

AGENDA PACKET

FEBRUARY 23, 2021 MEETING

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TOWN OF LEWISBORO
Westchester County, New York



Planning Board
79 Bouton Road
South Salem, New York 10590

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

AGENDA

Tuesday, February 23, 2021

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

Via Zoom videoconferencing and live streaming to Lewisboro TV YouTube channel

Join Zoom Meeting at <https://zoom.us/j/96636736163?pwd=NEsyNXRqYnZmb0tIOTEzbnlCL2hOUT09>

Meeting ID: 966 3673 6163 Passcode 839761

You may call in to the Zoom meeting at 1-929-205-6099 when prompted, enter 966 3673 6163

<https://www.youtube.com/channel/UCNUNE5gXs5rnHcyR4l6dikA>

I. DECISION

Cal #01-18PB

Apex Personal Training, 20 North Salem Road, Cross River NY 10518, Sheet 17, Block 10533, Lot 89 (EK Cross River, owner of record) - Application for Change of Use/Waiver of Site Development Plan Procedures.

II. PUBLIC HEARING, CONTINUATION

Cal #03-20PB, Cal #37-20WP

Gossett Brothers Nursery, 1202 Route 35, South Salem, NY 10590, Sheet 31 Block 10805 Lot 46 (Thomas Gossett for T. Gossett Revocable Trust – owner of record) - Application for Site Development Plan Approval and Wetland Activity Permit Approval for an existing nursery.

III. WETLAND VIOLATIONS

Cal #02-19WV, Cal #60-19WP, Cal #14-19SW

Kullman Residence, 12 Red Coat Lane, Waccabuc, NY 10597, Sheet 26, Block 11155, Lot 92 (Michael and Susan Kullman, owners of record)

Cal #01-20WV, Cal #12-20WP

Valencia Residence, 1196 Route 35, South Salem, NY 10590, Sheet 31, Block 10805, Lot 45 (Maria and Javier Valencia, owners of record)

IV. SITE DEVELOPMENT PLAN REVIEW

Cal #06-17PB

Wolf Conservation Center, Buck Run, South Salem, NY 10590, Sheet 21, Block 10803, Lots 3, 65, 67, 81, 82, 83, 86 & 88 (Wolf Conservation Center, owner of record) - Application for a Site Development Plan Approval, Special Use Permit and Subdivision associated with a private nature preserve.

V. WETLAND PERMIT REVIEW

Cal#60-20WP

McGuinness Residence, 17 Schoolhouse Road, Waccabuc, NY 10597, Sheet 22, Block 10802, Lot 35 (Annette and Peter McGuinness, owners of record) - Application for the construction of a greenhouse, covered dining area, spa and extension of an existing patio.

Cal #09-21WP

Gorton Residence, 22 Gilbert Road, South Salem, NY 10590, Sheet 36F, Block 10806, Lot 24 (Lara Gorton, owner of record) - Application for the construction of a rain garden and mitigation for modified sea wall.

Cal #13-21WP

Strauss Residence, 399 Pound Ridge Road, South Salem, NY 10590, Sheet 29B, Block 10540, Lot 64 (The Janice Filipowicz Strauss & William Theodore Strauss III Revocable Living Trust, owners of record) - Application for the construction of a sunroom.

VI. MINUTES OF January 19, 2021

VII. NEXT MEETING DATE: March 16, 2021.

TOWN OF LEWISBORO
Westchester County, New York



Building Department
79 Bouton Road
South Salem, New York 10590

Tel: (914) 763-3060
Fax: (914) 875-9148
Email: jangiello@lewisborogov.com

February 11, 2021

Ms. Janet Andersen, Chair
Town of Lewisboro Planning Board

Re: Cal#01-18PB
Apex Personal Training, 20 North Salem Rd., sheet 10533, block 10805, lot 089

Dear Ms. Andersen and Members of the Board,

I have reviewed the plan from Steven Charles Helmes, R.A., dated 1/22/2021. The proposed gym expansion is zoning compliant, other than the parking space shortfall. I have no issue with the Planning Board considering joint use of parking for this use.

Please do not hesitate to contact me with any questions.

Sincerely,

Joe Angiello
Building Inspector



THE HELMES GROUP, LLP

ARCHITECTURE • ENGINEERING
PROJECT MANAGEMENT

Via E-Mail & Hand Delivered

January 30, 2021

Chair Andersen & Members of the Planning Board
Town of Lewisboro
79 Bouton Road
South Salem, NY 10590

Project: Expansion of Existing Fitness Facility - "Change of Use"
APEX Personal Training, LLC., Existing Tenant
Cross River Shopping Center – Lower Level
Cross River, NY 10518 – Town of Lewisboro

Subject: Waiver of Site Development Plan Approval

Dear Chair Andersen & Members of the Planning Board:

In accordance with our 1/19/21 Planning Board Zoom Meeting, regarding the above-mentioned project, please be advised that our office has addressed the Planning Board Member comments, which were discussed and requested into revised drawings. Specifically, showing equipment layout in expanded fitness area spaced out as depicted on attached floor plan drawing for maintaining social distancing.

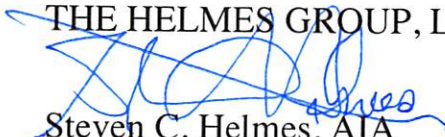
Therefore, enclosed hereto please find revised Drawings, dated 1/22/21, consisting of Drawings #1 & #2, as prepared by The Helmes Group, LLP – Architects. Please note, this letter and revised drawing is being forwarded to Joseph Angiello, Building Inspector for his review and comments, which was requested during our 1/19, Planning Board Meeting.

It is my understanding that we will be scheduled to appear before the Planning Board via Zoom, on **Tuesday, February 23, 2021 at 7:30 p.m.** and look forward to presenting this application in order to obtain the required Waiver of Site Plan Approval for this project.

If you have any questions or require any additional information prior to that time, please do not hesitate to contact me.

Very truly yours,

THE HELMES GROUP, LLP


Steven C. Helmes, AIA

Architect

SCH:KA Encl.

cc: Joseph Angiello, Town of Lewisboro Building Inspector

cc: APEX Personal Training, LLC – Shkelzen & John Swertfager

184 KATONAH AVENUE, KATONAH, NEW YORK 10536

Tel. (914) 232-4633 Fax (914) 232-0768

EXPANSION FOR: APEX FITNESS

CROSS RIVER SHOPPING CENTER - LOWER LEVEL CROSS RIVER, NY 10518

PREVIOUSLY APPROVED PARKING REQUIREMENTS:
TAKEN FROM: DWG A-01- AMENDED SITE PLAN APPROVAL PLAN
PREPARED BY: DESIGN DEVELOPMENT, PLLC - RONALD A. HOINA, ARCHITECT
DATED: FEBRUARY 14, 2012

SQUARE FOOTAGE/ PARKING				
SPACE IDEN	TENANT	USE	SQUARE FEET	P.S. REQUIRED*
A-1	CHASE BANK	BANK	4,000	27
B-1	CROSS RIVER PHARMACY	RETAIL	4,900	25
B-2	CROSS RIVER EYE	RETAIL	900	5
B-3	CROSS RIVER CLEANERS	RETAIL	1,400	7
B-4	VISION SALON	BEAUTY SALON	1,160	12
B-5	VILLARINAS	RESTAURANT	1,000	10
B-6	CROSS RIVER WINE/LIQUOR	RETAIL	1,400	7
B-7	CROSS RIVER POST OFFICE	RETAIL	1,050	6
B-8	LEWISBORO HARDWARE	RETAIL	1,150	6
C-1	SALEM NAIL	BEAUTY SALON	1,700	17
C-2	LA FAMILIA PIZZERIA	RESTAURANT	1,280	13
C-3	CROSS RIVER FLORIST	RETAIL	1,170	6
C-4	BAGEL	RESTAURANT	1,200	12
D-1	HOIKU	RESTAURANT	4,400	44
DLL-1	VACANT	N/A	1,630	-
DLL-2	VACANT	STORAGE	720	-
DLL-3	VACANT	N/A	1,080	-
DLL-4	VACANT	METER ROOM	70	-
E-1	D'AGOSTINOS	GROCERY	20,473	164
ELL-1	TENANT 3	RESTAURANT	1,000	10
ELL-2	TENANT 2	RETAIL	5,918	30
ELL-3	TENANT 1	OFFICE	6,347	26
ELL-4	D'AGOSTINOS	STORAGE	5,420	-
ELL-5	COMMON AREA	-	735	-
TOTAL			70,103	427

- *AS PER CURRENT LEWISBORO ZONING ORDINANCE
- NOTES:
- PARKING ORIGINALLY DESIGNED AND APPROVE WITH ZONING REGULATION IN EFFECT AT THAT TIME.
 - CURRENT ZONING REQUIRES PARKING SPACES TO BE 9'-0" X 18'-0" MIN. ACTUAL SPACES ARE 8'-6" X 18'-0" WHICH WAS IN ACCORDANCE WITH ZONING REGULATION IN EFFECT AT THE TIME OF APPROVALS.

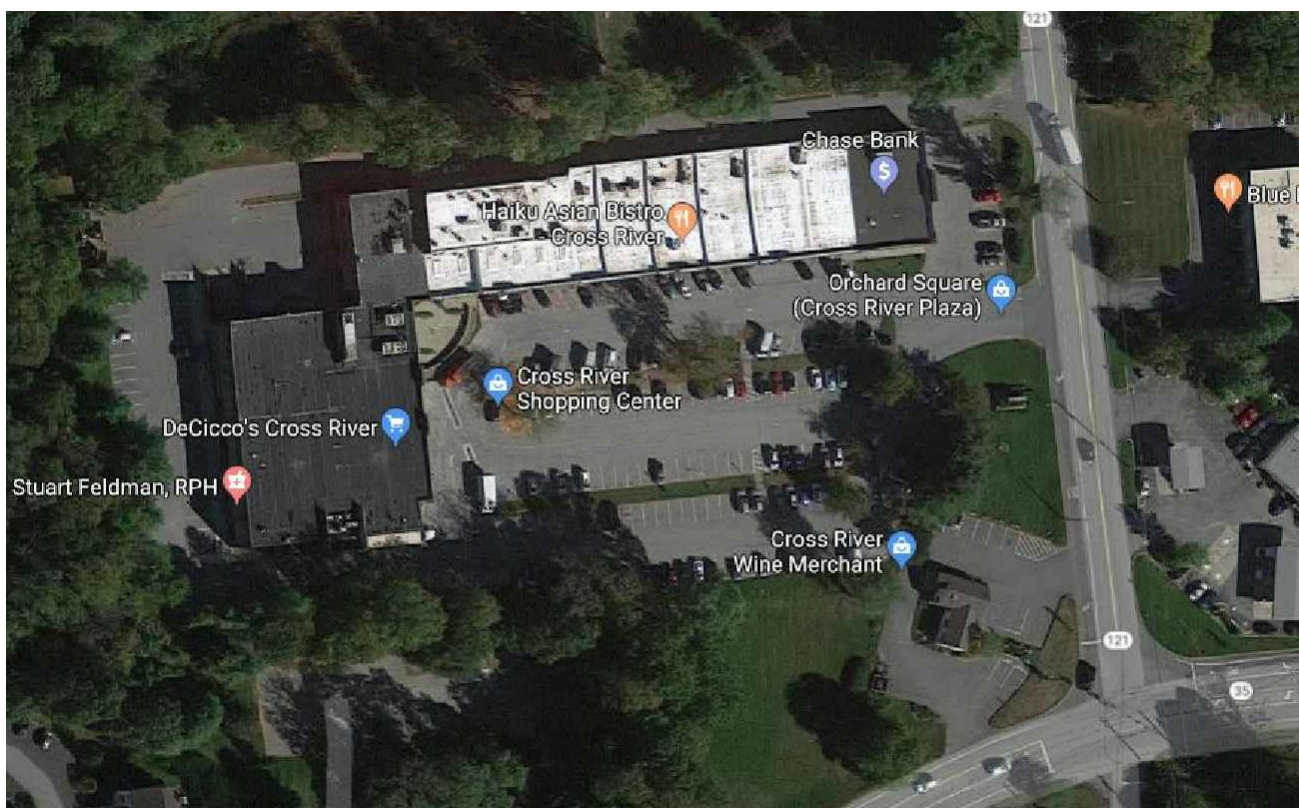
TOTAL PARKING SPACES AS OF LAST SPA	254 P.S. INCLUDING 10 ACCESSIBLE SPACES
TOTAL PARKING ADJUSTED FOR NEW LAYOUT*	238 P.S. INCLUDING 11 ACCESSIBLE SPACES
*REFER TO A-02 FOR CALCULATIONS	

PROPOSED SQUARE FOOTAGE / PARKING ANALYSIS			
USE	P.S. REQUIRED	EXISTING SQUARE FOOTAGE	REQUIRED PARKING SPACES
TENANT A : STORAGE DECICCO'S CROSS RIVER	N/A	N/A	0
TENANT B: OFFICE FOR BUSINESS OR PROFESSIONAL USE: (FORMER TOWN OFFICES)	1/250	1,895/250	8
TENANT B: RECREATION APEX EXPANSION (FORMER TOWN OFFICES)	1/200	4,452/200	23
TENANT C: OFFICE FOR BUSINESS OR PROFESSIONAL USE: FORMER POLICE STATION	1/250	1,400/250	6
TENANT D: RETAIL OR SERVICE BUSINESS - KEMPO ACADEMY	1/200	1,400/200	7
TENANT E: RECREATION FACILITY - APEX FITNESS	1/200	3,920/200 + (1) FOR EACH EMPLOYEE: (3) EMPLOYEES	23
EXISTING REQUIRED			67
EXISTING PROVIDED			-56
DEFICIENCY			11



TAX MAP

AS TAKEN FROM: WESTCHESTER G.I.S.



SATELLITE PHOTOGRAPH

AS TAKEN FROM: GOOGLE MAPS

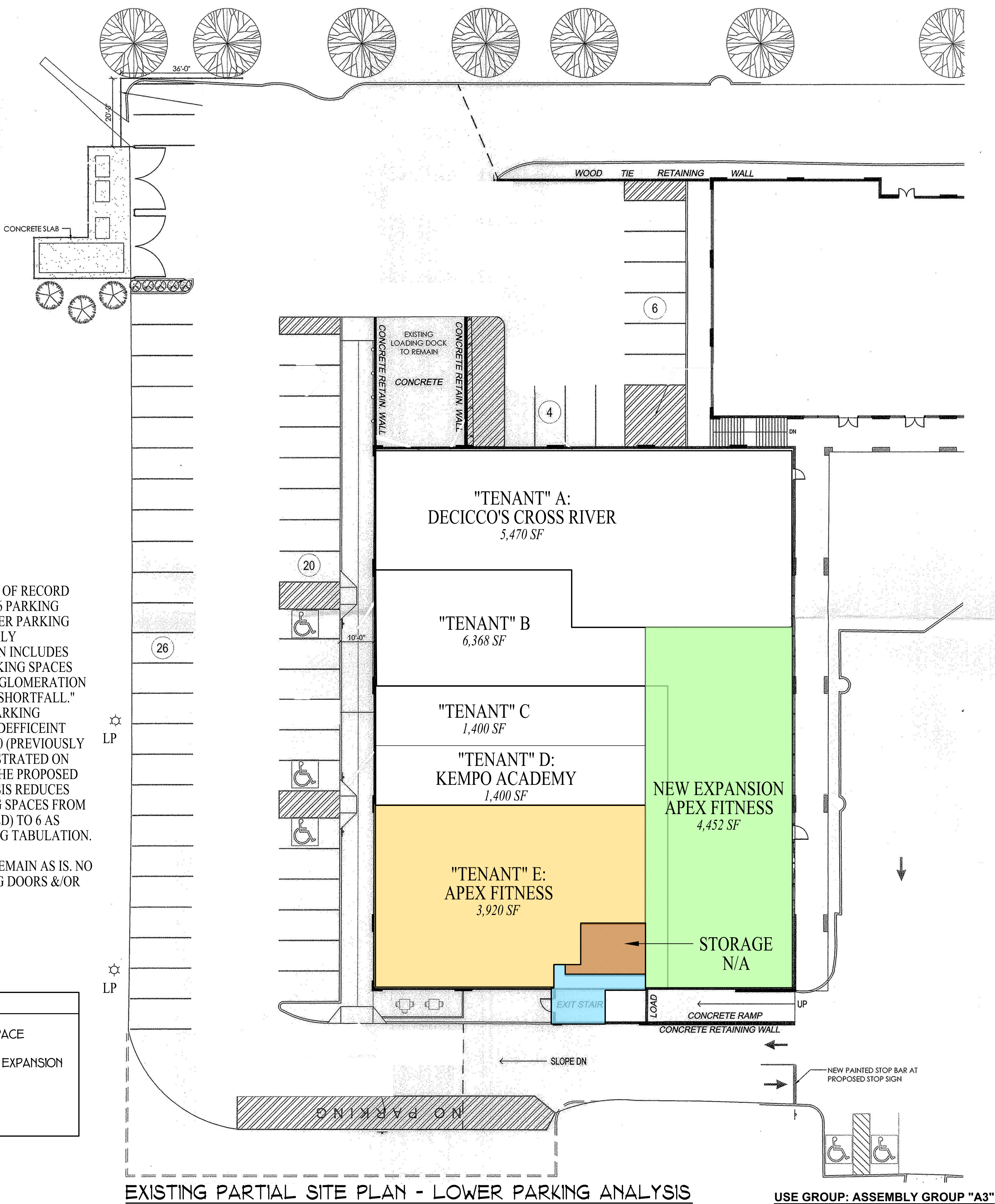


REFERENCE PHOTOGRAPH (FRONT ENTRANCE)

- NOTES:
- "THE EXISTING SITE PLAN OF RECORD IDENTIFIES A TOTAL OF 56 PARKING STALLS WITHIN THE LOWER PARKING AREA AND THE PREVIOUSLY REFERENCED RESOLUTION INCLUDES THE JOINT USE OF 10 PARKING SPACES BECAUSE THE PRIOR CONGLOMERATION RESULTED IN A 10 SPACE SHORTFALL." THE PROPOSED LOWER PARKING ANALYSIS REDUCES THE DEFICIENT PARKING SPACES FROM 10 (PREVIOUSLY APPROVED) TO 5 AS ILLUSTRATED ON PARKING TABULATION. THE PROPOSED LOWER PARKING ANALYSIS REDUCES THE DEFICIENT PARKING SPACES FROM 10 (PREVIOUSLY APPROVED) TO 6 AS ILLUSTRATED ON PARKING TABULATION.
 - THE STOREFRONT IS TO REMAIN AS IS. NO ALTERATION TO EXISTING DOORS &/OR WINDOWS IS PROPOSED.

LEGEND

- EXISTING TENANT SPACE
- PROPOSED TENANT EXPANSION
- EGRESS CORRIDOR
- STORAGE



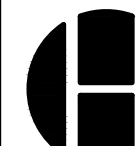
EXISTING PARTIAL SITE PLAN - LOWER PARKING ANALYSIS

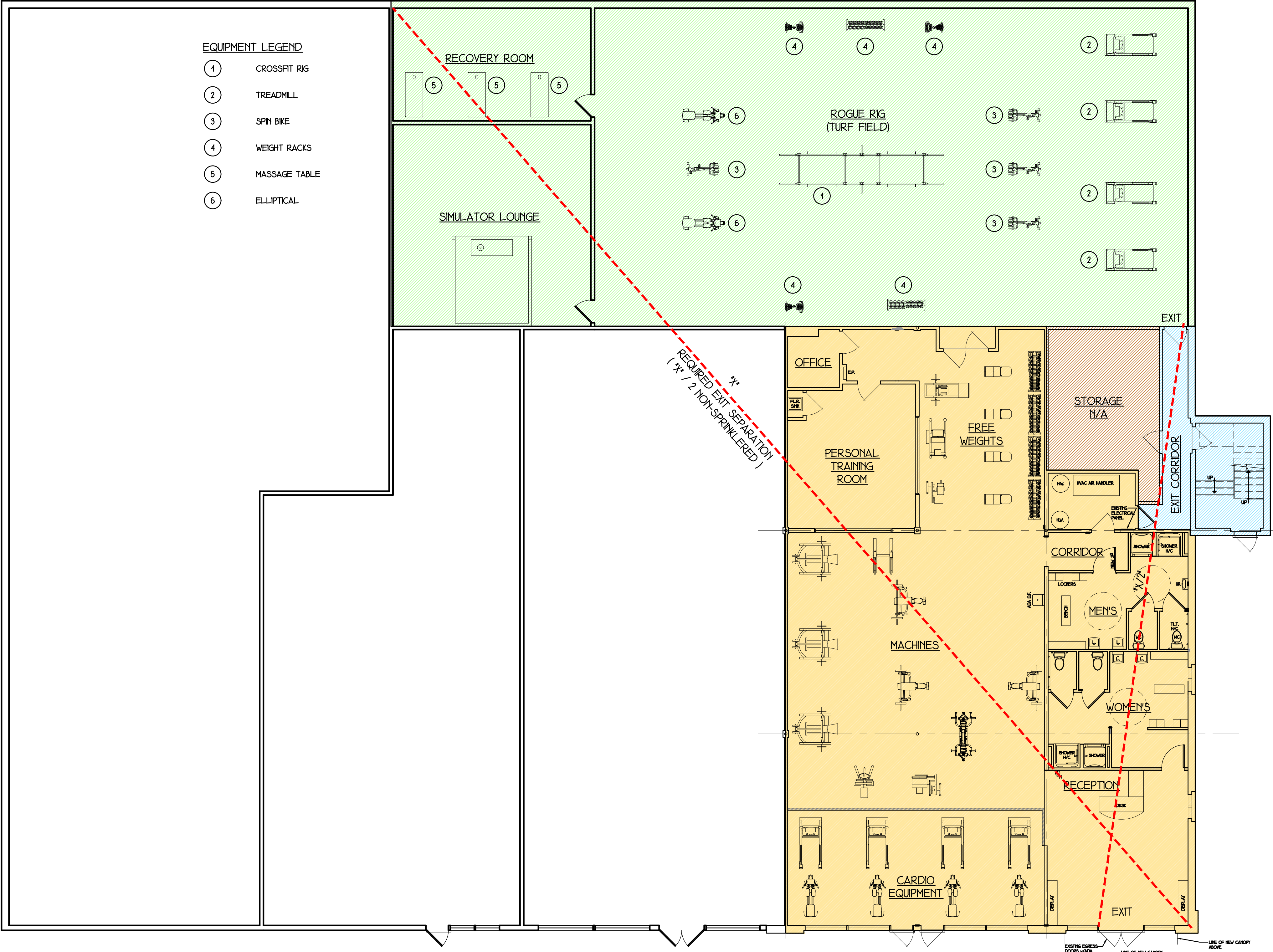
SCALE: 1" = 20'-0"

USE GROUP: ASSEMBLY GROUP "A3"



EXTERIOR REFERENCE PHOTOGRAPHS

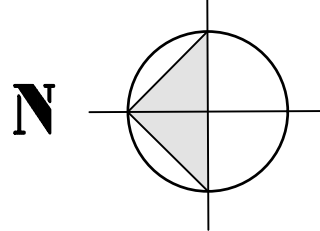
ISSUE DATES:	EXPANSION FOR: APEX PERSONAL TRAINING, LLC CROSS RIVER SHOPPING CENTER - LOWER LEVEL CROSS RIVER, NY 10518		
		SITE PLAN, TAX MAP, PARKING CALCULATIONS AND REFERENCE PHOTOGRAPHS SCALE: AS NOTED	DRAWN BY: GNA CHECKED BY: SCH
		 THE HELMES GROUP, LLP ARCHITECTURE • ENGINEERING PROJECT MANAGEMENT 184 KATONAH AVENUE, KATONAH, NY 10536 TEL: (914) 232-4633 FAX: (914) 232-0768 EMAIL: thg@thehelmesgroup.com	DRAWING NO.: 1 OF 2
01/22/21 REVISED AS PER PLANNING BOARD COMMENTS			
12/14/20 FOR PLANNING BOARD			



- EQUIPMENT LEGEND
- 1 CROSSFIT RIG
 - 2 TREADMILL
 - 3 SPIN BIKE
 - 4 WEIGHT RACKS
 - 5 MASSAGE TABLE
 - 6 ELLIPTICAL

LOWER LEVEL PLAN
SCALE: 1/8" = 1'-0"

- LEGEND
- EXISTING TENANT SPACE
 - PROPOSED TENANT EXPANSION
 - EGRESS CORRIDOR
 - STORAGE



EXISTING WATER USAGE CALCULATION				
SPACE / USE	OCCUPANCY		REQUIRED	USAGE
B2 / BUSINESS	1 PER 100 SF	1400 / 100 = 14 PEOPLE	15 GAL / PERSON	210
C1 / BUSINESS	1 PER 100 SF	1400 / 100 = 14 PEOPLE	15 GAL / PERSON	210
C2 / FAST FOOD	1 PER SEAT	10 SEATS = 10 PEOPLE	25 GAL / PERSON	250

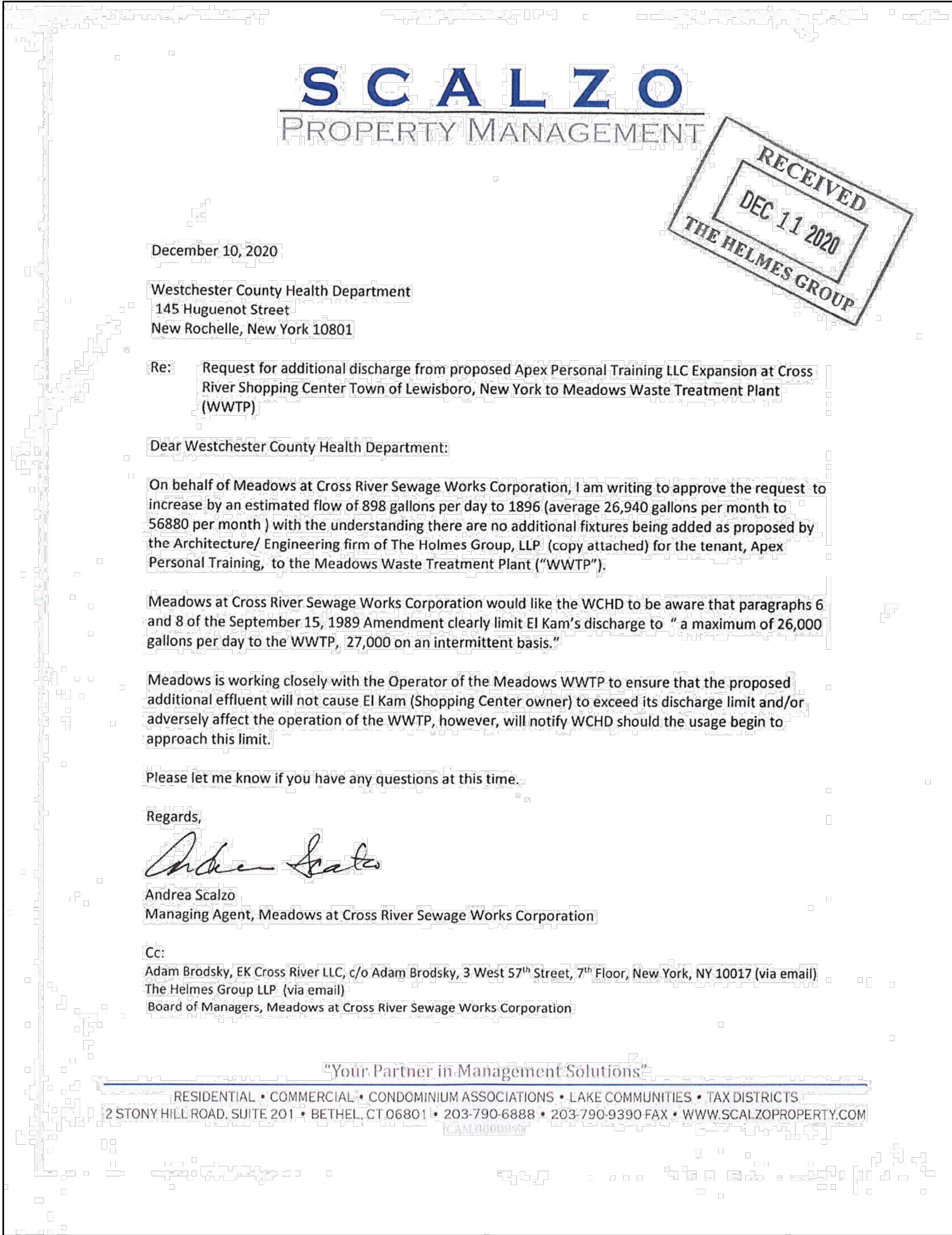
670 GALLONS/DAY

PROPOSED WATER USAGE CALCULATION				
SPACE / USE	OCCUPANCY		REQUIRED	USAGE
APEX GYM: B2/C1/C2	1 PER 50 SF	3920 / 50 = 78.4 PEOPLE	20 GAL / PERSON	1,568

1,568 GALLONS/DAY

NOTE: AS A RESULT OF THE "CHANGE OF USE" THE WATER USAGE WILL INCREASE FROM 670 GALLONS/DAY TO 1,568 GALLONS / DAY (PER 2018 APPLICATION)

NOTE: REFER TO ATTACHED LETTER FROM SCALZO PROPERTY MANAGEMENT DATED DECEMBER 10, 2020 REGARDING WATER USAGE INCREASE.



INTERIOR REFERENCE PHOTOGRAPHS

ISSUE DATES:

EXPANSION FOR:
APEX PERSONAL TRAINING, LLC
CROSS RIVER SHOPPING CENTER - LOWER LEVEL
CROSS RIVER, NY 10510

FLOOR PLANS & WATER USAGE CHART
SCALE: AS NOTED

THE HELMES GROUP, LLP
ARCHITECTURE • ENGINEERING
PROJECT MANAGEMENT
184 KATONAH AVENUE, KATONAH, NY 10536
TEL: (914) 232-4633 FAX: (914) 232-0768
EMAIL: thg@thehelmesgroup.com

DRAWN BY: GNA
CHECKED BY: SCH
DRAWING NO.:

2 OF 2

01/22/21 REVISED AS PER
PLANNING BOARD COMMENTS
12/14/20 FOR PLANNING BOARD

RECEIVED BY

JAN 22 2021

Town Clerk
Town of Lewisboro

**RESOLUTION
LEWISBORO PLANNING BOARD**

**ADOPTION OF NEGATIVE DECLARATION PURSUANT TO
STATE ENVIRONMENTAL QUALITY REVIEW ACT**

**GOSSETT BROTHERS NURSERY
1202 ROUTE 35 SOUTH SALEM, NEW YORK**

**Sheet 31, Block 10805, Lot 46
Cal. #03-20 PB**

January 19, 2021

WHEREAS, the Planning Board is entertaining an application for site development plan approval and a wetland activity permit (Cal. #03-20PB) with regard to the above-referenced property consisting of ± 5.5 acres of land; and

WHEREAS, this application is in conjunction with the owner/applicant's proposal to construct and operate an accessory winery business on said property in accordance with the provisions of Chapter 220, Zoning, of the Lewisboro Town Code (the "proposed action"); and

WHEREAS, the proposed action has been classified as an Unlisted Action under the State Environmental Quality Review Act ("SEQRA"); and

WHEREAS, a coordinated review of the proposed action is being performed, and the Planning Board is serving as SEQRA Lead Agency for purposes of this review; and

WHEREAS, the Planning Board has received and reviewed application plans and materials, submissions, reports and verbal commentary from the owner/applicant and its consultants, submissions, comment letters and verbal commentary from the Planning Board's consultants, comments offered during a public hearing and SEQRA documentation developed as part of the SEQRA review process;

NOW THEREFORE BE IT RESOLVED THAT, the proposed action is an Unlisted Action under SEQRA and the Planning Board has compared the proposed action with the Criteria for Determining Significance in 6 NYCRR 617.7(c) and determined that the proposed action will not have a significant adverse impact on the environment; and

BE IT FURTHER RESOLVED THAT, the Planning Board hereby adopts and issues the attached Negative Declaration and Notice of Determination of Non-Significance, which is to be distributed as required under SEQRA and its implementing regulations.

ADOPTION OF RESOLUTION

WHEREUPON, the Resolution herein was declared adopted by the Planning Board of the Town of Lewisboro as follows:

The motion was moved by: Jerome Kerner

The motion was seconded by: Charlene Indelicato

The vote was as follows:

**JANET ANDERSEN
JEROME KERNER
GREG LASORSA
MAUREEN MAGUIRE
CHARLENE INDELICATO**

aye
aye
aye
absent
aye

Janet Andersen^{cc}
Janet Andersen, Chair
January 19, 2021

**State Environmental Quality Review
NEGATIVE DECLARATION
Notice of Determination of Non-Significance**

Date: January 19, 2021

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

The Town of Lewisboro Planning Board has determined that the proposed action described below will not have a significant environmental impact and a Draft Environmental Impact Statement will not be prepared.

Name of Action: Gossett Brothers Nursery

SEQRA Status: ☐ Type 1
 ☒ Unlisted

Conditioned Negative Declaration: ☐ Yes
 ☒ No

Coordinated Review: ☒ Yes
 ☐ No

Description of Action: The subject property consists of ±5.5 acres of land and is located at 1202 Route 35 within the R-2A Zoning District. The subject property contains an existing landscape nursery and is developed with several detached buildings, gravel parking, and inventory display and storage areas. An existing residence is located on the same parcel, located to the rear of the site. The applicant is proposing to legally establish an accessory winery business to be located within the existing nursery building and is also proposing the installation of a water treatment system and a wastewater holding tank for the winery. The existing nursery is considered an existing non-conforming use and the winery is permitted within the underlying zone, subject to the issuance of a Special Use Permit from the Zoning Board of Appeals. The subject property contains wetlands that are jurisdictional to the New York State Department of Environmental Conservation (NYSDEC) and the Town of Lewisboro.

Location: 1202 Route 35, Town of Lewisboro, Westchester County, New York.

Reasons Supporting This Determination: The Planning Board has compared the proposed action with the Criteria for Determining Significance in 6 NYCRR 617.7 (c). Specifically:

1. The proposed action will not result in a substantial adverse change in the existing air quality, ground or surface water quality or quantity, traffic or noise levels; a substantial increase in solid waste production.

The subject property is currently developed and previously disturbed; the proposed action will result in <0.1 acre of land disturbance. While disturbance is proposed within the regulated wetland buffer, an extensive wetland mitigation plan has been provided. The subject property is accessed via a State highway and the proposed use will not result in a substantial increase in traffic above present levels; interior parking and traffic circulation will be improved. Existing floodlights are proposed to be removed to reduce light impacts and replaced with downward facing, full cut-off light fixtures, which will be turned off during non-operating hours. The proposed action will not result in a significant increase in solid waste and all solid waste will be removed via a private carter.

2. The proposed action will not result in the removal or destruction of large quantities of vegetation or fauna; substantial interference with the movement of any resident or migratory fish or wildlife species; impact a significant habitat area; result in substantial adverse impacts on a threatened or endangered species of animal or plant, or the habitat of such species; and will not result in other significant adverse impacts to natural resources.

The subject property is currently developed and previously disturbed; the proposed action will result in <0.1 acre of land disturbance and significant vegetation loss is not proposed. The applicant has developed a comprehensive planting plan which will increase the extent of native plants on-site and will improve habitat around the perimeter of an existing pond.

3. The proposed action will not result in the impairment of the environmental characteristics of a Critical Environmental Area as designated pursuant to 6 NYCRR Part 617.14(g).

The subject property is not located within or adjacent to a Critical Environmental Area.

4. The proposed action will not result in a material conflict with the Town's officially approved or adopted plans or goals.

The existing nursery is considered an existing non-conforming use and the winery is permitted within the underlying zone, subject to the issuance of a Special Use Permit from the Zoning Board of Appeals.

5. The proposed action will not result in the impairment of the character or quality of important historical, archaeological, architectural, aesthetic resources or the existing character of the community or neighborhood.

The subject property is currently developed and no new building construction of significant exterior alterations are proposed. No State or federally listed historical or archeological resources are located in proximity to the site.

6. The proposed action will not result in a major change in the use of either the quantity or type of energy.

The proposed action will result in an insignificant increase in use of electricity/energy; however, no impact is anticipated.

7. The proposed action will not create a hazard to human health.
8. The proposed action will not create a substantial change in the use, or intensity of use, of land including agricultural, open space or recreational resources, or in its capacity to support existing uses.
9. The proposed action will not encourage or attract a large number of people to a place or place for more than a few days, compared to the number of people who would come to such place absent the action.
10. The proposed action will not create a material demand for other actions that would result in one of the above consequences.
11. The proposed action will not result in changes in two (2) or more elements of the environment, no one of which has a significant impact on the environment, but when considered together result in a substantial adverse impact on the environment.
12. When analyzed with two (2) or more related actions, the proposed action will not have a significant impact on the environment and when considered cumulatively, will not meet one or more of the criteria under 6 NYCRR 617.7(c).
13. The Planning Board has considered reasonably related long-term, short-term, direct, indirect and cumulative impacts, including other simultaneous or subsequent actions.

January 26, 2021

Mr. Jan K. Johannessen, AICP
Mr. Joseph M. Cermele, P.E., CFM
Kellard Sessions Consulting, P.C.
Town Consulting Professionals - Town of Lewisboro
500 Main Street
Armonk, New York 10504

Re: Site Development Plan Approval,
Wetland Permit, and Special Use Permit
Gossett Brothers Nursery
1202 Route 35
Sheet 10805, Block 46, Lot 31

Dear Mr. Johannessen and Mr. Cermele,

In response to your comment memo dated December 10, 2020 we have revised the enclosed drawings entitled Site Plans for Gossett Nursery dated with revision January 15, 2021 as well as provided the following responses to your comments:

Gossett Nursery Responses to Memorandum dated 12/10/2020	
Comments	Response
1. As previously requested, the applicant must demonstrate compliance with the Special Use Permit standards associated with the accessory winery use, as allocated under Section 220-43.6 of the Zoning Code. It is recommended that the applicant provide a written response to each of the parameters outlined under this code section.	Gossett Nursery – response prepared by Michael Sirignano.
2. As previously requested, the Site Plan shall dimension the accessible walkway provided between the accessible parking spaces and the building (four (4) foot minimum required). The accessible parking and loading space must be striped in the field in accordance with State and Federal regulations; a note pointing to the accessible space states that the parking lines shown on the plan are for visual representation only; this will need to be revised and clarified.	Accessible walkway is now dimensioned 4' min. Accessible parking and loading space will be striped. Clarified this on site plan.
3. The applicant is proposing to demarcate the parking spaces by use of a portable stockade fence. The Board should determine if this is acceptable. Prior versions of the plan incorporated a Belgium block inlay to denote the spaces in the field. Please clarify if wheel stops will also be used as identified in the parking space detail.	Site plans have been revised to include the Belgium block curb as wheel stops and the stockade fence as an option to additionally help demarcate spaces.
4. As previously noted, a parking area encroaches onto the adjacent parcel to the east. A detail shall be provided relating to the proposed drainage feature/berm shown along the eastern edge of the parking area. An easement document between the two property owners shall be submitted and prepared to the satisfaction of the Planning Board Attorney. The easement shall be described by metes and bounds.	Berm drainage modification has been clarified on the site plan with a note. Gossett to provide easement document as soon as it is received.
5. As previously requested, the limits of land disturbance shall be illustrated and circulated on the site plan.	Limit of disturbance summary table has been added to the site plans.
6. As previously requested, the applicant shall contact this office regarding the completion of the Part 2 EAF; several of the responses require modification.	Revised and resubmitted EAF Form (Part 2) per Kellard Sessions comments.
7. As previously noted, once obtained, the applicant shall provide a copy of the WCDH and NYSDEC approvals, including signed plans and permits. Please also submit the completed applications and plans submitted to both agencies.	Will be provided once received.
8. Comments provided by the Town Building Inspector, in his memorandum dated September 2, 2020 shall be addressed.	Town Building Inspector comments have been addressed. Side yard zoning variance approval will be provided once received.

