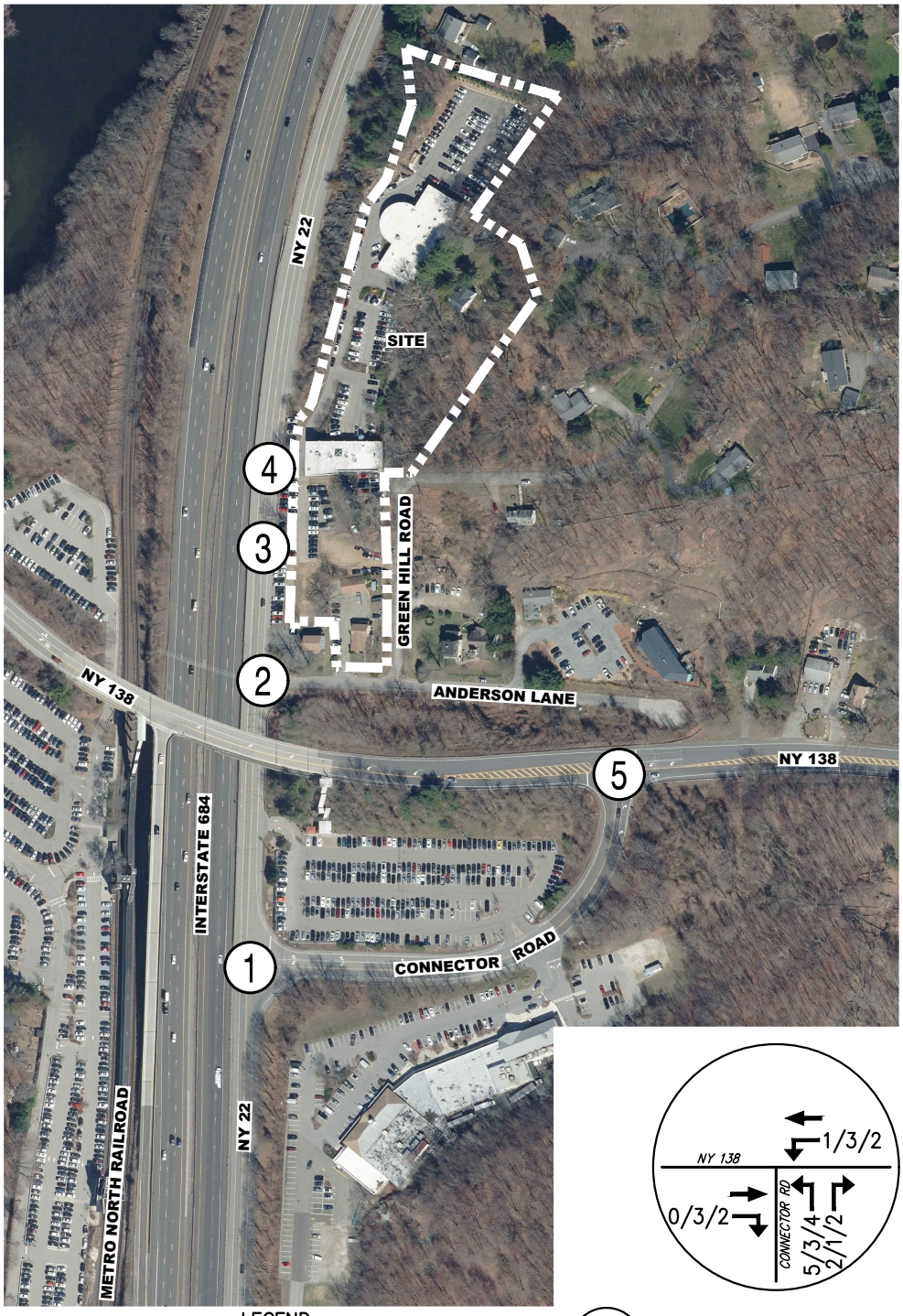
120 BEDFORD RD
ARMONK
NY 10504

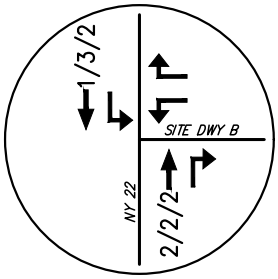
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fax 273-2102

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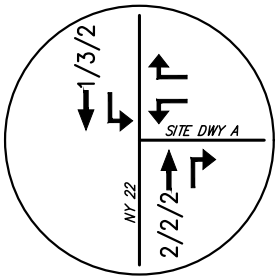
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

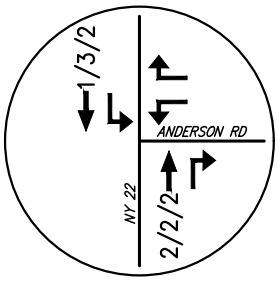




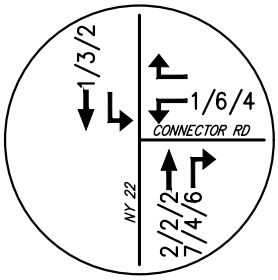
4 **NY 22 & SITE DRIVEWAY B**



3 **NY 22 & SITE DRIVEWAY A**



2 **NY 22 & ANDERSON ROAD**



1 **NY 22 & CONNECTOR ROAD**

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

5 **NY 138 & CONNECTOR ROAD**

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

OTHER DEVELOPMENT VOLUMES

WILDER BALTER MULTI-FAMILY DEVELOPMENT

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 08 — SCALE: 1" = 800'

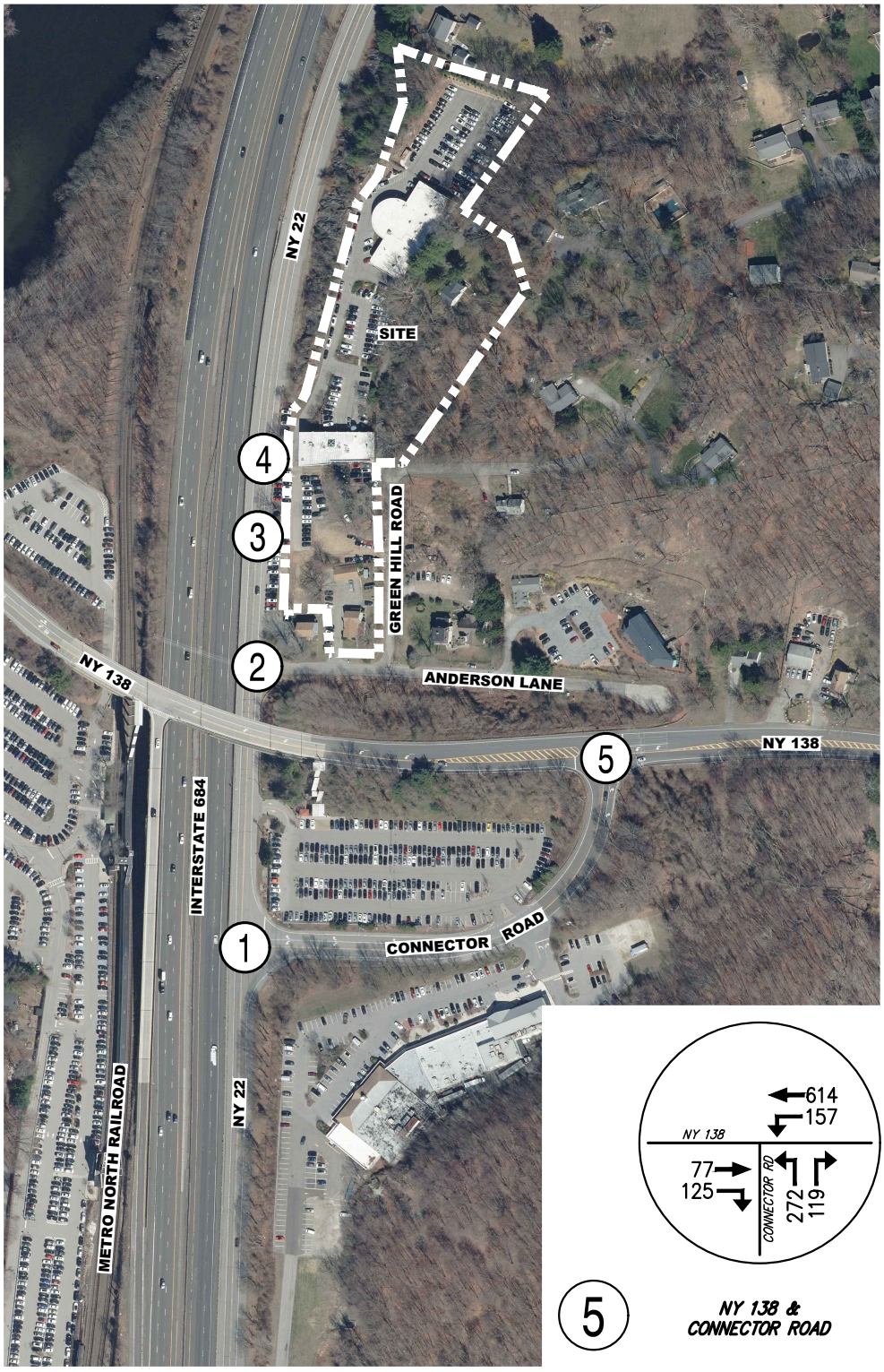
120 BEDFORD RD
ARMONK
NY 10504

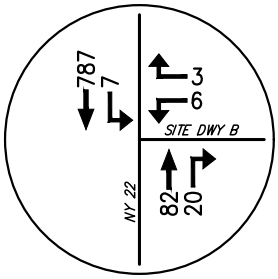
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fax 273-2102

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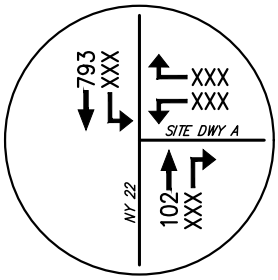
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

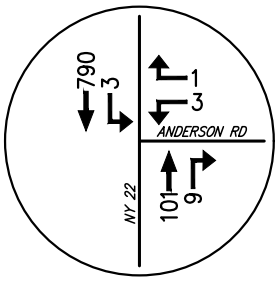




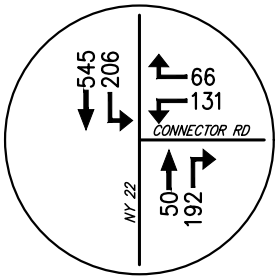
4 NY 22 & SITE DRIVEWAY B



3 NY 22 & SITE DRIVEWAY A



2 NY 22 & ANDERSON ROAD



1 NY 22 & CONNECTOR ROAD

5 NY 138 & CONNECTOR ROAD

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

2021 NO BUILD VOLUMES

PEAK WEEKDAY AM HOUR (7:15 - 8:15)

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 09 — SCALE: 1" = 800'

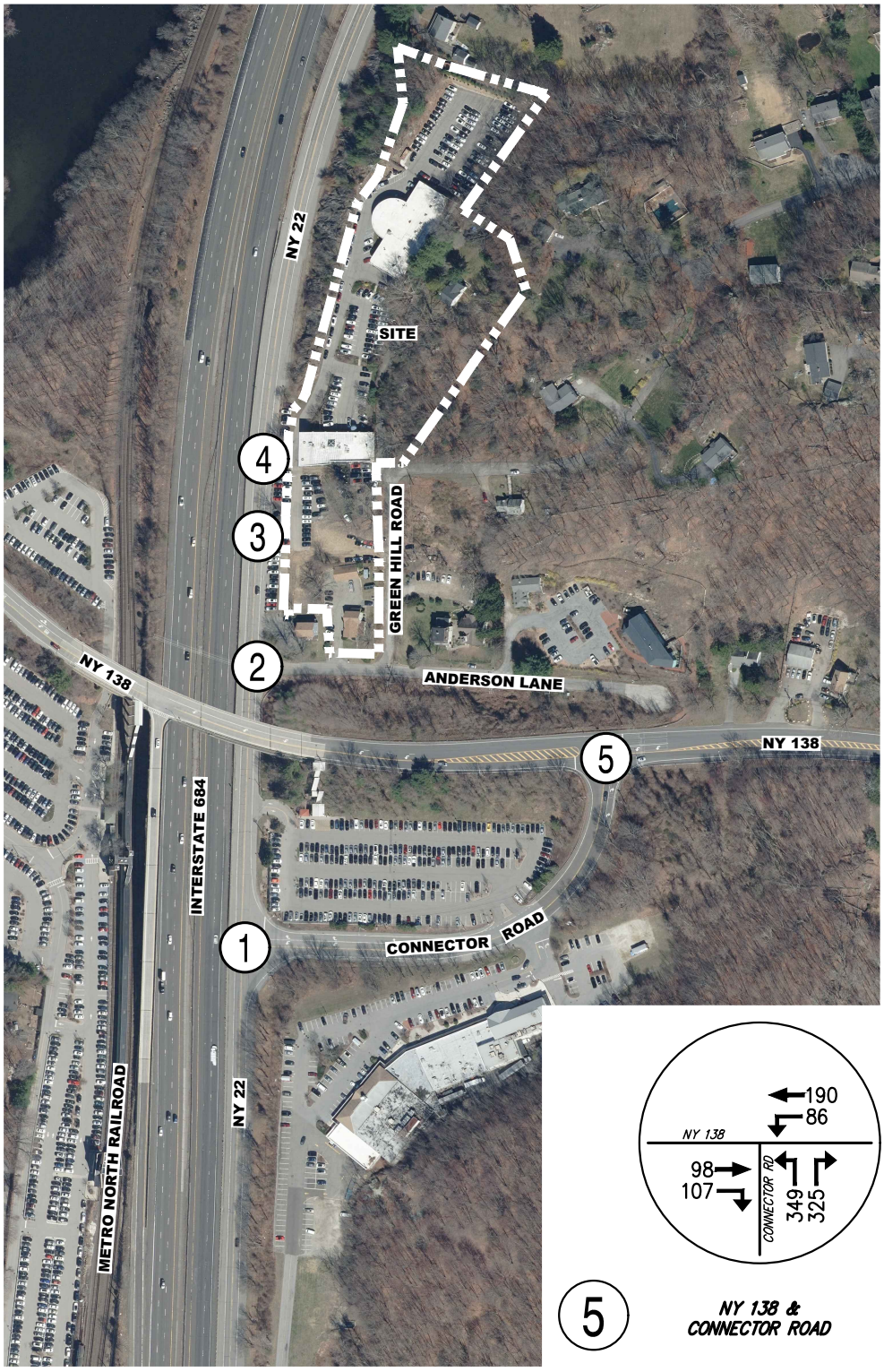
120 BEDFORD RD
ARMONK
NY 10504

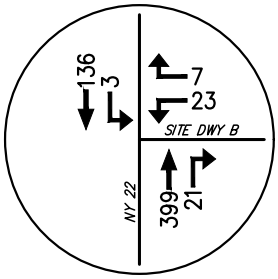
(914) 273-5225
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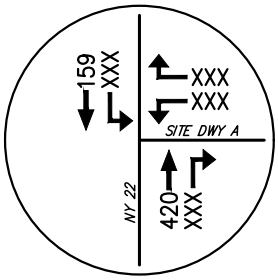
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

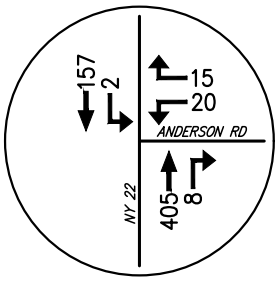




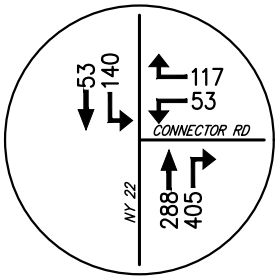
4 NY 22 & SITE DRIVEWAY B



3 NY 22 & SITE DRIVEWAY A



2 NY 22 & ANDERSON ROAD



1 NY 22 & CONNECTOR ROAD

5 NY 138 & CONNECTOR ROAD

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

2021 NO BUILD VOLUMES

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

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 10 — SCALE: 1" = 800'

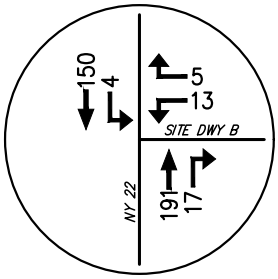
120 BEDFORD RD
ARMONK
NY 10504

(914) 273-5225
fax 273-2102

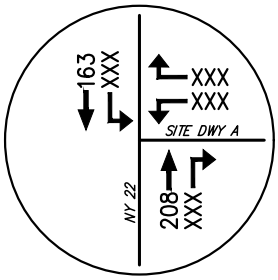
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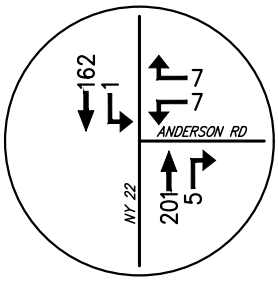
16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab



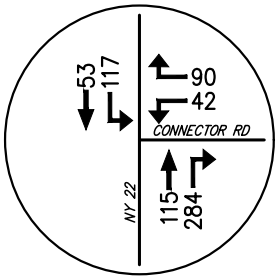
4 **NY 22 & SITE DRIVEWAY B**



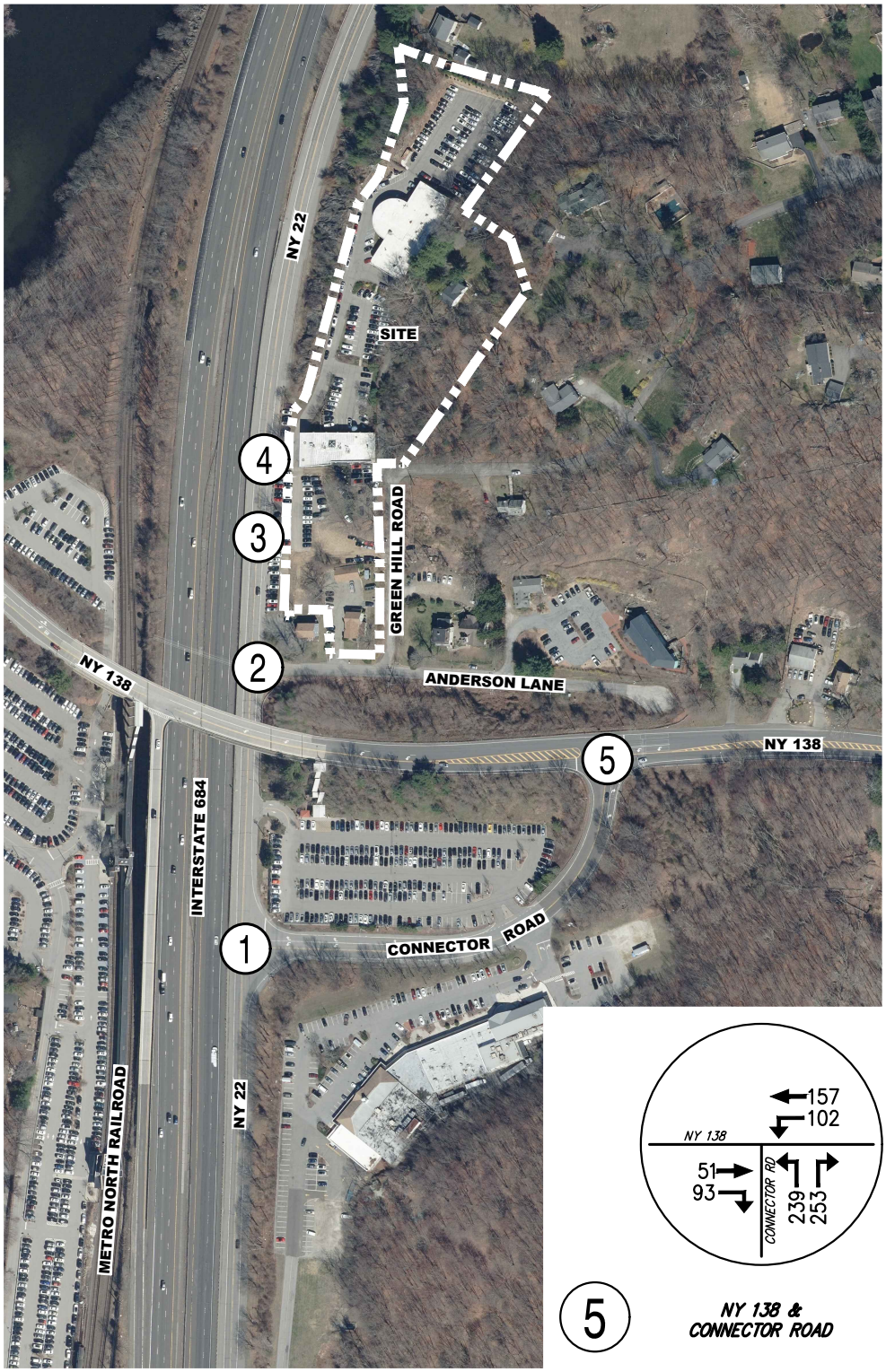
3 **NY 22 & SITE DRIVEWAY A**



2 **NY 22 & ANDERSON ROAD**



1 **NY 22 & CONNECTOR ROAD**



5 **NY 138 & CONNECTOR ROAD**

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

2021 NO BUILD VOLUMES

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

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 11 — SCALE: 1" = 800'

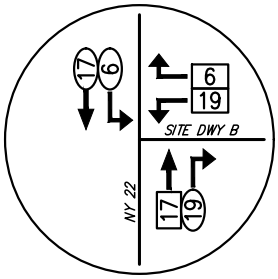
120 BEDFORD RD
ARMONK
NY 10504

(914) 273-5225
fax 273-2102

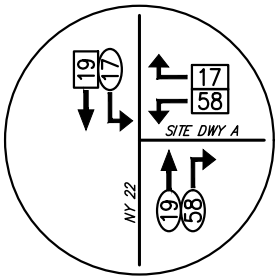
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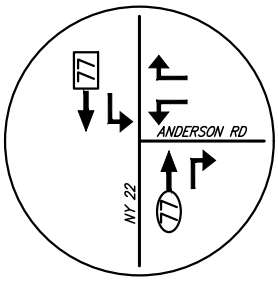
16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab



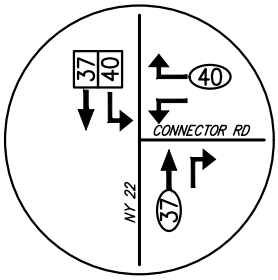
4 **NY 22 & SITE DRIVEWAY B**



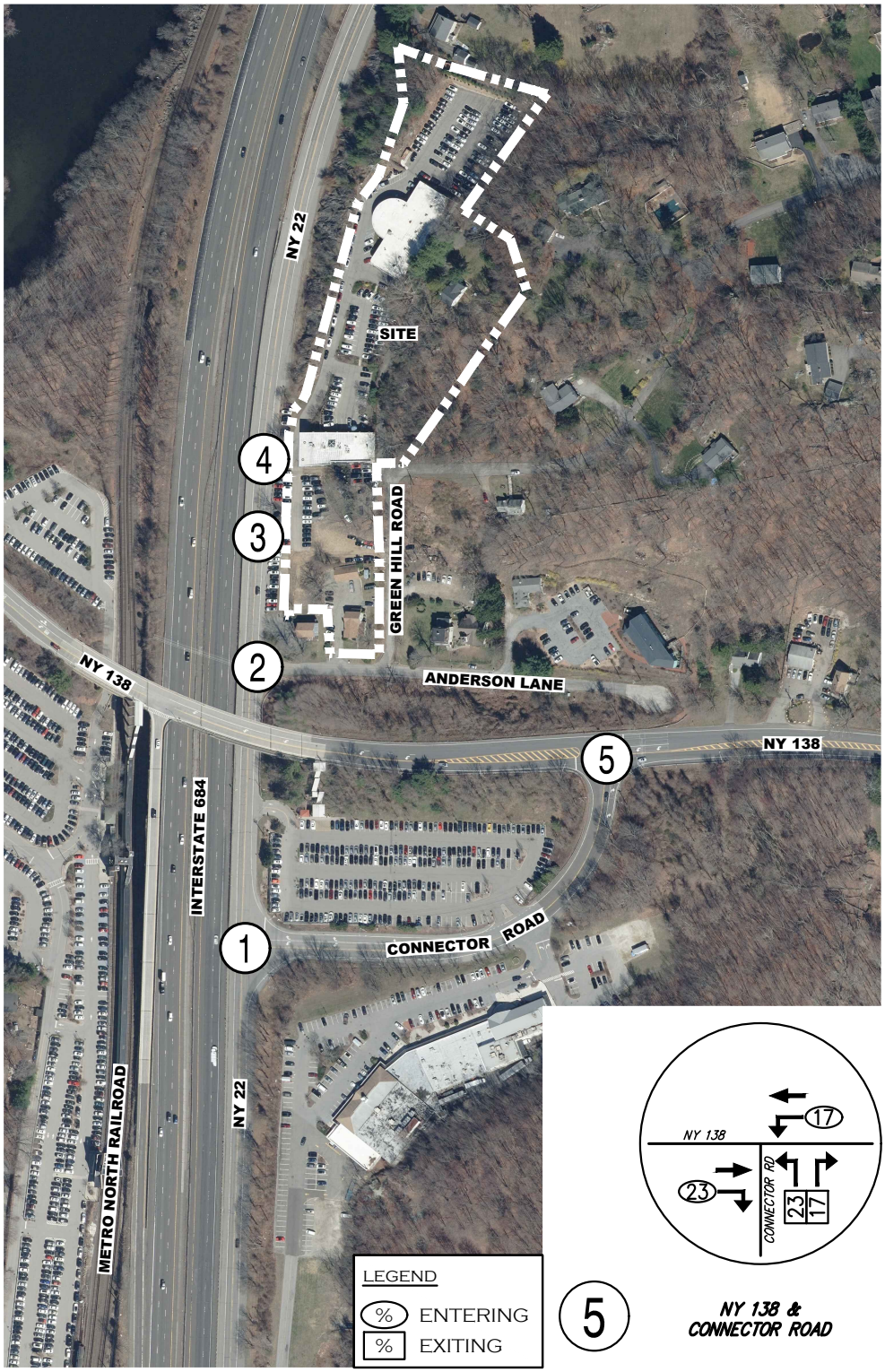
3 **NY 22 & SITE DRIVEWAY A**



2 **NY 22 & ANDERSON ROAD**



1 **NY 22 & CONNECTOR ROAD**



5 **NY 138 & CONNECTOR ROAD**

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

NET ADDITIONAL DRIVEWAY TRIP DISTRIBUTIONS

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 12 — SCALE: 1" = 800'

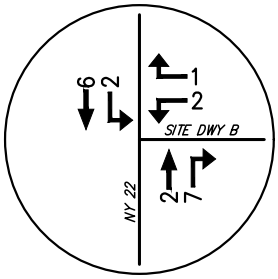
120 BEDFORD RD
ARMONK
NY 10504

(914) 273-5225
fax 273-2102

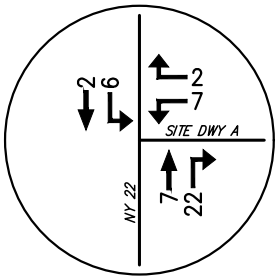
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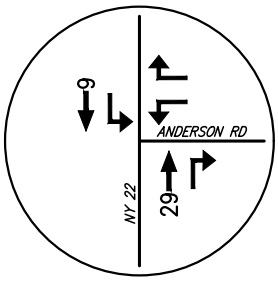
16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab



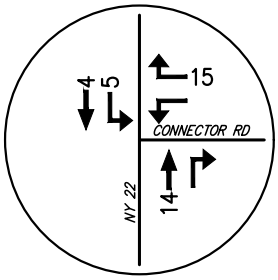
4 **NY 22 & SITE DRIVEWAY B**



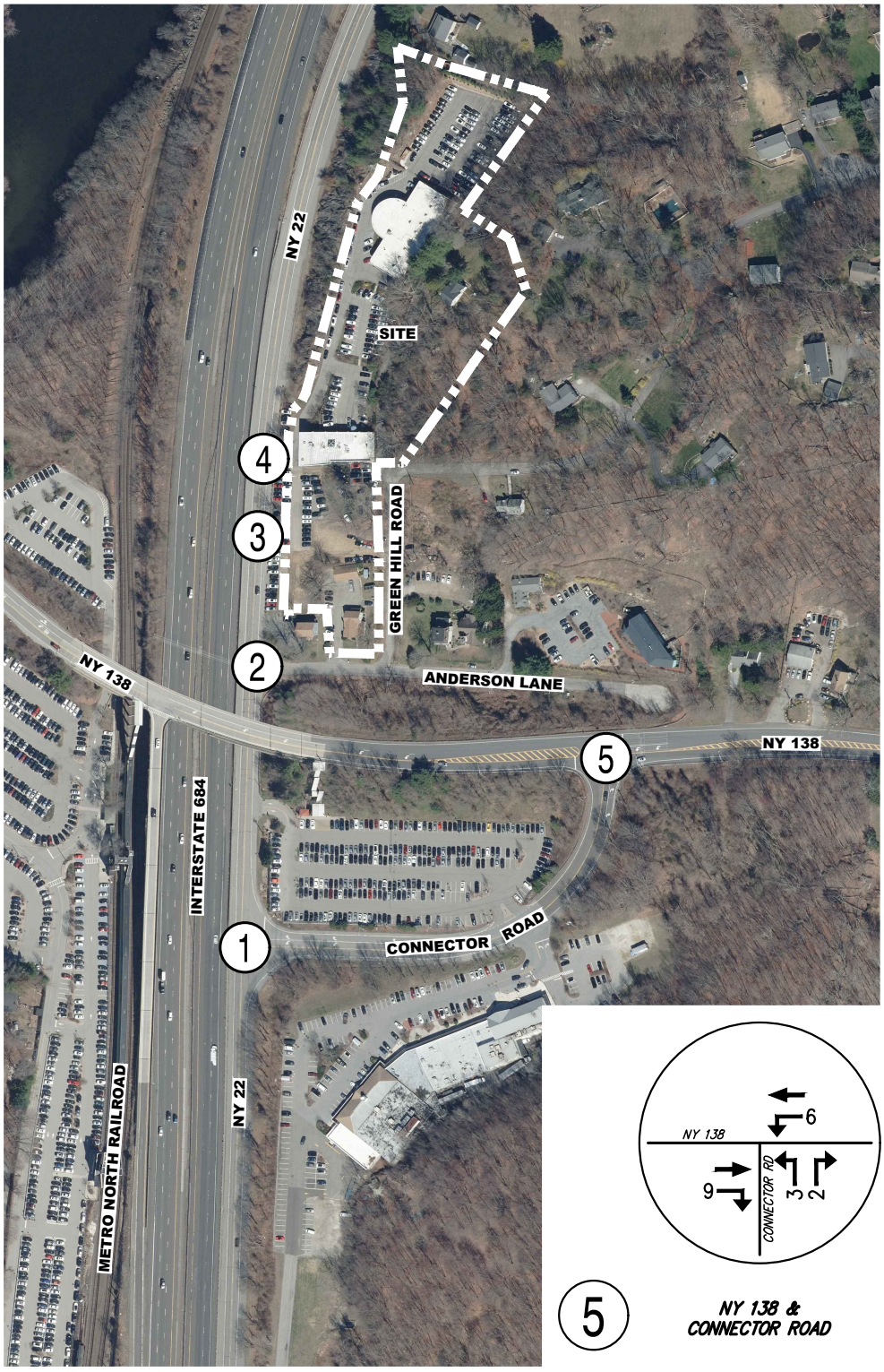
3 **NY 22 & SITE DRIVEWAY A**



2 **NY 22 & ANDERSON ROAD**



1 **NY 22 & CONNECTOR ROAD**



5 **NY 138 & CONNECTOR ROAD**

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

NET ADDITIONAL DRIVEWAY VOLUMES

PEAK WEEKDAY AM HOUR

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 13 — SCALE: 1" = 800'

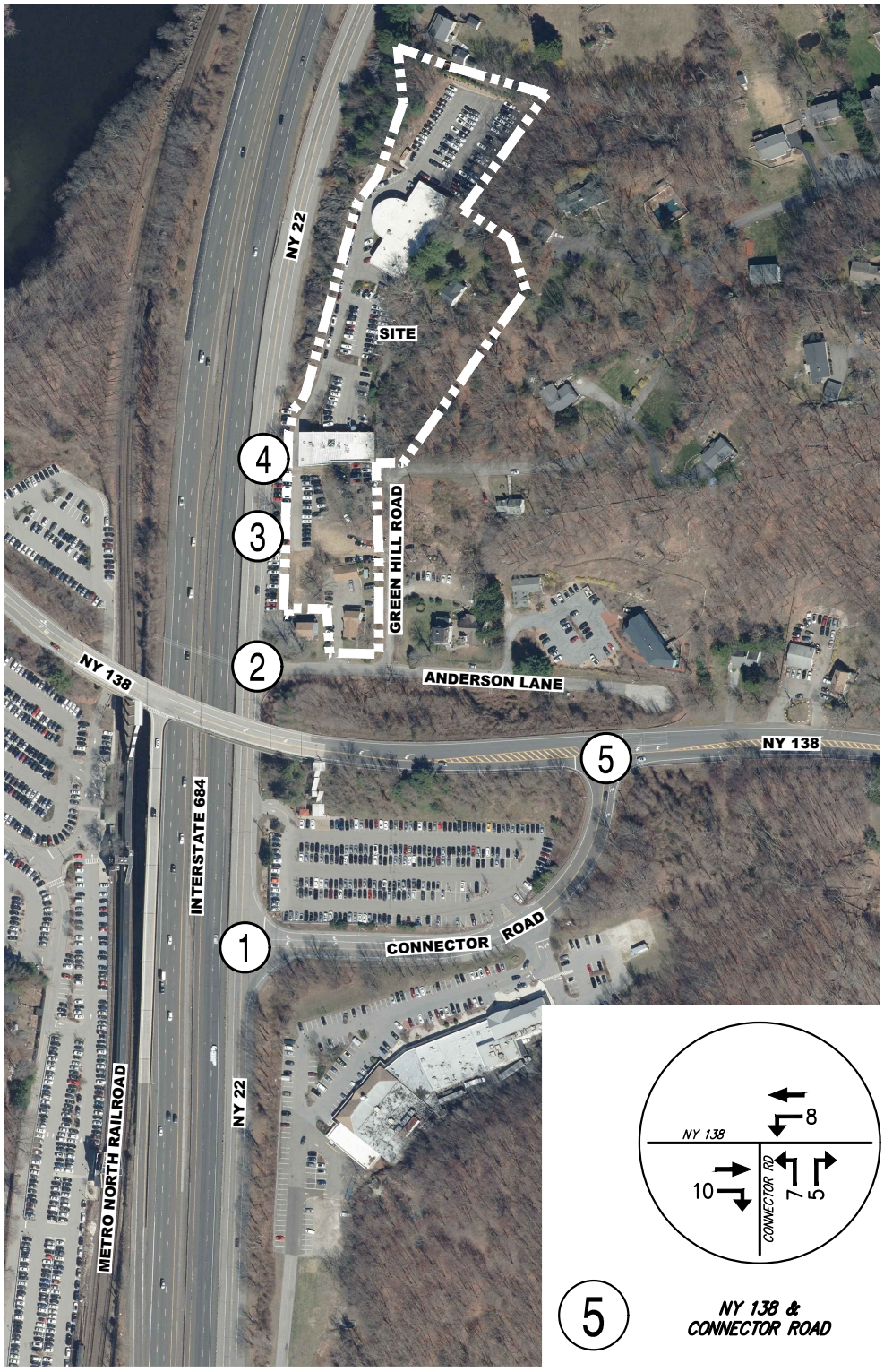
120 BEDFORD RD
ARMONK
NY 10504

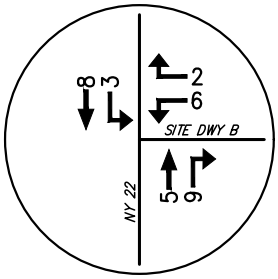
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fax 273-2102

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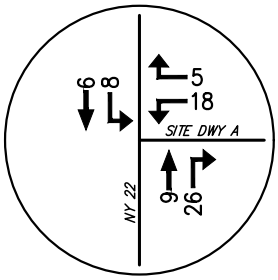
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

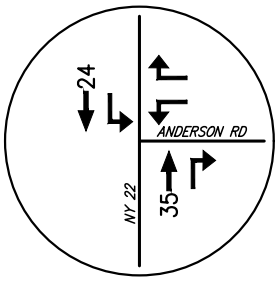




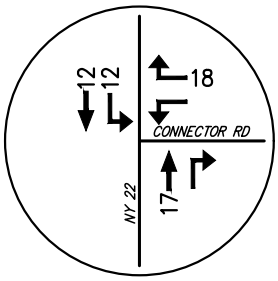
4 **NY 22 & SITE DRIVEWAY B**



3 **NY 22 & SITE DRIVEWAY A**



2 **NY 22 & ANDERSON ROAD**



1 **NY 22 & CONNECTOR ROAD**

5 **NY 138 & CONNECTOR ROAD**

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

NET ADDITIONAL DRIVEWAY VOLUMES

PEAK WEEKDAY PM HOUR

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 14 — SCALE: 1" = 800'

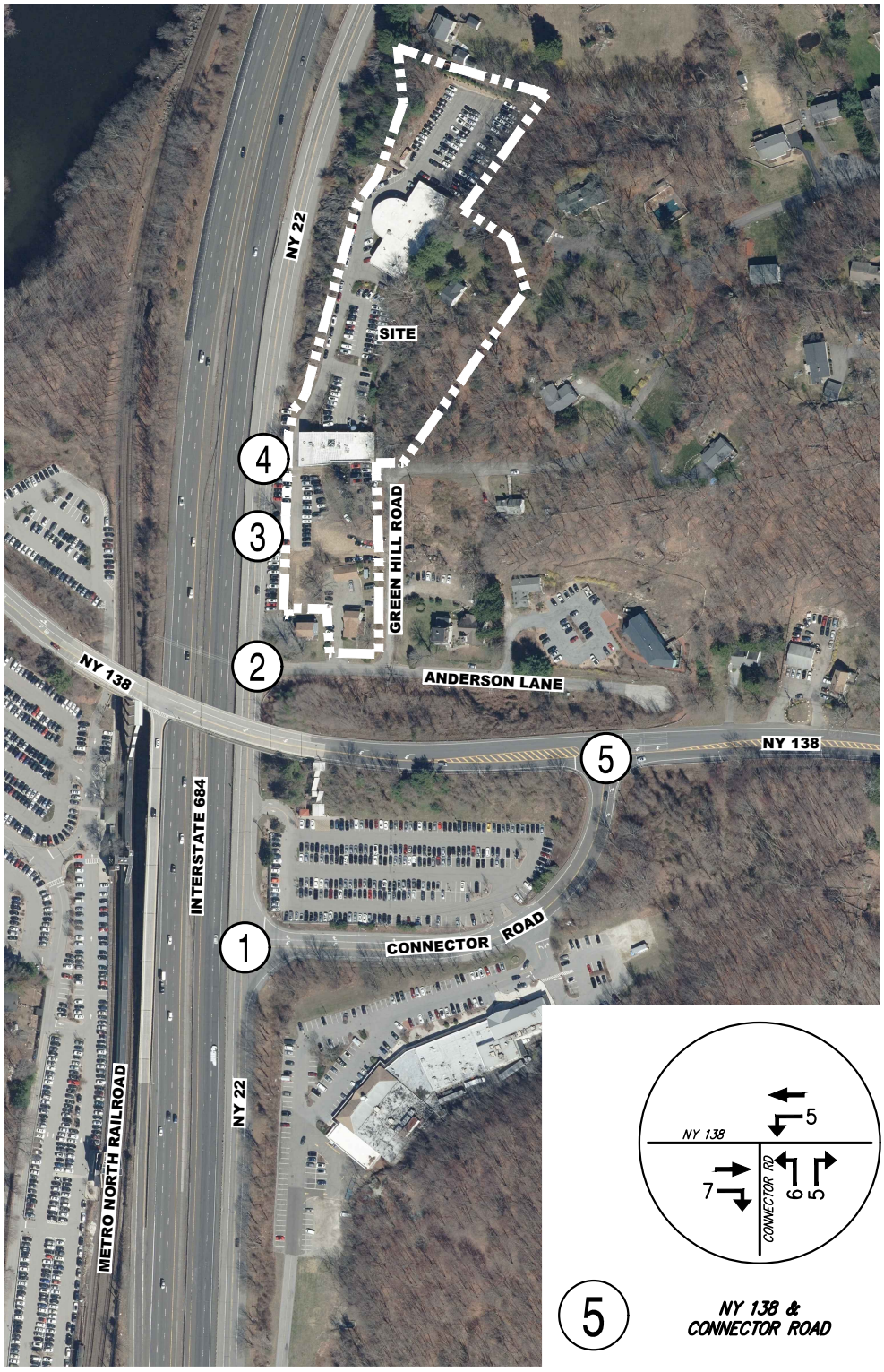
120 BEDFORD RD
ARMONK
NY 10504

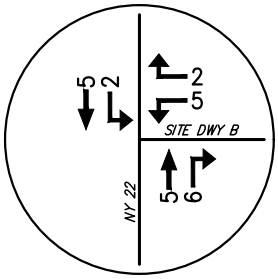
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fax 273-2102

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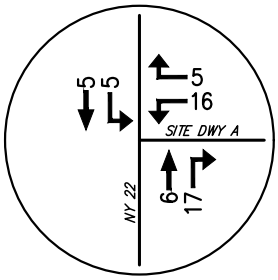
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

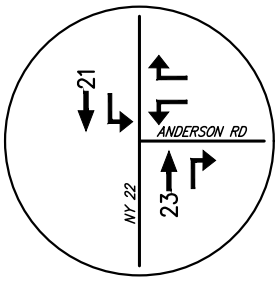




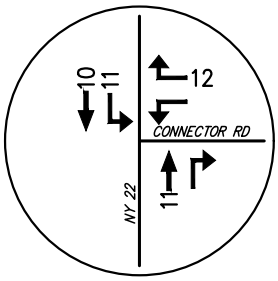
4 NY 22 & SITE DRIVEWAY B



3 NY 22 & SITE DRIVEWAY A



2 NY 22 & ANDERSON ROAD



1 NY 22 & CONNECTOR ROAD

5 NY 138 & CONNECTOR ROAD

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

NET ADDITIONAL DRIVEWAY VOLUMES

PEAK SATURDAY HOUR

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 15 — SCALE: 1" = 800'

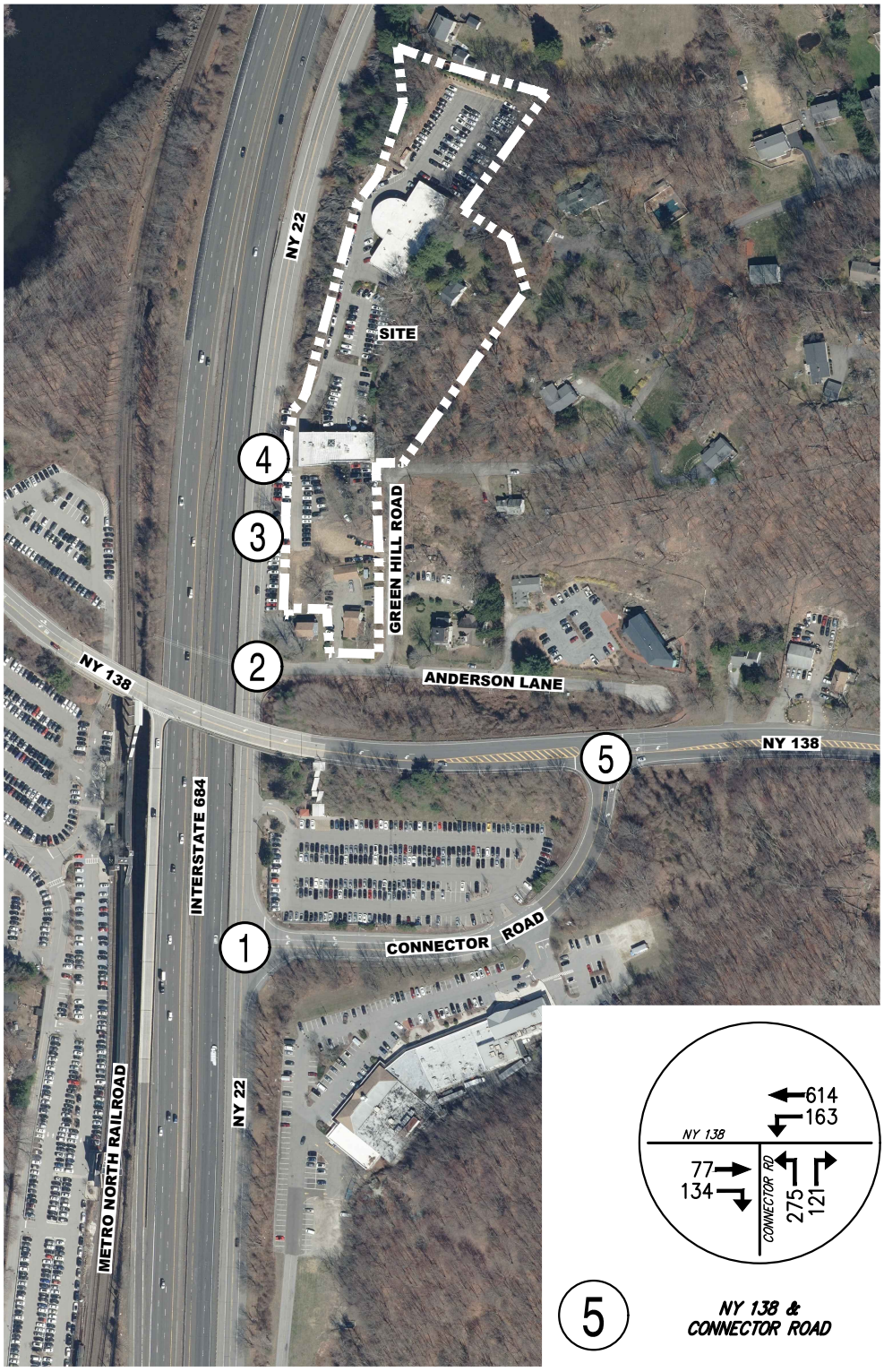
120 BEDFORD RD
ARMONK
NY 10504

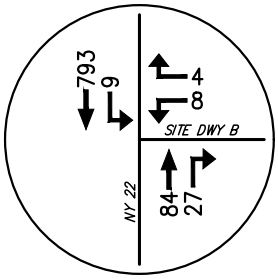
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fax 273-2102

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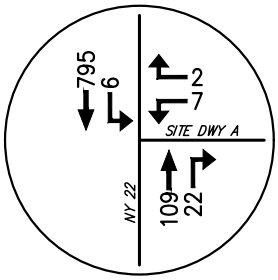
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

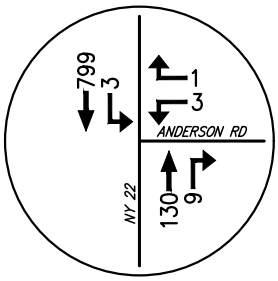




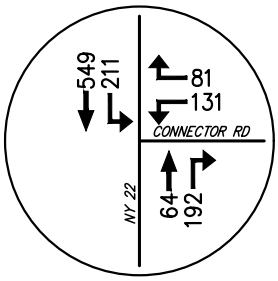
4 NY 22 & SITE DRIVEWAY B



3 NY 22 & SITE DRIVEWAY A



2 NY 22 & ANDERSON ROAD



1 NY 22 & CONNECTOR ROAD

5 NY 138 & CONNECTOR ROAD

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

2021 BUILD VOLUMES

PEAK WEEKDAY AM HOUR (7:15 - 8:15)

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 16 — SCALE: 1" = 800'

