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TOWN OF LEWISBORO
Westchester County, New York

Planning Board
PO Box 725
Cross River, New York 10518

Tel: (914) 763-5592
Fax: (914) 763-3637
Email: planning@lewisborogov.com

AGENDA

Tuesday, April 19, 2016

Cross River Plaza, Cross River

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

I. DECISIONS

Cal# 8-14PB, Cal# 95-14WP, Cal# 20-14SW
Goldens Bridge Village Center, NYS Route 22, Goldens Bridge, NY 10526, Sheet 4, Block 11126, Lot 07 (Stephen Cipes, owner of record) Application for Site Plan, Wetland Activity and Stormwater Permits in connection with the construction of new building, parking lot and modifications to the existing shopping center.

Cal #01-16PB
Oakridge Commons (additional seating), 450 Oakridge Common, South Salem, NY 10590, Sheet 49D, Block 9829, Lot 10 (Smith Ridge Assoc – owner of record) - Application for Site Plan Review for additional seating at Teatro's Café (40 additional seats indoor/outdoor).

II. PROJECT REVIEW

Cal #07-15PB, Cal# 31-15WP and Cal# 06-16SW
Fortune Home Builders – Duffy's Bridge Road, Goldens Bridge, NY, Sheet 2, Block 10516, Lot 1 (Glickenhaus Bedford Development, owner of record) – Application for Wetland Activity Permit and Stormwater Permit for the construction of a single-family residence on an undeveloped lot.

Cal#1-16 SW, Cal#1-16 WP
Lichtman, 192 Kitchawan Road, South Salem, NY 10590, Sheet 45, Block 10300, Lot 012 (Cheryl Chess and Aaron Lichtman, owners of record) - Application for demolition and removal of existing five-bedroom house, cottage and pool house. Application for Wetland Activity Permit and Stormwater Permit for the construction of a new five-bedroom house, garage, pool house, courtyard and modified driveway.

Cal #11-15PB, Cal#04-16 SW, Cal#09-16 WP
Elegant Banquets, 1410 Route 35, South Salem, NY 10590, Sheet 39, Block 10549, Lot 17 (South Salem Owners, LLC, owner of record) – Application for Site Plan Review, Wetland Activity Permit and Stormwater Permit in connection with an addition to the existing building and modification to the existing site.

III. SKETCH PLAN REVIEW

Cal #10-15 PB
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 46 unit MF development on a ±35.4 acre parcel.

IV. WETLAND VIOLATION

Cal# 5-14WV, Cal# 6-16WP
Caban, 31 South Shore Road, South Salem, NY 10590, Sheet 33D, Block CAMP, Lot 13, (Ryan and Patricia Caban, owners of record) Application for Wetland Activity Permit and property restoration.

V. EXTENSION OF TIME REQUESTS

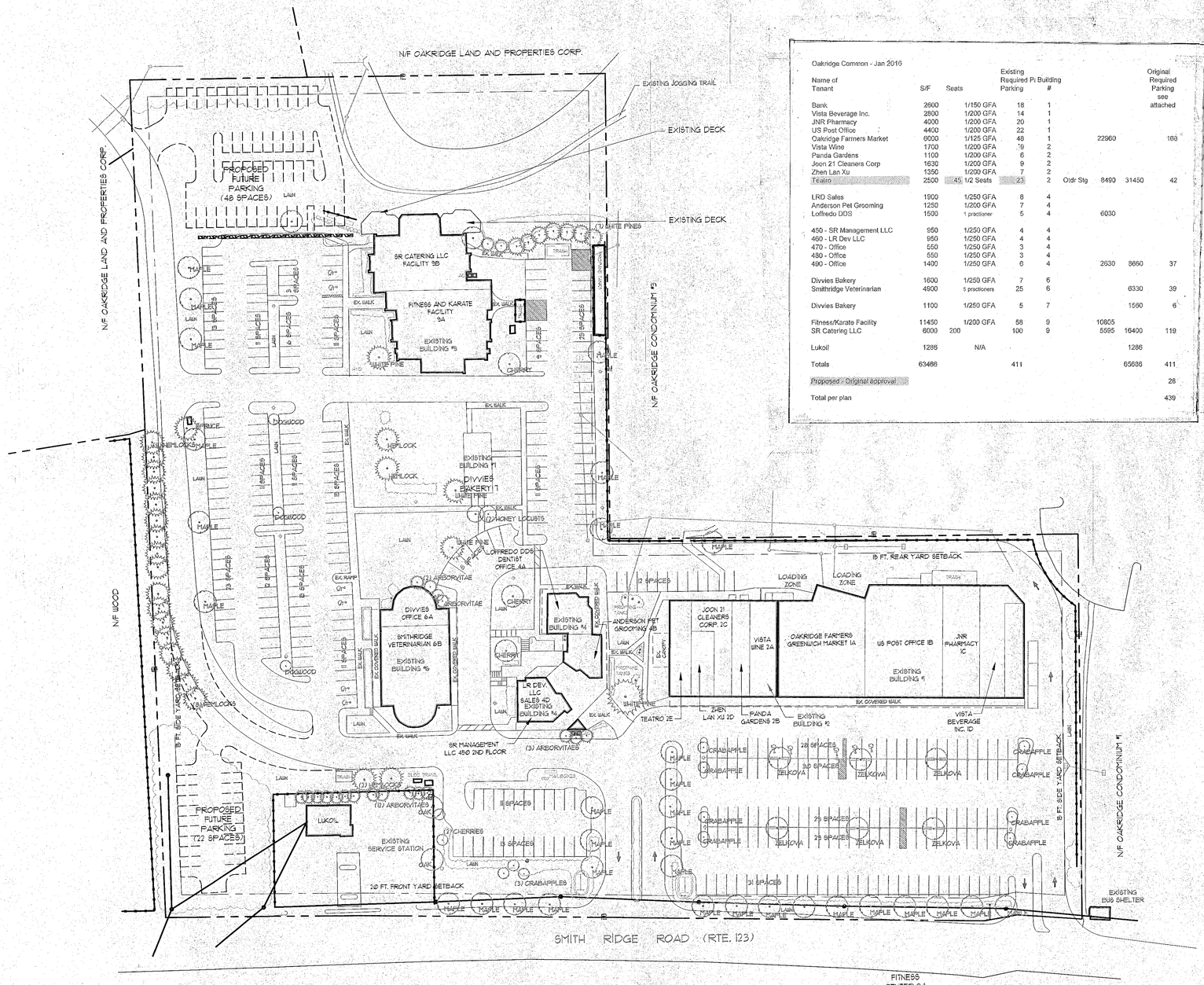
Cal#12-13PB and Cal# 13-14SW
Guillermo Arias, 411 Smith Ridge Road, South Salem, NY 10590 Sheet 0050, Block 09834, Lot 28, & Lexus Holding Company, LTD, Smith Ridge Road, South Salem, Sheet 0050, Block 09834, Lot 162 – Request for extension of time granting Final Subdivision Plat Approval and Stormwater Permit Approval for a two (2) lot subdivision.

Cal# 8-12PB
Rudolph Petruccelli, Oscaleta Road, South Salem, Sheet 33B, Block 11157, Lot 46 (Rudolph Petruccelli, owner of record) - Request for a 90-day Extension of Time to resolution granting Preliminary/Final Subdivision Plat, Negative Declaration Under SEQRA, dated October 21, 2014.

VI. CORRESPONDENCE AND GENERAL BUSINESS

Wetland Violation Reports

VII. MINUTES OF March 15, 2016



Oakridge Common - Jan 2016

Name of Tenant	S/F	Seats		Existing Required Parking	Building #				Original Required Parking see attached
Bank	2600		1/150 GFA	18	1				
Vista Beverage Inc.	2800		1/200 GFA	14	1				
JNR Pharmacy	4000		1/200 GFA	20	1				
US Post Office	4400		1/200 GFA	22	1				
Oakridge Farmers Market	6000		1/125 GFA	48	1		22960		168
Vista Wine	1700		1/200 GFA	9	2				
Panda Gardens	1100		1/200 GFA	6	2				
Joon 21 Cleaners Corp	1630		1/200 GFA	9	2				
Zhen Lan Xu	1350		1/200 GFA	7	2				
Teatro	2500	45	1/2 Seats	23	2	Otdr Stg	8490	31450	42
LRD Sales	1900		1/250 GFA	8	4				
Anderson Pet Grooming	1250		1/200 GFA	7	4				
Loffredo DDS	1500		1 practioner	5	4		6030		
450 - SR Management LLC	950		1/250 GFA	4	4				
460 - LR Dev LLC	950		1/250 GFA	4	4				
470 - Office	550		1/250 GFA	3	4				
480 - Office	550		1/250 GFA	3	4				
490 - Office	1400		1/250 GFA	6	4		2630	8660	37
Divvies Bakery	1600		1/250 GFA	7	6				
Smithridge Veterinarian	4900		5 practioners	25	6			6330	39
Divvies Bakery	1100		1/250 GFA	5	7			1560	6
Fitness/Karate Facility	11450		1/200 GFA	58	9		10805		
SR Catering LLC	6000	200		100	9		5595	16400	119
Lukoil	1286		N/A					1286	
Totals	63466			411				65686	411
Proposed - Original approval									28
Total per plan									439

APPROVED FOR FILING

Owner Date
OAKRIDGE LAND AND PROPERTY CORP.
202 OAKRIDGE COMMONS
SO. SALEM, NY 10590

Applicant Date
OAKRIDGE LAND AND PROPERTY CORP.
202 OAKRIDGE COMMONS
SO. SALEM, NY 10590

PLANNING BOARD ENDORSEMENT OF APPROVED PLANS

Lewisboro Planning Board Chairman Date

Lewisboro Planning Board Secretary Date

ISSUE / REVISIONS

No.	Date	Description

LEGEND

- PROPERTY LINE
- EX. STONE WALL
- EXISTING FENCING
- EXISTING EDGE OF WOODS
- EXISTING SHADE TREE (MAPLE)
- EXISTING EVERGREEN TREE (WHITE PINE)
- EXISTING SHRUBS/GROUNDCOVERS
- EXISTING POLE LIGHT
- EXISTING SHOEBOX POLE LIGHT
- EXISTING COBRA LIGHT

NOTES

1. SURVEY INFORMATION FROM MAP ENTITLED "SURVEY OF PROPERTY PREPARED FOR OAKRIDGE SHOPPING CENTER ASSOCIATES, PROPERTY SITUATED IN THE TOUN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK" BY CONTRACTORS' LINE AND GRADE SOUTH, BEDFORD HILLS, NEW YORK DATED JUNE 2, 1999.

2. OWNER: OAKRIDGE LAND AND PROPERTY CORPORATION, 202 OAKRIDGE COMMONS, SOUTH SALEM, NEW YORK 10590

3. TAX LOT: SHEET 45D, BLOCK 9629, LOT 10

4. SITE AREA: 10.3 ACRES

5. ZONE: R-RB, RETAIL BUSINESS ZONE

NOTES

1. REFERENCE IS HEREBY MADE TO THE FINAL APPROVED AND SIGNED SITE DEVELOPMENT PLAN ON FILE IN THE OFFICE OF THE TOUN OF LEWISBORO PLANNING BOARD (APPROVED ON MAY 5, 1992 AND SIGNED ON AUGUST 18, 1992). REFERENCE IS ALSO HEREBY MADE TO THE PLANNING BOARD RESOLUTION GRANTING WAIVER OF SITE DEVELOPMENT PLAN APPROVAL PROCEDURES DATED JANUARY 11, 1999, INCLUDING THE TABLE TITLED: LAND USE AND PARKING TABULATION.

REGISTERED ARCHITECT JOSEPH P. DELALLA STATE OF NEW YORK 1895

NORTH

0 25 50 100

SCALE: 1"= 50'-0"

EXISTING CONDITIONS PLAN

OAKRIDGE COMMON

SMITH RIDGE ROAD (RT. 123)

TOWN OF LEWISBORO, NEW YORK

DELALLA & ASSOCIATES, LLC.
Landscape Architecture ◇ Site Design ◇ Environmental Planning ◇ Land Development Consulting
30 Old Quarry Road - Suite 203, Ridgefield, Connecticut 06877 ◇ Telephone: 203-431-2112 ◇ Fax: 203-431-2442

Date: 02/16/16

Scale: 1" = 50'-0"

Sheet No. SP-0

1 of 1

OCCUPANCY CALCULATION

KITCHEN - 913 SF ÷ 300SF/PERSON = 3 PEOPLE

FOOD PREP - 900 SF ÷ 300 SF/ PERSON = 3 PEOPLE

DINING - 676 SF ÷ 15 SF/PERSON = 45 PEOPLE
MAX # OF SEATS = 45

OUTDOOR SEATING - 450 SF ÷ 15 /SF/PERSON = 30 PERSONS
MAX # OF SEATS = 24

TOTAL OCCUPANCY ALLOWED = 81 PEOPLE

TOTAL OCCUPANCY PROPOSED = 75 PEOPLE

USE - RESTAURANT - PRIMARILY ENGAGED IN PREPARING AND SERVING FOOD & BEVERAGES INTENDED FOR CONSUMPTION ON PREMISIS BY PATRONS SEATED AND SERVED AT TABLES OR COUNTERS.

APPROVED BY RESOLUTION OF THE LEWISBORO PLANNING BOARD

Chairman DATE

Secretary DATE

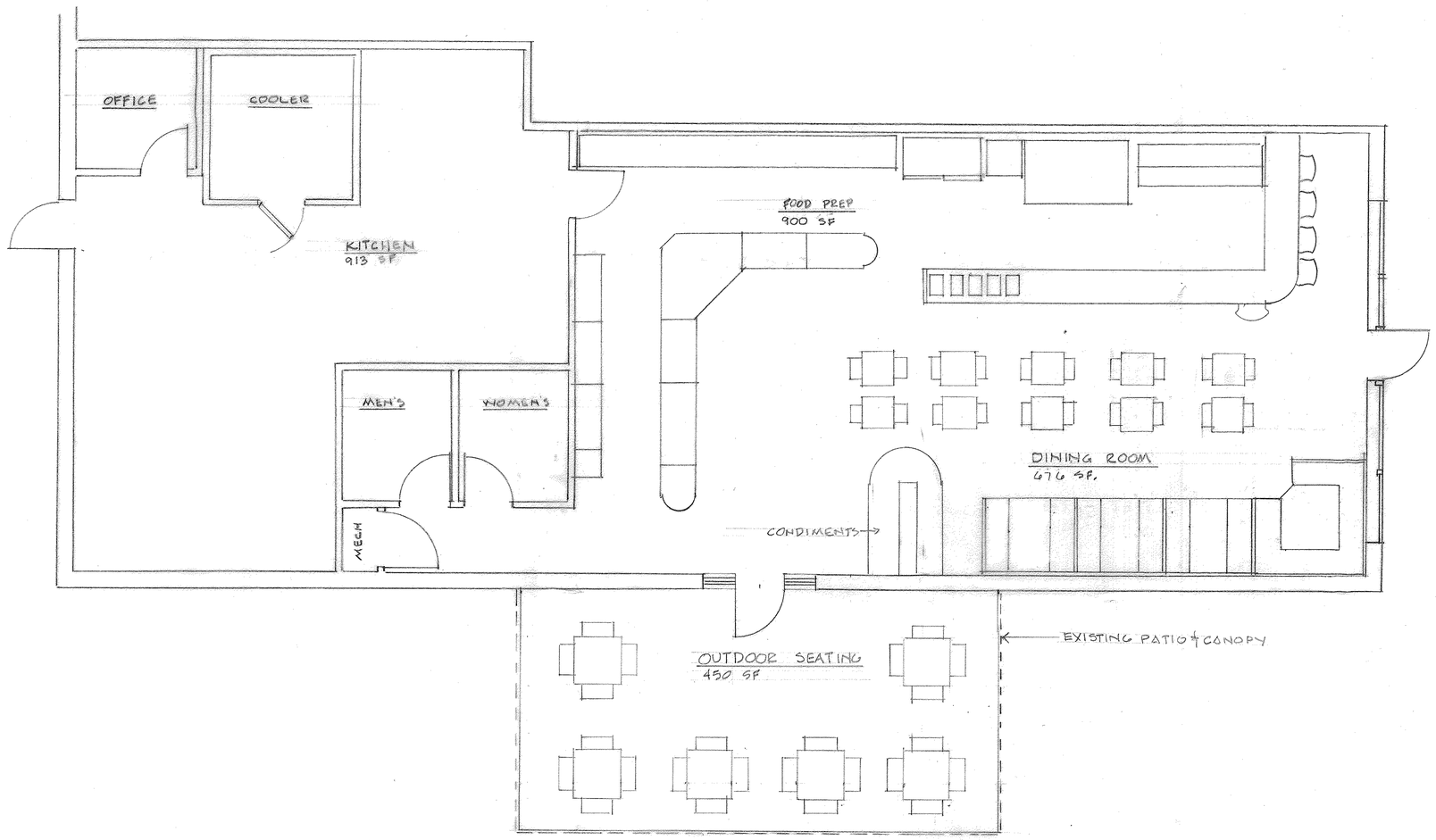
TOWN ENGINEER'S CERTIFICATION
Reviewed for compliance with the Planning Board Resolution dated_____.

Joseph M. Cermele, P.E. Date

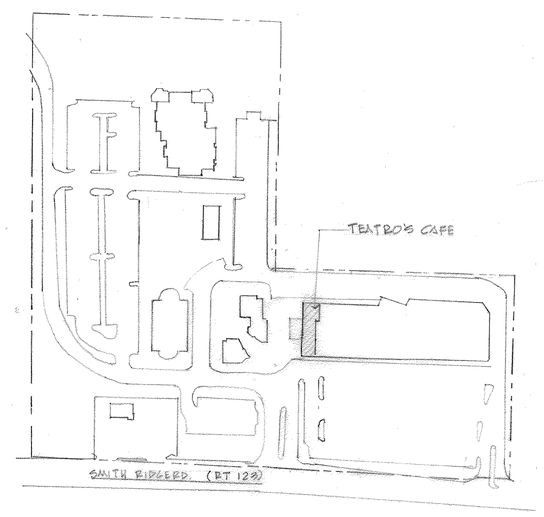
Kellard Sessions Consulting, P.C.
Town Consulting Engineer

OWNER'S CERTIFICATION
The undersigned is the owner(s) of the property shown hereon, is familiar with this drawing and its contents, and hereby approves same for filing.

Owners Name: Smith Ridge Associates, LLC – Philip Pine; Owner's rep Date
Owners Address: 202 Oakridge Common, South Salem, NY 10590



SEATING PLAN
1/4"=1'-0"



LOCATION PLAN (NTS)

CROSS RIVER ARCHITECTS, LLC
ROBERT J. EBERTS R.A., PRINCIPAL
P.O. BOX 384
19 NO. SALEM RD. 2nd FL.
CROSS RIVER, N.Y. 10518
914.763.5887

Revisions		
No	Comments	Date

PROJECT: OAKRIDGE COMMONS
202 OAKRIDGE COMMONS
LEWISBORO NY

TITLE: TEATRO'S CAFE - OCCUPANCY PLAN

SCALE	DATE	PROJECT #	DRAWN BY
1/4"=1'-0"	FEB 18, 2016		

DRAWING: A 1.

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

MEMORANDUM

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

DATE: April 6, 2016

FROM: Richard D. Williams Jr., P.E.

JOB #: 15217.100

RE: Fortune Home Builders
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. A small portion of the proposed driveway entrance is located within the Wetland A buffer area.

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. The majority of the driveway and approximately half of the house and lawn area are located within the Wetland B buffer area.

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 (Applicant has indicated approval received).
7. Town of Lewisboro Zoning Board of Appeals Variance for Steep Slopes (previously issued).

Project Review Comments:

The applicant has provided written responses and addressed a number of the outstanding comments. It is our understanding the applicant has retained counsel to work with the Planning Board's consulting attorney, Mr. Mole, to resolve the Town's access and frontage concerns for the property.

The applicant has also indicated that the property will result in over one acre of disturbance. Under the Town and NYSDEC regulations a Stormwater Pollution Prevention Plan (SWPPP) with post-construction stormwater management practices (SMP) is required. The applicant has indicated it will proceed with the SWPPP design after the Planning Board indicates whether or not the Wetland Permit is obtainable.

In addressing the outstanding comments the applicant has provided wetland mitigation in the form of plantings and barriers to prevent further encroachment. Given the drainage divides of the property, site limitations, and discussions with the Board, this office believes the level of mitigation provided is reasonable. Further, and as discussed with the Board at the site walk (the applicant was not in attendance), it is our understanding the Board was convinced there are no reasonable alternatives to the site layout.

As to the applicant's question as to whether or not Wetland Permit is "obtainable," it is appropriate for the applicant to ask the Planning Board if it is comfortable with the mitigation provided to date, or if additional mitigation is sought. However, the design of the SWPPP and limit of disturbance associated with providing the required SMP's is directly linked to the Wetland Permit. The Planning Board should have an understanding of what the final SWPPP will look like in order to determine if it will have any impacts to the buffer area, or requested mitigation.

With respect to our review of the submitted documents we offer the following:

1. The Mitigation Plan should quantify the mitigation provided within Wetland Buffer A and Wetland Buffer B
2. Fall protection should be provided above the proposed stone retaining wall on the North side of the driveway.
3. The wood and post rail should be called out on the plan view.
4. A barrier to prevent encroachment into the wetland buffer should be provided along the south side of the driveway in the vicinity of station 1+80.
5. A copy of the WCDOH approval for the subsurface sewage treatment system and well should be provided when obtained.
6. Silt fence should be provided along the sewer force main route.
7. The applicant has indicated that the first 160 feet of driveway does not need to be captured, safely conveyed or treated based on the presence of existing ledge. The creation of the cut slope will change the direction and concentration of runoff onto the existing macadam access drive. As this

area is within the wetland buffer and will result in the creation of paved surfaces we recommend the safe conveyance and treatment of runoff from this area be provided.

8. The applicant has indicated that testing has been performed for the proposed SMP's and that it will be provided on future submissions. Several test pits are shown on the drawings that are not in the location of the proposed SMP's. Due to the ledge rock present onsite the testing for the proposed SMP's should be in the specific location of the SMP and should include both deep testing and infiltration testing for infiltration practices. It is standard procedure for the Town to have a Town representative witness SMP soil testing. The applicant's engineer should coordinate soil testing with this office.
9. 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.
10. The limit of disturbance line should include all areas of disturbance including the proposed SMP's. In addition the value for the limit of disturbance should be verified.
11. The architectural drawings illustrate a walkout basement. The grading plan should accommodate for the walkout basement if that is the design intent.
12. The revisions to the EAF do not appear to have been made. Question 2 should be revised to include the Westchester County Department of Health and Question 15 should be clarified since the NYSDEC Mapper indicated an answer of "no."
13. The Wetland Narrative should quantify the amount of wetland mitigation provided and make reference to the walls / fences that will be constructed to act as barriers to future prevent unauthorized wetland buffer disturbance.

Documents Reviewed:

1. Cover letter prepared by Nathaniel J. Holt, P.E., dated March 18, 2016.
2. Narrative associated with a Wetland Permit Application, dated March 18, 2016..
3. Short Environmental Assessment Form, dated March 17, 2016.
4. Drawing Set prepared by Nathaniel J. Holt, P.E., revised March 17, 2016.
5. Mitigation Plan prepared by Robert Sherwood Landscape Architects, LLC dated March 21, 2016.

cc: A. Mole, Esq. (via email)

TO: Town of Lewisboro Planning Board
FROM: Lewisboro Conservation Advisory Council
SUBJECT: Fortune Home Builders
Duffy's Bridge Road, Goldens Bridge
Sheet 0002 , Block 10516, Lot 001
Cal # 31-15-WP
DATE: April 11, 2016

The Conservation Advisory Council (CAC) reviewed the applicant's plans and accompanying documents for a wetland activity permit at our April 4 meeting. This memo contains some issues similar to those previously discussed.

The CAC has consistently encouraged applicants to minimize disturbance to wetlands and wetland buffers. As the Town code states, the wetland buffer area is important for many reasons, including protecting the wetland and providing undisturbed habitat for life that is dependent upon wetlands. The Town code does not consider drainage patterns in the language regulating wetlands and buffers. The applicant's plans continue to place a large portion of the house within the wetland buffer. The applicant explains that a drainage divide would direct water which is adjacent to the house and the disturbed area away from the wetland. This explanation does not address the considerations included in the Town code. Further, the proposed infiltrators appear to make this argument moot, since they cross this divide and would direct the water towards the side of the divide that runs to the wetland.

We continue to suggest that the applicant should consider an alternate location for the house. The CAC continues to question whether the garage and house could be shifted towards the area of the plans that contains the large parking area, and thus not intrude as far into the buffer. We are concerned whether the desire for a walk out basement is the reason that the house is situated in the buffer. Any reasons to intrude into the buffer should address the considerations identified in the Town code's provisions.

The CAC also reviewed the wetland mitigation plans. We'd like to know the wetland mitigation ratio. We are concerned that the mitigation does not appear to benefit the wetlands, a consideration that would separate these plantings from normal landscaping. In order to count as mitigation, we ask the applicant to articulate the value that the mitigation activities provide to the wetlands.

NATHANIEL J. HOLT, PE

dan@holtengineering.net

March 18, 2016

HAND CARRY

Town of Lewisboro
Planning Department
Bureau of Environmental Quality
25 Moore Avenue
Mount Kisco, NY

Attn: Jerome Kerner, Chairman

RE: Fortune Homebuilders, LLC
Duffys Bridge Road
Wetlands/Stormwater Permit

Dear Chairman Kerner and Members of the Planning Board:

We are in receipt of recent correspondence from Richard Williams, PE in which he has provided comments and recommendations relative to the above captioned application. We also note that he indicated that the applicant did not respond to an earlier review memorandum of October 14, 2015.

With this submission, we have attempted to address the technical questions proffered by Mr. Williams in both the October 14, 2015 and January 19, 2016 memoranda. Comments relative to the status of the emergency access driveway will be addressed separately by Fortune Homebuilder's counsel. Our responses are listed in the same order as presented by Mr. Williams.

Project Review Comments (January 19, 2016)

1. *The wetland mitigation plan should quantify the amount of buffer disturbance and amount of mitigation provided*

The proposed buffer encroachment has been quantified on the Site Plans prepared by this office. In addition, the area of wetland buffer encroachment and mitigation has been shown on the plans prepared by Robert Sherwood.

2. *The applicant should consider placing a permanent barrier such as fence or stone walls in areas where further buffer encroachment is possible. This includes the central portion of the driveway which is not in a cut or fill as well as in front and behind the proposed house.*

It is the applicant's contention that most of the "barrier" will be the steeply sloped terrain between the edge of the disturbance and the wetlands, which would therefore naturally prohibit encroachment into the buffer. Basically, it would be impractical for any future homeowner to attempt to expand their yards beyond what is shown. Similarly, the construction of fence and/or stone walls along the edge of the disturbance would only increase the amount of encroachment.

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

3. The limit of disturbance should include all areas of disturbance including all areas to be planted and the proposed well site.

The limit of disturbance line has been shown on the mitigation plans prepared by Rob Sherwood and is taken directly from these plans.

Project Review Comments, (October 14, 2015)

1. A Town Stormwater Permit Application and fee should be provided.

The Stormwater Permit Application and fee is attached as requested.

2. Include the proposed septic system, grading, erosion controls etc within the Disturbance Limit Line area.

The septic system and related appurtances are shown and are within the Disturbance Limit Line.

3. Confirm that there are no NYCDEP watercourses on the site.

Both wetlands associated with project are trapped pockets with no outlets. Similarly, there are no NYCDEP (or any other) watercourse on the property.

4. Have the comments contained in a letter from the Highway Superintendent's letter of March 22, 2000.

Generally, this comment deals with the conditions regarding the construction of the emergency access driveway and Duffy's Bridge Road approximately 16 years ago such as the removal of trees and repair of a gate. As to the Town of Lewisboro's obligation to maintain Duffy's Bridge Road, we would defer to the Superintendent. Presumably, the requirement (or need) to obtain a permit from the Department to connect to the emergency access driveway will be worked out along with the other "legal" questions.

5. Provide the easement language associated with the emergency access easement that crosses the subject property.

It was the applicant's understanding that the easement language was filed with the Town of Lewisboro at the time of subdivision approval from the Town of Bedford. However, this request along with the other legal based issues that are and have been raised will be provided.

6. Obtain confirmation from the Building Inspector for zoning compliance. Address a concern raised by the Town Attorney relative to frontage.

The applicant will request that the Building Inspector opine regarding zoning compliance. Of course it is Fortune Homebuilder's contention that Duffy's Bridge Road is a town roadway and the property fronts on that road. Again, the frontage issue is legal in nature and will be addressed.

7. Provide a narrative as required by Section 217-7 (6)(e)

The requested narrative has been prepared and is attached.

8. Quantify the amount of buffer encroachment associated with Wetland A and B

See responses contained in the January 19, 2016 memorandum

9. The Planning Board should determine if mitigation is required for Wetland A is warranted

No response is necessary. However, it should be noted that the Emergency Access Driveway exists and its construction was permitted by the Town of Lewisboro approximately 15 years ago, therefore the need to provide mitigation at this point in time is questioned. Similarly, any runoff from the portion of the driveway which connects to the Emergency Access Driveway is diverted away from the wetland and into the swales constructed at that time. Again, providing mitigation at this time would would require the removal of existing vegetation which seems counter-productive.

10. The Planning Board should discuss mitigation measures associated with the buffer encroach Wetland B. Consider permanent barriers and mitigation plantings.

As discussed in the January 19th response, it is the applicant's contention that the development of the property takes place in the only viable (relatively level) area over the 9 acre site. With very little exception, all areas outside the proposed disturbance terminate at the edge of steeply sloped terrain. These natural barriers would require no disturbance while the installation of fences or walls would. The Mitigation Plan prepared by Robert Sherwood does contain plantings as part of the wetland permit. On the other hand, if the suggestion is to install additional plantings closer to the wetlands; such work would only increase the disturbance within the buffer and/or damage existing vegetation within an established wooded area.

11. The grading plan should illustrate the erosion controls for the septic area.

This comment is a repeat of Comment #2

12. An overflow for the roof leader drain cultec systems should be provided.

As detailed, the downspouts associated with the roof leaders consist of a Surcharge Protector. This methodology allows for flows in excess of the capacity of the drainage system to spill out on grade in several locations as opposed to a single concentrated point.

13. The applicant should verify if the limited disturbance represents a realistic lawn area for the site

The term "realistic" for this particular property is a relative term. Given the admittedly limited area in which to develop the house site, the creation of a yard is also limited. Any expansion in the yard area would result in excessive rock excavation to the rear and grading on steeply sloped terrain to the front and side. Regardless of the direction, the cost of such expansion would be excessive with very little area gained.

The applicant is very aware of the site conditions under which the development of the property will occur and has actively marketed the property that way.

14. Confirm that the pre-treatment tanks are also intended to be flow splitters.

A complete design and details for the proposed stormwater system will be provided.

Fortune Homebuilders approach has been to define the "critical path" in the process. The first step was to develop a viable septic system location, (a permit has been issued), the second step was to address the need to traverse the steep slopes on the site. That variance was granted on February 25, 2015. The next issue is the wetlands buffer encroachment. Once the wetland permit is deemed obtainable, the Stormwater Pollution Prevention Plan can be completed.

At this point, the proposed site plans have been revised to address comments and concerns on the part of the Planning Board and its Consultants. Most of those concerns have been directed towards the wetlands and ways in which the encroachment can be minimized. Each of these revisions has a direct effect on the design of the stormwater mitigation plans. Ideally, a consensus of opinion from the Planning Board relative to the wetland permit would enable the applicant to complete the stormwater mitigation plan.

15. Provide safe conveyance and treatment of the stormwater runoff for the first approximately 160 feet of new and emergency access driveway.

The emergency access driveway has been in existence for well over twenty five years. At the time that the Boulder Pines subdivision was approved, both the Towns of Bedford and Lewisboro wanted the deteriorated access driveway to be repaired and upgraded. That driveway was re-constructed in 2000 as approved. Therefore, since the applicant is not proposing to make any changes to the emergency access driveway, he should not be required to complete "safe conveyance and treatment" improvement so many years after the fact.

With regards to the proposed driveway, arguably there is no change in the Runoff Curve Number as it is going from rock outcroppings to pavement. Of equal importance is that portions of the proposed driveway will be intercepting runoff that previously flowed down to the emergency access driveway and its associated swales thereby improving that previously untreated condition.

16. The Limit of Disturbance is 0.8 acres and does not include the septic system.

Actually, the Limit of Disturbance line did include the proposed septic system in its entirety. A reduced scaled site plan has been provided for review.

17. Provide test results for the proposed stormwater mitigation system. Testing is to be in accordance with the NYSDEC Design Manual.

Deep test pit excavations have been completed in conformance with the Design Manual. As noted above, the final design (and testing) will be addressed as the project moves forward.

More importantly perhaps would be for the Planning Board to opine in some fashion on the proposed wetland permit(s). A considerable amount of effort has been taken in developing a design route for the proposed driveway. In particular, while portions of the driveway and house may be within the 150 wetland buffer area, the significance of the route is such that no portion of the driveway or the house drain towards the wetland. This was made possible by placing the proposed improvements on the opposite side of the natural ridge line on the property.

While it is conceivable to move the house from this natural flat area and outside of the buffer, the extent of excavation and overall disturbance would have a considerably greater impact that the regrading that is proposed within the buffer. The same is also true relative to the driveway: it could be located outside the wetland setback, but the disturbance to the steep slopes would be considerable. In both instances, the runoff to the wetlands would not be reduced by moving outside of the buffer.

In consideration of the above, we would request that this matter be placed upon the next Planning Board Agenda so that the discussion on the application can continue.

Very truly yours

Nathaniel J. Holt, P.E.

Encl

cc: FortuneHomebuilders, LLC

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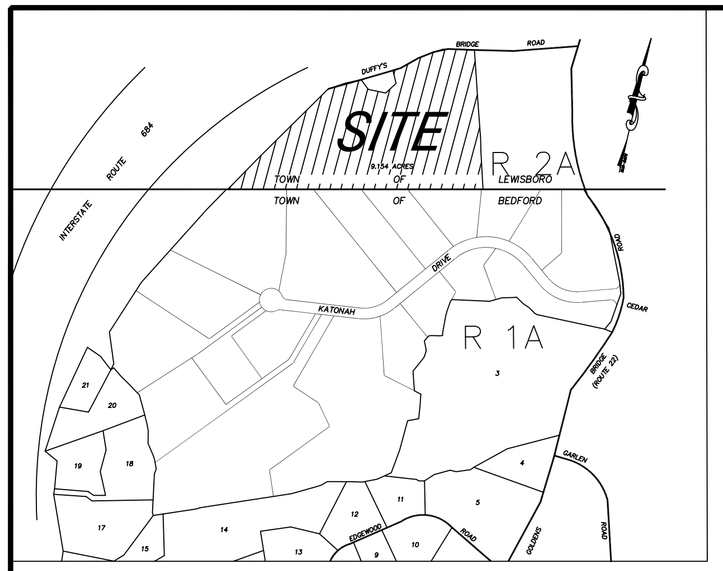

LOCATION MAP N.T.S.

PROPERTY OWNER: FORTUNE HOMEBUILDERS, LLC
8 KENDAL AVENUE,
SLEEPY HOLLOW, NEW YORK 10591

SITE LOCATION: DUFFY'S BRIDGE ROAD,
LEWISBORO, NEW YORK

TAX MAP DESIGNATION: SECTION 2; BLOCK 10516; LOT 1

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.
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3. EXPOSED AREAS MUST BE STABILIZED AS SOON AS LAND ALTERATIONS ARE COMPLETED.
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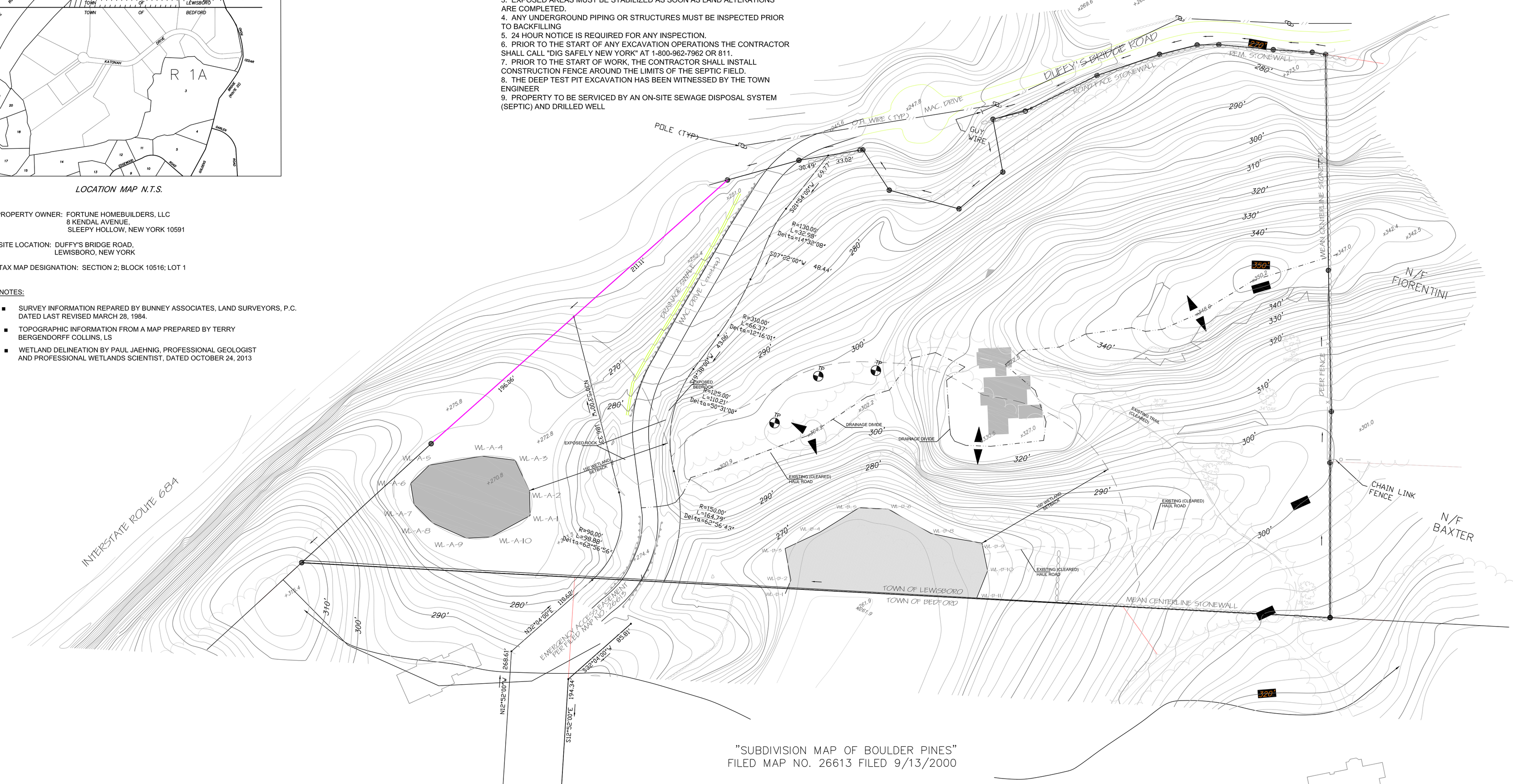
8. THE DEEP TEST PIT EXCAVATION HAS BEEN WITNESSED BY THE TOWN ENGINEER
9. PROPERTY TO BE SERVICED BY AN ON-SITE SEWAGE DISPOSAL SYSTEM (SEPTIC) AND DRILLED WELL



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 7

5	
4	
3	
2	March 17, 2016 Comm. Engr. Comments - 01/19/16
1	Planning Board Comments

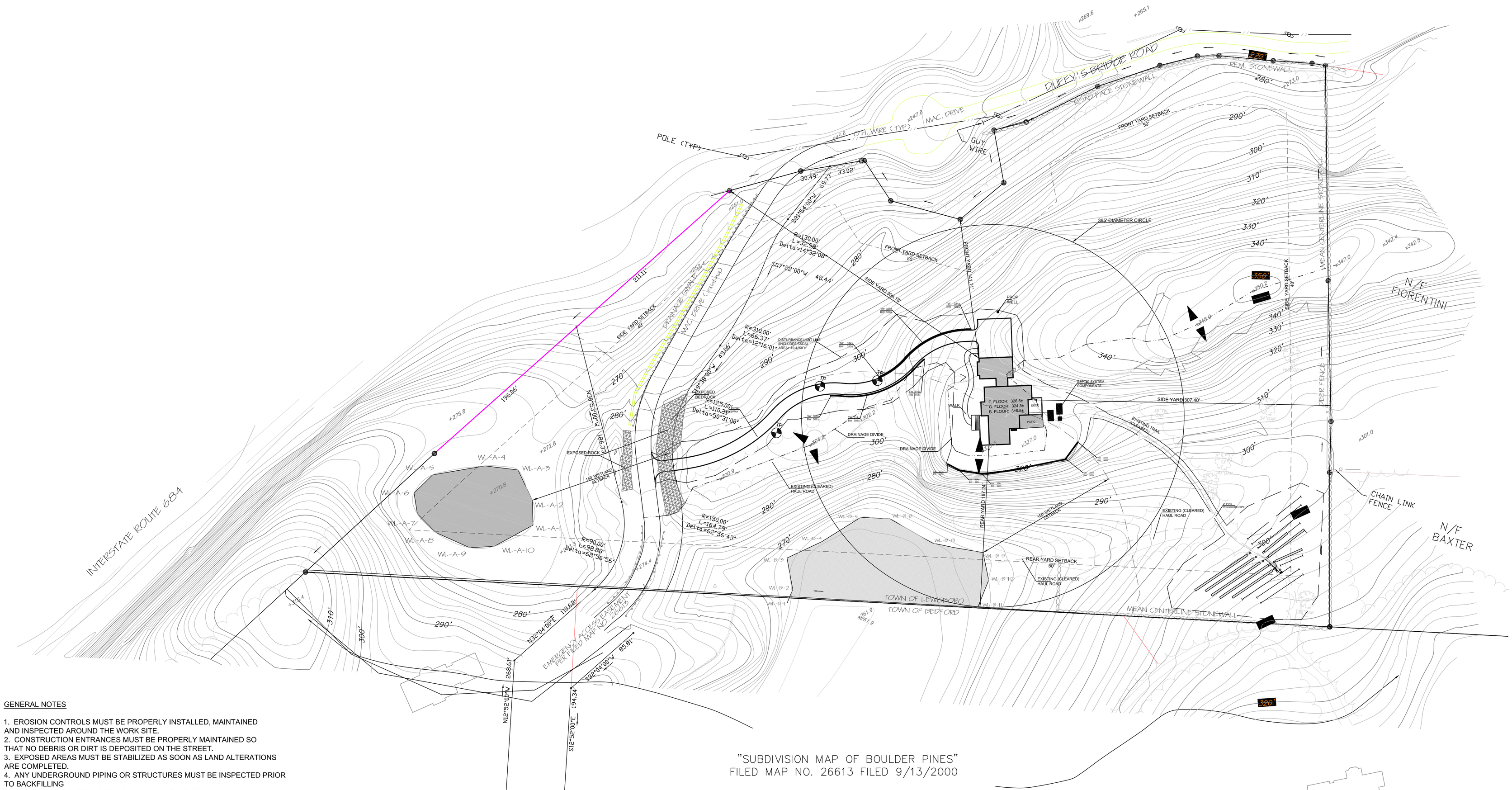
Original Date: NOVEMBER 5, 2013
Project Number: 13-FHB-2

Nathaniel J. Holt, P.E.
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 LEWISBOR, WESTCHESTER COUNTY, NY



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SHEET: 2 of 7

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3	
2	March 17, 2016 Comm. Engr Comments - 01/19/16
1	Original Issue Planning Board Comments

Original Date: NOVEMBER 5, 2013
Project Number: 13-FHB-2

Nathaniel-J-Holt, P.E.
STATE OF NEW YORK
NATHANIEL J. HOLT
074,197
LICENSED PROFESSIONAL ENGINEER
Date:

NATHANIEL J. HOLT, P.E.
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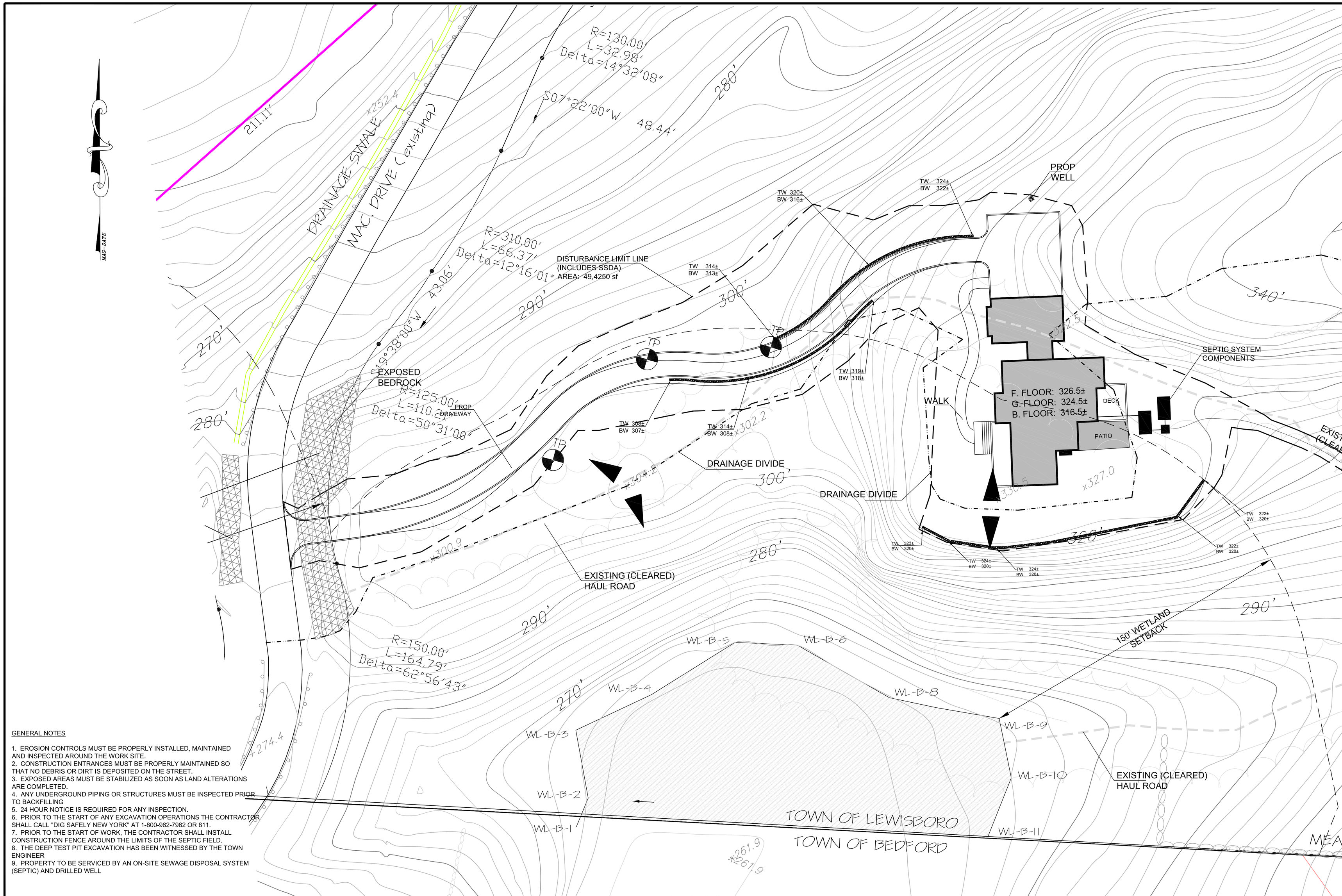
OVERALL SITE PLAN
DUFFY'S BRIDGE ROAD
TOWN OF LEWISBORO, NY

PROPOSED RESIDENCE
DUFFY'S BRIDGE ROAD
TOWN OF LEWISBOR, WESTCHESTER COUNTY, NY



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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 7

5 —
4 —
3 —
2 March 17, 2016 Cons. Engr. Comments - 01/19/16
1 Conform to NYSDEC Planning Board Comments

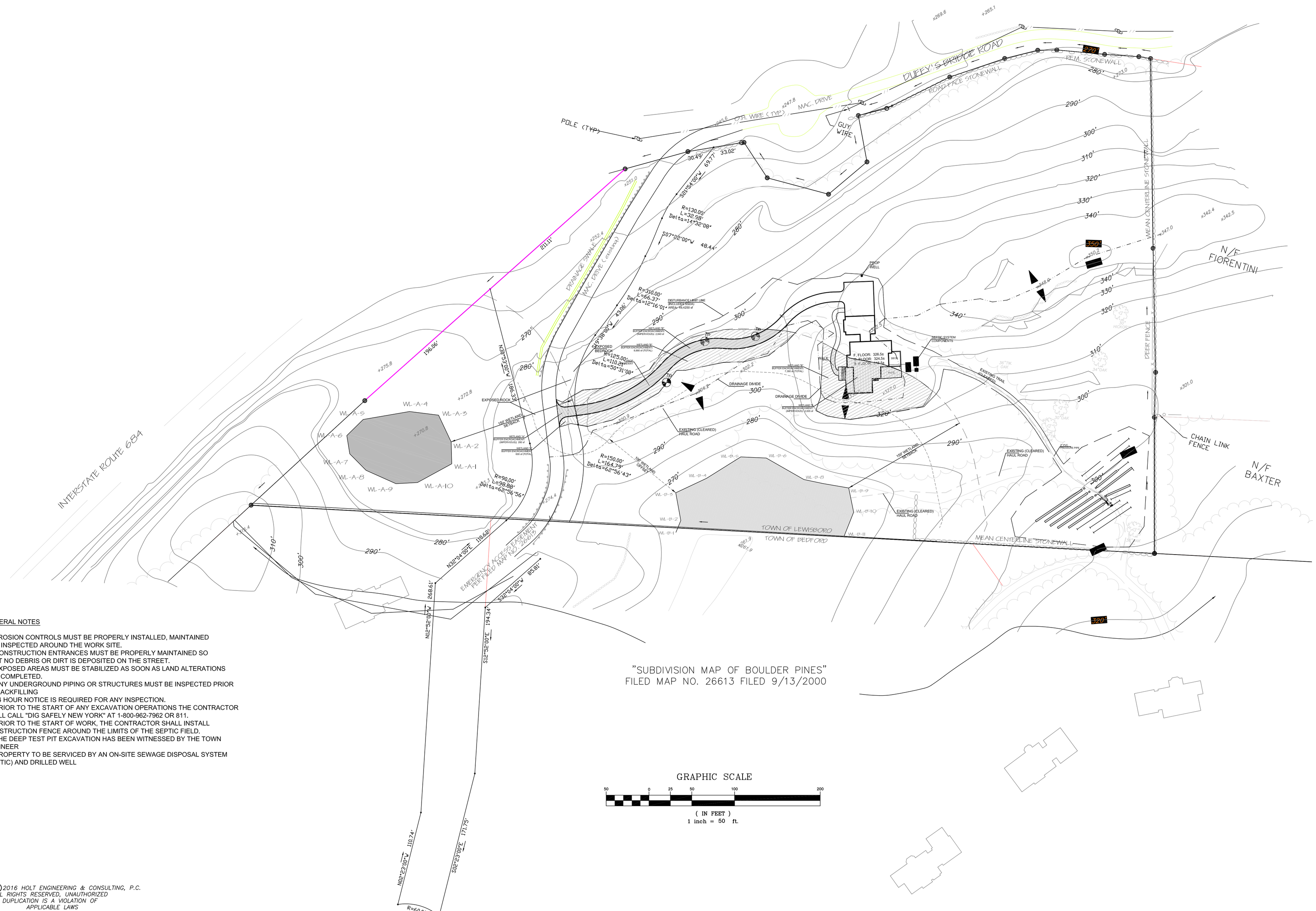
Original Date: NOVEMBER 5, 2013
Project Number: 13-FHB-2

Nathaniel J. Holt, P.E.
Date: _____

NATHANIEL J. HOLT, P.E.
592 ROUTE 22
PAWLING, NEW YORK 12564
(914) 760-1800

ENLARGED SITE PLAN
DUFFY'S BRIDGE ROAD
TOWN OF LEWISBORO, NY

PROPOSED RESIDENCE
DUFFY'S BRIDGE ROAD
TOWN OF LEWISBOR, WESTCHESTER COUNTY, NY



"SUBDIVISION MAP OF BOULDER PINES"
FILED MAP NO. 26613 FILED 9/13/2000

GENERAL NOTES

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SHEET: 4 of 7

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3	
2	March 17, 2016 Cons. Eng. Comments - 01/19/16
1	Original Issue - Planning Board Comments

Original Date: NOVEMBER 5, 2013
Project Number: 13-FHB-2

Nathaniel-J-Holt, P.E.
STATE OF NEW YORK ★ NATHANIEL J. HOLT ★ 074170 ★ LICENSED PROFESSIONAL ENGINEER
Date:

NATHANIEL J. HOLT, P.E.
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(914) 760-1800

BUFFER ENCROACHMENT PLAN

PROPOSED RESIDENCE DUFFY'S BRIDGE ROAD

TOWN OF LEWISBOR, WESTCHESTER COUNTY, NY

GENERAL NOTES

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"SUBDIVISION MAP OF BOULDER PINES"
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SHEET: 5 of 7

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2	March 17, 2016 Cons. Engr Comments - 01/19/16
1	Conform to Town Planning Board Comments

Original Date: NOVEMBER 5, 2013
Project Number: 13-FHB-2

Nathaniel J. Holt, P.E.
Date:

STATE OF NEW YORK ★ NATHANIEL J. HOLT ★ 074179 ★ LICENSED PROFESSIONAL ENGINEER

NATHANIEL J. HOLT, P.E.
592 ROUTE 22
PAWLING, NEW YORK 12564
(914) 760-1800

GRADING PLAN

PROPOSED RESIDENCE
DUFFY'S BRIDGE ROAD
TOWN OF LEWISBOR, WESTCHESTER COUNTY, NY

STORMWATER ANALYSIS

REQUIRED: CAPTURE 25 YR STORM EVENT
OVER INCREASE IN IMPERVIOUS AREA

EXISTING CONDITIONS (TRIBUTARY TO PRACTICE

FUTURE HOUSE SITE

AREA: 3,522 SF = 0.081 AC
SOIL TYPE: C

WOODED OPEN SPACE LAWN ("C"-GOOD CONDITION)
RCN: 75

FUTURE DRIVEWAY ROUTE

AREA 5,550 SF = 0.127 AC
SOIL TYPE: C

WOODED OPEN SPACE (ROCK OUTCROP)
RCN 85

FUTURE CONDITIONS

FUTURE HOUSE SITE

AREA 3,522 SF = 0.081 AC

IMPERVIOUS SURFACE
RCN 98

FUTURE DRIVEWAY ROUTE

AREA 5,550 SF = 0.127 AC

IMPERVIOUS SURFACE
RCN 98

RUNOFF DEPTH

EXISTING CONDITIONS: CN = 75 ; RUNOFF DEPTH = 3.03" *
EXISTING CONDITIONS: CN = 85; RUNOFF DEPTH = 4.03"

PROPOSED CONDITIONS: CN = 98; RUNOFF DEPTH = 5.46"*

* FROM TABLE 2.1 OF THE SCS HANDBOOK

RUNOFF VOLUME

HOUSE SITE: (5.46" - 3.03")/12"/ft x 3,522 sf = 713 cf

DRIVEWAY: (5.46" - 4.03")/12"/ft x 5,550 sf = 661 cf

PROPOSED MITIGATION

ONE CULTEC UNIT (MODEL 3300 XLHD) HAS THE CAPACITY OF 11.32cf/ft THEREFORE:

HOUSE:

713 cf / 11.32 cf/ft = 63 ft; SAY 9 UNITS

DRIVEWAY:

661 cf / 11.32 cf/ft = 58 ft; SAY 9 UNITS

NO ALLOWANCE TAKEN FOR PERCOLATION

PRE-TREATMENT REQUIREMENTS

USE THE "90% RULE" AS PER NYSDEC DESIGN MANUAL

$WQv = \frac{(P)(Rv)(A)}{12}$; WHERE: P = 1.3"
Rv = 0.2
A = 3,522 sf or 0.081 acres

HOUSE:

$WQv = \frac{(1.3")(0.2)(0.081)}{12} \times 0.25 = 0.0004$ acft or 19 CF = 142.7gal; SAY 150 gal

DRIVEWAY:

$WQv = \frac{(1.3)(0.2)(0.127)}{12} \times 0.25 = 0.00069$ acft or 29.97 cf = 224.1 gal; SAY 225gal

RECOMMENDATION

PROVIDE A TOTAL OF 18 CULTEC 330 HDXL RECHARGERS AND PRE-TREATMENT AS DETAILED.

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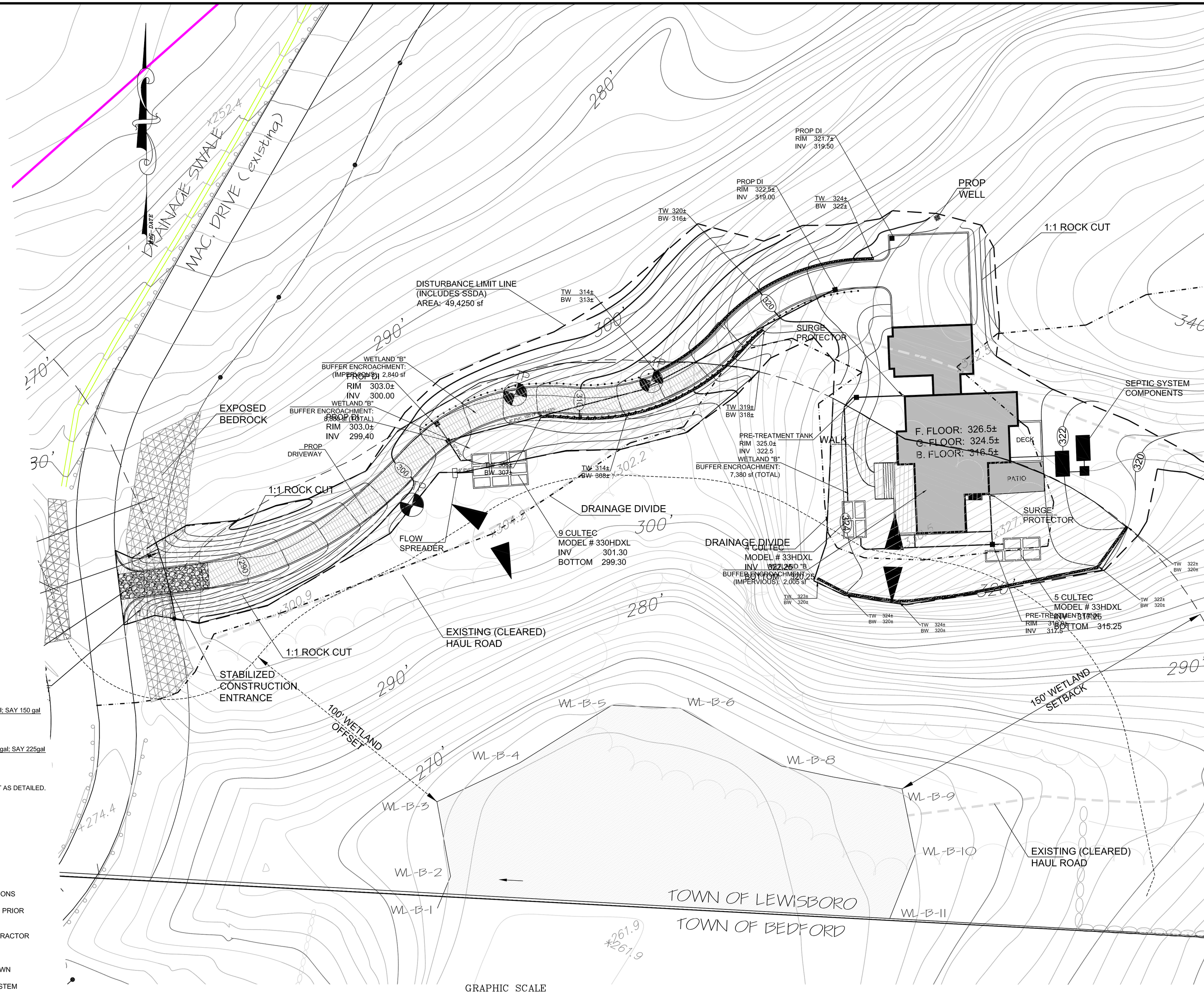

SHEET: 6 of 7

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4	
3	
2	March 17, 2016 Comm. Econ Comments - 01/19/16
1	Planning Board Comments

Original Date: NOVEMBER 5, 2013
Project Number: 13-FHB-2

Nathaniel J. Holt, P.E.
Date:

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592 ROUTE 22
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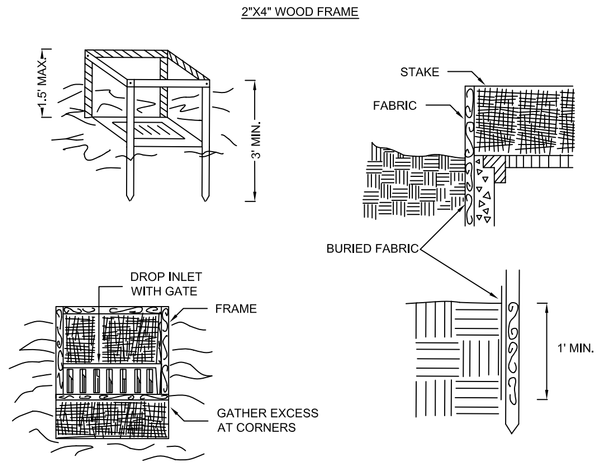
STORMWATER PLAN

PROPOSED RESIDENCE
DUFFY'S BRIDGE ROAD
TOWN OF LEWISBOR, WESTCHESTER COUNTY, NY

FILTER FABRIC INLET PROTECTION DETAIL



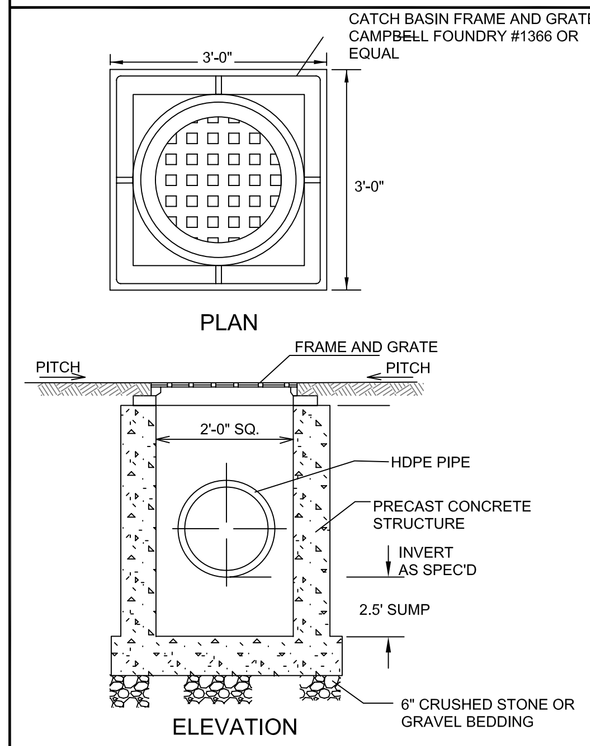
CONSTRUCTION SPECIFICATIONS

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

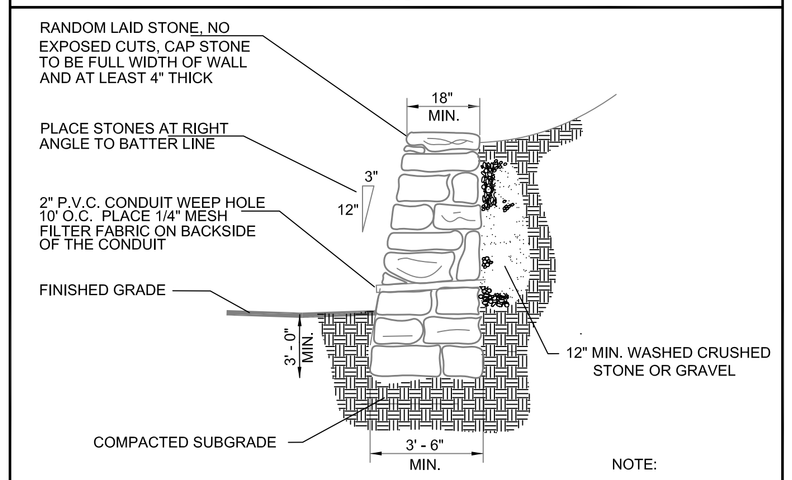
DRAIN INLET DETAIL

N.T.S.



RUBBLE STONE WALL

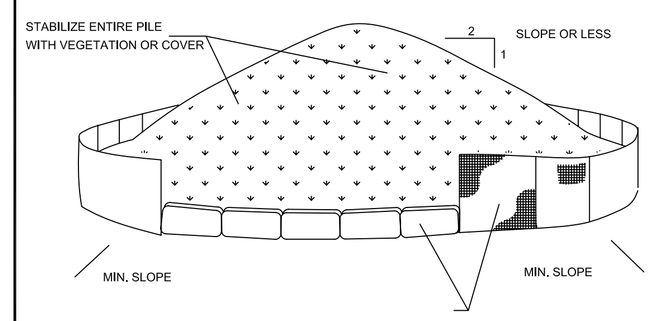
NTS



NOTE:
5' MAXIMUM HEIGHT

SOIL STOCKPILING DETAIL

N.T.S.

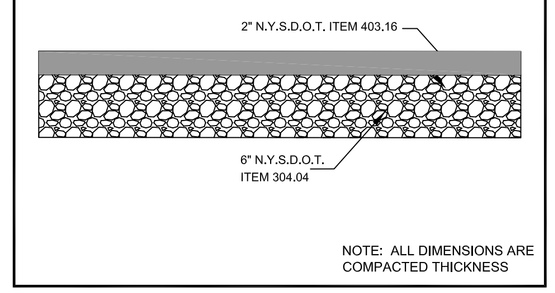


NOTES

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

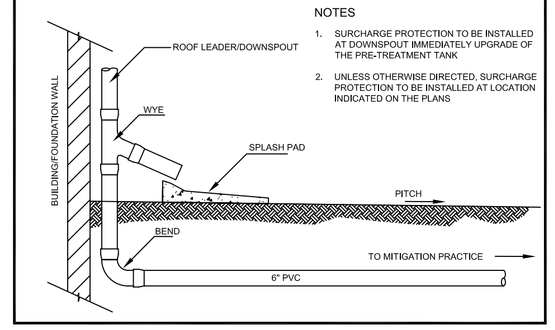
N.T.S.



NOTE: ALL DIMENSIONS ARE COMPACTED THICKNESS

SURCHARGE PROTECTION

NTS

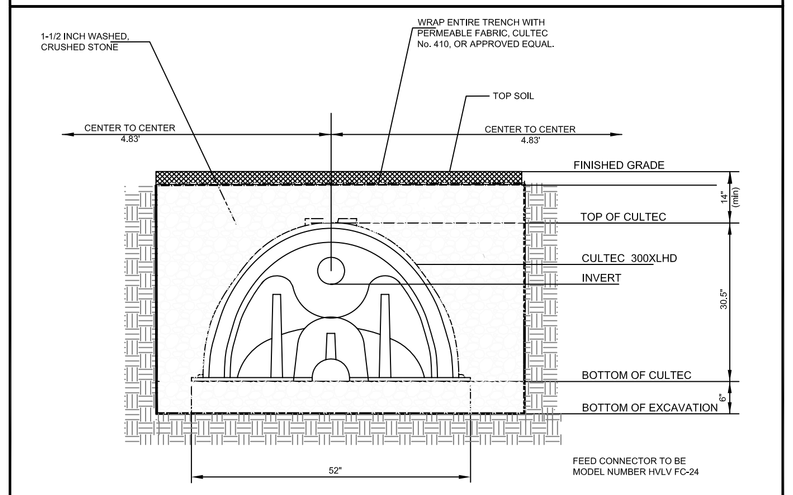


NOTES

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

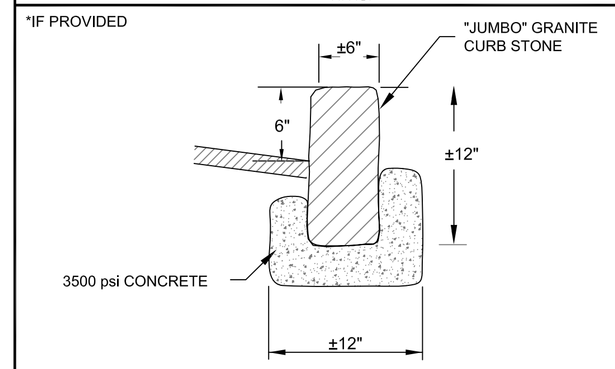
INFILTRATION UNIT

NTS

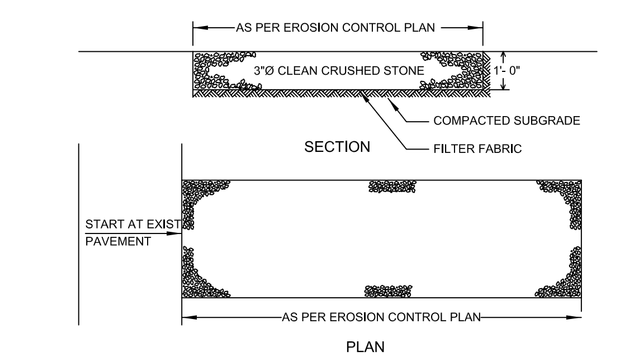


COBBLE STONE CURB DETAIL*

N.T.S.



STABILIZED CONSTRUCTION ENTRANCE

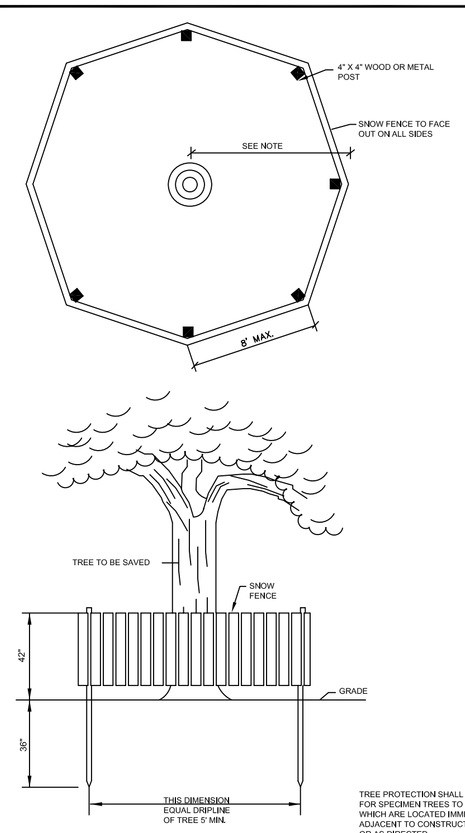


INSTALLATION NOTES

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

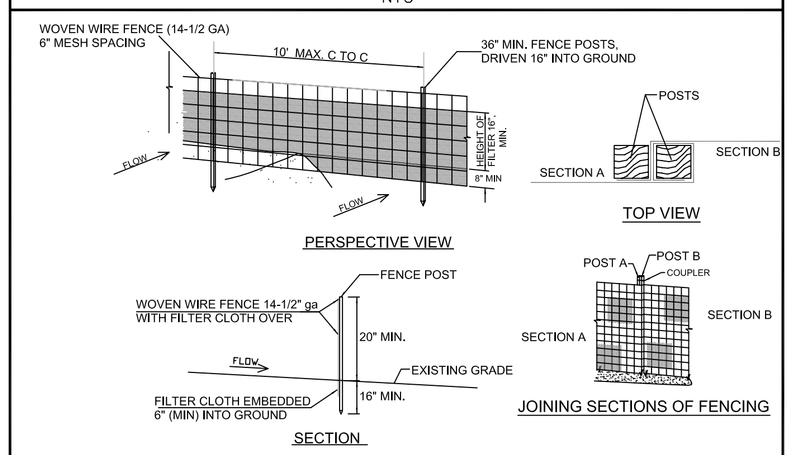
N.T.S.



TREE PROTECTION SHALL BE PROVIDED FOR SPECIMEN TREES TO BE SAVED WHICH ARE LOCATED IMMEDIATELY ADJACENT TO CONSTRUCTION AREAS OR AS DIRECTED.

SILT FENCE

NTS

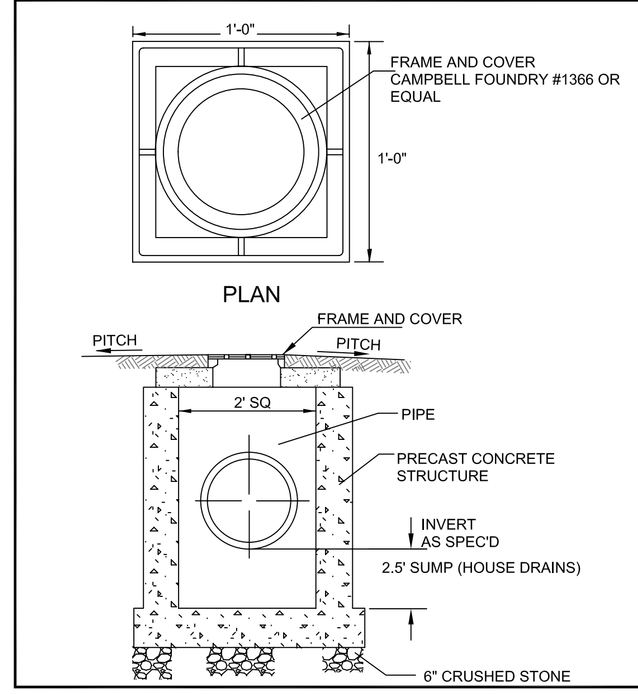


CONSTRUCTION NOTES FOR FABRICATED FENCE

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.

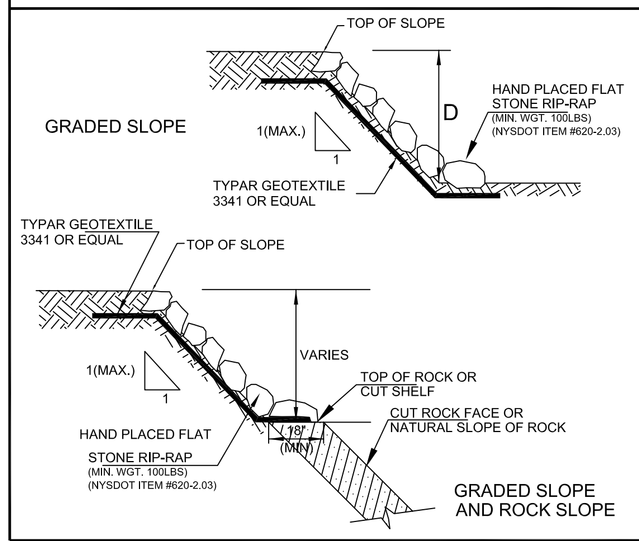
PRE-TREATMENT TANK DETAIL

N.T.S.



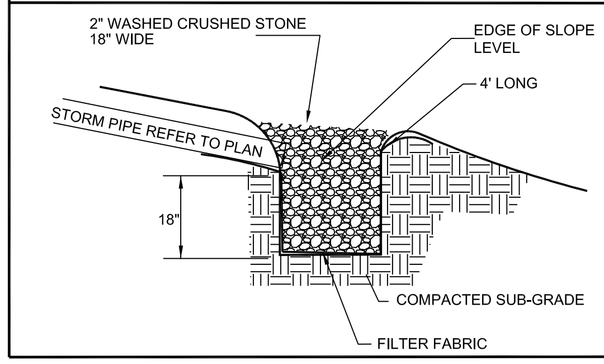
RIP RAP SLOPE DETAIL

N.T.S.

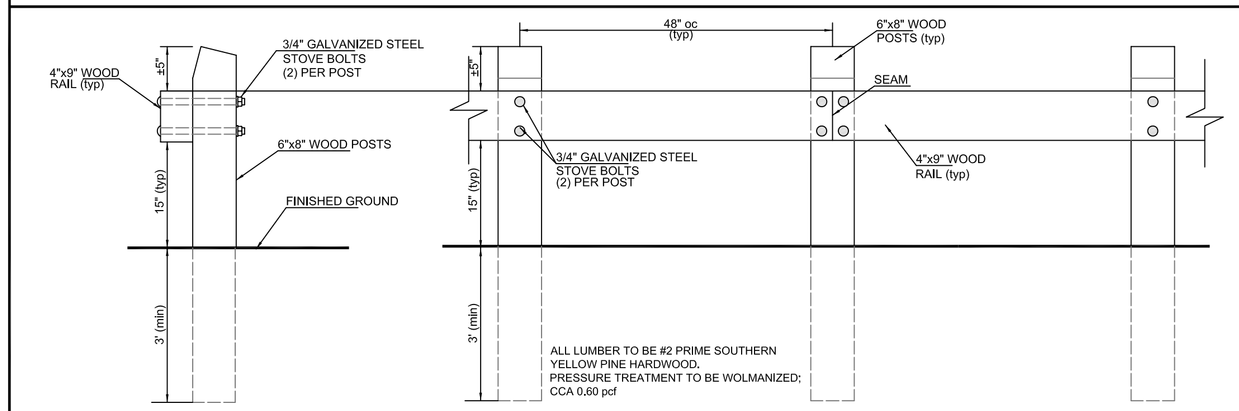


LEVEL SPREADER

NTS



WOOD POST AND RAIL DETAIL



ALL LUMBER TO BE #2 PRIME SOUTHERN YELLOW PINE HARDWOOD, PRESSURE TREATMENT TO BE WOLMANIZED; CCA 0.60 pcf

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SHEET: 7 of 7

5	
4	
3	
2	March 17, 2016 Cons. Eng. Comments - 01/19/16
1	Nov. 5, 2013 Planning Board Comments

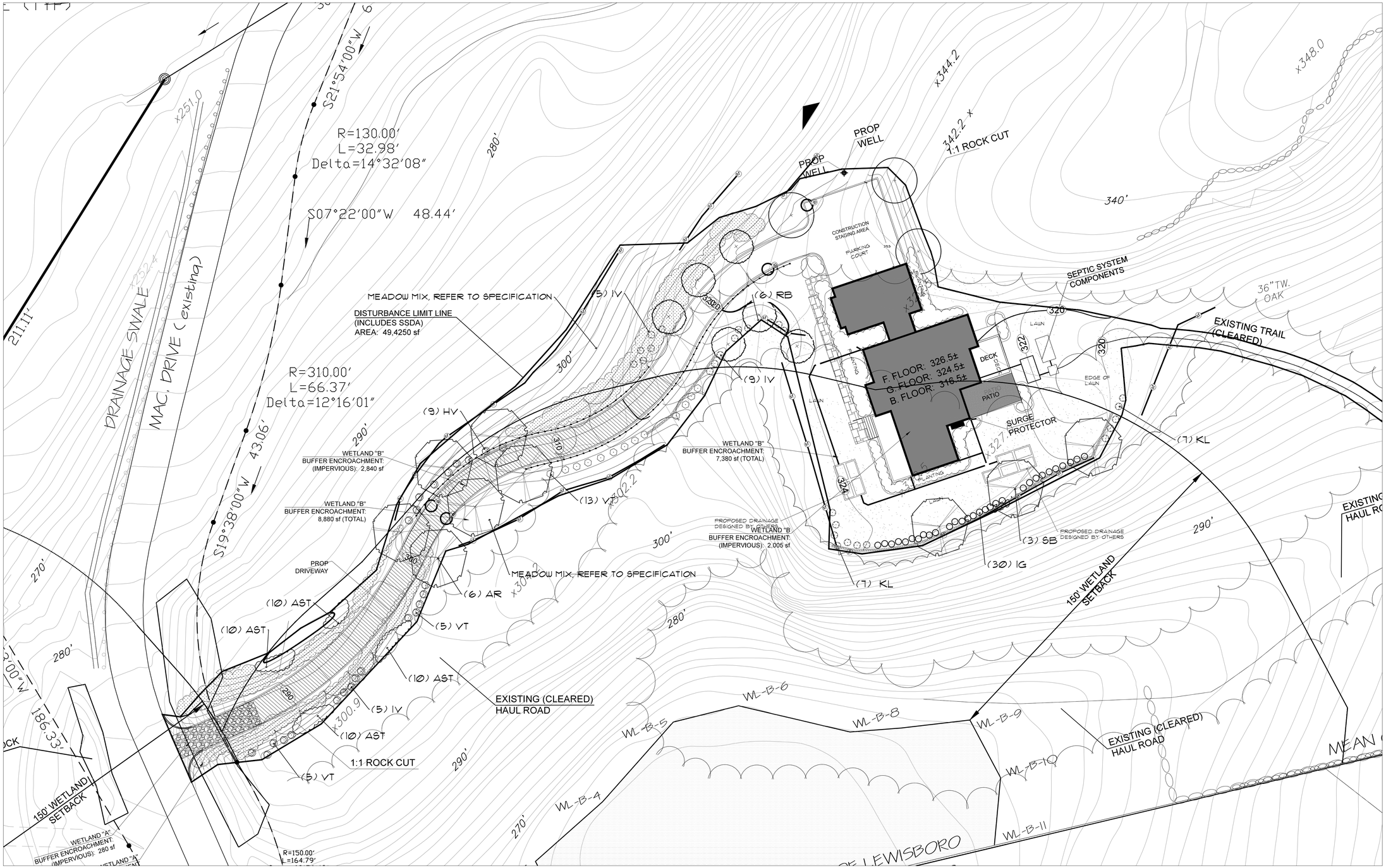
Original Date: NOVEMBER 5, 2013
Project Number: 13-FHB-2

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 LEWISBOR, WESTCHESTER COUNTY, NY



TREES AND SHRUBS

key	qty.	common & botanical name	size
AR	6	Red Maple Acer rubrum	3" Cal.
SB	6	Shadblow Amelanchier canadensis	3" Cal.
RB	6	Redbud Cercis canadensis	3" Cal.
HV	9	Witch Hazel Hamamelis virginiana	3' Ht.
VT	23	Northern Arrowwood Viburnum dentatum	24" Ht.
IV	19	Winterberry Ilex verticillata	245" Ht.

TREES AND SHRUBS

key	qty.	common & botanical name	size
KL	14	Mountain Laurel Kalmia latifolia	24" Ht.
IG	30	Inkberry Ilex glabra	24" Ht.
AST	40	Aster Aster novae-angliae	# Cont.

SEEDING NOTES:

MEADOW MIX:

INCLUDES CREEPING RED FESCUE 60%, COMMON EVENING PRIMROSE 10%, LITTLE BLUESTEM 25% PATRIDGE PEA AND GOLDEN ALEXANDER

1. SCARIFY THE EXISTING SEEDED AREAS BY HAND TO PREPARE SOILS FOR NEW SEED.
2. THE RATE OF SEEDING SHALL BE 1 POUND PER 2500 SF. SOWN BY HAND OR BY APPROVED MACHINE IN SUCH A MANNER THAT A UNIFORM STAND WILL RESULT AFTER SEEDING, THE SURFACE SHALL BE EVENLY RAKED WITH A FINE TOOTHED RAKE.
3. GRASS SEED SHALL BE SOWN ONLY BETWEEN APRIL AND JUNE 1, AND BETWEEN AUGUST 15 AND OCTOBER 1 AND DURING APPROVED PERIODS WHEN WEATHER CONDITIONS ARE SUITABLE AS DETERMINED BY THE LANDSCAPE ARCHITECT.
4. LOOSELY APPLY STRAW MULCH TO ALL SEEDED AREAS.
5. RESEED ALL AREAS THAT DO NOT SHOW A SATISFACTORY STAND OF GRASS AFTER 30 DAYS AND CONTINUE TO DO SO UNTIL A SATISFACTORY STAND OF GRASS HAS BEEN ESTABLISHED.

NOTES:

1. Survey and Drainage information taken from a survey prepared by Nathaniel J. Holt, titled *"Proposed Residence/ Duffy's Bridge Road/Existing Conditions,"* refer to this survey for more information.
2. Location of existing utilities not performed by this office, confirm location of all utilities prior to construction. CALL DIG SAFELY NEW YORK.
3. Contractor to verify all grades and dimensions prior to construction, contractor to inform Landscape Architect with any discrepancies.

NORTH:

ROBERT SHERWOOD
LANDSCAPE ARCHITECT LLC
P.O. BOX 564, BROOKFIELD CT 06804
p/f:203.798.1547 c:203.994.5337 e:robertsherwood@me.com

PROJECT:
MITIGATION
Proposed Residence

CLIENT:
Boulder Pines
Duffys Bridge Road
Lewisborough, Westchester County, New York

	3.21.16
REVISIONS:	
SCALE:	AS NOTED
DATE:	12.18.25
JOB NO:	15-32
DRAWING NO:	LP-1.0

Short Environmental Assessment Form
Part 1 - Project Information

Instructions for Completing

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

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

Part 1 - Project and Sponsor Information
FORTUNE HOME BUILDERS, LLC

Name of Action or Project:
PROPOSED CONSTRUCTION OF A SINGLE FAMILY RESIDENCE ON APPROXIMATELY 9.15 ACRES

Project Location (describe, and attach a location map):
AT THE TERMINUS OF DUFFY'S BRIDGE ROAD, TOWN OF LEWISBORO

Brief Description of Proposed Action:
PROPERTY IS CURRENTLY AN UNDEVELOPED APPROXIMATELY 9.15 ACRES OF LAND LOCATED ALONG THE MUNICIPAL BOUNDARY LINE BETWEEN THE TOWNS OF BEDFORD AND LEWISBORO. IT IS PROPOSED TO CONSTRUCT A FOUR BEDROOM SINGLE FAMILY RESIDENCE. PROPERTY WILL BE SERVED BY A DRILLED DOMESTIC WELL AND ON-SITE WASTEWATER TREATMENT SYSTEM; A PERMIT HAS BEEN ISSUED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH FOR BOTH. PROPERTY HAS ALSO RECEIVED A VARIANCE FROM THE TOWN OF LEWISBORO ZONING BOARD OF APPEALS RELATIVE TO CONSTRUCTION ON DESIGNATED STEEP SLOPES

Name of Applicant or Sponsor:	Telephone: (845) 279-1700
FORTUNE HOME BUILDERS, LLC	E-Mail: DGORMAN@FORTUNEHB.COM

Address:
150 DEANS CORNERS ROAD

City/PO:	State:	Zip Code:
BREWSTER	NY	10549

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

3.a. Total acreage of the site of the proposed action? 9.15 acres
b. Total acreage to be physically disturbed? 1.08 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 9.15 acres

4. Check all land uses that occur on, adjoining and near the proposed action.
☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☑ Residential (suburban)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____
☐ Parkland

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

	NO	YES
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	☐	☑
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: Name:Geographic Area Overlaying Aquifer, Reason:Exceptional or unique character, Agency:Bedford, Town of, Date:11-3-84	☐	☑
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	☑	☐
b. Are public transportation service(s) available at or near the site of the proposed action?	☐	☑
c. Are any pedestrian accommodations or bicycle routes available on or near site of the proposed action?	☐	☑
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies:	☐	☑
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: DRILLED DOMESTIC WELL	☑	☐
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: ON-SITE WASTE WATER TREATMENT SYSTEM (SEPTIC)	☑	☐
12. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places?	☑	☐
b. Is the proposed action located in an archeological sensitive area?	☑	☐
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	☐	☑
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres:	☑	☐

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

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

☑ Wetland ☐ Urban ☑ Suburban

	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	☐	☑
16. Is the project site located in the 100 year flood plain?	☑	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? ☐ NO ☑ YES	☐	☑
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: ☐ NO ☑ YES ON SITE STORMWATER MITIGATION SYSTEM IN ACCORDANCE WITH NYSDEC GUIDELINES		

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

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

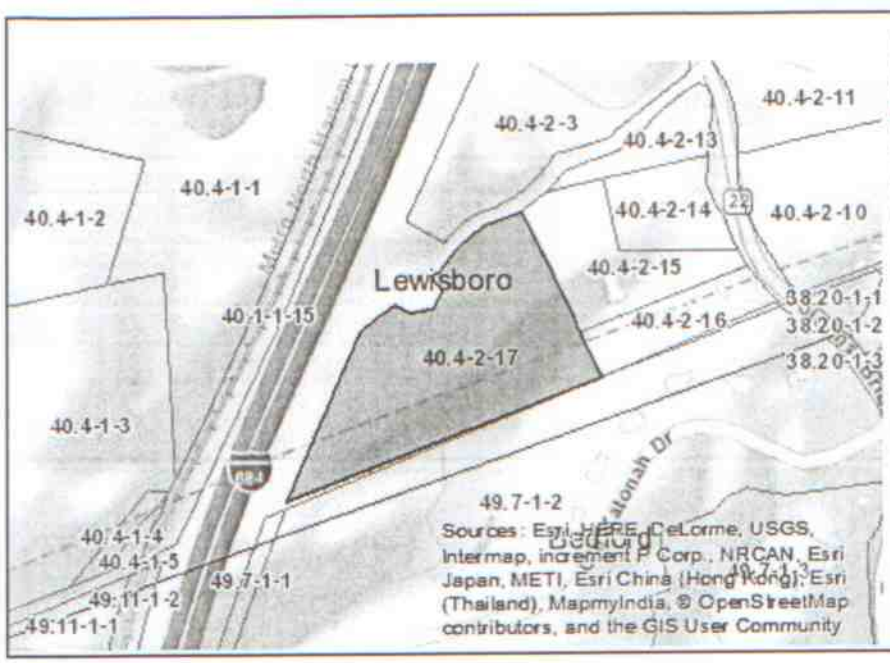
Applicant/sponsor name: CHRISTOPHER MUNCH Date: 3/17/14

Signature: FOR CHRISTOPHER MUNCH

PRINT FORM

EAF Mapper Summary Report

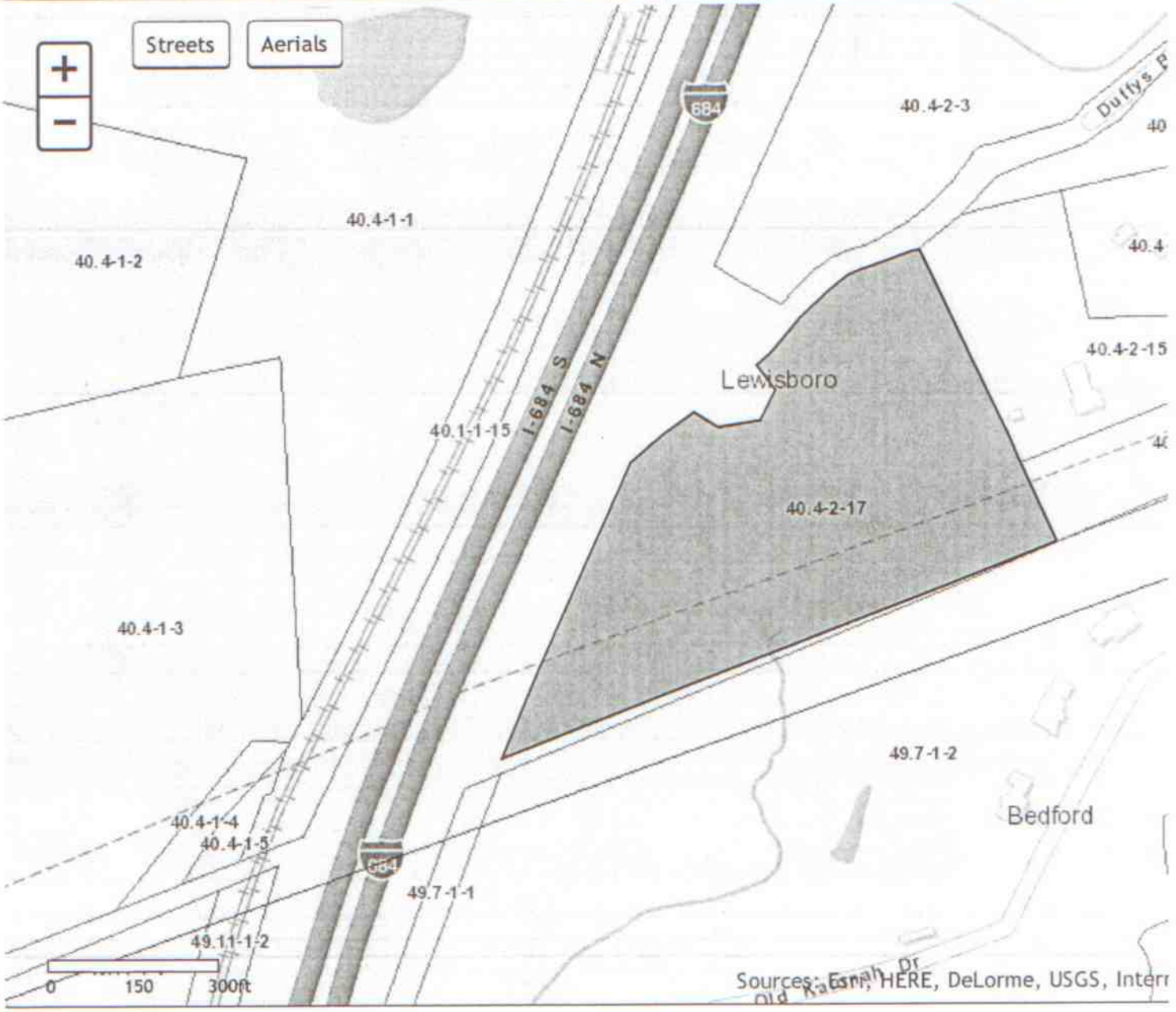
Friday, February 19, 2016 10:38 AM



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

Part 1 / Question 7 [Critical Environmental Area]	Yes
Part 1 / Question 7 [Critical Environmental Area - Identify]	Name:Geographic Area Overlaying Aquifer, Reason:Exceptional or unique character, Agency:Bedford, Town of, Date:11-3-84
Part 1 / Question 12a [National Register of Historic Places]	No
Part 1 / Question 12b [Archeological Sites]	No
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	Yes
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	No

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION



Initial Extent | Zoom In | Zoom Out | Show Overview Map

Search

Map Unit Legend

Westchester County, New York (NY119)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ce	Catden muck, 0 to 2 percent slopes	3,172.9	1.0%
ChB	Charlton loam, 2 to 8 percent slopes	8,161.7	2.5%
ChC	Charlton loam, 8 to 15 percent slopes	7,857.6	2.5%
ChD	Charlton loam, 15 to 25 percent slopes	3,958.8	1.2%
ChE	Charlton loam, 25 to 35 percent slopes	2,161.6	0.7%
ClB	Charlton loam, 2 to 8 percent slopes, very stony	716.9	0.2%
ClC	Charlton loam, 8 to 15 percent slopes, very stony	1,305.1	0.4%
ClD	Charlton loam, 15 to 25 percent slopes, very stony	871.9	0.3%
ClE	Charlton loam, 25 to 35 percent slopes, very stony	315.0	0.1%
ClF	Charlton loam, 35 to 45 percent slopes, very stony	779.9	0.2%
CrC	Charlton-Chatfield complex, rolling, very rocky	44,295.9	13.8%

Soil Map

Scale (not to scale)

Warning: Soil Map may not be valid at this scale.

You have zoomed in beyond the scale at which the soil map for this area is intended to be used. M done at a particular scale. The soil surveys that comprise your AOI were mapped at 1:12,000. The units and the level of detail shown in the resulting soil map are dependent on that map scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of map of soil line placement. The maps do not show the small areas of contrasting soils that could have b more detailed scale.

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

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

Special Point Features

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

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Westchester County, New York
Survey Area Data: Version 11, Sep 25, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

NARRATIVE

ASSOCIATED
WITH A

WETLAND PERMIT APPLICATION

for

PROPERTY LOCATED

at

DUFFY'S BRIDGE ROAD
TOWN OF LEWISBORO, NY

MARCH 18, 2016

PREPARED BY

NATHANIEL J. HOLT, PE
592 ROUTE 22
PAWLING, NEW YORK 12564

NATHANIEL J. HOLT, PE

dan@holtengineering.net

I. SUBJECT

Application for a Wetland Permit Under Chapter 217 - Wetlands and Watercourses

II. PURPOSE

It is proposed to construct a single family residence on a currently undeveloped 9.15 acre parcel of land located on Duffy's Bridge Road. Development of the property is constrained by Steep Slopes (15% or greater) and two locally regulated wetlands. In accordance with Chapter 217 of the Town of Lewisboro Town Code a wetland permit is required for any construction activities within 150 feet of the edge of the wetland. There are no New York State Department of Environmental Conservation or Army Corp of Engineers designated wetlands on the property.

The purpose of this narrative is to discuss the design considerations that were investigated to minimize and avoid disturbances to the regulated wetlands to the greatest extent practicable.

III. BACKGROUND

As noted above, the 9.15 acre parcel of land is located at the southerly side of the western terminus (cul de sac) of Duffy's Bridge Road. The property is owned by Fortune Home Builders, LLC. Although there is evidence of previous construction activities (the remnants of old farm roads, excavation and cleared areas with secondary growth), the only recent improvements occurred in the mid 2000's when an Emergency Access Driveway connecting Duffy's Bridge Road to Old Katonah Drive was constructed; essentially creating a loop to Route 22.

In the mid 1990's Fortune Home Builders obtained subdivision approval from the Town of Bedford Planning Board to construct the homes on Old Katonah Drive. During the review process, the condition of an driveway connecting Duffy's Bridge Road to an existing pond (referred to as Wetland "A" on the Site Plans) was found to be in a state of deterioration. Working in concert with the Town of Lewisboro, the Town of Bedford Planning Board orchestrated the reconstruction and improvement to the Emergency Access Drive which would provide alternate access to the subdivision should Old Katonah Drive or Route 22 become impassible. The driveway that presently exists was the culmination of that work by both Towns.

In the late 2000's Fortune Home Builders began marketing the property as an "estate lot" which would be developed as a single home site. Although preliminary sketches and architectural plans were prepared, potential buyers had difficulties in visualizing how the property would be developed. The single most difficulty potential buyers had was understanding how access to the house would be achieved. (Initially, the Owner

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

sought a permit to construct a driveway to the house site, however the Town of Lewisboro had no provisions to permit such an action).

Fortune Home Builders then determined that the only alternative was to obtain the necessary permits to construct a home on the property.

IV. EXISTING APPROVALS

Septic and Well

On December 1, 2010 plans and applications were filed with the Westchester County Department of Health to construct a four bedroom home. A permit (#L-2012-07) was subsequently issued for the construction of a new septic system and drilled well. An application for the renewal of that permit has been submitted.

Steep Slopes Permit

In accordance with the Town of Lewisboro Town Code disturbances to designated steep slopes (15% or greater) requires a variance from the Zoning Board of Appeals. Subsequently on November 9, 2014 an application was made to the Zoning Board of Appeals for the necessary variance.

Before the Public Hearing of February 25, 2015 was held, the Board conducted a site visit to see for themselves the site conditions first hand. Notably, in the findings dated March 12, 2015 which granted the Variance stated in part: "There is no practical alternative to the requested variance."

V. SITE DESIGN CONSIDERATIONS

General

Perhaps the three most important factors in the design of any property - particularly in Westchester County - is: the house site; access; and sewage treatment (septic). Importantly, site constraints such as topography and wetlands have a direct impact on the first three factors. Prior to arriving at the final design for the development of the property several alternatives were carefully considered.

Topographically, there were essentially two areas that presented feasible sites for the residence and the septic fields (other potential areas were considered, none provided the required area in which to located these improvements).

House Site

It was pointed out above, that there is evidence of existing farm/haul roads throughout the property (some of which actually extended into the adjacent Boulder Pines

subdivision) and what appeared to be an excavated level area resembling a plateau.

It was immediately obvious that the best location of the house would be at the plateau and if possible to follow the trails to access the building site. From a marketing perspective the location provided optimal vistas of the valley while avoiding the ridge line at the higher elevations. The issue then became how to construct a driveway from Duffy's Bridge Road to the house site.

Driveway

Again, the intent was to make use of one of the existing trails on the site. In addition, it would be preferred construct a driveway as short as possible while minimizing the associated excavation, and avoiding the wetlands. One such trail was nearly a straight line from the house site to the existing Emergency Access Drive.

However, the topography over much of its length was such that required driveway grades could not be achieved without excess depths of excavation (and maximum permitted gradient) - most of which was in bedrock and within the regulated wetland buffer. Furthermore portions of the existing trail drain directly towards the wetlands. As a result alternative alignments were studied.

One such option considered a driveway directly from Duffy's Bridge Road, while others studied several points along the existing emergency access driveway; all of which completely avoided any activities within the wetland buffer area. However, each of the options would require excessive depths of excavation, disturbances to the steep slopes and the removal of a countless number of trees. From the perspective of minimizing construction (cuts and fills) to the steep slopes, general disturbance and tree removal, the proposed route of the driveway provided the best alternative.

Again in considering the Steep Slope Variance, the Zoning Board of Appeals granted the Variance under Section 220-21B(1) & (3), stating in part that there was no practical alternative.

Septic System

As noted a portion of the existing trail formed a ready path between the house site and the potential location of the septic system absorption fields. Upon testing it was determined that the area located at the lower easterly portion of the property was the best place to locate the septic system. Moreover, the trail would provide a direct route between the house site and the absorption fields with minimal clearing or disturbance. The Westchester County Department of Health agreed with the proposed location of the septic system as a permit was issued on April 23, 2012.

VI. WETLAND and BUFFER ENCROACHMENTS

General

It is acknowledged the Town of Lewisboro's Wetland Ordinance requires a 150 foot buffer from a designated wetland, however, it is important to note that although portions of the proposed development occurs within the regulated buffer, none of the impervious surfaces drain towards either Wetland "A" or "B".

This has been attained by making use of an existing drainage divide that runs through the site. More specifically runoff on the southerly side of the drainage divide flows towards the wetland while runoff on the northerly side of the divide runs away from the wetlands.

Wetland Encroachment

As proposed no aspect of the development of the property disturbs any portion of either Wetland "A" or "B".

Buffer Encroachment

Wetland "A"

As designed, there is approximately 600 square feet of disturbance associated with the construction of the driveway that encroaches into the 150 foot buffer. Of that total, 280 square feet will consist of the pavement associated with the driveway.

No other disturbances are proposed within the buffer or Wetland "A"

Wetland "B"

As proposed, there is a total of 8,880 square feet of disturbance related to the construction of the driveway. Of that total, approximately 2,840 square feet will consist of the driveway pavement.