9. In order to expedite the review of the subsequent submissions, please provide annotated responses to each of the comments outlined herein.	Provided here
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Respectfully Submitted,

Alexandra D'Annunzio
Assistant Project Engineer

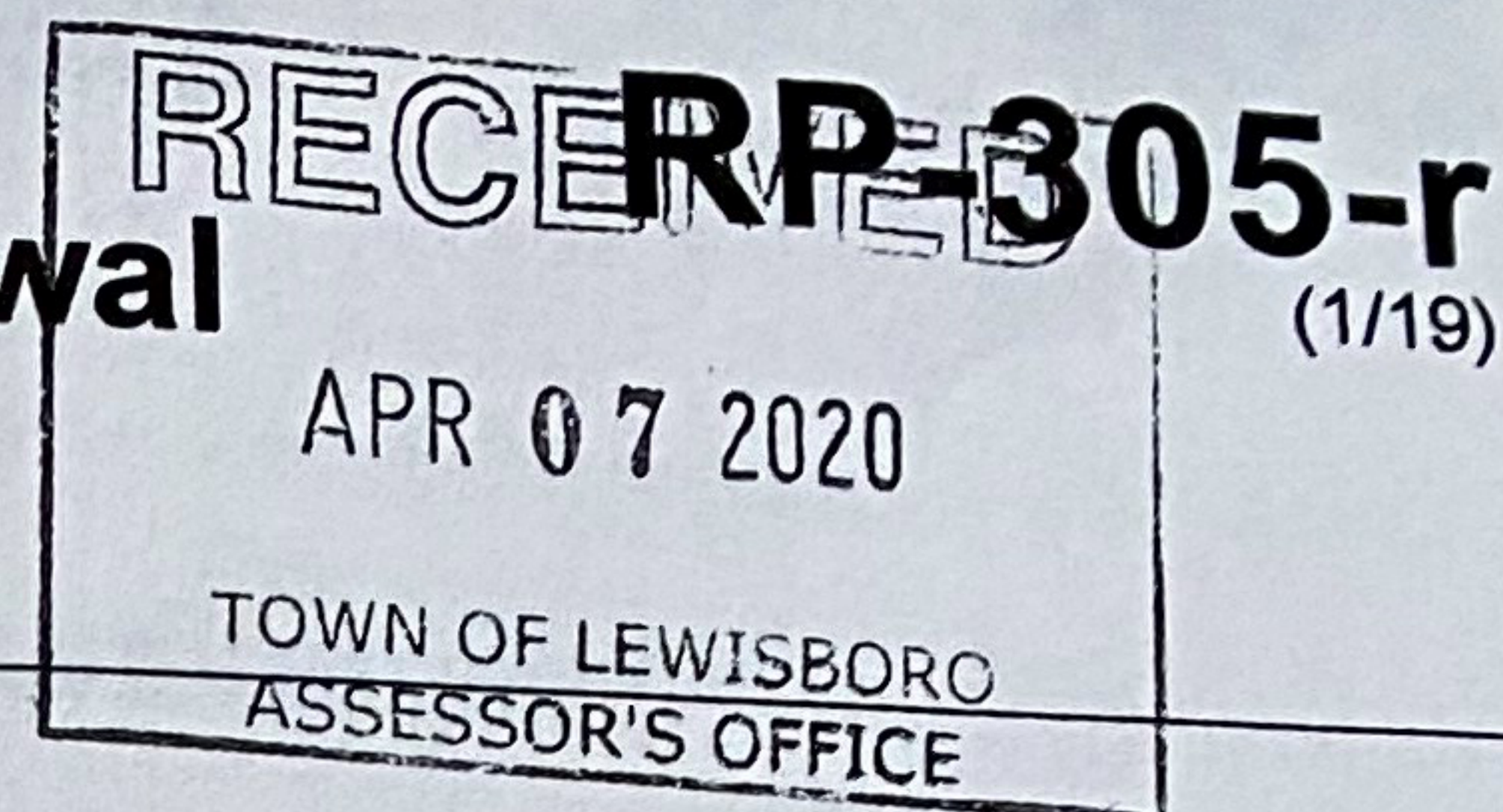
cc: Chairperson Janet Andersen and
Members of Lewisboro Planning Board
Gossett Nursery, w/ encl
South Salem Winery, w/ encl.
Beth Evans, Evans Associates Environmental Consulting, Inc.

File: Gossett Nursery-Rt35-Response to Kellard Sessions Comments-20210115.doc



Department of Taxation and Finance
Office of Real Property Tax Services

Agricultural Assessment Renewal Certification



Name(s) of owner(s) Thomas Gossett			Mailing address of owner(s) (number and street or PO box) 1202 Route 35		
Location of property (street address) 1202 Route 35			City, town, or village South Salem,		
City, village, or post office South Salem		State NY	ZIP code 10590	State NY	
Daytime contact number 914-763-3001		Evening contact number 914-943-5545		Email address Gossetnursey@gmail.com	

Please renew my agricultural assessment for 20 20 for the following parcel(s): Tax map number(s) 10805-046-0031

(attach additional sheets if necessary).

I have reviewed the last agricultural assessment application (Form RP-305) that was filed for this farm operation, as well as the instructions that accompany this renewal certification, and I hereby certify that each of the following statements of fact is true:*

1. The last agricultural assessment application (Form RP-305) for this land was filed in 20 9.
2. Since that application was filed, there has been no change in the ownership or total acreage of this parcel, or in the classification of its soils.
3. The land is still being used in the same manner as specified on that application, and there has been no change in the acreage devoted to each use.
4. At least one of the following conditions is satisfied:
 - a. The land consists of seven acres or more and generated the required \$10,000 or more in average gross sales value, annual gross sales value or average gross receipts, whichever was applicable; or
 - b. The land consists of less than seven acres and generated the required \$50,000 or more in average gross sales value, annual gross sales value or average gross receipts, whichever was applicable; or
 - c. No such requirement applied to this land because it qualified as either a newly-planted orchard, vineyard, or hopyard, a newly-established Christmas tree operation, or land used by a not-for-profit institution for eligible agricultural research.
5. If Form RP-305 indicated that rented land was being used in conjunction with the parcel(s) for the production of agricultural products for sale, the same land is being rented, the same person is continuing to rent it under the same written rental agreement, and, if the rented land does not independently satisfy the gross sales value requirement, it is used in conjunction with qualifying land.

I understand that I must maintain records confirming that each of these statements is true, and that I must supply those records to the assessor upon his or her request. I understand that any false statements on this form are punishable by law. I further understand that converting this land to a non-agricultural use may subject it to penalties and/or payments based on the amount of taxes owed.

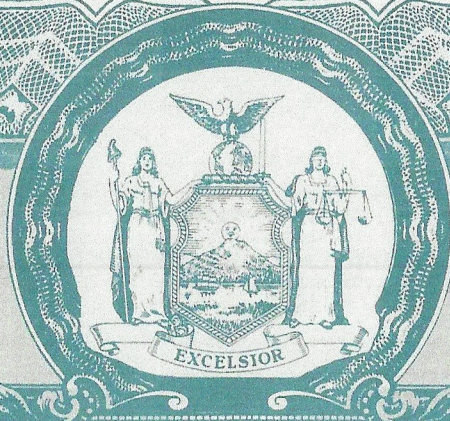
Tom Gossett
Signature of landowner

3-16-20
Date

To request a copy of the assessor's determination, check here ☒ and enclose a stamped, self-addressed envelope.

*Caution: If one or more of these statements is **not** true, do not complete this certificate; a new Form RP-305 will have to be completed and filed to request renewal of the agricultural assessment.

MICRO WINERY LICENSE
SERIAL #: 1280600
COUNTY: WESTCHESTER



EFFECTIVE DATE: 12/20/2017
EXPIRATION DATE: 1/31/2021
CERTIFICATE #: 895986

NEW YORK STATE LIQUOR AUTHORITY

THE LICENSEE DESIGNATED BELOW IS HEREBY GRANTED PERMISSION, UNDER THE ALCOHOLIC BEVERAGE CONTROL LAW TO TRAFFIC IN ALCOHOLIC BEVERAGE PURSUANT TO THE TYPE OF LICENSE INDICATED IN THE UPPER LEFT HAND CORNER OF THIS CERTIFICATE AND ACCORDING TO THE STATUTES AND REGULATIONS PERTAINING THERETO.

THIS LICENSE SHALL NOT BE TRANSFERABLE TO ANY OTHER PERSON OR TO ANY OTHER PREMISES OR TO ANY OTHER PART OF THE BUILDING CONTAINING SUCH LICENSED PREMISES: IT SHALL NOT BE DEEMED A PROPERTY OR VESTED RIGHT AND MAY BE REVOKED AT ANY TIME PURSUANT TO LAW

METHOD OF OPERATION

MICRO FARM WINERY

J VUOLO CORP
SOUTH SALEM WINERY
1202 RTE 35
SOUTH SALEM NY 10590

FILING FEE \$0.00
LICENSE FEE \$150.00

Vincent G. Bradley
Chairman

BEFORE COMMENCING OR DOING ANY BUSINESS FOR THE TIME FOR WHICH THIS LICENSE HAS BEEN ISSUED, THE SAID LICENSE SHALL BE ENCLOSED IN A SUITABLE WOOD OR METAL FRAME, HAVING A CLEAR GLASS SPACE AND A SUBSTANTIAL WOOD OR METAL BACK SO THAT THE WHOLE OF SAID LICENSE MAY BE SEEN THEREIN, AND SHALL BE POSTED UP AND AT ALL TIMES DISPLAYED IN A CONSPICUOUS PLACE IN THE ROOM WHERE SUCH BUSINESS IS CARRIED ON, SO THAT ALL PERSONS VISITING SUCH PLACE MAY READILY SEE THE SAME.

GOSSETT BROTHERS NURSERY

SITE DEVELOPMENT PLAN

TOWN OF LEWISBORO, NEW YORK

PARKING REQUIREMENT TABLE			
BUILDING USE	BUILDING AREA	PARKING REQUIREMENT	REQUIRED SPACES
NURSERY	2,061 SF	1 SPACE PER 200 SF GROSS FLOOR AREA (MIN 10 SPACES)	11
WINERY	994 SF	10 MIN	10
GREENHOUSE	793 SF	1 SPACE PER 200 SF GROSS FLOOR AREA (MIN 10 SPACES)	4
OFFICE	320 SF	1 SPACE PER 250 SF OF FLOOR AREA	2
TOTAL REQUIRED SPACES			27
TOTAL ACTIVE SPACES (6161+1H)			21
TOTAL LAND BANKED SPACES			6
TOTAL AVAILABLE SPACES			27

* PURSUANT TO CODE §220-43.6, ACCESSORY WINERY, ACCESSORY MICROBREWERY AND ACCESSORY CRAFT DISTILLERY SUPPLEMENTAL REGULATION (7) THERE SHALL BE NO FEWER THAN 10 OFF-STREET PARKING SPACES IN ADDITION TO THOSE REQUIRED BY THIS CHAPTER FOR THE FARM OR BUSINESS TO WHICH THE ACCESSORY USE IS ATTACHED.

SITE SPECIFIC NOTES	
1. THE GROSS SITE AREA EQUALS 239,710 SQ. FT. (5.503 ACRES).	
2. ACCORDING TO THE TAX ASSESSOR, THE SUBJECT SITE CONSISTS OF THE FOLLOWING TAX PARCEL IDENTIFICATION NUMBERS: SHEET: 31, BLOCK: 10805, LOT(S): 45.	
3. SURVEY INFORMATION SHOWN HEREON WAS PREPARED BY: H. STANLEY JOHNSON AND COMPANY LAND SURVEYORS, P.C. ENTITLED "TOPOGRAPHIC SURVEY PREPARED FOR THOMAS GOSSETT AND GOSSETT BROTHERS NURSERY," DATED JUNE 7, 2019 AND REVISED OCTOBER 30, 2020.	
4. PARCEL IS LOCATED IN THE TOWN OF LEWISBORO R-2A ZONING DISTRICT.	
5. THE SUBJECT SITE IS LOCATED IN THE CROTON RIVER BASIN WATERSHEDS.	
6. THE APPROVED HOLDING TANK MUST BE SURVEY LOCATED PRIOR TO CONSTRUCTION.	
7. NYSDEC FRESHWATER WETLAND (L-19) SHOWN HEREON WAS DELINEATED BY EVANS ASSOCIATES ENVIRONMENTAL CONSULTING, INC. ON MAY 22, 2019 AND VALIDATED BY THE DEC ON JUNE 20, 2019.	
SITE DEVELOPMENT NOTES	
1. PRIOR TO COMMENCING ANY WORK THE CONTRACTOR IS TO CONTACT DIG SAFELY NEW YORK (FORMERLY UFPO) (CODE 753) AT 1-800-962-7962.	
2. THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE, THEREFORE ACCURACY, COMPLETENESS AND/OR EXISTENCE OF SUBSURFACE INFORMATION CAN NOT BE CERTIFIED BY THE ENGINEER.	
3. THE CONTRACTOR OR HIS AUTHORIZED REPRESENTATIVE SHALL BE RESPONSIBLE FOR ALL APPLICATIONS, PERMITS AND/OR FEES REQUIRED BY THE TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK STATE AND/OR THE FEDERAL GOVERNMENT UNLESS OTHER ARRANGEMENTS ARE MADE WITH THIS OWNER.	
4. IT IS THE OWNER'S RESPONSIBILITY TO ENSURE THAT ANY PROPOSED IMPROVEMENTS ARE PLACED ON MATERIAL WITH A SUITABLE BEARING CAPACITY.	
5. ANY DAMAGE TO ADJACENT PROPERTIES SHALL BE REPLACED IN KIND BY THE OWNER.	
6. IF BLASTING IS REQUIRED, THE CONTRACTOR IS TO OBTAIN ALL NECESSARY PERMITS FROM THE APPROPRIATE CITY OF PEESKILL OFFICIALS.	
7. ALL CONSTRUCTION RELATED ACTIVITIES MUST BE WITHIN THE EROSION CONTROL BARRIER. EROSION CONTROL BARRIERS SHOULD REMAIN IN PLACE UNTIL THE PROJECT IS COMPLETE.	
8. GRADING SHALL NOT EXCEED 1 VERTICAL ON 2 HORIZONTAL EXCEPT IN ROCK AS DETERMINED BY THE ENGINEER.	
9. IF UNFORSEEN UNDERGROUND CONDITIONS ARE ENCOUNTERED (I.E. ROCK, GROUNDWATER, ETC.) THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER PRIOR TO CONTINUING WORK.	
10. IT IS THE OWNER'S RESPONSIBILITY TO ENSURE THAT ALL REQUIRED SETBACK DISTANCES ARE MAINTAINED DURING CONSTRUCTION.	
11. THIS PLAN WAS PREPARED FOR THE PURPOSE OF OBTAINING SITE PLAN APPROVAL FROM THE TOWN OF LEWISBORO TO CONSTRUCT THE ITEMS SHOWN, GENERALLY IN THE LOCATIONS SHOWN ON THIS PLAN.	
12. CONTRACTOR IS TO PROVIDE SHEETING AS REQUIRED BY THE NYS DOT, OSHA, AND NYS DEPT. OF LABOR, INDUSTRIAL CODE RULE 753 WHERE APPLICABLE (>5 DEEP).	
13. LOCATION, DESIGN AND INSTALLATION OF THE UNDERGROUND UTILITIES (INCLUDING BUT NOT LIMITED TO GAS, ELECTRICITY, TELEPHONE, CABLE) SHALL BE AS DIRECTED BY THE UTILITY COMPANIES AND THE CITY OF PEESKILL.	
14. THERE ARE NO PROPOSED TREES TO BE REMOVED.	
EROSION & SEDIMENT CONTROL NOTES	
1. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL SEDIMENT AND EROSION CONTROL PRACTICES. THE SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.	
2. TIMELY MAINTENANCE OF SEDIMENT CONTROL STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL STRUCTURES SHALL BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES. THE SEDIMENT LEVEL IN ALL SEDIMENT TRAPS SHALL BE CLOSELY MONITORED AND SEDIMENT REMOVED PROMPTLY WHEN MAXIMUM LEVELS ARE REACHED OR AS ORDERED BY THE ENGINEER. ALL SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED WEEKLY, PRIOR TO EXPECTED RAIN EVENTS, AND AFTER EACH HEAVY RAIN TO INSURE PROPER OPERATION AS DESIGNED. AN INSPECTION SCHEDULE SHALL BE SET FORTH PRIOR TO THE START OF CONSTRUCTION.	
3. THE LOCATIONS AND THE INSTALLATION TIMES OF THE SEDIMENT CAPTURING STANDARDS SHALL BE AS ORDERED BY THE ENGINEER, AND IN ACCORDANCE WITH ACCEPTED STANDARDS.	
4. ALL TOPSOIL NOT TO BE USED FOR FINAL GRADING SHALL BE REMOVED FROM THE SITE IMMEDIATELY AND PLACED IN A STABILIZED STOCKPILE OR FILL AREA. ALL TOPSOIL REQUIRED FOR FINAL GRADING AND STORED ON SITE SHALL BE LIMED, FERTILIZED, TEMPORARILY SEEDDED AND MULCHED WITHIN 14 DAYS.	
5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 21 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, SHALL IMMEDIATELY RECEIVE TEMPORARY SEEDING. MULCH SHALL BE USED IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER. DISTURBED AREAS SHALL BE LIMED AND FERTILIZED PRIOR TO TEMPORARY SEEDING.	
6. ALL DISTURBED AREAS WITHIN 500 FEET OF AN INHABITED DWELLING SHALL BE WETTED AS NECESSARY TO PROVIDE DUST CONTROL.	
7. THE CONTRACTOR SHALL KEEP THE ROADWAYS WITHIN THE PROJECT CLEAR OF SOIL AND DEBRIS AND IS RESPONSIBLE FOR ANY STREET CLEANING NECESSARY DURING THE COURSE OF THE PROJECT.	
8. SEDIMENT AND EROSION CONTROL STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED BY PERMANENT MEASURES.	
9. SOIL SEEDING AND FERTILIZER AMENDMENTS SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITION OF "NEW YORK GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL".	
10. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT EDITION OF "NEW YORK GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL".	

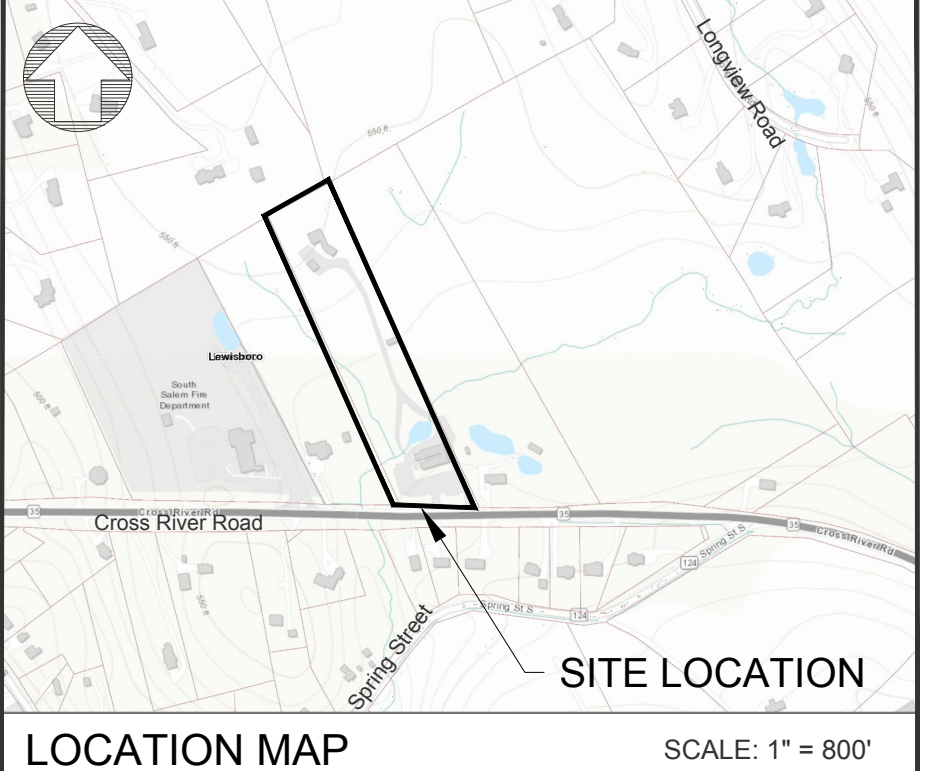
ZONING DATA CHART - R-2A (RESIDENTIAL ZONING DISTRICT)

SITE: EXISTING, NON CONFORMING

LOT DESCRIPTION	LOT AREA	LOT WIDTH	FRONT YARD (FROM STREET CENTER LINE)	FRONT YARD (FROM FRONT LOT LINE)	SIDE YARD	REAR YARD	BUILDING HEIGHT	BUILDING COVERAGE (%)
MINIMUM REQUIRED	2 AC	200 FT	75 FT	50 FT	40' EACH SIDE	50 FT	2.5 STORIES / 35 FT	9% (MAX)
EXISTING AND PROPOSED	5.503 AC	219 FT	114 FT	114 FT	43 FT / 3 FT	110 FT	>35 FT	14.4%

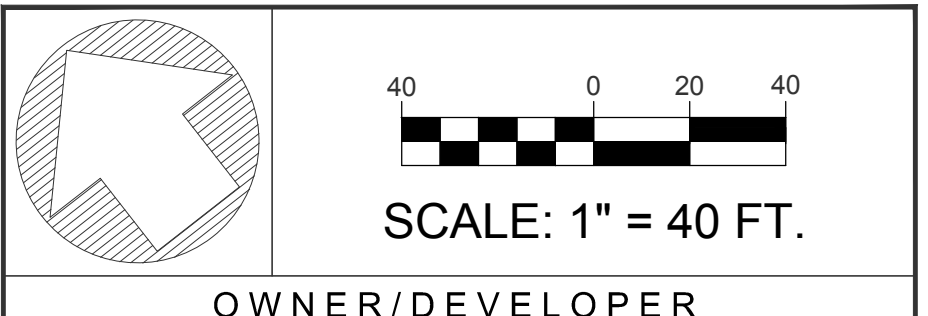
* 3 FT SIDE YARD SETBACK REMAINS AS PER EXISTING CONDITION

PURSUANT TO THE TOWN OF LEWISBORO CODE, CHAPTER 220, ZONING ARTICLE V, SUPPLEMENTAL REGULATIONS §220-32 AN ACCESSORY WINERY IS CONSIDERED A SPECIAL USE OF WHICH CONFORMANCE TO ADDITIONAL STANDARDS IS REQUIRED. REFER TO §220-43.6 ACCESSORY WINERY, ACCESSORY MICROBREWERY AND ACCESSORY CRAFT DISTILLERY FOR SUPPLEMENTAL REGULATIONS.



LOCATION MAP SCALE: 1" = 800'

Dig Safely.
New York
(800) 962-7962
www.digsafelynewyork.com



OWNER/DEVELOPER

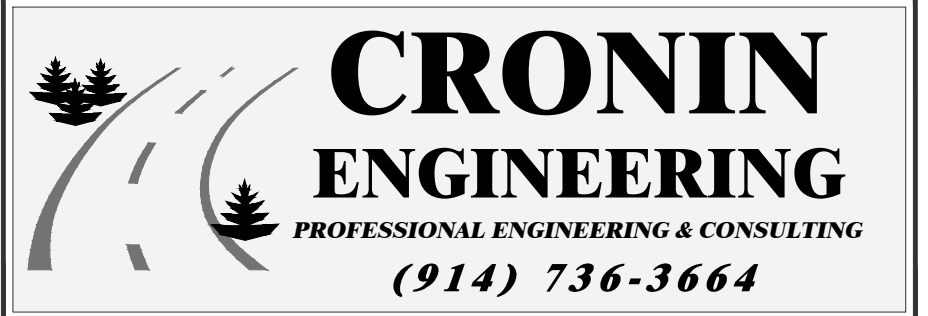
THOMAS GOSSETT
1202 OLD POST ROAD
SOUTH SALEM, NEW YORK 10590

* UNDER NEW YORK STATE EDUCATIONAL LAW ARTICLE 145, SECTION 7209 (2), IT IS UNLAWFUL FOR ANY PERSON TO ALTER ANY ITEM ON THIS DRAWING, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF ANY ITEM IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION AND A SPECIFIC DESCRIPTION OF THE ALTERATION. * COPYRIGHT 2021 BY CRONIN ENGINEERING, P.E., P.C. ALL RIGHTS RESERVED.

REVISIONS

#	REASON	DATE
3	PB, KS COMMENTS	1-15-21
2	PB, KS COMMENTS	11-20-20
1	PB, KS COMMENTS	9-29-20

MUNICIPAL TAX IDENTIFICATION:	
SECTION:	31
BLOCK:	10805
LOT:	46
SUBLOT:	-
DRAWN BY:	AS
CHECKED:	TC3
PROJECT:	GOSSETT NURSERY
DATE:	JULY 9, 2020
JOB #:	191209
TIMOTHY L. CRONIN III, P.E. LICENSE #062980	



39 Arlo Lane
Cortlandt Manor, New York 10567

SITE DEVELOPMENT PLAN

SITE PLAN FOR GOSSETT BROTHERS NURSERY

LOCATION:
1202 OLD POST ROAD
SOUTH SALEM, NEW YORK 10590

SHEET 1 OF 2 SP-1.1

ALLOWABLE AREA FACTOR							
2020 BUILDING CODE OF NEW YORK STATE TABLE 506.2							
LEGEND	USE	OCCUPANCY (IBC 2020 CHAPTER 3)	CONSTRUCTION TYPE (IBC 2020 CHAPTER 6)	EXISTING FIRE PROTECTION	EXISTING AREA (S.F.)	ALLOWABLE AREA (S.F.)	PERMITTED?
Winery	WINERY	A-2 (ASSEMBLY)	VB	(NOT SPRINKLERED)	1980	6,000	YES (6,000 > 1980)
Office	OFFICE	B (BUSINESS)	VB	(NOT SPRINKLERED)	1320	9,000	YES (9,000 > 1320)
Nursery	NURSERY	M (MERCANTILE)	VB	(NOT SPRINKLERED)	12,000	9,000	YES (9,000 > 12,000)
Storage	STORAGE	S-2 (LOW-HAZARD STORAGE)	VB	(NOT SPRINKLERED)	11,420	13,500	YES (13,500 > 11,420)
Greenhouse	GREENHOUSE	UTILITY	VB	(NOT SPRINKLERED)	1790	5,500	YES (5,500 > 1790)



INSET
ALLOWABLE AREA FACTOR PLAN
SCALE: 1" = 20'

SITE AREA USE DESIGNATION TABLE	
LEGEND	USE
AGRICULTURE NURSERY DISTRICT STORAGE / PLANTING AREA	AGRICULTURE NURSERY DISTRICT STORAGE / PLANTING AREA
MULCH / SOIL / STONE EQUIPMENT STORAGE AREA	MULCH / SOIL / STONE EQUIPMENT STORAGE AREA
WOODED NURSERY SHADE STOCK AREA (PLANTED)	WOODED NURSERY SHADE STOCK AREA (PLANTED)
SEASONAL PALLETIZED HARD GOODS / BENCH / SEASONAL DISPLAY STORAGE AREA	SEASONAL PALLETIZED HARD GOODS / BENCH / SEASONAL DISPLAY STORAGE AREA
LANDSCAPE OPERATION EQUIPMENT PARKING / BULK MATERIAL STORAGE BINS	LANDSCAPE OPERATION EQUIPMENT PARKING / BULK MATERIAL STORAGE BINS
NURSERY STOCK DISPLAY AREA	NURSERY STOCK DISPLAY AREA

SITE DEVELOPMENT PLAN

SCALE: 1" = 40'

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

Agency Use Only [If applicable]

Project : _____

Date : _____

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

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

Tips for completing Part 2:

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

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

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g)

☒ NO☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

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

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h)

☐ NO☒ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

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

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

5. Impact on Flooding The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) <i>If “Yes”, answer questions a - g. If “No”, move on to Section 6.</i>			
		☒ NO	☐ YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

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

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

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

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

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

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

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

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

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

13. Impact on Transportation

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

☒ NO

☐ YES

(See Part 1. D.2.j)

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

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

14. Impact on Energy

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

☒ NO

☐ YES

(See Part 1. D.2.k)

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

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

15. Impact on Noise, Odor, and Light

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

☐ NO

☒ YES

(See Part 1. D.2.m., n., and o.)

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

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

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

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.)

☒ NO

☐ YES

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

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans.
(See Part 1. C.1, C.2. and C.3.)

☒ NO☐ YES

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

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action’s land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character.
(See Part 1. C.2, C.3, D.2, E.3)

☒ NO☐ YES

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

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

Marex Management, Inc.

Oak Ridge Commons
P.O. Box 393
Waccabuc, New York 10597

estimate

November 19,2020

Dr. and Mrs. Kullman
12 Red Coat Lane
Waccabuc, N.Y. 10597

In Reference to: bibbo associates drainage improvements plans
As per your request below is a breakdown of work

- Create 225 linear feet of vegetated swale for storm water treatment
- Rake out, seed and straw swale as per plan
- Install three (3) Rip Rap stone spillways as per plan
- Pick up three (3) separate existing 4" drainage pipes and extend down to new vegetated swale
- Using 4" sdr-35 piping 260 linear feet
- Install three (3) rock inlets at pipe discharge to swale
- Backfill smooth upon completion
- Install 300 linear feet silt fence prior to starting work as per plan

Cost for above work	\$21,500.00
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- | | |
|--|----------|
| • Purchase of plants and shrubs as per plan | 4,276.00 |
| • Labor on planting and feeding new plants as per plan | 3,375.00 |

Marex Mgmt.Inc supervision for work above	<u>5,830.00</u>
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TOTAL COST FOR PROJECT	\$34,981.00
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Builders of Fine Custom Home for over 35 Years

MEMORANDUM

TO: Chairperson Janet Andersen and
Members of Lewisboro Planning Board

CC: Ciorsdan Conran
Judson Siebert, Esq.
Joseph Angiello

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

DATE: February 18, 2021

RE: Wolf Conservation Center
Mead Street and Buck Run
Sheet 21, Block 10803, Lots 3, 65, 67, 82, 83, and 88

PROJECT DESCRIPTION

The subject property consists of ±30.51 acres of land and is located off Buck Run, a private road, within the R-2A and R-4A Zoning Districts. The applicant has submitted an application for a Special Use Permit, under Section 220-43.2, Private Nature Preserves, of the Zoning Code, and is proposing several improvements in the furtherance of its goals and objectives. The applicant has previously submitted a subdivision application to the Planning Board in connection with a proposed lot line change, which moving forward, will be reviewed simultaneously with the Special Use Permit Application.

SEQRA

The proposed action has been preliminarily identified as an Unlisted Action under the State Environmental Quality Review Act (SEQRA) and it is recommended that the Planning Board conduct a coordinated review and seek to establish itself as the Lead Agency. The Planning Board must issue a Determination of Significance prior to taking action on this pending application.

REQUIRED APPROVALS/REFERRALS

1. Subdivision, a Special Use Permit, a Wetland Activity Permit and a Town Stormwater Permit are required from the Planning Board; a public hearing is required to be held.
2. An area variance may be required from the Zoning Board of Appeals.
3. The application must be referred to the Architecture and Community Appearance Review Council (ACARC) for review and recommendations.
4. Westchester County Department of Health (WCHD) Approval is required for Realty Subdivision and connection to existing sanitary sewage disposal systems and new potable water wells.
5. The proposed action requires Stormwater Pollution Prevention Plan (SWPPP) approval from the NYCDEP.
6. Land disturbance will exceed one (1) acre located within the NYCDEP East of Hudson Watershed; coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharge from Construction Activity (GP-0-20-001) is required.
7. An Article 24 Freshwater Wetland Permit may be required from the NYSDEC.
8. Improvements and modifications within the State right-of-way will require approval from the New York State Department of Transportation (NYSDOT).
9. The proposed action must be referred to the Westchester County Planning Board in accordance with Section 239-m of the General Municipal Law.

COMMENTS

1. The applicant shall submit an updated Existing Conditions Survey (boundary and 2-foot contours), signed and sealed by a NYS Licensed Land Surveyor.
2. The applicant shall submit a preliminary subdivision plat prepared by a NYS Licensed Land Surveyor and prepared in compliance with Town/County requirements.
3. It is recommended that the plans be forwarded to the Building Inspector for zoning and fire access code review.

4. The Fire Department should review the proposed site plan for fire apparatus access. The Fire Department should comment on the proposed grade and width of the proposed road and driveways.
5. The applicant shall submit the current property deed.
6. The names of the adjacent property owners and the location of any neighboring driveways, structures, buildings, wells, and septic areas shall appear on the plan.
7. The site plans shall identify/note the future use of all existing buildings to remain.
8. The Bulk Zoning Table shall be revised to compare the requirements of the underlying Zoning District to the existing and proposed condition; required variances and existing nonconformities shall be noted below the table.
9. The applicant shall submit a business plan, which shall provide a detailed description of the proposed use and its operation. The business plan shall include a title and date for reference purposes.
10. The plan shall be revised to provide a minimum back-up aisle width of 25 feet for all parking spaces. For coordination, all parking, drive aisle, driveway, and other layout dimension shall be depicted of the Site Plan.
11. The ADA spaces should be adjusted to have adequate space provided for a vehicle to safely back out. Vehicle maneuverability shall be updated to include maneuvering into/out of these spaces. The plan shall illustrate all ADA parking spaces are compliant, as it relates and maximum allowable grades.
12. All proposed curbs shall be concrete or belgium block.
13. The plan shall illustrate and identify the location, specie type and diameter at breast height (dbh) of all trees with a dbh of eight (8) inches or greater and located within the limits of disturbance and 25 feet beyond. Indicate trees to be removed and/or protected.
14. The applicant shall submit a Landscaping Plan for Board Review, prepared by a NYS Licensed Landscape Architect.
15. The applicant shall develop a Wetland Mitigation Plan, which provides, at a minimum, mitigation at a ratio of 1:1 (for every s.f. of wetland or wetland buffer disturbance proposed, an equal or greater amount of mitigation shall be provided). Reference is made to the Town's mitigation guidelines provided in Chapter 217, Appendix B.

16. A detailed Lighting Plan, demonstrating compliance with Sections 220-14 of the Zoning Code, shall be submitted for review. Illuminance levels shall be measured in footcandles and shall be depicted via a photometric plan identifying proposed footcandle measurements every ten (10) feet and extending over the property line by at least 20 feet. The following illuminance measurements shall be provided in tabular form on the plan: maximum, minimum, average during operation and non-operating hours, maximum to minimum ratio, and average to minimum ratio.
17. Additional information is required pertaining to the proposed ten (10) foot wide gravel path. The entire limits of the path shall be shown, as should its existing/proposed limits and proposed grading; a detail shall be provided.
18. Driveway and road profiles have been provided for Board's consideration. Both the private road and the driveway, proposed to be modified, do not meet width and grade requirements, as per Chapter 195, Subdivision of Land, of the Town Code. A determination must be made by the Building Inspector as to whether a zoning variance is required. We note that the driveway extending from Buck Run up towards the existing residence and proposed expanded parking area is proposed to be 14 feet wide, with slopes more than 25%. This condition is not ideal and must be reviewed by the Building Inspector and Fire Department for compliance and adequacy.
19. The proposed vertical profile for Buck Run shall illustrate all proposed slopes and vertical curves.
20. We recommend the applicant submit an additional truck turning analysis illustrating an emergency vehicle maneuvering around the turn between the proposed freezer facility and existing one (1) story house at the end of the proposed driveway.
21. All walls greater than four (4) feet in height shall be designed by a NYS Licensed Professional Engineer. The plan shall note that the construction of all walls greater than four (4) feet in height shall be certified by the Design Professional prior to issuance of a Certificate of Occupancy/Completion.
22. The plan shall illustrate a cut and fill analysis; the applicant should identify if blasting is anticipated.
23. The plan shall illustrate the proposed water service connections from all water supply wells. It is our understanding that the plan will require approval of a public water system from the WCHD. The applicant shall provide confirmation and demonstrate compliance with all required WCHD regulations and setbacks.
24. The plan shall include details of any improvement to the existing water supply and sanitary sewer that may become necessary.
25. The plan shall illustrate all existing septic system areas to be cordoned off during construction.