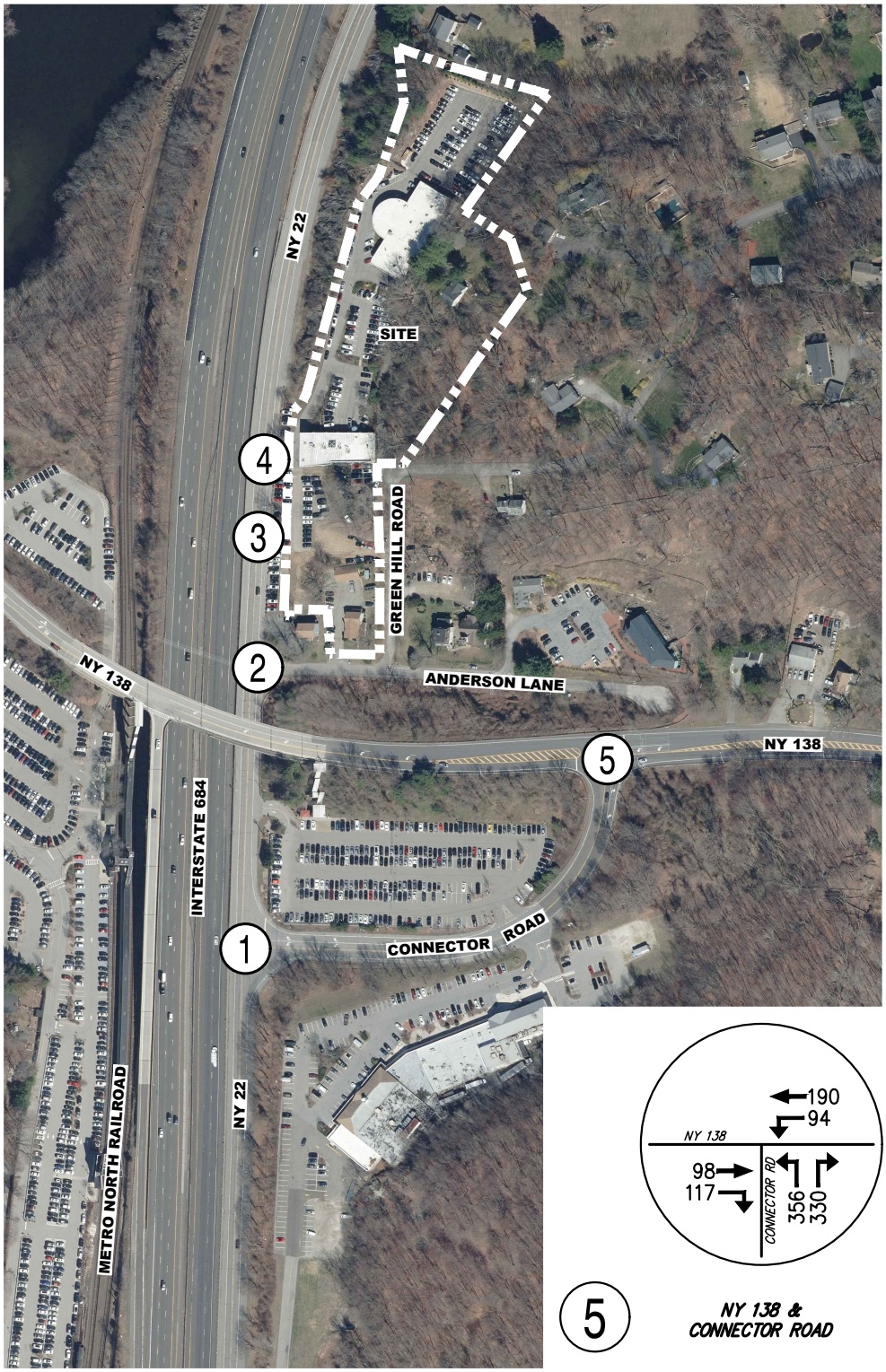
120 BEDFORD RD
ARMONK
NY 10504

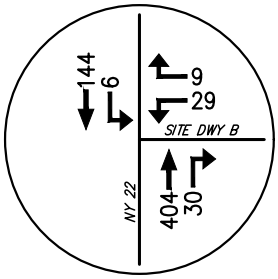
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fax 273-2102

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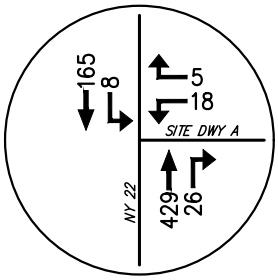
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

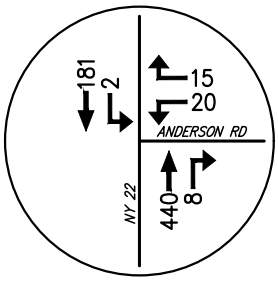




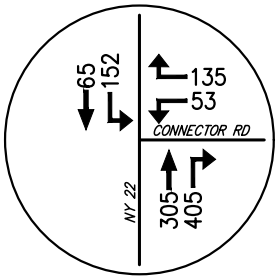
4 NY 22 & SITE DRIVEWAY B



3 NY 22 & SITE DRIVEWAY A



2 NY 22 & ANDERSON ROAD



1 NY 22 & CONNECTOR ROAD

5 NY 138 & CONNECTOR ROAD

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

2021 BUILD VOLUMES

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

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 17 — SCALE: 1" = 800'

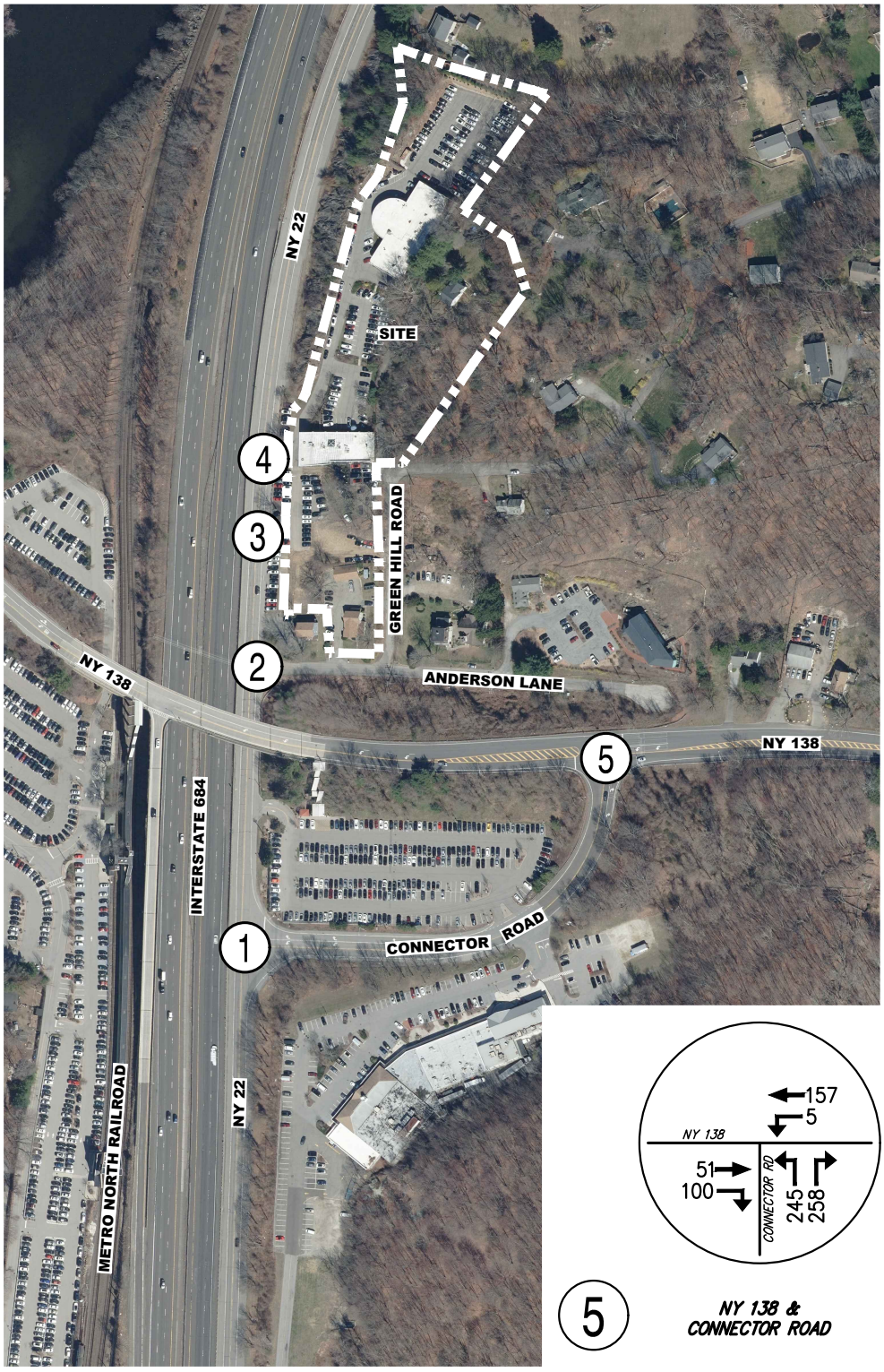
120 BEDFORD RD
ARMONK
NY 10504

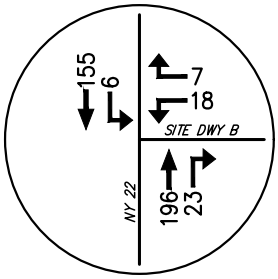
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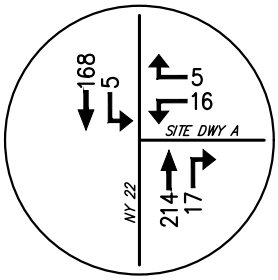
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

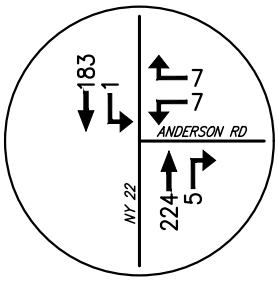




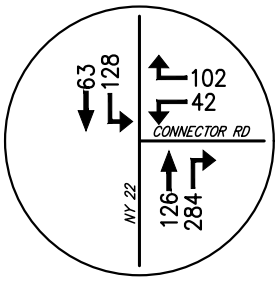
4 NY 22 & SITE DRIVEWAY B



3 NY 22 & SITE DRIVEWAY A



2 NY 22 & ANDERSON ROAD



1 NY 22 & CONNECTOR ROAD

5 NY 138 & CONNECTOR ROAD

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

2021 BUILD VOLUMES

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

REVISED: 02/05/2019
DATE: 11/16/2018

JMC PROJECT: 16124

FIGURE: 18 — SCALE: 1" = 800'

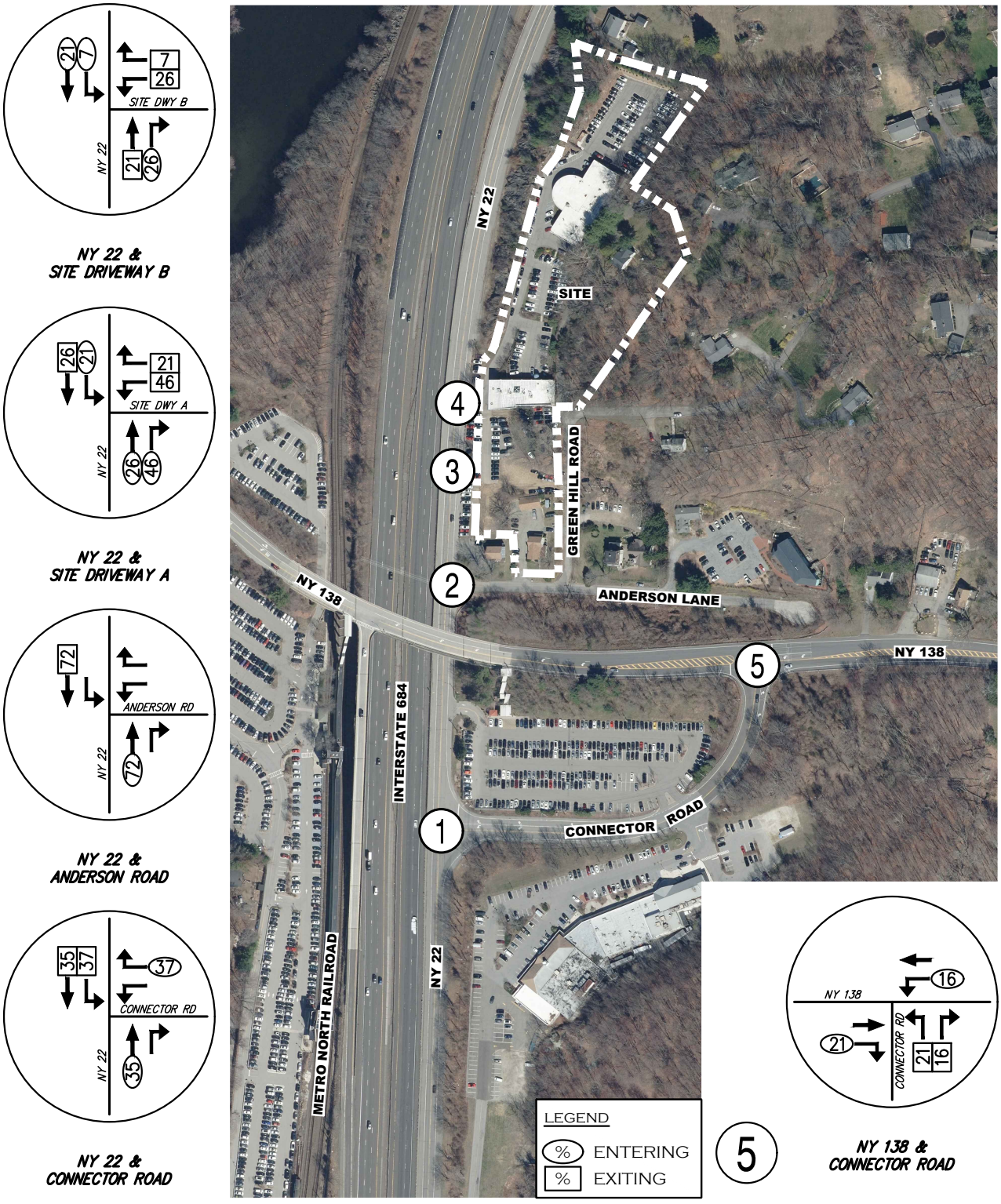
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab



MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

SENSITIVITY ANALYSIS NET ADDITIONAL DRIVEWAY TRIP DISTRIBUTIONS

DATE: 02/05/2019 — JMC PROJECT: 16124

FIGURE: S-01 — SCALE: 1" = 800'

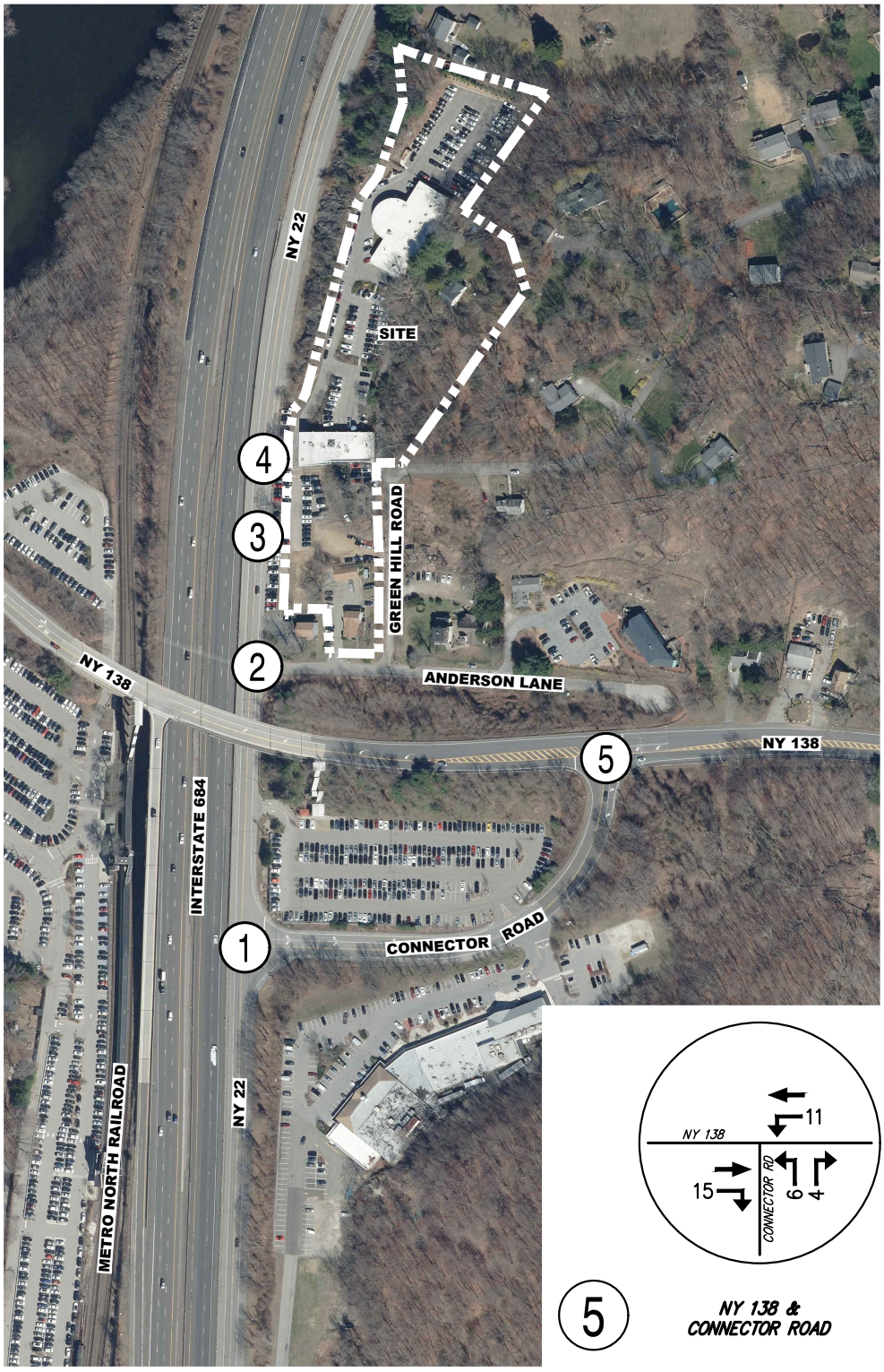
120 BEDFORD RD
ARMONK
NY 10504

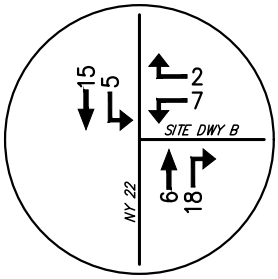
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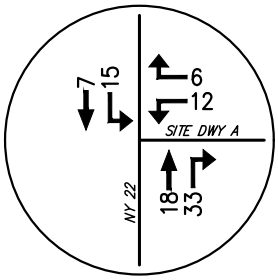
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

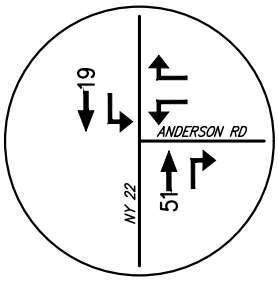




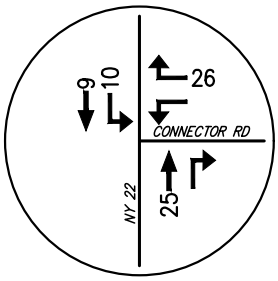
4 **NY 22 & SITE DRIVEWAY B**



3 **NY 22 & SITE DRIVEWAY A**



2 **NY 22 & ANDERSON ROAD**



1 **NY 22 & CONNECTOR ROAD**

5 **NY 138 & CONNECTOR ROAD**

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

SENSITIVITY ANALYSIS NET ADDITIONAL DRIVEWAY VOLUMES

PEAK WEEKDAY AM HOUR

DATE: 02/05/2019 — JMC PROJECT: 16124

FIGURE: S-02 — SCALE: 1" = 800'

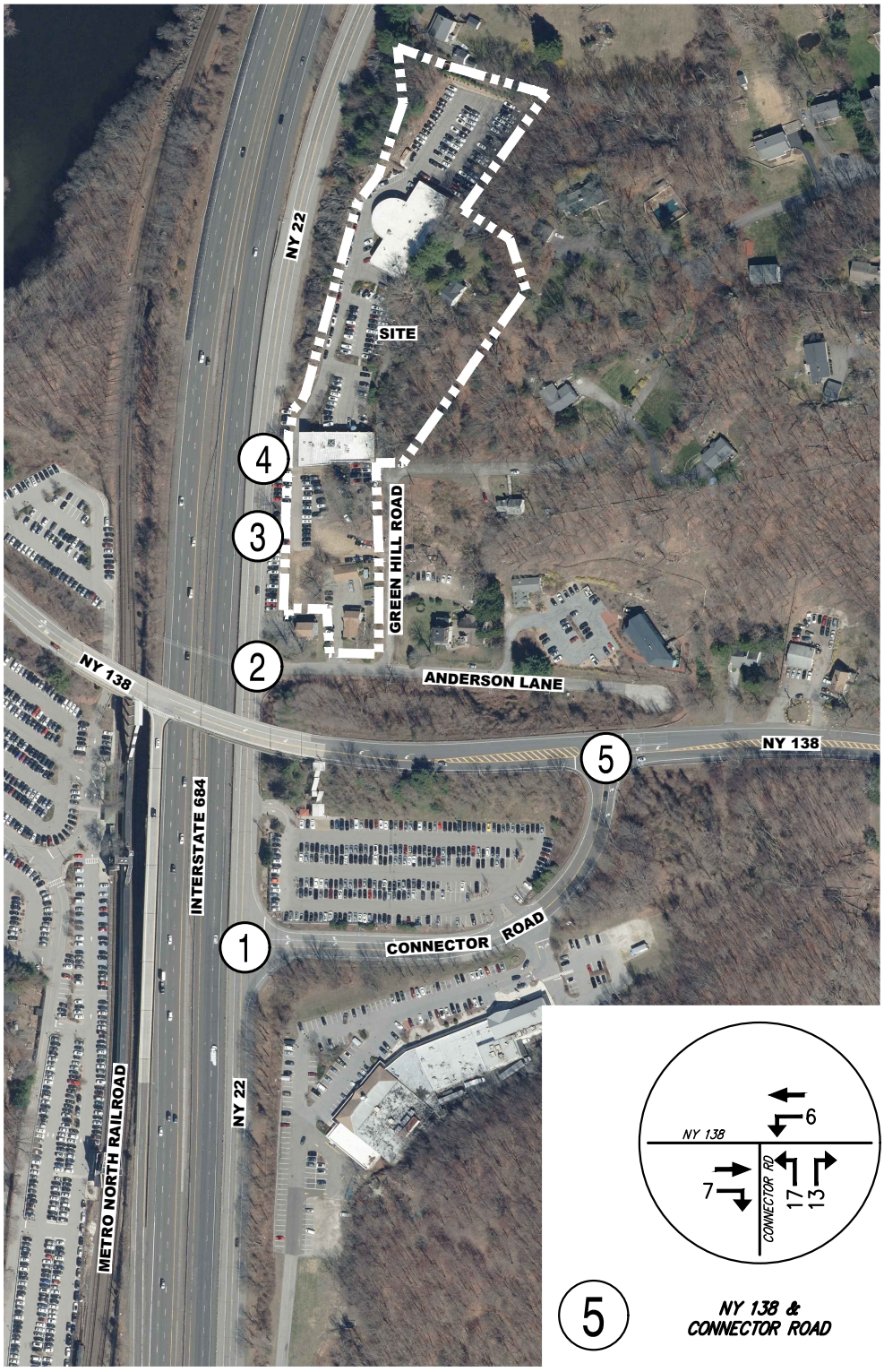
120 BEDFORD RD
ARMONK
NY 10504

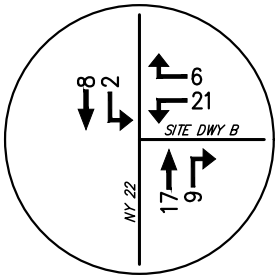
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fax 273-2102

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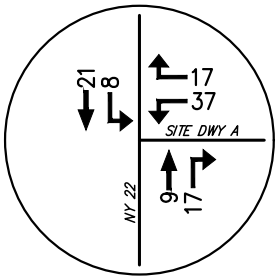
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

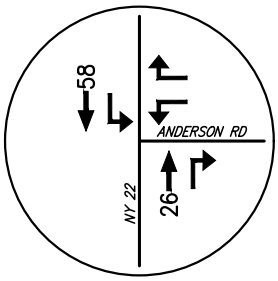




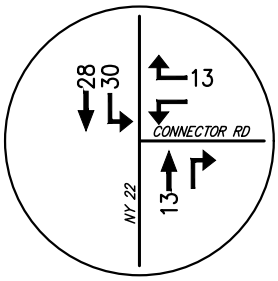
4 NY 22 & SITE DRIVEWAY B



3 NY 22 & SITE DRIVEWAY A



2 NY 22 & ANDERSON ROAD



1 NY 22 & CONNECTOR ROAD

5 NY 138 & CONNECTOR ROAD

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

SENSITIVITY ANALYSIS NET ADDITIONAL DRIVEWAY VOLUMES

PEAK WEEKDAY PM HOUR

DATE: 02/05/2019 — JMC PROJECT: 16124

FIGURE: S-03 — SCALE: 1" = 800'

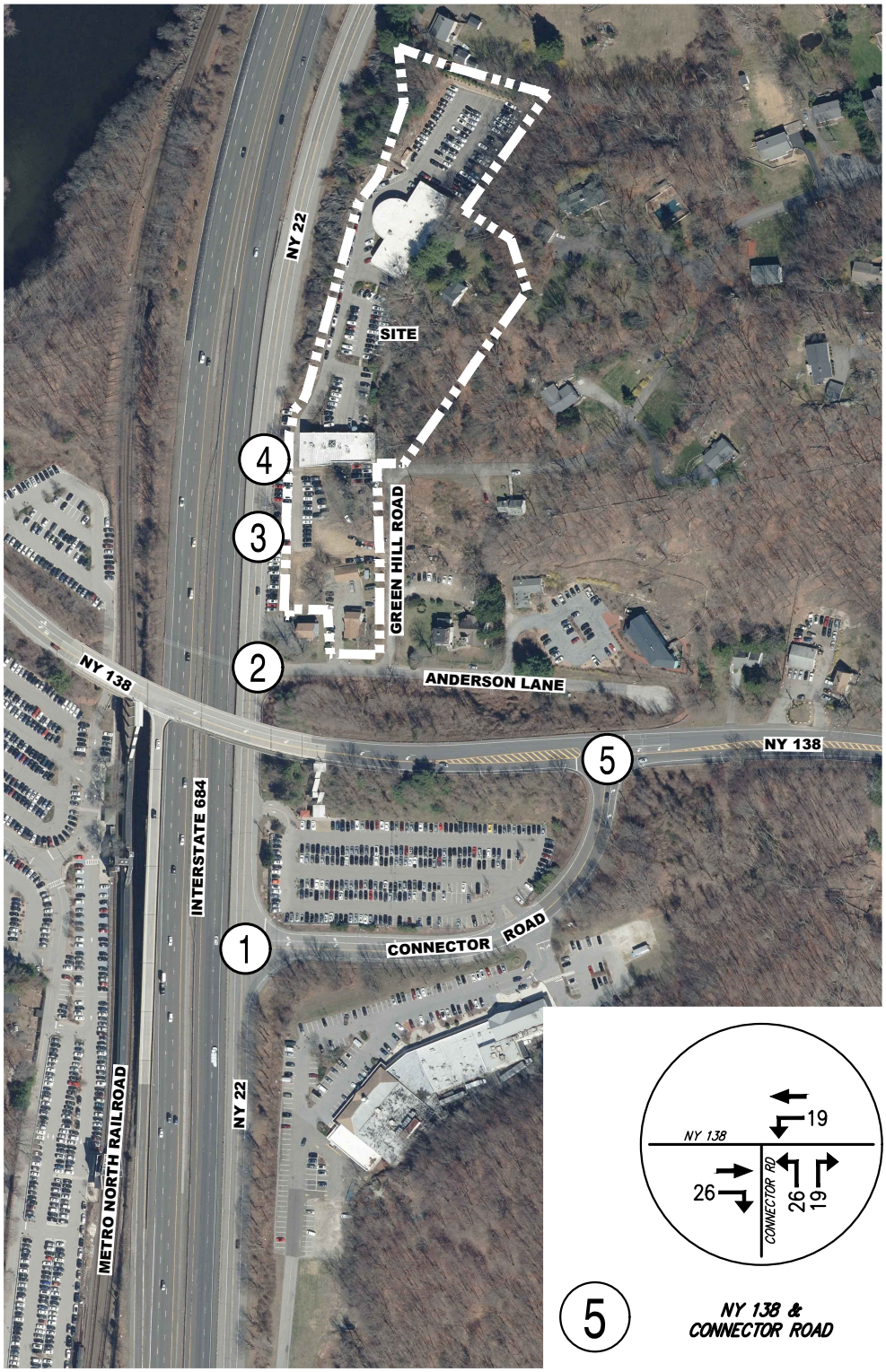
120 BEDFORD RD
ARMONK
NY 10504

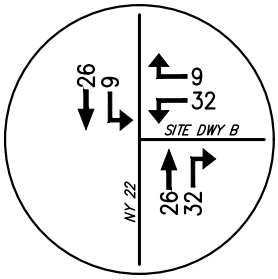
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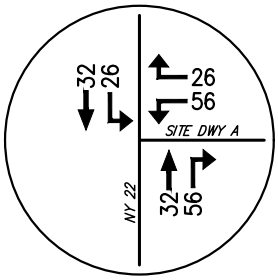
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

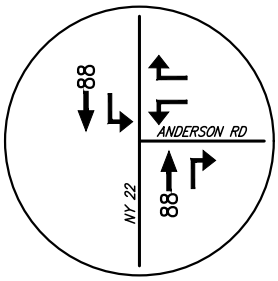




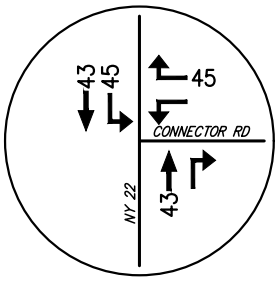
4 NY 22 & SITE DRIVEWAY B



3 NY 22 & SITE DRIVEWAY A



2 NY 22 & ANDERSON ROAD



1 NY 22 & CONNECTOR ROAD

5 NY 138 & CONNECTOR ROAD

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

SENSITIVITY ANALYSIS NET ADDITIONAL DRIVEWAY VOLUMES

PEAK SATURDAY HOUR

DATE: 02/05/2019 — JMC PROJECT: 16124

FIGURE: S-04 — SCALE: 1" = 800'

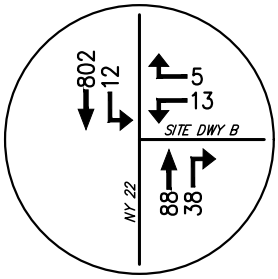
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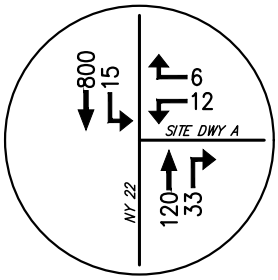
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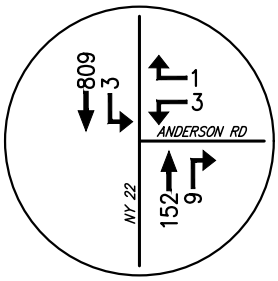
16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab



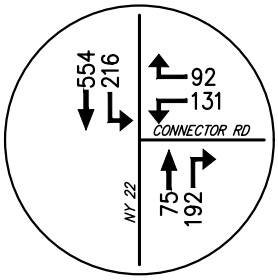
4 **NY 22 & SITE DRIVEWAY B**



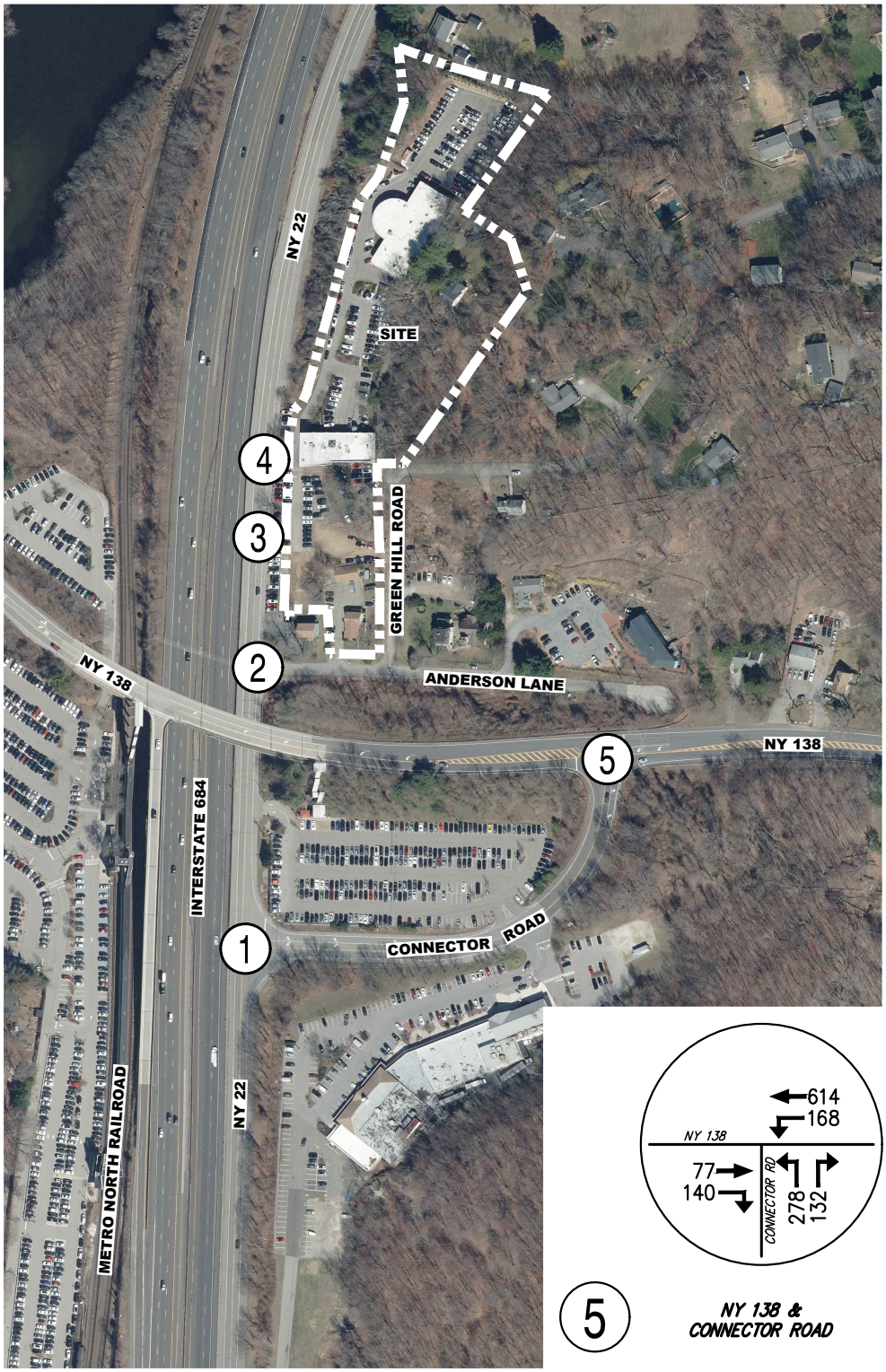
3 **NY 22 & SITE DRIVEWAY A**



2 **NY 22 & ANDERSON ROAD**



1 **NY 22 & CONNECTOR ROAD**



5 **NY 138 & CONNECTOR ROAD**

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

SENSITIVITY ANALYSIS 2021 BUILD VOLUMES

PEAK WEEKDAY AM HOUR

DATE: 02/05/2019 — JMC PROJECT: 16124

FIGURE: S-05 — SCALE: 1" = 800'

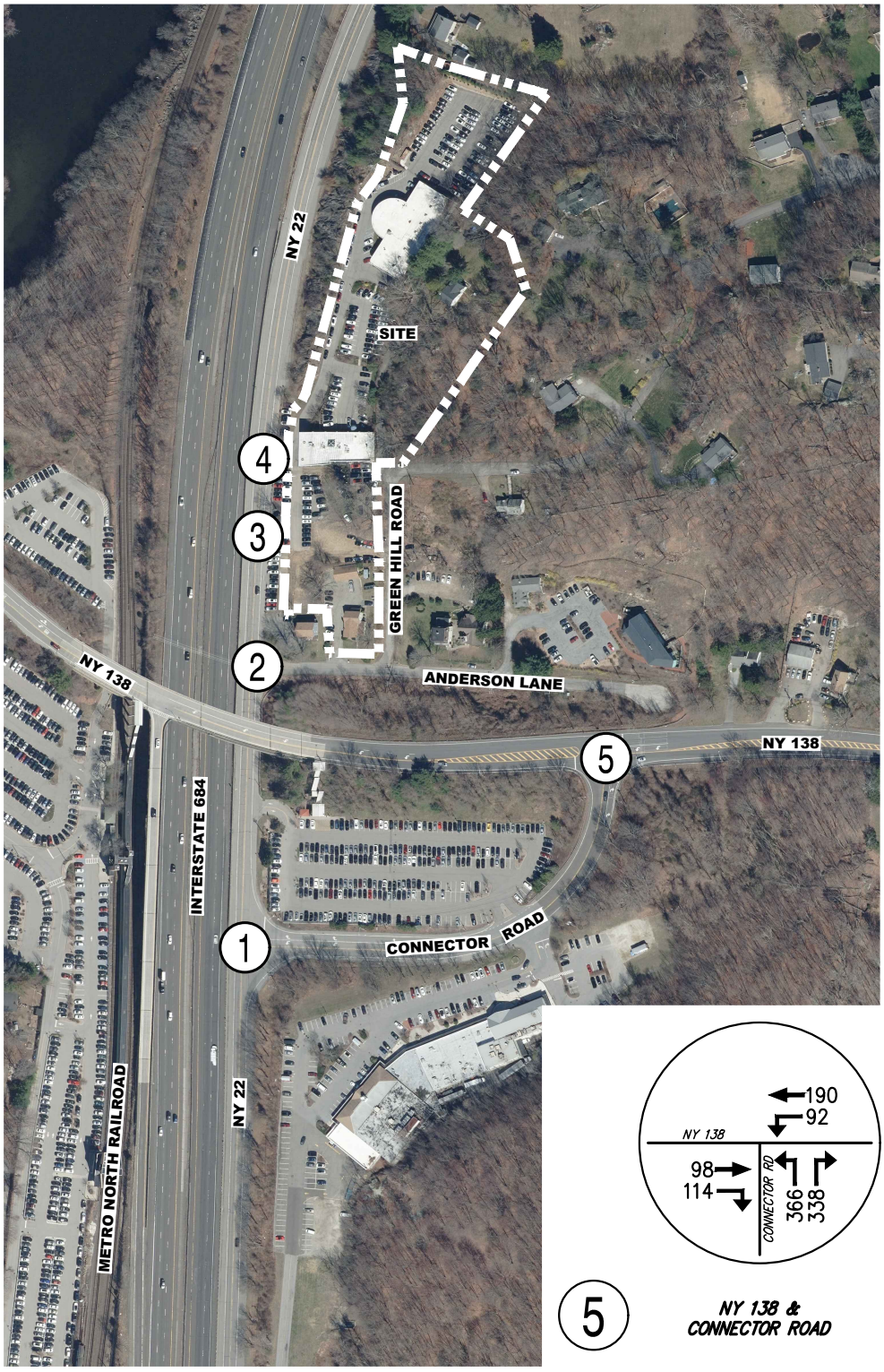
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ARMONK
NY 10504

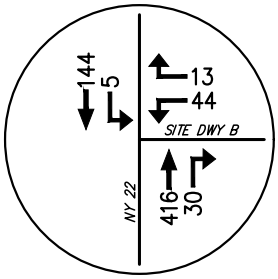
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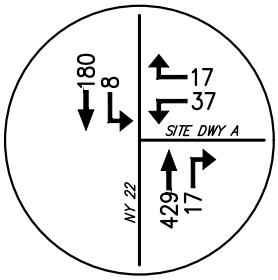
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

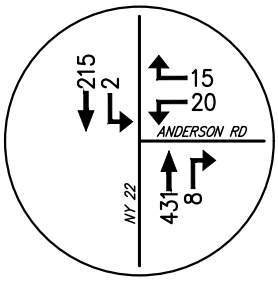




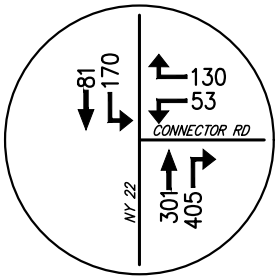
4 NY 22 & SITE DRIVEWAY B



3 NY 22 & SITE DRIVEWAY A



2 NY 22 & ANDERSON ROAD



1 NY 22 & CONNECTOR ROAD

5 NY 138 & CONNECTOR ROAD

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

SENSITIVITY ANALYSIS 2021 BUILD VOLUMES

PEAK WEEKDAY PM HOUR

DATE: 02/05/2019 — JMC PROJECT: 16124

FIGURE: S-06 — SCALE: 1" = 800'

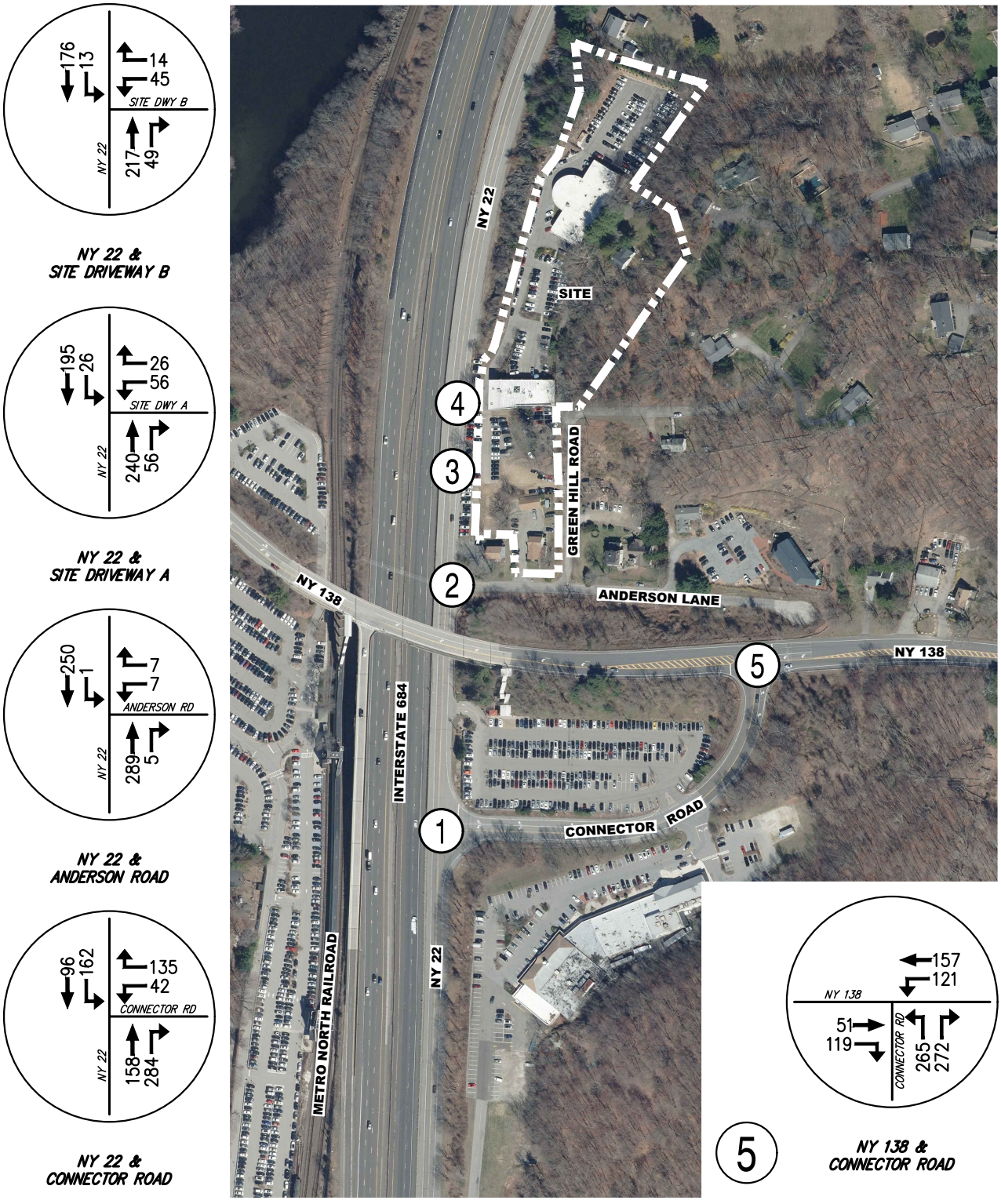
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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab



MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

SENSITIVITY ANALYSIS 2021 BUILD VOLUMES

PEAK SATURDAY HOUR

DATE: 02/05/2019 — JMC PROJECT: 16124

FIGURE: S-07 — SCALE: 1" = 800'

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16124–TRAFFIC–FIG.dwg; STUDY–AREA.tab

APPENDIX C

TURNING MOVEMENT COUNTS

DATE:	Wk: 09/27/2018 Sat: 09/29/2018
PERIOD:	Wk: 7-9 AM & 4-6 PM Sat: 12-2 PM
LOCATION:	NY 22 & Connector Road

ENTER COUNT DATA ON THIS PAGE

JOB NO:	16124
NAME:	Wk: SPG Sat: JJ
INT #:	1

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL		86	41	12		20					6	19							
	TRUCK		2		1		2						1							
7:15 - 7:30 AM	TOTAL		221	76	22		51					15	45							
	TRUCK		3	1	1		2						1							
7:30 - 7:45 AM	TOTAL		359	125	34		75					22	102							
	TRUCK		2	2	1							2	4							
7:45 - 8:00 AM	TOTAL		522	179	49		111					44	157							
	TRUCK		6				2					1	8							
8:00 - 8:15 AM	TOTAL		622	221	62		144					53	194							
	TRUCK		11	3	2		2						2							
8:15 - 8:30 AM	TOTAL		725	251	68		178					64	240							
	TRUCK		3	1	2		3					1	5							
8:30 - 8:45 AM	TOTAL		818	279	70		198					81	271							
	TRUCK		4	2	1		3					4	3							
8:45 - 9:00 AM	TOTAL		876	311	88		217					93	314							
	TRUCK		4	3	4		3						3							
12:00 - 12:15 PM	TOTAL		11	12	16		10					20	55							
	TRUCK				1							1	2							
12:15 - 12:30 PM	TOTAL		23	32	32		22					44	122							
	TRUCK			2	1		1					1	3							
12:30 - 12:45 PM	TOTAL		34	52	45		32					74	200							
	TRUCK			2								1	1							
12:45 - 1:00 PM	TOTAL		45	72	65		39					100	255							
	TRUCK			2									2							
1:00 - 1:15 PM	TOTAL		56	107	80		44					130	316							
	TRUCK			2								1	1							
1:15 - 1:30 PM	TOTAL		70	127	97		54					162	381							
	TRUCK			2	2		1					1	2							
1:30 - 1:45 PM	TOTAL		88	161	117		59					170	425							
	TRUCK		1	2	2								1							
1:45 - 2:00 PM	TOTAL		109	178	135		70					176	466							
	TRUCK				2								1							

4:00 - 4:15 PM	TOTAL		19	21	21		3					41	89						
	TRUCK		3	2	1		1					1							
4:15 - 4:30 PM	TOTAL		33	39	40		17					89	179						
	TRUCK		2	1	1		1						2						
4:30 - 4:45 PM	TOTAL		45	63	73		26					179	272						
	TRUCK			2	1							7	1						
4:45 - 5:00 PM	TOTAL		55	90	92		34					245	352						
	TRUCK		1	2	1		1					6	1						
5:00 - 5:15 PM	TOTAL		73	119	111		46					321	457						
	TRUCK			1								4	2						
5:15 - 5:30 PM	TOTAL		82	157	129		55					371	568						
	TRUCK			2			1						3						
5:30 - 5:45 PM	TOTAL		94	181	148		63					452	692						
	TRUCK		1		1		1					1	2						
5:45 - 6:00 PM	TOTAL		102	202	172		70					508	778						
	TRUCK											2	2						

1:
2: NY 22 SB - Thru
3: NY 22 SB - Left
4: Connector Road WB - Right
5:
6: Connector Road WB - Left
7:
8:
9:
10:
11: NY 22 NB - Thru
12: NY 22 NB - Right

A: Cross NY 22 north of INT
B: Cross Connector Road east of INT
C: Cross NY 22 south of INT
D: Along NY 22 west of INT

DATE:	Wk: 09/27/2018 Sat: 09/29/2018
PERIOD:	Wk: 7-9 AM & 4-6 PM Sat: 12-2 PM
LOCATION:	NY 22 & Connector Road

CALCULATIONS - DO NOT EDIT THIS SHEET

JOB NO:	16124
NAME:	Wk: SPG Sat: JJ
INT #:	1

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL	0	86	41	12	0	20	0	0	0	0	6	19	184	0	0	0	0	0	
	TRUCK	0	2	0	1	0	2	0	0	0	0	0	1		0	0	0	0	0	
7:15 - 7:30 AM	TOTAL	0	135	35	10	0	31	0	0	0	0	9	26	246	0	0	0	0	0	
	TRUCK	0	3	1	1	0	2	0	0	0	0	0	1		0	0	0	0	0	
7:30 - 7:45 AM	TOTAL	0	138	49	12	0	24	0	0	0	0	7	57	287	0	0	0	0	0	
	TRUCK	0	2	2	1	0	0	0	0	0	0	2	4		0	0	0	0	0	
7:45 - 8:00 AM	TOTAL	0	163	54	15	0	36	0	0	0	0	22	55	345	0	0	0	0	0	
	TRUCK	0	6	0	0	0	2	0	0	0	0	1	8		0	0	0	0	0	
8:00 - 8:15 AM	TOTAL	0	100	42	13	0	33	0	0	0	0	9	37	234	0	0	0	0	0	
	TRUCK	0	11	3	2	0	2	0	0	0	0	0	2		0	0	0	0	0	
8:15 - 8:30 AM	TOTAL	0	103	30	6	0	34	0	0	0	0	11	46	230	0	0	0	0	0	
	TRUCK	0	3	1	2	0	3	0	0	0	0	1	5		0	0	0	0	0	
8:30 - 8:45 AM	TOTAL	0	93	28	2	0	20	0	0	0	0	17	31	191	0	0	0	0	0	
	TRUCK	0	4	2	1	0	3	0	0	0	0	4	3		0	0	0	0	0	
8:45 - 9:00 AM	TOTAL	0	58	32	18	0	19	0	0	0	0	12	43	182	0	0	0	0	0	
	TRUCK	0	4	3	4	0	3	0	0	0	0	0	3		0	0	0	0	0	
12:00 - 12:15 PM	TOTAL	0	11	12	16	0	10	0	0	0	0	20	55	124	0	0	0	0	0	
	TRUCK	0	0	0	1	0	0	0	0	0	0	1	2		0	0	0	0	0	
12:15 - 12:30 PM	TOTAL	0	12	20	16	0	12	0	0	0	0	24	67	151	0	0	0	0	0	
	TRUCK	0	0	2	1	0	1	0	0	0	0	1	3		0	0	0	0	0	
12:30 - 12:45 PM	TOTAL	0	11	20	13	0	10	0	0	0	0	30	78	162	0	0	0	0	0	
	TRUCK	0	0	2	0	0	0	0	0	0	0	1	1		0	0	0	0	0	
12:45 - 1:00 PM	TOTAL	0	11	20	20	0	7	0	0	0	0	26	55	139	0	0	0	0	0	
	TRUCK	0	0	2	0	0	0	0	0	0	0	0	2		0	0	0	0	0	
1:00 - 1:15 PM	TOTAL	0	11	35	15	0	5	0	0	0	0	30	61	157	0	0	0	0	0	
	TRUCK	0	0	2	0	0	0	0	0	0	0	1	1		0	0	0	0	0	
1:15 - 1:30 PM	TOTAL	0	14	20	17	0	10	0	0	0	0	32	65	158	0	0	0	0	0	
	TRUCK	0	0	2	2	0	1	0	0	0	0	1	2		0	0	0	0	0	
1:30 - 1:45 PM	TOTAL	0	18	34	20	0	5	0	0	0	0	8	44	129	0	0	0	0	0	
	TRUCK	0	1	2	2	0	0	0	0	0	0	0	1		0	0	0	0	0	
1:45 - 2:00 PM	TOTAL	0	21	17	18	0	11	0	0	0	0	6	41	114	0	0	0	0	0	
	TRUCK	0	0	0	2	0	0	0	0	0	0	0	1		0	0	0	0	0	