Total disturbance the wetland buffer associated with the construction of the proposed residence is approximately 7,380 square feet. Approximately 2,005 square feet of that disturbance will consist of the impervious surfaces associated with the home.

No portion of the proposed septic system encroaches into the buffer of Wetland "B".

The net result is that the quality of the stormwater that currently flows into either Wetlands "A" or "B" will remain unchanged after development. Arguably, after the proposed landscaping/mitigation plan and water quality treatment systems are implemented, the quality of the stormwater entering either wetlands will be improved.

VII. CONCLUSION

It is understood that most of the proposed construction activities will occur within the 150 foot buffer thereby necessitating the issuance of a wetland permit. In developing the site plans for the subject property, the Owner has carefully developed a plan that although much of the work will be within the 150 foot buffer, no aspect of the newly created impervious surfaces nor most of the disturbance in the form of grading actually drain towards the wetlands. This has been accomplished by placing the development on the opposite side of the natural drainage divide the runs through the property.

The significance of this approach is obvious: by keeping all stormwater runoff associated impervious and general disturbances from flowing into the wetlands the intent of the buffer is achieved. That is there will be no increase in runoff towards the wetlands.

It is generally acknowledged that the primary purpose of a vegetative buffer around a wetland is to prevent silts and other deleterious materials from entering the wetland. Not only does the vegetation help to reduce the velocity of the runoff thereby minimizing erosion, but it also allows for the nutrient up-take by existing vegetation. Studies have shown that the highest percentage of removal occurs within 100 feet of the wetland. Coincidentally, the referenced ridge line that traverses the site is approximately 100 feet from Wetland B.

With the exception of supplementing the existing vegetation with additional landscaping, no construction related activities are proposed on the south side of the drainage divide.

It is the undersigned's opinion that the Site Development Plans have been carefully designed to minimize the scope of the project while minimizing impacts to the wetland buffer and not creating any impervious surfaces within the drainage shed associated with the wetlands.

Respectfully submitted;

Nathaniel J. Holt, P.E.

Encl

cc: Fortune HomeBuilders, LLC

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KELLARD SESSIONS
CONSULTING, P.C.

John Kellard, P.E.
David Sessions, RLA, AICP

MEMORANDUM

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

CC: Ciorsdan Conran
Judson Siebert, Esq.

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

DATE: April 14, 2016

RE: Wetland Permit/Stormwater Permit Approvals
Aaron Lichtman
192 Kitchawan Road
Sheet 45, Block 10300, Lot 12, 23, 26 & 44

Project Description

The subject property consists of ±26.3 acres of land located on Kitchawan Road within the R-4A Zoning District. The site is developed with a 5-bedroom residence, detached studio, in-ground pool, pool house, septic system, and driveway with two (2) curb cuts off of Kitchawan Road. The applicant is proposing to demolish the existing home and construct a new 5-bedroom residence along with a new garage, new asphalt driveway, and associated courtyards. The proposal calls for the demolition of the existing studio, portions of the existing driveway and the elimination of both existing curb cuts. The subject property contains wetlands that are jurisdictional to the Town of Lewisboro and the New York State Department of Environmental Conservation (NYSDEC) and work is proposed within the Town's 150-foot wetland buffer and, to a lesser extent, the State's 100-foot wetland adjacent area. Specifically, a portion of the new house, driveway, lower driveway courtyard, grading and stormwater management areas are located within the Town's 150-foot wetland buffer.

SEQRA

The proposed action is a Type II Action and is categorically exempt from the State Environmental Quality Review Act (SEQRA).

Required Approvals

1. A Wetland Activity Permit and Town Stormwater Permit is required from the Planning Board; a public hearing is required to be held on the Wetland Permit.

2. Work proposed within the Town right-of-way will require a permit from the Town Highway Superintendent.

3. The Westchester County Department of Health (WCDH) must approve use of the existing 7-bedroom septic system and modifications to the existing system and expansion area.

4. An Article 24 Freshwater Wetland Permit is required from NYSDEC.

5. Land disturbance will exceed one (1) acre outside of the NYC East of Hudson Watershed and, therefore, coverage under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002) is required.

Plan Comments

1. As requested, the existing conditions site and topographic survey should be submitted.

2. It is recommended that the Building Inspector review the proposed plans for zoning compliance; a report from the Building Inspector should be provided to the Planning Board.

3. The wetland boundary line must be confirmed by this office; unless otherwise requested, this verification can take place during the Planning Board site visit (to be scheduled).

4. We will defer formal comment on the wetland mitigation until such time as a Planning Board site walk has been conducted and we have had an opportunity to visit the property. However, based on the information provided to date, our general impression is that the extent of mitigation proposed is not sufficient given the extent of work and improvements proposed within the buffer. Regarding the Wetland Delineation Report, we offer the following comments:

a) The report should be updated to reflect project changes that have occurred since its preparation. Most notably, the existing pool house located within the wetland buffer is no longer proposed to be removed.

b) Regarding the response provided to Section 217-7A(6)(e) of the Wetland Ordinance, please provide further documentation as to why the house cannot be repositioned and/or redesigned so as to be located further outside of the regulated buffer. Additional information is needed so that the Planning Board can make a determination as to whether the impacts are necessary and unavoidable.

c) Regarding the response provided to Section 217-7A(6)(g) of the Wetland Ordinance, no alternatives have been provided or discussed.

d) Regarding the discussion of the proposed mitigation measures, the Planning Board does not typically count stormwater management toward wetland mitigation, as these practices would be required by the Town regardless of the whether a wetland permit is required.

5. The wetland mitigation plan should be revised to include a table identifying the total area of proposed land disturbance, total area of land disturbance proposed within the wetland buffer, total area of impervious coverage (existing/proposed) located within the wetland buffer, area of each wetland mitigation measure, and total area of wetland mitigation. As mentioned above, the Planning Board does not count stormwater management toward wetland mitigation.

6. As discussed, there are a number of trees located between the proposed house site and the pond that are located outside of the limits of disturbance, but are shown to be removed. Unless the applicant demonstrates that these trees pose a significant safety hazard, we would encourage the preservation of trees within the buffer, to the extent possible.

7. Please include the proposed limit of disturbance line on the grading plan and drainage plan. The limits of disturbance line should be expanded to include wetland mitigation areas and construction access, to the extent applicable.

8. The applicant should clarify what work is proposed in connection with the existing inground swimming pool; this area is included within the limits of disturbance.

9. The 150-foot wetland off-set from the off-site wetland located on the south side of Kitchawan Road should be clarified and adjusted, if deemed necessary.

10. We note that the applicant is proposing to fill on top of the existing septic system expansion area; this must be approved by the WCDH.

11. The applicant is proposing a detention basin in proximity to Kitchawan Road to manage stormwater flows from a portion of the driveway and the existing barn/garage/studio. Given its visibility from the street, it is recommended that a more natural looking feature be considered. Further, the overflow from this feature is in close proximity to the adjacent property.

12. Approximately half of the runoff from the roof of the proposed house will be discharged (untreated) to a proposed level spreader located in proximity to the pond/wetland. Some form of treatment should be provided before stormwater is discharged to the level spreader; we note that the sketch plan submission included what appeared to be a stormwater basin or rain garden at this location.

13. As previously identified, soil testing associated with proposed stormwater management facilities must be witnessed by this office; test locations and results shall be provided on the plan.

14. The plans shall be revised to include top and bottom wall elevations for all proposed retaining walls; a retaining wall detail shall be provided. Additionally, any proposed walls greater than 4 feet must be designed by a NYS Professional Engineer.

15. As requested, all existing and proposed water, sewage, electric, gas, and other applicable utilities shall be shown on the plan; a note should be added to the plan stating that all proposed utility lines will be installed underground.

16. The plans shall be revised to provide the size, slope and material for all drainage pipes. Further, rim and invert elevations for all drain inlets shall be provided.

17. The drain inlet immediately upstream of the detention system should be equipped with a hooded outlet and a 3-foot deep sump to provide a level pretreatment.

18. As requested, the roof drains for the barn/garage/studio and pool house (both to remain) should be shown on the plan.

19. All reference to "Kent Materials" should be removed from Sheet D-1.

20. Once obtained, the applicant should submit copies of the applicable NYSDEC Freshwater Wetland and WCDH approvals. It is recommended that these outside agency approvals be obtained prior to any decision being made by the Planning Board.

21. Floor plans for the exiting pool house (to remain) should be provided. All floor plans and elevations shall be revised to include a title block and must be signed/sealed by the preparer.

22. It is recommended that the Board conduct a site visit and that the centerline of the driveway and house corners be staked in the field.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

Plans Reviewed, prepared by Insite Engineering and dated March 31, 2016:

- Overall Plan (OP-1)
- Existing Conditions, Topographic Survey & Demolition Plan (EX-1)
- Layout & Landscape Plan (SP-1)
- Grading & Drainage Plan (SP-2)
- Erosion & Sediment Control Plan (SP-3)
- Details (D-1)
- Constraints Map (CM-1)
- Area Map (AM-1)
- NYSDEC Wetland Validation Map (WV-1), dated February 5, 2016

Documents Reviewed:

- Letter, prepared by Insite Engineering, dated March 31, 2016
- Preliminary Wetland Mitigation Plan Narrative, prepared by Insite Engineering, dated March 31, 2016
- Preliminary Stormwater Management Report, prepared by Insite Engineering, dated March 31, 2016
- Architecturals, prepared by Ralph R. Mackin, Jr. Architect, PLLC, AIA, dated November 21, 2015

JKJ/JMC/DJS/dc

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

March 31, 2016

Chairman Jerome Kerner
Town of Lewisboro Planning Board
20 North Salem Road
Cross River, NY 10518

RE: Lichtman Residence
Wetland Permit and Stormwater Permit
192 Kitchawan Road
Town of Lewisboro, New York

Dear Chairman Kerner and members of the Planning Board:

Enclosed please find the ten (10) copies of the following:

- Drawing EX-1, "Existing Conditions and Demolitions Plan", latest revisions dated March 31, 2016 (five full scale, five reduced scale).
- Drawing SP-1, "Site Plan", dated March 31, 2016 (five full scale, five reduced scale).
- Drawing SP-2, "Grading and Utilities Plan", dated March 31, 2016 (five full scale, five reduced scale).
- Drawing SP-3, "Erosion and Sediment Control Plan", dated March 31, 2016 (five full scale, five reduced scale).
- Drawing D-1, "Details and Notes", dated March 31, 2016 (five full scale, five reduced scale).
- Drawing WM-1, "Preliminary Wetland Mitigation Plan", dated March 31, 2016 (five full scale, five reduced scale).
- Drawing WV-1, "NYSDEC Wetland Validation Map", dated February 12, 2016 (five full scale, five reduced scale).
- Drawing CM-1, "Constraints Map", dated March 31, 2016.
- Drawing AM-1, "Area Map", dated March 31, 2016.
- Preliminary Wetland Mitigation Plan Narrative dated March 31, 2016.
- Preliminary Stormwater Pollution Prevention Plan (SWPPP), dated March 31, 2016.
- Floor Plans and Elevations prepared by Ralph Mackin Architects.

With regard to comments received from the Town Planning Consultants, we offer the following:

3 Garrett Place, Carmel, New York 10512 (845) 225-9690 Fax (845) 225-9717
www.insite-eng.com

Memorandum from Jan Johannessen, AICP, of Kellard Sessions Consulting, P.C., dated January 20, 2016:

SEQRA:

We acknowledge this project is considered a Type II Action and is categorically exempt from the State Environmental Quality Review Act (SEQRA).

Required Approvals:

1. We acknowledge a Wetland Activity Permit and Town Stormwater Permit are required from the Town of Lewisboro Planning Board, as well as a public hearing being required to be held.

2. Any work proposed within the Town right-of-way will require a permit from the Town Highway Superintendent.

3. We understand that Westchester County Department of Health approval of the use of the existing 7-bedroom septic system will be required for this project.

4. Due to the proximity of the project's land disturbance to the NYSDEC Wetland located onsite, a NYSDEC Freshwater Wetland Permit is required.

5. We acknowledge that coverage under the NYSDEC General Permit GP-0-15-002 is required.

Plan Comments:

1. An Existing Conditions Site and Topographic Survey has been provided for review. The plan set provided includes the Existing Conditions and Demolition Plan.

2. All tax parcel/property lines and ownership information has been indicated on the provided plans. The applications have been updated accordingly and were previously submitted.

3. Zoning setback lines have been added to the plans for review. It is our understanding that the Building Inspector will be reviewing the proposed plans for zoning compliance and a report shall be provided to the Planning Board upon receipt.

4. The subject existing building to remain is a barn / garage / studio and is proposed to be utilized as such.

5. Upon receipt, the NYSDEC Freshwater Wetland Permit and WCDOH Approvals will be forwarded for your records.

6. A Wetland Delineation Report was provided in our last submission as requested. A NYSDEC Wetland Validation Map was forwarded to the NYSDEC for approval. The fully executed NYSDEC Wetland Delineation Plan has been included in this submission.

7. The total land disturbance within the Town of Lewisboro 150-wetland buffer is approximately 31,000 sf which includes the removals of the existing residence and terraces, portions of the existing driveway, and studio annex. The existing house footprint is 3,856 ± sf; whereas the proposed house and garage footprint is 5,272 ± sf. The total development coverage in the existing condition is 18,878 ± sf; whereas the proposed condition is 21,845 ± sf. There is a 1,300 sf reduction in impervious surface within the Town 150 foot buffer.

8. A Preliminary Wetland Mitigation Plan and Narrative has been provided for review.

9. The existing lawn area between the proposed residence and the existing pond is the only gently sloping usable play area for the owners four children. Refer to the Preliminary Wetland Mitigation Plan for additional information.

10. As noted, there are several large caliper trees shown to be removed. Several of the trees are within the limits of disturbance and would not survive if left. Others were inspected and determined to pose future dangerous situations to the use of the property.

11. The surface types of the existing and proposed features are shown on the provided plans as requested.

12. Existing utilities are currently unknown. Surface evidence of the utilities is shown on Drawing EX-1. We are currently working to identify the current utilities and will provide additional information in the future. The propane tanks as the heating source and generator location are indicated on the plans. All proposed utilities will be installed underground as required in Section 220-17 of the Zoning Code.

13. The limits of disturbance have been shown on the provided plans.

14. The stormwater management areas have been identified on the plans and have been sized appropriately.

15. The existing drainage features have been illustrated on the plans as requested.

16. The Stormwater Pollution Prevention Plan (SWPPP) is included with this submission. We understand that soil testing for proposed stormwater management facilities, if required, needs to be witnessed by Kellard Sessions.

17. Sight distances have been provided on the site plans as requested.

18. Preliminary Construction Details have been provided for review.

19. Architectural elevations and floorplans have been provided.

20. We acknowledge your recommendation that the Board conduct a site visit. This site visit has been scheduled for April 16, 2016.

We respectfully request this project be placed on the April 19, 2016 Planning Board agenda for continued review and discussion of the project. Should you have any questions or comments regarding this information, please feel free to contact our office.

Very truly yours,

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

By: _____
Scott W. Blakely, RLA
Senior Principal Landscape Architect

SWB/jll

Enclosures:

cc: Aaron Litchman and Kimberly Howard
Ralph Mackin, AI, Mackin Architects

Insite File No. 15260.100

INSITE
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LANDSCAPE ARCHITECTURE, P.C.

PRELIMINARY WETLAND MITIGATION PLAN

NARRATIVE

LICHTMAN RESIDENCE

192-218 KITCHAWAN ROAD

TOWN OF LEWISBORO

March 31, 2016

As discussed at your Board's recent meeting of February 23, 2016, Aaron Lichtman, a dad of four girls, who are in Meadow Pond, John Jay Middle School and John Jay High School respectively, desires to rebuild his home and reduce and consolidate the ancillary structures and impervious surfaces within the wetland boundaries. His intent is for him and his family to live full time in the home and to enjoy the property for the foreseeable future as they did in the past.

Currently there is an existing Studio/barn, a studio annex, storage bunker, a six or seven bedroom home, a "Bathhouse" which has a CO for a bedroom, kitchen and full bath, and two chicken coups on the property. The Proposal is to reduce the number of ancillary buildings, and rebuild the home, which is beyond rehabilitation. It is proposed to keep the barn/bunker and "bathhouse", eliminate all the other structures and rebuild a five or six bedroom home for the Lichtman/Howard Family.

A. The Proposed Project as it impacts the wetlands buffer is entirely in pre-disturbed areas of the buffer.

B. The Proposed Project will not negatively impact Wetlands. Stephen Coleman of Environmental Consulting concluded his report by indicating "it is my opinion that the proposed project will not have a negative impact on the functions provided by the wetland complex present on the property."

C. Encroachments are necessary and unavoidable, and have been minimized to the maximum extent practicable.

D. Proposed mitigation exceeds a 1:1 ratio, key areas are being replanted, the two chicken coops closest to the wetlands are being removed and impervious surfaces within the wetland buffer are being substantially reduced in accordance with the Mitigation Plan Guidelines Section 2.0 subsections 2,3,8, and 10 as follows:

1. The applicant proposes to restore or enhance existing degraded or disturbed wetlands, watercourses and/or buffer areas of an equal or greater area to that disturbed for new construction (11,580 sq ft of restoration as compared to 3,800 sq ft of encroachment associated with the new residence construction and proposed pool terrace) by restoring or creating vegetative filters totaling 11,580 sf, which is broken down into five primary locations as follows:

   (a) Buffer restoration by removal of existing lawn area below the proposed level spreader, removal of invasive species and replanting of native grasses, perennials and shrubs (2,100 sf of restoration).

(b) Eliminating a portion of the existing driveway and the point of egress which is within the southerly buffer and the easterly buffer and restoring the vegetative filter consisting of natural ground cover perennials and shrubs [area from the piers on Kitchawan to the 570 elevation line] (1,880 sq ft of restoration).

(c) Eliminating the Studio Annex and in addition to a water treatment area creating a vegetative buffer to the north and south of the water treatment area from the property line to the driveway edge within the westerly buffer area. (2,100 sq ft of restoration).

(d) Eliminating the existing right of way which travels from Kitchawan Road into the recreational lawn including without limitation the area which currently contains chicken coups (A65 to A60) and in addition to a water treatment area, re-plant the same with no-mow meadow mix. (4,250 sq ft of restoration).

(e) Removal of invasive species along a portion of the pond edge from wetland flags A54 to A58 (50% of wetland buffer restoration 2,500 sf = 1,250 sf).

E. Implementing Storm Water Practices which do not currently exist.

F. Creating a net reduction of 1,300 ft of impervious surface within the wetlands buffer from that which currently exists an 8% reduction.

Based upon the foregoing, it is hoped that the Planning Board will approve the Lichtman/Howard Family application to allow them to rebuild, enhance and consolidate in an environmentally responsible manner.

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LANDSCAPE ARCHITECTURE, P.C.

PRELIMINARY STORMWATER MANAGEMENT REPORT

For

Lichtman Residence

192-218 Kitchawan Road
Town of Lewisboro,
Westchester County, New York

March 31, 2016

Owner Information:

Aaron Lichtman
192-218 Kitchawan Road
Town of South Salem, NY 10590

Prepared by:
Insite Engineering, Surveying & Landscape Architecture, P.C.
3 Garrett Place
Carmel, New York 10512

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Appendix A Pre-Development Computer Data
Appendix B Post-Development Computer Data

FIGURES
Figure 1: Location Map
Figure 2: Pre-Development Drainage Map
Figure 3: Post-Development Drainage Map

1.0 INTRODUCTION

1.1 Project Description

The subject project is a 26.3± acre parcel located at 192-218 Kitchawan Road in the Town of Lewisboro. The attached Location Map (Figure 1) delineates the subject parcel and its surroundings. The subject parcel is identified as Tax Map Numbers 45-10300-12, 26, 23, & 44. The site is currently developed with a main residence, barn / studio / garage, studio annex, pool house / 1 bedroom apartment, pool and associated appurtenances. The property has two localized high points; one located north of the existing dwelling, and the second located north of the existing subsurface sewage treatment system (SSTS). It is proposed to remove the existing main residence and studio annex and construct a new five or six bedroom dwelling.

1.2 Existing Site Conditions (Pre-Development)

The subject parcel is currently developed as a residential lot on the northern side of Kitchawan Road in the Town of Lewisboro. The lot is currently developed with the above referenced structures and a paved driveway. The developed area around the existing structures and existing pond is characterized as lawn area with trees and shrubs around the periphery. The subject property has two local high points; one located north of the existing dwellings, and the second located north of the existing SSTS. The onsite elevations range from elevation 582 at the local high point nearest the existing dwellings, and 552 near the NYSDEC designated wetland (D-5) and the existing pond. The onsite soils consist of Charlton-Chatfield complex (CrC) which is characterized as rolling and very rocky, and Palms Muck located near the NYSDEC wetland. The existing drainage pattern on the property is sheet flow and shallow concentrated flow from the local high points towards the property lines, with the drainage flowing east toward the NYSDEC wetland and pond and west toward the offsite town regulated wetland.

1.3 Proposed Site Conditions (Post Development)

As previously stated the project includes the demolition of the existing residence, studio annex, and portions of the existing driveway, the construction of a new five or six bedroom residence with an attached garage, driveway and parking areas. The remainder of the lot will remain unchanged in the post development condition. Improvements are proposed on the property to mitigate the increase in stormwater runoff produced in the proposed condition. It is proposed to capture and treat the stormwater runoff from the proposed dwelling and appurtenances with proposed collection systems consisting of precast concrete drain inlets, HDPE pipe and PVC SDR 35 roof drainage piping each. The collection systems will discharge to either the proposed stormwater dry basin or the stormwater detention system respectively for stormwater quality and quantity treatment. The proposed stormwater basin and detention system have been sized to capture and treat the 25-year design storm for the proposed development on the site. As noted in later sections of this report the detention system will be constructed with perforated pipe to allow for incidental infiltration of the stormwater runoff.

2.0 STORMWATER MANAGEMENT

Since the project consists of the construction of a single family home with proposed disturbances between one and five acres, an erosion control only Stormwater Prevention Plan (SWPPP) is required by the New York State Department Environmental Conservation (NYSDEC) per the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity Permit Number GP-0-15-002.

To meet the stormwater quantity requirements of the Town of Lewisboro, the stormwater analysis shown herein includes performed includes a reduction in the post-development peak stormwater volumes to pre-development conditions in the 25-year, 24-hour design storm. Stormwater management for proposed improvements on the parcel will be accomplished with the implementation small collection systems, including roof drains and drain inlets, discharging to the proposed detention system and stormwater basin.

The sizing of the all onsite stormwater treatment practices for stormwater quantity treatment require that the 25-year, 24-hour design storm be attenuated to pre-development conditions. As shown in Appendices A and B of this report, the detention system and stormwater basin were sized to attenuate the stormwater peak flows in the 25-year, 24-hour design storm to pre-development conditions.

As shown on the project plans the stormwater runoff from the eastern portion of the site, including the new residence and driveway area will be directed to a detention system consisting of three (3), twenty-four inch diameter pipes, approximately forty (40) feet in length. The proposed detention pipe shall be perforated for incidental drainage for stormwater quality purposes only. For the purposes of this analysis the pipe is conservatively assumed to be solid pipe, modeled as a solid pipe.

The stormwater runoff from the western portion of the site will be directed to a small dry stormwater basin for mitigation of the 25-year, 24-hour design storm. The outlet from both the detention system, discussed above and the dry stormwater basin will be directed to proposed level spreaders to mimic the existing sheet flow conditions at each of the chosen design lines.

To address stormwater quantity mitigation from the proposed development of the site, the "HydroCAD" Stormwater Modeling System," by HydroCAD Software Solutions LLC in Tamworth, New Hampshire, was used to model and assess the peak stormwater flows for the subject project. HydroCAD is a computer aided design program for modeling the hydrology and hydraulics of stormwater runoff. It is based primarily on hydrology techniques developed by the United States Department of Agriculture, Soil Conservation Service (USDA, SCS) TR-20 method combined with standard hydraulic calculations. For details on the input data for the subcatchments and design storms, please refer to Appendices A and B.

The input requirements for the HydroCAD computer program are as follows:

<u>Subcatchments (contributing watershed/sub-watersheds)</u>

- Design storm rainfall in inches
- CN (runoff curve number) values which are based on soil type and land use/ground cover
- Tc (time of concentration) flow path information
- Watershed Area in Acres

The following is a general description of the input data used to calculate the pre- and post-development stormwater runoff values. For detailed information for each subcatchment see Appendices A and B. The 25-year 24-hour design storms were obtained from the New York State Stormwater Design Manual.

Table 2.0.1 – Precipitation Values for Corresponding Design Storms

Design Storm	24-Hour Rainfall
25-Year	6.0"

The CN (runoff curve number) values utilized in this report were referenced from the USDA, SCS publication *Urban Hydrology for Small Watersheds*. The following is a summary of the various land uses/ground covers and their associated CN values utilized in this report.

Table 2.0.2 – Project Ground Cover and Associated Curve Numbers (CN)

Land Use/Ground Cover	CN Value
Woods, B Soil	55
Grass, B Soil	61
Paved Parking and Roofs	98

As required per the Town of Lewisboro rules and regulations, the attenuation of post-development peak flows from the 25-year storms to pre-development levels is accomplished with the proposed stormwater management practices. The following tables summarize the pre and post development peak flows expected for the proposed project.

Table 2.0.3– Existing and Proposed Conditions Peak Flows

24-HOUR DESIGN STORM PEAK FLOWS (c.f.s.)		
	25-YEAR	
	Existing	Proposed
Design Line 1	1.6	1.5
Design Line 2	9.7	9.7

As shown in the above table, the peak flows discharging from the detention system and dry stormwater basin in the proposed condition have been mitigated to at or below the existing condition levels for the 25-year, design storm as required by the Town of Lewisboro.

3.0 STORMWATER CONVEYANCE SYSTEM

The stormwater conveyance systems for the project consists of precast concrete drainage structures, HDPE and PVC SDR 35 pipes. The system will be sized utilizing the Rational Method. The Rational Method is a standard method used by engineers to develop flow rates for sizing collection systems. The Rational Method calculates flows based on a one-hour design storm. The collection system will be sized to convey, at a minimum, the 25-year design storm.

4.0 EROSION AND SEDIMENT CONTROL

Erosion and sediment control will be accomplished by four basic principles: diversion of clean water, containment of sediment, treatment of dirty water, and stabilization of disturbed areas. Sediment will be contained with the use of silt fence at the toe of disturbed slopes. Disturbed areas will be permanently stabilized within 15 days of final grading to limit the required length of time that the temporary facilities must be utilized.

4.1 Temporary Erosion and Sediment Control Facilities

Temporary erosion and sediment control facilities will be installed and maintained as required to reduce the impacts to off-site properties. In general, the following temporary methods and materials will be used to control erosion and sedimentation from the project site:

- Silt Fence Barriers
- Stabilized Construction Entrance

Siltation barriers constructed of geosynthetic filter cloth will be installed parallel to the existing contours in locations as shown on the plan. The intent of these barriers is to contain silt and sediment at the source and inhibit its transport by stormwater runoff. The siltation barriers will also help reduce the rate of runoff by creating filters through which the stormwater must pass.

A stabilized construction entrance should be installed at the entrance to the site as shown on the plan. The design drawings will include details to guide the contractor in the construction of this entrance. The intent of the stabilized construction entrance is to prevent the “tracking” of soil from the site. Dust control should be accomplished with water sprinkling trucks if required. During dry periods, sprinkler trucks should wet all exposed earth surfaces as required to prevent the transport of air-borne particles to adjoining areas.

4.2 Permanent Erosion and Sediment Control Facilities

Permanent erosion and sediment control will be accomplished by controlling/reducing stormwater runoff velocities and volumes, and vegetative and structural surface stabilization. All of the permanent facilities are relatively maintenance free and only require periodic inspections. An annual inspection for structural integrity is required for these facilities. Other than the actual building and paved surfaces, the primary method for permanently stabilizing disturbed surfaces at the subject site is with vegetation. The

vegetation will control stormwater runoff by preventing soil erosion, reducing runoff volume and velocities, and providing a filter medium.

Deep sump drain inlets are proposed to allow for settlement of suspended sediment that is generated by stormwater runoff from patio area. The basin and proposed level spreaders will provide a collection area for sediment deposition and eventual disposal prior to discharge to the existing vegetated ground surface. A dense vegetative buffer below the proposed level spreaders will provide additional stormwater quality treatment.

5.0 IMPLEMENTATION AND MAINTENANCE

5.1 Construction Phase

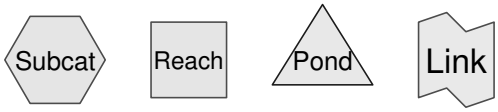
Details associated with the implementation and maintenance of the proposed stormwater facilities and erosion control measures during construction will be shown on the project plans. The erosion control plan includes associated details, and notes to aid the contractor in implementing the plan.

5.2 Long Term Maintenance Plan

The stormwater facilities for the subject project have been designed to minimize the required maintenance. This section discusses the minimum maintenance requirements to insure long-term performance of the stormwater facilities. Initially the stormwater facilities will require an increased maintenance and inspection schedule until all portions of the site are stable. Generally the stormwater facilities consist of either collection and conveyance components or treatment components.

The stormwater collection and conveyance system is composed of precast concrete drain inlets with cast iron frames and grates, HDPE and PVC SDR 35 pipes. The owner will assume the maintenance responsibilities for the drainage system. Minimal maintenance is typically required for these facilities. Each spring the pavement should be cleaned to remove the winter's accumulation of traction sand. After this is completed, the deep sump drain inlets should be cleaned to remove all deposited sediment. All pipes should be checked for debris and blockages and cleaned as required. During the cleaning process, the drain inlets and pipes should be inspected for structural integrity and overall condition; repairs and/or replacement should be made as required.

APPENDIX A
Pre-Development Computer Data



Routing Diagram for Lichtman Residence Pre-Development
Prepared by Insite Engineering , Printed 2/25/2016
HydroCAD® 10.00-15 s/n 02171 © 2015 HydroCAD Software Solutions LLC

Summary for Subcatchment PRE 1:

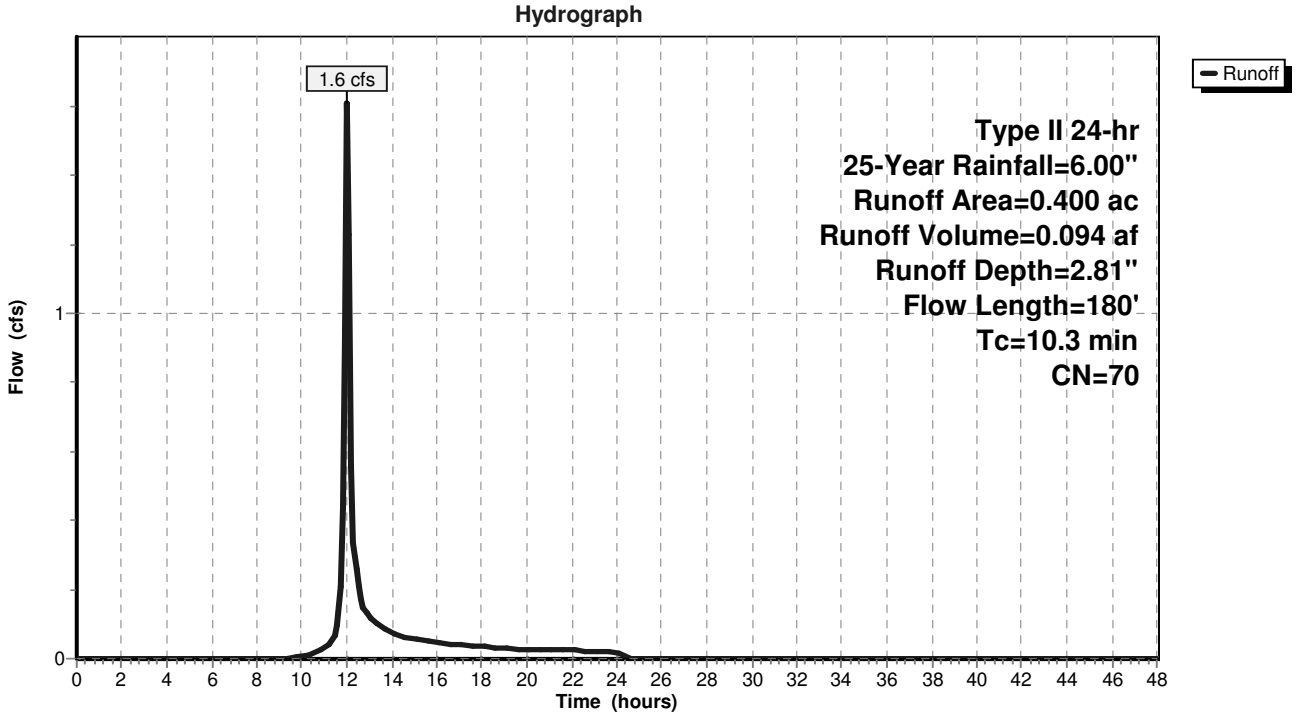
Runoff = 1.6 cfs @ 12.01 hrs, Volume= 0.094 af, Depth= 2.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.10 hrs
Type II 24-hr 25-Year Rainfall=6.00"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG B
0.300	61	>75% Grass cover, Good, HSG B
0.400	70	Weighted Average
0.300		75.00% Pervious Area
0.100		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0400	0.18		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.00"
0.9	80	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
10.3	180	Total			

Subcatchment PRE 1:



Summary for Subcatchment PRE 2:

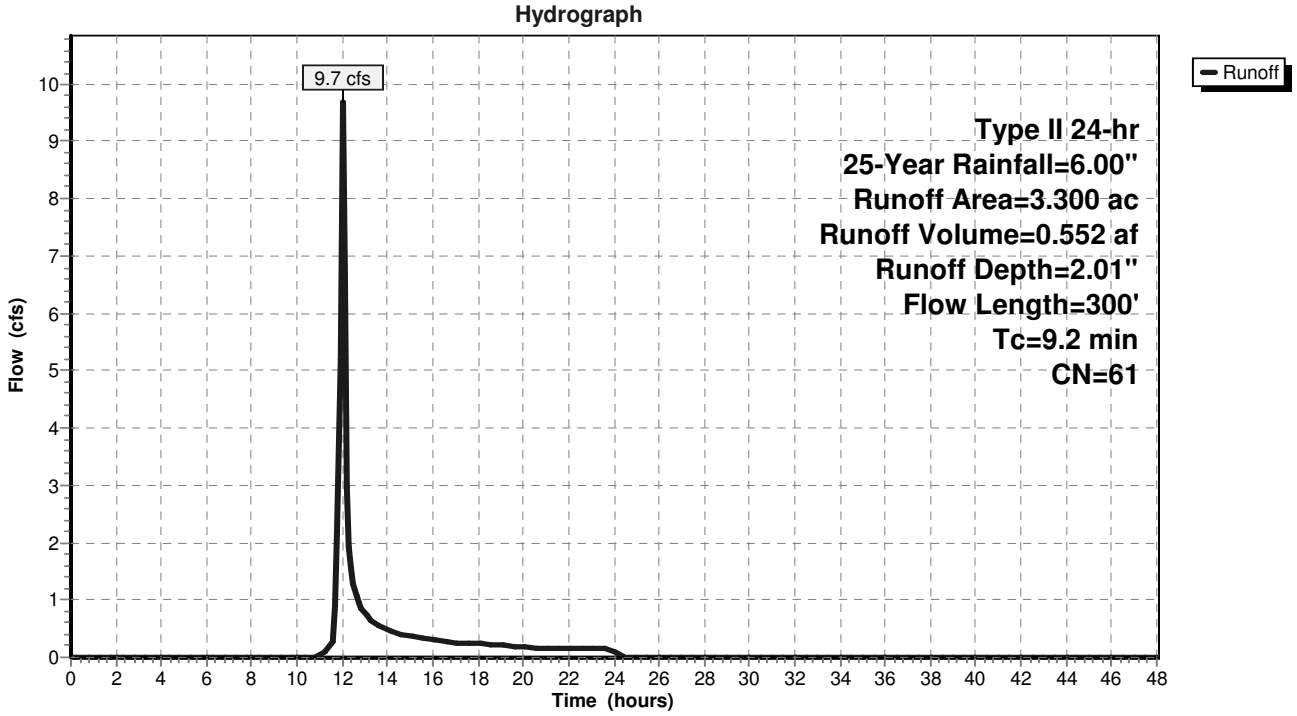
Runoff = 9.7 cfs @ 12.01 hrs, Volume= 0.552 af, Depth= 2.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.10 hrs
Type II 24-hr 25-Year Rainfall=6.00"

Area (ac)	CN	Description
0.200	98	Paved parking, HSG B
1.600	61	>75% Grass cover, Good, HSG B
1.500	55	Woods, Good, HSG B
3.300	61	Weighted Average
3.100		93.94% Pervious Area
0.200		6.06% Impervious Area

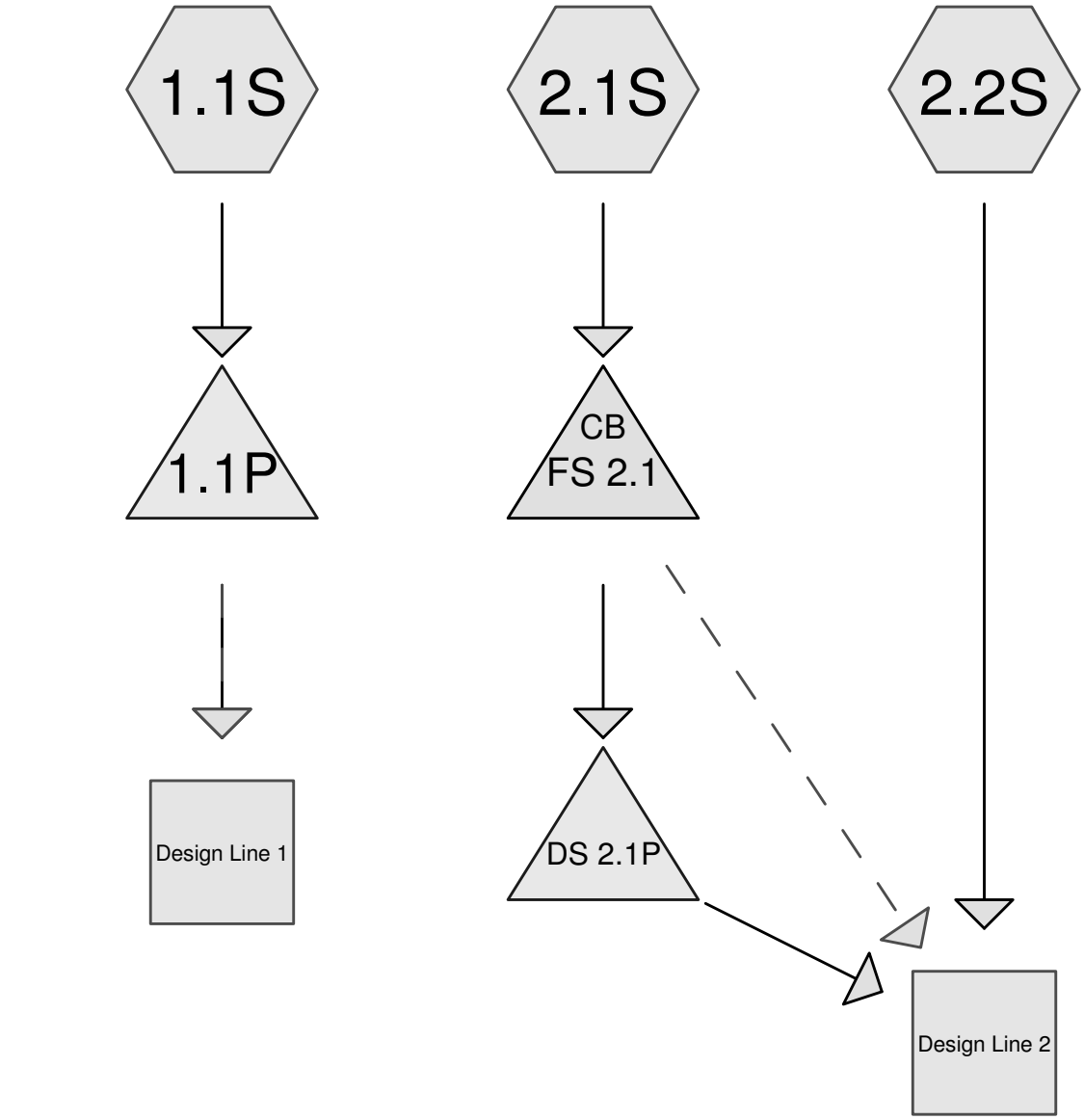
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0800	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.00"
2.1	200	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.2	300	Total			

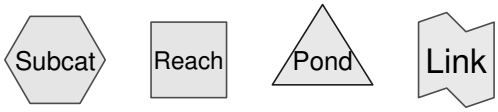
Subcatchment PRE 2:



APPENDIX B

Post-Development Computer Data





Routing Diagram for Lichtman Residence Post-Development
Prepared by Insite Engineering , Printed 3/30/2016
HydroCAD® 10.00-15 s/n 02171 © 2015 HydroCAD Software Solutions LLC

Summary for Subcatchment 1.1S:

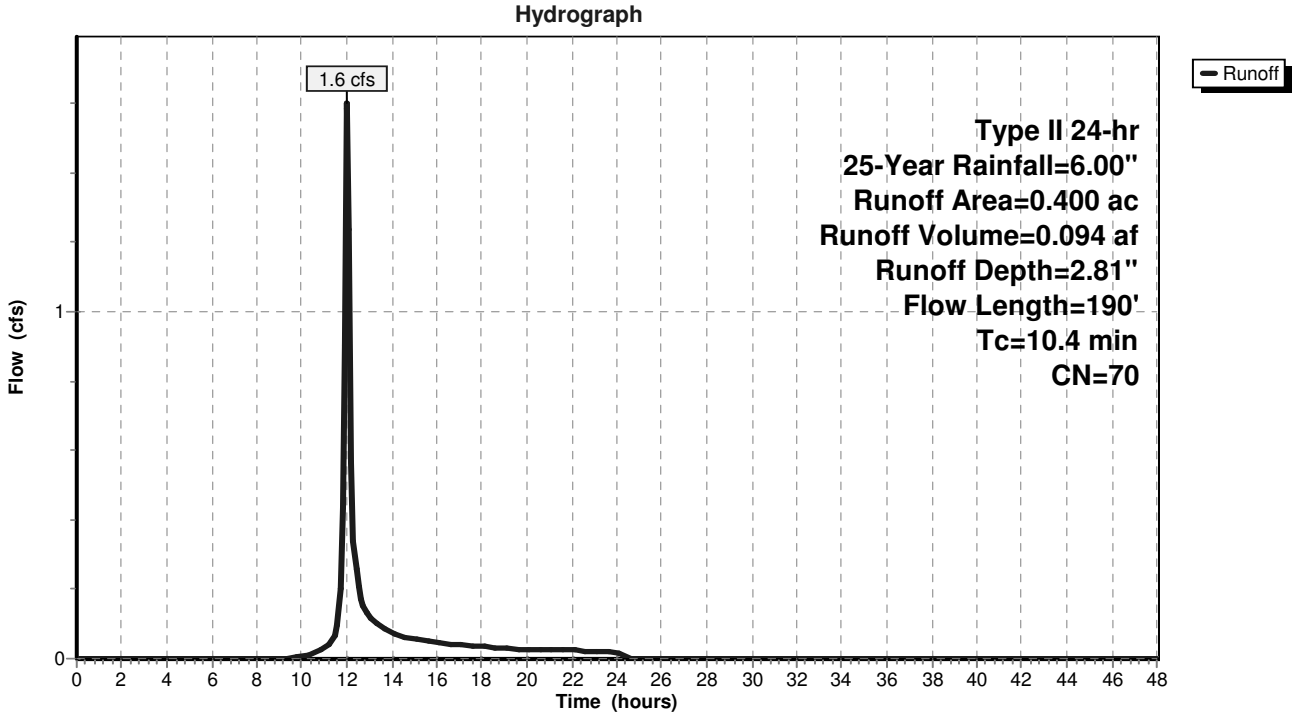
Runoff = 1.6 cfs @ 12.02 hrs, Volume= 0.094 af, Depth= 2.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.10 hrs
Type II 24-hr 25-Year Rainfall=6.00"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG B
0.300	61	>75% Grass cover, Good, HSG B
0.400	70	Weighted Average
0.300		75.00% Pervious Area
0.100		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0400	0.18		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.00"
1.0	90	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
10.4	190	Total			

Subcatchment 1.1S:



Summary for Subcatchment 2.1S:

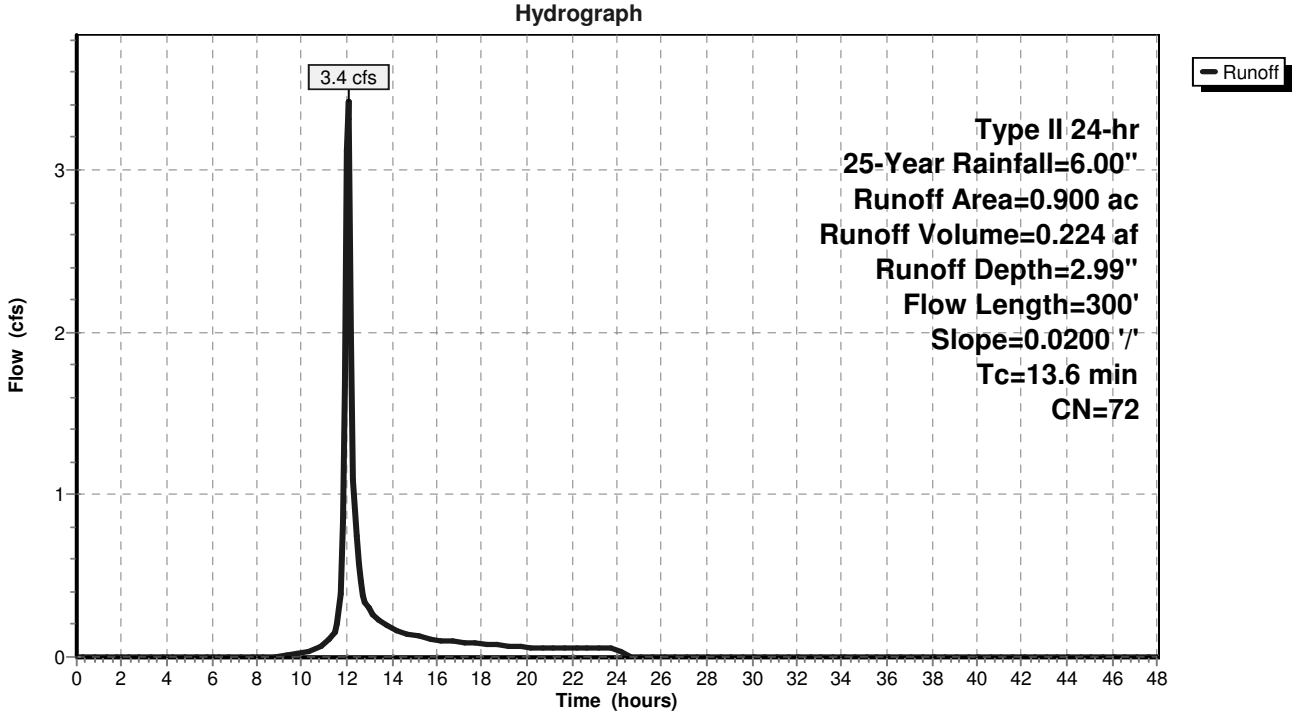
Runoff = 3.4 cfs @ 12.06 hrs, Volume= 0.224 af, Depth= 2.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.10 hrs
Type II 24-hr 25-Year Rainfall=6.00"

Area (ac)	CN	Description
0.300	98	Paved parking, HSG B
0.400	61	>75% Grass cover, Good, HSG B
0.200	55	Woods, Good, HSG B
0.900	72	Weighted Average
0.600		66.67% Pervious Area
0.300		33.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0200	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.00"
0.8	50	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.4	150	0.0200	6.42	5.04	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
13.6	300	Total			

Subcatchment 2.1S:



Summary for Subcatchment 2.2S:

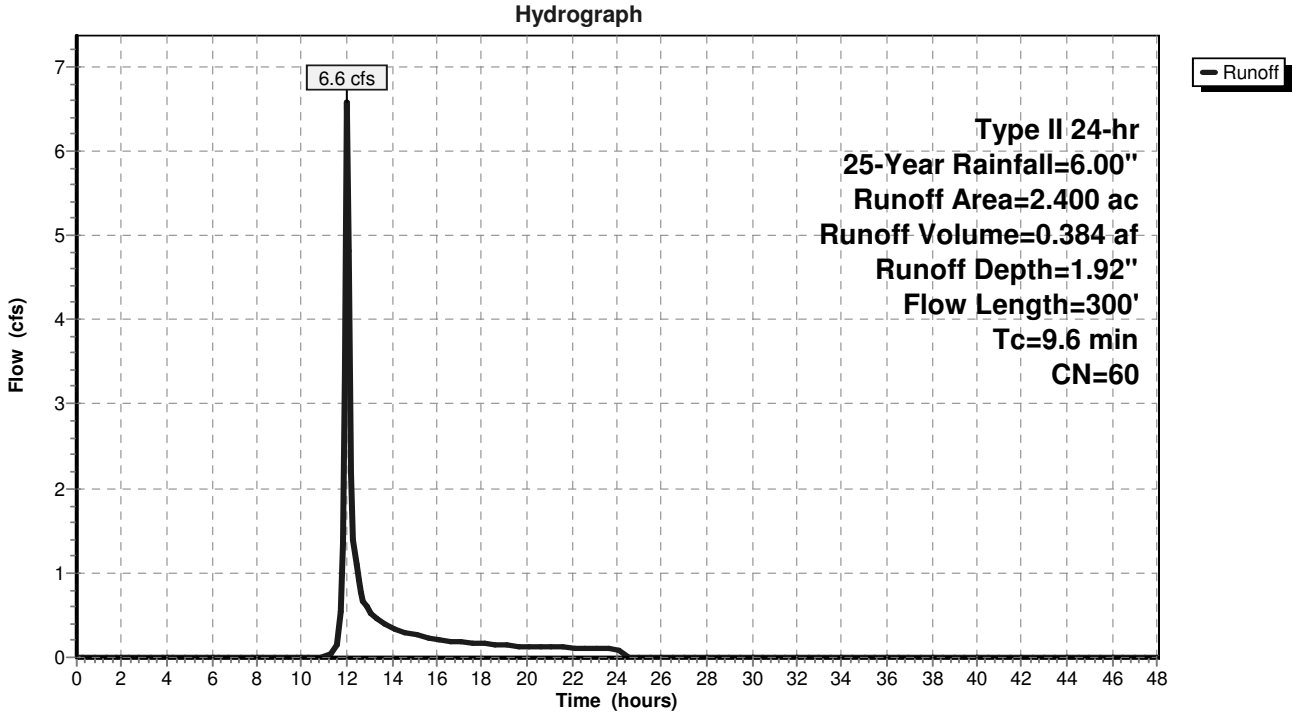
Runoff = 6.6 cfs @ 12.01 hrs, Volume= 0.384 af, Depth= 1.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.10 hrs
Type II 24-hr 25-Year Rainfall=6.00"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG B
1.200	61	>75% Grass cover, Good, HSG B
1.100	55	Woods, Good, HSG B
2.400	60	Weighted Average
2.300		95.83% Pervious Area
0.100		4.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	100	0.0700	0.22		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.00"
2.1	200	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.6	300	Total			

Subcatchment 2.2S:

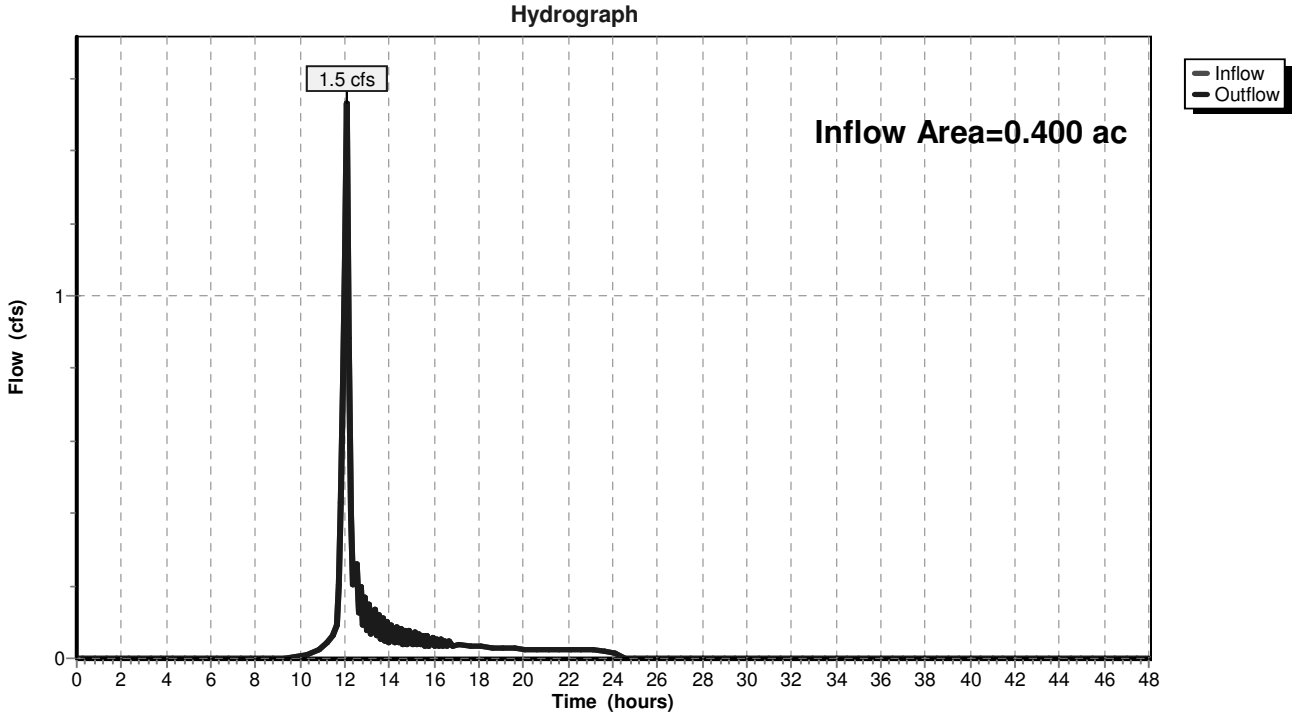


Summary for Reach Design Line 1:

Inflow Area = 0.400 ac, 25.00% Impervious, Inflow Depth = 2.81" for 25-Year event
Inflow = 1.5 cfs @ 12.09 hrs, Volume= 0.094 af
Outflow = 1.5 cfs @ 12.09 hrs, Volume= 0.094 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.10 hrs

Reach Design Line 1:

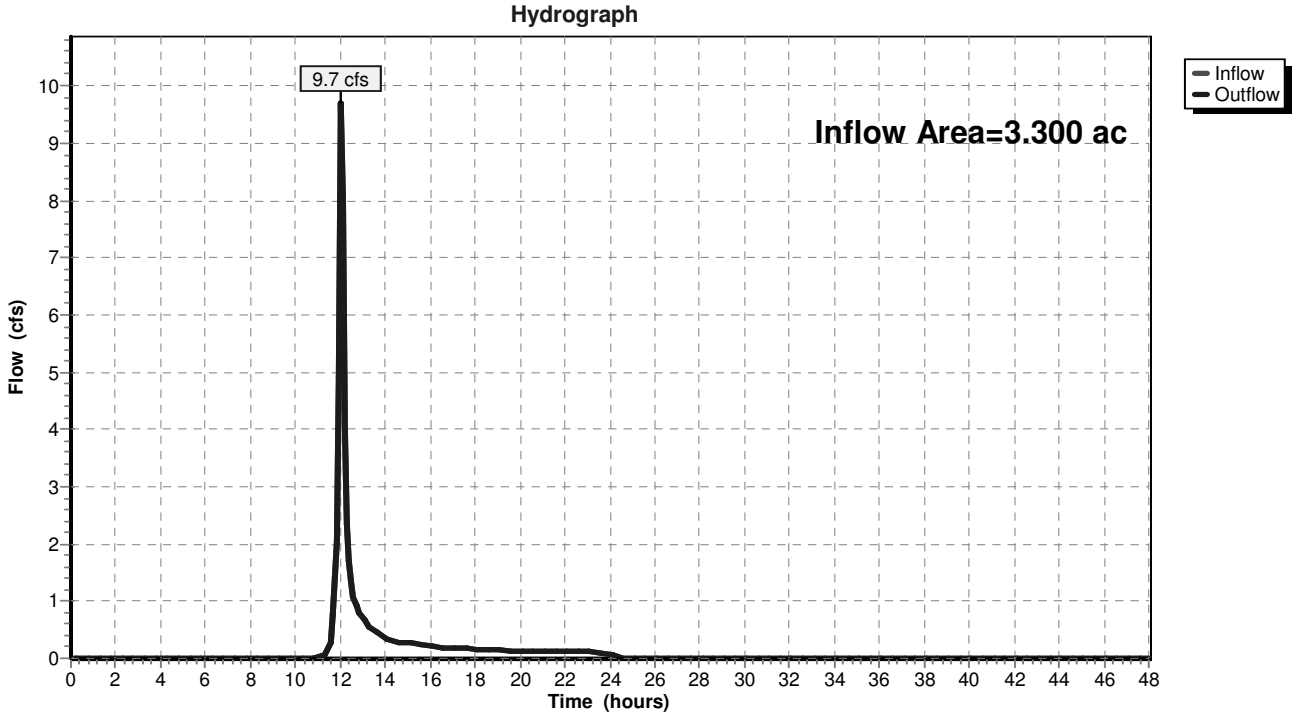


Summary for Reach Design Line 2:

Inflow Area = 3.300 ac, 12.12% Impervious, Inflow Depth = 1.83" for 25-Year event
Inflow = 9.7 cfs @ 12.03 hrs, Volume= 0.503 af
Outflow = 9.7 cfs @ 12.03 hrs, Volume= 0.503 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.10 hrs

Reach Design Line 2:



Summary for Pond 1.1P:

Inflow Area = 0.400 ac, 25.00% Impervious, Inflow Depth = 2.81" for 25-Year event
Inflow = 1.6 cfs @ 12.02 hrs, Volume= 0.094 af
Outflow = 1.5 cfs @ 12.09 hrs, Volume= 0.094 af, Atten= 4%, Lag= 4.5 min
Primary = 1.5 cfs @ 12.09 hrs, Volume= 0.094 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.10 hrs
Peak Elev= 562.90' @ 12.07 hrs Surf.Area= 283 sf Storage= 185 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.7 min (839.7 - 839.1)

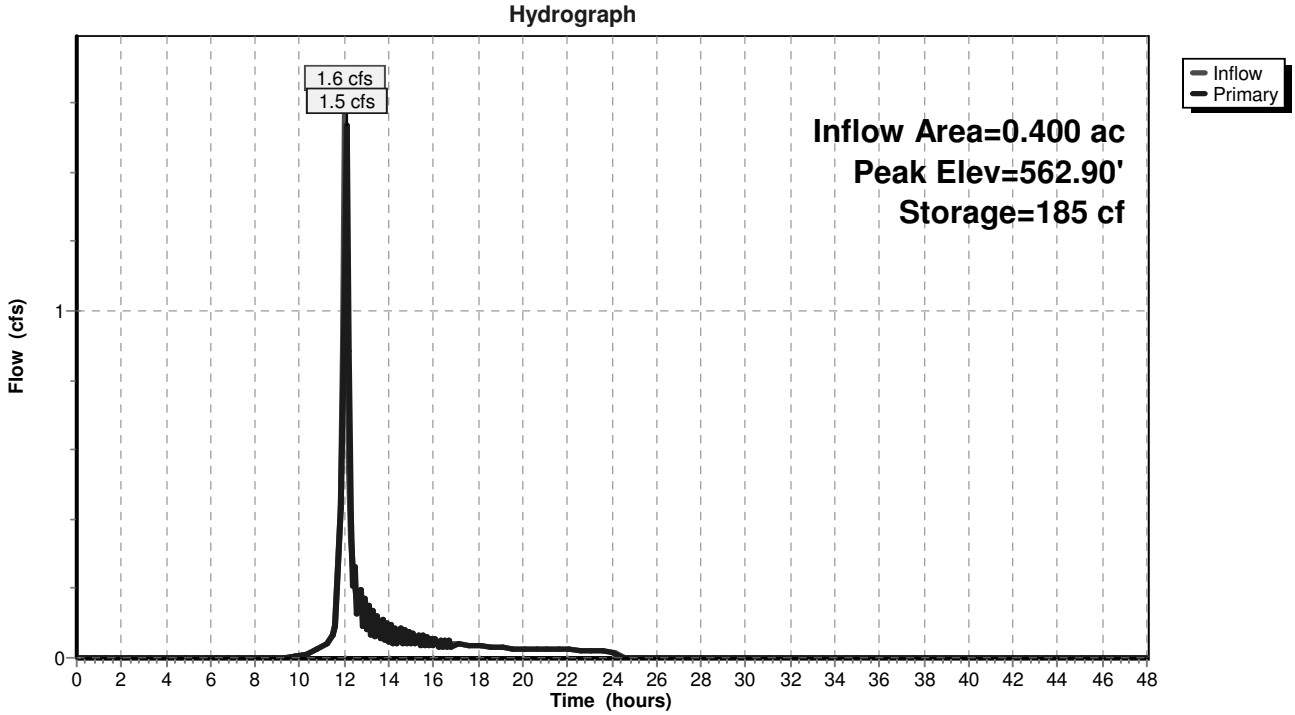
Volume	Invert	Avail.Storage	Storage Description
#1	562.00'	600 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
562.00	125	0	0
564.00	475	600	600

Device	Routing	Invert	Outlet Devices
#1	Primary	561.30'	**15.0" Round Culvert** L= 26.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 561.30' / 561.00' S= 0.0115 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#2	Device 1	561.30'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	562.70'	**2.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.5 cfs @ 12.09 hrs HW=562.87' (Free Discharge)
└─**1=Culvert** (Passes 1.5 cfs of 5.7 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 1.1 cfs @ 5.53 fps)
  └─**3=Broad-Crested Rectangular Weir** (Weir Controls 0.4 cfs @ 1.15 fps)

Pond 1.1P:



Summary for Pond DS 2.1P:

Inflow Area = 0.900 ac, 33.33% Impervious, Inflow Depth = 2.88" for 25-Year event
Inflow = 2.8 cfs @ 12.06 hrs, Volume= 0.216 af
Outflow = 2.7 cfs @ 12.06 hrs, Volume= 0.110 af, Atten= 5%, Lag= 0.0 min
Primary = 2.7 cfs @ 12.06 hrs, Volume= 0.110 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.10 hrs / 2
Peak Elev= 566.30' @ 12.06 hrs Surf.Area= 0 sf Storage= 377 cf

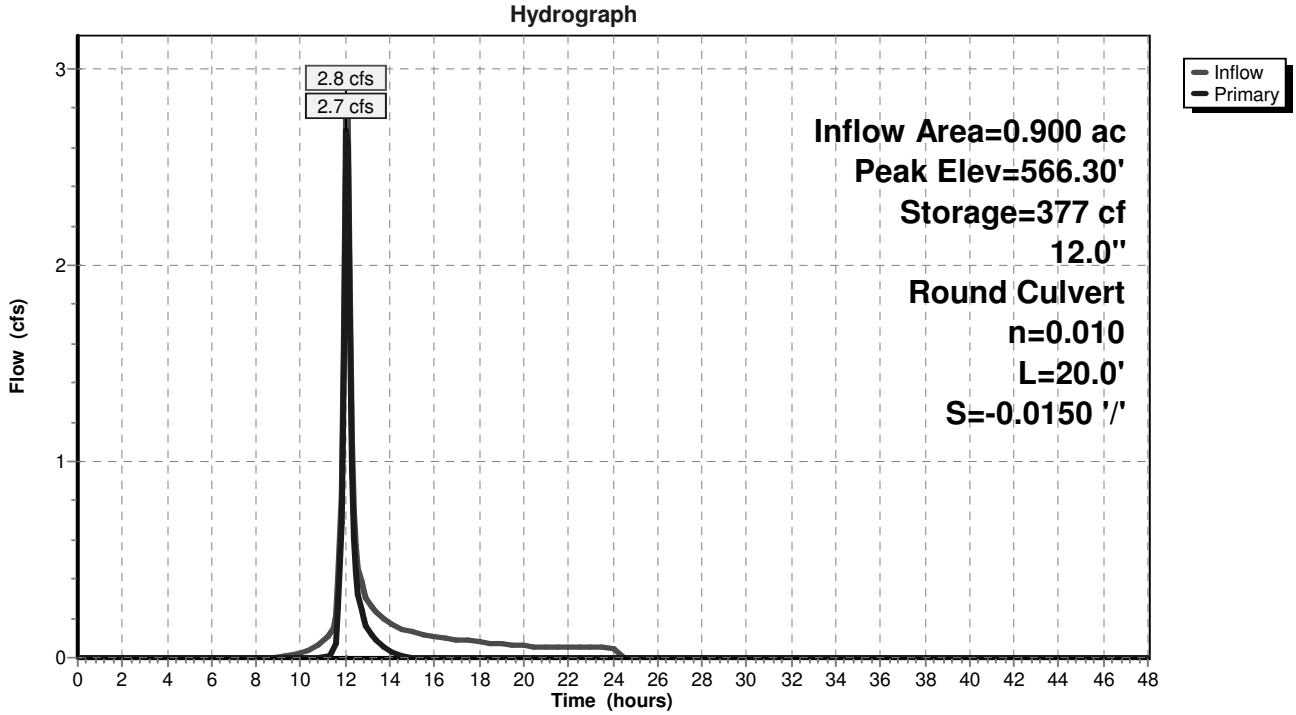
Plug-Flow detention time= 16.9 min calculated for 0.110 af (51% of inflow)
Center-of-Mass det. time= (not calculated: outflow precedes inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	563.00'	377 cf	**24.0" Round Pipe Storage** x 3 L= 40.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	565.30'	**12.0" Round Culvert** L= 20.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 565.00' / 565.30' S= -0.0150 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.6 cfs @ 12.06 hrs HW=566.26' (Free Discharge)
└**1=Culvert** (Barrel Controls 2.6 cfs @ 3.35 fps)

Pond DS 2.1P:



Summary for Pond FS 2.1:

Inflow Area =	0.900 ac, 33.33% Impervious, Inflow Depth = 2.99" for 25-Year event				
Inflow =	3.4 cfs @	12.06 hrs, Volume=	0.224 af		
Outflow =	3.4 cfs @	12.06 hrs, Volume=	0.224 af, Atten= 0%, Lag= 0.0 min		
Primary =	2.8 cfs @	12.06 hrs, Volume=	0.216 af		
Secondary =	0.6 cfs @	12.07 hrs, Volume=	0.009 af		

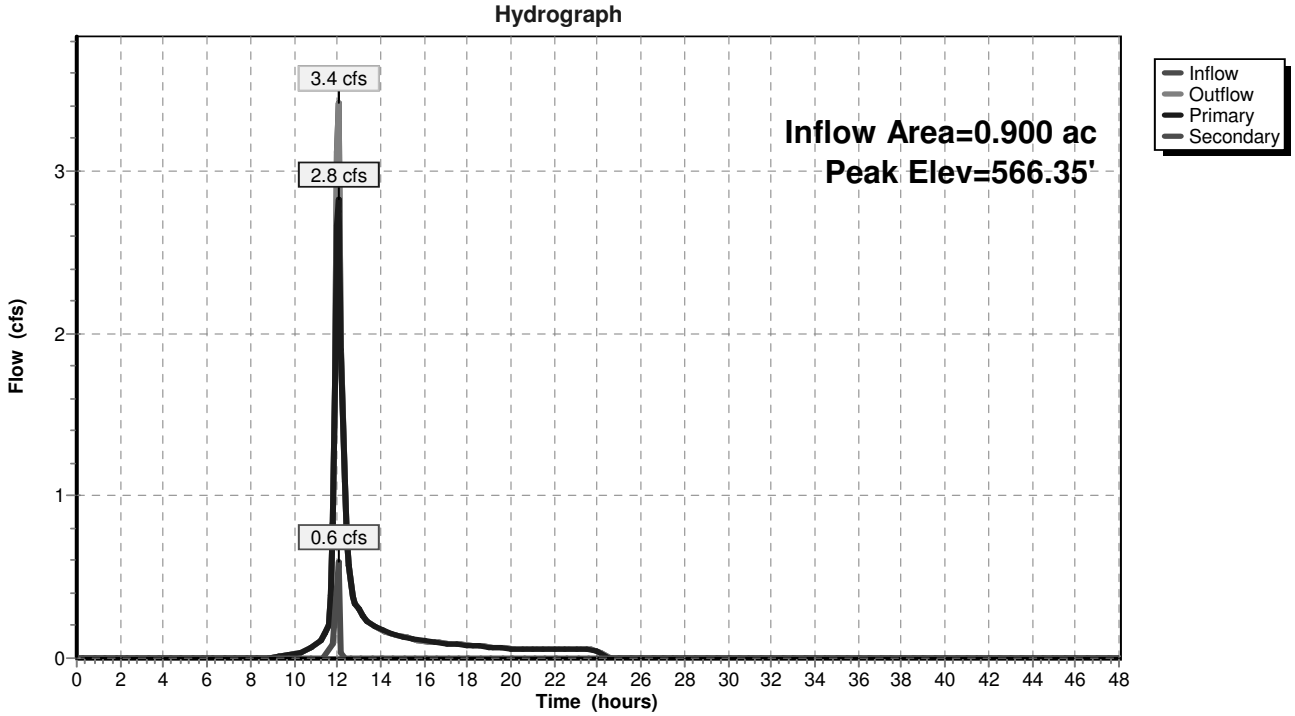
Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.10 hrs
Peak Elev= 566.35' @ 12.06 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	565.30'	**12.0" Round Culvert** L= 30.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 565.30' / 565.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	566.00'	**18.0" Round Culvert** L= 70.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 566.00' / 556.00' S= 0.1429 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

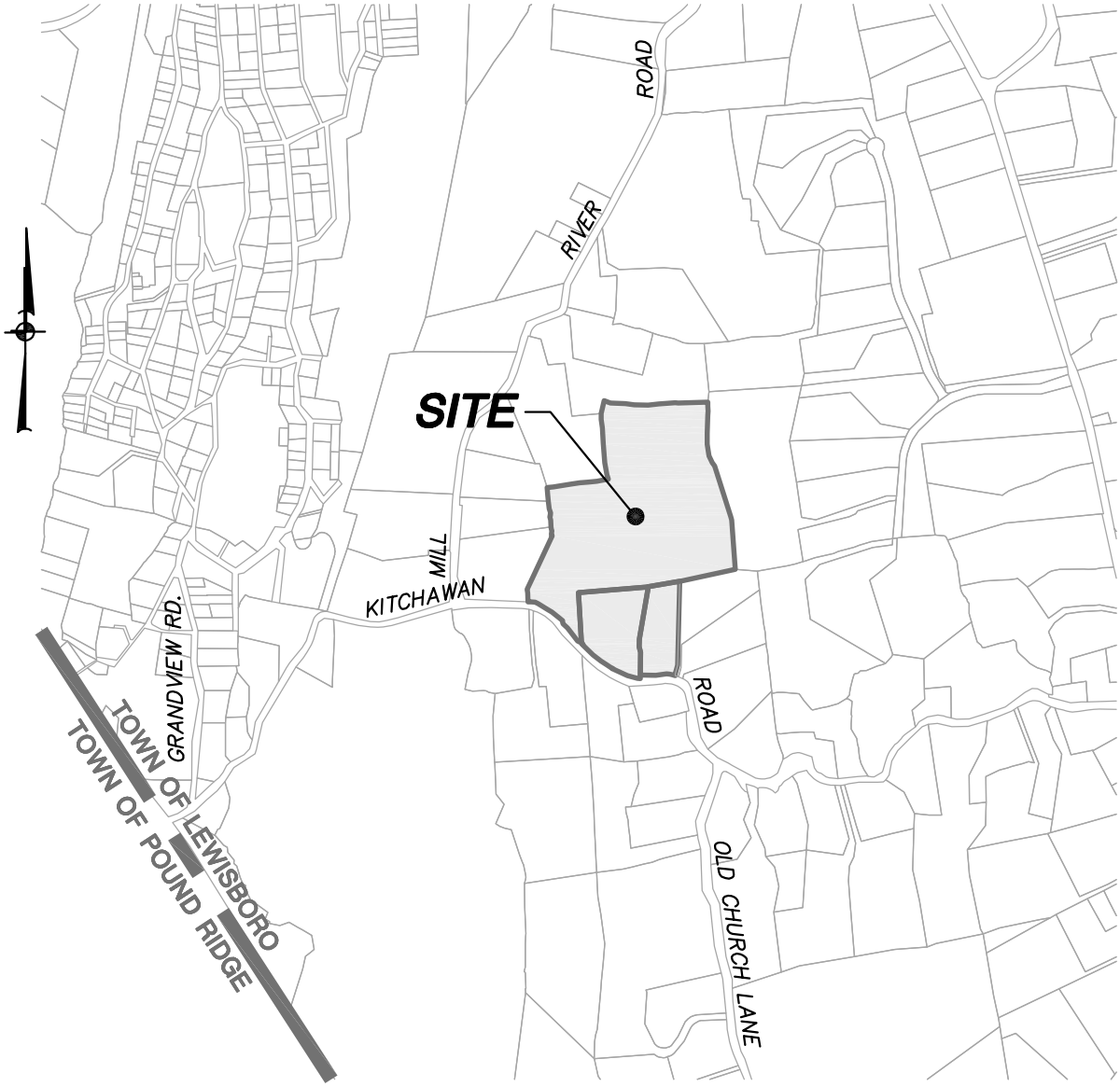
Primary OutFlow Max=2.7 cfs @ 12.06 hrs HW=566.32' (Free Discharge)
└**1=Culvert** (Inlet Controls 2.7 cfs @ 3.46 fps)

Secondary OutFlow Max=0.5 cfs @ 12.07 hrs HW=566.32' (Free Discharge)
└**2=Culvert** (Inlet Controls 0.5 cfs @ 1.92 fps)

Pond FS 2.1:



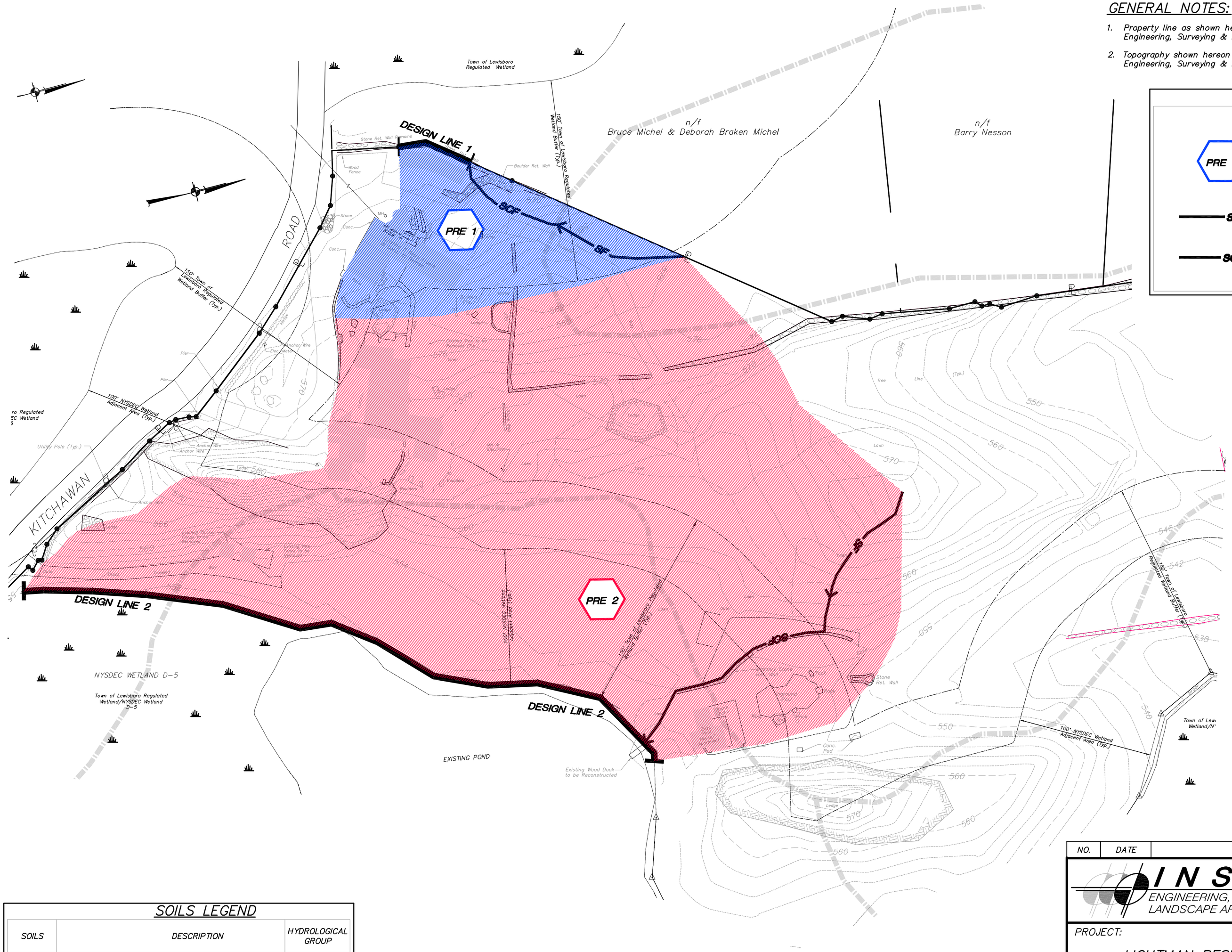
FIGURES



PROJECT: LICHTMAN RESIDENCE 192–218 KITCHAWAN RD., TOWN OF LEWISBORO, WESTCHESTER CO., NY	PREPARED BY: INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C. 3 Garrett Place • Carmel, New York 10512 Phone (845) 225–9690 • Fax (845) 225–9717 www.insite–eng.com	DATE: 2–25–16
DRAWING: LOCATION MAP		SCALE: 1"=1000'
		PROJECT NO.: 15260.100
		FIGURE: 1

GENERAL NOTES:

1. Property line as shown hereon based on survey of property prepared by Insite Engineering, Surveying & Landscape Architecture, P.C, dated October 9, 2015.
2. Topography shown hereon is based on topographic map prepared by Insite Engineering, Surveying & Landscape Architecture, P.C, dated October 9, 2015.



LEGEND

PRE 1	SUBCATCHMENT
SF	TIME OF CONCENTRATION SHEET FLOW
SCF	TIME OF CONCENTRATION SHALLOW CONCENTRATED FLOW

SOILS LEGEND

SOILS	DESCRIPTION	HYDROLOGICAL GROUP
CrC	Charlton–Chatfield Complex, rolling, very rocky	B
CuD	Chatfield–Hollis–Rock Outcrop Complex, hilly	B
Pa	Palms Muck	B
W	Water	
	NRCS Soil Boundary Line	

0 25 50 100

SCALE IN FEET

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

NO.	DATE	REVISION	BY

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

PROJECT:

LICHTMAN RESIDENCE

192–218 KITCHAWAN ROAD, TOWN OF LEWISBORO, NEW YORK

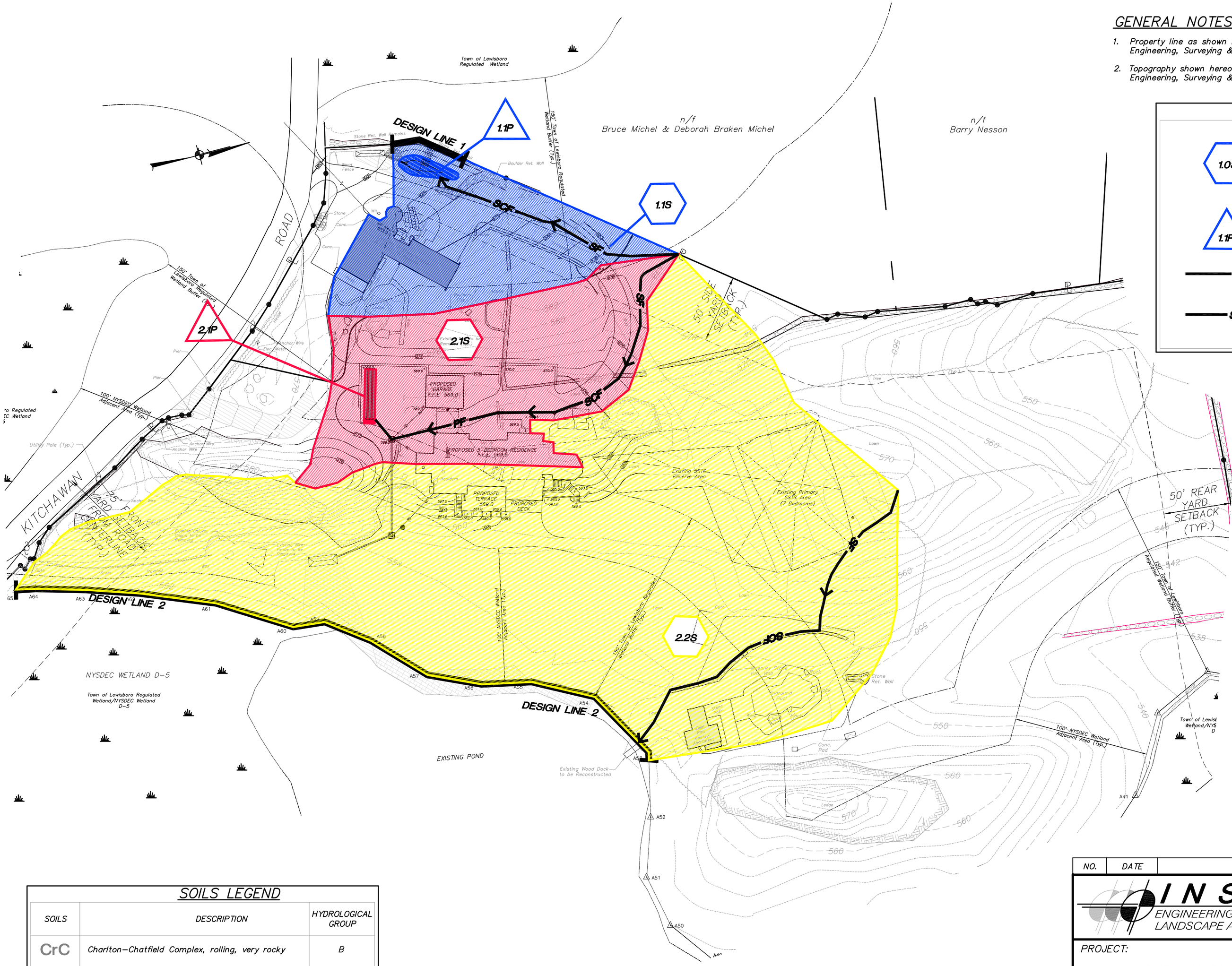
DRAWING:

PRE–DEVELOPMENT DRAINAGE MAP

PROJECT NUMBER	15260.100	PROJECT MANAGER	S.W.B.	FIGURE NO.	SHEET
DATE	3–31–16	DRAWN BY	J.W.T.	2	2 / 3
SCALE	1" = 50'	CHECKED BY	Z.M.P.		

GENERAL NOTES:

1. Property line as shown hereon based on survey of property prepared by Insite Engineering, Surveying & Landscape Architecture, P.C, dated October 9, 2015.
2. Topography shown hereon is based on topographic map prepared by Insite Engineering, Surveying & Landscape Architecture, P.C, dated October 9, 2015.



LEGEND

1.0S	SUBCATCHMENT
1.1P	STORMWATER MANAGEMENT PRACTICE
SF	TIME OF CONCENTRATION SHEET FLOW
SCF	TIME OF CONCENTRATION SHALLOW CONCENTRATED FLOW

SOILS LEGEND

SOILS	DESCRIPTION	HYDROLOGICAL GROUP
CrC	Charlton–Chatfield Complex, rolling, very rocky	B
CuD	Chatfield–Hollis–Rock Outcrop Complex, hilly	B
Pa	Palms Muck	B
W	Water	
	NRCS Soil Boundary Line	

0 125 50 100

SCALE IN FEET

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

NO.	DATE	REVISION	BY

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

PROJECT:

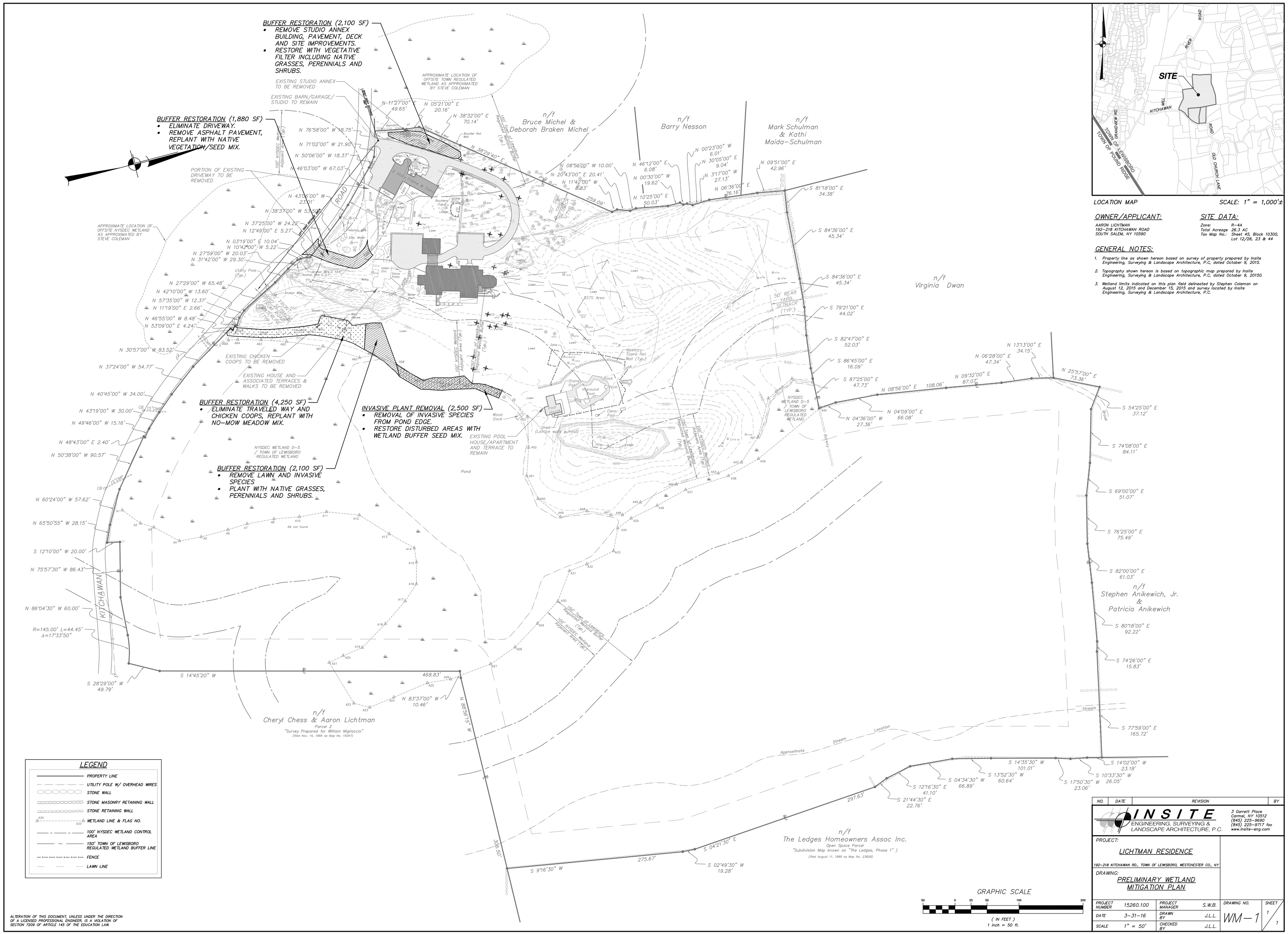
LICHTMAN RESIDENCE

192–218 KITCHAWAN ROAD, TOWN OF LEWISBORO, NEW YORK

DRAWING:

POST–DEVELOPMENT DRAINAGE MAP

PROJECT NUMBER	15260.100	PROJECT MANAGER	S.W.B.	FIGURE NO.	SHEET
DATE	3–31–16	DRAWN BY	J.W.T.	3	3/3
SCALE	1" = 50'	CHECKED BY	Z.M.P.		



LOCATION MAP SCALE: 1" = 1,000'±

OWNER/APPLICANT:

AARON LICHTMAN
192-218 KITCHAWAN ROAD
SOUTH SALEM, NY 10590

SITE DATA:

Zone: R-4A
Total Acreage 26.3 AC
Tax Map No.: Sheet 45, Block 10.300, Lot 12/26, 23 & 44

GENERAL NOTES:

1. Property line as shown hereon based on survey of property prepared by Insite Engineering, Surveying & Landscape Architecture, P.C. dated October 9, 2015.
2. Topography shown hereon is based on topographic map prepared by Insite Engineering, Surveying & Landscape Architecture, P.C. dated October 9, 20150.
3. Wetland limits indicated on this plan field delineated by Stephen Coleman on August 12, 2015 and December 15, 2015 and survey located by Insite Engineering, Surveying & Landscape Architecture, P.C.

NO.	DATE	REVISION	BY

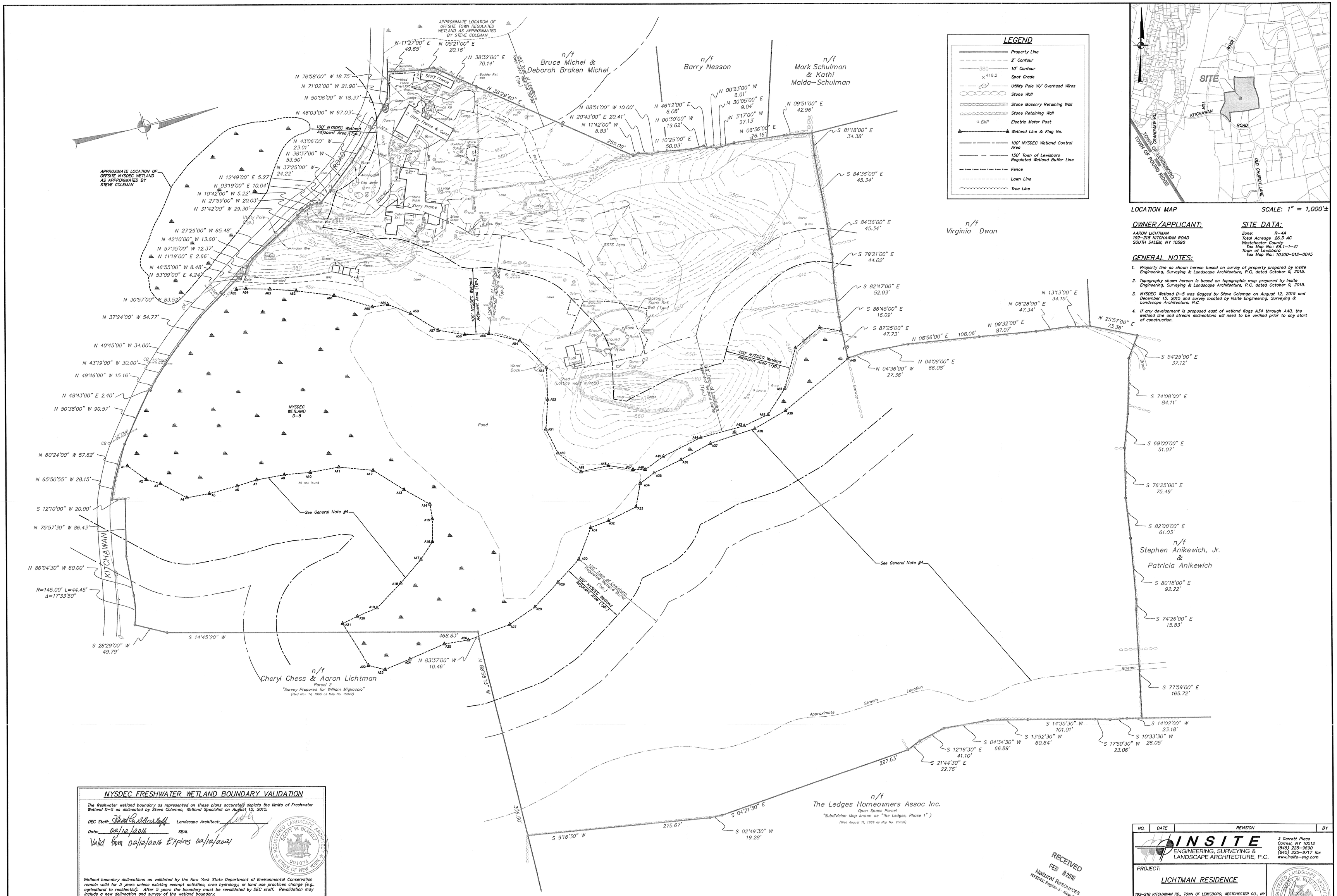
INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
LICHTMAN RESIDENCE
192-218 KITCHAWAN RD., TOWN OF LEWISBORO, WESTCHESTER CO., NY

DRAWING:
PRELIMINARY WETLAND MITIGATION PLAN

PROJECT NUMBER	15260.100	PROJECT MANAGER	S.W.B.	DRAWING NO.	SHEET
DATE	3-31-16	DRAWN BY	J.L.L.	WM-1	1/1
SCALE	1" = 50'	CHECKED BY	J.L.L.		

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



LEGEND

- Property Line
- 2' Contour
- 380 10' Contour
- ×418.2 Spot Grade
- Utility Pole W/ Overhead Wires
- Stone Wall
- Stone Masonry Retaining Wall
- Stone Retaining Wall
- EMP Electric Meter Post
- Wetland Line & Flag No.
- 100' NYSDEC Wetland Control Area
- 150' Town of Lewisboro Regulated Wetland Buffer Line
- Fence
- Lawn Line
- Tree Line

LOCATION MAP SCALE: 1" = 1,000'±

OWNER/APPLICANT:

AARON LICHTMAN
192-218 KITCHAWAN ROAD
SOUTH SALEM, NY 10590

SITE DATA:

Zone: R-4A
Total Acreage 26.3 AC
Westchester County
Tax Map No.: 68.1-1-41
Town of Lewisboro
Tax Map No.: 10300-012-0045

GENERAL NOTES:

1. Property line as shown hereon based on survey of property prepared by Insite Engineering, Surveying & Landscape Architecture, P.C, dated October 9, 2015.
2. Topography shown hereon is based on topographic map prepared by Insite Engineering, Surveying & Landscape Architecture, P.C, dated October 9, 2015.
3. NYSDEC Wetland D-5 was flagged by Steve Coleman on August 12, 2015 and December 15, 2015 and survey located by Insite Engineering, Surveying & Landscape Architecture, P.C.
4. If any development is proposed east of wetland flags A34 through A40, the wetland line and stream delineations will need to be verified prior to any start of construction.

NYSDEC FRESHWATER WETLAND BOUNDARY VALIDATION

The freshwater wetland boundary as represented on these plans accurately depicts the limits of Freshwater Wetland D-5 as delineated by Steve Coleman, Wetland Specialist on August 12, 2015.

DEC Staff: _____ Landscape Architect: _____

Date: 02/12/2016 SEAL

Valid from 02/12/2016 Expires 02/12/2021

REGISTERED LANDSCAPE ARCHITECT SCOTT W. BLAKELY 001074 STATE OF NEW YORK

Wetland boundary delineations as validated by the New York State Department of Environmental Conservation remain valid for 5 years unless existing exempt activities, area hydrology, or land use practices change (e.g., agricultural to residential). After 5 years the boundary must be revalidated by DEC staff. Revalidation may include a new delineation and survey of the wetland boundary.

Any proposed construction, grading, filling, excavating, clearing or other regulated activity in the freshwater wetland or adjacent 100 feet as depicted on this plan requires a permit from the New York State Department of Environmental Conservation under Article 24 of the Environmental Conservation Law (Freshwater Wetlands Act) prior to commencement of work.

RECEIVED FEB 8 2016 Natural Resources NYSDEC Region 3 - Nine Pelle

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NO.	DATE	REVISION	BY

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3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
LICHTMAN RESIDENCE
192-218 KITCHAWAN RD., TOWN OF LEWISBORO, WESTCHESTER CO., NY

DRAWING:
NYSDEC WETLAND VALIDATION MAP

REGISTERED LANDSCAPE ARCHITECT SCOTT W. BLAKELY 001074 STATE OF NEW YORK

PROJECT NUMBER	15260.100	PROJECT MANAGER	S.W.B.	DRAWING NO.	SHEET
DATE	2-5-16	DRAWN BY	M.E.U.	WV-1	1/1
SCALE	1" = 50'	CHECKED BY	J.L.L.		

GENERAL NOTES:

1. EXISTING PROPERTY LINES AND TOPOGRAPHY TAKEN FROM WESTCHESTER COUNTY G.I.S. INFORMATION SHOWN AS APPROXIMATE.

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

NO.	DATE	REVISION	BY

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www.insite-eng.com

PROJECT:

LICHTMAN RESIDENCE

192-218 KITCHAWAN RD., TOWN OF LEWISBORO, WESTCHESTER CO., NY

DRAWING:

AREA MAP

PROJECT NUMBER	15260.100	PROJECT MANAGER	S.W.B.	DRAWING NO.	SHEET
DATE	3-31-16	DRAWN BY	M.E.U	AM-1	1 / 1
SCALE	1" = 100'	CHECKED BY	J.L.L.		

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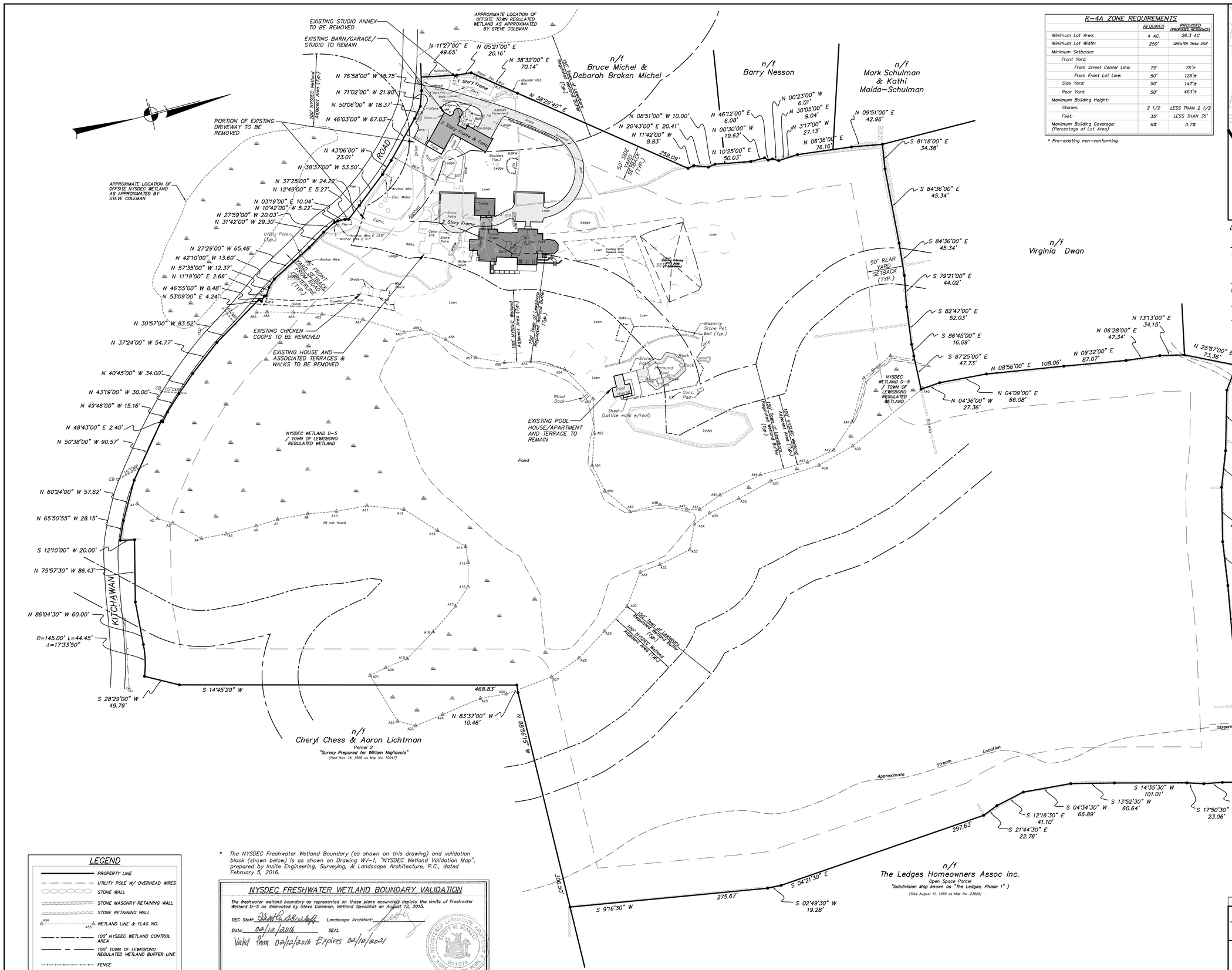
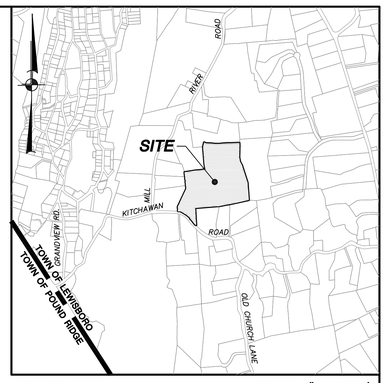


R-4A ZONE REQUIREMENTS

	REQUIRED	PROVIDED (PROPOSED RESIDENCE)
Minimum Lot Area:	4 AC.	26.3 AC
Minimum Lot Width:	250'	GREATER THAN 250'
Minimum Setbacks:		
Front Yard:		
From Street Center Line:	75'	75'±
From Front Lot Line:	50'	126'±
Side Yard:	50'	147'±
Rear Yard:	50'	463'±
Maximum Building Height:		
Stories:	2 1/2	LESS THAN 2 1/2
Feet:	35'	LESS THAN 35'
Maximum Building Coverage: (Percentage of Lot Area)	6%	0.7%

* Pre-existing non-conforming.