26. The plan shall include a proposed sight line plan and profiles for the proposed curb cut location to demonstrate adequate visibility in either direction in accordance AASHTO guidelines.
27. The plan shall illustrate provisions for fire protection.
28. The property is located in the Waccabuc River Basin, part of the New York City East of Hudson Watershed. Since disturbances exceed one (1) acre, the applicant has prepared Stormwater Pollution Prevention Plan (SWPPP) in accordance with NYSDEC General Permit G-0-20-001 and Chapter 189, Stormwater Management and Erosion and Sediment Control, of the Town Code. A Notice of Intent (NOI) and MS4 Acceptance Form will need to be filed with the NYSDEC. Submit draft copies to this office for review.
29. The applicant will be required to perform test, deep and percolation, to be witnessed by this office to demonstrate suitable soils for all proposed infiltration system practices. The hydrologic model shall be updated based on the observed percolation test data. Please contact this office this office to schedule. The plan shall illustrate the deep and percolation test results.
30. Since disturbances exceed two (2) acres and the proposed work is occurring on slopes exceeding 15%, NYCDEP approval of the SWPPP will be required.
31. As Per NYSDEC guidelines, infiltration chambers shall be installed in virgin soils and cannot be installed on slopes with grades steeper than 15% or in fill sections greater than the top quarter of the drywell system. The plan shall illustrate all slopes in the vicinity of all proposed infiltration facilities to demonstrate accordance with NYSDEC guidelines.
32. We note that the applicant is proposing impervious surface within 100-feet of a NYSDEC wetland, which may require a variance from the NYCDEP.
33. As illustrated on the Post Development Drainage Basin Map in the SWPPP Report, a portion of the proposed driveway, downgrade of Infiltration System #1.1 and Basin #1.1P, appears it will not be treated by any stormwater mitigation practices. The plan shall illustrate the required stormwater quality treatment and quantity controls for this portion of the proposed driveway. If not, a variance from the NYCDEP will be required for untreated stormwater.
34. It appears infiltration Bbasin 1.1P will infiltrate into the native soil strata. A deep and percolation test should be provided at this location if the intention is to provide infiltration.
35. The proposed drainage map illustrates that the proposed courtyard is not included in Drainage Area 1.2S. It is recommended this area be included and discharge into Infiltration Basin #1.2. The hydrologic model shall be revised accordingly.

36. It appears the pipe discharge in Infiltration Basin #1.2 will be submerged. We recommend the pipe layout be revised to avoid this condition.
37. The plan shall illustrate the roof drain connections on the Site Plan. Include the size, slope and material.
38. The SWPPP Report shall include pipe flow calculations. The calculations shall demonstrate that the proposed pipe network along the Buck Run driveway will have sufficient capacity.
39. It appears proposed drainage system along Buck Run will have pipe slopes exceeding 15%. We recommend pipe collars be installed to avoid any erosion of backfill material between the manhole and pipe connection points. Provide details.
40. As shown on the Drainage Schedule, the pipes connect to the HDS 1.2 are set at 0% pitch. All pipes should be set at 1% minimum pitch for performance and maintenance purposes.
41. The weirs in Diversion Manhole #1.2 and #1.3 are not modeled in the HydroCad output within the SWPPP Report. The HydroCad output shall be updated to include the weirs and the elevations in the HydroCad output shall coordinate with the plans.
42. As several parcels are involved, access, grading, and drainage easements will be required, as will maintenance agreements. All proposed easement metes and bounds shall be depicted on the site plan and plat. The SWPPP shall also clarify the future maintenance responsibility.
43. The plan shall note that disturbance limits shall be staked in the field prior to construction.
44. Include erosion control measures on the plan, including, but not limited to, erosion control blankets, water bars, check dams, construction sequence, etc. Provide details.
45. It is recommended that additional stockpile areas be shown at the location of the education center and in the area of the proposed overnight accommodations.

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 BIBBO ASSOCIATES, LLP, DATED DECEMBER 29, 2020:

- Preliminary Plot Plan (Dwg. No. PP-1)
- Existing Conditions and Removals Plan (Dwg. No. EX-1)
- Layout Plan – South (Dwg. No. LP-1)
- Layout Plan – North (Dwg. No. LP-2)

Chairperson Janet Andersen

February 18, 2021

Page 7 of 7

- Construction Plan – South (Dwg. No. CP-1)
- Construction Plan - North (Dwg. No. CP-2)
- Erosion Control Plan (Dwg. No. EC-1)
- Road Profiles (Dwg. No. P-1)
- Turning Maneuvers (Dwg. No. T-1)
- Erosion Control Notes & Details (Dwg. No. EC-2)
- Details (Dwg. No. D-1)
- Details (Dwg. No. D-2)

PLANS REVIEWED, PREPARED BY KG+D ARCHITECTS, DATED (LAST REVISED) DECEMBER 29, 2020:

- Title Sheet
- Code Compliance Information (Sheet CC-1)
- Landscape Plan (Sheet L-100)
- Main Floor & Basement Plan (Sheet A201)
- Roof Plan & Details (Sheet A202)
- Exterior Elevations (Sheet A301)
- Exterior Elevations (Sheet A302)
- Renderings (Sheet A303)
- Wall Sections (Sheet A801)

DOCUMENTS REVIEWED:

- Cover Letter, prepared DelBello Donnellan Weingarten Wise & Wiederkehr, LLP, dated December 28, 2020
- Stormwater Pollution Prevention Plan (SWPPP), prepared by Bibbo Associates, LLP, dated December 29, 2020

JKJ/dc

MEMORANDUM

TO: Chairperson Janet Andersen and
Members of Lewisboro Planning Board

CC: Ciorsdan Conran
Judson Siebert, Esq.
Joseph Angiello

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

DATE: February 9, 2021

RE: Wetland Permit and Stormwater Permit
Peter and Annette McGuinness
17 School House Road
Sheet 22, Block 10802, Lot 35

PROJECT DESCRIPTION

The subject property consists of ±23.261 acres of land and is located at 17 School House Road within the R-4A Zoning District. The subject property is developed with a single-family residence, recreational barn, studio/storage shed, septic, domestic well, and driveway. The southeast portion of the property is developed with a shelter, lamb paddock, chicken coop, and feed storage shed. The applicant is proposing several outdoor improvements, including, but not limited to, construction of a spa, patio expansion, roof overhang, and driveway expansion. The proposed improvements will result in ±8,617 s.f. of disturbance within the wetland buffer.

SEQRA

The proposed action has been preliminarily identified as a Type II Action and is therefore categorically exempt from the State Environmental Quality Review Act (SEQRA).

REQUIRED APPROVALS/REFERRALS

1. A Wetland Activity Permit and Town Stormwater Permit are required from the Planning Board; unless waived by the Planning Board, a public hearing is required to be held on the Wetland Activity Permit.
2. Area variances have been granted by the Zoning Board of Appeals.
3. An Article 24 Freshwater Wetland Permit is required from the New York State Department of Environmental Conservation (NYSDEC).
4. The subject property is located within the NYC East of Hudson Watershed and proposed land disturbance exceeds 5,000 s.f. Coverage under New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001) will be required.

COMMENTS

1. At the January 19, 2021 Planning Board Meeting, the Board recommended that additional mitigation be provided, including the incorporation of demarcated no-mow zones and the replacement of existing lawn area with native planting areas.
2. A copy of the NYSDEC Article 24 Freshwater Wetland Permit shall be submitted to the Planning Board upon receipt.
3. As previously requested, the applicant shall perform percolation soil testing in the vicinity of the proposed mitigation system to be witnessed by the Town Engineer. The test locations and results shall be shown on the plan. Contact this office to schedule the testing.
4. Soil Deep testing has been performed and witnessed by this office. As designed, the minimum three (3) foot separation distance from the bottom of the infiltration chambers to groundwater is not achieved. An alternate design shall be considered.
5. As previously requested, all plans, including the Topographic Survey and Landscape Architecture Plans, shall be signed/sealed by the Design Professional.
6. As previously requested, all relevant construction details shall be submitted for review including, but limited to, gravel driveway, stormwater mitigation system, drainage structures, pipe trench and pipe bedding.

7. A spot grade provided for the retaining wall on the south side of the driveway indicates a retaining wall height of 4.1 feet (potential typo). All walls greater than four (4) feet in height shall be designed by a NYS Licensed Professional Engineer. The construction details shall be revised as necessary or the wall elevations on the grading plan should be revised.

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 J.D. BARRETT & ASSOCIATES, LLC, DATED (LAST REVISED) DECEMBER 29, 2020:

- Overall Property & Existing Conditions Plan (Sheet 1 of 4)
- Site Plan – Subject Area 1 (Sheet 2 of 4)
- Grading Plan (Sheet 3 of 4)
- Erosion Control & Site Mitigation Plan, Subject Areas 1 and 2 (Sheet 4 of 4)

PLANS REVIEWED, PREPARED BY ALP ENGINEERING, DATED DECEMBER 24, 2020:

- Existing Conditions and Stormwater Analysis (Sheet SW-0)
- Future Conditions Stormwater Plan (Sheet SW-1)

PLANS REVIEWED, PREPARED BY PATRICK M. CROKE, DATED (LAST REVISED) OCTOBER 9, 2020:

- Site Plan and General Notes (Sheet A-1)
- Site Plan and Landscape Plan (Sheet A-2)
- Architectural Plan (Sheet A-3)
- Architectural Plan (Sheet A-4)
- Elevations (Sheet A-5)
- Elevations (Sheet A-6)
- Elevations (Sheet A-7)
- Sections (Sheet A-8)
- Sections and Details (Sheet A-9)

DOCUMENTS REVIEWED:

- Cover Letter, prepared by J.D. Barrett & Associates, LLC, dated December 29, 2020
- ZBA Resolution of Approval for Cal No.12-20-BZ
- Stormwater Permit Application, dated December 24, 2020
- Letter to Planning Board, prepared by ALP Engineering, dated December 28, 2020
- Stormwater Pollution Prevention Plan Report (SWPPP), prepared by ALP Engineering, dated December 24, 2020
- MS4 and Notice of Intent Forms
- Survey of Property, prepared by Jeffrey DeRosa, LS, dated December 14, 2016

JKJ/dc

TO: The Town of Lewisboro Planning Board
FROM: Lewisboro Conservation Advisory Council
SUBJECT: **McGuiness Residence, 17 Schoolhouse Road**
South Salem, NY 10590
DATE: February 10, 2021

The Conservation Advisory Council (CAC) has reviewed the materials recently submitted by the applicant, including the December 29, 2020 Letter to the Planning Board from J. D. Barrett & Associates responding to the concerns raised in our November 10, 2020 memo. At the January Planning Board meeting both the wetland inspector and the CAC requested that additional areas be added to the mitigation plan to alleviate the concern that only increasing density in previous mitigation areas would not provide adequate mitigation. The CAC continues to await this updated mitigation plan.

February 16, 2021

Ms. Janet Anderson, Chair
Town of Lewisboro Planning Board (PB)
79 Bouton Road
South Salem, NY 10590-1430

**Re: McGuinness Property / Proposed Outdoor Improvements / Updated Information
17 School House Road – 23.261 Acres, R-4A Zone
Tax Parcel ID: 22-10802-35**

Dear Chair Anderson & Members of the PB:

On behalf of Peter and Annette McGuinness, we provide the following materials in support of a Wetland Permit Application for the above project, portions of which occur within the outer areas of the 150-foot wetland setback on the property. Information provided at this time responds to project review comments noted in the Town Planner's memorandum for the project, dated February 9, 2021. We are providing this new information now to share our responses to the review comments with the PB in order to have productive discussions with the PB on the project at the February 24, 2021 PB meeting. This information is only provided digitally at this time. Hard copies can be provided upon request. We include the following information.

- This explanatory **Cover Letter**, prepared by J.D. Barrett & Associates, LLC, dated February 16, 2021.
- **Revised Site Plans**, prepared by J.D. Barrett & Associates, LLC, dated December 29, 2020, last revised February 16, 2021, including:
 - Sheet 1 of 5 – Overall Property & Existing Conditions Plan
 - Sheet 2 of 5 – Site Plan-Subject Area 1
 - Sheet 3 of 5 – Grading Plan
 - Sheet 4 of 5 – Erosion Control
 - Sheet 5 of 5 – Site Mitigation Plan, Subject Areas 1 and 2
- **Engineering Response Letter**, prepared by ALP Engineering, dated December 28, 2020, last revised February 16, 2021.
- **Engineering Plans**, prepared by ALP Engineering, dated December 24, 2020, last revised February 16, 2021, including:
 - SW-0 – Existing Conditions Stormwater Analysis
 - SW-1 – Stormwater Management Plan
 - SW-2 – Stormwater Management Plan Construction Details
- SWPPP Report for 17 School House Road, revised date February 16, 2021.
- A stamped and signed **Survey for the Property**, prepared by Insite Engineering, Surveying & Landscape Architecture, PC, Carmel, NY, dated August 19, 2019.

New Information Prepared

The project team has prepared new and revised information in response to comments noted in the Town Planner's (TP) project review memorandum, dated February 9, 2021. The following information responds to the "Comments" section of the memorandum beginning on page 2 of 3. We offer the following responses to the TP's memo.

1. Comment #1 regarding Additional Mitigation. As discussed previously with the PB at the January 2021 meeting, the applicant has directed the project team to create larger wetland mitigation areas, in addition to the mitigation shown on the December 29, 2020 plans, by converting existing areas of mowed lawn into native plantings. We now show, on Sheet 5 of 5 - Mitigation Planting Plan, new additional plantings (color coded pale yellow) adjacent to the new activity areas in the backyard, by the driveway area and the former lamb paddock. The new plantings include newly created edge gardens around the back and side yards. The addition of a rain type garden by the driveway and parking area and additional plantings inside the former lamb pen and around the proposed greenhouse (that replaces the original lamb shelter). The purpose of the mitigation plantings proposed is to offset the unavoidable wetland buffer disturbances associated with this project.

We have calculated that there will be approximately 7607 SF of wetland buffer disturbance associated with this project. We note on the plans that Subject Area 1 that occurs in the backyard and adjacent to the activity barns will disturb 6374 SF of wetland buffer, although 1065 SF of that disturbed area within the wetland buffer occurs over the existing driveway. The other area of wetland buffer disturbance occurs at Subject Area 2, the former lamb pen in the front yard. Here there will be 1233 SF of wetland buffer disturbance associated with removing the former lamb shed and replacing it with a greenhouse of similar size. Total wetland buffer disturbance has been calculated at 7607 SF.

We have also calculated that we are proposing approximately 15,220 SF of wetland mitigation to offset the wetland buffer impacts at a 2:1 ratio of mitigation provided to unavoidable impact created. This is a mitigation rate approximately double the required 1:1 mitigation rate the Town Code calls for. This will result in considerably more plantings replacing mowed lawn in the wetland buffer and associated benefits of same.

We note that the December 29, 2020 Mitigation Plan showed approximately 7700 SF of wetland mitigation. Those areas are shown in a pale green tone on the Wetland Mitigation Plan, Sheet 5 of 5. The additional wetland mitigation of approximately 7520 SF shown on the current February 16, 2021 plan is shown in a pale yellow tone. The December 2020 plantings were specified with exact species, sizes and quantities. The February 2021 mitigation plantings are shown, at this time, schematically and a typical mitigation planting list is provided indicating the types of species proposed. We will detail the new mitigation plantings, similar to the December 2020 plantings, once the mitigation plan is discussed and agreed to with the PB. It is our hope that the 2:1 mitigation concept will be acceptable and the PB can agree to move the project to

Administrative Wetland Permit Approval and the Town Planner can review and approve the final mitigation planting plan.

2. Comment #2 regarding NYSDEC Article 24 Freshwater Wetland Permit (NYSDEC Wetland Permit). We have prepared a NYSDEC Wetland Permit Application to reflect the latest site plan. Same shall be submitted to NYSDEC for review in the coming days. Evidence of NYSDEC wetland permit coverage shall be provided to the PB once it becomes available.
3. Comment #3 regarding Percolation Soil Testing. Please see response by ALP Engineering.
4. Comment #4 regarding Soil Deep Testing. At the request of the project engineer, approximately one foot of soil fill has now been added over the proposed infiltration system that is positioned just west of the pool area. (The drainage chambers are shown with light blue dashed lines on the plan.) The one foot of fill is provided in order to maintain a three-foot soil separation between the bottom of the infiltration practice and ground water. You will note that a low 18"- 20" stonewall is now proposed (just west of the infiltrators) to contain the soil fill over the infiltration practice. This limits the amount of filling and disturbance in the wetland buffer. See response to this item in the ALP Engineering response letter.
5. Comment #5 regarding Signed & Sealed Plans. The Site Plans, Engineering Plans and Property Survey now bear the professional seals and signatures of the professionals who prepared the work.
6. Comment #6 regarding Relevant Construction Details. The final construction plans shall provide all relevant construction details for the project.
7. Comment #7 regarding Retaining Wall Heights. We have corrected the typo on the wall height elevation on the retaining wall at the southern driveway parking area to read as 4' ht. vs. 4.1' ht. Maximum wall height in all areas is 4'.
8. Comment #8 regarding Revised Pool Fence Location. After discussions with the owners, the location of the proposed pool fence has been modified from the December 2020 plans. Previously in December, the pool fence was located adjacent to the pool and patio area. At this time, it has been modified to enclose the usable backyard. Here, the pool fence will connect to the western edge of the house and extend to the tree line behind the previously installed mitigation plantings. Once the fence reaches the tree line it will turn 90° and travel northerly along the back of the mitigation plantings and then travel easterly along the watercourse before it turns and travels southerly back to the activity barns. A small section of fence will connect the activity barns to the house to complete the enclosure. The area of backyard enclosed will be approximately .443 acres of the 23.261 acre site, or approximately 2% of the total site area will be within the pool enclosure. The benefit of the currently proposed pool fence plan is that the backyard now remains open to the pool area for open play. In addition, the view to the pool from the house and back patio are now open, providing superior visual supervision of the pool area from the

house. An additional benefit is that the pool fence will now help protect the plantings from deer browsing and damage. A detail of the fence is provided on Sheet 3 of 5.

Summary

We believe that the project team has substantially addressed the comments and concerns noted by the PB and contained in the Town Planner's project review letter. We look forward to discussing the project with the PB at the February 23, 2021 PB meeting. It is our hope that the PB concurs that we have sufficiently addressed the project issues and that the project can be referred to the Town Planner's office for Wetland Permit Administrative Approval in order to keep the approval process moving forward.

On behalf of the applicants and project team, we are appreciative of the PB's time and consideration for this project.

Respectfully submitted,

Jeri Barrett

Jeri D. Barrett, R.L.A.

JDB:lj

Enc.

cc: Mr. & Mrs. McGuinness

Michael Sirignano, Esq.

Alan Pilch, PE, RLA

Jeff DeRosa



**ALP Engineering
& Landscape Architecture, PLLC**

February 16, 2021

Hon. Janet Andersen, Chairwoman and Members of the Planning Board
Town of Lewisboro
79 Bouton Road
South Salem, NY 10590

**Re: 17 School House Road
Sheet 22, Block 10802, Lot 35
Application for Wetland Permit and Stormwater Permit**

Dear Chairwoman Andersen and Members of the Planning Board:

This letter is submitted in responding to stormwater management comments in the February 9, 2021 memorandum to the Planning Board regarding the above-noted application for a Wetland Permit and Stormwater Permit. Each of the comments from the above-noted memorandum that are related to the work that our office submitted is presented below in italics; the response to the comment follows.

Enclosed are digital copies of the following revised drawings and documents:

<u>Drawing No.:</u>	<u>Drawing Title:</u>	<u>Date:</u>
SW-0	Existing Conditions Stormwater Analysis	12/24/2020
SW-1	Stormwater Management Plan	02/16/2021
SW-2	Stormwater Management Plan Construction Details	02/16/2021

- SWPPP Report for 17 School House Road, revised date 02/16/2021.

3. *As previously requested, the applicant shall perform percolation soil testing in the vicinity of the proposed mitigation system to be witnessed by the Town Engineer. The test locations and results shall be shown on the plan. Contact this office to schedule the testing.*

Response: Percolation testing within the footprint of the proposed stormwater management practice will be performed when the weather and ground conditions are more favorable to

P.O. Box 843 Ridgefield, CT 06877
EAEC Office: 162 Falls Road Bethany, CT 06524
Direct: (475) 215-5343 Mobile: (203) 710-0587
EAEC Tel: (203) 393-0690 x114
Email: alan@eaec-inc.com



conduct the testing. At this time, with the snow cover and frost depth, soil percolation testing is not feasible.

4. *Soil Deep testing has been performed and witnessed by this office. As designed, the minimum three (3) foot separation distance from the bottom of the infiltration chambers to groundwater is not achieved. An alternate design shall be considered.*

Response: The amended stormwater management plan provides the required three (3) feet of vertical separation from the documented high seasonal groundwater table and the invert elevation of the 6" of stone below the chambers.

6. *As previously requested, all relevant construction details shall be submitted for review including, but limited to, gravel driveway, stormwater mitigation system, drainage structures, pipe trench and pipe bedding.*

Response: Construction details are provided on sheet SW-2 for the installed Cultec chambers, catch basins, pipe trench, perforated pipe in trench, and storm pipe cleanout. Please refer to drawings prepared by JD Barrett and Associates for the gravel driveway construction detail.

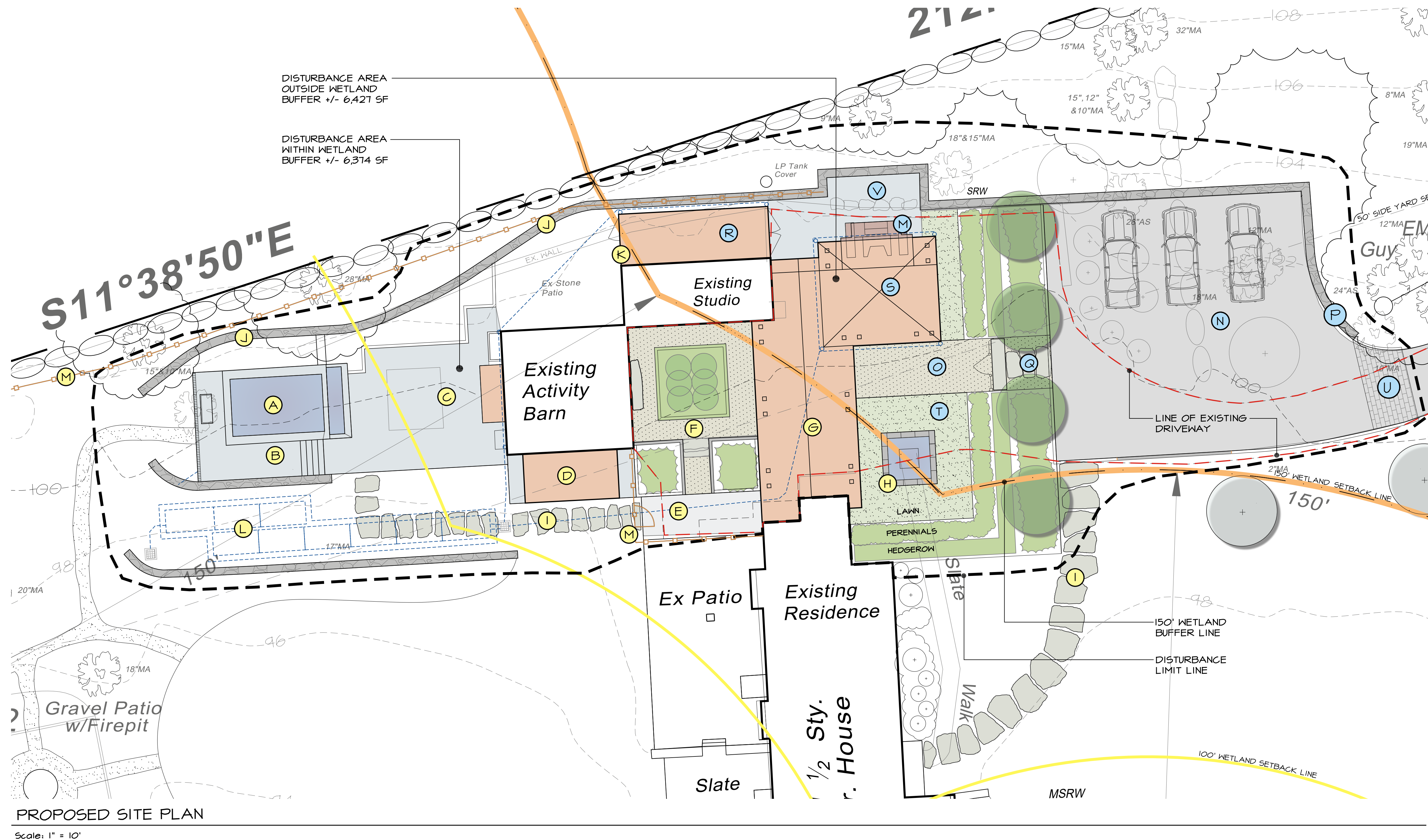
We look forward to your review of the submitted materials. If you have any comments or questions, or require printed materials, please feel free to contact us at (475) 215-5343.

Sincerely,

ALP ENGINEERING & LANDSCAPE ARCHITECTURE, PLLC

Alan L. Pilch, P.E., R.L.A.
Principal

cc: Jan Johannessen, AICP and Joseph Cermele, PE
Peter and Annette McGuinness
Jeri D. Barrett, RLA

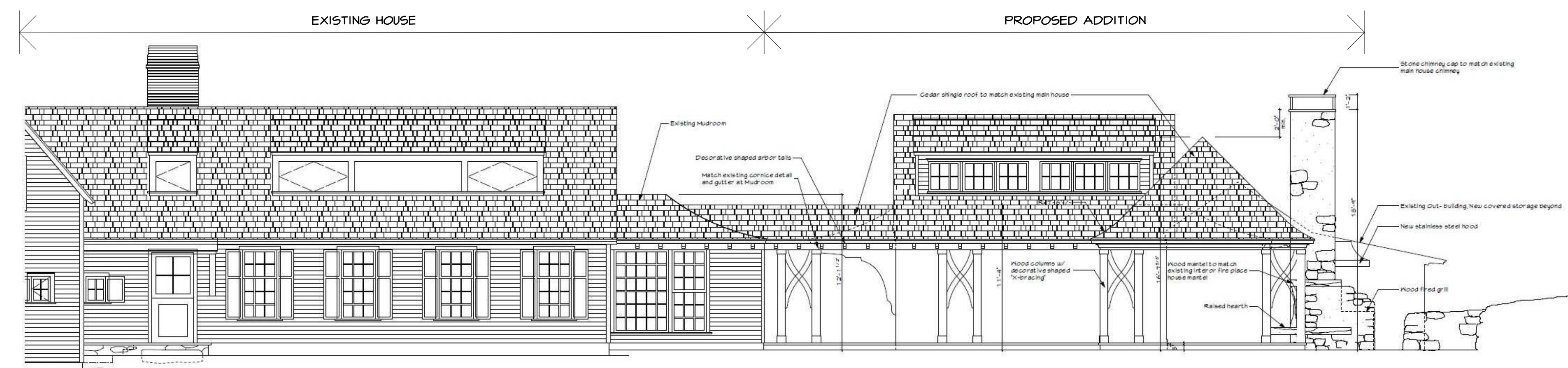


PROPOSED ACTIVITIES LOCATED WITHIN OR PARTIALLY WITHIN WETLAND BUFFER

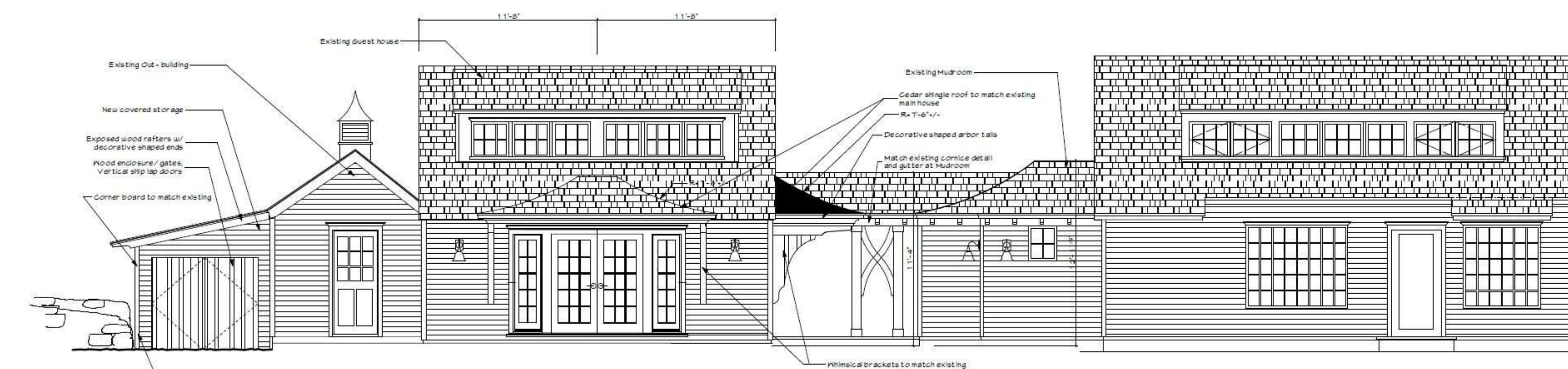
- (A) PROPOSED 10' x 15' SALT WATER SPA W/ PLUNGE POOL
- (B) PROPOSED BLUESTONE SPA PATIO
- (C) EXISTING GRAVEL PATIO TO BE CONVERTED TO BLUESTONE PAVING
- (D) PROPOSED BARN ROOF OVERHANGS EXPANSION TO PROVIDE NEW COVERED SITTING AREA/ PORCH
- (E) PROPOSED REAR PATIO EXPANSION
- (F) EXISTING GRAVEL DRIVEWAY TO BE CONVERTED TO FORMAL GARDEN WITH PEA GRAVEL WALKWAYS
- (G) PROPOSED COVERED DINING PATIO REPLACES PORTION OF EXISTING GRAVEL DRIVEWAY
- (H) PROPOSED GARDEN AREA WITH ORNAMENTAL WATER FEATURE OVER EXISTING DRIVEWAY AND MOWED LAWN
- (I) PROPOSED STEPPING STONES OVER EXISTING LAWN AREA
- (J) PROPOSED NEW OR REALIGNED STONE RETAINING WALL
- (K) NEW COVERED STORAGE SHED OVER EXISTING STONE PATIO (SMALL PORTION LOCATED W/ IN WETLAND BUFFER)
- (L) STORMWATER MANAGEMENT AREA
- (M) POOL FENCE

PROPOSED ACTIVITIES LOCATED OUTSIDE REGULATED WETLAND BUFFER

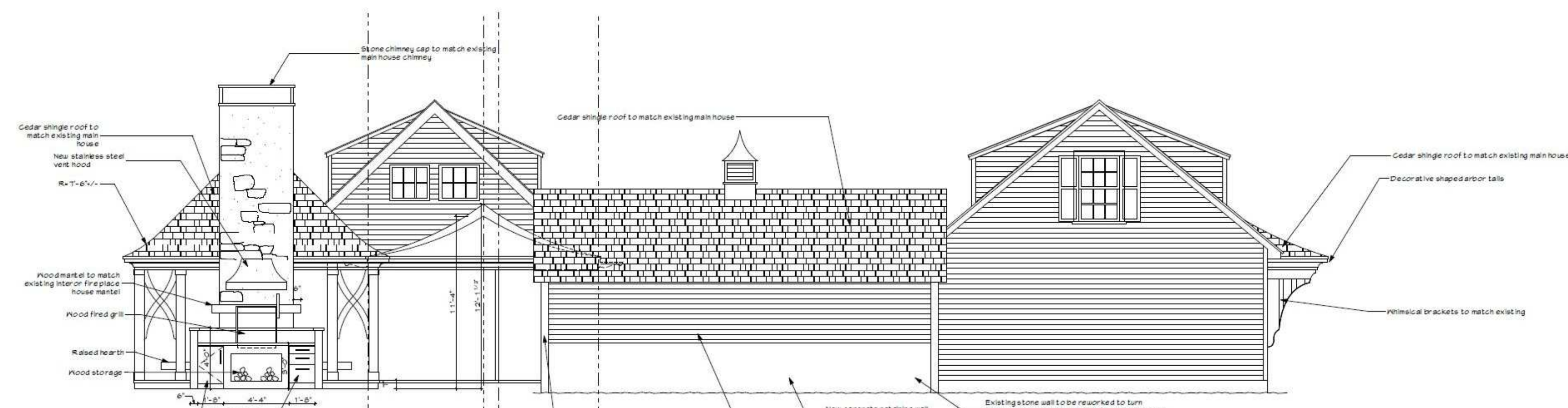
- (N) PROPOSED GRILL AND FIREPLACE
- (O) EXPANSION OF EXISTING GRAVEL DRIVEWAY TO SERVE AS PARKING AND TURNAROUND AREA
- (P) PROPOSED PEA GRAVEL AND STEPPING STONE WALKWAY OVER EXISTING GRAVEL DRIVEWAY
- (Q) PROPOSED STONE RETAINING WALL AT PARKING AREA
- (R) PROPOSED STEPPING STONE AND PEA GRAVEL OVER EXISTING GRAVEL DRIVEWAY
- (S) PROPOSED SPA EQUIPMENT TO BE LOCATED WITHIN NEW STORAGE SHED
- (T) PROPOSED COVERED SITTING FOLLY
- (U) PROPOSED GRASS AREA SURROUNDED BY PERENNIALS AND LOW EVERGREEN HEDGE
- (V) RUMBLE STRIP
- (W) PROPOSED BLUESTONE PATIO AND REALIGNED WALL EAST OF GRILL AREA



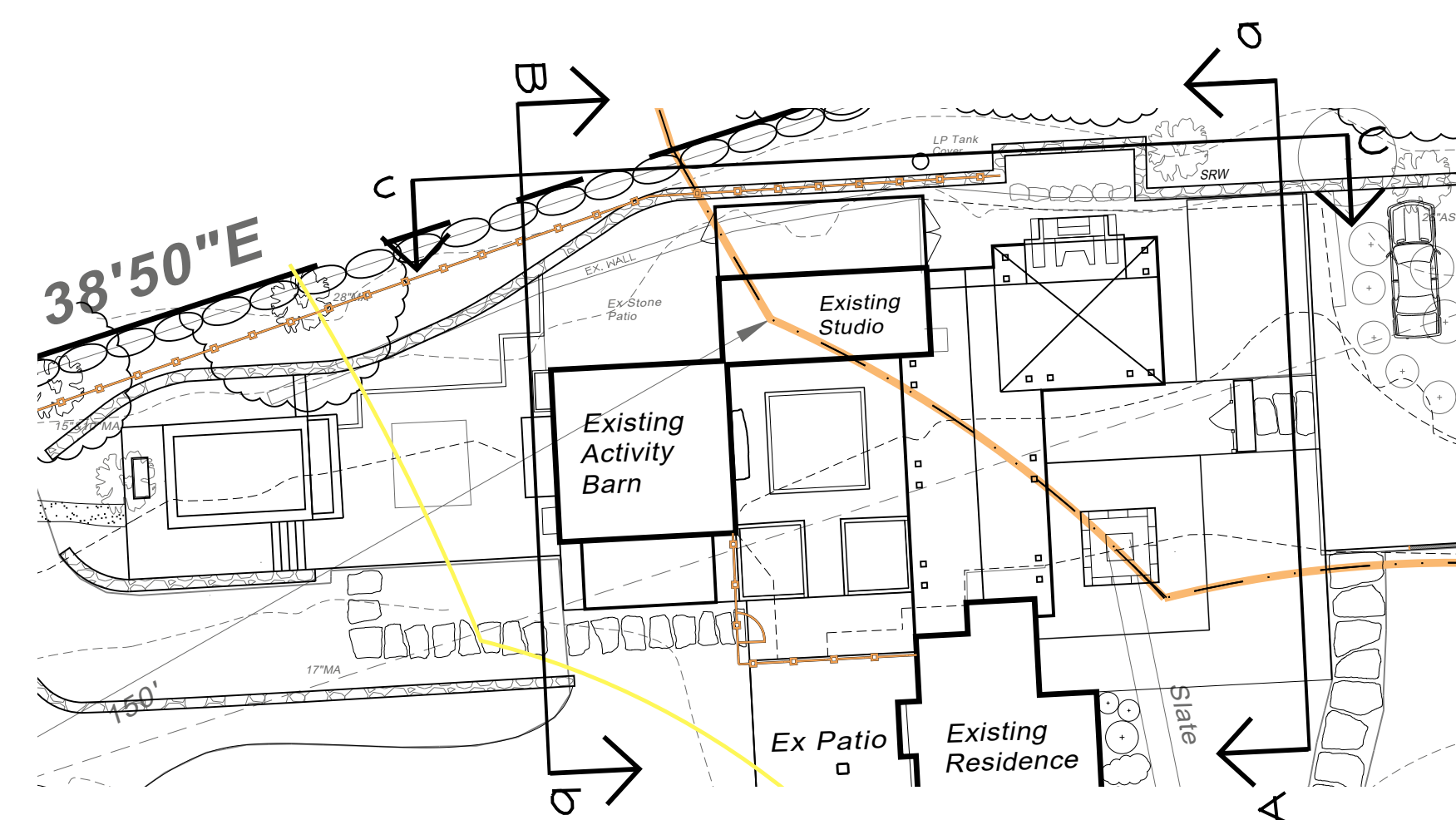
NTS



NTS



NTS



SITE PLAN - SUBJECT AREA I

Prepared For:
MR. & MRS. MCGUINNESS
17 SCHOOL HOUSE ROAD
WACCABUC, NY 10591
Tax Parcel ID 22-10802-35
23.261 Acres

Prepared By:
Landscape Architect/Environmental Planner:
J. D. BARRETT & ASSOCIATES, LLC
109 SPORT HILL ROAD
EASTON, CONNECTICUT 06612
Tel. 203.372.5805 Fax 203.372.0449

Attorney:
MICHAEL FULLER SIRIGNANO
OLD POST ROAD PROFESSIONAL BUILDING
842 ROUTE 35, PO BOX 184
CROSS RIVER, NY 10518
Tel. 914-163-5500

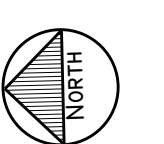
Wetland and Soil Scientist:
PAUL JAEHNIG
PO BOX 1071
RIDGEFIELD, CT 06871
Tel. 203.438.4443

Environmental Consultant:
STEPHEN W. COLEMAN ENV. CONSULTING
3 ASPEN COURT
OSHING, NY 10562
Tel. 914.762. 7288

Engineer/Surveyor:
INSITE ENGINEERING, SURVEYING &
LANDSCAPE ARCHITECTURE, P.C.
3 GARRETT PLACE
CARMEL, NY 10512
Tel. 845-225-4640