4:00 - 4:15 PM	TOTAL	0	19	21	21	0	3	0	0	0	0	41	89	194	0	0	0	0	0	
	TRUCK	0	3	2	1	0	1	0	0	0	0	1	0		0	0	0	0	0	
4:15 - 4:30 PM	TOTAL	0	14	18	19	0	14	0	0	0	0	48	90	203	0	0	0	0	0	
	TRUCK	0	2	1	1	0	1	0	0	0	0	0	2		0	0	0	0	0	
4:30 - 4:45 PM	TOTAL	0	12	24	33	0	9	0	0	0	0	90	93	261	0	0	0	0	0	
	TRUCK	0	0	2	1	0	0	0	0	0	0	7	1		0	0	0	0	0	
4:45 - 5:00 PM	TOTAL	0	10	27	19	0	8	0	0	0	0	66	80	210	0	0	0	0	0	
	TRUCK	0	1	2	1	0	1	0	0	0	0	6	1		0	0	0	0	0	
5:00 - 5:15 PM	TOTAL	0	18	29	19	0	12	0	0	0	0	76	105	259	0	0	0	0	0	
	TRUCK	0	0	1	0	0	0	0	0	0	0	4	2		0	0	0	0	0	
5:15 - 5:30 PM	TOTAL	0	9	38	18	0	9	0	0	0	0	50	111	235	0	0	0	0	0	
	TRUCK	0	0	2	0	0	1	0	0	0	0	0	3		0	0	0	0	0	
5:30 - 5:45 PM	TOTAL	0	12	24	19	0	8	0	0	0	0	81	124	268	0	0	0	0	0	
	TRUCK	0	1	0	1	0	1	0	0	0	0	1	2		0	0	0	0	0	
5:45 - 6:00 PM	TOTAL	0	8	21	24	0	7	0	0	0	0	56	86	202	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	2	2		0	0	0	0	0	

1:
2: NY 22 SB - Thru
3: NY 22 SB - Left
4: Connector Road WB - Right
5:
6: Connector Road WB - Left
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A: Cross NY 22 north of INT
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DATE:	Wk: 09/27/2018 Sat: 09/29/2018
PERIOD:	Wk: 7-9 AM & 4-6 PM Sat: 12-2 PM
LOCATION:	NY 22 & Connector Road

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

JOB NO:	16124
NAME:	Wk: SPG Sat: JJ
INT #:	1

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL		522	179	49		111					44	157	1,062						
	TRUCK		2%	2%	6%		5%					7%	9%							0.77
7:15 - 8:15 AM	TOTAL		536	180	50		124					47	175	1,112						
	TRUCK		4%	3%	8%		5%					6%	9%							0.81
7:30 - 8:30 AM	TOTAL		504	175	46		127					49	195	1,096						
	TRUCK		4%	3%	11%		6%					8%	10%							0.79
7:45 - 8:45 AM	TOTAL		459	154	36		123					59	169	1,000						
	TRUCK		5%	4%	14%		8%					10%	11%							0.72
8:00 - 9:00 AM	TOTAL		354	132	39		106					49	157	837						
	TRUCK		6%	7%	23%		10%					10%	8%							0.89
12:00 - 1:00 PM	TOTAL		45	72	65		39					100	255	576						
	TRUCK		0%	8%	3%		3%					3%	3%							0.89
12:15 - 1:15 PM	TOTAL		45	95	64		34					110	261	609						
	TRUCK		0%	8%	2%		3%					3%	3%							0.94
12:30 - 1:30 PM	TOTAL		47	95	65		32					118	259	616						
	TRUCK		0%	8%	3%		3%					3%	2%							0.95
12:45 - 1:45 PM	TOTAL		54	109	72		27					96	225	583						
	TRUCK		2%	7%	6%		4%					2%	3%							0.92
1:00 - 2:00 PM	TOTAL		64	106	70		31					76	211	558						
	TRUCK		2%	6%	9%		3%					3%	2%							0.88
4:00 - 5:00 PM	TOTAL		55	90	92		34					245	352	868						
	TRUCK		11%	8%	4%		9%					6%	1%							0.83
4:15 - 5:15 PM	TOTAL		54	98	90		43					280	368	933						
	TRUCK		6%	6%	3%		5%					6%	2%							0.89
4:30 - 5:30 PM	TOTAL		49	118	89		38					282	389	965						
	TRUCK		2%	6%	2%		5%					6%	2%							0.92
4:45 - 5:45 PM	TOTAL		49	118	75		37					273	420	972						
	TRUCK		4%	4%	3%		8%					4%	2%							0.91
5:00 - 6:00 PM	TOTAL		47	112	80		36					263	426	964						
	TRUCK		2%	3%	1%		6%					3%	2%							0.90

DATE:	Wk: 09/27/2018 Sat: 09/22/2018	JOB NO:	16124
PERIOD:	Wk: 7-9 AM & 4-6 PM Sat: 12-2 PM	NAME:	Wk: RS Sat: MT
LOCATION:	NY 22 & Anderson Lane	INT #:	2

ENTER COUNT DATA ON THIS PAGE

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL							1	0	16	128	0	1							
	TRUCK									1	2									
7:15 - 7:30 AM	TOTAL							1	0	30	287	0	1							
	TRUCK									3	2									
7:30 - 7:45 AM	TOTAL							4	0	44	430	0	1							
	TRUCK									3	4									
7:45 - 8:00 AM	TOTAL							8	0	73	623	1	2							
	TRUCK									1	7									
8:00 - 8:15 AM	TOTAL							10	1	99	795	3	4							
	TRUCK									2	10									
8:15 - 8:30 AM	TOTAL							10	1	114	908	3	8							
	TRUCK									3	3									
8:30 - 8:45 AM	TOTAL							11	1	138	1,025	3	9							
	TRUCK									6	9									
8:45 - 9:00 AM	TOTAL							17	1	163	1,114	5	10							
	TRUCK									5	8									
12:00 - 12:15 PM	TOTAL							0	2	41	26	2	0							
	TRUCK									1	3					5		2		
12:15 - 12:30 PM	TOTAL							1	2	92	64	4	0							
	TRUCK									1						1		3		
12:30 - 12:45 PM	TOTAL							3	5	134	98	7	1							
	TRUCK									1	3	1	1							
12:45 - 1:00 PM	TOTAL							5	6	175	135	9	1							
	TRUCK										1									
1:00 - 1:15 PM	TOTAL							5	9	227	173	9	1							
	TRUCK										1					1				
1:15 - 1:30 PM	TOTAL							8	9	270	202	9	1							
	TRUCK							1		1	1					1				
1:30 - 1:45 PM	TOTAL							9	9	314	235	11	1							
	TRUCK									1	2	1						1		
1:45 - 2:00 PM	TOTAL							9	9	352	276	12	1							
	TRUCK									3	1					1				

4:00 - 4:15 PM	TOTAL							5	1	59	42	1	0							
	TRUCK									2	5									
4:15 - 4:30 PM	TOTAL							8	3	128	74	5	0							
	TRUCK							1		1	3									
4:30 - 4:45 PM	TOTAL							12	5	248	101	11	0							
	TRUCK								1	9	3									
4:45 - 5:00 PM	TOTAL							14	9	332	134	15	0							
	TRUCK									3	1									
5:00 - 5:15 PM	TOTAL							15	16	428	173	20	1							
	TRUCK									3	1									
5:15 - 5:30 PM	TOTAL							16	18	498	206	25	2							
	TRUCK										2									
5:30 - 5:45 PM	TOTAL							17	19	597	235	27	2							
	TRUCK									2	1									
5:45 - 6:00 PM	TOTAL							17	21	682	260	29	2							
	TRUCK									1	1									

1:
2:
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7: NY 22 NB - Right
8: Anderson Lane WB - Right
9: NY 22 NB - Thru
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DATE:	Wk: 09/27/2018 Sat: 09/22/2018
PERIOD:	Wk: 7-9 AM & 4-6 PM Sat: 12-2 PM
LOCATION:	NY 22 & Anderson Lane

CALCULATIONS - DO NOT EDIT THIS SHEET

JOB NO:	16124
NAME:	Wk: RS Sat: MT
INT #:	2

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL	0	0	0	0	0	0	1	0	16	128	0	1	146	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	1	2	0	0		0	0	0	0	0	
7:15 - 7:30 AM	TOTAL	0	0	0	0	0	0	0	0	14	159	0	0	173	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	3	2	0	0		0	0	0	0	0	
7:30 - 7:45 AM	TOTAL	0	0	0	0	0	0	3	0	14	143	0	0	160	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	3	4	0	0		0	0	0	0	0	
7:45 - 8:00 AM	TOTAL	0	0	0	0	0	0	4	0	29	193	1	1	228	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	1	7	0	0		0	0	0	0	0	
8:00 - 8:15 AM	TOTAL	0	0	0	0	0	0	2	1	26	172	2	2	205	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	2	10	0	0		0	0	0	0	0	
8:15 - 8:30 AM	TOTAL	0	0	0	0	0	0	0	0	15	113	0	4	132	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	3	3	0	0		0	0	0	0	0	
8:30 - 8:45 AM	TOTAL	0	0	0	0	0	0	1	0	24	117	0	1	143	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	6	9	0	0		0	0	0	0	0	
8:45 - 9:00 AM	TOTAL	0	0	0	0	0	0	6	0	25	89	2	1	123	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	5	8	0	0		0	0	0	0	0	
12:00 - 12:15 PM	TOTAL	0	0	0	0	0	0	0	2	41	26	2	0	71	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	1	3	0	0		0	5	0	2	7	
12:15 - 12:30 PM	TOTAL	0	0	0	0	0	0	1	0	51	38	2	0	92	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	1	0	0	0		0	1	0	3	4	
12:30 - 12:45 PM	TOTAL	0	0	0	0	0	0	2	3	42	34	3	1	85	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	1	3	1	1		0	0	0	0	0	
12:45 - 1:00 PM	TOTAL	0	0	0	0	0	0	2	1	41	37	2	0	83	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	1	0	0		0	0	0	0	0	
1:00 - 1:15 PM	TOTAL	0	0	0	0	0	0	0	3	52	38	0	0	93	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	1	0	0		0	1	0	0	1	
1:15 - 1:30 PM	TOTAL	0	0	0	0	0	0	3	0	43	29	0	0	75	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	1	0	1	1	0	0		0	1	0	0	1	
1:30 - 1:45 PM	TOTAL	0	0	0	0	0	0	1	0	44	33	2	0	80	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	1	2	1	0		0	0	0	1	1	
1:45 - 2:00 PM	TOTAL	0	0	0	0	0	0	0	0	38	41	1	0	80	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	3	1	0	0		0	1	0	0	1	

4:00 - 4:15 PM	TOTAL	0	0	0	0	0	0	5	1	59	42	1	0	108	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	2	5	0	0		0	0	0	0	0	
4:15 - 4:30 PM	TOTAL	0	0	0	0	0	0	3	2	69	32	4	0	110	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	1	0	1	3	0	0		0	0	0	0	0	
4:30 - 4:45 PM	TOTAL	0	0	0	0	0	0	4	2	120	27	6	0	159	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	1	9	3	0	0		0	0	0	0	0	
4:45 - 5:00 PM	TOTAL	0	0	0	0	0	0	2	4	84	33	4	0	127	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	3	1	0	0		0	0	0	0	0	
5:00 - 5:15 PM	TOTAL	0	0	0	0	0	0	1	7	96	39	5	1	149	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	3	1	0	0		0	0	0	0	0	
5:15 - 5:30 PM	TOTAL	0	0	0	0	0	0	1	2	70	33	5	1	112	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	2	0	0		0	0	0	0	0	
5:30 - 5:45 PM	TOTAL	0	0	0	0	0	0	1	1	99	29	2	0	132	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	2	1	0	0		0	0	0	0	0	
5:45 - 6:00 PM	TOTAL	0	0	0	0	0	0	0	2	85	25	2	0	114	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	1	1	0	0		0	0	0	0	0	

1:
2:
3:
4:
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7: NY 22 NB - Right
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10: NY 22 SB - Thru
11: Anderson Lane WB - Left
12: NY 11 SB - Left

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DATE:	Wk: 09/27/2018 Sat: 09/22/2018
PERIOD:	Wk: 7-9 AM & 4-6 PM Sat: 12-2 PM
LOCATION:	NY 22 & Anderson Lane

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

JOB NO:	16124
NAME:	Wk: RS Sat: MT
INT #:	2

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL							8		73	623	1	2	707						
	TRUCK							0%		11%	2%	0%	0%							0.78
7:15 - 8:15 AM	TOTAL							9	1	83	667	3	3	766						
	TRUCK							0%	0%	11%	3%	0%	0%							0.84
7:30 - 8:30 AM	TOTAL							9	1	84	621	3	7	725						
	TRUCK							0%	0%	11%	4%	0%	0%							0.79
7:45 - 8:45 AM	TOTAL							7	1	94	595	3	8	708						
	TRUCK							0%	0%	13%	5%	0%	0%							0.78
8:00 - 9:00 AM	TOTAL							9	1	90	491	4	8	603						
	TRUCK							0%	0%	18%	6%	0%	0%							0.74
12:00 - 1:00 PM	TOTAL							5	6	175	135	9	1	331						
	TRUCK							0%	0%	2%	5%	11%	100%			6		5	11	0.90
12:15 - 1:15 PM	TOTAL							5	7	186	147	7	1	353						
	TRUCK							0%	0%	1%	3%	14%	100%			2		3	5	0.95
12:30 - 1:30 PM	TOTAL							7	7	178	138	5	1	336						
	TRUCK							14%	0%	1%	4%	20%	100%			2			2	0.90
12:45 - 1:45 PM	TOTAL							6	4	180	137	4		331						
	TRUCK							17%	0%	1%	4%	25%				2		1	3	0.89
1:00 - 2:00 PM	TOTAL							4	3	177	141	3		328						
	TRUCK							25%	0%	3%	4%	33%				3		1	4	0.88
4:00 - 5:00 PM	TOTAL							14	9	332	134	15		504						
	TRUCK							7%	11%	5%	9%	0%								0.79
4:15 - 5:15 PM	TOTAL							10	15	369	131	19	1	545						
	TRUCK							10%	7%	4%	6%	0%	0%							0.86
4:30 - 5:30 PM	TOTAL							8	15	370	132	20	2	547						
	TRUCK							0%	7%	4%	5%	0%	0%							0.86
4:45 - 5:45 PM	TOTAL							5	14	349	134	16	2	520						
	TRUCK							0%	0%	2%	4%	0%	0%							0.87
5:00 - 6:00 PM	TOTAL							3	12	350	126	14	2	507						
	TRUCK							0%	0%	2%	4%	0%	0%							0.85

DATE:	Wk AM: 09/28/2018 Wk PM: 09/27/2018 Sat: 09/22/2018	JOB NO:	16124
PERIOD:	Wk: 7-9 AM & 4-6 PM Sat: 12-2 PM	NAME:	JJ
LOCATION:	NY 22 & Site Driveway B	INT #:	4

ENTER COUNT DATA ON THIS PAGE

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL	7	8	0	0	1	112													
	TRUCK															1				
7:15 - 7:30 AM	TOTAL	21	14	0	0	3	286													
	TRUCK						3													
7:30 - 7:45 AM	TOTAL	33	18	3	2	4	468													
	TRUCK	3					2													
7:45 - 8:00 AM	TOTAL	45	23	3	3	6	679								1					
	TRUCK	2					5													
8:00 - 8:15 AM	TOTAL	66	28	6	3	8	864													
	TRUCK	4					6													
8:15 - 8:30 AM	TOTAL	82	30	8	3	8	1,038													
	TRUCK	1					3													
8:30 - 8:45 AM	TOTAL	98	33	11	3	10	1,194													
	TRUCK	2					5													
8:45 - 9:00 AM	TOTAL	119	37	12	4	13	1,285								1					
	TRUCK	5					4													
12:00 - 12:15 PM	TOTAL	33	4	2	0	1	23								2	3				
	TRUCK	1					3													
12:15 - 12:30 PM	TOTAL	77	6	5	0	1	55								3	1				
	TRUCK	1																		
12:30 - 12:45 PM	TOTAL	115	11	8	1	4	84													
	TRUCK	1					4													
12:45 - 1:00 PM	TOTAL	151	15	11	3	4	118									2				
	TRUCK						1													
1:00 - 1:15 PM	TOTAL	195	21	15	5	5	154													
	TRUCK						1													
1:15 - 1:30 PM	TOTAL	234	23	18	8	6	176													
	TRUCK						1								1					
1:30 - 1:45 PM	TOTAL	272	27	19	8	6	209								1					
	TRUCK						2													
1:45 - 2:00 PM	TOTAL	308	29	22	10	7	245									1				
	TRUCK	3																		

4:00 - 4:15 PM	TOTAL	54	12	4	2	0	29													
	TRUCK	2					5								1					
4:15 - 4:30 PM	TOTAL	117	18	6	6	0	55													
	TRUCK						4													
4:30 - 4:45 PM	TOTAL	226	27	10	7	0	76													
	TRUCK	8	2				1													
4:45 - 5:00 PM	TOTAL	307	33	14	9	1	106													
	TRUCK	7					3													
5:00 - 5:15 PM	TOTAL	391	37	22	11	3	134													
	TRUCK	3					1													
5:15 - 5:30 PM	TOTAL	453	39	29	13	3	163													
	TRUCK						3													
5:30 - 5:45 PM	TOTAL	544	40	33	13	3	184													
	TRUCK	2					1								1					
5:45 - 6:00 PM	TOTAL	631	41	36	15	3	209													
	TRUCK	1					1													

1: NY 22 NB - Thru
2: NY 22 NB - Right
3: Site Driveway WB - Left
4: Site Driveway WB - Right
5: NY 22 SB - Left
6: NY 22 SB - Thru
7:
8:
9:
10:
11:
12:

A: Along NY 22 west of INT from South to North
B: Along NY 22 west of INT from North to South
C: Cross Site Dwy east of INT
D: Cross NY 22 south of INT

DATE:	Wk AM: 09/28/2018 Wk PM: 09/27/2018 Sat: 09/22/2018	**CALCULATIONS - DO NOT EDIT THIS SHEET**	JOB NO:	16124
PERIOD:	Wk: 7-9 AM & 4-6 PM Sat: 12-2 PM		NAME:	JJ
LOCATION:	NY 22 & Site Driveway B		INT #:	4

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL	7	8	0	0	1	112	0	0	0	0	0	0	128	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	1	0	0	1	
7:15 - 7:30 AM	TOTAL	14	6	0	0	2	174	0	0	0	0	0	0	196	0	0	0	0	0	
	TRUCK	0	0	0	0	0	3	0	0	0	0	0	0		0	0	0	0	0	
7:30 - 7:45 AM	TOTAL	12	4	3	2	1	182	0	0	0	0	0	0	204	0	0	0	0	0	
	TRUCK	3	0	0	0	0	2	0	0	0	0	0	0		0	0	0	0	0	
7:45 - 8:00 AM	TOTAL	12	5	0	1	2	211	0	0	0	0	0	0	231	1	0	0	0	1	
	TRUCK	2	0	0	0	0	5	0	0	0	0	0	0		0	0	0	0	0	
8:00 - 8:15 AM	TOTAL	21	5	3	0	2	185	0	0	0	0	0	0	216	0	0	0	0	0	
	TRUCK	4	0	0	0	0	6	0	0	0	0	0	0		0	0	0	0	0	
8:15 - 8:30 AM	TOTAL	16	2	2	0	0	174	0	0	0	0	0	0	194	0	0	0	0	0	
	TRUCK	1	0	0	0	0	3	0	0	0	0	0	0		0	0	0	0	0	
8:30 - 8:45 AM	TOTAL	16	3	3	0	2	156	0	0	0	0	0	0	180	0	0	0	0	0	
	TRUCK	2	0	0	0	0	5	0	0	0	0	0	0		0	0	0	0	0	
8:45 - 9:00 AM	TOTAL	21	4	1	1	3	91	0	0	0	0	0	0	121	1	0	0	0	1	
	TRUCK	5	0	0	0	0	4	0	0	0	0	0	0		0	0	0	0	0	
12:00 - 12:15 PM	TOTAL	33	4	2	0	1	23	0	0	0	0	0	0	63	2	3	0	0	5	
	TRUCK	1	0	0	0	0	3	0	0	0	0	0	0		0	0	0	0	0	
12:15 - 12:30 PM	TOTAL	44	2	3	0	0	32	0	0	0	0	0	0	81	3	1	0	0	4	
	TRUCK	1	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
12:30 - 12:45 PM	TOTAL	38	5	3	1	3	29	0	0	0	0	0	0	79	0	0	0	0	0	
	TRUCK	1	0	0	0	0	4	0	0	0	0	0	0		0	0	0	0	0	
12:45 - 1:00 PM	TOTAL	36	4	3	2	0	34	0	0	0	0	0	0	79	0	2	0	0	2	
	TRUCK	0	0	0	0	0	1	0	0	0	0	0	0		0	0	0	0	0	
1:00 - 1:15 PM	TOTAL	44	6	4	2	1	36	0	0	0	0	0	0	93	0	0	0	0	0	
	TRUCK	0	0	0	0	0	1	0	0	0	0	0	0		0	0	0	0	0	
1:15 - 1:30 PM	TOTAL	39	2	3	3	1	22	0	0	0	0	0	0	70	0	0	0	0	0	
	TRUCK	0	0	0	0	0	1	0	0	0	0	0	0		1	0	0	0	1	
1:30 - 1:45 PM	TOTAL	38	4	1	0	0	33	0	0	0	0	0	0	76	1	0	0	0	1	
	TRUCK	0	0	0	0	0	2	0	0	0	0	0	0		0	0	0	0	0	
1:45 - 2:00 PM	TOTAL	36	2	3	2	1	36	0	0	0	0	0	0	80	0	1	0	0	1	
	TRUCK	3	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	

4:00 - 4:15 PM	TOTAL	54	12	4	2	0	29	0	0	0	0	0	0	101	0	0	0	0	0	
	TRUCK	2	0	0	0	0	5	0	0	0	0	0	0		1	0	0	0	1	
4:15 - 4:30 PM	TOTAL	63	6	2	4	0	26	0	0	0	0	0	0	101	0	0	0	0	0	
	TRUCK	0	0	0	0	0	4	0	0	0	0	0	0		0	0	0	0	0	
4:30 - 4:45 PM	TOTAL	109	9	4	1	0	21	0	0	0	0	0	0	144	0	0	0	0	0	
	TRUCK	8	2	0	0	0	1	0	0	0	0	0	0		0	0	0	0	0	
4:45 - 5:00 PM	TOTAL	81	6	4	2	1	30	0	0	0	0	0	0	124	0	0	0	0	0	
	TRUCK	7	0	0	0	0	3	0	0	0	0	0	0		0	0	0	0	0	
5:00 - 5:15 PM	TOTAL	84	4	8	2	2	28	0	0	0	0	0	0	128	0	0	0	0	0	
	TRUCK	3	0	0	0	0	1	0	0	0	0	0	0		0	0	0	0	0	
5:15 - 5:30 PM	TOTAL	62	2	7	2	0	29	0	0	0	0	0	0	102	0	0	0	0	0	
	TRUCK	0	0	0	0	0	3	0	0	0	0	0	0		0	0	0	0	0	
5:30 - 5:45 PM	TOTAL	91	1	4	0	0	21	0	0	0	0	0	0	117	0	0	0	0	0	
	TRUCK	2	0	0	0	0	1	0	0	0	0	0	0		1	0	0	0	1	
5:45 - 6:00 PM	TOTAL	87	1	3	2	0	25	0	0	0	0	0	0	118	0	0	0	0	0	
	TRUCK	1	0	0	0	0	1	0	0	0	0	0	0		0	0	0	0	0	

1: NY 22 NB - Thru
2: NY 22 NB - Right
3: Site Driveway WB - Left
4: Site Driveway WB - Right
5: NY 22 SB - Left
6: NY 22 SB - Thru
7:
8:
9:
10:
11:
12:

A: Along NY 22 west of INT from South to North
B: Along NY 22 west of INT from North to South
C: Cross Site Dwy east of INT
D: Cross NY 22 south of INT

DATE:	Wk AM: 09/28/2018 Wk PM: 09/27/2018 Sat: 09/22/2018	**PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET**	JOB NO:	16124
PERIOD:	Wk: 7-9 AM & 4-6 PM Sat: 12-2 PM		NAME:	JJ
LOCATION:	NY 22 & Site Driveway B		INT #:	4

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL	45	23	3	3	6	679							759	1				1	
	TRUCK	11%	0%	0%	0%	0%	1%									1			1	0.82
7:15 - 8:15 AM	TOTAL	59	20	6	3	7	752							847	1				1	
	TRUCK	15%	0%	0%	0%	0%	2%													0.92
7:30 - 8:30 AM	TOTAL	61	16	8	3	5	752							845	1				1	
	TRUCK	16%	0%	0%	0%	0%	2%													0.91
7:45 - 8:45 AM	TOTAL	65	15	8	1	6	726							821	1				1	
	TRUCK	14%	0%	0%	0%	0%	3%													0.89
8:00 - 9:00 AM	TOTAL	74	14	9	1	7	606							711	1				1	
	TRUCK	16%	0%	0%	0%	0%	3%													0.82
12:00 - 1:00 PM	TOTAL	151	15	11	3	4	118							302	5	6			11	
	TRUCK	2%	0%	0%	0%	0%	7%													0.93
12:15 - 1:15 PM	TOTAL	162	17	13	5	4	131							332	3	3			6	
	TRUCK	1%	0%	0%	0%	0%	5%													0.89
12:30 - 1:30 PM	TOTAL	157	17	13	8	5	121							321		2			2	
	TRUCK	1%	0%	0%	0%	0%	6%								1				1	0.86
12:45 - 1:45 PM	TOTAL	157	16	11	7	2	125							318	1	2			3	
	TRUCK	0%	0%	0%	0%	0%	4%								1				1	0.85
1:00 - 2:00 PM	TOTAL	157	14	11	7	3	127							319	1	1			2	
	TRUCK	2%	0%	0%	0%	0%	3%								1				1	0.86
4:00 - 5:00 PM	TOTAL	307	33	14	9	1	106							470						
	TRUCK	6%	6%	0%	0%	0%	12%								1				1	0.82
4:15 - 5:15 PM	TOTAL	337	25	18	9	3	105							497						
	TRUCK	5%	8%	0%	0%	0%	9%													0.86
4:30 - 5:30 PM	TOTAL	336	21	23	7	3	108							498						
	TRUCK	5%	10%	0%	0%	0%	7%													0.86
4:45 - 5:45 PM	TOTAL	318	13	23	6	3	108							471						
	TRUCK	4%	0%	0%	0%	0%	7%								1				1	0.92
5:00 - 6:00 PM	TOTAL	324	8	22	6	2	103							465						
	TRUCK	2%	0%	0%	0%	0%	6%								1				1	0.91

DATE:	Wk: 09/27/2018 Sat: 09/29/2018
PERIOD:	Wk: 7-9 AM & 4-6 PM Sat: 12-2 PM
LOCATION:	NY 138 & Connector Road

ENTER COUNT DATA ON THIS PAGE

JOB NO:	16124
NAME:	Wk: KRM Sat:SPG
INT #:	5

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL	31	10					47		13	45	169								
	TRUCK	2										2								
7:15 - 7:30 AM	TOTAL	67	24					100		29	81	337								
	TRUCK	1																		
7:30 - 7:45 AM	TOTAL	93	41					174		55	109	501								
	TRUCK		1					6			1	4								
7:45 - 8:00 AM	TOTAL	124	61					240		79	140	630						1		
	TRUCK	2	3					4			1	3								
8:00 - 8:15 AM	TOTAL	144	86					303		113	176	774								
	TRUCK	2	2					3		5		2								
8:15 - 8:30 AM	TOTAL	170	110					353		150	205	910								
	TRUCK	2	3					6		3	3	1								
8:30 - 8:45 AM	TOTAL	190	141					395		180	224	1,016								
	TRUCK	2	6					3		3	2	3								
8:45 - 9:00 AM	TOTAL	212	156					442		202	248	1,106						1		
	TRUCK	6	2					4		3		1								
12:00 - 12:15 PM	TOTAL	26	14					52		40	20	42								
	TRUCK	1						1		1										
12:15 - 12:30 PM	TOTAL	54	25					102		103	44	86								
	TRUCK	1						3		3		1								
12:30 - 12:45 PM	TOTAL	78	40					161		162	72	121								
	TRUCK							2				1								
12:45 - 1:00 PM	TOTAL	97	54					221		220	86	155								
	TRUCK							2		2										
1:00 - 1:15 PM	TOTAL	111	64					280		275	108	197								
	TRUCK		1					2		2					1					
1:15 - 1:30 PM	TOTAL	128	73					344		323	132	229								
	TRUCK	2	1					1		3	1	2								
1:30 - 1:45 PM	TOTAL	156	89					409		370	148	275								
	TRUCK	1						2		1	2									
1:45 - 2:00 PM	TOTAL	179	102					465		398	170	310								
	TRUCK									1	1	1								

4:00 - 4:15 PM	TOTAL	19	13					80		60	13	57						1		
	TRUCK	2								2		5								
4:15 - 4:30 PM	TOTAL	45	29					171		99	29	103						1		
	TRUCK	1						1		1		1								
4:30 - 4:45 PM	TOTAL	73	54					247		170	53	150						1		
	TRUCK	1						1		2	1	3								
4:45 - 5:00 PM	TOTAL	90	81					322		235	67	190								
	TRUCK		1					2		1	1	2								
5:00 - 5:15 PM	TOTAL	119	102					405		308	82	250								
	TRUCK	1	2					3				1								
5:15 - 5:30 PM	TOTAL	139	126					500		392	91	290								
	TRUCK							5				2								
5:30 - 5:45 PM	TOTAL	156	160					600		467	109	323								
	TRUCK		3					1			2									
5:45 - 6:00 PM	TOTAL	171	179					687		547	129	355								
	TRUCK							4		2		1								

1: NY 138 EB - Right
2: NY 138 EB - Thru
3:
4:
5:
6:
7: NY 22 Connector NB - Left
8:
9: NY 22 Connector NB - Right
10: NY 138 WB - Left
11: NY 138 WB - Thru
12:

A: Cross NY 138 west of INT
B: Along NY 138 north of INT
C: Cross NY 138 east of INT
D: Cross Connector south of INT

DATE:	Wk: 09/27/2018 Sat: 09/29/2018
PERIOD:	Wk: 7-9 AM & 4-6 PM Sat: 12-2 PM
LOCATION:	NY 138 & Connector Road

CALCULATIONS - DO NOT EDIT THIS SHEET

JOB NO:	16124
NAME:	Wk: KRM Sat:SPG
INT #:	5

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL	31	10	0	0	0	0	47	0	13	45	169	0	315	0	0	0	0	0	
	TRUCK	2	0	0	0	0	0	0	0	0	0	2	0		0	0	0	0	0	
7:15 - 7:30 AM	TOTAL	36	14	0	0	0	0	53	0	16	36	168	0	323	0	0	0	0	0	
	TRUCK	1	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
7:30 - 7:45 AM	TOTAL	26	17	0	0	0	0	74	0	26	28	164	0	335	0	0	0	0	0	
	TRUCK	0	1	0	0	0	0	6	0	0	1	4	0		0	0	0	0	0	
7:45 - 8:00 AM	TOTAL	31	20	0	0	0	0	66	0	24	31	129	0	301	0	0	0	1	1	
	TRUCK	2	3	0	0	0	0	4	0	0	1	3	0		0	0	0	0	0	
8:00 - 8:15 AM	TOTAL	20	25	0	0	0	0	63	0	34	36	144	0	322	0	0	0	0	0	
	TRUCK	2	2	0	0	0	0	3	0	5	0	2	0		0	0	0	0	0	
8:15 - 8:30 AM	TOTAL	26	24	0	0	0	0	50	0	37	29	136	0	302	0	0	0	0	0	
	TRUCK	2	3	0	0	0	0	6	0	3	3	1	0		0	0	0	0	0	
8:30 - 8:45 AM	TOTAL	20	31	0	0	0	0	42	0	30	19	106	0	248	0	0	0	0	0	
	TRUCK	2	6	0	0	0	0	3	0	3	2	3	0		0	0	0	0	0	
8:45 - 9:00 AM	TOTAL	22	15	0	0	0	0	47	0	22	24	90	0	220	0	0	0	1	1	
	TRUCK	6	2	0	0	0	0	4	0	3	0	1	0		0	0	0	0	0	
12:00 - 12:15 PM	TOTAL	26	14	0	0	0	0	52	0	40	20	42	0	194	0	0	0	0	0	
	TRUCK	1	0	0	0	0	0	1	0	1	0	0	0		0	0	0	0	0	
12:15 - 12:30 PM	TOTAL	28	11	0	0	0	0	50	0	63	24	44	0	220	0	0	0	0	0	
	TRUCK	1	0	0	0	0	0	3	0	3	0	1	0		0	0	0	0	0	
12:30 - 12:45 PM	TOTAL	24	15	0	0	0	0	59	0	59	28	35	0	220	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	2	0	0	0	1	0		0	0	0	0	0	
12:45 - 1:00 PM	TOTAL	19	14	0	0	0	0	60	0	58	14	34	0	199	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	2	0	2	0	0	0		0	0	0	0	0	
1:00 - 1:15 PM	TOTAL	14	10	0	0	0	0	59	0	55	22	42	0	202	0	0	0	0	0	
	TRUCK	0	1	0	0	0	0	2	0	2	0	0	0		1	0	0	0	1	
1:15 - 1:30 PM	TOTAL	17	9	0	0	0	0	64	0	48	24	32	0	194	0	0	0	0	0	
	TRUCK	2	1	0	0	0	0	1	0	3	1	2	0		0	0	0	0	0	
1:30 - 1:45 PM	TOTAL	28	16	0	0	0	0	65	0	47	16	46	0	218	0	0	0	0	0	
	TRUCK	1	0	0	0	0	0	2	0	1	2	0	0		0	0	0	0	0	
1:45 - 2:00 PM	TOTAL	23	13	0	0	0	0	56	0	28	22	35	0	177	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	1	1	1	0		0	0	0	0	0	

4:00 - 4:15 PM	TOTAL	19	13	0	0	0	0	80	0	60	13	57	0	242	0	0	0	1	1
	TRUCK	2	0	0	0	0	0	0	0	2	0	5	0		0	0	0	0	0
4:15 - 4:30 PM	TOTAL	26	16	0	0	0	0	91	0	39	16	46	0	234	0	0	0	1	1
	TRUCK	1	0	0	0	0	0	1	0	1	0	1	0		0	0	0	0	0
4:30 - 4:45 PM	TOTAL	28	25	0	0	0	0	76	0	71	24	47	0	271	0	0	0	1	1
	TRUCK	1	0	0	0	0	0	1	0	2	1	3	0		0	0	0	0	0
4:45 - 5:00 PM	TOTAL	17	27	0	0	0	0	75	0	65	14	40	0	238	0	0	0	0	0
	TRUCK	0	1	0	0	0	0	2	0	1	1	2	0		0	0	0	0	0
5:00 - 5:15 PM	TOTAL	29	21	0	0	0	0	83	0	73	15	60	0	281	0	0	0	0	0
	TRUCK	1	2	0	0	0	0	3	0	0	0	1	0		0	0	0	0	0
5:15 - 5:30 PM	TOTAL	20	24	0	0	0	0	95	0	84	9	40	0	272	0	0	0	0	0
	TRUCK	0	0	0	0	0	0	5	0	0	0	2	0		0	0	0	0	0
5:30 - 5:45 PM	TOTAL	17	34	0	0	0	0	100	0	75	18	33	0	277	0	0	0	0	0
	TRUCK	0	3	0	0	0	0	1	0	0	2	0	0		0	0	0	0	0
5:45 - 6:00 PM	TOTAL	15	19	0	0	0	0	87	0	80	20	32	0	253	0	0	0	0	0
	TRUCK	0	0	0	0	0	0	4	0	2	0	1	0		0	0	0	0	0

1: NY 138 EB - Right
2: NY 138 EB - Thru
3:
4:
5:
6:
7: NY 22 Connector NB - Left
8:
9: NY 22 Connector NB - Right
10: NY 138 WB - Left
11: NY 138 WB - Thru
12:

A: Cross NY 138 west of INT
B: Along NY 138 north of INT
C: Cross NY 138 east of INT
D: Cross Connector south of INT

DATE:	Wk: 09/27/2018 Sat: 09/29/2018
PERIOD:	Wk: 7-9 AM & 4-6 PM Sat: 12-2 PM
LOCATION:	NY 138 & Connector Road

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

JOB NO:	16124
NAME:	Wk: KRM Sat:SPG
INT #:	5

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL	124	61					240		79	140	630		1,274				1	1	
	TRUCK	4%	7%					4%		0%	1%	1%								0.95
7:15 - 8:15 AM	TOTAL	113	76					256		100	131	605		1,281				1	1	
	TRUCK	4%	8%					5%		5%	2%	1%								0.96
7:30 - 8:30 AM	TOTAL	103	86					253		121	124	573		1,260				1	1	
	TRUCK	6%	10%					8%		7%	4%	2%								0.94
7:45 - 8:45 AM	TOTAL	97	100					221		125	115	515		1,173				1	1	
	TRUCK	8%	14%					7%		9%	5%	2%								0.91
8:00 - 9:00 AM	TOTAL	88	95					202		123	108	476		1,092				1	1	
	TRUCK	14%	14%					8%		11%	5%	1%								0.85
12:00 - 1:00 PM	TOTAL	97	54					221		220	86	155		833						
	TRUCK	2%	0%					4%		3%	0%	1%								0.95
12:15 - 1:15 PM	TOTAL	85	50					228		235	88	155		841						
	TRUCK	1%	2%					4%		3%	0%	1%			1				1	0.96
12:30 - 1:30 PM	TOTAL	74	48					242		220	88	143		815						
	TRUCK	3%	4%					3%		3%	1%	2%			1				1	0.93
12:45 - 1:45 PM	TOTAL	78	49					248		208	76	154		813						
	TRUCK	4%	4%					3%		4%	4%	1%			1				1	0.93
1:00 - 2:00 PM	TOTAL	82	48					244		178	84	155		791						
	TRUCK	4%	4%					2%		4%	5%	2%			1				1	0.91
4:00 - 5:00 PM	TOTAL	90	81					322		235	67	190		985				3	3	
	TRUCK	4%	1%					1%		3%	3%	6%								0.91
4:15 - 5:15 PM	TOTAL	100	89					325		248	69	193		1,024				2	2	
	TRUCK	3%	3%					2%		2%	3%	4%								0.91
4:30 - 5:30 PM	TOTAL	94	97					329		293	62	187		1,062				1	1	
	TRUCK	2%	3%					3%		1%	3%	4%								0.94
4:45 - 5:45 PM	TOTAL	83	106					353		297	56	173		1,068						
	TRUCK	1%	6%					3%		0%	5%	3%								0.95
5:00 - 6:00 PM	TOTAL	81	98					365		312	62	165		1,083						
	TRUCK	1%	5%					4%		1%	3%	2%								0.96

DATE:	-
PERIOD:	Wk: 7-9 AM & 4-6 PM Sat: 12-2 PM

PEAK HOUR CALCULATIONS - DO NOT EDIT THIS SHEET

JOB NO:	16124
NAME:	JMC

TIME	CLASS	TOTAL INT. 1	TOTAL INT. 2	TOTAL INT. 3	TOTAL INT. 4	TOTAL INT. 5	TOTAL INT.	TOTAL INT.	TOTAL INT.	TOTAL
7:00 - 8:00 AM	TOTAL	1,062	707		759	1,274				3,802
	TRUCK									
7:15 - 8:15 AM	TOTAL	1,112	766		847	1,281				4,006
	TRUCK									
7:30 - 8:30 AM	TOTAL	1,096	725		845	1,260				3,926
	TRUCK									
7:45 - 8:45 AM	TOTAL	1,000	708		821	1,173				3,702
	TRUCK									
8:00 - 9:00 AM	TOTAL	837	603		711	1,092				3,243
	TRUCK									
12:00 - 1:00 PM	TOTAL	576	331		302	833				2,042
	TRUCK									
12:15 - 1:15 PM	TOTAL	609	353		332	841				2,135
	TRUCK									
12:30 - 1:30 PM	TOTAL	616	336		321	815				2,088
	TRUCK									
12:45 - 1:45 PM	TOTAL	583	331		318	813				2,045
	TRUCK									
1:00 - 2:00 PM	TOTAL	558	328		319	791				1,996
	TRUCK									
4:00 - 5:00 PM	TOTAL	868	504		470	985				2,827
	TRUCK									
4:15 - 5:15 PM	TOTAL	933	545		497	1,024				2,999
	TRUCK									
4:30 - 5:30 PM	TOTAL	965	547		498	1,062				3,072
	TRUCK									
4:45 - 5:45 PM	TOTAL	972	520		471	1,068				3,031
	TRUCK									
5:00 - 6:00 PM	TOTAL	964	507		465	1,083				3,019
	TRUCK									

APPENDIX D

CAPACITY ANALYSES



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	124	50	47	175	180	536
Future Volume (vph)	124	50	47	175	180	536
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-2%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.894			
Flt Protected	0.950					0.988
Satd. Flow (prot)	1728	1503	1583	0	0	1809
Flt Permitted	0.950					0.988
Satd. Flow (perm)	1728	1503	1583	0	0	1809
Link Speed (mph)	30		45			45
Link Distance (ft)	836		1411			503
Travel Time (s)	19.0		21.4			7.6
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	8%	6%	9%	3%	4%
Adj. Flow (vph)	153	62	58	216	222	662
Shared Lane Traffic (%)						
Lane Group Flow (vph)	153	62	274	0	0	884
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 68.3%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	19.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	124	50	47	175	180	536
Future Vol, veh/h	124	50	47	175	180	536
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-2	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	5	8	6	9	3	4
Mvmt Flow	153	62	58	216	222	662

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1272	166	0	0	274	0
Stage 1	166	-	-	-	-	-
Stage 2	1106	-	-	-	-	-
Critical Hdwy	6.25	6.18	-	-	4.13	-
Critical Hdwy Stg 1	5.25	-	-	-	-	-
Critical Hdwy Stg 2	5.25	-	-	-	-	-
Follow-up Hdwy	3.545	3.372	-	-	2.227	-
Pot Cap-1 Maneuver	196	867	-	-	1283	-
Stage 1	864	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 142	867	-	-	1283	-
Mov Cap-2 Maneuver	~ 142	-	-	-	-	-
Stage 1	627	-	-	-	-	-
Stage 2	332	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	116.9	0	2.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	142	867	1283	-
HCM Lane V/C Ratio	-	-	1.078	0.071	0.173	-
HCM Control Delay (s)	-	-	160.2	9.5	8.4	0
HCM Lane LOS	-	-	F	A	A	A
HCM 95th %tile Q(veh)	-	-	8.3	0.2	0.6	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	1	83	9	3	755
Future Volume (vph)	3	1	83	9	3	755
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	4%		-2%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973		0.986			
Flt Protected	0.962					
Satd. Flow (prot)	1685	0	1722	0	0	1909
Flt Permitted	0.962					
Satd. Flow (perm)	1685	0	1722	0	0	1909
Link Speed (mph)	30		45			45
Link Distance (ft)	519		503			117
Travel Time (s)	11.8		7.6			1.8
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	11%	0%	3%	0%
Adj. Flow (vph)	4	1	99	11	4	899
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	110	0	0	903
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	1	83	9	3	755
Future Vol, veh/h	3	1	83	9	3	755
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	4	-	-2	-	-	-1
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	11	0	3	0
Mvmt Flow	4	1	99	11	4	899

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1012	105	0	0	110	0
Stage 1	105	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Critical Hdwy	7.2	6.6	-	-	4.13	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	6.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.227	-
Pot Cap-1 Maneuver	214	944	-	-	1474	-
Stage 1	903	-	-	-	-	-
Stage 2	325	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	213	944	-	-	1474	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	325	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	264	1474	-
HCM Lane V/C Ratio	-	-	0.018	0.002	-
HCM Control Delay (s)	-	-	18.9	7.4	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	84	0	0	758
Future Volume (vph)	0	0	84	0	0	758
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	2081	0	1644	0	0	1881
Flt Permitted						
Satd. Flow (perm)	2081	0	1644	0	0	1881
Link Speed (mph)	30		45			45
Link Distance (ft)	183		117			236
Travel Time (s)	4.2		1.8			3.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	15%	0%	0%	2%
Adj. Flow (vph)	0	0	91	0	0	824
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	91	0	0	824
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	84	0	0	758
Future Vol, veh/h	0	0	84	0	0	758
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	-2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	15	0	0	2
Mvmt Flow	0	0	91	0	0	824

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	915	91	0	0	91	0
Stage 1	91	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	562	1002	-	-	1517	-
Stage 1	996	-	-	-	-	-
Stage 2	752	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	562	1002	-	-	1517	-
Mov Cap-2 Maneuver	562	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	752	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1517	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	3	64	20	7	752
Future Volume (vph)	6	3	64	20	7	752
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.959		0.968			
Flt Protected	0.966					
Satd. Flow (prot)	1928	0	1643	0	0	1844
Flt Permitted	0.966					
Satd. Flow (perm)	1928	0	1643	0	0	1844
Link Speed (mph)	30		45			45
Link Distance (ft)	182		236			636
Travel Time (s)	4.1		3.6			9.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	15%	0%	0%	2%
Adj. Flow (vph)	7	3	70	22	8	817
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	92	0	0	825
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	3	64	20	7	752
Future Vol, veh/h	6	3	64	20	7	752
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	15	0	0	2
Mvmt Flow	7	3	70	22	8	817

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	914	81	0	0	92	0
Stage 1	81	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	562	1011	-	-	1515	-
Stage 1	1000	-	-	-	-	-
Stage 2	750	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	556	1011	-	-	1515	-
Mov Cap-2 Maneuver	556	-	-	-	-	-
Stage 1	990	-	-	-	-	-
Stage 2	750	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	654	1515	-
HCM Lane V/C Ratio	-	-	0.015	0.005	-
HCM Control Delay (s)	-	-	10.6	7.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	76	113	131	605	256	100
Future Volume (vph)	76	113	131	605	256	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	10	10
Grade (%)	3%			1%	1%	
Storage Length (ft)		0	85		0	75
Storage Lanes		0	1		1	1
Taper Length (ft)			130		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00			
Frt	0.919					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1715	0	1761	2121	1596	1428
Flt Permitted			0.634		0.950	
Satd. Flow (perm)	1715	0	1174	2121	1596	1428
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	118					104
Link Speed (mph)	35			35	30	
Link Distance (ft)	518			589	836	
Travel Time (s)	10.1			11.5	19.0	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	8%	4%	2%	1%	5%	5%
Adj. Flow (vph)	79	118	136	630	267	104
Shared Lane Traffic (%)						
Lane Group Flow (vph)	197	0	136	630	267	104
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.01	0.85	1.10	1.10
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	2
Detector Template	NYSDOT		NYSDOT	NYSDOT	NYSDOT	NYSDOT
Leading Detector (ft)	78		78	78	78	78
Trailing Detector (ft)	-10		-10	-10	-10	-10
Detector 1 Position(ft)	-10		-10	-10	-10	-10
Detector 1 Size(ft)	40		40	40	40	40
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	4.0		4.0	4.0	4.0	4.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	38		38	38	38	38
Detector 2 Size(ft)	40		40	40	40	40
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector 2 Channel						
Detector 2 Extend (s)	4.0		4.0	4.0	4.0	4.0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	15.0		15.0	15.0	10.0	10.0
Total Split (s)	45.0		45.0	45.0	35.0	35.0
Total Split (%)	56.3%		56.3%	56.3%	43.8%	43.8%
Maximum Green (s)	40.0		40.0	40.0	30.0	30.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0
Recall Mode	Min		Min	Min	None	None
Act Effct Green (s)	23.8		23.8	23.8	16.0	16.0
Actuated g/C Ratio	0.47		0.47	0.47	0.32	0.32
v/c Ratio	0.23		0.25	0.63	0.53	0.20
Control Delay	4.7		10.1	13.8	20.1	5.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	4.7		10.1	13.8	20.1	5.1
LOS	A		B	B	C	A
Approach Delay	4.7			13.2	15.9	
Approach LOS	A			B	B	
Queue Length 50th (ft)	11		20	117	58	0
Queue Length 95th (ft)	49		65	286	166	30
Internal Link Dist (ft)	438			509	756	
Turn Bay Length (ft)			85			75
Base Capacity (vph)	1421		958	1730	1024	954
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.14		0.14	0.36	0.26	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 50.7			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 12.7		Intersection LOS: B	
Intersection Capacity Utilization 54.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Connector Road & NY 138