LOCATION MAP SCALE: 1" = 1,000'±

OWNER/APPLICANT:

AARON LICHTMAN & KIMBERLY HOWARD
192-218 KITCHAWAN ROAD
SOUTH SALEM, NY 10590

SITE DATA:

Zone: R-4A
Total Acreage 26.3 AC
Tax Map No.: 66.1-1-41

GENERAL NOTES:

1. Property line as shown hereon based on survey of properly prepared by Insite Engineering, Surveying & Landscape Architecture, P.C, dated October 9, 2015.
2. Topography shown hereon is based on topographic map prepared by Insite Engineering, Surveying & Landscape Architecture, P.C, dated October 9, 20150.
3. Wetland limits indicated on this plan field delineated by Stephen Coleman on August 12, 2015 and December 15, 2015 and survey located by Insite Engineering, Surveying & Landscape Architecture, P.C.

LEGEND

- PROPERTY LINE
- UTILITY POLE W/ OVERHEAD WIRES
- STONE WALL
- STONE MASONRY RETAINING WALL
- STONE RETAINING WALL
- A34 — A32 WETLAND LINE & FLAG NO.
- 100' NYSDEC WETLAND CONTROL AREA
- 150' TOWN OF LEWSBORO REGULATED WETLAND BUFFER LINE
- FENCE
- LAWN LINE

* The NYSDEC Freshwater Wetland Boundary (as shown on this drawing) and validation block (shown below) is as shown on Drawing WV-1, "NYSDEC Wetland Validation Map", prepared by Insite Engineering, Surveying, & Landscape Architecture, P.C., dated February 5, 2016.

NYSDEC FRESHWATER WETLAND BOUNDARY VALIDATION

The freshwater wetland boundary as represented on these plans accurately depicts the limits of Freshwater Wetland D-5 as delineated by Steve Coleman, Wetland Specialist on August 12, 2015.

DEC Staff: Heather Walderkopf Landscape Architect: Scott W. Blakely

Date: 02/12/2016 SEAL

Valid from 02/12/2016 Expires 02/12/2021

REGISTERED LANDSCAPE ARCHITECT SCOTT W. BLAKELY 001075 STATE OF NEW YORK

Wetland boundary delineations as validated by the New York State Department of Environmental Conservation remain valid for 5 years unless existing exempt activities, area hydrology, or land use practices change (e.g., agricultural to residential). After 5 years the boundary must be revalidated by DEC staff. Revalidation may include a new delineation and survey of the wetland boundary.

Any proposed construction, grading, filling, excavating, clearing or other regulated activity in the freshwater wetland or adjacent 100 feet as depicted on this plan requires a permit from the New York State Department of Environmental Conservation under Article 24 of the Environmental Conservation Law (Freshwater Wetlands Act) prior to commencement of work.

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(845) 225-9717 fax
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PROJECT:

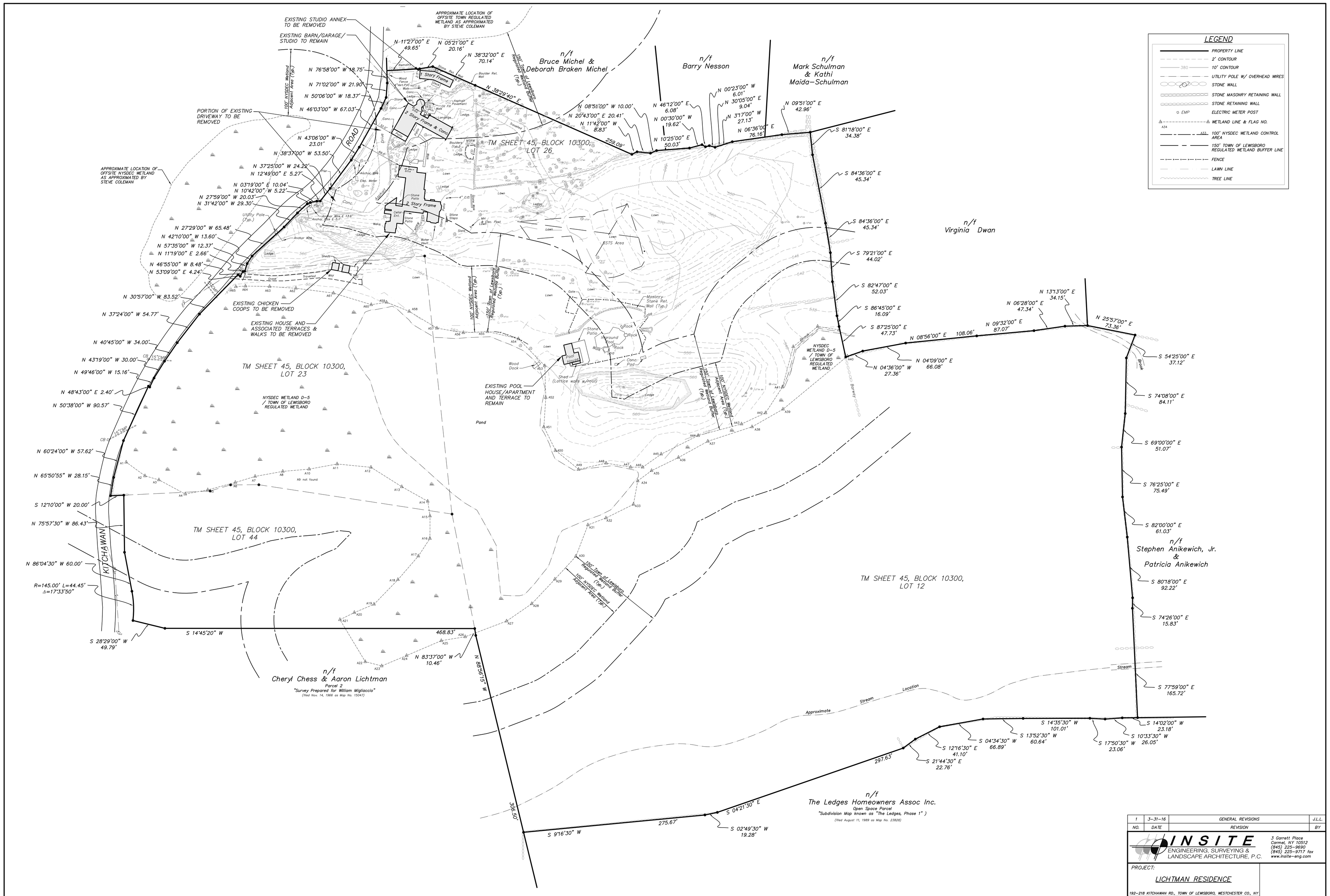
LICHTMAN RESIDENCE

192-218 KITCHAWAN RD., TOWN OF LEWSBORO, WESTCHESTER CO., NY

DRAWING:

OVERALL PLAN

PROJECT NUMBER	15260.100	PROJECT MANAGER	S.W.B.	DRAWING NO.	SHEET
DATE	3-31-16	DRAWN BY	M.E.U.	OP-1	1 / 6
SCALE	1" = 50'	CHECKED BY	J.L.L.		



NO.	DATE	REVISION	BY
1	3-31-16	GENERAL REVISIONS	J.L.L.

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PROJECT:
LICHTMAN RESIDENCE
192-218 KITCHAWAN RD., TOWN OF LEWSBORO, WESTCHESTER CO., NY

DRAWING:
EXISTING CONDITIONS, TOPOGRAPHIC SURVEY & DEMOLITION PLAN

PROJECT NUMBER	15260.100	PROJECT MANAGER	S.W.B.	DRAWING NO.	SHEET
DATE	2-4-16	DRAWN BY	C.T.Q.	EX-1	2 / 6
SCALE	1" = 50'	CHECKED BY	J.L.L.		

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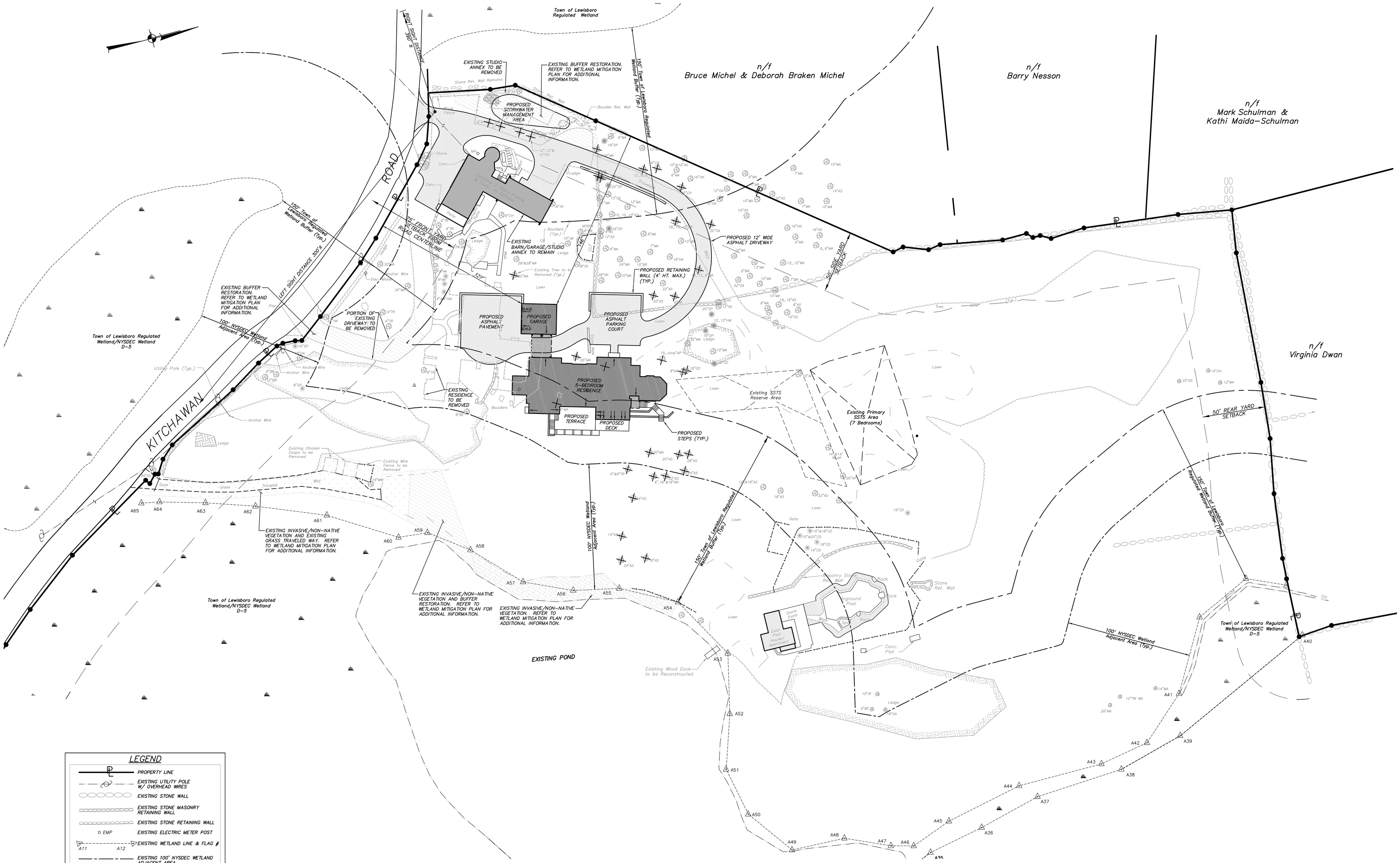

LEGEND

- PROPERTY LINE
- EXISTING UTILITY POLE W/ OVERHEAD WIRES
- EXISTING STONE WALL
- EXISTING STONE MASONRY RETAINING WALL
- EXISTING STONE RETAINING WALL
- EMP — EXISTING ELECTRIC METER POST
- A11 A12 — EXISTING WETLAND LINE & FLAG #
- EXISTING 100' NYSDEC WETLAND ADJACENT AREA
- EXISTING 150' TOWN OF LEWSBORO REGULATED WETLAND BUFFER LINE
- EXISTING FENCE
- EXISTING LAWN LINE
- EXISTING TREE LINE

LAYOUT & LANDSCAPE PLAN

SCALE: 1" = 30'

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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PROJECT:
LICHTMAN RESIDENCE
192-218 KITCHAWAN RD., TOWN OF LEWSBORO, WESTCHESTER CO., NY

DRAWING:
LAYOUT & LANDSCAPE PLAN

PROJECT NUMBER	15260.100	PROJECT MANAGER	S.W.B.	DRAWING NO.	SHEET
DATE	3-31-16	DRAWN BY	M.E.U.	SP-1	3 / 6
SCALE	1" = 30'	CHECKED BY	J.L.L.		

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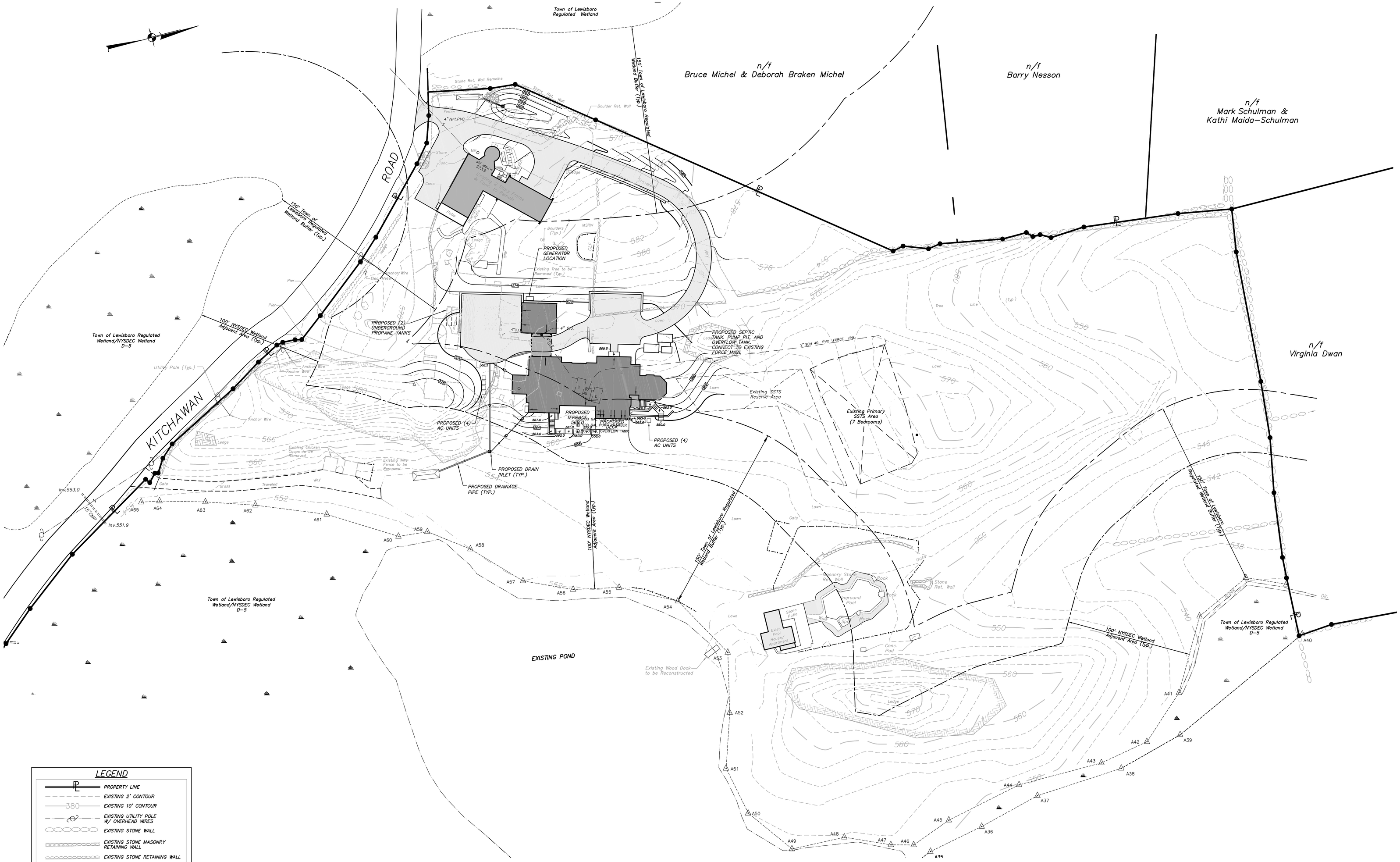

GRADING & DRAINAGE PLAN

SCALE: 1" = 30'

LEGEND

- PROPERTY LINE
- EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- EXISTING UTILITY POLE W/ OVERHEAD WIRES
- EXISTING STONE WALL
- EXISTING STONE MASONRY RETAINING WALL
- EXISTING STONE RETAINING WALL
- EMP EXISTING ELECTRIC METER POST
- A11 A12 EXISTING WETLAND LINE & FLAG #
- EXISTING 100' NYSDEC WETLAND ADJACENT AREA
- EXISTING 150' TOWN OF LEWSBORO REGULATED WETLAND BUFFER LINE
- EXISTING FENCE

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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(845) 225-9717 fax
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PROJECT:
LICHTMAN RESIDENCE
192-218 KITCHAWAN RD., TOWN OF LEWSBORO, WESTCHESTER CO., NY

DRAWING:
GRADING & DRAINAGE PLAN

PROJECT NUMBER	15260.100	PROJECT MANAGER	S.W.B.	DRAWING NO.	SHEET
DATE	2-25-16	DRAWN BY	M.E.U.	SP-2	4 / 6
SCALE	1" = 30'	CHECKED BY	J.L.L.		

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EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 30'

LEGEND

PL	PROPERTY LINE
	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
	EXISTING UTILITY POLE W/ OVERHEAD WIRES
	EXISTING STONE WALL
	EXISTING STONE MASONRY RETAINING WALL
	EXISTING STONE RETAINING WALL
EMP	EXISTING ELECTRIC METER POST
A11 A12	EXISTING WETLAND LINE & FLAG #
	EXISTING 100' NYSDEC WETLAND ADJACENT AREA
	EXISTING 150' TOWN OF LEWSBORO REGULATED WETLAND BUFFER LINE
	EXISTING FENCE
TSS	PROPOSED TEMPORARY SOIL STOCKPILE
SF	PROPOSED SILT FENCE
	PROPOSED LIMITS OF DISTURBANCE

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

NO.	DATE	REVISION	BY

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PROJECT:
LICHTMAN RESIDENCE
192-218 KITCHAWAN RD., TOWN OF LEWSBORO, WESTCHESTER CO., NY

DRAWING:
EROSION & SEDIMENT CONTROL PLAN

PROJECT NUMBER	15260.100	PROJECT MANAGER	S.W.B.	DRAWING NO.	SHEET
DATE	3-31-16	DRAWN BY	M.E.U.	SP-3	5 / 6
SCALE	1" = 30'	CHECKED BY	J.L.L.		

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REQUIRED EROSION CONTROL SWPPP CONTENTS:

Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP-0-15-002), all Stormwater Pollution Prevention Plan's (SWPPP) shall include erosion and sediment control practices designed in conformance with the most current version of the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." Where erosion and sediment control practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of required SWPPP components is provided in accordance with Part III.B.1a–l of General Permit GP-0-15-002:

a. *Background Information: The subject project consists of the demolition of existing 5-bedroom residence, existing pool house, existing cottage, 2 existing sheds and portions of existing driveway, the construction of new 5-bedroom residence, garage, pool house and asphalt driveway, and the installation of proposed stormwater management areas and wetland mitigation areas.*

b. *Site map / construction drawing: These plans serve to satisfy this SWPPP requirement.*

c. *Description of the soils present at the site: Onsite soils located within the proposed limits of disturbance consist of Charlton loam (ChC and ChE), Chatfield-Charlton Complex (CsD), Charlton-Chatfield Complex (CrC), and Leicester loam (LcB), as identified on the Soil Conservation Service Web Soil Survey. These soil types belong to the Hydrologic Soil Group "B" and "D."*

d. *Construction phasing plan / sequence of operations: The Construction Sequence and phasing found on these plans provide the required phasing. A Construction Sequence and Erosion and Sediment Control Maintenance Schedule has been provided. The Erosion and Sediment Control Notes contained hereon outline a general sequence of operations for the proposed project. In general all erosion and sediment control facilities shall be installed prior to commencement with land disturbing activities, and areas of disturbance shall be limited to the shortest period of time as practicable.*

e. *Description of erosion and sediment control practices: This plan, and details / notes shown hereon serve to satisfy this SWPPP requirement.*

f. *Temporary and permanent soil stabilization plan: The Sedimentation and Erosion Control Notes and Details provided heron identify temporary and permanent stabilization measures to be employed with respect to specific elements of the project, and at the various stages of development.*

g. *Site map / construction drawing: This plan serves to satisfy this SWPPP requirement.*

h. *The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices: The details, Erosion and Sediment Control Notes, and Erosion and Sediment Control Maintenance Schedule serve to satisfy this SWPPP requirement.*

i. *An inspection schedule: Inspections are to be performed twice weekly and by a qualified professional as required by the General Permit GP-0-15-002. In addition the NYSDEC Trained Contractor shall perform additional inspections as cited in the Sedimentation and Erosion Control Notes.*

j. *A description of pollution prevention measures that will be used to control litter, construction chemicals and construction debris: In general, all construction litter / debris shall be collected and removed from the site. The general contractor shall supply either waste barrels or dumpster for proper waste disposal. Any construction chemicals utilized during construction shall either be removed from site daily by the contractor or stored in a structurally sound and weatherproof building. No hazardous waste shall be disposed of onsite, and shall ultimately be disposed of in accordance with all federal, state and local regulations. Material Safety Data Sheets (MSDS), material inventory, and emergency contact numbers shall be maintained by the general contractor for all construction chemicals utilized onsite. Finally, temporary sanitary facilities (portable toilets) shall be provided onsite during the entire length of construction, and inspected weekly for evidence of leaking holding tanks.*

k. *A description and location of any stormwater discharges associated with industrial activity other than construction at the site: There are no known industrial stormwater discharges present or proposed at the site.*

l. *Identification of any elements of the design that are not in conformance with the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." All proposed elements of this SWPPP have been designed in accordance with the "New York Standards and Specifications for Erosion and Sediment Control."*

REQUIRED POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICE COMPONENTS:

1. *Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP-0-15-002), all construction projects needing post-construction stormwater management practices shall prepare a SWPPP that also includes practices designed in conformance with the most current version of the technical standard, New York State Stormwater Management Design Manual ("Design Manual"). Where post-construction stormwater management practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of SWPPP components is provided in accordance with Part III.B.2a–g and III.B.3:*

   a. *Identification of all post-construction stormwater management practices to be constructed as part of the project; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.*

   b. *A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.*

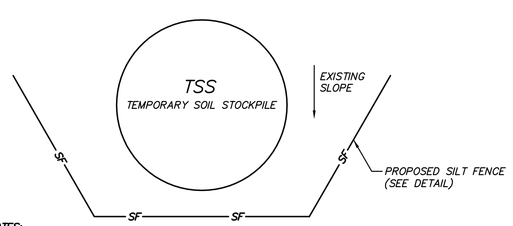
   c. *A Stormwater Modeling and Analysis Report including pre-development conditions, post-development conditions, the results of the stormwater modeling, a summary table demonstrating that each practice has been designed in conformance with the sizing criteria, identification of and justification for any deviations from the Design Manual, and identification of any design criteria that are not required. The required analysis is provided in the report titled Amended Stormwater Pollution Prevention Plan for Kent Materials.*

   d. *Soil testing results and locations. This SWPPP requirement is provided in the report titled Amended Stormwater Pollution Prevention Plan for Kent Materials.*

   e. *Infiltration testing results. This SWPPP requirement is provided in the report titled Amended Stormwater Pollution Prevention Plan for Kent Materials.*

   f. *An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice. The Permanent Stormwater Facilities Maintenance Schedule provided on these plans serves to satisfy this requirement.*

2. *Enhanced Phosphorus Removal Standards – Beginning on September 30, 2008, all construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the most current version of the technical standard, New York Stormwater Management Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a – 2.f above. The permanent stormwater practices for this project have been sized according to chapter 10 of the Design Manual Enhanced Phosphorus Removal Standards. Please see 2.a – 2.f above.*



NOTES:

1. AREA CHOSEN FOR STOCKPILE LOCATION SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE IMMEDIATELY SEEDED WITH K31 PERENNIAL TALL FESCUE.
4. ALL STOCKPILES SHALL BE PROTECTED WITH SILT FENCING INSTALLED ON THE DOWNGRADIENT SIDE.

TEMPORARY SOIL STOCKPILE DETAIL

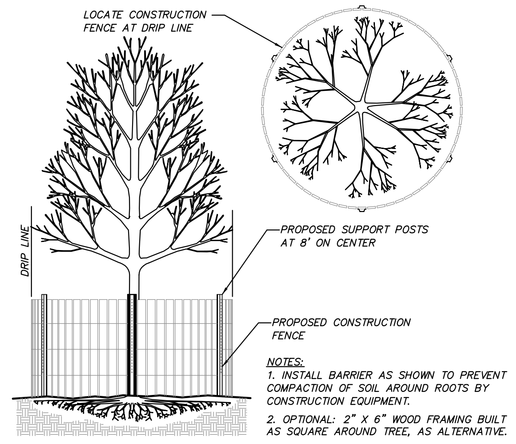
(N.T.S.)

EROSION AND SEDIMENT CONTROL MAINTENANCE SCHEDULE

MONITORING REQUIREMENTS				MAINTENANCE REQUIREMENTS	
PRACTICE	DAILY	WEEKLY	AFTER RAINFALL	DURING CONSTRUCTION	AFTER CONSTRUCTION
SILT FENCE BARRIER	–	Inspect	Inspect	Clean/Replace	Remove
STABILIZED CONSTRUCTION ENTRANCE	Inspect	–	Inspect	Clean/Replace Stone and Fabric	Remove
DUST CONTROL	Inspect	–	Inspect	Mulching/ Spraying Water	N/A
*VEGETATIVE ESTABLISHMENT	–	Inspect	Inspect	Water/Reseed/ Remulch	Reseed to 80% Coverage
INLET PROTECTION	–	Inspect	Inspect	Clean/Repair/ Replace	Remove
SOIL STOCKPILES	–	Inspect	Inspect	Mulching/ Silt Fence Repair	Remove
CONCRETE DRAINAGE STRUCTURES	–	Inspect	Inspect	Clean Sumps/ Remove Debris/ Repair/Replace	Clean Sumps/ Remove Debris/ Repair/Replace
DRAINAGE PIPES	–	Inspect	Inspect	Clean/Repair	Clean/Repair
ROAD & PAVEMENT	–	Inspect	Inspect	Clean	Clean
*STORMWATER TRAP/BASIN	–	Inspect	Inspect	Clean/Mulch/ Repair/Reseed	See Permanent Stormwater Facilities Maintenance Schedule on Drawing SP-3.1

* Permanent vegetation is considered stabilized when 80% of the plant density is established.
Erosion control measures shall remain in place until all disturbed areas area permanently stabilized.

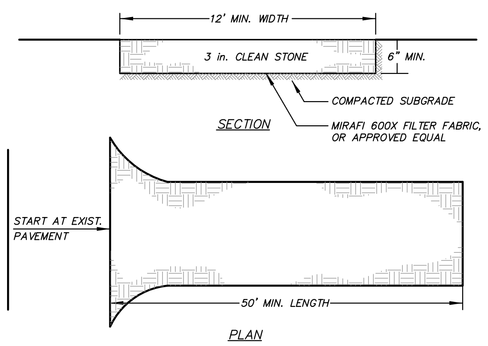
Note: The party responsible for implementation of the maintenance schedule during and after construction is:
Aaron Lichtman
192 Kitchawan Road
Lewisboro, NY 10590
and/or the current owner(s) of the subject property.



NOTES:
1. INSTALL BARRIER AS SHOWN TO PREVENT COMPACTION OF SOIL AROUND ROOTS BY CONSTRUCTION EQUIPMENT.
2. OPTIONAL: 2" X 6" WOOD FRAMING BUILT AS SQUARE AROUND TREE, AS ALTERNATIVE.

TREE PROTECTION DETAIL

(N.T.S.)

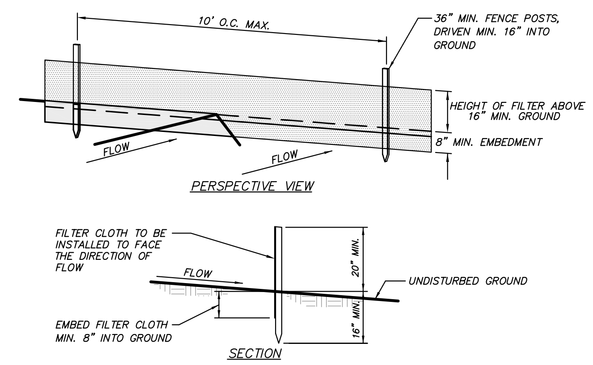


INSTALLATION NOTES

1. STONE SIZE – USE 3" STONE
2. LENGTH – AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.)
3. THICKNESS – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCUR.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

(N.T.S.)



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. FILTER CLOTH TO BE FASTENED SECURELY TO POSTS AT TOP AND MID SECTION.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

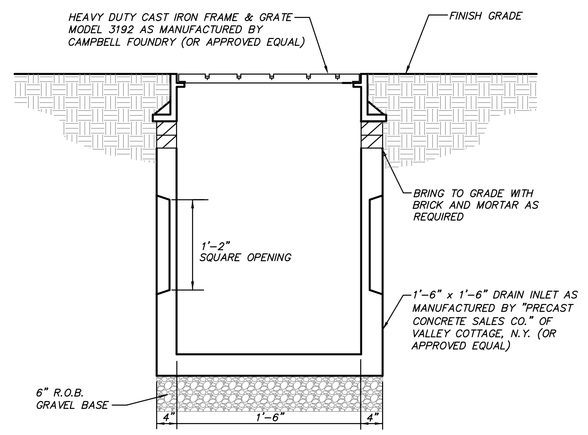
POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

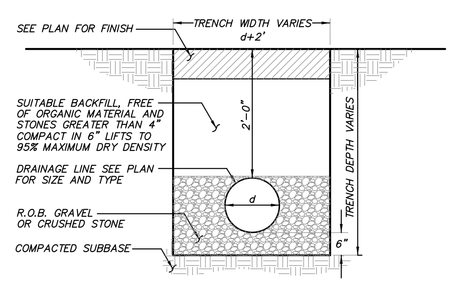
SILT FENCE DETAIL

(N.T.S.)



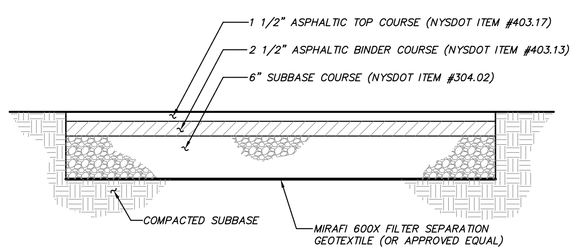
DRAIN INLET DETAIL

(N.T.S.)



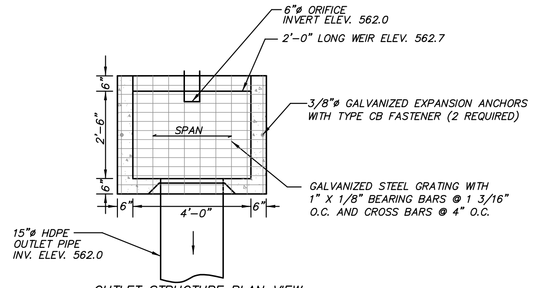
DRAINAGE LINE TRENCH DETAIL

(N.T.S.)



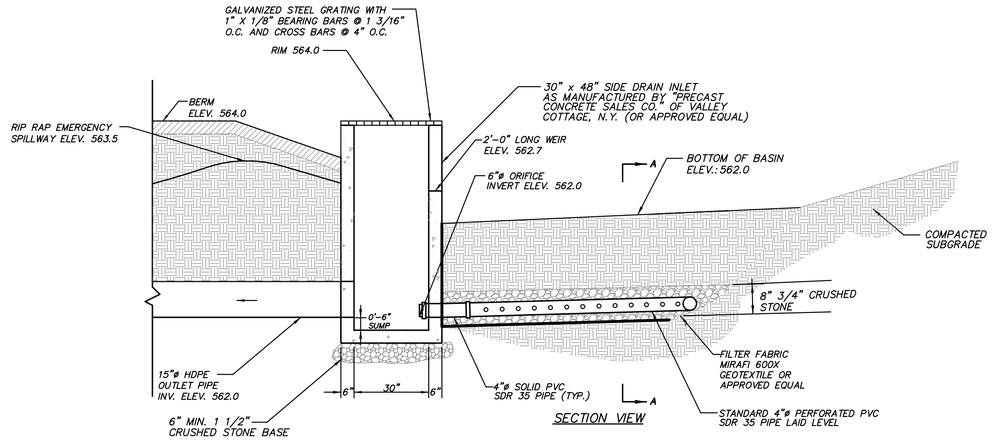
ASPHALT PAVEMENT DETAIL

(N.T.S.)



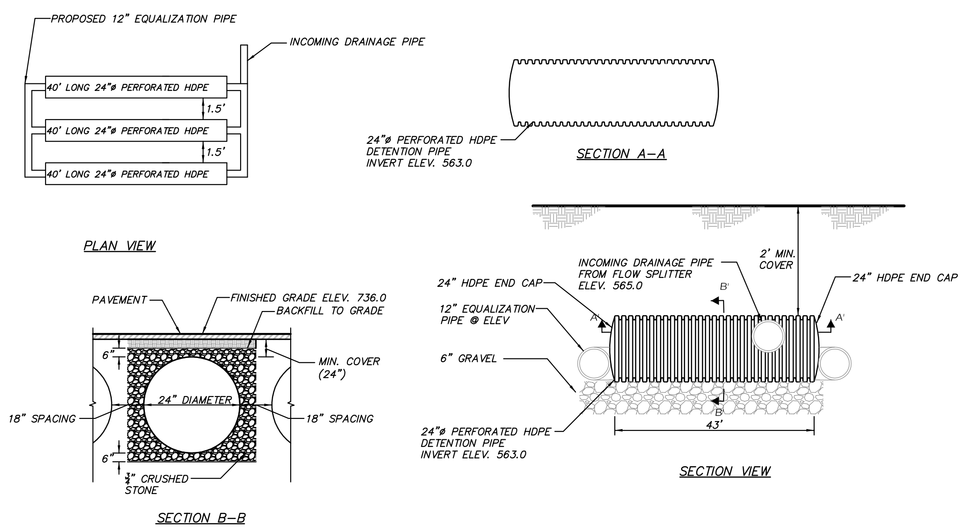
OUTLET STRUCTURE PLAN VIEW

(N.T.S.)



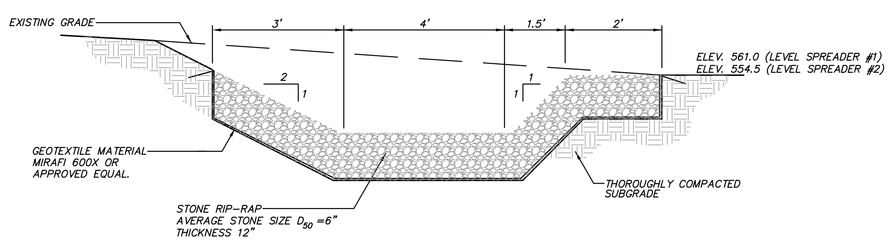
BASIN 1.1P OUTLET STRUCTURE DETAIL

(N.T.S.)



STORMWATER INFILTRATION SYSTEM DETAIL

(N.T.S.)



LEVEL SPREADER DETAIL

(N.T.S.)

NO.	DATE	REVISION	BY

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
LICHTMAN RESIDENCE
192-218 KITCHAWAN RD., TOWN OF LEWISBORO, WESTCHESTER CO., NY

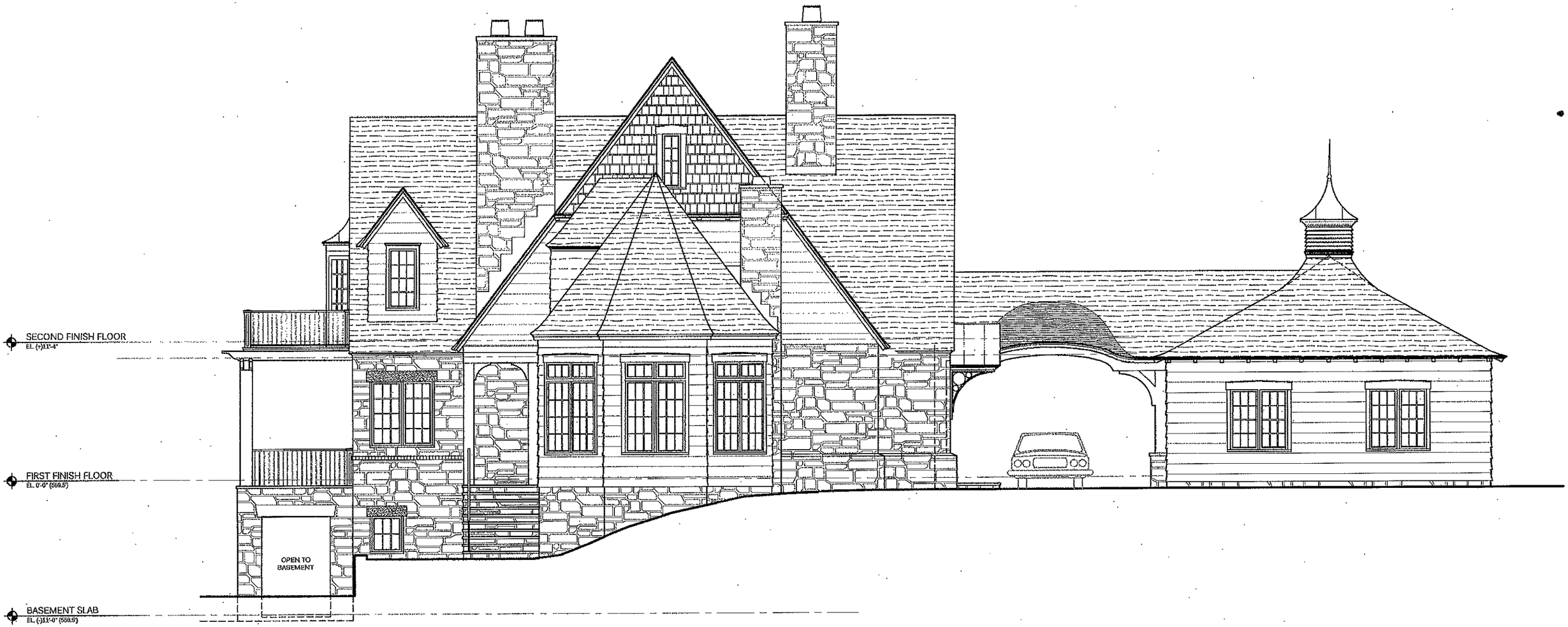
DRAWING:
DETAILS

PROJECT NUMBER	15260.100	PROJECT MANAGER	S.W.B.	DRAWING NO.	SHEET
DATE	3-31-16	DRAWN BY	M.E.U.	D-1	6 / 6
SCALE	AS SHOWN	CHECKED BY	J.L.L.		

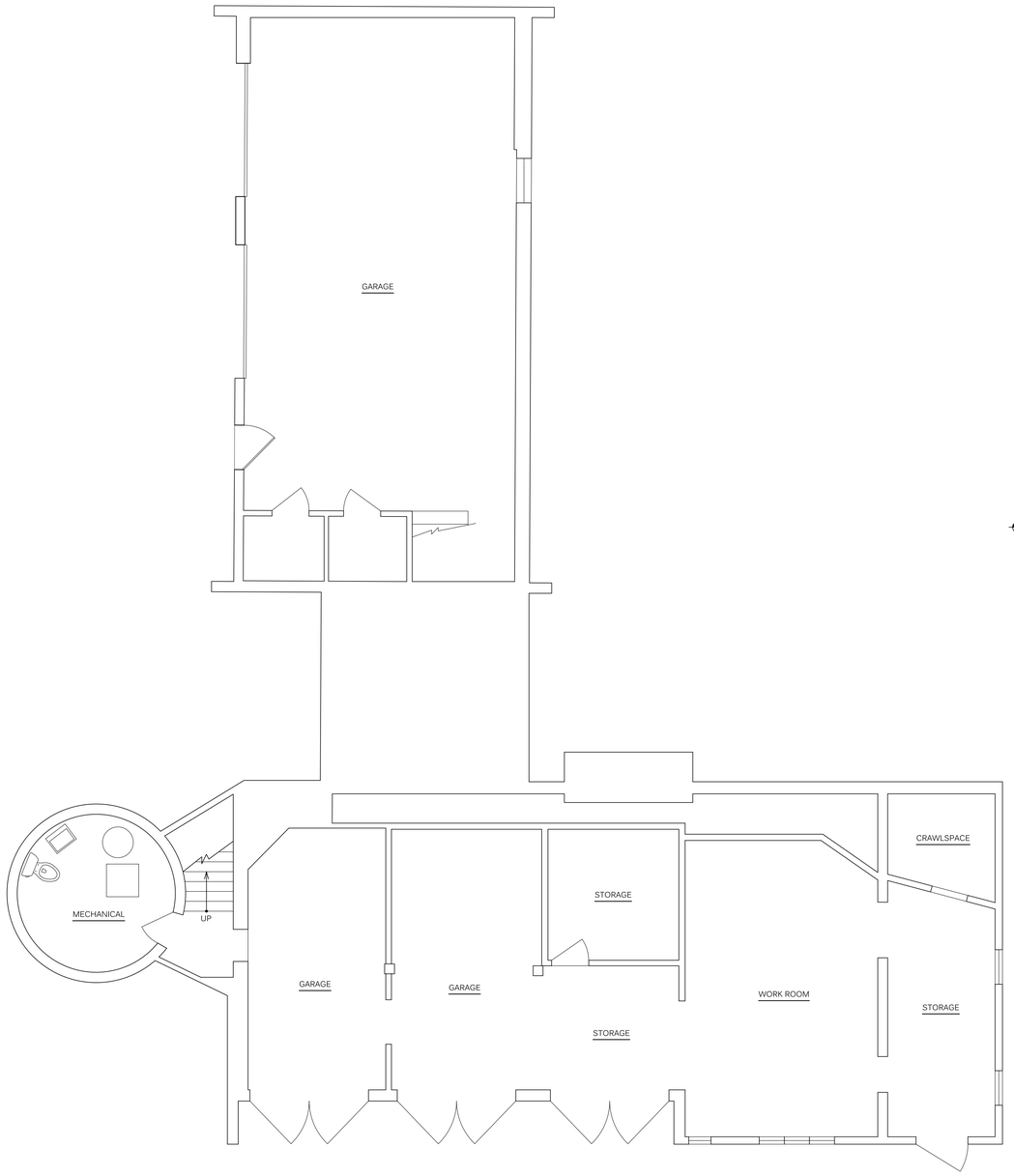
ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

T.O. GARAGE ATTIC FLR.
EL. (+)10'-1"
FIRST FINISH FLOOR
EL. 0'-0" (669.5')
T.O. GARAGE SLAB
EL. (-)1'-0"
SECOND FINISH FLOOR
EL. (+)11'-4"
FIRST FINISH FLOOR
EL. 0'-0" (669.5')

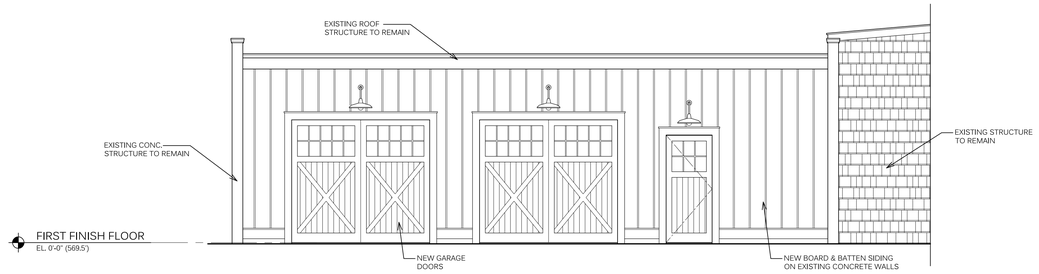
SECOND FINISH FLOOR
EL (+)11'-4"
FIRST FINISH FLOOR
EL 0'-0" (559.5')


SECOND FINISH FLOOR
EL. (+)11'-4"
FIRST FINISH FLOOR
EL. 0'-0" (559.5')
BASEMENT SLAB
EL. (-)11'-0" (559.5')
OPEN TO BASEMENT

SECOND FINISH FLOOR
EL (+)11'-4"
OPEN TO BASEMENT
OPEN TO BASEMENT
OPEN TO BASEMENT



PROPOSED GARAGE PLAN



PROPOSED GARAGE ELEVATION

MACKIN ARCHITECTS.COM EST. 1992
RALPH R. MACKIN, JR. ARCHITECT, PLLC, AIA
112 TITICUS ROAD, NORTH SALEM, NEW YORK 10560 OFFICE (914) 277-3152
MACKINARCHITECTS.COM MAIL@MACKINARCHITECTS.COM

The Lichtman/Howard Residence
192 Kitchawan Road
South Salem, New York

GARAGE PLAN
& ELEVATION

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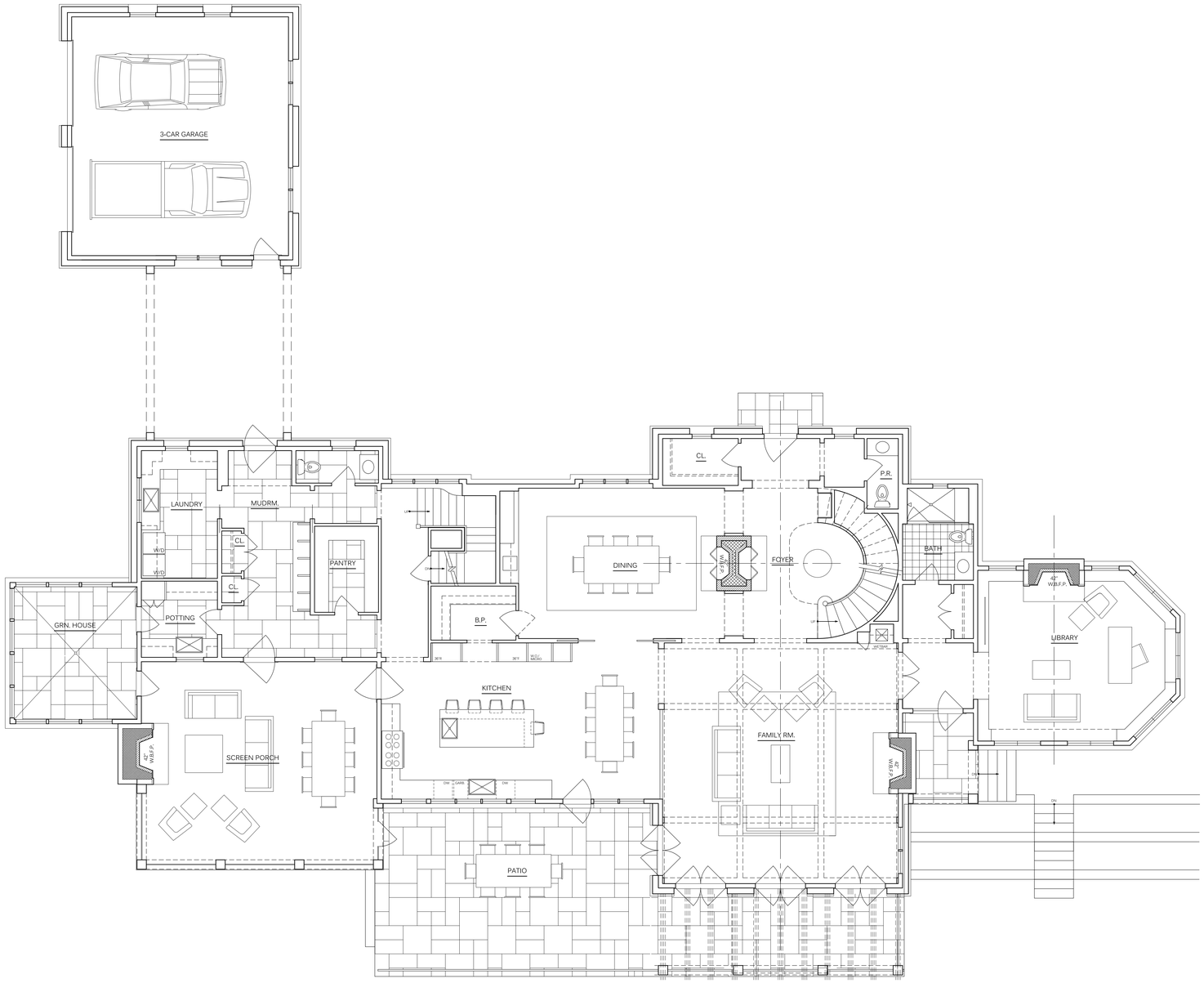
New York State Lic No. 023072
State of Conn. Lic. No. 10504

REV.	DATE	DESCRIPTION	REV.	DATE	

DATE: 11.21.15
SCALE: 1/4" = 1'-0"
PROJECT NO.: 15012
DRAWN:

LICHTMAN/HOWARD RESIDENCE
DWG. NO.
G.1



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The Lichtman/Howard Residence
192 Kitchawan Road
South Salem, New York

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New York State Lic No. 023072
State of Conn. Lic. No. 10504

REV.	DATE	DESCRIPTION	REV.	DATE
	11.21.15	MEETING W/ CLIENT		

DATE:	11.21.15
SCALE:	3/16"=1'-0"
PROJECT NO.:	15012
DRAWN:	CC,TM

LICHTMAN/HOWARD RESIDENCE

DWG. NO.

A.1

KELLARD SESSIONS
CONSULTING, P.C.

John Kellard, P.E.
David Sessions, RLA, AICP

MEMORANDUM

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

CC: Ciorsdan Conran
Judson Siebert, Esq.

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

DATE: April 14, 2016

RE: Wilder Balter Partners, Inc.
New York State Route 22
Sheet 5, Block 10776, Lot 19, 20 & 21

Project Description

The subject property is located on the east side of NYS Route 22, proximate to the I-684 northbound exit ramp, consists of three (3) tax parcels totaling ±35.4 acres of land, and is located within the CC-20 Zoning District. The subject property consists of vacant undeveloped land, is predominately wooded, and portions of the property contain wetlands that are jurisdictional to the Town of Lewisboro and the New York State Department of Environmental Conservation (NYSDEC). The applicant is proposing a 46-unit multifamily development comprised of five (5) buildings, a clubhouse, recreational facilities, an access road off of NYS Route 22, parking for 92 vehicles, and stormwater management facilities. The project will be served by on-site potable wells and a septic system. The development is proposed to comply with Westchester County's fair and affordable housing programs and policies and 45 of the units are proposed to be Affordable Affirmatively Furthering Fair Housing (AFFH) Units.

SEQRA

The proposed action has been preliminarily identified as an Unlisted Action under the State Environmental Quality Review Act (SEQRA) and a coordinated review is underway.

Required Approvals and Referrals

1. Site Plan Approval, a Wetland Activity Permit and a Town Stormwater Permit is required from the Planning Board.

2. A public hearing is required to be held on the Wetland Activity Permit; it is recommended that the public hearing include the proposed Site Plan and Town Stormwater Permit applications.

3. An area variance (parking) is required from the Zoning Board of Appeals.

4. The proposed septic system and potable water well(s) require approval from the Westchester County Department of Health (WCDH).

5. The proposed septic system and Stormwater Pollution Prevention Plan (SWPPP) require approval from the New York City Department of Environmental Protection (NYCDEP).

6. An Article 24 Freshwater Wetland Permit is required from the New York State Department of Environmental Conservation (NYSDEC).

7. Coverage under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-15-002) will be required.

8. Coverage under the NYSDEC General Permit for discharging 1,000 gpd or more of treated sanitary sewage to groundwater is required (GP-0-15-001).

9. Access onto NYS Route 22 requires approval from the New York State Department of Transportation (NYSDOT).

10. The application has been referred to the Westchester County Planning Board in accordance with Section 239-m of the General Municipal Law.

Part 1 EAF Review - Complete

Part 2 EAF Review

The applicant has submitted Part 2 of the EAF for the Planning Board's review. As Part 2 of the EAF is the responsibility of the Lead Agency, it is recommended that the Planning Board review each EAF response and amend the document, as necessary. Part 2 of the EAF is designed to focus

the Lead Agency on the relevant environmental areas of concern, identify potential impacts and to determine the significance and magnitude of the impact.

Following completion of the Part 2 EAF and after comparing the information provided to the criteria for determining significance, as outlined under Part 617.7 of the SEQR statute, the Planning Board can begin the process of determining significance.

Part 3 EAF Review

The majority of our prior EAF comments have been addressed, the following items remain:

1. Soils, Topography and Geology, Table 3.1-1: The source information noted at the bottom of the table should be revised accordingly.

2. Soils, Topography and Geology, Page 3.1-3: The applicant should identify and describe proposed construction phasing.

3. Wetlands, Page 3.3-2: The applicant must prepare and submit a wetland report that includes the information required under Section 217-7A(5) and (6) of the wetland's ordinance, which should be summarized within this Section.

4. Groundwater, Page 3.4-2: The applicant should evaluate potential impacts to existing off-site wells. The supplemental information provided by LBG on March 29, 2016, as well as additional information addressing related groundwater comments provided elsewhere in this memorandum, should be included within this Section.

5. Ecology, Section 3.5: This section should be revised to address the following; it is understood that this work is in progress:

    a. A site specific flora and fauna inventory should be conducted via field verification. Surveys should be completed at various points during appropriate times of the year/growing season to capture various species. A comprehensive list of species should be presented along with the survey dates, duration of surveys and qualification of the botanist/ecologist conducting the survey.

    b. The applicant shall corroborate information provided by the NYSDEC regarding rare, endangered, threatened and species of special concern via field observation; the NYSDEC has issued a report stating that such species do not exist on or proximate to the site based on available information.

c. On-site vegetative community types should be identified, categorized, mapped and described through utilization of NYNHP "Ecological Communities of New York State", second edition, as a standard for consistency. A figure illustrating the various on-site vegetative communities should be provided.

d. The impact of the proposed action on the site's vegetative communities and trees should be analyzed and graphically illustrated. The ecological effects of vegetation loss should be discussed qualitatively.

e. Discuss the impacts on interconnected habitat, habitat fragmentation, habitat loss, and the habitat value of each vegetative community. Discuss whether the subject property is part of a larger wildlife corridor.

f. Discussed proposed mitigation for identified impacts.

6. Aesthetic Resources, Section 3.6: The Planning Board may wish to have additional viewpoints analyzed, such as between Views #2A and #3. Each viewpoint should be analyzed and described and photo-simulations should be provided for all locations where the development will be visible. It is recommended that additional site sections be provided and that all sections be provided at more decipherable scale, such as 1"= 50'H and 1"=10'V. Site sections should illustrate (based on survey information) all proposed permanent above-ground features, including the full extent of buildings, walls, proposed landscaping, and existing vegetation/average tree canopy elevations. Further, it is recommended that architectural building elevations and floor plans (typical) be included within the EAF and that the buildings and construction materials/treatments be described.

7. Transportation, Section 3.8: The additional information provided by Maser Consulting, dated March 30, 2016, should be summarized in this Section and the TIS should be revised and resubmitted.

8. Community Facilities and Services, Section 3.9: A formal written response from the Katonah-Lewisboro School District addressing school capacity, ability to serve the anticipated number of new students, impact on the school budget, and associated costs should be provided.

9. Schools, Page 3.9-10: Please identify how the District-wide marginal cost was determined, is this a number provided by the School District or was this derived by the applicant?

10. General Comment: In instances where supplemental information is being provided via letter (traffic is an example), it is recommended that the applicant revise and resubmit the corresponding report in its entirety.

Planning and Engineering Comments

1. It is recommended that the Building Inspector review the proposed plans for zoning compliance; a report from the Building Inspector should be provided to the Planning Board.

2. It is recommended that the Planning Board seek interpretation/comment from the Building Inspector on the following three (3) items:

   a. Confirmation that the dimensional and bulk zoning requirements of the R-MF Zone replace those of the underlying CC-20 Zone.
   b. Confirmation that the Density Transition Area is being accurately and appropriately illustrated and that the corresponding density calculations are correct.
   c. Determination as to whether the common recreation facilities, as required under Section 220-26(D)(3) of the Zoning Code (which explicitly includes swimming pools, tennis, basketball, volleyball and shuffleboard courts and playground equipment) would include a community center/clubhouse as proposed.

3. The applicant has acknowledged the building height requirement and has agreed to provide the average grade calculation for each building and determine/identify the proposed building height for each building based on the average grade and mean gable elevations as the project progresses.

4. The applicant will be required to prepare a photometric lighting plan, designed to demonstrate conformance with Section 220-14 of the Zoning Code. The lighting plan shall identify illuminance levels as expressed in footcandles and measured in a grid pattern every 10 feet. All existing and proposed light fixtures shall be identified and detailed on the plan, along with proposed foundations and poles.

5. The applicant should survey locate all trees located within the proposed area of disturbance (and 50-feet beyond) with a diameter of ≥8-inches. Plans should be provided which identify the location, specie type, size and whether the tree is to remain or be removed.

6. A landscape plan shall be prepared to demonstrate compliance with Sections 220-15 and 220-55E of the Zoning Code.

7. All on-site trees with a diameter greater than or equal to 8" dbh and located within the limits of disturbance (and 50 feet beyond) must be survey-located and illustrated on the site plan. The plan should identify the diameter and specie type of each tree and whether

the tree is to be protected or removed. The applicant has indicated a desire to discuss the scope of the tree survey with the Planning Board.

8. The applicant has developed a wetland mitigation plan to off-set proposed disturbance to the buffer area. While this office agrees with the general concept, the details of the mitigation plan will be reviewed as the project progresses.

9. A NYSDEC Wetland Validation Block shall be added to the plans and executed as required.

10. The applicant has acknowledged the requirement to provide design details certified by a New York State Licensed Professional Engineer for all retaining walls greater than four (4) feet in height.

11. The applicant has coordinated the size of the three (3) refuse collection areas between the plan and detail. As previously noted, however, access to the refuse area at the lower parking lot remains limited. After pick-up, a refuse truck will be required to maneuver in reverse for the full length of the drive and into the main entry drive in order to turn around. The applicant should continue to give consideration to an alternative layout. Vehicle maneuvers should be illustrated on the plan as requested.

12. The plan shall illustrate required sight lines and profiles at the intersection of the entry drive with NYS Route 22. Any areas requiring clearing and/or grading to accommodate adequate sight lines should be illustrated.

13. The applicant has revised the plan as requested to demonstrate that all proposed roads meet the design standards provided in Section 195-22, Streets and the Minimum Design Standards for New Streets (195 Attachment 5) of the Town Code with the exception of the minimum 200 foot radius for horizontal curves and grades less than 1% in the upper level access road. The applicant will be required to modify the plan or seek relief from the Planning Board.

14. Road profiles for all access roads and drives have been provided as requested. Profiles for underground stormwater, sanitary and water service facilities shall be provided as the plan progresses.

15. The plan has been revised to reduce the diameter of the proposed turn-around with planted island between Buildings #4 and #5 to 96 feet providing for a 24-foot wide one-way access and planted island. This appears to be an acceptable alternative.

16. As indicated by the applicant, a technical review meeting with the Fire Department is necessary to discuss details of the fire protection systems.

17. The applicant must provide utility plans illustrating the locations of all components related to the sanitary sewer system, water supply system, and underground electric/telephone/cable service as the design progresses.

18. The plan shall include rim and invert elevations, pipe sizes, material and slope for all components of the stormwater system.

19. The applicant should review the first floor elevations proposed for Buildings No. 1, 2, 3 and 5, as they appear to be set at or slightly lower than adjacent exterior grades.

20. The applicant has provided a Preliminary Stormwater Pollution Prevention Plan (SWPPP) and acknowledges the need to develop it completely as the project progresses. Upon preliminary review, it appears that the SWPPP includes the various necessary components for review. The project is a multi-family residential development located in the NYC Watershed with disturbances in excess of one (1) acre and the creation of more than 40,000 s.f. of new impervious surface. In addition to satisfying the requirements of Chapter 189, Stormwater Management and Erosion and Sediment Control of the Town Code, the SWPPP must comply with NYSDEC Regulations for coverage under the SPDES General Permit, GP-0-15-002, for stormwater discharges from construction activity, as well as require review and approval by the New York City Department of Environmental Protection (NYCDEP). We will reserve comment until such time as the NYCDEP has had an opportunity to review and comment.

21. This office must witness any deep and percolation tests conducted in association with proposed stormwater management practices.

22. The plans and SWPPP shall include a capacity analysis for all stormwater conveyances to demonstrate adequate sizing.

23. As previously requested, the plans and SWPPP must demonstrate that all components of the proposed stormwater pre-treatment and infiltration basins comply with applicable requirements of the NYS Stormwater Management Design Manual, including forebay sizing, side slopes, maintenance berms and access, etc.

24. The application should provide the results of an on-site cut and fill analysis, including the volume of proposed "cut" and "fill". A plan should be provided which graphically distinguishes/shades areas of cut versus fill. The applicant should be prepared to discuss

how either surplus materials will be disposed of or additional material imported to the site, as applicable. Provisions for the temporary on-site storage and any construction vehicle queuing should be included on the plan. It is understood that the cut and fill analysis is in progress.

25. The applicant has prepared a Preliminary Engineer's Report for Water Facilities. The water supply system will require review and approval from the Westchester County Department of Health (WCHD) and NYSDEC. As the plan develops, the location and details of the water supply system, treatment components, 15,000 gallon storage tank and distribution system must be provided.

26. The applicant has prepared a Preliminary Wastewater System Report. The wastewater system will require review and approval from the WCHD and NYSDEC. As the plan develops, the location and details of the sanitary sewer main and service connections and all components specific to the subsurface disposal system must be provided.

27. The Erosion & Sediment Control Plan (Sheet SP-3) should be revised to include the following:

    a) The limits of disturbance have been illustrated, but must also be quantified. This limit should be revised to include the temporary soil stockpile area adjacent to the basin. The proposed phasing for the project must also be illustrated and quantified.
    b) The proposed grading along the east side of the upper lot includes slopes greater than 2H:1V. The Site Plan indicates that these areas are to be stabilized with a rock slope. This shall be clarified on the Erosion & Sediment Control Plan as well. The plans shall include details of the protective measures appropriate for the stabilization of these slopes.
    c) Illustrate the locations of all required contractor staging areas.
    d) Provide sizing of all temporary sediment basins/traps, etc., as appropriate.
    e) Construction sequencing for all construction activities.

28. The applicant has submitted a revised Hydrogeologic Assessment Report, prepared by LBG, dated (last revised) March 29, 2016. The current hydrogeologic report should be revised/updated to include the following:

    a) A 72-Hour Pump Test will be required to be conducted by the applicant prior to approval of the project. Existing on and offsite wells located a minimum of 2,000 l.f. ("subject area") from the proposed on-site wells will need to be monitored during the 72-Hour Pump Test to determine if these pumping of the new wells will result in drawdown of the static water level on any of the existing wells within the

subject area. The applicant should submit an offsite well monitoring plan prior to the drilling of the proposed on-site wells.

b) The applicant states that the property will not be irrigated. This does not seem realistic since there will likely be common landscaping areas/planting beds adjacent to the dwelling units, parking areas and screening areas that are ultimately developed. Since the occupancy of the development will be 100% rental and not individually owned, the applicant's management company will be responsible for the long-term maintenance of the property (i.e., snow plowing, landscape maintenance, etc.). Irrigation of the plant material will be an important component of the long-term survival of the landscaping and screening proposed for the development. The applicant should describe, in detail, how the proposed landscape/screening material will be irrigated if an automated irrigation system will not be installed.

c) Once the proposed wells are drilled and pump tested, the applicant shall submit the results of the pump tests and the proposed pump test plan to the Town for review.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

Plans Reviewed, prepared by Insite Engineering and dated (last revised) March 31, 2016:

- Overall Site Plan (Sheet OP-1)
- Layout Plan (Sheet SP-1)
- Grading & Drainage Plan (Sheet SP-2)
- Erosion & Sediment Control Plan (SP-3)
- Entry Drive & Parking Profiles (PR-1)
- Site Details (D-1, D-2, D-3)
- Vicinity Map

Documents Reviewed:

- Letter, prepared by Insite Engineering, dated March 31, 2016
- Letter, prepared by Leggette, Brashears & Graham, Inc., dated March 29, 2016
- Letter, prepared by Tim Miller Associates, Inc., dated March 31, 2016
- Letter, prepared by Maser Consulting, R.A., dated March 30, 2016
- Expanded Environmental Assessment Report, prepared by Tim Miller Associates, Inc., dated (last revised) March 31, 2016

- Parts 1, 2 and 3 of the Full Environmental Assessment Form
- Complaint Response and Mitigation Plan - DRAFT, prepared by Leggette, Brashears & Graham, Inc.
- Phase IA Literature Review and Sensitivity Assessment and Phase 1B Archaeological Fieldwork, prepared by Strata, LLC, dated March, 2016
- Blasting Mitigation Plan
- Wetlands Mitigation Report & Plans, prepared by Tim Miller Associates, Inc.

JKJ/JMC/DJS/dc

T:\Lewisboro\Correspondence\LW4093JJ-LWPB-WilderBalter-Review-Memo-4-14-16.docx

TO: Town of Lewisboro Planning Board
FROM: Lewisboro Conservation Advisory Council
SUBJECT: Wilder Balter Partners
NY State Route 22
Goldens Bridge, NY 10526
Sheet 5, Block 10776, Lots 19, 20 & 21
Cal #10-15 PB
DATE: April 11, 2016

The Conservation Advisory Council (CAC) reviewed the applicant's plans and accompanying documents at our April 4 meeting.

The CAC reviewed the wetland mitigation plans for this proposal. While in general agreement with the approach, we are concerned with the proposed use of glyphosphate to eliminate annual invasive plants within the wetland. If used, we would encourage the use of the proper surfactants – Rodeo-type rather than Roundup-type. But further, we are concerned whether the use of glyphosphate in wetland areas to address annual invasive plants with an extensive annual seedbed would be a net benefit to the wetland, especially considering the large amount of other mitigation activities that are proposed for this site.

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

March 31, 2016

Town of Lewisboro Planning Board
Cross River Shopping Center @ Orchard Square
20 North Salem Road, Suite L (Lower Level)
P. O. Box 725
Cross River, New York 10518

RE: Wilder Balter Partners, LLC
Housing Development
NYS Route 22

Dear Chairman Kerner and Members of the Board:

Enclosed please find twelve (12) copies of the following in support of an application for site plan review of the above referenced project:

- Eight (8) sheet Site Plan Set, last revised March 31, 2016.
- Drawing VM-1 "Vicinity Map", last revised March 31, 2016.

The site plan set has been revised per comments from the Planning Board and the Planning Board's consultants.

In response to the specific comments from the Planning Board at the meeting on March 15, 2016, the Vicinity Map has been updated to include the street distance from the site to the train station and to show the distances from offsite locations to Building #2.

In response to the specific Planning & Engineering Comments in the comment memorandum from Kellard Sessions Consulting, P.C., the Planning Board's Consulting Professionals, dated March 9, 2016, we offer the following responses:

1. Agreed and duly noted.
2. Please confirm that the Planning Board has referred the project to the Building Inspector for his review.
3. Please confirm that the Planning Board has referred the three items listed to the Building Inspector for his interpretation/comments.
4. Preliminary analysis of building height indicates the buildings are within the limits established by zoning. As the project progresses, the applicant's architect will provide specifics relative to the building height determination.
5. The approximate location of the existing off-site cell tower has been illustrated on Drawing OP-1 of the site plan set. Drawing VM-1 has been updated to show distances from off-site locations to Building #2.
6. The proposed sidewalk along the south and east side of the main entry driveway has been extended to connect to the walkway at the upper parking lot.
7. The crosswalk across the access drive to the lower parking lot has been relocated parallel to the main drive. The walkway at the rear of Building #2 has been continued to meet the proposed sidewalk along the main drive.

8. Guiderail has been added along the west side of the entry driveway in areas where the grade drops off between approximately Station 2+50 and 5+00.
9. The plan has been revised to show mountable curb for only the entrance to the stormwater basin maintenance access drive off of the main drive and a flush curb and sidewalk between the four parking spaces and the main drive, with transition curbs and sidewalk ramps as required.
10. A photometric lighting plan will be provided in a later submission.
11. As the project advances the landscape plan will be further developed and shall comply with the appropriate sections of the zoning code.
12. The scope for survey location of existing trees on the site will be further discussed with the Planning Board as the plan progresses.
13. Tim Miller Associates has prepared a mitigation plan for the wetland buffer disturbance in accordance with the Town code.
14. Once completed the NYSDEC Wetland Validation block will be added to the plans.
15. The site plans have been updated to specify the location and extent of all New York City Department of Environmental Protection (NYCDEP) jurisdictional watercourses, and associated restrictive areas. A site walk with the NYCDEP on March 9, 2016, confirmed our previously stated position that the on-site watercourse is not a reservoir stem.
16. As the project progresses, engineering details for the retaining walls greater than 4' can be provided.
17. The refuse enclosures have been revised on the site plans.
18. Sight line profiles for the intersection of the entry drive and Route 22 will be prepared by Maser Consulting as part of the work with the New York State Department of Transportation (NYSDOT) and the Highway Work Permit for the entrance improvements.
19. Snow storage areas have been indicated on the site plan.
20. The proposed main access drive has been revised to meet the design standards provided in Section 195-22, with the exception of the provision for a minimum radius of 200 feet for horizontal curves. Driveway and parking lot profiles are provided to demonstrate compliance with the requirements for the vertical alignment. Road centerline stationing and labelling of the horizontal alignments have been provided on plans.
21. Additional spot elevations have been provided on the site plan to demonstrate maximum handicap accessible parking space and access aisle grades of 2%. The profiles demonstrate grades of all other parking areas of less than 5%.
22. The profile for the main access drive has been updated and profiles for the centerline of the parking areas have been provided on Drawing PR-1. Profile information relative to stormwater, sanitary and water service facilities will be provided in a later submission.
23. A turnaround with a minimum diameter of 96 feet is required by the NYS Fire Code. The combined paved area of asphalt and pavers has been reduced based on a vehicle maneuvering study to 18' of asphalt pavement and 6' of pavers. The central island has been enlarged.
24. Please confirm that the Planning Board has referred this project to the Fire Department. The applicant and this office requests the opportunity to meet with representatives of the Fire Department to review together the project details pertaining to hydrant locations and other firefighting components to be designed and incorporated into the project plans.

25. On Drawing SP-1, a "No Outlet" sign has been added at the main entrance, and "No Parking" signs have been added along the main entry drive, at the turnaround and at the refuse collection areas.
26. Utility design for the sanitary sewer system, water supply system, and other underground utilities will be further developed as the project progresses.
27. Rim and invert elevations, pipe sizing, material pipes, slopes and other details of the stormwater collection system will be provided as the plan progresses.
28. The 292 contour has been added on Drawing SP-2.
29. An additional catch basin has been added in the parking lot north of Building #5.
30. The Preliminary Stormwater Pollution Prevention Plan (SWPPP) provides information to verify conformance with the State, NYCDEP, and Town stormwater requirements. As the project progresses, it is understood that further review of the plan and associated details will be forthcoming.
31. It is understood that the Town Engineer's office is to witness deep and percolation tests associated with the stormwater practices.
32. It is understood that stormwater collection system calculations will be required for piping, swales, and conveying stormwater for the project.
33. Details pertaining to the stormwater components will be further developed as the plans progress.
34. The proposed location of grass swales and stone checkdams are shown on the grading and erosion control plans, Drawings SP-2 and SP-3, respectively.
35. A cut / fill analysis will be provided at a later date.
36. It is understood that the Westchester County Department of Health (WCDOH) and New York State Department of Environmental Conservation (NYSDEC) will be required to review and approve the project. As the plan develops details on the water supply and distribution system will be provided.
37. It is understood that the Westchester County Department of Health (WCDOH) and New York State Department of Environmental Conservation (NYSDEC) will be required to review and approve the project wastewater system. As the plan develops details on the wastewater system will be provided.
38. The Drawing SP-3 has been revised to include the following:
    a. The limits of disturbance line has been updated on the plan and quantified. Phasing for the project will be provided in a later submission.
    b. A portion of the proposed grading along the east side of the upper lot has proposed slopes of 1H:1V. This area has been labelled as a stabilized rock slope on Drawing SP-1. Additional information will be provided in a later submission.
    c. Silt fence has been provided downslope of all disturbed areas.
    d. Location of staging area, soil stockpiles, and temporary sediment basins have been located on the erosion control plan. Sizing of these elements will be addressed at a later date.
    e. A construction sequence will be provided at a later date.
39. Comments relative to the Hydrogeological Assessment Report are being addressed separately by Leggette, Brashears & Graham, Inc.

We look forward to continued discussion of the project with the Board at the April 19th, 2016 meeting.

Should you have any questions or comments regarding this information, please feel free to contact our office.

Very truly yours,

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

By: _____
Jeffrey J. Contelmo, PE
Senior Principal Engineer

JJC/dlm/amh

Enclosures

cc: John Bainlardi
Jon Dahlgren

Insite File No. 15246.100

EXPANDED ENVIRONMENTAL ASSESSMENT

SEQR Full Environmental Assessment Form (EAF) and Supplemental Studies

Application of Wilder Balter Partners, Inc.
for Site Plan, Wetlands Permit and Stormwater Permit

WB Lewisboro Affordable Housing
Route 22
Town of Lewisboro, New York

Applicant:
WILDER BALTER PARTNERS, INC.
570 Taxter Road, Elmsford, New York, 10523
Contact: John Bainlardi
(914) 347-3333

Project Engineer:
INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place,Carmel, New York 10512
Contact: Jeff Contelmo, PE
(845) 225-9690

Environmental Planner:
TIM MILLER ASSOCIATES, INC.
10 North Street, Cold Spring, New York 10516
Contact: Frederick P. Wells, RLA
(845) 265-4400

Revised March 31, 2016

Application of Wilder Balter Partners, Inc.
for Site Plan Approval, Wetlands Permit, Stormwater Permit
to Town of Lewisboro Planning Board

EXPANDED ENVIRONMENTAL ASSESSMENT

SEQR Full Environmental Assessment Form (EAF) and Supplemental Studies

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1.0 INTRODUCTION

Wilder Balter Partners, Inc. (the "Applicant"), proposes to develop a 46 unit affordable residential community on a 35.4 acre site located on NYS Route 22 in the western portion of the Town of Lewisboro, Westchester County, New York. The development site is located in the Hamlet of Goldens Bridge approximately three-quarters of a mile south of Route 138 and the Goldens Bridge train station. The location of the site is shown on Figures 2-1 and 2-2. The site is currently vacant wooded land and is not served by public water or sewer service.

This Expanded Environmental Assessment Form (EAF) evaluates a focused scope of potential environmental impacts for the Proposed Action, based upon the evaluation process and questions found in the Full Environmental Assessment Form, and "EAF Workbooks" prepared by the NYSDEC.

This Expanded EAF is prepared in accordance with Section 8-0101 of the New York State Environmental Conservation Law and the regulations promulgated by the New York State Department of Environmental Conservation (NYSDEC) thereunder, which appear at 6NYCRR Part 617 (known as the New York State Environmental Quality Review Act, SEQRA, or SEQR).

This document includes the EAF form Parts 1, 2 and supplemental information as Part 3. Part 1 of the EAF Form provides project details and its environmental setting. Part 2 of the EAF Form identifies potential project impacts by category, such as surface water, aesthetic resources and transportation. The Part 3 evaluations provided in this Expanded EAF provide background information, technical studies and analyses of the potential impact categories as may result from the development. Part 3 also identifies the mitigation measures that are proposed (integral to the project design) to minimize or avoid the identified impacts as relates to the magnitude and importance of potential impacts. The Part 3 sections and evaluations are further described below.

Development Purpose, Needs, and Benefits

The proposed development will provide needed AFFH affordable rental apartments in a portion of the Town where multi-family residential is permitted and in close proximity to mass transit and major transportation routes. The proposed affordable rental community will add to the Town's housing inventory and fill a specific housing need.

The development will comply with Westchester County's fair and affordable housing programs and policies, including the Westchester County Fair and Affordable Implementation Plan. The proposed development will assist the County in meeting its court mandated obligation to complete 750 affordable AFFH units with financing and building permits in place by December 31, 2016. The proposed AFFH apartments will also count towards the Town of Lewisboro's substantially unmet "fair share obligation" to create 239 units of affordable housing as established by the County's Affordable Housing Allocation Plan (2000-2015). Funding for the development will include programs provided by Westchester County and NYSHCR.
.
The design of the proposed buildings will be an attractive addition to the neighborhood, set back from NYS Route 22 with appropriately scaled architecture and landscaping that will be compatible with its residential and mixed-use setting. The size, scale and architecture for the proposed residential buildings will be similar to a recently completed and well received multi-

family affordable development in North Salem, New York named Bridleside, which community serves as the Applicant's vision for the proposed action.

Objectives of the Applicant

The Applicant's proposal intends to accomplish the following:

- To provide affordable rental housing opportunities in an area of the Town zoned for and well suited to support such land use, especially its location in close proximity to mass transportation and shopping opportunities (Goldens Bridge).
- To create an attractive residential development that takes advantage of the recent changes in the Town Code to allow multi-family housing in the CC-20 zoning district, and a development that is compatible with the character of the community and the long-range plans for the area.
- To minimize the environmental impacts of the development by locating the development on the western portion of the property on the most level and suitable areas of the property. The eastern portion of the site (Parcel 40.2-2-5), is proposed to be permanently preserved through the use of restrictive covenants and/or conservation easements.

The Applicant, Wilder Balter Partners, Inc. is a leading developer of award winning new residential developments in the New York metropolitan area. WBP companies have built market rate and affordable communities throughout the Hudson Valley, in Connecticut and in Nassau and Suffolk counties in Long Island for 25 years. WB Residential Communities, Inc. (WBRES) is the property management affiliate of Wilder Balter Partners. This group successfully manages and oversees 32 WBP developed properties with more than 3,200 apartments located in New York, Connecticut and the US Virgin Islands.

Site Location and Environmental Setting

Property Location

The development site is located on the east side of NYS Route 22 and immediately east of Interstate 684. The site is located approximately three-quarters of a mile south of Route 138 and the Goldens Bridge Metro North train station. The subject property is bounded on the north and east by vacant land, to the south by low density residential properties and on the west by NYS Route 22. Interstate 684 lies directly west of NYS Route 22 and the highway parallels the Metro North rail line. The Croton Reservoir, part of the New York City water supply system, lies approximately 550 feet west of the site.

Route 22 provides the only road frontage to the subject property. The site is comprised of three tax lots.

Environmental Setting

The subject property is located within an area of low density residential development, undeveloped land and transportation uses, as shown in Figure 2-2 Aerial Photo. The land uses in the area are predominantly low density residential, although the western portion of the property is located in the CC-20 Campus Commercial zoning district. This district is located

along the Route 22 corridor, approximately one-half mile south of the Goldens Bridge Village Center.

The topographic setting of the property includes an east-west trending rocky hill which slopes towards lower elevations to the north, west, south and east. Elevations on the property range from 208 feet in the wetlands in the southwest portion of the site to 450 feet at the hilltop in the north central portion of the site. Steep slopes, consisting of slopes greater than 15 % are located on the slopes of the hill and many upland portions of the property. Steep slopes comprise approximately 67 percent of the subject site (23.8 acres).

The property is currently undeveloped with the exception of two water supply wells that were installed in the 1980's as part of an earlier proposed development that was never completed. The site is primarily wooded with second growth successional forest on upland portions of the site and mapped wetlands are located in the southeastern portion of the property. A small intermittent stream runs through the middle of the wetland. The wetlands are regulated by the Town of Lewisboro, the NYSDEC (Wetland F-29) and by the U.S. Army Corps of Engineers. Based upon mapping by the NYSDEC the property is not part of or adjacent to any designated significant natural community or state listed Critical Environmental Area.

The site is serviced by electric, telephone and cable service from private utilities on Route 22. No municipal water or sewer services are available to the site.

Development Description, Proposed Uses, and Layout

Building Layout and Design

The proposed residential development will include five (5) multi-family buildings serviced by a single 24-foot wide access driveway. Development is concentrated in upland areas in the western portion of the property. Each of the five buildings will contain between 8 and 10 residential units and one building (Building 2) will contain a community space (clubhouse). The layout plan is provided as Figure 2-3 and full sized drawings are attached. The buildings were located to minimize grading and site disturbance to the extent necessary on a property that has varied topography and areas of exposed bedrock. The buildings, driveways and parking areas were situated to make use of more level portions of the site and minimize disturbance to slopes.

Parking and driveway access for emergency vehicles is provided at the front of all buildings and additional parking is provided at the west side of Buildings 2 and 3, to take advantage of the difference in elevations from the front to the back of the Buildings. A traffic circle with a full radius of 65 feet is provided between Buildings 4 and 5 to allow for emergency vehicles to circulate through the development. In addition to the community space in Building 2, a children's play area is proposed between Buildings 2 and 3 and a multi-purpose sports court is provided next to Building 5. Sidewalks will link all of the buildings, parking and play areas.

Given the natural slopes on the property, development will require retaining walls south of Buildings 3 and 4 and between Buildings 4 and 5. Two stormwater management basins are located south of the residential development, at lower elevations where stormwater naturally flows. A graded driveway will be provided for maintenance access to the stormwater management basins.

The residential development will be fully landscaped with vegetation that is common to the northeast.

Compliance with Zoning Code

The subject property lies in two Town zoning districts: the two westerly lots are located in the CC-20 zoning district and the easterly lot is located in the R-4A zoning district. The proposed residential development is proposed for the two westerly lots in the CC-20 district, while the eastern lot is proposed to be permanently preserved through the use of restrictive covenants and/or conservation easements. A portion of the community septic system will need to be constructed on the easterly lot (R-4A district), but no structures or impervious surface. The proposed action will include a lot consolidation to result in a single tax lot for the entire property, replacing the three existing lots.

The site plans developed for this affordable housing application show and tabulate the various zoning requirements of the CC-20 and R-4A districts applicable to the property, including the new reference to the provisions for multi-family dwellings which are found in the R-MF requirements.

Multi-family dwellings are a permitted use in the CC-20 district, subject to the requirements of Section 220-26, Multifamily Residence District (R-MF), of the Zoning Code. The dimension and bulk zoning requirements of the R-MF district replace those of the underlying CC-20 district. The proposed plan meets all of the dimension and bulk requirements of the R-MF district, with the exception of parking.

The Applicant is proposing a total of 92 parking spaces for this facility, whereas 124 spaces are required by zoning based on the proposed bedroom count. The Applicant is requesting a parking variance from the Zoning Board of Appeals, based upon the actual parking usage at similar projects developed and managed by the Applicant

The Applicant proposes to permanently preserve at least 17 acres of the site through the use of restrictive covenants and/or conservation easements. This preserved area will be located substantially on the R-4A zoned parcel and provide a permanent buffer and open space resource for the benefit of the development's residents and surrounding properties.

Compliance with the Master Plan

The Town Master Plan outlines policies and goals formally adopted by the Town of Lewisboro in 1985[1] as a guide for land use and future development in the Town. In its Plan, the Town identified considerations for preservation of open space resources as well as for development that are generally applicable to the subject proposal today. The Plan does not identify site-specific consistency criteria, but it was intended to provide overall guidance on the local scale for land planning decisions.

The 1985 Town Master Plan speaks of a vision for land use in the I-684/Route 22 corridor that would provide for development of campus commercial land use that would also incorporate the preservation of open space. Campus commercial development was envisioned and planned for in the area bordering Route 22 including the subject site and paved the way for the subsequent rezoning to CC-20. As stated in the Master Plan relative to campus commercial facilities, adequate buffering between such use and adjacent residential areas would allow the two

[1] Accessed on the Town's website 1/21/16.

different types of land use to coexist, and reduce impacts to the natural environment resulting from development.

The Town's Master Plan cites general design principles to guide future public and private development in the Town to support the goals and objectives of the Town. These recommendations refer to landscape buffering of buildings and parking areas, minimization of disturbance on steep slopes where potential for erosion needs to be addressed, and provisions to minimize adverse visual impact on Town character and neighboring uses.

The proposed plan will comply with the requirements of the Town's Zoning, with the exception of a parking variance. The site plan will incorporate various conventional slope protection and wetland protection measures that will minimize the potential for soil erosion and surface water impacts. The plan also will incorporate tree preservation measures (particularly by minimizing the overall area of site disturbance) and proposed landscape plantings that will minimize visual intrusion and create an asset to the community. Moreover, the site plan will preserve a significant area located outside of the limits of disturbance in permanent open space.

The proposed development plan addresses the Town's design principles relative to environmental protection and visual consistency, in the applicant's opinion. The proposed site plan has been laid out such that the buildings and other site features will be substantially surrounded by permanently preserved, wooded open spaces and will not be visually prominent at any time of year. In addition to the proposed landscape plan, natural topographic conditions render the development area of the site largely obscured from view from most offsite locations thereby avoiding potential impact on community character.

Residential Use and Management

The proposed development will be exclusively used for residential purposes. The Applicant proposes an affordable AFFH development with 45 rental units and a single caretakers unit (46 units total). The rental apartments will meet the requirements of the Westchester County Fair and Affordable Housing Implementation Plan (2000). While the development will be funded utilizing programs provided by Westchester County and NYSHCR, the development will be developed, built, marketed, owned and operated by Wilder Balter Partners, Inc.

The development will include a mix of one, two and three bedroom units as follows:

1 BR – 14 Units
2 BR – 28 Units (including caretakers units)
3 BR – 4 Units

The units will range will in size from approximately 842 square feet (1-BR unit), 1,025 square feet (2-BR unit) and 1,285 square feet (3-BR unit).

The development is proposed as a fair and affordable community subject to maximum income requirements. The units will be available to residents whose household incomes do not exceed 60% of the Area Median Income (AMI), based on family size, as established by the Department of Housing and Urban Development (HUD) on an annual basis. Nine of the units (20 percent) will be set aside for households at or below 50% of the AMI. In 2015, the area median income in Westchester County was established at $105,700 for a 4 person household. Therefore, for a family of 4, 60% of the AMI would be $63,420 and 50% would be $52,850. Further information on income eligibility, marketing and building occupancy is provided in Section 3.9 Community

Facilities and Services and in the January 6, 1016 letter from Wilder Balter Partners, Inc. to the Planning Board (see Appendix A – Correspondence).

The apartments will be marketed by Wilder Balter Partners, Inc. together with a non-profit partner (expected to be the Housing Action Council) to households meeting the income eligibility requirements. Marketing will comply with the Westchester County Affirmative Fair Housing Marketing Plan. A typical application is provided in Appendix A (see January 6, 2016 Wilder Balter Partners, Inc. letter). Applicants will be selected for an interview by public lottery. Interviews will be conducted by trained and experienced management staff. In addition to income and asset information, all applicants will be required to pass established credit and criminal screening processes.

Further information regarding anticipated community demographics is provided in Section 3.9 – Community Facilities and Services. Information provided in the demographics and community services discussion is based, in part, on a recently completed and fully occupied affordable rental community in North Salem managed by Wilder Balter Partners, Inc. named Bridleside at North Salem.

Drainage / Stormwater Management Plan

A preliminary stormwater management plan for the proposed development has been prepared by the project engineer, Insite Engineering, Surveying, & landscape Architecture, P.C. The plan includes a stormwater pollution prevention plan report, or SWPPP and relevant engineering drawings. A copy of the preliminary SWPPP is provided in Appendix B.

The SWPPP is required to meet the regulatory requirements of the Town of Lewisboro, the NYSDEC and the New York City Department of Environmental Conservation (NYCDEP). Once the SWPPP is approved in final form (as part of the final site plan approval after the conclusion of the SEQR process), the document will govern all activities associated with site disturbance for construction and all permanent drainage features required to comply with applicable stormwater management regulations. Section 3.2 provides further description of the proposed stormwater management system.

The site plans call for a stormwater collection system to collect and direct stormwater from developed impervious surface to a single stormwater management practice, given the use of an infiltration practice for treatment. Therefore, the stormwater design consists of a dry pretreatment extended detention basin followed by discharge to an infiltration area (see Drawing SP-2 Conceptual Grading Plan).

The SWPPP also provides for erosion and sediment control during construction and on-going maintenance for stormwater management facilities.

Utilities (Water and Sewer)

The development site is not located in an area served by municipal water and sewer service. Water service will be provided by a new community water system supplied by on-site wells and wastewater will be treated by a new community on-site septic system. These systems are being designed by the project engineer, Insite Engineering, Surveying & landscape Architecture, P.C.

The engineer has developed preliminary water and sewer reports for the residential development and they are attached in Appendix C and D. The community water and sewer

systems will be designed and constructed in accordance with the standards and subject to the approval of the Westchester County Department of Health (WCDOH) and New York State Department of Environmental Conservation (NYSDEC).

Water demand for the development has been estimated in the Water Facilities Report to be 9,020 gallons per day (gpd) based upon bedroom count. Average daily flow is estimated to be 6 gpm, with peak hourly flow estimated at 60 gpm. Each building will be equipped with sprinklers and the combined peak flow from domestic and fire sprinkler demand will be used to design the water system.

Water will be supplied from two existing wells, but an additional 1 to 2 wells will be required (3 to 4 wells total) to meet the NYSDEC requirements for maximum day demand with the best well out of service. Water supply for the development was evaluated by Leggette Brashears & Graham (see Water Supply Report – Appendix E). Further discussion of groundwater supply is provided in Section 3.4 Groundwater.

The community water system will include on-site water treatment facilities and an estimated 15,000 gallon storage tank.

Wastewater design flow for the residential development is based upon bedroom count and is estimated at 9,020 gallons per day (gpd). Preliminary soil testing for the Subsurface Treatment System (SSTS) areas have been completed by Insite. Suitable soils for the SSTS areas have been identified in the southwestern, northern and eastern portion of the site. Based on the site constraints, preliminary testing and initial assessment indicate that the on-site soils can accommodate a SSTS to support a wastewater design flow of up to 9,020 gpd. The final SSTS capacity will be based on witnessed soil testing with the WCDOH and NYCDEP and the final bedroom count for the development.

Construction

Construction Period Anticipated

The duration of the construction is anticipated to be approximately 16 months, beginning in Spring 2017. The residential development will be constructed as one continuous project. Construction activity will occur weekdays from 8:00 AM and Sunset, in conformance with the Town of Lewisboro regulations. No construction activity will occur between Sunset and 8:00 AM or on weekends or holidays.

Erosion and Sediment Controls During Construction

The site plan documents for permitting and construction will include detailed erosion and sedimentation control plans, details and notes designed in accordance with Town, NYSDEC and NYCDEP requirements for stormwater management. Erosion and sediment controls will include implementation and maintenance of temporary measures throughout the duration of the construction activities and installation of structural measures for the permanent stabilization of the site. Details of the proposed erosion and sediment controls are specified in the preliminary Stormwater Pollution Prevention Plan (SWPPP) (see Appendix B).

Site excavation will entail excavation and earth removal. Based upon observation and preliminary soil testing, it is anticipated that grading for construction will require rock hammering and blasting. . A cut and fill analysis is being completed by the project engineer as the Site Plan

is refined. The project engineer will endeavor to bring the earthwork as close to balance as possible in order to minimize import/export. Re-using the on-site rock as construction fill will require on-site rock processing by a rock crusher. Any required blasting and/or rock crushing will be done in compliance with all Town of Lewisboro and New York State regulations and requirements. A Blasting Permit from the Town of Lewisboro is required for the work.

A stabilized gravel construction access pad will be installed at the construction entrance point identified on the erosion control plans to limit soil transport onto the local roadways from trucks leaving the site. The SWPPP will specify measures to stabilize the steep slopes during and after construction and to divert clean runoff water away from the construction area.

Construction Staging

Construction material and staging areas will be maintained on the site. Areas for equipment staging and soil stockpiling within the site will need to be designated prior to commencement of construction activities. Erosion controls will be utilized around all areas selected for material storage and equipment staging. The construction equipment entrance will be stabilized with broken stone and perimeter silt fencing will be installed around all construction areas.

Truck Traffic

Construction traffic will arrive at the beginning of the construction period, primarily consisting of trucks delivering equipment and building materials, and daily trips of construction workers. Large construction equipment will include bulldozers, graders, excavators and dump trucks. This equipment is typically brought to the site on tractor trailers and generally is kept at the site for the duration of site preparation activities.

While the construction activity is ongoing, construction materials will be brought in throughout the construction period. Trucks will travel to and from the site to transport construction materials.

EAF Part 3 Evaluation

As described, the EAF Part 3 Evaluation provides information and analyses for those potential impact categories that are relevant to the proposed development. The Part 3 sections provide a description of existing conditions, potential impacts and proposed mitigation to avoid and/or minimize potential impacts. 3.1 Impact on Land (Soils, Topography, Geology)
The development will require grading and excavation for project construction. The project has been designed to minimize the limits and extent of grading. Mitigation measures including a Soil Erosion Control Plan are described in the section.

3.2 Impact on Surface Water
Site development, grading and soil erosion have the potential to impact on-site and off-site water quality. Mitigation measures including a Stormwater Pollution Prevention Plan (SWPPP) are described in the section.

3.3 Impact on Wetlands
The subject property contains a wetland regulated by the NYSDEC, the Town of Lewisboro and the US Army Corps of Engineers. The proposed Site Plan requires encroachment into the Town of Lewisboro and NYSDEC designated wetland buffer area (designated wetlands are avoided). Approximately 7,000 sf of DEC adjacent area and 14,500 sf of Town of Lewisboro buffer will be disturbed. Mitigation measures including a wetlands mitigation plan are described.

3.4 Impact on Groundwater
The development site is not located in an area served by municipal water and therefore water service will be provided by a new community water system supplied by on-site wells. A hydrogeologic assessment for the property has been prepared and it is anticipated that on-site wells can meet the estimated water demand of 9,020 gallons per day (gpd), with no significant impact to the nearby private wells.

3.5 Impact on Ecology
The site is primarily wooded with second growth successional forest on upland portions of the site and a mapped wetland is located in the southeastern portion of the property. Grading for site development will alter approximately 9 acres of existing vegetation and habitat. An evaluation of existing vegetation and mitigation measures are provided.

3.6 Impact on Aesthetic Resources
The development will alter the view for drivers on the I-684 exit ramp and on a limited section of NYS Route 22. A visual analysis has been completed and mitigation measures are described. Mitigation will include building design elements such as building materials and colors.

3.7 Impact on Historic and Archeological Resources
On-site grading has the potential to impact archeological resources. Phase 1A and 1B Cultural Resources Surveys have been completed for the project area. The Phase 1B investigation involved soil test pits. Based upon the surveys, the development will have no impacts upon Historic and Archeological resources.

3.8 Impact on Transportation
The proposed development will result in approximately 43 new vehicle trips during the p.m. peak traffic hour. A traffic study has been completed and is described in the section. The development will not result in significant impacts to local traffic.

3.9 Impact on Community Facilities and Services
The new development will result in new demand for municipal services, including the addition of an estimated 17 school children to the Katonah-Lewisboro School District. The potential impacts to the Town of Lewisboro and the School District are evaluated.

3.10 Consistency with Community Character
The subject property lies in two Town zoning districts: the two westerly lots are located in the CC-20 zoning district and the easterly lot is located in the R-4A zoning district. The proposed residential development is proposed for the two westerly lots in the CC-20 district, while the eastern lot is proposed to be permanently preserved through the use of restrictive covenants and/or conservation easements. A discussion is provided regarding the development's consistency with nearby existing land uses, the Town Zoning Code and the Master Plan.

Approvals, Reviews and Permits

Approvals, reviews and/or permits required for the implementation of this development are listed below by issuing agency. These agencies are called Involved Agencies under SEQRA, and have approval authority over one or more aspects of this application.

Site Plan, Wetlands Permit and Stormwater Permit

Town of Lewisboro Planning Board
20 North Salem Road
Cross River, NY 10518

Variances from Zoning Code
Town of Lewisboro Zoning Board of Appeals
20 North Salem Road
Cross River, NY 10518

Building Permit, Blasting Permit
Town of Lewisboro Building Department
20 North Salem Road
Cross River, NY 10518

Community Septic System, Community Water Supply
Westchester County Department of Health
145 Huguenot Street
New Rochelle, NY 10801

Community Septic System, SWPPP
NYC Department of Environmental Preservation
465 Columbus Avenue
Valhalla, NY 10595

SPDES General Permit for Stormwater, Wetland Permit
NYS Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, NY 12561

Highway Permit
NYS Department of Transportation
4 Burnett, Boulevard
Poughkeepsie, New York 12603

Development Funding
Westchester County Planning Board
148 Maritine Avenue
White Plains, New York 10601

Development Funding
New York State Homes & Community Renewal
641 Lexington Avenue
New York, New York 10022

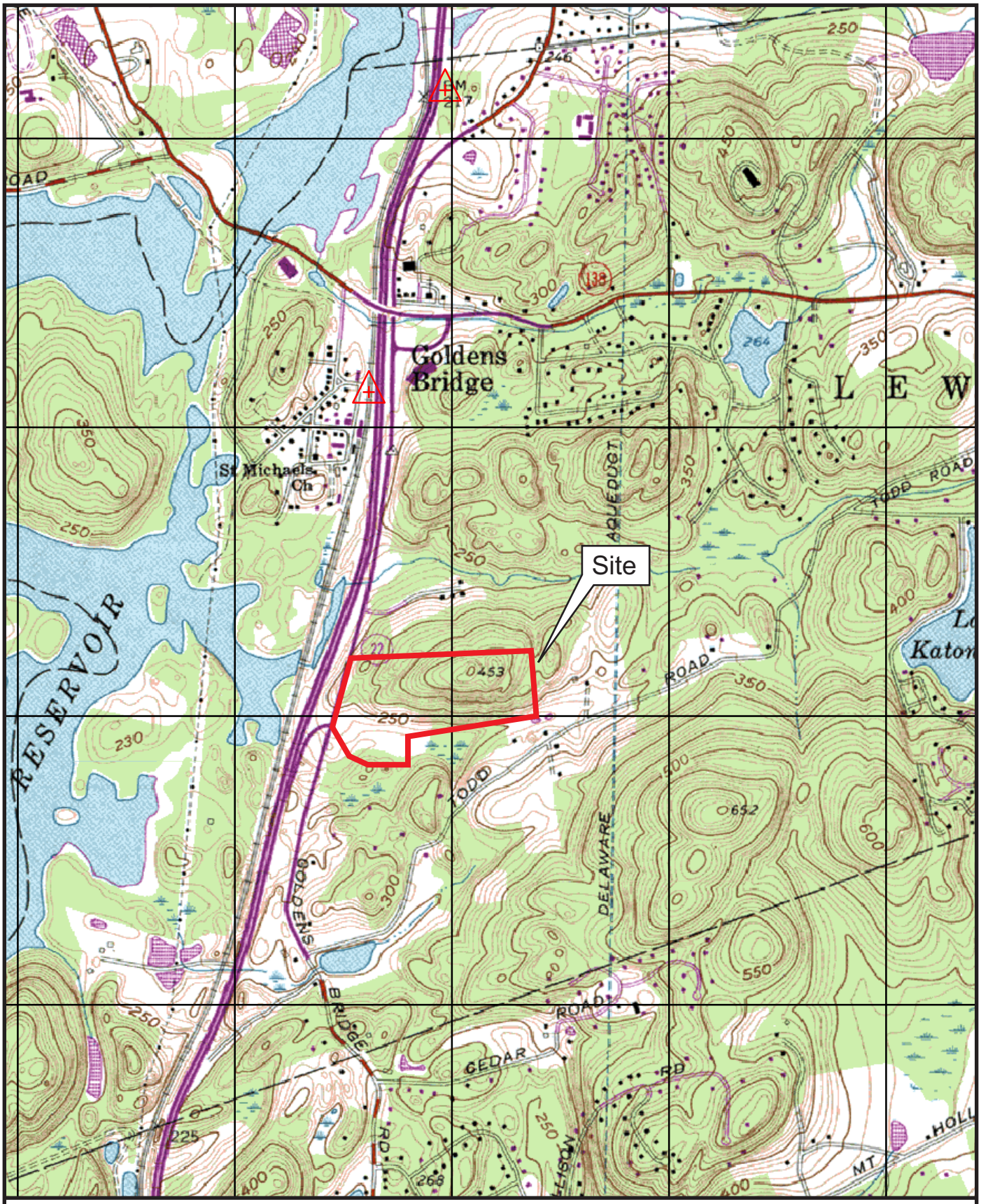

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Figure 1-1: Location Map
WB Lewisboro Affordable Housing
Town of Lewisboro, Westcheter County, New York
Base Map: Terrain Navigator
Approx. Scale: 2.6 inch = 1 mile

File 15038 02/02/16

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Figure 1-2: Aerial Photograph
WB Lewisboro Affordable Housing
Town of Lewisboro, Westchester County, New York
Source: NYS GIS Clearinghouse

File 15038 Fig 1-2 02/02/16

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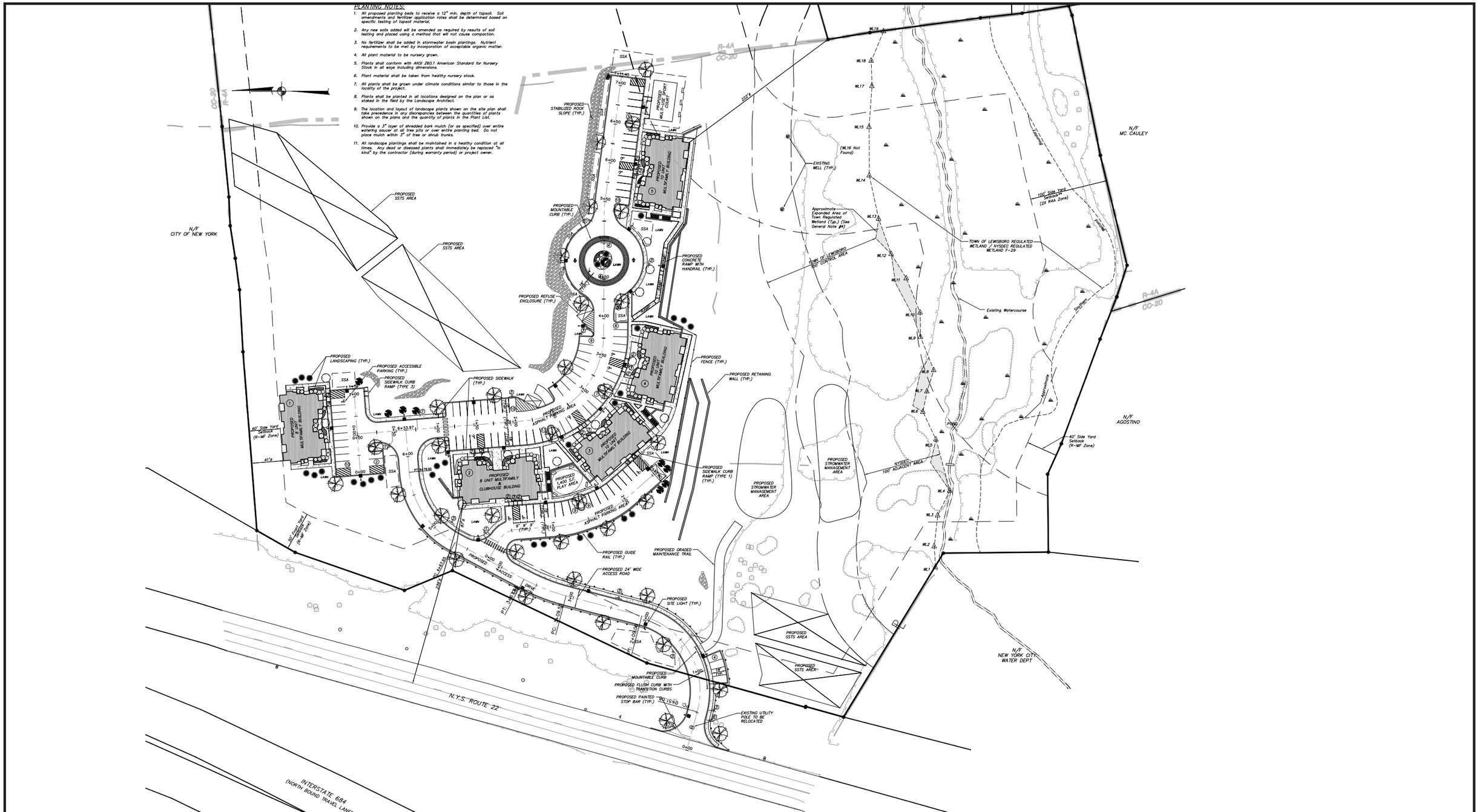

Figure 1-3: Proposed Site Plan
WB Lewisboro Affordable Housing
Town of Lewisboro, Westchester County, New York
Source: Insite Engineering, Surveying & Landscape Architecture, P.C.