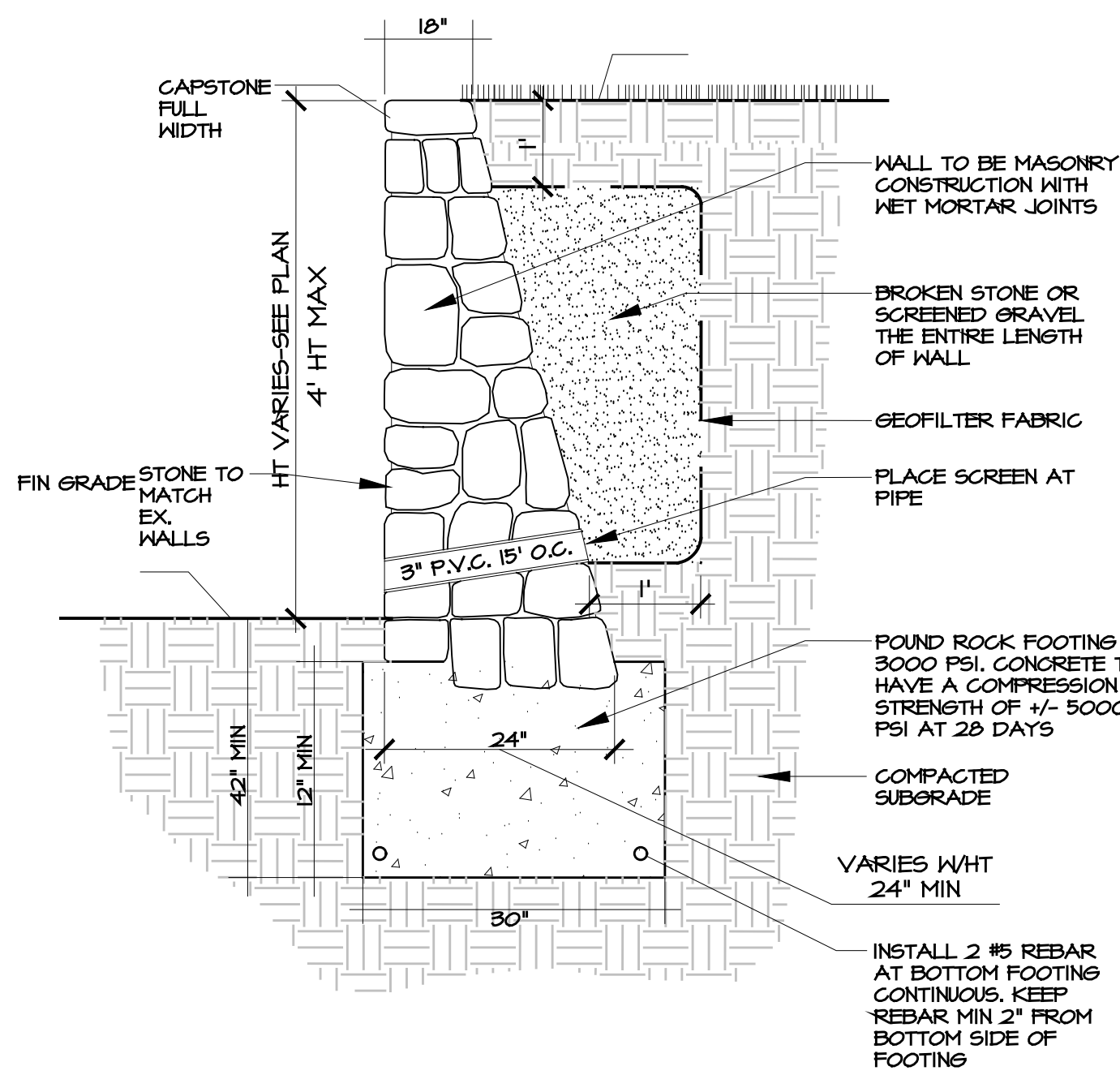
Stormwater Engineer:
ALP ENGINEERING & LANDSCAPE
ARCHITECTURE, PLLC
P.O. Box 843
RIDGEFIELD, CT 06871
Tel. 475.215.5343
Scale: 1" = 10'

Date: October 9, 2020
Rev: December 24, 2020
Rev: February 16, 2021



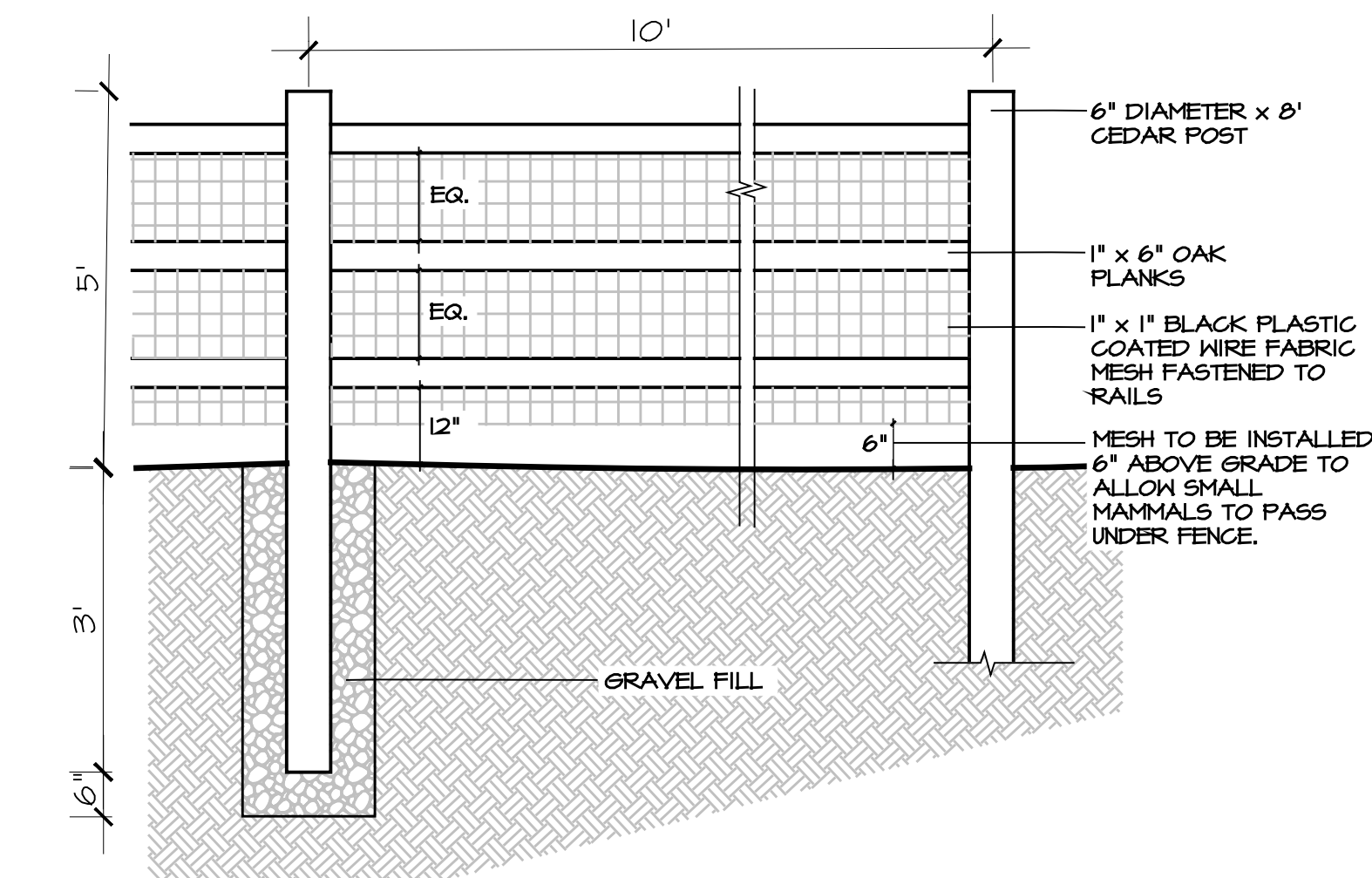


EXISTING FIRE PIT SITTING AREA TO BE REDUCED IN SIZE AND GRAVEL REMOVED. GRAVEL AND BELGIAN BLOCK EDGE TO BE REPLACED WITH MULCH. EDGES TO BE PLANTED WITH BUFFER ENHANCEMENT PLANTINGS TO PROVIDE INCREASED PROTECTION TO ADJACENT WETLAND AND FORMER FIRE PIT AREA.



STONE RETAINING WALL

Scale: nts



POST AND RAIL FENCE

SCALE: NTS

Zoning analysis

Proposal for site renovations
17 School House Road Waccabuc, NY

Parcel ID: 42.2-1-21
Zone: R-4a
Lot size (acres): 23.261
Lot size (square feet): 1,013,241

Regulation	Minimum	Maximum	Actual (Existing)	Proposed	Remarks
Min. lot size (Acres)	4		23.261	23.261	
Width/Circle (Feet)	250		296.000	296.000	
Front yard (Feet)	50		407	407	
Side yard -1 (Feet)	50		18	6	
Side yard -2 (Feet)	50		224	224	
Rear yard (Feet)	50		937	937	
Max. height, stories		2 1/2	2	2	
Max. height, feet		35'	23	23	
Building coverage		6%	0.30%	0.42%	Percentage
		60,794	3,052	4,278	Square feet

Remarks: ABOVE INFORMATION TAKEN FROM ZBA APPROVED ARCHITECTURAL PLANS PREPARED BY PATRICK CROKE, ARCHITECT, DATED 7-8-20

Variances Recently Granted by the ZBA, 07/29/20

	Proposed Condition	Required per Article IV Sec. 220-23(E)	Area Variance Request
1	Variance #1 Installation of pool deck 10'-0" from NE side yard lot line	50'	40'-0"
2	Variance #2 Installation of pool 11'-0" from NE side yard lot line	50'	39'-0"
3	Variance #3 Installation of recreation cottage west side patio 39'-6" from NE side yard lot line	50'	10'-6"
4	Variance #4 Installation of recreation cottage west side overhang 39'-6" from NE side yard lot line	50'	10'-6"
5	Variance #5 Installation of recreation cottage north side overhang 23'-6" from NE side yard lot line	50'	26'-6"
6	Variance #6 Installation of east side storage enclosure 6'-0" from NE side yard lot line	50'	44'-0"
7	Variance #7 Installation of patio on east side of fireplace/grill 12'-0" from NE side yard lot line	50'	30'-0"
8	Variance #8 Installation of fireplace/grill 20'-0" from NE side yard lot line	50'	30'-0"
9	Variance #9 Installation of covered dining/sitting folly 23'-0" from NE side yard lot line	50'	27'-0"
10	Variance #10 Installation of pool equipment 10'-0" from NE side yard lot line	50'	40'-0"

VARIANCE PLAN/ GRADING PLAN

Prepared For:
MR. & MRS. MCGUINNESS
17 SCHOOL HOUSE ROAD
WACCABUC, NY 10547
Tax Parcel ID 22-10802-35
23.261 Acres

Prepared by:
Landscape Architect/Environmental Planner:
J. D. BARRETT & ASSOCIATES, LLC
104 SPORT HILL ROAD
EASTON, CONNECTICUT 06612
Tel. 203.312.5809 Fax 203.312.0499

Attorney:
MICHAEL FULLER SIRIGNANO
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842 ROUTE 35, PO BOX 104
CROSS RIVER, NY 10518
Tel. 914-763-5500

Wetland and Soil Scientist:
PAUL JAENIG
PO BOX 1071
RIDGEFIELD, CT 06871
Tel. 203.438-9593

Environmental Consultant:
STEPHEN W. COLEMAN ENV. CONSULTING
3 ASPEN COURT
OSSING, NY 10562
Tel. 914.762. 1288

Engineer/Surveyor:
INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 GARRETT PLACE
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Tel. 845-225-4640

Stormwater Engineer:
ALP ENGINEERING & LANDSCAPE ARCHITECTURE, PLLC
P.O. Box 843
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Tel. 475.215.5343

Scale : 1" = 10'
Date : December 29, 2020
Rev : February 16, 2021



leaching of liquids into the ground. The liner shall be plastic sheeting with a minimum thickness of 10 mils with no holes or tears, and washed beyond the top of the pit with an earthen berm, sand, bags, stone, or other structural appearance except at the access point.

If pre-fabricated washouts are used they must ensure the capture and containment of the concrete wash and be stored based on the expected frequency of concrete pours. They shall be sited as noted in the location criteria.

Maintenance

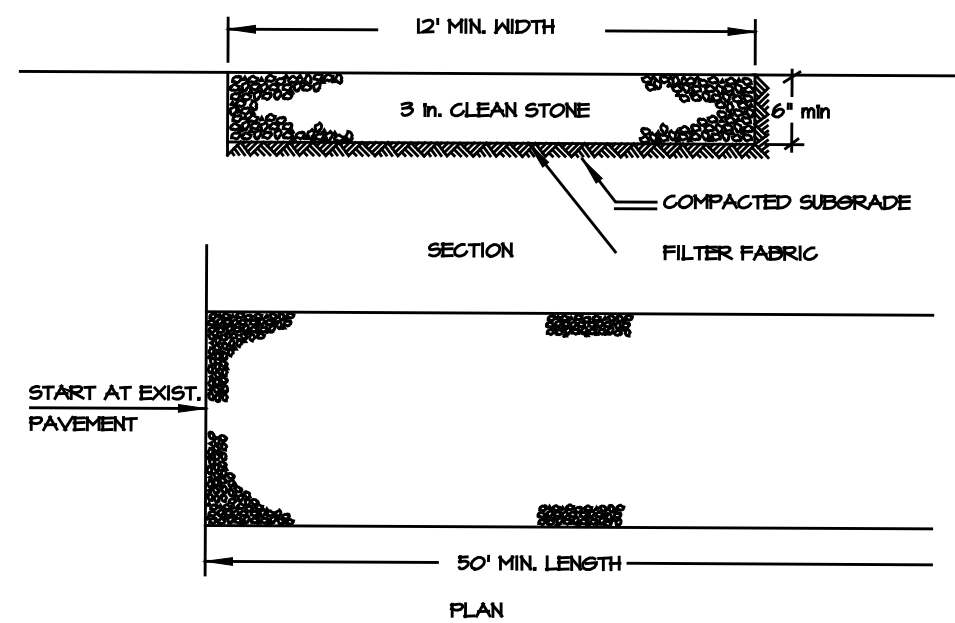
- All concrete washout facilities shall be inspected daily. Damaged or leaking facilities shall be deactivated and repaired or replaced immediately. Excess rainwater that has accumulated over hardened concrete should be pumped to a stabilized area, such as a grass filter strip.
- Accumulated hardened material shall be removed when excess wash water shall be pumped into a containment vessel and properly disposed of off site.
- 75% of the storage capacity of the structure is filled. Any excess wash water shall be pumped into a containment vessel and properly disposed of off site.
- Disposal of the hardened material off-site in a construction/demolition landfill. On-site disposal may be allowed if it has been approved and accepted as part of the project SWPPP. In that case, the material should be recycled as specified, or buried and covered with a minimum of 2 feet of clean compacted earthfill that is permanently stabilized to prevent erosion.
- The plastic liner shall be replaced with clean clomox.
- Inspect the project site frequently to ensure that no concrete discharges are taking place in non-designated areas.

Design Criteria

Capacity: The washout facility should be sized to contain solids, wash water, and rainfall and sized to allow for the evaporation of the wash water and rainfall. Wash water shall be estimated at 7 gallons per chute and 50 gallons per tonnage of the concrete, pump truck and/or discharging drum. The minimum size shall be 8 feet by 8 feet at the bottom and 2 feet deep. If excavated, the side slopes shall be 2:1 horizontal to 1 vertical.

Location: Locate the facility a minimum of 100 feet from drainage swales, storm drain inlets, wetlands, streams and other surface waters. Prevent surface water from entering the structure except for the access road. Provide appropriate access with a gravel access road sloped down to the structure. Signs shall be placed to direct drivers to the facility after their load is discharged.

Liner: All washout facilities will be lined to prevent

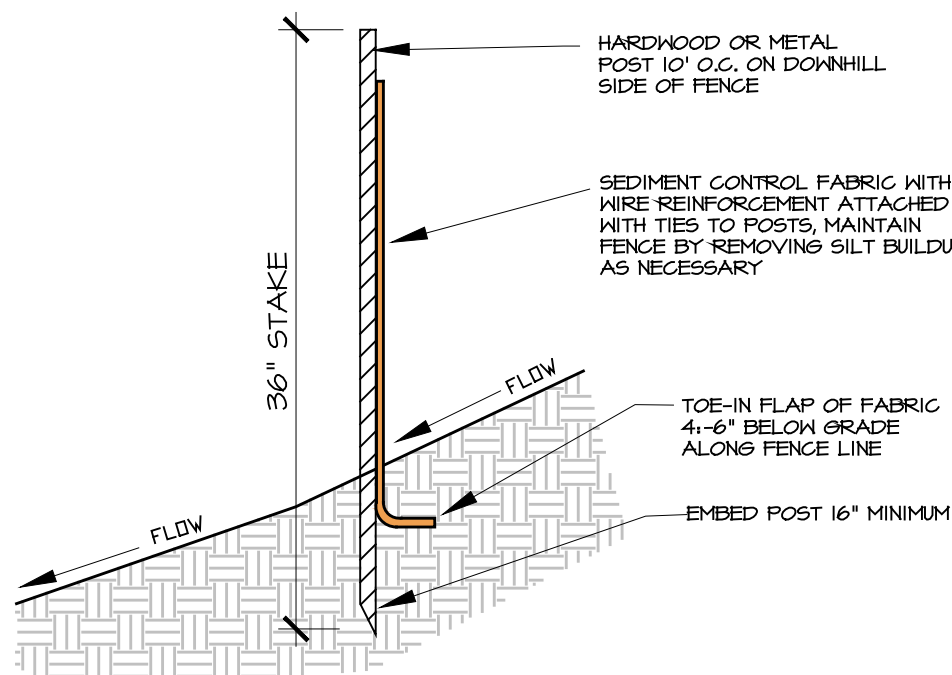


INSTALLATION NOTES

- STONE SIZE - USE 6-8" SURGE STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - AS REQUIRED 50' MIN. SEE PLAN.
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCUR.
- 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.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE RIPPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- 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 REPAIRS AND/OR CLEANOUT OF ANY HEADERS USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.
- WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS PERFORMED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND HIGH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. TIRE WASHING REQUIRED BEFORE VEHICLE ENTERS PUBLIC ROAD.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE

SCALE: NTS



INSTALLATION NOTES

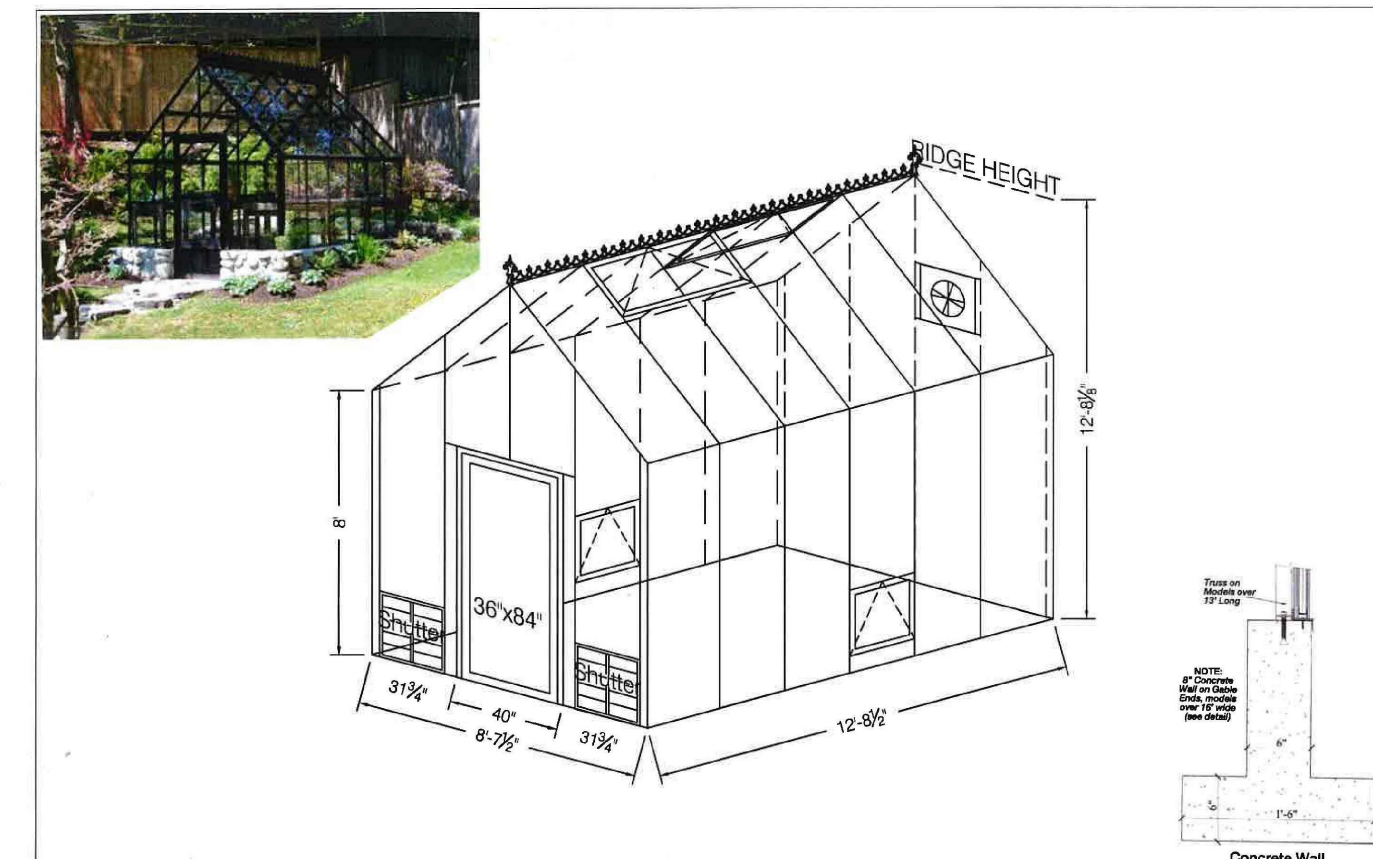
- WIRE REINFORCED SILT FENCING FABRIC TO BE FASTENED SECURELY TO POSTS WITH WIRES OR STAPLES. POSTS SHALL BE STEEL, EITHER 1" OR 1 1/2" SHAPE TYPE OR HARDWOOD.
 - WHEN TWO SECTIONS OF FABRIC CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
 - PREFABRICATED UNITS SHALL BE GEOFAB, EMVOFENCE, OR APPROVED EQUIVALENT.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
- ORANGE SILT FENCE
SCALE: NTS

EROSION CONTROL NOTES

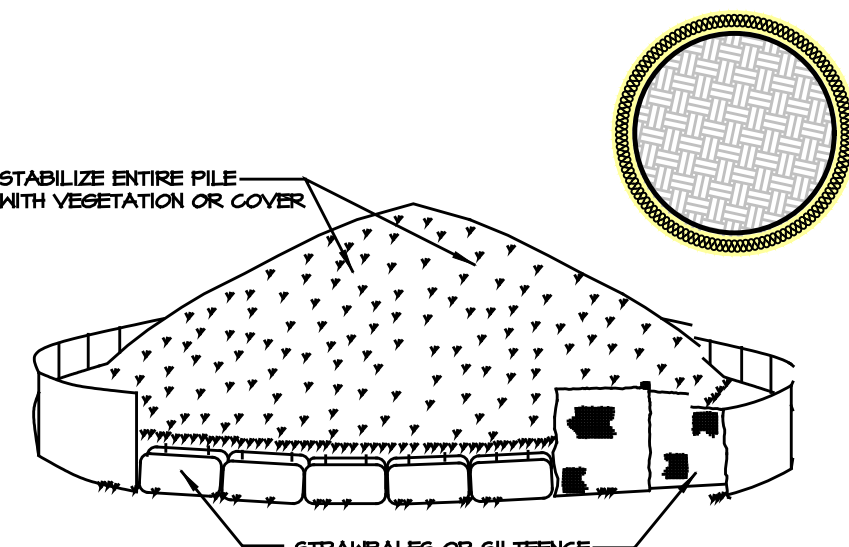
- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL SEDIMENT AND EROSION CONTROL PRACTICES. THE SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- THIRTY MAINTENANCE OF SEDIMENT CONTROL STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL STRUCTURES SHALL BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES. THE SEDIMENT LEVEL IN ALL SEDIMENT TRAPS SHALL BE CLOSELY MONITORED AND SEDIMENT REMOVED PROMPTLY WHEN MAXIMUM LEVELS ARE REACHED OR AS ORDERED BY THE ENVIRONMENTAL CONSULTANT. ALL SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED ON A REGULAR BASIS, AND AFTER EACH HEAVY RAIN TO INSURE PROPER OPERATION AS DESIGNED. AN INSPECTION SCHEDULE SHALL BE SET FORTH PRIOR TO THE START OF CONSTRUCTION.
- THE LOCATIONS AND THE INSTALLATION TIMES OF THE SEDIMENT CAPTURING STANDARDS SHALL BE AS ORDERED BY THE ENVIRONMENTAL CONSULTANT, AND IN ACCORDANCE WITH THE STANDARDS SET FORTH PER LOCAL CODES.
- ALL TOPSOIL NOT TO BE USED FOR FINAL GRADING SHALL BE STRIPPED FROM THE WORK AREA FIRST AND PLACED IN A STABILIZED STOCKPILE OR FILL AREA. ALL TOPSOIL REQUIRED FOR FINAL GRADING AND STORED ON SITE SHALL BE LIMED, FERTILIZED, TEMPORARILY SEEDED AND MULCHED WITHIN 14 DAYS.
- ALL INACTIVE DISTURBED AREAS NOT SUBJECT TO CONSTRUCTION TRAFFIC, SHALL RECEIVE TEMPORARY SEEDINGS WITHIN SEVEN DAYS. MULCH SHALL BE USED IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER. DISTURBED AREAS SHALL BE LIMED AND FERTILIZED PRIOR TO SEEDING. FINAL STABILIZATION SHALL BE APPLIED UPON COMPLETION OF FINAL GRADING AND SOIL RESTORATION WITHIN 14 DAYS.
- ALL DISTURBED AREAS WITHIN 500 FEET OF AN INHABITED DWELLING SHALL BE NETTED AS NECESSARY TO PROVIDE DUST CONTROL.
- THE CONTRACTOR SHALL KEEP THE ROADWAYS WITHIN THE PROJECT CLEAR OF SOIL AND DEBRIS AND IS RESPONSIBLE FOR ANY STREET CLEANING NECESSARY DURING THE COURSE OF THE PROJECT. SEE NOTE NUMBER 8 BELOW ON ANTI TRACKING PAD DETAIL.
- SEDIMENT AND EROSION CONTROL PRACTICES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED BY PERMANENT MEASURES.
- EROSION CONTROL MEASURES SHALL BE INSPECTED BY ENVIRONMENTAL CONSULTANT ON A WEEKLY BASIS WHILE EARTHWORK ACTIVITY IS ON GOING AND UP UNTIL VEGETATIVE STABILIZATION OCCURS ON ALL DISTURBED AREAS.



EXISTING SHED TO BE REMOVED AT SUBJECT AREA 2



PROPOSED GREENHOUSE CONCEPT AT SUBJECT AREA 2



INSTALLATION NOTES

- AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
- MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.
- UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED.
- SEE SPECIFICATIONS (THIS MANUAL) FOR INSTALLATION OF SILT FENCE.

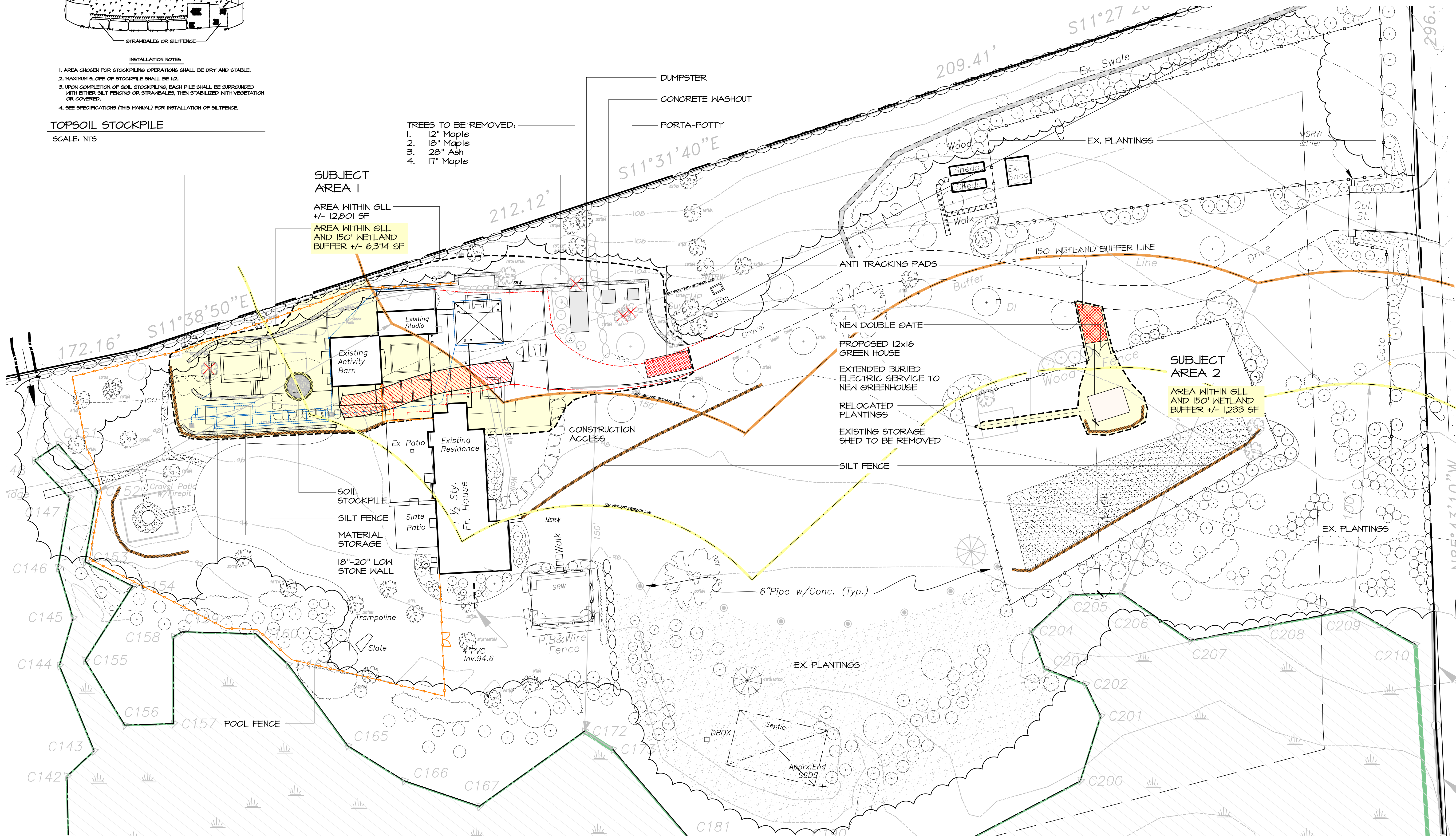
TOPSOIL STOCKPILE

SCALE: NTS

SUBJECT AREA 1

AREA WITHIN GLL +/- 12,801 SF
AREA WITHIN GLL AND 150' WETLAND BUFFER +/- 6,374 SF

- TREES TO BE REMOVED:
- 12" Maple
 - 18" Maple
 - 28" Ash
 - 17" Maple



DISTURBANCE AREA SUMMARY

	DEC. 2020 PLAN	FEB 2021 PLAN
LOT AREA	23.261 Acres (1,013,241 SF)	23.261 Acres (1,013,241 SF)
SUBJECT AREA 1		
DISTURBANCE WITHIN WETLAND BUFFER	+/- 6,078 SF	+/- 6,374 SF
DISTURBANCE OUTSIDE WETLAND BUFFER	+/- 6,421 SF	+/- 6,421 SF
TOTAL DISTURBANCE @ SUBJECT AREA 1	+/- 12,505 SF	+/- 12,801 SF
SUBJECT AREA 2 (Sheet 4 of 5)		
DISTURBANCE WITHIN WETLAND BUFFER	+/- 1,573 SF	+/- 1,233 SF
DISTURBANCE OUTSIDE WETLAND BUFFER	+/- 0 SF	+/- 0 SF
TOTAL DISTURBANCE @ SUBJECT AREA 2	+/- 1,573 SF	+/- 1,233 SF
TOTAL DISTURBANCE @ SUBJECT AREA 1 + 2	+/- 14,078 SF	+/- 14,034 SF
TOTAL DISTURBANCE AREA 1 + 2 WITHIN WETLAND BUFFER	+/- 7,651 SF	+/- 7,607 SF
TOTAL PROPOSED WETLAND MITIGATION PLANTING AREA	+/- 7,700 SF (1:1)	+/- 15,220 SF (2:1)

CONSTRUCTION PLAN/ EROSION CONTROL PLAN

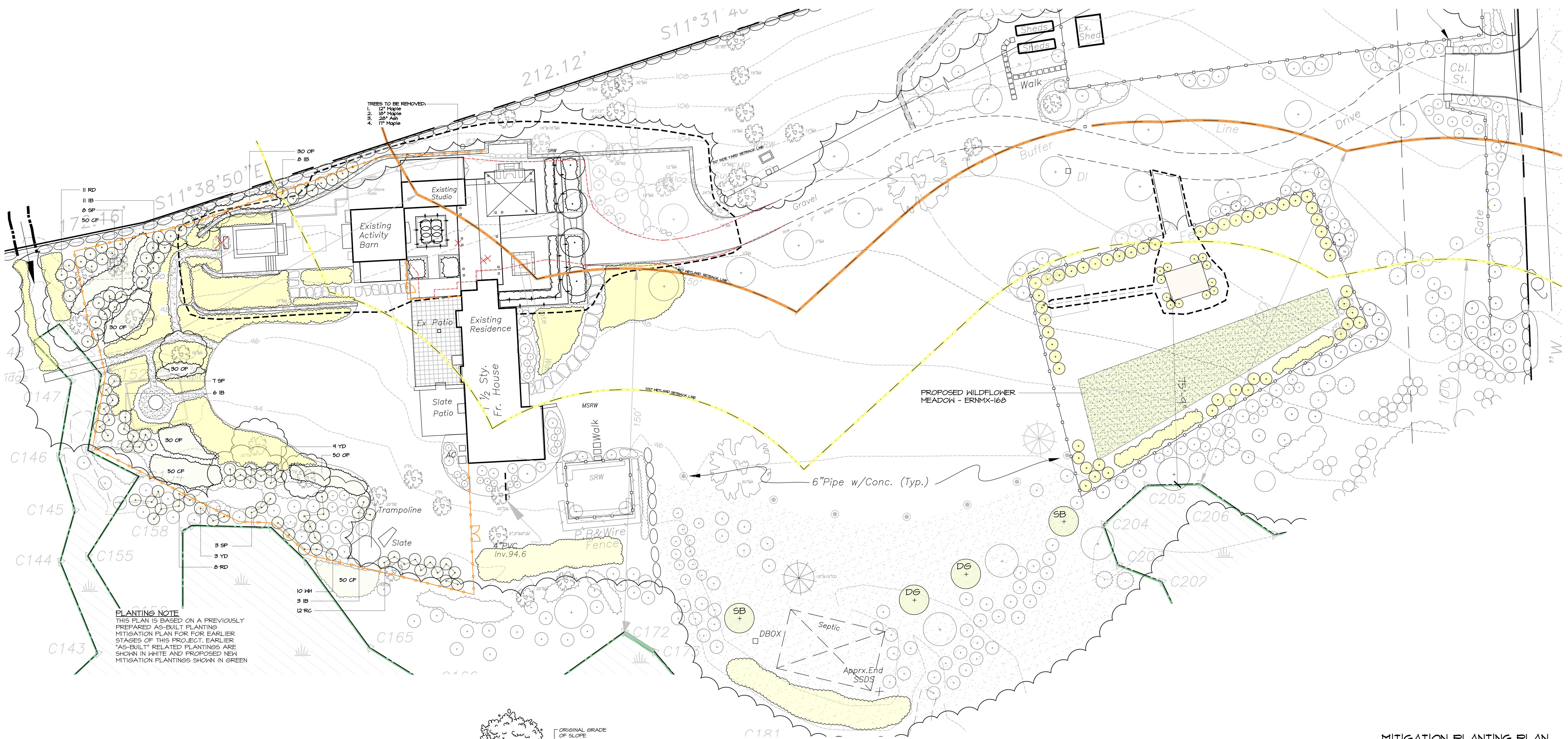
Prepared For:
MR. & MRS. MCGUINNESS
17 SCHOOL HOUSE ROAD
WACCABUC, NY 10597
Tax Parcel ID 22-10802-35
23.261 Acres

Prepared by:
Landscape Architect/Environmental Planner:
J. D. BARRETT & ASSOCIATES, LLC
104 SPORT HILL ROAD
EASTON, CONNECTICUT 06612
Tel. 203.312.5805 Fax 203.312.0444