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	76	113	131	605	256	100
Future Volume (veh/h)	76	113	131	605	256	100
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1798	1798	1864	1954	1820	1820
Adj Flow Rate, veh/h	79	118	136	630	267	104
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	2	1	5	5
Cap, veh/h	314	469	673	943	444	396
Arrive On Green	0.48	0.48	0.48	0.48	0.26	0.26
Sat Flow, veh/h	650	971	1181	1954	1733	1542
Grp Volume(v), veh/h	0	197	136	630	267	104
Grp Sat Flow(s),veh/h/ln	0	1622	1181	1954	1733	1542
Q Serve(g_s), s	0.0	2.7	2.9	9.4	5.2	2.1
Cycle Q Clear(g_c), s	0.0	2.7	5.7	9.4	5.2	2.1
Prop In Lane		0.60	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	783	673	943	444	396
V/C Ratio(X)	0.00	0.25	0.20	0.67	0.60	0.26
Avail Cap(c_a), veh/h	0	1692	1336	2039	1356	1207
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	5.8	7.5	7.6	12.5	11.4
Incr Delay (d2), s/veh	0.0	0.2	0.2	1.2	1.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.5	2.5	1.8	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.1	7.7	8.7	14.4	11.9
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h	197			766	371	
Approach Delay, s/veh	6.1			8.6	13.7	
Approach LOS	A			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		23.5		14.8		23.5
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		40.0		30.0		40.0
Max Q Clear Time (g_c+I1), s		11.4		7.2		4.7
Green Ext Time (p_c), s		7.1		2.8		1.5

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	38	89	282	389	118	49
Future Volume (vph)	38	89	282	389	118	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-2%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.922			
Flt Protected	0.950					0.966
Satd. Flow (prot)	1728	1591	1706	0	0	1751
Flt Permitted	0.950					0.966
Satd. Flow (perm)	1728	1591	1706	0	0	1751
Link Speed (mph)	30		45			45
Link Distance (ft)	836		1411			503
Travel Time (s)	19.0		21.4			7.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	2%	6%	2%	6%	2%
Adj. Flow (vph)	41	97	307	423	128	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	97	730	0	0	181
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.1%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	38	89	282	389	118	49
Future Vol, veh/h	38	89	282	389	118	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-2	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	2	6	2	6	2
Mvmt Flow	41	97	307	423	128	53

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	828	519	0	0	730	0
Stage 1	519	-	-	-	-	-
Stage 2	309	-	-	-	-	-
Critical Hdwy	6.25	6.12	-	-	4.16	-
Critical Hdwy Stg 1	5.25	-	-	-	-	-
Critical Hdwy Stg 2	5.25	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.254	-
Pot Cap-1 Maneuver	353	565	-	-	856	-
Stage 1	608	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	299	565	-	-	856	-
Mov Cap-2 Maneuver	299	-	-	-	-	-
Stage 1	514	-	-	-	-	-
Stage 2	751	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	299	565	856	-
HCM Lane V/C Ratio	-	-	0.138	0.171	0.15	-
HCM Control Delay (s)	-	-	19	12.7	9.9	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.6	0.5	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	15	370	8	2	132
Future Volume (vph)	20	15	370	8	2	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	4%		-2%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.943		0.997			
Flt Protected	0.972					0.999
Satd. Flow (prot)	1602	0	1841	0	0	1818
Flt Permitted	0.972					0.999
Satd. Flow (perm)	1602	0	1841	0	0	1818
Link Speed (mph)	30		45			45
Link Distance (ft)	519		503			117
Travel Time (s)	11.8		7.6			1.8
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	7%	4%	0%	0%	5%
Adj. Flow (vph)	23	17	430	9	2	153
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	439	0	0	155
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	15	370	8	2	132
Future Vol, veh/h	20	15	370	8	2	132
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	4	-	-2	-	-	-1
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	7	4	0	0	5
Mvmt Flow	23	17	430	9	2	153

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	592	435	0	0	439	0
Stage 1	435	-	-	-	-	-
Stage 2	157	-	-	-	-	-
Critical Hdwy	7.2	6.67	-	-	4.1	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	6.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	-	-	2.2	-
Pot Cap-1 Maneuver	414	582	-	-	1132	-
Stage 1	596	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	413	582	-	-	1132	-
Mov Cap-2 Maneuver	413	-	-	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	846	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	472	1132	-
HCM Lane V/C Ratio	-	-	0.086	0.002	-
HCM Control Delay (s)	-	-	13.3	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	385	0	0	134
Future Volume (vph)	0	0	385	0	0	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	2081	0	1800	0	0	1793
Flt Permitted						
Satd. Flow (perm)	2081	0	1800	0	0	1793
Link Speed (mph)	30		45			45
Link Distance (ft)	183		117			236
Travel Time (s)	4.2		1.8			3.6
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	5%	10%	0%	7%
Adj. Flow (vph)	0	0	448	0	0	156
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	448	0	0	156
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	385	0	0	134
Future Vol, veh/h	0	0	385	0	0	134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	5	10	0	7
Mvmt Flow	0	0	448	0	0	156

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	604	448	0	0	448	0
Stage 1	448	-	-	-	-	-
Stage 2	156	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	695	714	-	-	1123	-
Stage 1	873	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	695	714	-	-	1123	-
Mov Cap-2 Maneuver	695	-	-	-	-	-
Stage 1	873	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1123	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	23	7	364	21	3	111
Future Volume (vph)	23	7	364	21	3	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.969		0.993			
Flt Protected	0.963					0.999
Satd. Flow (prot)	1942	0	1783	0	0	1759
Flt Permitted	0.963					0.999
Satd. Flow (perm)	1942	0	1783	0	0	1759
Link Speed (mph)	30		45			45
Link Distance (ft)	182		236			636
Travel Time (s)	4.1		3.6			9.6
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	5%	10%	0%	7%
Adj. Flow (vph)	27	8	423	24	3	129
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	0	447	0	0	132
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	7	364	21	3	111
Future Vol, veh/h	23	7	364	21	3	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	5	10	0	7
Mvmt Flow	27	8	423	24	3	129

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	570	435	0	0	447	0
Stage 1	435	-	-	-	-	-
Stage 2	135	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	711	723	-	-	1124	-
Stage 1	878	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	709	723	-	-	1124	-
Mov Cap-2 Maneuver	709	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	712	1124	-
HCM Lane V/C Ratio	-	-	0.049	0.003	-
HCM Control Delay (s)	-	-	10.3	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	97	94	62	187	329	293
Future Volume (vph)	97	94	62	187	329	293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	10	10
Grade (%)	3%			1%	1%	
Storage Length (ft)		0	85		0	75
Storage Lanes		0	1		1	1
Taper Length (ft)			130		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00			
Frt	0.933					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1798	0	1744	2060	1627	1485
Flt Permitted			0.630		0.950	
Satd. Flow (perm)	1798	0	1155	2060	1627	1485
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	87					257
Link Speed (mph)	35			35	30	
Link Distance (ft)	518			589	836	
Travel Time (s)	10.1			11.5	19.0	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	3%	4%	3%	1%
Adj. Flow (vph)	103	100	66	199	350	312
Shared Lane Traffic (%)						
Lane Group Flow (vph)	203	0	66	199	350	312
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.01	0.85	1.10	1.10
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	2
Detector Template	NYSDOT		NYSDOT	NYSDOT	NYSDOT	NYSDOT
Leading Detector (ft)	78		78	78	78	78
Trailing Detector (ft)	-10		-10	-10	-10	-10
Detector 1 Position(ft)	-10		-10	-10	-10	-10
Detector 1 Size(ft)	40		40	40	40	40
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	4.0		4.0	4.0	4.0	4.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	38		38	38	38	38
Detector 2 Size(ft)	40		40	40	40	40
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector 2 Channel						
Detector 2 Extend (s)	4.0		4.0	4.0	4.0	4.0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	15.0		15.0	15.0	10.0	10.0
Total Split (s)	45.0		45.0	45.0	35.0	35.0
Total Split (%)	56.3%		56.3%	56.3%	43.8%	43.8%
Maximum Green (s)	40.0		40.0	40.0	30.0	30.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0
Recall Mode	Min		Min	Min	None	None
Act Effct Green (s)	11.7		11.7	11.7	15.9	15.9
Actuated g/C Ratio	0.31		0.31	0.31	0.42	0.42
v/c Ratio	0.33		0.19	0.31	0.51	0.40
Control Delay	9.0		13.1	13.2	11.1	3.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	9.0		13.1	13.2	11.1	3.7
LOS	A		B	B	B	A
Approach Delay	9.0			13.2	7.6	
Approach LOS	A			B	A	
Queue Length 50th (ft)	16		9	29	45	6
Queue Length 95th (ft)	66		38	88	112	39
Internal Link Dist (ft)	438			509	756	
Turn Bay Length (ft)			85			75
Base Capacity (vph)	1712		1097	1956	1328	1259
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.12		0.06	0.10	0.26	0.25

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 38			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 9.2		Intersection LOS: A	
Intersection Capacity Utilization 50.0%		ICU Level of Service A	
Analysis Period (min) 15			

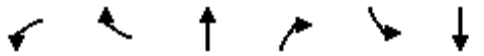
Splits and Phases: 5: Connector Road & NY 138



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	97	94	62	187	329	293
Future Volume (veh/h)	97	94	62	187	329	293
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1875	1875	1850	1908	1850	1879
Adj Flow Rate, veh/h	103	100	66	199	350	312
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	4	3	1
Cap, veh/h	269	261	472	587	677	612
Arrive On Green	0.31	0.31	0.31	0.31	0.38	0.38
Sat Flow, veh/h	873	848	1165	1908	1762	1593
Grp Volume(v), veh/h	0	203	66	199	350	312
Grp Sat Flow(s),veh/h/ln	0	1720	1165	1908	1762	1593
Q Serve(g_s), s	0.0	3.0	1.5	2.6	5.0	4.9
Cycle Q Clear(g_c), s	0.0	3.0	4.5	2.6	5.0	4.9
Prop In Lane		0.49	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	530	472	587	677	612
V/C Ratio(X)	0.00	0.38	0.14	0.34	0.52	0.51
Avail Cap(c_a), veh/h	0	2118	1548	2350	1627	1471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	8.8	10.6	8.7	7.7	7.7
Incr Delay (d2), s/veh	0.0	0.6	0.2	0.5	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.3	0.8	1.3	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	9.5	10.8	9.2	8.6	8.6
LnGrp LOS	A	A	B	A	A	A
Approach Vol, veh/h	203			265	662	
Approach Delay, s/veh	9.5			9.6	8.6	
Approach LOS	A			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		15.0		17.5		15.0
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		40.0		30.0		40.0
Max Q Clear Time (g_c+I1), s		6.5		7.0		5.0
Green Ext Time (p_c), s		2.0		5.6		1.6

Intersection Summary	
HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	34	80	111	271	104	50
Future Volume (vph)	34	80	111	271	104	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-2%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.904			
Flt Protected	0.950					0.967
Satd. Flow (prot)	1761	1591	1684	0	0	1743
Flt Permitted	0.950					0.967
Satd. Flow (perm)	1761	1591	1684	0	0	1743
Link Speed (mph)	30		45			45
Link Distance (ft)	836		1411			503
Travel Time (s)	19.0		21.4			7.6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	3%	3%	8%	0%
Adj. Flow (vph)	36	85	118	288	111	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	85	406	0	0	164
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	80	111	271	104	50
Future Vol, veh/h	34	80	111	271	104	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-2	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	2	3	3	8	0
Mvmt Flow	36	85	118	288	111	53

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	537	262	0	0	406	0
Stage 1	262	-	-	-	-	-
Stage 2	275	-	-	-	-	-
Critical Hdwy	6.23	6.12	-	-	4.18	-
Critical Hdwy Stg 1	5.23	-	-	-	-	-
Critical Hdwy Stg 2	5.23	-	-	-	-	-
Follow-up Hdwy	3.527	3.318	-	-	2.272	-
Pot Cap-1 Maneuver	518	782	-	-	1121	-
Stage 1	791	-	-	-	-	-
Stage 2	781	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	465	782	-	-	1121	-
Mov Cap-2 Maneuver	465	-	-	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	781	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	5.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	465	782	1121	-
HCM Lane V/C Ratio	-	-	0.078	0.109	0.099	-
HCM Control Delay (s)	-	-	13.4	10.2	8.6	0
HCM Lane LOS	-	-	B	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.4	0.3	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	7	186	5	1	147
Future Volume (vph)	7	7	186	5	1	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	4%		-2%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932		0.997			
Flt Protected	0.976					
Satd. Flow (prot)	1530	0	1895	0	0	1843
Flt Permitted	0.976					
Satd. Flow (perm)	1530	0	1895	0	0	1843
Link Speed (mph)	30		45			45
Link Distance (ft)	519		503			117
Travel Time (s)	11.8		7.6			1.8
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	14%	0%	1%	0%	100%	3%
Adj. Flow (vph)	7	7	196	5	1	155
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	201	0	0	156
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	7	186	5	1	147
Future Vol, veh/h	7	7	186	5	1	147
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	4	-	-2	-	-	-1
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	14	0	1	0	100	3
Mvmt Flow	7	7	196	5	1	155

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	356	199	0	0	201	0
Stage 1	199	-	-	-	-	-
Stage 2	157	-	-	-	-	-
Critical Hdwy	7.34	6.6	-	-	5.1	-
Critical Hdwy Stg 1	6.34	-	-	-	-	-
Critical Hdwy Stg 2	6.34	-	-	-	-	-
Follow-up Hdwy	3.626	3.3	-	-	3.1	-
Pot Cap-1 Maneuver	572	829	-	-	951	-
Stage 1	772	-	-	-	-	-
Stage 2	814	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	571	829	-	-	951	-
Mov Cap-2 Maneuver	571	-	-	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	814	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	676	951	-
HCM Lane V/C Ratio	-	-	0.022	0.001	-
HCM Control Delay (s)	-	-	10.4	8.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	193	0	0	148
Future Volume (vph)	0	0	193	0	0	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	2081	0	1872	0	0	1828
Flt Permitted						
Satd. Flow (perm)	2081	0	1872	0	0	1828
Link Speed (mph)	30		45			45
Link Distance (ft)	183		117			236
Travel Time (s)	4.2		1.8			3.6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	1%	0%	0%	5%
Adj. Flow (vph)	0	0	217	0	0	166
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	217	0	0	166
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	193	0	0	148
Future Vol, veh/h	0	0	193	0	0	148
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	-2
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	1	0	0	5
Mvmt Flow	0	0	217	0	0	166

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	383	217	0	0	217	0
Stage 1	217	-	-	-	-	-
Stage 2	166	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	805	890	-	-	1365	-
Stage 1	952	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	805	890	-	-	1365	-
Mov Cap-2 Maneuver	805	-	-	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	970	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1365	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	5	176	17	4	135
Future Volume (vph)	13	5	176	17	4	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.961		0.988			
Flt Protected	0.966					0.999
Satd. Flow (prot)	1932	0	1851	0	0	1792
Flt Permitted	0.966					0.999
Satd. Flow (perm)	1932	0	1851	0	0	1792
Link Speed (mph)	30		45			45
Link Distance (ft)	182		236			636
Travel Time (s)	4.1		3.6			9.6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	1%	0%	0%	5%
Adj. Flow (vph)	15	6	198	19	4	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	217	0	0	156
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	5	176	17	4	135
Future Vol, veh/h	13	5	176	17	4	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	2
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	1	0	0	5
Mvmt Flow	15	6	198	19	4	152

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	368	208	0	0	217	0
Stage 1	208	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	813	898	-	-	1365	-
Stage 1	955	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	811	898	-	-	1365	-
Mov Cap-2 Maneuver	811	-	-	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	972	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	833	1365	-
HCM Lane V/C Ratio	-	-	0.024	0.003	-
HCM Control Delay (s)	-	-	9.4	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	50	85	88	155	228	237
Future Volume (vph)	50	85	88	155	228	237
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	10	10
Grade (%)	3%			1%	1%	
Storage Length (ft)		0	85		0	75
Storage Lanes		0	1		1	1
Taper Length (ft)			130		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00	
Frt	0.915					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1802	0	1796	2121	1612	1456
Flt Permitted			0.667		0.950	
Satd. Flow (perm)	1802	0	1261	2121	1610	1456
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	89					247
Link Speed (mph)	35			35	30	
Link Distance (ft)	518			589	836	
Travel Time (s)	10.1			11.5	19.0	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	1%	0%	1%	4%	3%
Adj. Flow (vph)	52	89	92	161	238	247
Shared Lane Traffic (%)						
Lane Group Flow (vph)	141	0	92	161	238	247
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.01	0.85	1.10	1.10
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	2
Detector Template	NYSDOT		NYSDOT	NYSDOT	NYSDOT	NYSDOT
Leading Detector (ft)	78		78	78	78	78
Trailing Detector (ft)	-10		-10	-10	-10	-10
Detector 1 Position(ft)	-10		-10	-10	-10	-10
Detector 1 Size(ft)	40		40	40	40	40
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	4.0		4.0	4.0	4.0	4.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	38		38	38	38	38
Detector 2 Size(ft)	40		40	40	40	40
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector 2 Channel						
Detector 2 Extend (s)	4.0		4.0	4.0	4.0	4.0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	15.0		15.0	15.0	10.0	10.0
Total Split (s)	45.0		45.0	45.0	35.0	35.0
Total Split (%)	56.3%		56.3%	56.3%	43.8%	43.8%
Maximum Green (s)	40.0		40.0	40.0	30.0	30.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0
Recall Mode	Min		Min	Min	None	None
Act Effct Green (s)	10.8		10.8	10.8	12.0	12.0
Actuated g/C Ratio	0.33		0.33	0.33	0.36	0.36
v/c Ratio	0.22		0.22	0.23	0.41	0.36
Control Delay	5.6		10.8	10.1	10.2	3.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	5.6		10.8	10.1	10.2	3.1
LOS	A		B	B	B	A
Approach Delay	5.6			10.3	6.6	
Approach LOS	A			B	A	
Queue Length 50th (ft)	6		11	19	27	0
Queue Length 95th (ft)	34		39	57	72	27
Internal Link Dist (ft)	438			509	756	
Turn Bay Length (ft)			85			75
Base Capacity (vph)	1790		1252	2107	1467	1347
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.08		0.07	0.08	0.16	0.18

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 33			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.41			
Intersection Signal Delay: 7.5		Intersection LOS: A	
Intersection Capacity Utilization 41.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Connector Road & NY 138





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	50	85	88	155	228	237
Future Volume (veh/h)	50	85	88	155	228	237
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1890	1890	1894	1954	1835	1850
Adj Flow Rate, veh/h	52	89	92	161	238	247
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	0	1	4	3
Cap, veh/h	212	363	597	662	563	505
Arrive On Green	0.34	0.34	0.34	0.34	0.32	0.32
Sat Flow, veh/h	626	1071	1263	1954	1747	1568
Grp Volume(v), veh/h	0	141	92	161	238	247
Grp Sat Flow(s),veh/h/ln	0	1697	1263	1954	1747	1568
Q Serve(g_s), s	0.0	1.8	1.7	1.8	3.2	3.7
Cycle Q Clear(g_c), s	0.0	1.8	3.4	1.8	3.2	3.7
Prop In Lane		0.63	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	575	597	662	563	505
V/C Ratio(X)	0.00	0.25	0.15	0.24	0.42	0.49
Avail Cap(c_a), veh/h	0	2301	1881	2649	1777	1594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.0	8.3	7.0	7.8	8.0
Incr Delay (d2), s/veh	0.0	0.3	0.2	0.3	0.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.4	0.3	0.5	0.8	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	7.3	8.4	7.3	8.6	9.1
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	141			253	485	
Approach Delay, s/veh	7.3			7.7	8.8	
Approach LOS	A			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		15.0		14.5		15.0
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		40.0		30.0		40.0
Max Q Clear Time (g_c+I1), s		5.4		5.7		3.8
Green Ext Time (p_c), s		1.9		3.9		1.1

Intersection Summary	
HCM 6th Ctrl Delay	8.3
HCM 6th LOS	A



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	131	66	50	192	206	545
Future Volume (vph)	131	66	50	192	206	545
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-2%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.893			
Flt Protected	0.950					0.986
Satd. Flow (prot)	1728	1503	1581	0	0	1806
Flt Permitted	0.950					0.986
Satd. Flow (perm)	1728	1503	1581	0	0	1806
Link Speed (mph)	30		45			45
Link Distance (ft)	836		1411			503
Travel Time (s)	19.0		21.4			7.6
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	8%	6%	9%	3%	4%
Adj. Flow (vph)	162	81	62	237	254	673
Shared Lane Traffic (%)						
Lane Group Flow (vph)	162	81	299	0	0	927
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.8%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	33.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	131	66	50	192	206	545
Future Vol, veh/h	131	66	50	192	206	545
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-2	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	5	8	6	9	3	4
Mvmt Flow	162	81	62	237	254	673

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1362	181	0	0	299	0
Stage 1	181	-	-	-	-	-
Stage 2	1181	-	-	-	-	-
Critical Hdwy	6.25	6.18	-	-	4.13	-
Critical Hdwy Stg 1	5.25	-	-	-	-	-
Critical Hdwy Stg 2	5.25	-	-	-	-	-
Follow-up Hdwy	3.545	3.372	-	-	2.227	-
Pot Cap-1 Maneuver	173	851	-	-	1256	-
Stage 1	851	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 117	851	-	-	1256	-
Mov Cap-2 Maneuver	~ 117	-	-	-	-	-
Stage 1	576	-	-	-	-	-
Stage 2	307	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	192.6	0	2.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	117	851	1256	-
HCM Lane V/C Ratio	-	-	1.382	0.096	0.202	-
HCM Control Delay (s)	-	-	284.7	9.7	8.6	0
HCM Lane LOS	-	-	F	A	A	A
HCM 95th %tile Q(veh)	-	-	11.1	0.3	0.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	1	101	9	3	790
Future Volume (vph)	3	1	101	9	3	790
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	4%		-2%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973		0.989			
Flt Protected	0.962					
Satd. Flow (prot)	1685	0	1724	0	0	1909
Flt Permitted	0.962					
Satd. Flow (perm)	1685	0	1724	0	0	1909
Link Speed (mph)	30		45			45
Link Distance (ft)	519		503			117
Travel Time (s)	11.8		7.6			1.8
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	11%	0%	3%	0%
Adj. Flow (vph)	4	1	120	11	4	940
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	131	0	0	944
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	1	101	9	3	790
Future Vol, veh/h	3	1	101	9	3	790
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	4	-	-2	-	-	-1
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	11	0	3	0
Mvmt Flow	4	1	120	11	4	940

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1074	126	0	0	131	0
Stage 1	126	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Critical Hdwy	7.2	6.6	-	-	4.13	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	6.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.227	-
Pot Cap-1 Maneuver	193	917	-	-	1448	-
Stage 1	880	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	192	917	-	-	1448	-
Mov Cap-2 Maneuver	192	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	308	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	239	1448	-
HCM Lane V/C Ratio	-	-	0.02	0.002	-
HCM Control Delay (s)	-	-	20.4	7.5	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	102	0	0	793
Future Volume (vph)	0	0	102	0	0	793
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	2081	0	1644	0	0	1881
Flt Permitted						
Satd. Flow (perm)	2081	0	1644	0	0	1881
Link Speed (mph)	30		45			45
Link Distance (ft)	183		117			236
Travel Time (s)	4.2		1.8			3.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	15%	0%	0%	2%
Adj. Flow (vph)	0	0	111	0	0	862
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	111	0	0	862
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	102	0	0	793
Future Vol, veh/h	0	0	102	0	0	793
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	-2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	15	0	0	2
Mvmt Flow	0	0	111	0	0	862

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	973	111	0	0	111	0
Stage 1	111	-	-	-	-	-
Stage 2	862	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	540	983	-	-	1492	-
Stage 1	989	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	540	983	-	-	1492	-
Mov Cap-2 Maneuver	540	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	741	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1492	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	3	82	20	7	787
Future Volume (vph)	6	3	82	20	7	787
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.959		0.973			
Flt Protected	0.966					
Satd. Flow (prot)	1928	0	1642	0	0	1844
Flt Permitted	0.966					
Satd. Flow (perm)	1928	0	1642	0	0	1844
Link Speed (mph)	30		45			45
Link Distance (ft)	182		236			636
Travel Time (s)	4.1		3.6			9.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	15%	0%	0%	2%
Adj. Flow (vph)	7	3	89	22	8	855
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	111	0	0	863
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	3	82	20	7	787
Future Vol, veh/h	6	3	82	20	7	787
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	15	0	0	2
Mvmt Flow	7	3	89	22	8	855

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	971	100	0	0	111	0
Stage 1	100	-	-	-	-	-
Stage 2	871	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	540	994	-	-	1492	-
Stage 1	993	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	535	994	-	-	1492	-
Mov Cap-2 Maneuver	535	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	738	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	632	1492	-
HCM Lane V/C Ratio	-	-	0.015	0.005	-
HCM Control Delay (s)	-	-	10.8	7.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	77	125	157	614	272	119
Future Volume (vph)	77	125	157	614	272	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	10	10
Grade (%)	3%			1%	1%	
Storage Length (ft)		0	85		0	75
Storage Lanes		0	1		1	1
Taper Length (ft)			130		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00			
Frt	0.916					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1710	0	1761	2121	1596	1428
Flt Permitted			0.626		0.950	
Satd. Flow (perm)	1710	0	1159	2121	1596	1428
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	130					124
Link Speed (mph)	35			35	30	
Link Distance (ft)	518			589	836	
Travel Time (s)	10.1			11.5	19.0	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	8%	4%	2%	1%	5%	5%
Adj. Flow (vph)	80	130	164	640	283	124
Shared Lane Traffic (%)						
Lane Group Flow (vph)	210	0	164	640	283	124
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.01	0.85	1.10	1.10
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	2
Detector Template	NYSDOT		NYSDOT	NYSDOT	NYSDOT	NYSDOT
Leading Detector (ft)	78		78	78	78	78
Trailing Detector (ft)	-10		-10	-10	-10	-10
Detector 1 Position(ft)	-10		-10	-10	-10	-10
Detector 1 Size(ft)	40		40	40	40	40
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	4.0		4.0	4.0	4.0	4.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	38		38	38	38	38
Detector 2 Size(ft)	40		40	40	40	40
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector 2 Channel						
Detector 2 Extend (s)	4.0		4.0	4.0	4.0	4.0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	15.0		15.0	15.0	10.0	10.0
Total Split (s)	45.0		45.0	45.0	35.0	35.0
Total Split (%)	56.3%		56.3%	56.3%	43.8%	43.8%
Maximum Green (s)	40.0		40.0	40.0	30.0	30.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0
Recall Mode	Min		Min	Min	None	None
Act Effct Green (s)	24.3		24.3	24.3	16.8	16.8
Actuated g/C Ratio	0.47		0.47	0.47	0.32	0.32
v/c Ratio	0.24		0.30	0.64	0.55	0.23
Control Delay	4.7		11.1	14.4	20.7	4.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	4.7		11.1	14.4	20.7	4.9
LOS	A		B	B	C	A
Approach Delay	4.7			13.8	15.9	
Approach LOS	A			B	B	
Queue Length 50th (ft)	11		26	123	64	0
Queue Length 95th (ft)	52		80	303	176	33
Internal Link Dist (ft)	438			509	756	
Turn Bay Length (ft)			85			75
Base Capacity (vph)	1390		924	1692	1003	944
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.15		0.18	0.38	0.28	0.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 52			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 13.0		Intersection LOS: B	
Intersection Capacity Utilization 55.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: Connector Road & NY 138



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	77	125	157	614	272	119
Future Volume (veh/h)	77	125	157	614	272	119
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1798	1798	1864	1954	1820	1820
Adj Flow Rate, veh/h	80	130	164	640	283	124
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	2	1	5	5
Cap, veh/h	299	485	655	948	463	412
Arrive On Green	0.49	0.49	0.49	0.49	0.27	0.27
Sat Flow, veh/h	616	1001	1167	1954	1733	1542
Grp Volume(v), veh/h	0	210	164	640	283	124
Grp Sat Flow(s),veh/h/ln	0	1616	1167	1954	1733	1542
Q Serve(g_s), s	0.0	3.1	3.9	10.1	5.8	2.6
Cycle Q Clear(g_c), s	0.0	3.1	7.0	10.1	5.8	2.6
Prop In Lane		0.62	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	784	655	948	463	412
V/C Ratio(X)	0.00	0.27	0.25	0.67	0.61	0.30
Avail Cap(c_a), veh/h	0	1601	1245	1937	1288	1146
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	6.1	8.2	8.0	13.0	11.8
Incr Delay (d2), s/veh	0.0	0.3	0.3	1.2	1.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.7	2.8	2.0	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.4	8.5	9.2	14.8	12.4
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h	210			804	407	
Approach Delay, s/veh	6.4			9.0	14.1	
Approach LOS	A			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		24.6		15.8		24.6
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		40.0		30.0		40.0
Max Q Clear Time (g_c+I1), s		12.1		7.8		5.1
Green Ext Time (p_c), s		7.5		3.1		1.7

Intersection Summary	
HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	53	117	288	405	140	53
Future Volume (vph)	53	117	288	405	140	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-2%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.921			
Flt Protected	0.950					0.965
Satd. Flow (prot)	1728	1591	1705	0	0	1748
Flt Permitted	0.950					0.965
Satd. Flow (perm)	1728	1591	1705	0	0	1748
Link Speed (mph)	30		45			45
Link Distance (ft)	836		1411			503
Travel Time (s)	19.0		21.4			7.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	2%	6%	2%	6%	2%
Adj. Flow (vph)	58	127	313	440	152	58
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	127	753	0	0	210
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 63.9%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	53	117	288	405	140	53
Future Vol, veh/h	53	117	288	405	140	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-2	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	2	6	2	6	2
Mvmt Flow	58	127	313	440	152	58

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	895	533	0	0	753	0
Stage 1	533	-	-	-	-	-
Stage 2	362	-	-	-	-	-
Critical Hdwy	6.25	6.12	-	-	4.16	-
Critical Hdwy Stg 1	5.25	-	-	-	-	-
Critical Hdwy Stg 2	5.25	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.254	-
Pot Cap-1 Maneuver	323	555	-	-	839	-
Stage 1	600	-	-	-	-	-
Stage 2	712	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	263	555	-	-	839	-
Mov Cap-2 Maneuver	263	-	-	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	712	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.2	0	7.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	263	555	839	-
HCM Lane V/C Ratio	-	-	0.219	0.229	0.181	-
HCM Control Delay (s)	-	-	22.5	13.4	10.2	0
HCM Lane LOS	-	-	C	B	B	A
HCM 95th %tile Q(veh)	-	-	0.8	0.9	0.7	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	15	405	8	2	157
Future Volume (vph)	20	15	405	8	2	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	4%		-2%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.943		0.997			
Flt Protected	0.972					0.999
Satd. Flow (prot)	1602	0	1841	0	0	1818
Flt Permitted	0.972					0.999
Satd. Flow (perm)	1602	0	1841	0	0	1818
Link Speed (mph)	30		45			45
Link Distance (ft)	519		503			117
Travel Time (s)	11.8		7.6			1.8
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	7%	4%	0%	0%	5%
Adj. Flow (vph)	23	17	471	9	2	183
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	480	0	0	185
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	15	405	8	2	157
Future Vol, veh/h	20	15	405	8	2	157
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	4	-	-2	-	-	-1
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	7	4	0	0	5
Mvmt Flow	23	17	471	9	2	183

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	663	476	0	0	480	0
Stage 1	476	-	-	-	-	-
Stage 2	187	-	-	-	-	-
Critical Hdwy	7.2	6.67	-	-	4.1	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	6.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	-	-	2.2	-
Pot Cap-1 Maneuver	371	549	-	-	1093	-
Stage 1	566	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	370	549	-	-	1093	-
Mov Cap-2 Maneuver	370	-	-	-	-	-
Stage 1	565	-	-	-	-	-
Stage 2	815	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	430	1093	-
HCM Lane V/C Ratio	-	-	0.095	0.002	-
HCM Control Delay (s)	-	-	14.2	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	420	0	0	159
Future Volume (vph)	0	0	420	0	0	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	2081	0	1800	0	0	1793
Flt Permitted						
Satd. Flow (perm)	2081	0	1800	0	0	1793
Link Speed (mph)	30		45			45
Link Distance (ft)	183		117			236
Travel Time (s)	4.2		1.8			3.6
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	5%	10%	0%	7%
Adj. Flow (vph)	0	0	488	0	0	185
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	488	0	0	185
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

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

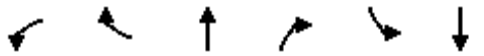
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	420	0	0	159
Future Vol, veh/h	0	0	420	0	0	159
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	5	10	0	7
Mvmt Flow	0	0	488	0	0	185

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	673	488	0	0	488	0
Stage 1	488	-	-	-	-	-
Stage 2	185	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	663	687	-	-	1086	-
Stage 1	860	-	-	-	-	-
Stage 2	963	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	663	687	-	-	1086	-
Mov Cap-2 Maneuver	663	-	-	-	-	-
Stage 1	860	-	-	-	-	-
Stage 2	963	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1086	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	23	7	399	21	3	136
Future Volume (vph)	23	7	399	21	3	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.969		0.993			
Flt Protected	0.963					0.999
Satd. Flow (prot)	1942	0	1784	0	0	1758
Flt Permitted	0.963					0.999
Satd. Flow (perm)	1942	0	1784	0	0	1758
Link Speed (mph)	30		45			45
Link Distance (ft)	182		236			636
Travel Time (s)	4.1		3.6			9.6
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	5%	10%	0%	7%
Adj. Flow (vph)	27	8	464	24	3	158
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	0	488	0	0	161
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	7	399	21	3	136
Future Vol, veh/h	23	7	399	21	3	136
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	5	10	0	7
Mvmt Flow	27	8	464	24	3	158

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	640	476	0	0	488	0
Stage 1	476	-	-	-	-	-
Stage 2	164	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	678	695	-	-	1086	-
Stage 1	864	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	676	695	-	-	1086	-
Mov Cap-2 Maneuver	676	-	-	-	-	-
Stage 1	861	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	680	1086	-
HCM Lane V/C Ratio	-	-	0.051	0.003	-
HCM Control Delay (s)	-	-	10.6	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	98	107	86	190	349	325
Future Volume (vph)	98	107	86	190	349	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	10	10
Grade (%)	3%			1%	1%	
Storage Length (ft)		0	85		0	75
Storage Lanes		0	1		1	1
Taper Length (ft)			130		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00			
Frt	0.929					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1790	0	1744	2060	1627	1485
Flt Permitted			0.622		0.950	
Satd. Flow (perm)	1790	0	1141	2060	1627	1485
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	99					269
Link Speed (mph)	35			35	30	
Link Distance (ft)	518			589	836	
Travel Time (s)	10.1			11.5	19.0	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	3%	4%	3%	1%
Adj. Flow (vph)	104	114	91	202	371	346
Shared Lane Traffic (%)						
Lane Group Flow (vph)	218	0	91	202	371	346
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.01	0.85	1.10	1.10
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	2
Detector Template	NYSDOT		NYSDOT	NYSDOT	NYSDOT	NYSDOT
Leading Detector (ft)	78		78	78	78	78
Trailing Detector (ft)	-10		-10	-10	-10	-10
Detector 1 Position(ft)	-10		-10	-10	-10	-10
Detector 1 Size(ft)	40		40	40	40	40
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	4.0		4.0	4.0	4.0	4.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	38		38	38	38	38
Detector 2 Size(ft)	40		40	40	40	40
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector 2 Channel						
Detector 2 Extend (s)	4.0		4.0	4.0	4.0	4.0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	15.0		15.0	15.0	10.0	10.0
Total Split (s)	45.0		45.0	45.0	35.0	35.0
Total Split (%)	56.3%		56.3%	56.3%	43.8%	43.8%
Maximum Green (s)	40.0		40.0	40.0	30.0	30.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0
Recall Mode	Min		Min	Min	None	None
Act Effct Green (s)	11.8		11.8	11.8	17.1	17.1
Actuated g/C Ratio	0.30		0.30	0.30	0.44	0.44
v/c Ratio	0.36		0.27	0.33	0.53	0.43
Control Delay	9.4		14.8	14.0	11.1	4.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	9.4		14.8	14.0	11.1	4.0
LOS	A		B	B	B	A
Approach Delay	9.4			14.2	7.6	
Approach LOS	A			B	A	
Queue Length 50th (ft)	18		14	32	49	8
Queue Length 95th (ft)	72		52	94	119	45
Internal Link Dist (ft)	438			509	756	
Turn Bay Length (ft)			85			75
Base Capacity (vph)	1686		1071	1934	1289	1232
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.13		0.08	0.10	0.29	0.28

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 39.3			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 51.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Connector Road & NY 138



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	98	107	86	190	349	325
Future Volume (veh/h)	98	107	86	190	349	325
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1875	1875	1850	1908	1850	1879
Adj Flow Rate, veh/h	104	114	91	202	371	346
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	4	3	1
Cap, veh/h	244	268	440	571	712	644
Arrive On Green	0.30	0.30	0.30	0.30	0.40	0.40
Sat Flow, veh/h	817	895	1149	1908	1762	1593
Grp Volume(v), veh/h	0	218	91	202	371	346
Grp Sat Flow(s),veh/h/ln	0	1712	1149	1908	1762	1593
Q Serve(g_s), s	0.0	3.4	2.3	2.8	5.4	5.6
Cycle Q Clear(g_c), s	0.0	3.4	5.8	2.8	5.4	5.6
Prop In Lane		0.52	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	512	440	571	712	644
V/C Ratio(X)	0.00	0.43	0.21	0.35	0.52	0.54
Avail Cap(c_a), veh/h	0	2033	1461	2267	1569	1419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	9.5	11.8	9.3	7.6	7.6
Incr Delay (d2), s/veh	0.0	0.8	0.3	0.5	0.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	0.5	0.9	1.4	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	10.3	12.1	9.8	8.4	8.6
LnGrp LOS	A	B	B	A	A	A
Approach Vol, veh/h	218			293	717	
Approach Delay, s/veh	10.3			10.5	8.5	
Approach LOS	B			B	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		15.1		18.6		15.1
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		40.0		30.0		40.0
Max Q Clear Time (g_c+I1), s		7.8		7.6		5.4
Green Ext Time (p_c), s		2.3		6.1		1.7

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	42	90	115	284	117	53
Future Volume (vph)	42	90	115	284	117	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-2%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.904			
Flt Protected	0.950					0.967
Satd. Flow (prot)	1761	1591	1684	0	0	1741
Flt Permitted	0.950					0.967
Satd. Flow (perm)	1761	1591	1684	0	0	1741
Link Speed (mph)	30		45			45
Link Distance (ft)	836		1411			503
Travel Time (s)	19.0		21.4			7.6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	3%	3%	8%	0%
Adj. Flow (vph)	45	96	122	302	124	56
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	96	424	0	0	180
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	90	115	284	117	53
Future Vol, veh/h	42	90	115	284	117	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-2	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	2	3	3	8	0
Mvmt Flow	45	96	122	302	124	56

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	577	273	0	0	424	0
Stage 1	273	-	-	-	-	-
Stage 2	304	-	-	-	-	-
Critical Hdwy	6.23	6.12	-	-	4.18	-
Critical Hdwy Stg 1	5.23	-	-	-	-	-
Critical Hdwy Stg 2	5.23	-	-	-	-	-
Follow-up Hdwy	3.527	3.318	-	-	2.272	-
Pot Cap-1 Maneuver	492	772	-	-	1104	-
Stage 1	782	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	435	772	-	-	1104	-
Mov Cap-2 Maneuver	435	-	-	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	759	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	435	772	1104	-
HCM Lane V/C Ratio	-	-	0.103	0.124	0.113	-
HCM Control Delay (s)	-	-	14.2	10.3	8.7	0
HCM Lane LOS	-	-	B	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.4	0.4	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	7	201	5	1	162
Future Volume (vph)	7	7	201	5	1	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	4%		-2%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932		0.997			
Flt Protected	0.976					
Satd. Flow (prot)	1530	0	1895	0	0	1844
Flt Permitted	0.976					
Satd. Flow (perm)	1530	0	1895	0	0	1844
Link Speed (mph)	30		45			45
Link Distance (ft)	519		503			117
Travel Time (s)	11.8		7.6			1.8
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	14%	0%	1%	0%	100%	3%
Adj. Flow (vph)	7	7	212	5	1	171
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	217	0	0	172
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.9%		ICU Level of Service A	
Analysis Period (min) 15			

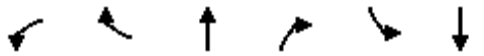
Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	7	201	5	1	162
Future Vol, veh/h	7	7	201	5	1	162
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	4	-	-2	-	-	-1
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	14	0	1	0	100	3
Mvmt Flow	7	7	212	5	1	171

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	388	215	0	0	217	0
Stage 1	215	-	-	-	-	-
Stage 2	173	-	-	-	-	-
Critical Hdwy	7.34	6.6	-	-	5.1	-
Critical Hdwy Stg 1	6.34	-	-	-	-	-
Critical Hdwy Stg 2	6.34	-	-	-	-	-
Follow-up Hdwy	3.626	3.3	-	-	3.1	-
Pot Cap-1 Maneuver	544	810	-	-	936	-
Stage 1	756	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	543	810	-	-	936	-
Mov Cap-2 Maneuver	543	-	-	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	798	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	650	936	-
HCM Lane V/C Ratio	-	-	0.023	0.001	-
HCM Control Delay (s)	-	-	10.7	8.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	208	0	0	163
Future Volume (vph)	0	0	208	0	0	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	2081	0	1872	0	0	1828
Flt Permitted						
Satd. Flow (perm)	2081	0	1872	0	0	1828
Link Speed (mph)	30		45			45
Link Distance (ft)	183		117			236
Travel Time (s)	4.2		1.8			3.6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	1%	0%	0%	5%
Adj. Flow (vph)	0	0	234	0	0	183
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	234	0	0	183
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.3%		ICU Level of Service A	
Analysis Period (min) 15			

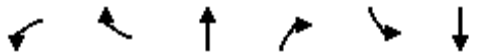
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	208	0	0	163
Future Vol, veh/h	0	0	208	0	0	163
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	-2
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	1	0	0	5
Mvmt Flow	0	0	234	0	0	183

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	417	234	0	0	234	0
Stage 1	234	-	-	-	-	-
Stage 2	183	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	787	876	-	-	1345	-
Stage 1	946	-	-	-	-	-
Stage 2	964	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	787	876	-	-	1345	-
Mov Cap-2 Maneuver	787	-	-	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	964	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1345	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	5	191	17	4	150
Future Volume (vph)	13	5	191	17	4	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.961		0.989			
Flt Protected	0.966					0.999
Satd. Flow (prot)	1932	0	1853	0	0	1792
Flt Permitted	0.966					0.999
Satd. Flow (perm)	1932	0	1853	0	0	1792
Link Speed (mph)	30		45			45
Link Distance (ft)	182		236			636
Travel Time (s)	4.1		3.6			9.6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	1%	0%	0%	5%
Adj. Flow (vph)	15	6	215	19	4	169
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	234	0	0	173
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	5	191	17	4	150
Future Vol, veh/h	13	5	191	17	4	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	2
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	1	0	0	5
Mvmt Flow	15	6	215	19	4	169

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	402	225	0	0	234	0
Stage 1	225	-	-	-	-	-
Stage 2	177	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	795	883	-	-	1345	-
Stage 1	949	-	-	-	-	-
Stage 2	966	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	793	883	-	-	1345	-
Mov Cap-2 Maneuver	793	-	-	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	966	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	816	1345	-
HCM Lane V/C Ratio	-	-	0.025	0.003	-
HCM Control Delay (s)	-	-	9.5	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	51	93	102	157	239	253
Future Volume (vph)	51	93	102	157	239	253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	10	10
Grade (%)	3%			1%	1%	
Storage Length (ft)		0	85		0	75
Storage Lanes		0	1		1	1
Taper Length (ft)			130		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00	
Frt	0.913					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1798	0	1796	2121	1612	1456
Flt Permitted			0.662		0.950	
Satd. Flow (perm)	1798	0	1252	2121	1610	1456
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	97					264
Link Speed (mph)	35			35	30	
Link Distance (ft)	518			589	836	
Travel Time (s)	10.1			11.5	19.0	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	1%	0%	1%	4%	3%
Adj. Flow (vph)	53	97	106	164	249	264
Shared Lane Traffic (%)						
Lane Group Flow (vph)	150	0	106	164	249	264
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.01	0.85	1.10	1.10
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	2
Detector Template	NYSDOT		NYSDOT	NYSDOT	NYSDOT	NYSDOT
Leading Detector (ft)	78		78	78	78	78
Trailing Detector (ft)	-10		-10	-10	-10	-10
Detector 1 Position(ft)	-10		-10	-10	-10	-10
Detector 1 Size(ft)	40		40	40	40	40
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	4.0		4.0	4.0	4.0	4.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	38		38	38	38	38
Detector 2 Size(ft)	40		40	40	40	40
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector 2 Channel						
Detector 2 Extend (s)	4.0		4.0	4.0	4.0	4.0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	15.0		15.0	15.0	10.0	10.0
Total Split (s)	45.0		45.0	45.0	35.0	35.0
Total Split (%)	56.3%		56.3%	56.3%	43.8%	43.8%
Maximum Green (s)	40.0		40.0	40.0	30.0	30.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0
Recall Mode	Min		Min	Min	None	None
Act Effct Green (s)	11.2		11.2	11.2	12.5	12.5
Actuated g/C Ratio	0.33		0.33	0.33	0.37	0.37
v/c Ratio	0.23		0.26	0.23	0.42	0.38
Control Delay	5.6		11.5	10.4	10.5	3.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	5.6		11.5	10.4	10.5	3.1
LOS	A		B	B	B	A
Approach Delay	5.6			10.8	6.7	
Approach LOS	A			B	A	
Queue Length 50th (ft)	6		13	20	29	0
Queue Length 95th (ft)	37		47	61	79	29
Internal Link Dist (ft)	438			509	756	
Turn Bay Length (ft)			85			75
Base Capacity (vph)	1764		1227	2079	1439	1329
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.09		0.09	0.08	0.17	0.20

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 33.9			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 7.7		Intersection LOS: A	
Intersection Capacity Utilization 42.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Connector Road & NY 138





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	51	93	102	157	239	253
Future Volume (veh/h)	51	93	102	157	239	253
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1890	1890	1894	1954	1835	1850
Adj Flow Rate, veh/h	53	97	106	164	249	264
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	0	1	4	3
Cap, veh/h	199	364	574	649	587	526
Arrive On Green	0.33	0.33	0.33	0.33	0.34	0.34
Sat Flow, veh/h	598	1095	1253	1954	1747	1568
Grp Volume(v), veh/h	0	150	106	164	249	264
Grp Sat Flow(s),veh/h/ln	0	1693	1253	1954	1747	1568
Q Serve(g_s), s	0.0	2.0	2.0	1.8	3.3	4.1
Cycle Q Clear(g_c), s	0.0	2.0	4.0	1.8	3.3	4.1
Prop In Lane		0.65	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	562	574	649	587	526
V/C Ratio(X)	0.00	0.27	0.18	0.25	0.42	0.50
Avail Cap(c_a), veh/h	0	2249	1823	2597	1741	1562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.4	8.8	7.3	7.7	8.0
Incr Delay (d2), s/veh	0.0	0.4	0.2	0.3	0.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	0.4	0.5	0.9	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	7.7	9.0	7.6	8.4	9.0
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	150			270	513	
Approach Delay, s/veh	7.7			8.2	8.8	
Approach LOS	A			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		15.0		15.1		15.0
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		40.0		30.0		40.0
Max Q Clear Time (g_c+I1), s		6.0		6.1		4.0
Green Ext Time (p_c), s		2.1		4.2		1.1

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	131	81	64	192	211	549
Future Volume (vph)	131	81	64	192	211	549
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-2%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.899			
Flt Protected	0.950					0.986
Satd. Flow (prot)	1728	1503	1594	0	0	1806
Flt Permitted	0.950					0.986
Satd. Flow (perm)	1728	1503	1594	0	0	1806
Link Speed (mph)	30		45			45
Link Distance (ft)	836		1411			503
Travel Time (s)	19.0		21.4			7.6
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	8%	6%	9%	3%	4%
Adj. Flow (vph)	162	100	79	237	260	678
Shared Lane Traffic (%)						
Lane Group Flow (vph)	162	100	316	0	0	938
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 73.0%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	36.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	131	81	64	192	211	549
Future Vol, veh/h	131	81	64	192	211	549
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-2	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	5	8	6	9	3	4
Mvmt Flow	162	100	79	237	260	678