File 15038 Fig 1-3 03/31/16

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3.1 SOILS, TOPOGRAPHY and GEOLOGY

Existing Conditions

The soils on the development site have been mapped by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS) of Putnam and Westchester County, New York. Soils on the property are varied and are partly controlled by the varied topography and bedrock that is shallow or exposed in portions of the site.

The eight (8) soil types mapped on-site include: Chatfield-Hollis-Rock outcrop complex (CtC and CuD), Hollis-Rock outcrop (HrF), Palms muck (Pa), Riverhead loam (RhB), Leicester loam (LcB), Chatfield-Charlton Complex (CsD), Charlton Loam (ChD), and Charlton-Chatfield Complex (CrC). The location of these soils groups on the site is shown in Figure 3.1-1, Soils Map. A summary of on-site soils, soil characteristics, depth to groundwater and depth to bedrock is provided in Table 3.1-1.

The Chatfield-Hollis-Rock outcrop complex soils (CtC and CuD) are either hilly (CuD) or rolling (CtC) and are moderately to very deep and well drained to excessively drained. Slopes range from 3 to 15 percent (CtC) and 15 to 35 percent (CuD). Depth to water is more than 6 feet throughout the year, permeability is moderate to moderately rapid, and available water capacity is very low to moderate. The depth to bedrock is typically between 10 inches and 40 inches.

The Hollis-Rock outcrop complex soils (HrF) are shallow, very steep and well drained soils with areas of rock outcrop. Slopes will range from 35 to 60 percent. Depth to water is more than 6 feet throughout the year, permeability is moderate or moderately rapid, and the available water capacity is very low. The depth to bedrock is generally between 10 to 20 inches.

The Palms muck soils (Pa) are nearly level, very deep and very poorly drained soils and consists of 16 to 51 inches of organic material. Depth to water is typically 6 inches above to 12 inches below the surface from September through June, and up to 24 inches during dry periods. Permeability is moderately slow to moderately rapid with a high water capacity. Depth to bedrock is typically more than 60 inches.

The Riverhead loam (RhB) soils are gently sloping, very deep and well drained. Slopes range from 3 to 8 percent. Depth to water is more than 6 feet throughout the year. Permeability is moderately rapid with a moderate water capacity. The depth to bedrock is typically more than 60 inches.

The Leicester loam (LcB) soils are gently sloping, very deep and somewhat poorly drained. Slopes range from 3 to 8 percent. Depth to water is typically 1.5 feet in depth from November to May. Permeability is moderate or moderately rapid with a moderate water capacity. Depth the bedrock is greater than 60 inches.

The Chatfield-Charlton complex (CsD) is a soils unit that is very deep and well drained. Slopes range from 15 to 35 percent. Depth to water is generally more than 6 feet throughout the year. Permeability is moderate to moderately rapid with a low water capacity. Depth to bedrock is typically 20 to 40 inches.

The Charlton loam (ChD) soils are moderately steep, very deep and well drained. Slopes range from 15 to 25 percent. Depth to water is 6 feet below the ground surface throughout the year.

Permeability is moderate to moderately rapid with a moderate water capacity. Depth to bedrock is more than 60 inches.

The Charlton-Chatfield complex (CrC) consists of very deep and well drained soils. Slopes range from 2 to 15 percent. Depth to water is typically 6 feet throughout the year. Permeability is moderate to moderately rapid with a low to moderate water capacity. Depth to bedrock is greater than 60 inches.

Table 3-1-1
Soil Characteristics and Limitations

Soil Series	Hydrologic Group[1]	Permeability (in./hr.)	Erosion Factor K[2]	Depth to Bedrock (inches below the ground surface)	Depth to Water (feet below the ground surface)
Chatfield-Hollis-Rock outcrop (CtC & CuD)	B/C/D	0.6-6.0 (0-24" deep)	0.20-0.32	10-40 inches	>6 feet
Hollis-Rock outcrop (HrF)	C/D	0.6-6.0 (0-16" deep)	0.24-0.32	10-20 inches	>6 feet
Palms muck (Pa)	A/D	0.2-6.0 (0-48" deep) 0.2-2.0 (48-60" deep)	0.37	>60 inches	+1-1.0 feet (November thru May)
Riverhead loam (RhB)	B	2.0-6.0 (0-30" deep) >20 (30-60" deep)	0.17-.28	>60 inches	>6 feet
Leicester loam (LcB)	C	0.6-6.0 (0-26" deep) 0.6-20.0 (26-60" deep)	0.24-0.28	>60 inches	0-1.5 feet (November thru May)
Chatfield-Charlton complex (CsD)	B	0.6-6.0 (0-60" deep)	0.20-0.24	20-40 iches	>6 feet
Charlton loam (ChD)	B	0.6-6.0 (0-60" deep)	0.24	>60 inches	>6 feet
Charlton-Chatfield complex (CrC)	B	0.6-6.0 (0-60" deep)	0.20-0.24	>60 inches	>6 feet

[1] Hydrologic groups are used to estimate runoff from precipitation; they range from high infiltration (A) to low infiltration (D).
[2] Erosion Factor K indicates susceptibility to sheet and rill erosion by water measured in tons/acre/year. K values range from 0.05 to 0.69. Higher values indicate greater susceptibility
Source: Soil Survey of Rockland County, New York, USDA SCS.

The site generally slopes from the north to the south towards the wetland in the southwestern portion or the property. Bedrock underlying the development site consists of Fordham Gneiss and Inwood Marble.

The project engineer has analyzed the existing slopes on the property. As shown in Drawing CM-1 Constraints and Net Lot Area Map, development is proposed on the more level, western

portions of the property. Existing slopes based upon slope categories are shown in Table 3.1-2 Existing Slopes.

Table 3.1-2 Existing Slopes	
0-15 %	11.6 acres
15-20%	4.1 acres
>20%	19.7 acres
Total	35.4 acres
Source: insite Engineering, Surveying, & Landscape Architecture, P.C. March 2016	

Potential Impacts

Grading is required to build the internal road network, install utilities, prepare areas for the proposed residential buildings and parking, and to create the stormwater management facilities located in the southern portion of the site. The conceptual grading is shown in Figure 3.1-2 - Conceptual Grading Plan. The site plan layout is designed to utilize the existing topography thereby minimizing the amount of earthwork necessary. Based on preliminary engineering estimates approximately 9 acres is proposed to be disturbed for the development. Exposed soils, especially in areas of steep slopes has the potential to result in soil erosion and sedimentation into areas of lower topography including wetland buffers and wetlands located in the southwest portion of the site.

A cut and fill analysis is being completed by the project engineer as the Site Plan is refined. The project engineer will endeavor to balance the cuts and fills to the greatest extent practical to minimize the need to import or export material. Re-using the on-site rock as construction fill will require on-site rock processing by a rock crusher.

Based upon analysis by the project engineer, the development will require some disturbance to slopes greater than 15 percent. Disturbance to slopes by category is provided in Table 3.1-3. Grading on steeper grades increases the potential for soil erosion, if stabilization and erosion control techniques are not properly implemented. An erosion and sediment control plan has been prepared to assure proper management of exposed soils and to minimize erosion, as further described below.

Table 3.1-3 Slope Disturbance	
0-15%	3.9 acres
15-20%	1.4 acres
>20%	3.6 acres
Total	8.9 acres
Source: Insite Engineering, Surveying, & Landscape Architecture, P.C. March 2016	

Bedrock outcrops are more prevalent in the eastern portion of the property and include a topographic ridge. Development on the eastern portion of the property is not proposed, with the possible exception of septic fields. The septic fields, as shown in the plans, would only occur on level portions of the site with sufficient soil cover above the bedrock. All major development is located on the western portion of the property. If bedrock is encountered during construction, mechanical means (i.e. ripping, chipping) would be employed first to avoid any unnecessary blasting. Based upon observation and preliminary soil testing, it is anticipated that grading for construction will require rock hammering and blasting. In limited circumstances such as

improper design or implementation, blasting has the potential to damage off-site foundations. The nearest existing off-site residences are located on Todd Road south of the property and approximately 600 feet from the proposed area of development. Blasting mitigation measures are described below.

A*voidance or Minimization of Potential Impacts* and Mitigation

Soils

As indicated, construction of the development will require the grading of approximately 9 acres of the 35.4 acre property or 25 percent. The project engineer has provided an estimate of the amount of grading required in each slope category, as shown in Table 3.1-3. As shown in the grading plan (Figure 3.1-2), grading on slopes greater than 15 percent is unavoidable, but has been minimized to the extent practical through the layout of the buildings, parking areas, driveways and septic fields.

Engineering measures such as proper design of foundations, subsurface drainage as needed, and proper designs of pavement subbase and excavated slopes can be utilized to overcome any construction limitations of the onsite soils.

A Soil Erosion and Sediment Control Plan (Drawing SP-3) has been prepared for the subject development, as part of the Stormwater Pollution Prevention Plan (SWPPP) to assure proper management of soils to minimize erosion, as further described below.

Blasting

A Blasting Permit will be obtained from the Town of Lewisboro for any required blasting, according to the Building Code (92-18 Blasting Operations).

Any necessary blasting would only be carried out in conformance with an approved Blasting Plan, specific to this project, developed between the Blasting Contractor and the Town. The Blasting Plan would include, but not be limited to the following:

- Determination of a radius of sensitive receptors to the blasting site.
- Notification of property owners within the radius of sensitive receptors. This notification would provide warning that blasting will occur and the dates it is planned to start and finish.
- Conducting pre-blasting inspections for buildings within the radius of sensitive receptors. This will be completed by the Blasting Contractor.
- Conducting post-blasting inspections of the buildings within the specified radius.
- Blasting would only be conducted during specified hours in conformance with the Town of Lewisboro Building Code (7:00 AM to 7:00 PM).

The Blasting Plan would be developed in full conformance with the Town of Lewisboro's Building Code and in accordance with New York State blasting law. A preliminary Blasting Plan is attached as Appendix H. The contractor’s Blasting Contract would be based on site specific blasting requirements, and would be submitted to the Town for approval in advance of any site work activity. In accordance with the Town Building Code, the Building Inspector shall not issue a permit for blasting unless the applicant has filed with the Building Inspector a certificate of insurance evidencing comprehensive general liability insurance.

Potential Erosion

The anticipated development includes the grading and disturbance of 9 forested acres. The area proposed to be disturbed is in the western portion of the site with more level topography minimizing disturbance to steep slopes to the extent practical. During construction, erosion control measures will be implemented to mitigate any steep slope disturbance that may occur.

A Soil Erosion and Sediment Control Plan (Drawing SP-3) has been prepared for the subject development, as part of the Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is provided in Appendix B. The Erosion and Sediment Control Plan shows the limits of disturbance and the placement of silt fencing in locations down-slope from areas of grading. The proposed stabilized construction entrance is also shown in the Plan. Drainage inlets with inlet protection will be installed in conjunction with the stormwater collection drain system.

The SWPPP has been designed to conform to applicable requirements of the New York State Department of Environmental Conservation (NYSDEC), SPDES General Permit GP-0-15-002. The Plan will be completed in accordance with New York State Department of Environmental Conservation best management practices ("BMPs") as further described below.

Best Management Practices (BMPs)

The principle objectives of the Soil Erosion and Sediment Control Plan include the following:

- divert clean surface water before it reaches the construction area;
- control erosion at its source with temporary and permanent soil protection measures;
- capture sediment-laden runoff from areas of disturbance and filter the runoff prior to discharge; and,
- decelerate and distribute storm water runoff through use of natural vegetative buffers or structural means before discharge to off-site areas.

These objectives will be achieved by utilizing a collective approach to managing runoff, i.e. Best Management Practices (BMPs). Prior to any disturbance, erosion and sediment control measures will be installed in accordance with the specifications of the Erosion Control Plan. The construction contractor will be required to install all sediment and erosion control measures and maintain them throughout the entire construction process.

Based upon the proposed erosion control measures being implemented, construction impacts will be minimized.

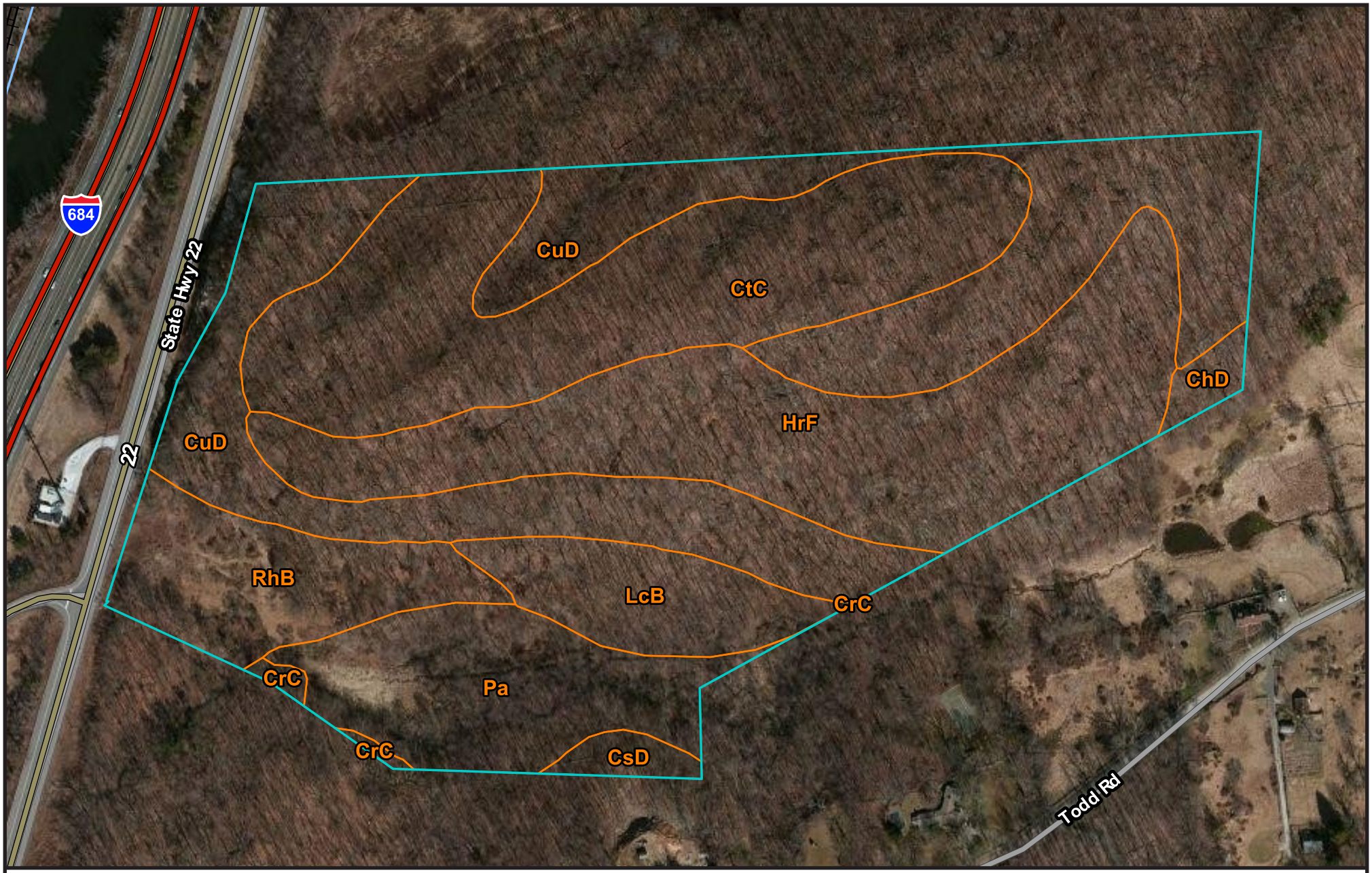

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Figure 3.1-1: Soils Map
WB Lewisboro Affordable Housing
Town of Lewisboro, Westchester County, New York
Source: Natural Resources Conservation Service

File 15038 Fig 3.1-1 02/02/16

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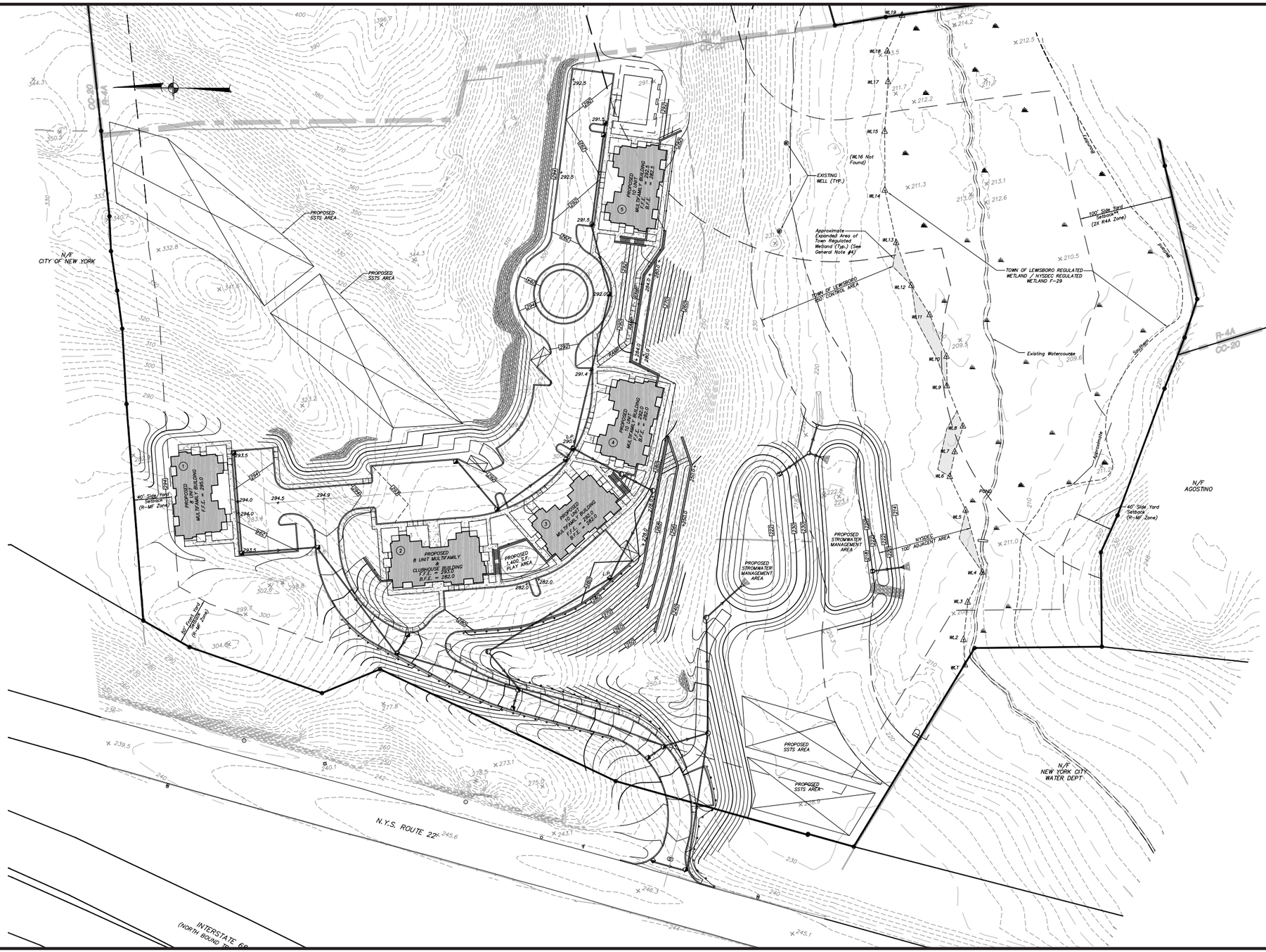

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Figure 3.1-2: Conceptual Grading Plan
WB Lewisboro Affordable Housing
Town of Lewisboro, Westchester County, New York
Source: Insite Engineering, Surveying & Landscape Architecture, P.C.

File 15038 Fig 3.1-2 03/31/16

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

3.2 IMPACT ON WATER RESOURCES

Existing Conditions

The development site is mostly wooded with second growth forest and an area of wetland located in the southwestern portion of the site. Topography on the property is varied and elevations range from about 210 feet to 450 feet. An east-west trending ridge is located in the northern portion of the property, and run-off generally drains from north to south towards the wetland. Surface water drainage flows by sheet flow from higher elevations to lower elevations on the site.

The wetland in the southwest portion of the property is mapped as a NYSDEC regulated wetland (F-29). This wetland is also regulated by the Town of Lewisboro and the US Army Corps of Engineers. According to the NYSDEC on-line database Wetland F-29 is 14.4 acres in size. Approximately 2.3 acres of this wetland is located on the subject property.

An intermittent watercourse is located in the mapped wetland and this watercourse flows towards the west under Route 22 and the eventually drains to the Muscoot Reservior located west of the property. A site walk with the New York City Department of Environmental Protection (NYCDEP) on March 9, 2016 confirmed that the on-site watercourse is not a reservoir stem. This intermittent watercourse is not designated on NYSDEC maps (NYSDEC Environmental Resource Mapper). The property contains no other streams, ponds or lakes.

The development site is in the Muscoot Watershed Basin. This Reservoir is located in the New York City East-of-Hudson Croton Watershed, where the Environmental Protection Agency (EPA) has established a Total Maximum Daily Load (TMDLs) for phosphorus. The burden for reducing current phosphorous loading to achieve the TMDL presently lies with the applicant, Town of Lewisboro and its regional partners. The program for phosphorous reduction has been established in the NYSDEC document entitled *Croton Watershed Phase II Phosphorous TMDL Nonpoint Source Implementation Plan* (TMDL Implementation Plan) dated January 14, 2009.

Potential Impacts

Stormwater run-off during construction or post-development, has the potential to affect water quality for wetlands and water courses identified on-site and may potentially affect off-site water courses. During construction, stormwater run-off has the potential to transport sediment into wetlands and water courses. The development will result in the introduction of 2.4 acres of new impervious surface to the site. Post-development, stormwater may transport sediment, salt from winter deicing and oil and grease from parking lots and driveways. Effective stormwater management, both during and following the development, will minimize these potential stormwater impacts.

Avoidance or Minimization of Potential Impacts and Mitigation

In connection to the project plans, the project engineer has prepared a preliminary Stormwater Pollution Prevention Plan (SWPPP) for the proposed development. The development will require grading, excavation and the construction of driveways, parking areas and buildings. Approximately 2.4 acres will be converted to impervious surface for the development. Mitigation for the proposed impervious surfaces resulting from the development will be provided by the proposed stormwater management practices (SMP's) described in the SWPPP. The proposed SMP's will be designed to capture and treat runoff from the impervious surfaces associated with

the proposed buildings, parking areas and access drive. A copy of the preliminary SWPPP is attached in Appendix B.

The existing drainage patterns on the site will be maintained to the maximum extent practical in the proposed condition. Stormwater treatment for the subject project will be accomplished with several practices including an extended detention dry stormwater basin, used as pretreatment practice prior to an infiltration basin. The infiltration basin and extended detention pretreatment dry stormwater basin will both be sized to capture and treat the Water Quality Volume from the contributing area of the proposed development. The stormwater runoff from the proposed development will be captured in a collection system and conveyed to the extended detention dry stormwater basin for pretreatment of the stormwater runoff, prior to discharging to the infiltration basin for final treatment.

Given the topography and natural constraints on the subject property, limited practical area was available for stormwater management practices. As shown in Figure 3.1-2 Conceptual Grading Plan, the infiltration basin and extended detention pretreatment dry stormwater basin are located partially within the Town of Lewisboro 150 foot wetland buffer and the NYSDEC 100 foot adjacent area. Approximately 7,000 sf of NYSDEC adjacent area and 14,500 sf of Town of Lewisboro buffer will be disturbed. As mitigation for this disturbance, these transition areas will receive manual removal of invasive species during basin construction that will allow the native species to regenerate and compete with the more aggressive invasive species that currently occupy this part of the site. In addition the stormwater management facilities will be planted with wetland vegetation, as further described in Section 3.5 - Impact on Ecology.

The proposed stormwater management system for the development has been designed to meet the requirements of local, city, and state stormwater ordinances and guidelines, including but not limited to those of the Town of Lewisboro, the NYSDEC, and the New York City Department of Environmental Protection (NYCDEP). Since the subject development proposes the disturbance of more than one (1) acre, coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-15-002 is required. In order to meet the requirements set forth by this permit, the latest edition of the NYSDEC *New York State Stormwater Management Design Manual* (NYSSMDM), including Chapter 10: *Enhanced Phosphorus Removal Standards* (Chapter 10), was referenced for the design of the proposed stormwater management system. Based upon NYCDEP rules and regulations in the watershed, NYCDEP review and approval of a SWPPP Approval is required for this for this project. In the opinion of the applicant, adherence to the NYSDEC, NYCDEP and Town of Lewisboro stormwater regulations and requirements will ensure that stormwater quality from the development will be maintained.

Given the above mitigation measures, it is the applicant's opinion that the proposed action will have no significant impact to on-site or off-site water resources.

3.3 IMPACT ON WETLANDS

Existing Conditions

The 36 acre subject site is a mix of wooded upland slopes and wetland/stream corridor, located between undeveloped lands to the north and east, undeveloped lands and large lot residential development along Todd Road to the south, and Route 22 and I-684 to the west. The site wetland corridor is located along the southern property line, and drains to New York City owned property to the south. The 27 acre undeveloped parcel to the north is also owned by the DEP.

Site observations were conducted by Steve Marino, PWS, of Tim Miller Associates in October and November of 2015 and January of 2016. The following description complies with Section 271-7A(5) and (6) of the Town of Lewisboro Code.

The site wetlands have been subject to disturbance over the years. Hydrology for the wetland is derived from the steep rocky slopes both north and south of the wetland, with runoff collecting at the bottom of the slopes within a relatively broad flat area. This wetland is identified as DEC Wetland F-29, and is listed as 14.4 acres total (Figure 3.3-1). It is shown as a palustirne scrub-shrub wetland on NWI mapping (Figure 3.3-2)

Soils in the wetland are best described as Palms Muck for the majority of the flatter areas (Figure 3.3-3). As noted above, the soils in the western part of the wetland have been disturbed by previous activities, and exhibit some characteristics of udorthents (i.e., previously disturbed soils). Along the northwestern part of the wetland, the soils transition into Leicester loam as the slope rises, before changing over to the Chatfield Hollis soil group on the rocky steep upland slopes.

In the relatively undisturbed portions of the wetland, the most common species are red maple (FAC), slippery elm (FAC), green ash (FACW) and occasionally pin oak (FACW). A well-developed shrub layer was not observed. Skunk cabbage (OBL), cinnamon fern (FACW), sensitive fern (FACW), Canada goldenrod (FACU) and occasional tussock sedge (OBL) were the most common native herbaceous species. Representative photos of the wetland are provided with this EAF.

However, the majority of the wetland area on site is previously disturbed, resulting in a mix of non-native and invasive species throughout the wetland and the surrounding buffers. Several impenetrable areas of *Phragmites australis* (FACW) were observed. Fox grape (FACU), multifloral rose (FACU), climbing bittersweet (UPL), garlic mustard (FACU), and Japanese barberry (FACU) were observed throughout the wetland and adjacent areas. Occasional morrow honeysuckle (FACU), tartarian honeysuckle (FACU) and brambles (FACU) were also observed. The majority of these introduced species are FACU and UPL, and are an indication of the wetland drying out over time, most likely due to the channelizing of the watercourse through the area.

A watercourse has been created (or channelized) by past site activities, which flows from east to west, then turning south at the southwest property line and onto DEP property. This watercourse derives its hydrology from the rocky, steep slopes to the north, south and east, and becomes channelized on the parcel to the east of the subject property. After leaving the site, the watercourse flows south, and presumably eventually reaches a culvert under Route 684 and to the Muscoot Reservoir. This could not be verified in the field. The watercourse is not mapped by the DEC.

Wetland/Watercourse and buffer area functions

Due to its location in the watershed, this wetland functions primarily to capture and treat stormwater runoff from the adjacent rocky hillsides before it makes its way into the stream channel and offsite. Nutrient attenuation by the wetland is high due to it dense vegetation and flat slope, which provides for a long residence time in the wetland. However, the "vegetative diversity" function is relatively low due to the high percentage of non-native species within the wetland corridor. While no wetland dependent wildlife were observed during the site inspections, it is likely that common salamanders (red-backed, slimy and two-lined) live within the wetland and its adjacent areas, and a number of bird species feed on the fruit and seeds of the various herbaceous plants. It is also possible that box turtles may utilize this corridor if they are present in the surrounding woods. The adjacent areas are less densely vegetated, due to the rocky substrate, but do function somewhat as a filter before runoff enters the wetland. Runoff is rapid, due to the rocky soils, but is also aerated as it flows over the rocks down the slope.

Impacts

No direct impacts to Town or DEC regulated wetlands is proposed. One of the two stormwater management areas is proposed to be constructed partially within the 100 DEC adjacent area and entirely within the Town 150 foot control area. Of necessity these basins will be located within DEC and Town of Lewisboro buffer areas. Approximately 7,000 sf of DEC adjacent area and 14,500 sf of Town of Lewisboro buffer will be disturbed. No buildings, parking or other impervious surfaces will be placed within the adjacent area.

In order to minimize site grading and take advantage of site topography, the basins must be located in the flattest portion of the site that is downgradient of the development areas. There is such an area available on the northern side of the flagged wetland, and the project engineer has developed plans that use this area while minimizing disturbance to the adjacent area. The chosen location is part of the previously disturbed buffer area, which is dominated by opportunistic volunteer species (primarily Canada goldenrod and multifloral rose), so that vegetative impacts will be minimized as well.

No grading or other activities will occur within the wetland, but will of necessity be near the wetland. The New York City DEP's interpretation of the Watershed Rules and Regulations results in a redundant stormwater treatment program, requiring two basins on the current design and sufficient capacity to capture the regulated runoff volumes.

Mitigation

The stormwater management basins will be planted with wetland vegetation (both woody and herbaceous) and overseeded with seed mixes appropriate for the transitional nature of the hydrology associated with storm basins. Additionally, a program of wetland and buffer restoration is proposed for transition areas immediately bordering the stormwater basin construction disturbance area. As mitigation for this disturbance, these transition areas will receive manual removal of invasive species during basin construction that will allow the native species to regenerate and compete with the more aggressive invasive species that currently occupy this part of the site. A detailed plan, showing the areas to be treated, details of the methodology and plants to be installed is included with this EAF (See Appendix I).

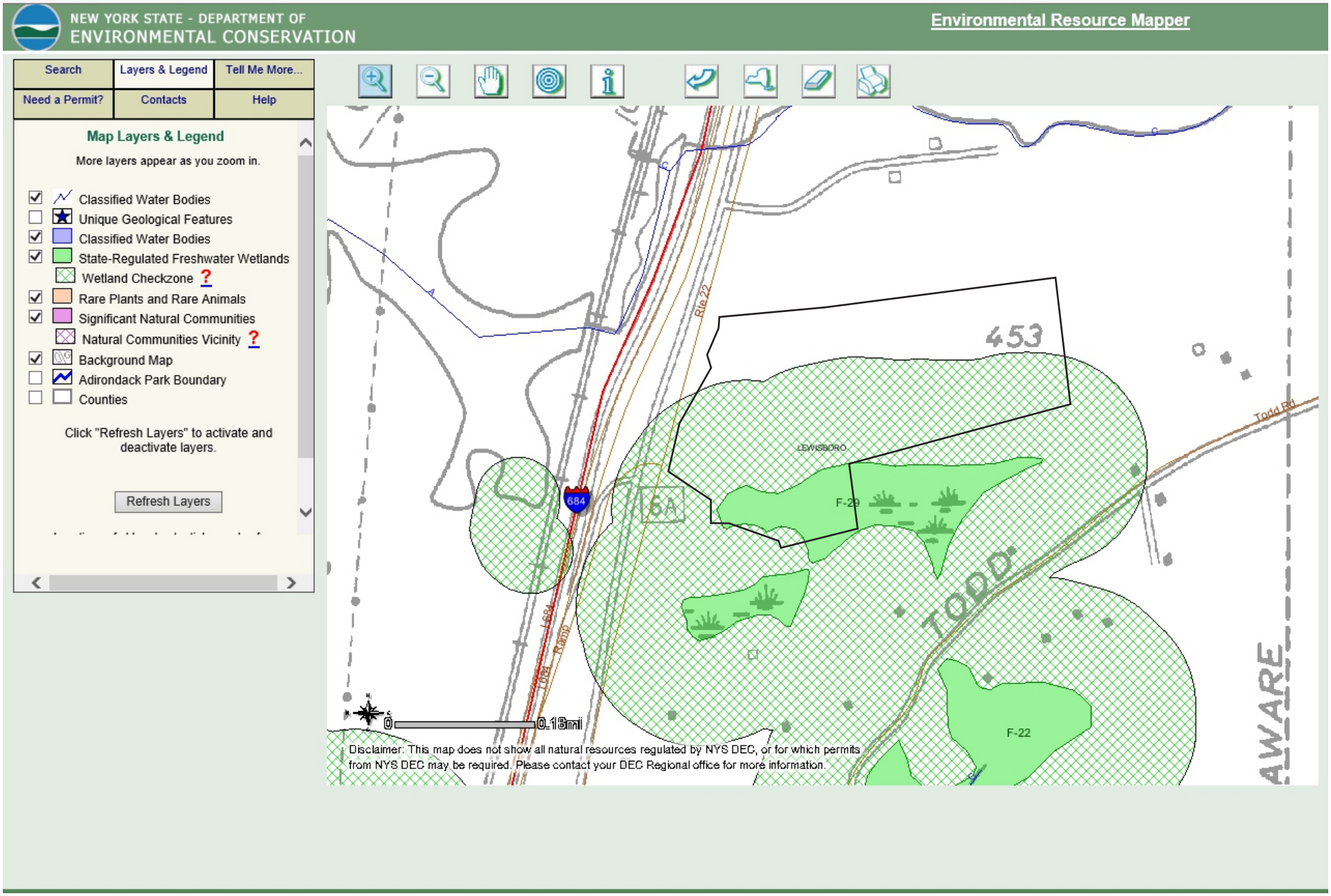


Figure 3.3-1 DEC Mapping
WB Lewisboro Affordable Housing
Source: NYSDEC

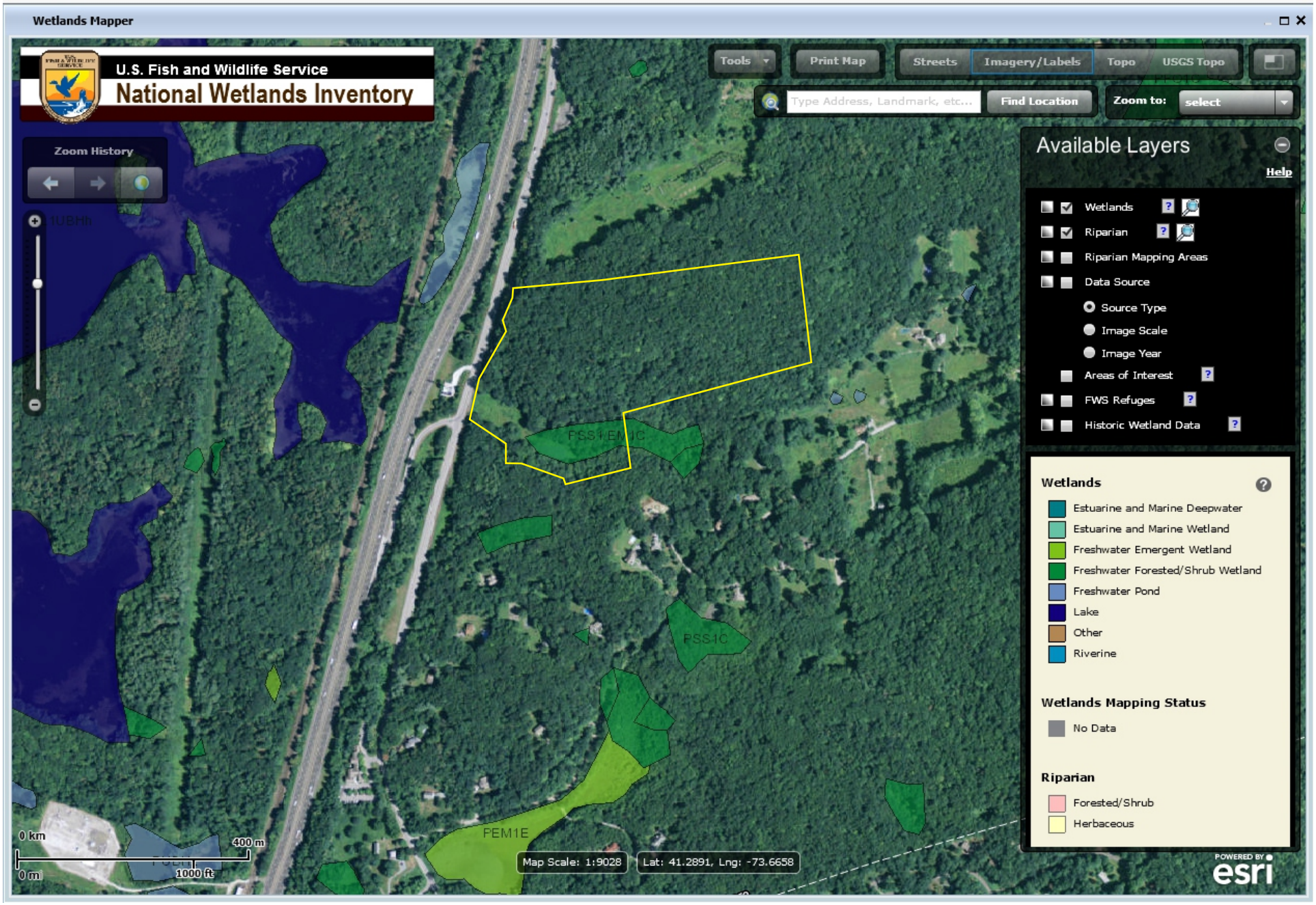
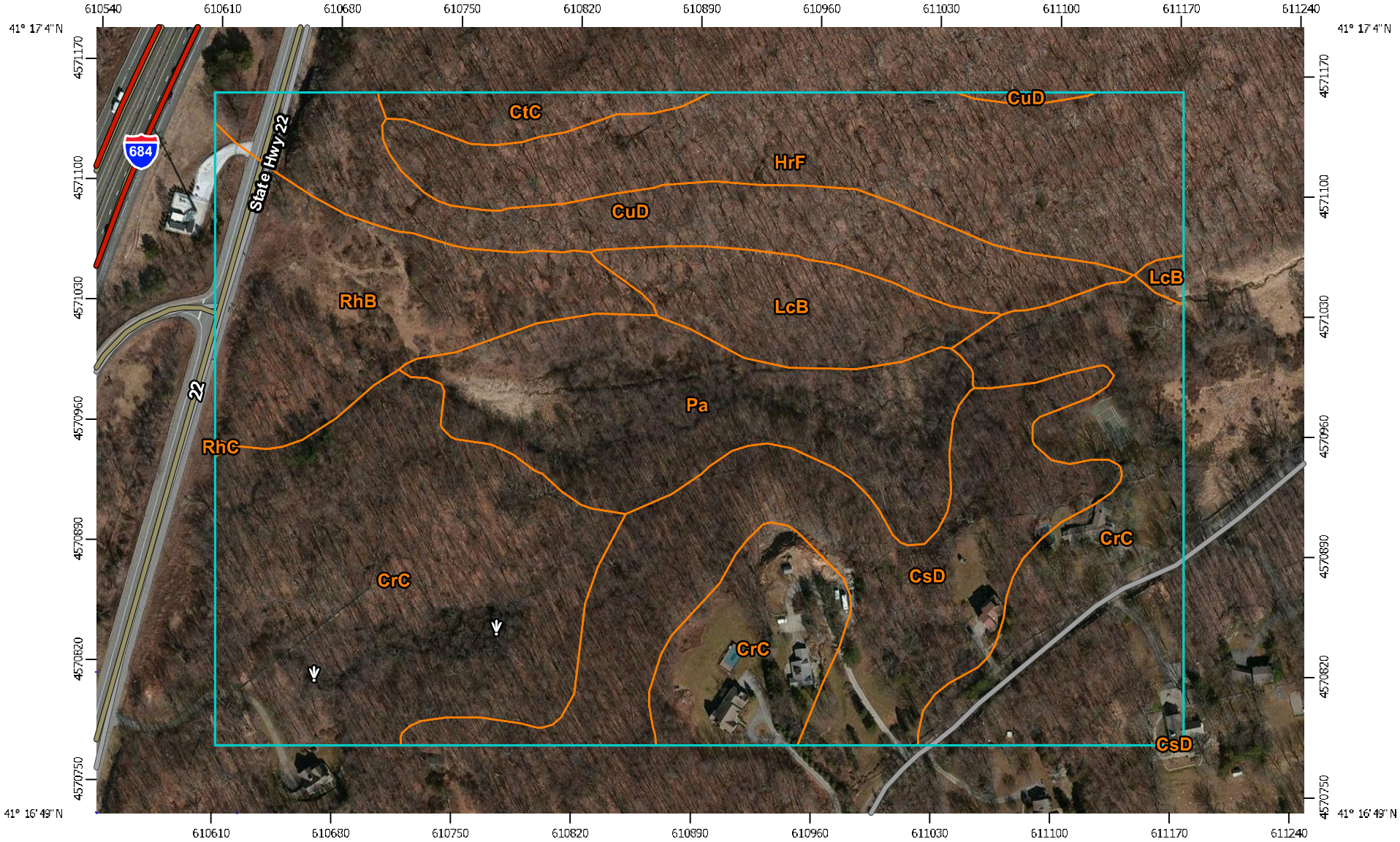


Figure 3.3-2 National Wetland Inventory Mapping
WB Lewisboro Affordable Housing
Source: USFWS

Soil Map—Westchester County, New York



Map Scale: 1:3,220 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 45 90 180 270

Feet: 0 150 300 600 900

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

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

Figure 3.3-3 Soil Survey
WB Lewisboro Affordable Housing
Source: USDA NRCS

3.4 IMPACT ON GROUNDWATER RESOURCES

Existing Conditions

The development site is located in a rural suburban setting with surrounding properties a mix of undeveloped wooded land and low density residential properties. The property is approximately 35.4 acres in size and located on the east side of NYS Route 22 and Interstate 684 which lie directly west of the site.

Topography on the property is varied and elevations range from about 210 feet to 450 feet. A east-west trending ridge is located in the northern portion of the property, and an area of wetland is located in the southwest corner of the site adjacent to Route 22. Approximately 67 percent of the property (23.8 acres) contain steep slopes (15 percent or greater) and bedrock is exposed or near surface in much of the northern portion of the property.

A hydrogeologic assessment has been completed for the property by Leggette Brashears & Graham, Inc. (LBG) and is provided in Appendix E. The technical information provided below summarizes the LBG hydrogeologic assessment.

Surficial Geology

The subject property is underlain by glacial till with areas of bedrock at or near the surface. Glacial till is composed of unsorted and non-stratified sediments deposited by glacial activity. These sediments contain variable proportions of clay, silt, sand, gravel and boulders. Till is usually not suitable for wells and water supply since the unsorted material does not readily transmit water. No sand and gravel deposits are mapped in the vicinity of the property. A map of the surficial material for the study area is provided in Appendix E, Figure 2.

Bedrock Geology

Bedrock underlying the development site is mapped as Inwood Marble on the northern portion and Fordam Gneiss on the central and southern portions. A map showing the distribution of bedrock types is shown in Appendix E - Figure 3. Inwood marble consists of white to whitish grey calcite and dolomite marble. In general, marble formations exhibit similar characteristics to other carbonate rocks, but have fewer solution cavities. Marble bedrock is susceptible to weathering and under deformational stress forms numerous open fractures. Groundwater is contained in the interconnected fractures, joints and secondary openings.

Fordam Gneiss consists of undifferentiated gneiss bedrock units. Gneiss is a metamorphic rock that typically appears layered with light and dark minerals. Gneiss bedrock is highly resistant to weathering and erosion and therefore forms the varied topography and ridges where it is found. Groundwater is found in secondary fractures, joint systems and weathered zones in gneiss bedrock.

A fracture trace analysis was conducted for the study area to identify potential areas that have to potential to develop bedrock wells with higher than average yields. A fracture trace map includes the delineation of faults, fracture trace joint systems, old or buried stream courses. These surface features often identify areas of subsurface fractures and weathering that provided favorable well locations for productive well yields. The fracture trace map is provided in Appendix E, Figure 3.

Precipitation Recharge

A recharge analysis provides a comparison of the natural precipitation recharge for a given property compared to the estimated water demand for proposed development. This analysis can determine if a property is self sufficient with regard to precipitation available to supply groundwater, or whether proposed water demand exceeds the available recharge. If on-site recharge meets or exceeds the proposed demand, the water supply should be reliable and not adversely affect the aquifer in off-site areas. Although recharge analysis or water-budget analysis, is useful in estimating available groundwater, drilling and pump-testing wells is the only definitive indicator of groundwater availability and method to identify potential off-site impacts. Bedrock fractures and the nature of the bedrock underlying a given property greatly affects groundwater availability and potential off-site impacts.

Groundwater recharge is generally related to precipitation, but the amount of rain-fall that reaches the aquifer and becomes groundwater is difficult to measure. Groundwater recharge occurs as a portion of overall precipitation infiltrates soil and bedrock fractures to reach the bedrock aquifer. Records for nearby Westchester County airport, in White Plains, NY report an annual rainfall of 50.45 inches. Approximately one-half of this amount is lost to run-off and the transpiration process. Recharge to till-covered metamorphic bedrock is estimated to be approximately 7 inches annually (Mazzaferro et.al., 1979)[1] or about 520 gpd/acre (gallons per day per acre). This estimate provides approximately 18,300 gpd for the 35.4 acre site, which greatly exceeds the estimated water demand for the development of 1,350 gpd.

Existing Wells

Two wells were drilled on the subject property in March 1987 by P.F. Beal and Sons. Inc. The wells were installed for a previously proposed site plan application for the property that was never developed beyond well installation. Based upon preliminary estimates those wells yield approximately 5 gpm each or 10 gpm total. The combined yield of the two wells would be approximately 14,400 gpd. The existing wells will require testing to confirm actual sustainable yields and any potential impacts to off-site water supplies.

Potential Impacts

Development Water Demand

The proposed development will require an estimated water demand of approximately 9,000 gallons per day (gpd), or 6.25 gallons per minute (gpm) based upon bedroom counts and engineering estimates (see Appendix C - Engineers Water Report). NYS Department of Health standards require new water supply systems to provide twice the average daily water demand with the best well out of service. To meet this requirement, on-site wells would need to provide a combined rate of 12.5 gpm (18,000 gpd), with the best well out of service.

The use of subsurface wastewater disposal would return approximately 85 percent of the withdrawn water back to the groundwater. This would reduce the consumptive water use by the development to 1,350 gpd.

The bedrock groundwater recharge estimate for the 35.4 acre property is 18,330 gallons per day (gpd) under normal precipitation conditions and 13,000 gpd under one-year-in-thirty drought

[1] Mazzaferro, D., E. Handman, and M. Thomas. 1979. Water Resource Inventory of Connecticut, Part 8, Quinnipiac River Basin, CT Water Resource Bulletin, 27.

conditions. The estimated recharge under both normal and drought conditions is more than sufficient to support the estimated consumptive demand of 1,350 gpd for the proposed development.

As indicated, the two existing on-site wells have a combined estimated yield of 10 gpm. An additional one to two new wells (three to four wells total) will be necessary to produce the developments water demand of 12.5 gpm with the best well out of service. For the development of a new water supply, the NYS Health Department requires the demonstration of a stabilized yield of 5 gpm or greater, regardless of the development's water demand.

In addition, public water supplies must also comply with minimum separation distances from potential contamination sources identified in Appendix 5-D of the NYSDOH sanitary code. The required minimum separation distance to protect public water supply wells from contamination is 200 feet for absorption fields and for stormwater infiltration basins (treating stormwater from driveways and parking lots).

Based upon LBG's hydrogeologic assessment of the development site and environs, wells drilled at geologically favorable locations (i.e. Fracture trace liniations) will likely yield water in the range of 5 to 10 gpm.

The relatively low average water withdrawal for the proposed development of 9,000 gpd (6.25 gpm) indicates a low likelihood of significant mutual interference between the on-site wells and existing nearby off-site wells. The closest nearby wells are approximately 600 feet from the on-site wells. These include existing homes on Todd Road south and southeast of the subject site. However, the drilling and pump testing of the proposed wells is the only definitive indicator of groundwater availability and any potential impacts to neighboring water supplies.

Avoidance and Minimization of Potential Impacts or Mitigation

As described above, the relatively low average water withdrawal for the development indicates a low likelihood of significant mutual interference between on-site wells and existing nearby off-site wells. The drilling and pump testing of the proposed supply wells will provide definitive information regarding groundwater availability and potential impacts to neighboring wells.

In order to address the unlikely event that an impact to a neighboring well occurs that would potentially require mitigation, a draft Complaint Response and Mitigation Plan has been prepared (see Appendix E Hydrogeologic Assessment and Mitigation Plan). The Plan provides a process for off-site well owners to file a complaint to the applicant and for the complaint to be promptly investigated. If the complaint is found to be valid, remedies will be provided to the private well owner, fully paid for by the applicant. Remedies may include lowering a well pump, replacing a well pump, deepening a well, redeveloping a well or replacing a well. The draft Complaint Response and Mitigation Plan will be finalized in consultation with the Planning Board.

3.5 IMPACT ON ECOLOGY

Existing Conditions

The 36 acre subject site is a mix of wooded upland slopes and wetland/stream corridor, located between undeveloped lands to the north and east, undeveloped lands and large lot residential development along Todd Road to the south, and Route 22 and I-684 to the west. The site wetland corridor is located along the southern property line, and drains to New York City owned property to the south. The 27 acre undeveloped parcel to the north is also owned by the DEP.

Vegetation

Site observations were conducted by natural resource staff of Tim Miller Associates in October and November of 2015 and January of 2016. The following conditions were noted.

The site slopes downward from east to west, with steep slopes downward toward the wetland corridor along the southern border of the site. leveling off at the central stream corridor. The upland areas of the project site are predominately wooded with tree and shrub species typical of a Northern Hardwood Forest community in a rocky substrate (Figure 3.4-1). Vegetation on the site is characterized as second growth woodlands including sugar maple, red oak, white oak, white ash, and various birches. Beech, tulip poplar and black cherry were occasionally observed. The shrub and herbaceous layer are sparse due to heavy deer grazing. Where there are groundcovers Christmas fern and Pennsylvania sedge are the most common.

Historically, the majority of the site has remained wooded since the 1940's, probably due to the rocky topography. Those areas closest to Route 22 are shown as open pasture in the 1947 aerial, and it is likely that some logging occurred through the 1960's. See Figures 3.4-2 and 3.4-3.

The site wetlands have been subject to disturbance over the years, as indicated in the aerial photograph from 1947. That photograph shows hedgerows and rock walls through the wetland area and the wetland cleared of trees. Hydrology for the wetland is derived from the steep slopes both north and south of the wetland, with runoff collecting at the bottom of the slopes within a relatively broad flat area. This wetland is identified as DEC Wetland F-29, and is listed as 14.4 acres total. A watercourse has been created by past site activities, which flows from east to west, then turning south at the southwest property line and onto DEP property.

In the relatively undisturbed portions of the wetland, the most common species are red maple, slippery elm, green ash and occasionally pin oak. A well-developed shrub layer was not observed. Skunk cabbage, cinnamon fern, sensitive fern, Canada goldenrod and occasional tussock sedge were the most common native herbaceous species.

However, the majority of the wetland area on site is previously disturbed, resulting in a mix of non-native and invasive species throughout the wetland and the surrounding buffers. Several impenetrable areas of *Phragmites australis* were observed. Fox grape, multifloral rose, climbing bittersweet, garlic mustard, and Japanese barberry were observed throughout the wetland and adjacent areas. Occasional morrow honeysuckle, tartarian honeysuckle and brambles were also observed.

Wildlife

The wooded slopes on the north part of the site provides habitat for some of the more common species in the area, including white-tailed deer, raccoon, eastern gray squirrel, striped skunk, red fox and opossum. These species are likely to move back and forth through the wetland and upland areas. The overall quality of the wildlife habitat for less common species is compromised by the absence of understory and herbaceous layers and diversity of habitat available. However, undeveloped lands to the north and south do present opportunities for wildlife movement, and it is likely that coyote, rodents, some snake species and a variety of birds move through the area.

The level of past site disturbance in the wetland is reflected in the habitat potential and number of species that are expected to be observed on these parcels. Green frogs, spring peepers, wood frogs, American toads and other small mobile species may utilize the wetland system. Some of the smaller bird species (wrens, sparrows, bluebirds) likely feed on the seeds of the grasses and wildflowers that are found on the site.

There are no known listed rare or threatened plant species on the site. The NYSDEC Environmental Resource Mapper did not identify the possible existence of a sensitive species in the immediate site vicinity (see attached Figure 3.4-4). However, NYSDEC Natural Heritage did notify the applicant about a record of a bog turtle *(Glyptemys muhlenbegii)* being seen south of the site near Todd Road in 1978. Bog turtles are considered to be extirpated from Westchester County, and as Natural Heritage puts it, “there is uncertainty regarding their continued presence” (see attached letter from Natural Heritage Program). However, the bog turtle was unlikely to come from the site wetland, which is generally a wooded wetland and does not meet the typical habitat criteria for this species.

Potential Impacts

Vegetation

The current plans call for the disturbance of approximately 9 acres of the 35.4 acre site for the construction of the new residences, parking facilities and stormwater management basins. Most of these facilities will be located within the higher elevations of the site, with the exception of the stormwater basins. These will be located out of necessity at the lower elevations closer to the wetland. The location of the stormwater facilities have been laid out at flattest available parts of the hillside slopes and parallel to the topography to the extent practicable. Of necessity these basins will be located within DEC and Town of Lewisboro buffer areas. Approximately 7,000 sf of DEC adjacent area and 14,500 sf of Town of Lewisboro buffer will be disturbed.

Wildlife

The site does not contain areas of significant or unusual wildlife habitat that would be impacted by the development project, and the project itself affects nine of the 35.4 acres available. The loss of 9 acres of upland and wetland buffer habitat is an unavoidable impact to develop the affordable residential community. The development will retain approximately 75 percent of the existing vegetation and wildlife habitat.

Avoidance or Minimization of Potential Impacts and Mitigation

With the preservation of the 18 acre eastern parcel as conservation land, and the undisturbed portions of the two western parcels (another eight acres), in the opinion of the applicant, the development will not result in adverse environmental impacts to ecologically significant or unusual vegetation.

The proposed plan incorporates a landscape program for all areas disturbed by construction around the perimeter of the buildings and parking lots. Any disturbed side slopes below the development on the south side will be seeded with a restoration mix of quick germinating grass cover crop and herbaceous perennials to establish vegetative stabilization of the soil. Additionally, the mix used for the slopes will include seed for native grass and woody species that produce berries and seeds that will provide a food source for a greater diversity of animal species.

The stormwater management basins will be planted with wetland vegetation (both woody and herbaceous) and overseeded with seed mixes appropriate for the transitional nature of the hydrology associated with storm basins. Additionally, a program of wetland and buffer restoration is proposed for transition areas immediately bordering the stormwater basin construction disturbance area. As mitigation for this disturbance, these transition areas will receive manual removal of invasive species during basin construction that will allow the native species to regenerate and compete with the more aggressive invasive species that currently occupy this part of the site. The wetland mitigation plan is provided in Appendix I.

In the opinion of the applicant, enhancement of the existing wetland and adjacent areas will provide an opportunity for the restoration of a more diverse and native vegetation community to that portion of the site, which will benefit a wider diversity of animal species, particularly birds.

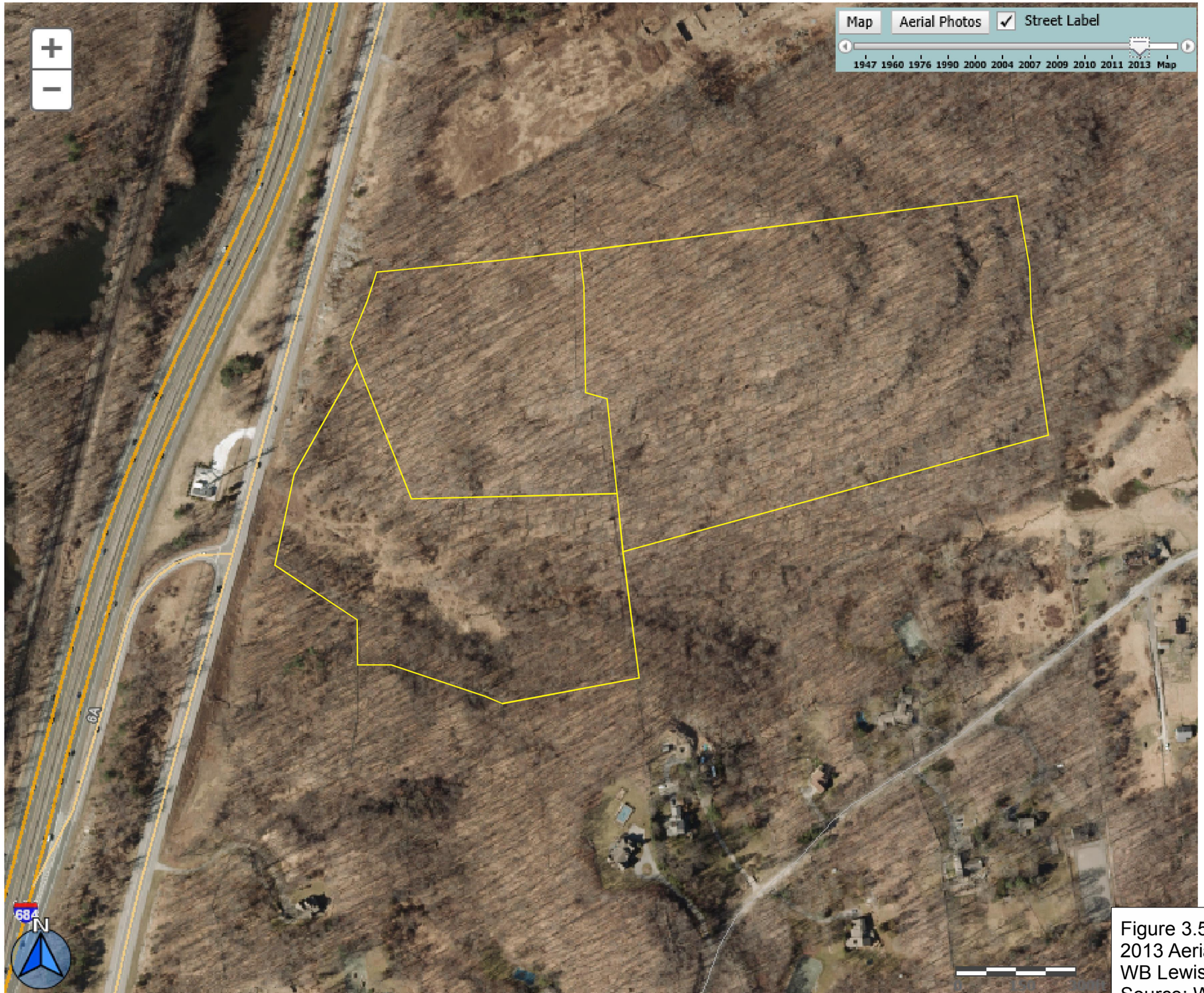


Figure 3.5-1
2013 Aerial Photo
WB Lewisboro Affordable Housing
Source: Westchester County GIS

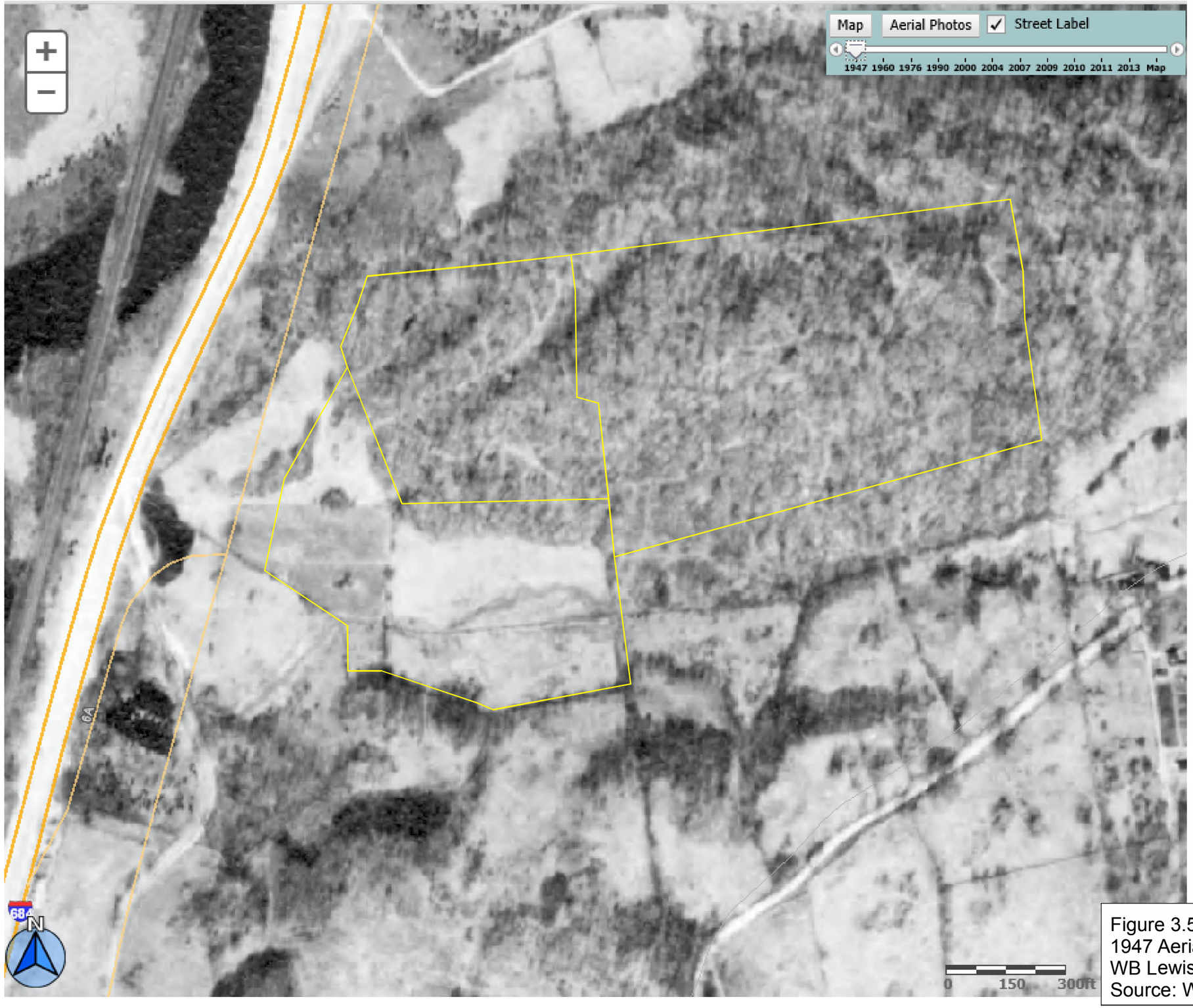


Figure 3.5-2
1947 Aerial Photo
WB Lewisboro Affordable Housing
Source: Westchester County GIS

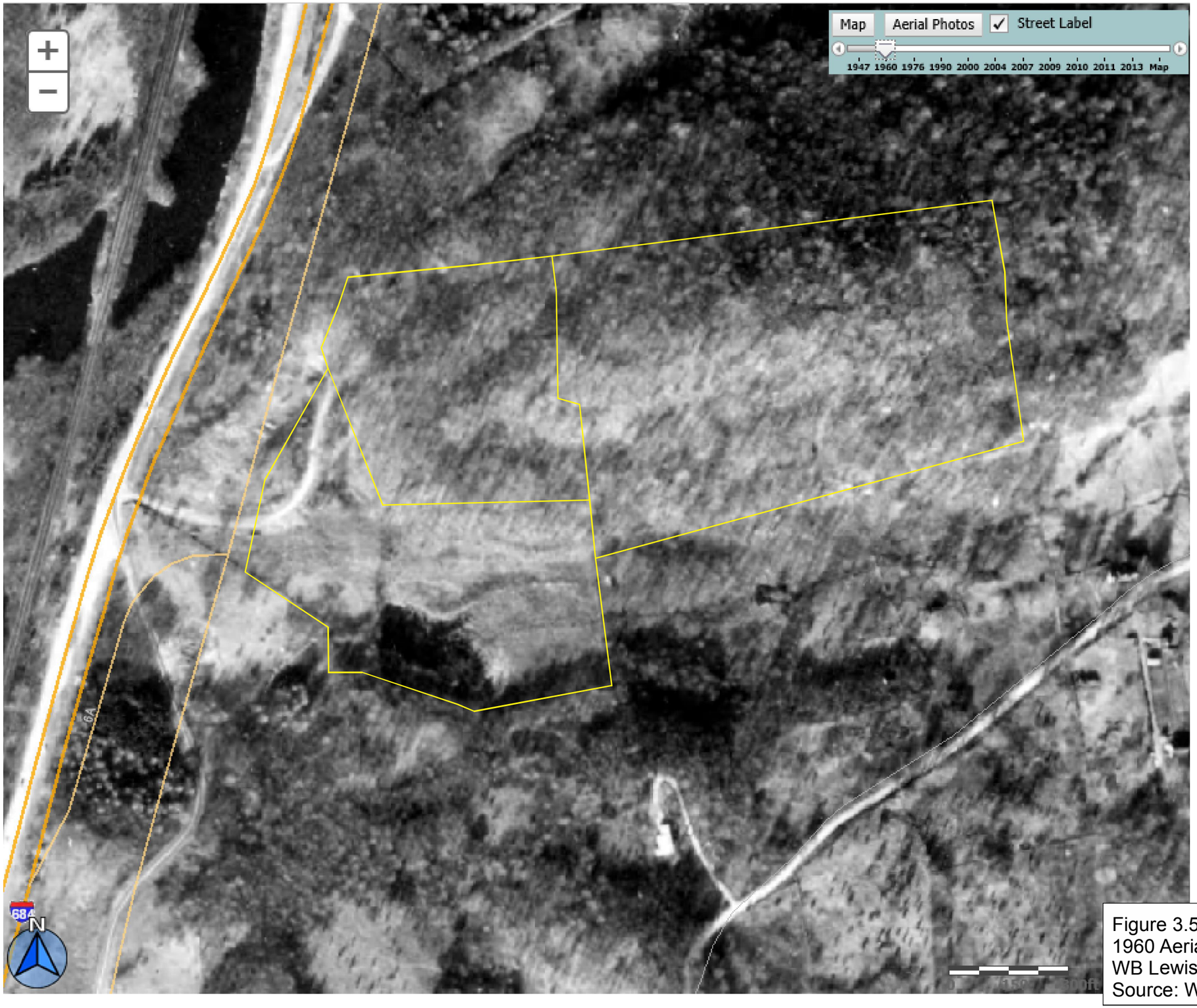


Figure 3.5-3
1960 Aerial Photo
WB Lewisboro Affordable Housing
Source: Westchester County GIS

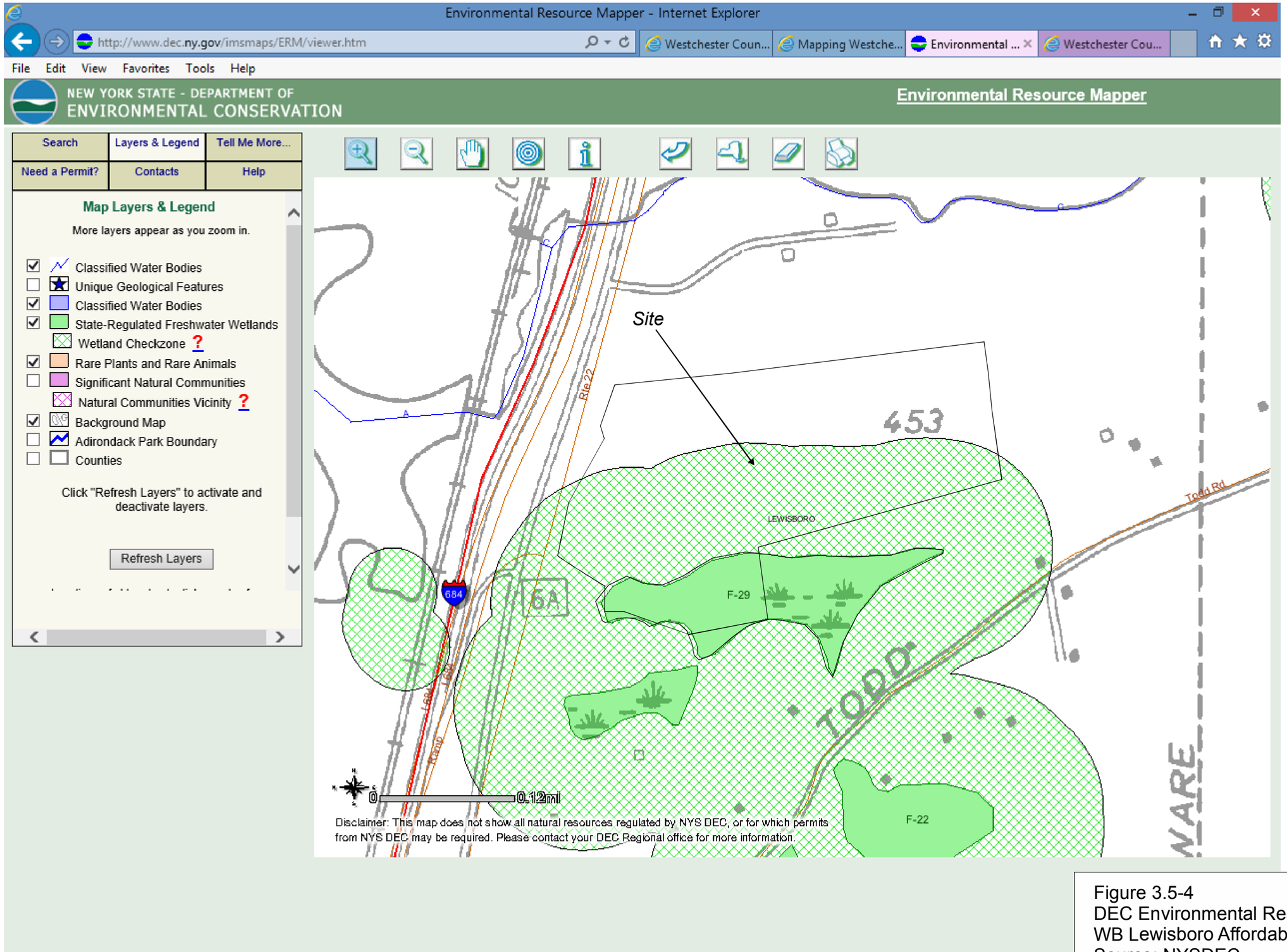


Figure 3.5-4
DEC Environmental Resource Mapper
WB Lewisboro Affordable Housing
Source: NYSDEC

3.6 IMPACT ON AESTHETIC RESOURCES

Existing Conditions

Development Site Location - Visual Context

The setting in which the development site is situated consists of a mix of land uses -- commercial development to the north (including North County Shopping Center, aka Goldens Bridge Village Center), a major regional transportation corridor immediately to the west (NY State Route 22, Interstate Route 684 and the Metro-North railroad), single family residences on relatively large lots to the south, and wooded, undeveloped land and open water of the Croton reservoir system in much of the surrounding area. Figure 1-2 shows the site vicinity in a recent aerial photograph; Figure 3.6-1 shows the site on a topographic map.

The visual character of the immediate site vicinity is dominated by the Route 22 / I-684 transportation corridor including Exit 6A for Goldens Bridge, which meets Route 22 opposite the site. Route 22 and I-684 follow a winding north/south route in very undulating and irregular topography that has many small hills and narrow valleys and dense woodland cover that characterizes the rural feel of Lewisboro.

The site is a topographic knoll, rising some 200 feet above the road elevation, similar to numerous other knolls in the area. The site is almost entirely wooded with the exception of a rock outcrop exposed by the construction of Route 22. The trees are up to 55+ feet tall, predominantly deciduous, with moderately dense understory vegetation. The sizable rock outcrop provides a visual feature along the property frontage. While not prominent in the landscape of the street corridor, it provides a reminder of the nature of the Lewisboro landscape.

The visual experience for someone traveling in the road corridor in the site vicinity is a mix of single family residential lots, commercial development of varying sizes, and wooded open space. Buildings are visible, in many instances partially obscured, amongst the extensive woodland cover (evident in Figure 1-2), particularly for users of Route 22. In the immediate site area, the corridor is visually dominated by I-684. There are no provisions for pedestrian traffic in the corridor and incidental use by bicyclists was observed on Route 22.

The potential for views of the subject site were reviewed during a site area visit in January 2016. Key study views were identified within approximately one-half mile of the site. Views toward the site from publicly accessible locations are depicted in photographs presented in Figures 3.6-2 through 3.6-6. The limits of the possible view of the site are indicated in the figures. A key to the locations of the view points is shown in Figure 3.6-1. A ±125 foot high cell tower located on the opposite side of Route 22 from the subject property provides a landmark in the photographs. The study area views are:

- The street corridor within about one-half mile, which is primarily experienced by motorists passing the site on I-684 at highway speed or on Route 22 at varying speeds. Views 1A and 1B from southbound and northbound I-684, respectively, were investigated. These views are partially obscured by intervening vegetation and diminished by the speed of travel. These views are further obstructed during the warmer months when leaves are on the trees. Figure 3.6-2 shows existing views 1A and 1B looking toward the subject site from I-684 southbound and northbound. View 1A is interrupted as the driver passes under the bridge and quickly disappears behind intervening vegetation as one travels south. Likewise, the

mid-distance view toward the site (View 1B) for drivers approaching the Goldens Bridge exit quickly disappears behind intervening roadside vegetation.

- Views 2A and 2B from northbound and southbound Route 22, respectively, were found to reveal visibility of the development site for motorists approaching the site. Figure 3.6-3 shows these existing views from Route 22 northbound and southbound. There is roadside vegetation that interrupts or obscures portions of the view as a driver approaches the site from either vantage point.
- The Exit 6A ramp from I-684 northbound meets Route 22 opposite the site at a Stop sign. Thus, there is a stationary view (View 3) in close proximity of the site frontage and looking into the western portion of the site, as experienced by drivers while they negotiate a right or left turn onto Route 22. Figure 3.6-4 shows a wide-angle view from this location in winter. The site rises above the road and, being a topographic knoll, much of the site is hidden from view due to the topography and intervening vegetation. During the winter months it is possible to see into the site several hundred feet amongst the tree trunks; when leaves are on the trees views into the site are largely obscured. *View 3 will provide the greatest visual exposure of the site from any of the identified vantage points.*
- Figure 3.6-5 shows Views 4A and 4B from the ramp from Route 138 to Route 22, looking south, and from the top of the Route 138 ramp onto I-684 southbound, respectively. View 4A may be briefly experienced by drivers while they negotiate the turn onto southbound Route 22. View 4B may be experienced by drivers for a brief moment after they negotiate the turn from Route 138 onto the southbound ramp. The view from this viewpoint quickly vanishes as the driver descends the ramp and enters I-684.
- Views toward the site from Todd Road (south of the site) were investigated. Due to the intervening topography of Todd Road properties, view of the subject site from publicly accessible vantage points on the road is limited to a partial view beyond the intervening trees from one location in the vicinity of #35 Todd Road, the Bedford Audubon Society property. This is identified as View 5. Figure 3.6-6 shows a wide-angle view from this location, looking westward through the intervening trees.

There are no formally designated aesthetic resources or scenic vantage points sensitive to visual change in the viewshed of the subject site. Given the topography and dense tree cover of the site area, there is limited view of the development site from surrounding roads and there is no location in the study area that would afford a view of the entire site, based on site area reconnaissance undertaken in January 2016 along I-684, Route 22, Route 138, and Todd Road and at Goldens Bridge train station.

The Code of the Town of Lewisboro includes mention of aesthetics, most pointedly in §220-1 Zoning, Statement of Purpose: “To preserve the natural beauty of the physiography of the Town; to protect the Town against unsightly, obtrusive and obnoxious land uses and operations; to enhance the aesthetic aspect of the natural and man-made elements of the Town; and to ensure appropriate development with regard to those elements.”

Potential Impacts

To utilize the site in accordance with current zoning and a site-sensitive affordable housing plan, the proposed development will remove trees from the western portion of the site and small pockets in the interior of the site, create an opening in the tree canopy on the middle elevations of the site, and create an opening on Route 22 for a driveway, while preserving the existing tree cover on most of the property. Given its topographic position and the density of woodland cover

around it, this clearing is not expected to be startling, visually prominent, nor out of character from the surrounding landscape.

The proposed buildings will be placed along the contour on the southwest-facing slopes of the knoll on the site. The 2-story buildings will be lower in elevation than the existing tree tops that will remain, thereby avoiding any direct or prominent visual exposure of the development from offsite. There will also be four SSTS areas cleared in the rear of the property (located where suitable soils are found), covering small areas of one-quarter to one-half acre in size. These areas are proposed to be replanted with a low growing conservation mix.

Site Profile Figure 3.6-7 shows a profile of the post-development ground line and tree line taken through the site, through the center of the proposed development area and one of the SSTS clearings. An enlarged version of this profile is depicted in Figure 3.6-7E. (See Figure 3.6-1 showing the location of the profile line.) The Site Profile figure shows the line of sight for a person in a vehicle stopped on the Exit 6A Stop sign at Route 22, facing the subject property -- View 3 depicted in the existing condition photograph in Figure 3.6-4. As identified above, this vantage point *would provide the most visual exposure of the proposed development from any of the identified vantage points*.

Views On the Street Corridor and From Study Vantage Points

The development will open a view into the subject property via the new entrance driveway on Route 22. (See the Conceptual Grading Plan, Figure 3.1-2.) Tree clearing will occur where the proposed driveway will access the site and climb the west side of the knoll, leaving a strip of existing trees along the driveway and atop the rock outcrop that faces Route 22. The driveway will be seen from the Exit 6A Stop sign and from vehicles traveling north past the site on Route 22. Vehicles traveling south past the site will see the driveway intersection on Route 22, and the entrance area landscaping. South of the driveway, an SSTS area is proposed in an area that already has low growing vegetation, and further into the site stormwater management basins are proposed. These areas will be situated some 15 to over 20 feet below the elevation of the road, virtually out of sight from the public.

Mitigation Measures

The streetscape character of the property frontage along Route 22 will not be adversely changed by the development; the proposed driveway entrance will be the only disturbance of existing vegetation on the frontage, which will receive appropriate landscape treatment so that the new development will be compatible with the characteristics of the neighborhood.

The applicant conducted a balloon flight at the property on January 21, 2016, to provide two points of reference for investigating possible views to the proposed development from local area vantage points. Two 3-foot red balloons were raised to the proposed height of the roof peak of buildings 1 and 3. In both locations the balloons were situated well below the tops of the trees.

The eight vantage points shown in the accompanying graphics were visited, however only from the Exit 6A Stop sign location could one of the balloons be seen, largely obscured by the trees. Observations while driving the area roads found that the balloons were visible from Route 22 and I-684 in very close proximity to the site (within approximately 800 feet of the proposed development area), demonstrating that the density of the existing tree cover on and off the property can be expected to provide significant buffering of views (mitigation) of the proposed

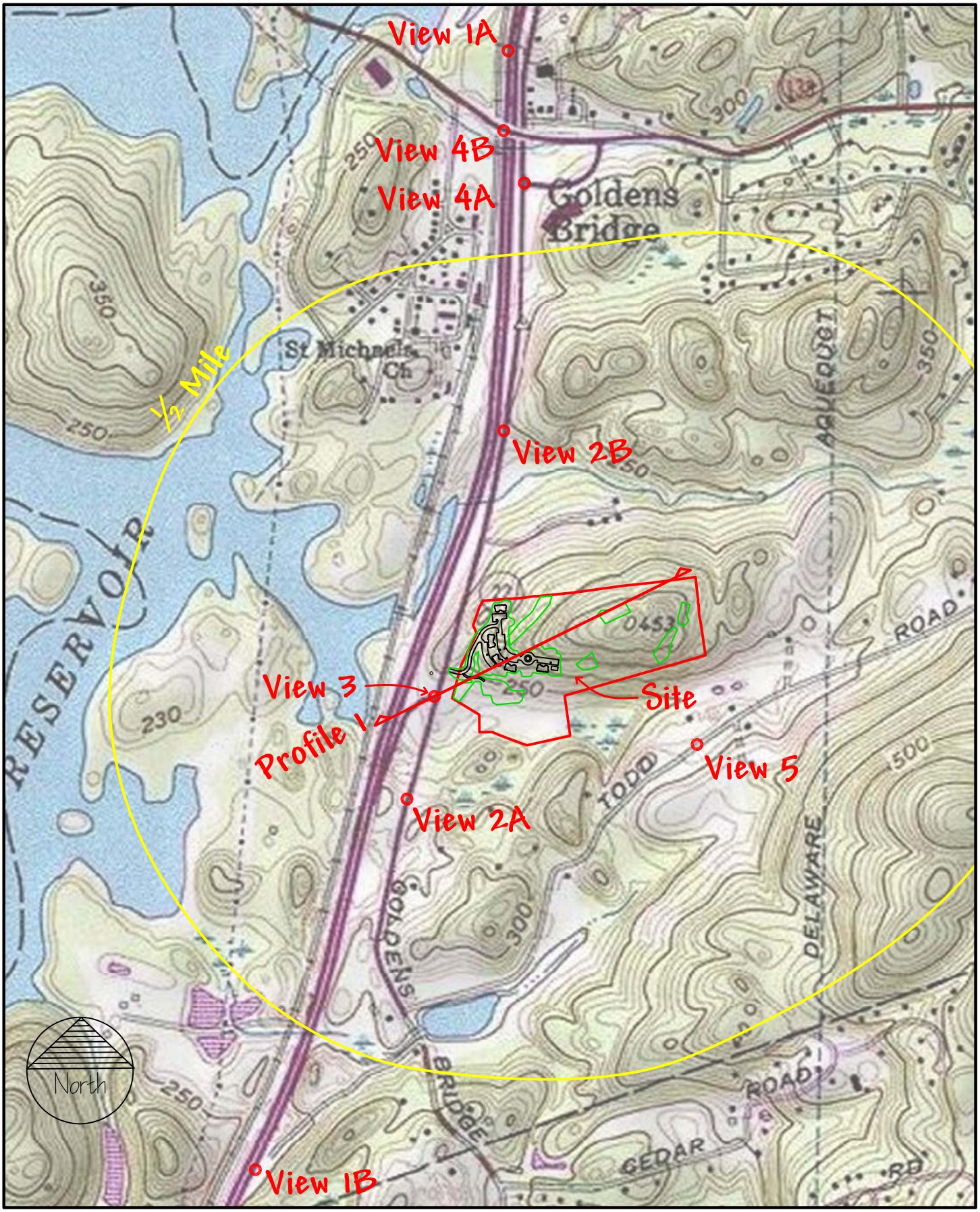
buildings in winter. In summer months, it is likely that there will be no visibility of the buildings from offsite other than from Route 22 between Exit 6A and the site driveway.

All of the proposed buildings will be below the height of the tree line, and, while portions of buildings will likely be visible through the trees from vehicles passing the site, more so in winter than in summer, their presence will be compatible with the characteristics of the neighborhood. From no location will the entire development be visible, the “worst case” view studied in Figure 3.5-7E demonstrates the limited exposure of the development to outside views, and mitigation of partial views will be incorporated into the design plans such that no significant visual impact will result. The documentation provided demonstrates that such visibility would not be considered a significant adverse or unmitigated impact.

In summary, the proposed affordable housing development will create new openings in the tree canopy on portions of the existing wooded knoll, and will place new buildings below the tree line and behind a dense buffer of existing trees, which will have very limited visibility from off-site due to the extent of existing trees and understory vegetation proposed to remain on the site and the surrounding predominance of woodland cover.

Overall, in the applicant’s opinion, the development will have a minimal effect of the wooded, open space character of this area of the Town of Lewisboro and will not have a significant adverse impact on any visual or aesthetic resources. The visual changes which will result from the development, in the applicant’s opinion, will not result in significant impacts to identified aesthetic resources or vantage points with views to the subject site.

The applicant anticipates working directly with the Town during development of the design plans with the intent of purposefully creating a project appearance that will complement the community. Such design elements would include building facade materials and color, roof pitch, materials of the landscape features such as light fixtures, signage and retaining walls, and selection of plant materials. The applicant is committed to designing a housing development that will be an asset to the Town.



1/26/16
Scale: 1" = 1,000'
Base Maps: USGS Topo Quad & Insite Engg.
FS: WBLewisboro\\visual\CAD\visual studies.dwg: keymap

Figure 3.6-1: Key Map to Visual Assessment
WB Lewisboro Affordable Housing
Town of Lewisboro, Westchester County, New York

Tim Miller Associates, Inc., 10 North Street, Cold Spring, New York 10516 (845) 265-4400

1A: I-684 (View Looking South)

1B: I-684 (View Looking North)

Figure 3.6-2: Route I-684 Photos

WB Lewisboro Affordable Housing

Town of Lewisboro, Westchester County, New York

Data Source: TMA photos Jan. 2016

03/2 /16

15039/*Fig3.5-.eps*

2A: Route 22 (View Looking North)

2B: Route 22 (View Looking South)

Figure 3.6-3: Route 22 Photos

WB Lewisboro Affordable Housing

Town of Lewisboro, Westchester County, New York

Data Source: TMA photos Jan. 2016

03/26/16

15039/*Fig3.5-.eps*

3: Exit 6A at Route 22 (View Looking Northeast)

Figure 3.6-4: Exit 6A Photo

WB Lewisboro Affordable Housing
Town of Lewisboro, Westchester County, New York
Data Source: TMA photos Jan. 2016

03/2 /16
15039/*Fig3.5-.eps*

4A: Route 138 Ramp to Route 22 (View Looking South)

4B: Route 138 Ramp to I-684 (View Looking South)

Figure 3.6-5: Route 138 Photos

WB Lewisboro Affordable Housing

Town of Lewisboro, Westchester County, New York

Data Source: TMA photos Jan. 2016

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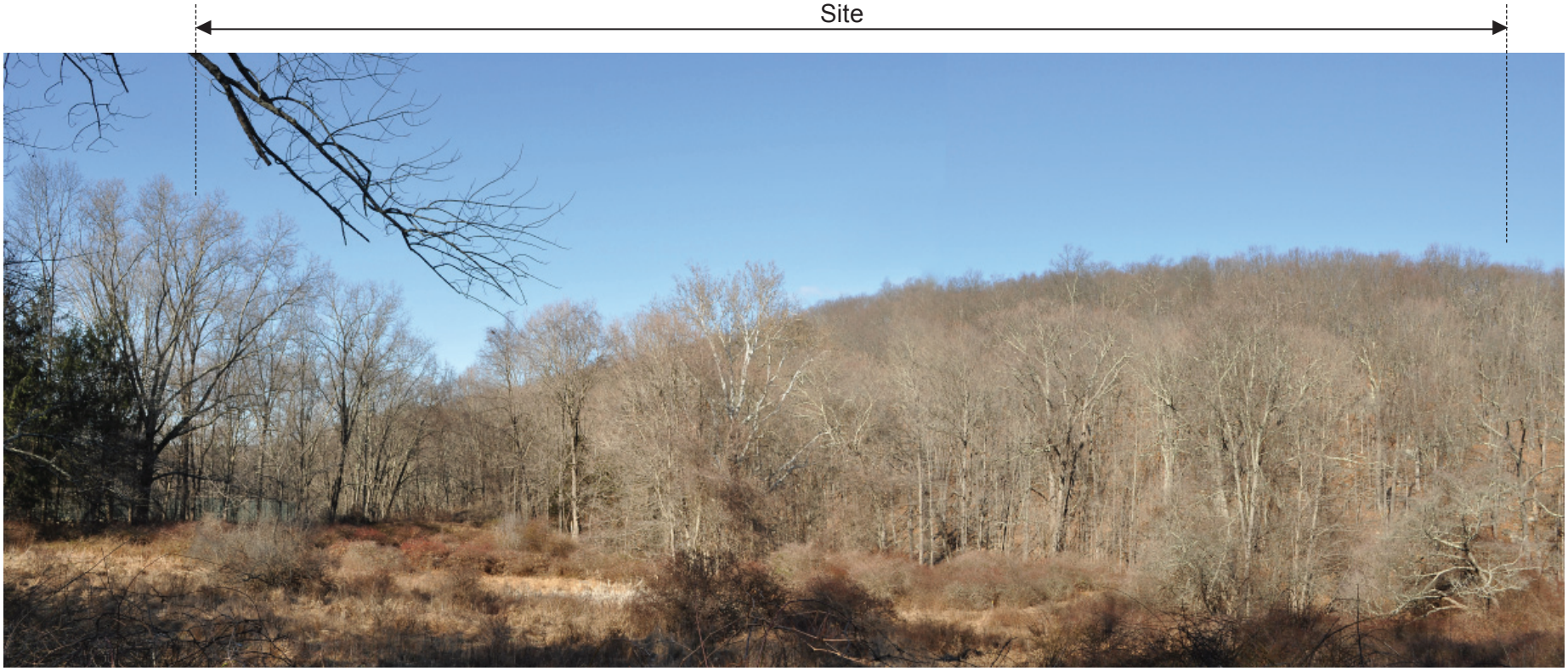

5: Todd Road (View Looking West)

Figure 3.6-6: Todd Road Photo

WB Lewisboro Affordable Housing
Town of Lewisboro, Westchester County, New York
Data Source: TMA photos Jan. 2016

03/29/16
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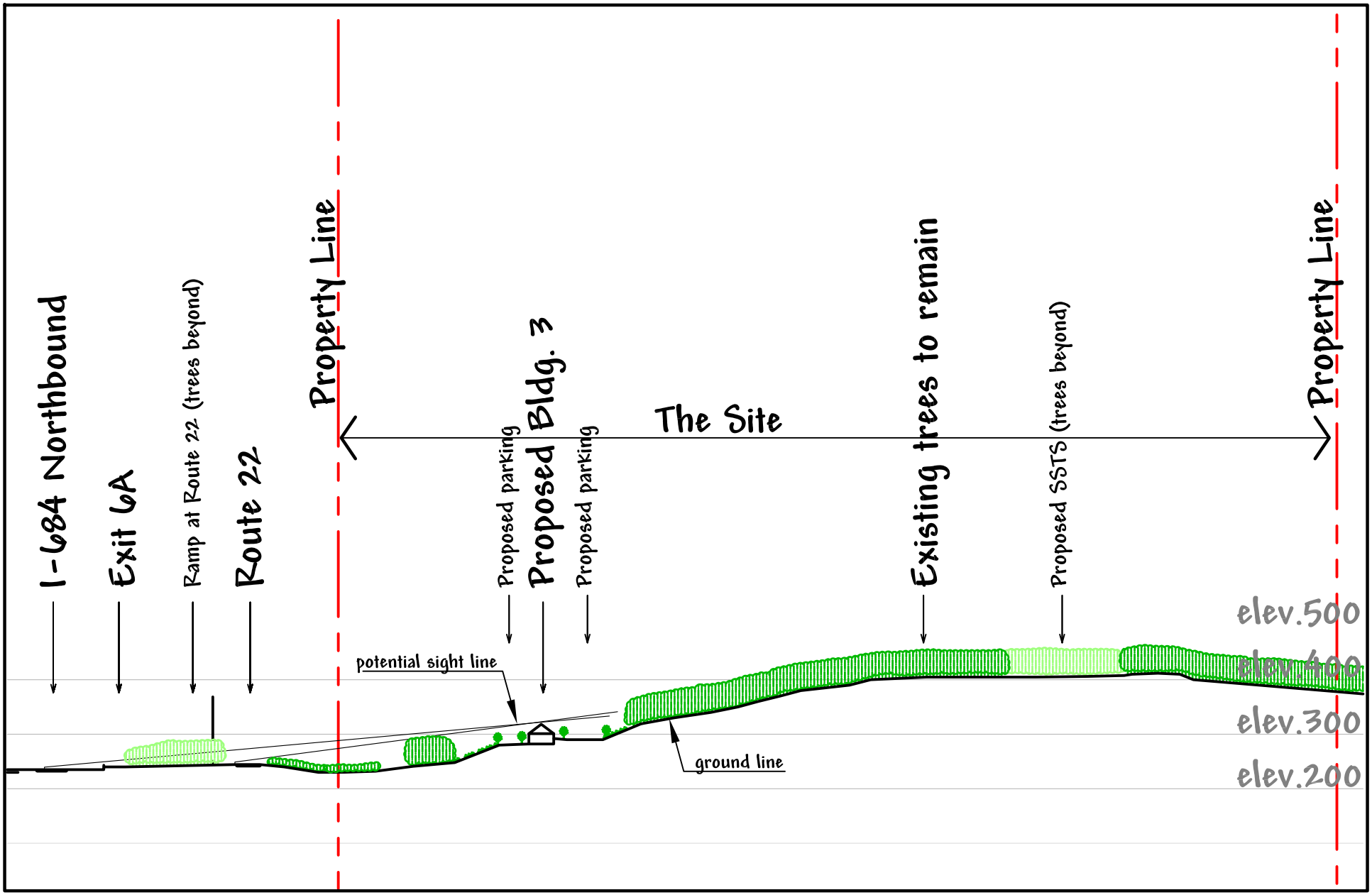

Figure 3.6-7: Site Profile 1 Looking Northwest

WB Lewisboro Affordable Housing

Town of Lewisboro, Westchester County, New York

Base Maps: USGS Topo Quad & Insite Engg.

1/26/16

Scale: 1" = 250'

FS: WBLewisboro\\visual\CAD\visual studies.dwg: profile1

Tim Miller Associates, Inc., 10 North Street, Cold Spring, New York 10516 (845) 265-4400

3.7 IMPACT ON HISTORICAL AND ARCHEOLOGICAL RESOURCES

Existing Conditions

As described herein, the 35.4 acre subject site is undeveloped and mostly wooded land. No structures or foundations have been observed on the property. Based upon historical photographs, the majority of the site has remained wooded since the 1940's, probably due to the rocky topography. Those areas closest to Route 22 are shown as open pasture in the 1947 aerial photograph, and it is likely that some logging occurred through the 1960's.

A Phase 1A and Phase 1B Cultural Resource Investigation has recently been conducted on the property. The Phase 1A / 1B investigation is provided in Appendix F. A file search at the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) identified no New York State Museum (NYSM), OPRHP sites or National Register Listed or Eligible properties on or within 500 feet of the subject property. There have been no prior archeological investigations conducted within 500 feet of the subject property.

Potential Impacts

According to the Phase 1A investigation, the subject site is considered to have moderate sensitivity for the presence of prehistoric cultural remains. The location exhibits several characteristics that are known to have been conducive to Native American occupation including the elevated hilltop adjacent to water sources that are themselves tributaries to a larger nearby river system. No rockshelters or usable lithic resources were identified within the proposed area of disturbance indicating that pre-contact sites would likely be limited to small temporary hunting camps rather than larger long-term settlements.

The proposed residential development will involve the grading of approximately 9 acres of relatively undeveloped land. The grading and excavation has the potential to disturb archeological cultural resources, should they be present on the property.

The Phase 1B fieldwork was conducted in December, 2015 at the subject site. The fieldwork consisted of 45 hand-excavated shovel tests across more level portions of the Area of Potential Effect (APE). The Area of Potential Effect is based upon the project plans. The test locations are shown in the Phase 1A/1B Archeological Investigation (Maps 9 and 10). No significant cultural resources were identified and no further archeological work was recommended.

Mitigation Measures

Based on the results of the Phase 1A/1B Cultural Resources investigation, no historic or archeological resources have been identified on or near the subject property and none will be impacted. No mitigation measures are warranted or proposed.

3.8 IMPACTS ON TRANSPORTATION

Existing Conditions

The project sponsor, Wilder Balter Partners, Inc. (the "Applicant"), proposes to develop a 46 unit affordable residential community on a 35.4-acre site located on NYS Route 22 in the western portion of the Town of Lewisboro, Westchester County, New York. The project site is located in the Hamlet of Goldens Bridge approximately ¾ - mile south of Route 138 and the Goldens Bridge train station. The location of the site is shown on maps in Figures 2-1 and 2-2. The site will have a single access slightly north of the northbound Interstate 684 Exit 6A ramp. This section summarizes the detailed transportation report by Maser Consulting P.A. contained in Appendix G.

Interstate 684 is a six lane divided limited access highway and is a major commuter route to Interstate 287 in southern Westchester County. Thus most regional commuter traffic does not use NYS Route 22 that passes by the site and parallels Interstate 684 in this area. The northbound exit ramp (6A) from Interstate 684 is located immediately south of the site and was studied along with the site access to NYS Route 22. NYS Route 22 is a two lane road with posted 40 miles per hour. Peak hour traffic volumes (weekday a.m. and p.m.) were counted in December of 2015 and compared with counts taken in 2014 for the Goldens Bridge Shopping Centre to the north.

Potential Impacts

Future Traffic Without the Project (No Build Volumes)

Traffic volumes were projected to the design year of 2020 using a background growth of 2.5 percent (0.5 percent per year) based on historical data. Traffic from the proposed Golden Bridge Village Shopping Centre expansion was also added to the future traffic.

Future Traffic With the Project (Build Volumes)

Site generated traffic was estimated for the apartments (Land Use code 220) using the Institute of Transportation Engineers, *Trip Generation Manual*, 9th edition, 2012. In the a.m. peak hour 5 entering and 21 exiting trips were estimated. In the p.m. peak hour 28 entering and 15 exiting trips were projected. Distribution of arrival and departure traffic was based on existing traffic volumes and supplemental data.

Capacity Analysis

Capacity analysis using SYNCHRO analysis software is based on procedures documented in the *2010 Highway Capacity Manual.* Traffic conditions are defined based on a level of service grade from A the best to F the worst conditions. NYS Route 22 and the site driveway are anticipated to operate at a level of service C or better for all movements.

The Interstate 684 northbound off ramp (Exit 6A) at NYS Route 22 experiences a level of service F in both the a.m. and p.m. peak hours in the Existing Condition and will experience increased delay with future traffic. Although a traffic signal would improve operation to a level of service B or better for all movements, the review of traffic volumes indicates the intersection does not satisfy signal warrants as specified by the *Manual of Uniform Traffic Control Devices*.

"The results of the capacity analysis indicated the proposed residential development will not significantly change the overall Levels of Service at each of the key locations. The intersection of I-684 and Route 22 will continue to experience operating problems during peak periods and should continue to be monitored in the future for a possible traffic signal." (See Appendix G - Page 6 Mr. Grealy letter to Mr. Bainlardi, January 29, 2016).

Access Sight Distances

NYS Route 22 speeds limits are 45 miles per hour entering into the 40 mile per hour speed limit in the section including the site access. Sight distances were observed and summarized with only the intersection sight distance not meeting a 55 mile per hour posted speed looking to the right. Vegetation pruning is recommended to the north of the site access to increase the sight distance to exceed the intersection sight distance. A W2-2 "Intersection Ahead" sign should be posted in advance of the site north and south on NYS Route 22 with a final determination to be made by the New York State Department of Transportation as part of the Highway Work Permit Process.

Avoidance or Minimization of Potential Impacts or Mitigation

Based on the transportation report, the proposed residential development will not significantly change the overall levels of service at each of the key locations studied. The applicant will work with the NYS Department of Transportation regarding the entrance drivewy and the development's traffic as part of the Highway Work Permit Process. Given the lack of the project's impact on key locations, no mitigation measures are proposed.

3.9 COMMUNITY FACILITIES AND SERVICES

3.9.1 Demographic Resources

Existing Conditions

As discussed, The project sponsor, Wilder Balter Partners, Inc. (the "Applicant"), proposes to develop a 46 unit affordable residential community on a 35.4-acre site located on NYS Route 22 in the western portion of the Town of Lewisboro, Westchester County, New York. The project site is located in the Hamlet of Goldens Bridge approximately three-quarters of a mile south of Route 138 and the Goldens Bridge train station. The project site is currently vacant.