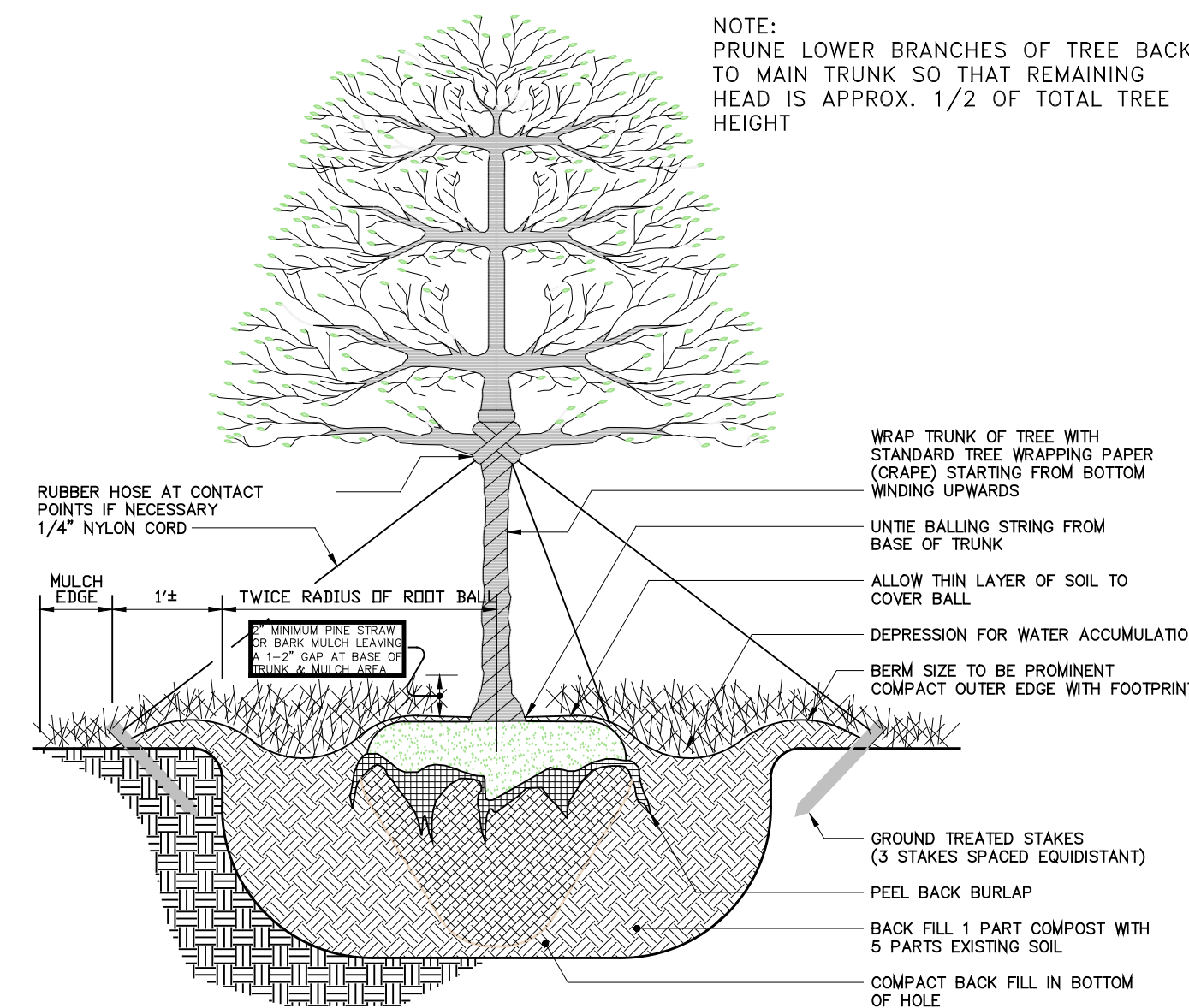
Attorney:
MICHAEL FULLER SIRIGNANO
OLD POST ROAD PROFESSIONAL BUILDING
842 ROUTE 35, PO BOX 784
CROSS RIVER, NY 10518
Tel. 914-763-5500
Wetland and Soil Scientist:
PAUL JAEHNIG
PO BOX 1071
RIDGEFIELD, CT 06871
Tel. 203.438.4993
Environmental Consultant:
STEPHEN M. COLEMAN ENV. CONSULTING
3 ASPEN COURT
OSSINGON, NY 10562
Tel. 914.762. 7288
Engineer/Surveyor:
INSITE ENGINEERING, SURVEYING &
LANDSCAPE ARCHITECTURE, P.C.
8 GARRETT PLACE
CARMEL, NY 10512
Tel. 845-225-4640
Stormwater Engineer:
ALP ENGINEERING & LANDSCAPE
ARCHITECTURE, PLLC
P.O. Box 843
RIDGEFIELD, CT 06871
Tel. 475.215.5343

Scale: 1" = 20'

Date: October 4, 2020
Rev: December 24, 2020
Rev: February 16, 2021

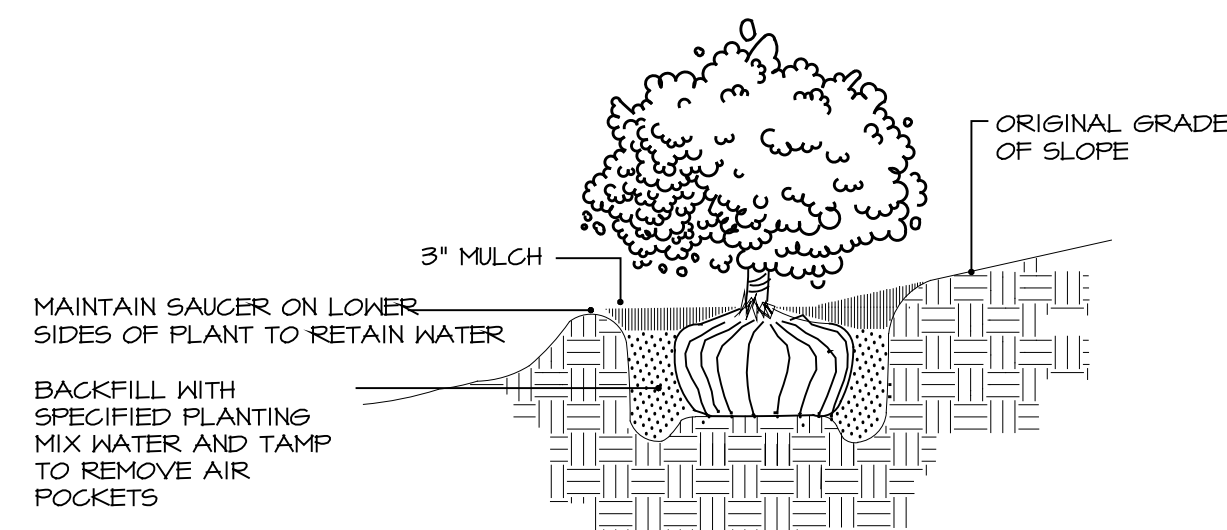


PLANTING NOTE
THIS PLAN IS BASED ON A PREVIOUSLY PREPARED AS-BUILT PLANTING MITIGATION PLAN FOR EARLIER STAGES OF THIS PROJECT. EARLIER "AS-BUILT" RELATED PLANTINGS ARE SHOWN IN WHITE AND PROPOSED NEW MITIGATION PLANTINGS SHOWN IN GREEN



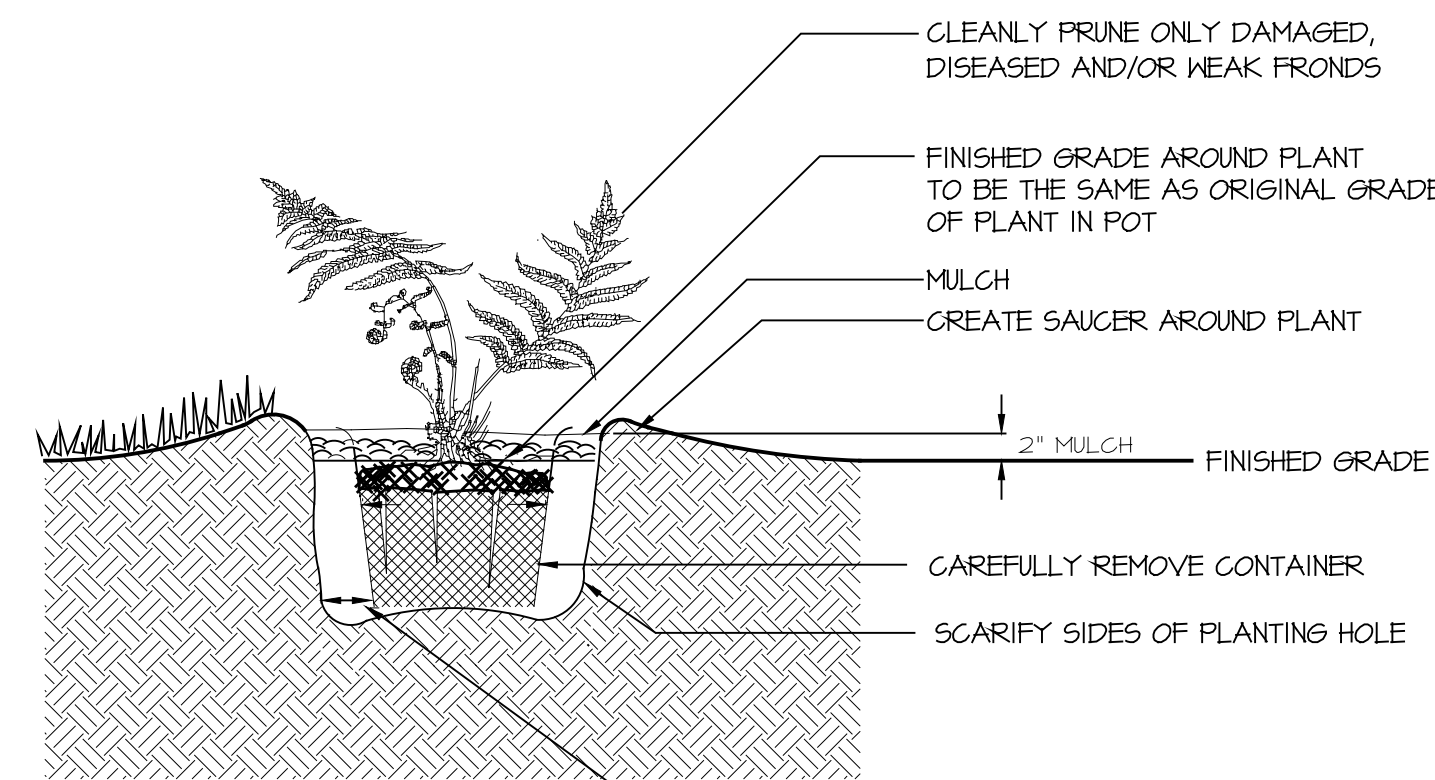
TREE PLANTING DETAIL

NTS



SHRUB PLANTING DETAIL

NTS



FERN PLANTING DETAIL

NTS

TYPICAL PLANT LIST FOR FEBRUARY 2021 MITIGATION PLANTING

TREES	PIN OAK, SHADBLow, BLACK TUPELO, DOGWOOD
SHRUBS	INKBERRY, WINTERBERRY, BLUEBERRY, ELDERBERRY, GRABERRY, STEEPLE BUSH, CHOKEBERRY, SUMMERSWEET, MEADOW SWEET
GROUND COVER	FERNS, RUSHES AND SEDGES



WILD FLOWER MIX

NTS

MITIGATION PLANTING SUMMARY

AS BUILT MITIGATION PLANTINGS 2019	
PLANTINGS PROPOSED ON DEC 24, 2020 PLAN	+/-1,100 SF
ADDITIONAL PLANTINGS PROPOSED ON FEB 16, 2021 PLAN	+/-1,520 SF
TOTAL MITIGATION PROPOSED	+/-15,220 SF

* FINAL PLANTING PLAN TO BE PROVIDED

PLANT LIST - DECEMBER 2020 PLAN

QTY.	KEY BOTANICAL NAME	COMMON NAME	SIZE
2	DE	Cornus florida	FLOWERING DOGWOOD
2	SB	Amelanchier canadensis	SERVICEBERRY
10	SP	Lindera benzoin	SPICEBUSH
10	WH	Hamamelis virginiana	WITCHHAZEL
12	RC	Aronia arbutifolia	RED CHOKEBERRY
14	RD	Cornus sericea	REDTIG DOGWOOD
12	YD	Cornus sericea 'Flaviramea'	YELLOWTIG DOGWOOD
28	IB	ILEX GLABRA	INKBERRY
200	CF	ONOCLEA SENSIBILIS	CINNAMON FERN
170	OF	MATTEUCCIA STRUTHIOPTERIS	OSTRICH FERN

ERNMX-168 NORTHEAST ANNUAL + PERENNIAL WILDFLOWER MIX

MITIGATION PLANTING PLAN

Prepared For :
MR. & MRS. MCGUINNESS
17 SCHOOL HOUSE ROAD
WACCABUC, NY 10547
Tax Parcel ID 22-10802-35
23.261 Acres

Prepared by:
Landscape Architect/Environmental Planner:
J. D. BARRETT & ASSOCIATES, LLC
104 SPORT HILL ROAD
EASTON, CONNECTICUT 06612
Tel. 203.312.5809 Fax 203.312.0444

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LANDSCAPE ARCHITECTURE, P.C.
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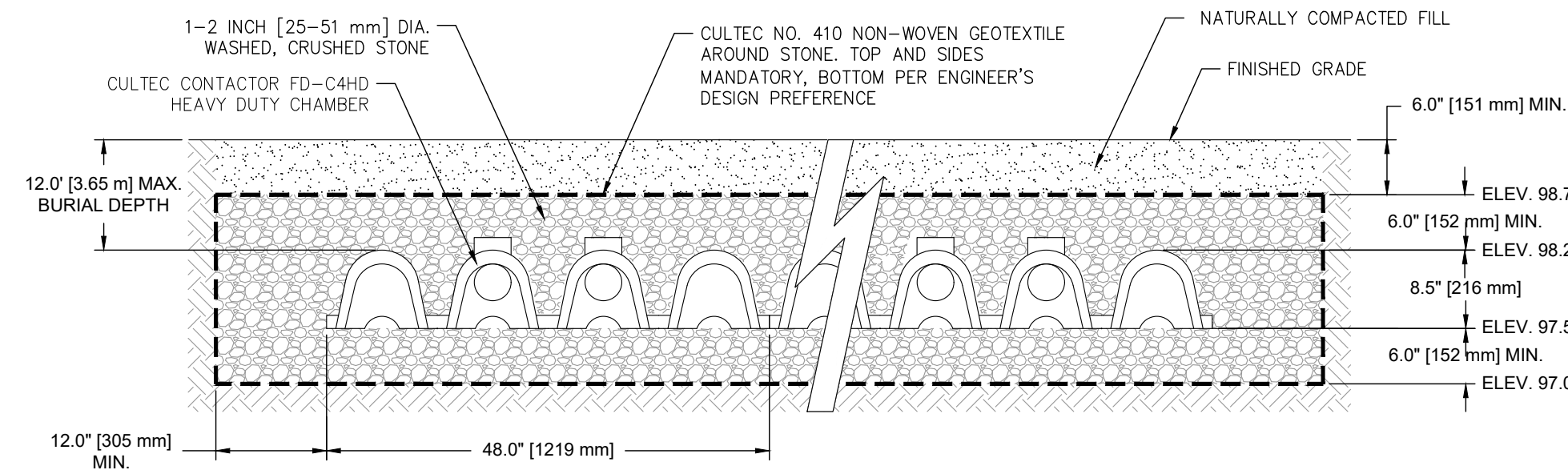
Stormwater Engineer:
ALP ENGINEERING & LANDSCAPE
ARCHITECTURE, PLLC
P.O. Box 843
RIDGEFIELD, CT 06871
Tel. 475.215.5343

Scale : 1" = 16'

Date : February 16, 2021

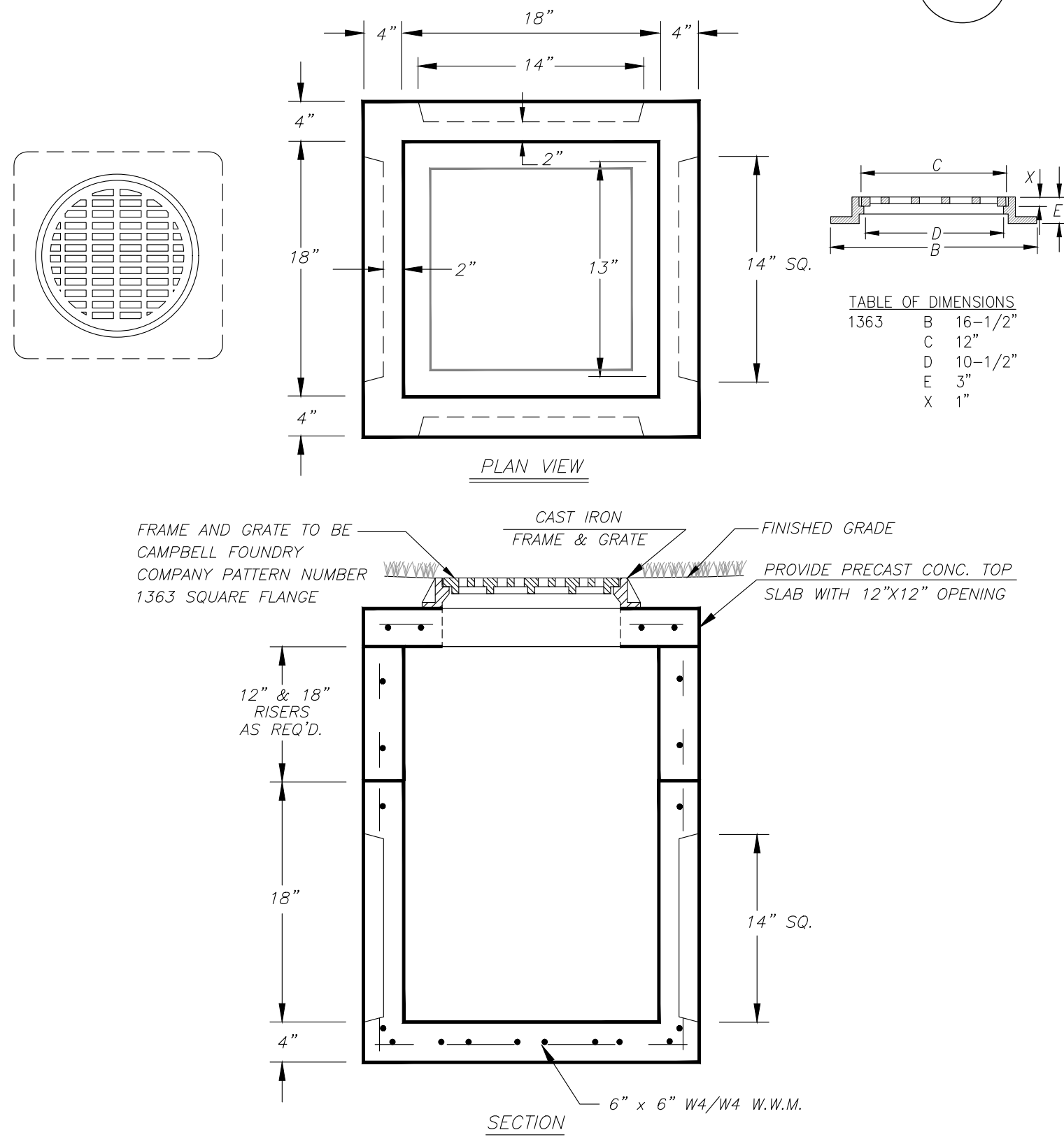
Cultec Contactor FD-C4HD Chamber Installation

1



Catch Basin

4

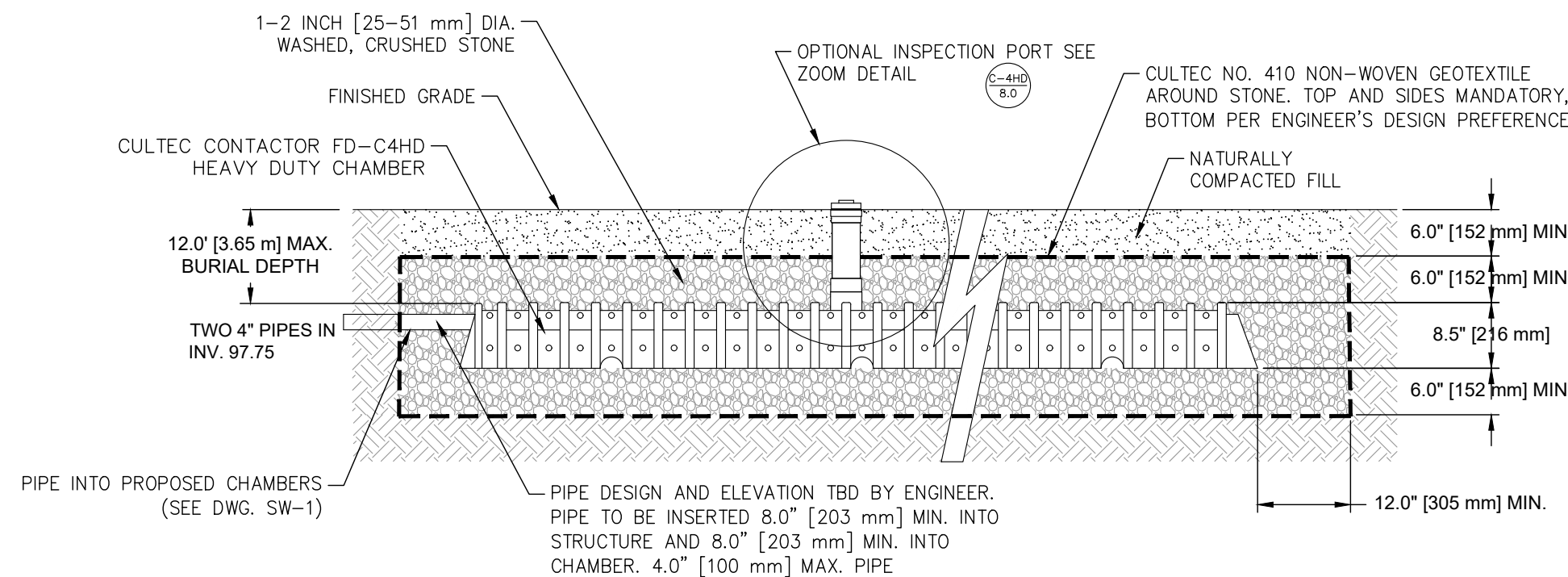


NOTES :
 *CONCRETE : 4,000 PSI @ 28 DAYS
 *REINFORCING : AS PER ASTM A-185
 6" x 6" W4/W4 W.W.M.
 *WEIGHTS
 CATCH BASIN - 645 LBS.
 CONCRETE FLAT TOP ALSO AVAILABLE
 180 LBS. (3" THICK)
 RISER WEIGHTS : 363 LBS/FT.

Precast Concrete Sales Co.		
123 Route 303 Valley Cottage, N.Y. 10989		
Tel. (845) 268-4949 - Fax (845) 268-4376		
CONT.		
JOB		
18"x18"x18" KNOCKOUT CATCH BASIN		
DATE	DRAWN BY	DRAWING NO.
1/16	CLASSIC DESIGN	218-18

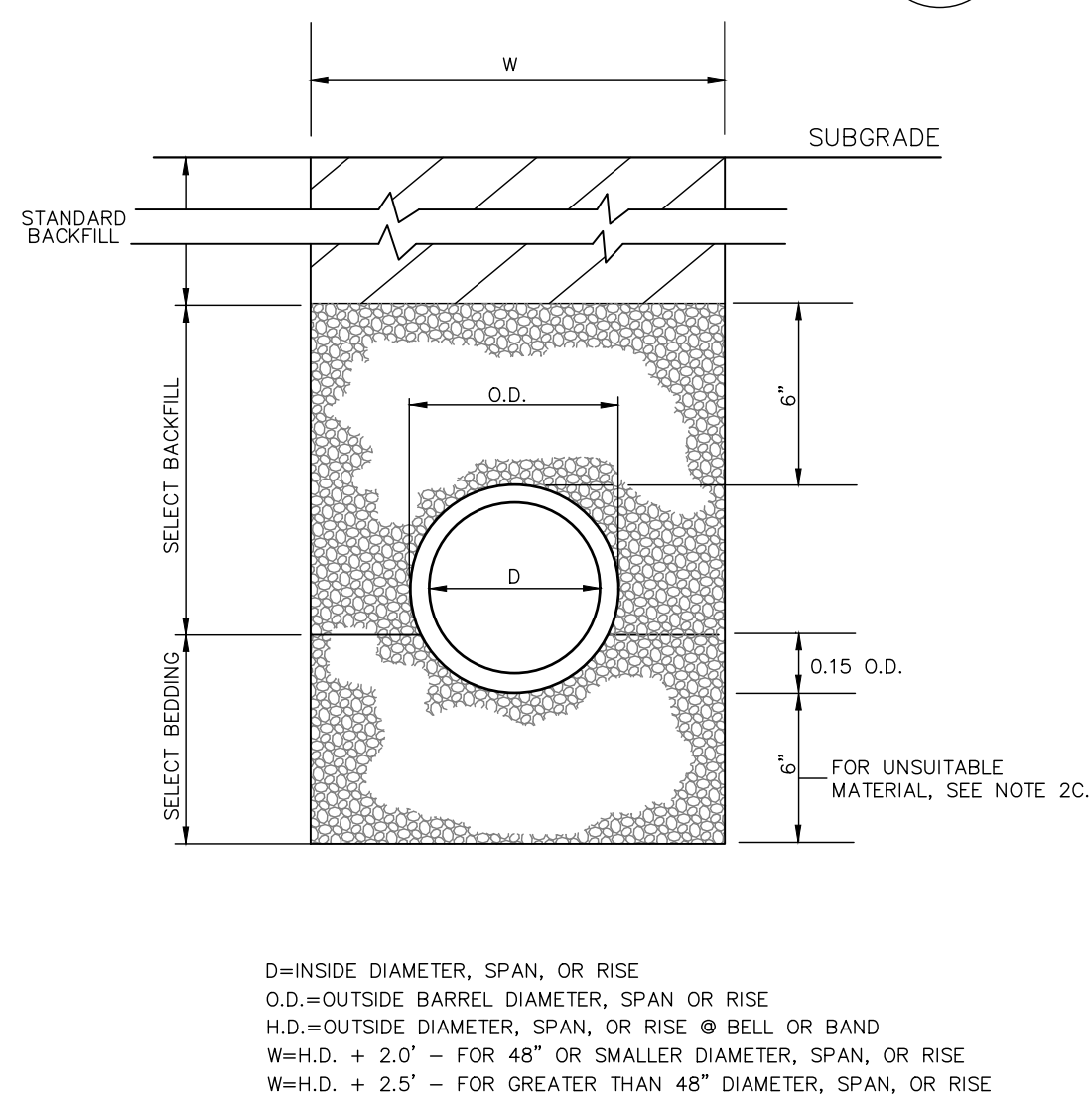
Cultec Contactor FD-C4HD Chamber Installation

2



Pipe Trench

5

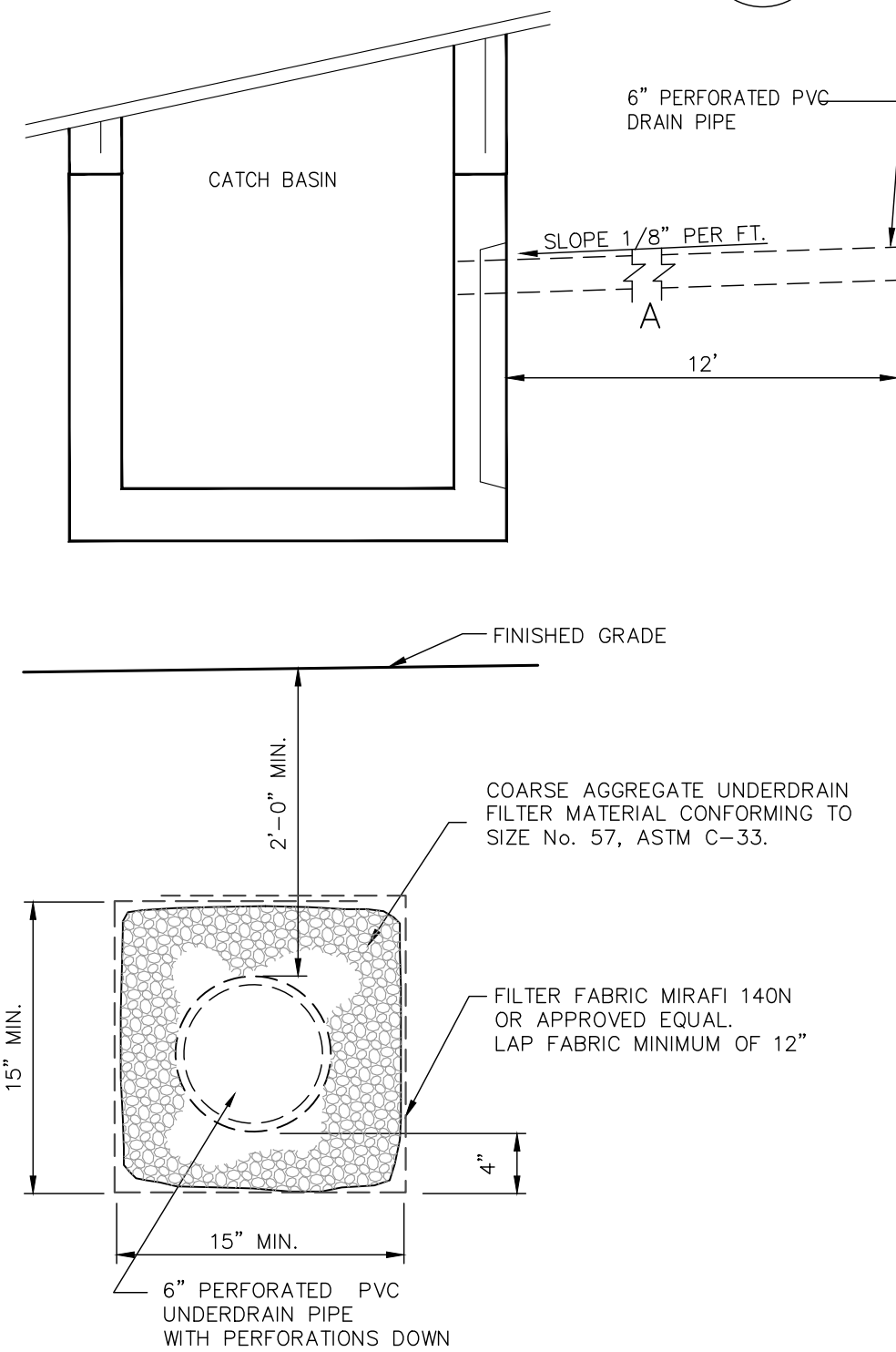


NOTES:

- FOR TYPE II TRENCH, MATERIAL FOR SELECT BEDDING AND SELECT BACKFILL SHALL BE:
 - EITHER SAND OR CRUSHED STONE IF NO WATER IS ENCOUNTERED IN TRENCH.
 - CRUSHED STONE IF WATER IS ENCOUNTERED IN TRENCH.
- TYPE II TRENCH SHALL BE USED IN ALL OF THE FOLLOWING CASES:
 - FOR ALL PVC PIPE AND CONDUIT INSTALLATION.
 - WHEN ROCK OR HARDPAN IS ENCOUNTERED IN BOTTOM OF TRENCH.
 - WHEN UNSUITABLE MATERIAL IS ENCOUNTERED IN BOTTOM OF TRENCH. IN SUCH CASE DEPTH OF UNDERCUTTING SHALL BE AS DIRECTED BY THE ENGINEER WITH 6" MINIMUM.
- FOR ALL TRENCH EXCAVATION IN FILL AREAS, ALL EMBANKMENTS SHALL BE CONSTRUCTED TO A MINIMUM OF 2 FEET ABOVE THE OUTSIDE TOP (AT THE BELL) OF THE PIPE PRIOR TO BEGINNING ANY TRENCH EXCAVATION.
- SELECT BEDDING - SHALL CONSIST OF A BED OF PROPERLY COMPACTED GRANULAR BEDDING MATERIAL (SAND OR CRUSHED STONE AS SPECIFIED) HAVING A COMPACTED THICKNESS OF AT LEAST SIX (6) INCHES BELOW THE BOTTOM OF THE PIPE OR CONDUIT AND EXTENDING AROUND THE PIPE OR CONDUIT FOR AT LEAST 30% OF ITS DIAMETER OR RISE. THE LAYER OF BEDDING MATERIAL SHALL BE SHAPED TO FIT THE PIPE OR CONDUIT FOR AT LEAST 15% OF THE OUTSIDE DIAMETER OR RISE OF THE PIPE OR CONDUIT AND SHALL HAVE RECESSES SHAPED TO RECEIVE THE BELL OF BELL AND SHOT PIPE. SAND BEDDING SHALL BE CLEAN, WELL-GRADED SAND CONSISTING OF HARD, DURABLE PARTICLES FREE FROM LUMPS OF CLAY, LOAM AND ALL OTHER DELETERIOUS SUBSTANCES. CRUSHED STONE BEDDING SHALL BE WELL-GRADED CRUSHED STONE CONFORMING TO ASTM DESIGNATION C-33, SIZE NO. 67.
- STANDARD BACKFILL - SHALL CONSIST OF ON-SITE MATERIAL (EARTH) APPROVED BY THE OWNER'S FIELD REPRESENTATIVE AND/OR SOILS ENGINEER. SHOULD THERE BE A DEFICIENCY OF PROPER ON-SITE MATERIAL FOR BACKFILLING, THE CONTRACTOR SHALL FURNISH, PLACE AND COMPACT ADDITIONAL PROPER BACKFILL MATERIAL.
- SELECT BACKFILL - SHALL CONSIST OF GRANULAR MATERIAL (SAND OR CRUSHED STONE AS SPECIFIED) AS APPROVED BY THE OWNER'S FIELD REPRESENTATIVE AND/OR SOILS ENGINEER. SAND SHALL CONSIST OF CLEAN, WELL GRADED, HARD, DURABLE PARTICLES, FREE OF LUMPS OF CLAY, LOAM AND ALL OTHER DELETERIOUS SUBSTANCES. CRUSHED STONE SHALL CONSIST OF WELL GRADED CRUSHED STONE CONFORMING TO ASTM DESIGNATION C-33, SIZE NO. 67.
- BACKFILL FOR PIPE AND CONDUIT SHALL BE PLACED EVENLY AND CAREFULLY AROUND AND OVER THE PIPE OR CONDUIT IN SIX (6) INCH MAXIMUM LAYERS. EACH LAYER SHALL BE THOROUGHLY AND CAREFULLY COMPACTED UNTIL TWELVE (12) INCHES OF COVER EXISTS OVER THE PIPE OR CONDUIT. THE REMAINDER OF THE BACKFILL SHALL THEN BE PLACED AND COMPACTED IN MAXIMUM TWELVE (12) INCH LAYERS. EACH LAYER SHALL BE COMPACTED BY APPROVED MECHANICAL TAMPING MACHINES.

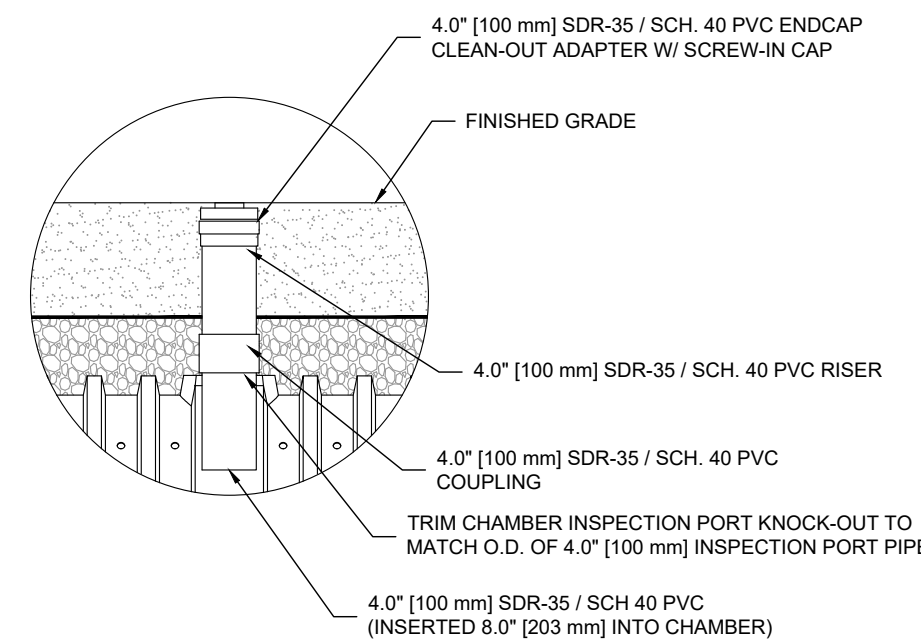
Perforated Pipe in Trench

6



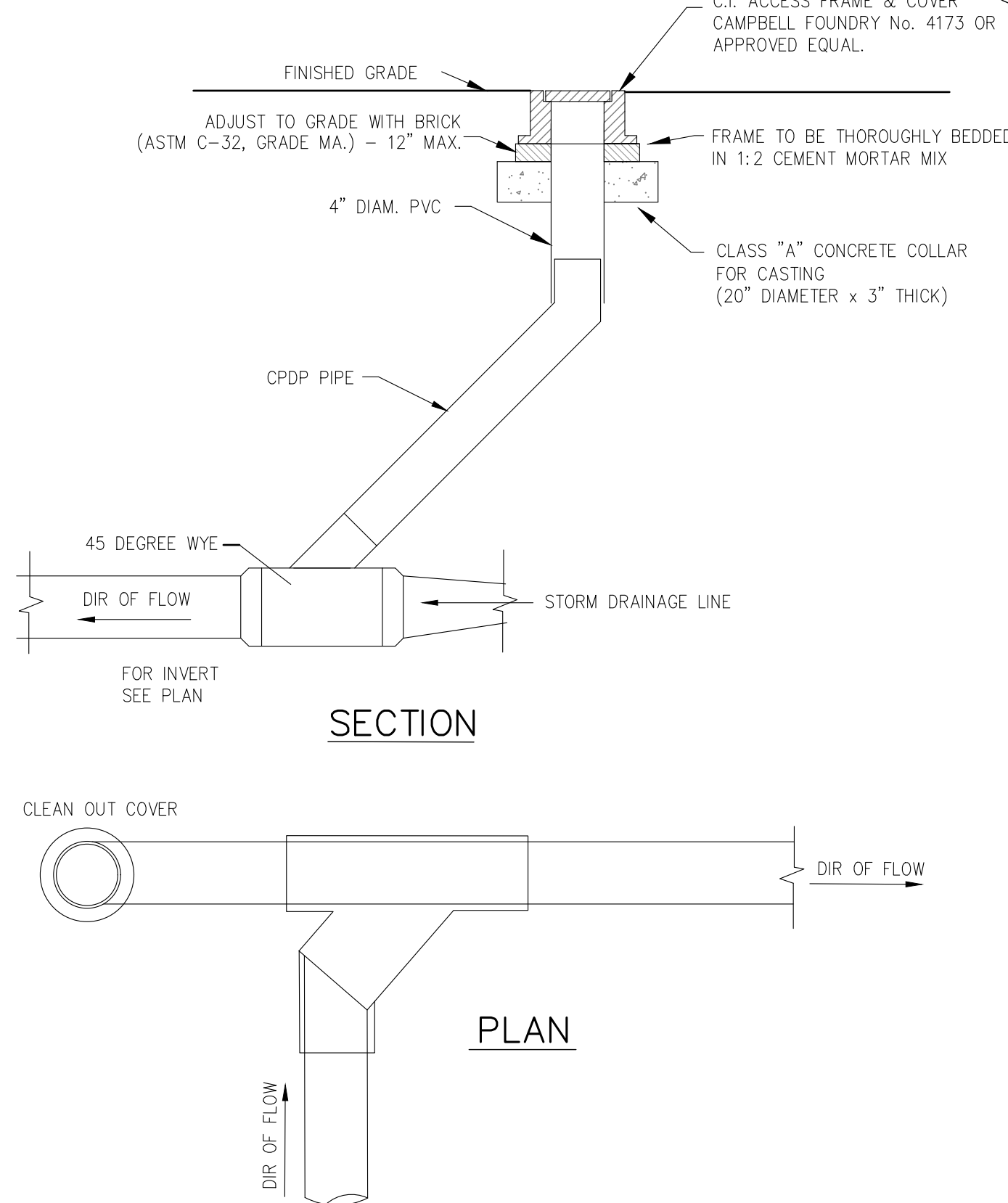
Cultec Chamber Inspection Port

3



Storm Pipe Clean Out

7



CONSULTANTS:

LANDSCAPE ARCHITECT:
 JD Barrett & Associates
 109 Sport Hill Rd
 Easton, CT 06612
 203-372-5805 tel.
 203-372-0499 fax

SURVEYOR:
 TC Merritts Land Surveyors, PC
 394 Bedford Road
 Pleasantville, NY 10570
 Tel: (914) 769-8003

ISSUED:

Rev. as per Ping Bd & Town Consultant comments 02/16/2021

OWNERSHIP AND USE OF DOCUMENTS

UNAUTHORIZED ALTERATIONS AND ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW.