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1396	198	0	0	316	0
Stage 1	198	-	-	-	-	-
Stage 2	1198	-	-	-	-	-
Critical Hdwy	6.25	6.18	-	-	4.13	-
Critical Hdwy Stg 1	5.25	-	-	-	-	-
Critical Hdwy Stg 2	5.25	-	-	-	-	-
Follow-up Hdwy	3.545	3.372	-	-	2.227	-
Pot Cap-1 Maneuver	166	833	-	-	1239	-
Stage 1	837	-	-	-	-	-
Stage 2	301	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 110	833	-	-	1239	-
Mov Cap-2 Maneuver	~ 110	-	-	-	-	-
Stage 1	555	-	-	-	-	-
Stage 2	301	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	204.5	0	2.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	110	833	1239	-
HCM Lane V/C Ratio	-	-	1.47	0.12	0.21	-
HCM Control Delay (s)	-	-	$ 324.8	9.9	8.7	0
HCM Lane LOS	-	-	F	A	A	A
HCM 95th %tile Q(veh)	-	-	11.7	0.4	0.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	1	130	9	3	799
Future Volume (vph)	3	1	130	9	3	799
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	4%		-2%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973		0.991			
Flt Protected	0.962					
Satd. Flow (prot)	1685	0	1725	0	0	1909
Flt Permitted	0.962					
Satd. Flow (perm)	1685	0	1725	0	0	1909
Link Speed (mph)	30		45			45
Link Distance (ft)	519		503			117
Travel Time (s)	11.8		7.6			1.8
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	11%	0%	3%	0%
Adj. Flow (vph)	4	1	155	11	4	951
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	166	0	0	955
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.4%		ICU Level of Service A	
Analysis Period (min) 15			

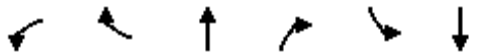
Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	1	130	9	3	799
Future Vol, veh/h	3	1	130	9	3	799
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	4	-	-2	-	-	-1
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	11	0	3	0
Mvmt Flow	4	1	155	11	4	951

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1120	161	0	0	166	0
Stage 1	161	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Critical Hdwy	7.2	6.6	-	-	4.13	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	6.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.227	-
Pot Cap-1 Maneuver	180	873	-	-	1406	-
Stage 1	842	-	-	-	-	-
Stage 2	303	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	179	873	-	-	1406	-
Mov Cap-2 Maneuver	179	-	-	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	303	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	223	1406	-
HCM Lane V/C Ratio	-	-	0.021	0.003	-
HCM Control Delay (s)	-	-	21.5	7.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	2	109	22	6	795
Future Volume (vph)	7	2	109	22	6	795
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973		0.977			
Flt Protected	0.962					
Satd. Flow (prot)	1948	0	1642	0	0	1882
Flt Permitted	0.962					
Satd. Flow (perm)	1948	0	1642	0	0	1882
Link Speed (mph)	30		45			45
Link Distance (ft)	183		117			236
Travel Time (s)	4.2		1.8			3.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	15%	0%	0%	2%
Adj. Flow (vph)	8	2	118	24	7	864
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	142	0	0	871
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.6%		ICU Level of Service B	
Analysis Period (min) 15			

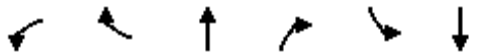
Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	2	109	22	6	795
Future Vol, veh/h	7	2	109	22	6	795
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	-2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	15	0	0	2
Mvmt Flow	8	2	118	24	7	864

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1008	130	0	0	142	0
Stage 1	130	-	-	-	-	-
Stage 2	878	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	526	966	-	-	1453	-
Stage 1	983	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	521	966	-	-	1453	-
Mov Cap-2 Maneuver	521	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	736	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	580	1453	-
HCM Lane V/C Ratio	-	-	0.017	0.004	-
HCM Control Delay (s)	-	-	11.3	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	4	84	27	9	793
Future Volume (vph)	8	4	84	27	9	793
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.958		0.967			
Flt Protected	0.967					0.999
Satd. Flow (prot)	1928	0	1641	0	0	1843
Flt Permitted	0.967					0.999
Satd. Flow (perm)	1928	0	1641	0	0	1843
Link Speed (mph)	30		45			45
Link Distance (ft)	182		236			636
Travel Time (s)	4.1		3.6			9.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	15%	0%	0%	2%
Adj. Flow (vph)	9	4	91	29	10	862
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	120	0	0	872
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	4	84	27	9	793
Future Vol, veh/h	8	4	84	27	9	793
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	15	0	0	2
Mvmt Flow	9	4	91	29	10	862

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	988	106	0	0	120	0
Stage 1	106	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	534	988	-	-	1480	-
Stage 1	991	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	527	988	-	-	1480	-
Mov Cap-2 Maneuver	527	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	624	1480	-
HCM Lane V/C Ratio	-	-	0.021	0.007	-
HCM Control Delay (s)	-	-	10.9	7.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	77	134	163	614	275	121
Future Volume (vph)	77	134	163	614	275	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	10	10
Grade (%)	3%			1%	1%	
Storage Length (ft)		0	85		0	75
Storage Lanes		0	1		1	1
Taper Length (ft)			130		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00			
Frt	0.914					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1707	0	1761	2121	1596	1428
Flt Permitted			0.621		0.950	
Satd. Flow (perm)	1707	0	1150	2121	1596	1428
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	140					126
Link Speed (mph)	35			35	30	
Link Distance (ft)	518			555	836	
Travel Time (s)	10.1			10.8	19.0	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	8%	4%	2%	1%	5%	5%
Adj. Flow (vph)	80	140	170	640	286	126
Shared Lane Traffic (%)						
Lane Group Flow (vph)	220	0	170	640	286	126
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.01	0.85	1.10	1.10
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	2
Detector Template	NYSDOT		NYSDOT	NYSDOT	NYSDOT	NYSDOT
Leading Detector (ft)	78		78	78	78	78
Trailing Detector (ft)	-10		-10	-10	-10	-10
Detector 1 Position(ft)	-10		-10	-10	-10	-10
Detector 1 Size(ft)	40		40	40	40	40
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	4.0		4.0	4.0	4.0	4.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	38		38	38	38	38
Detector 2 Size(ft)	40		40	40	40	40
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector 2 Channel						
Detector 2 Extend (s)	4.0		4.0	4.0	4.0	4.0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	15.0		15.0	15.0	10.0	10.0
Total Split (s)	45.0		45.0	45.0	35.0	35.0
Total Split (%)	56.3%		56.3%	56.3%	43.8%	43.8%
Maximum Green (s)	40.0		40.0	40.0	30.0	30.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0
Recall Mode	Min		Min	Min	None	None
Act Effct Green (s)	24.4		24.4	24.4	16.9	16.9
Actuated g/C Ratio	0.47		0.47	0.47	0.32	0.32
v/c Ratio	0.25		0.32	0.65	0.56	0.23
Control Delay	4.6		11.3	14.5	20.8	4.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	4.6		11.3	14.5	20.8	4.9
LOS	A		B	B	C	A
Approach Delay	4.6			13.8	15.9	
Approach LOS	A			B	B	
Queue Length 50th (ft)	11		27	124	65	0
Queue Length 95th (ft)	53		84	305	179	33
Internal Link Dist (ft)	438			475	756	
Turn Bay Length (ft)			85			75
Base Capacity (vph)	1386		914	1687	1000	942
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.16		0.19	0.38	0.29	0.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 52.2			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 13.0		Intersection LOS: B	
Intersection Capacity Utilization 55.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: Connector Road & NY 138





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	77	134	163	614	275	121
Future Volume (veh/h)	77	134	163	614	275	121
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1798	1798	1864	1954	1820	1820
Adj Flow Rate, veh/h	80	140	170	640	286	126
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	2	1	5	5
Cap, veh/h	284	498	644	948	466	415
Arrive On Green	0.49	0.49	0.49	0.49	0.27	0.27
Sat Flow, veh/h	586	1026	1157	1954	1733	1542
Grp Volume(v), veh/h	0	220	170	640	286	126
Grp Sat Flow(s),veh/h/ln	0	1612	1157	1954	1733	1542
Q Serve(g_s), s	0.0	3.3	4.2	10.2	5.9	2.6
Cycle Q Clear(g_c), s	0.0	3.3	7.5	10.2	5.9	2.6
Prop In Lane		0.64	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	782	644	948	466	415
V/C Ratio(X)	0.00	0.28	0.26	0.67	0.61	0.30
Avail Cap(c_a), veh/h	0	1585	1221	1922	1279	1138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	6.2	8.5	8.0	13.0	11.8
Incr Delay (d2), s/veh	0.0	0.3	0.3	1.2	1.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.8	2.9	2.1	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.5	8.8	9.2	14.9	12.4
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h	220			810	412	
Approach Delay, s/veh	6.5			9.1	14.1	
Approach LOS	A			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		24.7		15.9		24.7
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		40.0		30.0		40.0
Max Q Clear Time (g_c+I1), s		12.2		7.9		5.3
Green Ext Time (p_c), s		7.5		3.2		1.8

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



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	53	135	305	405	152	65
Future Volume (vph)	53	135	305	405	152	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-2%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.923			
Flt Protected	0.950					0.966
Satd. Flow (prot)	1728	1591	1708	0	0	1751
Flt Permitted	0.950					0.966
Satd. Flow (perm)	1728	1591	1708	0	0	1751
Link Speed (mph)	30		45			45
Link Distance (ft)	836		1411			503
Travel Time (s)	19.0		21.4			7.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	2%	6%	2%	6%	2%
Adj. Flow (vph)	58	147	332	440	165	71
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	147	772	0	0	236
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	53	135	305	405	152	65
Future Vol, veh/h	53	135	305	405	152	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-2	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	2	6	2	6	2
Mvmt Flow	58	147	332	440	165	71

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	953	552	0	0	772	0
Stage 1	552	-	-	-	-	-
Stage 2	401	-	-	-	-	-
Critical Hdwy	6.25	6.12	-	-	4.16	-
Critical Hdwy Stg 1	5.25	-	-	-	-	-
Critical Hdwy Stg 2	5.25	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.254	-
Pot Cap-1 Maneuver	299	542	-	-	825	-
Stage 1	589	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	237	542	-	-	825	-
Mov Cap-2 Maneuver	237	-	-	-	-	-
Stage 1	466	-	-	-	-	-
Stage 2	685	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.2	0	7.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	237	542	825	-
HCM Lane V/C Ratio	-	-	0.243	0.271	0.2	-
HCM Control Delay (s)	-	-	25	14.1	10.5	0
HCM Lane LOS	-	-	D	B	B	A
HCM 95th %tile Q(veh)	-	-	0.9	1.1	0.7	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	15	440	8	2	181
Future Volume (vph)	20	15	440	8	2	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	4%		-2%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.943		0.998			
Flt Protected	0.972					
Satd. Flow (prot)	1602	0	1843	0	0	1819
Flt Permitted	0.972					
Satd. Flow (perm)	1602	0	1843	0	0	1819
Link Speed (mph)	30		45			45
Link Distance (ft)	519		503			117
Travel Time (s)	11.8		7.6			1.8
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	7%	4%	0%	0%	5%
Adj. Flow (vph)	23	17	512	9	2	210
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	521	0	0	212
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	15	440	8	2	181
Future Vol, veh/h	20	15	440	8	2	181
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	4	-	-2	-	-	-1
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	7	4	0	0	5
Mvmt Flow	23	17	512	9	2	210

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	731	517	0	0	521	0
Stage 1	517	-	-	-	-	-
Stage 2	214	-	-	-	-	-
Critical Hdwy	7.2	6.67	-	-	4.1	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	6.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	-	-	2.2	-
Pot Cap-1 Maneuver	333	518	-	-	1056	-
Stage 1	537	-	-	-	-	-
Stage 2	788	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	332	518	-	-	1056	-
Mov Cap-2 Maneuver	332	-	-	-	-	-
Stage 1	536	-	-	-	-	-
Stage 2	788	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	392	1056	-
HCM Lane V/C Ratio	-	-	0.104	0.002	-
HCM Control Delay (s)	-	-	15.2	8.4	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	5	429	26	8	165
Future Volume (vph)	18	5	429	26	8	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.970		0.992			
Flt Protected	0.963					0.998
Satd. Flow (prot)	1944	0	1781	0	0	1795
Flt Permitted	0.963					0.998
Satd. Flow (perm)	1944	0	1781	0	0	1795
Link Speed (mph)	30		45			45
Link Distance (ft)	183		117			236
Travel Time (s)	4.2		1.8			3.6
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	5%	10%	0%	7%
Adj. Flow (vph)	21	6	499	30	9	192
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	529	0	0	201
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.2%		ICU Level of Service A	
Analysis Period (min) 15			

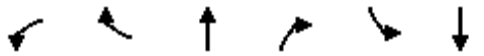
Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	5	429	26	8	165
Future Vol, veh/h	18	5	429	26	8	165
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	5	10	0	7
Mvmt Flow	21	6	499	30	9	192

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	724	514	0	0	529	0
Stage 1	514	-	-	-	-	-
Stage 2	210	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	641	670	-	-	1048	-
Stage 1	852	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	635	670	-	-	1048	-
Mov Cap-2 Maneuver	635	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	955	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	642	1048	-
HCM Lane V/C Ratio	-	-	0.042	0.009	-
HCM Control Delay (s)	-	-	10.9	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	29	9	404	30	6	144
Future Volume (vph)	29	9	404	30	6	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.969		0.991			
Flt Protected	0.963					0.998
Satd. Flow (prot)	1942	0	1778	0	0	1759
Flt Permitted	0.963					0.998
Satd. Flow (perm)	1942	0	1778	0	0	1759
Link Speed (mph)	30		45			45
Link Distance (ft)	182		236			636
Travel Time (s)	4.1		3.6			9.6
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	5%	10%	0%	7%
Adj. Flow (vph)	34	10	470	35	7	167
Shared Lane Traffic (%)						
Lane Group Flow (vph)	44	0	505	0	0	174
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	9	404	30	6	144
Future Vol, veh/h	29	9	404	30	6	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	5	10	0	7
Mvmt Flow	34	10	470	35	7	167

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	669	488	0	0	505	0
Stage 1	488	-	-	-	-	-
Stage 2	181	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	665	687	-	-	1070	-
Stage 1	860	-	-	-	-	-
Stage 2	965	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	660	687	-	-	1070	-
Mov Cap-2 Maneuver	660	-	-	-	-	-
Stage 1	854	-	-	-	-	-
Stage 2	965	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	666	1070	-
HCM Lane V/C Ratio	-	-	0.066	0.007	-
HCM Control Delay (s)	-	-	10.8	8.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	98	117	94	190	356	330
Future Volume (vph)	98	117	94	190	356	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	10	10
Grade (%)	3%			1%	1%	
Storage Length (ft)		0	85		0	75
Storage Lanes		0	1		1	1
Taper Length (ft)			130		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00			
Frt	0.927					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1786	0	1744	2060	1627	1485
Flt Permitted			0.616		0.950	
Satd. Flow (perm)	1786	0	1130	2060	1627	1485
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	107					267
Link Speed (mph)	35			35	30	
Link Distance (ft)	518			589	836	
Travel Time (s)	10.1			11.5	19.0	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	3%	4%	3%	1%
Adj. Flow (vph)	104	124	100	202	379	351
Shared Lane Traffic (%)						
Lane Group Flow (vph)	228	0	100	202	379	351
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.01	0.85	1.10	1.10
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	2
Detector Template	NYSDOT		NYSDOT	NYSDOT	NYSDOT	NYSDOT
Leading Detector (ft)	78		78	78	78	78
Trailing Detector (ft)	-10		-10	-10	-10	-10
Detector 1 Position(ft)	-10		-10	-10	-10	-10
Detector 1 Size(ft)	40		40	40	40	40
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	4.0		4.0	4.0	4.0	4.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	38		38	38	38	38
Detector 2 Size(ft)	40		40	40	40	40
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector 2 Channel						
Detector 2 Extend (s)	4.0		4.0	4.0	4.0	4.0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	15.0		15.0	15.0	10.0	10.0
Total Split (s)	45.0		45.0	45.0	35.0	35.0
Total Split (%)	56.3%		56.3%	56.3%	43.8%	43.8%
Maximum Green (s)	40.0		40.0	40.0	30.0	30.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0
Recall Mode	Min		Min	Min	None	None
Act Effct Green (s)	12.0		12.0	12.0	17.3	17.3
Actuated g/C Ratio	0.30		0.30	0.30	0.44	0.44
v/c Ratio	0.37		0.29	0.33	0.53	0.44
Control Delay	9.3		15.4	14.1	11.2	4.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	9.3		15.4	14.1	11.2	4.1
LOS	A		B	B	B	A
Approach Delay	9.3			14.5	7.8	
Approach LOS	A			B	A	
Queue Length 50th (ft)	19		16	33	51	9
Queue Length 95th (ft)	74		58	95	125	47
Internal Link Dist (ft)	438			509	756	
Turn Bay Length (ft)			85			75
Base Capacity (vph)	1675		1056	1924	1280	1225
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.14		0.09	0.10	0.30	0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 39.7			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 9.7		Intersection LOS: A	
Intersection Capacity Utilization 52.9%		ICU Level of Service A	
Analysis Period (min) 15			

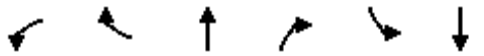
Splits and Phases: 5: Connector Road & NY 138



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	98	117	94	190	356	330
Future Volume (veh/h)	98	117	94	190	356	330
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1875	1875	1850	1908	1850	1879
Adj Flow Rate, veh/h	104	124	100	202	379	351
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	4	3	1
Cap, veh/h	241	287	438	590	710	642
Arrive On Green	0.31	0.31	0.31	0.31	0.40	0.40
Sat Flow, veh/h	778	928	1139	1908	1762	1593
Grp Volume(v), veh/h	0	228	100	202	379	351
Grp Sat Flow(s),veh/h/ln	0	1706	1139	1908	1762	1593
Q Serve(g_s), s	0.0	3.7	2.7	2.8	5.7	5.9
Cycle Q Clear(g_c), s	0.0	3.7	6.4	2.8	5.7	5.9
Prop In Lane		0.54	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	528	438	590	710	642
V/C Ratio(X)	0.00	0.43	0.23	0.34	0.53	0.55
Avail Cap(c_a), veh/h	0	1963	1396	2196	1520	1375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	9.6	12.1	9.3	7.9	7.9
Incr Delay (d2), s/veh	0.0	0.8	0.4	0.5	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	0.5	0.9	1.6	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	10.4	12.5	9.8	8.8	9.0
LnGrp LOS	A	B	B	A	A	A
Approach Vol, veh/h	228			302	730	
Approach Delay, s/veh	10.4			10.7	8.9	
Approach LOS	B			B	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		15.8		19.0		15.8
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		40.0		30.0		40.0
Max Q Clear Time (g_c+I1), s		8.4		7.9		5.7
Green Ext Time (p_c), s		2.4		6.2		1.8

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	42	102	126	284	128	63
Future Volume (vph)	42	102	126	284	128	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-2%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.906			
Flt Protected	0.950					0.968
Satd. Flow (prot)	1761	1591	1688	0	0	1746
Flt Permitted	0.950					0.968
Satd. Flow (perm)	1761	1591	1688	0	0	1746
Link Speed (mph)	30		45			45
Link Distance (ft)	836		1411			503
Travel Time (s)	19.0		21.4			7.6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	3%	3%	8%	0%
Adj. Flow (vph)	45	109	134	302	136	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	109	436	0	0	203
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	102	126	284	128	63
Future Vol, veh/h	42	102	126	284	128	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-2	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	2	3	3	8	0
Mvmt Flow	45	109	134	302	136	67

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	624	285	0	0	436	0
Stage 1	285	-	-	-	-	-
Stage 2	339	-	-	-	-	-
Critical Hdwy	6.23	6.12	-	-	4.18	-
Critical Hdwy Stg 1	5.23	-	-	-	-	-
Critical Hdwy Stg 2	5.23	-	-	-	-	-
Follow-up Hdwy	3.527	3.318	-	-	2.272	-
Pot Cap-1 Maneuver	463	760	-	-	1092	-
Stage 1	773	-	-	-	-	-
Stage 2	733	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	403	760	-	-	1092	-
Mov Cap-2 Maneuver	403	-	-	-	-	-
Stage 1	673	-	-	-	-	-
Stage 2	733	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	5.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	403	760	1092	-
HCM Lane V/C Ratio	-	-	0.111	0.143	0.125	-
HCM Control Delay (s)	-	-	15	10.5	8.8	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.5	0.4	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	7	224	5	1	183
Future Volume (vph)	7	7	224	5	1	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	4%		-2%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932		0.997			
Flt Protected	0.976					
Satd. Flow (prot)	1530	0	1895	0	0	1845
Flt Permitted	0.976					
Satd. Flow (perm)	1530	0	1895	0	0	1845
Link Speed (mph)	30		45			45
Link Distance (ft)	519		503			117
Travel Time (s)	11.8		7.6			1.8
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	14%	0%	1%	0%	100%	3%
Adj. Flow (vph)	7	7	236	5	1	193
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	241	0	0	194
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	7	224	5	1	183
Future Vol, veh/h	7	7	224	5	1	183
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	4	-	-2	-	-	-1
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	14	0	1	0	100	3
Mvmt Flow	7	7	236	5	1	193

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	434	239	0	0	241	0
Stage 1	239	-	-	-	-	-
Stage 2	195	-	-	-	-	-
Critical Hdwy	7.34	6.6	-	-	5.1	-
Critical Hdwy Stg 1	6.34	-	-	-	-	-
Critical Hdwy Stg 2	6.34	-	-	-	-	-
Follow-up Hdwy	3.626	3.3	-	-	3.1	-
Pot Cap-1 Maneuver	506	784	-	-	914	-
Stage 1	733	-	-	-	-	-
Stage 2	776	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	505	784	-	-	914	-
Mov Cap-2 Maneuver	505	-	-	-	-	-
Stage 1	732	-	-	-	-	-
Stage 2	776	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	614	914	-
HCM Lane V/C Ratio	-	-	0.024	0.001	-
HCM Control Delay (s)	-	-	11	8.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	5	214	17	5	168
Future Volume (vph)	16	5	214	17	5	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.966		0.990			
Flt Protected	0.964					0.998
Satd. Flow (prot)	1938	0	1854	0	0	1827
Flt Permitted	0.964					0.998
Satd. Flow (perm)	1938	0	1854	0	0	1827
Link Speed (mph)	30		45			45
Link Distance (ft)	183		117			236
Travel Time (s)	4.2		1.8			3.6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	1%	0%	0%	5%
Adj. Flow (vph)	18	6	240	19	6	189
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	259	0	0	195
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.9%		ICU Level of Service A	
Analysis Period (min) 15			

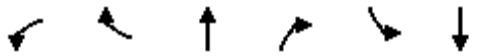
Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	5	214	17	5	168
Future Vol, veh/h	16	5	214	17	5	168
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	-2
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	1	0	0	5
Mvmt Flow	18	6	240	19	6	189

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	451	250	0	0	259	0
Stage 1	250	-	-	-	-	-
Stage 2	201	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	770	863	-	-	1317	-
Stage 1	941	-	-	-	-	-
Stage 2	958	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	766	863	-	-	1317	-
Mov Cap-2 Maneuver	766	-	-	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	958	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	787	1317	-
HCM Lane V/C Ratio	-	-	0.03	0.004	-
HCM Control Delay (s)	-	-	9.7	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	7	196	23	6	155
Future Volume (vph)	18	7	196	23	6	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.961		0.986			
Flt Protected	0.966					0.998
Satd. Flow (prot)	1932	0	1848	0	0	1791
Flt Permitted	0.966					0.998
Satd. Flow (perm)	1932	0	1848	0	0	1791
Link Speed (mph)	30		45			45
Link Distance (ft)	182		236			636
Travel Time (s)	4.1		3.6			9.6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	1%	0%	0%	5%
Adj. Flow (vph)	20	8	220	26	7	174
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	246	0	0	181
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	7	196	23	6	155
Future Vol, veh/h	18	7	196	23	6	155
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	2
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	1	0	0	5
Mvmt Flow	20	8	220	26	7	174

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	421	233	0	0	246	0
Stage 1	233	-	-	-	-	-
Stage 2	188	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	785	877	-	-	1332	-
Stage 1	947	-	-	-	-	-
Stage 2	962	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	780	877	-	-	1332	-
Mov Cap-2 Maneuver	780	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	962	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	805	1332	-
HCM Lane V/C Ratio	-	-	0.035	0.005	-
HCM Control Delay (s)	-	-	9.6	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	51	100	107	157	245	258
Future Volume (vph)	51	100	107	157	245	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	10	10
Grade (%)	3%			1%	1%	
Storage Length (ft)		0	85		0	75
Storage Lanes		0	1		1	1
Taper Length (ft)			130		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00	
Frt	0.911					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1795	0	1796	2121	1612	1456
Flt Permitted			0.657		0.950	
Satd. Flow (perm)	1795	0	1242	2121	1610	1456
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	104					269
Link Speed (mph)	35			35	30	
Link Distance (ft)	518			589	836	
Travel Time (s)	10.1			11.5	19.0	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	1%	0%	1%	4%	3%
Adj. Flow (vph)	53	104	111	164	255	269
Shared Lane Traffic (%)						
Lane Group Flow (vph)	157	0	111	164	255	269
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.01	0.85	1.10	1.10
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	2
Detector Template	NYSDOT		NYSDOT	NYSDOT	NYSDOT	NYSDOT
Leading Detector (ft)	78		78	78	78	78
Trailing Detector (ft)	-10		-10	-10	-10	-10
Detector 1 Position(ft)	-10		-10	-10	-10	-10
Detector 1 Size(ft)	40		40	40	40	40
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	4.0		4.0	4.0	4.0	4.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	38		38	38	38	38
Detector 2 Size(ft)	40		40	40	40	40
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector 2 Channel						
Detector 2 Extend (s)	4.0		4.0	4.0	4.0	4.0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	15.0		15.0	15.0	10.0	10.0
Total Split (s)	45.0		45.0	45.0	35.0	35.0
Total Split (%)	56.3%		56.3%	56.3%	43.8%	43.8%
Maximum Green (s)	40.0		40.0	40.0	30.0	30.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0
Recall Mode	Min		Min	Min	None	None
Act Effct Green (s)	11.3		11.3	11.3	12.6	12.6
Actuated g/C Ratio	0.33		0.33	0.33	0.37	0.37
v/c Ratio	0.24		0.27	0.23	0.43	0.38
Control Delay	5.5		11.7	10.4	10.6	3.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	5.5		11.7	10.4	10.6	3.2
LOS	A		B	B	B	A
Approach Delay	5.5			10.9	6.8	
Approach LOS	A			B	A	
Queue Length 50th (ft)	6		14	20	30	0
Queue Length 95th (ft)	38		49	62	82	30
Internal Link Dist (ft)	438			509	756	
Turn Bay Length (ft)			85			75
Base Capacity (vph)	1756		1213	2072	1431	1322
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.09		0.09	0.08	0.18	0.20

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 34.2			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 7.8		Intersection LOS: A	
Intersection Capacity Utilization 43.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Connector Road & NY 138



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	51	100	107	157	245	258
Future Volume (veh/h)	51	100	107	157	245	258
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1890	1890	1894	1954	1835	1850
Adj Flow Rate, veh/h	53	104	111	164	255	269
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	0	1	4	3
Cap, veh/h	188	369	563	645	595	533
Arrive On Green	0.33	0.33	0.33	0.33	0.34	0.34
Sat Flow, veh/h	570	1119	1245	1954	1747	1568
Grp Volume(v), veh/h	0	157	111	164	255	269
Grp Sat Flow(s),veh/h/ln	0	1689	1245	1954	1747	1568
Q Serve(g_s), s	0.0	2.1	2.2	1.9	3.4	4.1
Cycle Q Clear(g_c), s	0.0	2.1	4.3	1.9	3.4	4.1
Prop In Lane		0.66	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	557	563	645	595	533
V/C Ratio(X)	0.00	0.28	0.20	0.25	0.43	0.50
Avail Cap(c_a), veh/h	0	2228	1795	2579	1729	1551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.5	9.1	7.4	7.7	8.0
Incr Delay (d2), s/veh	0.0	0.4	0.2	0.3	0.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	0.4	0.5	0.9	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	7.9	9.3	7.7	8.4	9.0
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	157			275	524	
Approach Delay, s/veh	7.9			8.4	8.7	
Approach LOS	A			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		15.0		15.3		15.0
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		40.0		30.0		40.0
Max Q Clear Time (g_c+I1), s		6.3		6.1		4.1
Green Ext Time (p_c), s		2.1		4.3		1.2

Intersection Summary	
HCM 6th Ctrl Delay	8.5
HCM 6th LOS	A



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	131	92	75	192	216	554
Future Volume (vph)	131	92	75	192	216	554
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-2%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.903			
Flt Protected	0.950					0.986
Satd. Flow (prot)	1728	1503	1602	0	0	1806
Flt Permitted	0.950					0.986
Satd. Flow (perm)	1728	1503	1602	0	0	1806
Link Speed (mph)	30		45			45
Link Distance (ft)	836		1411			503
Travel Time (s)	19.0		21.4			7.6
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	8%	6%	9%	3%	4%
Adj. Flow (vph)	162	114	93	237	267	684
Shared Lane Traffic (%)						
Lane Group Flow (vph)	162	114	330	0	0	951
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 74.1%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	41.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	131	92	75	192	216	554
Future Vol, veh/h	131	92	75	192	216	554
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-2	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	5	8	6	9	3	4
Mvmt Flow	162	114	93	237	267	684

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1430	212	0	0	330	0
Stage 1	212	-	-	-	-	-
Stage 2	1218	-	-	-	-	-
Critical Hdwy	6.25	6.18	-	-	4.13	-
Critical Hdwy Stg 1	5.25	-	-	-	-	-
Critical Hdwy Stg 2	5.25	-	-	-	-	-
Follow-up Hdwy	3.545	3.372	-	-	2.227	-
Pot Cap-1 Maneuver	~ 158	818	-	-	1224	-
Stage 1	826	-	-	-	-	-
Stage 2	295	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 102	818	-	-	1224	-
Mov Cap-2 Maneuver	~ 102	-	-	-	-	-
Stage 1	535	-	-	-	-	-
Stage 2	295	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	226.4	0	2.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	102	818	1224	-
HCM Lane V/C Ratio	-	-	1.586	0.139	0.218	-
HCM Control Delay (s)	-	-	$ 378.3	10.1	8.8	0
HCM Lane LOS	-	-	F	B	A	A
HCM 95th %tile Q(veh)	-	-	12.4	0.5	0.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	1	152	9	3	809
Future Volume (vph)	3	1	152	9	3	809
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	4%		-2%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973		0.992			
Flt Protected	0.962					
Satd. Flow (prot)	1685	0	1725	0	0	1909
Flt Permitted	0.962					
Satd. Flow (perm)	1685	0	1725	0	0	1909
Link Speed (mph)	30		45			45
Link Distance (ft)	519		503			117
Travel Time (s)	11.8		7.6			1.8
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	11%	0%	3%	0%
Adj. Flow (vph)	4	1	181	11	4	963
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	192	0	0	967
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	1	152	9	3	809
Future Vol, veh/h	3	1	152	9	3	809
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	4	-	-2	-	-	-1
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	11	0	3	0
Mvmt Flow	4	1	181	11	4	963

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1158	187	0	0	192	0
Stage 1	187	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Critical Hdwy	7.2	6.6	-	-	4.13	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	6.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.227	-
Pot Cap-1 Maneuver	169	843	-	-	1375	-
Stage 1	815	-	-	-	-	-
Stage 2	299	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	168	843	-	-	1375	-
Mov Cap-2 Maneuver	168	-	-	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	299	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	210	1375	-
HCM Lane V/C Ratio	-	-	0.023	0.003	-
HCM Control Delay (s)	-	-	22.5	7.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	6	120	33	15	800
Future Volume (vph)	12	6	120	33	15	800
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.953		0.971			
Flt Protected	0.969					0.999
Satd. Flow (prot)	1922	0	1643	0	0	1880
Flt Permitted	0.969					0.999
Satd. Flow (perm)	1922	0	1643	0	0	1880
Link Speed (mph)	30		45			45
Link Distance (ft)	183		117			236
Travel Time (s)	4.2		1.8			3.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	15%	0%	0%	2%
Adj. Flow (vph)	13	7	130	36	16	870
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	166	0	0	886
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 64.1%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	6	120	33	15	800
Future Vol, veh/h	12	6	120	33	15	800
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	-2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	15	0	0	2
Mvmt Flow	13	7	130	36	16	870

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1050	148	0	0	166	0
Stage 1	148	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	511	950	-	-	1424	-
Stage 1	976	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	500	950	-	-	1424	-
Mov Cap-2 Maneuver	500	-	-	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	728	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	594	1424	-
HCM Lane V/C Ratio	-	-	0.033	0.011	-
HCM Control Delay (s)	-	-	11.3	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	5	88	38	12	802
Future Volume (vph)	13	5	88	38	12	802
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.964		0.960			
Flt Protected	0.964					0.999
Satd. Flow (prot)	1934	0	1642	0	0	1843
Flt Permitted	0.964					0.999
Satd. Flow (perm)	1934	0	1642	0	0	1843
Link Speed (mph)	30		45			45
Link Distance (ft)	182		236			636
Travel Time (s)	4.1		3.6			9.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	15%	0%	0%	2%
Adj. Flow (vph)	14	5	96	41	13	872
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	137	0	0	885
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.8%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	5	88	38	12	802
Future Vol, veh/h	13	5	88	38	12	802
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	15	0	0	2
Mvmt Flow	14	5	96	41	13	872

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1015	117	0	0	137	0
Stage 1	117	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	524	978	-	-	1459	-
Stage 1	987	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	515	978	-	-	1459	-
Mov Cap-2 Maneuver	515	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	730	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	593	1459	-
HCM Lane V/C Ratio	-	-	0.033	0.009	-
HCM Control Delay (s)	-	-	11.3	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	77	140	168	614	278	132
Future Volume (vph)	77	140	168	614	278	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	10	10
Grade (%)	3%			1%	1%	
Storage Length (ft)		0	85		0	75
Storage Lanes		0	1		1	1
Taper Length (ft)			130		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00			
Frt	0.913					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1706	0	1761	2121	1596	1428
Flt Permitted			0.617		0.950	
Satd. Flow (perm)	1706	0	1143	2121	1596	1428
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	146					137
Link Speed (mph)	35			35	30	
Link Distance (ft)	518			555	836	
Travel Time (s)	10.1			10.8	19.0	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	8%	4%	2%	1%	5%	5%
Adj. Flow (vph)	80	146	175	640	290	138
Shared Lane Traffic (%)						
Lane Group Flow (vph)	226	0	175	640	290	138
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.01	0.85	1.10	1.10
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	2
Detector Template	NYSDOT		NYSDOT	NYSDOT	NYSDOT	NYSDOT
Leading Detector (ft)	78		78	78	78	78
Trailing Detector (ft)	-10		-10	-10	-10	-10
Detector 1 Position(ft)	-10		-10	-10	-10	-10
Detector 1 Size(ft)	40		40	40	40	40
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	4.0		4.0	4.0	4.0	4.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	38		38	38	38	38
Detector 2 Size(ft)	40		40	40	40	40
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector 2 Channel						
Detector 2 Extend (s)	4.0		4.0	4.0	4.0	4.0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	15.0		15.0	15.0	10.0	10.0
Total Split (s)	45.0		45.0	45.0	35.0	35.0
Total Split (%)	56.3%		56.3%	56.3%	43.8%	43.8%
Maximum Green (s)	40.0		40.0	40.0	30.0	30.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0
Recall Mode	Min		Min	Min	None	None
Act Effct Green (s)	24.6		24.6	24.6	17.2	17.2
Actuated g/C Ratio	0.47		0.47	0.47	0.33	0.33
v/c Ratio	0.26		0.33	0.65	0.56	0.25
Control Delay	4.6		11.6	14.8	20.8	4.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	4.6		11.6	14.8	20.8	4.9
LOS	A		B	B	C	A
Approach Delay	4.6			14.1	15.6	
Approach LOS	A			B	B	
Queue Length 50th (ft)	12		30	131	68	0
Queue Length 95th (ft)	54		88	307	181	35
Internal Link Dist (ft)	438			475	756	
Turn Bay Length (ft)			85			75
Base Capacity (vph)	1375		901	1672	990	938
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.16		0.19	0.38	0.29	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 52.7			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 13.1		Intersection LOS: B	
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: Connector Road & NY 138





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	77	140	168	614	278	132
Future Volume (veh/h)	77	140	168	614	278	132
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1798	1798	1864	1954	1820	1820
Adj Flow Rate, veh/h	80	146	175	640	290	138
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	2	1	5	5
Cap, veh/h	276	503	635	946	473	421
Arrive On Green	0.48	0.48	0.48	0.48	0.27	0.27
Sat Flow, veh/h	570	1040	1150	1954	1733	1542
Grp Volume(v), veh/h	0	226	175	640	290	138
Grp Sat Flow(s),veh/h/ln	0	1609	1150	1954	1733	1542
Q Serve(g_s), s	0.0	3.5	4.4	10.3	6.0	2.9
Cycle Q Clear(g_c), s	0.0	3.5	7.9	10.3	6.0	2.9
Prop In Lane		0.65	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	779	635	946	473	421
V/C Ratio(X)	0.00	0.29	0.28	0.68	0.61	0.33
Avail Cap(c_a), veh/h	0	1564	1196	1900	1264	1124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	6.4	8.7	8.1	13.1	12.0
Incr Delay (d2), s/veh	0.0	0.3	0.3	1.2	1.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.8	3.0	2.1	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.7	9.1	9.4	14.9	12.6
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h	226			815	428	
Approach Delay, s/veh	6.7			9.3	14.2	
Approach LOS	A			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		24.9		16.2		24.9
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		40.0		30.0		40.0
Max Q Clear Time (g_c+I1), s		12.3		8.0		5.5
Green Ext Time (p_c), s		7.6		3.3		1.8

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	53	130	305	405	170	81
Future Volume (vph)	53	130	305	405	170	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-2%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.923			
Flt Protected	0.950					0.967
Satd. Flow (prot)	1728	1591	1708	0	0	1755
Flt Permitted	0.950					0.967
Satd. Flow (perm)	1728	1591	1708	0	0	1755
Link Speed (mph)	30		45			45
Link Distance (ft)	836		1411			503
Travel Time (s)	19.0		21.4			7.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	2%	6%	2%	6%	2%
Adj. Flow (vph)	58	141	332	440	185	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	141	772	0	0	273
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.9%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	53	130	305	405	170	81
Future Vol, veh/h	53	130	305	405	170	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-2	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	2	6	2	6	2
Mvmt Flow	58	141	332	440	185	88

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1010	552	0	0	772	0
Stage 1	552	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Critical Hdwy	6.25	6.12	-	-	4.16	-
Critical Hdwy Stg 1	5.25	-	-	-	-	-
Critical Hdwy Stg 2	5.25	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.254	-
Pot Cap-1 Maneuver	278	542	-	-	825	-
Stage 1	589	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	212	542	-	-	825	-
Mov Cap-2 Maneuver	212	-	-	-	-	-
Stage 1	450	-	-	-	-	-
Stage 2	647	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.1	0	7.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	212	542	825	-
HCM Lane V/C Ratio	-	-	0.272	0.261	0.224	-
HCM Control Delay (s)	-	-	28.2	14	10.6	0
HCM Lane LOS	-	-	D	B	B	A
HCM 95th %tile Q(veh)	-	-	1.1	1	0.9	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	15	431	8	2	215
Future Volume (vph)	20	15	431	8	2	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	4%		-2%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.943		0.998			
Flt Protected	0.972					
Satd. Flow (prot)	1602	0	1843	0	0	1819
Flt Permitted	0.972					
Satd. Flow (perm)	1602	0	1843	0	0	1819
Link Speed (mph)	30		45			45
Link Distance (ft)	519		503			117
Travel Time (s)	11.8		7.6			1.8
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	7%	4%	0%	0%	5%
Adj. Flow (vph)	23	17	501	9	2	250
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	510	0	0	252
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	15	431	8	2	215
Future Vol, veh/h	20	15	431	8	2	215
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	4	-	-2	-	-	-1
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	7	4	0	0	5
Mvmt Flow	23	17	501	9	2	250

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	760	506	0	0	510	0
Stage 1	506	-	-	-	-	-
Stage 2	254	-	-	-	-	-
Critical Hdwy	7.2	6.67	-	-	4.1	-
Critical Hdwy Stg 1	6.2	-	-	-	-	-
Critical Hdwy Stg 2	6.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	-	-	2.2	-
Pot Cap-1 Maneuver	318	526	-	-	1065	-
Stage 1	545	-	-	-	-	-
Stage 2	750	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	317	526	-	-	1065	-
Mov Cap-2 Maneuver	317	-	-	-	-	-
Stage 1	544	-	-	-	-	-
Stage 2	750	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.5	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	382	1065	-
HCM Lane V/C Ratio	-	-	0.107	0.002	-
HCM Control Delay (s)	-	-	15.5	8.4	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	37	17	429	17	8	180
Future Volume (vph)	37	17	429	17	8	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.957		0.995			
Flt Protected	0.967					0.998
Satd. Flow (prot)	1926	0	1788	0	0	1795
Flt Permitted	0.967					0.998
Satd. Flow (perm)	1926	0	1788	0	0	1795
Link Speed (mph)	30		45			45
Link Distance (ft)	183		117			236
Travel Time (s)	4.2		1.8			3.6
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	5%	10%	0%	7%
Adj. Flow (vph)	43	20	499	20	9	209
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	519	0	0	218
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	37	17	429	17	8	180
Future Vol, veh/h	37	17	429	17	8	180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	5	10	0	7
Mvmt Flow	43	20	499	20	9	209

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	736	509	0	0	519	0
Stage 1	509	-	-	-	-	-
Stage 2	227	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	636	673	-	-	1057	-
Stage 1	853	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	630	673	-	-	1057	-
Mov Cap-2 Maneuver	630	-	-	-	-	-
Stage 1	844	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	643	1057	-
HCM Lane V/C Ratio	-	-	0.098	0.009	-
HCM Control Delay (s)	-	-	11.2	8.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	44	13	416	30	5	144
Future Volume (vph)	44	13	416	30	5	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.969		0.991			
Flt Protected	0.963					0.998
Satd. Flow (prot)	1942	0	1779	0	0	1758
Flt Permitted	0.963					0.998
Satd. Flow (perm)	1942	0	1779	0	0	1758
Link Speed (mph)	30		45			45
Link Distance (ft)	182		236			636
Travel Time (s)	4.1		3.6			9.6
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	5%	10%	0%	7%
Adj. Flow (vph)	51	15	484	35	6	167
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	0	519	0	0	173
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	44	13	416	30	5	144
Future Vol, veh/h	44	13	416	30	5	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	5	10	0	7
Mvmt Flow	51	15	484	35	6	167

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	681	502	0	0	519	0
Stage 1	502	-	-	-	-	-
Stage 2	179	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	660	678	-	-	1057	-
Stage 1	856	-	-	-	-	-
Stage 2	965	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	656	678	-	-	1057	-
Mov Cap-2 Maneuver	656	-	-	-	-	-
Stage 1	851	-	-	-	-	-
Stage 2	965	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	661	1057	-
HCM Lane V/C Ratio	-	-	0.1	0.006	-
HCM Control Delay (s)	-	-	11.1	8.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	98	114	92	190	366	338
Future Volume (vph)	98	114	92	190	366	338
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	10	10
Grade (%)	3%			1%	1%	
Storage Length (ft)		0	85		0	75
Storage Lanes		0	1		1	1
Taper Length (ft)			130		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00			
Frt	0.927					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1786	0	1744	2060	1627	1485
Flt Permitted			0.618		0.950	
Satd. Flow (perm)	1786	0	1133	2060	1627	1485
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	105					267
Link Speed (mph)	35			35	30	
Link Distance (ft)	518			589	836	
Travel Time (s)	10.1			11.5	19.0	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	3%	4%	3%	1%
Adj. Flow (vph)	104	121	98	202	389	360
Shared Lane Traffic (%)						
Lane Group Flow (vph)	225	0	98	202	389	360
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.01	0.85	1.10	1.10
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	2
Detector Template	NYSDOT		NYSDOT	NYSDOT	NYSDOT	NYSDOT
Leading Detector (ft)	78		78	78	78	78
Trailing Detector (ft)	-10		-10	-10	-10	-10
Detector 1 Position(ft)	-10		-10	-10	-10	-10
Detector 1 Size(ft)	40		40	40	40	40
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	4.0		4.0	4.0	4.0	4.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	38		38	38	38	38
Detector 2 Size(ft)	40		40	40	40	40
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector 2 Channel						
Detector 2 Extend (s)	4.0		4.0	4.0	4.0	4.0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	15.0		15.0	15.0	10.0	10.0
Total Split (s)	45.0		45.0	45.0	35.0	35.0
Total Split (%)	56.3%		56.3%	56.3%	43.8%	43.8%
Maximum Green (s)	40.0		40.0	40.0	30.0	30.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0
Recall Mode	Min		Min	Min	None	None
Act Effct Green (s)	11.9		11.9	11.9	18.1	18.1
Actuated g/C Ratio	0.29		0.29	0.29	0.45	0.45
v/c Ratio	0.37		0.29	0.33	0.54	0.44
Control Delay	9.6		15.8	14.5	11.1	4.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	9.6		15.8	14.5	11.1	4.1
LOS	A		B	B	B	A
Approach Delay	9.6			14.9	7.8	
Approach LOS	A			B	A	
Queue Length 50th (ft)	19		16	33	53	10
Queue Length 95th (ft)	75		57	96	128	49
Internal Link Dist (ft)	438			509	756	
Turn Bay Length (ft)			85			75
Base Capacity (vph)	1665		1051	1911	1256	1208
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.14		0.09	0.11	0.31	0.30

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 40.4			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 9.8		Intersection LOS: A	
Intersection Capacity Utilization 53.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Connector Road & NY 138





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	98	114	92	190	366	338
Future Volume (veh/h)	98	114	92	190	366	338
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1875	1875	1850	1908	1850	1879
Adj Flow Rate, veh/h	104	121	98	202	389	360
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	4	3	1
Cap, veh/h	241	280	433	582	722	652
Arrive On Green	0.31	0.31	0.31	0.31	0.41	0.41
Sat Flow, veh/h	789	918	1142	1908	1762	1593
Grp Volume(v), veh/h	0	225	98	202	389	360
Grp Sat Flow(s),veh/h/ln	0	1708	1142	1908	1762	1593
Q Serve(g_s), s	0.0	3.7	2.6	2.9	5.9	6.0
Cycle Q Clear(g_c), s	0.0	3.7	6.3	2.9	5.9	6.0
Prop In Lane		0.54	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	521	433	582	722	652
V/C Ratio(X)	0.00	0.43	0.23	0.35	0.54	0.55
Avail Cap(c_a), veh/h	0	1949	1388	2178	1508	1363
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	9.7	12.3	9.5	7.8	7.9
Incr Delay (d2), s/veh	0.0	0.8	0.4	0.5	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	0.5	0.9	1.6	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	10.6	12.7	10.0	8.7	8.9
LnGrp LOS	A	B	B	A	A	A
Approach Vol, veh/h	225			300	749	
Approach Delay, s/veh	10.6			10.8	8.8	
Approach LOS	B			B	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		15.7		19.4		15.7
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		40.0		30.0		40.0
Max Q Clear Time (g_c+I1), s		8.3		8.0		5.7
Green Ext Time (p_c), s		2.4		6.3		1.8

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	42	135	158	284	162	96
Future Volume (vph)	42	135	158	284	162	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	-1%		-2%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.913			
Flt Protected	0.950					0.970
Satd. Flow (prot)	1761	1591	1701	0	0	1755
Flt Permitted	0.950					0.970
Satd. Flow (perm)	1761	1591	1701	0	0	1755
Link Speed (mph)	30		45			45
Link Distance (ft)	836		1411			503
Travel Time (s)	19.0		21.4			7.6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	3%	3%	8%	0%
Adj. Flow (vph)	45	144	168	302	172	102
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	144	470	0	0	274
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	135	158	284	162	96
Future Vol, veh/h	42	135	158	284	162	96
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	-2	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	2	3	3	8	0
Mvmt Flow	45	144	168	302	172	102

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	765	319	0	0	470	0
Stage 1	319	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Critical Hdwy	6.23	6.12	-	-	4.18	-
Critical Hdwy Stg 1	5.23	-	-	-	-	-
Critical Hdwy Stg 2	5.23	-	-	-	-	-
Follow-up Hdwy	3.527	3.318	-	-	2.272	-
Pot Cap-1 Maneuver	386	728	-	-	1061	-
Stage 1	748	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	320	728	-	-	1061	-
Mov Cap-2 Maneuver	320	-	-	-	-	-
Stage 1	619	-	-	-	-	-
Stage 2	659	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	5.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	320	728	1061	-
HCM Lane V/C Ratio	-	-	0.14	0.197	0.162	-
HCM Control Delay (s)	-	-	18.1	11.2	9.1	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.7	0.6	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	7	289	5	1	250
Future Volume (vph)	7	7	289	5	1	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	4%		-2%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932		0.998			
Flt Protected	0.976					
Satd. Flow (prot)	1530	0	1897	0	0	1847
Flt Permitted	0.976					
Satd. Flow (perm)	1530	0	1897	0	0	1847
Link Speed (mph)	30		45			45
Link Distance (ft)	519		503			117
Travel Time (s)	11.8		7.6			1.8
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	14%	0%	1%	0%	100%	3%
Adj. Flow (vph)	7	7	304	5	1	263
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	309	0	0	264
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	7	289	5	1	250
Future Vol, veh/h	7	7	289	5	1	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	4	-	-2	-	-	-1
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	14	0	1	0	100	3
Mvmt Flow	7	7	304	5	1	263