Potential Impacts

The Applicant proposes to construct 45 units of affordable rental apartments plus one superintendents apartment (46 units total). The rental apartments will meet the requirements of the Westchester County Fair and Affordable Housing Implementation Plan. The proposed development will assist Westchester County in meeting its court mandated obligation to complete 750 affordable AFFH units, with building permits and funding in place, by December 31, 2016. The proposed AFFH apartments will also count toward the Town of Lewisboro's substantially unmet "fair share obligation" to create 239 units of affordable housing as established by the County's Affordable Housing Allocation Plan (2000-2015).

As illustrated in Figure 1-3, the 46 apartments will be located in five buildings of eight to ten units. The buildings will contain a mix of one, two and three bedroom units. The majority (eighty percent) of the units will be affordable to residents whose income does not exceed 60% of the Area Median Income (AMI), based upon family size, as established by the Department of Housing and Urban Development (HUD) on an annual basis. To further meet the affordability guidelines, twenty percent of the rental units will be marketed to residents whose income does not exceed 50% of the (AMI).

For the purpose of this analysis the development is envisioned to include 14 one bedroom units, 24 two bedroom units and 8 three bedroom units. The actual number of units and the proposed bedroom counts will be finalized prior to site plan approval. According to the NYS HCR funding guidelines the units are projected to rent for $988 to $1,643 depending upon number of bedrooms, unit size and affordability criteria.

Demographic multipliers published by the Rutgers University Center for Urban Policy Research (CUPR) were used to project the future population of the proposed affordable 46 unit AFFH multifamily community. Population projections are based upon the geographic region, type of unit, number of bedrooms, and the anticipated rental value. As shown in Table 3.9-1, based upon the nature of this development, the multipliers used to project the population are as follows; three bedroom units house 3.81 persons per unit, two bedroom units are 2.31 persons per unit and a one bedroom unit is 1.67 to 1.99 persons per unit depending upon the rental value. By comparison, 2010 U.S. Census data indicate that the average household size for all housing types in the Town of Lewisboro is 2.78 persons, and the average family size is 3.16 persons.

Based upon the CUPR residential multipliers, approximately 110 persons, including 16 school age children are projected to reside in the anticipated housing.

Table 3.9-1 Population Projections					
Unit Type	**Number of Units**	**Population Multiplier**	**Population**	**School Age Children Multiplier**	**School Age Population**
1-BR 50% AMI	3	1.99	6	0.30	0.9
2-BR 50% AMI	5	2.31	11	0.23	1.15
3-BR 50% AMI	1	3.81	4	1.50	1.5
1-BR 60% AMI	11	1.67	18	0.08	0.88
2-BR 60% AMI	18	2.31	42	0.23	4.14
3-BR 60% AMI	7	3.81	27	1.00	7
2-BR Superintendent Apartment	1	2.31	2	0.23	0.23
TOTAL	**46**		**110**		**16**

Source: Rutgers University Center for Urban Policy Research, June 2006. Table prepared by TMA, 2016. Values are based upon 5+ Unit Structures for Rent at more than $1,000 per month for one, two and Three Bedroom units as noted in the Table above.

3.9.2 Fiscal Resources

Existing Conditions

Current Assessed Value

The proposed AFFH multifamily community is contained on the following Town Tax Parcels;

- Sheet 5 - Block 10776 - Lot 19
- Sheet 5 - Block 10776 - Lot 20
- Sheet 5 - Block 10776 - Lot 21

The current equalized assessed value of the three undeveloped parcels is $87,300. This represents 9.9 percent of the total market value of the three parcels. According to a review of the 2015 tax bills for the subject parcels, the total annual property taxes paid to the Town of Lewisboro are $1,639 and the municipal taxes paid to the Goldens Bridge Fire Department are $890. The municipal taxes paid to Westchester County are $2,990. Thus, the total municipal taxes paid are $5,520 while the annual property taxes paid to the Katonah Lewisboro School District (KLSD) are $17,061.

Potential Impacts

The New York State Office of Real Property Services (NYSRPS) requires that rental properties are assessed in terms of the value of the income they provide. Based upon the income value of the proposed affordable rental apartments, the total market value of the proposed community is estimated to be $4,717,342. Using the current Town of Lewisboro 2015 equalization rate of 9.9 percent, the total future Assessed Value for this analysis is estimated to be $467,017.

Projected Revenues

Table 3.9-2 compares the revenues generated presently by the property to the revenues to be generated after the proposed rental community is complete. Revenues are based on the most current 2015 municipal tax rates (2015-2016 tax rate for the Katonah Lewisboro School District).

According to the Town of Lewisboro budget, the Town's tax rate includes Town governmental services, highway maintenance, justice court, police services, and parks & recreation.

As presented in Table 3.9-2, annual revenues to the Town of Lewisboro are projected to be approximately $8,770. Tax revenues to the Goldens Bridge Fire Department are estimated to be $4,762. The tax revenues to Westchester County would be approximately $15,995 annually, thus the total municipal revenue is estimated to be $29,527.

Table 3.9-2 also indicates the annual revenues to the Katonah Lewisboro School District would be approximately $91,268. The net *increase* between the current tax revenues generated by the site and paid to the School District and the total future project-generated revenues to the school district are projected to be approximately $74,207 annually.

As can be seen in Table 3.9-2, overall, the combined tax revenues from each jurisdiction are projected to total more than $120 thousand annually.

Table 3.9-2
Current & Projected Taxes Generated by the 46 Unit AFFH Residential Community

Taxing Authority	Current Tax Rate	Current Taxes ($)	AFFH Projected Taxes Total ($)	Net Increase Between Current & Projected Taxes ($)
Westchester County	$34.2497	**$**2,990	**$**15,995	**$**13,005
Town of Lewisboro	$18.7796	$1,640	$8,771	$7,131
Goldens Bridge Fire District	$10.1963	$890	$4,762	$3,872
Total Town of Lewisboro		$2,530	$13,533	$11,003
Total Municipal	$63.2256	**$5,220**	**$29,258**	**$24,008**
Katonah Lewisboro School District	$195.4287	**$17,061**	**$91,268**	**$74,207**
TOTAL	$258.6543	**$22,581**	**$120,796**	**$98,215**

Notes:
Municipal taxes are based upon Town of Lewisboro 2015 Tax Rates. These rates are in effect 4/1/15 through 4/1/16.
Katonah Lewisboro School District Tax Rates are for the 2015-2016 school year.

Infrastructure Costs

A management company will operate and maintain all common areas, facilities and infrastructure included in the proposed action. All of the community aspects of the project will be privately maintained, including the roadway. There are no aspects of the project which are anticipated to result in an ownership, maintenance or operational responsibility to the Town of Lewisboro, thus reducing municipal costs to the maximum extent practicable.

3.9.3 Police, Fire and Emergency Services

Existing Conditions

Police Protection

The Lewisboro Police Department provides police protection services to properties within the 29 square mile area that comprises the Town of Lewisboro. The police department headquarters is located at 20 North Salem Road, Cross River, NY, approximately 5.5 miles (driving distance) southeast of the project site. The Town of Lewisboro is served by the New York State Police in conjunction with the Lewisboro Town Police. The New York State Police are stationed on Route 100 in Somers, NY.

The Lewisboro police force provides police protection for the Town of Lewisboro including the hamlets of Cross River, Goldens Bridge, South Salem, Waccabuc, Vista and Grants Corner.

The Lewisboro Police Department is led by Police Chief Frank Secret. The Department has a police force of 12 officers, in addition to civilian employees who provide police coverage. According to the Police Chief[1], in 2015 the department handled approximately 1,851 calls for service. The population data from the 2010 census indicates there are 12,411 persons residing in the Town of Lewisboro. Based upon these figures, there is approximately one police officer for every 1,000 residents and annual average calls per capita equates to 0.15.

Sworn personnel are involved in various programs including Crime Prevention, Accident Investigation, STOP DWI, Commercial Vehicle Enforcement, Intelligence, and Youth Court.

Based upon location, typical response time to a residence in the proposed community is estimated to be five to ten minutes.

Fire Department

The proposed development is within the Goldens Bridge Fire District and is served by the Goldens Bridge Fire Department which is a 100% volunteer fire department. The Fire district covers an area of approximately 8 square miles in the hamlet of Goldens Bridge which includes a mix of both business and residential areas, as well as a section of Interstate 684 and the Metro North Railroad. Serving a population of approximately 4,000 residents and countless number of commuters who use both Interstate 684 and Metro-North Railroad, the fire department provides coverage 24 hours a day, 365 days a year. The Goldens Bridge Fire Department typically responds to an average of approximately 275 calls annually. Based upon these figures, annual average calls per capita equates to 0.07.

There are approximately 70 active members who serve the community by providing Fire, Rescue, Disaster Relief and Emergency Medical Services to anyone in need. The Goldens Bridge Fire Department is also dedicated to community service by offering scholarships for community minded youth, supporting Scouting organizations of America and supporting other local charities.

The Goldens Bridge Fire Department currently operates 3 engines, 1 tanker truck, 2 heavy rescue vehicles, 1 brush unit, and 3 Chiefs' vehicles. These units are staffed by 100 volunteer

[1] Phone conversation with Police Chief Secret on February 1, 2016.

members who respond from a fire station at 254 Waccabuc Road in Goldens Bridge. The station is approximately 1.5 miles (driving distance) from the subject site. In 2015, the department responded to approximately 250 alarms. These alarms consisted of structural fires, motor vehicle accidents (MVA's), automatic alarms, vehicle fires, mutual aid, and various other calls for assistance. The Goldens Bridge Fire Department does not respond to medical emergency calls. This service is provided by the Lewisboro Volunteer Ambulance Corps LVAC.

Ambulance and Health Services

The Lewisboro Volunteer Ambulance Corps (LVAC) provides emergency ambulance service to the project area. Average response time is between five and seven minutes. In 2013, LVAC responded to 416 ambulance calls. According to their records, 320 patients were transported to area hospitals. Based upon these figures, annual average calls per capita equates to 0.04.

Each ambulance response is staffed by a crew chief who is a New York State Certified Emergency Medical Technician, and a driver, who may or may not be an EMT. Most calls have a third crew member, referred to as the first aider, who also may or may not be an EMT. The crew chief is in charge of patient care decisions, including which hospital the patient is transported to.

The Town of Lewisboro is one of several towns in northern Westchester County which are additionally served by a paramedic service, Westchester EMS. There are three paramedic fly cars in service at all times and one is paged out along with LVAC on all calls. If the patient's condition warrants ALS, the paramedic will ride with the LVAC crew and provide advanced life support.

LVAC currently operates 2 ambulances, 67B1 and 67B2, the B standing for basic life support. The Corps also has a first response vehicle, a fully-equipped Chevrolet Tahoe. The Corp. has approximately 40 riding members. All members are trained to use AEDs (Automatic Electronic Defibrillators), and LVAC has 10 Lifepak AEDs. LVAC also participates in the Epipen program to administer epinephrine, is certified to use albuterol for the treatment of asthma, and trained to use glocometry. They have recently added the Lucas device to all vehicles which is used to provide continuous CPR for any patients that require the treatment.

The primary hospital serving the project area is Northern Westchester Hospital in Mt. Kisco. Services offered by this hospital include: emergency services, ambulatory surgery, cardiopulmonary center, diagnostic imaging, mental health unit, MRI center, nutritional services, occupational therapy, pediatrics, physical therapy, prostate cancer treatment, alcohol & substance abuse, speech & hearing, and a wound care center.

According to Northern Westchester Hospital, its physicians represent all of the medical specialties and offer their patients the latest in medical care supported by nursing, clinical, and technical staff. Northern Westchester Hospital also offers various outreach programs that present preventive medicine and wellness subjects.

Although LVAC transports most patients to Northern Westchester Hospital in Mt. Kisco, occasionally patients are transported to Putnam Hospital in Carmel, Westchester Medical Center in Valhalla, and Danbury or Norwalk Hospitals in Connecticut.

Potential Impacts

As shown in Table 3.9-1, development of the proposed residential community is anticipated to result in a population increase of approximately 110 persons. This increase represents less than one percent of the current Town population of 12,411 (2010 Census).

Police Department

Based on planning standards contained in the Development Impact Assessment Handbook published by the Urban Land Institute, model factors for police protection recommend two (2) police personnel per 1,000 persons which further breaks down to 1.5 police personnel per 1,000 persons for residential uses and 0.5 police personnel per 1,000 persons for nonresidential uses. Based on this standard, 110 persons would increase police staffing needs by less than one quarter of a person which is not likely to have an impact on the Town's police personnel ratio of 1.0 officers personnel per 1,000 residents. As discussed earlier, annual average calls per capita equates to 0.15, thus it can be expected that calls for service to the Police Department would increase by approximately 17 calls annually.

Fire Department

Based on planning standards published in the Development Impact Assessment Handbook, approximately 1.65 fire department personnel per 1,000 population is recommended to provide adequate fire protection service. One hundred ten new residents would generate demand for an additional 0.18 fire department personnel. As discussed earlier in this section, the proposed development would generate $4,762 in annual property tax revenues to the fire district to offset any additional demand. The proposed site access roads will be designed in accordance with Town road specifications which are designed to adequately accommodate emergency service vehicles. As discussed earlier, annual average calls per capita equates to 0.07, thus it can be expected that calls for service to the Goldens Bridge Department would increase by approximately 8 calls annually.

Each of the proposed residential buildings will be equipped with fire sprinklers and the water system is designed to meet the combined peak flow for domestic and sprinkler use. Fire hydrants are not proposed given the use of sprinklers. The applicant will provide emergency back-up water supply storage in underground tanks. The applicant will work with the Goldens Bridge Fire Department regarding the final design for emergency back-up water supply.

Emergency Medical Service

Based on planning standards contained in the Development Impact Assessment Handbook, approximately 36.5 calls per 1,000 population are made annually. Based on this standard, the 110 residents would increase EMS calls by approximately four calls annually on average. The Lewisboro Volunteer Ambulance Corp. has sufficient capabilities to handle this increase. As discussed earlier, annual average calls per capita equates to 0.04, thus it can be expected that calls for service to the Lewisboro Volunteer Ambulance Corp. from the proposed development would be approximately 4 calls annually.

Hospital

Based on planning standards contained in the Development Impact Assessment Handbook, four (4.0) hospital beds should be provided per 1,000 persons. Based on this standard, the

projected population increase associated with the proposed residential development has the potential to increase the need for beds in hospitals serving the Northern Westchester County area by less than half of a bed. This is not considered a significant impact.

3.9.4 Comparison to Bridleside, North Salem

New Housing developments are often controversial. Existing residents like the character of their existing neighborhoods and are often attached to the undeveloped parcels which have provided areas of open space. There are also practical considerations like traffic, property values and additional school children, that can be cause for concern. These concerns can be even more exaggerated when the proposal is for affordable housing.

Wilder Balter, the project sponsor, has successfully developed many multifamily communities throughout the Hudson Valley, including a substantially similar affordable housing development in the neighboring Town of North Salem, known as “Bridleside” which provides a vision for the subject proposal. The Bridleside residential development includes 65 units of affordable housing with a similar mix of one, two and three bedroom units as are proposed in the 45 unit WB Lewisboro Affordable Housing Development. The projected funding sources and rental values will be virtually identical in the two developments. The market values of residential real estate is comparable in North Salem and Lewisboro. The tax structure, tax rates and equalization rates are also similar in the two communities. Beyond the projections provided in development models, real life experience with similar development can provide an accurate window into what the future will bring post development.

Table 3.9-3 shown below, provides data on population and relevant demands for community services at the Bridleside project. Data was gathered from the Town of North Salem Police Department, the North Salem Fire Department, the North Salem Volunteer Ambulance Corp. And the North Salem School District. Table 3.9-3 lists the annual calls for service to the North Salem emergency service providers, and compares this data to the projections of demands for community services anticipated from the Lewisboro residential community. Since the proposed Lewisboro development is 45 units compared to the 65 units built in Bridleside, the statistics for Bridleside have been factored by 69% to provide a direct comparison to the Lewisboro projections.

A count of school age children who reside at Bridleside indicates there are a total of 35 students, however of this total 9 students already lived within the North Salem School District, indicating the increase in the school districts enrollment was 26 students as shown in Table 3.9-3.

Table 3.9-3 Impact Comparison Bridleside vs. Lewisboro AFFH			
Area of Concern	***Bridleside North Salem***		***AFFH Lewisboro***
Land Use			
Total Site Area (acres)	40.0		35.4
Total Area of Disturbance (acres)	14.1		9.0
Impervious Surfaces (acres)	3.1		2.4
Community Resources			
	Bridleside Full Value	***Bridleside Factored at 69%***	***AFFH Lewisboro***
Residential Units	65	45	45
Population	137	95	110
School-age Children - New to the District	26	18	16
Police Annual Calls for Service	23	16	17 *
Fire Annual Calls for Service	17	12	8 *
Ambulance Annual Calls for Service	7	5	4 *
Municipal Taxes	$44,588	$30,766	$29,527
School Taxes	$102,076	$70,423	$91,268

Notes: Estimates are approximate.
Source: Insite Engineering; Tim Miller Associates, Inc., 2016
* Based upon existing average annual calls with the current service area.

Minimization of Potential Impacts and Mitigation

Police, Fire and Emergency Services

As Table 3.9-3 shows the actual calls for emergency service at Bridleside are consistent with the projection of need from the Lewisboro development. The anticipated calls for emergency services is not anticipated to result in any significant impact to police protection, or fire and emergency service provision in the Town of Lewisboro as a result of the construction of the proposed residential development.

The proposed development will generate tax revenues to balance any potential increases in the cost to various municipal and other district services.

Secondary Benefits

There are expected to be secondary benefits to the local economy as a result of construction activities and the future spending by the new residents of this project. The spending of residents expected to live at the proposed development will benefit commercial businesses in the local area and the region, both in the Town of Lewisboro and the surrounding region.

3.9.5 Schools

Existing Conditions

The project site is served by the Katonah Lewisboro Union Free School District. The District includes three K-5 elementary schools, one middle school (grades 6, 7 and 8), and one high school. The Katonah Lewisboro Union Free School District geographically includes all of the Town of Lewisboro and the Katonah Hamlet area in the Town of Bedford, and smaller portions of the Town of North Salem and the Town of Pound Ridge.

According to information provided by the School District[2], enrollments have been steadily decreasing over the past 10 years. As of October 2014, 3,204 students were enrolled in the District. Table 3.9-4 below summarizes the 2014-2015 grade distributions and enrollments of the various schools within the District:

Table 3.9-4
Katonah Lewisboro School District (2014-2015 School Year)

School	Grades Served	2014 Enrollment
Increase Miller Elementary School	K-5	479
Katonah Elementary School	K-5	415
Meadow Pond Elementary School	K-5	384
John Jay Middle School	6-8	777
John Jay High School	9-12	1,149
TOTAL		**3,204**

Katonah Lewisboro School District, 2015.

All of the schools in this School District received a rating of “5” from the New York State Public School Report Card of Comprehensive Information with respect to the “district need to resource capacity”. This rating states that “this is a school district with average student needs in relation to district resources capacity”.

Potential Impacts

As shown in Table 3.9-1, based upon demographic multipliers published by the Rutgers University Center for Urban Policy Research, approximately 16 students are projected to reside in the proposed residential development.

According to the Assistant Superintendent for Business, Based upon the geographic location of the project site and the current student distribution among schools in the district, it is likely that students from the proposed residential development would attend the Increase Miller Elementary School, the John Jay Middle School and the John Jay high School. It should be noted that student distribution is reviewed annually and is subject to change.

[2] Katonah Lewisboro Union free School District 2015-2016 General Fund Budget Book, April 2015.

School District Costs Associated with the Proposed Project

The budget for the 2015-2016 school year for the Katonah Lewisboro Union Free School District totals approximately $108,731,720. The portion of the budget to be raised through taxation is $95,904,695 - approximately 88 percent of the budget is met through the property tax levy. The addition of 16 students to a population of more than 3,200 students represents an increase of less than half of one percent. This deminimus increase in student population will not have a significant impact on administrative or capital needs of the district. Any costs to the District's would be related specifically to instruction and transportation, referred to as marginal costs, District wide, these costs total $49,544,464. Since 88 percent of the Budget is to be raised by the tax levy, the portion of these costs to be raised by the tax levy total $43,599,128.

With an enrollment of 3,204 students, the per-student marginal cost to be raised by the tax levy are calculated to be $13,608, ($43,599,128 / 3,204). This cost is likely overstated given the small percentage of new students compared to the existing student population. Projected costs to the school district could be up to $217,728 annually based on an estimated 16 students that would reside in the community.

The proposed residential housing development is estimated to generate $91,268 in property tax revenues annually to the school district. Thus, the overall impact on the district's budget could conservatively result in a cost of up to $126,460. If this cost materializes, it would need to be met by an adjustment to the overall tax rates of the School District of approximately 25 cents per $1,000 of assessed valuation. For a typical home in the Katonah Lewisboro District, this translates into approximately $12.50 per household.

The anticipated cost of education must be balanced with the fact that the WB Lewisboro Affordable Housing Development will be a resource that will provide for affordable housing that will help to advance the Town and County goals for such housing and will help to satisfy local and regional housing needs, truly a mitigation factor that must be given appropriate consideration.

Construction is projected to take 12 to 18 months which is likely to be spread over two school years. The increased student population is also expected to be distributed throughout the grade levels, resulting in an average of less than one student per grade. The multi-year phasing and distribution of students will allow for an additional 16 students to be integrated to the local schools with minimal impact. Conversation with the Business Administrator for the Katonah Lewisboro District[3] indicated absorption of the new students should not present a capacity problem for the school district, particularly in light of the declining enrollment trend the district is experiencing. A letter from the School District to this effect has been requested from the School District.

Minimization of Potential Impacts and Mitigation

The development plans will be forwarded to the School District for review and comment on transportation safety, bus turning radius and bus stop locations. Since the potential for significant impacts is minimal, no further mitigation is proposed.

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[3] *Information provided via phone conversation, 1/26/16 with Mike Jumper, Assistant Superintendent for Business of the Katonah Lewisboro School District.*

3.9.6 Summary

Lewisboro has a responsibility to provide for their share of the regional need for affordable housing. This need was recognized by the Town Board in its adoption of Local Law 7-2015 permitting the development of multi-family housing, including AFFH units, in various zoning districts throughout the Town (including the CC-20 zone in which the subject site exists).

As set forth in the Westchester County Affordable Housing Allocation Plan 2000-2015 (November 9, 2005), 239 units were estimated as Lewisboro's "fair share obligation" which has been substantially unmet. The WB Lewisboro Affordable Housing Development will provide needed affordable housing opportunities for the Town of Lewisboro. All of the 45 residential units will be designated affordable, in accordance with Westchester County's eligibility requirements.

Most impacts to be considered in development projects are site specific – traffic, visual, natural resources, etc. But fiscal impacts are not site specific other than whether or not a site has public roads, water, sewer and or sanitation. Fiscal impacts relating to school children are not at all site specific and therefore must be supported by the entire community.

The proposed 45 units in the WB Lewisboro Affordable Housing Development represent less than 25% of the Town's "fair share obligation" to provide affordable housing. Given the privately owned infrastructure, and the relatively low expected population of school age children, the fiscal impacts of these affordable units could not be any less.

3.10 IMPACT ON THE COMMUNITY

Consistency with Community Plans and Community Character

Existing Conditions

The subject property encompasses 35.4 acres of land on three lots located in the Town of Lewisboro, Westchester County, New York. The property is located on the east side of NYS Route 22, proximate to the I-684 northbound Exit 6A ramp and south of the hamlet of Goldens Bridge. The three parcels are located in the following special districts: Katonah-Lewisboro School District and Goldens Bridge Fire District. The two westerly lots are located in the CC-20 zoning district and the easterly lot is located in the R-4A zoning district.

The site is located approximately three-quarters of a mile south of the hamlet of Goldens Bridge, which includes several community-scale commercial businesses, a post office, a community center and the Goldens Bridge Metro-North train station. Generally within approximately three-quarters of a mile of the site, land uses to the north and west include residential, public uses, warehouse, commercial, retail, transportation and vacant land. To the south and east, land use is predominantly single family residential, and vacant land.

Town Master Plan

The Town Master Plan outlines policies and goals formally adopted by the Town of Lewisboro in 1985[1] as a guide for land use and future development in the Town. In its Plan, the Town identified considerations for preservation of open space resources as well as for development that are generally applicable to the subject proposal today. The Plan does not identify site-specific consistency criteria, but it was intended to provide overall guidance on the local scale for land planning decisions. Consistency of the proposed development with policies identified in the Plan, to the extent such policies are defined, is described below.

The 1985 Town Master Plan speaks of a vision for land use in the I-684/Route 22 corridor that would provide for development of campus commercial land use that would also incorporate the preservation of open space. Campus commercial development was envisioned and planned for in the area bordering Route 22 including the subject site and paved the way for the subsequent rezoning to CC-20. As stated in the Master Plan relative to campus commercial facilities, adequate buffering between such use and adjacent residential areas would allow the two different types of land use to coexist, and reduce impacts to the natural environment resulting from development.

Zoning Requirements

A recent amendment to the zoning code adopted by the Town Board in 2015 (LL 7-2015) added provisions that would permit multi-family housing in commercial and business areas. A joint task force composed of members of the Planning Board, Zoning Board of Appeals, Architectural Review Council and Housing Committee had been tasked with exploring ways to enable Lewisboro to comply with the obligations of the Westchester County Housing Settlement, and to facilitate the effort to provide fair and affordable housing in Town. The amended provisions of the code apply to the subject site and is particularly appropriate for this application for affordable housing.

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[1] Accessed on the Town's website 1/21/16.

In her letter of January 25, 2016 to the Chair of the Lewisboro Planning Board, the Chair of the Lewisboro Housing Committee stated:

> The majority of the Housing Committee feels that the proposed Wilder Balter 45-unit development would accomplish the goal for which the Zoning code was amended: providing fair and affordable housing in Lewisboro. The construction of the proposed AFFH housing in Lewisboro would also substantially help Lewisboro and the County in complying with the Settlement, joining other nearby towns such as North Salem, Pound Ridge and Bedford, who have also taken steps in this direction.[2]

Potential Impacts

The site plans developed for this affordable housing application show and tabulate the various zoning requirements of the CC-20 and R-4A districts applicable to the property, including the new reference to the provisions for multi-family dwellings which are found in the R-MF requirements. The plans identify the conformance of the proposed plan to the applicable zoning requirements including the following information:

- Front, side and rear yard setbacks of the R-MF district or double the R-4A district setback, as applicable (these replace the setbacks of the CC-20 district);
- Density transition area of the R-MF district (replaces the perimeter buffer of the CC-20 district);
- Buffer lot with conservation easement (CC-20 district requirement);
- Town wetland control area and State wetland adjacent area; and,
- Tables with the applicable net land area calculations, density unit calculations, parking requirements and recreation requirements.

Multi-family dwellings are a permitted use in the CC-20 district, subject to the requirements of Section 220-26, Multifamily Residence District (R-MF), of the Zoning Code. The dimension and bulk zoning requirements of the R-MF district replace those of the underlying CC-20 district (to be confirmed by the Planning Board Attorney or Building Inspector).

The applicant is proposing a total of 92 parking spaces for this facility (2.0 per unit), whereas 124 spaces are required by zoning based on the proposed bedroom count. The required number of spaces far exceeds the parking needs of the development based upon the applicant's experience with other similar developments owned and managed by the applicant throughout the Hudson Valley. For example, the Bridleside 65-unit affordable rental community in North Salem was approved with 144 parking spaces but a recent three day survey showed that only 76 spaces were being used (53 percent of the requirement or 1.17 cars per dwelling unit). Another example is the 92-unit Roundtop affordable rental community in Montrose which was approved with 141 parking spaces (1.5 parking spaces per unit). The survey for that property showed that only 98 spaces were being used (70 percent or 1.07 cars per dwelling unit). Accordingly, the applicant is requesting a parking variance from the Zoning Board of Appeals.

The applicant proposes to permanently preserve open space on the easternmost part of the property located in the R-4A zoning district. The applicant intends to preserve at least 17 acres

[2] See January 25, 2016 letter to the Chair of the Lewisboro Planning Board from the Chair of the Lewisboro Housing Committee.

of open space through restrictive covenants and/or a conservation easement, thereby providing a permanent buffer to the adjoining lands in the R-4A district.

Mitigation Measures

The Town's Master Plan cites general design principles to guide future public and private development in the Town to support the goals and objectives of the Town. These recommendations refer to landscape buffering of buildings and parking areas, minimization of disturbance on steep slopes where potential for erosion needs to be addressed, and provisions to minimize adverse visual impact on Town character and neighboring uses.

The Master Plan highlights the need for care in site planning of parcels containing steep slopes, wetlands and other open space resources to minimize the potential for impacts to the sensitive qualities of such areas as well as potential visual intrusions into the landscape of Lewisboro. In addressing these concerns, the proposed development plan presents a balance between the environmental goals of open space resource preservation and wise utilization of the land in the applicant's opinion.

The site plan will incorporate various conventional slope protection and wetland protection measures that will minimize the potential for soil erosion and surface water impacts. The plan also will incorporate tree preservation measures (particularly by minimizing the overall area of site disturbance) and proposed landscape plantings that will minimize visual intrusion and create an asset to the community. Moreover, the site plan will preserve a significant area located outside of the limits of disturbance in permanent open space.

Refer to the preceding narratives in this Part 3 on specific subject areas for discussions of environmental concerns relating to particular physical components of the proposed plan that are integral to the design and will effectively avoid or minimize impacts.

The proposed plan, in the applicant's opinion, will be consistent with the Town's Zoning Statement of Purpose (§220-1): "To preserve the natural beauty of the physiography of the Town; to protect the Town against unsightly, obtrusive and obnoxious land uses and operations; to enhance the aesthetic aspect of the natural and man-made elements of the Town; and to ensure appropriate development with regard to those elements."

The proposed plan will also meet the site plan standards set forth in §220-48 which the Planning Board will consider in acting on a site development plan application:

> (1) The proposed number, size, location, height, bulk, use, appearance and architectural features of all structures and facilities.
>
> (a) The overall building and site design shall enhance and protect the character and property values in the surrounding neighborhood.
>
> (b) Development shall be compatible with the architectural style and visual composition of the hamlet area in which it is located.
>
> (c) Development shall have a harmonious relationship with the natural terrain and vegetation on the site and on adjacent properties.

The proposed plan will address a housing need cited in the Town Master Plan. In it's determination of significance at the time that multi-family dwellings was added as a permitted use in the CC-20 district regulations (LL 7-2015), the Town's findings stated the "...definition of

AFFH Unit ... in addition to allowing multifamily housing within the Town's commercial zones, is consistent with the Goal and Policy set forth in the Town Master Plan, which recites that 'opportunities should be provided for a range of housing, including type, cost and character' (Town Master Plan, Goal 1C)."

The Westchester County Department of Planning supports the development of affordable affirmatively furthering fair housing (AFFH) rental units in the Town of Lewisboro.[3] This application is consistent with the Westchester County Planning Board's long-range planning policies set forth in *Westchester 2025 - Context for County and Municipal Planning and Policies to Guide County Planning (*adopted 2008 and amended 2010), and its recommended strategies set forth in *Patterns for Westchester: The Land and the People* (adopted 1995), which calls for increasing the range of housing types in Westchester County.[4]

The applicant is cognizant of the Town's Complete Streets Policy adopted in 2011 and although the policy does not specifically address individual site plans, this development proposal will conform with the policy as it might be applied to the plan.

The proposed affordable housing development plan addresses the Town's design principles relative to environmental protection and visual consistency, in the applicant's opinion. The proposed site plan has been laid out such that the buildings and other site features will be virtually surrounded by wooded open space, will not be visually prominent at any time of year, and will be largely obscured from offsite views when leaves are on the trees.

The development includes a natural landscape buffer to the public roads and nearby uses through the preservation of existing vegetation over much of the property. (These buffers reflect what is depicted for the property in the Town's Master Plan map of 1985.) In addition to the mixture of native and adaptive deciduous and evergreen tree and shrub species proposed on the landscape plan, natural topographic conditions render the development area of the site largely obscured from view from most offsite locations thereby avoiding potential impact on community character.

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[3] Letter to Jerome Kerner, Chair, Town of Lewisboro Planning Board, from Norma V. Drummond, Deputy Commissioner, Westchester County Department of Planning, dated March 11, 2016.
[4] Letter to Ciorsdan Conrad, Planning Board Secretary, Town of Lewisboro, from Edward Buroughs, AICP, Commissioner, Westchester County Planning Board, dated February 12, 2016.

EXPANDED ENVIRONMENTAL ASSESSMENT

SEQR Full Environmental Assessment Form (EAF) and Supplemental Studies

Application of Wilder Balter Partners, Inc.
for Site Plan, Wetlands Permit and Stormwater Permit

WB Lewisboro Affordable Housing
Route 22
Town of Lewisboro, New York

Applicant:
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INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
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Environmental Planner:
TIM MILLER ASSOCIATES, INC.
10 North Street, Cold Spring, New York 10516
Contact: Frederick P. Wells, RLA
(845) 265-4400

Revised March 31, 2016
~~**February 3, 2016**~~

Application of Wilder Balter Partners, Inc.
for Site Plan Approval, Wetlands Permit, Stormwater Permit
to Town of Lewisboro Planning Board

EXPANDED ENVIRONMENTAL ASSESSMENT

SEQR Full Environmental Assessment Form (EAF) and Supplemental Studies

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1.0 INTRODUCTION

Wilder Balter Partners, Inc. (the "Applicant"), proposes to develop a 46 unit affordable residential community on a 35.4 acre site located on NYS Route 22 in the western portion of the Town of Lewisboro, Westchester County, New York. The development site is located in the Hamlet of Goldens Bridge approximately three-quarters of a mile south of Route 138 and the Goldens Bridge train station. The location of the site is shown on Figures 2-1 and 2-2. The site is currently vacant wooded land and is not served by public water or sewer service.

This Expanded Environmental Assessment Form (EAF) evaluates a focused scope of potential environmental impacts for the Proposed Action, based upon the evaluation process and questions found in the Full Environmental Assessment Form, and "EAF Workbooks" prepared by the NYSDEC.

This Expanded EAF is prepared in accordance with Section 8-0101 of the New York State Environmental Conservation Law and the regulations promulgated by the New York State Department of Environmental Conservation (NYSDEC) thereunder, which appear at 6NYCRR Part 617 (known as the New York State Environmental Quality Review Act, SEQRA, or SEQR).

This document includes the EAF form Parts 1, 2 and supplemental information as Part 3. Part 1 of the EAF Form provides project details and its environmental setting. Part 2 of the EAF Form identifies potential project impacts by category, such as surface water, aesthetic resources and transportation. The Part 3 evaluations provided in this Expanded EAF provide background information, technical studies and analyses of the potential impact categories as may result from the development. Part 3 also identifies the mitigation measures that are proposed (integral to the project design) to minimize or avoid the identified impacts as relates to the magnitude and importance of potential impacts. The Part 3 sections and evaluations are further described below.

Development Purpose, Needs, and Benefits

The proposed development will provide needed AFFH affordable rental apartments in a portion of the Town where multi-family residential is permitted and in close proximity to mass transit and major transportation routes. The proposed affordable rental community will add to the Town's housing inventory and fill a specific housing need.

The development will comply with Westchester County's fair and affordable housing programs and policies, including the Westchester County Fair and Affordable Implementation Plan. The proposed development will assist the County in meeting its court mandated obligation to complete 750 affordable AFFH units with financing and building permits in place by December 31, 2016. The proposed AFFH apartments will also count towards the Town of Lewisboro's substantially unmet "fair share obligation" to create 239 units of affordable housing as established by the County's Affordable Housing Allocation Plan (2000-2015). Funding for the development will include programs provided by Westchester County and NYSHCR.
.
The design of the proposed buildings will be an attractive addition to the neighborhood, set back from NYS Route 22 with appropriately scaled –architecture and landscaping that will be compatible with its residential and mixed-use setting. The size, scale and architecture for the proposed residential buildings will be similar to a recently completed and well received multi-

family affordable development in North Salem, New York named Bridleside, which community serves as the Applicant's vision for the proposed action.

Objectives of the Applicant

The Applicant's proposal intends to accomplish the following:

- To provide affordable rental housing opportunities in an area of the Town zoned for and well suited to support such land use, especially its location in close proximity to mass transportation and shopping opportunities (Goldens Bridge).
- To create an attractive residential development that takes advantage of the recent changes in the Town Code to allow multi-family housing in the CC-20 zoning district, and a development that is compatible with the character of the community and the long-range plans for the area.
- To minimize the environmental impacts of the development by locating the development on the western portion of the property on the most level and suitable areas of the property. The eastern portion of the site (Parcel 40.2-2-5), is proposed to be permanently preserved through the use of restrictive covenants and/or conservation easements.

The Applicant, Wilder Balter Partners, Inc. is a leading developer of award winning new residential developments in the New York metropolitan area. WBP companies have built market rate and affordable communities throughout the Hudson Valley, in Connecticut and in Nassau and Suffolk counties in Long Island for 25 years. WB Residential Communities, Inc. (WBRES) is the property management affiliate of Wilder Balter Partners. This group successfully manages and oversees 32 WBP developed properties with more than 3,200 apartments located in New York, Connecticut and the US Virgin Islands.

Site Location and Environmental Setting

Property Location

The development site is located on the east side of NYS Route 22 and immediately east of Interstate 684. The site is located approximately three-quarters of a mile south of Route 138 and the Goldens Bridge Metro North train station. The subject property is bounded on the north and east by vacant land, to the south by low density residential properties and on the west by NYS Route 22. Interstate 684 lies directly west of NYS Route 22 and the highway parallels the Metro North rail line. The Croton Reservoir, part of the New York City water supply system, lies approximately 550 feet west of the site.

Route 22 provides the only road frontage to the subject property. The site is comprised of three tax lots.

Environmental Setting

The subject property is located within an area of low density residential development, undeveloped land and transportation uses, as shown in Figure 2-2 Aerial Photo. The land uses in the area are predominantly low density residential, although the western portion of the property is located in the CC-20 Campus Commercial zoning district. This district is located

along the Route 22 corridor, approximately one-half mile south of the Goldens Bridge Village Center.

The topographic setting of the property includes an east-west trending rocky hill which slopes towards lower elevations to the north, west, south and east. Elevations on the property range from 208 feet in the wetlands in the southwest portion of the site to 450 feet at the hilltop in the north central portion of the site. Steep slopes, consisting of slopes greater than 15 % are located on the slopes of the hill and many upland portions of the property. Steep slopes comprise approximately 67 percent of the subject site (23.8 acres).

The property is currently undeveloped with the exception of two water supply wells that were installed in the 1980's as part of an earlier proposed development that was never completed. The site is primarily wooded with second growth successional forest on upland portions of the site and mapped wetlands are located in the southeastern portion of the property. A small intermittent stream runs through the middle of the wetland. The wetlands are regulated by the Town of Lewisboro, the NYSDEC (Wetland F-29) and by the U.S. Army Corps of Engineers. Based upon mapping by the NYSDEC the property is not part of or adjacent to any designated significant natural community or state listed Critical Environmental Area.

The site is serviced by electric, telephone and cable service from private utilities on Route 22.~~,~~ No municipal water or sewer services are available to the site.

Development Description, Proposed Uses, and Layout

Building Layout and Design

The proposed residential development will include five (5) multi-family buildings serviced by a single 24-foot wide access driveway. Development is concentrated in upland areas in the western portion of the property. Each of the five buildings will contain between 8 and 10 residential units and one building (Building 2) will contain a community space (clubhouse). The layout plan is provided as Figure 2-3 and full sized drawings are attached. The buildings were located to minimize grading and site disturbance to the extent necessary on a property that has varied topography and areas of exposed bedrock. The buildings, driveways and parking areas were situated to make use of more level portions of the site and minimize disturbance to slopes.

Parking and driveway access for emergency vehicles is provided at the front of all buildings and additional parking is provided at the west side of Buildings 2 and 3, to take advantage of the difference in elevations from the front to the back of the Buildings. A traffic circle with a full radius of 65 feet is provided between Buildings 4 and 5 to allow for emergency vehicles to circulate through the development. In addition to the community space in Building 2, a children's play area is proposed between Buildings 2 and 3 and a multi-purpose sports court is provided next to Building 5. Sidewalks will link all of the buildings, parking and play areas.

Given the natural slopes on the property, development will require retaining walls south of Buildings 3 and 4 and between Buildings 4 and 5. Two stormwater management basins are located south of the residential development, at lower elevations where stormwater naturally flows. ~~–~~A graded driveway will be provided for maintenance access to the stormwater management basins.

The residential development will be fully landscaped with vegetation that is common to the northeast.

Compliance with Zoning Code

The subject property lies in two Town zoning districts: the two westerly lots are located in the CC-20 zoning district and the easterly lot is located in the R-4A zoning district. The proposed residential development is proposed for the two westerly lots in the CC-20 district, while the eastern lot is proposed to be permanently preserved through the use of restrictive covenants and/or conservation easements. A portion of the community septic system will need to be constructed on the easterly lot (R-4A district), but no structures or impervious surface. The proposed action will include a lot consolidation to result in a single tax lot for the entire property, replacing the three existing lots.

The site plans developed for this affordable housing application show and tabulate the various zoning requirements of the CC-20 and R-4A districts applicable to the property, including the new reference to the provisions for multi-family dwellings which are found in the R-MF requirements.

Multi-family dwellings are a permitted use in the CC-20 district, subject to the requirements of Section 220-26, Multifamily Residence District (R-MF), of the Zoning Code. The dimension and bulk zoning requirements of the R-MF district replace those of the underlying CC-20 district. The proposed plan meets all of the dimension and bulk requirements of the ~~CC-20 and~~ R-MF district~~s~~, with the exception of parking.

The Applicant is proposing a total of 92 parking spaces for this facility, whereas 124 spaces are required by zoning based on the proposed bedroom count. The Applicant is requesting a parking variance from the Zoning Board of Appeals, based upon the actual parking usage at similar projects developed and managed by the Applicant

The Applicant proposes to permanently preserve at least 17 acres of the site through the use of restrictive covenants and/or conservation easements. This preserved area will be located substantially on the R-4A zoned parcel and provide a permanent buffer and open space resource for the benefit of the development's residents and surrounding properties.

Compliance with the Master Plan

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The Town Master Plan outlines policies and goals formally adopted by the Town of Lewisboro in 1985[1] as a guide for land use and future development in the Town. In its Plan, the Town identified considerations for preservation of open space resources as well as for development that are generally applicable to the subject proposal today. The Plan does not identify site-specific consistency criteria, but it was intended to provide overall guidance on the local scale for land planning decisions.

The 1985 Town Master Plan speaks of a vision for land use in the I-684/Route 22 corridor that would provide for development of campus commercial land use that would also incorporate the preservation of open space. Campus commercial development was envisioned and planned for in the area bordering Route 22 including the subject site and paved the way for the subsequent rezoning to CC-20. As stated in the Master Plan relative to campus commercial facilities, adequate buffering between such use and adjacent residential areas would allow the two

[1] Accessed on the Town's website 1/21/16.

different types of land use to coexist, and reduce impacts to the natural environment resulting from development.

The Town's Master Plan cites general design principles to guide future public and private development in the Town to support the goals and objectives of the Town. These recommendations refer to landscape buffering of buildings and parking areas, minimization of disturbance on steep slopes where potential for erosion needs to be addressed, and provisions to minimize adverse visual impact on Town character and neighboring uses.

The proposed plan will comply with the requirements of the Town's Zoning, with the exception of a parking variance. The site plan will incorporate various conventional slope protection and wetland protection measures that will minimize the potential for soil erosion and surface water impacts. The plan also will incorporate tree preservation measures (particularly by minimizing the overall area of site disturbance) and proposed landscape plantings that will minimize visual intrusion and create an asset to the community. Moreover, the site plan will preserve a significant area located outside of the limits of disturbance in permanent open space.

The proposed development plan addresses the Town's design principles relative to environmental protection and visual consistency, in the applicant's opinion. The proposed site plan has been laid out such that the buildings and other site features will be substantially surrounded by permanently preserved, wooded open spaces and will not be visually prominent at any time of year. In addition to the proposed landscape plan, natural topographic conditions render the development area of the site largely obscured from view from most offsite locations thereby avoiding potential impact on community character.

Residential Use and Management

The proposed development will be exclusively used for residential purposes. The Applicant proposes an affordable AFFH development with 45 rental units and a single caretakers unit (46 units total). The rental apartments will meet the requirements of the Westchester County Fair and Affordable Housing Implementation Plan (2000). While the development will be funded utilizing programs provided by Westchester County and NYSHCR, the development will be developed, built, marketed, owned and operated by Wilder Balter Partners, Inc.

The development will include a mix of one, two and three bedroom units as follows:

1 BR – 14 Units
2 BR – 28 Units (including caretakers units)
3 BR – 4 Units

The units will range will in size from approximately 842 square feet (1-BR unit), 1,025 square feet (2-BR unit) and 1,285 square feet (3-BR unit).

The development is proposed as a fair and affordable community subject to maximum income requirements. The units will be available to residents whose household incomes do not exceed 60% of the Area Median Income (AMI), based on family size, as established by the Department of Housing and Urban Development (HUD) on an annual basis. Nine of the units (20 percent) will be set aside for households at or below 50% of the AMI. ~~Units will be available to households at or below 60% of the median income of Westchester County, adjusted by household size. Nine (20%) of the units must be set aside for households at or below 50% of the area median income.~~ In 2015, the area median income in Westchester County was

established at $105,700 for a 4 person household. Therefore, for a family of 4, 60% of the AMI would be $63,420 and 50% would be $52,850. Further information on income eligibility, marketing and building occupancy is provided in Section 3.9 Community Facilities and Services and in the~~the~~ January 6, 1016 letter from Wilder Balter Partners, Inc. to the Planning Board (see Appendix A – Correspondence).

The apartments will be marketed by Wilder Balter Partners, Inc. together with a non-profit partner (expected to be the Housing Action Council) to households meeting the income eligibility requirements. Marketing will comply with the Westchester County Affirmative Fair Housing Marketing Plan. A typical application is provided in Appendix A (see January 6, 2016 Wilder Balter Partners, Inc. letter). Applicants will be selected for an interview by public lottery. Interviews will be conducted by trained and experienced management staff. In addition to income and asset information, all applicants will be required to pass established credit and criminal screening processes.

Further information regarding anticipated community demographics is provided in Section 3.9 – Community Facilities and Services. Information provided in the demographics and community services discussion is based, in part, on a recently completed and fully occupied affordable rental community in North Salem managed by Wilder Balter Partners, Inc. named Bridleside at North Salem.

Drainage / Stormwater Management Plan

A preliminary stormwater management plan for the proposed development has been prepared by the project engineer, Insite Engineering, Surveying, & landscape Architecture, P.C. The plan includes a stormwater pollution prevention plan report, or SWPPP and relevant engineering drawings. A copy of the preliminary SWPPP is provided in Appendix B.

The SWPPP is required to meet the regulatory requirements of the Town of Lewisboro, the NYSDEC and the New York City Department of Environmental Conservation (NYCDEP). Once the SWPPP is approved in final form (as part of the final site plan approval after the conclusion of the SEQR process), the document will govern all activities associated with site disturbance for construction and all permanent drainage features required to comply with applicable stormwater management regulations. Section 3.2 provides further description of the proposed stormwater management system.

The site plans call for a stormwater collection system to collect and direct stormwater from developed impervious surface to a single stormwater management practice, given the use of an infiltration practice for treatment. Therefore, the stormwater design consists of a dry pretreatment extended detention basin followed by discharge to an infiltration area (see Drawing SP-2 Conceptual Grading Plan).

The SWPPP also provides for erosion and sediment control during construction and on-going maintenance for stormwater management facilities.

Utilities (Water and Sewer)

The development site is not located in an area served by municipal water and sewer service. Water service will be provided by a new community water system supplied by on-site wells and wastewater will be treated by a new community on-site septic system. These systems are being designed by the project engineer, Insite Engineering, Surveying & landscape Architecture, P.C.

The engineer has developed preliminary water and sewer reports for the residential development and they are attached in Appendix C and D. The community water and sewer systems will be designed and constructed in accordance with the standards and subject to the approval of the Westchester County Department of Health (WCDOH) and New York State Department of Environmental Conservation (NYSDEC).

Water demand for the development has been estimated in the Water Facilities Report to be 9,020 gallons per day (gpd) based upon bedroom count. Average daily flow is estimated to be 6 gpm, with peak hourly flow estimated at 60 gpm. Each building will be equipped with sprinklers and the combined peak flow from domestic and fire sprinkler demand will be used to design the water system.

Water will be supplied from two existing wells, but an additional 1 to 2 wells will be required (3 to 4 wells total) to meet the NYSDEC requirements for maximum day demand with the best well out of service. Water supply for the development was evaluated by Leggette Brashears & Graham (see Water Supply Report – Appendix E). Further discussion of groundwater supply is provided in Section 3.4 Groundwater.

The community water system will include on-site water treatment facilities and an estimated 15,000 gallon storage tank.

Wastewater design flow for the residential development is based upon bedroom count and is estimated at 9,020 gallons per day (gpd). Preliminary soil testing for the Subsurface Treatment System (SSTS) areas have been completed by Insite. Suitable soils for the SSTS areas have been identified in the southwestern, northern and eastern portion of the site. Based on the site constraints, preliminary testing and initial assessment indicate that the on-site soils can accommodate a SSTS to support a wastewater design flow of up to 9,020 gpd. The final SSTS capacity will be based on witnessed soil testing with the WCDOH and NYCDEP and the final bedroom count for the development.

Construction

Construction Period Anticipated

The duration of the construction is anticipated to be approximately 16 months, beginning in Spring 2017. The residential development will be constructed as one continuous project. Construction activity will occur weekdays from 8:00 AM and Sunset, in conformance with the Town of Lewisboro regulations. No construction activity will occur between Sunset and 8:00 AM or on weekends or holidays.

Erosion and Sediment Controls During Construction

The site plan documents for permitting and construction will include detailed erosion and sedimentation control plans, details and notes designed in accordance with Town, NYSDEC and NYCDEP requirements for stormwater management. Erosion and sediment controls will include implementation and maintenance of temporary measures throughout the duration of the construction activities and installation of structural measures for the permanent stabilization of the site. Details of the proposed erosion and sediment controls are specified in the preliminary Stormwater Pollution Prevention Plan (SWPPP) (see Appendix B).

Site excavation will entail excavation and earth removal. Based upon observation and preliminary soil testing, it is anticipated that grading for construction will require rock hammering and blasting. ~~Preliminary cut and fill estimates completed by the project engineer indicate that~~ . A cut and fill analysis is being completed by the project engineer as the Site Plan is refined. The project engineer will endeavor to bring the earthwork as close to balance as possible in order to minimize import/export. ~~all excavated material can be re-used on-site and therefore, minimal material will be required to be imported to or exported from the subject site.~~ Re-using the on-site rock as construction fill will require on-site rock processing by a rock crusher. Any required blasting and/or rock crushing will be done in compliance with all Town of Lewisboro and New York State regulations and requirements. A Blasting Permit from the Town of Lewisboro is required for the work.

A stabilized gravel construction access pad will be installed at the construction entrance point identified on the erosion control plans to limit soil transport onto the local roadways from trucks leaving the site. The SWPPP will specify measures to stabilize the steep slopes during and after construction and to divert clean runoff water away from the construction area.

Construction Staging

Construction material and staging areas will be maintained on the site. Areas for equipment staging and soil stockpiling within the site will need to be designated prior to commencement of construction activities. Erosion controls will be utilized around all areas selected for material storage and equipment staging. The construction equipment entrance will be stabilized with broken stone and perimeter silt fencing will be installed around all construction areas.

Truck Traffic

Construction traffic will arrive at the beginning of the construction period, primarily consisting of trucks delivering equipment and building materials, and daily trips of construction workers. Large construction equipment will include bulldozers, graders, excavators and dump trucks. This equipment is typically brought to the site on tractor trailers and generally is kept at the site for the duration of site preparation activities.

While the construction activity is ongoing, construction materials will be brought in throughout the construction period. Trucks will travel to and from the site to transport construction materials.

EAF Part 3 Evaluation

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As described, the EAF Part 3 Evaluation provides information and analyses for those potential impact categories that are relevant to the proposed development. The Part 3 sections provide a description of existing conditions, potential impacts and proposed mitigation to avoid and/or minimize potential impacts.

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3.1 Impact on Land (Soils, Topography, Geology)
The development will require grading and excavation for project construction. The project has been designed to minimize the limits and extent of grading. Mitigation measures including a Soil Erosion Control Plan are described in the section.

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3.2 Impact on Surface Water
Site development, grading and soil erosion have the potential to impact on-site and off-site water quality. Mitigation measures including a Stormwater Pollution Prevention Plan (SWPPP) are described in the section.

3.3 Impact on Wetlands
The subject property contains a wetland regulated by the NYSDEC, the Town of Lewisboro and the US Army Corps of Engineers. The proposed Site Plan requires encroachment into the Town of Lewisboro and NYSDEC designated wetland buffer area (designated wetlands are avoided). Approximately 7,000 sf of DEC adjacent area and 14,500 sf of Town of Lewisboro buffer will be disturbed. Mitigation measures including a wetlands mitigation plan are described.

3.4 Impact on Groundwater
The development site is not located in an area served by municipal water and therefore water service will be provided by a new community water system supplied by on-site wells. A hydrogeologic assessment for the property has been prepared and it is anticipated that on-site wells can meet the estimated water demand of 9,020 gallons per day (gpd), with no significant impact to the nearby private wells.

3.5 Impact on Ecology
The site is primarily wooded with second growth successional forest on upland portions of the site and a mapped wetland is located in the southeastern portion of the property. Grading for site development will alter approximately 9 acres of existing vegetation and habitat. An evaluation of existing vegetation and mitigation measures are provided.

3.6 Impact on Aesthetic Resources
The development will alter the view for drivers on the I-684 exit ramp and on a limited section of NYS Route 22. A visual analysis has been completed and mitigation measures are described. Mitigation will include building design elements such as building materials and colors.

3.7 Impact on Historic and Archeological Resources
On-site grading has the potential to impact archeological resources. Phase 1A and 1B Cultural Resources Surveys have been completed for the project area. The Phase 1B investigation involved soil test pits. Based upon the surveys, the development will have no impacts upon Historic and Archeological resources.

3.8 Impact on Transportation
The proposed development will result in approximately 43 new vehicle trips during the p.m. peak traffic hour. A traffic study has been completed and is described in the section. The development will not result in significant impacts to local traffic.

3.9 Impact on Community Facilities and Services
The new development will result in new demand for municipal services, including the addition of an estimated 17 school children to the Katonah-Lewisboro School District. The potential impacts to the Town of Lewisboro and the School District are evaluated.

3.10 Consistency with Community Character
The subject property lies in two Town zoning districts: the two westerly lots are located in the CC-20 zoning district and the easterly lot is located in the R-4A zoning district. The proposed residential development is proposed for the two westerly lots in the CC-20 district, while the eastern lot is proposed to be permanently preserved through the use of restrictive covenants

and/or conservation easements. A discussion is provided regarding the development's consistency with nearby existing land uses, the Town Zoning Code and the Master Plan.

Approvals, Reviews and Permits

Approvals, reviews and/or permits required for the implementation of this development are listed below by issuing agency. These agencies are called Involved Agencies under SEQRA, and have approval authority over one or more aspects of this application.

Site Plan, Wetlands Permit and Stormwater Permit
Town of Lewisboro Planning Board
20 North Salem Road
Cross River, NY 10518

Variances from Zoning Code
Town of Lewisboro Zoning Board of Appeals
20 North Salem Road
Cross River, NY 10518

Building Permit, Blasting Permit
Town of Lewisboro Building Department
20 North Salem Road
Cross River, NY 10518

Community Septic System, Community Water Supply
Westchester County Department of Health
145 Huguenot Street
New Rochelle, NY 10801

Community Septic System, SWPPP
NYC Department of Environmental Preservation
465 Columbus Avenue
Valhalla, NY 10595

SPDES General Permit for Stormwater, Wetland Permit
NYS Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, NY 12561

Highway Permit
NYS Department of Transportation
4 Burnett, Boulevard
Poughkeepsie, New York 12603

Development Funding
Westchester County Planning Board
148 Maritine Avenue
White Plains, New York 10601

Development Funding
New York State Homes & Community Renewal
641 Lexington Avenue
New York, New York 10022

3.1 SOILS, TOPOGRAPHY and GEOLOGY

Existing Conditions

The soils on the development site have been mapped by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS) of Putnam and Westchester County, New York. Soils on the property are varied and are partly controlled by the varied topography and bedrock that is shallow or exposed in portions of the site.

The eight (8) soil types mapped on-site include: Chatfield-Hollis-Rock outcrop complex (CtC and CuD), Hollis-Rock outcrop (HrF), Palms muck (Pa), Riverhead loam (RhB), Leicester loam (LcB), Chatfield-Charlton Complex (CsD), Charlton Loam (ChD), and Charlton-Chatfield Complex (CrC). The location of these soils groups on the site is shown in Figure 3.1-1, Soils Map. *A summary of on-site soils, soil characteristics, depth to groundwater and depth to bedrock is provided in Table 3.1-1.*

The Chatfield-Hollis-Rock outcrop complex soils (CtC and CuD) are either hilly (CuD) or rolling (CtC) and are moderately to very deep and well drained to excessively drained. Slopes range from 3 to 15 percent (CtC) and 15 to 35 percent (CuD). Depth to water is more than 6 feet throughout the year, permeability is moderate to moderately rapid, and available water capacity is very low to moderate. The depth to bedrock is typically between 10 inches and 40 inches.

The Hollis-Rock outcrop complex soils (HrF) are shallow, very steep and well drained soils with areas of rock outcrop. Slopes will range from 35 to 60 percent. Depth to water is more than 6 feet throughout the year, permeability is moderate or moderately rapid, and the available water capacity is very low. The depth to bedrock is generally between 10 to 20 inches.

The Palms muck soils (Pa) are nearly level, very deep and very poorly drained soils and consists of 16 to 51 inches of organic material. Depth to water is typically 6 inches above to 12 inches below the surface from September through June, and up to 24 inches during dry periods. Permeability is moderately slow to moderately rapid with a high water capacity. Depth to bedrock is typically more than 60 inches.

The Riverhead loam (RhB) soils are gently sloping, very deep and well drained. Slopes range from 3 to 8 percent. Depth to water is more than 6 feet throughout the year. Permeability is moderately rapid with a moderate water capacity. The depth to bedrock is typically more than 60 inches.

The Leicester loam (LcB) soils are gently sloping, very deep and somewhat poorly drained. Slopes range from 3 to 8 percent. Depth to water is typically 1.5 feet in depth from November to May. Permeability is moderate or moderately rapid with a moderate water capacity. Depth the bedrock is greater than 60 inches.

The Chatfield-Charlton complex (CsD) is a soils unit that is very deep and well drained. Slopes range from 15 to 35 percent. Depth to water is generally more than 6 feet throughout the year. Permeability is moderate to moderately rapid with a low water capacity. Depth to bedrock is typically 20 to 40 inches.

The Charlton loam (ChD) soils are moderately steep, very deep and well drained. Slopes range from 15 to 25 percent. Depth to water is 6 feet below the ground surface throughout the year.

Permeability is moderate to moderately rapid with a moderate water capacity. Depth to bedrock is more than 60 inches.

The Charlton-Chatfield complex (CrC) consists of very deep and well drained soils. Slopes range from 2 to 15 percent. Depth to water is typically 6 feet throughout the year. Permeability is moderate to moderately rapid with a low to moderate water capacity. Depth to bedrock is greater than 60 inches.

Table 3-1-*1*
Soil Characteristics and Limitations

Soil Series	Hydrologic Group[1]	Permeability (in./hr.)	Erosion Factor K[2]	Depth to Bedrock (inches below the ground surface)	Depth to Water (feet below the ground surface)
Chatfield-Hollis-Rock outcrop (CtC & CuD)	B/C/D	0.6-6.0 (0-24" deep)	0.20-0.32	10-40 inches	>6 feet
Hollis-Rock outcrop (HrF)	C/D	0.6-6.0 (0-16" deep)	0.24-0.32	10-20 inches	>6 feet
Palms muck (Pa)	A/D	0.2-6.0 (0-48" deep) 0.2-2.0 (48-60" deep)	0.37	>60 inches	+1-1.0 feet (November thru May)
Riverhead loam (RhB)	B	2.0-6.0 (0-30" deep) >20 (30-60" deep)	0.17-.28	>60 inches	>6 feet
Leicester loam (LcB)	C	0.6-6.0 (0-26" deep) 0.6-20.0 (26-60" deep)	0.24-0.28	>60 inches	0-1.5 feet (November thru May)
Chatfield-Charlton complex (CsD)	B	0.6-6.0 (0-60" deep)	0.20-0.24	20-40 iches	>6 feet
Charlton loam (ChD)	B	0.6-6.0 (0-60" deep)	0.24	>60 inches	>6 feet
Charlton-Chatfield complex (CrC)	B	0.6-6.0 (0-60" deep)	0.20-0.24	>60 inches	>6 feet

[1] Hydrologic groups are used to estimate runoff from precipitation; they range from high infiltration (A) to low infiltration (D).
[2] Erosion Factor K indicates susceptibility to sheet and rill erosion by water measured in tons/acre/year. K values range from 0.05 to 0.69. Higher values indicate greater susceptibility
Source: Soil Survey of Rockland County, New York, USDA SCS.

The site generally slopes from the north to the south towards the wetland in the southwestern portion or the property. Bedrock underlying the development site consists of Fordham Gneiss and Inwood Marble.

The project engineer has analyzed the existing slopes on the property. As shown in Drawing CM-1 Constraints and Net Lot Area Map, development is proposed on the more level, western

portions of the property. Existing slopes based upon slope categories are shown in Table 3.1-2 Existing Slopes.

Table 3.1-2 Existing Slopes	
0-15 %	11.6 acres
15-20%	4.1 acres
>20%	19.7 acres
Total	35.4 acres
Source: insite Engineering, Surveying, & Landscape Architecture, P.C. March 2016	

Potential Impacts

Grading is required to build the internal road network, install utilities, prepare areas for the proposed residential buildings and parking, and to create the stormwater management facilities located in the southern portion of the site. The conceptual grading is shown in Figure 3.1-2 - Conceptual Grading Plan. The site plan layout is designed to utilize the existing topography thereby minimizing the amount of earthwork necessary. Based on preliminary engineering estimates approximately 9 acres is proposed to be disturbed for the development. Exposed soils, especially in areas of steep slopes has the potential to result in soil erosion and sedimentation into areas of lower topography including wetland buffers and wetlands located in the southwest portion of the site.

A cut and fill analysis is being completed by the project engineer as the Site Plan is refined. The project engineer will endeavor to balance the cuts and fills to the greatest extent practical to minimize the need to import or export material. Re-using the on-site rock as construction fill will require on-site rock processing by a rock crusher.

Based upon analysis by the project engineer, the development will require some disturbance to slopes greater than 15 percent. Disturbance to slopes by category is provided in Table 3.1-3. Grading on steeper grades increases the potential for soil erosion, if stabilization and erosion control techniques are not properly implemented. An erosion and sediment control plan has been prepared to assure proper management of exposed soils and to minimize erosion, as further described below.

Table 3.1-3 Slope Disturbance	
0-15%	3.9 acres
15-20%	1.4 acres
>20%	3.6 acres
Total	8.9 acres
Source: Insite Engineering, Surveying, & Landscape Architecture, P.C. March 2016	

Bedrock outcrops are more prevalent in the eastern portion of the property and include a topographic ridge. Development on the eastern portion of the property is not proposed, with the possible exception of septic fields. The septic fields, as shown in the plans, would only occur on level portions of the site with sufficient soil cover above the bedrock. All major development is located on the western portion of the property. If bedrock is encountered during construction, mechanical means (i.e. ripping, chipping) would be employed first to avoid any unnecessary blasting. Based upon observation and preliminary soil testing, it is anticipated that grading for

construction will require rock hammering and blasting. In limited circumstances such as improper design or implementation, blasting has the potential to damage off-site foundations. The nearest existing off-site residences are located on Todd Road south of the property and approximately 600 feet from the proposed area of development. Blasting mitigation measures are described below.

Avoidance or Minimization of Potential Impacts and Mitigation

Soils

~~Grading is required to build the internal road network, install utilities, prepare areas for the proposed residential buildings and parking, and to create the stormwater management area located on the southern portion of the site. The conceptual grading is shown in Figure 3.1-2 - Conceptual Grading Plan. Work will be incorporated with the existing topography thus minimizing the amount of earthwork necessary. Based on preliminary engineering estimates approximately 9 acres of land is proposed to be disturbed for the development area. Preliminary cut and fill estimates completed by the project engineer indicate that all excavated material can be re-used on-site and therefore, minimal material will be required to be imported to or exported from the subject site.~~

As indicated, construction of the development will require the grading of approximately 9 acres of the 35.4 acre property or 25 percent. The project engineer has provided an estimate of the amount of grading required in each slope category, as shown in Table 3.1-3. As shown in the grading plan (Figure 3.1-2), grading on slopes greater than 15 percent is unavoidable, but has been minimized to the extent practical through the layout of the buildings, parking areas, driveways and septic fields.

Engineering measures such as proper design of foundations, subsurface drainage as needed, and proper designs of pavement subbase and excavated slopes can be utilized to overcome any construction limitations of the onsite soils.

A Soil Erosion and Sediment Control Plan (Drawing SP-3) has been prepared for the subject development, as part of the Stormwater Pollution Prevention Plan (SWPPP)~~An erosion and sediment control plan will be prepared~~ to assure proper management of soils to minimize erosion, as further described below.

Blasting

~~Bedrock outcrops are more prevalent in the eastern portion of the property and include a topographic ridge. Development on this portion of the property and the ridge is not proposed. All development is located on the western portion of the property. If bedrock is encountered during construction, mechanical means (i.e. ripping, chipping) would be employed first to avoid any unnecessary blasting. Based upon observation and preliminary soil testing, it is anticipated that grading for construction will require rock hammering and blasting.~~

A Blasting Permit will be obtained from the Town of Lewisboro for any required blasting, according to the Building Code (92-18 Blasting Operations).

Any necessary blasting would only be carried out in conformance with an approved Blasting Plan, specific to this project, developed between the Blasting Contractor and the Town. The Blasting Plan would include, but not be limited to the following:

- Determination of a radius of sensitive receptors to the blasting site.
- Notification of property owners within the radius of sensitive receptors. This notification would provide warning that blasting will occur and the dates it is planned to start and finish.
- Conducting pre-blasting inspections for buildings within the radius of sensitive receptors. This will be completed by the Blasting Contractor.
- Conducting post-blasting inspections of the buildings within the specified radius.
- Blasting would only be conducted during specified hours in conformance with the Town of Lewisboro Building Code (7:00 AM to 7:00 PM).

The Blasting Plan would be developed in full conformance with the Town of Lewisboro's Building Code and in accordance with New York State blasting law. *A preliminary Blasting Plan is attached as Appendix H.* The contractor's Blasting Contract would be based on site specific blasting requirements, and would be submitted to the Town for approval in advance of any site work activity. In accordance with the Town Building Code, the Building Inspector shall not issue a permit for blasting unless the applicant has filed with the Building Inspector a certificate of insurance evidencing comprehensive general liability insurance.

Potential Erosion

The anticipated development includes the grading and disturbance of 9 forested acres. The area proposed to be disturbed is in the western portion of the site with more level topography minimizing disturbance to steep slopes to the extent practical. During construction, erosion control measures will be implemented to mitigate any steep slope disturbance that may occur.

A Soil Erosion and Sediment Control Plan (Drawing SP-3) has been prepared for the subject development, as part of the Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is provided in Appendix B. *The Erosion and Sediment Control Plan shows the limits of disturbance and the placement of silt fencing in locations down-slope from areas of grading. The proposed stabilized construction entrance is also shown in the Plan. Drainage inlets with inlet protection will be installed in conjunction with the stormwater collection drain system.*

The SWPPP has been designed to conform to applicable requirements of the New York State Department of Environmental Conservation (NYSDEC), SPDES General Permit GP-0-15-002. The Plan will be completed in accordance with New York State Department of Environmental Conservation best management practices ("BMPs") as further described below.

Best Management Practices (BMPs)

The principle objectives of the Soil Erosion and Sediment Control Plan include the following:

- divert clean surface water before it reaches the construction area;
- control erosion at its source with temporary and permanent soil protection measures;
- capture sediment-laden runoff from areas of disturbance and filter the runoff prior to discharge; and,
- decelerate and distribute storm water runoff through use of natural vegetative buffers or structural means before discharge to off-site areas.

These objectives will be achieved by utilizing a collective approach to managing runoff, i.e. Best Management Practices (BMPs). Prior to any disturbance, erosion and sediment control measures will be installed in accordance with the specifications of the Erosion Control Plan. The construction contractor will be required to install all sediment and erosion control measures and maintain them throughout the entire construction process.

Based upon the proposed erosion control measures being implemented, construction impacts will be minimized.

3.2 IMPACT ON WATER RESOURCES

Existing Conditions

The development site is mostly wooded with second growth forest and an area of wetland located in the southwestern portion of the site. Topography on the property is varied and elevations range from about 210 feet to 450 feet. An east-west trending ridge is located in the northern portion of the property, and run-off generally drains from north to south towards the wetland. Surface water drainage flows by sheet flow from higher elevations to lower elevations on the site.

The wetland in the southwest portion of the property is mapped as a NYSDEC regulated wetland (F-29). This wetland is also regulated by the Town of Lewisboro and the US Army Corps of Engineers. According to the NYSDEC on-line database Wetland F-29 is 14.4 acres in size. Approximately 2.3 acres of this wetland is located on the subject property.

An intermittent watercourse is located in the mapped wetland and this watercourse flows towards the west under Route 22 and the eventually drains to the Muscoot Reservior located west of the property. *A site walk with the New York City Department of Environmental Protection (NYCDEP) on March 9, 2016 confirmed that the on-site watercourse is not a reservoir stem.* This intermittent watercourse is not designated on NYSDEC maps (NYSDEC Environmental Resource Mapper). The property contains no other streams, ponds or lakes.

The development site is in the Muscoot Watershed Basin. This Reservoir is located in the New York City East-of-Hudson Croton Watershed, where the Environmental Protection Agency (EPA) has established a Total Maximum Daily Load (TMDLs) for phosphorus. The burden for reducing current phosphorous loading to achieve the TMDL presently lies with the applicant, Town of Lewisboro and its regional partners. The program for phosphorous reduction has been established in the NYSDEC document entitled *Croton Watershed Phase II Phosphorous TMDL Nonpoint Source Implementation Plan* (TMDL Implementation Plan) dated January 14, 2009.

Potential Impacts

Stormwater run-off during construction or post-development, has the potential to affect water quality for wetlands and water courses identified on-site and may potentially affect off-site water courses. During construction, stormwater run-off has the potential to transport sediment into wetlands and water courses. The development will result in the introduction of 2.4 acres of new impervious surface to the site. Post-development, stormwater may transport sediment, salt from winter deicing and oil and grease from parking lots and driveways. Effective stormwater management, both during and following the development, will minimize these potential stormwater impacts.

Avoidance or Minimization of Potential Impacts and Mitigation

In connection to the project plans, the project engineer has prepared a preliminary Stormwater Pollution Prevention Plan (SWPPP) for the proposed development. The development will require grading, excavation and the construction of driveways, parking areas and buildings. Approximately 2.4~~8~~ acres will be converted to impervious surface for the development. Mitigation for the proposed impervious surfaces resulting from the development will be provided by the proposed stormwater management practices (SMP's) described in the SWPPP. The proposed SMP's will be designed to capture and treat runoff from the impervious surfaces

associated with the proposed buildings, parking areas and access drive. A copy of the preliminary SWPPP is attached in Appendix B.

The existing drainage patterns on the site will be maintained to the maximum extent practical in the proposed condition. Stormwater treatment for the subject project will be accomplished with several practices including an extended detention dry stormwater basin, used as pretreatment practice prior to an infiltration basin. The infiltration basin and extended detention pretreatment dry stormwater basin will both be sized to capture and treat the Water Quality Volume from the contributing area of the proposed development. The stormwater runoff from the proposed development will be captured in a collection system and conveyed to the extended detention dry stormwater basin for pretreatment of the stormwater runoff, prior to discharging to the infiltration basin for final treatment.

Given the topography and natural constraints on the subject property, limited practical area was available for stormwater management practices. As shown in Figure 3.1-2 Conceptual Grading Plan, the infiltration basin and extended detention pretreatment dry stormwater basin are located partially within the Town of Lewisboro 150 foot wetland buffer and the NYSDEC 100 foot adjacent area. Approximately 7,000 sf of NYSDEC adjacent area and 14,500 sf of Town of Lewisboro buffer will be disturbed. As mitigation for this disturbance, these transition areas will receive manual removal of invasive species during basin construction that will allow the native species to regenerate and compete with the more aggressive invasive species that currently occupy this part of the site. In addition the stormwater management facilities will be planted with wetland vegetation, as *further* described in Section 3.*5*~~4~~ - Impact on Ecology.

The proposed stormwater management system for the development has been designed to meet the requirements of local, city, and state stormwater ordinances and guidelines, including but not limited to those of the Town of Lewisboro, the NYSDEC, and the New York City Department of Environmental Protection (NYCDEP). Since the subject development proposes the disturbance of more than one (1) acre, coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-15-002 is required. In order to meet the requirements set forth by this permit, the latest edition of the NYSDEC *New York State Stormwater Management Design Manual* (NYSSMDM), including Chapter 10: *Enhanced Phosphorus Removal Standards* (Chapter 10), was referenced for the design of the proposed stormwater management system. Based upon NYCDEP rules and regulations in the watershed, NYCDEP review and approval of a SWPPP Approval is required for this for this project. *In the opinion of the applicant, a*~~A~~dherence to the NYSDEC, NYCDEP and Town of Lewisboro stormwater regulations and requirements will ensure that stormwater quality from the development will be maintained.

Given the above mitigation measures, it is the applicant's opinion that the proposed action will have no significant impact to on-site or off-site water resources.

3.3 IMPACT ON WETLANDS

Existing Conditions

The 36 acre subject site is a mix of wooded upland slopes and wetland/stream corridor, located between undeveloped lands to the north and east, undeveloped lands and large lot residential development along Todd Road to the south, and Route 22 and I-684 to the west. The site wetland corridor is located along the southern property line, and drains to New York City owned property to the south. The 27 acre undeveloped parcel to the north is also owned by the DEP.

Site observations were conducted by Steve Marino, PWS, of Tim Miller Associates in October and November of 2015 and January of 2016. The following description complies with Section 271-7A(5) and (6) of the Town of Lewisboro Code.

The site wetlands have been subject to disturbance over the years. Hydrology for the wetland is derived from the steep rocky slopes both north and south of the wetland, with runoff collecting at the bottom of the slopes within a relatively broad flat area. This wetland is identified as DEC Wetland F-29, and is listed as 14.4 acres total (Figure 3.3-1). It is shown as a palustirne scrub-shrub wetland on NWI mapping (Figure 3.3-2)

Soils in the wetland are best described as Palms Muck for the majority of the flatter areas (Figure 3.3-3). As noted above, the soils in the western part of the wetland have been disturbed by previous activities, and exhibit some characteristics of udorthents (i.e., previously disturbed soils). Along the northwestern part of the wetland, the soils transition into Leicester loam as the slope rises, before changing over to the Chatfield Hollis soil group on the rocky steep upland slopes.

In the relatively undisturbed portions of the wetland, the most common species are red maple (FAC), slippery elm (FAC), green ash (FACW) and occasionally pin oak (FACW). A well-developed shrub layer was not observed. Skunk cabbage (OBL), cinnamon fern (FACW), sensitive fern (FACW), Canada goldenrod (FACU) and occasional tussock sedge (OBL) were the most common native herbaceous species. Representative photos of the wetland are provided with this EAF.

However, the majority of the wetland area on site is previously disturbed, resulting in a mix of non-native and invasive species throughout the wetland and the surrounding buffers. Several impenetrable areas of *Phragmites australis* (FACW) were observed. Fox grape (FACU), multifloral rose (FACU), climbing bittersweet (UPL), garlic mustard (FACU), and Japanese barberry (FACU) were observed throughout the wetland and adjacent areas. Occasional morrow honeysuckle (FACU), tartarian honeysuckle (FACU) and brambles (FACU) were also observed. The majority of these introduced species are FACU and UPL, and are an indication of the wetland drying out over time, most likely due to the channelizing of the watercourse through the area.

A watercourse has been created (or channelized) by past site activities, which flows from east to west, then turning south at the southwest property line and onto DEP property. This watercourse derives its hydrology from the rocky, steep slopes to the north, south and east, and becomes channelized on the parcel to the east of the subject property. After leaving the site, the watercourse flows south, and presumably eventually reaches a culvert under Route 684 and to the Muscoot Reservoir. This could not be verified in the field. The watercourse is not mapped by the DEC.

Wetland/Watercourse and buffer area functions

Due to its location in the watershed, this wetland functions primarily to capture and treat stormwater runoff from the adjacent rocky hillsides before it makes its way into the stream channel and offsite. Nutrient attenuation by the wetland is high due to it dense vegetation and flat slope, which provides for a long residence time in the wetland. However, the "vegetative diversity" function is relatively low due to the high percentage of non-native species within the wetland corridor. While no wetland dependent wildlife were observed during the site inspections, it is likely that common salamanders (red-backed, slimy and two-lined) live within the wetland and its adjacent areas, and a number of bird species feed on the fruit and seeds of the various herbaceous plants. It is also possible that box turtles may utilize this corridor if they are present in the surrounding woods. The adjacent areas are less densely vegetated, due to the rocky substrate, but do function somewhat as a filter before runoff enters the wetland. Runoff is rapid, due to the rocky soils, but is also aerated as it flows over the rocks down the slope.

Impacts

No direct impacts to Town or DEC regulated wetlands is proposed. One of the two stormwater management areas is proposed to be constructed partially within the 100 DEC adjacent area and entirely within the Town 150 foot control area. Of necessity these basins will be located within DEC and Town of Lewisboro buffer areas. Approximately 7,000 sf of DEC adjacent area and 14,500 sf of Town of Lewisboro buffer will be disturbed. No buildings, parking or other impervious surfaces will be placed within the adjacent area.

In order to minimize site grading and take advantage of site topography, the basins must be located in the flattest portion of the site that is downgradient of the development areas. There is such an area available on the northern side of the flagged wetland, and the project engineer has developed plans that use this area while minimizing disturbance to the adjacent area. The chosen location is part of the previously disturbed buffer area, which is dominated by opportunistic volunteer species (primarily Canada goldenrod and multifloral rose), so that vegetative impacts will be minimized as well.

No grading or other activities will occur within the wetland, but will of necessity be near the wetland. The New York City DEP's interpretation of the Watershed Rules and Regulations results in a redundant stormwater treatment program, requiring two basins on the current design and sufficient capacity to capture the regulated runoff volumes.

Mitigation

The stormwater management basins will be planted with wetland vegetation (both woody and herbaceous) and overseeded with seed mixes appropriate for the transitional nature of the hydrology associated with storm basins. Additionally, a program of wetland and buffer restoration is proposed for transition areas immediately bordering the stormwater basin construction disturbance area. As mitigation for this disturbance, these transition areas will receive manual removal of invasive species during basin construction that will allow the native species to regenerate and compete with the more aggressive invasive species that currently occupy this part of the site. A detailed plan, showing the areas to be treated, details of the methodology and plants to be installed is included with this EAF (See Appendix I).

3.4 IMPACT ON GROUNDWATER RESOURCES

Existing Conditions

The development site is located in a rural suburban setting with surrounding properties a mix of undeveloped wooded land and low density residential properties. The property is approximately 35.4 acres in size and located on the east side of NYS Route 22 and Interstate 684 which lie directly west of the site.

Topography on the property is varied and elevations range from about 210 feet to 450 feet. A east-west trending ridge is located in the northern portion of the property, and an area of wetland is located in the southwest corner of the site adjacent to Route 22. Approximately 67 percent of the property (23.8 acres) contain steep slopes (15 percent or greater) and bedrock is exposed or near surface in much of the northern portion of the property.

A hydrogeologic assessment has been completed for the property by Leggette Brashears & Graham, Inc. (LBG) and is provided in Appendix E. The technical information provided below summarizes the LBG hydrogeologic assessment.

Surficial Geology

The subject property is underlain by glacial till with areas of bedrock at or near the surface. Glacial till is composed of unsorted and non-stratified sediments deposited by glacial activity. These sediments contain variable proportions of clay, silt, sand, gravel and boulders. Till is usually not suitable for wells and water supply since the unsorted material does not readily transmit water. No sand and gravel deposits are mapped in the vicinity of the property. A map of the surficial material for the study area is provided in Appendix E, Figure 2.

Bedrock Geology

Bedrock underlying the development site is mapped as Inwood Marble on the northern portion and Fordam Gneiss on the central and southern portions. A map showing the distribution of bedrock types is shown in Appendix E - Figure 3. Inwood marble consists of white to whitish grey calcite and dolomite marble. In general, marble formations exhibit similar characteristics to other carbonate rocks, but have fewer solution cavities. Marble bedrock is susceptible to weathering and under deformational stress forms numerous open fractures. Groundwater is contained in the interconnected fractures, joints and secondary openings.

Fordam Gneiss consists of undifferentiated gneiss bedrock units. Gneiss is a metamorphic rock that typically appears layered with light and dark minerals. Gneiss bedrock is highly resistant to weathering and erosion and therefore forms the varied topography and ridges where it is found. Groundwater is found in secondary fractures, joint systems and weathered zones in gneiss bedrock.

A fracture trace analysis was conducted for the study area to identify potential areas that have to potential to develop bedrock wells with higher than average yields. A fracture trace map includes the delineation of faults, fracture trace joint systems, old or buried stream courses. These surface features often identify areas of subsurface fractures and weathering that provided favorable well locations for productive well yields. The fracture trace map is provided in Appendix E, Figure 3.

Precipitation Recharge

A recharge analysis provides a comparison of the natural precipitation recharge for a given property compared to the estimated water demand for proposed development. This analysis can determine if a property is self sufficient with regard to precipitation available to supply groundwater, or whether proposed water demand exceeds the available recharge. If on-site recharge meets or exceeds the proposed demand, the water supply should be reliable and not adversely affect the aquifer in off-site areas. Although recharge analysis or water-budget analysis, is useful in estimating available groundwater, drilling and pump-testing wells is the only definitive indicator of groundwater availability and method to identify potential off-site impacts. Bedrock fractures and the nature of the bedrock underlying a given property greatly affects groundwater availability and potential off-site impacts.

Groundwater recharge is generally related to precipitation, but the amount of rain-fall that reaches the aquifer and becomes groundwater is difficult to measure. Groundwater recharge occurs as a portion of overall precipitation infiltrates soil and bedrock fractures to reach the bedrock aquifer. Records for nearby Westchester County airport, in White Plains, NY report an annual rainfall of 50.45 inches. Approximately one-half of this amount is lost to run-off and the transpiration process. Recharge to till-covered metamorphic bedrock is estimated to be approximately 7 inches annually (Mazzaferro et.al., 1979)[1] or about 520 gpd/acre (gallons per day per acre). This estimate provides approximately 18,300 gpd for the 35.4 acre site, which greatly exceeds the estimated water demand for the development of 1,350 gpd.

Existing Wells

Two wells were drilled on the subject property in March 1987 by P.F. Beal and Sons. Inc. The wells were installed for a previously proposed site plan application for the property that was never developed beyond well installation. Based upon preliminary estimates those wells yield approximately 5 gpm each or 10 gpm total. The combined yield of the two wells would be approximately 14,400 gpd. The existing wells will require testing to confirm actual sustainable yields and any potential impacts to off-site water supplies.

Potential Impacts ~~***Avoidance or Minimization of Potential Impacts***~~

Development Water Demand

The proposed development will require an estimated water demand of approximately 9,000 gallons per day (gpd), or 6.25 gallons per minute (gpm) based upon bedroom counts and engineering estimates (see Appendix C - Engineers Water Report). NYS Department of Health standards require new water supply systems to provide twice the average daily water demand with the best well out of service. To meet this requirement, on-site wells would need to provide a combined rate of 12.5 gpm (18,000 gpd), with the best well out of service.

The use of subsurface wastewater disposal would return approximately 85 percent of the withdrawn water back to the groundwater. This would reduce the consumptive water use by the development to 1,350 gpd.

The bedrock groundwater recharge estimate for the 35.4 acre property is 18,330 gallons per day (gpd) under normal precipitation conditions and 13,000 gpd under one-year-in-thirty drought

[1] Mazzaferro, D., E. Handman, and M. Thomas. 1979. Water Resource Inventory of Connecticut, Part 8, Quinnipiac River Basin, CT Water Resource Bulletin, 27.

conditions. The estimated recharge under both normal and drought conditions is more than sufficient to support the estimated consumptive demand of 1,350 gpd for the proposed development.

As indicated, the two existing on-site wells have a combined estimated yield of 10 gpm. An additional one to two new wells (three to four wells total) will be necessary to produce the developments water demand of 12.5 gpm with the best well out of service. For the development of a new water supply, the NYS Health Department requires the demonstration of a stabilized yield of 5 gpm or greater, regardless of the development's water demand.

In addition, public water supplies must also comply with minimum separation distances from potential contamination sources identified in Appendix 5-D of the NYSDOH sanitary code. The required minimum separation distance to protect public water supply wells from contamination is 200 feet for absorption fields and for stormwater infiltration basins (treating stormwater from driveways and parking lots).

Based upon LBG's hydrogeologic assessment of the development site and environs, wells drilled at geologically favorable locations (i.e. Fracture trace liniations) will likely yield water in the range of 5 to 10 gpm.

The relatively low average water withdrawal for the proposed development of 9,000 gpd (6.25 gpm) indicates a low likelihood of significant mutual interference between the on-site wells and existing nearby off-site wells. The closest nearby wells are approximately *600* ~~600~~ feet from the on-site wells. *These include existing homes on Todd Road south and southeast of the subject site.* However, the drilling and pump testing of the proposed wells is the only definitive indicator of groundwater availability and any potential impacts to neighboring water supplies.

Avoidance and Minimization of Potential Impacts or Mitigation

As described above, the relatively low average water withdrawal for the development indicates a low likelihood of significant mutual interference between on-site wells and existing nearby off-site wells. The drilling and pump testing of the proposed supply wells will provide definitive information regarding groundwater availability and potential impacts to neighboring wells.

In order to address the unlikely event that an impact to a neighboring well occurs that would potentially require mitigation, a draft Complaint Response and Mitigation Plan has been prepared (see Appendix E Hydrogeologic Assessment and Mitigation Plan). The Plan provides a process for off-site well owners to file a complaint to the applicant and for the complaint to be promptly investigated. If the complaint is found to be valid, remedies will be provided to the private well owner, fully paid for by the applicant. Remedies may include lowering a well pump, replacing a well pump, deepening a well, redeveloping a well or replacing a well. The draft Complaint Response and Mitigation Plan will be finalized in consultation with the Planning Board.

3.*5*~~4~~ IMPACT ON ECOLOGY

Existing Conditions

The 36 acre subject site is a mix of wooded upland slopes and wetland/stream corridor, located between undeveloped lands to the north and east, undeveloped lands and large lot residential development along Todd Road to the south, and Route 22 and I-684 to the west. The site wetland corridor is located along the southern property line, and drains to New York City owned property to the south. The 27 acre undeveloped parcel to the north is also owned by the DEP.

Vegetation

Site observations were conducted by natural resource staff of Tim Miller Associates in October and November of 2015 and January of 2016. The following conditions were noted.

The site slopes downward from east to west, with steep slopes downward toward the wetland corridor along the southern border of the site. leveling off at the central stream corridor. The upland areas of the project site are predominately wooded with tree and shrub species typical of a Northern Hardwood Forest community in a rocky substrate (Figure 3.4-1). Vegetation on the site is characterized as second growth woodlands including sugar maple, red oak, white oak, white ash, and various birches. Beech, tulip poplar and black cherry were occasionally observed. The shrub and herbaceous layer are sparse due to heavy deer grazing. Where there are groundcovers Christmas fern and Pennsylvania sedge are the most common.

Historically, the majority of the site has remained wooded since the 1940's, probably due to the rocky topography. Those areas closest to Route 22 are shown as open pasture in the 1947 aerial, and it is likely that some logging occurred through the 1960's. See Figures 3.4-2 and 3.4-3.

The site wetlands have been subject to disturbance over the years*, as indicated in the aerial photograph from 1947. That photograph shows hedgerows and rock walls through the wetland area and the wetland cleared of trees.* Hydrology for the wetland is derived from the steep slopes both north and south of the wetland, with runoff collecting at the bottom of the slopes within a relatively broad flat area. This wetland is identified as DEC Wetland F-29, and is listed as 14.4 acres total. A watercourse has been created by past site activities, which flows from east to west, then turning south at the southwest property line and onto DEP property.

In the relatively undisturbed portions of the wetland, the most common species are red maple, slippery elm, green ash and occasionally pin oak. A well-developed shrub layer was not observed. Skunk cabbage, cinnamon fern, sensitive fern, Canada goldenrod and occasional tussock sedge were the most common native herbaceous species.

However, the majority of the wetland area on site is previously disturbed, resulting in a mix of non-native and invasive species throughout the wetland and the surrounding buffers. Several impenetrable areas of *Phragmites australis* were observed. Fox grape, multifloral rose, climbing bittersweet, garlic mustard, and Japanese barberry were observed throughout the wetland and adjacent areas. Occasional morrow honeysuckle, tartarian honeysuckle and brambles were also observed.

Wildlife

The wooded slopes on the north part of the site provides habitat for some of the more common species in the area, including white-tailed deer, raccoon, eastern gray squirrel, striped skunk, red fox and opossum. These species are likely to move back and forth through the wetland and upland areas. The overall quality of the wildlife habitat for less common species is compromised by the absence of understory and herbaceous layers and diversity of habitat available. However, undeveloped lands to the north and south do present opportunities for wildlife movement, and it is likely that coyote, rodents, some snake species and a variety of birds move through the area.

The level of past site disturbance in the wetland is reflected in the habitat potential and number of species that are expected to be observed on these parcels. Green frogs, spring peepers, wood frogs, American toads and other small mobile species may utilize the wetland system. Some of the smaller bird species (wrens, sparrows, bluebirds) likely feed on the seeds of the grasses and wildflowers that are found on the site.

There are no known listed rare or threatened plant species on the site. The NYSDEC Environmental Resource Mapper did not identify the possible existence of a sensitive species in the immediate site vicinity (see attached Figure 3.4-4). However, NYSDEC Natural Heritage did notify the applicant about a record of a bog turtle *(Glyptemys muhlenbegii)* being seen south of the site near Todd Road in 1978. Bog turtles are considered to be extirpated from Westchester County, and as Natural Heritage puts it, “there is uncertainty regarding their continued presence” (see attached letter from Natural Heritage Program). However, the bog turtle was unlikely to come from the site wetland, which is generally a wooded wetland and does not meet the typical habitat criteria for this species.

~~Avoidance or Minimization of~~ Potential Impacts

Vegetation

The current plans call for the disturbance of approximately 9 acres of the 35.4 acre site for the construction of the new residences, parking facilities and stormwater management basins. Most of these facilities will be located within the higher elevations of the site, with the exception of the stormwater basins. These will be located out of necessity at the lower elevations closer to the wetland. The location of the *stormwater* facilities have been laid out at flattest available parts of the hillside slopes and parallel to the topography to the extent practicable. *Of necessity these basins will be located within DEC and Town of Lewisboro buffer areas. Approximately 7,000 sf of DEC adjacent area and 14,500 sf of Town of Lewisboro buffer will be disturbed.*

~~With the preservation of the 18 acre eastern parcel as conservation land, and the undisturbed portions of the two western parcels (another eight acres), this development will not result in adverse environmental impacts to ecologically significant or unusual vegetation.~~

~~The proposed plan incorporates a landscape program for all areas disturbed by construction around the perimeter of the buildings and parking lots. Any disturbed side slopes below the development on the south side will be seeded with a restoration mix of quick germinating grass cover crop and herbaceous perennials to establish vegetative stabilization of the soil. Additionally, the mix used for the slopes will include seed for native grass and woody species~~

~~that produce berries and seeds that will provide a food source for a greater diversity of animal species.~~

~~The stormwater management basins will be planted with wetland vegetation (both woody and herbaceous) and overseeded with seed mixes appropriate for the transitional nature of the hydrology associated with storm basins. Additionally, a program of wetland and buffer restoration is proposed for transition areas immediately bordering the stormwater basin construction disturbance area. Of necessity these basins will be located within DEC and Town of Lewisboro buffer areas. Approximately 7,000 sf of DEC adjacent area and 14,500 sf of Town of Lewisboro buffer will be disturbed. As mitigation for this disturbance, these transition areas will receive manual removal of invasive species during basin construction that will allow the native species to regenerate and compete with the more aggressive invasive species that currently occupy this part of the site.~~

Wildlife

The site does not contain areas of significant or unusual wildlife habitat that would be impacted by the development project, and the project itself affects nine of the 35.4 acres available. *The loss of 9 acres of upland and wetland buffer habitat is an unavoidable impact to develop the affordable residential community. The development will retain approximately 75 percent of the existing vegetation and wildlife habitat.* ~~Enhancement of the existing wetland and adjacent areas will provide an opportunity for the restoration of a more diverse and native vegetation community to that portion of the site, which will benefit a wider diversity of animal species, particularly birds.~~

Avoidance or Minimization of Potential Impacts and Mitigation

With the preservation of the 18 acre eastern parcel as conservation land, and the undisturbed portions of the two western parcels (another eight acres), in the opinion of the applicant, the development will not result in adverse environmental impacts to ecologically significant or unusual vegetation.

The proposed plan incorporates a landscape program for all areas disturbed by construction around the perimeter of the buildings and parking lots. Any disturbed side slopes below the development on the south side will be seeded with a restoration mix of quick germinating grass cover crop and herbaceous perennials to establish vegetative stabilization of the soil. Additionally, the mix used for the slopes will include seed for native grass and woody species that produce berries and seeds that will provide a food source for a greater diversity of animal species.

The stormwater management basins will be planted with wetland vegetation (both woody and herbaceous) and overseeded with seed mixes appropriate for the transitional nature of the hydrology associated with storm basins. Additionally, a program of wetland and buffer restoration is proposed for transition areas immediately bordering the stormwater basin construction disturbance area. As mitigation for this disturbance, these transition areas will receive manual removal of invasive species during basin construction that will allow the native species to regenerate and compete with the more aggressive invasive species that currently occupy this part of the site. The wetland mitigation plan is provided in Appendix I.

> *In the opinion of the applicant, enhancement of the existing wetland and adjacent areas will provide an opportunity for the restoration of a more diverse and native vegetation community to that portion of the site, which will benefit a wider diversity of animal species, particularly birds.*

~~3.5~~*3.6* IMPACT ON AESTHETIC RESOURCES

Existing Conditions

Development Site Location - Visual Context

The setting in which the development site is situated consists of a mix of land uses -- commercial development to the north (including North County Shopping Center, aka Goldens Bridge Village Center), a major regional transportation corridor immediately to the west (NY State Route 22, Interstate Route 684 and the Metro-North railroad), single family residences on relatively large lots to the south, and wooded, undeveloped land and open water of the Croton reservoir system in much of the surrounding area. Figure 1-2 shows the site vicinity in a recent aerial photograph; Figure ~~3.5~~*3.6*-1 shows the site on a topographic map.

The visual character of the immediate site vicinity is dominated by the Route 22 / I-684 transportation corridor including Exit 6A for Goldens Bridge, which meets Route 22 opposite the site. Route 22 and I-684 follow a winding north/south route in very undulating and irregular topography that has many small hills and narrow valleys and dense woodland cover that characterizes the rural feel of Lewisboro.

The site is a topographic knoll, rising some 200 feet above the road elevation, similar to numerous other knolls in the area. The site is almost entirely wooded with the exception of a rock outcrop exposed by the construction of Route 22. The trees are up to 55+ feet tall, predominantly deciduous, with moderately dense understory vegetation. The sizable rock outcrop provides a visual feature along the property frontage. While not prominent in the landscape of the street corridor, it provides a reminder of the nature of the Lewisboro landscape.

The visual experience for someone traveling in the road corridor in the site vicinity is a mix of single family residential lots, commercial development of varying sizes, and wooded open space. Buildings are visible, in many instances partially obscured, amongst the extensive woodland cover (evident in Figure 1-2), particularly for users of Route 22. In the immediate site area, the corridor is visually dominated by I-684. There are no provisions for pedestrian traffic in the corridor and incidental use by bicyclists was observed on Route 22.

The potential for views of the subject site were reviewed during a site area visit in January 2016. Key study views were identified within approximately one-half mile of the site. Views toward the site from publicly accessible locations are depicted in photographs presented in Figures ~~3.5~~*3.6*-2 through ~~3.5~~*3.6*-6. The limits of the possible view of the site are indicated in the figures. A key to the locations of the view points is shown in Figure ~~3.5~~*3.6*-1. A ±125 foot high cell tower located on the opposite side of Route 22 from the subject property provides a landmark in the photographs. The study area views are:

- The street corridor within about one-half mile, which is primarily experienced by motorists passing the site on I-684 at highway speed or on Route 22 at varying speeds. Views *1A and 1B* from *southbound and northbound* I-684*, respectively, were investigated. These views* are partially obscured by intervening vegetation and diminished by the speed of travel. These views are further obstructed during the warmer months when leaves are on the trees. Figure ~~3.5~~*3.6*-2 shows existing views *1A and 1B looking* toward the subject site from I-684 southbound and northbound.~~;~~ *View 1A is interrupted as the driver passes under the bridge and quickly disappears behind intervening vegetation as one travels south. Likewise, the*

mid-distance view toward the site (View 1B) for drivers approaching the Goldens Bridge exit quickly disappears behind intervening roadside vegetation.

- *Views 2A and 2B from northbound and southbound Route 22, respectively, were found to reveal visibility of the development site for motorists approaching the site.* Figure ~~3.5~~*3.6*-3 shows *these* existing views from Route 22 northbound and southbound.~~;~~ *There is roadside vegetation that interrupts or obscures portions of the view as a driver approaches the site from either vantage point.*
- ~~Figure 3.5-5 shows existing views from the ramp from Route 138 to Route 22, looking south, and from the Route 138 ramp onto I-684 southbound.~~
- The Exit 6A ramp from I-684 northbound meets Route 22 opposite the site at a Stop sign. Thus, there is a stationary view *(View 3)* in close proximity of the site frontage and *looking* into the western portion of the site*, as experienced by* ~~for~~ drivers while they negotiate a right or left turn onto Route 22. Figure ~~3.5~~*3.6*-4 shows a wide-angle view from this location in winter. The site rises above the road and, being a topographic knoll, much of the site is hidden from view due to the topography and intervening vegetation. During the winter months it is possible to see into the site several hundred feet amongst the tree trunks; when leaves are on the trees views into the site are *largely*~~significantly~~ obscured. *View 3 will provide the greatest visual exposure of the site from any of the identified vantage points.*
- *Figure 3.6-5 shows Views 4A and 4B from the ramp from Route 138 to Route 22, looking south, and from the top of the Route 138 ramp onto I-684 southbound, respectively. View 4A may be briefly experienced by drivers while they negotiate the turn onto southbound Route 22. View 4B may be experienced by drivers for a brief moment after they negotiate the turn from Route 138 onto the southbound ramp. The view from this viewpoint quickly vanishes as the driver descends the ramp and enters I-684.*
- Views toward the site from Todd Road (south of the site) were investigated. Due to the intervening topography of Todd Road properties, view of the subject site from publicly accessible vantage points on the road is limited to a partial view beyond the intervening trees from one location in the vicinity of #35 Todd Road, the Bedford Audubon Society property. *This is identified as View 5.* Figure ~~3.5~~*3.6*-6 shows a wide-angle view from this location, looking westward through the intervening trees.

There are no formally designated aesthetic resources or scenic vantage points sensitive to visual change in the viewshed of the subject site. Given the topography and dense tree cover of the site area, there is limited view of the development site from surrounding roads and there is no location in the study area that would afford a view of the entire site, based on site area reconnaissance undertaken in January 2016 along I-684, Route 22, Route 138, and Todd Road and at Goldens Bridge train station.

The Code of the Town of Lewisboro includes mention of aesthetics, most pointedly in §220-1 Zoning, Statement of Purpose: "To preserve the natural beauty of the physiography of the Town; to protect the Town against unsightly, obtrusive and obnoxious land uses and operations; to enhance the aesthetic aspect of the natural and man-made elements of the Town; and to ensure appropriate development with regard to those elements."

Potential Impacts ~~*Avoidance or Minimization of Potential Impacts*~~

To utilize the site in accordance with current zoning and a site-sensitive affordable housing plan, the proposed development will remove trees from the western portion of the site and small pockets in the interior of the site, create an opening in the tree canopy on the middle elevations

of the site, and create an opening on Route 22 for a driveway, while preserving the existing tree cover on most of the property. Given its topographic position and the density of woodland cover around it, this clearing is not expected to be startling, visually prominent, nor out of character from the surrounding landscape.

The proposed buildings will be placed along the contour on the southwest-facing slopes of the knoll on the site. The 2-story buildings will be lower in elevation than the existing tree tops that will remain, thereby avoiding any direct or prominent visual exposure of the development from offsite. There will also be four SSTS areas cleared in the rear of the property (located where suitable soils are found), covering small areas of one-quarter to one-half acre in size. These areas are proposed to be replanted with a low growing conservation mix.

Site Profile Figure ~~3.5~~*3.6*-7 shows a profile of the post-development ground line and tree line taken through the site, through the center of the proposed development area and one of the SSTS clearings. *An enlarged version of this profile is depicted in Figure 3.6-7E.* (See Figure ~~3.5~~*3.6*-1 showing the location of the profile line.) The Site Profile figure shows the line of sight for a person in a vehicle stopped on the Exit 6A Stop sign at Route 22, facing the subject property -- *View 3*~~the view~~ depicted in the existing condition photograph in Figure ~~3.5~~*3.6*-4*. As identified above, this vantage point would provide the most visual exposure of the proposed development from any of the identified vantage points.*~~.~~

Views On the Street Corridor and From Study Vantage Points

The development will open a view into the subject property via the new entrance driveway on Route 22. (See the Conceptual Grading Plan, Figure 3.1-2.) Tree clearing will occur where the proposed driveway will access the site and climb the west side of the knoll, leaving a strip of existing trees along the driveway and atop the rock outcrop that faces Route 22. The driveway will be seen from the Exit 6A Stop sign and from vehicles traveling north past the site on Route 22. Vehicles traveling south past the site will see the driveway intersection on Route 22, and the entrance area landscaping. South of the driveway, an SSTS area is proposed in an area that already has low growing vegetation, and further into the site stormwater management basins are proposed. These areas will be situated some 15 to over 20 feet below the elevation of the road, virtually out of sight from the public.