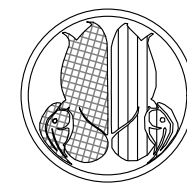
No part of these drawings shall be copied, disclosed to others or used in connection with any work or project other than for which they have been prepared without the express written consent of the licensed professional who prepared the document.

SEAL:



PROJECT NAME:
MCGUINNESS PROPERTY
 17 School House Road
 Waccabuc, New York

ENGINEER & LANDSCAPE ARCHITECT:
ALP ENGINEERING & LANDSCAPE ARCHITECTURE, PLLC



P.O. Box 843 Ridgefield, CT 06877
 Direct Tel: (475) 215-5343 Cell (203) 710-0587

Drawing Title:

**Future Conditions
 Stormwater Plan**

Date: December 24, 2020

Dwn. by: alp

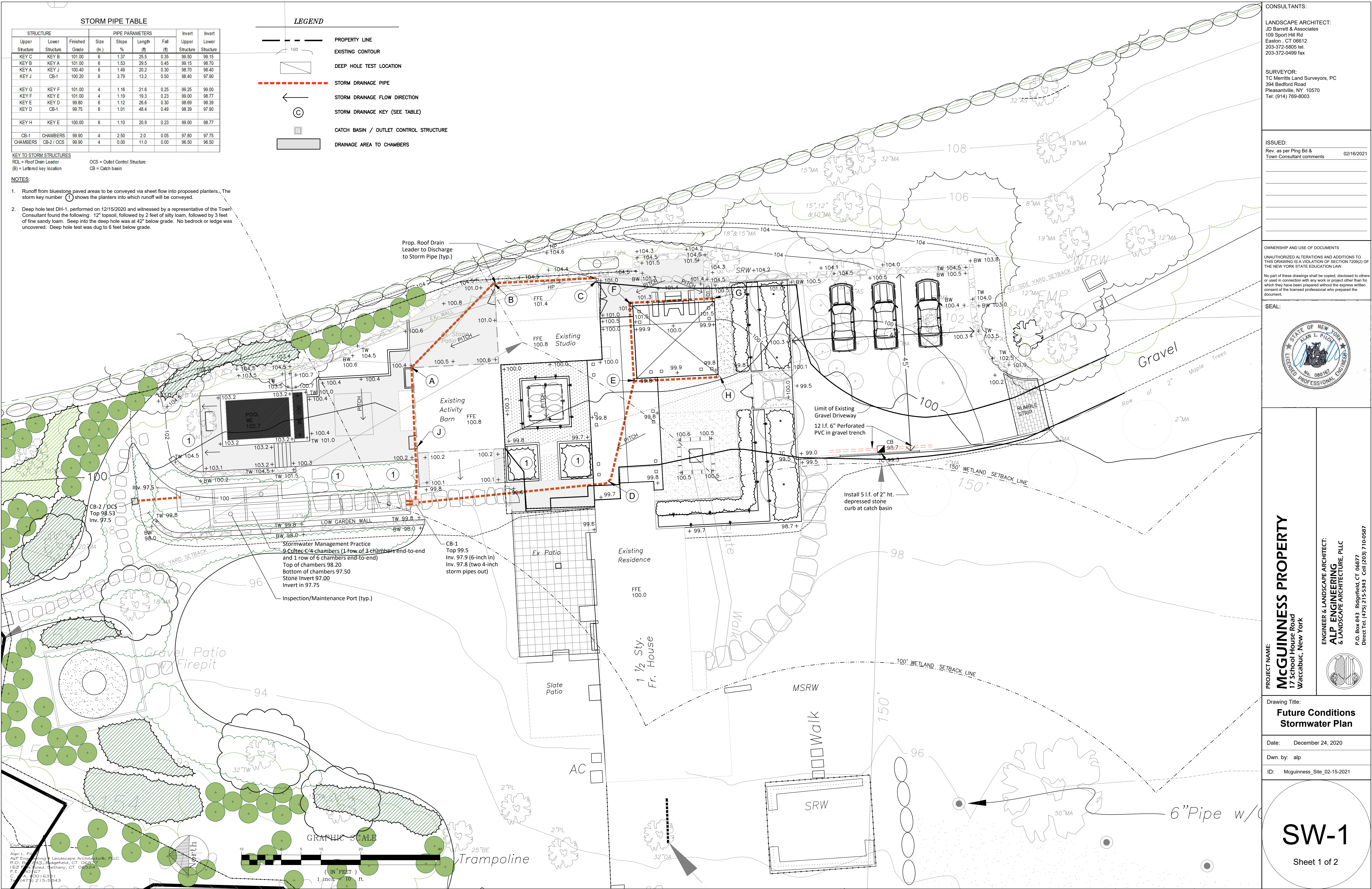
ID: McGuinness_Site_02-15-2021

SW-1

Sheet 1 of 2

Civil engineer:

Alan L. Pilch
 ALP Engineering & Landscape Architecture, PLLC
 P.O. Box 843, Ridgefield, CT 06877
 162 Falls Road, Bethany, CT 06524
 P.E. #80167
 C. of A. #0016331
 Tel: (475) 215-5343



**STORMWATER MANAGEMENT REPORT
FOR 17 SCHOOL HOUSE ROAD
WACCABUC, NEW YORK**

Date: February 16, 2021

PREPARED BY: ALAN L. PILCH, PE, RLA
ALP ENGINEERING & LANDSCAPE ARCHITECTURE, PLLC

Report Contents:

- 1) Existing Site Conditions
- 2) Stormwater Management Design Criteria and Plan
- 3) Stormwater Analysis
- 4) Stormwater Modeling – Peak Rate Attenuation

Figures

Supporting Documentation

Appendix A Hydrographs and Routings

This Stormwater Management Report is submitted in support of the application of the owner of the above-noted property for the construction of various modification to an existing property. The proposed changes include (refer to Site Plan – Subject Area 1, Sheet 2 of 3 by Jeri D. Barrett and Associates) the following. The letters below correspond to the lettering on the above-noted Sheet 2 of 3:

- A. Construction of a new 10' x 15' salt water spa with plunge pool
- B. Construction of a bluestone patio for the spa
- C. Conversion of an existing gravel surface patio to bluestone paving
- D. Construction of an overhang on the east side of the existing activity barn building overhang
- E. Expansion of the existing upper rear patio
- F. Removal of a portion of the existing gravel driveway and its conversion to a formal garden with pea gravel walkways
- G. Construction of a covered dining patio area (replacing a portion of the gravel driveway)
- H. Construction of a garden area with a water feature (replacing a portion of the gravel driveway)
- I. Construction of new stepping stones to the front door of the house (replacing the existing walkway from the driveway to the house)
- J. Realigned stone retaining wall.
- K. New covered storage shed to be built on the west side of the existing studio
- L. New bluestone patio
- M. New grill and fireplace
- N. Modification of the existing gravel driveway
- O. New pea gravel and stepping stone walkway.
- P. New stone retaining wall adjacent to modified gravel driveway.
- Q. New stepping stones to link bluestone patio and covered dining patio

- R. Installation of spa equipment in covered storage shed.
- S. New covered sitting folly.

1) Existing Site Conditions:

The subject property is 23.261 acres in size and is located on the north side of School House Road (see **Figure 1**). There is an existing 1-1/2 story residence on the lot, as well as an existing frame barn and attached studio building. An upper and lower patio is present on the rear side of the house, and a stone patio on the west side of the barn and studio building. Finally, there is a gravel surfaced patio and gravel surfaced patio with a fire pit in the rear yard. and flagstone walkways and the typical residential landscape of mown lawn and shrubs. The majority of the property consists of dense woods. Only in the area near the house is there the typical residential landscape of lawn, trees and shrubs. The property is located in the Cross River Basin watershed. All of the runoff from the property is conveyed generally west and then to the north.

Soils - According to the Web Soil Survey, the soils in the area of the proposed work are mapped as WdB, Woodbridge loam and PnC, Paxton fine sandy loam (see **Figure 2**). The survey reports that Woodbridge loam and Paxton fine sandy loam soils are very deep, well drained, and consist of a gravelly fine sandy loam and fine sandy loam to a depth of about 65 inches. These soils are classified as hydrologic soils group C. Both soils feature a depth of about 20” to 39” to densic material. The deep hole test performed on 12/15/2020 within the footprint of the proposed stormwater management practice found a seep at a depth of 42” below grade.

2) Stormwater Management Design Criteria and Plan

The project includes the various construction activities noted above.

PROPOSED CONSTRUCTION / MODIFICATION	Existing Ground Surface	Future Condition
Construction of a new 10’ x 15’ salt water spa with plunge pool	Lawn	Concrete surface
Construction of a bluestone patio for the spa	Lawn	Bluestone
Conversion of an existing gravel surface patio to bluestone paving	Gravel	Bluestone
Construction of an overhang on the east side of the existing activity barn building overhang	Lawn	Roof
Expansion of the existing upper rear patio	Bluestone	Gravel driveway
Removal of a portion of the existing gravel driveway and its conversion to a formal garden with pea gravel walkways	Gravel driveway	Pea gravel and landscaping

PROPOSED CONSTRUCTION / MODIFICATION	Existing Ground Surface	Future Condition
Construction of a covered dining patio area (replacing a portion of the gravel driveway)	Gravel driveway and lawn	Roof
Construction of a garden area with a water feature (replacing a portion of the gravel driveway)	Gravel driveway	Pea gravel / concrete
Construction of new stepping stones to the front door of the house (replacing the existing walkway from the driveway to the house)	Stone	Lawn
Realigned stone retaining wall.	Woods, lawn	Stone
New covered storage shed to be built on the west side of the existing studio	Flagstone	Roof
New bluestone patio	Stone wall and woods	Bluestone patio
New grill and fireplace	Gravel Driveway	Impervious
Modification of the existing gravel driveway	Gravel Driveway and Lawn/Woods	Gravel driveway
New pea gravel and stepping stone walkway	Gravel Driveway	Pea gravel / stone
New stone retaining wall adjacent to modified gravel driveway	Lawn and Woods	Stone
New stepping stones to link bluestone patio and covered dining patio	Gravel Driveway	Stone and pea gravel
Installation of spa equipment in covered storage shed	Flagstone	Roof

With the proposed construction, the amount of impervious surfaces that convey runoff to the design point will increase, from 4,830 s.f. at present to 8,091 s.f. in the future. Some of these impervious surfaces are being constructed over existing semi-pervious surfaces (gravel or pea stone). Semi-pervious surfaces within the drainage area to the design point will decrease from 4,891 s.f. to 3,213 s.f.

Given the dispersed changes to the property that are being proposed – the work is spread out over about 200 feet along the western boundary of the property – and the fact that the runoff from both the front and rear yards is conveyed in a easterly direction, a design point was established along the eastern property line where all of the runoff from the portions of the property to be modified is conveyed to an existing intermittent watercourse that is present just south of the area of the proposed work. The drainage area to the design point is calculated to be 93,090 square feet (2.137 acres).

The stormwater management plan for the property has been designed to meet the requirements of the Town of Lewisboro. To this end, the project will provide peak rate attenuation for all storm events up to the 25-year storm. It is proposed to direct runoff from portions of the areas to be modified into a subsurface stormwater management facility to consist of 9 Cultec C-4 chambers in order to provide peak rate attenuation.

Deep hole testing within the footprint of the proposed chambers was done on December 15, 2020. The deep hole test revealed 12" of topsoil, followed by 2' of silty loam, and then 3'-0" of fine sandy loam. The hole was dug to a depth of 6 feet, or about elevation 91.75 feet. A seep was present 42" below grade. No bedrock was encountered. The deep hole test was performed at elevation 97.5 feet. Therefore, the seep was noted at elevation 94 feet. The proposed Cultec C-4 chambers, which are 8.5" in height, are to be situated such that the bottom of the chambers will be at elevation 97.5' with the bottom of the 6" of stone below the chambers at elevation 97.0'. This would provide 3 feet of vertical separation between the proposed invert elevation of the stone under the chambers and the water table, and 3'-6" of vertical separation from the bottom of the chambers. Percolation testing has not been performed due to the unfavorable winter weather conditions.

3) Stormwater Analysis

As noted above, the runoff from the property drains in general to the east. The runoff from the proposed addition drains to the southwest toward an existing 12" culvert pipe under Todd Road North.

An analysis was first done to determine the composite curve number under the existing and future conditions to the design point. This analysis showed that in the existing condition, the drainage area to the design point has a curve number of 74. In the future condition, with all of the changes described above, the composite curve number of the drainage area to the design point would increase to 75.

In order to attenuate this increase, it is proposed to convey runoff from some of the new impervious surfaces into proposed subsurface chambers for peak rate of runoff attenuation purposes. The chambers, by virtue of infiltration of runoff into the soils, will also provide some water quality improvement. As is noted above, the changes to the property include: new impervious surfaces over existing lawn, new impervious surfaces over existing stone and gravel surfaces, new semi-pervious surfaces (stone or pea gravel) over existing gravel, new semi-pervious surfaces (stone or pea gravel) over existing lawn. The land cover changes with the most potential to impact downstream flows (either rate of runoff or water quality) is the construction of new impervious surfaces over existing lawn areas. For this reason, given that the proposed new construction will have minimal impact on the peak rate of runoff at the design point, it is proposed to direct runoff from impervious surfaces from an area in excess of the new impervious surfaces that will be constructed over existing lawn areas into proposed chambers for peak rate attenuation and for water quality improvement.

The calculations show that the new impervious surfaces that will be constructed over existing lawn areas is equal to 1,262 square feet. To mitigate the impacts, it is proposed to convey runoff from 2,005 square feet of impervious surfaces (see **drawing SW-1**) into the proposed chambers in subsurface storm drainage pipes. This area is to consist of: the covered sitting folly (376 square feet), the proposed covered dining patio (637 s.f.), and the existing Studio building, covered storage shed and the existing activity barn building (763 s.f.).

In the HydroCAD modeling, the drainage area to the proposed chambers is defined as Future Condition Drainage Area #2 (FDA-2). The remainder of the drainage area to the design point is named Future Condition Drainage Area #1 (FDA-1).

In addition, the runoff from the proposed bluestone paving area between the new pool and existing activity building (479 s.f.) will be directed into the proposed planters to be constructed to the east of these features (see **drawing SW-1**). To be conservative, the attenuation of the peak rate of runoff from directing the runoff into the proposed planters (labeled as “1” on drawing SW-1) is not modeled.

The proposed pool is 15’ in length x 10 feet in width. A 6-inch drawdown of the pool corresponds to a volume of (15’ x 10’ x 0.5’) 75 cubic feet. The proposed 9 Cultec C-4 chambers have a storage volume of about 360 cubic feet, well in excess of the drawdown volume. The proposed subsurface stormwater management facility is located in the side yard, to the east of the proposed spa in an area which is presently a mown lawn.

4) Stormwater Modeling – Peak Rate Attenuation and Water Quality Improvement

The peak rate of runoff to the design point has been calculated for the 1-year through 25-year storm events. The analysis was performed in accordance with the methodology of the United States Department of Agriculture Soil Conservation Service (now Natural Resources Conservation Service) publication *Urban Hydrology for Small Watersheds, Technical Release 55 (TR-55)*, 1986. To calculate the peak rate of runoff, the following information used in the analysis: (i) Runoff depths for the 24-hour design storms used in the calculations were as follows: 2.82" for the one-year storm, 5.07" for the ten-year storm, and 6.37" for the 25-year storm, based on the data from the Northeast Regional Climate Center for the property; (ii) A 24-hour rainfall duration was used in calculating the hydrographs, (iii) a Type III storm distribution was used in the analysis. Finally, hydrographs and pond routings were created using the computer program *HydroCAD* (ver. 10.10-4b), by HydroCAD Software Solutions, LLC.

The calculations show that at the design point, the peak rate of runoff at the design point will drop slightly when compared to the existing condition. This is summarized in **Table 1**, below.

Table 1. Peak Rates of Runoff to Design Point

(all flows in cubic feet per second)

<i>Drainage Area/ Storm Interval</i>	<i>1 year</i>	<i>10 year</i>	<i>25 year</i>
<i>Existing Condition</i>			
<i>Flows to Design Point</i>	1.42	4.71	6.86
<i>Future Condition</i>			
<i>Flows to Design Point</i>	1.39	4.61	6.71

In the modeling, the runoff that is discharged from the outlet control structure from the chambers is conveyed in reaches to the Design Point. Reach #1 is flow across the lawn in the rear yard; Reach #2 is the flow across the existing wooded area, and finally Reach #3 is the flow in the existing intermittent channel which traverses the rear yard.

Water Quality Improvement – Chapter 4 of the 2015 *Stormwater Management Design Manual* provides the methodology for calculating the water quality volume. As noted in the Design Manual, “the water quality volume (denoted as the WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels.” Within the New York City Water Supply Watershed, New York State has defined the WQv as the volume of runoff generated from the one year storm event, which is equal to 2.82” of precipitation.

Runoff from 2,005 square feet of impervious surfaces will be directed in subsurface storm pipes into the proposed chambers. The calculations show that the water quality volume (using a precipitation depth of 2.82 inches), would result in a runoff volume of 433 cubic feet.

The proposed 9 Cultec C-4 chambers would have a storage volume of 389.8 cubic feet, or about 90% of the water quality volume. At the elevation of the proposed grate, the total volume of runoff in the chambers would be about 360 cubic feet, or about 83% of the entire water quality volume without infiltration into the soil being taken into account. The proposed chambers will thus provide, in addition to peak rate of runoff attenuation, improvement to the quality of the runoff being discharged from the property. It will also reduce slightly the volume of runoff that is discharged.

5) Summary:

The proposed stormwater management facility to consist of 9 Cultec C-4 chambers which will peak rate attenuation of the runoff from the property over the 1-year through 25-year storm events. It will also provide water quality improvement from the area that exceeds the area of the new impervious surfaces that will be constructed over existing lawn surfaces.

FIGURES

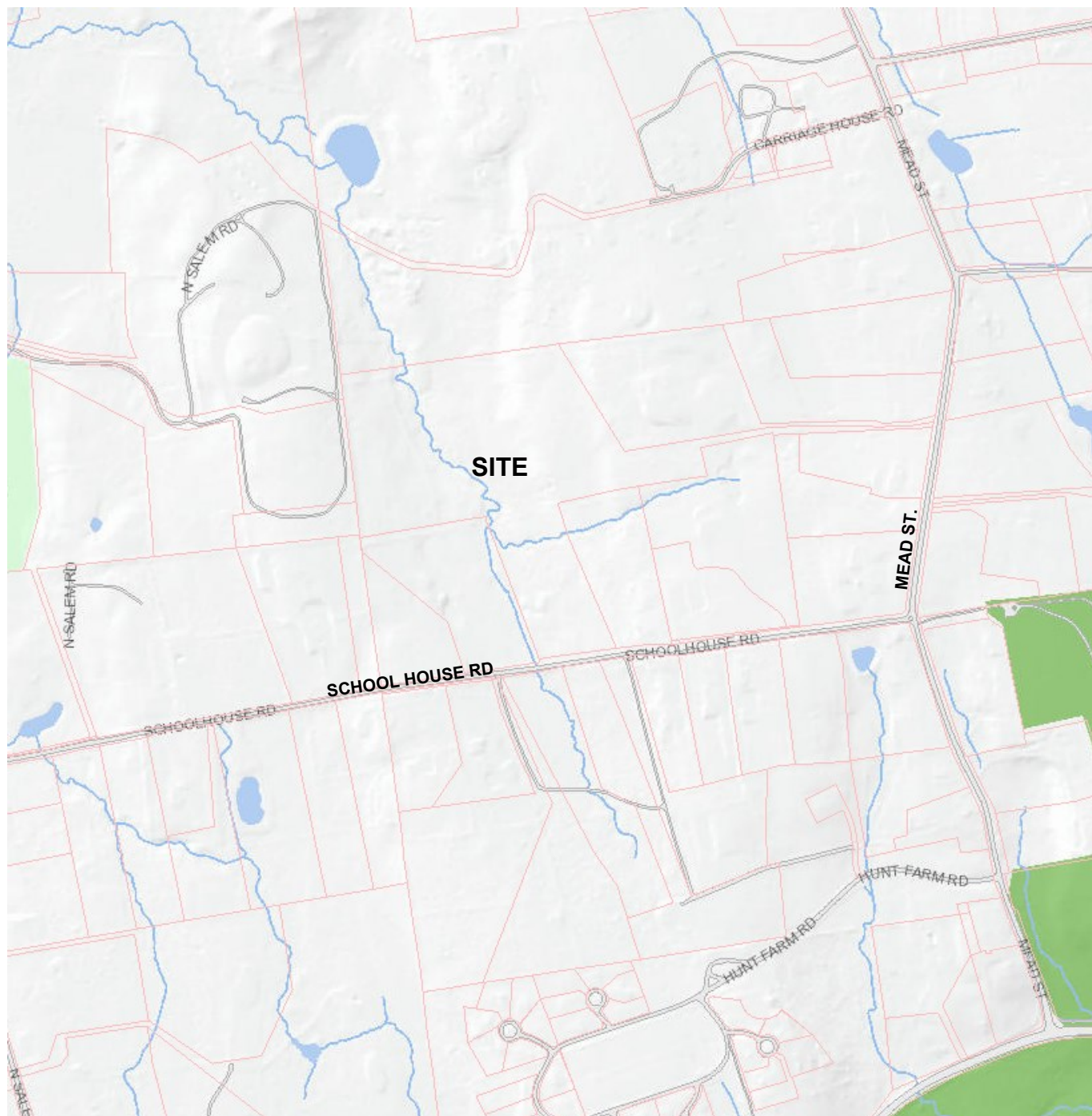
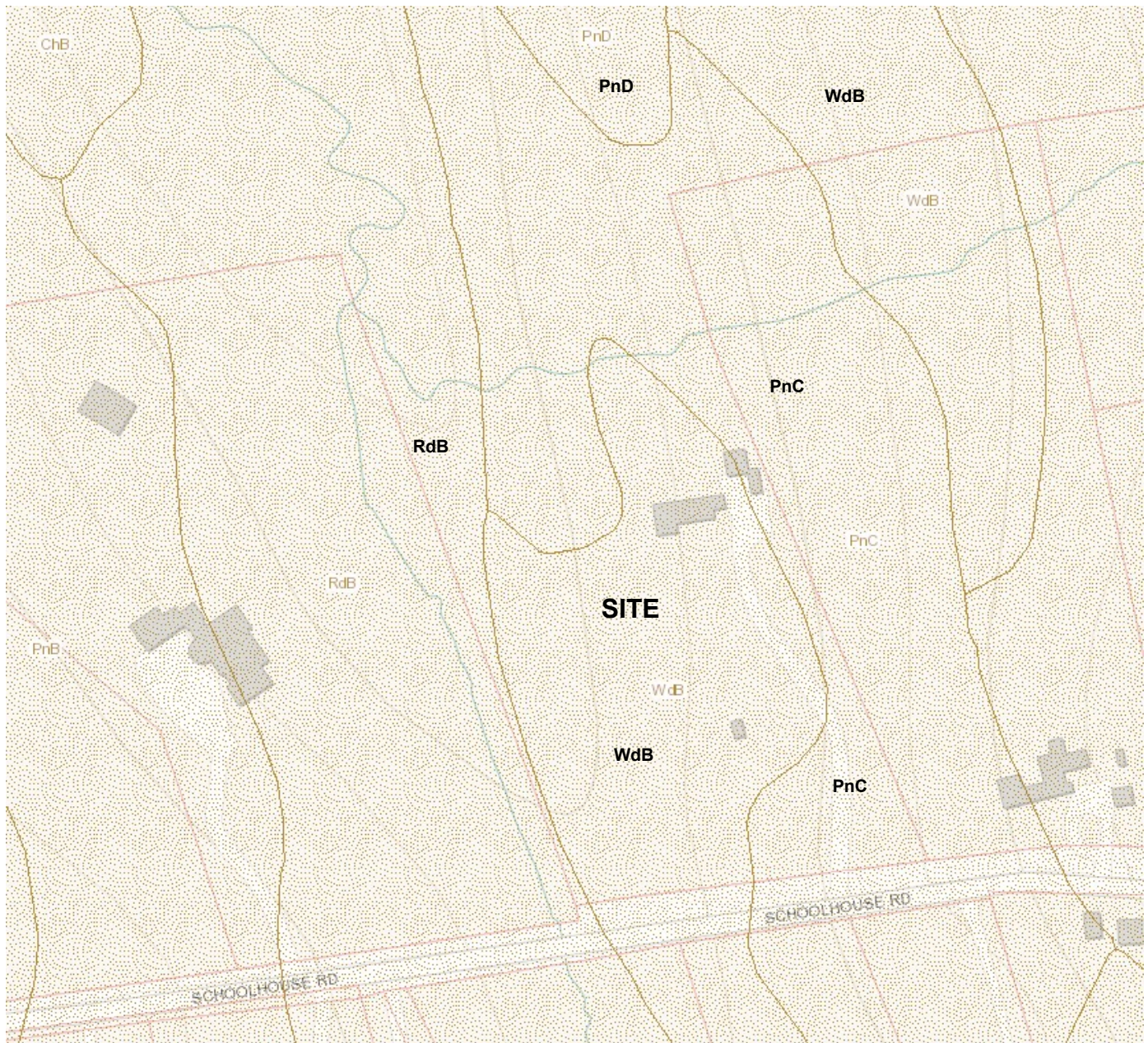


Figure 1
SITE LOCATION MAP
Scale: Not to Scale



SOILS:

PnC: Paxton fine sandy loam, 8 to 15 percent slopes

PnD: Paxton fine sandy loam, 15 to 25 percent slopes

RdB: Ridgebury complex, 3 to 8 percent slopes

WdB: Woodbridge loam, 3 to 8 percent slopes

Figure 2

SOILS MAP

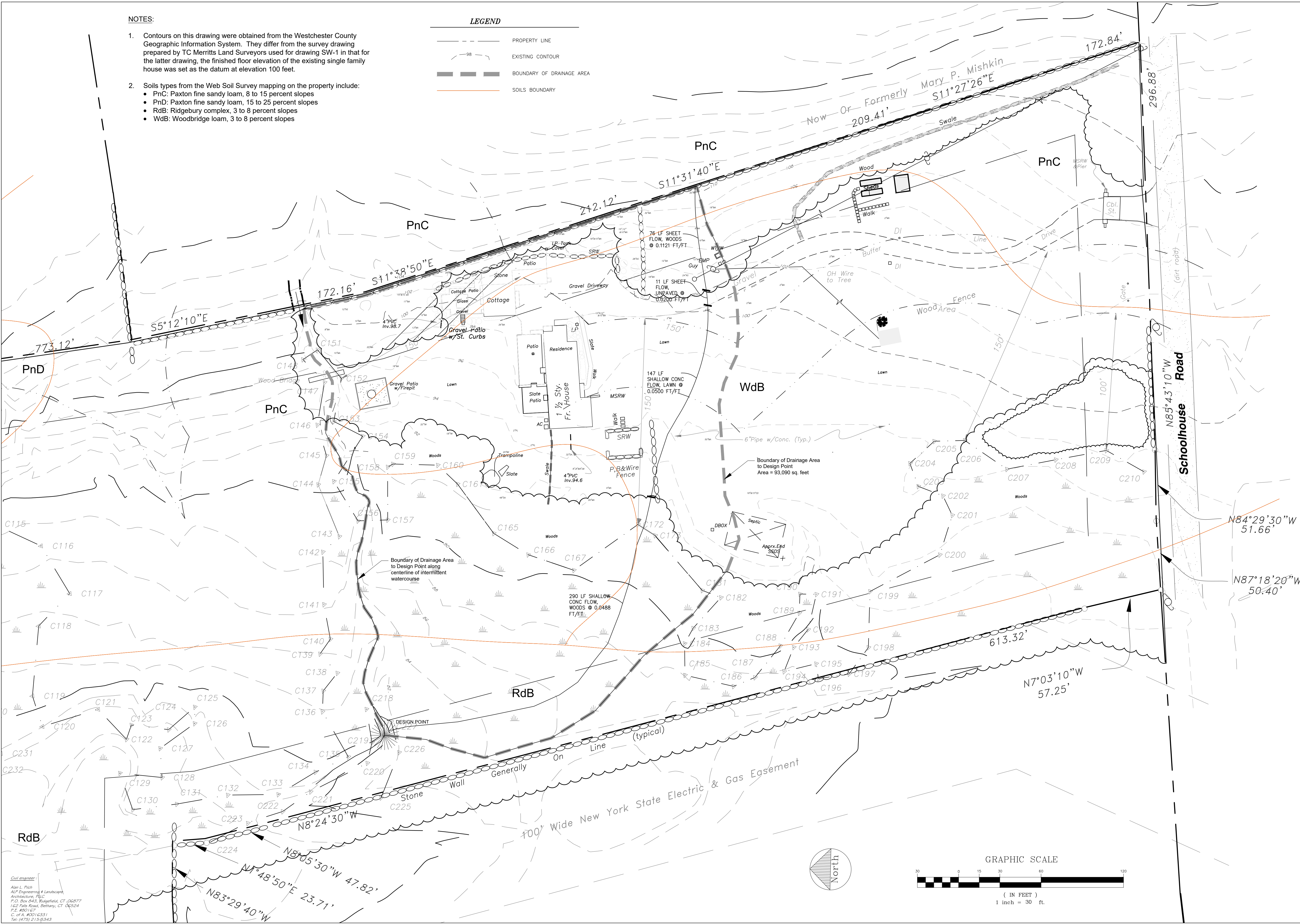
Scale: Not to Scale

NOTES:

- Contours on this drawing were obtained from the Westchester County Geographic Information System. They differ from the survey drawing prepared by TC Merritts Land Surveyors used for drawing SW-1 in that for the latter drawing, the finished floor elevation of the existing single family house was set as the datum at elevation 100 feet.
- Soils types from the Web Soil Survey mapping on the property include:
 - PnC: Paxton fine sandy loam, 8 to 15 percent slopes
 - PnD: Paxton fine sandy loam, 15 to 25 percent slopes
 - RdB: Ridgebury complex, 3 to 8 percent slopes
 - WdB: Woodbridge loam, 3 to 8 percent slopes

LEGEND

- PROPERTY LINE
- 98- EXISTING CONTOUR
- BOUNDARY OF DRAINAGE AREA
- SOILS BOUNDARY



Civil engineer
Alan L. Pich
ALP Engineering & Landscape
Architecture, PLLC
P.O. Box 843, Ridgefield, CT 06277
162 Falls Road, Bethany, CT 06249
P.E. #001627
C. of A. #0016331
Tel: (475) 215-6343

CONSULTANTS:

LANDSCAPE ARCHITECT:
JD Barrett & Associates
109 Sport Hill Rd.
Easton, CT 06612
203-372-5805 tel.
203-372-0499 fax

SURVEYOR:
TC Merritts Land Surveyors, PC
394 Bedford Road
Pleasantville, NY 10570
Tel: (914) 769-8003

ISSUED:

OWNERSHIP AND USE OF DOCUMENTS

UNAUTHORIZED ALTERATIONS AND ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW.

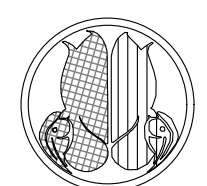
No part of these drawings shall be copied, disclosed to others or used in connection with any work or project other than for which they have been prepared without the express written consent of the licensed professional who prepared the document.

SEAL:



PROJECT NAME:
MC GUINNESS PROPERTY
17 School House Road
Waccabuc, New York

ENGINEER & LANDSCAPE ARCHITECT:
ALP ENGINEERING
& LANDSCAPE ARCHITECTURE, PLLC



Drawing Title:

**Existing Conditions
Stormwater Analysis**

Date: December 24, 2020

Dwn. by: alp

ID: Existing_Conditions_Analysis

SW-0

Sheet 1 of 1

SWPPP Figure 3

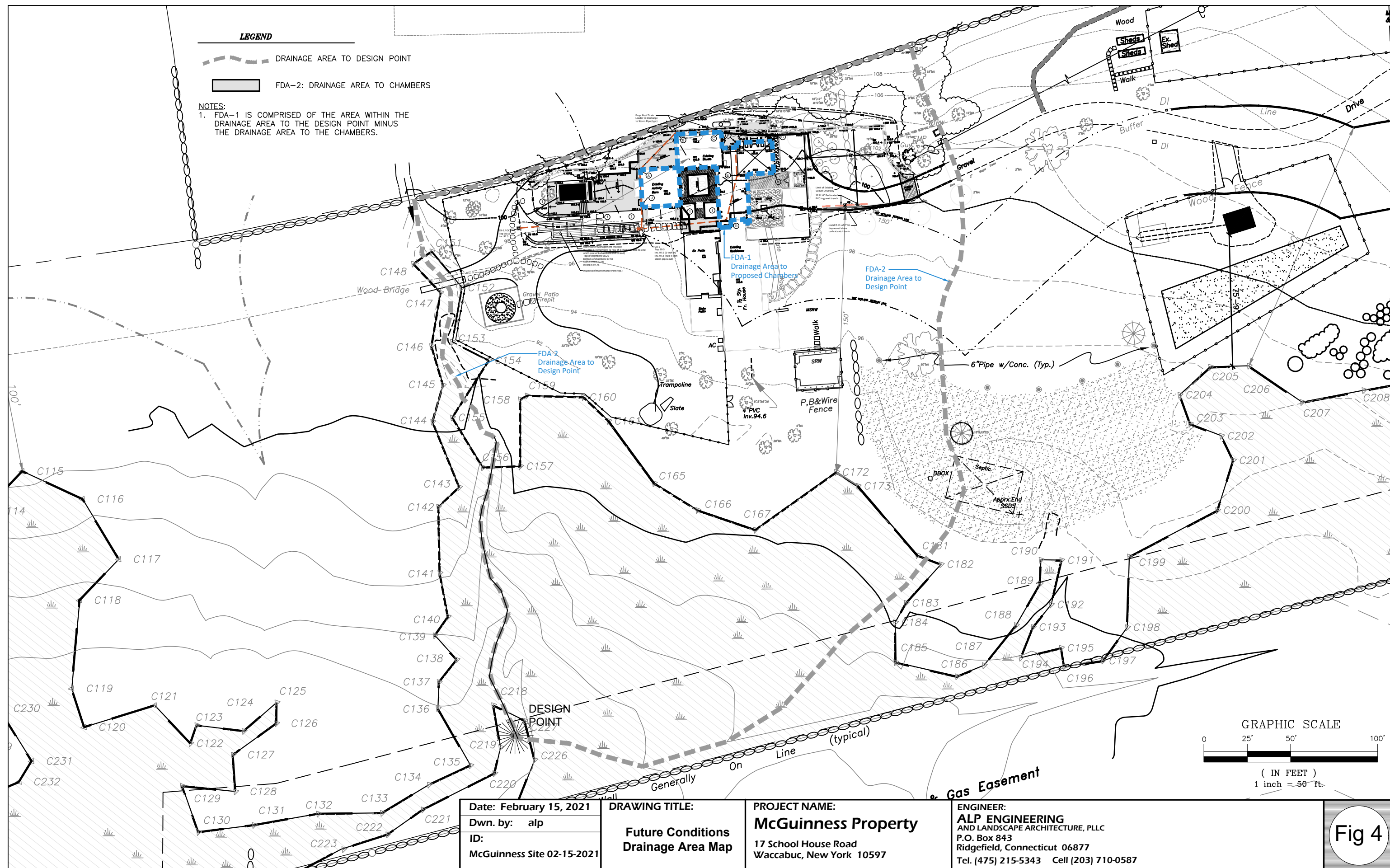


Fig 4

SUPPORTING DOCUMENTATION

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	No
State	New York
Location	
Longitude	73.603 degrees West
Latitude	41.285 degrees North
Elevation	0 feet
Date/Time	Sun, 13 Dec 2020 08:32:52 -0500

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.33	0.51	0.63	0.84	1.04	1.25	1yr	0.89	1.22	1.43	1.82	2.29	2.82	3.18	1yr	2.49	3.05	3.53	4.22	4.86	1yr
2yr	0.39	0.61	0.75	1.02	1.25	1.50	2yr	1.08	1.46	1.71	2.19	2.75	3.40	3.81	2yr	3.01	3.66	4.20	4.96	5.62	2yr
5yr	0.46	0.71	0.89	1.21	1.54	1.84	5yr	1.33	1.80	2.10	2.72	3.42	4.27	4.81	5yr	3.78	4.63	5.34	6.21	6.98	5yr
10yr	0.53	0.81	1.00	1.40	1.81	2.16	10yr	1.56	2.11	2.46	3.20	4.02	5.07	5.75	10yr	4.49	5.53	6.41	7.36	8.23	10yr
25yr	0.63	0.96	1.19	1.70	2.24	2.66	25yr	1.93	2.60	3.02	3.97	5.00	6.37	7.27	25yr	5.64	7.00	8.16	9.22	10.23	25yr
50yr	0.72	1.09	1.36	1.96	2.63	3.13	50yr	2.27	3.06	3.54	4.67	5.89	7.58	8.70	50yr	6.71	8.36	9.80	10.93	12.06	50yr
100yr	0.83	1.25	1.57	2.26	3.10	3.67	100yr	2.68	3.59	4.15	5.51	6.94	9.03	10.40	100yr	7.99	10.00	11.77	12.97	14.23	100yr
200yr	0.95	1.43	1.81	2.63	3.66	4.31	200yr	3.16	4.22	4.86	6.51	8.19	10.75	12.45	200yr	9.51	11.97	14.15	15.39	16.79	200yr
500yr	1.16	1.72	2.21	3.21	4.57	5.34	500yr	3.94	5.22	6.01	8.12	10.20	13.55	15.79	500yr	11.99	15.18	18.07	19.29	20.91	500yr