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	572	307	0	0	309	0
Stage 1	307	-	-	-	-	-
Stage 2	265	-	-	-	-	-
Critical Hdwy	7.34	6.6	-	-	5.1	-
Critical Hdwy Stg 1	6.34	-	-	-	-	-
Critical Hdwy Stg 2	6.34	-	-	-	-	-
Follow-up Hdwy	3.626	3.3	-	-	3.1	-
Pot Cap-1 Maneuver	407	713	-	-	854	-
Stage 1	672	-	-	-	-	-
Stage 2	709	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	407	713	-	-	854	-
Mov Cap-2 Maneuver	407	-	-	-	-	-
Stage 1	671	-	-	-	-	-
Stage 2	709	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	518	854	-
HCM Lane V/C Ratio	-	-	0.028	0.001	-
HCM Control Delay (s)	-	-	12.2	9.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	56	26	240	56	26	195
Future Volume (vph)	56	26	240	56	26	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.957		0.974			
Flt Protected	0.967					0.994
Satd. Flow (prot)	1926	0	1827	0	0	1827
Flt Permitted	0.967					0.994
Satd. Flow (perm)	1926	0	1827	0	0	1827
Link Speed (mph)	30		45			45
Link Distance (ft)	183		117			236
Travel Time (s)	4.2		1.8			3.6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	1%	0%	0%	5%
Adj. Flow (vph)	63	29	270	63	29	219
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	0	333	0	0	248
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	26	240	56	26	195
Future Vol, veh/h	56	26	240	56	26	195
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	-2
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	1	0	0	5
Mvmt Flow	63	29	270	63	29	219

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	579	302	0	0	333	0
Stage 1	302	-	-	-	-	-
Stage 2	277	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	707	821	-	-	1238	-
Stage 1	923	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	688	821	-	-	1238	-
Mov Cap-2 Maneuver	688	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	931	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	725	1238	-
HCM Lane V/C Ratio	-	-	0.127	0.024	-
HCM Control Delay (s)	-	-	10.7	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	45	14	217	49	13	176
Future Volume (vph)	45	14	217	49	13	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	12	12	12	12
Grade (%)	-12%		1%			2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.968		0.975			
Flt Protected	0.963					0.996
Satd. Flow (prot)	1940	0	1828	0	0	1790
Flt Permitted	0.963					0.996
Satd. Flow (perm)	1940	0	1828	0	0	1790
Link Speed (mph)	30		45			45
Link Distance (ft)	182		236			636
Travel Time (s)	4.1		3.6			9.6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	1%	0%	0%	5%
Adj. Flow (vph)	51	16	244	55	15	198
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	0	299	0	0	213
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.89	0.89	1.01	1.01	1.01	1.01
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	45	14	217	49	13	176
Future Vol, veh/h	45	14	217	49	13	176
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-12	-	1	-	-	2
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	1	0	0	5
Mvmt Flow	51	16	244	55	15	198

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	500	272	0	0	299	0
Stage 1	272	-	-	-	-	-
Stage 2	228	-	-	-	-	-
Critical Hdwy	4	5	-	-	4.1	-
Critical Hdwy Stg 1	3	-	-	-	-	-
Critical Hdwy Stg 2	3	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	745	845	-	-	1274	-
Stage 1	933	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	735	845	-	-	1274	-
Mov Cap-2 Maneuver	735	-	-	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	948	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	758	1274	-
HCM Lane V/C Ratio	-	-	0.087	0.011	-
HCM Control Delay (s)	-	-	10.2	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	51	119	121	157	265	272
Future Volume (vph)	51	119	121	157	265	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	10	10
Grade (%)	3%			1%	1%	
Storage Length (ft)		0	85		0	75
Storage Lanes		0	1		1	1
Taper Length (ft)			130		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00	
Frt	0.905					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1783	0	1796	2121	1612	1456
Flt Permitted			0.646		0.950	
Satd. Flow (perm)	1783	0	1221	2121	1610	1456
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	124					283
Link Speed (mph)	35			35	30	
Link Distance (ft)	518			589	836	
Travel Time (s)	10.1			11.5	19.0	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	1%	0%	1%	4%	3%
Adj. Flow (vph)	53	124	126	164	276	283
Shared Lane Traffic (%)						
Lane Group Flow (vph)	177	0	126	164	276	283
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.01	0.85	1.10	1.10
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	2
Detector Template	NYSDOT		NYSDOT	NYSDOT	NYSDOT	NYSDOT
Leading Detector (ft)	78		78	78	78	78
Trailing Detector (ft)	-10		-10	-10	-10	-10
Detector 1 Position(ft)	-10		-10	-10	-10	-10
Detector 1 Size(ft)	40		40	40	40	40
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	4.0		4.0	4.0	4.0	4.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	38		38	38	38	38
Detector 2 Size(ft)	40		40	40	40	40
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector 2 Channel						
Detector 2 Extend (s)	4.0		4.0	4.0	4.0	4.0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	15.0		15.0	15.0	10.0	10.0
Total Split (s)	45.0		45.0	45.0	35.0	35.0
Total Split (%)	56.3%		56.3%	56.3%	43.8%	43.8%
Maximum Green (s)	40.0		40.0	40.0	30.0	30.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0
Recall Mode	Min		Min	Min	None	None
Act Effct Green (s)	11.8		11.8	11.8	13.7	13.7
Actuated g/C Ratio	0.33		0.33	0.33	0.38	0.38
v/c Ratio	0.26		0.31	0.23	0.45	0.39
Control Delay	5.4		12.7	10.8	11.0	3.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	5.4		12.7	10.8	11.0	3.2
LOS	A		B	B	B	A
Approach Delay	5.4			11.6	7.1	
Approach LOS	A			B	A	
Queue Length 50th (ft)	7		17	22	33	0
Queue Length 95th (ft)	40		56	64	94	31
Internal Link Dist (ft)	438			509	756	
Turn Bay Length (ft)			85			75
Base Capacity (vph)	1728		1181	2051	1377	1285
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.10		0.11	0.08	0.20	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 35.8			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.45			
Intersection Signal Delay: 8.0		Intersection LOS: A	
Intersection Capacity Utilization 45.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Connector Road & NY 138

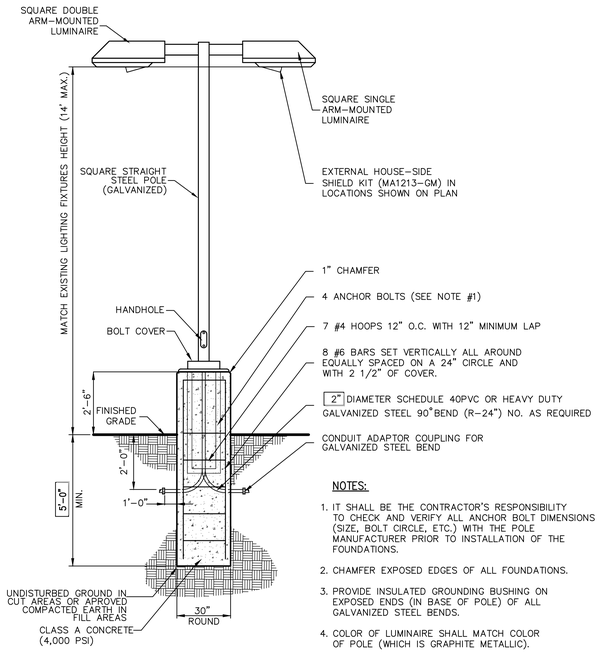




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	51	119	121	157	265	272
Future Volume (veh/h)	51	119	121	157	265	272
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1890	1890	1894	1954	1835	1850
Adj Flow Rate, veh/h	53	124	126	164	276	283
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	0	1	4	3
Cap, veh/h	162	380	531	632	617	554
Arrive On Green	0.32	0.32	0.32	0.32	0.35	0.35
Sat Flow, veh/h	503	1176	1223	1954	1747	1568
Grp Volume(v), veh/h	0	177	126	164	276	283
Grp Sat Flow(s),veh/h/ln	0	1678	1223	1954	1747	1568
Q Serve(g_s), s	0.0	2.5	2.7	1.9	3.8	4.4
Cycle Q Clear(g_c), s	0.0	2.5	5.2	1.9	3.8	4.4
Prop In Lane		0.70	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	543	531	632	617	554
V/C Ratio(X)	0.00	0.33	0.24	0.26	0.45	0.51
Avail Cap(c_a), veh/h	0	2171	1717	2528	1695	1520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.9	9.9	7.7	7.7	7.9
Incr Delay (d2), s/veh	0.0	0.5	0.3	0.3	0.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.5	0.5	1.0	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	8.4	10.2	8.0	8.4	8.9
LnGrp LOS	A	A	B	A	A	A
Approach Vol, veh/h	177			290	559	
Approach Delay, s/veh	8.4			9.0	8.7	
Approach LOS	A			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		15.0		15.9		15.0
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		40.0		30.0		40.0
Max Q Clear Time (g_c+I1), s		7.2		6.4		4.5
Green Ext Time (p_c), s		2.3		4.6		1.4

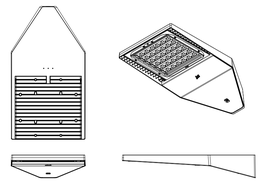
Intersection Summary	
HCM 6th Ctrl Delay	8.7
HCM 6th LOS	A



NOTES:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHECK AND VERIFY ALL ANCHOR BOLT DIMENSIONS (SIZE, BOLT CIRCLE, ETC.) WITH THE POLE MANUFACTURER PRIOR TO INSTALLATION OF THE FOUNDATIONS.
2. CHAMFER EXPOSED EDGES OF ALL FOUNDATIONS.
3. PROVIDE INSULATED GROUNDING BUSHING ON EXPOSED ENDS (IN BASE OF POLE) OF ALL GALVANIZED STEEL BENDS.
4. COLOR OF LUMINAIRE SHALL MATCH COLOR OF POLE (WHICH IS GRAPHITE METALLIC).

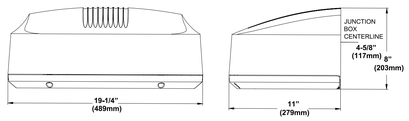
SITE LIGHT FIXTURE



LUMINAIRE & POLE SPECIFICATIONS

1. SITE LIGHTING FIXTURES & POLES
   SLM (SLICE MEDIUM)
   LIGHTS: SLM
   LUMINAIRE: LSI SLM-LED-18L-SIL-FT-UNV-DIM-50-70CRI
   POLE: SQUARE
2. LUMINAIRE AND POLE TO BE GRAPHITE METALLIC.
3. LIGHTING STANDARDS ADJACENT TO RESIDENTIAL ZONING DISTRICTS SHALL HAVE EXTERNAL HOUSE-SIDE SHIELD KIT (MA1213-GM).
4. BUILDING MOUNTED FIXTURE
   LIGHTS: XPWS3
   LUMINAIRE: LSI XPWS3-FT-LED-48-450-CW-UE
5. BUILDING LIGHTS ARE MOUNTED 12 FEET ABOVE GRADE.

BUILDING MOUNTED FIXTURE



Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
	43	SLM-LED-18L-SIL-FTA-50-70CRI-	SINGLE	N.A.	0.900	SLM-LED-18L-SIL-FTA-50-70CRI-IL
	16	XPWS3-FT-LED-48-450-CW-UE	SINGLE	N.A.	0.900	XPWS3-FT-LED-48-450-CW-UE

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Central Lot_Planar_2	Illuminance	Fc	6.62	13.4	0.9	7.36	14.89
Eastern Lot_Planar_2	Illuminance	Fc	4.72	11.9	0.1	47.20	119.00
Rear Driveway_Planar	Illuminance	Fc	4.31	10.0	0.0	N.A.	N.A.
Roadway_Planar	Illuminance	Fc	5.42	14.5	0.0	N.A.	N.A.
Southern Lot_Planar_2	Illuminance	Fc	5.00	11.3	0.2	25.00	56.50
Total Property	Illuminance	Fc	0.72	14.5	0.0	N.A.	N.A.

LIGHTING LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE OR CURB LINE
- EXISTING FENCE
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING ROCK LEDGE
- PROPOSED BUILDING LINE
- PROPOSED BUILDING OVERHANG
- PROPOSED CONCRETE CURB
- PROPOSED RETAINING WALL

PROPOSED LIGHTS

- SLM (SLICE MEDIUM)
- DOUBLE SLM (SLICE MEDIUM)
- SLM WITH SHEILD (SLICE MEDIUM)
- BUILDING MOUNTED LIGHT
- ILLUMINANCE FOOTCANDLE VALUES

NOTES:

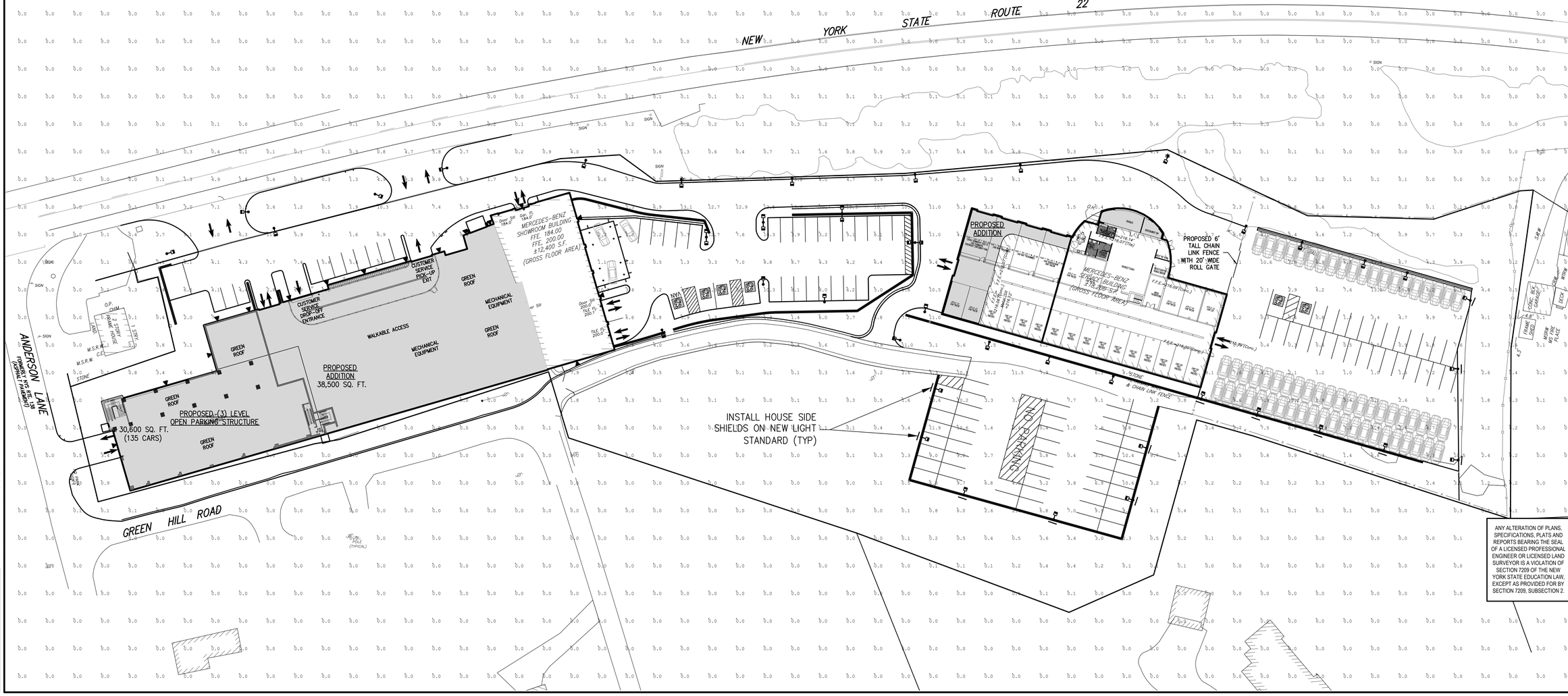
1. EXISTING INFORMATION WAS TAKEN FROM "SURVEY OF PROPERTY" FOR CELEBRITY OF WESTCHESTER, LLC AS PREPAREED BY INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C., DATED AUGUST 17, 2017.
2. THE ILLUMINANCE FOOTCANDLE LIGHTING LEVELS SHOWN ON THIS PLAN ARE MEASURED AT FINISHED GRADE.
3. ALL OF THE LIGHTING FIXTURES WILL BE ILLUMINATED FROM DUSK UNTIL CLOSE OF BUSINESS. THE DEALERSHIP SHALL INSTALL NIGHT CAMERAS FOR SECURITY PURPOSES.
4. ALL EXISTING LIGHT FIXTURES WILL BE REMOVED.

No.	Revision	Date	By
1.	REVISED PER TOWN COMMENTS	12/26/2018	TC
2.	REVISED PER TOWN COMMENTS	02/05/2019	SS

Project Editor: Obadele

APPLICANT/OWNER:
CELEBRITY MOTOR CAR, LLC
130 ROUTE 10
WHIPPANY, NJ 07981

ARCHITECT:
SULLIVAN ARCHITECTURE
31 MAMARONECK AVENUE
WHITE PLAINS, NY 10601



ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

LIGHTING PLAN

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

Drawn:	SS
Approved:	AN
Scale:	1" = 30'
Date:	11/29/2018
Project No:	16124
16124-LIGHTING	LIGHTING
	LIGHT.scr
Drawing No:	C-600

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcplic.com

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NOT FOR CONSTRUCTION

FREDERICK P. CLARK ASSOCIATES, INC.
PLANNING, TRANSPORTATION, ENVIRONMENT AND DEVELOPMENT
RYE, NEW YORK FAIRFIELD, CONNECTICUT

MICHAEL A. GALANTE
MANAGING PRINCIPAL

DAVID H. STOLMAN
AICP, PP, PRINCIPAL

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203 255-3100

HUDSON VALLEY
845 297-6056

LONG ISLAND
516 364-4544

www.fpclark.com

email@fpclark.com

February 19, 2019

Chairman Jerome Kerner, AIA and
Members of the Planning Board
Town of Lewisboro
79 Bouton Road
South Salem, New York 10590

Subject: **Review of Response to Traffic and Site Plan Comments – Mercedes Benz of Goldens Bridge, Lewisboro, New York**

Dear Mr. Kerner:

As requested, we completed a review of the Revised Traffic Impact Study and Site Plan prepared by JMC, dated revised February 5, 2019 and November 30, 2018, respectively, for a proposed Car Dealership Expansion.

Traffic Review Comments

Based on our review of the Applicant's updated Traffic Report, we offer the following comments:

1. *Accident History* – The Applicant sent a request to the Town's Police Department and they responded that they do not have any record of accidents involved at the requested locations. In addition, the Applicant has requested the accident data from NYSDOT; however, has not received a response at this time. When this data is received it should be summarized and a discussion of the results should be provided.

2. *Sensitivity Analysis* – Review of the sensitivity analysis indicated that there will not be a significant change in the capacity analysis results or findings.

Sincerely,

Michael A. Galante
Managing Principal

Steven T. Cipolla, E.I.T.
Senior Associate/Transportation

cc: Jan K. Johannessen, AICP

g:\791.000 mercedes benz of goldens bridge\word\mgb18-001.stc.docx

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and Members of the Lewisboro Planning Board

DATE: February 20, 2019

FROM: Richard D. Williams Jr., P.E.

JOB #: 15217.100

RE: Manny Goncalves
Wetland / Stormwater Permit
Duffy's Bridge Road
Sheet 2, Block 10516 Lot 1

COMMENTS

Project Description:

The subject project consists of approximately 9.1 acres of land and is located at the end of Duffy's Bridge Road. Located in the R-2A zone the majority of the site is undeveloped, with the exception of an asphalt access driveway that connects the end of Duffy's Bridge Road to the Boulder Pines subdivision located to the south. Interstate 684 forms the eastern boundary to the site. The Town of Bedford Town Line forms the southern boundary to the site.

The applicant is proposing to construct a single family residence, driveway, drilled well, and subsurface sewage treatment system on the site. Two regulated wetlands exist on the site.

Wetland A is located on the western side of the emergency access road and is a Town of Lewisboro regulated wetland only. This wetland is relatively small in size with primary functions being storage during storm events, limited groundwater recharge, and wildlife habitat. Based on the size of the wetland and limited hydro-period that is available it appears that this wetland is not suitable to function as a viable vernal pool habitat. The existing emergency access road is located within the Wetland A wetland buffer. The existing emergency access road appears to divert runoff from the subject property away from Wetland A and towards Duffy's Bridge Road. There has been some initial disturbance consisting of minor grading within the Wetland A buffer.

Wetland B is a Town Regulated Wetland and a USACOE regulated wetland located in the southern portion of the site. Since the application does not propose any disturbance within Wetland B no permitting from USACOE is required. A small portion of the proposed house and driveway are within the Wetland B buffer area, but is located in an area where stormwater runoff drains away from Wetland B.

SEQRA:

The proposed action is listed as Type II action and thus can be exempt from the State Environmental Quality Review Act (SEQRA).

Required Approvals:

1. A Wetland Activity Permit for which a public hearing is required to be held.
2. A Town Stormwater Permit.
3. A Town Highway Permit.
4. A Town Building Permit.
5. Coverage under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities, General Permit GP-0-15-002.
6. Westchester County Department of Health Approval
7. Town of Lewisboro Zoning Board of Appeals Variance for Steep Slopes (previously issued).

Project Review Comments:

There has been a change in ownership of the property since this application was last discussed in front of the Planning Board. The new owner is proposing a new driveway location and slightly different house footprint. The revised driveway location was reviewed at a site meeting with the Town Highway Superintendent, this office, and the applicant.

With respect to our review of the submitted documents we offer the following:

1. It should be determined by the Building Inspector if the steep slopes variance is acceptable as issued or if it needs to be modified.
2. A SWPPP and NOI designed in accordance with Chapter 189 of the Town Code and the NYSDEC SPDES *General Permit from Stormwater Discharges from Construction Activities General Permit GP-0-15-002* should be provided.
3. At the last Planning Board meeting where this application was discussed, the Planning Board requested the applicant provide a house layout outside of the Wetland B buffer area. A small portion of the proposed house and driveway are proposed within the Wetland B buffer. The Planning Board should review the proposed location and determine if it is acceptable and if so if mitigation is necessary. Based on the drainage divide shown on the project plans, the house was sited in a portion of the buffer where stormwater runoff drains away from Wetland B in the existing condition.
4. Updated topography or spot shots should be provided to illustrate the proposed drainage divide.
5. A portion of the disturbed area that drains away from the wetland in the existing conditions is being developed as lawn and appears to be redirected towards the wetland. The grading in this area should be updated to ensure the existing drainage boundaries are maintained, and the junction boxes replaced with yard drains.
6. Minor grading occurred around the area where the previously proposed driveway entrance intersected the emergency access driveway. The applicant shall address how to stabilize this area and include it in the proposed limit of disturbance.
7. A revised EAF should be provided.
8. It appears a small turn around is proposed at the end of the proposed driveway. The applicant should clarify the intent of what is to be constructed. The drawings should be provided to the Highway Superintendent for his review.
9. Question # 4 on the Wetland Permit Application and Question #5 on the Stormwater Permit Application should be filled in.
10. Although a SWPPP has not been provided, testing will be required in all areas where infiltration is proposed. This office shall be contacted to observe soil testing.
11. Test pit information should be provided on the drawings to substantiate the proposed rock cuts.
12. A turning plan demonstrating how a fire truck can navigate the proposed driveway should be provided.

13. Silt fence, soil stockpile areas, and a construction sequence should be provided.
14. The proposed infiltration systems should be located on slopes less than 15% as required by the *New York State Stormwater Management Design Manual*.
15. As additional items are provided our office will continue to review them.

Documents Reviewed:

1. Cover letter prepared by Nathaniel J. Holt, P.E., dated January 7, 2019.
2. Site Development Plan Application, dated January 8, 2019.
3. Wetland Permit Application, dated January 8, 2019.
4. Stormwater Permit Application, dated January 8, 2019.
5. Drawing Set prepared by Nathaniel J. Holt, P.E., dated October 5, 2018.

cc: A. Mole, Esq. (via email)

TO: Town of Lewisboro Planning Board

FROM: Lewisboro Conservation Advisory Council

SUBJECT: Goncalves Residence
Duffy's Bridge Road

DATE: February 9, 2019

The Conservation Advisory Council (CAC) reviewed the applicant's submission of a sketch plan for a single-family home on Duffy's Bridge Road.

The sketch plan shows a portion of the house, the patio and part of the road in the wetland buffer. The site also contains steep grades. As the site and housing plan develops, the CAC is looking to understand the impact of disturbance of the road construction, a wetland mitigation plan or strategy and an SWPPP to contain any storm water effects.

NATHANIEL J. HOLT, PE

dan@holtengineering.net

January 7, 2019

Town of Lewisboro
Planning Board
79 Bouton Road
South Salem, NY 10590

Attn: Jerome Kerner, AIA
Chairman

RE: Manny Goncalves
Duffys Bridge Road
2-15016-1

Dear Mr. Kerner and Members of the Planning Board:

It has been some time since we last submitted Site Plans for the above referenced property (formerly Fortune Home Builders). However, recently the property has been purchased by Manny Goncalves who has taken a different perspective on the development of this particular lot. Perhaps the most significant change has been the proposed route of the driveway to the house site.

This past fall, there was a site meeting held in which Mr. Goncalves' "team" met with Richard Williams, PE, Peter Ripperger and other representatives of the Town. The primary purpose of the meeting was to discuss status of Duffys Bridge Road and the necessary improvements to create what is generally called "a suitable improved road". As the meeting was wrapping up, Mr. Williams, Peter Ripperger and I located a possible alternative to the use of the emergency access driveway.

As some of the Board members may recall, the original plan was to use the existing emergency access driveway and then construct a new driveway to the planned house site. Many expressed concerns over this approach as it would require significant rock excavation and disturbance within two wetland buffers. This alternate/proposed driveway which is indicated on the attached plans avoids both wetland buffer encroachments and the significant rock excavation. Admittedly the new route is longer and creates more disturbance then the original design which will require that a full SWPPP be prepared (something that many persons representing the Town felt would be required under the original plan anyway). Although there is a new Architect (Teo Siguenza) on the project, it has been generally agreed that the best location for the new house was at a plateau-like feature, therefore the slightly redesigned house has remained in that area.

We were advised that since there are new owners of the property, the review process must be "restarted", beginning with Sketch Plan review. Admittedly, the attached plans provide much more information than typically provided at this stage, however, since some of the

592 Route 22 •Pawling, NY 12564 •PHONE: (914) 760-1800
540 N.W. University Boulevard, Suite 105 •Port Saint Lucie, FL 34986 •PHONE: (772) 204-9550 •FAX: (772) 204-9553

current Board members have already been on the site, we felt that it would be beneficial to provide you with as much detail as is practical.

Presuming that the Planning Board reacts favorably to this redesign, our future submission will also consist of a full Stormwater Pollution Prevention Plan.

In addition to the required Application Fees, please find attached:

- Site Development Plan Application
- Stormwater Permit Application
- Wetland Permit Application
- Five (5) Full Size and Four (4) Half Size Site Development Plans, Sheets 1-9, dated last revised October 5, 2018, prepared by this office
- A CD of the above materials

We look forward to discussing this new plan with your Board on February 26th.

Very truly yours,

Nathaniel J. Holt, PE
Holt Engineering & Consulting, PA

Encl

cc: Frank Goncalves

F:\HEC-Projects_Docs\munch\fortune.kerner.ltr.2019.0107.wpd

1/8/19

1-19PB

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518 Email: planning@lewisborogov.com Tel: (914) 763-5592

Site Development Plan/Subdivision Plat Application - Check all that apply: #205 (rd)

Step I escrow estab'd

Waiver of Site Development Plan Procedures	☐			
Site Development Plan Approval	Step I ☑	Step II ☑		
Special Use Permit Approval	Step I ☐	Step II ☐		
Subdivision Plat Approval	Step I ☐	Step II ☐	Step III ☐	

Project Information

Project Name: 2 DUFFY'S BRIDGE RD.

Project Address: 2 DUFFY'S BRIDGE RD.

Gross Parcel Area: 9.15 Ac Zoning District: R-2A Sheet(s): 40.4 Block (s): 2 / 15016 Lot(s): 17 / 1

Project Description: CONSTRUCTION OF A SINGLE FAMILY RESIDENCE AND ASSOCIATED IMPROVEMENTS ON A CURRENTLY UNDEVELOPED LOT

Is the site located within 500 feet of any Town boundary?	YES ☑	NO ☐
Is the site located within the New York City Watershed?	YES ☑	NO ☐
Is the site located on a State or County Highway?	YES ☐	NO ☑

Does the proposed action require any other permits/approvals from other agencies/departments?

Town Board	☐	ZBA	☐	Building Dept.	☑	Town Highway	☑
ACARC	☐	NYSDEC	☑	NYCDEP	☑	WCDH	☑
NYSDOT	☐	Town Wetland	☑	Town Stormwater	☑		

Other _____

Owner's Information

Name: MANNY GONCALVES Email: FRANKGONCALVES710GMAIL.COM

Address: 56 TEMPLE ST HARRISON 10528 Phone: 914 671-1688

Applicant's Information (if different)

Name: _____ Email: _____

Address: _____ Phone: _____

Authorized Agent's Information

Name: NATHANIEL J HOLT PE Email: DANOHOLTENGINEERING.NET

Address: 592 ROUTE 22 PAWLING Phone: 9147601800

THE APPLICANT understands that any application is considered complete only when all information and documents required have been submitted and received by the Planning Board. The applicant further understands that the applicant is responsible for the payment of all application and review fees incurred by the Planning Board.

THE UNDERSIGNED WARRANTS the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge and belief, and authorizes visitation and inspection of the subject property by the Town of Lewisboro and its agents.

APPLICANT'S SIGNATURE _____ DATE _____

OWNER'S SIGNATURE Manuel Gonçalves DATE _____

AFFIDAVIT OF OWNERSHIP

STATE OF)
COUNTY OF) **ss:**

MANNY GONCALVES, being duly sworn, deposes and says that ~~she~~/he resides at 56 TEMPLE ST HARRISON

in the County of: WESTCHESTER

State of: NEW YORK

And that ~~she~~/he is (check one) (1) the owners, or (2) the OWNER
Title

of _____
name of corporation, partnership or other legal entity

which is the owner, in fee of all that certain lot, piece or parcel of land situated, lying and being in the Town of Lewisboro, New York, aforesaid and known and designated on the Tax Map in the Town of Lewisboro as Lot Number 17

Block 2 on sheet 40.4.

For (*check one*):

[ ] SKETCH PLAN REVIEW [ ] PRELIMINARY SUBDIVISION PLAT [ ] FINAL SUBDIVISION PLAT

[ ] SITE DEVELOPMENT PLAN [ ] SPECIAL USE PERMIT [ ] WAIVER OF SITE PLAN PROCEDURES

[ ] WETLAND PERMIT [✓] STORMWATER PERMIT [ ] FILING WITH WESTCHESTER COUNTY CLERK

Manuel Gonçalves
Signed

Sworn to before me this

4th day of January, 2018.

Patricia V. DeSiguenza
Notary public (affix stamp)

PATRICIA V. SIGUENZA
NOTARY PUBLIC-STATE OF NEW YORK
No. 01SI6186218
Qualified in Westchester County
Commission Expires April 28, 20[illegible]

TOWN OF LEWISBORO PLANNING BOARD

79 Bouton Road, South Salem, NY 10590
Email: planning@lewisborogov.com
Tel: (914) 763-5592 Fax: (914) 763-3637

Tax Payment Affidavit Requirement

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant
(Please type or print)

MANNY GONCALVES
Name of Applicant

2 DOFFYS BRIDGE RD
Project Name

Property Description CTY / TOL

Tax Block(s):	2	10516
Tax Lot(s):	17	001
Tax Sheet(s):	40.4	002

Property Assessed to:

MANUEL GONCALVES
Name
56 TEMPLE ST
Address
HARRISON NY 10528
City *State* *Zip*

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes: Deputy Donna Crocker 1/3/19
Date

Sworn to before me this
3 **day of** January, 2019

Janet L Donohue
Signature - Notary Public (affix stamp)

JANET L. DONOHUE
NOTARY PUBLIC, STATE OF NEW YORK
No. 01DO6259627
Qualified in Westchester County
Commission Expires April 16, 2020

FILE

Application No: 2-19 WP

Fee: $255 Date: 1/8/19 (pd)

TOWN OF LEWISBORO
WETLAND PERMIT APPLICATION

79 Bouton Road, South Salem, NY 10590
Phone: 914-763-5592
Fax: 914-763-3637
planning@lewisborogov.com

Project Information

Project Address: 2 DUFFYS BRIDGE ROAD

Sheet: 40.4 Block: 2 Lot(s): 17
2 15016 1

Project Description (identify the improvements proposed within the wetland/wetland buffer and the approximate amount of wetland/wetland buffer disturbance):
CONSTRUCTION OF A SINGLE FAMILY RESIDENCE AND ASSOCIATED SITE IMPROVEMENTS ON A CURRENTLY UNDEVELOPED LOT

Owner's Information

Owner's Name: MANNY GONCALVES Phone: 914-671-1688

Owner's Address: 56 TEMPLE ST HARRISON 10528 Email: FRANKGONCALVES71@GMAIL.COM

Applicant's Information (if different)

Applicant's Name: _____ Phone: _____

Applicant's Address: _____ Email: _____

Authorized Agent's Information (if applicable)

Agent's Name: NATHANIEL J HOLT PE Phone: 9147601800

Agent's Adress: 592 ROUTE 22 STE GC PAWLING Email: DAN@HOLTENGINEERING.NET

To Be Completed By Owner/Applicant

1. What type of Wetland Permit is required? (see §217-5C and §217-5D of the Town Code)
   ☐ Administrative ☑ Planning Board
2. Is the project located within the NYCDEP Watershed? ☑ Yes ☐ No
3. Total area of proposed disturbance: ☐ < 5,000 s.f. ☐ 5,000 s.f. - < 1 acre ☑ ≥1 acre
4. Does the proposed action require any other permits/approvals from other agencies/departments? (Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: _____

FILE

Note: Initially, all applications shall be submitted with a plan that illustrates the existing conditions and proposed improvements. Said plan must include a line which encircles the total area of proposed land disturbance and the approximate area of disturbance must be calculated (square feet). The Planning Board and/or Town Wetland Inspector may require additional materials, information, reports and plans, as determined necessary, to review and evaluate the proposed action. If the proposed action requires a Planning Board Wetland Permit, the application materials outlined under §217-7 of the Town Code must be submitted, unless waived by the Planning Board. The Planning Board may establish an initial escrow deposit to cover the cost of application/plan review and inspections conducted by the Town's consultants.

For administrative wetland permits, see attached Administrative Wetland Permit Fee Schedule.

Owner/Applicant Signature: Manuel Goncalves Date: 1/6/19

Application No: 2-19SW

Fee: ~~750~~ $155 Date: 1/8/19 (PS)

FILE

TOWN OF LEWISBORO
STORMWATER PERMIT APPLICATION

79 Bouton Road, South Salem, NY 10590
Phone: 914-763-5592
Fax: 914-763-3637
planning@lewisborogov.com

Project Information

Project Address: 2 DUFFY'S BRIDGE ROAD

Sheet: 40.4 / 2 Block: 2 / 150/4 Lot(s): 17 / 1

Project Description (describe overall project including all proposed land development activities): CONSTRUCTION OF A SINGLE FAMILY ~~RESIDENCE~~ RESIDENCE AND ASSOCIATED SITE IMPROVEMENTS ON A UNDEVELOPED LOT

Owner's Information

Owner's Name: MANNY GONCALVES Phone: 914 671-1688

Owner's Address: 56 TEMPLE ST HARRISON 10528 Email: FRANKGONCALVES71@GMAIL.COM

Applicant's Information (if different)

Applicant's Name: _____ Phone: _____

Applicant's Address: _____ Email: _____

Authorized Agent's Information

Agent's Name: NATHANIEL J. HOLT PE Phone: 914 760 1800

Agent's Adress: 592 ROUTE 22, STE GC PAWLING Email: DAN@HOLTENGINEERING.NET

To Be Completed By Owner/Applicant/Agent

1. The approval authority is? (see §189-5 of the Town Code)

   ☐ Town Engineer and SMO ☑ Planning Board

2. Is the project located within the NYCDEP Watershed? ☑ Yes ☐ No

3. Total area of proposed disturbance: ☐ 5,000 s.f. - < 1 acre ☑ ≥1 acre

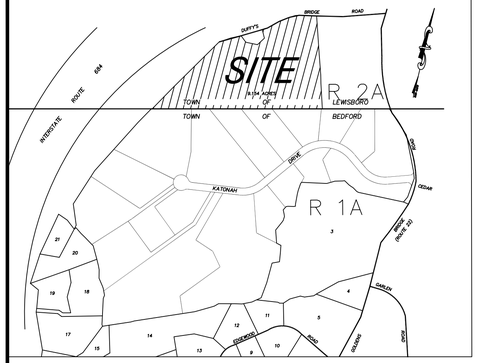
4. Will the project require coverage under the NYSDEC General Permit for Stormwater Discharges from Construction Activity? ☑ Yes ☐ No ☐ Requires post-construction stormwater practice

5. Does the proposed action require any other permits/approvals from other agencies/departments? (Wetland Inspector, Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: _____

Note: The applicant, owner and/or agent is responsible for reviewing and complying with Chapter 189, "Stormwater Management and Erosion and Sediment Control," of the Town Code. This application must be submitted with all applicable plans, reports and documentation specified under §189-8, "SWPPP requirements," of the Town Code; all SWPPP's shall be prepared in conformance with Chapter 189 and shall be prepared by a qualified professional, as defined therein. The provision for obtaining a Town Stormwater Permit is in addition to the requirement of obtaining coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity, if applicable.

Owner/Applicant Signature: X Manuel Gonçalves Date: 1/6/19

FILE



LOCATION MAP N.T.S.

PROPERTY OWNER: MANNY GONCALVES
c/o IMPERIAL CONTRACTING LLC
56 TEMPLE STREET
HARRISON, NEW YORK 10528

SITE LOCATION: 2 DUFFY'S BRIDGE ROAD,
LEWISBORO, NEW YORK

TAX MAP DESIGNATION: SECTION 2; BLOCK 10516; LOT 1

TAX ID: 40.4-2-17

NOTES:

- SURVEY INFORMATION REPARED BY BUNNEY ASSOCIATES, LAND SURVEYORS, P.C. DATED LAST REVISED MARCH 28, 1984.
- TOPOGRAPHIC INFORMATION FROM A MAP PREPARED BY TERRY BERGENDORFF COLLINS, LS
- WETLAND DELINEATION BY PAUL JAEHNIG, PROFESSIONAL GEOLOGIST AND PROFESSIONAL WETLANDS SCIENTIST, DATED OCTOBER 24, 2013

GENERAL NOTES

1. EROSION CONTROLS MUST BE PROPERLY INSTALLED, MAINTAINED AND INSPECTED AROUND THE WORK SITE.
2. CONSTRUCTION ENTRANCES MUST BE PROPERLY MAINTAINED SO THAT NO DEBRIS OR DIRT IS DEPOSITED ON THE STREET.
3. EXPOSED AREAS MUST BE STABILIZED AS SOON AS LAND ALTERATIONS ARE COMPLETED.
4. ANY UNDERGROUND PIPING OR STRUCTURES MUST BE INSPECTED PRIOR TO BACKFILLING
5. 24 HOUR NOTICE IS REQUIRED FOR ANY INSPECTION.
6. PRIOR TO THE START OF ANY EXCAVATION OPERATIONS THE CONTRACTOR SHALL CALL "DIG SAFELY NEW YORK" AT 1-800-962-7962 OR 811.
7. PRIOR TO START OF WORK, THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE LIMITS OF THE SEPTIC FIELD.
8. THE DEEP TEST PIT EXCAVATION HAS BEEN WITNESSED BY THE TOWN ENGINEER
9. PROPERTY TO BE SERVICED BY AN ON-SITE SEWAGE DISPOSAL SYSTEM (SEPTIC) AND DRILLED WELL

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

ZONING CONFORMANCE TABLE - R 2A ZONE			
MIN. LOT SIZE	REQUIRED	EXISTING	PROPOSED
MIN. LOT AREA	2 ACRES	9.154 AC	9.154 AC
FRONT YARD	50 ft	50 ft	144.11 ft
SIDE YARD	40 ft	40 ft	307.40/309.18 ft
REAR YARD	50 ft	170.9 ft	187.24 ft
MAX. HEIGHT (FEET)	35 ft	<35 ft	<35 ft
(STORIES)	2-1/2	2	2
MAX. BUILDING COVERAGE (%)	9%	0%	0.81%
LOT WIDTH/CIRCLE (FEET)	200 ft	395 ft	395 ft

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APPLICABLE LAWS

SHEET: 1 of 9

5 4 3 2 1

Original Date: October 5, 2018
Project Number: IMP.01

Nathaniel J. Holt P.E.
NATHANIEL J. HOLT, P.E.
074128
LICENSED PROFESSIONAL ENGINEER
STATE OF NEW YORK
Date:

NATHANIEL J. HOLT, P.E.
592 ROUTE 22
PAWLING, NEW YORK 12564
(914) 760-1800

EXISTING CONDITONS

PROPOSED RESIDENCE
DUFFY'S BRIDGE ROAD
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY



GENERAL NOTES

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SHEET: 2 of 9

5 4 3 2 1

Original Date: October 5, 2018
Project Number: IMP.01

Nathaniel-J-Holt, P.E.
STATE OF NEW YORK
NATHANIEL J. HOLT
074176
LICENSED PROFESSIONAL ENGINEER
Date:

NATHANIEL J. HOLT, P.E.
592 ROUTE 22
PAWLING, NEW YORK 12564
(914) 760-1800

OVERALL SITE PLAN
DUFFY'S BRIDGE ROAD
TOWN OF LEWISBORO, NY

PROPOSED RESIDENCE
DUFFY'S BRIDGE ROAD
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

DISTURBANCE LIMIT LINE
(INCLUDES SSDA)
AREA: 60,740 sf

R=130.00'
L=32.98'
Delta=14°32'08"
S07°22'00"W
48.44'

R=310.00'
L=66.37'
Delta=12°16'01"

PROP
RUBBLE WALL

PROP
RUBBLE WALL

124.4'

19'

1:1 ROCK CUT

PROP
WELL

38.3'

24.0'

PROP
WALK

PROP
WALK

VISITOR
PARKING

SEPTIC SYSTEM
COMPONENTS

F. FLOOR: 324.5±
G. FLOOR: 322.5±
C. FLOOR: 314.5±

PORCH

25.3'

45.6'

307.7'

PROP
PATIO

EXISTING TRAIL
(CLEARED)

PROP
RUBBLE WALL

DRAINAGE DIVIDE

DRAINAGE DIVIDE

TP

TP

EXISTING (CLEARED)
HAUL ROAD

150' WETLAND
SETBACK

201.7'

EXISTING (CLEARED)
HAUL ROAD

EXISTING (CLEARED)
HAUL ROAD

2" PVC
PRESSURE PIPE

SEPTIC SYST
(SEE WCDH APPR
PLANS)

WL-B-1
WL-B-2
WL-B-3
WL-B-4
WL-B-5
WL-B-6
WL-B-8
WL-B-9
WL-B-10
WL-B-11

TOWN OF LEWISBORO
TOWN OF BEDFORD

MEAN CENTERLINE STONEWALL

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GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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SHEET: 3 of 9

Original Date: October 5, 2018
Project Number: IMP.01

Nathaniel J. Holt P.E.
N.Y.S. PROFESSIONAL ENGINEER
074128
LICENSED PROFESSIONAL ENGINEER
Date:

NATHANIEL J. HOLT, P.E.
592 ROUTE 22
PAWLING, NEW YORK 12564
(914) 760-1800

ENLARGED SITE PLAN
PROPOSED RESIDENCE
DUFFY'S BRIDGE ROAD

TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY



GENERAL NOTES

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GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

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SHEET: 4 of 9

5 4 3 2 1

Original Date: October 5, 2018
Project Number: IMP.01

Nathaniel J. Holt, P.E.
NEW YORK LICENSED PROFESSIONAL ENGINEER
071128
Date:

NATHANIEL J. HOLT, P.E.
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PAWLING, NEW YORK 12564
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STORMWATER MITIGATION PLAN

PROPOSED RESIDENCE
DUFFY'S BRIDGE ROAD

TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY



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"SUBDIVISION MAP OF BOULDER PINES"
FILED MAP NO. 26613 FILED 9/13/2000

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

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SHEET: 5 of 9

Original Date: October 5, 2018
Project Number: IMP.01

NATHANIEL J. HOLT, P.E.
592 ROUTE 22
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(914) 760-1800

GRADING PLAN

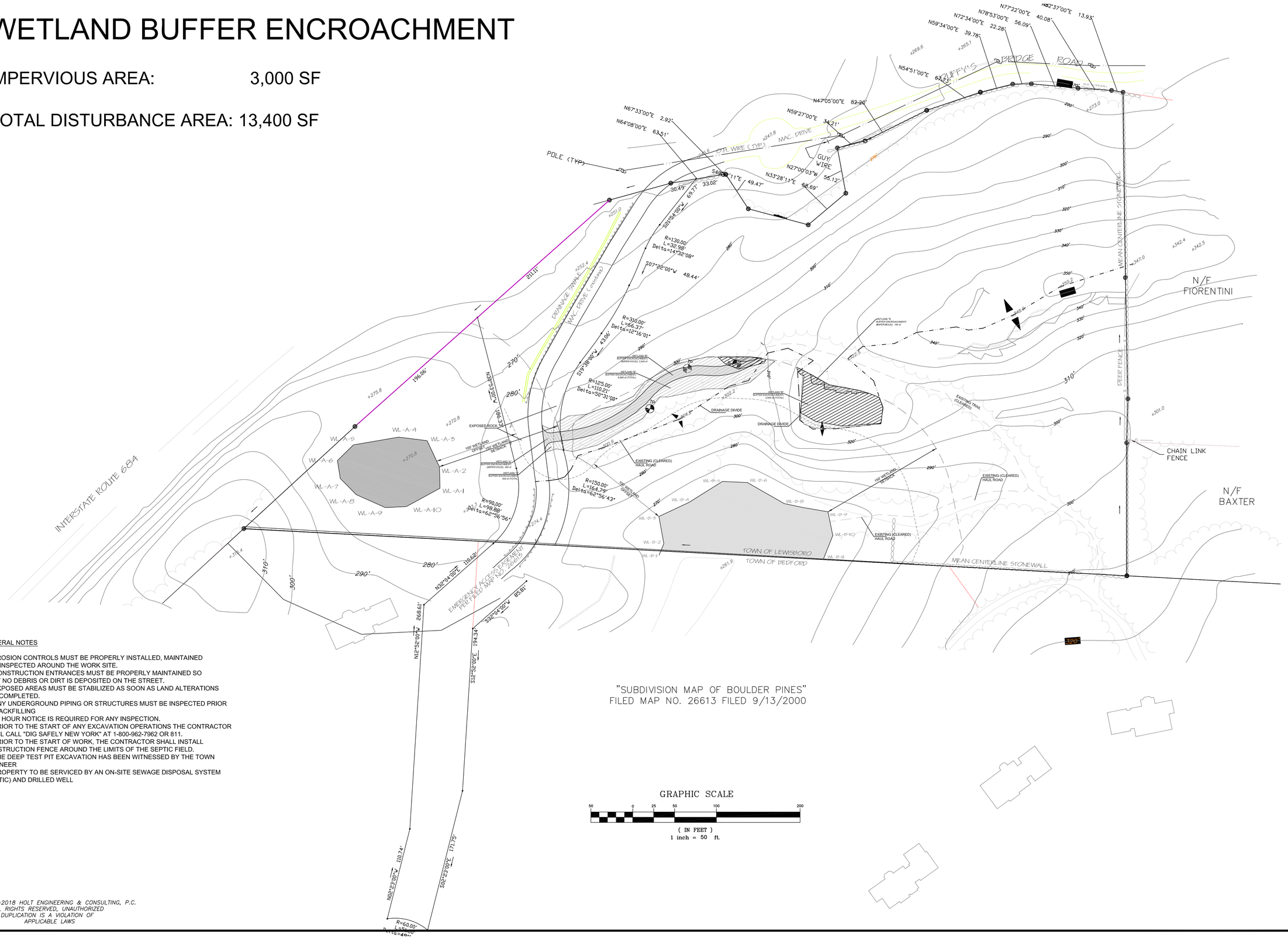
PROPOSED RESIDENCE
DUFFY'S BRIDGE ROAD

TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

WETLAND BUFFER ENCROACHMENT

IMPERVIOUS AREA: 3,000 SF

TOTAL DISTURBANCE AREA: 13,400 SF



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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SHEET: 6 of 9

Original Date: October 5, 2018
Project Number: IMP.01

Nathaniel-J-Holt, P.E.
Date:

NATHANIEL J. HOLT, P.E.
592 ROUTE 22
PAWLING, NEW YORK 12564
(914) 760-1800

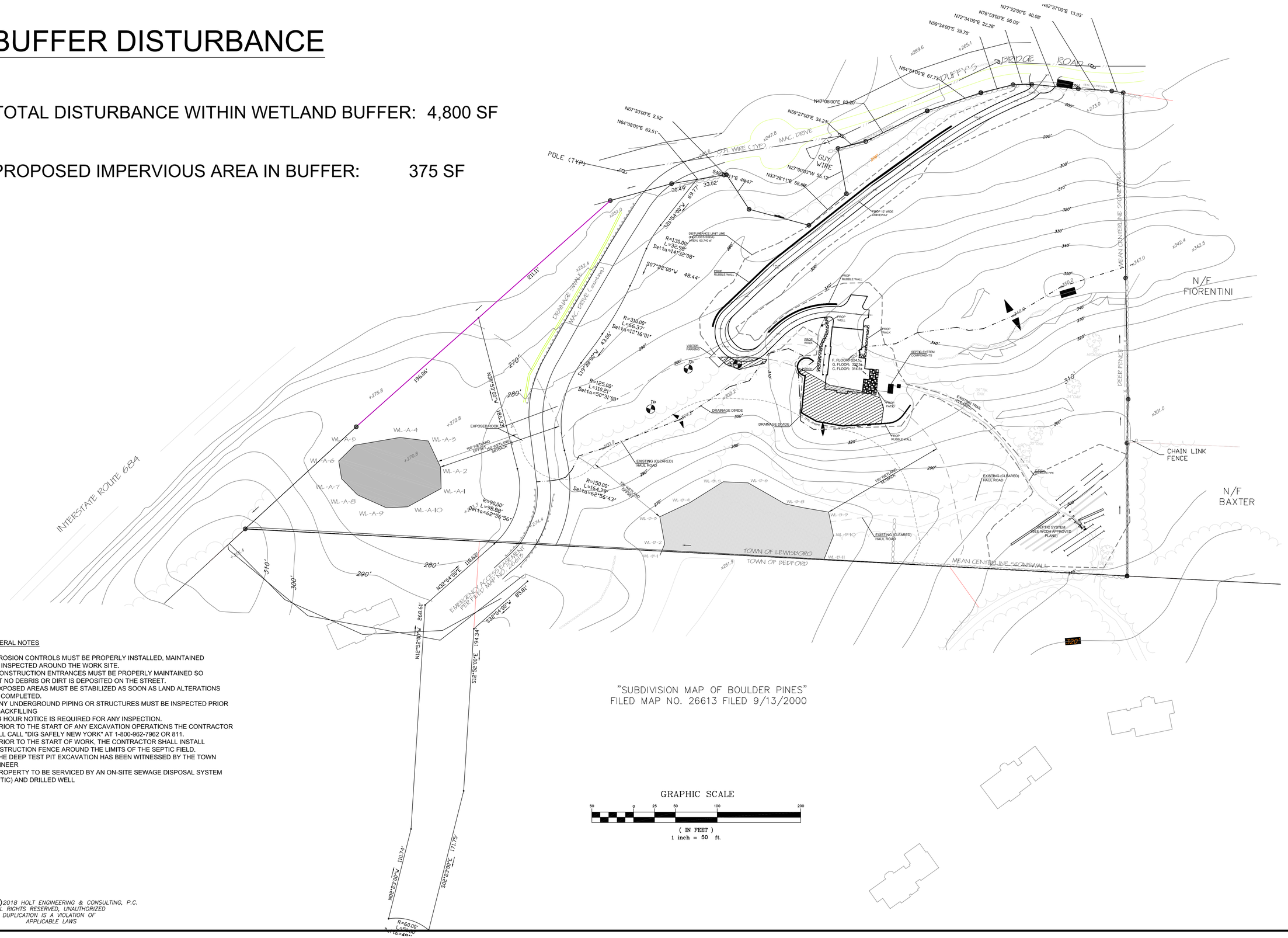
BUFFER ENCROACHMENT PLAN
(PREVIOUS APPLICATION)

PROPOSED RESIDENCE
DUFFY'S BRIDGE ROAD
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

BUFFER DISTURBANCE

TOTAL DISTURBANCE WITHIN WETLAND BUFFER: 4,800 SF

PROPOSED IMPERVIOUS AREA IN BUFFER: 375 SF



GENERAL NOTES

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SHEET: 7 of 9

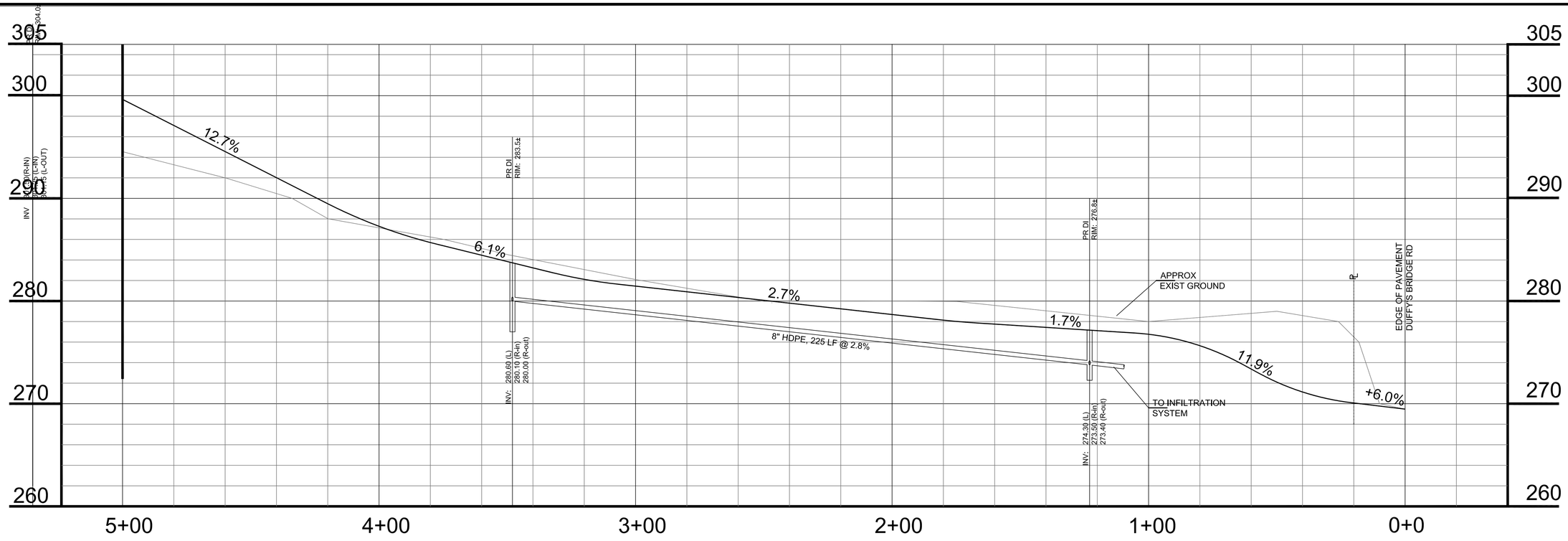
Original Date: October 5, 2018
Project Number: IMP.01

Nathaniel J. Holt, P.E.
Date: 12/4/18

NATHANIEL J. HOLT, P.E.
592 ROUTE 22
PAWLING, NEW YORK 12564
(914) 760-1800

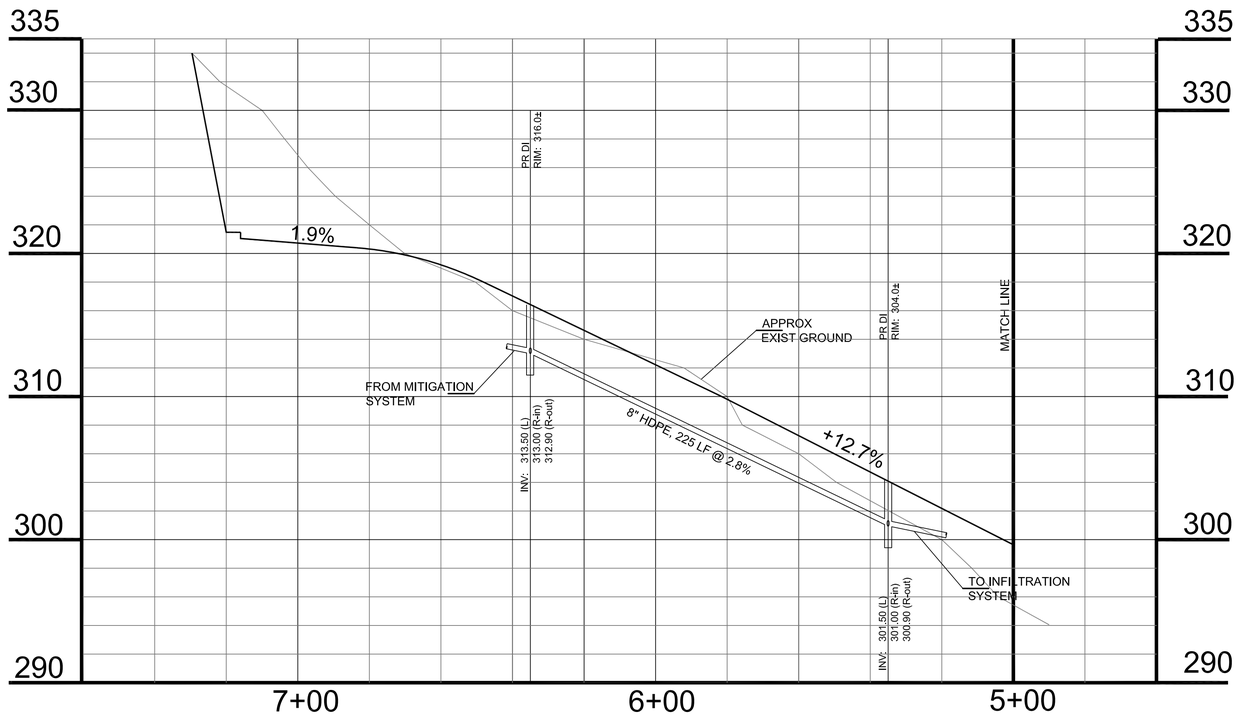
BUFFER ENCROACHMENT PLAN

PROPOSED RESIDENCE
DUFFY'S BRIDGE ROAD
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY



DRIVEWAY PROFILE

SCALES HORZ: 1" = 20'; VERT: 1" = 5'



DRIVEWAY PROFILE

SCALES HORZ: 1" = 20'; VERT: 1" = 5'

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SHEET: 8 of 9

5 4 3 2 1

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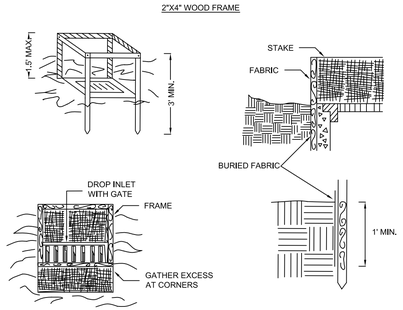
Nathaniel J. Holt, P.E.
Date:

NATHANIEL J. HOLT, P.E.
592 ROUTE 22
PAWLING, NEW YORK 12564
(914) 760-1800

DETAILS

PROPOSED RESIDENCE
DUFFY'S BRIDGE ROAD
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

FILTER FABRIC INLET PROTECTION DETAIL



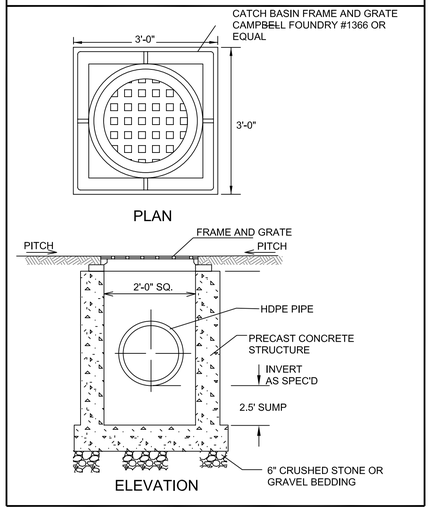
CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85, BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT, MINIMUM LENGTH 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVEN A MINIMUM OF 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH WIRE MESH BEHINDTHE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVERFLOW FOR STABILITY.

MAXIMUN DRAINAGE AREA 1 ACRE

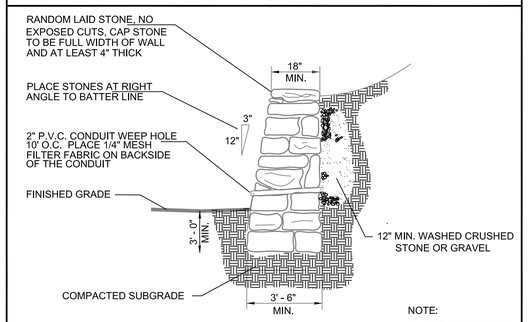
DRAIN INLET DETAIL

N.T.S.



RUBBLE STONE WALL

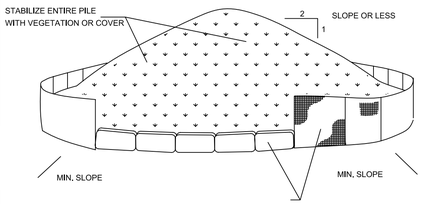
NTS



NOTE:
5' MAXIMUM HEIGHT

SOIL STOCKPILING DETAIL

N.T.S.

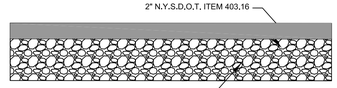


NOTES

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SOIL STOCKPILES SHALL BE LOCATED A MINIMUM OF 100' FROM WETLANDS AND WATERCOURSES.

TYPICAL PAVEMENT SECTION

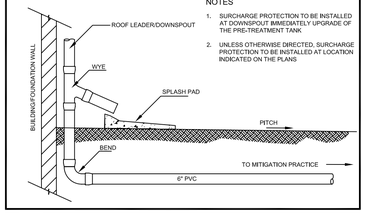
N.T.S.



NOTE: ALL DIMENSIONS ARE COMPACTED THICKNESS

SURCHARGE PROTECTION

NTS

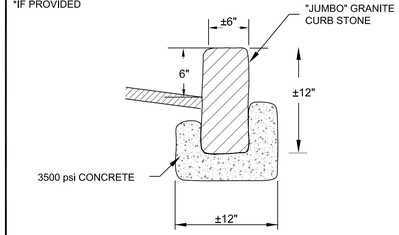


NOTES

1. SURCHARGE PROTECTION TO BE INSTALLED AT DOWNSPOUT IMMEDIATELY UPGRADE OF THE PRE-TREATMENT TANK.
2. UNLESS OTHERWISE DIRECTED, SURCHARGE PROTECTION TO BE INSTALLED AT LOCATION INDICATED ON THE PLANS

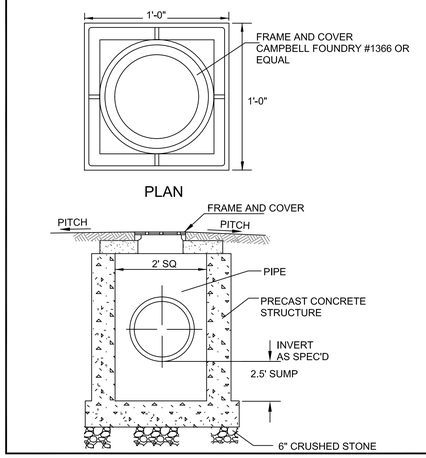
COBBLE STONE CURB DETAIL

N.T.S.

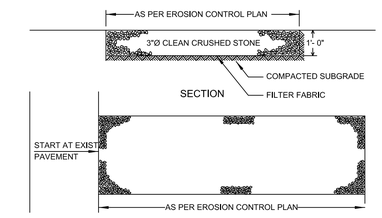


JUNCTION BOX DETAIL

N.T.S.



STABILIZED CONSTRUCTION ENTRANCE

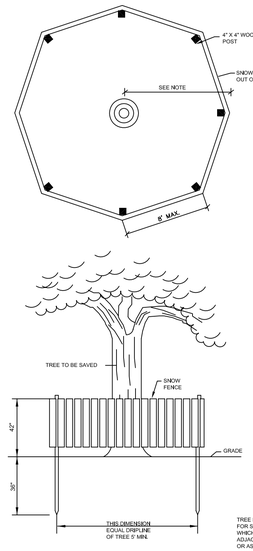


INSTALLATION NOTES

1. STONE SIZE - USE 3" CRUSHED STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS PER PLAN.
3. THICKNESS - AS DETAILED.
4. WIDTH - 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH OF DRIVEWAY.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. THE REPAIR AND/OR REMOVAL OF ANY MEASURES MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO THE PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE COMPLETED ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE COMPLETED AFTER EACH RAIN EVENT.

TREE PROTECTION DETAIL

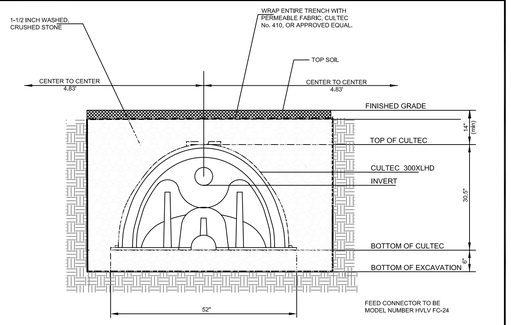
N.T.S.



TREE PROTECTION SHALL BE PROVIDED FOR SPECIMEN TREES TO BE SAVED WHICH ARE LOCATED IMMEDIATELY ADJACENT TO CONSTRUCTION AREAS OR AS DIRECTED.

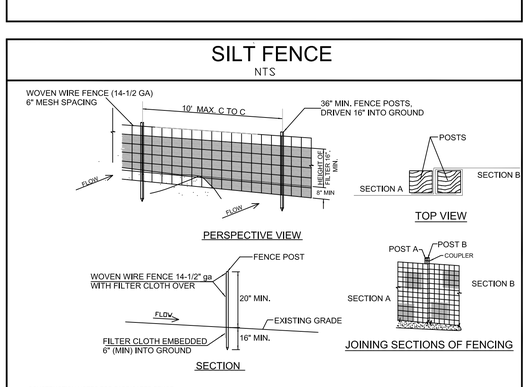
INFILTRATION UNIT

NTS



SILT FENCE

NTS

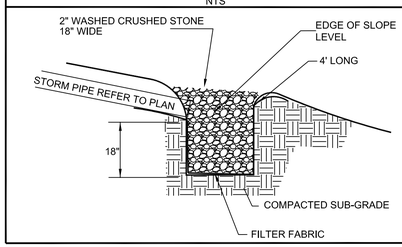


CONSTRUCTION NOTES FOR FABRICATED FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED AT 24" ON CENTER.
3. WHEN TWO SECTION OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED UNDER ONE ANOTHER.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REPLACED WHEN "BULGES" DEVELOP IN FENCE.

LEVEL SPREADER

NTS



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ALL RIGHTS RESERVED, UNAUTHORIZED
DUPLICATION IS A VIOLATION OF
APPLICABLE LAWS

SHEET: 9 of 9

Original Date: October 5, 2018
Project Number: IMP 01

Nathaniel J. Holt, P.E.
Date:

NATHANIEL J. HOLT, P.E.
592 ROUTE 22
PAWLING, NEW YORK 12564
(914) 760-1800

DETAILS

PROPOSED RESIDENCE
DUFFY'S BRIDGE ROAD
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

WETLAND CERTIFICATE OF COMPLIANCE

TOWN OF LEWISBORO

Town Offices
79 Bouton Road, South Salem, New York 10590
Phone: (914) 763-3060
Fax: (914) 533-0097

Date: January 22, 2019

Permit #: 76-18 W.P. & 1-18 W.V.

Permit issued to: Siegfried and Karen Potz
1178 Route 35

Project location: 1178 Route 35

Sheet: 27 Block: 10805 Lot(s): 29

Date of Inspection: December 20, 2018

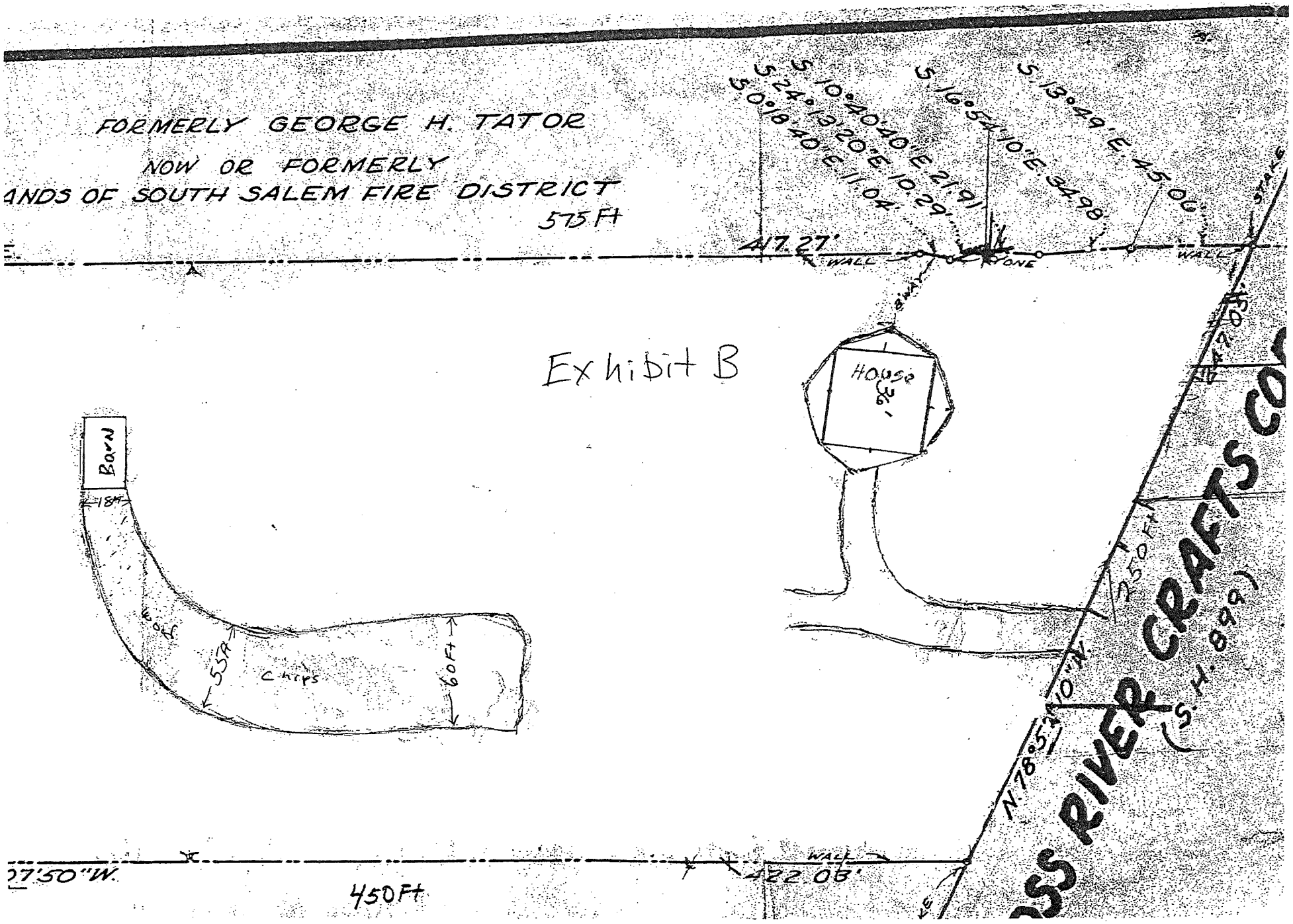
Comments: All work has been completed in substantial accordance with the Wetland Implementation Permit and the site is stabilized.

The above referenced parcel(s) has been inspected and a determination has been made that work conducted within the regulated area has been completed in substantial accordance with the issued Wetland Activity Permit and the provisions of Chapter 217 of the Town of Lewisboro Town Code.

Wetland Inspector

1/22/19
Date

"A-76-18 W.P."


FORMERLY GEORGE H. TATOR
NOW OR FORMERLY
ANDS OF SOUTH SALEM FIRE DISTRICT
575 Ft
S. 24° 13' 20" E. 10.29'
S. 10° 40' 40" E. 21.91'
S. 16° 54' 10" E. 94.98'
S. 13° 49' E. 45.00'
47.27'
WALL
STONE
WALL
Exhibit B
House
Barn
18Ft
55Ft
Chips
40Ft
450Ft
122.08'
WALL
N 78° 51' 10" W.
S. 11° 09' W.
RIVER CRAFTS CO

TOWN OF LEWISBORO
Westchester County, New York

Building Department
79 Bouton Road
South Salem, New York 10590

Tel: (914) 763-3060
Fax: (914) 875-9148
Email: jangiello@lewisborogov.com

February, 19, 2019

Mr. Jerome Kerner, Chairman
Town of Lewisboro Planning Board

Re: Waccabuc Country Club wash facility/bulk storage

Dear Mr. Kerner and Members of the Board,

I have reviewed the plans from John M. Doyle, R.A. latest revision dated 1/31/19 and the plans from Peter G. Marchetti Jr., P.E. latest revision dated 10/10/18. I have the following comments:

5 Carriage House Rd.
0022-10802-061

The proposed chemical storage and wash down facility will have a front yard setback of 21'-4" whereas 50' are required per Article IV Section 220-23E of the Town of Lewisboro Zoning Code.

The proposed chemical storage and wash down facility will increase the lot coverage to 18.6% whereas 6% is the maximum permitted per Article IV Section 220-23E of the Town of Lewisboro Zoning Code.

The proposed chemical storage and wash down facility will have a floor area of 3,150 square feet whereas 600 square feet is the maximum permitted per Article IV Section 220-23D(11) of the Town of Lewisboro Zoning Code.

The proposed chemical storage and wash down facility will be an improvement to a nonconforming use whereas an approval by the Board of Appeals is required per Article III Section 220-9E(1) of the Town of Lewisboro Zoning Code.

The proposed chemical storage and wash down facility will not have frontage on a road which is improved to the satisfaction of the Town and requires a variance of per Article III Section 220-11 of the Town of Lewisboro Zoning Code.

The proposed chemical storage and wash down facility will not have frontage on a road which is improved to the satisfaction of the Town and requires a variance of Section 280a of NYS Town Law.

8 Carriage House Rd.
0022-10802-026

The proposed bulk storage shed #1 will have a front yard setback of 5'-6" whereas 50' are required and a rear yard setback of 39'-9" whereas 50' are required per Article IV Section 220-23E of the Town of Lewisboro Zoning Code.

The proposed bulk storage shed #2 will have a front yard setback of 44'-3" whereas 50' are required and a rear yard setback of 37'-7" whereas 50' are required per Article IV Section 220-23E of the Town of Lewisboro Zoning Code.

The proposed bulk storage sheds (#1 and #2) will increase the lot coverage to 14.7% whereas 6% is the maximum permitted per Article IV Section 220-23E of the Town of Lewisboro Zoning Code.

The proposed bulk storage sheds (#1 and #2) will be an improvement to a nonconforming use whereas an approval by the Board of Appeals is required per Article III Section 220-9E(1) of the Town of Lewisboro Zoning Code.

The proposed bulk storage sheds (#1 and #2) will not have frontage on a road which is improved to the satisfaction of the Town and requires a variance of per Article III Section 220-11 of the Town of Lewisboro Zoning Code.

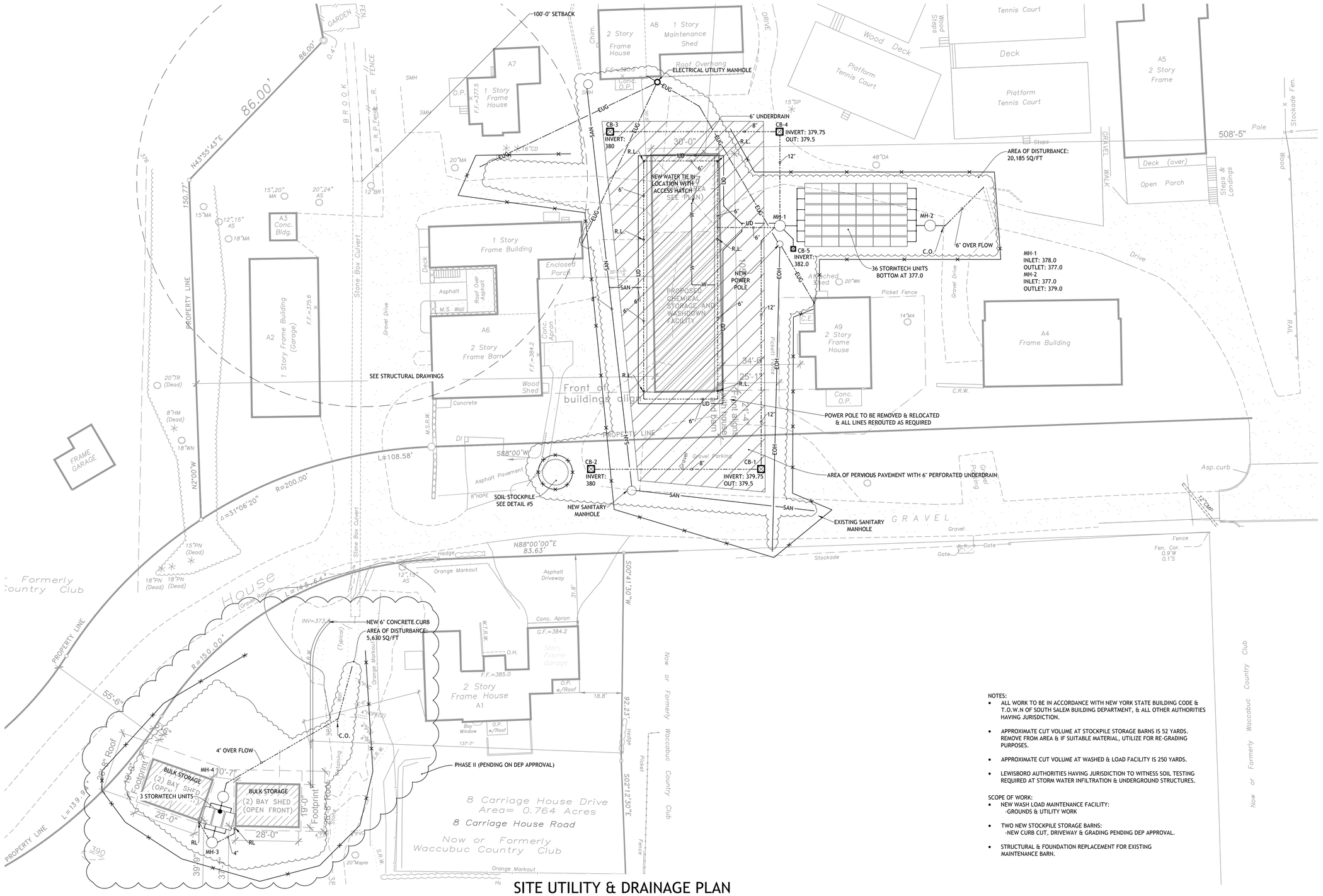
The proposed bulk storage sheds (#1 and #2) will not have frontage on a road which is improved to the satisfaction of the Town and requires a variance of Section 280a of NYS Town Law.

Five Carriage House Rd. and eight Carriage Rd. have been filed under building permit application #0425-2018. I have advised the applicant to revise the existing building permit application and file an additional application to separate the two properties.

Please do not hesitate to contact me with any questions,

Sincerely,

Joe Angiello
Building Inspector



SITE UTILITY & DRAINAGE PLAN

SCALE: 1" = 20' - 0"

NOTES:

- ALL WORK TO BE IN ACCORDANCE WITH NEW YORK STATE BUILDING CODE & T.O.W.N OF SOUTH SALEM BUILDING DEPARTMENT, & ALL OTHER AUTHORITIES HAVING JURISDICTION.
- APPROXIMATE CUT VOLUME AT STOCKPILE STORAGE BARNS IS 52 YARDS. REMOVE FROM AREA & IF SUITABLE MATERIAL, UTILIZE FOR RE-GRADING PURPOSES.
- APPROXIMATE CUT VOLUME AT WASHED & LOAD FACILITY IS 250 YARDS.
- LEWISBORO AUTHORITIES HAVING JURISDICTION TO WITNESS SOIL TESTING REQUIRED AT STORM WATER INFILTRATION & UNDERGROUND STRUCTURES.

SCOPE OF WORK:

- NEW WASH LOAD MAINTENANCE FACILITY:
  - GROUNDS & UTILITY WORK
- TWO NEW STOCKPILE STORAGE BARNS:
  - NEW CURB CUT, DRIVEWAY & GRADING PENDING DEP APPROVAL.
- STRUCTURAL & FOUNDATION REPLACEMENT FOR EXISTING MAINTENANCE BARN.

MARCHETTI CONSULTING ENGINEERS

25 High Ridge Rd
Pound Ridge. NY 10576
P (914) 764-9011
F (914) 764-9012
info@marchetticonsultingengineers.com

Drawings and Specifications, as instruments of professional service, are and shall remain the property of the Engineer. Documents are not to be used, in whole or in part, for other projects or purposes or by any other parties than those authorized by contract without the specific written authorization of the Engineer. The use of this document is contingent upon payment to the engineer for services rendered. Non-payment shall give the Engineer the authority to bar document use by any and all parties. If owner disputes any Engineer's statements for services, it is required that the owner advise the engineer in writing with ten (10) days. Remaining, undisputed portions are due and payable upon receipt. The owner shall indemnify the Engineer against any claims alleging damages or delays incurred in the event the Engineer exercises the right to bar document use for non-payment. Contractors must check all dimensions on site. Only figured dimensions are to be worked from. Discrepancies must be reported immediately to the Engineer before proceeding.

LEGEND

C.O.	CLEAN OUT
R.L.	RAIN LEADER
	EROSION CONTROL FENCING
EOH	ELECTRIC OVER HEAD
EUG	ELECTRIC UNDERGROUND
SAN	SANITARY WASTE
W	WATER
384	EXISTING CONTOUR
384	NEW CONTOUR
T.O.W.	TO OF WALL
B.O.W.	BOTTOM OF WALL
	CURB TO BE REMOVED
	CUT AREA
UD	UNDERDRAIN

No.	DESCRIPTION	DATE
1	ISSUE FOR PRICING	2018-09-13
	REVISION	2018-10-10
	REVISION	2019-02-04

STAMP & SIGN:

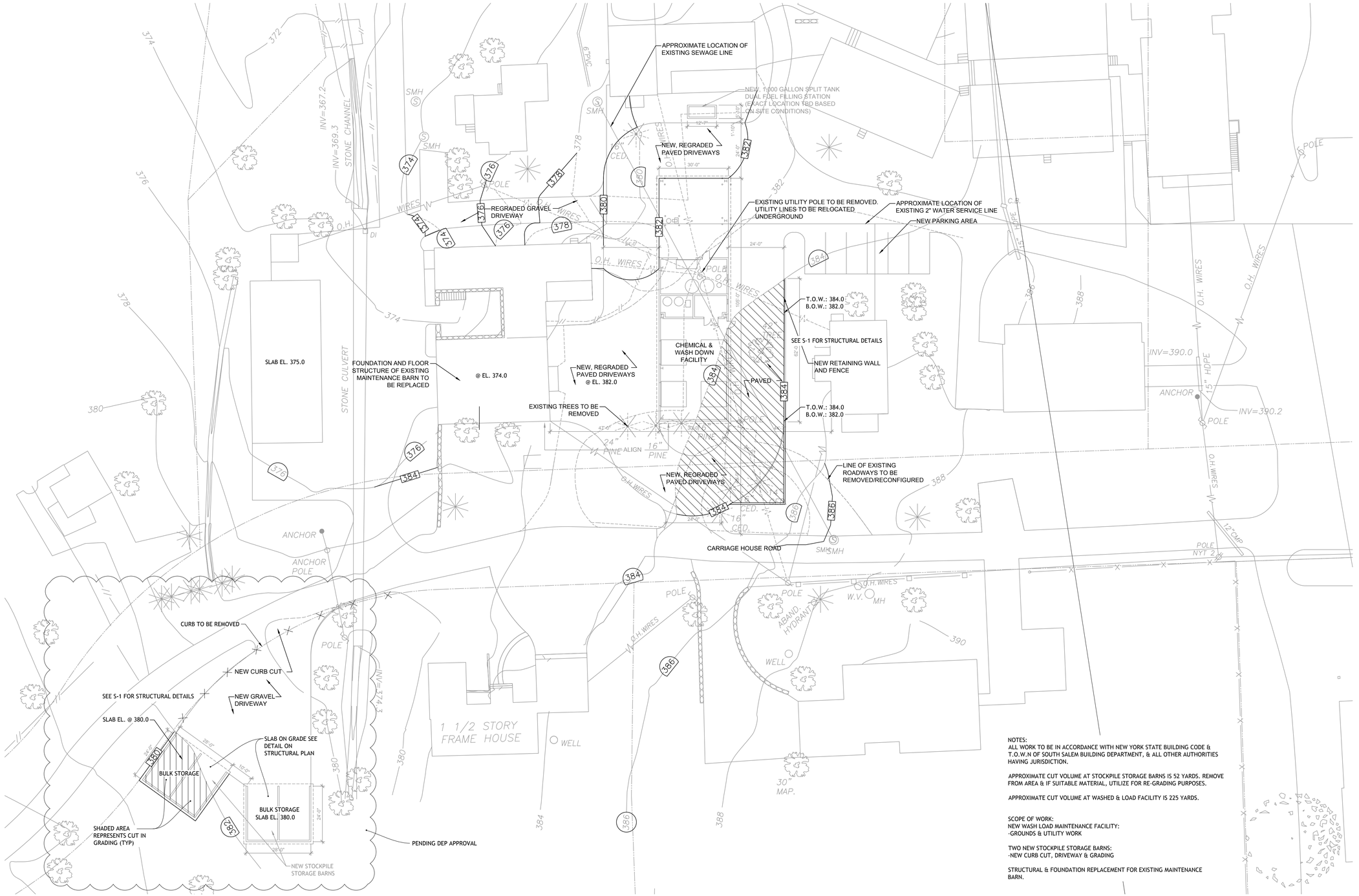
WACCABUC COUNTRY CLUB
90 MEAD STREET
LEWISBORO, NY 10597

SITE UTILITY & DRAINAGE PLAN

PROJECT NUMBER:	#2018-29
DATE:	2018-09-13
DRAWN BY:	EF/RN
CHECKED BY:	PGM

C-1

SCALE: AS NOTED



GRADING PLAN

SCALE: 1" = 20' - 0"

NOTES:
ALL WORK TO BE IN ACCORDANCE WITH NEW YORK STATE BUILDING CODE & T.O.W.N OF SOUTH SALEM BUILDING DEPARTMENT, & ALL OTHER AUTHORITIES HAVING JURISDICTION.

APPROXIMATE CUT VOLUME AT STOCKPILE STORAGE BARNS IS 52 YARDS. REMOVE FROM AREA & IF SUITABLE MATERIAL, UTILIZE FOR RE-GRADING PURPOSES.

APPROXIMATE CUT VOLUME AT WASHED & LOAD FACILITY IS 225 YARDS.

SCOPE OF WORK:
NEW WASH LOAD MAINTENANCE FACILITY:
-GROUNDS & UTILITY WORK

TWO NEW STOCKPILE STORAGE BARNS:
-NEW CURB CUT, DRIVEWAY & GRADING

STRUCTURAL & FOUNDATION REPLACEMENT FOR EXISTING MAINTENANCE BARN.

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	REVISION	2018-10-10
	REVISION	2019-02-04

STAMP & SIGN:

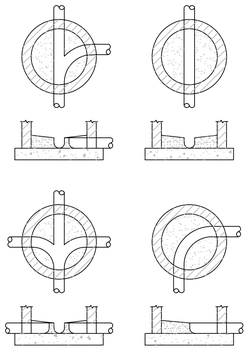
WACCABUC COUNTRY CLUB
90 MEAD STREET
LEWISBORO, NY 10597

GRADING PLAN

PROJECT NUMBER:	#2018-29
DATE:	2018-09-13
DRAWN BY:	EF
CHECKED BY:	PGM

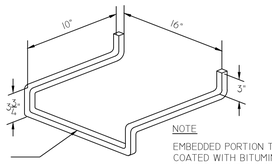
C-2

SCALE: AS NOTED

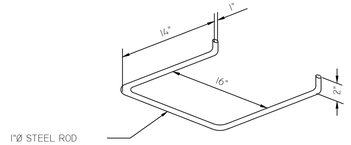


TYPICAL INVERTS

SCALE: 1/4" = 1'-0"



ALUMINUM



GALVANIZED STEEL

MANHOLE STEPS

NOT TO SCALE

NOTES

CASTINGS DESIGNATED AS "HEAVY DUTY" SHALL SAFELY WITHSTAND AASHTO HS20 HIGHWAY LOADING.

ALL STEEL TO BE STRUCTURAL GRADE CONFORMING TO ASTM A36.

CAST IRON SHALL CONFORM TO ASTM A48 CLASS 30.

SEAT OF MANHOLE FRAMES, EDGES AND BOTTOM OF COVERS SHALL BE MACHINED TO A TRUE SURFACE SO COVERS WILL NOT BIND OR ROCK ON FRAMES.

FIRST STEP FROM TOP OF MANHOLE SHALL BE SHORTENED SO AS TO EXTEND NOT MORE THAN 4" FROM WALL OF MANHOLE. ALL OTHER STEPS SHALL EXTEND 6" FROM WALL.

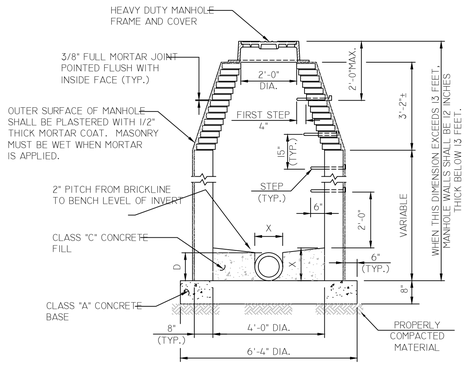
APPROVED CONCRETE BLOCK MAY BE USED IN LIEU OF BRICK IN THE CONSTRUCTION OF CATCH BASINS AND STORM MANHOLES.

WHERE SHOWN, STEEL ITEMS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 FOR STEEL SHAPES AND PLATES, OR ASTM A153 FOR HARDWARE.

REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING:
BAR REINFORCEMENT - ASTM A615 GRADE 60
WELDED WIRE FABRIC - ASTM A184
WELDED DEFORMED WIRE FABRIC - ASTM A497

UNREINFORCED PIPES SHALL BE CUT FLUSH WITH INSIDE FACE OF C.B. WALL. REINFORCED PIPES SHALL BE CUT TO PROVIDE 1" RECESS INTO FACE OF C.B. WALL. CUT END SHALL THEN BE PATCHED WITH MORTAR FLUSH WITH WALL.

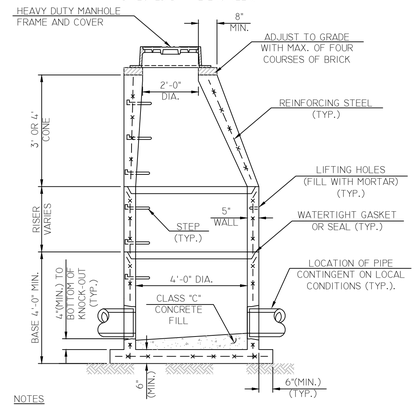
ALL UNUSED KNOCK-OUTS SHALL BE BRICKED UP WHERE DIRECTED BY THE ENGINEER.



NOTES

1. DIMENSIONS "X" VARY ACCORDING TO SIZE OF PIPE. "D" DENOTES OUTSIDE DIAMETER OF PIPE.
2. WHERE 5 FT. & 6 FT. DIA. MANHOLES ARE SHOWN ON THE PLANS, THEY SHALL BE CONSTRUCTED USING PRECAST CONCRETE UNITS.

STANDARD MANHOLE
(LESS THAN 36" PIPE)
(MASONRY CONSTRUCTION)



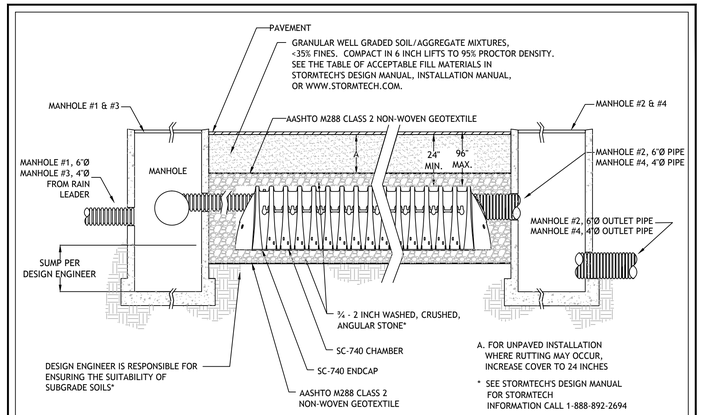
NOTES

1. 5 FT. & 6 FT. DIA. PRECAST BASES MAY BE USED WHEN REQUIRED DUE TO SIZE OR NUMBER OF PIPES AT THE MANHOLE. PRECAST REDUCERS WILL BE PLACED ABOVE THE 5' AND 6' BASES AS DIRECTED BY THE ENGINEER. WALL THICKNESS TO INCREASE 1 INCH FOR EACH 1 FOOT OF INSIDE DIAMETER INCREASE.
2. FOR ADDITIONAL INFORMATION, SEE "STANDARD MANHOLE (LESS THAN 36" PIPE)" DETAIL, THIS SHEET.

STANDARD MANHOLE
(PRECAST CONCRETE UNITS)

1 C-3 STANDARD MANHOLE

SCALE: N.T.S.



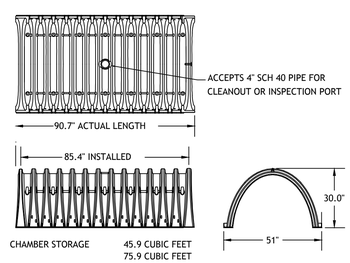
2 C-3 STORMTECH SC-740 CHAMBER SYSTEM

SCALE: N.T.S.

FOR STORMTECH
INFORMATION CALL 1-888-892-2694
*SEE STORMTECH'S DESIGN MANUAL

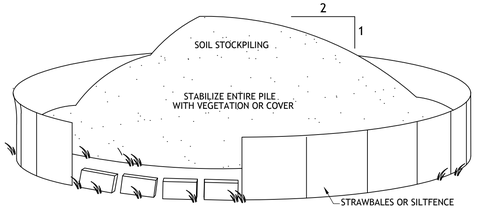
3 C-3 STORMTECH SC-740 CHAMBER SYSTEM TYPICAL CROSS SECTION DETAIL

SCALE: N.T.S.



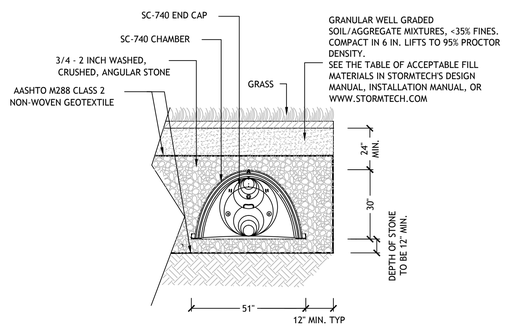
4 C-3 STORMTECH SC-740 CHAMBER INFILTRATOR

SCALE: N.T.S.



5 C-3 STOCKPILE SOIL DETAIL

SCALE: N.T.S.



6 C-3 STORMTECH SC-740 CHAMBER SYSTEM TYPICAL CROSS SECTION DETAIL

SCALE: N.T.S.

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	REVISION	2019-02-04

STAMP & SIGN:

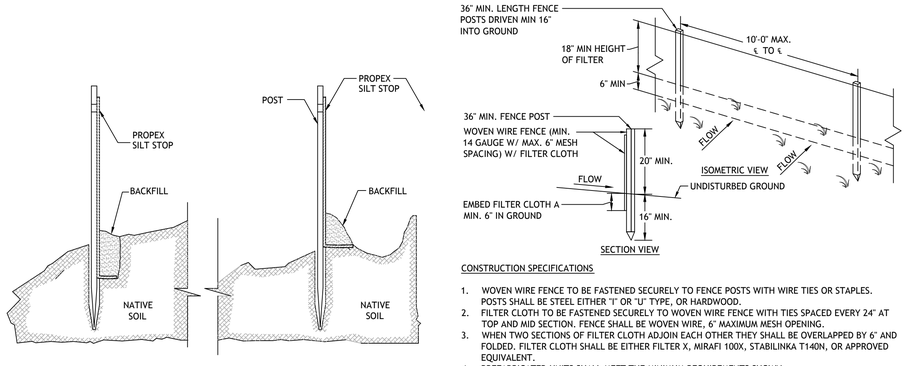
WACCABUC COUNTRY CLUB
90 MEAD STREET
LEWISBORO, NY 10597

DETAILS & SECTIONS

PROJECT NUMBER:	#2018-29
DATE:	2018-09-13
DRAWN BY:	EF
CHECKED BY:	PGM

C-3

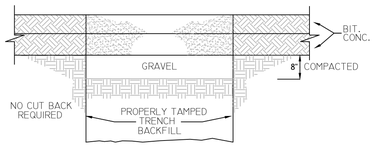
SCALE: AS NOTED



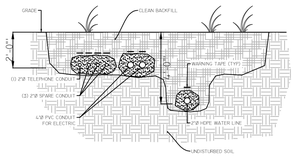
CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "I" OR "U" TYPE, OR HARDWOOD.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL MEET THE MINIMUM REQUIREMENTS SHOWN.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

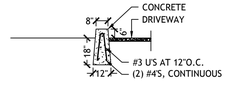
7 C-4 SILT FENCE DETAIL
SCALE: N.T.S.



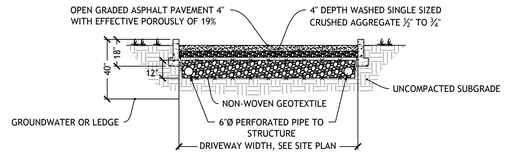
8 C-4 GRAVEL AND DIRT ROADS
SCALE: N.T.S.



9 C-4 TYPICAL UTILITY TRENCH DETAIL
SCALE: N.T.S.



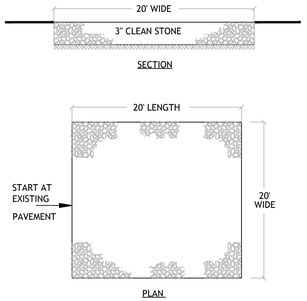
10 C-4 CURB DETAIL
SCALE: N.T.S.