Mitigation Measures

The streetscape character of the property frontage along Route 22 will not be adversely changed by the development; the proposed driveway entrance will be the only disturbance of existing vegetation on the frontage, which will receive appropriate landscape treatment so that the new development will be compatible with the characteristics of the neighborhood.

The applicant conducted a balloon flight at the property on January 21, 2016, to provide two points of reference for investigating possible views to the proposed development from local area vantage points. Two 3-foot red balloons were raised to the proposed height of the roof peak of buildings 1 and 3. In both locations the balloons were situated well below the tops of the trees.

The eight vantage points shown in the accompanying graphics were visited, however only from the Exit 6A Stop sign location could one of the balloons be seen, largely obscured by the trees. Observations while driving the area roads found that the balloons were visible from Route 22 and I-684 in very close proximity to the site (within approximately 800 feet of the proposed development area), demonstrating that the density of the existing tree cover on and off the

property can be expected to provide significant buffering of views *(mitigation)* of the proposed buildings in winter. In summer months, it is likely that there will be no visibility of the buildings from offsite other than from Route 22 between Exit 6A and the *site*~~project~~ driveway.

All of the proposed buildings will be below the height of the tree line, and, while portions of buildings will likely be visible through the trees from vehicles passing the site, more so in winter than in summer, their presence will be compatible with the characteristics of the neighborhood. *From no location will the entire development be visible, the "worst case" view studied in Figure 3.5-7E demonstrates the limited exposure of the development to outside views, and mitigation of partial views will be incorporated into the design plans such that no significant visual impact will result. The documentation provided demonstrates that such visibility would not be considered a significant adverse or unmitigated impact.*

In summary, the proposed affordable housing development will create new openings in the tree canopy on portions of the existing wooded knoll, and will place new buildings below the tree line and behind a dense buffer of existing trees, which will have very limited visibility from off-site due to the extent of existing trees and understory vegetation proposed to remain on the site and the surrounding predominance of woodland cover.

Overall, *in the applicant's opinion,* the development will have a minimal effect of the wooded, open space character of this area of the Town of Lewisboro and will not have a significant adverse impact on any visual or aesthetic resources. *The visual changes which will result from the development, in the applicant's opinion, will not result in significant impacts to* ~~There are no~~ identified aesthetic resources or vantage points with views to the subject site*.* ~~that will be significantly impacted by the visual change of the proposed development.~~

The applicant anticipates working directly with the Town during development of the design plans with the intent of purposefully creating a project appearance that will complement the community. Such design elements would include building facade materials and color, roof pitch, materials of the landscape features such as light fixtures, signage and retaining walls, and selection of plant materials. The applicant is committed to designing a housing development that will be an asset to the Town.

3.7 IMPACT ON HISTORICAL AND ARCHEOLOGICAL RESOURCES

Existing Conditions

As described herein, the 35.4 acre subject site is undeveloped and mostly wooded land. No structures or foundations have been observed on the property. Based upon historical photographs, the majority of the site has remained wooded since the 1940's, probably due to the rocky topography. Those areas closest to Route 22 are shown as open pasture in the 1947 aerial *photograph*, and it is likely that some logging occurred through the 1960's.

A Phase 1A and Phase 1B Cultural Resource Investigation has recently been conducted on the property. *The Phase 1A / 1B investigation is provided in Appendix F.* ~~The Phase 1A literature review indicated that there are no known archeological sites and no structures or sites within the project area that are eligible or listed on the State or National Register of Historic Places.~~ *A file search at the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) identified no New York State Museum (NYSM), OPRHP sites or National Register Listed or Eligible properties on or within 500 feet of the subject property. There have been no prior archeological investigations conducted within 500 feet of the subject property.*

Potential Impacts

According to the Phase 1A investigation, the subject site is considered to have moderate sensitivity for the presence of prehistoric cultural remains. The location exhibits several characteristics that are known to have been conducive to Native American occupation including the elevated hilltop adjacent to water sources that are themselves tributaries to a larger nearby river system. No rockshelters or usable lithic resources were identified within the proposed area of disturbance indicating that pre-contact sites would likely be limited to small temporary hunting camps rather than larger long-term settlements.

The proposed residential development will involve the grading of approximately 9 acres of relatively undeveloped land. The grading and excavation has the potential to disturb archeological cultural resources, should they be present on the property.

The Phase 1B fieldwork was conducted in December, 2015 at the subject site. The fieldwork consisted of 45 hand-excavated shovel tests across more level portions of the Area of Potential Effect (APE). The Area of Potential Effect is based upon the project plans. *The test locations are shown in the Phase 1A/1B Archeological Investigation (Maps 9 and 10).* No significant cultural resources were identified and no further archeological work was recommended.

~~Once the Phase 1A and 1B Cultural Resource Investigation is completed it will be submitted to the Lead Agency and the NY State Historic Preservation Office (SHPO) for review and concurrence with the recommendations.~~

Mitigation Measures

Based on the results of the Phase 1A/1B Cultural Resources investigation, no historic or archeological resources have been identified on or near the subject property and none will be impacted. No mitigation measures are warranted or proposed.

3.8~~7~~ Impacts on Transportation

Existing Conditions

The project sponsor, Wilder Balter Partners, Inc. (the "Applicant"), proposes to develop a 46 unit affordable residential community on a 35.4-acre site located on NYS Route 22 in the western portion of the Town of Lewisboro, Westchester County, New York. The project site is located in the Hamlet of Goldens Bridge approximately ¾ - mile south of Route 138 and the Goldens Bridge train station. The location of the site is shown on maps in Figures 2-1 and 2-2. The site will have a single access slightly north of the northbound Interstate 684 Exit 6A ramp. This section summarizes the detailed transportation report by Maser Consulting P.A. contained in Appendix G.

Interstate 684 is a six lane divided limited access highway and is a major commuter route to Interstate 287 in southern Westchester County. Thus most regional commuter traffic does not use NYS Route 22 that passes by the site and parallels Interstate 684 in this area. The northbound exit ramp (6A) from Interstate 684 is located immediately south of the site and was studied along with the site access to NYS Route 22. NYS Route 22 is a two lane road with posted 40 miles per hour. Peak hour traffic volumes (weekday a.m. and p.m.) were counted in December of 2015 and compared with counts taken in 2014 for the Goldens Bridge Shopping Centre to the north.

~~*Avoidance or Minimization of*~~ *Potential Impacts*

Future Traffic Without the Project (No Build Volumes)

Traffic volumes were projected to the design year of 2020 using a background growth of 2.5 percent (0.5 percent per year) based on historical data. Traffic from the proposed Golden Bridge Village Shopping Centre expansion was also added to the future traffic.

Future Traffic With the Project (Build Volumes)

Site generated traffic was estimated for the apartments (Land Use code 220) using the Institute of Transportation Engineers, *Trip Generation Manual*, 9th edition, 2012. In the a.m. peak hour 5 entering and 21 exiting trips were estimated. In the p.m. peak hour 28 entering and 15 exiting trips were projected. Distribution of arrival and departure traffic was based on existing traffic volumes and supplemental data.

Capacity Analysis

Capacity analysis using SYNCHRO analysis software is based on procedures documented in the *2010 Highway Capacity Manual.* Traffic conditions are defined based on a level of service grade from A the best to F the worst conditions. NYS Route 22 and the site driveway are anticipated to operate at a level of service C or better for all movements.

The Interstate 684 northbound off ramp (Exit 6A) at NYS Route 22 experiences a level of service F in both the a.m. and p.m. peak hours in the Existing Condition and will experience increased delay with future traffic. Although a traffic signal would improve operation to a level of service B or better for all movements, the review of traffic volumes indicates the intersection does not satisfy signal warrants as specified by the *Manual of Uniform Traffic Control Devices*.

"The results of the capacity analysis indicated the proposed residential development will not significantly change the overall Levels of Service at each of the key locations. The intersection of I-684 and Route 22 will continue to experience operating problems during peak periods and should continue to be monitored in the future for a possible traffic signal." (See Appendix G - Page 6 Mr. Grealy letter to Mr. Bainlardi, January 29, 2016). ~~Given the lack of the project's impact on key locations, no mitigation measures are proposed.~~

Access Sight Distances

NYS Route 22 speeds limits are 45 miles per hour entering into the 40 mile per hour speed limit in the section including the site access. Sight distances were observed and summarized with only the intersection sight distance not meeting a 55 mile per hour posted speed looking to the right. Vegetation pruning is recommended to the north of the site access to increase the sight distance to exceed the intersection sight distance. A W2-2 "Intersection Ahead" sign should be posted in advance of the site north and south on NYS Route 22 with a final determination to be made by the New York State Department of Transportation as part of the Highway Work Permit Process.

Avoidance or Minimization of Potential Impacts or Mitigation

Based on the transportation report, the proposed residential development will not significantly change the overall levels of service at each of the key locations studied. The applicant will work with the NYS Department of Transportation regarding the entrance drivewy and the development's traffic as part of the Highway Work Permit Process. Given the lack of the project's impact on key locations, no mitigation measures are proposed.

3.*9*~~8~~ COMMUNITY FACILITIES AND SERVICES

3.*9*~~8~~.1 Demographic Resources

Existing Conditions

As discussed, The project sponsor, Wilder Balter Partners, Inc. (the "Applicant"), proposes to develop a 46 unit affordable residential community on a 35.4-acre site located on NYS Route 22 in the western portion of the Town of Lewisboro, Westchester County, New York. The project site is located in the Hamlet of Goldens Bridge approximately three-quarters of a mile south of Route 138 and the Goldens Bridge train station. *The project site is currently vacant.*

Potential Impacts

The Applicant proposes to construct 45 units of affordable rental apartments plus one superintendents apartment (46 units total). The rental apartments will meet the requirements of the Westchester County Fair and Affordable Housing Implementation Plan. The proposed development will assist Westchester County in meeting its court mandated obligation to complete 750 affordable AFFH units, with building permits and funding in place, by December 31, 2016. The proposed AFFH apartments will also count toward the Town of Lewisboro's substantially unmet "fair share obligation" to create 239 units of affordable housing as established by the County's Affordable Housing Allocation Plan (2000-2015).

As illustrated in Figure 1-3, the 46 apartments will be located in five buildings of eight to ten units. The buildings will contain a mix of one, two and three bedroom units. The majority (eighty percent) of the units will be affordable to residents whose income does not exceed 60% of the Area Median Income (AMI), based upon family size, as established by the Department of Housing and Urban Development (HUD) on an annual basis. To further meet the affordability guidelines, twenty percent of the rental units will be marketed to residents whose income does not exceed 50% of the (AMI).

For the purpose of this analysis the development is envisioned to include 14 one bedroom units, 24 two bedroom units and 8 three bedroom units. The actual number of units and the proposed bedroom counts will be finalized prior to site plan approval. According to the NYS HCR funding guidelines the units are projected to rent for $988 to $1,643 depending upon number of bedrooms, unit size and affordability criteria.

Demographic multipliers published by the Rutgers University Center for Urban Policy Research (CUPR) were used to project the future population of the proposed affordable 46 unit AFFH multifamily community. Population projections are based upon the geographic region, type of unit, number of bedrooms, and the anticipated rental value. As shown in Table 3.*9*~~8~~-1, based upon the nature of this development, the multipliers used to project the population are as follows; three bedroom units house 3.81 persons per unit, two bedroom units are 2.31 persons per unit and a one bedroom unit is 1.67 to 1.99 persons per unit depending upon the rental value. By comparison, 2010 U.S. Census data indicate that the average household size for all housing types in the Town of Lewisboro is 2.78 persons, and the average family size is 3.16 persons.

Based upon the CUPR residential multipliers, approximately 110 persons, including 16 school age children are projected to reside in the anticipated housing.

Table 3.98-1 Population Projections					
Unit Type	**Number of Units**	**Population Multiplier**	**Population**	**School Age Children Multiplier**	**School Age Population**
1-BR 50% AMI	3	1.99	6	0.30	0.9
2-BR 50% AMI	5	2.31	11	0.23	1.15
3-BR 50% AMI	1	3.81	4	1.50	1.5
1-BR 60% AMI	11	1.67	18	0.08	0.88
2-BR 60% AMI	18	2.31	42	0.23	4.14
3-BR 60% AMI	7	3.81	27	1.00	7
2-BR Superintendent Apartment	1	2.31	2	0.23	0.23
TOTAL	**46**		**110**		**16**

Source: Rutgers University Center for Urban Policy Research, June 2006. Table prepared by TMA, 2016.
Values are based upon 5+ Unit Structures for Rent at more than $1,000 per month for one, two and Three Bedroom units as noted in the Table above.

3.98.2 Fiscal Resources

Existing Conditions

Current Assessed Value

The proposed AFFH multifamily community is contained on the following Town Tax Parcels;

- Sheet 5 - Block 10776 - Lot 19
- Sheet 5 - Block 10776 - Lot 20
- Sheet 5 - Block 10776 - Lot 21

The current equalized assessed value of the three undeveloped parcels is $87,300. This represents 9.9 percent of the total market value of the three parcels. According to a review of the 2015 tax bills for the subject parcels, the total annual property taxes paid to the Town of Lewisboro are $1,639 and the municipal taxes paid to the Goldens Bridge Fire Department are $890. The municipal taxes paid to Westchester County are $2,990. Thus, the total municipal taxes paid are $5,520 while the annual property taxes paid to the Katonah Lewisboro School District (KLSD) are $17,061.

Potential Impacts

The New York State Office of Real Property Services (NYSRPS) requires that rental properties are assessed in terms of the value of the income they provide. Based upon the income value of the proposed affordable rental apartments, the total market value of the proposed community is estimated to be $4,717,342. Using the current Town of Lewisboro 2015 equalization rate of 9.9 percent, the total future Assessed Value for this analysis is estimated to be $467,017.

Projected Revenues

Table 3.9~~8~~-2 compares the revenues generated presently by the property to the revenues to be generated after the proposed rental community is complete. Revenues are based on *the most current* 2015 municipal tax rates (2015-2016 tax rate for the Katonah Lewisboro School District).

According to the Town of Lewisboro budget, the Town's tax rate includes Town governmental services, highway maintenance, justice court, police services, and parks & recreation.

As presented in Table 3.9~~8~~-2, annual revenues to the Town of Lewisboro are projected to be approximately $8,770. Tax revenues to the Goldens Bridge Fire Department are estimated to be $4,762. The tax revenues to Westchester County would be approximately $15,995 annually, thus the total municipal revenue is estimated to be $29,527.

Table 3.9~~8~~-2 also indicates the annual revenues to the Katonah Lewisboro School District would be approximately $91,268. The net *increase* between the current tax revenues generated by the site and paid to the School District and the total future project-generated revenues to the school district are projected to be approximately $74,207 annually.

As can be seen in Table 3.9~~8~~-2, overall, the combined tax revenues from each jurisdiction are projected to total more than $120 thousand annually.

Table 3.9~~8~~-2
Current & Projected Taxes Generated by the 46 Unit AFFH Residential Community

Taxing Authority	*Current Tax Rate*	Current Taxes ($)	AFFH Projected Taxes Total ($)	Net Increase Between Current & Projected Taxes ($)
Westchester County	*$34.2497*	$2,990	$15,995	$13,005
Town of Lewisboro	*$18.7796*	$1,640	$8,771	$7,131
Goldens Bridge Fire District	*$10.1963*	$890	$4,762	$3,872
Total Town of Lewisboro		$2,530	$13,533	$11,003
Total Municipal	*$63.2256*	**$5,220**	**$29,258**	**$24,008**
Katonah Lewisboro School District	*$195.4287*	**$17,061**	**$91,268**	**$74,207**
TOTAL	*$258.6543*	**$22,581**	**$120,796**	**$98,215**

Notes:
Municipal taxes are based upon Town of Lewisboro 2015 Tax Rates. *These rates are in effect 4/1/15 through 4/1/16.*
Katonah Lewisboro School District Tax Rates are for the 2015-2016 school year.

Infrastructure Costs

A management company will operate and maintain all common areas, facilities and infrastructure included in the proposed action. All of the community aspects of the project will be privately maintained, including the roadway. There are no aspects of the project which are anticipated to result in an ownership, maintenance or operational responsibility to the Town of Lewisboro, thus reducing municipal costs to the maximum extent practicable.

3.9~~8~~.3 Police, Fire and Emergency Services

Existing Conditions

Police Protection

The Lewisboro Police Department provides police protection services to properties within the 29 square mile area that comprises the Town of Lewisboro. The police department headquarters is located at 20 North Salem Road, Cross River, NY, approximately *5.5 miles (driving distance)*~~10 miles~~ *southeast* ~~northwest~~ of the project site. The Town of Lewisboro is served by the New York State Police in conjunction with the Lewisboro Town Police. The New York State Police are stationed on Route 100 in Somers, NY.

The Lewisboro police force provides police protection for the Town of Lewisboro including the hamlets of Cross River, Goldens Bridge, South Salem, Waccabuc, Vista and Grants Corner.

The Lewisboro Police Department is led by Police Chief Frank Secret. The Department has a police force of 12 officers, in addition to civilian employees who provide police coverage. According to the Police Chief[1], in 2015 the department handled approximately 1,851 calls for service. The population data from the 2010 census indicates there are 12,411 persons residing in the Town of Lewisboro. Based upon these figures, there is approximately one police officer for every 1,000 residents and annual average calls per capita equates to 0.15.

Sworn personnel are involved in various programs including Crime Prevention, Accident Investigation, STOP DWI, Commercial Vehicle Enforcement, Intelligence, and Youth Court.

Based upon location, typical response time to a residence in the proposed community is estimated to be five to ten minutes.

Fire Department

The proposed development is within the Goldens Bridge Fire District and is served by the Goldens Bridge Fire Department which is a 100% volunteer fire department. The Fire district covers an area of approximately 8 square miles in the hamlet of Goldens Bridge which includes a mix of both business and residential areas, as well as a section of Interstate 684 and the Metro North Railroad. Serving a population of approximately 4,000 residents and countless number of commuters who use both Interstate 684 and Metro-North Railroad, the fire department provides coverage 24 hours a day, 365 days a year. The Goldens Bridge Fire Department typically responds to an average of approximately 275 calls annually. Based upon these figures, annual average calls per capita equates to 0.07.

There are approximately 70 active members who serve the community by providing Fire, Rescue, Disaster Relief and Emergency Medical Services to anyone in need. The Goldens Bridge Fire Department is also dedicated to community service by offering scholarships for community minded youth, supporting Scouting organizations of America and supporting other local charities.

[1] Phone conversation with Police Chief Secret on February 1, 2016.

The Goldens Bridge Fire Department currently operates 3 engines, 1 tanker truck, 2 heavy rescue vehicles, 1 brush unit, and 3 Chiefs' vehicles. These units are staffed by 100 volunteer members who respond from a fire station at 254 Waccabuc Road in Goldens Bridge. *The station is approximately 1.5 miles (driving distance) from the subject site.* In 2015, the department responded to approximately 250 alarms. These alarms consisted of structural fires, motor vehicle accidents (MVA's), automatic alarms, vehicle fires, mutual aid, and various other calls for assistance. The Goldens Bridge Fire Department does not respond to medical emergency calls. This service is provided by the Lewisboro Volunteer Ambulance Corps LVAC.

Ambulance and Health Services

The Lewisboro Volunteer Ambulance Corps (LVAC) provides emergency ambulance service to the project area. Average response time is between five and seven minutes. In 2013, LVAC responded to 416 ambulance calls. According to their records, 320 patients were transported to area hospitals. Based upon these figures, annual average calls per capita equates to 0.04.

Each ambulance response is staffed by a crew chief who is a New York State Certified Emergency Medical Technician, and a driver, who may or may not be an EMT. Most calls have a third crew member, referred to as the first aider, who also may or may not be an EMT. The crew chief is in charge of patient care decisions, including which hospital the patient is transported to.

The Town of Lewisboro is one of several towns in northern Westchester County which are additionally served by a paramedic service, Westchester EMS. There are three paramedic fly cars in service at all times and one is paged out along with LVAC on all calls. If the patient's condition warrants ALS, the paramedic will ride with the LVAC crew and provide advanced life support.

LVAC currently operates 2 ambulances, 67B1 and 67B2, the B standing for basic life support. The Corps also has a first response vehicle, a fully-equipped Chevrolet Tahoe. The Corp. has approximately 40 riding members. All members are trained to use AEDs (Automatic Electronic Defibrillators), and LVAC has 10 Lifepak AEDs. LVAC also participates in the Epipen program to administer epinephrine, is certified to use albuterol for the treatment of asthma, and trained to use glocometry. They have recently added the Lucas device to all vehicles which is used to provide continuous CPR for any patients that require the treatment.

The primary hospital serving the project area is Northern Westchester Hospital in Mt. Kisco. Services offered by this hospital include: emergency services, ambulatory surgery, cardiopulmonary center, diagnostic imaging, mental health unit, MRI center, nutritional services, occupational therapy, pediatrics, physical therapy, prostate cancer treatment, alcohol & substance abuse, speech & hearing, and a wound care center.

According to Northern Westchester Hospital, its physicians represent all of the medical specialties and offer their patients the latest in medical care supported by nursing, clinical, and technical staff. Northern Westchester Hospital also offers various outreach programs that present preventive medicine and wellness subjects.

Although LVAC transports most patients to Northern Westchester Hospital in Mt. Kisco, occasionally patients are transported to Putnam Hospital in Carmel, Westchester Medical Center in Valhalla, and Danbury or Norwalk Hospitals in Connecticut.

Potential Impacts

As shown in Table 3.*9*~~8~~-1, development of the proposed residential community is anticipated to result in a population increase of approximately 110 persons. This increase represents less than one percent of the current Town population of 12,411 (2010 Census).

Police Department

Based on planning standards contained in the Development Impact Assessment Handbook published by the Urban Land Institute, model factors for police protection recommend two (2) police personnel per 1,000 persons which further breaks down to 1.5 police personnel per 1,000 persons for residential uses and 0.5 police personnel per 1,000 persons for nonresidential uses. Based on this standard, 110 persons would increase police staffing needs by less than one quarter of a person which is not likely to have an impact on the Town's police personnel ratio of 1.0 officers personnel per 1,000 residents. As discussed earlier, annual average calls per capita equates to 0.15, thus it can be expected that calls for service to the Police Department would increase by approximately 17 calls annually.

Fire Department

Based on planning standards published in the Development Impact Assessment Handbook, approximately 1.65 fire department personnel per 1,000 population is recommended to provide adequate fire protection service. One hundred ten new residents would generate demand for an additional 0.18 fire department personnel. As discussed earlier in this section, the proposed development would generate $4,762 in annual property tax revenues to the fire district to offset any additional demand. The proposed site access roads will be designed in accordance with Town road specifications which are designed to adequately accommodate emergency service vehicles. ~~Fire hydrants will be installed according to Town standards.~~ As discussed earlier, annual average calls per capita equates to 0.07, thus it can be expected that calls for service to the Goldens Bridge Department would increase by approximately 8 calls annually.

Each of the proposed residential buildings will be equipped with fire sprinklers and the water system is designed to meet the combined peak flow for domestic and sprinkler use. Fire hydrants are not proposed given the use of sprinklers. The applicant will provide emergency back-up water supply storage in underground tanks. The applicant will work with the Goldens Bridge Fire Department regarding the final design for emergency back-up water supply.

Emergency Medical Service

Based on planning standards contained in the Development Impact Assessment Handbook, approximately 36.5 calls per 1,000 population are made annually. Based on this standard, the 110 residents would increase EMS calls by approximately four calls annually on average. The Lewisboro Volunteer Ambulance Corp. has sufficient capabilities to handle this increase. As discussed earlier, annual average calls per capita equates to 0.04, thus it can be expected that calls for service to the Lewisboro Volunteer Ambulance Corp. from the proposed development would be approximately 4 calls annually.

Hospital

Based on planning standards contained in the Development Impact Assessment Handbook, four (4.0) hospital beds should be provided per 1,000 persons. Based on this standard, the

projected population increase associated with the proposed residential development has the potential to increase the need for beds in hospitals serving the Northern Westchester County area by less than half of a bed. This is not considered a significant impact.

3.9~~8~~.4 Comparison to Bridleside, North Salem

New Housing developments are often controversial. Existing residents like the character of their existing neighborhoods and are often attached to the undeveloped parcels which have provided areas of open space. There are also practical considerations like traffic, property values and additional school children, that can be cause for concern. These concerns can be even more exaggerated when the proposal is for affordable housing.

Wilder Balter, the project sponsor, has successfully developed many multifamily communities throughout the Hudson Valley, including a substantially similar affordable housing development in the neighboring Town of North Salem, known as "Bridleside" which provides a vision for the subject proposal. The Bridleside residential development includes 65 units of affordable housing with a similar mix of one, two and three bedroom units as are proposed in the 45 unit WB Lewisboro Affordable Housing Development. The projected funding sources and rental values will be virtually identical in the two developments. The market values of residential real estate is comparable in North Salem and Lewisboro. The tax structure, tax rates and equalization rates are also similar in the two communities. Beyond the projections provided in development models, real life experience with similar development can provide an accurate window into what the future will bring post development.

Table 3.9~~8~~-3 shown below, provides data on population and relevant demands for community services at the Bridleside project. Data was gathered from the Town of North Salem Police Department, the North Salem Fire Department, the North Salem Volunteer Ambulance Corp. And the North Salem School District. Table 3.9~~8~~-3 lists the annual calls for service to the North Salem emergency service providers, and compares this data to the projections of demands for community services anticipated from the Lewisboro residential community. Since the proposed Lewisboro development is 45 units compared to the 65 units built in Bridleside, the statistics for Bridleside have been factored by 69% to provide a direct comparison to the Lewisboro projections.

A count of school age children who reside at Bridleside indicates there are a total of 35 students, however of this total 9 students already lived within the North Salem School District, indicating the increase in the school districts enrollment was 26 students as shown in Table 3.9~~8~~-3.

Table 3.9~~8~~-3 Impact Comparison Bridleside vs. Lewisboro AFFH			
Area of Concern	***Bridleside North Salem***		***AFFH Lewisboro***
Land Use			
Total Site Area (acres)	40.0		35.4
Total Area of Disturbance (acres)	14.1		9.0
Impervious Surfaces (acres)	3.1		2.4
Community Resources			
	Bridleside Full Value	***Bridleside Factored at 69%***	***AFFH Lewisboro***
Residential Units	65	45	45
Population	137	95	110
School-age Children - New to the District	26	18	16
Police Annual Calls for Service	23	16	17 *
Fire Annual Calls for Service	17	12	8 *
Ambulance Annual Calls for Service	7	5	4 *
Municipal Taxes	$44,588	$30,766	$29,527
School Taxes	$102,076	$70,423	$91,268
Notes: Estimates are approximate. Source: Insite Engineering; Tim Miller Associates, Inc., 2016 * Based upon existing average annual calls with the current service area.			

Minimization of Potential Impacts *and Mitigation*

Police, Fire and Emergency Services

As Table 3.9~~8~~-3 shows the actual calls for emergency service at Bridleside are consistent with the projection of need from the Lewisboro development. The anticipated calls for emergency services is not anticipated to result in any significant impact to police protection, or fire and emergency service provision in the Town of Lewisboro as a result of the construction of the proposed residential development.

The proposed development will generate tax revenues to balance any potential increases in the cost to various municipal and other district services.

Secondary Benefits

There are expected to be secondary benefits to the local economy as a result of construction activities and the future spending by the new residents of this project. The spending of residents expected to live at the proposed development will benefit commercial businesses in the local area and the region, both in the Town of Lewisboro and the surrounding region.

3.9~~8~~.5 Schools

Existing Conditions

The project site is served by the Katonah Lewisboro Union Free School District. The District includes three K-5 elementary schools, one middle school (grades 6, 7 and 8), and one high school. The Katonah Lewisboro Union Free School District geographically includes all of the Town of Lewisboro and the Katonah Hamlet area in the Town of Bedford, and smaller portions of the Town of North Salem and the Town of Pound Ridge.

According to information provided by the School District[2], enrollments have been steadily decreasing over the past 10 years. As of October 2014, 3,204 students were enrolled in the District. Table 3.9~~8~~-4 below summarizes the 2014-2015 grade distributions and enrollments of the various schools within the District:

Table 3.9~~8~~-4
Katonah Lewisboro School District (2014-2015 School Year)

School	Grades Served	2014 Enrollment
Increase Miller Elementary School	K-5	479
Katonah Elementary School	K-5	415
Meadow Pond Elementary School	K-5	384
John Jay Middle School	6-8	777
John Jay High School	9-12	1,149
TOTAL		**3,204**

Katonah Lewisboro School District, 2015.

All of the schools in this School District received a rating of “5” from the New York State Public School Report Card of Comprehensive Information with respect to the “district need to resource capacity”. This rating states that “this is a school district with average student needs in relation to district resources capacity”.

Potential Impacts

As shown in Table 3.9~~8~~-1, based upon demographic multipliers published by the Rutgers University Center for Urban Policy Research, approximately 16 students are projected to reside in the proposed residential development.

According to the Assistant Superintendent for Business, Based upon the geographic location of the project site and the current student distribution among schools in the district, it is likely that students from the proposed residential development would attend the Increase Miller Elementary School, the John Jay Middle School and the John Jay high School. It should be noted that student distribution is reviewed annually and is subject to change.

[2] Katonah Lewisboro Union free School District 2015-2016 General Fund Budget Book, April 2015.

School District Costs Associated with the Proposed Project

The budget for the 2015-2016 school year for the Katonah Lewisboro Union Free School District totals approximately $108,731,720. The portion of the budget to be raised through taxation is $95,904,695 - approximately 88 percent of the budget is met through the property tax levy. The addition of 16 students to a population of more than 3,200 students represents an increase of less than half of one percent. This deminimus increase in student population will not have a significant impact on administrative or capital needs of the district. Any costs to the District's would be related specifically to instruction and transportation, referred to as marginal costs, *District wide, these costs total $49,544,464. Since 88 percent of the Budget is* to be raised by the tax levy*, the portion of these costs to be raised by the tax levy*~~. District wide these costs~~ total $*43,599,128*~~49,544,464~~.

With an enrollment of 3,204 students, the per-student marginal cost to be raised by the tax levy are calculated to be $13,6*08*~~39~~*, ($43,599,128 / 3,204)*. This cost is likely overstated given the small percentage of new students compared to the existing student population. Projected costs to the school district could be up to $*217,728*~~215,498~~ annually based on an estimated 16 students that would reside in the community.

The proposed residential housing development is estimated to generate $91,268 in property tax revenues annually to the school district. Thus, the overall impact on the district's budget could conservatively result in a cost of up to $*126,460*~~124,230~~. If this cost materializes, it would need to be met by an adjustment to the overall tax rates of the School District of approximately 25 cents per $1,000 of assessed valuation. For a typical home in the Katonah Lewisboro District, this translates into approximately $12.50 per household.

The anticipated cost of education must be balanced with the fact that the WB Lewisboro Affordable Housing Development will be a resource that will provide for affordable housing that will help to advance the Town and County goals for such housing and will help to satisfy local and regional housing needs, truly a mitigation factor that must be given appropriate consideration.

Construction is projected to take 12 to 18 months which is likely to be spread over two school years. The increased student population is also expected to be distributed throughout the grade levels, resulting in an average of less than one student per grade. The multi-year phasing and distribution of students will allow for an additional 16 students to be integrated to the local schools with minimal impact. Conversation with the Business Administrator for the Katonah Lewisboro District[3] indicated absorption of the new students should not present a capacity problem for the school district, particularly in light of the declining enrollment trend the district is experiencing. *A letter from the School District to this effect has been requested from the School District.*

Minimization of Potential Impacts and Mitigation

The development plans will be forwarded to the School District for review and comment on transportation safety, bus turning radius and bus stop locations. *Since the potential for significant impacts is minimal, no further mitigation is proposed.*

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[3] *Information provided via phone conversation, 1/26/16 with Mike Jumper, Assistant Superintendent for Business of the Katonah Lewisboro School District.*

3.98.6 Summary

Lewisboro has a responsibility to provide for their share of the regional need for affordable housing. This need was recognized by the Town Board in its adoption of Local Law 7-2015 permitting the development of multi-family housing, including AFFH units, in various zoning districts throughout the Town (including the CC-20 zone in which the subject site exists).

As set forth in the Westchester County Affordable Housing Allocation Plan 2000-2015 (November 9, 2005), 239 units were estimated as Lewisboro's "fair share obligation" which has been substantially unmet. The WB Lewisboro Affordable Housing Development will provide needed affordable housing opportunities for the Town of Lewisboro. All of the 45 residential units will be designated affordable, in accordance with Westchester County's eligibility requirements.

Most impacts to be considered in development projects are site specific – traffic, visual, natural resources, etc. But fiscal impacts are not site specific other than whether or not a site has public roads, water, sewer and or sanitation. Fiscal impacts relating to school children are not at all site specific and therefore must be supported by the entire community.

The proposed 45 units in the WB Lewisboro Affordable Housing Development represent less than 25% of the Town's "fair share obligation" to provide affordable housing. Given the privately owned infrastructure, and the relatively low expected population of school age children, the fiscal impacts of these affordable units could not be any less.

~~3.9~~*3.10* IMPACT ON THE COMMUNITY

Consistency with Community Plans and Community Character

Existing Conditions

The subject property encompasses 35.4 acres of land on three lots located in the Town of Lewisboro, Westchester County, New York. The property is located on the east side of NYS Route 22, proximate to the I-684 northbound Exit 6A ramp and south of the hamlet of Goldens Bridge. The three parcels are located in the following special districts: Katonah-Lewisboro School District and Goldens Bridge Fire District. The two westerly lots are located in the CC-20 zoning district and the easterly lot is located in the R-4A zoning district.

The site is located approximately three-quarters of a mile south of the hamlet of Goldens Bridge, which includes several community-scale commercial businesses, a post office, a community center and the Goldens Bridge Metro-North train station. Generally within approximately three-quarters of a mile of the site, land uses to the north and west include residential, public uses, warehouse, commercial, retail, transportation and vacant land. To the south and east, land use is predominantly single family residential, and vacant land.

Town Master Plan

The Town Master Plan outlines policies and goals formally adopted by the Town of Lewisboro in 1985[1] as a guide for land use and future development in the Town. In its Plan, the Town identified considerations for preservation of open space resources as well as for development that are generally applicable to the subject proposal today. The Plan does not identify site-specific consistency criteria, but it was intended to provide overall guidance on the local scale for land planning decisions. Consistency of the proposed development with policies identified in the Plan, to the extent such policies are defined, is described below.

The 1985 Town Master Plan speaks of a vision for land use in the I-684/Route 22 corridor that would provide for development of campus commercial land use that would also incorporate the preservation of open space. Campus commercial development was envisioned and planned for in the area bordering Route 22 including the subject site and paved the way for the subsequent rezoning to CC-20. As stated in the Master Plan relative to campus commercial facilities, adequate buffering between such use and adjacent residential areas would allow the two different types of land use to coexist, and reduce impacts to the natural environment resulting from development.

Zoning Requirements

A recent amendment to the zoning code adopted by the Town Board in 2015 (LL 7-2015) added provisions that would permit multi-family housing in commercial and business areas. A joint task force composed of members of the Planning Board, Zoning Board of Appeals, Architectural Review Council and Housing Committee had been tasked with exploring ways to enable Lewisboro to comply with the obligations of the Westchester County Housing Settlement, and to facilitate the effort to provide fair and affordable housing in Town. The amended provisions of the code apply to the subject site and is particularly appropriate for this application for affordable housing.

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[1] Accessed on the Town's website 1/21/16.

In her letter of January 25, 2016 to the Chair of the Lewisboro Planning Board, the Chair of the Lewisboro Housing Committee stated:

> The majority of the Housing Committee feels that the proposed Wilder Balter 45-unit development would accomplish the goal for which the Zoning code was amended: providing fair and affordable housing in Lewisboro. The construction of the proposed AFFH housing in Lewisboro would also substantially help Lewisboro and the County in complying with the Settlement, joining other nearby towns such as North Salem, Pound Ridge and Bedford, who have also taken steps in this direction.[2]

Potential Impacts

The site plans developed for this affordable housing application show and tabulate the various zoning requirements of the CC-20 and R-4A districts applicable to the property, including the new reference to the provisions for multi-family dwellings which are found in the R-MF requirements. The plans identify *the conformance of the proposed plan to the applicable zoning requirements including* the following information:

- Front, side and rear yard setbacks of the R-MF district or double the R-4A district setback, as applicable (these replace the setbacks of the CC-20 district);
- *D*~~d~~ensity transition area of the R-MF district (replaces the perimeter buffer of the CC-20 district);
- *B*~~b~~uffer lot with conservation easement (CC-20 district requirement);
- Town wetland control area *and*~~;~~ State wetland adjacent area; and*,*
- *T*~~t~~ables with the applicable net land area calculations, density unit calculations, parking requirements and recreation requirements.

Multi-family dwellings are a permitted use in the CC-20 district, subject to the requirements of Section 220-26, Multifamily Residence District (R-MF), of the Zoning Code. The dimension and bulk zoning requirements of the R-MF district replace those of the underlying CC-20 district (to be confirmed by the Planning Board Attorney or Building Inspector).

The applicant is proposing a total of 92 parking spaces for this facility (2.0 per unit), whereas 124 spaces are required by zoning based on the proposed bedroom count. The required number of spaces far exceeds the parking needs of the development based upon the applicant's experience with other similar developments owned and managed by the applicant throughout the Hudson Valley. For example, the Bridleside 65-unit affordable rental community in North Salem was approved with 144 parking spaces but a recent three day survey showed that only 76 spaces were being used (53 percent of the requirement or 1.17 cars per dwelling unit). Another example is the 92-unit Roundtop affordable rental community in Montrose which was approved with 141 parking spaces (1.5 parking spaces per unit). The survey for that property showed that only 98 spaces were being used (70 percent or 1.07 cars per dwelling unit). Accordingly, the applicant is requesting a parking variance from the Zoning Board of Appeals.

The applicant proposes to permanently preserve open space on the easternmost part of the property located in the R-4A zoning district. The applicant intends to preserve at least 17 acres

[2] See January 25, 2016 letter to the Chair of the Lewisboro Planning Board from the Chair of the Lewisboro Housing Committee.

of open space through restrictive covenants and/or a conservation easement, thereby providing a permanent buffer to the adjoining lands in the R-4A district.

Mitigation Measures~~*Avoidance or Minimization of Potential Impacts*~~

The Town's Master Plan cites general design principles to guide future public and private development in the Town to support the goals and objectives of the Town. These recommendations refer to landscape buffering of buildings and parking areas, minimization of disturbance on steep slopes where potential for erosion needs to be addressed, and provisions to minimize adverse visual impact on Town character and neighboring uses.

The Master Plan highlights the need for care in site planning of parcels containing steep slopes, wetlands and other open space resources to minimize the potential for impacts to the sensitive qualities of such areas as well as potential visual intrusions into the landscape of Lewisboro. In addressing these concerns, the proposed development plan presents a balance between the environmental goals of open space resource preservation and wise utilization of the land *in the applicant's opinion*.

The site plan will incorporate various conventional slope protection and wetland protection measures that will minimize the potential for soil erosion and surface water impacts. The plan also will incorporate tree preservation measures (particularly by minimizing the overall area of site disturbance) and proposed landscape plantings that will minimize ~~any~~ visual intrusion and create an asset to the community. *Moreover, the site plan will preserve a significant area located outside of the limits of disturbance in permanent open space.*

Refer to the preceding narratives in this Part 3 on specific subject areas for discussions of environmental concerns relating to particular *physical* components of the proposed plan that are integral to the design and will effectively avoid or minimize impacts.

The proposed plan, in the applicant's opinion, will be consistent with the Town's Zoning Statement of Purpose (§220-1): "To preserve the natural beauty of the physiography of the Town; to protect the Town against unsightly, obtrusive and obnoxious land uses and operations; to enhance the aesthetic aspect of the natural and man-made elements of the Town; and to ensure appropriate development with regard to those elements."

The proposed plan will also meet the site plan standards set forth in §220-48 which the Planning Board will consider in acting on a site development plan application:

> *(1) The proposed number, size, location, height, bulk, use, appearance and architectural features of all structures and facilities.*
>
> *(a) The overall building and site design shall enhance and protect the character and property values in the surrounding neighborhood.*
>
> *(b) Development shall be compatible with the architectural style and visual composition of the hamlet area in which it is located.*
>
> *(c) Development shall have a harmonious relationship with the natural terrain and vegetation on the site and on adjacent properties.*

The proposed plan will address a housing need cited in the Town Master Plan. In it's determination of significance at the time that multi-family dwellings was added as a permitted use in the CC-20 district regulations (LL 7-2015), the Town's findings stated the "...definition of

AFFH Unit ... in addition to allowing multifamily housing within the Town's commercial zones, is consistent with the Goal and Policy set forth in the Town Master Plan, which recites that 'opportunities should be provided for a range of housing, including type, cost and character' (Town Master Plan, Goal 1C)."

The Westchester County Department of Planning supports the development of affordable affirmatively furthering fair housing (AFFH) rental units in the Town of Lewisboro.[3] *This application is consistent with the Westchester County Planning Board's long-range planning policies set forth in Westchester 2025 - Context for County and Municipal Planning and Policies to Guide County Planning (adopted 2008 and amended 2010), and its recommended strategies set forth in Patterns for Westchester: The Land and the People (adopted 1995), which calls for increasing the range of housing types in Westchester County.*[4]

The applicant is cognizant of the Town's Complete Streets Policy adopted in 2011 and although the policy does not specifically address individual site plans, this development proposal will conform with the policy as it might be applied to the plan.

The proposed affordable housing development plan addresses the Town's design principles relative to environmental protection and visual consistency*, in the applicant's opinion*. The proposed site plan has been laid out such that the buildings and other site features will be virtually surrounded by wooded open space, will not be visually prominent at any time of year, and will be largely obscured from offsite views when leaves are on the trees.

The development includes a natural landscape buffer to the public roads and nearby uses through the preservation of existing vegetation over much of the property. *(These buffers reflect what is depicted for the property in the Town's Master Plan map of 1985.)* In addition to the mixture of native and adaptive deciduous and evergreen tree and shrub species proposed on the landscape plan, natural topographic conditions render the development area of the site largely obscured from view from most offsite locations thereby avoiding potential impact on community character.

[3] Letter to Jerome Kerner, Chair, Town of Lewisboro Planning Board, from Norma V. Drummond, Deputy Commissioner, Westchester County Department of Planning, dated March 11, 2016.

[4] Letter to Ciorsdan Conrad, Planning Board Secretary, Town of Lewisboro, from Edward Buroughs, AICP, Commissioner, Westchester County Planning Board, dated February 12, 2016.

APPENDIX E

Hydrogeologic Assessment

DRAFT

COMPLAINT RESPONSE
AND MITIGATION PLAN
WILDER BALTER PARTNERS
ROUTE 22, LEWISBORO, NEW YORK

The Developers, Wilder Balter Partners (WBP), will respond promptly to any complaints from offsite well owners within 2,000 feet of the proposed supply wells that allege damage caused by the operations of the WBP well-supply source. Depending on the nature of the complaint, the complaint will be directed to either LBG or the water operator of the system, or both, for investigation and remediation, if required. The operating premise of the response to offsite well problems is that damage to a distant offsite well, whether related to the ability of the well to produce its normal supply or water-quality degradation, can only result if significant drawdown of the static water level in the subject well occurred as a result of pumpage by the WBP well-supply sources.

If after investigation any complaint is found to be valid, i.e., a well problem caused by drawdown resulting from pumpage by the WBP well-supply source, the problem will be remediated at the cost of the Developers WBP. If the problem is unrelated to the operations of the WBP well-supply source, i.e., caused by normal wear and tear or naturally-occurring conditions, the well owner will be referred to a competent well or pump contractor for remediation at his cost. A written report regarding each such compliant will be provided to the WBP and to the complainant within seven days of the completion of any complaint investigation.

For any well problem that is found to have been caused by drawdown resulting from pumpage by the WBP well-supply source, a remedy or remedies would be offered to the well owner, to be paid by WBP. Such remedies might include lowering a well pump, replacing a well pump, deepening a well, redeveloping a well, or drilling a new well. In any such remediation, the costs to the WBP would include restoration of disturbed land or plantings. WBP would select the most efficacious remediation that is economically warranted.

H:\Wilder Balter\Lewisboro\Well MItigation Plan.doc

APPENDIX F

Archaeological Report

PHASE IA LITERATURE REVIEW AND SENSITIVITY ASSESSMENT
AND
PHASE IB ARCHEOLOGICAL FIELDWORK

Wilder Balter Lewisboro

Town of Lewisboro, Westchester County, New York

March 2016

Prepared by:

STRATA Cultural Resource Management, LLC
105 South Street
Warwick, NY 10990
Telephone: 845-647-1390
info@stratacrm.com
36CFR61 Archeological Consultants

MANAGEMENT SUMMARY

SHPO Project Review Number:

Involved State and Federal Agencies:

Phase of Survey: Phase IA/IB

Location Information: NYS Route 22, Town of Lewisboro, Westchester Co.,NY

Survey Area (Metric & English)
Number of Acres Surveyed: 36ac (14.5 ha)
Number of Square meters & Feet excavated:

USGS 7.5 Minute Quadrangle Map: 1981 Croton Falls, NY

Archeological Survey Overview
Number and Interval of Shovel Tests: 45 STPs @ 15-Meter (50-ft) interval
Number and Size of Units: 0

Results of Archeological Survey
Number and name of historic sites identified: 0
Number and name of prehistoric sites identified: 0

Results of Architectural Survey
Number of buildings/structures/cemeteries adjacent to Project Area: 0
Number of previously determined NR listed or eligible buildings/structures/cemeteries/districts: 0

Report Author: Jim Turner, RPA, Principal Investigator

Date of Report: March 2016

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PHASE IA ARCHEOLOGICAL SENSITIVITY ASSESSMENT

INTRODUCTION

STRATA Cultural Resource Management was contacted on November 24, 2015 by Tim Miller of Tim Miller Associates, Inc. to conduct a Phase IA/IB Archeological Investigation on a group of three properties (SBL 5-10766-19, 20 & 21) measuring approximately 36 acres along NYS Route 22 in the Town of Lewisboro, Westchester County, New York.

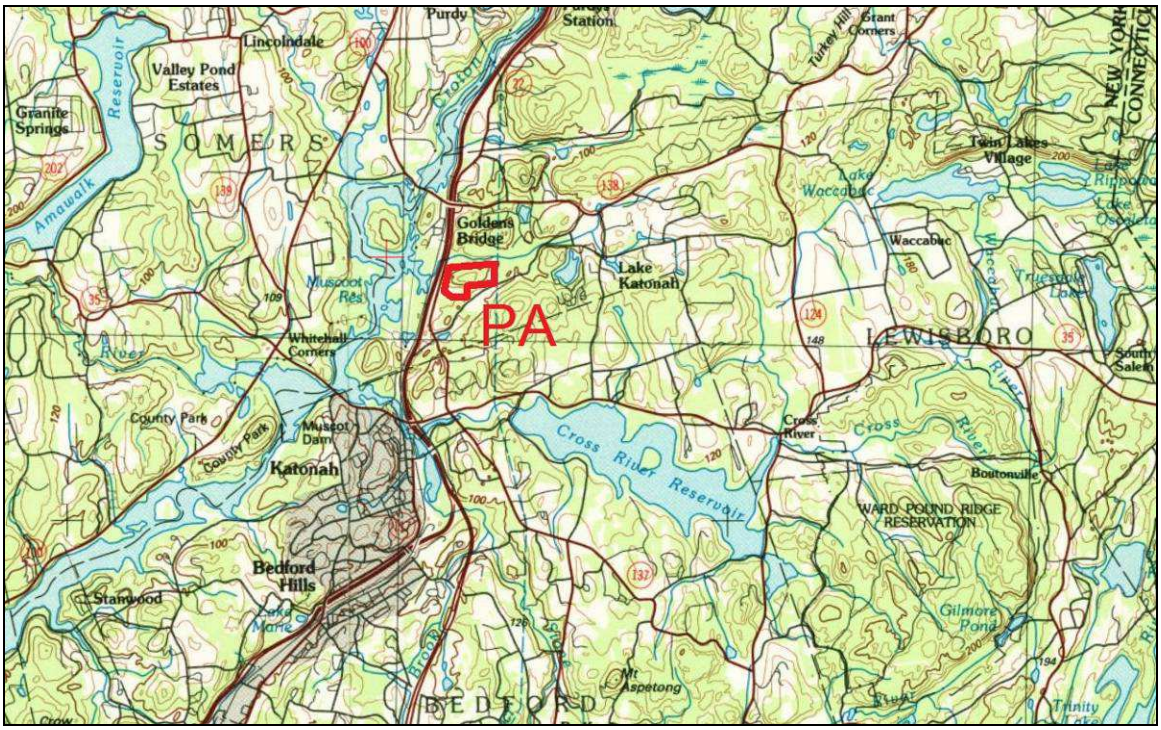
PROJECT INFORMATION

The proposed project consists of construction of six multi-family residences with associated roadways, parking, recreation facilities, underground utilities, subsurface sewage treatments systems (SSTS) and stormwater management.

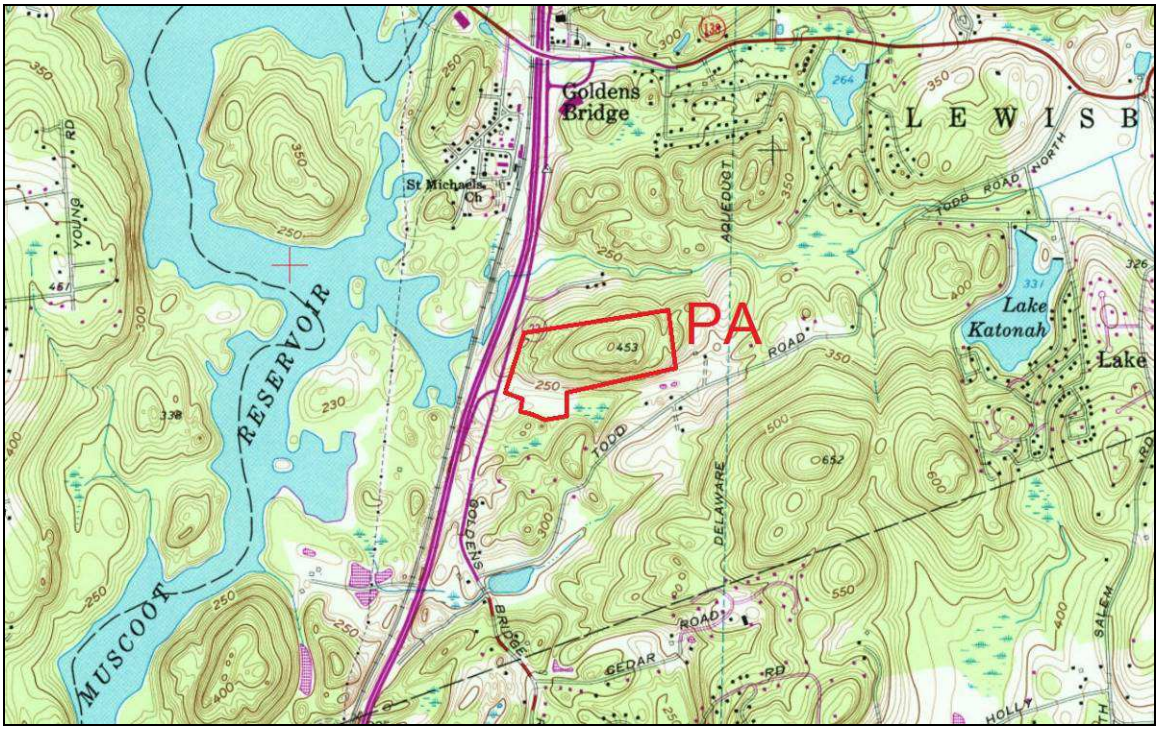
The Project Area (PA) is a roughly rectangular parcel that lies to the east of I-684 and NYS Route 22 between Katonah and Golden's Bridge (Photos 1-17; Maps 1-4). Elevations within the Project Area are approximately 211 feet (64 m) above mean sea level (AMSL) at the surface of the wetlands and rise to approximately 453 feet (138 m) AMSL in the center of the property at the top of the hill. Extensive bedrock outcrops characterize the higher elevations. An area of wetlands is located in the southwest portion of the Project Area.

The Area of Potential Effect (APE) is considered to be the western portions of Project Area containing the buildings, roadways, SSTS and stormwater ponds as well as select locations within the eastern portions of the Project Area containing SSTS.

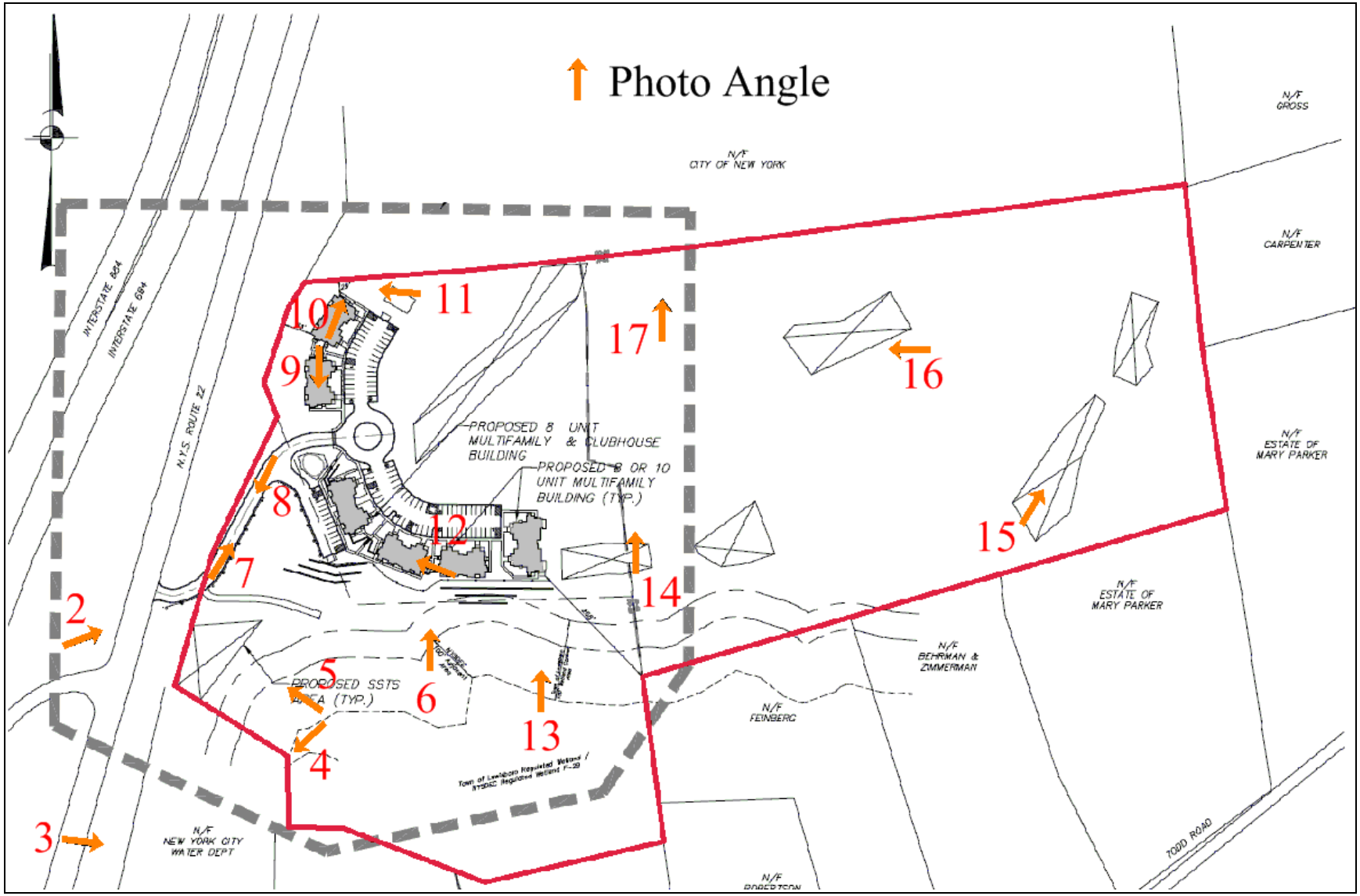
Photo 1: Aerial view of the Project Area south of Golden's Bridge.



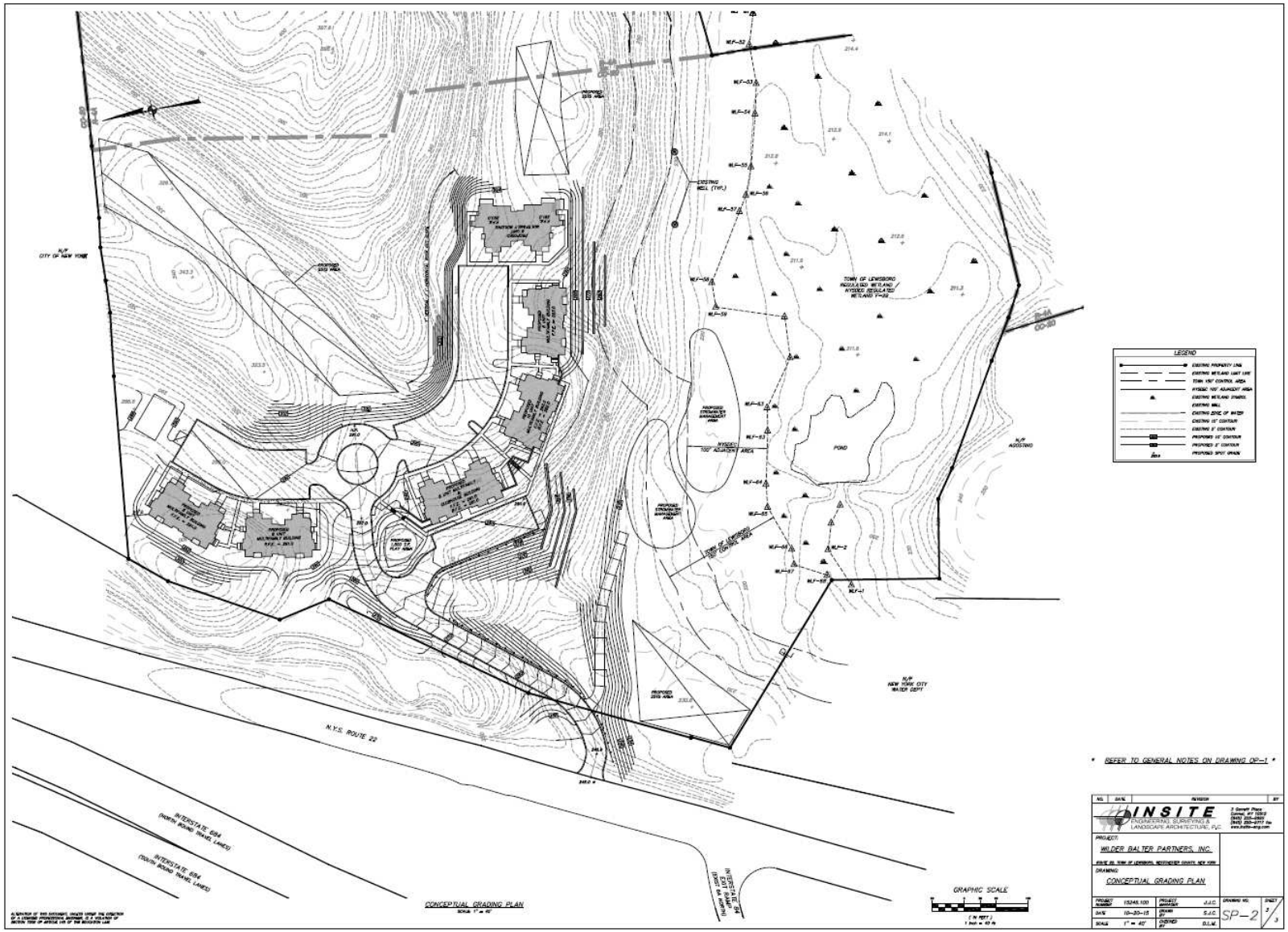
Map 1: USGS 1:250,000 Topographic Map showing Project Area.



Map 2: 1981 USGS 7.5' Topographic Quadrangle (Croton Falls, NY).



Map 3: Project Area showing proposed development including subsurface sewage treatment systems (SSTS) in eastern half of property and report photo angles.



Map 4: Project Area showing proposed development including multi-family dwellings, roadways, subsurface sewage treatment systems and stormwater ponds.

Photo 2: View northeast across Route 22 toward Project Area and proposed entry road.

Photo 3: View east from Route 22 across wetlands within Project Area.

Photo 4: View southwest of Project Area showing property corner monument at stream.

Photo 5: View northwest showing three-sided stone enclosure situated near stream.

Photo 6: View north of Project Area showing bedrock outcrop in vicinity of Building 5.

Photo 7: View northeast of Project Area showing proposed route of access road.

Photo 8: View southwest of Project Area showing proposed route of access road.

Photo 9: View south of Project Area showing staked centerline of Building 2.

Photo 10: View north of Project Area showing staked centerline of Building 1 with stone wall at rear.

Photo 11: View west of stone wall along property boundary showing elevation difference with Route 22 below.

Photo 12: View west of Project Area showing staked centerline of Building 4.

Photo 13: View north of Project Area showing steep hillside below Building 6.

Photo 14: View north of Project Area showing stone wall at location of proposed SSTS.

Photo 15: View northeast of Project Area near southeast property corner showing location of proposed SSTS.

Photo 16: View west of Project Area showing proposed location of SSTS.

Photo 17: View north of Project area showing steep slopes along northern property line.

Bedrock and Surficial Geology

The Project Area lies within metamorphic rocks of sedimentary and volcanic origin. The surficial geology of the Project Area consists of glacial till overlying bedrock with exposed outcrops.

Soils and Drainage

Soils within the Project Area consist of Charlton loam (**ChB**), Chatfield-Hollis-Rock Outcrop complex (**CtC, CuD**), Hollis Rock Outcrop complex (**HrF**), Leicester loam (**LcB**), Palms muck (**Pa**) and Riverhead loam (**RhB**) (Map 5) (USDA 1994). The typical soil profiles for soils contained within the APE are shown below in Table 1.

Map 5: Project Area soils (http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx).

Table 1: Project Area soils (USDA 1994).

Name	Soil Horizon Depth	Color	Texture, Inclusions	Slope %	Drainage	Description
Charlton loam (**ChB**)	**A** 0-2 in (0-5 cm) **B** 2-8 in (5-20 cm) **C** 8-24 in (20-61 cm) **D** 24-60 in (61-152 cm)	V Dk Gr Br Dk Br Dk Yl Br Dk Gr Br	Loam Loam Sandy loam Sandy loam	2-8	Well drained	Glacial till derived from granite, schist and gneiss
Chatfield-Hollis-Rock Outcrop complex (**CtC, CuD**)	**A** 0-2 in (0-5 cm) **B** 2-7 in (5-18 cm) **C** 7-24 in (18-61 cm) **D** 24 in (61 cm)	V Dk Gr Br Dk Br Br	Loam Loam Flaggy silt loam Bedrock	3-35	Somewhat excessively drained	Hilltops and narrow ridges in bedrock-controlled landscapes
Hollis Rock Outcrop complex (**HrF**)	**A** 0-1 in (0-3 cm) **B** 1-16 in (3-41 cm) **C** 16 in (41 cm)	Dk Br Yl Br	Fine sandy loam Fine sandy loam Bedrock	35-60	Somewhat excessively drained	Hillsides in bedrock-controlled landscapes
Leicester loam (**LcB**)	**A** 0-8 in (0-20 cm) **B** 8-18 in (20-46 cm) **C** 18-26 in (46-66 cm) **D** 26-60 in (66-152 cm)	V Dk Gr Br Dk Gr Br Br Br	Loam Sandy loam Sandy loam Sandy loam	3-8	Poorly drained	Lower parts of hillsides and small drainageways
Riverhead loam (**RhB**)	**A** 0-6 in (0-23 cm) **B** 6-14 in (23-41 cm) **C** 14-25 in (41-66 cm) **D** 25-30 in (66-76 cm) **E** 30-60 in (76-152 cm)	Dk Br Dk Br Dk Yl Br Yl Br Br	Loam Fine Sandy loam Sandy loam Loamy sand Loamy sand	3-8	Well drained	Benchlike areas along streams and on broad plains

Current Conditions and Previous Disturbance

The Project Area is currently forested uplands adjacent to a wetland with extensive bedrock outcrops across the proposed development footprint. Stone walls cross the Project Area along its southern slopes and a three-sided stone enclosure lies near the stream suggesting agricultural or livestock grazing usage in the past. A rough access road proceeds east from Route 22 along the northern edge of the wetland. Near the terminus of this road in the east there was observed disturbances in the ground surface consisting of mounds and depression suggesting mining and/or dumping activity at this location. The upland forest appears relatively undisturbed.

LITERATURE REVIEW

Site File Search

A site file search conducted at the Office of parks, Recreation and Historic Preservation (OPRHP) identified no New York State Museum (NYSM) sites or OPRHP sites within 500 feet of the Project Area.

National Register Listed and Eligible Properties

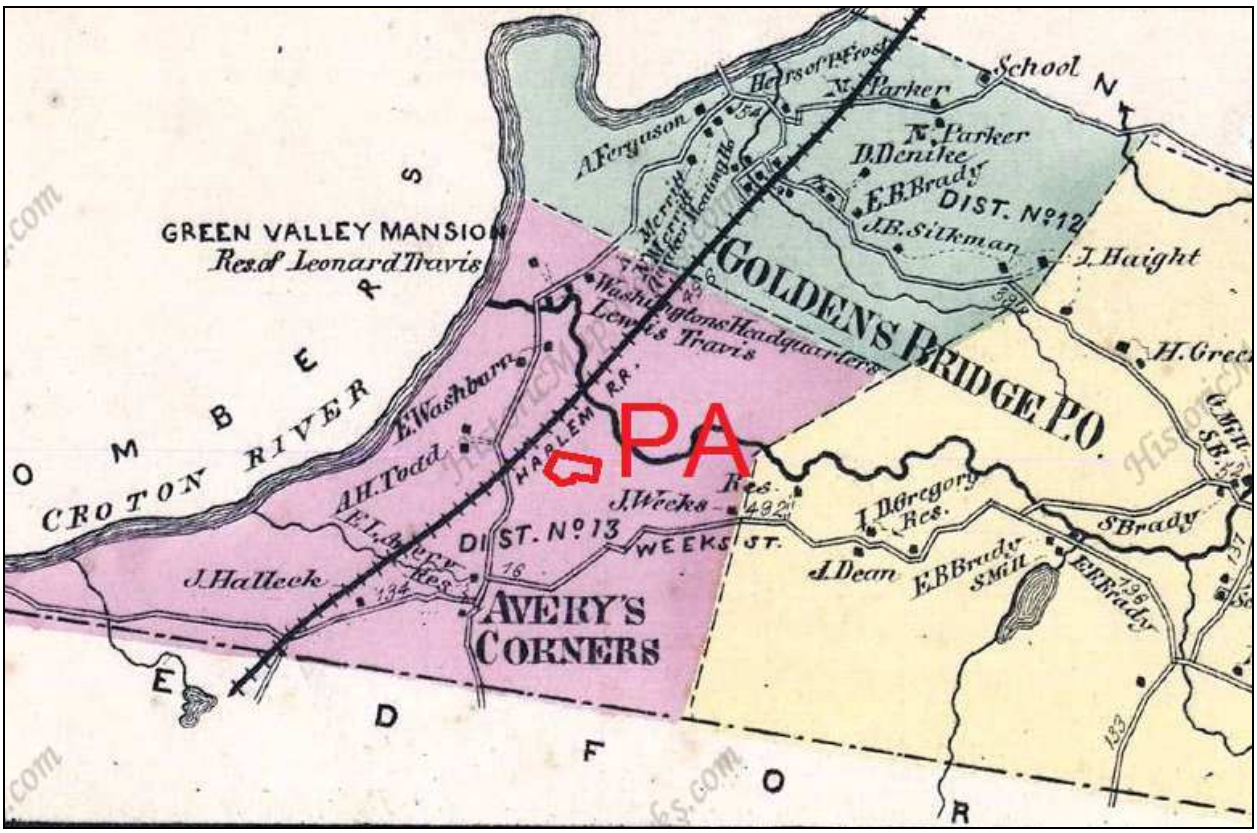
There are no National Register Listed or Eligible properties within 500 feet of the Project Area.

Previous surveys

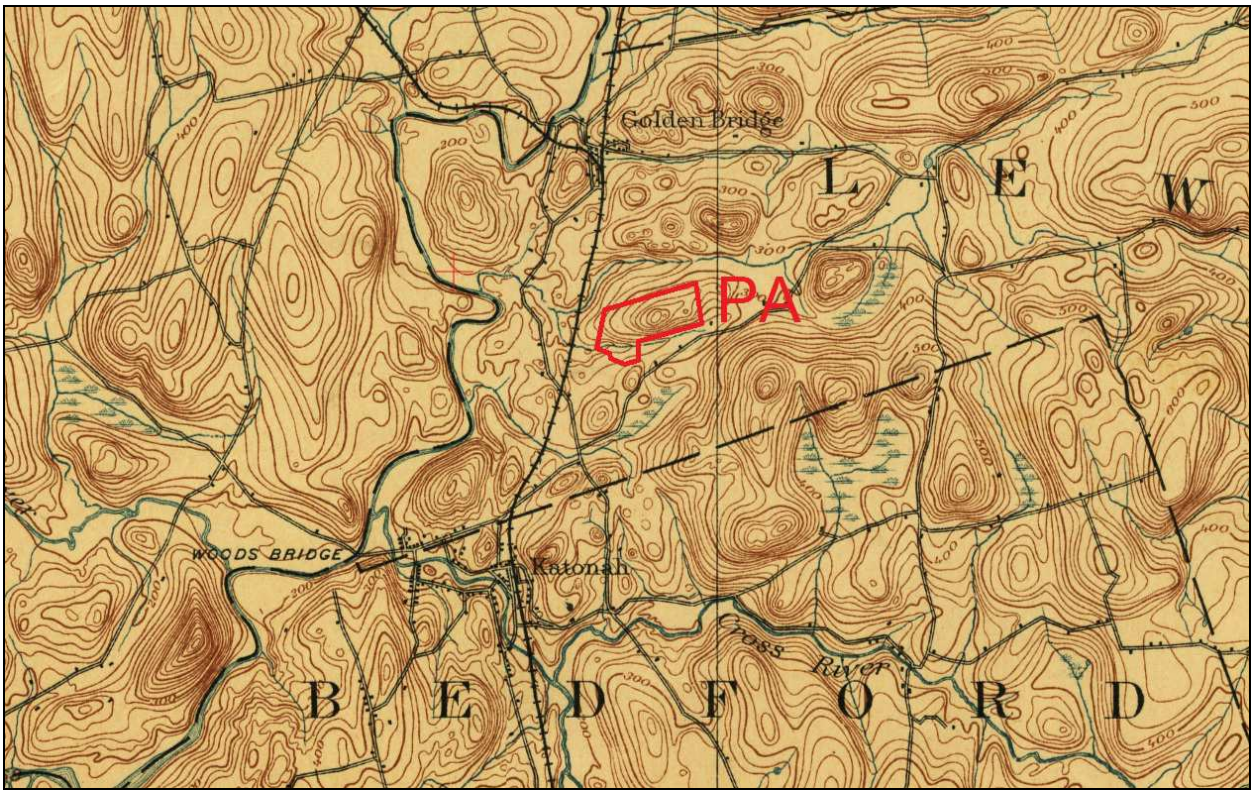
There have been no prior archeological investigations conducted within 500 feet of the Project Area.

Historic Map Review

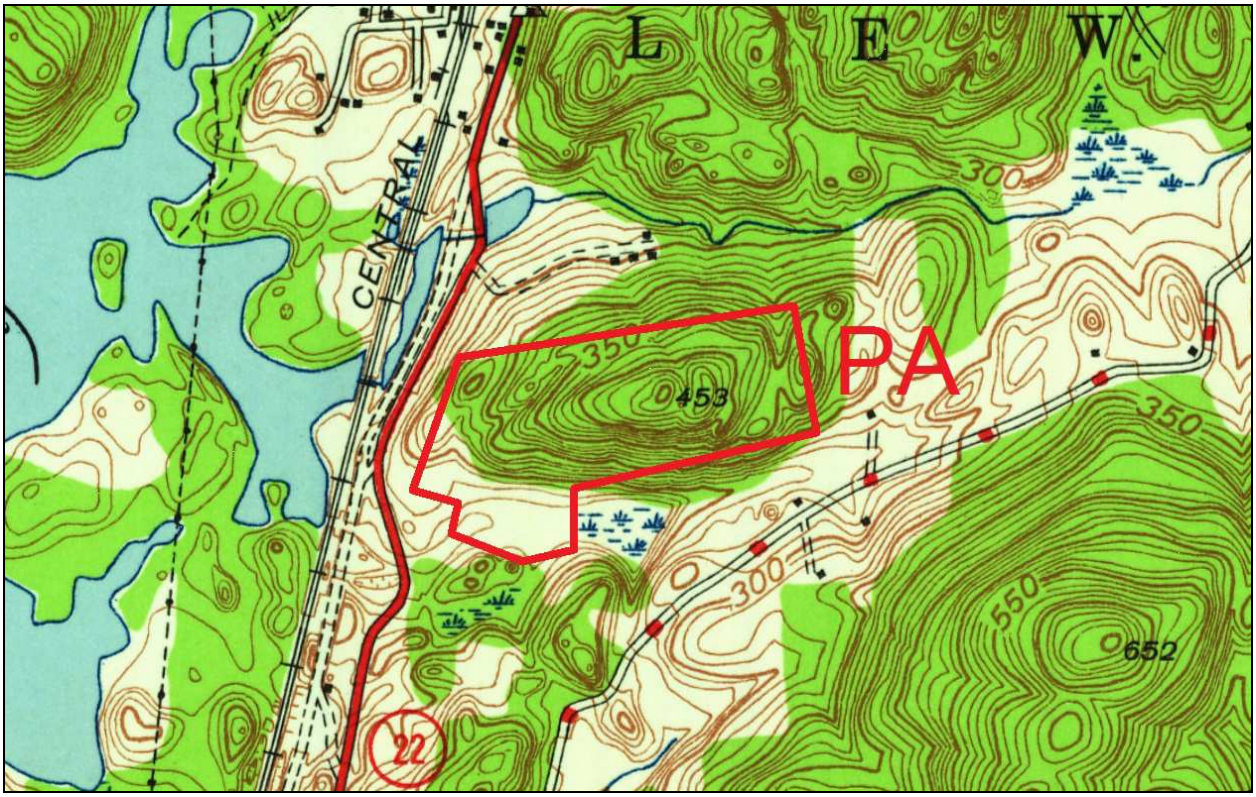
Three historic maps were reviewed to provide background context for the Project Area. These maps dated from 1867, 1892 and 1944. The earliest map by Beers shows the Project Area to the east of the Harlem Railroad line before the creation of the Muscoot Reservoir. The road north from Avery's Corners crosses the railroad due west of the Project Area. The 1892 USGS topo map shows the Project Area surrounding the large bedrock hilltop with water flowing westward across the bottom of the southern slope. The 1944 USGS topo map shows the Project Area after the creation of the Muscoot Reservoir as well as NYS Route 22. The drainage of the entire region has been modified and no water is shown flowing across the southern slope of the hilltop.



Map 6: 1867 *New York and its Vicinity* (Beers).



Map 7: 1892 USGS 15' Topographic Quadrangle (Carmel, NY).



Map 8: 1944 USGS 7.5' Topographic Quadrangle (Carmel, NY).

SENSITIVITY ASSESSMENT

Prehistoric Sensitivity

The Project Area is considered to have a moderate sensitivity for the presence of prehistoric cultural remains. The location exhibits several characteristics that are known to have been conducive to Native American occupation including an elevated hilltop adjacent to water sources that are themselves tributaries of a larger nearby river system. No rockshelters or usable lithic resources were identified within the Project Area indicating precontact sites would likely be limited to small temporary hunting camps rather than larger long-term settlements.

Historic Sensitivity

The Project Area is considered to have low sensitivity for the presence of historic cultural remains. Historic map research indicates that no structures have occupied the site from the early settlement of the area until the present day.

TESTING RECOMMENDATIONS

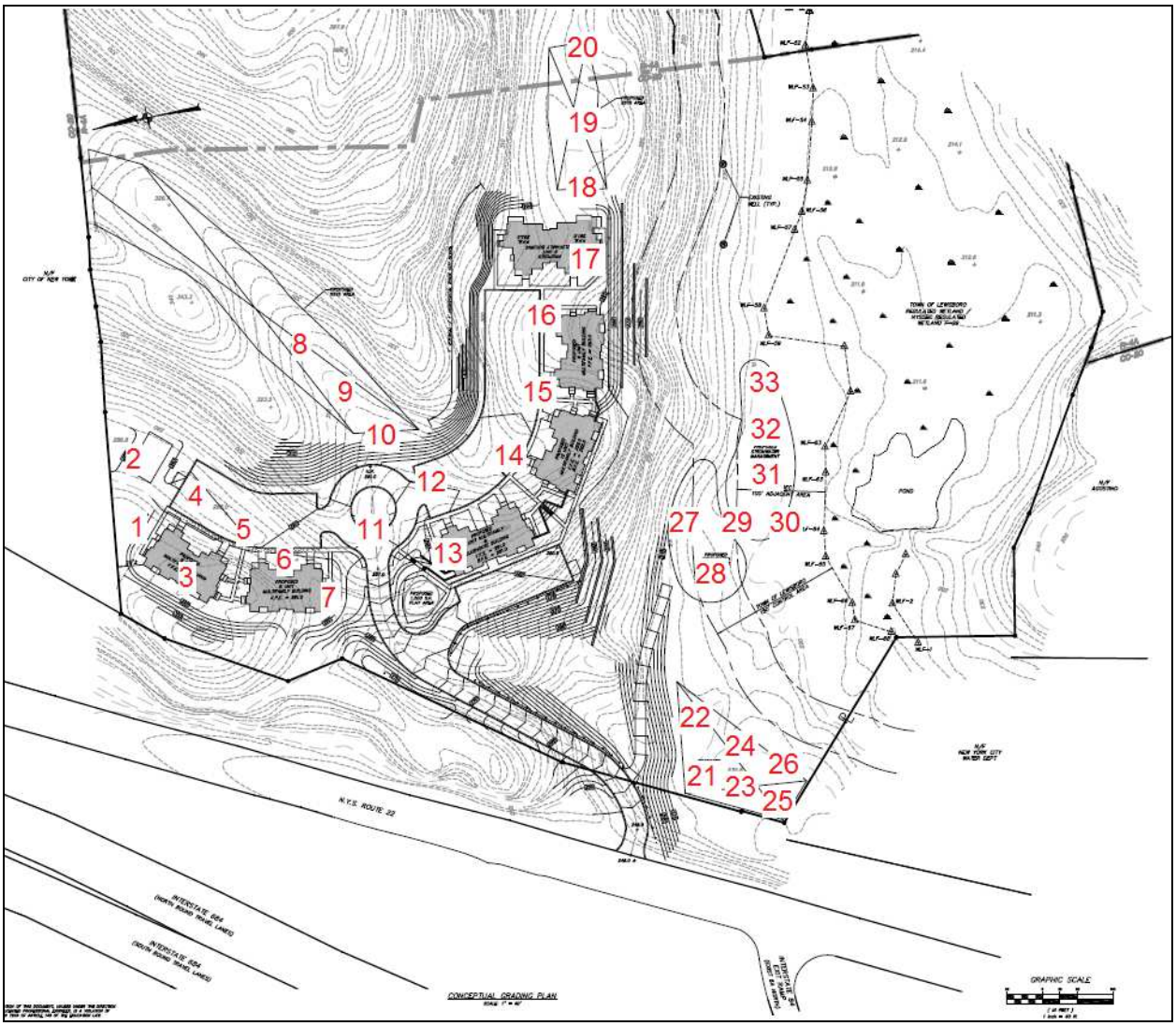
Due to the sensitivity for precontact cultural resources, subsurface archeological testing is recommended for all relatively level portions of the Project Area that are contained within the Project Area excepting the wetlands and areas of prior disturbance.

PHASE IB FIELD INVESTIGATION

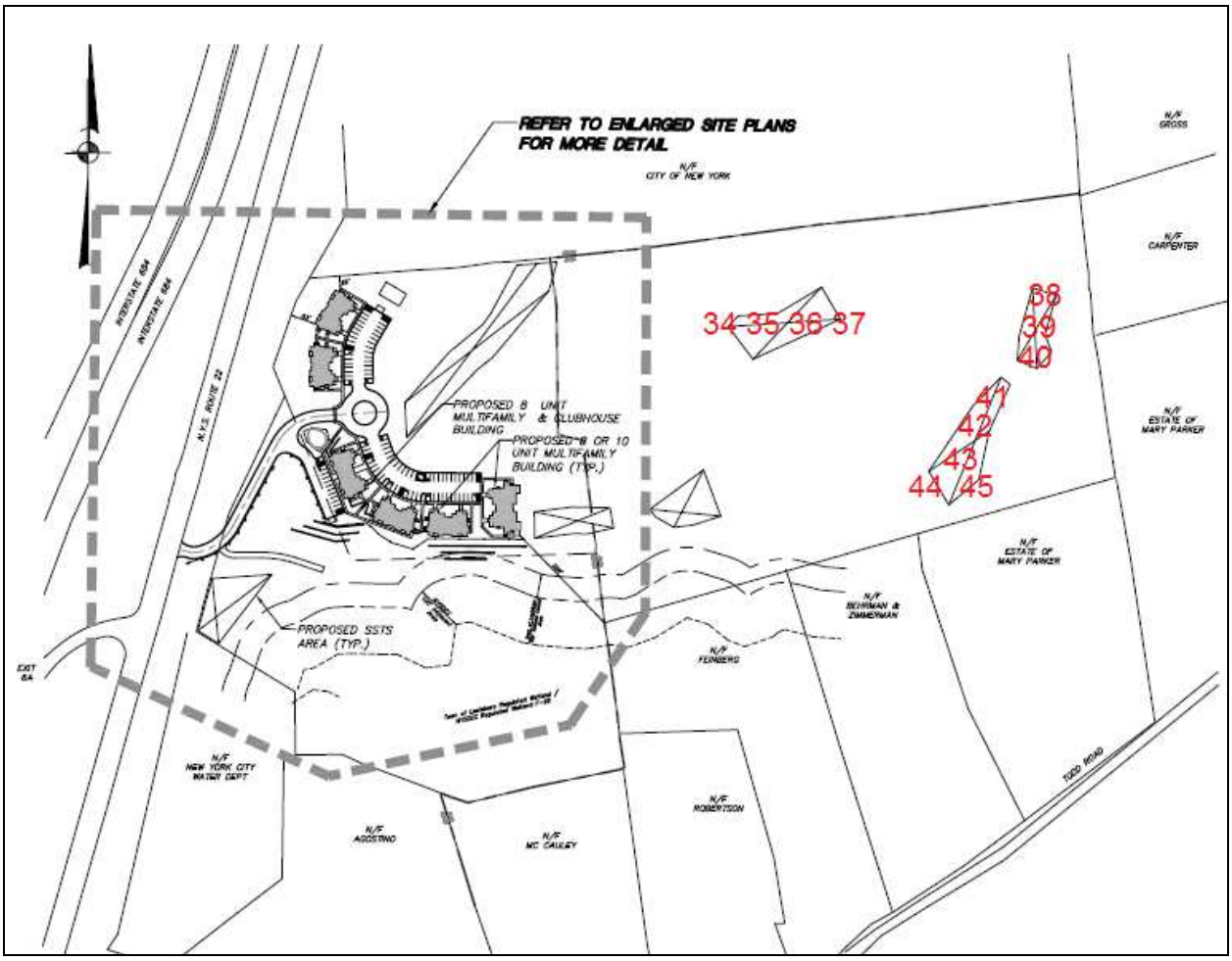
The Phase IB Field Investigation was conducted on January 17, 2016 beginning with a site walkover and visual surface survey of the Project Area. Shovel testing was performed by Mike Thomas, Field Technician and Jim Turner, Principal Investigator. For testing results see Appendix 1: Phase IB Shovel Test Records.

Shovel Testing Results

A total of 45 shovel test pits (STPs) were laid out within the Project Area (Map 10). No significant cultural deposits were identified during the subsurface excavations conducted within the Project Area.



Map 9: Shovel testing locations within the Project Area.



Map 10: Shovel testing locations within SSTS areas.

RECOMMENDATIONS

The Phase IA Literature Review and Sensitivity Assessment indicated a moderate sensitivity for precontact cultural resources and a low sensitivity for historic cultural resources. The Phase IB Archeological Fieldwork did not identify any significant cultural resources within the Project Area and therefore no further testing is recommended.

APPENDIX H

Blasting Mitigation Plan

Blasting Mitigation Plan

Blasting Protocol and Plan

Based upon initial soil testing and the proposed Site Plan layout, it is anticipated that rock will be encountered in the development of the site. If rock is encountered, mechanical means of rock removal such as ripping and hammering with a back hoe would be the first choices for rock removal. However, in the event that rock is encountered that would require more than mechanical removal, the Applicant has put together a blasting protocol that will then be submitted for approval prior to any blasting taking place.

The Town of Lewisboro has regulations regarding blasting in Chapter 92-18 Blasting Operations in the Building Code. The Code requires a blasting permit from the Building Inspector prior to any blasting operations. The Code provides blasting procedures, hours of blasting operations and insurance requirements (see attached).

Title 12 of the New York State Code of Rules and Regulations (12 NYCRR Part 39) governs the statewide handling, transportation, and storage of explosives. The applicant will follow the requirements contains therein, and will further mitigate any impacts from blasting, by meeting the following protocols which are typical of those found in municipal ordinances.

The following protocols will be followed by the project:

- All blasting will be conducted in compliance with New York State requirements (Title 12 of the New York Code of Rules and Regulations [12 NYCRR Part 39]) for the possession, handling, storage, and transportation of explosives.
- Blasting will be conducted by licensed, qualified and insured blasting contractors, who are certified in New York State. The blasting contractor will adhere to all insurance needs as required by the Town of Lewisboro Building Code. According to the Code:

  > The Building inspector shall not issue a permit for blasting unless the applicant has filed with the Building Inspector a certificate of insurance evidencing comprehensive general liability insurance on an occurrence basis insuring against bodily injury and property damage in the amount of at least $1,000,000 by an insurance carrier licensed by the Insurance Department o the State of New York, said certificate to include the Town of Lewisboro as an additional named insured. The applicant shall also file evidence of payment of the premium of payment of the premium for said insurance coverage.

- Pre-blasting inspections will be conducted for all off-site structures located within a predetermined radius or 1,000 feet of the blasting/excavation area, if authorized by the property owners. These inspections will include photo documentation and/or video documentation.
- Prior to blasting, an analysis will be completed by the contractor to determine the size, placement, and timing of blasting charges. This analysis will be provided in a written blasting plan.

- This blasting plan will be available for review by the Building Inspector or designee, and will include the blasting layout, size of blast, timing of charges, and quantity of material to be extracted.
- Seismographic equipment with decibel meters will be placed on the property line between the location of the blast and the nearest residences of structures. The results of the monitoring equipment will be promptly reviewed following each blast.
- The quantity of explosives will be limited to the amount necessary to fracture the rock without endangering persons or property. Before firing, all blasts will be covered with a suitable protective device to prevent escape of broken material.
- Blasting operations will be limited to the hours between 7:00 am and 7:00 pm, Monday through Saturday, consistent with the Lewisboro Zoning Code. Blasting will not be conducted between the hours of 7:00 pm and 7:00 am Monday through Saturday or anytime on Sunday or any holiday.
- The minimum required amount of explosives will be used in all blasting operations. Charges will be staggered to avoid the creation of high energy blasts.
- When blasting is to occur within 1,000 feet of existing off-site structures, the contractor will conduct test blasting, if necessary, prior to any other blasting to determine appropriate on-site blasting techniques.
- Blasting will be conducted so that the resulting ground vibrations at nearby structures does not exceed the standard industry measurement of a Peak Particle Velocity of 2.0 inches per second and the airborne noise does not exceed 130 dBA.
- Sufficient surficial converge of the blast area will be provided to prevent damage from air blast and vibration.
- Notifications will be made to the Town Clerk, Town Police, and nearby off-site residences/structures within 1,000 feet of the blasting area twice prior to blasting. Initially not less than 72-hours nor more than 30 days prior to the blast, notifying residents/property owners of the approximate anticipated day and time of blasting. The second notification would be not less than 24 hours and no more than 72 hours prior to the blast, to notify the exact time of blast (within 1 hour).
- Notification would be accomplished through mailings and by telephone calls (if feasible) to the property owners. The mailings documenting the blasting schedule would be sent through the US Postal Service to the appropriate officials and all residents/property owners within 1,000 feet of the blasting area. Phone calls to these residents/property owners would be made within the specified time frames noted above to provide additional notification of the pending blasting. The mailed notifications will include information regarding the blasting locations and the anticipated time during which the blasting would occur.
- When blasting activities are to be conducted, warning flags or other means will be used at a reasonable distance along roadways to give proper warning to the general public.
- For each blast, an air horn will be sounded in a manner to give proper warning before the firing of the blast, and to give and “all clear’ at the conclusion of each blast.

Preblast Surveys

The purpose of a preblast survey is to determine the condition of a dwelling or structure and document any preblast damage or other physical factors that could reasonably be affected by blasting. The survey can also be used to document that damage occurred after the survey was conducted.

Many structures develop hairline cracks over time. These can be caused by a number of environmental factors including humidity and temperature changes, settlement from consolidation, freeze-thaw cycles, variations in ground moisture and wind. Structural problems may result from constructing a building on improperly compacted fill, improperly sized footings or other structural elements, and not being built to Building Code requirements. Inadequate drainage around a building can also cause settling and cracking. These types of cracks will be noted during the preblast survey.

Any resident or property owner within 1,000 feet of the blast area may request a preblast survey. The request must be made in writing, directly to the Building Inspector who shall promptly

notify the applicant. The survey will include visual inspection of foundations and exposed walls, as well as photographic and/or video documentation of conditions prior to blasting. In locations where existing wells will also be monitored, the condition of the well, depth of casing and depth of water elevation will also be measured and recorded (see discussion of wells below).

The blasting contractor will promptly conduct a preblast survey (at his expense) and prepare a written report of the survey. Copies of the report shall be provided to the Building Inspector and to the person requesting the survey.

Complaints

Formal complaints about blasting can be sent to the Building Inspector. Complaints should include the date(s) and time(s) of the blast(s) (if known) and the owner's name, address, and telephone number (and email if preferred). A representative of the Village and the blasting contractor will follow-up all complaints with an inspection of the activities in question and provide a written response to the owner.

In the case of specific blast damage complaints, the Building inspector and blasting contractor will interview the person involved, locate the structure, determine the distance and direction to the blast sites, check the preblast survey, check the blast and seismic records and consider the probable or actual measured levels of energy from the blasting at the structure. If it is determined that blasting has caused damage the Building Inspector may issue a Notice of Violation. The notice will require appropriate mitigation to prevent recurrence of the violation. Monetary reparation for damage will be settled between the contractor and the property owner.

Town of Lewisboro, NY
Wednesday, March 30, 2016

Chapter 92. Building Code Administration

§ 92-18. Blasting operations.

[Added 6-18-2009 by L.L. No. 3-2009]

A. It shall be unlawful to conduct any blasting operations without having first obtained a permit for the same from the Building Inspector. Persons securing permits for blasting shall use the utmost care and caution to prevent excessive shock waves or stones or debris or other material from flying and endangering life and property. Immediately after loading and tamping each hole, and before firing the blast, except in the case of authorized ditching or drainage operations, the material to be blasted shall be covered completely on all exposed surfaces with a strong woven matting or rope or wire and timber cribbing, held securely together by chains or steel wire cables. After the material has been thus covered, the blast shall be fired without unnecessary delay. All blasting shall be done by means of approved detonators. No person shall conduct such blasting operations between 7:00 p.m. and 7:00 a.m. nor at any time on Sunday, except in an emergency and then only under authority of a special approval issued by the Building Inspector. The blasting of material contiguous to any building or other structure or pipeline shall be conducted so as not to cause any damage thereto. All blasting shall be under the direct supervision of persons approved and licensed by New York State.

B. The Building Inspector shall not issue a permit for blasting unless the applicant has filed with the Building Inspector a certificate of insurance evidencing comprehensive general liability insurance on an occurrence basis insuring against bodily injury and property damage in the amount of at least $1,000,000 by an insurance carrier licensed by the Insurance Department of the State of New York, said certificate to include the Town of Lewisboro as an additional named insured. The applicant shall also file evidence of payment of the premium for said insurance coverage.

APPENDIX I

Wetlands Mitigation Plan

Western part of wetland, looking east

Western part of wetland, looking west

Eastern portion of central watercourse

Watercourse through center of wetland

Northern edge of east part of wetland

Portion of wetland south of subject property

Watercourse leaving site onto DEP property

Watercourse flowing south on DEP property

Wetland Buffer Mitigation Plan Notes
Wilder Balter Lewisboro
Route 22, Town of Lewisboro, NY
March 14, 2016

Notes:

1. Limits of the wetland buffer enhancement area will be staked out prior to commencement of plant removal.
2. Nuisance and non-native vegetation will be removed, including species listed in the invasive species narrative.
3. Wetland seed mix will be used as specified to supplement plantings at a rate of 4 pounds per acre. Eight pounds of seed will be used for this site.
4. The area chosen for restoration and enhancement is adjacent to the northern side of the wetland, and is the location of past site activities. Historic aerial photos show that agricultural and forestry activities were being conducted on this part of the site as recently as the 1960's. Secondary growth following the cessation of this disturbance includes a number of non-native and invasive species, which will be cleared from the site in accordance with the attached maintenance plan.
5. Two stormwater management basins will be constructed partially within the regulated buffer areas. These basins will be planted as stormwater wetlands, and will also add diversity of vegetation and stormwater quality treatment to the site.
5. A total of 91 shrubs, 12 trees and a number of herbaceous plants will be planted to create a more diverse buffer plant community on site as per the plant list below.

Goals/Offsetting of Proposed Impacts

The proposed impacts to buffers and adjacent areas are associated with the construction of stormwater management basins designed to treat runoff from the newly developed residential units. These basins will be constructed in an area that was previously disturbed and has suitable topography such that the basins can be created with minimal grading and earth movement. The proposed planting plan will improve on this vegetative cover by introducing native species to the area, while providing filtering and flood attenuation of overland runoff before it enters the receiving stream.

It is noted that a portion of the proposal is to eliminate non-native vegetation in some areas of the existing wetland and adjacent areas. In total, the proposed mitigation will include approximately two acres of the site. No direct impacts to wetlands are proposed; approximately 14,500 sf of Town and 7,000 sf of DEC buffer will be affected. Mitigation ratios will therefore be approximately 3.7: and 7.7:1 respectively.

Proposed Wetland Buffer Enhancement

The overall mitigation area, identified on the plans as "wetland/buffer enhancement area", is a disturbed part of the site where previous site work, clearing and grading were done. As noted above, nuisance vegetation, stone piles and rubble will be removed in this area and plants installed as shown on the planting plan.

Planting Details

Plant choices for the wetland expansion were made according to existing site conditions and locally common species.

All planting will proceed by hand. Materials will be brought to the site in good condition (see below) and then placed in central drop locations. The materials will then be hand-carried to their planting locations and in turn, planted by hand. Only rounded, shallow planting shovels will be used in this effort.

Criteria for selecting plant material will include (1) the plant's ability to withstand the expected light and saturation conditions; (2) its demonstrated survival on this site and other nearby sites; (3) the plant must be native and non-invasive; and (4) whether the plant material is available at nurseries in the same region as the site. See Table 1 for complete plant species list. Seed mix was chosen based on the species' ability to survive in moist areas adjacent to the road with some sun.

Planting will be done in spring or early summer (between April 1 and July 1). Shrubs may also be planted in the late summer to early fall (September 1 to October 30). In all cases, a hole will be dug twice as deep as the root ball. The only shovels allowed are rounded, shallow spades. The hole will then be backfilled with a thin layer of rich, organic topsoil, the plant placed inside, the hole backfield to the top and then gently tamped down.

Container-grown plant material delivered to the job site will be inspected to assure moist soil/root masses. Any dry and light weight plants will not be accepted. If not planted immediately the container will be stored out of the sun and wind and kept moist (i.e., a means of watering will be provided and watering will occur daily). When removed from the containers, the plants will be the size of the specified container. If in leaf, the plants will appear healthy with no spots, leaf damage, discoloration, insects or fungus. If not in leaf, the buds will be firm and free of damage, discoloration, insects or fungus. Containers will be a minimum of quart size for shrubs and gallon size for trees.

Bare roots plants will be shipped from the nursery immediately after lifting from the field and will be planted immediately upon arrival at the site. If they cannot be planted as soon as arriving at the site, they will be stored in the shade, protected from sun and wind, and kept moist by the use of straw, peat moss, compost, or other suitable materials. Plants not having an abundance of well developed terminal buds on the leaders and branches will be rejected. The stems and branches of all plants will be turgid and the cambium healthy or the plants rejected. Any bare root plants that are in leaf or have leaflets will be rejected.

Plant Species Choices for Wetland Buffer Enhancement/Restoration

Map Symbol	Quantity	Scientific Name	Common Name	Size
Trees				
Aru	12	Acer rubrum	Red Maple	5' - 6'
Shrubs				
CSe	29	Cornus sericea	Redosier dogwood	3' - 4'
AC	6	Amelanchier canadensis	Shadblow	4' - 5'
SD	14	Salix discolor	Pussy willow	3' - 4'
VC	21	Vaccinium corymbosum	Highbush blueberry	4' - 5'
VD	21	Viburnum dentatum	Arrowwood	4' - 5'
Herbaceous Plants				
CS	100	Carex stricta	Tussock sedge	2" plug
CC	100	Carex crinita	Fringed sedge	2" plug
JE	100	Juncus effusus	Soft rush	2" plug
Seed Mix				
SWM	8 pounds	Riparian Buffer Mix ERNMX-154 Or equivalent		

Wetland Buffer Enhancement Areas

Following the removal of non-native invasive species as specified in the invasive species eradication plan, wetland and buffer areas will be seeded using the following seed mixes:

Buffer Areas - Riparian Buffer Mix (ERNMX-154 or equivalent) at 20 lbs/acre.

Monitoring and Maintenance

At least one pre-construction meeting will occur between the chosen grading and/or planting contractor/subcontractor and the site environmental monitor prior to beginning construction on site. The construction monitor will have experience in wetland construction and a Bachelor of Science degree in Natural and/or Physical Resources.

Monitoring and maintenance efforts for the mitigation plantings will take place over a three year period following construction. This will include bi-weekly visits for the first growing season, and then twice a year for the next two years, with additional inspections as required depending on conditions. The applicant's environmental monitor will conduct a survey of the site and site conditions will be noted and adjusted as necessary. An annual report will be provided to the Town of Lewisboro and government agencies at the end of the growing season for each of the three years. Deer fence will be utilized as necessary to minimize damage from deer browsing.

Invasive Species Monitoring and Control Program

Japanese barberry, oriental bittersweet, *Phragmites australis* and multifloral rose are all noted as present within and adjacent to the wetlands on the project site. These invasive species favor areas of disturbed soils and edge areas. This plan will implement an invasive species monitoring and manual control program for the duration of construction and development of the project. It has been designed to carry over into the needed maintenance plans that will need to be developed and implemented by the Project Owner.

Those areas of the site that are closest to the existing wetlands and watercourses have been disturbed and re-graded over the years. These are the portions of the site that are known to support invasive species which are altering the character of the wetlands and adjacent areas and represent a long term risk to the native vegetative community.

By controlling exotic vegetation, and reducing deer populations due to increased human activity on the site, nearby native plants will have less competition and therefore have more resources available for their own growth. An invasive species monitoring and control program will be implemented at the project site as part of the overall development plan. Species targeted for removal include the following:

Tree-of-heaven (Ailanthus altissima)
Multiflora rose (Rosa multiflora)
Mugwort (Artemisia vulgaris)
Autumn olive (Eleagnus umbellata)
Garlic mustard (Alliaria petiolata)
Purple loosestrife (Lythrum salicara)
Common reed (Phragmites australis)
Oriental bittersweet (Celastrus orbiculatus)
Porcelainberry (Ampelopsis brevipedunculata)
Japanese Barberry (Berberis thunbergii)
Japanese Stilt Grass (Microstegium vimeneum)
Winged Euonymus (Euonymus alatus)

The above listed species and all other invasive non-native plants that are detrimental to the ecology of the project site will be removed during site development to the extent practicable. The goal of this program is to reduce the presence of exotic/invasive species to a threshold of less than ten percent total cover within the areas shown on the Wetland Restoration and Buffer Enhancement Plan (the "Plan"). A qualified biologist/botanist will supervise the removal of invasive species. Invasive species can be removed in several ways, depending on the location and species of the plant:

1. If a shrub is isolated and does not have its root system entwined with other plants, it may be removed mechanically. As much of the root system as possible should be removed to prevent the possibility of the invasive plant sprouting from root pieces left behind.
2. If a shrub is growing amongst other native plants in a way that uprooting it may disturb surrounding native plants warranting preservation, the plant may be most safely and effectively removed by chemical means. To remove by chemical means, the plant shall first be cut back to a few stubs and stumps, about twelve inches from the base. An EPA approved solution of glyphosate (Round-up or equivalent) shall be painted on the ends of the stumps. This technique shall be applied in the early fall months before the onset of plant dormancy. Proper notification must be made prior to the application of all restricted pesticides, and application made by a licensed applicator, if required. During project construction, glyphosate will only be applied by a licensed herbicide applicator, as coordinated with the Environmental Site Monitor. Only hand-cutting and removal will be allowed within the Wetland Controlled Area.
3. Highly invasive groundcovers, such as Japanese honeysuckle, are difficult to eliminate due to their habit of rooting along the stem. Groundcovers of this type will be removed by hand or mechanically. If after the second year of treatment the species persists, it may be sprayed with glyphosate, using a very close and targeted application during the active growing season. If the plant is growing among other herbaceous or shrub material that would be harmed by spraying, the glyphosate shall be applied by brush or mechanical removal should be considered. Repeated treatments may be necessary to remove the plant completely.
4. Highly invasive annuals, such as garlic mustard, are difficult to eliminate due to their growth from seed that is widespread among the soil seed bank where the plants are found. Several methods may be utilized in removing this type of invasive plants. If the species is growing densely without other plants, the area will be sprayed with glyphosate during the active growing season, following the manufacturer's recommendations. Species will also be removed by hand. Both methods should be performed before plants set seed. Both methods shall be performed multiple times over a season and possibly over several seasons to completely eradicate the target species.