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.24	0.37	0.45	0.61	0.75	0.98	1yr	0.65	0.96	1.21	1.58	2.03	2.54	2.79	1yr	2.24	2.68	3.28	3.71	4.55	1yr
2yr	0.38	0.59	0.73	0.98	1.21	1.46	2yr	1.05	1.42	1.66	2.12	2.69	3.30	3.69	2yr	2.92	3.55	4.08	4.82	5.46	2yr
5yr	0.42	0.65	0.80	1.10	1.40	1.70	5yr	1.21	1.67	1.94	2.51	3.14	3.93	4.44	5yr	3.48	4.27	4.93	5.72	6.44	5yr
10yr	0.45	0.70	0.86	1.21	1.56	1.92	10yr	1.34	1.87	2.19	2.86	3.54	4.48	5.08	10yr	3.97	4.88	5.69	6.49	7.28	10yr
25yr	0.49	0.74	0.93	1.32	1.74	2.20	25yr	1.50	2.15	2.55	3.39	4.13	5.33	6.05	25yr	4.71	5.82	6.87	7.68	8.54	25yr
50yr	0.51	0.78	0.97	1.40	1.89	2.42	50yr	1.63	2.37	2.89	3.87	4.65	6.08	6.93	50yr	5.38	6.66	7.93	8.73	9.63	50yr
100yr	0.54	0.82	1.03	1.49	2.04	2.66	100yr	1.76	2.61	3.27	4.43	5.15	6.95	7.92	100yr	6.15	7.62	9.20	9.92	10.88	100yr
200yr	0.57	0.86	1.09	1.58	2.21	2.93	200yr	1.91	2.87	3.71	5.09	5.79	7.93	9.11	200yr	7.02	8.76	10.70	11.27	12.30	200yr
500yr	0.61	0.91	1.17	1.70	2.42	3.34	500yr	2.09	3.27	4.40	6.15	6.76	9.45	10.99	500yr	8.37	10.57	13.09	13.40	14.45	500yr

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.37	0.57	0.70	0.94	1.15	1.39	1yr	1.00	1.36	1.58	2.03	2.54	3.06	3.42	1yr	2.71	3.29	3.79	4.50	5.18	1yr
2yr	0.42	0.65	0.80	1.08	1.34	1.56	2yr	1.15	1.52	1.78	2.27	2.85	3.51	3.99	2yr	3.11	3.83	4.37	5.16	5.83	2yr
5yr	0.50	0.77	0.96	1.32	1.67	1.98	5yr	1.45	1.93	2.28	2.94	3.68	4.61	5.22	5yr	4.08	5.02	5.76	6.72	7.50	5yr
10yr	0.59	0.90	1.12	1.57	2.02	2.38	10yr	1.75	2.33	2.75	3.57	4.49	5.68	6.43	10yr	5.03	6.19	7.13	8.24	9.13	10yr
25yr	0.74	1.13	1.40	2.00	2.64	3.07	25yr	2.28	3.00	3.55	4.62	5.85	7.49	8.51	25yr	6.62	8.19	9.44	10.76	11.83	25yr
50yr	0.88	1.34	1.66	2.39	3.22	3.73	50yr	2.78	3.64	4.30	5.61	7.16	9.23	10.51	50yr	8.17	10.11	11.67	13.20	14.41	50yr
100yr	1.05	1.59	1.99	2.88	3.95	4.53	100yr	3.41	4.43	5.21	6.83	9.27	11.39	12.99	100yr	10.08	12.49	14.39	16.19	17.56	100yr
200yr	1.26	1.89	2.40	3.48	4.85	5.50	200yr	4.18	5.37	6.30	8.28	11.43	14.04	16.05	200yr	12.43	15.43	17.79	19.84	21.40	200yr
500yr	1.62	2.41	3.10	4.50	6.40	7.10	500yr	5.53	6.94	8.12	10.70	15.16	18.51	21.23	500yr	16.38	20.41	23.45	25.91	27.76	500yr

ALP ENGINEERING LANDSCAPE ARCHITECTURE, PLLC

P.O. Box 843, Ridgefield CT 06877

17 School House Road, Waccabuc, N.Y.

TEST DATA REQUIRED TO BE SUBMITTED WITH APPLICATION
DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES

DEPTH	HOLE DH-1	HOLE # _____	HOLE # _____	HOLE # _____
GROUND				
0'-6"				
1'-0"	Topsoil			
1'-6"				
2'-0"	Silty loam			
2'-6"				
3'-0"				
3'-6"				
4'-0"				
4'-6"	Fine sandy			
5'-0"	loam			
5'-6"				
6'-0"				
6'-6"				
7'-0"				
7'-6"				
8'-0"				
8'-6"				
G.W.	Seep at 42"			
ROCK	No bedrock			

TESTS MADE BY: Alan L. Pilch, PE, RLA

DATE: 12/15/2020

NAME: ALP ENGINEERING

SIGNATURE:

ADDRESS: P.O. BOX 843

SEAL:

RIDGEFIELD, CT 06877

Table 1
17 School House Road
Existing Condition to Design Point

DRAINAGE AREA TO DESIGN POINT		93,090 SF
Woods, good, HSG C	43,125	
	10,293	
TOTAL		53,418
Impervious Surfaces		
House	1,837	
Patio (upper patio rear of house)	645	
Patio (lower patio rear of house)	357	
Entry (to front door)	33	
Walkway (from gravel driveway to front door)	168	
Cottage (exist activity barn and exist studio)	809	
Patio (bluestone adjacent to barn & studio)	481	
Wall (west side of driveway, patio)	241	
Wall (near gravel driveway)	206	
Steps (down from gravel area)	25	
Fire Pit	28	
TOTAL		4,830
Semi-Pervious Surfaces		
Gravel Driveway	3,897	
Gravel Driveway	140	
Gravel Walkway (at south end)	471	
TOTAL		4,508
Lawn/Landscape, HSG C		30,334

Table 2
17 School House Road
Future Condition to Design Point

FUTURE DRAINAGE CONDITIONS - AREA TO DESIGN POINT		93,090 SF
Woods, good, HSG C	42,890	
	10,293	
	TOTAL	53,183
Impervious Surfaces		
House	1,837	
Patio (upper patio rear of house)	645	
Patio (lower patio rear of house)	357	
Patio (new over existing gravel driveway)	158	
Entry (to front door)	33	
Walkway (new stone walk to front door over existing lawn)	345	
Cottage (exist activity barn and exist studio)	809	
Patio (bluestone patio over existing gravel)	378	
Patio (bluestone patio over existing lawn)	100	
Pool and Patio (over existing lawn)	400	
Bluestone Patio (west of activity barn and studio)	481	
Wall (to south of pool and patio over existing lawn)	15	
Wall (to east of pool and patio over existing lawn)	48	
Wall (to east of patio over existing lawn)	18	
Wall (east of pea gravel walkway over existing gravel driveway)	17	
Wall (east of pea gravel walkway over existing gravel driveway)	17	
Wall (new wall on west side)	363	
Wall (new wall on west side)	241	
Existing Wall	82	
Wall (new wall on west side)	49	
Steps (from rear patio addition to pool over existing lawn)	180	
Steps (from gravel driveway to new pea gravel walkway over ex gravel driveway)	57	
Bluestone walk near pool	98	
Covered Dining Patio and Sitting Folly (over existing gravel driveway)	1,047	
Bluestone Patio (over existing lawn)	120	
Water Feature (over existing gravel surface)	87	
Bluestone Step (over existing gravel surface to rear patio addition)	14	
Wall (to east of bluestone patio over existing lawn)	17	
Bluestone Steps (over existing lawn)	19	
Covered Storage Shed (additional impervious to bluestone patio west of activ barn)	31	
Fire Pit	28	
	TOTAL	8,091

Table 2
17 School House Road
Future Condition to Design Point

Semi-Pervious Surfaces		
Gravel Driveway	2,522	
Gravel Driveway	53	
Pea Gravel Walkway	219	
Pea Gravel Adjacent to Walkway	36	
Fire Pit Surface	383	
	TOTAL	3,213
Lawn/Landscape, HSG C		28,603

Table 3
17 School House Road
Water Quality Volume Calculation

Under the Watershed Regulations, the requirement is to capture and treat the runoff from the 1-year, 24 hour storm event which is equal to 2.79 inches of precipitation, or the water quality volume, whichever is greater. The following calculates the treatment volume of runoff from the 1-year storm (using TR-55 in accordance with the New York Stormwater Management Design Manual) and the Water Quality Volume - 1.5" of precipitation (using the 90% Rule).

1-year, 24 hour precipitation =

2.82

 inches
 90% rule precipitation depth =

1.5

 inches

<i>Drainage Area</i>	<i>Area (in sq feet)</i>	<i>Area (in acres)</i>	<i>CN Value</i>	<i>Runoff Depth (inches)</i>	<i>1 yr, 24 hr storm Treatment Vol. (cu feet)</i>	<i>90% Rule Treatment Vol. (cu feet)</i>
Impervious Surfaces to Proposed Chambers	2,005	0.046	98			
TOTALS / WEIGHTED CN	2,005	0.046	98	2.59	433	238

% impervious = 100
 Rv = 0.95



CULTEC Stormwater Design Calculator

Date: December 18, 2020

Project Information:

McGuinness Property
17 School House Rd
Waccabuc
New York

Project Number: FIELD A

Calculations Performed By:

Alan Pilch, PE, RLA
ALP Engineering & Land Arch
P.O. Box 845
Ridgefield CT
06877

(475) 215-5343
alan@eaec-inc.com

CONTACTOR FIELD DRAIN C-4HD



Contactor Field Drain C-4HD Chamber Specifications

Height	8.5	inches
Width	48.0	inches
Length	8.50	feet
Installed Length	8.00	feet
Bare Chamber Volume	13.54	cu. feet
Installed Chamber Volume	32.72	cu. feet

Breakdown of Storage Provided by Contactor Field Drain C-4HD Stormwater System

Within Chambers	41.45	cu. feet
Within Feed Connectors	-	cu. feet
Within Stone	92.07	cu. feet
Total Storage Provided	133.5	cu. feet
Total Storage Required	115.00	cu. feet

Materials List

Contactor Field Drain C-4HD

Total Number of Chambers Required	3	pieces
Starter Chambers	1	pieces
End Chambers	2	pieces
HVLV FC-48 Feed Connectors	0	pieces
CULTEC No. 410 Non-Woven Geotextile	60	sq. yards
CULTEC No. 4800 Woven Geotextile	12	feet
Stone	9	cu. yards

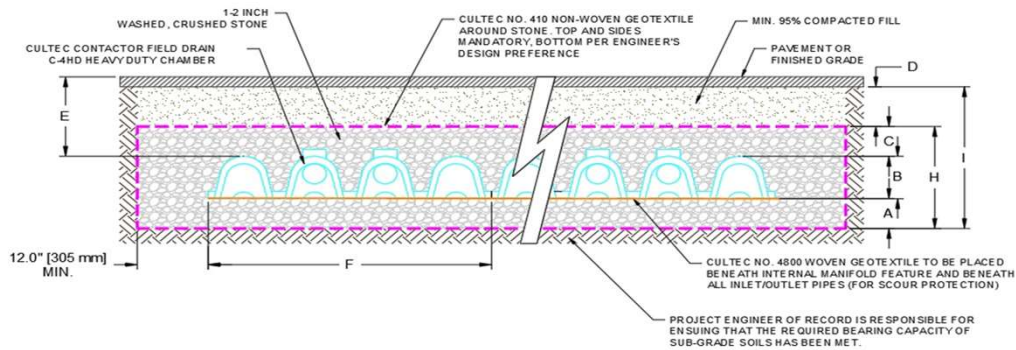
Bed Detail



Bed detail for reference only. Not project specific. Not to scale.

Bed Layout Information

Number of Rows Wide	1	pieces
Number of Chambers Long	3	pieces
Chamber Row Width	4.00	feet
Chamber Row Length	24.50	feet
Bed Width	6.00	feet
Bed Length	26.50	feet
Bed Area Required	159.00	sq. feet
Length of Separator Row	N/A	feet



Conceptual graphic only. Not job specific.

Cross Section Table Reference

A	Depth of Stone Base	6.0	inches
B	Chamber Height	8.5	inches
C	Depth of Stone Above Units	6.0	inches
D	Depth of 95% Compacted Fill	8.0	inches
E	Max. Depth Allowed Above the Chamber	12.00	feet
F	Chamber Width	48.0	inches
G	Center to Center Spacing	4.50	feet
H	Effective Depth	1.71	feet
I	Bed Depth	2.38	feet



CULTEC Stormwater Design Calculator

Date: February 15, 2021

Project Information:

McGuinness Property
17 School House Rd
Waccabuc
New York

Project Number: FIELD B

Calculations Performed By:

Alan Pilch, PE, RLA
ALP Engineering & Land Arch
P.O. Box 845
Ridgefield CT
06877

(475) 215-5343
alan@eaec-inc.com

CONTACTOR FIELD DRAIN C-4HD



Contactor Field Drain C-4HD Chamber Specifications

Height	8.5	inches
Width	48.0	inches
Length	8.50	feet
Installed Length	8.00	feet
Bare Chamber Volume	13.54	cu. feet
Installed Chamber Volume	32.72	cu. feet

Breakdown of Storage Provided by Contactor Field Drain C-4HD Stormwater System

Within Chambers	82.06	cu. feet
Within Feed Connectors	-	cu. feet
Within Stone	174.23	cu. feet
Total Storage Provided	256.3	cu. feet
Total Storage Required	230.00	cu. feet

Materials List

Contactor Field Drain C-4HD

Total Number of Chambers Required	6	pieces
Starter Chambers	1	pieces
End Chambers	5	pieces
HVLV FC-48 Feed Connectors	0	pieces
CULTEC No. 410 Non-Woven Geotextile	111	sq. yards
CULTEC No. 4800 Woven Geotextile	12	feet
Stone	16	cu. yards

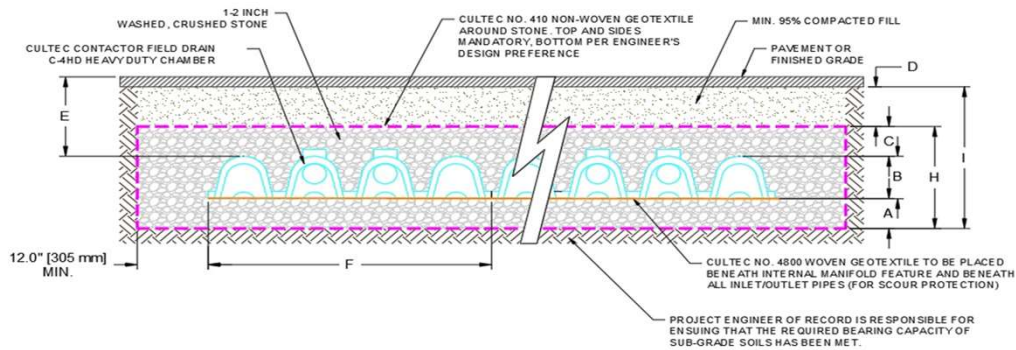
Bed Detail



Bed detail for reference only. Not project specific. Not to scale.

Bed Layout Information

Number of Rows Wide	1	pieces
Number of Chambers Long	6	pieces
Chamber Row Width	4.00	feet
Chamber Row Length	48.50	feet
Bed Width	6.00	feet
Bed Length	50.50	feet
Bed Area Required	303.00	sq. feet
Length of Separator Row	N/A	feet



Conceptual graphic only. Not job specific.

Cross Section Table Reference

A	Depth of Stone Base	6.0	inches
B	Chamber Height	8.5	inches
C	Depth of Stone Above Units	6.0	inches
D	Depth of 95% Compacted Fill	8.0	inches
E	Max. Depth Allowed Above the Chamber	12.00	feet
F	Chamber Width	48.0	inches
G	Center to Center Spacing	4.50	feet
H	Effective Depth	1.71	feet
I	Bed Depth	2.38	feet

Appendix A

***Stormwater Management Report
Hydrographs and Routings***



Existing Condition to
Design Point



XDA-1 to Design Point



Future Condition
Drainage Area to
Design Point



FDA-1 to Design Point



FDA-2 to Chambers



Cultec C-4 Chambers



Reach 1 Lawn



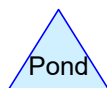
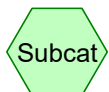
Reach 2 Woods



Reach 3 Intermittent
Channel



Design Point



Routing Diagram for 17 School House Rd SW Mgmt_02-16-2021

Prepared by ALP Engineering & Land. Arch. PLLC

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17 School House Rd SW Mgmt_02-16-2021

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-year	Type III 24-hr		Default	24.00	1	2.82	2
2	10-year	Type III 24-hr		Default	24.00	1	5.07	2
3	25-year	Type III 24-hr		Default	24.00	1	6.37	2

17 School House Rd SW Mgmt_02-16-2021

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.688	74	>75% Grass cover, Good, HSG C (1S, 2S, 8S, 9S)
0.372	96	Gravel surface driveway, HSG C (1S, 2S, 8S, 9S)
0.547	98	Impervious Surfaces (1S, 2S, 8S, 9S)
0.046	98	Unconnected pavement, HSG B (3S)
4.894	70	Woods, Good, HSG C (1S, 2S, 8S, 9S)
8.548	74	TOTAL AREA

17 School House Rd SW Mgmt_02-16-2021

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	2.688	0.000	0.000	2.688	>75% Grass cover, Good	1S, 2S, 8S, 9S
0.000	0.000	0.372	0.000	0.000	0.372	Gravel surface driveway	1S, 2S, 8S, 9S
0.000	0.000	0.000	0.000	0.547	0.547	Impervious Surfaces	1S, 2S, 8S, 9S
0.000	0.046	0.000	0.000	0.000	0.046	Unconnected pavement	3S
0.000	0.000	4.894	0.000	0.000	4.894	Woods, Good	1S, 2S, 8S, 9S
0.000	0.046	7.955	0.000	0.547	8.548	TOTAL AREA	

Time span=0.00-48.00 hrs, dt=0.02 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: XDA-1 to Design Point Runoff Area=93,090 sf 5.19% Impervious Runoff Depth=0.80"
Flow Length=524' Tc=13.7 min CN=74 Runoff=1.42 cfs 0.142 af

Subcatchment 2S: FDA-1 to Design Point Runoff Area=91,085 sf 6.68% Impervious Runoff Depth=0.80"
Flow Length=524' Tc=13.7 min CN=74 Runoff=1.39 cfs 0.139 af

Subcatchment 3S: FDA-2 to Chambers Runoff Area=2,005 sf 100.00% Impervious Runoff Depth=2.59"
Tc=6.0 min CN=98 Runoff=0.13 cfs 0.010 af

Subcatchment 8S: Existing Condition to Runoff Area=93,090 sf 5.19% Impervious Runoff Depth=0.80"
Flow Length=524' Tc=13.7 min CN=74 Runoff=1.42 cfs 0.142 af

Subcatchment 9S: Future Condition Runoff Area=93,090 sf 8.69% Impervious Runoff Depth=0.85"
Flow Length=524' Tc=13.7 min CN=75 Runoff=1.53 cfs 0.151 af

Reach 4R: Reach 1 Lawn Avg. Flow Depth=0.01' Max Vel=0.06 fps Inflow=0.01 cfs 0.002 af
n=0.240 L=76.0' S=0.0829 '/' Capacity=0.49 cfs Outflow=0.00 cfs 0.002 af

Reach 5R: Reach 2 Woods Avg. Flow Depth=0.01' Max Vel=0.03 fps Inflow=0.00 cfs 0.002 af
n=0.400 L=43.0' S=0.0267 '/' Capacity=0.21 cfs Outflow=0.00 cfs 0.002 af

Reach 6R: Reach 3 Intermittent Channel Avg. Flow Depth=0.00' Max Vel=0.81 fps Inflow=0.00 cfs 0.002 af
n=0.040 L=184.0' S=0.0527 '/' Capacity=367.70 cfs Outflow=0.00 cfs 0.002 af

Pond 4P: Cultec C-4 Chambers Peak Elev=98.53' Storage=357 cf Inflow=0.13 cfs 0.010 af
Outflow=0.01 cfs 0.002 af

Link 7L: Design Point Inflow=1.39 cfs 0.140 af
Primary=1.39 cfs 0.140 af

Total Runoff Area = 8.548 ac Runoff Volume = 0.583 af Average Runoff Depth = 0.82"
93.06% Pervious = 7.955 ac 6.94% Impervious = 0.593 ac

Summary for Subcatchment 1S: XDA-1 to Design Point

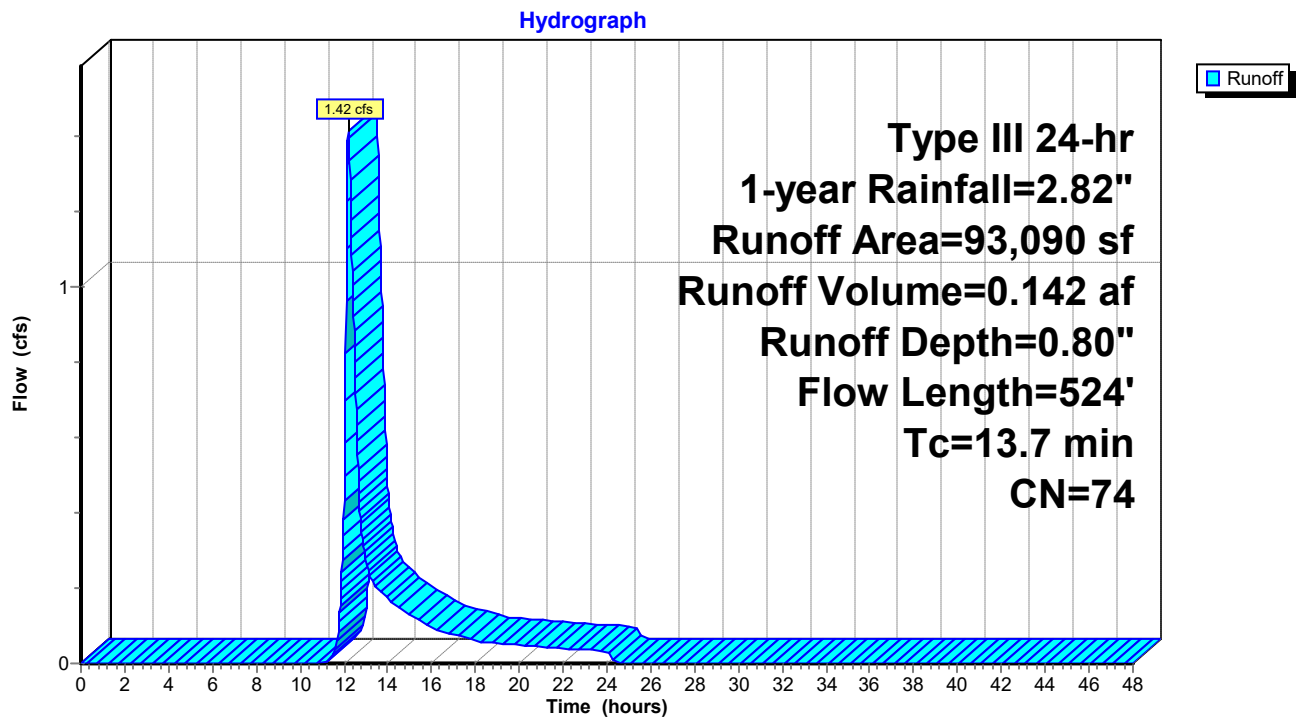
Runoff = 1.42 cfs @ 12.21 hrs, Volume= 0.142 af, Depth= 0.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 1-year Rainfall=2.82"

	Area (sf)	CN	Description
*	4,830	98	Impervious Surfaces
	53,418	70	Woods, Good, HSG C
	29,951	74	>75% Grass cover, Good, HSG C
*	4,891	96	Gravel surface driveway, HSG C
	93,090	74	Weighted Average
	88,260		94.81% Pervious Area
	4,830		5.19% Impervious Area

	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	8.4	76	0.1121	0.15		Sheet Flow, A-B
						Woods: Light underbrush n= 0.400 P2= 3.40"
	0.2	11	0.0200	0.91		Sheet Flow, B-C
						Smooth surfaces n= 0.011 P2= 3.40"
	0.7	147	0.0500	3.35		Shallow Concentrated Flow, C-D
						Grassed Waterway Kv= 15.0 fps
	4.4	290	0.0488	1.10		Shallow Concentrated Flow, D-E
						Woodland Kv= 5.0 fps
	13.7	524	Total			

Subcatchment 1S: XDA-1 to Design Point



Summary for Subcatchment 2S: FDA-1 to Design Point

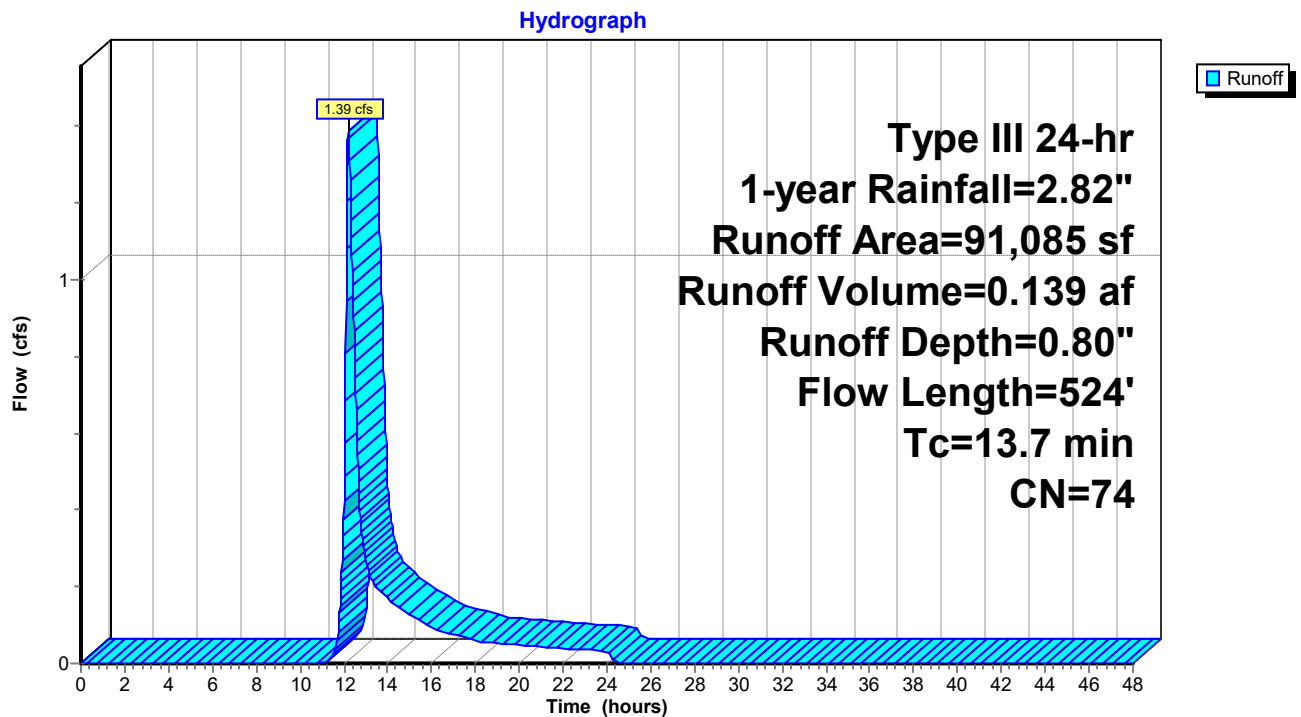
Runoff = 1.39 cfs @ 12.21 hrs, Volume= 0.139 af, Depth= 0.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 1-year Rainfall=2.82"

	Area (sf)	CN	Description
*	6,086	98	Impervious Surfaces
	53,183	70	Woods, Good, HSG C
	28,603	74	>75% Grass cover, Good, HSG C
*	3,213	96	Gravel surface driveway, HSG C
	91,085	74	Weighted Average
	84,999		93.32% Pervious Area
	6,086		6.68% Impervious Area

	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	8.4	76	0.1121	0.15		Sheet Flow, A-B
						Woods: Light underbrush n= 0.400 P2= 3.40"
	0.2	11	0.0200	0.91		Sheet Flow, B-C
						Smooth surfaces n= 0.011 P2= 3.40"
	0.7	147	0.0500	3.35		Shallow Concentrated Flow, C-D
						Grassed Waterway Kv= 15.0 fps
	4.4	290	0.0488	1.10		Shallow Concentrated Flow, D-E
						Woodland Kv= 5.0 fps
	13.7	524	Total			

Subcatchment 2S: FDA-1 to Design Point



Summary for Subcatchment 3S: FDA-2 to Chambers

Runoff = 0.13 cfs @ 12.08 hrs, Volume= 0.010 af, Depth= 2.59"

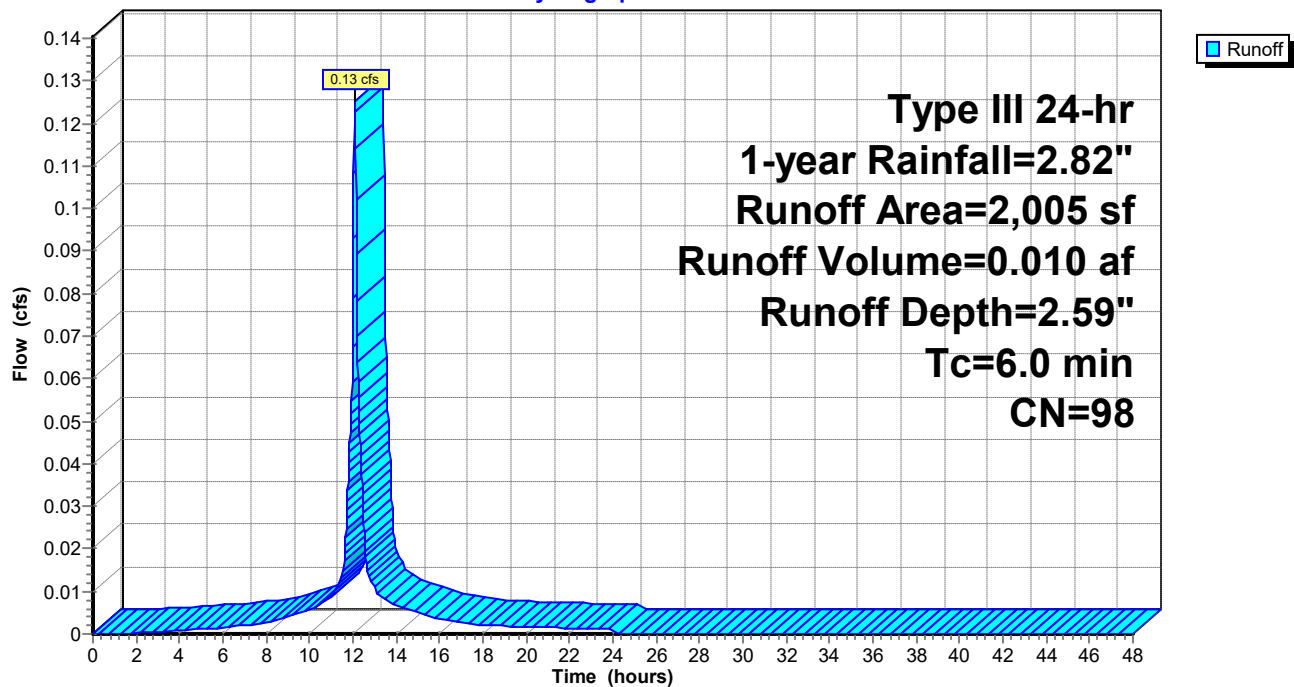
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 1-year Rainfall=2.82"

Area (sf)	CN	Description
2,005	98	Unconnected pavement, HSG B
2,005		100.00% Impervious Area
2,005		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 3S: FDA-2 to Chambers

Hydrograph



Summary for Subcatchment 8S: Existing Condition to Design Point

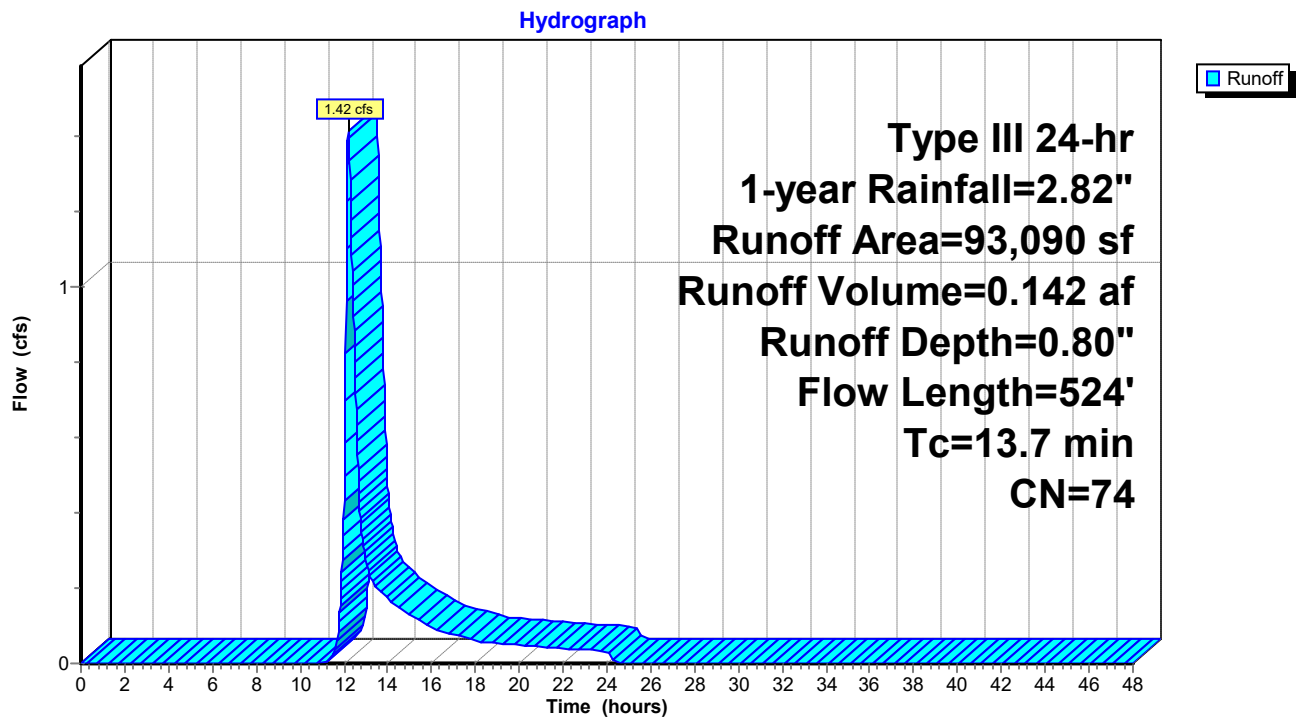
Runoff = 1.42 cfs @ 12.21 hrs, Volume= 0.142 af, Depth= 0.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 1-year Rainfall=2.82"

	Area (sf)	CN	Description
*	4,830	98	Impervious Surfaces
	53,418	70	Woods, Good, HSG C
	29,951	74	>75% Grass cover, Good, HSG C
*	4,891	96	Gravel surface driveway, HSG C
	93,090	74	Weighted Average
	88,260		94.81% Pervious Area
	4,830		5.19% Impervious Area

	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	8.4	76	0.1121	0.15		Sheet Flow, A-B
						Woods: Light underbrush n= 0.400 P2= 3.40"
	0.2	11	0.0200	0.91		Sheet Flow, B-C
						Smooth surfaces n= 0.011 P2= 3.40"
	0.7	147	0.0500	3.35		Shallow Concentrated Flow, C-D
						Grassed Waterway Kv= 15.0 fps
	4.4	290	0.0488	1.10		Shallow Concentrated Flow, D-E
						Woodland Kv= 5.0 fps
	13.7	524	Total			

Subcatchment 8S: Existing Condition to Design Point



Summary for Subcatchment 9S: Future Condition Drainage Area to Design Point

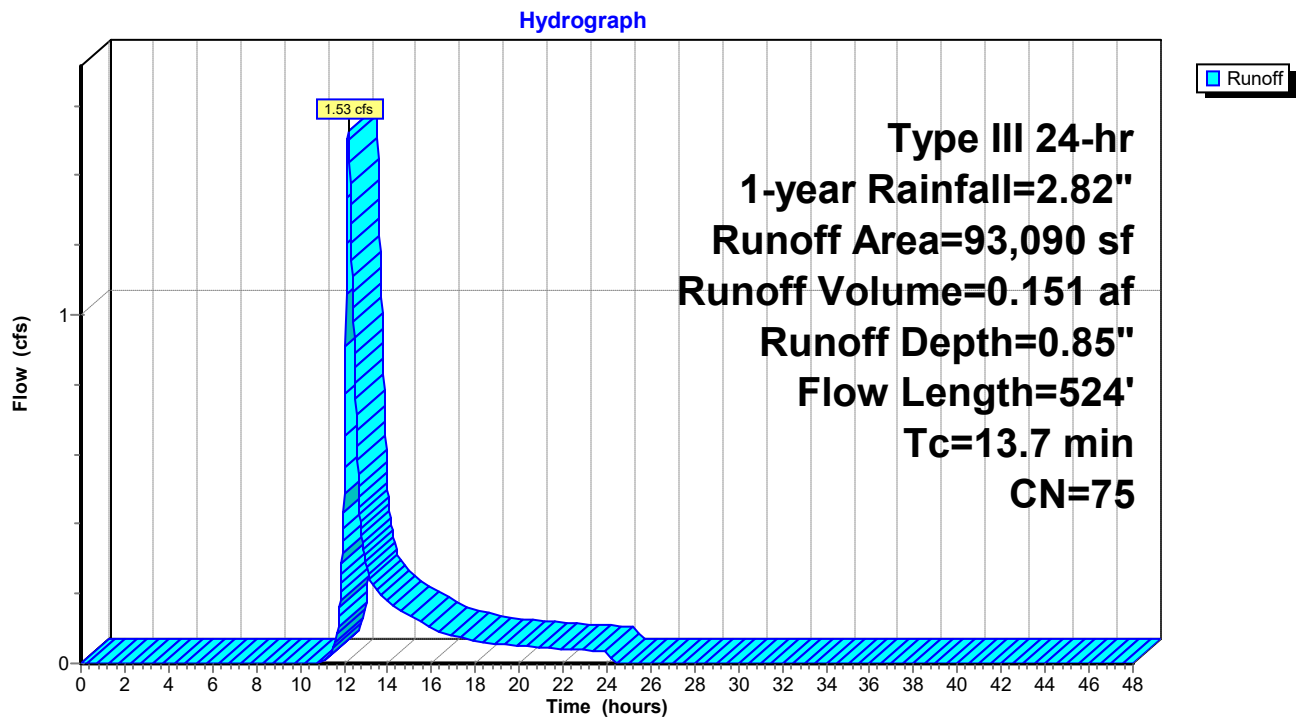
Runoff = 1.53 cfs @ 12.21 hrs, Volume= 0.151 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 1-year Rainfall=2.82"