11 C-4 CROSS SECTION AT PERVIOUS PAVEMENT DRIVEWAY
SCALE: N.T.S.

NOTES:
* MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.

* PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PERFORMED AFTER EACH RAIN.



12 C-4 ANTI-TRACKING APRON
SCALE: N.T.S.

SCOPE OF WORK:

-THE FOLLOWING IS A LIST OF REQUIRED WORK AT THE SITE. ALL WORK TO BE IN ACCORDANCE WITH TOWN OF SOUTH SALEM BUILDING, PLANNING AND ZONING AND WATER CONTROL AGENCIES AS WELL AS STATE OF NEW YORK BUILDING CODES. THIS LIST IS NOT INTENDED BE ALL INCLUSIVE ALL REQUIRED WORK AND MATERIAL TO BE SUPPLIED AS TO PROVIDE COMPLETED STRUCTURES.

-CHEMICAL & WASH DOWN FACILITY

CONTRACTOR TO PROVIDE AND INSTALL ALL OF THE COMPONENTS AND ANY AND ALL OTHER REQUIRED ITEMS TO ENABLE CONSTRUCTION OF THE WASH & LOAD MAINTENANCE FACILITY INCLUDING BUT NOT LIMITED TO:

-ALL GRADING OF SITE AND ADJACENT DRIVE AREAS.
-ALL FOOTINGS AND FOUNDATIONS, ALL RETAINING WALLS AS DETAILED ON STRUCTURAL DRAWINGS FOR BUILDING.
-ALL PAVED AND UNPAVED AREAS CONSISTING OF BASE, GRAVEL, BASE AND FINISH ASPHALT TOPPINGS AS DETAILED AND AS REQUIRED.
-ALL UTILITY SERVICE HOOKUPS TO NEW BUILDING INCLUDING UNDERGROUND POTABLE WATER, SANITARY WASTE, STORM WATER AND ELECTRIC SERVICE WITH RELOCATION OF SAME AS REQUIRED.
-POTABLE WATER TO BE TIED TO EXISTING 2" MAIN AS SHOWN WITH HIGH DENSITY POLYETHYLENE (HDPE) PIPING.
-SANITARY TO BE TIED INTO EXISTING SERVICE WITH SCHEDULE 80 & 40 PVC.
-A COMPLETE STORM WATER RETENTION SYSTEM AND OVERFLOW WITH ALL STRUCTURES AND PIPING AS SHOWN ON PLANS PIPING TO BE PVC
-A NEW ELECTRIC POWER POLE AND RELOCATION OF OVERHEAD ELECTRIC SERVICE TO UNDERGROUND SERVICE TO ADJACENT BUILDING. ALL POWER LINES TO BE COPPER IN SCHEDULE 40 OR 80 PVC.
-RETAINING WALL AND FENCING AS SHOWN

-BULK STORAGE

-CONTRACTOR TO PROVIDE AND INSTALL ALL THE COMPONENTS AND ANY AND ALL REQUIRED ITEMS TO ENABLE CONSTRUCTION OF THE STOCKPILE STORAGE BARNS INCLUDING BUT NOT LIMITED TO:
-RE-GRADING OF SITE
-CURB CUT AT ENTRANCE TO STORAGE BARNS
-GRAVEL DRIVEWAY AND COMPACTION
-ALL FOOTINGS AND FOUNDATIONS & SLABS AS DETAILED ON DRAWINGS

-FOUNDATION & SLAB INSTALLATION AT MAINTENANCE BUILDING

-CONTRACTOR TO PROVIDE AND INSTALL ALL REQUIRED SHORING, EXCAVATION, SLABS, FOUNDATIONS AS PER THE DRAWINGS AND NOT LIMITED TO:
-SHORING AND UNDERPINNING OF EXISTING BUILDING AND COLLAPSING FOUNDATION AREA
-EXCAVATION AND PLACEMENT OF FOOTINGS AND FOUNDATION AT SAME AREA AS SHOWN ON DRAWINGS
-LEVELING AND GRADING, COMPACTING, AND GRAVEL AND CONCRETE PLACEMENT AT GARAGE AREA OF MAINTENANCE BUILDING INCLUDING, ALL GRAVEL, VAPOR BARRIER, COMPACTION, CONCRETE AND REINFORCEMENT PLACEMENT.
-REPLACEMENT OF ALL EXISTING WOOD COLUMNS WITH 8"X8"X1/2" HSS STEEL COLUMNS ON 4'X4'X12" REINFORCED FOOTINGS.
-ALL REQUIRED CONNECTIONS OF EXISTING BUILDING TO NEW ELEMENTS

MARCHETTI CONSULTING ENGINEERS
25 High Ridge Rd
Pound Ridge, NY 10576
P (914) 764-9011
F (914) 764-9012
info@marchetticonsultingengineers.com

Drawings and Specifications, as instruments of professional service, are and shall remain the property of the Engineer. Documents are not to be used, in whole or in part, for other projects or purposes or by any other parties than those authorized by contract without the specific written authorization of the Engineer. The use of this document is contingent upon payment to the engineer for services rendered. Non-payment shall give the Engineer the authority to bar document use by any and all parties. If owner disputes any Engineer's statements for services, it is required that the owner advise the engineer in writing with ten (10) days. Remaining, undisputed portions are due and payable upon receipt. The owner shall indemnify the Engineer against any claims alleging damages or delays incurred in the event the Engineer exercises the right to bar document use for non-payment. Contractors must check all dimensions on site. Only figured dimensions are to be worked from. Discrepancies must be reported immediately to the Engineer before proceeding.

LEGEND

C.O.	CLEAN OUT
R.L.	RAIN LEADER
✳ ✳ ✳	EROSION CONTROL FENCING
—EOH—	ELECTRIC OVER HEAD
—EUG—	ELECTRIC UNDERGROUND
—SAN—	SANITARY WASTE
—W—	WATER
384	EXISTING CONTOUR
384	NEW CONTOUR
T.O.W.	TO OF WALL
B.O.W.	BOTTOM OF WALL
	CURB TO BE REMOVED
	CUT AREA
UD	UNDERDRAIN

No.	DESCRIPTION	DATE
1	ISSUE FOR PRICING	2018-09-13
	REVISION	2018-10-10
	REVISION	2019-02-04

STAMP & SIGN:

WACCABUC COUNTRY CLUB
90 MEAD STREET
LEWISBORO, NY 10597

DETAILS & SECTIONS

PROJECT NUMBER:	#2018-29
DATE:	2018-09-13
DRAWN BY:	EF
CHECKED BY:	PGM

C-4

SCALE: AS NOTED

N

150'-0" TOWN REGULATED AREA

100'-0" DEP SETBACK

P. & W. GARDEN FEN

P. & R. Fence

86.00'

FENCE

(1) AG
(3) MP
(12) Oc
(3) CA
(1) AG

(3) CA
(9) Oc
(5) CAh
15",20" MA
24",24" AS

BR

15"MA
12",15" AS
18"MA

A3 Conc. Bldg.

REDIRECT OVERLAND FLOW TO NEW RIP-RAP SLOPE AROUND EX. CB

Stone Box Culvert

A2 1 Story Frame Building (Garage) F.F.=375.6

20"TR (Dead)
8"HM (Dead)
18"WN

FRAME GARAGE

(2) MP
(1) CC
(3) MP
(3) CA

MEADOW MIX

(5) IG
(3) JV
18"PN (Dead)
18"PN (Dead)
(2) BN
(7) Mc

Deck
Asphalt
Roof Over Asphalt
M.S. Wall

1 Story Frame Building
Enclosed Porch

A6 2 Story Frame Barn F.F.=384.2

Conc. Apron

Wood Shed

Concrete

(1) CA
(9) IG

(20) Ed 24" O.C.
BIO-SWALE (50) Iv 18" O.C.

(5) CAh
(12) Mc
(12) Ed
DI

(3) CAh
8"HDPE
(1) CA
(12) Mc

RIP-RAP PLUNGE POOL BORDERED WITH BOULDERS TO REDIRECT FLOW INTO NEW BIO-SWAL TO SLOW AND FILTER WATER

Deck
2 Story Frame House
A8 1 Story Maintenance Shed
Roof Overhang
F.F.=380.3
Conc. O.P.
Chim.
SMH
SMH
SMH

A7 1 Story Frame House F.F.=377.5
O.P.

20"MA
16"CD
12"CD

(1) CA
(30) Os 3' O.C.
(3) CA

PROPOSED CHEMICAL STORAGE AND WASHDOWN FACILITY

GUARDCO 104L LED WALL MOUNT SCONCE; OR APPROVED EQ.; TYP.

AREA OF DISTURBANCE: 4,064± SQ/FT

(1) IC
(5) IG
(1) HQ
(1) PP

(1) IC
(1) HQ
(5) HQ
(1) UA

Platform Tennis Court
Wood Deck
Platform Tennis Court
Steps
Platform Tennis Court
Deck
Platform Tennis Court
Steps
Wood Steps

15"SP

A5 2 Story Frame

Deck (over)
Open Porch

48"OA

36 STORMTECH UNITS BOTTOM AT 377.0

T.O.W.: 384.0
B.O.W.: 382.0
20"WN

Picket Fence

C.E.

A9 2 Story Frame House

14"MA

T.O.W.: 384.0
B.O.W.: 382.0
Conc. O.P.

Picket Fence

C.R.W.

A4 Frame Building

18"OA

REMOVE ALL VEGETATION ON BOTH SIDES OF STREAM CHANNEL AND REPLANT WITH PROPOSED BUFFER MATERIAL

MEADOW MIX

(1) BN
(3) IG
(3) JV

AREA OF DISTURBANCE: 5,630 SQ/FT

BULK STORAGE
BULK STORAGE

(5) Mc
(5) IG
(3) MP

12",15" AS

Hedge

Asphalt Driveway

31.8'

Conc. Apron

G.F.=384.2

Story Frame Garage

W.T.R.W.

F.F.=385.0

O.H.

2 Story Frame House A1

O.P. w/Roof

18.8'

150'-0" REGULATED AREA

Bay Window

O.P. w/Roof

MEADOW MIX
(1) VD
(12) RA
(3) IVw
(1) CR

(3) VD
(1) CR
(2) RA
(6) IVw
(1) JV

(1) IVs
(5) CA

(1) CR
(5) CA

(1) AG
(5) IVw

(2) CA
(4) CAh

Stone Box Culvert
Stone Box Culvert
Stone Box Culvert
Stone Box Culvert
Stone Box Culvert
Stone Box Culvert

S.R.W.

20"Maple

Hedge

Stockade

Gate

Gate

Fence
Fen. Cor.
0.9'W
0.1'S

8 Carriage House Drive
Area= 0.764 Acres
8 Carriage House Road

Picket Fence

Fence

Wall
Stone
10"Beech
Wall
10"Beech
Riprap
16"Beech
Remains
40"Maple
18"Maple

INV=380.4

374 372 376 378 380 382 384 386 388 390

NOTES:
1. BASE INFORMATION TAKEN FROM "SITE UTILITIES & DRAINAGE PLAN" PREPARED BY MARCHETTI CONSULTING ENGINEERS, DATED 9,13,18; REV. 2.4.19
2. SEE SITE DEVELOPMENT PLANS PREPARED BY MARCHETTI CONSULTING ENGINEERS FOR ALL GRADING, DRAINAGE, UTILITIES, ETC.

DISTURBANCE / MITIGATION CALCULATION:

AREA OF DISTURBANCE*:
- 5,630 + 4,064 = 9,694 S.F.

PROPOSED MITIGATION (PLANT BEDS):
- 9,700 ± S.F.

*DISTURBANCE IS CALCUTAED USING AREAS LOCATED WITHIN THE 150' TOWN REGULATED BUFFER AREA THAT ARE NOT CURRENTLY DEVELOPED (LAWN / AND OR PLANTING AREA).

SEED ALL DISTURBED AREAS WITH GENERAL SEED MIX UNLESS OTHERWISE NOTED.

NEW PLANT MATERIAL TO BE LAID OUT IN FIELD BY LANDSCAPE ARCHITECT

SEE SHEET L2 FOR PLANTING NOTES AND DETAILS

DATE: REVISION:

A2 LAND CONSULTING
LANDSCAPE ARCHITECTURE
LAND USE CONSULTING

A2 Land Consulting, LLC
30 Rocky Hill Rd.
New Fairfield, CT 06812

P: 845.531.1504
E: abigail@a2land.com
W: www.a2land.com

MITIGATION PLAN

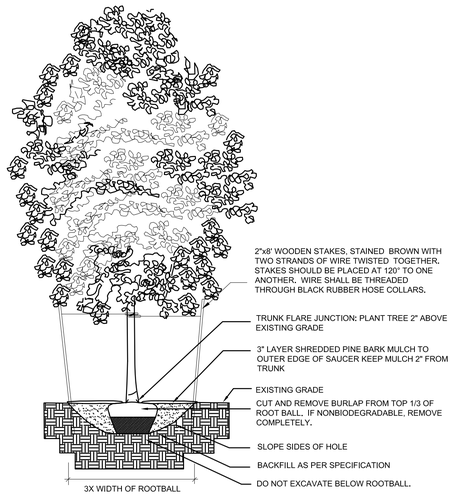
PREPARED FOR

WACCABUC COUNTRY CLUB

90 MEAD STREET
LEWISBORO, NY

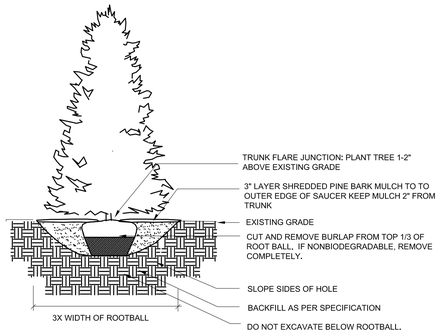
DATE:	2.7.18
SCALE:	1" = 20'
PROJ #:	1915
DWG FILE:	1915LA
SHEET:	L1

REGISTERED LANDSCAPE ARCHITECT
ABIGAIL ADAMS
No. 002321-1
STATE OF NEW YORK



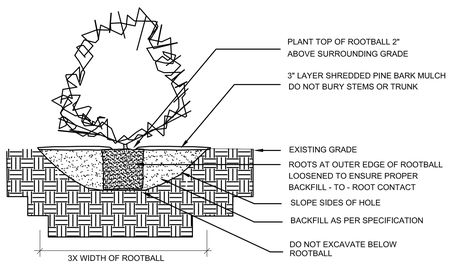
DECIDUOUS TREE PLANTING

N.T.S.



EVERGREEN TREE PLANTING

N.T.S.



SHRUB PLANTING

N.T.S.

GENERAL PLANTING NOTES

1. ALL PLANTING MATERIAL TO BE NURSERY GROWN STOCK SUBJECT TO APPLICABLE A.N.L.A STANDARDS.
2. THE CONTRACTOR SHALL SUPPLY ALL PLANTS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND LISTED IN THE PLANT LIST. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT LIST AND THOSE REQUIRED BY THE DRAWINGS, THE LARGER NUMBER SHALL APPLY.
3. ALL PLANTS SHALL BE APPROVED PRIOR TO INSTALLATION AND SHALL BE LOCATED ON SITE BY THE CONTRACTOR, FOR THE APPROVAL OF THE LANDSCAPE ARCHITECT OR CLIENT. ANY INSTALLATIONS WHICH WERE NOT PRE-APPROVED AND WHICH ARE SUBSEQUENTLY REQUESTED TO BE MOVED, WILL BE DONE AT THE CONTRACTORS EXPENSE.
4. PRECISE LOCATION OF ITEMS NOT DIMENSIONED ON THE PLAN ARE TO BE FIELD STAKED BY THE CONTRACTOR AND SHALL BE SUBJECT TO THE REQUIREMENTS SPECIFIED IN THE PREVIOUS NOTE.
5. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGED VEGETATION AND SHALL REPLACE OR REPAIR ANY DAMAGE AT HIS OWN EXPENSE.
6. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES IN THE FIELD. WHERE PLANT MATERIAL MAY INTERFERE WITH UTILITIES, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT TO COORDINATE THEIR INSTALLATION.
7. PLANTINGS INSTALLED IN THE DRY SUMMER MONTHS AND /OR LAWN SEEDED OUT OF SPRING OR FALL PERIODS, IF ALLOWED BY OWNER, WILL REQUIRE AGGRESSIVE IRRIGATION PROGRAMS AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE DIRECTED BY THE OWNER.
8. SUBSTITUTIONS PERMITTED ONLY UPON WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
9. PLANT TAGS TO REMAIN ON ALL PLANT MATERIAL UNTIL FINAL ACCEPTANCE. CONTRACTOR TO THEN REMOVE ALL PLANT TAGS.
10. WHERE A SIZE RANGE IS GIVEN IN THE PLANT SCHEDULE, AT LEAST 50% OF THE PLANTS PROVIDED SHALL BE OF THE LARGER SIZE.
11. CONTRACTOR TO GUARANTEE ALL PLANT MATERIAL FOR ONE YEAR AFTER DATE OF FINAL ACCEPTANCE.
12. CONTRACTOR TO MAINTAIN ALL PLANT MATERIAL UNTIL 60 DAYS AFTER FINAL ACCEPTANCE.

SEED MIXES

GENERAL SEED MIX:
WATER STAR ULTRA MIXTURE
AS SUPPLIED BY PLANTER CHOICE NURSERY, OR APPROVED EQUAL.
30% Razor Creeping Red Fescue
20% Interga Perennial Ryegrass
20% APR 2015 Perennial Ryegrass
10% Survivor Chewings Fescue
10% Soprano Perennial Ryegrass
10% Blue Bonnet Kentucky Blue
50# per 12,500 sq. ft.

MEADOW MIX:
NATIVE UPLAND WILDLIFE FORAGE AND COVER MEADOW MIX
ERNMX-123
AS SUPPLIED BY ERNST SEED, OR APPROVED EQUAL.

15.00%	Tripasacum dactyloides	Eastern Gamma Grass
12.00%	Elymus Canadensis	Canada Wild Rye
10.00%	Andropogon gerardii	Big Bluestem, Niagra
10.00%	Andropogon scoparius	Little Bluestem
10.00%	Bromus ciliatus	Fringed Brome Grass
10.00%	Panicum virgatum	Switch Grass, Shelter
8.00%	Sorghastrum nutans	Indian Grass
6.00%	Chamaecrista fasciculate	Partridge Pea
5.00%	Panicum amarum	Atlantic Coastal Panic Grass
5.00%	Poa palustris	Fowl Bluegrass
4.00%	Coreopsis tinctoria	Plains Coreopsis
3.00%	Rudbeckia hirta	Black Eyed Susan
2.00%	Desmodium canadense	Showy Tick Trefoil

Seeding Rate: 15lb per acre, or 1/3-1/2 lb per 1,000 sq ft

This mix provides forage and cover for a wide range of desirable wildlife, including butterflies and pollinators.

PROPOSED PLANTING SCHEDULE

SYM	BOTANICAL-NAME	COMMON-NAME	SIZE	ROOT	QTY
CANOPY, ORNAMENTAL & EVERGREEN TREES:					
BN	Betula nigra 'Heritage'	Heritage Birch	10'-12' Ht.	B&B Clump	3
CC	Cercis canadensis	Eastern Red Bud	10'-12' Ht.	B&B Clump	1
JV	Juniperus virginiana	Eastern Red Cedar	5'-6' Ht.	B&B	8
PP	Picea pungens 'Fat Albert'	'Fat Albert' Spruce	5'-6' Ht.	B&B	1
UA	Ulmus americana 'Princeton'	'Princeton' Elm	10'-12' Ht.	B&B	1
SHRUBS:					
AG	Amelanchier x grandiflora 'Autumn Brilliance'	'Autumn Brilliance' Serviceberry	10 Gal.	Cont.	3
CA	Clethra alnifolia 'Ruby Spice'	'Ruby Spice' Clethra	3 Gal.	Cont.	27
CAh	Clethra alnifolia 'Hummingbird'	'Hummingbird' Clethra	3 Gal.	Cont.	15
CR	Cornus Racemosa	Gray Dogwood	5 Gal.	Cont	3
HQ	Hydrangea quercifolia 'Snow Queen'	'Snow Queen' Oakleaf Hydrangea	3 Gal.	Cont.	7
IC	Ilex crenata 'Schwoebel Excelsa'	'Schwoebel Excelsa' Holly	5'-6' Ht.	B&B	2
IG	Ilex glabra	Inkberry	3 Gal.	Cont.	27
IVs	Ilex verticillata 'Southern Gentleman'	'Southern Gentleman' Winterberry	3 Gal.	Cont.	1
IVw	Ilex verticillata 'Winter Gold'	'Winter Gold' Winterberry	3 Gal.	Cont.	14
MP	Myrica pennsylvanica	Northern Bayberry	7 Gal.	Cont.	11
RA	Rhus aromatica 'Gro-Low'	'Gro-Low' Fragrant Sumac	2 Gal.	Cont.	14
VD	Viburnum dentatum 'Chicago Lustre'	'Chicago Lustre' Northern Arrowwood	3'-4' Ht.	B&B	4
HERBACEOUS:					
Ed	Eupatorium dubium 'Baby Joe'	'Baby Joe' Joe Pye Weed	1 Gal.	Cont	32
Iv	Iris versicolor	Blue Flag Iris	2" Plug	Cont.	50
Mc	Muhlenbergia capillaris	Muhly Grass	1 Gal.	Cont.	36
Os	Onoclea sensibilis	Sensitive Fern	1 Gal.	Cont.	21
Oc	Osmunda cinnamomea	Cinnamon Fern	1 Gal.	Cont.	30

DATE: REVISION:

A2 Land Consulting, LLC
30 Rocky Hill Rd.
New Fairfield, CT 06812

P: 845.531.1504
E: abigail@a2land.com
W: www.a2land.com

LANDSCAPE ARCHITECTURE
LAND USE CONSULTING

MITIGATION PLAN

PREPARED FOR

WACCABUC COUNTRY CLUB

90 MEAD STREET
LEWISBORO, NY

DATE:	2.7.18
SCALE:	1" = 20'
PROJ #:	1915
DWG FILE:	1915LA
SHEET:	L2

REGISTERED LANDSCAPE ARCHITECT
ABIGAIL ADAMS
No. 002321
STATE OF NEW YORK

GARDCO by signify

Wall Mount

LED Wall Sconce

104L



Project:

Location:

Cat.No:

Type:

Lamps: Qty:

Notes:

Gardco 104 LED wall sconces feature a low-profile design that provides wide flexibility in high performance exterior wall illumination. Full cutoff performance, usable illumination patterns, and powerful wattages combine into a compact and architecturally pleasing design. 104L sconces are available in Type 2, 3, and 4 distributions, and provide output of up to 9500 lumens. Energy saving control options increase energy savings and offer California Title 24 compliance. Emergency Battery Backup option available for path of egress.

Ordering guide

example: 104L-32L-700-NW-G1-3-120-IMRI2-BZ

Prefix	Number of LEDs	Drive Current	LED Color – Generation	Distribution	Emergency	Voltage	Options: Controls	Options: Electrical	Finish
104L									
104L LED Wall Sconce	**16L** 16 LEDs (1 module)	**530** 530mA **650** 650mA[1] **700** 700mA **1000** 1000mA **1200** 1200mA	**CW-G1** Cool White 5700K, 70 CRI Generation 1 **NW-G1** Neutral White 4000K, 70 CRI Generation 1 **WW-G1** Warm White 3000K, 70 CRI Generation 1	**2** Type 2 **3** Type 3 **4** Type 4	**EBPC** Emergency Battery Pack Cold Weather[3,4,6,12] Leave blank to omit an emergency option	**UNV** 120-277V **HVU** 347-480V **120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V	**DD** 0-10V Dimming Driver[5,6] **DCC** Dual Circuit Control[6,7,8] **DynaDimmer:** Automatic Profile Dimming **CS50** Safety 50% Dimming (7 hours)[7,9,10] **CM50** Median 50% Dimming (8 hours)[7,9,10] **CE50** Economy 50% Dimming (9 hours)[7,9,10] **DA50** All Night 50% Dimming[7,9,10] **Photoelectric systems** **PCB** Photocontrol Button[5,10,11,12] **Infrared Motion Response systems** **IMRI2** Integral with #2 lens[9,12,13] **IMRI3** Integral with #4 lens[9,12,13] **Wireless system** **LLC2** Integral module with #2 lens[5,7,9,14] **LLC3** Integral module with #3 lens[5,7,9,14]	**Fusing** **F1** Single (120, 277, 347VAC)[12] **F2** Double (208, 240, 480VAC)[12] **F3** Canadian Double Pull (208, 240, 480VAC)[12]	**Textured** **BK** Black **WH** White **BZ** Bronze **DGY** Dark Gray **MGY** Medium Gray **Customer specified** **RAL** Specify optional color or RAL (ex: OC-LGP or OC-RAL7024) **CC** Custom color (Must supply color chip for required factory quote)
	32L 32 LEDs (2 module)	**530** 530mA **650** 650mA[1] **700** 700mA **1000** 1000mA[1]							

1. 650mA only available with Emergency Battery Pack Cold Rated (EBPC) option
2. 32L rated for 30°C at 1000mA
3. Available for use with 16L and 32L in 530mA or 650mA only. Rated for -20°C to 35° C.
4. Available in 120 or 277V only.
5. Not available with Dual Circuit Control (DCC) option.
6. EBPC is not available with DCC.
7. Not available with Dimming Driver (DD) option.
8. Available in 32L with 530mA. Consult technical support center for use with photocell and CS/CM/CE/DA.
9. Available in 120-277V (UNV) only.
10. Not available with LLC and DCC.
11. Not available with 480V.
12. Must specifiy input voltage.
13. Not available with DD, DCC or LLC.
14. LLC2/3 Not available with PCB, IMRI, CS/CM/CE/DA. Ships with WS accessory attached to wireless module. Not for use with LLCR accessory.

104L Sconce LED

Wall Mount

Luminaire Accessories (order separately)

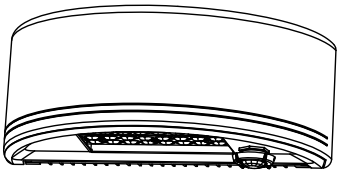
Mounting accessories
Wall Mount
WS Wall Mounted Box for Surface Conduit

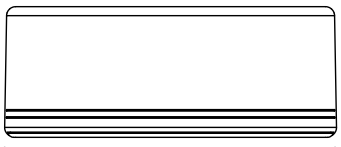
System accessories
Wireless system remote mount module
LLCR2-(F) #2 lens - specify finish in place of (F)
LLCR3-(F) #3 lens - specify finish in place of (F)

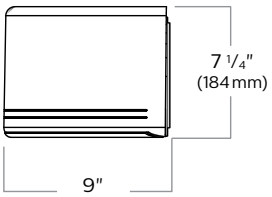
Wireless system remote controller accessory

Wireless system offers a remote radio/sensor module that to connected to a Limelight system (sold by other). Remote module can be mounted to wall or pole with j-box supplied. May be specified by choosing one of two different lenses to accommodate a variety of mounting heights/sensor detection ranges. Must specify option DD on luminaires that are planned to be used with remote mount controllers. See page 4 for Wireless system details.

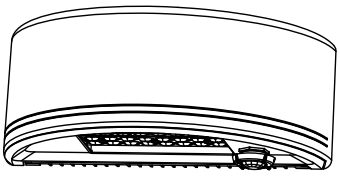
Dimensions

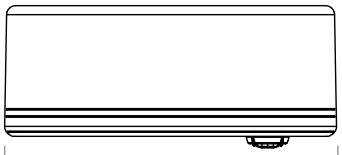


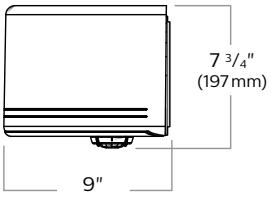




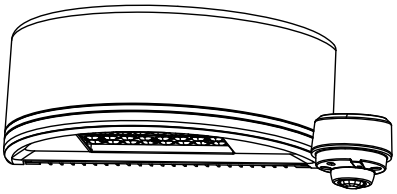
Motion Response

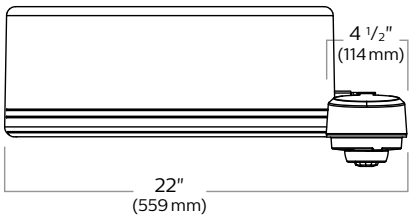


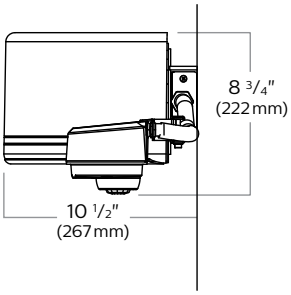


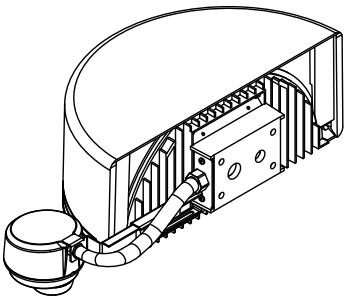


Wireless Controls









Luminaire Weights	
LED Wall Sconce 104L	**Weight**
Luminaire	13.5 lbs
Luminaire - EBPC (EM battery pack)	17.0 lbs
Luminaire - Integrated system controls	16.3 lbs

104L Sconce LED

Wall Mount

LED Wattage and Lumen Values

Ordering Code	LED Qty	LED Current (mA)	Color Temp.	Average System Watts[1]	Type 2			Type 3			Type 4		
					Lumen Output[1,2]	BUG Rating	Efficacy (LPW)	Lumen Output[1,2]	BUG Rating	Efficacy (LPW)	Lumen Output[1,2]	BUG Rating	Efficacy (LPW)
104L-16L-530-NW-G1	16	530	4000K	28	2944	B1-U0-G0	106	2687	B1-U0-G1	97	2747	B1-U0-G1	99
104L-16L-700-NW-G1	16	700	4000K	37	3789	B1-U0-G1	103	3458	B1-U0-G1	94	3535	B1-U0-G1	96
104L-16L-1000-NW-G1	16	1000	4000K	55	5050	B1-U0-G1	92	4609	B1-U0-G1	84	4712	B1-U0-G1	86
104L-16L-1200-NW-G1	16	1200	4000K	65	5744	B2-U0-G1	89	5242	B1-U0-G2	81	5359	B1-U0-G2	83
104L-32L-530-NW-G1	32	530	4000K	52	5698	B2-U0-G1	110	5200	B1-U0-G2	100	5316	B1-U0-G2	102
104L-32L-700-NW-G1	32	700	4000K	70	7242	B2-U0-G1	103	6609	B1-U0-G2	94	6757	B1-U0-G2	96
104L-32L-1000-NW-G1	32	1000	4000K	107	9797	B2-U0-G1	92	8941	B2-U0-G2	84	9140	B2-U0-G2	86

LED Wattage and Lumen Values (Emergency Mode)[3]

Ordering Code	LED Qty	LED Current (mA)	Color Temp.	Ave. System Watts (charging mode)	Type 2	Type 3	Type 4
104L-16L-NW-EBPC	16	N/A	4000K	14	1345	1228	1255
104L-32L-NW-EBPC	32	N/A	4000K	14	1754	1600	1636

1. Wattage and lumen output may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.
2. Lumen values based on photometric tests performed in compliance with IESNA LM-79.
3. For emergency EBPC option, publish values are based on initial lumens.

Luminaire options

DD: 0-10V dimming driver with leads supplied through back of luminaire (for secondary dimming controls by others).

Dynadimmer Automatic Profile Dimming: Automatic dimming profiles (CS50/CM50/CE50) offer safety, median, or economy settings, for shorter or longer duration. Dimming profiles provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. 50% dimming is standard. DA50 offers 50% instantaneous dimming all night (during all dark hours). Other dimming settings are also available if different light levels are required (contact Technical Support for details).

Profile	Dimming		
	Schedule	Duration	Level
Economy	9 PM - 6 AM	9 hours	50%
Median	10 PM - 6 AM	8 hours	50%
Safety	11 PM - 6 AM	7 hours	50%
Reactive 50	all night	dynamic	

IMRI2, IMRI3: Infrared Motion Response Integral (IMRI). IMRI module is mounted integral to the luminaire door and is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges (see charts for approximate detection patterns). Motion response for option IMRI is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to 100% light output. Dimming on low is factory set to 50% with 5 minute default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50% of the normal constant wattage reducing the light level. IMRI can also be specified with automatic profile dimming for the added benefit of a combined dimming profile with sensor detection, where the PIR sensor will override the dimming profile when occupancy is detected. Passive infrared (PIR) motion sensor, WattStopper FSP-211, equipped with lens choice specified. Available from 120V to 277V input only. Motion sensor off state power is 0.0 watts. The FSP-211 can also be reprogrammed with WattStopper's FS1R-100 remote programming tool accessory.

DCC: Dual Circuit Control permits separate switching of 32L models only, where a quantity of (2) 16 LED modules are controlled independently by use of two sets of leads, one for each module.

Wireless system: 104L luminaires are available with optional wireless controllers ready to be connected to a Limelight system (sold by other). The system allows you to Wirelessly manage the entire site, independent lighting groups or individual luminaires while on-site or remotely.
Based on a high density mesh network with an easy to use web-based portal, you can conveniently access, monitor and manage your lighting network remotely. Wireless System can be combined with site and area, pedestrian, and parking garage luminaires as well, for a completely connected outdoor solution.

F1: Fusing Single (for 120, 277 or 347VAC)

F2: Fusing Double (for 208, 240 or 480VAC)

F3: Fusing Canadian Double Pull (for 208, 240 or 480VAC)

EBPC: Emergency battery pack is cold weather rated down to -20C (-4F) and integral to the luminaire , allowing for a consistent look between emergency and non-emergency sconces. A separate surface mount accessory box is not required. Dual light engines (32L) are wired in parallel, both operating in emergency mode to meet various redundancy lamp requirements. Also available with single light engine (16L). Secondary driver with relay immediately detects AC power loss and powers luminaire for a minimum of 90 minutes from the time power is lost.

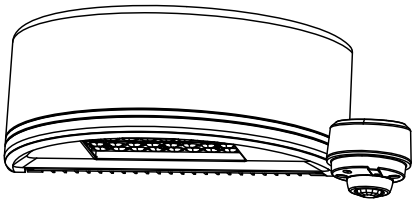
104L Sconce LED

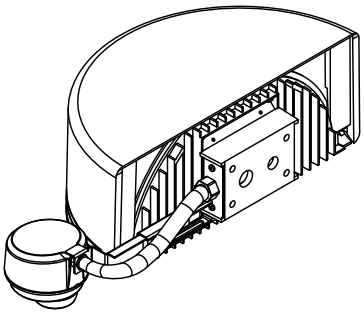
Wall Mount

Infrared Motion Response and Wireless system sensor coverage patterns

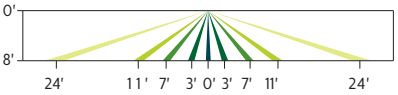
LLC2/3 Luminaire Mounted Controller

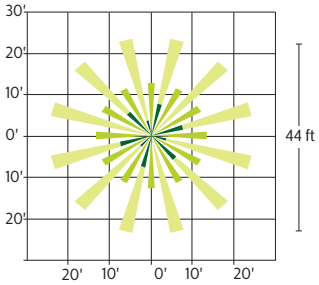
Controller attached to luminaire and Includes radio, photocell and motion sensor with #2 or #3 lens for 8-20' mounting heights.



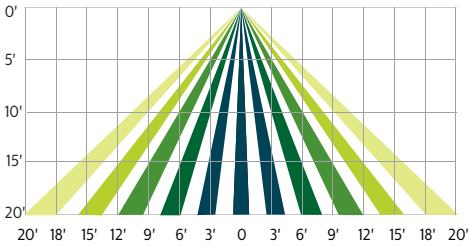


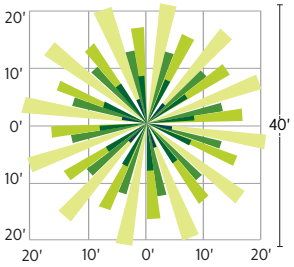
IMRI2/LLC2/LLCR2





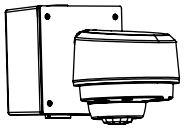
IMRI3/LLC3/LLCR3



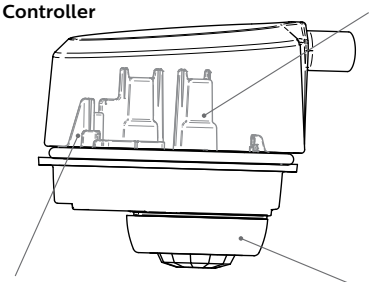


Remote Mount Wireless Controller

Used to extend the communication on site, to extend motion response and add other luminaires that are not pole mounted. Consult factory for more information.



Controller



Wireless Radio

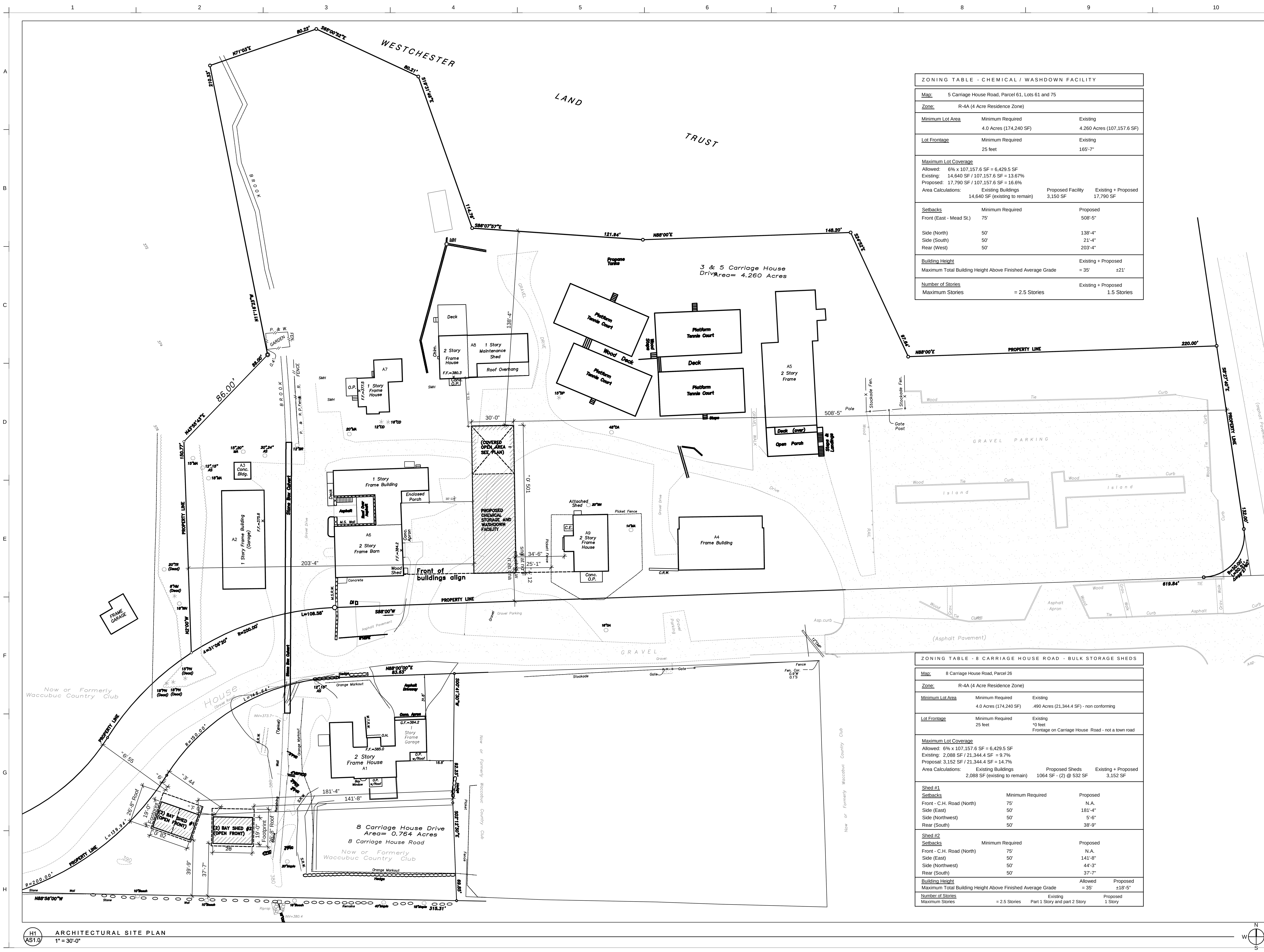
- 1.8 Watts max (no load draw)
- Operating voltage 120-277 VAC RMS
- Communicates using the ZigBee protocol
- Carries out dimming commands from Gateway
- Reports ambient light readings to 1500 Ft-Cd
- Transmission Systems Operating within the band 2400-2483.5Mhz
- ROHS Compliant

Photocell

- Ambient light photocell on every wireless radio that averages the light levels of up to 5 controllers for an accurate reading and optimal light harvesting activity.
- Reports ambient light readings to 1500 Fc.

Motion Response

- Detects motion through passive infrared sensing technology with three different lens configurations
- Motion sensor coverage can be adjusted from a narrow to a wide detection range, which helps reduce false triggers to further increase energy savings.
- Sensing profiles can be updated to adapt to activity levels in the environment, such as occupancy level, wind, and mounting height



ZONING TABLE - CHEMICAL / WASHDOWN FACILITY

Map:	5 Carriage House Road, Parcel 61, Lots 61 and 75		
Zone:	R-4A (4 Acre Residence Zone)		
Minimum Lot Area	Minimum Required		Existing
	4.0 Acres (174,240 SF)		4.260 Acres (107,157.6 SF)
Lot Frontage	Minimum Required		Existing
	25 feet		165'-7"
Maximum Lot Coverage			
Allowed:	6% x 107,157.6 SF = 6,429.5 SF		
Existing:	14,640 SF / 107,157.6 SF = 13.67%		
Proposed:	17,790 SF / 107,157.6 SF = 16.6%		
Area Calculations:	Existing Buildings	Proposed Facility	Existing + Proposed
	14,640 SF (existing to remain)	3,150 SF	17,790 SF
Setbacks	Minimum Required		Proposed
Front (East - Mead St.)	75'		508'-5"
Side (North)	50'		138'-4"
Side (South)	50'		21'-4"
Rear (West)	50'		203'-4"
Building Height			Existing + Proposed
Maximum Total Building Height Above Finished Average Grade			= 35' ±21'
Number of Stories			Existing + Proposed
Maximum Stories	= 2.5 Stories		1.5 Stories

ZONING TABLE - 8 CARRIAGE HOUSE ROAD - BULK STORAGE SHEDS

Map:	8 Carriage House Road, Parcel 26		
Zone:	R-4A (4 Acre Residence Zone)		
Minimum Lot Area	Minimum Required	Existing	
	4.0 Acres (174,240 SF)	.490 Acres (21,344.4 SF) - non conforming	
Lot Frontage	Minimum Required	Existing	
	25 feet	*0 feet Frontage on Carriage House Road - not a town road	
Maximum Lot Coverage			
Allowed:	6% x 107,157.6 SF = 6,429.5 SF		
Existing:	2,088 SF / 21,344.4 SF = 9.7%		
Proposal:	3,152 SF / 21,344.4 SF = 14.7%		
Area Calculations:	Existing Buildings	Proposed Sheds	Existing + Proposed
	2,088 SF (existing to remain)	1064 SF - (2) @ 532 SF	3,152 SF
Shed #1			
Setbacks	Minimum Required	Proposed	
Front - C.H. Road (North)	75'	N.A.	
Side (East)	50'	181'-4"	
Side (Northwest)	50'	5'-6"	
Rear (South)	50'	38'-9"	
Shed #2			
Setbacks	Minimum Required	Proposed	
Front - C.H. Road (North)	75'	N.A.	
Side (East)	50'	141'-8"	
Side (Northwest)	50'	44'-3"	
Rear (South)	50'	37'-7"	
Building Height		Allowed	Proposed
Maximum Total Building Height Above Finished Average Grade		= 35'	±18'-5"
Number of Stories		Existing	Proposed
Maximum Stories	= 2.5 Stories	Part 1 Story and part 2 Story	1 Story

DOYLE|COFFIN ARCHITECTURE

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Ridgefield, Connecticut 06877
203|431|6001
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doylecoffinarchitecture.com

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NOTES

1. Survey Information references "Base Map Survey" dated January 31, 2019; prepared by Insite Engineering, Surveying and Landscape Architecture, P.C., 3 Garrett Place, Carmel, NY 10512

CHEMICAL MIXING STORAGE AND WASH FACILITY AND BULK STORAGE FOR

WACCABUC COUNTRY CLUB

MEAD STREET
WACCABUC, NY 10597

ISSUED 01/31/19
REVISIONS

PRINCIPAL	JMD	P.A.	KJT
JOB NUMBER	885	SCALE	AS NOTED

ZONING

ARCHITECTURAL SITE PLAN

© DOYLE COFFIN ARCHITECTURE, LLC 2018

SHEET
AS1.0

FIELDWORK COMPLETED: January 16, 2019

WESTCHESTER LAND TRUST

3 & 5 Carriage House Drive
Area= 4.260 Acres

8 Carriage House Drive
Area= 0.764 Acres

Now or Formerly Waccabuc Country Club

Limit of 2002 Topo & 2018 Detail Update

Mead Street (asphalt Pavement)

Carriage House Road

GRAVEL PARKING

Island

Island

Gravel Parking (1-Way)

Gravel Parking

Soft Sided Storage

FRAME GARAGE

Now or Formerly Waccabuc Country Club

Survey prepared by Insite Engineering, Surveying and Landscape Architects, PC on January 25, 2019

3 & 5 Carriage House Road– Survey and topography prepared by Bunney Associates on April 6, 2001 and revised on September 4, 2008

Limit of 2002 Topo & 2019 Detail Update

Contour information within this limit line was generated in 2002 and has not been updated.

Survey detail within this area updated in 2019 by Insite Engineering, Surveying and Landscape Architects

– 2002 2' Contours
– 2002 10' Contours
– 2019 2' Contours
– 2019 10' Contours

TREE LEGEND
○ – Deciduous
✳ – Evergreen
AS– Ash
BR– Birch
CD– Cedar
HM– Hemlock
MA– Maple
OA– Oak
PN– Pine
SP– Spruce
TR– Unknown

Building Coverage		
Area	Sq. Feet	Description
A1	2088	8 Carriage House Rd.
A2	2129	Garage
A3	143	Conc. Bld.
A4	2297	Frame Building
A5	3265	2 Story Frame Building
A6	3357	Fr.Building and Barn
A7	818	1 Sty. Frame Hse
A8	1560	Maintenance Shed
A9	1071	2 Sty. Frame House
Total	14640	3&5 Carriage House Rd.

Base Map
Prepared for
Waccabuc Country Club
Situate in the
Town of Lewisboro
Westchester County, New York
Scale 1" = 20' Date: January 31, 2019

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
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Phone (845) 225-9690 • Fax (845) 225-9717
www.insite-eng.com

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16125.200
Waccabuc CC 8 Carriage House Survey.dwg

Z:\16125200 Waccabuc CC\Country Club Maps\Waccabuc CC 8 Carriage House Survey.dwg

ARCHITECTURE AND COMMUNITY APPEARANCE REVIEW COUNCIL

TOWN OF LEWISBORO

RECEIVED
JAN 04 REC'D 2019
TOWN CLERK
TOWN OF LEWISBORO

CAL. NO. 28-18-ACARC/PB

Applicant(s):		John Assumma, Waccabuc Country Club
Reason for Referral:		Planning Board
Address:		90 Mead Street, Waccabuc, NY
Tax Map I.D.s and Zone		Sheet 22, Block 10802, Lot 37 SCR-2A Sheet 22, Block 10802, Lot 61 R-4 A
Owner(s) of Record:		Waccabuc Country Club
Decision Date:		December 12, 2018
The Vote:	To Approve:	Virginia LoBosco, Chair Christine Carrié Alan Kaufman Craig Pillon
	Absent:	Rose Bonanno
Presentation by:		John Doyle, AIA, and Patrick Hagen, Waccabuc Country Club
Nature of Application:		Application for construction of a chemical wash station and bulk storage building.
Evidence Presented:		Grading plan (C-2) by Marchetti Consulting Engineers, dated October 10, 2018; Architectural drawings (A1.1, A1.3 & A1.5) by Doyle Coffin Architecture , dated XX/XX/15 and photographs from applicant.

Based on the foregoing, the members of ACARC resolved to approve the Waccabuc Country Club chemical wash station, bulk storage building, fences and plantings as submitted:

Chemical wash station

- concrete base, green metal siding and aluminum standing seam metal roof with gables;
- measures 30' by 110' (height 19'); and
- three closed and two open bays (with bollards).

Bulk storage building

- open-front two-bay green wood shed;
- measures 26' by 25' (height 18' 5");
- 6' overhanging front roof; and
- curved side walls.

Fences

- dark green wood fence comprised of vertical boards topped with pickets;
- 6' near the residence; and
- 8' where it is on top of a retaining wall on the maintenance building side.

Concrete-block foundations are to be painted green and the same green will be used throughout this project.

Plantings will be installed at the southern gable end of the chemical wash building and at the Carriage House Road entrance.

By motion Virginia LoBosco; seconded by Alan Kaufman; In favor: Christine Carrié, Alan Kaufman, Virginia LoBosco and Craig Pillon. Absent: Rose Bonanno

Virginia LoBosco cc
Virginia LoBosco, Chair

Dated in South Salem, New York
This 4th day of January, 2019