Monitoring and Maintenance Schedule

Following development of the site, a maintenance plan will include the regular inspection of undisturbed areas as shown on the Plan, and removal of these species as necessary. This represents the transitional areas that are most susceptible to opportunistic settling of invasive species. It is anticipated that a schedule of inspections three times a year for the first three years following full project build out (early, mid and late growing season) will be adequate for the identification and removal of the invasive species in this area.

The Town Building Inspector and Wetlands Inspector will be consulted prior to the proposed removal of invasive species within the controlled area. In addition, all activities related to invasive species control, monitoring and assessment of achievement of the 10 percent tolerance threshold for coverage by all invasive species on the project site will be coordinated with the Environmental Site Monitor. These inspections will include the mapping and identification of locations and extent of cover of invasive species, and identify the methods to be used for the subsequent removal. Following treatment, a brief report outlining extent, location and removal method for each species shall be prepared and filed with the Town Planning Office.

Buffer area to be enhanced. Invasive species will be removed, new plants installed and area seeded with transitional species mix.

Wetland area where invasive species will be removed.

Total Buffer Disturbance	
New York State DEC	7,000 sf
Town of Lewisboro	14,500 sf
Mitigation/Enhancement:	
Wetland/Buffer enhancement area	+/- 40,000 sf
Stormwater Basin planting	+/- 14,000 sf
Total buffer restoration/enhancement	+/- 54,000 sf
Buffer/restoration ratio - DEC	7.7:1
Buffer/restoration ratio - Town	3.7:1

Mitigation Plan prepared by Steve Marino, PWS

Date: March 14, 2016

Basemap provided by INSITE Engineering

Tim Miller Associates, Inc.
Environmental and Planning Services
10 North Street, Cold Spring, NY
845 265 4400

WETLAND BUFFER RESTORATION
AND ENHANCEMENT PLAN
FOR
WILDER BALTER PARTNERS INC.
ROUTE 22
LEWISBORO, WESTCHESTER COUNTY, NEW YORK

LEGGETTE, BRASHEARS & GRAHAM, INC.

PROFESSIONAL GROUNDWATER AND
ENVIRONMENTAL ENGINEERING SERVICES

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SHELTON, CT 06484
(203) 929-8555
FAX (203) 926-9140
www.lbgweb.com

March 29, 2016

Chairman Jerome Kerner, AIA
Town of Lewisboro Planning Board
P. O. Box 725
Cross River, NY 10518

RE: Wilder Balter Partners
NYS Route 22
Lewisboro, New York

Dear Chairman Kerner:

Leggette, Brashears & Graham, Inc. (LBG) has prepared the following responses to comments received dated March 9, 2016 from the Town of Lewisboro Planning Board regarding the January 18, 2016 Hydrogeologic Assessment Report for the above-referenced property.

Comment 16:
Groundwater, Page 3.3-3: The applicant should evaluate potential impacts to existing off-site wells.

Response:
The closest residential wells to the existing onsite wells are about 600 feet. The potential for water-level interference between wells from pumping diminishes with increasing distance between the wells. With the relatively low average water withdrawal proposed for the project, there is a low likelihood of significant mutual inference between the onsite wells and other nearby wells. However, drilling and testing of the proposed supply wells is the only definitive indicator of groundwater availability from the aquifer source and any potential impacts to neighboring water supplies.

To address the unlikely event that an impact to a neighboring well occurs that would potentially require mitigation, a draft complaint response and mitigation plan has been prepared. A copy of the plan is included in Attachment I.

Comment 39:
The applicant has submitted a Hydrogeologic Assessment Report, prepared by LBG, dated January 18, 2016. The hydrogeologic report should be revised to include the following:

a. *The report should include a table that breaks down the 46 units by type and number of bedrooms along with WCDH demand values so that the water demand is clearly spelled out.*

Response:

The table below contains a summary of the water demand calculation for the project along with a breakdown of the unit type and number. The New York State Department of Environmental Conservation's (NYSDEC) March 2014 "Design Standards for Intermediate Sized Wastewater Treatment Systems" water usage values were used to calculate the water demand.

Unit Type	Number of Units	Water Usage Multiplier (gpd)	Total Water Usage (gpd)
1 Bedroom	14	110	1,540
2 Bedroom	28	220	6,160
3 Bedroom	4	330	1,320
		Total Water Demand	9,020

gpd gallons per day

b. *Irrigation demand is not mentioned anywhere in the report and a section regarding the proposed means of irrigation should be included. If included as part of the development, irrigation could double the demand during the summer months of July, August and September. A table that projects irrigation demands should be included in the report.*

Response:

At this time, the project is not planning to use onsite water for irrigation.

c. *The 30-year drought available of 13,000 gpd is very close to the applicant's estimated demand of 9,000 gpd. Much off-site water may contribute to the subject site.*

Response:

The desk top evaluation of the contributing recharge from the 35.25- acre subject property 18,330 gpd (gallons per day) under average precipitation conditions and 13,000 gpd under extreme drought conditions with a 3.3-percent probability of recurrence. The recharge under both of these scenarios exceeds the calculated water demand of the project of 9,020 gpd. Therefore, the evaluation indicates that the site's water usage does not exceed its recharge contribution to the groundwater system. These calculations are based on the site acreage's contribution to recharge within the whole watershed. Groundwater recharge and groundwater flow will cross the project site boundaries under natural conditions.

Additionally, the project will be utilizing onsite subsurface wastewater discharge. Therefore, approximately 85 percent of the groundwater withdrawal from onsite wells would be returned to the groundwater system through percolation of the wastewater discharge. This results in a consumptive water use of about 1,350 gpd for the project. The calculated recharge under both normal (18,330 gpd) and drought (13,000 gpd) precipitation conditions significantly exceed the project's consumptive water use.

d. *Although two (2) existing well logs in the report state that both wells have a capacity of 5 gpm, the driller's log indicates that after 6 hours of pumping, the static water level at drawn down to 500+ feet below top of casing (ft btoc) (within 20 feet of the bottom of the well). This is an indication that these wells are not suitable to be used as a community supply, as they will not meet the demand of the proposed development.*

Response:
The estimated yields reported on the well driller's logs were obtained by the driller conducting air-lift tests on the wells. The driller inserts the drilling rods into the well down to the bottom and injects air. The continuous overflow from the well is measured as the well yield. This method of measuring a well's yield does not allow for the direct measurement of a pumping water level. Therefore, the driller reports the depth at which the drill rods are set as the pumping water level.

A yield test conducted in accordance with Westchester County Department of Health (WCDH) and New York State Department of Health (NYSDOH) will need to be conducted on any well that is proposed for use to supply potable water to the proposed development. These well tests will assess the stabilized pumping rate and water-level drawdown in the wells, and will determine whether the wells are suitable for use as public water-supply sources.

Should you have any additional questions, contact Stacy at (475) 882-1723.

Very truly yours,

LEGGETTE, BRASHEARS & GRAHAM, INC.

Stacy Stieber, CPG
Associate/Hydrogeologist

Reviewed by:

Thomas P. Cusack, CPG
Principal

SS:cmm
Enclosure
cc: J. Bainlardi
H:\Wilder Balter\Lewisboro\PB_March2016 LBG responses.doc

ATTACHMENT I

DRAFT

COMPLAINT RESPONSE
AND MITIGATION PLAN
WILDER BALTER PARTNERS
ROUTE 22, LEWISBORO, NEW YORK

The Developers, Wilder Balter Partners (WBP), will respond promptly to any complaints from offsite well owners within 2,000 feet of the proposed supply wells that allege damage caused by the operations of the WBP well-supply source. Depending on the nature of the complaint, the complaint will be directed to either LBG or the water operator of the system, or both, for investigation and remediation, if required. The operating premise of the response to offsite well problems is that damage to a distant offsite well, whether related to the ability of the well to produce its normal supply or water-quality degradation, can only result if significant drawdown of the static water level in the subject well occurred as a result of pumpage by the WBP well-supply sources.

If after investigation any complaint is found to be valid, i.e., a well problem caused by drawdown resulting from pumpage by the WBP well-supply source, the problem will be remediated at the cost of the Developers WBP. If the problem is unrelated to the operations of the WBP well-supply source, i.e., caused by normal wear and tear or naturally-occurring conditions, the well owner will be referred to a competent well or pump contractor for remediation at his cost. A written report regarding each such compliant will be provided to the WBP and to the complainant within seven days of the completion of any complaint investigation.

For any well problem that is found to have been caused by drawdown resulting from pumpage by the WBP well-supply source, a remedy or remedies would be offered to the well owner, to be paid by WBP. Such remedies might include lowering a well pump, replacing a well pump, deepening a well, redeveloping a well, or drilling a new well. In any such remediation, the costs to the WBP would include restoration of disturbed land or plantings. WBP would select the most efficacious remediation that is economically warranted.

H:\Wilder Balter\Lewisboro\Well MItigation Plan.doc

MASER CONSULTING P.A.

Engineers
Planners
Surveyors
Landscape Architects
Environmental Scientists

11 Bradhurst Avenue
Hawthorne, NY 10532
T: 914.347.7500
F: 914.347.7266
www.maserconsulting.com

March 30, 2016

VIA EMAIL AND UPS

Mr. Jerome Kerner AIA, Chairman
Planning Board
Town of Lewisboro
20 No. Salem Road
Cross River, NY 10518

Re: Wilder Balter Partners, Inc.
Multi Family Housing
New York State Route 22
Sheet 5, Block 10776, Lot 19, 29 & 21
MC Project No. 15002398A

Dear Mr. Kerner:

This response is to the transportation related comments contained in the March 9, 2016 memorandum prepared by Kellard Sessions Consulting, P.C. as part of their review of the project under the heading "Part 3 EAF Review". For ease of review, we have maintained the numbering as contained in their memorandum.

21. Transportation, Section 3.7: It is recommended that the intersections of NYS Route 22 and North Street and of NYS Route 138 and North Street be analyzed; we note that these intersections may have been recently studied in connection with the Goldens Bridge Shopping Center expansion and we would accept incorporation of this data into the applicant's traffic impact study.

Response: ***The above referenced intersections were analyzed in detail as part of the Goldens Bridge Shopping Center expansion. That study had considered background traffic growth which accounts for the expected volumes from the proposed multi-family development. Even considering the conservatively high trip estimates used in the traffic study for the proposed multi-family housing project, these volumes equate to 2 entering and 9 exiting vehicles during the AM peak hour and 9 entering and 6 exiting vehicles during the PM peak hour at NYS Route 22 and North Street and less at North Street and Route 138. As shown in the Level of Service Summary Table (Table No. 2A), the project will not have a significant impact on the Levels of Service or vehicle delays at these intersections.***

22. Transportation, Section 3.7: Please provide all existing and proposed trip rate traffic volumes, levels of service, and sight distance summaries in tabular format.

    Response: ***Tabular summaries have been prepared to indicate the information requested. Copies of Tables 2A (Level of Service Summary), 3A (Traffic Volume Summary-AM), 3B (Traffic Volume Summary-PM) and 3 (Sight Distance Summary) are attached.***

23. Transportation, Section 3.7: The applicant should evaluate potential impacts associated with the proximity of the site access road to the I-684 Exit 6A northbound off-ramp; alternative site access road locations along NYS Route 22 should be considered as determined necessary.

    Response: ***The site access centerline is now located approximately 250' north of the centerline of the I-684 Exit 6A Off Ramp. This location was chosen to maximize sight distance for entering and exiting vehicles and the driveway includes appropriate radii to accommodate entering and exiting vehicles. As part of the Highway Work Permit Review, curbing and shoulder/pavement improvements will be finalized with NYSDOT.***

24. Transportation, Section 3.7: The applicant should evaluate potential impacts to NYS Route 22 during construction.

    Response: ***During construction, as required as part of the NYSDOT Highway Work Permits, a Maintenance and Protection of Traffic Plan will be prepared to ensure than any impacts to the adjacent state highway are minimized during construction. These plans include appropriate signing, and limits of hours of any work within the State R.O.W. associated with the project and also maintenance of the construction entrance to the site all in accordance with state standards and requirements. The details will be finalized as part of the Highway Work Permit.***

Other comments from the Planning Board Meeting of March 15, 2016.

Response: ***Several other requests for clarification and/or additional information were voiced at the planning board meeting. The following is a summary of the responses to these items.***

a) The accident data for this section of NYS Route 22 were requested for the latest 3 year period from NYSDOT. A summary of the information will be presented when received.

b) ***Information regarding available public transportation in the area including the Goldens Bridge metro-North service was compiled and is attached. Note that there is no existing Bee-Line route along Route 22 in this vicinity.***

c) ***Potential shoulder improvements and provisions for bicycles and pedestrians are under the purview of the NYSDOT and their requirements for the project will be fulfilled as part of the Highway Work Permit process.***

d) ***The traffic volume generation from the project and information on existing peak hour traffic volumes is presented in the attached Tables No. 3A and 3B which were prepared in response to item 22 referenced above.***

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

Very truly yours,

MASER CONSULTING P.A.

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

PJG:js
Enclosures
cc: Planning Board Members

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TABLE NO. 2A

LEVEL OF SERVICE SUMMARY TABLE

			2015 EXISTING		2020 NO-BUILD		2020 BUILD	
			AM	PM	AM	PM	AM	PM
1	NYS ROUTE 22 &	**UNSIGNALIZED**						
	I-684 NB OFF RAMP (EXIT 6A)	EB	F[62.6]	F[160.1]	F[81.1]	F[206.4]	F[91.9]	F[242.2]
	WITH SIGNALIZATION	EB	-	-	-	-	B[15.4]	B[11.4]
		NB	-	-	-	-	A[5.0]	B[14.7]
		SB	-	-	-	-	A[8.0]	B[12.1]
		OVERALL	-	-	-	-	**A[9.7]**	**B[12.3]**
2	NYS ROUTE 22 &	**UNSIGNALIZED**						
	SITE ACCESS DRIVEWAY	WB	-	-	-	-	C[17.8]	C[22.1]
		SB	-	-	-	-	A[8.1]	B[10.5]
3	NORTH STREET &	**SIGNALIZED**						
	NYS ROUTE 138	EB	A[4.4]	A[9.8]	A[4.5]	B[10.1]	A[4.5]	B[10.3]
		EN	B[15.5]	B[10.8]	B[16.2]	B[11.0]	B[16.6]	B[11.4]
		NB	B[15.5]	A[8.8]	B[15.8]	A[9.0]	B[15.7]	A[9.2]
		OVERALL	**B[13.7]**	**A[9.4]**	**B[14.2]**	**A[9.7]**	**B[14.3]**	**A[9.9]**
4	NORTH STREET	**UNSIGNALIZED**						
	NYS ROUTE 22	WB	D[33.9]	B[13.2]	E[47.4]	B[14.1]	E[49.4]	B[14.3]
		SB	A[8.5]	A[9.8]	A[8.6]	B[10.0]	A[8.7]	B[10.1]

NOTES:

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

2) SEE APPENDIX "C" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.

TABLE NO. 3A

SUMMARY OF EXISTING AND FUTURE TRAFFIC VOLUMES - AM PEAK HOUR

		2015 EXISTING	2020 NO-BUILD	SITE GENERATED TRAFFIC VOLUMES	2020 BUILD	% INCREASE NO-BUILD TO BUILD
1	NYS ROUTE 22 & I-684 NB OFF RAMP (EXIT 6A)	895	933	18	951	1.9%
2	NYS ROUTE 22 & SITE ACCESS DRIVEWAY	874	912	29	941	3.2%
3	NORTH STREET & NYS ROUTE 138	1390	1480	5	1485	0.3%
4	NORTH STREET & NYS ROUTE 22	1136	1214	11	1225	0.9%

TABLE NO. 3B

SUMMARY OF EXISTING AND FUTURE TRAFFIC VOLUMES - PM PEAK HOUR

		2015 EXISTING	2020 NO-BUILD	SITE GENERATED TRAFFIC VOLUMES	2020 BUILD	% INCREASE NO-BUILD TO BUILD
1	NYS ROUTE 22 & I-684 NB OFF RAMP (EXIT 6A)	869	912	31	943	3.4%
2	NYS ROUTE 22 & SITE ACCESS DRIVEWAY	865	907	45	952	5.0%
3	NORTH STREET & NYS ROUTE 138	1131	1227	8	1235	0.7%
4	NORTH STREET & NYS ROUTE 22	941	1025	15	1040	1.5%

NEW YORK STATE OF OPPORTUNITY. | Department of Transportation

ANDREW M. CUOMO
Governor

MATTHEW J. DRISCOLL
Commissioner

TODD WESTHUIS, P.E.
Acting Regional Director

March 25, 2016

Richard D'Andrea
Maser
11 Bradhurst Ave
Hawthorne, NY 10532

RE: Freedom of Information Law Request# **FR8-16-004418**
Accident Data
Route 22 in Lewisboro

VIA: E-Mail (No Hard Copy to Follow)

Dear Mr. D'Andrea:

This correspondence will acknowledge receipt of your March 24, 2016 Freedom of Information Law (FOIL) request at the New York State Department of Transportation (NYSDOT) Records Access Office on this date.

We are researching your request and will notify you within the next twenty days regarding the availability of the records you are seeking.

Please indicate the FOIL request number when corresponding on this subject.

Sincerely,

Andrew Wu
Records Access Officer
Andrew.wu@dot.ny.gov

TABLE NO. 3

SIGHT DISTANCE SUMMARY TABLE FOR PROPOSED ACCESS

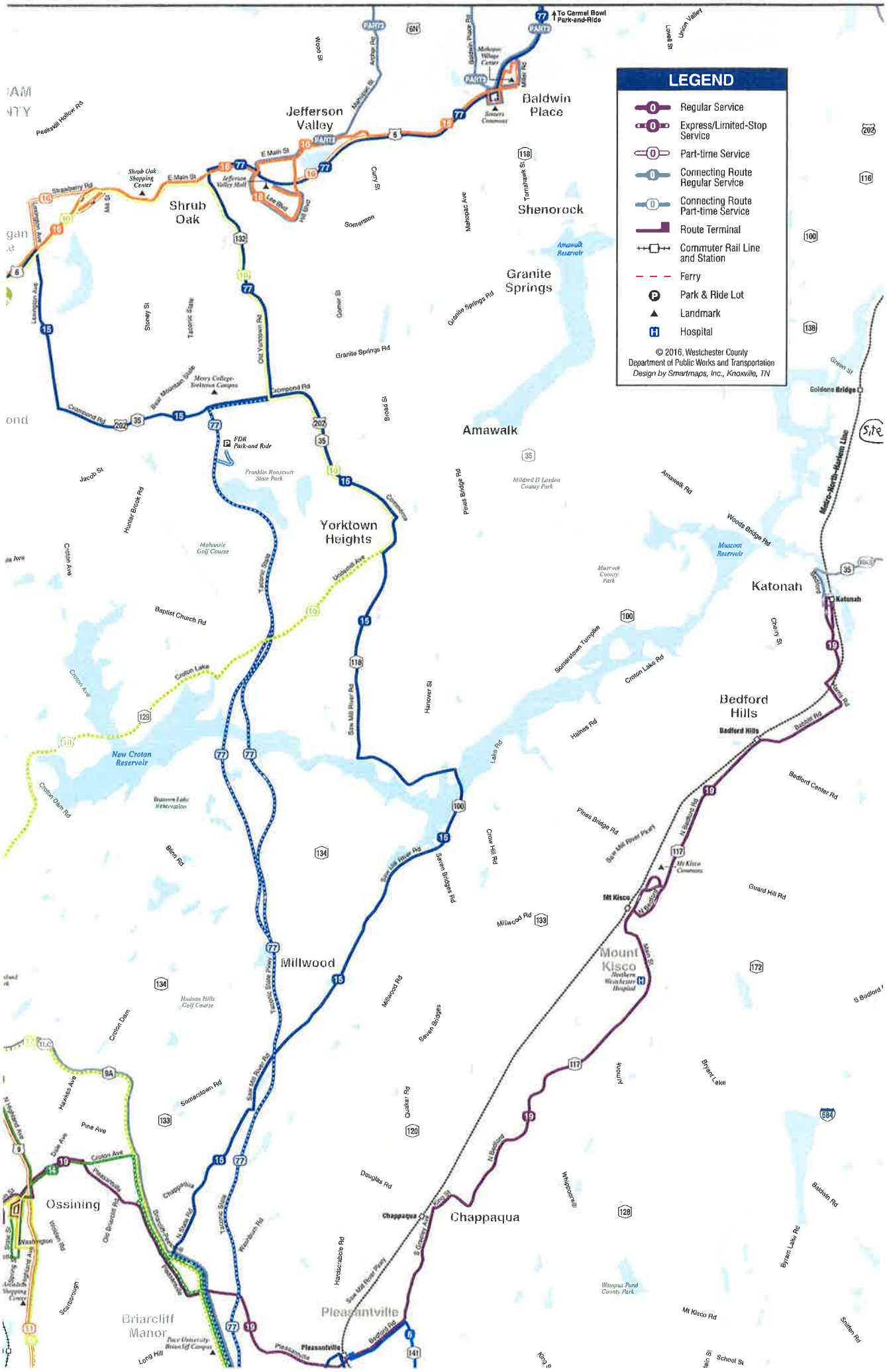
Location	Sight Line	Provided Sight Distance[1]	AASHTO Sight Distances[2]	
			Stopping Sight Distance	Intersection Sight Distance
SITE ACCESS	Looking Left	1422	495	610
	Looking Right	558	495	610
	Looking Right (3)	1203	495	610
	Left Turn Entry	1422	495	445
	Rear End	1203	495	495

NOTES:

1) Provided Sight Distances based on field measurements conducted by Maser Consulting, P.A. on December 3, 2015.

2) AASHTO Sight Distances based on data provided in the Geometric Design of Highways and Streets, 6th Edition dated 2011. Sight distances are based on the Posted Speed Limit of 55 MPH on NYS Route 22.

3) With completion of clearing and grading.


LEGEND
Regular Service
Express/Limited-Stop Service
Part-time Service
Connecting Route Regular Service
Connecting Route Part-time Service
Route Terminal
Commuter Rail Line and Station
Ferry
Park & Ride Lot
Landmark
Hospital
© 2016, Westchester County Department of Public Works and Transportation
Design by Smartmaps, Inc., Knoxville, TN
To Cermel Bowl Park-and-Ride
Baldwin Place
Jefferson Valley
Shrub Oak
Shenorock
Granite Springs
Amawalk
Yorktown Heights
Katonah
Bedford Hills
Mount Kisco
Millwood
Chappaqua
Pleasantville
Briarcliff Manor
Ossining
FDR Park-and-Ride
Amawalk Reservoir
Muscoot Reservoir
New Croton Reservoir
Mohansic Golf Course
Franklin Roosevelt State Park
Mildred D Laxdon County Park
Muscoot County Park
Hudson Hills Golf Course
Wampus Pond County Park
Bryant Lake
Pine Ave
Somerstown Rd
Douglas Rd
Quaker Rd
Millwood Rd
Seven Bridges
Crow Hill Rd
Pines Bridge Rd
Halnes Rd
Croton Lake Rd
Somerstown Turnpike
Hanover St
Saw Mill River Rd
Baptist Church Rd
Hunter Brook Rd
Jacob St
Amawalk Rd
Woods Bridge Rd
Bedford Center Rd
Guard Hill Rd
Mt Kisco Rd
Bryant Lake Rd
Baldwin Rd
Whippoorwill
Hardscrabble Rd
Bedford Rd
Pleasantville
Chappaqua
Mt Kisco
Katonah
Goldens Bridge
Metro-North Harlem Line
Peekskill Hollow Rd
Strawberry Rd
E Main St
Jefferson Valley Mall
Shrub Oak Shopping Center
Somerset
Granite Springs Rd
Old Yorktown Rd
Mohansic Ave
Tomahawk St
Curry St
Stoney St
Taconic State
Mill St
Lexington Ave
Cortlandt Ave
Croton Ave
Croton Lake
Croton Dam Rd
Bleen Rd
Somerset Rd
Hawkes Ave
Pine Ave
Croton Ave
Pleasantville
Chappaqua
Washington
Sourbrough
Long Hill
Bedford Rd
Pleasantville
Mt Kisco
Bedford Hills
Katonah
Cherry St
Green St
Amawalk Reservoir
Muscoot Reservoir
New Croton Reservoir
Mohansic Golf Course
Franklin Roosevelt State Park
Mildred D Laxdon County Park
Muscoot County Park
Hudson Hills Golf Course
Wampus Pond County Park
Bryant Lake
Pine Ave
Somerstown Rd
Douglas Rd
Quaker Rd
Millwood Rd
Seven Bridges
Crow Hill Rd
Pines Bridge Rd
Halnes Rd
Croton Lake Rd
Somerstown Turnpike
Hanover St
Saw Mill River Rd
Baptist Church Rd
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Jacob St
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Woods Bridge Rd
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Croton Ave
Pleasantville
Chappaqua
Washington
Sourbrough
Long Hill
Bedford Rd
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Mt Kisco
Bedford Hills
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Muscoot Reservoir
New Croton Reservoir
Mohansic Golf Course
Franklin Roosevelt State Park
Mildred D Laxdon County Park
Muscoot County Park
Hudson Hills Golf Course
Wampus Pond County Park
Bryant Lake

Schedules & Fares

MNR Schedules Look-up Results:

Origin Station: GOLDENS BRIDGE
Destination Station: GRAND CENTRAL
Travel Date: 03/24/2015
Note: To help you plan your trip, we have given you your time selection as well as the trains 2½ hours before and 2½ hours after.

If bold letter appears in Note column, click on it for details.

Departs GOLDENS BRIDGE	Notes	Arrives GRAND CENTRAL	Notes	Travel Time In Minutes	Transfer(s)	Fares
12:33 AM		1:54 AM		81	THROUGH TRAIN	OFF PEAK
4:40 AM		5:50 AM		70	THROUGH TRAIN	PEAK
5:01 AM		6:11 AM		70	THROUGH TRAIN	PEAK
5:31 AM		6:40 AM		69	THROUGH TRAIN	PEAK
5:54 AM		7:04 AM		70	THROUGH TRAIN	PEAK
6:10 AM		7:13 AM		63	THROUGH TRAIN	PEAK
6:17 AM		7:29 AM		72	THROUGH TRAIN	PEAK
6:27 AM		7:33 AM		66	THROUGH TRAIN	PEAK
6:34 AM		7:49 AM		75	THROUGH TRAIN	PEAK
6:44 AM		7:53 AM		69	THROUGH TRAIN	PEAK
7:06 AM		8:22 AM		76	THROUGH TRAIN	PEAK
7:16 AM		8:24 AM		68	THROUGH TRAIN	PEAK
7:27 AM		8:31 AM		64	THROUGH TRAIN	PEAK
7:39 AM		8:50 AM		71	THROUGH TRAIN	PEAK
7:51 AM		8:56 AM		65	THROUGH TRAIN	PEAK
8:05 AM		9:15 AM		70	THROUGH TRAIN	PEAK
8:22 AM		9:30 AM		68	THROUGH TRAIN	PEAK
8:40 AM		9:53 AM		73	THROUGH TRAIN	PEAK
9:06 AM		10:20 AM		74	THROUGH TRAIN	OFF PEAK
9:30 AM		10:44 AM		74	THROUGH TRAIN	OFF PEAK
9:53 AM		11:05 AM		72	THROUGH TRAIN	OFF PEAK
10:29 AM		11:43 AM		74	THROUGH TRAIN	OFF PEAK
10:53 AM		12:05 PM		72	THROUGH TRAIN	OFF PEAK
11:29 AM		12:43 PM		74	THROUGH TRAIN	OFF PEAK
12:29 PM		1:43 PM		74	THROUGH TRAIN	OFF PEAK
1:29 PM		2:43 PM		74	THROUGH TRAIN	OFF PEAK
2:29 PM		3:43 PM		74	THROUGH TRAIN	OFF PEAK
2:53 PM		4:06 PM		73	THROUGH TRAIN	OFF PEAK
3:18 PM		4:33 PM		75	THROUGH TRAIN	OFF PEAK
3:53 PM		5:05 PM		72	THROUGH TRAIN	OFF PEAK
4:20 PM		5:39 PM		79	THROUGH TRAIN	OFF PEAK
4:49 PM		6:07 PM		78	THROUGH TRAIN	OFF PEAK
5:18 PM		6:36 PM		78	THROUGH TRAIN	OFF PEAK
5:56 PM		7:08 PM		72	THROUGH TRAIN	OFF PEAK
6:20 PM		7:33 PM		73	THROUGH TRAIN	OFF PEAK
6:55 PM		8:07 PM		72	THROUGH TRAIN	OFF PEAK
7:28 PM		8:41 PM		73	THROUGH TRAIN	OFF PEAK
8:23 PM		9:36 PM		73	THROUGH TRAIN	OFF PEAK
9:29 PM		10:44 PM		75	THROUGH TRAIN	OFF PEAK
10:29 PM		11:44 PM		75	THROUGH TRAIN	OFF PEAK
11:28 PM		12:42 AM		74	THROUGH TRAIN	OFF PEAK

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Schedules & Fares

MNR Schedules Look-up Results:

Origin Station: GRAND CENTRAL
Destination Station: GOLDENS BRIDGE
Travel Date: 03/24/2015
Note: To help you plan your trip, we have given you your time selection as well as the trains 2½ hours before and 2½ hours after.

*If **bold** letter appears in Note column, click on it for details.*

Departs GRAND CENTRAL	Notes	Arrives GOLDENS BRIDGE	Notes	Travel Time In Minutes	Transfer(s)	Fares
12:04 AM		1:13 AM		69	THROUGH TRAIN	OFF PEAK
1:04 AM		2:13 AM		69	THROUGH TRAIN	OFF PEAK
1:56 AM		3:21 AM		85	THROUGH TRAIN	OFF PEAK
6:02 AM		7:14 AM		72	THROUGH TRAIN	PEAK
6:26 AM		7:38 AM		72	THROUGH TRAIN	PEAK
6:46 AM		8:03 AM		77	THROUGH TRAIN	PEAK
7:15 AM		8:34 AM		79	THROUGH TRAIN	PEAK
7:53 AM		9:09 AM		76	THROUGH TRAIN	PEAK
8:20 AM		9:35 AM		75	THROUGH TRAIN	PEAK
8:44 AM		9:56 AM		72	THROUGH TRAIN	PEAK
9:22 AM		10:32 AM		70	THROUGH TRAIN	OFF PEAK
9:45 AM		10:57 AM		72	THROUGH TRAIN	OFF PEAK
10:47 AM		11:56 AM		69	THROUGH TRAIN	OFF PEAK
11:47 AM		12:56 PM		69	THROUGH TRAIN	OFF PEAK
12:22 PM		1:31 PM		69	THROUGH TRAIN	OFF PEAK
12:47 PM		1:56 PM		69	THROUGH TRAIN	OFF PEAK
1:22 PM		2:31 PM		69	THROUGH TRAIN	OFF PEAK
1:47 PM		2:56 PM		69	THROUGH TRAIN	OFF PEAK
2:22 PM		3:31 PM		69	THROUGH TRAIN	OFF PEAK
2:47 PM		3:49 PM		62	THROUGH TRAIN	OFF PEAK
3:16 PM		4:26 PM		70	THROUGH TRAIN	OFF PEAK
3:43 PM		4:48 PM	H	65	THROUGH TRAIN	OFF PEAK
3:52 PM		5:02 PM		70	THROUGH TRAIN	OFF PEAK
4:18 PM		5:23 PM	H	65	THROUGH TRAIN	PEAK
4:21 PM		5:31 PM		70	THROUGH TRAIN	PEAK
4:35 PM		5:38 PM	H	63	THROUGH TRAIN	PEAK
4:42 PM		5:53 PM		71	THROUGH TRAIN	PEAK
4:57 PM		6:01 PM	H	64	THROUGH TRAIN	PEAK
5:27 PM		6:31 PM	H	64	THROUGH TRAIN	PEAK
5:29 PM		6:40 PM		71	THROUGH TRAIN	PEAK
5:44 PM		6:46 PM	H	62	THROUGH TRAIN	PEAK
6:04 PM		7:05 PM	H	61	THROUGH TRAIN	PEAK
6:29 PM		7:35 PM	H	66	THROUGH TRAIN	PEAK
6:56 PM		8:02 PM	H	66	THROUGH TRAIN	PEAK
7:21 PM		8:24 PM	H	63	THROUGH TRAIN	PEAK
7:54 PM		9:03 PM		69	THROUGH TRAIN	PEAK
8:22 PM		9:31 PM		69	THROUGH TRAIN	OFF PEAK
8:52 PM		10:01 PM		69	THROUGH TRAIN	OFF PEAK
9:22 PM		10:31 PM		69	THROUGH TRAIN	OFF PEAK
9:52 PM		11:01 PM		69	THROUGH TRAIN	OFF PEAK
10:22 PM		11:31 PM		69	THROUGH TRAIN	OFF PEAK
11:04 PM		12:13 AM		69	THROUGH TRAIN	OFF PEAK

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MONDAY – FRIDAY NEW YORK – WASSAIC

TO NEW YORK

AM PEAK (SENIOR/DISABLED/MEDICARE FARES NOT VALI

MILES		500	602	502	604	304	504	606	306	506	608	308	908	508	310	4910
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
82	Wassaic												5 10			C 5 15
80	Tenmile River												5 14			C 5 19
77	Dover Plains												5 19			C 5 24
69	Harlem Valley-Wingdale												5 28			C 5 33
64	Pawling												5 35			C 5 40
60	Patterson												5 41			C 5 46
53	Southeast Ar.															C 5 57
53	Southeast Lv.		4 26		4 47			5 17			5 40		5 51			6 02
52	Brewster		4 29		4 50			5 20			5 43		5 55			6 05
48	Croton Falls		4 34		4 55			5 25			5 48		6 01			6 10
46	Purdy's		4 37		4 58			5 28			5 51		6 05			6 13
44	Goldens Bridge		4 40		5 01			5 31			5 54		6 10			6 17
41	Katonah		4 44		5 05			5 35			5 58					6 21
39	Bedford Hills		4 48		5 09			5 39			6 02					6 25
37	Mount Kisco		4 52		5 13			5 43			6 06					6 29
32	Chappaqua		4 57		5 18			5 48			6 11					6 34
31	Pleasantville		5 00		5 21			5 51			6 14					6 37
28	Hawthorne		5 04		5 25			5 55			6 18					6 41
26	Valhalla		5 08		5 29			5 59			6 22					6 45
24	North White Plains	4 50	5 12	5 17	5 33	5 38	5 57		6 06	6 19	6 26			6 38		6 49
22	White Plains	4 53	5 15	5 20	5 36	5 41	6 00	6 05	6 09	6 22	6 29		6 37	6 41		6 53
21	Hartsdale	4 56		5 23		5 44	6 03		6 12	6 25				6 44		
19	Scarsdale	4 59		5 26		5 47	6 06		6 15	6 28				6 48		
17	Crestwood	5 02		5 29		5 50	6 09		6 18			6 36			6 50	
16	Tuckahoe	5 04		5 31		5 52			6 20			6 38			6 52	
15	Bronxville	5 06		5 33		5 54			6 22			6 40			6 54	
14	Fleetwood	5 08		5 35		5 56			6 24			6 42			6 57	
13	Mount Vernon West	5 11		5 38		5 59			6 27			6 45			7 00	
13	Wakefield	5 13		5 40		6 01			6 29			6 47				
12	Woodlawn	5 15		5 42		6 03			6 31			6 49				
11	Williams Bridge	5 17		5 44		6 05			6 33			6 51				
10	Botanical Garden	5 19		5 46		6 07			6 35							
9	Fordham	5 22		5 49		6 10			6 38							
8	Tremont															
6	Melrose															
4	Harlem-125th Street	D 5 30	D 5 39	D 5 57	D 6 00	H 6 18	D 6 26	D 6 29	H 6 46	D 6 48	D 6 53	H 7 02	D 7 02	D 7 09	D 7 14	D 7 17
0	Grand Central Terminal	5 41 AM	5 50 AM	6 08 AM	6 11 AM	6 29 AM	6 37 AM	6 40 AM	6 57 AM	6 59 AM	7 04 AM	7 13 AM	7 13 AM	7 21 AM	7 26 AM	7 29 AM

WILL NOT OPERATE 12/29 - 12/30

WILL OPERATE 12/29 - 12/30 ONLY

TO SOUTHEAST

AM PEAK

MILES		501	601 901	503	603	505	605	307	507	607	309	509	609 909	511	611	513
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
0	Grand Central Terminal	5 37	6 02	6 08	6 26	6 31	6 46	6 49	7 12	7 15	7 18	7 44	7 53	7 56	8 20	8 2
4	Harlem-125th Street	5 47	R 6 12	6 18	R 6 36	6 41	R 6 56	6 59	R 7 22	R 7 25	7 28	R 7 55	R 8 03	8 06	R 8 30	8 3
6	Melrose	5 51				6 45		7 03						8 10		
8	Tremont	5 54				6 48		7 06						8 13		
9	Fordham	5 57	6 20	6 26	6 44	6 51	7 05	7 09		7 33	7 36		8 11	8 16	8 38	8 4
10	Botanical Garden	5 59				6 53		7 11			7 39			8 19		8 4
11	Williams Bridge	6 01		6 29		6 55	7 09	7 13		7 37			8 15		8 41	
12	Woodlawn	6 04		6 32		6 58	7 12	7 16		7 40			8 18		8 44	
13	Wakefield	6 06				7 00		7 18			7 45			8 25		8 5
13	Mount Vernon West	6 09		6 35		7 03		7 21		7 43	7 48		8 22	8 28	8 48	8 5
14	Fleetwood	6 11		6 37		7 05		7 23			7 50			8 30		8 5
15	Bronxville	6 14		6 39		7 08		7 26			7 53			8 33		8 5
16	Tuckahoe	6 16		6 41		7 10		7 28			7 55			8 35		9 0
17	Crestwood	6 19		6 44		7 13		7 31			7 58			8 38		9 0
19	Scarsdale	6 22		6 47		7 16		7 34			8 01			8 41		9 0
21	Hartsdale	6 25		6 50		7 19		7 37			8 04			8 44		9 0
22	White Plains	6 28	6 38	6 53	7 02	7 22	7 27	7 40	H 7 48	7 57	8 07	H 8 22	8 33	8 47	8 59	9 1
24	North White Plains	6 35	6 42	7 01	7 06	7 29	7 31	7 47	7 55	8 02	8 17	8 31	8 37	8 55	9 03	9 2
26	Valhalla		6 46		7 10		7 35			8 06			8 41		9 07	
27	Hawthorne		6 50		7 14		7 39			8 10			8 45		9 11	
31	Pleasantville		6 54		7 18		7 43			8 14			8 49		9 15	
32	Chappaqua		6 57		7 21		7 46			8 17			8 52		9 18	
37	Mount Kisco		7 03		7 27		7 52			8 23			8 58		9 24	
39	Bedford Hills		7 07		7 31		7 56			8 27			9 02		9 28	
41	Katonah		7 10		7 34		7 59			8 30			9 05		9 31	
44	Goldens Bridge		7 14		7 38		8 03			8 34			9 09		9 35	
46	Purdy's		7 18		7 42		8 07			8 38			9 13		9 39	
48	Croton Falls		7 21		7 45		8 10			8 41			9 16		9 42	
52	Brewster		7 27		7 51		8 16			8 47			9 22		9 48	
53	Southeast Ar.		7 37		8 00		8 25			8 55			9 30		9 57	
53	Southeast Lv.		C 7 40										C 9 32			
60	Patterson		C 7 48										C 9 40			
64	Pawling		C 7 54										C 9 46			
69	Harlem Valley-Wingdale		C 8 01										C 9 53			
77	Dover Plains		C 8 09										C 10 01			
80	Tenmile River		C 8 12										C 10 04			
82	Wassaic		C 8 20										C 10 14			
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM

) ON INBOUND PEAK TRAINS) (BICYCLES NOT PERMITTED ON INBOUND AM PEAK TRAINS)

610	612	312	512	614	616	314	916	514	316	516	518	618	620	920	520	324	522	524	624	326	626	926	526	328	628	630	330	528	632	634
AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	A
							6 00							6 30								6 52								
							6 04							6 34								6 56								
							6 09							6 39								7 01								
							6 18							6 48								7 10								
							6 25							6 55								7 17								
							6 31							7 01								7 23								
6 02	6 12			6 19			6 41					6 51	7 01	7 11							7 25	7 32				7 51				8 0
6 05	6 15			6 22			6 45					6 54	7 04	7 15							7 28	7 36				7 54				8 1
6 10	6 20			6 27			6 51					6 59	7 09								7 33	7 42				7 59				8 1
6 13	6 23			6 30			6 55					7 02	7 12								7 36	7 46				8 02				8 1
6 17	6 27			6 34	6 44							7 06	7 16	7 27							7 39	7 51				8 05				8 2
6 21	6 31			6 38	6 48							7 10	7 20								7 43					8 09				8 2
6 25	6 35			6 42	6 52							7 14	7 24								7 47					8 13				8 3
6 29	6 39			6 46	6 56							7 18	7 28						7 42		7 51				8 06	8 17			8 24	8 3
6 34				6 52	7 01							7 24	7 34						7 48		7 57				8 12	8 23			8 30	8 4
6 37				6 55								7 27							7 51						8 15				8 33	
6 41				6 59								7 31							7 55						8 19				8 37	
6 45				7 03								7 35							7 59						8 23				8 41	
6 49		6 43	7 00	7 07			7 23		7 16	7 35		7 39						8 00	8 03					8 12	8 27			8 40	8 45	
6 53		6 46	7 03	7 11	7 15		7 27		7 19	7 39		7 43	7 47	7 53				8 04	8 07		8 12	8 18		8 15	8 31	8 37		8 43	8 49	8 5
		6 49	7 06					7 34	7 22								8 01						8 28	8 18				8 46		
		6 52	7 10					7 38	7 25								8 05						8 32	8 21				8 49		
		6 56	7 14			7 19			7 29		7 41				7 58					8 11					8 25			8 41	8 53	
		6 58				7 21			7 31		7 43				8 00					8 13					8 27			8 43		
		7 00				7 23			7 33		7 45				8 03					8 16					8 30			8 46		
		7 03				7 26			7 36		7 48				8 06					8 19					8 32			8 48		
		7 06				7 29			7 39		7 51	7 55				8 01				8 22					8 35			8 51		
		7 08							7 41							8 03									8 37					
		7 10							7 44							8 05									8 39					
		7 13							7 47							8 08									8 42					
		7 15							7 49							8 10									8 44					
		7 18							7 52							8 13									8 46					
		7 20							7 54							8 15									8 48					
		7 23							7 57							8 18									8 51					
D 7 17	D 7 20	H 7 27	D 7 32	D 7 36	D 7 40	D 7 43	D 7 52	D 7 59	H 8 03	D 8 04	D 8 05	D 8 09	D 8 11	D 8 18		H 8 23			D 8 32	D 8 36	D 8 37	D 8 43	D 8 52	H 8 55	D 8 56	D 9 02			D 9 13	D 9 1
7 29 AM	7 33 AM	7 40 AM	7 45 AM	7 49 AM	7 53 AM	7 56 AM	8 05 AM	8 12 AM	8 16 AM	8 17 AM	8 18 AM	8 22 AM	8 24 AM	8 31 AM	8 34 AM	8 36 AM	8 37 AM	8 41 AM	8 45 AM	8 49 AM	8 50 AM	8 56 AM	9 05 AM	9 08 AM	9 09 AM	9 15 AM	9 17 AM	9 22 AM	9 26 AM	9 3 A

WILL NOT OPERATE 12/29 - 12/30

AM PEAK | OFF-PEAK

613	515	615	517	617 917	519	521	621	523	525	625 925	527	627	529	629	531	631	533	633 933	535	4535	635	537	637	639	541	4541	641	543	343	4643
AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
8 44	8 53	9 22	9 25	9 45	9 54	10 25	10 47	10 54	11 25	11 47	11 54	12 22	12 25	12 47	12 54	1 22	1 25	1 47	1 54	2 18	2 22	2 25	2 47	2 53	2 56	3 13	3 16	3 19	3 22	3 3
R 8 54	9 03	R 9 32	9 35	R 9 55	10 04	10 35	R 10 57	11 04	11 35	R 11 57	12 04	R 12 32	12 35	R 12 57	1 04	R 1 32	1 35	R 1 57	2 04	R 2 28	R 2 32	2 35	R 2 57	R 3 03	3 06	R 3 23	R 3 26	R 3 29	3 32	R 3 4
			9 39						11 39								1 39												3 36	
			9 42						11 42								1 42												3 39	
9 02	9 11		9 45		10 12	10 43		11 12	11 45		12 12		12 43		1 12		1 45		2 12			2 43			3 14				3 42	
	9 14		9 47		10 14	10 45		11 14	11 47		12 14		12 45		1 14		1 47		2 14			2 45			3 16				3 44	
	9 17		9 50		10 17	10 48		11 17	11 50		12 17		12 48		1 17		1 50		2 17			2 48							3 47	
	9 20		9 53		10 20	10 51		11 20	11 52		12 20		12 51		1 20		1 53		2 20			2 51							3 50	
	9 22		9 55		10 22	10 53		11 22	11 55		12 22		12 53		1 22		1 55		2 22			2 53							3 52	
	9 25		9 57		10 25	10 56		11 25	11 58		12 25		12 56		1 25		1 58		2 25			2 56			3 23			H 3 43	3 55	
	9 27		10 00		10 27	10 58		11 27	12 00		12 27		12 58		1 27		2 00		2 27			2 58			3 25			H 3 45	3 57	
	9 29		10 02		10 29	11 00		11 29	12 02		12 29		1 00		1 29		2 02		2 29			3 00			3 27			H 3 48	3 59	
	9 31		10 04		10 31	11 02		11 31	12 04		12 31		1 02		1 31		2 04		2 31			3 02			3 29			H 3 50	4 01	
	9 34		10 07		10 34	11 05		11 34	12 07		12 34		1 05		1 34		2 07		2 34			3 05			3 32			H 3 53	4 04	
	9 37	9 53	10 10		10 37	11 08		11 37	12 10		12 37	12 52	1 08		1 37	1 52	2 10		2 37	H 2 48	2 52	3 08		3 23	3 35			H 3 56	4 07	
	9 40	9 56	10 13		10 40	11 11		11 40	12 13		12 40	12 55	1 11		1 40	1 55	2 13		2 40	H 2 51	2 55	3 11		3 26	3 38			H 3 59	4 10	
9 20	9 43	9 59	10 16	10 20	10 43	11 14	11 21	11 43	12 16	12 21	12 43	12 58	1 14	1 21	1 43	1 58	2 16	2 21	2 43	H 2 54	2 58	3 14	3 21	3 29	3 41	H 3 47	3 50	H 4 02	4 13	4 0
9 24	9 51	10 02	10 23	10 24	10 50	11 21	11 24	11 50	12 23	12 24	12 50	1 01	1 21	1 24	1 50	2 01	2 23	2 24	2 52	3 00	3 01	3 21		3 32	3 48	3 53	3 54	4 09	4 21	4 1
9 28				10 28			11 28			12 28				1 28				2 28						3 36			3 58			
9 32		10 09		10 33			11 32			12 32		1 08		1 32		2 08		2 32			3 08			3 40			4 02			
9 36		10 13		10 37			11 36			12 36		1 12		1 36		2 12		2 36			3 12			3 44			4 06			
9 39		10 16		10 40			11 39			12 39		1 15		1 39		2 15		2 39			3 15			3 47			4 09			
9 45		10 22		10 46			11 45			12 45		1 21		1 45		2 21		2 45			3 21		3 38	3 59			4 15			
9 49				10 50			11 49			12 49				1 49				2 49					3 42				4 19			
9 52		10 28		10 53			11 52			12 52		1 27		1 52		2 27		2 52			3 27		3 45				4 22			
9 56		10 32		10 57			11 56			12 56		1 31		1 56		2 31		2 56			3 31		3 49				4 26			4 3
10 00				11 01			12 00			1 00				2 00				3 00					3 53				4 30			4 3
10 03				11 04			12 03			1 03				2 03				3 03					3 56				4 33			4 3
10 09		10 43		11 10			12 09			1 09		1 42		2 09		2 42		3 09			3 42		4 02				4 39			4 4
10 19		10 51		11 17			12 16			1 16		1 49		2 16		2 49		3 16			3 49		4 09				4 46			4 5
				C 11 21						C 1 21								C 3 21												
				C 11 29						C 1 29								C 3 29												
				C 11 35						C 1 35								C 3 35												
				C 11 42						C 1 42								C 3 42												
				C 11 50						C 1 50								C 3 50												
				C 11 53						C 1 53								C 3 53												
				C 12 03						C 2 03								C 4 03												
AM	AM	AM	AM	PM	AM	AM	PM	AM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	P

WILL OPERATE 11/26 & 12/24 ONLY

WILL OPERATE 11/26 & 12/24 ONLY

WILL OPERATE 11/26 & 12/24 ONLY

STOPS AT MT. PLEASANT AT 10:30 AM

AM PEAK			OFF-PEAK																											
332	534	636	334	536	638	4940	336	538	940 640	640	540	642	542	4644	644	544	646	546	948 648	548	550	652	552	554	956 656	556	558	660	560	66
AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	P
						8 30			C 8 30										C 10 28						C 12 28					
						8 34			C 8 34										C 10 32						C 12 32					
						8 38			C 8 38										C 10 36						C 12 36					
						8 46			C 8 46										C 10 44						C 12 44					
						8 53			C 8 53										C 10 51						C 12 51					
						8 59			C 8 59										C 10 57						C 12 57					
									C 9 10										C 11 08						C 1 08					
		8 26			8 52	9 08			9 15	9 15		9 40		10 08	10 14		10 40		11 14			12 14			1 14			2 14		2
		8 29			8 55	9 12			9 18	9 18		9 43		10 12	10 17		10 43		11 17			12 17			1 17			2 17		2
		8 34			9 00				9 23	9 23					10 22				11 22			12 22			1 22			2 22		
		8 37			9 03				9 26	9 26					10 25				11 25			12 25			1 25			2 25		
		8 40			9 06				9 30	9 30		9 53		10 22	10 29		10 53		11 29			12 29			1 29			2 29		2
		8 44			9 10				9 34	9 34		9 57		10 26	10 33		10 57		11 33			12 33			1 33			2 33		2
		8 48			9 14				9 38	9 38					10 37				11 37			12 37			1 37			2 37		
		8 52			9 18	9 28			9 42	9 42		10 03		10 32	10 41		11 03		11 41			12 41			1 41			2 41		3
		8 58			9 24	9 34			9 48	9 48		10 09		10 38	10 47		11 09		11 47			12 47			1 47			2 47		3
		9 01			9 27				9 51	9 51		10 12			10 50		11 12		11 50			12 50			1 50			2 50		3
		9 05			9 31				9 55	9 55		10 16			10 54		11 16		11 54			12 54			1 54			2 54		3
		9 09			9 35				9 59	9 59					10 58				11 58			12 58			1 58			2 58		
	9 02	9 13		9 34	9 39	9 46		9 51	10 03	10 03	10 09	10 23	10 33	10 49	11 02	11 06	11 23	11 33	12 02	12 06	12 33	1 02	1 06	1 33	2 02	2 06	2 33	3 02	3 06	3
	9 06	9 17		9 37	9 43	9 50		9 54	10 06	10 06	10 12	10 26	10 36	10 53	11 05	11 09	11 26	11 36	12 05	12 09	12 36	1 05	1 09	1 36	2 05	2 09	2 36	3 05	3 09	3
	9 10			9 40				9 57			10 15	10 29	10 39			11 12	11 29	11 39		12 12	12 39		1 12	1 39		2 12	2 39		3 12	3
	9 14			9 43				10 00			10 18	10 32	10 42			11 15	11 32	11 42		12 15	12 42		1 15	1 42		2 15	2 42		3 15	3
9 02	9 18		9 26	9 47			9 52	10 04			10 22		10 46			11 19		11 46		12 19	12 46		1 19	1 46		2 19	2 46		3 19	
9 04			9 28				9 54				10 24		10 48			11 21		11 48		12 21	12 48		1 21	1 48		2 21	2 48		3 21	
9 07			9 30				9 56				10 26		10 50			11 23		11 50		12 23	12 50		1 23	1 50		2 23	2 50		3 23	
9 09			9 32				9 58				10 28		10 52			11 25		11 52		12 25	12 52		1 25	1 52		2 25	2 52		3 25	
9 12			9 35				10 01				10 31		10 55			11 28		11 55		12 28	12 55		1 28	1 55		2 28	2 55		3 28	
9 14			9 37				10 03				10 33		10 57			11 30		11 57		12 30	12 57		1 30	1 57		2 30	2 57		3 30	
9 16			9 39				10 05				10 35		10 59			11 32		11 59		12 32	12 59		1 32	1 59		2 32	2 59		3 32	
9 19			9 42				10 08				10 38		11 02			11 35		12 02		12 35	1 02		1 35	2 02		2 35	3 02		3 35	
9 21			9 44				10 10				10 40		11 04			11 37		12 04		12 37	1 04		1 37	2 04		2 37	3 04		3 37	
9 23			9 46				10 12				10 42		11 06			11 39		12 06		12 39	1 06		1 39	2 06		2 39	3 06	H 3 23	3 39	
											10 44									12 41						2 41				
											10 47									12 44						2 44				
D 9 33	D 9 36	H 9 41	D 9 55	H 10 06	H 10 09	H 10 17	D 10 21	H 10 24	H 10 33	H 10 33	H 10 52	H 10 54	H 11 15	H 11 20	H 11 32	H 11 48	H 11 54	H 12 15	H 12 32	H 12 50	H 1 15	H 1 32	H 1 48	H 2 15	H 2 32	H 2 50	H 3 15	H 3 32	H 3 48	H 3
9 45 AM	9 48 AM	9 53 AM	10 06 AM	10 17 AM	10 20 AM	10 28 AM	10 32 AM	10 35 AM	10 44 AM	10 44 AM	11 03 AM	11 05 AM	11 26 AM	11 31 AM	11 43 AM	11 59 AM	12 05 PM	12 26 PM	12 43 PM	1 01 PM	1 26 PM	1 43 PM	1 59 PM	2 26 PM	2 43 PM	3 01 PM	3 26 PM	3 43 PM	3 59 PM	4

WILL OPERATE 12/29 -12/30 ONLY

WILL NOT OPERATE 12/29 -12/30

WILL OPERATE 12/29 -12/30 ONLY

WILL OPERATE 12/29 -12/30 ONLY

STOPS AT MT. PLEASANT AT 12:56 PM

PM PEAK																															
943	643	545	345	645	647	547	349	949	649	551	351	353	651	653	355	953	655	657	557	357	359	659	661	559	361	363	963	663	665	56
PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	P
3 43	3 52	3 55	3 57	4 18	4 21	4 24	4 30	4 35	4 42	4 45	4 48	4 54	4 57	5 04	5 10	5 19	5 27	5 29	5 35	5 38	5 40	5 44	5 49	5 52	5 58	6 00	6 04	6 10	6 13	6
R 3 54	R 4 02	R 4 05	4 07	R 4 28	R 4 31	R 4 34	4 40	R 4 46	R 4 52	R 4 55	R 4 58	5 04		R 5 14	R 5 20	R 5 30		R 5 39			5 50			R 6 02	R 6 08	6 10	R 6 15	R 6 20	R 6 23	R 6
			4 11				4 44					5 08									5 54					6 14					
			4 14				4 47					5 11									5 57					6 17					
			4 17				4 50					5 14									6 00					6 20					
			4 19				4 52					5 16									6 02					6 22					
			4 21				4 55					5 19									6 05					6 25					
			4 24				4 58					5 22			H 5 31						6 08					6 28					
			4 26				5 00					5 24			H 5 34						6 10					6 30					
			4 29			4 48	5 03				H 5 12	5 27			H 5 37					H 6 01	6 13				H 6 22	6 34					
			4 31			4 50	5 05				H 5 14	5 29			H 5 39					H 6 03	6 15				H 6 24	6 37					
			4 33			4 53	5 08				H 5 17	5 32			H 5 42					H 6 06	6 18				H 6 27	6 40					
			4 35			4 55	5 11				H 5 19	5 34			H 5 44					H 6 08	6 20				H 6 29	6 43					
		H 4 23	4 38			4 58	5 15				5 24	5 37			5 50					6 13	6 23				6 34	6 46					
		H 4 26	4 41			5 01	5 19			H 5 15		5 40		H 5 34					H 6 04		6 26			H 6 22		6 50					H 6
		H 4 29	4 44			5 04	5 22			H 5 18		5 43		H 5 37					H 6 07		6 29			H 6 25		6 53					H 6
4 18	4 26	H 4 32	4 47		4 54	5 07	5 25	5 11	5 16	H 5 21		5 47	5 31	H 5 40		5 54		6 03	H 6 10		6 32		H 6 22	H 6 28		6 57	R 6 39	6 44	6 47	H 6
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Mail&Ride

Sign up online at www.mta.info for Mail&Ride, our monthly ticket-by-mail subscription program. Manage your account online too!

At Stations

Buy any ticket at a ticket office or easy-to-use ticket machine. You can use cash or a major credit or debit card. In the event of a ticket vending machine malfunction, please call our toll-free hotline at 877-886-6677.

On Board the Train

(Purchasing your ticket on board the train is a cash-only transaction and is the most expensive ticket-purchasing option. Tickets purchased on board cost between $5.75 and $6.50 more. Train crews must charge the higher on board fare at all times, without exceptions). Train crews have no discretion to waive this rule, even if there is no ticket office or working ticket machine at your boarding station.

Ticket Types

One-Way - Good for one ride for 60 days including date of sale. Sold for:

Peak - Weekday trains in the gray shaded areas in this timetable.

Off Peak – All other trains including all day weekends & holidays.

Round-Trip - Good for two rides for 60 days including date of sale. Sold for peak or off-peak travel. Priced at the combination of one way fares selected (peak, off-peak, peak/off-peak, senior both ways, etc.).

Weekly - Unlimited rides Saturday through Friday. On sale the Wednesday before the Saturday that the ticket becomes valid. Non-transferable.

Monthly - Unlimited rides during the calendar month indicated on the ticket. On sale starting on the 20th of the month prior. Non-transferable.

Ten-Trip Tickets - Good for ten one-way rides. Valid for six months from date of sale. Can be shared. Sold for peak, off peak, or intermediate travel. We also sell Senior/People with Disabilities and Medicare Customers Ten-Trips.

Senior/People with Disabilities and Medicare Customers

Half-fare good at all times except weekday AM Peak trains. Seniors must be 65 or older with valid ID; people with disabilities must present MTA ID card. Medicare customers must present valid Medicare card or an MTA Reduced-Fare MetroCard at time of ticket purchase or use to obtain half-fare price. Valid for 60 Days including date of sale.

Children's Fares and Family Fare - Children 5–11 years old ride for 50% of adult fares; children under 5 years old ride free at all times. "Family Fare" is available for off-peak travel; up to four children 5–11 may ride for $1.00 when accompanied by a fare-paying adult 18 years or older. Valid for 60 Days including date of sale.

Other Ticket Types - See the Tickets & Fares brochure, our website, or call for details about other ticket types: CityTicket, School Monthly, Group Rates, Deals & Getaways, etc.

RETURNING TICKETS

Consult Ticket Agent or mail claim to:

Ticket Redemption
MTA Metro-North Railroad
P.O.Box 4117
New York, NY 10163

Refunds are subject to a $10 processing fee per transaction. One-way and Round-trip tickets are valid for travel or refund for sixty (60) days from date of sale. Ten-trip tickets are valid for travel or refund for six (6) months from date of sale. Commutation Tickets – when monthly or weekly commutation tickets are submitted for refund before their expiration, the discount is forfeited, and we must deduct the proper combination of one-way and/or weekly fares for the period the ticket has been in the customer's possession. Details of refund regulations are contained in Metro-North's tariffs, which are available for review at any ticket office. Should any questions arise as to proper fare and ticket privileges, please pay the fare requested, obtain receipt, and communicate with us.

TIM
MILLER
ASSOCIATES, INC.
10 North Street, Cold Spring, New York 10516 *Phone (845) 265-4400* *Fax (845) 265-4418*

March 31, 2016

Town of Lewisboro Planning Board
Attn: Chairman Jerome Kerner
20 North Salem Road, Suite L/Lower Level
PO Box 725
Cross River, New York 10518

Re: **Application for Site Development Plan**
Proposed AFFH Multifamily Development
NYS Route 22, Tax map: Sheet 5, Block 10776, Lots 19, 20 & 21
Town of Lewisboro, New York

Dear Chairman Kerner and Members of the Planning Board:

Attached, please find twelve (12) copies of *revised* Expanded Environmental Assessment Form (EAF) text and supplemental information in support of an application for site plan approval for the Wilder Balter Partners, Inc. proposed AFFH residential development. Insite Engineering has submitted updated site plans under separate cover.

The Expanded EAF dated February 3, 2016 has been revised and updated in response to comments prepared by Kellard Sessions Consulting, P.C. dated March 9, 2016. Responses to Part 3 EAF comments are described below, while Planning and Engineering Comments are responded to by Insite Engineering in a separate letter. The document has been printed with the edits accepted, but we have also provided a copy of the text alone, with all edits shown. Please note that the Appendices that have not changed are not included with this submission, but new Appendices are attached.

Responses to comments are as follows:

1. The document has been modified throughout to indicate "in the applicant's opinion", preceding statements of opinion.

2. A summary of all potential impacts/categories evaluated in the part 3 EAF, has been added to the Introduction (see page 1-8).

3. The sections of the expanded EAF have been modified to reflect "Existing Conditions, Potential Impacts, and Proposed Mitigation".

4. All figures include the latest site plan information and base map.

5. A separate section has been provided to address impacts to on-site and off-site Wetlands, watercourses and waterbodies (see Section 3.3 Wetlands). A Wetlands Mitigation Plan is referenced and is attached to the document.

6. Introduction, Page 1-3: Missing text has been added to paragraph 3 under the heading "Building layout and Design".

7. Introduction, Page 1-4: Reference to the CC-20 zoning has been removed, subject confirmation by the Building Inspector.

8. Introduction, Page 1-4: The project's consistency with the Town Master Plan is described.

9. Introduction, Page 1-4: A discussion has been provided regarding the income thresholds for the proposed residential units, including dollar amount.

10. Introduction, Page 1-7: A cut and fill analysis is being prepared by the project engineer, but is not available for this submission. A figure and/or large scale plan will be prepared to illustrate cut and fill. As the development design progresses, the project engineer will endeavor to bring the earthwork as close to balance as possible in order to minimize the import/export of material.

11. Soils, Topography and Geology, Section 3.1: A steep slopes analysis is provided indicating the estimated area of disturbance for each slope category (see page 3.1-3).

12. Soils, Topography and Geology, Section 3.1: A table is provided which summarizes the information in the Soil Survey of Westchester County (see Table 3.1-2).

13. Soils, Topography and Geology, Section 3.1: As indicated in Response 10, a cut and fill analysis is in progress but has not yet been completed.

14. Soils, Topography and Geology, Section 3.1: A draft Blasting Protocol has been provided and is summarized on page 3.1-4. We note that the specifics of blasting procedures will be provided to the Building Inspector at the time of application for a Blasting Permit. The Blasting Contractor retained for the work will provide specific information.

15. Soils, Topography and Geology, Section 3.1: Site specific temporary and permanent erosion control measures are described (see page 3.1-5).

16. Groundwater, Page 3.4-3. A further discussion regarding potential impacts to off-site wells is provided by Leggette Brashears and Graham (see attached letter dated March 29, 2016). LBG has also provided a draft private well owner Complaint Response Mitigation Plan (see Appendix E).

17. Ecology, Section 3.5: Comments a. through g.: A more detailed evaluation of the on-site and local vegetative communities will be provided following additional field visits over the next month, when vegetation is more easily identified and fauna becomes more active. The result of these surveys and expanded analysis will be provided to the Planning Board, as soon as it is completed.

18. Ecology, Page 3.5-1. A further explanation of previous on-site wetland disturbance has been provided. The 1947 Aerial Photo (Figure 3.4-2) shows hedgerows and walls in the existing wetland area and the area is devoid of trees indicating that the area has been disturbed and likely used for agricultural uses.

19. Aesthetic Resources, Section 3.6: Additional discussion of the development's potential visual impact is provided in the Aesthetic Resource Section. The applicant is in the process of developing additional visual presentations that will provide the Planning Board with a better assessment of how the development will appear in its setting. This information will be forwarded to the Planning Board as soon as it is available.

    The applicant anticipates working directly with the Town during development of the design plans with the intent of purposefully creating a project appearance that will complement the community. Such design elements would include building facade materials and color, roof pitch, materials of the landscape features such as light fixtures, signage and retaining walls, and selection of plant materials. The applicant is committed to designing a residential development that will be an asset to the Town.

20. Historical and Archeological, Section 3.7: The Phase 1A and 1B Cultural Resource Investigation has been provided and is attached as Appendix F. A summary of the report and findings is provided.

21. Transportation, Section 3.8: The traffic engineer, Maser Consulting has responded to the comments on Transportation in a separate letter (See Attached letter dated March 30, 2016).

22. Transportation, Section 3.8; See attached letter from Maser Consulting dated March 30, 2016.

23. Transportation, Section 3.8; See attached letter from Maser Consulting dated March 30, 2016.

24. Transportation, Section 3.8: See attached letter from Maser Consulting dated March 30, 2016.

25. Demographic Resources, Section 3.9: Specific information has been provided show what assumptions were used to determine the population and school-age children multipliers (see page 3.9-1).

26. Demographic Resources, Section 3.9: Table 3.9-1 has been revised to include the tax rates for various jurisdictions.

27. Demographic Resources, Section 3.9: The Katonah-Lewisboro School District has been contacted regarding the residential development and its ability to serve the anticipated number of new students. A reference to the communication is provided in on page 3.9-10. TMA is in the process of obtaining formal written comment from the School District regarding the development.

28. Police, Fire and Emergency Services, Page 3.9-8: A description has been added regarding water service available for firefighting.

29. Schools, page 3.9-6; Text has been added to indicate the elementary school likely to receive students from the development. We understand that it would be the Increase Miller Elementary School.

30. Schools, Page 3.9-10: A description has been provided as to the methods and references used to determine the District-wide marginal costs.

31. Community, Section 3-10; An expanded discussion of Town and regional land use plans and the development's consistency with those plans is provided.

We look forward to continued discussion of the proposed development at the next meeting of the Planning Board. Please advise if you have any questions or require additional information.

Sincerely,

Jon P. Dahlgren
Senior Geologist
TIM MILLER ASSOCIATES, INC.

Cc: J. Bainlardi, Wilder Balter Partners, Inc.
J. Contelmo, Insite Engineering
Enclosure

NOTE:

ALL DISTANCES ARE TO BUILDING # 2 ON THE PROJECT SITE.

Vicinity Map

Wilder Balter Partners, Inc.

Route 22, Town of Lewisboro, Westchester Co., NY
Scale: 1" = 150'
March 31, 2016

GRAPHIC SCALE

150 0 75 150 300

(IN FEET)
1 inch = 150 ft.

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

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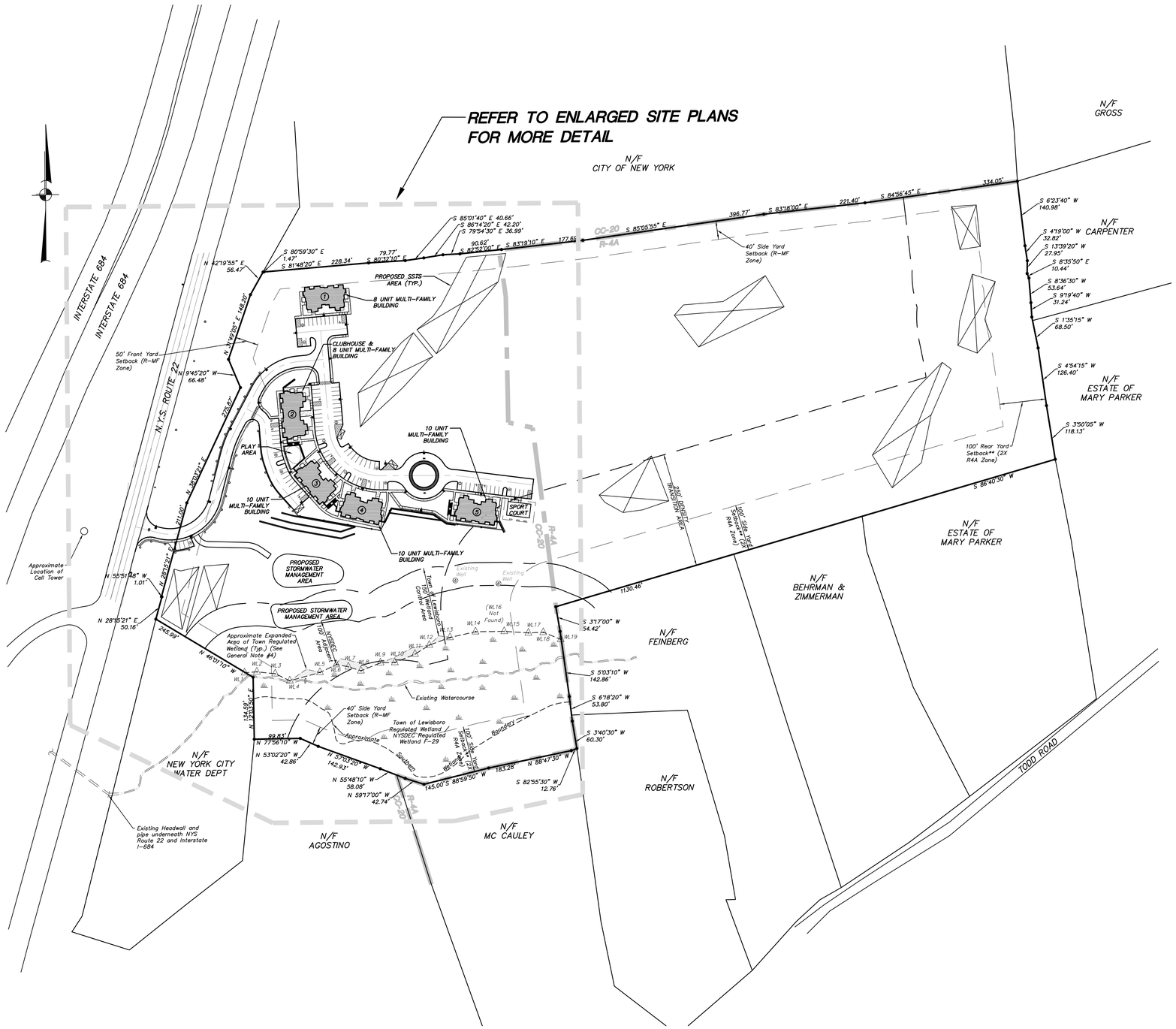
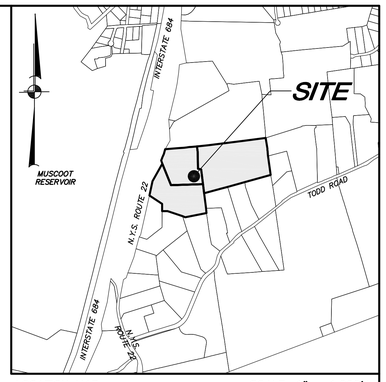


OVERALL PLAN
SCALE: 1" = 100'

LEGEND

- EXISTING PROPERTY LINE
- EXISTING WETLAND LIMIT LINE (WL9 – WL10)
- TOWN 150' CONTROL AREA
- NYSDEC 100' ADJACENT AREA
- EXISTING WETLAND SYMBOL
- EXISTING WELL
- EXISTING EDGE OF WATER
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED RETAINING WALL
- PROPOSED GUIDERAIL



LOCATION MAP SCALE: 1" = 1,000'±

OWNER:

Property Group Partners, LLC
Attn: Jeffrey Sussman, President
609 Fifth Avenue, 6th Floor
New York, NY 10017

APPLICANT:

Wilder Balter Partners, Inc.
570 Taxter Road
Elmsford, NY 10523

SITE DATA:

Zone: CC–20 (Campus Commercial)
R–4A
Total Acreage 35.43 AC. ±
Tax Map No.: Sheet 5
Block 10766
Lots 19, 20 & 21
Proposed Use: Multi–family Dwellings

GENERAL NOTES:

1. Property lines as shown hereon are based on a Survey of Property prepared by Bunney Associates Land Surveyors, last revised October 31, 1984.
2. Topography as shown hereon is based on aerial photography dated April 2008, as prepared by Geomaps International. Contour Interval is 2'.
3. The wetland flagging as shown hereon was delineated by Steve Marino on November 16, 2015 and survey located by Insite Engineering, Surveying & Landscape Architecture PC, completed November 25, 2015.
4. Approximate location of expanded Town Regulated Wetland area as shown hereon based on sketch provided by Town Wetland Consultant, Kellard Sessions, January 2016.
5. Project proposes merger of (3) tax parcels.

R–MF ZONING REQUIREMENTS (CC–20 District): *

* Multifamily dwellings are a permitted use in CC–20 District, subject to the requirements of Section 220–26 R–MF Multifamily Residence District.

	Required:	Provided:
Minimum Permitted Gross Lot Area	5 acres	35.4 ac.±
Minimum Lot Width	250'	800'±
Minimum Yard		
Front (from street center line)	75'	239' ±
Front (from front lot line)	50'	87' ±
Side	40'	41' ±
Side (2X 50' along R4A Zone)	100' **	222' ±
Rear (2X 50' along R4A Zone)	100' **	1,200' ±
Maximum Height	3 stories or 35'	To be determined
Maximum Building Coverage	12%	Less than 2%

DEVELOPMENT DENSITY – DENSITY UNIT CALCULATIONS

OVERALL SITE PERMITTED DENSITY:
Permitted Density Units (2.0 Density Units per Net Lot Area):
Net Lot Area (per Net Lot Area Calculations on Dwg CM–1) = 15.58 Acres x 2.0 Density Units

Total Permitted Density Units for Overall Site: = 31.1 * Density Units

* Before any increase (up to 50%) in Density Units which may be authorized by the PB if applicant constructs at least ⅓ of additional Density Units as AFFH Units.

Proposed Density Units for Overall Site:

1 bedroom dwelling units	14 /	2.5 density units	=	5.6 Density Units
2 bedroom dwelling units	28 /	2.0 density units	=	14.0 Density Units
3 bedroom dwelling units	4 /	1.5 density units	=	2.7 Density Units

Total Proposed Density Units = 22.3 Density Units

DENSITY TRANSITION AREA:
Permitted Density Units within Density Transition Area (1.0 Density Units per Net Lot Area):
Net Lot Area (per Net Lot Area Calculations Plan) = 5.05 Acres x 1.0 Density Units

Permitted Density Units = 5.0 * Density Units

Total Proposed Density Units for Density Transition Area: = 2.5 * Density Units
(conservatively assume (5) 2 bdrm dwelling units/2.0 density units = 2.5)

PARKING REQUIREMENTS:

Required –
2 parking spaces per Dwelling Unit (DU) 46 DU x 2.0 = 92 spaces
plus 1 space for each unit with 2 bdrms or more 32 DU x 1.0 = 32 spaces

Total Parking Spaces Required: 124 spaces

Total Parking Spaces Provided (2 spaces per Dwelling Unit): 92 spaces *

* Based on applicant's experience with similar projects, the number of parking spaces provided would be more than adequate to meet the residents' needs. A variance will be required for number of parking spaces.

RECREATION REQUIREMENTS:

Required –
300 s.f. per Density Unit
22.3 Density Unit x 300 s.f./Density Unit = 6,690 s.f. Recreation Area

Total Recreation Area Required: 6,690 s.f.

Provided –
The following common recreation facilities proposed at the site serve to meet this requirement:

- Clubhouse: 2,600 s.f.±
- Play area: 1,400 s.f.±
- Multi–use sport court & perimeter: 3,000 s.f.±
- Walking trails: Area to be determined

Total Recreation Area Provided: 7,000 s.f.

NO.	DATE	REVISION	BY
4	3–31–16	REVISED PER TOWN COMMENTS	MEU
3	2–4–16	REVISED PER TOWN COMMENTS	MEU
2	1–6–16	GENERAL REVISIONS	MEU
1	12–14–15	GENERAL REVISIONS	DLM

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Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
OVERALL SITE PLAN

STATE OF NEW YORK – JEFFREY J. CONTEE – LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	10–20–15	DRAWN BY	S.J.C.	OP–1	1 / 8
SCALE	1" = 100'	CHECKED BY	D.L.M.		

GRAPHIC SCALE
100 0 50 100 200
(IN FEET)
1 inch = 100 ft.

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

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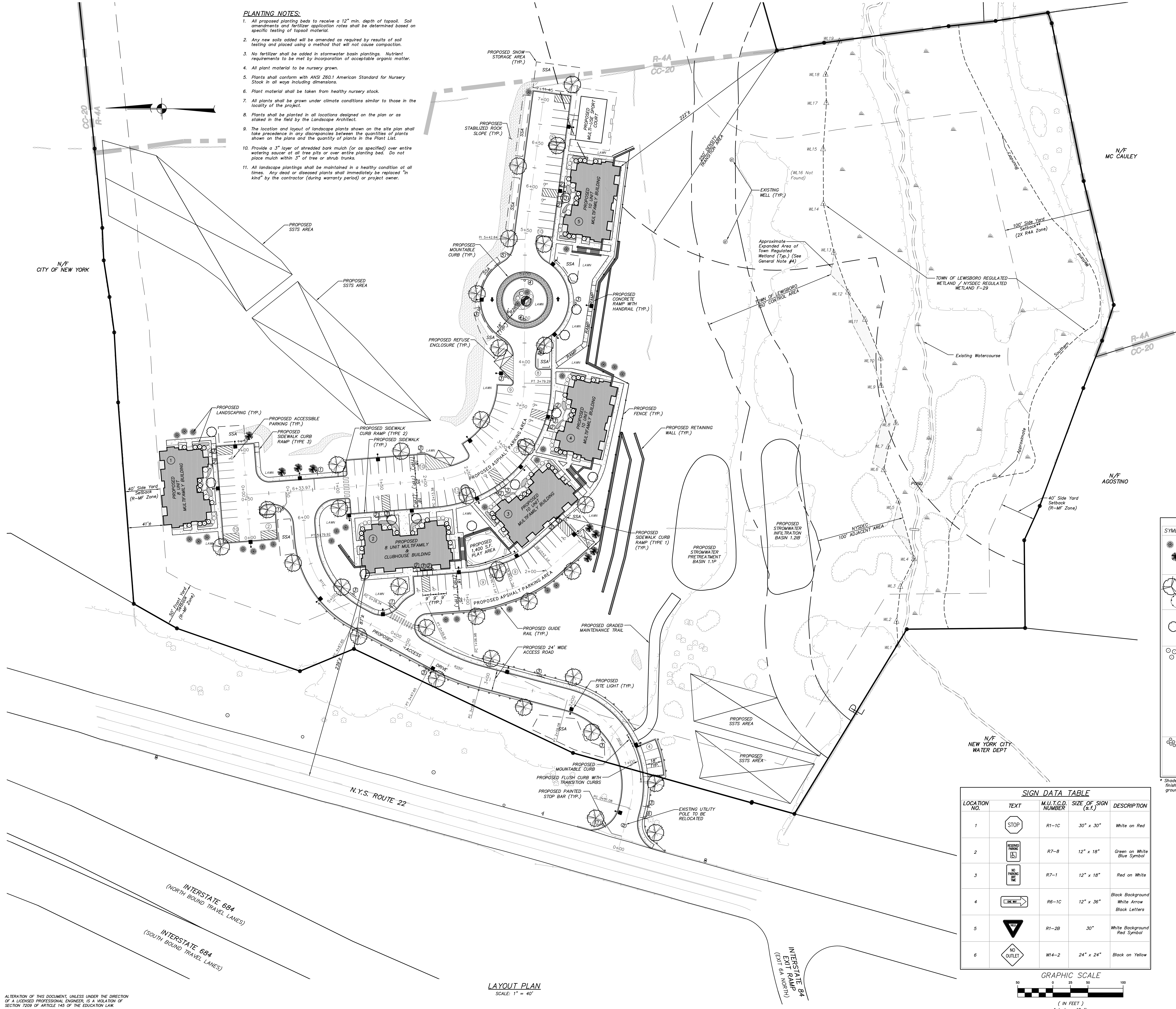
PLANTING NOTES:

1. All proposed planting beds to receive a 12" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
2. Any new soils added will be amended as required by results of soil testing and placed using a method that will not cause compaction.
3. No fertilizer shall be added in stormwater basin plantings. Nutrient requirements to be met by incorporation of acceptable organic matter.
4. All plant material to be nursery grown.
5. Plants shall conform with ANSI Z60.1 American Standard for Nursery Stock in all ways including dimensions.
6. Plant material shall be taken from healthy nursery stock.
7. All plants shall be grown under climate conditions similar to those in the locality of the project.
8. Plants shall be planted in all locations designed on the plan or as staked in the field by the Landscape Architect.
9. The location and layout of landscape plants shown on the site plan shall take precedence in any discrepancies between the quantities of plants shown on the plans and the quantity of plants in the Plant List.
10. Provide a 3" layer of shredded bark mulch (or as specified) over entire watering saucer at all tree pits or over entire planting bed. Do not place mulch within 3" of tree or shrub trunks.
11. All landscape plantings shall be maintained in a healthy condition at all times. Any dead or diseased plants shall immediately be replaced "in kind" by the contractor (during warranty period) or project owner.



LAYOUT PLAN

SCALE: 1" = 40'

LEGEND

- EXISTING PROPERTY LINE
- EXISTING WETLAND LIMIT LINE
- TOWN 150' CONTROL AREA
- NYSDEC 100' ADJACENT AREA
- EXISTING WETLAND SYMBOL
- EXISTING WELL
- EXISTING EDGE OF WATER
- EXISTING TREELINE
- EXISTING BRUSHLINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED RETAINING WALL
- PROPOSED GUIDERAIL
- PROPOSED FENCE
- PROPOSED POLE-MOUNTED SITE LIGHT
- PROPOSED TRAFFIC SIGN
- PROPOSED LANDSCAPING

SEEDING NOTES:

1. All proposed seeded areas to receive 4" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material. Topsoil shall be placed using a method that will not cause compaction.
2. Upon final grading and placement of topsoil and any required soil amendments, areas to receive permanent vegetation cover in combination with suitable mulch as follows:
   - select seed mixture per drawings and seeding notes.
   - fertilizer applied at the manufacturer's recommended rate using a 10-10-10 seed starter fertilizer or equivalent.
   - no fertilizer is to be used in stormwater basins. Nutrient requirements shall be met by incorporation of acceptable organic matter.
   - mulch: salt hay or small grain straw applied at a rate of 90 lbs./1000 s.f. or 2 tons/acre, to be applied and anchored according to New York State Standards and Specifications for Erosion and Sediment Control, August 2005.
   - if the season prevents the establishment of a permanent vegetation cover, the disturbed areas will be mulched with straw or equivalent.
3. Seeding should begin immediately upon completion of finish grading and seed bed preparation while soil is still friable and before weeds can emerge. If seeding area is crusted or compacted, it should be loosened by discing or tilling. If weeds are present, they should be mowed short and removed or tilled under before seed is applied.
4. Seed mixture shall be planted between March 21 and May 20, or between August 15, and October 15 or as directed by project representative. The seed mixes as specified on these drawings are as follows:
   A. Seed Mix for lawn areas at a rate of 100 lbs. per acre:
      - Kentucky Bluegrass 20%
      - Creeping Red Fescue 40%
      - Perennial Ryegrass 20%
      - Annual Ryegrass 20%

   B. Temporary Seed Mix for temporary seeding shall be annual or perennial ryegrass in spring, summer or early fall, at a rate of 30 lbs. per acre or winter rye (cereal rye) in late fall or early winter at a rate of 100 lbs. per acre.

   C. Seed mixture for meadow areas, slopes 3H:1V or steeper, and stormwater basins shall be (ERNMX-181) Native Steep Slopes Mix with annual ryegrass at a rate of 60lbs. per acre.

SCHEMATIC PLANT LIST

SYMBOL	BOTANICAL/COMMON NAME	SIZE	ROOT
	EVERGREEN TREES		
	Picea glauca / White Spruce	6' - 7' HT.	B & B
	Picea pungens glauca / Colorado Blue Spruce	6' - 7' HT.	B & B
	Pinus strobus / Eastern White Pine	7' - 8' HT.	B & B
	Thuja occidentalis / American Arborvitae	6' - 7' HT.	B & B
	SHADE TREES		
	Acer rubrum 'October Glory' / October Glory Red Maple	3" CAL. *	B & B
	Betula nigra / River Birch	10' - 12' HT.	B & B
	Liquidambar styraciflua / Sweetgum	3" CAL. *	B & B
	Quercus rubra / Northern Red Oak	3" CAL. *	B & B
	FLOWERING/SPECIMEN TREES		
	Amelanchier canadensis / Shadblow Serviceberry	10' - 12' HT.	B & B
	Cercis canadensis / Eastern Redbud	2" CAL.	B & B
	Cornus florida / White Flowering Dogwood	2" CAL.	B & B
	Malus 'Centurion' / Centurion Crabapple	2" CAL.	B & B
	SHRUBS		
	Cornus sericea (stolonifera) / Red-osier Dogwood	2' - 3' HT.	#3 CONT.
	Hydrangea arborescens / Smooth Hydrangea	15-18" SPR.	#2 CONT.
	Ilex glabra / Inkberry	18"-24" HT.	#3 CONT.
	Ilex verticillata / Winterberry	2' - 3' HT.	#5 CONT.
	Itea virginica 'Henry's Garnet' / Sweetspire	15"-18" SPR.	#2 CONT.
	Juniperus virginiana 'Grey Owl' / Grey Owl Juniper	15"-18" SPR.	#2 CONT.
	Kalmia latifolia / Mountain Laurel	18"-24" HT.	#3 CONT.
	Rhododendron catawbiense / Catawba Rhododendron	24"-30" HT.	#5 CONT.
	Rosa 'The Fairy' / Fairy Rose	15"-18" HT.	#2 CONT.
	Spiraea bumalda 'Gold Mound' / Gold Mound Spirea	15"-18" HT.	#2 CONT.
	Viburnum dentatum ' Blue Muffin' / Arrowwood Viburnum	2' - 3' HT.	#5 CONT.
	Viburnum tomentosum 'Mariesii' / Doublefile Viburnum	2' - 3' HT.	#5 CONT.
	PERENNIALS & FERNS		SPACING
	Echinacea purpurea 'White Swan' / White Coneflower	#1 CONT.	18" O.C.
	Liriope muscari 'Variegata' / Variegated Lilyturf	#1 CONT.	18" O.C.
	Panicum virgatum 'Shenandoah' / Red Switchgrass	#1 CONT.	24" O.C.
	Rudbeckia fulgida 'Goldsturm' / Blackeyed Susan	#1 CONT.	24" O.C.

* Shade trees shall have a minimum trunk diameter of 3" measured at a height of six inches above finished ground level with a minimum of a seven foot single stem to the first branches above ground level.

SIGN DATA TABLE

LOCATION NO.	TEXT	M.U.T.C.D. NUMBER	SIZE OF SIGN (s.f.)	DESCRIPTION
1	STOP	R1-1C	30" x 30"	White on Red
2	RESERVED PARKING	R7-8	12" x 18"	Green on White Blue Symbol
3	NO PARKING ANY TIME	R7-1	12" x 18"	Red on White
4	ONE WAY	R6-1C	12" x 36"	Black Background White Arrow Black Letters
5	YIELD	R1-2B	30"	White Background Red Symbol
6	NO OUTLET	W14-2	24" x 24"	Black on Yellow

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 40 ft.

* REFER TO GENERAL NOTES ON DRAWING OP-1 *

NO.	DATE	REVISION	BY
4	3-31-16	REVISED PER TOWN COMMENTS	MEU
3	2-4-16	REVISED PER TOWN COMMENTS	MEU
2	1-6-16	GENERAL REVISIONS	MEU
1	12-14-15	GENERAL REVISIONS	DLM

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PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
LAYOUT PLAN

STATE OF NEW YORK · JEFFREY J. CONTELMO · 061031 · LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.	DRAWING NO. SP-1
DATE	10-20-15	DRAWN BY	S.J.C.	SHEET 2/8
SCALE	1" = 40'	CHECKED BY	D.L.M.	

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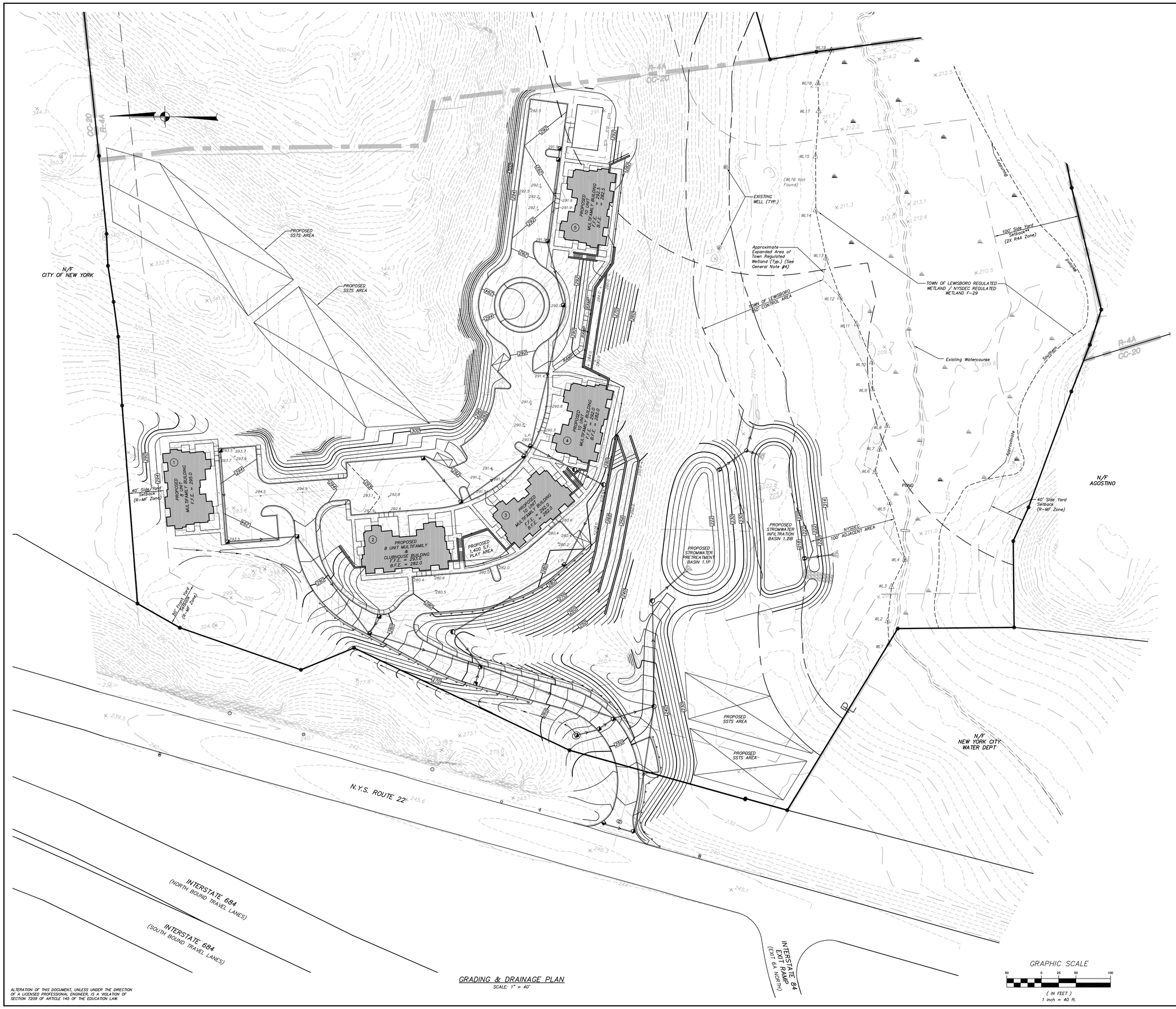

LEGEND

- EXISTING PROPERTY LINE
- EXISTING WETLAND LIMIT LINE
- TOWN 150' CONTROL AREA
- NYSDEC 100' ADJACENT AREA
- EXISTING WETLAND SYMBOL
- EXISTING WELL
- EXISTING EDGE OF WATER
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED RETAINING WALL
- PROPOSED GUIDERAIL
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT GRADE
- PROPOSED DRAINAGE PIPE
- PROPOSED END SECTION WITH RIPRAP
- PROPOSED DRAINAGE INLET
- PROPOSED OUTLET STRUCTURE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED GRASS SWALE

* REFER TO GENERAL NOTES ON DRAWING OP-1 *

NO.	DATE	REVISION	BY
4	3-31-16	REVISED PER TOWN COMMENTS	MEU
3	2-4-16	REVISED PER TOWN COMMENTS	MEU
2	1-6-16	GENERAL REVISIONS	MEU
1	12-14-15	GENERAL REVISIONS	DLM

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PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
GRADING & DRAINAGE PLAN

STATE OF NEW YORK · JEFFREY A. CONTEGNO · 073436 · LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	10-20-15	DRAWN BY	S.J.C.	SP-2	3 / 8
SCALE	1" = 40'	CHECKED BY	D.L.M.		

GRADING & DRAINAGE PLAN
SCALE: 1" = 40'

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

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING WETLAND LIMIT LINE
- TOWN 150' CONTROL AREA
- NYSDEC 100' ADJACENT AREA
- EXISTING WETLAND SYMBOL
- EXISTING WELL
- EXISTING EDGE OF WATER
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- NRCS SOIL BOUNDARY LINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED RETAINING WALL
- PROPOSED GUIDERAIL
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT GRADE
- PROPOSED DRAINAGE PIPE
- PROPOSED END SECTION WITH RIPRAP
- PROPOSED DRAINAGE INLET WITH INLET PROTECTION
- PROPOSED OUTLET STRUCTURE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED SILT FENCE
- PROPOSED CONSTRUCTION FENCE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY SOIL STOCKPILE
- PROPOSED LIMIT OF DISTURBANCE LINE

SOILS LEGEND

SOILS	DESCRIPTION	HYDROLOGICAL GROUP
CrC	Charlton–Chatfield complex, rolling, very rocky	B
CtC	Chatfield–Hollis–Rock outcrop complex, rolling	B,C/D
CuD	Chatfield–Hollis–Rock outcrop complex, hilly	B,C/D
HrF	Hollis–Rock outcrop complex, very steep	C/D
LcB	Leicester loam, 3% to 8% slopes, stony	C
Pa	Palms muck	A/D
RhB	Riverhead loam, 3% to 8% slopes	B

* REFER TO GENERAL NOTES ON DRAWING OP–1 *

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 40 ft.

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EROSION & SEDIMENT CONTROL PLAN
SCALE: 1" = 40'

NO.	DATE	REVISION	BY
1	3–31–16	REVISED PER TOWN COMMENTS	MEU

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PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
EROSION & SEDIMENT CONTROL PLAN

STATE OF NEW YORK · JEFFREY A. CONTENTO · LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	2–4–16	DRAWN BY	S.J.C.	SP–3	4 / 8
SCALE	1" = 40'	CHECKED BY	D.L.M.		

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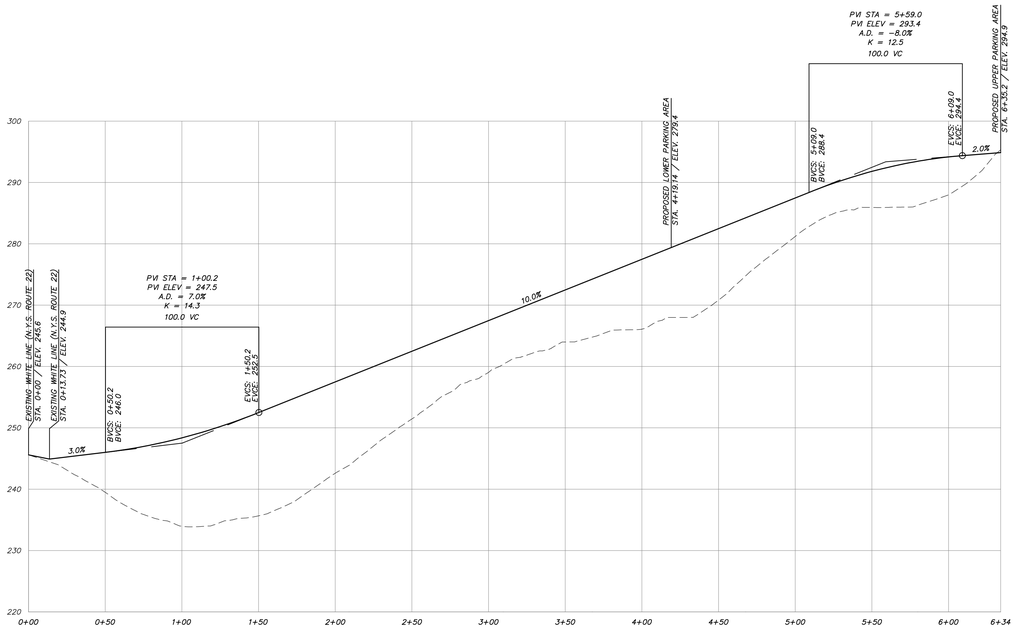
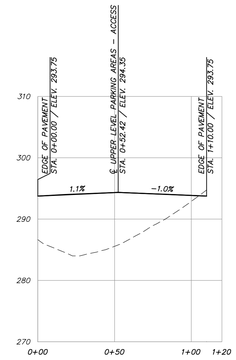


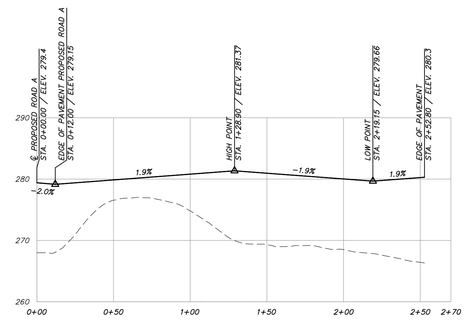
ACCESS DRIVE PROFILE

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



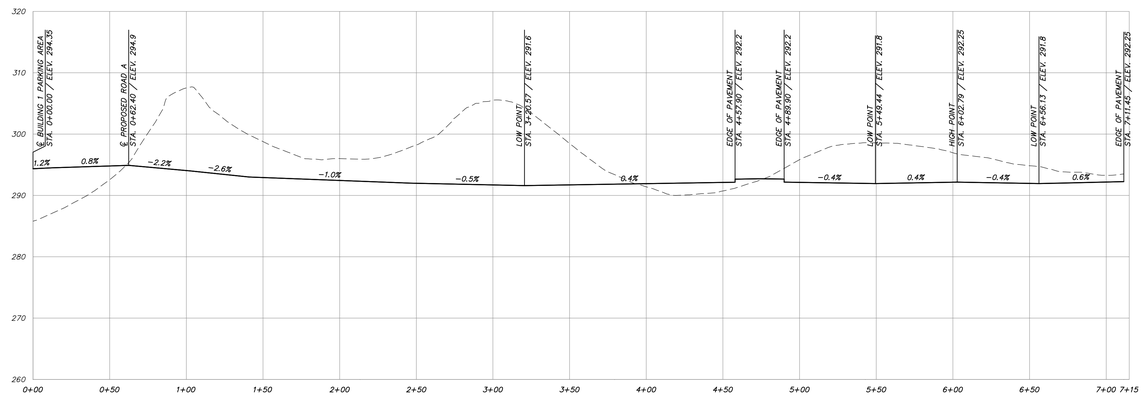
BUILDING 1 PARKING AREA

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



CLUBHOUSE – LOWER LEVEL PARKING AREA

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



UPPER LEVEL PARKING AREAS ACCESS

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'

NO.	DATE	REVISION	BY

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PROJECT:

WILDER BALTER PARTNERS, INC.

ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:

ENTRY DRIVE & PARKING PROFILES

STATE OF NEW YORK · JEFFREY J. CONTELLO · LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	3–31–16	DRAWN BY	S.J.C.	PR–1	5 / 8
SCALE	AS SHOWN	CHECKED BY	D.L.M.		

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

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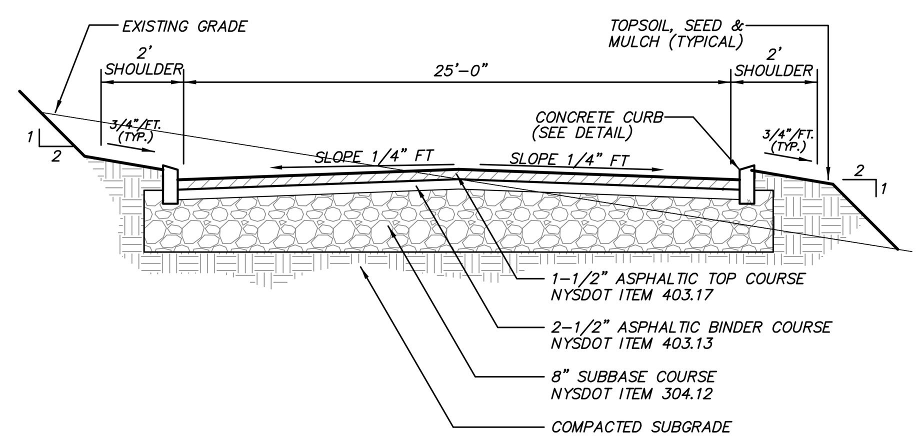
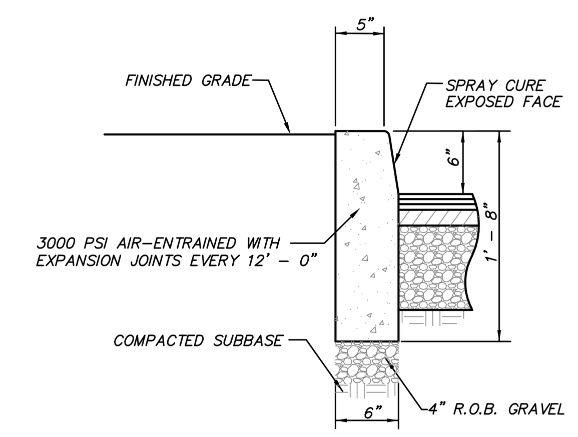


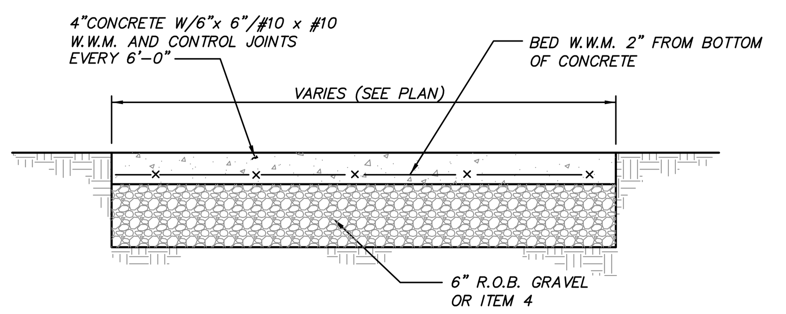
DRIVEWAY PAVEMENT DETAIL

(N.T.S.)



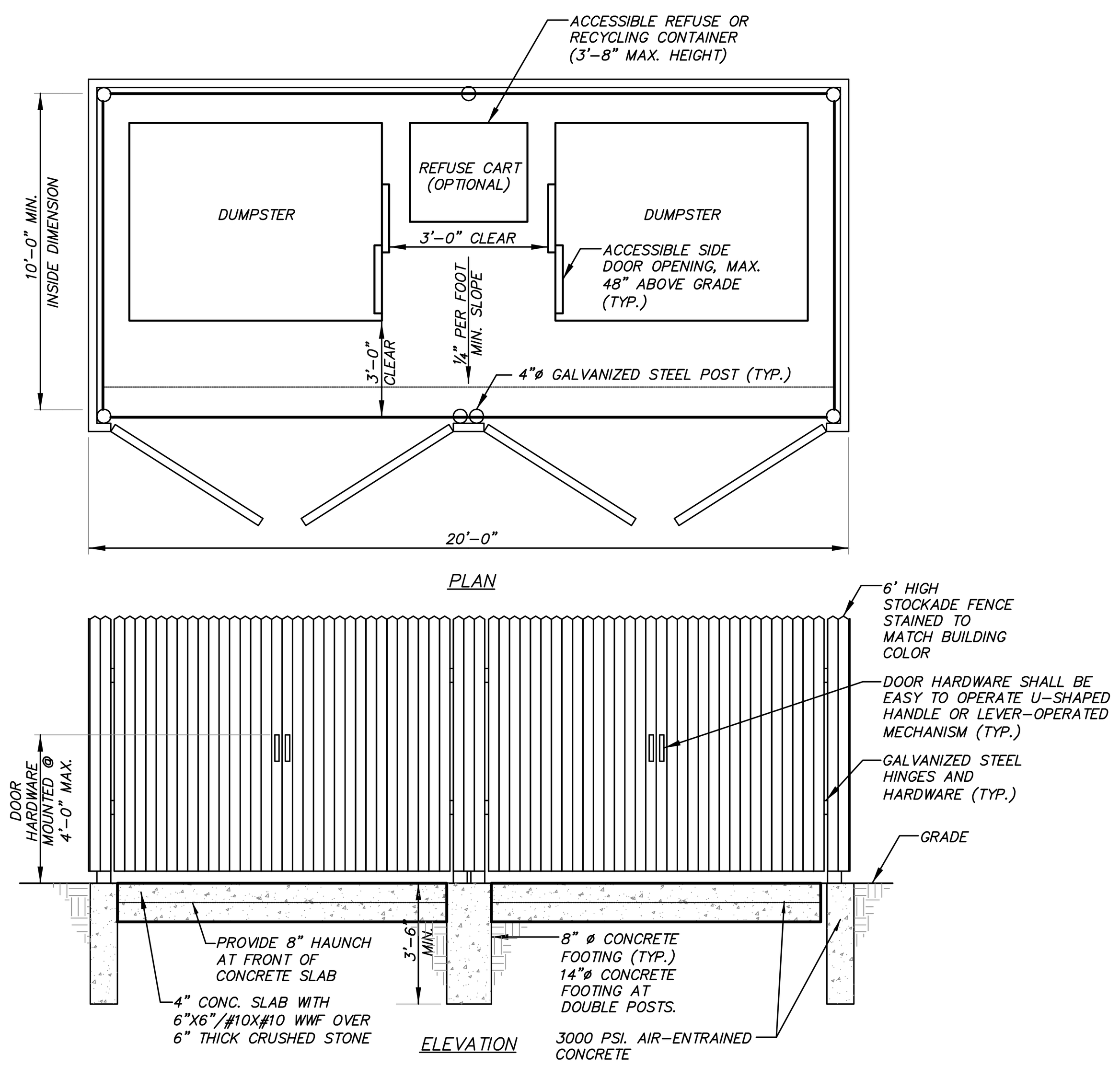
CONCRETE CURB DETAIL

(N.T.S.)



CONCRETE SIDEWALK DETAIL

(N.T.S.)



GENERAL NOTES:

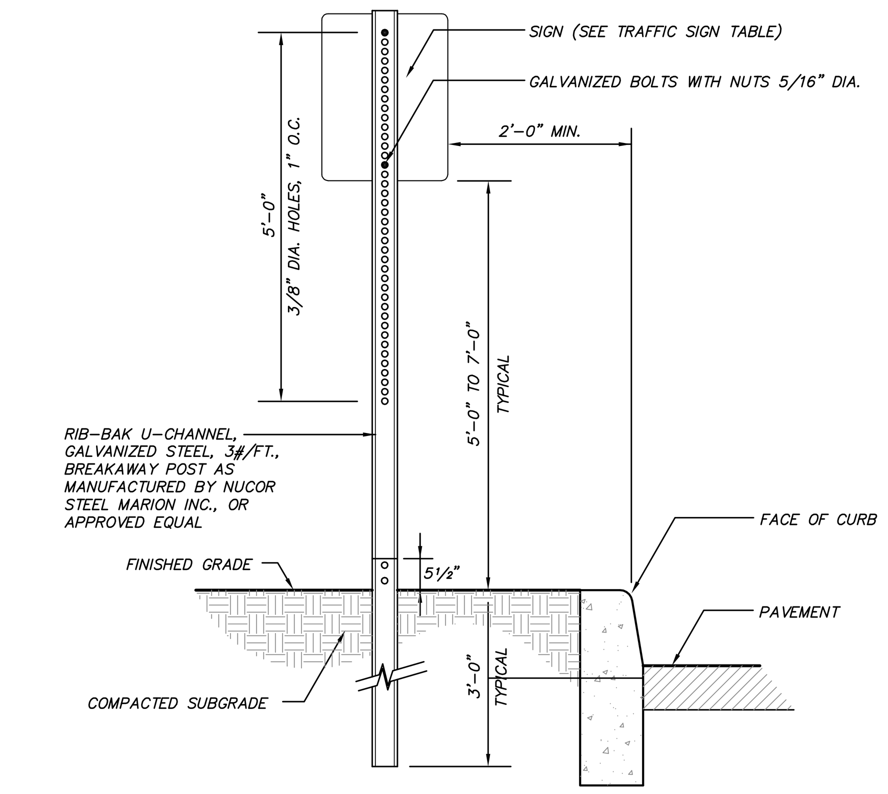
1. CHECK WITH REFUSE HAULER PRIOR TO INSTALLATION OF REFUSE ENCLOSURE FOR FINAL DIMENSIONS.
2. ALL HARDWARE UTILIZED TO ATTACH WOOD FENCE TO POSTS SHALL BE GALVANIZED STEEL.

ACCESSIBILITY NOTES:

1. VERTICAL CHANGE IN LEVEL BETWEEN FINISHED GRADE OF CONCRETE PAD FOR DUMPSTER ENCLOSURE AND ADJACENT PAVEMENT AT GATE OPENINGS SHALL NOT EXCEED 1/4"; 1/4" TO 1/2" VERTICAL CHANGE SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 2H:1V.
4. GATE(S) DESIGNATED FOR ACCESSIBLE ENTRY INTO DUMPSTER ENCLOSURE SHALL BE MAINTAINED TO BE RELATIVELY FREE SWINGING AND EASY TO OPEN AND CLOSE.
5. SHOULD INDIVIDUAL GATE BE DESIGNATED FOR ACCESSIBLE ENTRY, IT SHALL BE LABELLED AS SUCH.
6. A 36" MINIMUM CLEAR DISTANCE SHALL BE MAINTAINED BETWEEN DUMPSTERS AND IN FRONT OF DUMPSTER AS NECESSARY TO PROVIDE ACCESSIBLE ROUTE WITHIN DUMPSTER ENCLOSURE TO SIDE ACCESS DOORS TO DUMPSTERS AND / OR REFUSE CARTS.
7. ACCESSIBLE REFUSE CONTAINERS SHALL BE PROVIDED – TRASH CAN(S), REFUSE CARTS, AND/OR DUMPSTERS WITH ACCESSIBLE SIDE OPENINGS.

DUMPSTER ENCLOSURE DETAIL

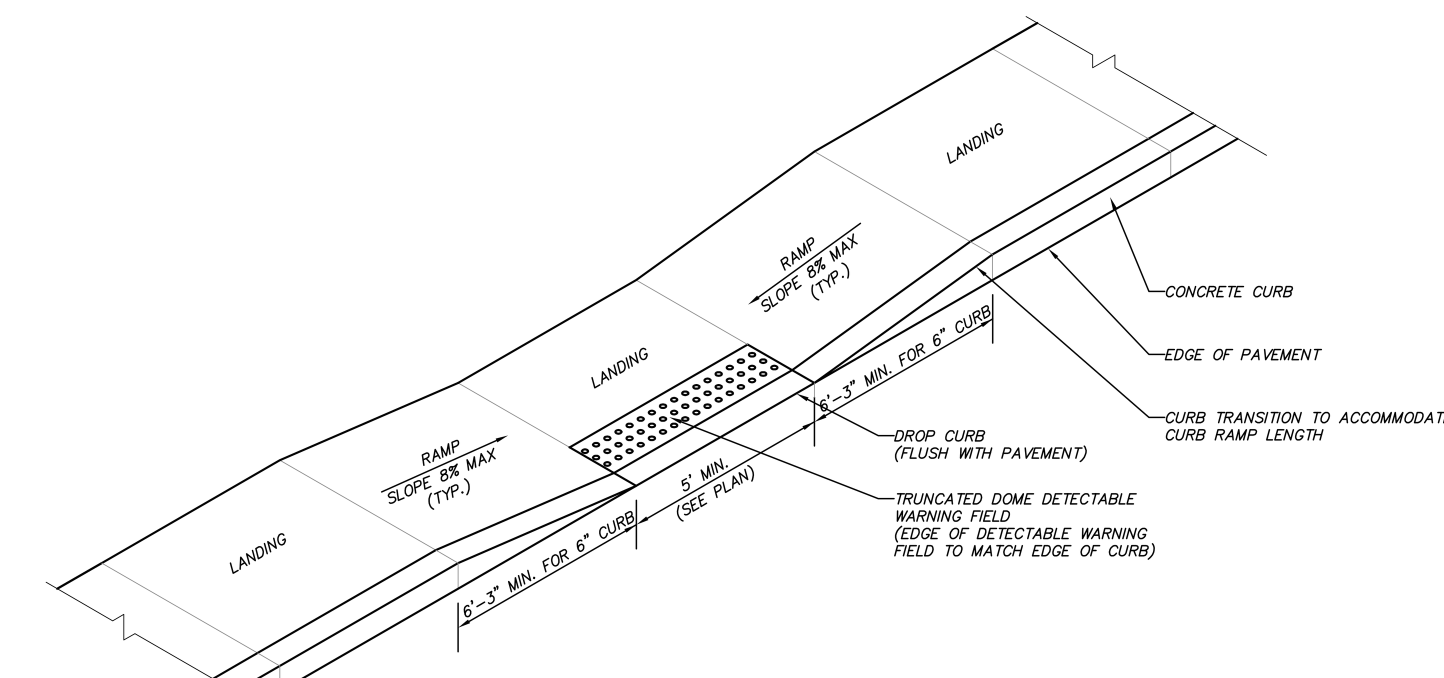
(N.T.S.)



NOTE: FOR HANDICAP PARKING SIGNAGE, SIGNS SHALL BE INSTALLED AT A CLEAR HEIGHT OF BETWEEN 5'-0" AND 7'-0" ABOVE GRADE OF PARKING SPACE AND SUCH THAT SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE.

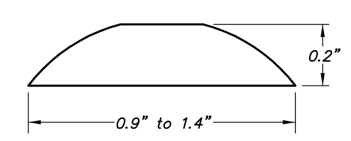
TRAFFIC SIGN DETAIL

(N.T.S.)

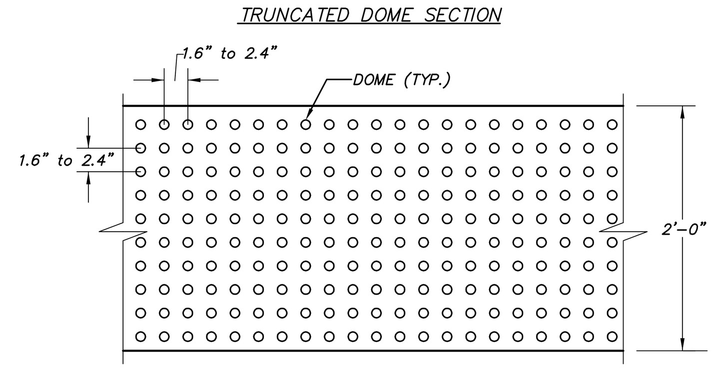


SIDEWALK CURB RAMP (TYPE 1)

(N.T.S.)



TRUNCATED DOME SECTION



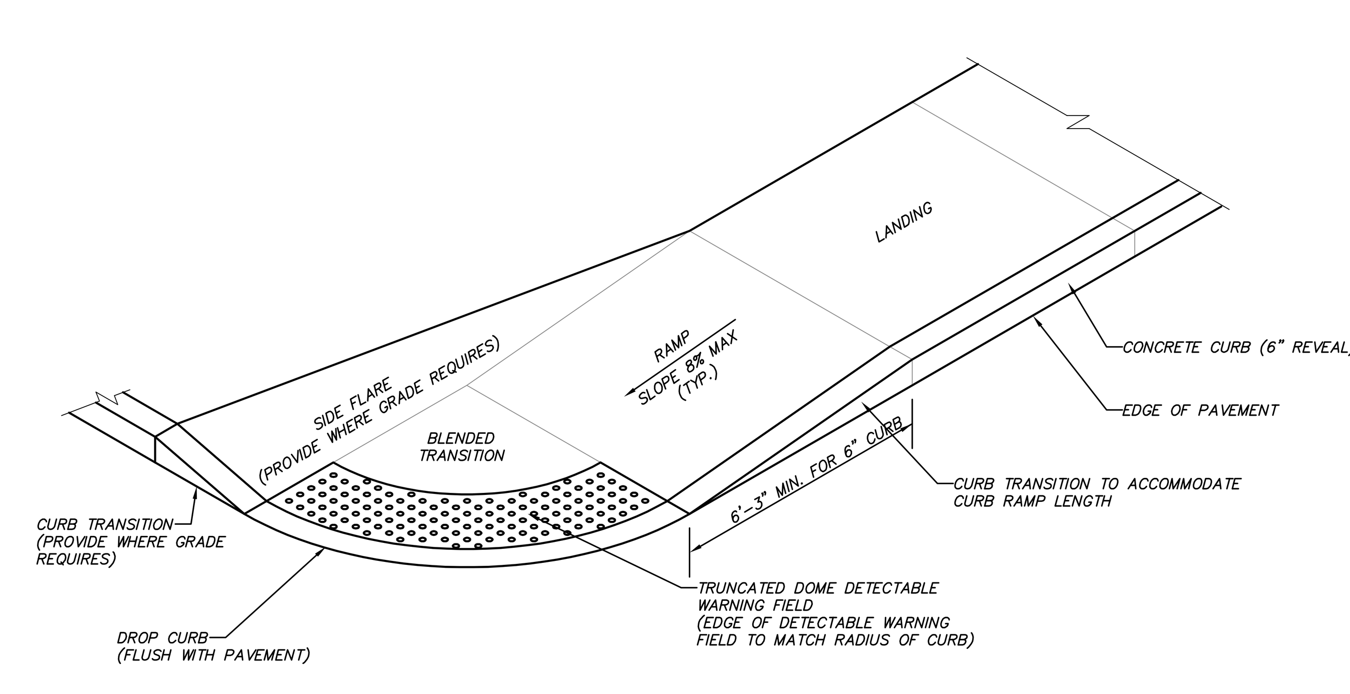
TRUNCATED DOME SPACING

TRUNCATED DOME DETAIL

(N.T.S.)

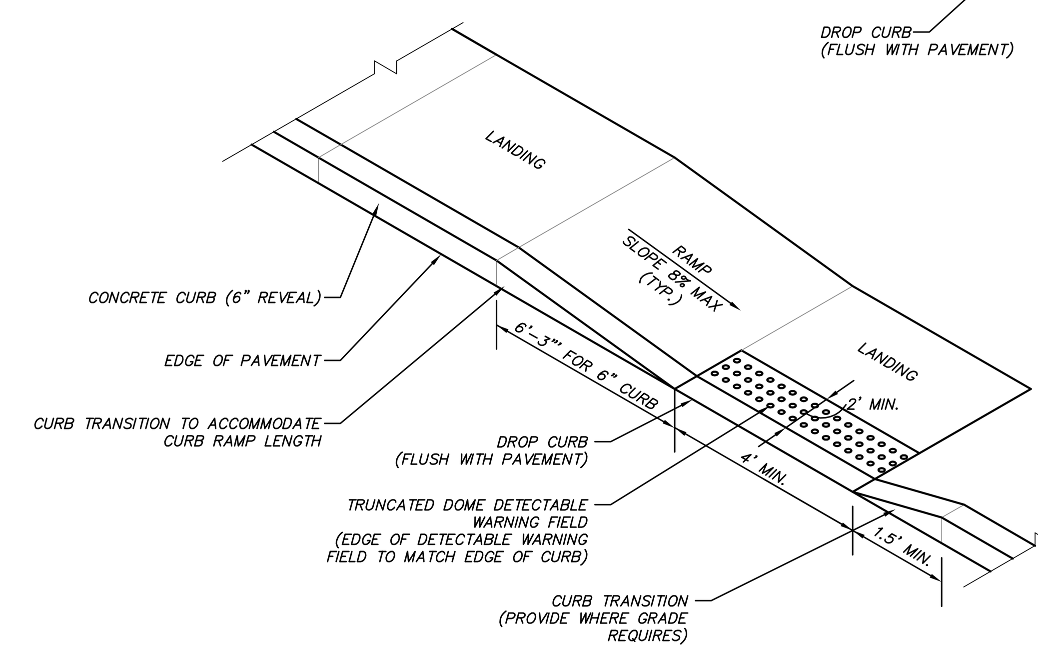
TRUNCATED DOME DETECTABLE WARNING FIELD NOTES:

1. The detectable warning field shall consist of raised truncated domes with a nominal diameter of 0.9 inches, a nominal height of 0.2 inches, and a nominal spacing of 2.35 inches on center in accordance with the most recent version of ANSI ICC A117.1.
2. The details provided are not drawn to scale. The quantity of domes depicted on the detectable warning field (the domes and the entire 24 inch level surface) is for illustration only.
3. The size of the detectable warning field shall be 24 inches in the direction of travel and shall extend the full width of the curb ramp or flush surface, exclusive of side flares.
4. Detectable warnings shall be located so that the edge of the warning field nearest to the roadway or street surface is 6 inches to 9 inches from the edge of the roadway/street, or from the front of the dropped curb, where a dropped curb continues across the bottom of the sidewalk curb ramp.
5. Domes shall be aligned on a square grid in the predominant direction of travel.
6. The detectable warning field shall be yellow.



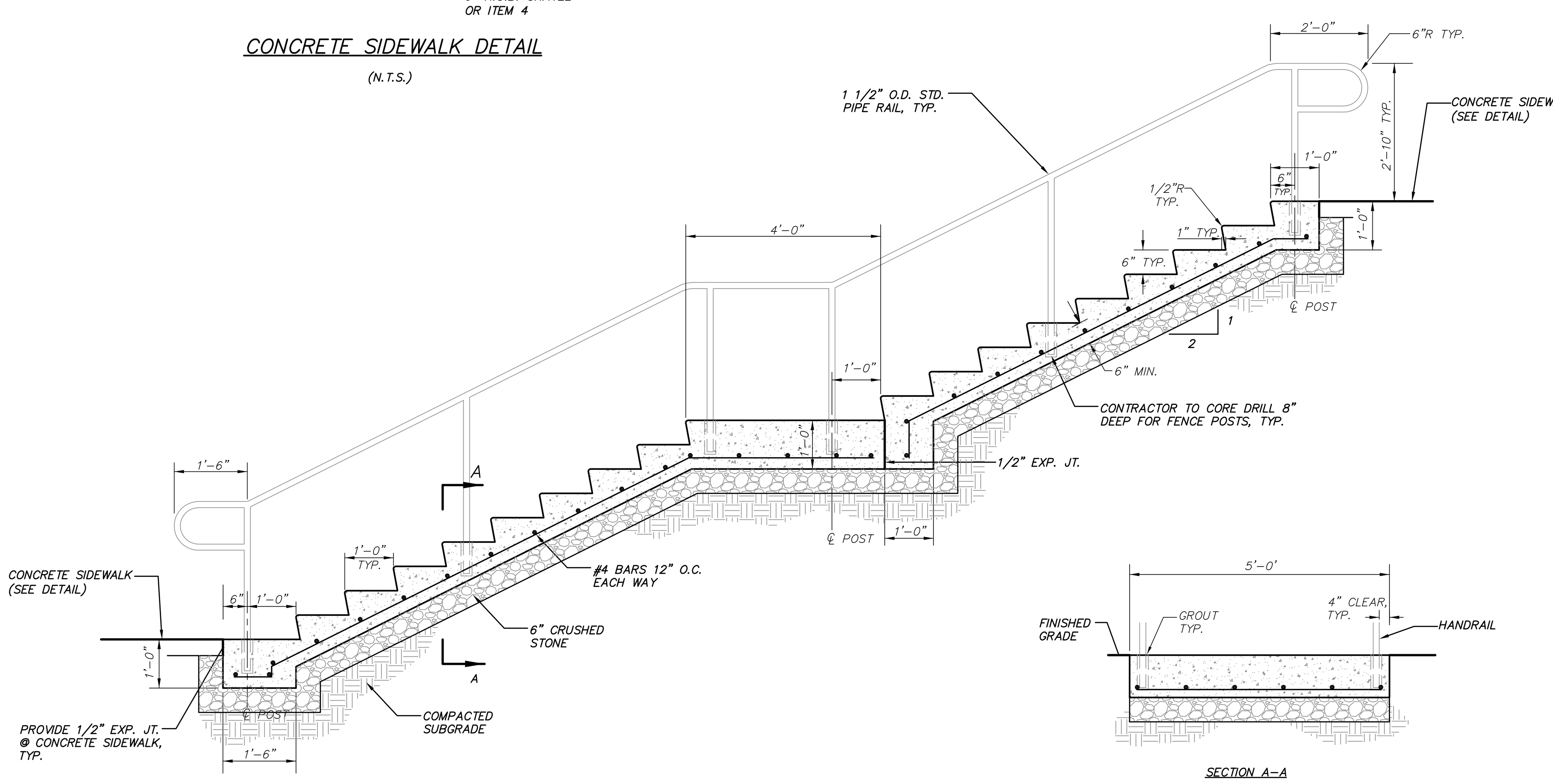
SIDEWALK CURB RAMP (TYPE 2)

(N.T.S.)



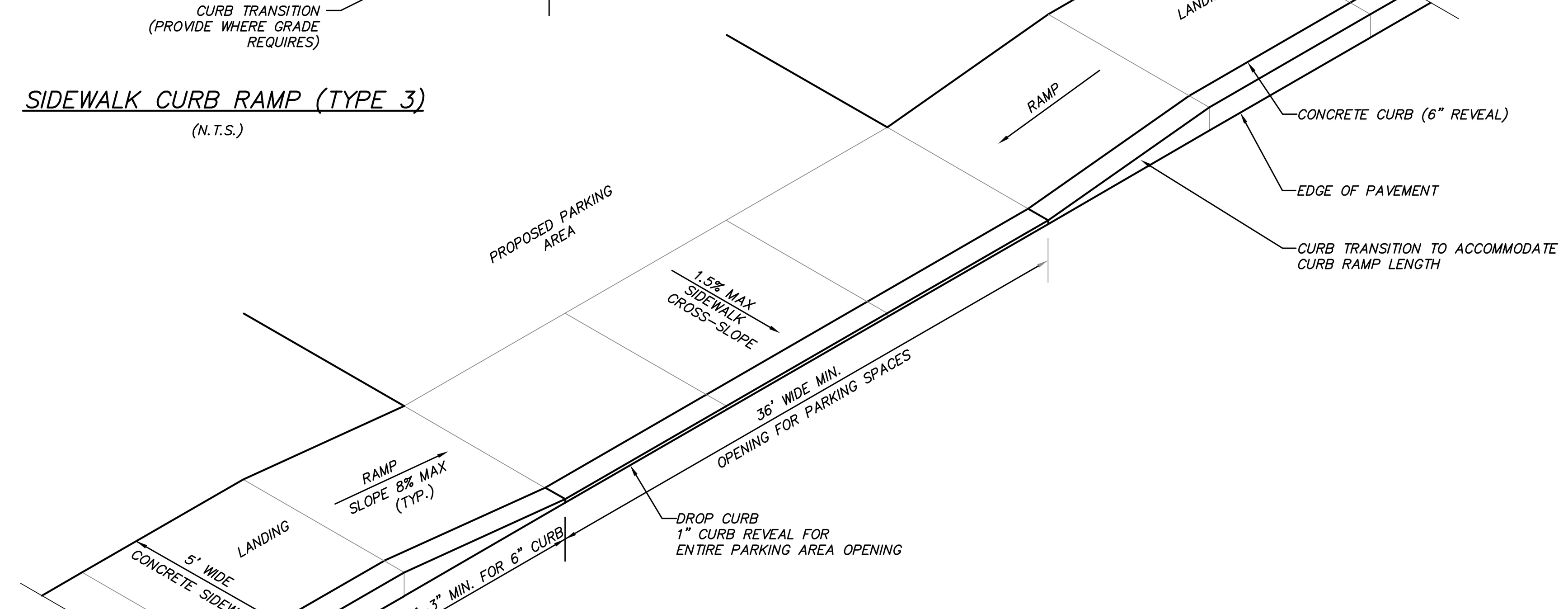
SIDEWALK CURB RAMP (TYPE 3)

(N.T.S.)



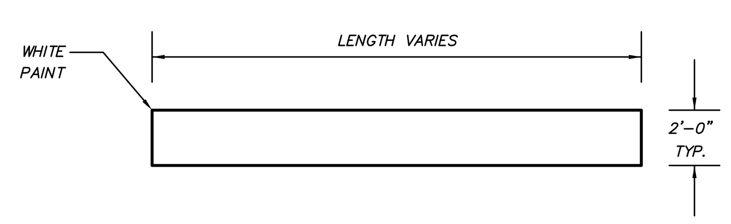
CONCRETE STEPS DETAIL

(N.T.S.)



SIDEWALK FLUSH CURB DETAIL
AT LOWER PARKING SPACES

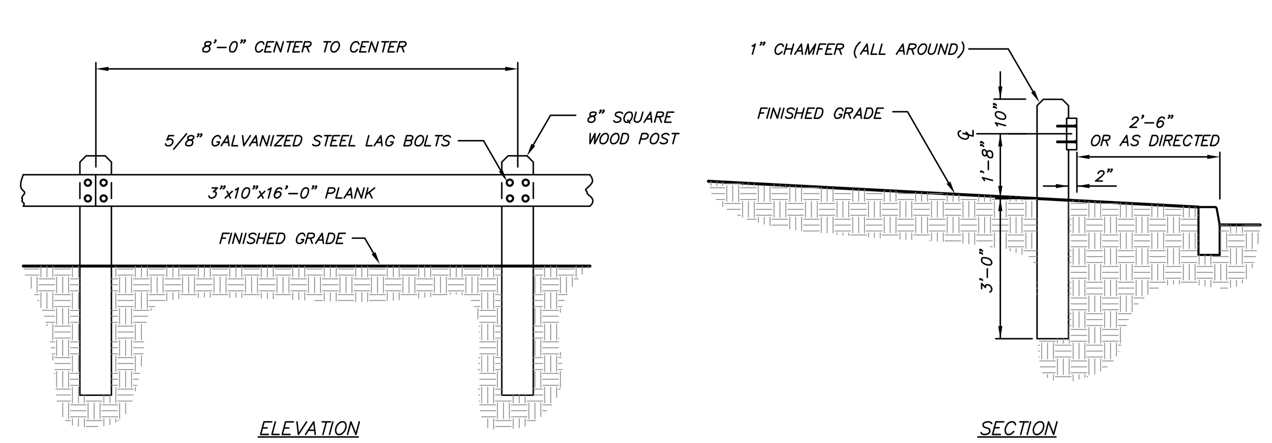
(N.T.S.)



NOTE: INSTALLATION TO CONFORM WITH CURRENT NYSDOT STANDARDS AND SPECIFICATIONS.

PAINTED STOP BAR DETAIL

(N.T.S.)

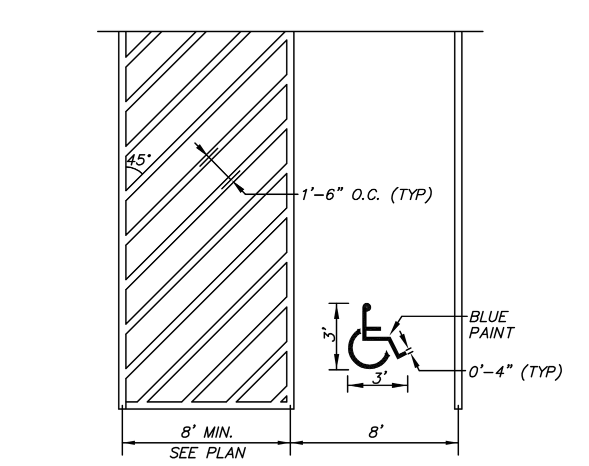


NOTES:

1. ALL WOOD TO BE SEASONED NO.1 DOUGLAS FIR, SOUTHERN PINE OR OTHER APPROVED STRUCTURAL LUMBER.
2. ALL WOOD TO BE TREATED WITH AN APPROVED WOOD PRESERVATIVE SUITABLE FOR INSTALLATION IN AND ADJACENT TO GROUND SURFACES.

WOOD GUIDE RAIL DETAIL

(N.T.S.)

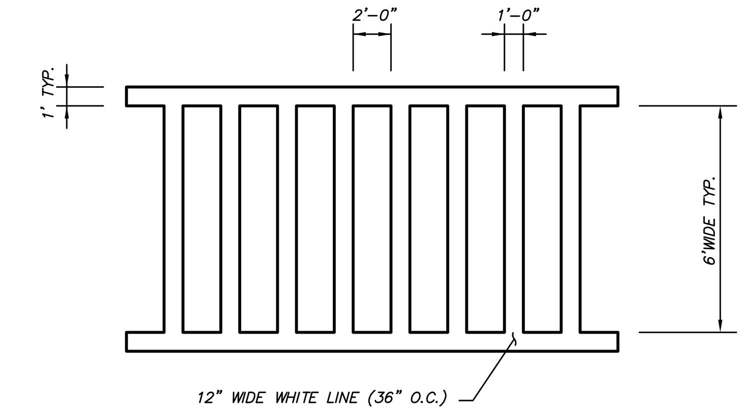


NOTE:

1. ALL ACCESSIBLE PARKING STRIPING SHALL BE 4" WIDE BLUE PAINT

PAINTED ACCESSIBLE PARKING DETAIL

(N.T.S.)



NOTE: INSTALLATION TO CONFORM WITH CURRENT NYSDOT STANDARDS AND SPECIFICATIONS

CROSSWALK MARKING DETAIL

(N.T.S.)

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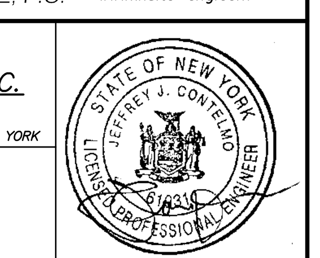
NO.	DATE	REVISION	BY
1	3-31-16	REVISED PER TOWN COMMENTS	MEU

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT: WILDER BALTER PARTNERS, INC.

ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING: SITE DETAILS



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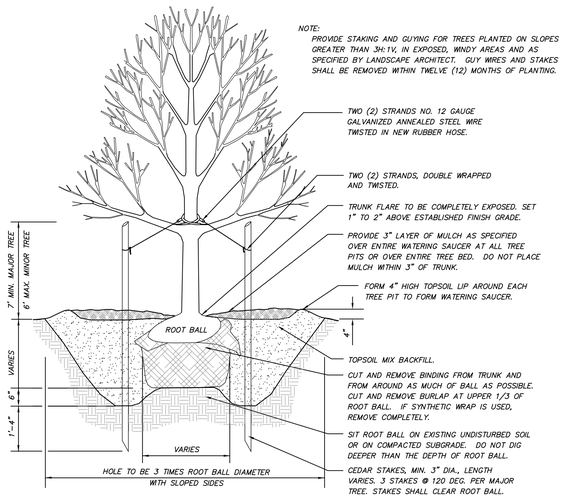
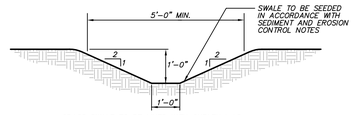
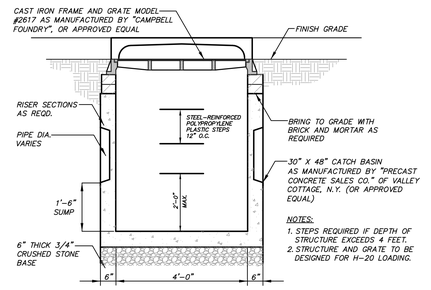


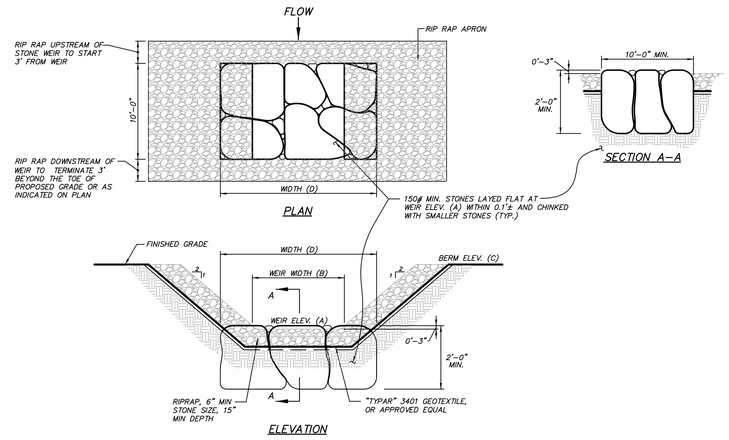
TREE PLANTING DETAIL
(N.T.S.)



GRASS SWALE DETAIL
(N.T.S.)



CATCH BASIN DETAIL
(N.T.S.)



STONE EMERGENCY OVERFLOW DETAIL
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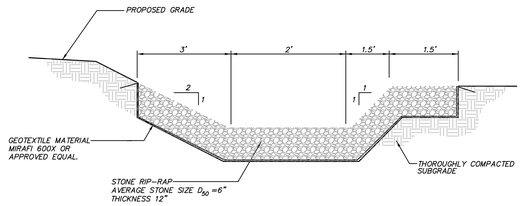

LEVEL SPREADER DETAIL
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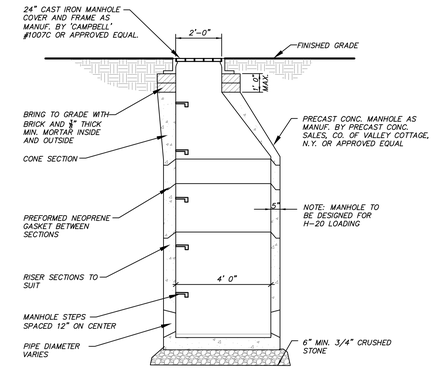
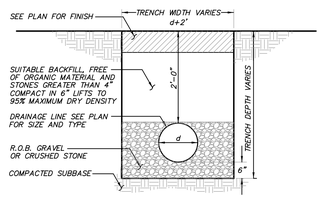
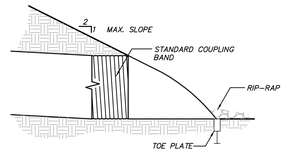
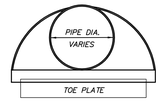


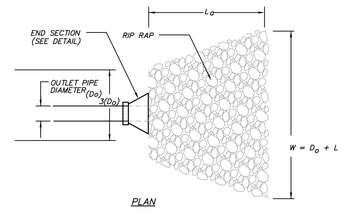
DRAINAGE MANHOLE DETAIL
(N.T.S.)

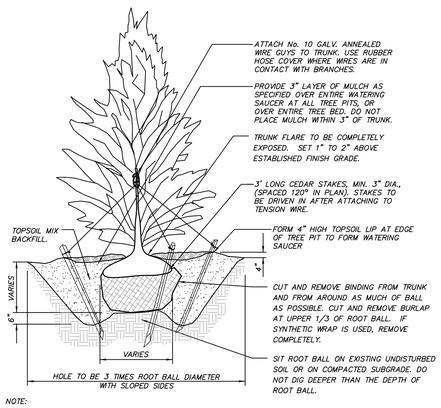


DRAINAGE LINE TRENCH DETAIL
(N.T.S.)



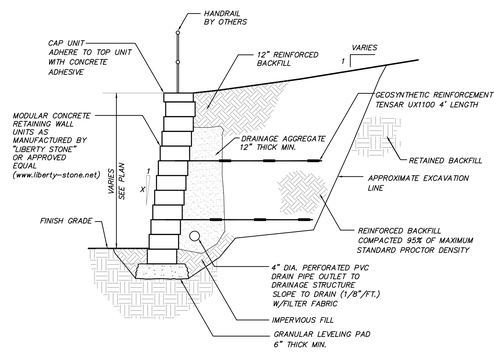






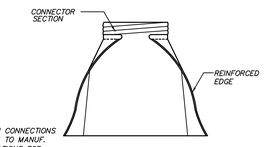
NOTE:
PROVIDE STAKING AND GUYING FOR TREES PLANTED ON SLOPES GREATER THAN 3H:1V, IN EXPOSED, WINDY AREAS AND AS SPECIFIED BY LANDSCAPE ARCHITECT. GUY WIRES AND STAKES SHALL BE REMOVED WITHIN TWELVE MONTHS OF PLANTING.

EVERGREEN TREE PLANTING DETAIL
(N.T.S.)



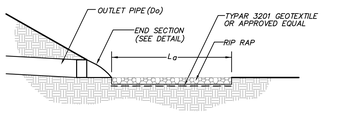
NOTES:
1. STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
2. BENCH CUT ALL EXCAVATED SLOPES.
3. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE ENGINEER TO REMOVE UNSUITABLE SOIL.
4. SITE ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
5. LEVELING PAD SHALL CONSIST OF COMPACTED COARSE SAND OR CRUSHED GRAVEL, 6" THICK MIN.
6. CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 3" THICK MAXIMUM.
7. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 6".
8. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME FILL BEHIND UNITS IS COMPACTED.
9. DRAINAGE AGGREGATE SHALL BE INSTALLED DIRECTLY BEHIND THE WALL WITHIN 12" OF THE TOP OF THE WALL. DRAINAGE AGGREGATE SHALL NOT EXTEND BELOW FINAL GRADE IN FRONT OF WALL.
10. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.(ASTM D-698)
11. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE SITE SOILS ENGINEER.
12. COMPACTION WITHIN 3 FT. OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT.
13. GEOSYNTHETIC SHALL BE PLACED WITH STRONGEST DIRECTION PERPENDICULAR TO WALL. FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
14. CONTRACTOR SHALL DIRECT SURFACE RUNOFF TO AVOID DAMAGING WALL WHILE UNDER CONSTRUCTION.
15. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.
16. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
17. MODULAR BLOCK RETAINING WALL AT STEPS TO BE INSTALLED VERTICALLY (NO BATTER)
18. MODULAR BLOCK RETAINING WALL MANUFACTURER TO SUPPLY CONSTRUCTION DETAILS OF WALL SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE STATE OF NEW YORK.

MODULAR BLOCK RETAINING WALL DETAIL
(N.T.S.)

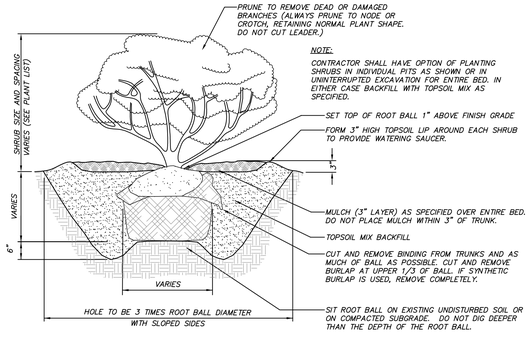


NOTE:
END SECTION CONNECTIONS TO CONFORM TO MANUF. RECOMMENDATIONS FOR VARIOUS PIPE SIZES

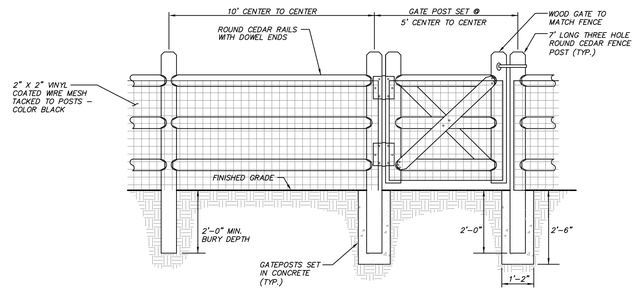
END SECTION DETAIL
(N.T.S.)



VELOCITY DISSIPATOR DETAIL
(N.T.S.)



SHRUB PLANTING DETAIL
(N.T.S.)



POST AND RAIL FENCE DETAIL
(N.T.S.)

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INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
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(845) 225-9717 fax
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PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
SITE DETAILS

STATE OF NEW YORK · JEFFREY J. CONTEE · LICENSED PROFESSIONAL ENGINEER

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REQUIRED EROSION CONTROL SWPPP CONTENTS:

Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP-0-15-002), all Stormwater Pollution Prevention Plan's (SWPPP) shall include erosion and sediment control practices designed in conformance with the most current version of the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." Where erosion and sediment control practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of required SWPPP components is provided in accordance with Part III.B.1a-l of General Permit GP-0-15-002:

a. Background Information: The subject project consists of the construction of (45) affordable dwelling units and a caretaker unit with appurtenances and utilities.

b. Site map / construction drawing: These plans serve to satisfy this SWPPP requirement.

c. Description of the soils present at the site: Onsite soils located within the proposed limits of disturbance consist of Charlton-Chatfield complex (CrC), Chatfield-Hollis-Rock outcrop (CtC & CuD), Hollis-Rock outcrop complex (HrF), Leicester loam (LcB), Palms muck (Pa) and Riverhead loam (RhB) as identified on the Soil Conservation Service Web Soil Survey. These soil types belong to the Hydrologic Soil Group "A", "A/D", "B", "C" and "C/D."

d. Construction phasing plan / sequence of operations: The Construction Sequence and phasing found on these plans provide the required phasing. A Construction Sequence and Erosion and Sediment Control Maintenance Schedule has been provided. The Sedimentation and Erosion Control Notes contained hereon outline a general sequence of operations for the proposed project. In general all erosion and sediment control facilities shall be installed prior to commencement with land disturbing activities, and areas of disturbance shall be limited to the shortest period of time as practicable.

e. Description of erosion and sediment control practices: This plan, and details / notes shown hereon serve to satisfy this SWPPP requirement.

f. Temporary and permanent soil stabilization plan: The Sedimentation and Erosion Control Notes and Details provided heron identify temporary and permanent stabilization measures to be employed with respect to specific elements of the project, and at the various stages of development.

g. Site map / construction drawing: This plan serves to satisfy this SWPPP requirement.

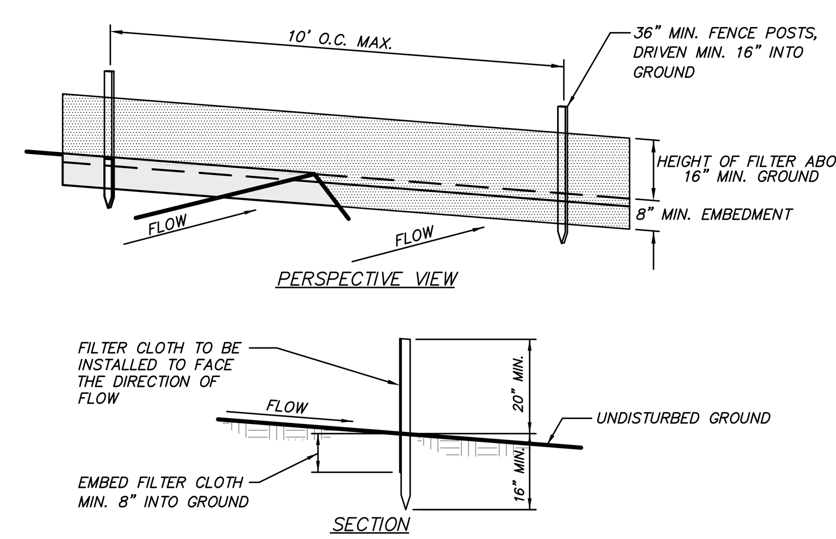
h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices: The details, Erosion and Sediment Control Notes, and Erosion and Sediment Control Maintenance Schedule serve to satisfy this SWPPP requirement.

i. An inspection schedule: Inspections are to be performed twice weekly and by a qualified professional as required by the General Permit GP-0-15-002. In addition the NYSDEC Trained Contractor shall perform additional inspections as cited in the Sedimentation and Erosion Control Notes.

j. A description of pollution prevention measures that will be used to control litter, construction chemicals and construction debris: In general, all construction litter / debris shall be collected and removed from the site. The general contractor shall supply either waste barrels or dumpster for proper waste disposal. Any construction chemicals utilized during construction shall either be removed from site daily by the contractor or stored in a structurally sound and weatherproof building. No hazardous waste shall be disposed of onsite, and shall ultimately be disposed of in accordance with all federal, state and local regulations. Material Safety Data Sheets (MSDS), material inventory, and emergency contact numbers shall be maintained by the general contractor for all construction chemicals utilized onsite. Finally, temporary sanitary facilities (portable toilets) shall be provided onsite during the entire length of construction, and inspected weekly for evidence of leaking holding tanks.

k. A description and location of any stormwater discharges associated with industrial activity other than construction at the site: There are no known industrial stormwater discharges present or proposed at the site.

l. Identification of any elements of the design that are not in conformance with the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." All proposed elements of this SWPPP have been designed in accordance with the "New York Standards and Specifications for Erosion and Sediment Control."



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. FILTER CLOTH TO BE FASTENED SECURELY TO POSTS AT TOP AND MID SECTION.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

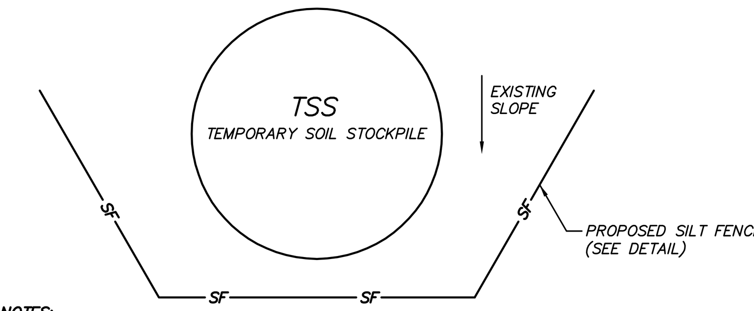
POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

SILT FENCE DETAIL

(N.T.S.)



NOTES:

1. AREA CHOSEN FOR STOCKPILE LOCATION SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE IMMEDIATELY SEEDED WITH K31 PERENNIAL TALL FESCUE.
4. ALL STOCKPILES SHALL BE PROTECTED WITH SILT FENCING INSTALLED ON THE DOWNGRADIENT SIDE.

TEMPORARY SOIL STOCKPILE DETAIL

(N.T.S.)

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

Z:\E\15246100\06 D 1-3.dwg, 3/30/2016 6:04:58 PM, dmckenzie, 1:1

REQUIRED POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICE COMPONENTS:

1. Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP-0-15-002), all construction projects needing post-construction stormwater management practices shall prepare a SWPPP that also includes practices designed in conformance with the most current version of the technical standard, New York State Stormwater Management Design Manual ("Design Manual"). Where post-construction stormwater management practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of SWPPP components is provided in accordance with Part III.B.2a-g and III.B.3:

   a. Identification of all post-construction stormwater management practices to be constructed as part of the project; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.

   b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.

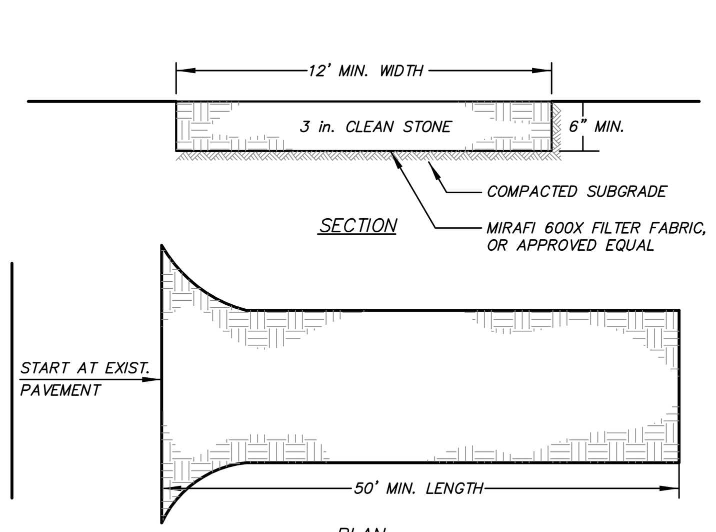
A Stormwater Modeling and Analysis Report including pre-development conditions, post-development conditions, the results of the stormwater modeling, a summary table demonstrating that each practice has been designed in conformance with the sizing criteria, identification of and justification for any deviations from the Design Manual, and identification of any design criteria that are not required. The required analysis is provided in the report titled Preliminary Stormwater Pollution Prevention Plan for Wilder Balter Partners, Inc.

   c. Soil testing results and locations. This SWPPP requirement is provided in the report titled Amended Stormwater Pollution Prevention Plan for Kent Materials.

   d. Infiltration testing results. This SWPPP requirement is provided in the report titled Preliminary Stormwater Pollution Prevention Plan for Wilder Balter Partners, Inc.

   e. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice. The Permanent Stormwater Facilities Maintenance Schedule provided on these plans serves to satisfy this requirement.

2. Enhanced Phosphorus Removal Standards - Beginning on September 30, 2008, all construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the most current version of the technical standard, New York Stormwater Management Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f above. The permanent stormwater practices for this project have been sized according to chapter 10 of the Design Manual Enhanced Phosphorus Removal Standards. Please see 2.a - 2.f above.

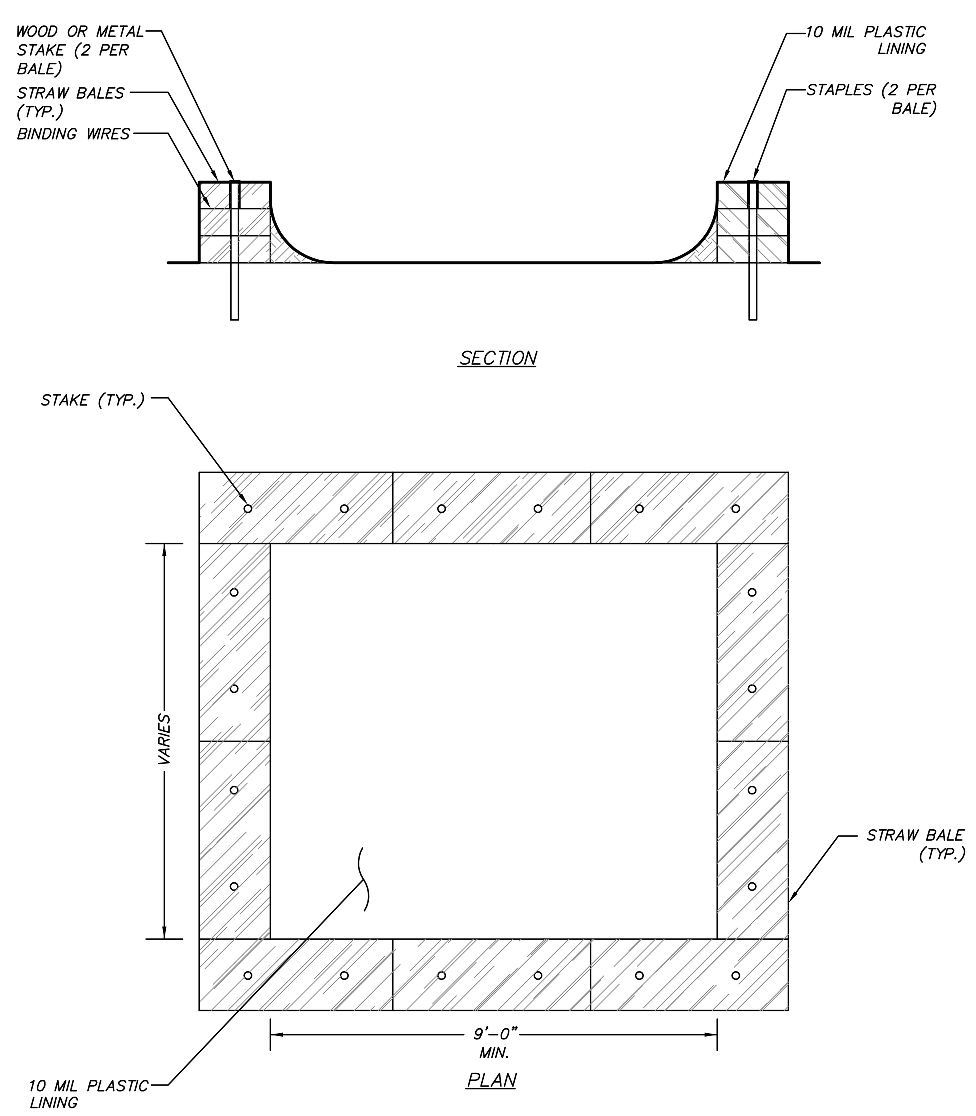


INSTALLATION NOTES

1. STONE SIZE - USE 3" STONE
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.)
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCUR.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

(N.T.S.)



CONCRETE WASHOUT AREA DETAIL

(N.T.S.)

NOTES

1. TEMPORARY CONCRETE WASHOUT TYPE ABOVE GRADE WILL BE CONSTRUCTED AS SHOWN ABOVE, WITH RECOMMENDED MINIMUM LENGTH AND MINIMUM WIDTH OF 10 FT.
2. THE WASHOUT WILL BE MINIMUM OF 50 FT FROM STORM DRAIN INLETS.
3. PLASTIC LINING WILL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

EROSION AND SEDIMENT CONTROL MAINTENANCE SCHEDULE

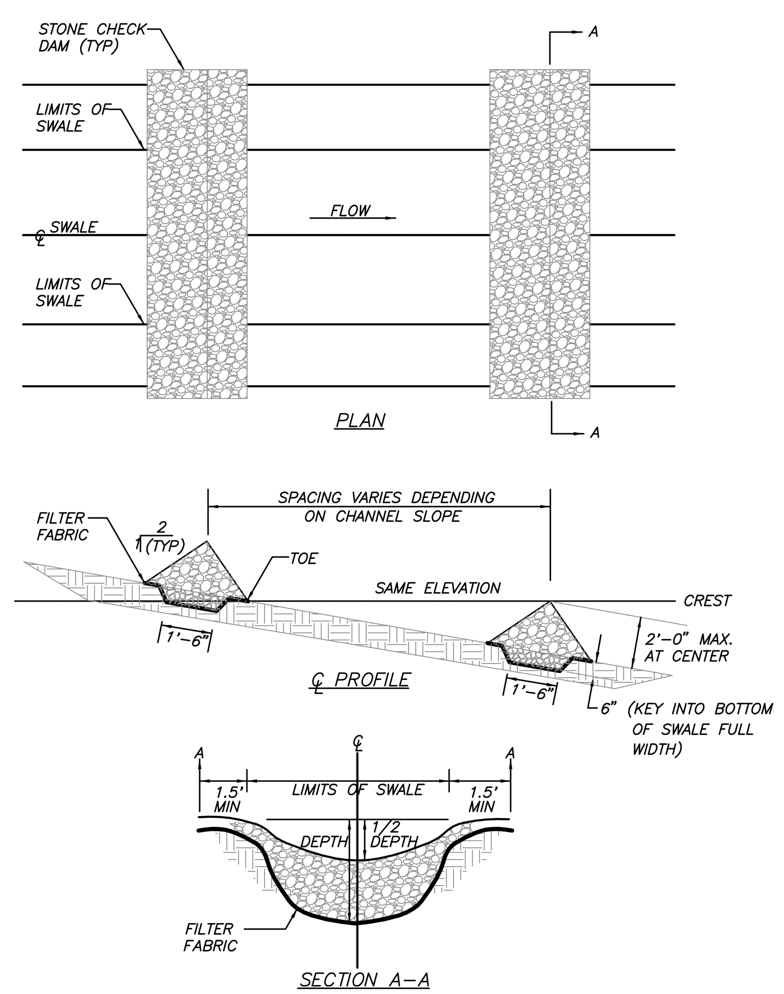
MONITORING REQUIREMENTS				MAINTENANCE REQUIREMENTS	
PRACTICE	DAILY	WEEKLY	AFTER RAINFALL	DURING CONSTRUCTION	AFTER CONSTRUCTION
SILT FENCE BARRIER	–	Inspect	Inspect	Clean/Replace	Remove
STABILIZED CONSTRUCTION ENTRANCE	Inspect	–	Inspect	Clean/Replace Stone and Fabric	Remove
DUST CONTROL	Inspect	–	Inspect	Mulching/ Spraying Water	N/A
*VEGETATIVE ESTABLISHMENT	–	Inspect	Inspect	Water/Reseed/ Remulch	Reseed to 80% Coverage
INLET PROTECTION	–	Inspect	Inspect	Clean/Repair/ Replace	Remove
SOIL STOCKPILES	–	Inspect	Inspect	Mulching/ Silt Fence Repair	Remove
SWALES	–	Inspect	Inspect	Clean/Mulch/ Repair	Mow Permanent Grass/Replace/ Repair Rip Rap
CHECK DAMS	–	Inspect	Inspect	Clean/Replace Stones/Repair	Clean/Replace Stones/Repair
CONCRETE DRAINAGE STRUCTURES	–	Inspect	Inspect	Clean Sumps/ Remove Debris/ Repair/Replace	Clean Sumps/ Remove Debris/ Repair/Replace
DRAINAGE PIPES	–	Inspect	Inspect	Clean/Repair	Clean/Repair
ROAD & PAVEMENT	–	Inspect	Inspect	Clean	Clean
*STORMWATER TRAP/BASIN	–	Inspect	Inspect	Clean/Mulch/ Repair/Reseed	See Permanent Stormwater Facilities Maintenance Schedule on Drawing SP-3.1

* Permanent vegetation is considered stabilized when 80% of the plant density is established. Erosion control measures shall remain in place until all disturbed areas area permanently stabilized.

Note: The party responsible for implementation of the maintenance schedule during and after construction is:

Wilder Balter Partners, Inc.
570 Taxter Road
Elmsford, NY 10523

and/or the current owner(s) of the subject property.

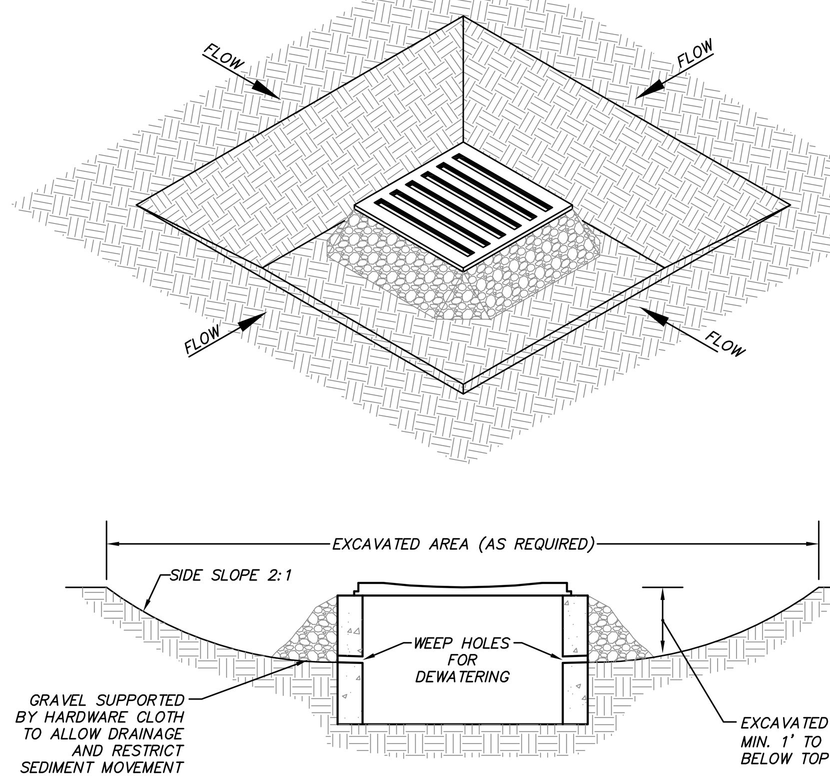


NOTES:

1. STONE SHALL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. SET SPACING OF CHECK DAMS SO THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

STONE CHECK DAM DETAIL

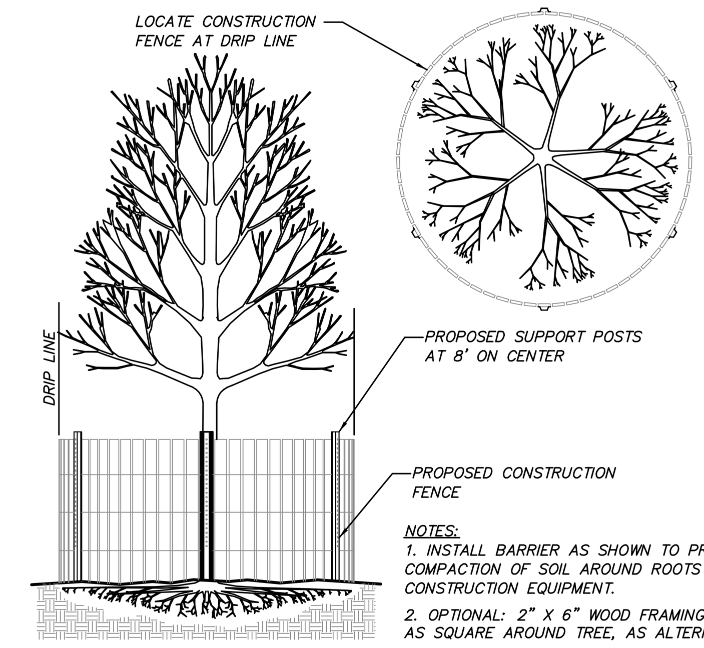
(N.T.S.)



1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL EXCAVATION WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY, AND STABILIZE WITH PERMANENT SEEDING
5. MAXIMUM DRAINAGE AREA = 1 ACRE

EXCAVATED DROP INLET PROTECTION DETAIL

(N.T.S.)



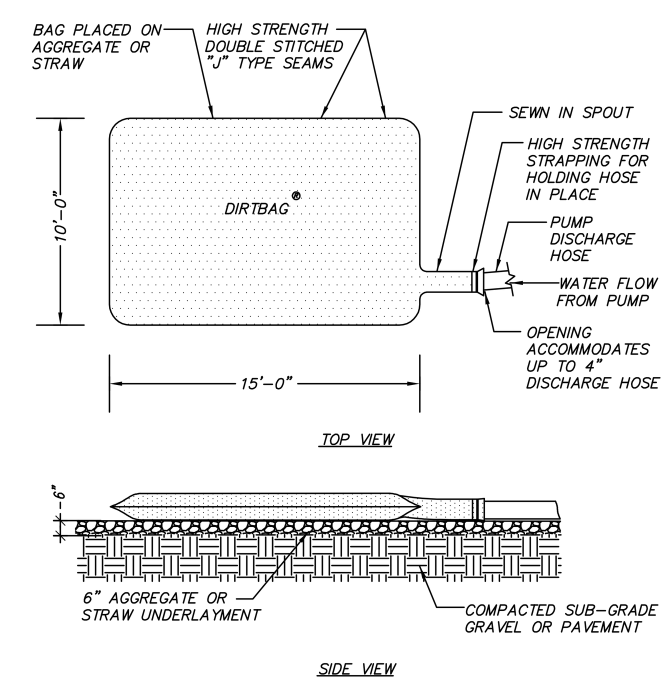
NOTES:
1. INSTALL BARRIER AS SHOWN TO PREVENT COMPACTION OF SOIL AROUND ROOTS BY CONSTRUCTION EQUIPMENT.
2. OPTIONAL: 2" X 6" WOOD FRAMING BUILT AS SQUARE AROUND TREE, AS ALTERNATIVE.

TREE PROTECTION DETAIL

(N.T.S.)

TREE PROTECTION NOTES:

1. Trees to be preserved in proximity to disturbance areas shall be marked in the field by the Landscape Architect prior to start of construction.
2. Install tree protection measures prior to start of site clearing & construction.
3. No construction equipment shall be parked and no earth or construction materials shall be stockpiled or stored under the canopy of trees to be preserved.
4. During tree removal operations associated with construction, do not damage adjacent trees to remain. Lower limbs and tree trunks, do not drop them.
5. Carefully tie back any tree branches that conflict with construction equipment.
6. Where trenching for utilities is required within a root zone, tunneling under and around roots shall be by hand digging. If roots 3" or larger are encountered immediately adjacent to the location of new construction and relocation is not practical, the roots shall be hand pruned under the supervision of a Certified Arborist or Landscape Architect to 6" back from the new construction limit. All exposed roots to receive appropriate treatment prior to backfilling.
7. If tree protection fencing to protect the root zone is not possible, six to eight inches of wood chip mulch and 3/4 inch plywood shall be placed over the entire affected root zone area to prevent soil compaction.
8. Any tree damaged during construction activities must be immediately repaired by a qualified arborist at no additional cost to the owner.



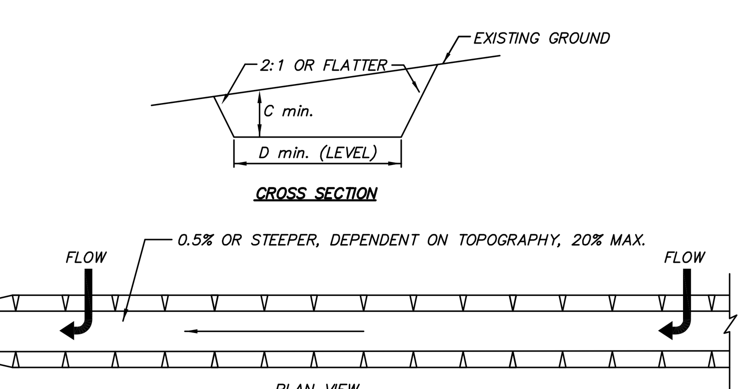
NOTES:

1. PUMPED SILT CONTROL SYSTEM TO BE LOCATED WHERE WATER, AFTER PASSING THROUGH SYSTEM, WILL NOT CAUSE EROSION.
2. PUMPED SILT CONTROL SYSTEM TO BE MONITORED AND MAINTAINED TO ASSURE ADEQUATE FILTRATION.
3. PUMPED SILT CONTROL SYSTEM TO BE MANUFACTURED BY ACF ENVIRONMENTAL (1-800-448-3636) OR APPROVED EQUAL.

"DIRTBAG" PUMPED SILT CONTROL SYSTEM DETAIL

(N.T.S.)

	SWALE A (< 5 AC.)	SWALE B (5-10 AC.)
C	1'	1'
D	4'	6'



CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED ON CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.
9. STABILIZATION SHALL BE AS PER THE CHART BELOW:

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	A (5 AC. OR LESS)	B (5-10 AC.)
1	0.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELSIOR
3	5.1-8.0%	SEED WITH JUTE OR EXCELSIOR; SOD	LINED RIP-RAP 4-8" RECYCLED CONCRETE EQUIVALENT
4	8.1-20%	LINED 4-8" RIP-RAP	ENGINEERED DESIGN

TEMPORARY SWALE DETAIL

(N.T.S.)

EROSION & SEDIMENT CONTROL NOTES:

1. The Erosion and Sediment Control Plan is only to be referred to for the installation of erosion and sediment control measures. For all other construction related activities, including, but not limited to, grading and utilities, refer to the appropriate drawings.
2. Each contractor or subcontractor responsible for soil disturbance shall have a NYSDEC trained contractor onsite during soil disturbing activities. The NYSDEC trained contractor will be responsible to comply with the stormwater pollution prevention plan and for the implementation and maintenance of erosion and sediment control measures on this site prior to and during construction. The NYSDEC trained contractor shall sign a certification statement required by GP-0-15-002.
3. All construction activities involving the removal or disposition of soil are to be provided with appropriate protective measures to minimize erosion and contain sediment disposition within. Minimum soil erosion and sediment control measures shall be implemented as shown on the plans and shall be installed in accordance with "New York Standards and Specifications For Erosion and Sediment Control," latest edition.
4. Wherever feasible, natural vegetation should be retained and protected. Disturbance shall be minimized in the areas required to perform construction. No more than 5 acres of unprotected soil shall be exposed at any one time, unless prior authorization is granted by the MS4.
5. When land is exposed during development, the exposure shall be kept to the shortest practical period of time, but in no case more than 7 days after the construction activity in that portion of the site has ceased. Disturbance shall be minimized in the areas required to perform construction.
6. All construction vehicles shall be kept clear of the watercourses and wetland control areas outside the areas of proposed development. Silt fence and orange construction fence shall be installed in the areas where the grading is in close proximity of the watercourses or wetland control areas.
7. The stabilized construction entrances, silt fence, and orange construction fence shall be installed as shown on the plans prior to beginning any clearing, grubbing or earthwork.
8. All topsoil to be stripped from the area being developed shall be stockpiled and immediately seeded with a rye grass mixture having a quick germination time.
9. Any graded areas not subject to further disturbance or construction traffic shall, within 7 days of final grading, receive permanent vegetation cover in combination with a suitable mulch. Refer to "Site Seeding Notes" for additional detail and application rate.
10. Grass seed mix may be applied by either mechanical or hydroseeding methods. Turf establishment shall be performed in accordance with the current edition of the "NYSDOT Standard Specification, Construction and Materials, Section 610-3.02, Method No. 1".
11. Cut or fill (all) slopes steeper than 3:1 shall be stabilized immediately after grading with a rolled erosion control product (RECP) such as, Curlex I Single Net Erosion Control Blanket, or approved equal.
12. Paved roadways shall be kept clean at all times.
13. The site shall at all times be graded and maintained such that all stormwater runoff is diverted to soil erosion and sediment control facilities.
14. All storm drainage outlets shall be stabilized, as required, before the discharge points become operational.
15. Stormwater from disturbed areas must be passed through erosion control barriers before discharge beyond disturbed areas or discharged into other drainage systems.
16. Erosion and sediment control measures shall be inspected and maintained on a daily basis by the NYSDEC Trained Contractor. to insure that channels, temporary and permanent ditches and pipes are clear of debris, that embankments and berms have not been breached and that all straw bales and silt fences are intact. Any failure of erosion and sediment control measures shall be immediately repaired by the contractor and inspected for approval by the site engineer.
17. Dust shall be controlled by sprinkling or other approved methods as necessary, or as directed by the trained contractor or site engineer.
18. Cut and fills shall not endanger adjoining property, nor divert water onto the property of others.
19. All fills shall be placed and compacted in 6" lifts to provide stability of material and to prevent settlement.
20. The NYSDEC Trained Contractor shall inspect downstream conditions for evidence of sedimentation on a weekly basis and after rainstorms.
21. As warranted by field conditions, special additional erosion and sediment control measures, as specified by the site engineer, the Wetlands Inspector, the Town Engineer and/or NYCDEP shall be installed by the contractor.
22. Erosion and sediment control measures shall remain in place until all disturbed areas are suitably stabilized.
23. After completion of the site improvements, the owner will assume responsibility for maintenance of the roads, parking lots, drainage systems and stormwater facilities. Each spring the paved areas shall be cleaned to remove the winter accumulation of traction sand. After this is completed all drain inlet and catch basin sumps should be cleaned. All pipes should be checked for debris and blockage and cleaned as required. During the cleaning process, the drain inlets, catch basins and pipes should be inspected for structural integrity and overall condition. Repairs and/or replacements should be made as required.
24. Inspection of the stormwater basins should be performed every 6 months and after large storm events. These inspections should, at a minimum, check the outlet pipes for blockage and the general overall integrity of the basin and appurtenances.
25. Maintain basin vegetation including removal of trees and replacement of vegetation that should die. Remove any litter which accumulates as necessary. Typically, the accumulated silt will be required to be removed every 10 to 20 years. Any accumulated silt shall be removed from the stormwater basins once the site has been stabilized.
26. Refer to the Stormwater Pollution Prevention Plan for additional details regarding long-term maintenance of the storm drainage facilities.

EXCAVATION DEWATERING CONTINGENCY REQUIREMENTS:

The contractor shall maintain a contingency excavation dewatering kit consisting of a minimum of the following:

- (1) Submersible 2" electric trash pump with float switch, model #HS2.4S-61 as manufactured by Tsurumi Pumps or approved equal. 3000 GPH, max head 39 ft.
- (1) Generator to run the electric trash pump.
- (1) Gas powered 3" heavy duty trash pump, model # 3S5AR as manufactured by Gorman Rupp or approved equal. 18,000 GPH, max head 103 ft. head 39 ft..
- (6) 4' X 8' sheets of plywood
- (20) Haybales
- (500 LF) 2" hose
- (500 LF) 3" hose
- (300 LF) silt fence
- (20 CY) 3/4" washed crushed stone
- (40 LF) 24"ø perforated HDPE pipe
- (1) "Dirtbag" pumped silt control system

NO.	DATE	REVISION	BY
1	3-31-16	REVISED PER TOWN COMMENTS	MEU

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:

WILDER BALTER PARTNERS, INC.

ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:

SITE DETAILS

STATE OF NEW YORK · JEFFREY J. CONTELMO · 61831 · LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.	DRAWING NO. D-3
DATE	2-4-16	DRAWN BY	S.J.C.	SHEET 8 / 8
SCALE	AS SHOWN	CHECKED BY	D.L.M.	

TO: Town of Lewisboro Planning Board

FROM: Lewisboro Conservation Advisory Council

SUBJECT: Caban Wetland Permit
31 South Shore Drive, South Salem
Sheet 33.15, Block 5, Lot 12/A013
Cal#6-16WP

DATE: April 11, 2016

The Conservation Advisory Council (CAC) reviewed this application at our April meeting.

In reviewing the county's septic pumping records, the CAC found no record of the holding tank at the applicant's location having been pumped within the last 5 years. We suggest that as part of the wetland mitigation, the holding tank at this location should be pumped and inspected, and we ask that the applicant consider the installation of an alarm in the holding tank.

NADERMAN
LAND PLANNING AND ENGINEERING, P.C. BARRY G. NADERMAN, P.E.

March 31, 2016 **VIA HAND DELIVER**

Planning Department
Town of Lewisboro
Cross River Shopping Center
@ Orchard Square
Suite L (Lower Level)
20 North Salem Road
Cross River, NY 10518

Attn: Ciorsdan Conran – Planning Administrator

Re: Caban Restoration
31 South Shore Drive
Town of Lewisboro
Tax ID: Sht 33D; Blk CAMP; Lot 13

Dear Ms. Conran:

Enclosed find nine (9) copies of the following for the update submission for an application for a Wetlands Permit for the property restoration at the above referenced property:

- Dwg R-1 "Property Restoration Plan" rev. dated 3-9-16
- Re-Submission Letter to Kellard Sessions dated 3-11-16
- Wetlands Implementation Permit issued 3-23-16
- Completed NYSDEC Notice of Intent (NOI)
- Letter from the South Shore Waccabuc Association dated 2-29-16

We are filing at this time to provide the Board with an update of the project in preparation for our scheduled appearance at the April ~~13~~ 19th Planning Board meeting.

Subsequent to our last appearance, we had made a re-submission to Kellard Sessions of the revised plans on March 11, 2016. That submission was the basis for the issuance of the Wetlands Implementation Permit issued 3-23-16 for the initial clean up of the debris and timber/ brush throughout the property. A copy of the re-submission letter and Permit are attached herewith.

Also enclosed is the NYSDEC Notice of Intent as well as the Approval letter from the South Shore Waccabuc Association as requested.

1 Deans Bridge Road
2nd Floor
Somers, NY 10589

tel: 914.245.5403
fax: 914.962.5963
e: bgn@naderman.com

We look forward to discussing further at your April 13th meeting. At which time we are hopeful the Board will be in a position to make a determination to allow the project to proceed with an Administrative Wetlands Permit for the remaining restoration work.

In the meanwhile, upon review, should you require any additional information, or have any questions, please feel free to call.

Respectfully,

Barry G. Naderman, P.E.
Naderman Land Planning & Engineering, P.C.

cc: Patricia and Ryan Caban w/ enc.

5881PBsubm2

NADERMAN
LAND PLANNING AND ENGINEERING, P.C. BARRY G. NADERMAN, P.E.

March 11, 2016

VIA HAND DELIVER

Kellard Sessions Consulting, P.C.
500 Main Street
Armonk, NY 10504

Attn: David Sessions, RLA, AICP
Town Wetlands Inspector

Re: Caban Restoration
31 South Shore Drive
Town of Lewisboro
Tax ID: Sht 33D; Blk CAMP; Lot 13

Dear Mr. Sessions:

Enclosed find 3 Copies of the revised Dwg R-1 "Property Restoration Plan" rev. dated 3-9-16 for the re-submission for a Wetlands Permit for the property restoration at the above referenced property.

The plan has been revised based upon our meeting in the field and comments listed in your memorandum dated February 12, 2016. Items listed are addressed as follows by item number:

1. A 10' wide vegetative buffer strip has been indicated along the shoreline with an opening at the existing opening in the concrete/ boulder bulkhead. As suggested, the plant selection list will be submitted to prior to purchasing the plant materials for installation.
2. The limit of disturbance had been illustrated on the plan indicating 14,000 sf or so of disturbance. As such, upon clean-up of the brush and timber, we will re-delineate the line for the remaining work and prepare the NYSDEC Notice of Intent accordingly.
3. The wetland boundary and intermittent watercourse has been added to the plan as delineated in the field. It is obvious the entire property lies within the resulting 150' buffer.
4. The note regarding the stump removal has been expanded to include the immediate topsoil, seeding and mulch as requested.
5. The minimum 4" topsoil has been added to the 6th note of the Sediment and Erosion Control Notes as requested.
6. The existing septic holding tank and well have been added to the plan as located in the field.
7. The tax parcel ID has been revised as requested. Be advised the prior number indicated was taken from the County GIS mapping.
8. The plans have been signed and sealed as requested.

1 Deans Bridge Road
2nd Floor
Somers, NY 10589

tel: 914.245.5403
fax: 914.962.5963
e: bgn@naderman.com

We are hopeful all is in order for issuance of the first Administrative Wetlands Permit to initiate the clean-up of the site limited to debris, timber and brush pile removal. It is our understanding that the Planning Board will consider an Administrative Wetlands Permit at their April meeting. Be advised the Owner has obtained the letter from the Association approving the remediation which will be submitted along with the NYSDEC NOI for that April meeting.

In the meanwhile, upon review, should you require any additional information, or have any questions, please feel free to call.

Respectfully,

Barry G. Naderman, P.E.
Naderman Land Planning & Engineering, P.C.

cc: Patricia and Ryan Caban w/ enc.

5881kellardsubm

WETLAND IMPLEMENTATION PERMIT

TOWN OF LEWISBORO

Town Offices @ Orchard Square, Suite L (Lower Level)
20 North Salem Road, Cross River, NY 10518
Phone: (914) 763-3060
Fax: (914) 533-0097

Date Issued: March 23, 2016 Permit #: 05-14 W.V.

Permit is hereby issued to: Patricia & Ryan Caban
31 South Shore Drive

Description of Approved Activity: The applicant is proposing remediation in the form of timber, brush, tree and debris removal in response to the Town of Lewisboro Wetland Violation. The proposed remediation will be referred to as Phase 1, as there will be further restoration of the property in the future. The applicant appeared before the Town of Lewisboro Planning Board where it was determined that the remediation of the Wetland Violation could be handled administratively by this office.

Location of Proposed Activity: 31 South Shore Drive

Sheet: 33D Block: CAMP Lot(s): 13

Conditions:

1. No land disturbance activity shall be permitted within the wetlands or within 150 feet of the wetlands, except as specifically approved herein.

2. The following drawing, prepared by Naderman Land Planning & Engineering, P.C. and dated January 26, 2016, is hereby approved subject to the conditions set forth below:

   - Property Restoration Plan (R-1)

3. Prior to the commencement of any site work, silt fencing shall be installed downslope of the disturbance area and perpendicular to the direction of the slope. All disturbed areas shall be raked, seeded and mulched upon completion of land disturbance activities.

4. The issuance of this permit does not necessarily authorize the commencement of site work. No site work shall commence until the conditions of this permit have been satisfied (the conditions required to be satisfied prior to the commencement of any site work) and until the owner/applicant has obtained any and all required permits from other Town, County, State or Federal Departments and/or Agencies (as applicable).

5. All work covered by this permit is to be completed before March 23, 2018, unless an extension of this period is requested in writing and granted.

Wetland Inspector

0806372691

NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR _____ (for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-15-002

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

-IMPORTANT-

RETURN THIS FORM TO THE ADDRESS ABOVE

OWNER/OPERATOR **MUST SIGN FORM**

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)
Ryan and Patricia Caban

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
Caban

Owner/Operator Contact Person First Name
Ryan

Owner/Operator Mailing Address
14 Old Pond Road

City
South Salem

State
NY

Zip
10590 -

Phone (Owner/Operator)
914 - 815 - 1174

Fax (Owner/Operator)
___ - ___ - ____

Email (Owner/Operator)
ryanjcaban@gmail.com

FED TAX ID
__ - _____ (not required for individuals)

Project Site Information

Project/Site Name
Caban Restoration

Street Address (NOT P.O. BOX)
31 South Shore Drive

Side of Street
● **North** ○ **South** ○ **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)
Town of Lewisboro

State: NY
Zip: 10590-
County: Westchester
DEC Region:

Name of Nearest Cross Street
Oscaleta Road

Distance to Nearest Cross Street (Feet)
650

Project In Relation to Cross Street
○ **North** ○ **South** ○ **East** ● **West**

Tax Map Numbers
Section-Block-Parcel
33.15-5-12

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you **must** go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.ny.gov/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i"(identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting): 619420

Y Coordinates (Northing): 4572670

2. What is the nature of this construction project?

○ **New Construction**

○ **Redevelopment with increase in impervious area**

● **Redevelopment with no increase in impervious area**

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use

- ○ FOREST
- ○ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ● SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ○ OTHER

Post-Development Future Land Use

- ● SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION — Number of Lots
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- ○ OTHER

***Note:** for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
0.0	0.3	0.0	0.0

5. Do you plan to disturb more than 5 acres of soil at any one time? ○ **Yes** ○ **No**

6. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

A	B	C	D
%	%	100 %	%

7. Is this a phased project? ○ **Yes** ● **No**

8. Enter the planned start and end dates of the disturbance activities.

Start Date 04 / 15 / 2016 – **End Date** 12 / 31 / 2016

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name

Waccabuc Lake

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ○ Wetland / State Jurisdiction Off Site
- ○ Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ○ Stream / Creek Off Site
- ○ River On Site
- ○ River Off Site
- ○ Lake On Site
- ● Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ● Regulatory Map
- ○ Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-15-002? ○ **Yes** ● **No**

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-15-002? ● **Yes** ○ **No**

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ● **Yes** ○ **No**
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ **Yes** ● **No**
If Yes, what is the acreage to be disturbed?

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ **Yes** ● **No**

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ● **Yes** ○ **No** ○ **Unknown**

16. What is the name of the municipality/entity that owns the separate storm sewer system?

Town of Lewisboro

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ○ **Yes** ● **No** ○ **Unknown**

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ○ **Yes** ● **No**

19. Is this property owned by a state authority, state agency, federal government or local government? ○ **Yes** ● **No**

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) ○ **Yes** ● **No**

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? ● **Yes** ○ **No**

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? ○ **Yes** ● **No**
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? ○ **Yes** ○ **No**

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ● **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer
Naderman Land Planning & ENgineering,P.C

Contact Name (Last, Space, First)
Naderman, Barry

Mailing Address
1 Deans Bridge Road

City
Somers

State Zip
NY 10589-

Phone
914-245-5403

Fax
914-962-5963

Email
bgn@naderman.com

SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-15-002. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name
Barry

MI
G

Last Name
Naderman, P.E.

Signature

Date
03/31/2016

25. Has a construction sequence schedule for the planned management practices been prepared? ○ Yes ○ No

26. Select **all** of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural

- ○ Check Dams
- ○ Construction Road Stabilization
- ○ Dust Control
- ○ Earth Dike
- ○ Level Spreader
- ○ Perimeter Dike/Swale
- ○ Pipe Slope Drain
- ○ Portable Sediment Tank
- ○ Rock Dam
- ○ Sediment Basin
- ○ Sediment Traps
- ● Silt Fence
- ○ Stabilized Construction Entrance
- ○ Storm Drain Inlet Protection
- ○ Straw/Hay Bale Dike
- ○ Temporary Access Waterway Crossing
- ○ Temporary Stormdrain Diversion
- ○ Temporary Swale
- ○ Turbidity Curtain
- ○ Water bars

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ○ Grassed Waterway
- ● Mulching
- ○ Protecting Vegetation
- ○ Recreation Area Improvement
- ● Seeding
- ○ Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ● Topsoiling
- ○ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ○ Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ○ Retaining Wall
- ○ Riprap Slope Protection
- ○ Rock Outlet Protection
- ○ Streambank Protection

Other

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- ○ **Preservation of Undisturbed Areas**
- ○ **Preservation of Buffers**
- ○ **Reduction of Clearing and Grading**
- ○ **Locating Development in Less Sensitive Areas**
- ○ **Roadway Reduction**
- ○ **Sidewalk Reduction**
- ○ **Driveway Reduction**
- ○ **Cul-de-sac Reduction**
- ○ **Building Footprint Reduction**
- ○ **Parking Reduction**

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).

○ All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).

○ Compacted areas were considered as impervious cover when calculating the **WQv Required,** and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

[ ][ ][ ].[ ][ ][ ] **acre-feet**

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required(#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	Total Contributing Area (acres)		Total Contributing Impervious Area (acres)
RR Techniques (Area Reduction)			
○ Conservation of Natural Areas (RR-1)	___.___	and/or	___.___
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)	___.___	and/or	___.___
○ Tree Planting/Tree Pit (RR-3)	___.___	and/or	___.___
○ Disconnection of Rooftop Runoff (RR-4)	___.___	and/or	___.___
RR Techniques (Volume Reduction)			
○ Vegetated Swale (RR-5)			___.___
○ Rain Garden (RR-6)			___.___
○ Stormwater Planter (RR-7)			___.___
○ Rain Barrel/Cistern (RR-8)			___.___
○ Porous Pavement (RR-9)			___.___
○ Green Roof (RR-10)			___.___
Standard SMPs with RRv Capacity			
○ Infiltration Trench (I-1)			___.___
○ Infiltration Basin (I-2)			___.___
○ Dry Well (I-3)			___.___
○ Underground Infiltration System (I-4)			___.___
○ Bioretention (F-5)			___.___
○ Dry Swale (O-1)			___.___
Standard SMPs			
○ Micropool Extended Detention (P-1)			___.___
○ Wet Pond (P-2)			___.___
○ Wet Extended Detention (P-3)			___.___
○ Multiple Pond System (P-4)			___.___
○ Pocket Pond (P-5)			___.___
○ Surface Sand Filter (F-1)			___.___
○ Underground Sand Filter (F-2)			___.___
○ Perimeter Sand Filter (F-3)			___.___
○ Organic Filter (F-4)			___.___
○ Shallow Wetland (W-1)			___.___
○ Extended Detention Wetland (W-2)			___.___
○ Pond/Wetland System (W-3)			___.___
○ Pocket Wetland (W-4)			___.___
○ Wet Swale (O-2)			___.___

Table 2 - Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Alternative SMP	Total Contributing Impervious Area (acres)
○ **Hydrodynamic**	___.___
○ **Wet Vault**	___.___
○ **Media Filter**	___.___
○ **Other** _____	___.___

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name _____

Manufacturer _____

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.

Total RRv provided

___.___ **acre-feet**

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

○ **Yes** ○ **No**

If Yes, go to question 36.
If No, go to question 32.

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

___.___ **acre-feet**

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

○ **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.

If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided

[ ][ ][ ].[ ][ ][ ] **acre-feet**

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). [ ][ ][ ].[ ][ ][ ]

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? ○ **Yes** ○ **No**

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required

[ ][ ][ ].[ ][ ][ ] **acre-feet**

CPv Provided

[ ][ ][ ].[ ][ ][ ] **acre-feet**

36a. The need to provide channel protection has been waived because:

○ Site discharges directly to tidal waters or a fifth order or larger stream.

○ Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

37a. The need to meet the Qp and Qf criteria has been waived because:

- ○ Site discharges directly to tidal waters or a fifth order or larger stream.
- ○ Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ○ **Yes** ○ **No**

If Yes, Identify the entity responsible for the long term Operation and Maintenance

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a) This space can also be used for other pertinent project information.

40. Identify other DEC permits, existing and new, that are required for this project/facility.

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Solid Waste
- ○ Navigable Waters Protection / Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands/Article 24
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers
- ○ Stream Bed or Bank Protection / Article 15
- ○ Endangered or Threatened Species(Incidental Take Permit)
- ○ Individual SPDES
- ○ SPDES Multi-Sector GP N Y R
- ○ Other
- ● None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ○ Yes ● No
If Yes, Indicate Size of Impact. .

42. Is this project subject to the requirements of a regulated, traditional land use control MS4? ● Yes ○ No
(If No, skip question 43)

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ● Yes ○ No

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. N Y R

Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name: Ryan

MI:

Print Last Name: Caban

Owner/Operator Signature:

Date: / /

Feb. 29, 2016

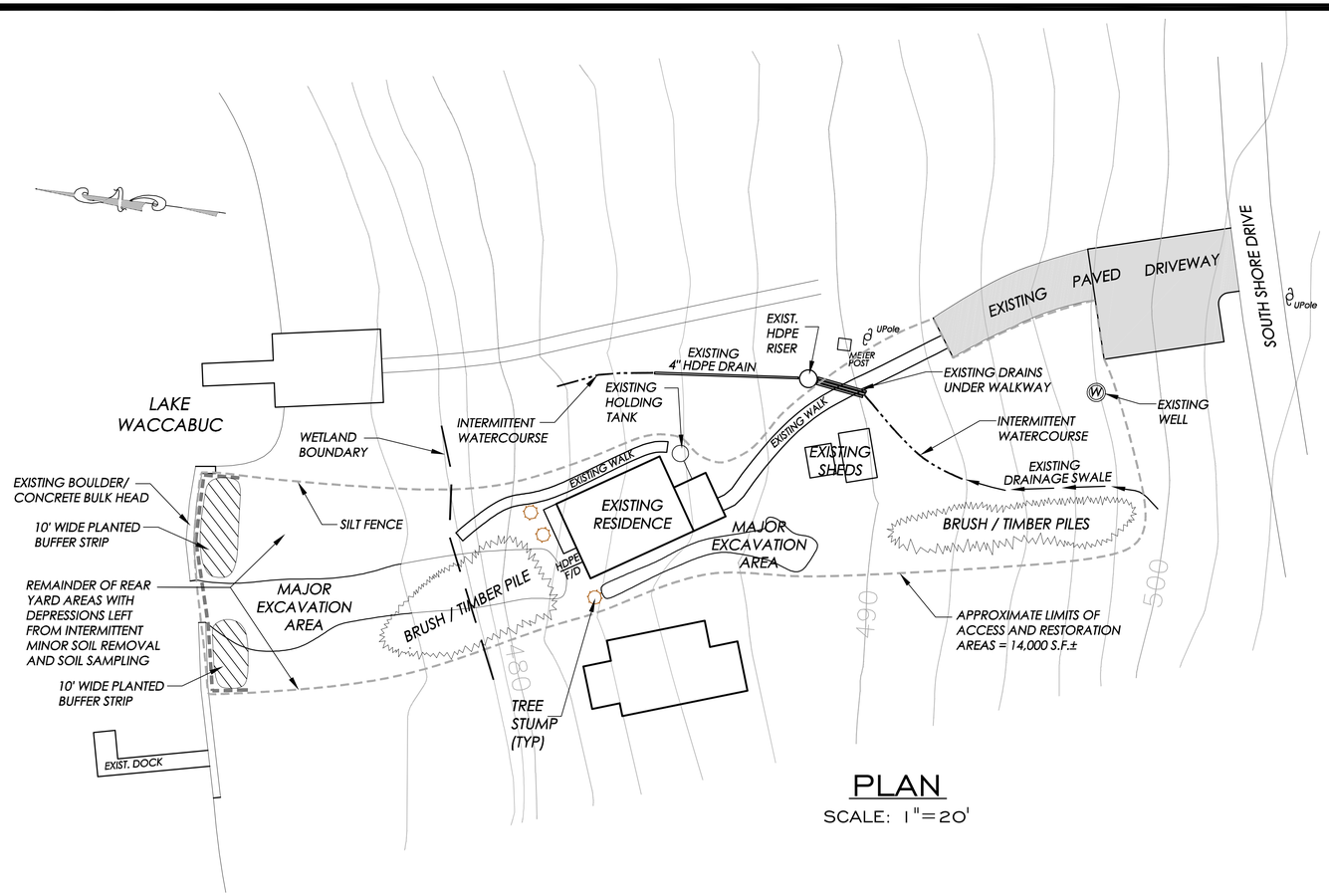
To Whom It May Concern,

The South Shore Waccabuc Assn. Executive Board has reviewed and approves of the Plan titled, "Property Restoration Plan (R-1)" for the Caban residence at 31 South Shore Drive, South Salem N.Y. In addition the Executive Board requests that the building contractor who is doing said work or any work on the property add, South Shore Waccabuc Assn., on to their insurance policy while work is being done. Thank You.

George Peterkin

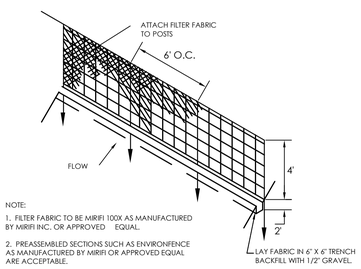
George Peterkin

President of the So. Shore Waccabuc Assn.



PLAN

SCALE: 1"=20'



NOTE:

1. FILTER FABRIC TO BE MIRIFI 100X AS MANUFACTURED BY MIRIFI INC. OR APPROVED EQUAL.

2. PREASSEMBLED SECTIONS SUCH AS ENVIRONFENCE AS MANUFACTURED BY MIRIFI OR APPROVED EQUAL ARE ACCEPTABLE.

DETAIL: SILT FENCE

N.T.S.

INSTALLATION NOTES:

1. PLACE BALES OF STRAW WITH ENDS TIGHTLY ABUTTING OTHER BALES TO SURROUND THE INLET. WHERE SLOPE AND SPACE PERMIT, ESTABLISH THE LINE OF BALES 2 TO 10 FEET AWAY FROM THE INLET. ANCHOR BALES IN PLACE BY DRIVING REBARS OR 2' X 2' STAKES THROUGH THE BALES. SUPPLEMENT WITH GRAVEL, PILES AGAINST THE BALES.

2. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

3. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.

4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION SHALL BE MINIMIZED.

5. THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

MAJOR EXCAVATION ARE

The Major Excavation Areas from the soil clean-up shall be filled with clean fill material free of organic and any kink of construction debris or waste materials. The fill will be placed and compacted in 12" lifts to the prior natural subgrade. The areas will be immediately topsoiled, seeded and mulched.

STUMP REMOVAL

The significant stumps left shall be excavated and hauled off-site to an approved facility. The excavations left will be filled with clean fill material free of organic and any kink of construction debris or waste materials. The fill will be placed and compacted in 12" lifts to the prior natural subgrade. Disturbed areas shall be immediately immediately treated with topsoil, seed and mulch.

REAR YARD AREA OF DEPRESSIONS

The smaller depressions and soil testing holes in the remainder of the rear yard will be top dressed with clean topsoil to smooth the depressions and immediately seeded and mulched.

BRUSH / TIMBER PILES

All cut brush and timber will be removed off-site and disposed off-site at an approved facility. Any bare areas will be immediately topsoiled, seeded and mulched.

GENERAL CLEAN-UP OF SITE DEBRIS

Miscellaneous debris found throughout the site will be cleaned up and hauled off-site to an approved facility. Any bare areas will be immediately topsoiled, seeded and mulched.

SITE DATA

Owner/Applicant:	Patricia and Ryan Caban 14 Old Pond Road South Salem, N.Y. 10590
Location:	31 South Shore Drive South Salem, New York (Town of Lewisboro)
Designation:	Sec: 33D Blk: CAMP Lot: 13
Site Area:	

GENERAL NOTES

This plan has been prepared to identify the damaged portions of the site as a result of an oil clean up operation under the direct supervision of the NYSDEC and to identify the work required to restore the prooperty to its prior condition.

Existing topography and site features based upon the Westchester County GIS mapping and on-site field observations.

Wetland boundary and intermittent watercourse delineation based upon flagging set by Naderman Land Planning & Engineering and confirmed by Kellard Sessions Consulting on March 7, 2016.

Sediment & Erosion Control Notes

Silt fencing shall be placed where indicated and as directed by the ENgineer or Town Engineer in the field to completely isolate the work area and protect the lake.

The town may require additional erosion control measures if deemed appropriate to mitigate siltation or erosion of disturbed soils.

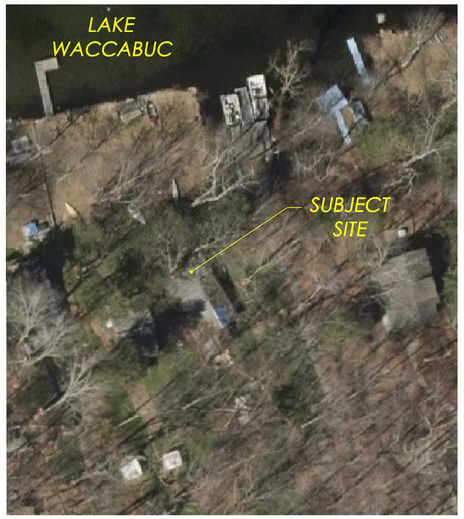
Erosion control measures shall be installed prior to the start of construction within a specific work area. The contractor shall be responsible for the maintenance and/or replacement of control measures as required throughout the duration of construction.

All erosion controls shall be inspected immediately after a rainfall event and on a weekly basis. Any damaged controls shall be immediately repaired or replaced as required.

If any disturbed areas are to remain idle for a period of seven (7) days or more, the area shall be temporarily stabilized with temporary seeding and mulching.

Once all areas have been filled and the clean up materials are removed from the site to the satisfaction of the Town Engineer, the disturbed areas shall be restored with a minimum 4" topsoil and seeded with an aggressive ecology seeding mix.

Once a healthy stand of vegetaion has stabilized the areas, the erosion controls shall be removed.



AERIAL PLAN

SCALE: 1"=40'

UNAUTHORIZED ALTERATIONS AND ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW.

No.	Revision/Issue	Date
1	REV. PER TOWN COMMENTS	3/9/16

NADERMAN
LAND PLANNING AND ENGINEERING, P.C.
tel: 914.245.5403
fax: 914.962.5963
e: bgn@naderman.com
1 deans bridge road
2nd floor
somers, ny 10589

CABAN RESIDENCE

31 South Shore Drive

Town of Lewisboro Westchester Co., NY

PROPERTY RESTORATION PLAN

Project 5881	Sheet R-1
Date 1/26/16	
Scale 1" = 20'	

Site Design Consultants

Civil Engineers • Land Planners

March 31, 2016

Chairman Jerome Kerner, AIA
Members of the Lewisboro Planning Board

c/o Ms. Ciorsdan Conran
Planning Board Secretary
P.O. Box 725
Cross River, NY 10518

Re: Arias/Lexus Subdivision
Block 09834, Lots 28 & 162, Sheet 50
Cal# 12-13PB

Dear Chairman Kerner and Members of the Planning Board:

On behalf of our clients, our previous request for an extension of time to the resolution granting Final Subdivision Plat Approval, dated May19, 2015 will expire on April 17, 2016.

We are providing this letter as a request for an extension of time for resubmission of approval regarding the above referenced Planning Board Resolution for Arias / Lex Holding Company Ltd., granting Final Subdivision Plat Approval, which will expire July 16, 2016. Since the subdivision plat has not yet received final signature, we are requesting a time extension to keep this project current.

We are awaiting the review and signatures of both property owners which should be obtained in the near future. Kindly place this item on the agenda for the April 19, 2016 Planning Board Meeting for a time extension to expire July 16, 2016. Please let us know if you have any questions, or advise us of additional information that may need to be provided to support this request. Thank you.

Sincerely,

Joseph C. Riina, P.E.

Cc: G. Arias
Lex Holding Co., Ltd.

JCR/cm/sdc 02-20

251-F Underhill Avenue • Yorktown Heights, New York 10598
60 Walnut Grove Road • Ridgefield, Connecticut 06877
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Cross River, New York 10518

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April 12, 2016

Via Email: planning@lewisborogov.com

Ciorsdan Conran
Planning Board Secretary
Lewisboro Planning Board
P.O. Box 725
Cross River, New York 10518

Re: Rudolph C. Petruccelli
Section 33B, Lot 26, Block 11157
Cal. #8-12 P.B.

Dear Ciorsdan:

Request is respectfully made for an additional ninety (90) day extension of the Preliminary/Final Subdivision Plat approval in the above matter. Unfortunately, Mr. Petruccelli suffered a serious illness which required hospitalization. We would appreciate this further extension in order to finalize the filing of the plat.

Very truly yours,

Michael Fuller Sirignano

MFS/cp