	Area (sf)	CN	Description
*	8,091	98	Impervious Surfaces
	53,183	70	Woods, Good, HSG C
	28,603	74	>75% Grass cover, Good, HSG C
*	3,213	96	Gravel surface driveway, HSG C
	93,090	75	Weighted Average
	84,999		91.31% Pervious Area
	8,091		8.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	76	0.1121	0.15		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 3.40"
0.2	11	0.0200	0.91		Sheet Flow, B-C
					Smooth surfaces n= 0.011 P2= 3.40"
0.7	147	0.0500	3.35		Shallow Concentrated Flow, C-D
					Grassed Waterway Kv= 15.0 fps
4.4	290	0.0488	1.10		Shallow Concentrated Flow, D-E
					Woodland Kv= 5.0 fps
13.7	524	Total			

Subcatchment 9S: Future Condition Drainage Area to Design Point



Summary for Reach 4R: Reach 1 Lawn

Inflow Area = 0.046 ac, 100.00% Impervious, Inflow Depth = 0.46" for 1-year event
 Inflow = 0.01 cfs @ 14.84 hrs, Volume= 0.002 af
 Outflow = 0.00 cfs @ 15.80 hrs, Volume= 0.002 af, Atten= 16%, Lag= 58.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

Max. Velocity= 0.06 fps, Min. Travel Time= 21.3 min

Avg. Velocity= 0.03 fps, Avg. Travel Time= 37.6 min

Peak Storage= 6 cf @ 15.45 hrs

Average Depth at Peak Storage= 0.01', Surface Width= 12.25'

Bank-Full Depth= 0.10' Flow Area= 1.4 sf, Capacity= 0.49 cfs

12.00' x 0.10' deep channel, n= 0.240 Sheet flow over Dense Grass

Side Slope Z-value= 20.0 ' ' Top Width= 16.00'

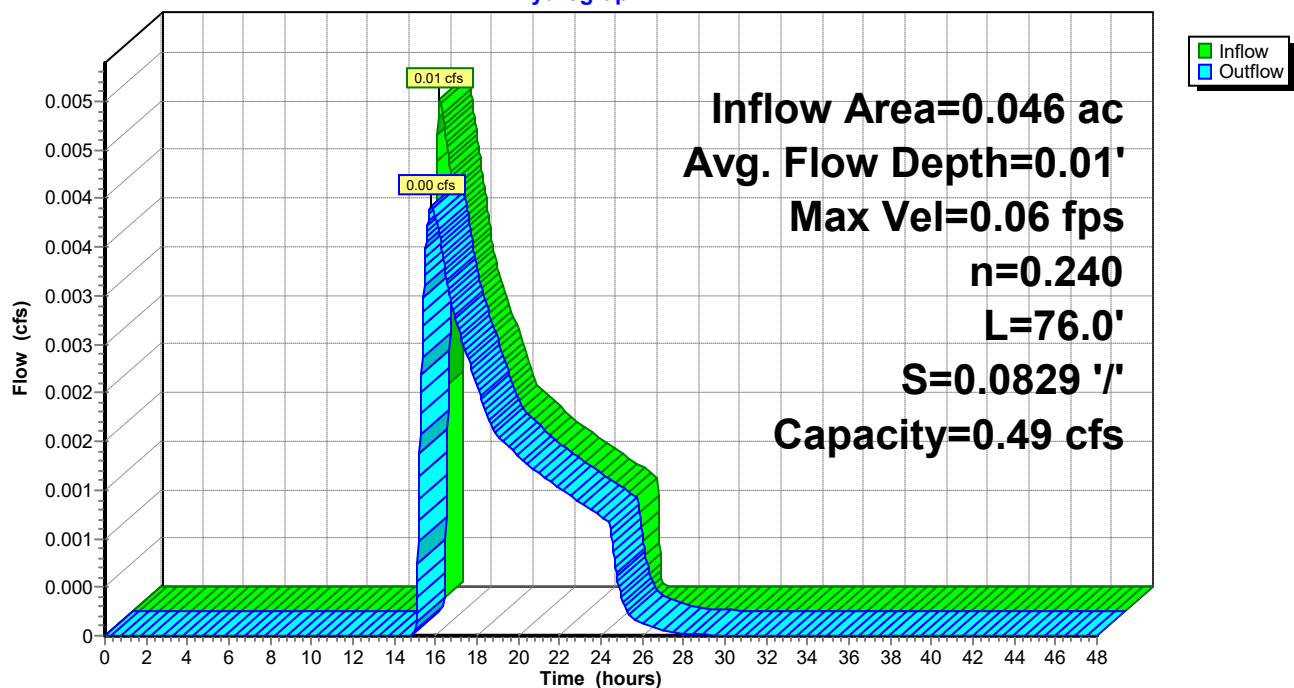
Length= 76.0' Slope= 0.0829 ' '

Inlet Invert= 97.30', Outlet Invert= 91.00'

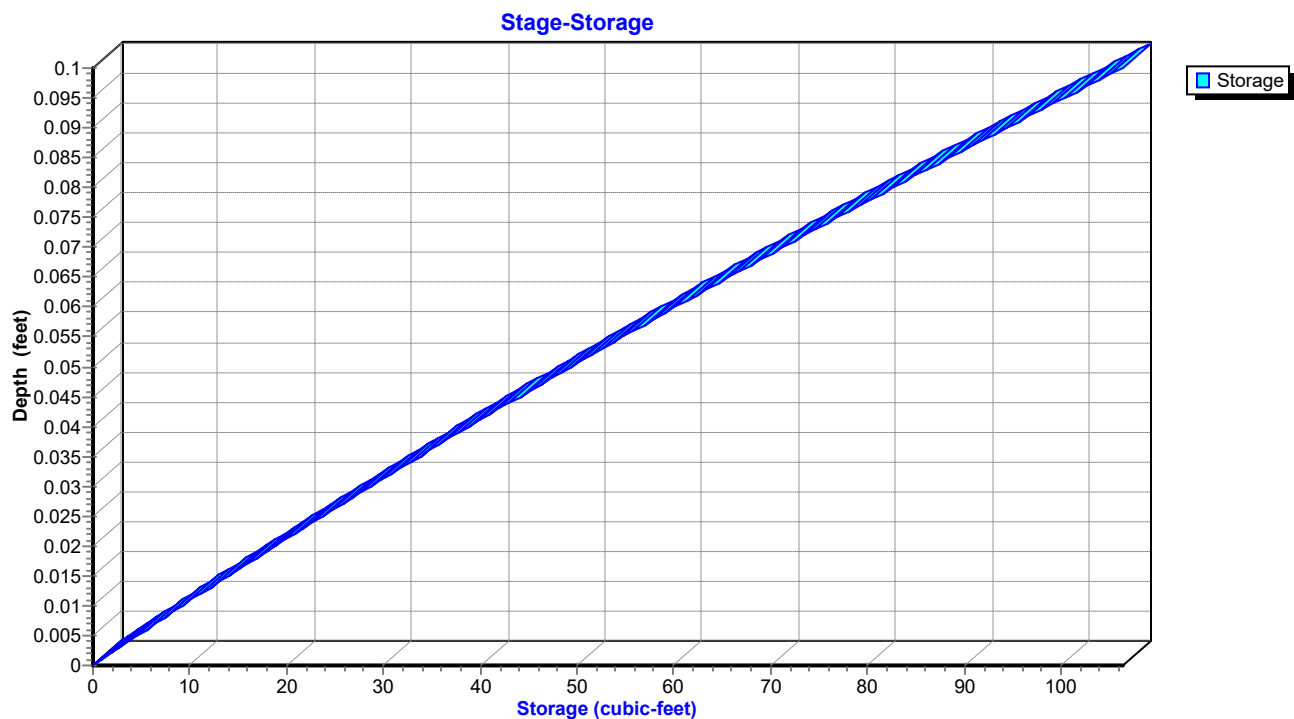


Reach 4R: Reach 1 Lawn

Hydrograph



Reach 4R: Reach 1 Lawn



Summary for Reach 5R: Reach 2 Woods

Inflow Area = 0.046 ac, 100.00% Impervious, Inflow Depth = 0.46" for 1-year event
Inflow = 0.00 cfs @ 15.80 hrs, Volume = 0.002 af
Outflow = 0.00 cfs @ 16.73 hrs, Volume = 0.002 af, Atten = 10%, Lag = 55.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

Max. Velocity= 0.03 fps, Min. Travel Time= 26.3 min

Avg. Velocity = 0.01 fps, Avg. Travel Time= 56.9 min

Peak Storage= 6 cf @ 16.30 hrs

Average Depth at Peak Storage= 0.01' , Surface Width= 15.38'

Bank-Full Depth= 0.10' Flow Area= 1.7 sf, Capacity= 0.21 cfs

15.00' x 0.10' deep channel, $n = 0.400$ Sheet flow: Woods+light brush

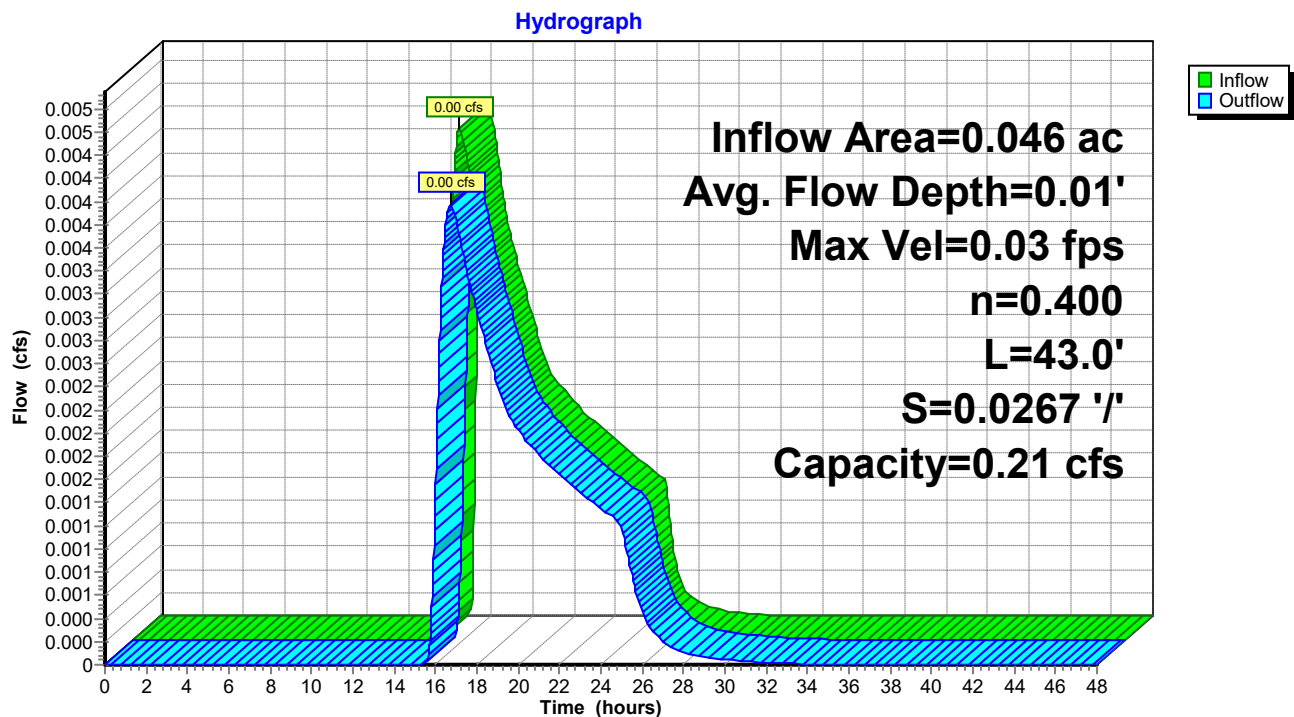
Side Slope Z-value= 20.0 ' /' Top Width= 19.00'

Length= 43.0' Slope= 0.0267 '/'

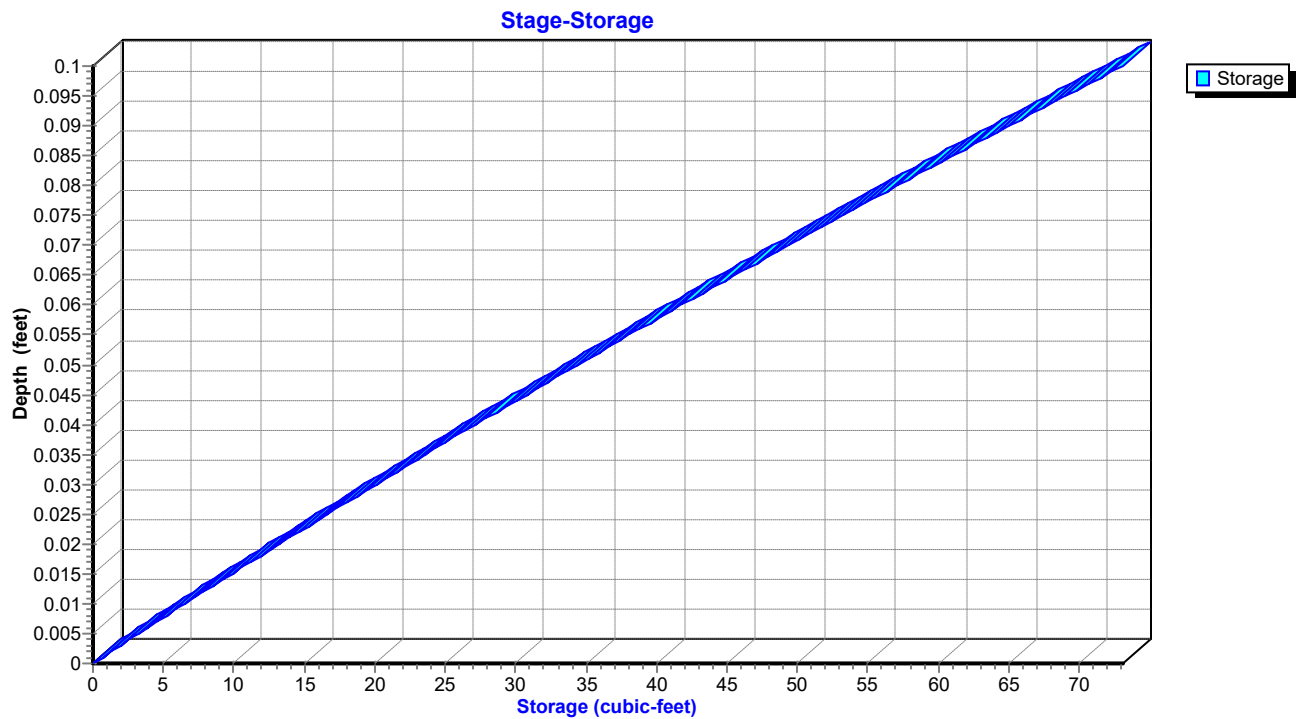
Inlet Invert= 90.90', Outlet Invert= 89.75'



Reach 5R: Reach 2 Woods



Reach 5R: Reach 2 Woods



Summary for Reach 6R: Reach 3 Intermittent Channel

Inflow Area = 0.046 ac, 100.00% Impervious, Inflow Depth = 0.46" for 1-year event
 Inflow = 0.00 cfs @ 16.73 hrs, Volume= 0.002 af
 Outflow = 0.00 cfs @ 16.87 hrs, Volume= 0.002 af, Atten= 0%, Lag= 8.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

Max. Velocity= 0.81 fps, Min. Travel Time= 3.8 min

Avg. Velocity= 0.81 fps, Avg. Travel Time= 3.8 min

Peak Storage= 1 cf @ 16.80 hrs

Average Depth at Peak Storage= 0.00', Surface Width= 4.00'

Bank-Full Depth= 3.00' Flow Area= 30.0 sf, Capacity= 367.70 cfs

4.00' x 3.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides

Side Slope Z-value= 2.0 '/' Top Width= 16.00'

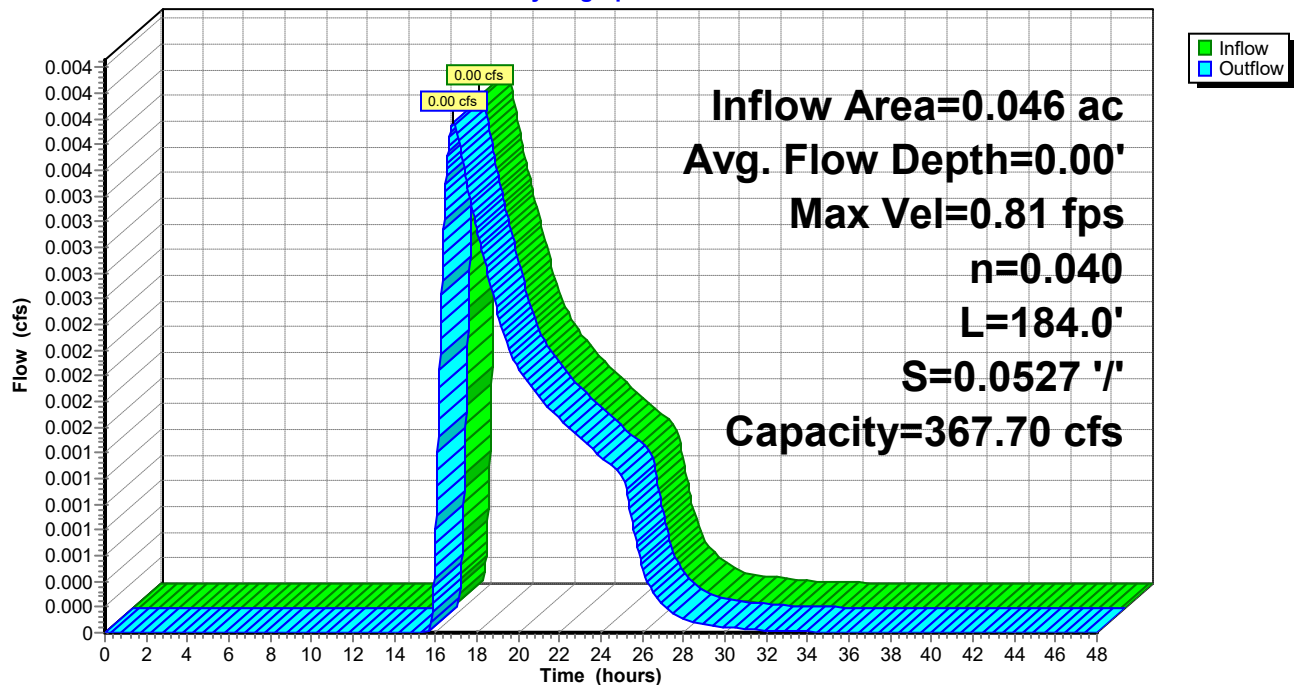
Length= 184.0' Slope= 0.0527 '/'

Inlet Invert= 89.70', Outlet Invert= 80.00'

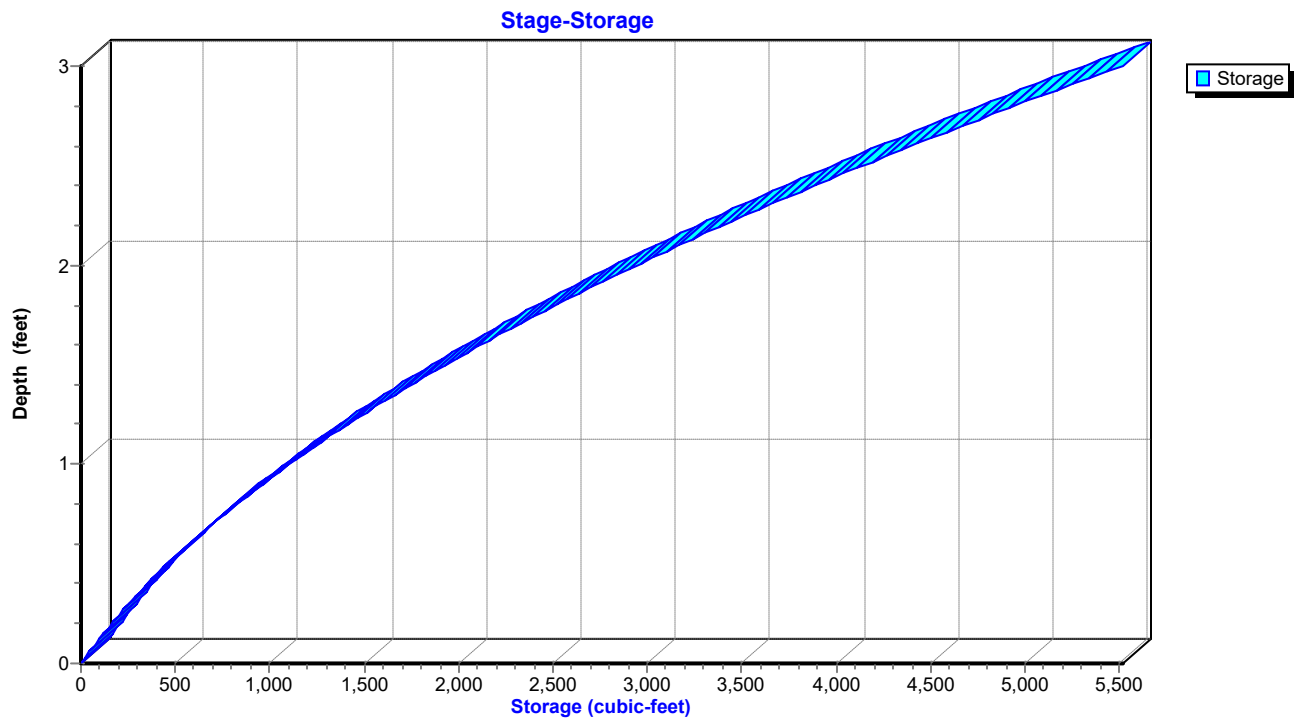


Reach 6R: Reach 3 Intermittent Channel

Hydrograph



Reach 6R: Reach 3 Intermittent Channel



Summary for Pond 4P: Cultec C-4 Chambers

Inflow Area = 0.046 ac, 100.00% Impervious, Inflow Depth = 2.59" for 1-year event
 Inflow = 0.13 cfs @ 12.08 hrs, Volume= 0.010 af
 Outflow = 0.01 cfs @ 14.84 hrs, Volume= 0.002 af, Atten= 96%, Lag= 165.2 min
 Primary = 0.01 cfs @ 14.84 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
 Peak Elev= 98.53' @ 14.84 hrs Surf.Area= 462 sf Storage= 357 cf

Plug-Flow detention time= 587.5 min calculated for 0.002 af (18% of inflow)
 Center-of-Mass det. time= 332.6 min (1,091.7 - 759.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	97.00'	92 cf	6.00'W x 26.50'L x 1.71'H Field A 272 cf Overall - 41 cf Embedded = 231 cf x 40.0% Voids
#2A	97.50'	41 cf	Cultec FD C-4 x 3 Inside #1 Effective Size= 42.0"W x 8.0"H => 1.67 sf x 8.00'L = 13.3 cf Overall Size= 48.0"W x 8.5"H x 8.50'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.67 sf x 1 rows
#3B	97.00'	175 cf	6.00'W x 50.50'L x 1.71'H Field B 518 cf Overall - 81 cf Embedded = 437 cf x 40.0% Voids
#4B	97.50'	81 cf	Cultec FD C-4 x 6 Inside #3 Effective Size= 42.0"W x 8.0"H => 1.67 sf x 8.00'L = 13.3 cf Overall Size= 48.0"W x 8.5"H x 8.50'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.67 sf x 1 rows
		389 cf	Total Available Storage

Storage Group A created with Chamber Wizard
 Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	98.53'	12.0" x 12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 14.84 hrs HW=98.53' (Free Discharge)
 ↑1=Orifice/Grate (Weir Controls 0.00 cfs @ 0.22 fps)

Pond 4P: Cultec C-4 Chambers - Chamber Wizard Field A

Chamber Model = Cultec FD C-4 (Cultec Contactor® Field Drain C-4)

Effective Size= 42.0"W x 8.0"H => 1.67 sf x 8.00'L = 13.3 cf

Overall Size= 48.0"W x 8.5"H x 8.50'L with 0.50' Overlap

Row Length Adjustment= +0.50' x 1.67 sf x 1 rows

3 Chambers/Row x 8.00' Long +0.50' Row Adjustment = 24.50' Row Length +12.0" End Stone x 2 = 26.50' Base Length

1 Rows x 48.0" Wide + 12.0" Side Stone x 2 = 6.00' Base Width

6.0" Stone Base + 8.5" Chamber Height + 6.0" Stone Cover = 1.71' Field Height

3 Chambers x 13.3 cf +0.50' Row Adjustment x 1.67 sf x 1 Rows = 40.8 cf Chamber Storage

271.6 cf Field - 40.8 cf Chambers = 230.8 cf Stone x 40.0% Voids = 92.3 cf Stone Storage

Chamber Storage + Stone Storage = 133.1 cf = 0.003 af

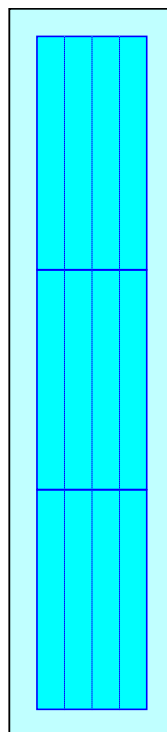
Overall Storage Efficiency = 49.0%

Overall System Size = 26.50' x 6.00' x 1.71'

3 Chambers

10.1 cy Field

8.5 cy Stone



Pond 4P: Cultec C-4 Chambers - Chamber Wizard Field B

Chamber Model = Cultec FD C-4 (Cultec Contactor® Field Drain C-4)

Effective Size= 42.0"W x 8.0"H => 1.67 sf x 8.00'L = 13.3 cf

Overall Size= 48.0"W x 8.5"H x 8.50'L with 0.50' Overlap

Row Length Adjustment= +0.50' x 1.67 sf x 1 rows

6 Chambers/Row x 8.00' Long +0.50' Row Adjustment = 48.50' Row Length +12.0" End Stone x 2 = 50.50' Base Length

1 Rows x 48.0" Wide + 12.0" Side Stone x 2 = 6.00' Base Width

6.0" Stone Base + 8.5" Chamber Height + 6.0" Stone Cover = 1.71' Field Height

6 Chambers x 13.3 cf +0.50' Row Adjustment x 1.67 sf x 1 Rows = 80.8 cf Chamber Storage

517.6 cf Field - 80.8 cf Chambers = 436.8 cf Stone x 40.0% Voids = 174.7 cf Stone Storage

Chamber Storage + Stone Storage = 255.5 cf = 0.006 af

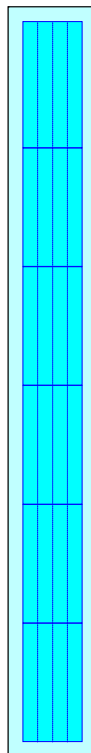
Overall Storage Efficiency = 49.4%

Overall System Size = 50.50' x 6.00' x 1.71'

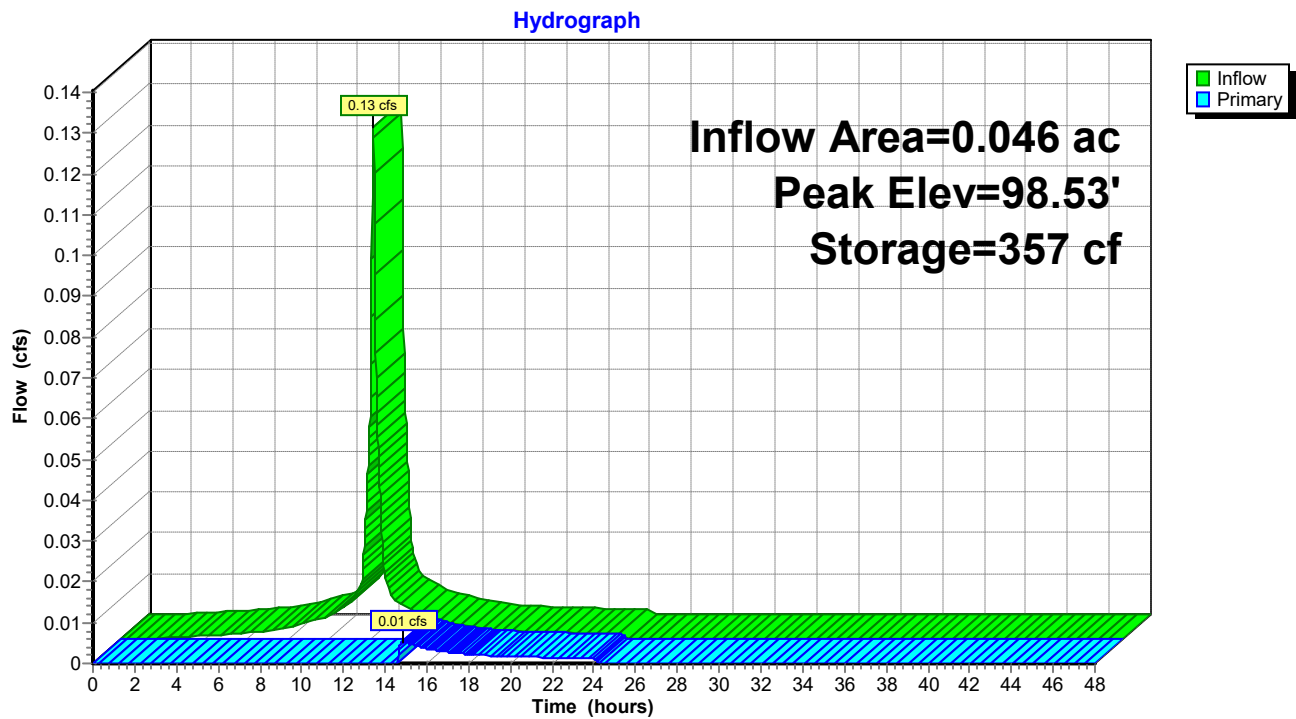
6 Chambers

19.2 cy Field

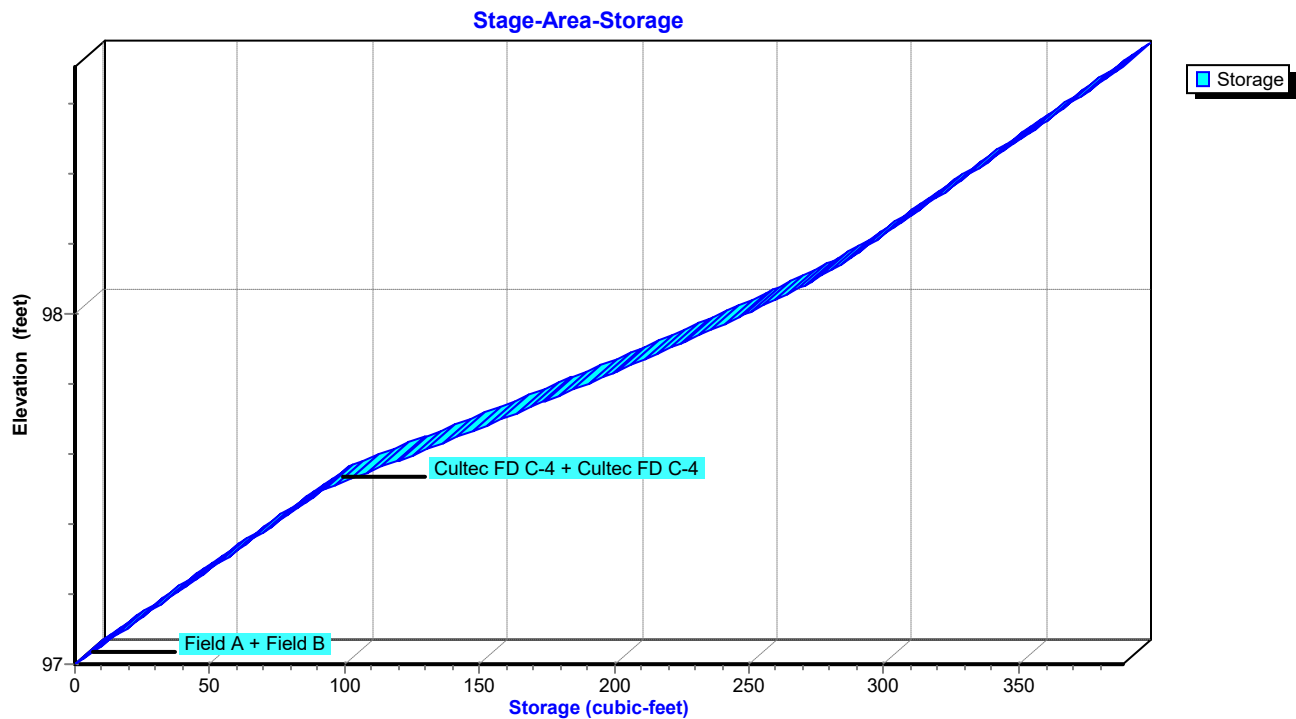
16.2 cy Stone



Pond 4P: Cultec C-4 Chambers



Pond 4P: Cultec C-4 Chambers

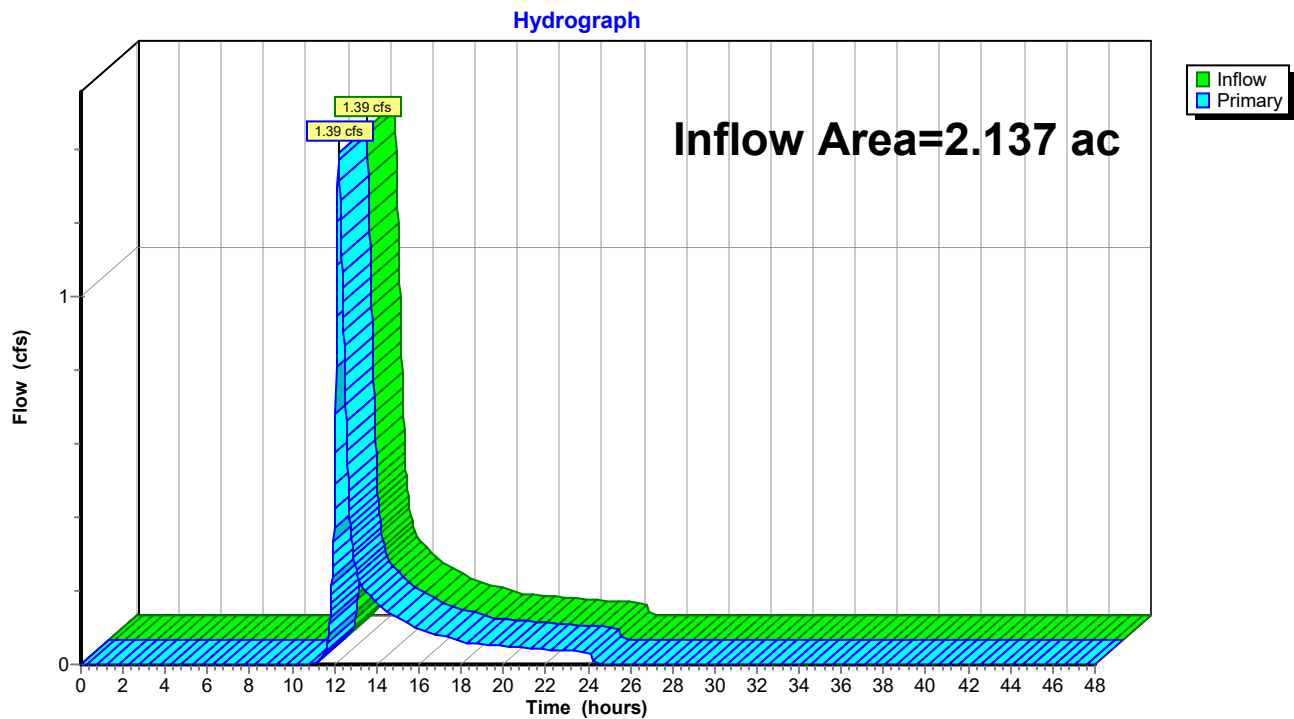


Summary for Link 7L: Design Point

Inflow Area = 2.137 ac, 8.69% Impervious, Inflow Depth = 0.79" for 1-year event
Inflow = 1.39 cfs @ 12.21 hrs, Volume= 0.140 af
Primary = 1.39 cfs @ 12.21 hrs, Volume= 0.140 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

Link 7L: Design Point



Time span=0.00-48.00 hrs, dt=0.02 hrs, 2401 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: XDA-1 to Design Point Runoff Area=93,090 sf 5.19% Impervious Runoff Depth=2.42"
Flow Length=524' Tc=13.7 min CN=74 Runoff=4.71 cfs 0.431 af

Subcatchment 2S: FDA-1 to Design Point Runoff Area=91,085 sf 6.68% Impervious Runoff Depth=2.42"
Flow Length=524' Tc=13.7 min CN=74 Runoff=4.61 cfs 0.422 af

Subcatchment 3S: FDA-2 to Chambers Runoff Area=2,005 sf 100.00% Impervious Runoff Depth=4.83"
Tc=6.0 min CN=98 Runoff=0.23 cfs 0.019 af

Subcatchment 8S: Existing Condition to Runoff Area=93,090 sf 5.19% Impervious Runoff Depth=2.42"
Flow Length=524' Tc=13.7 min CN=74 Runoff=4.71 cfs 0.431 af

Subcatchment 9S: Future Condition Runoff Area=93,090 sf 8.69% Impervious Runoff Depth=2.51"
Flow Length=524' Tc=13.7 min CN=75 Runoff=4.89 cfs 0.446 af

Reach 4R: Reach 1 Lawn Avg. Flow Depth=0.05' Max Vel=0.23 fps Inflow=0.23 cfs 0.010 af
n=0.240 L=76.0' S=0.0829 '/' Capacity=0.49 cfs Outflow=0.14 cfs 0.010 af

Reach 5R: Reach 2 Woods Avg. Flow Depth=0.07' Max Vel=0.10 fps Inflow=0.14 cfs 0.010 af
n=0.400 L=43.0' S=0.0267 '/' Capacity=0.21 cfs Outflow=0.11 cfs 0.010 af

Reach 6R: Reach 3 Intermittent Channel Avg. Flow Depth=0.03' Max Vel=0.82 fps Inflow=0.11 cfs 0.010 af
n=0.040 L=184.0' S=0.0527 '/' Capacity=367.70 cfs Outflow=0.10 cfs 0.010 af

Pond 4P: Cultec C-4 Chambers Peak Elev=98.60' Storage=368 cf Inflow=0.23 cfs 0.019 af
Outflow=0.23 cfs 0.010 af

Link 7L: Design Point Inflow=4.61 cfs 0.432 af
Primary=4.61 cfs 0.432 af

Total Runoff Area = 8.548 ac Runoff Volume = 1.749 af Average Runoff Depth = 2.45"
93.06% Pervious = 7.955 ac 6.94% Impervious = 0.593 ac

Summary for Subcatchment 1S: XDA-1 to Design Point

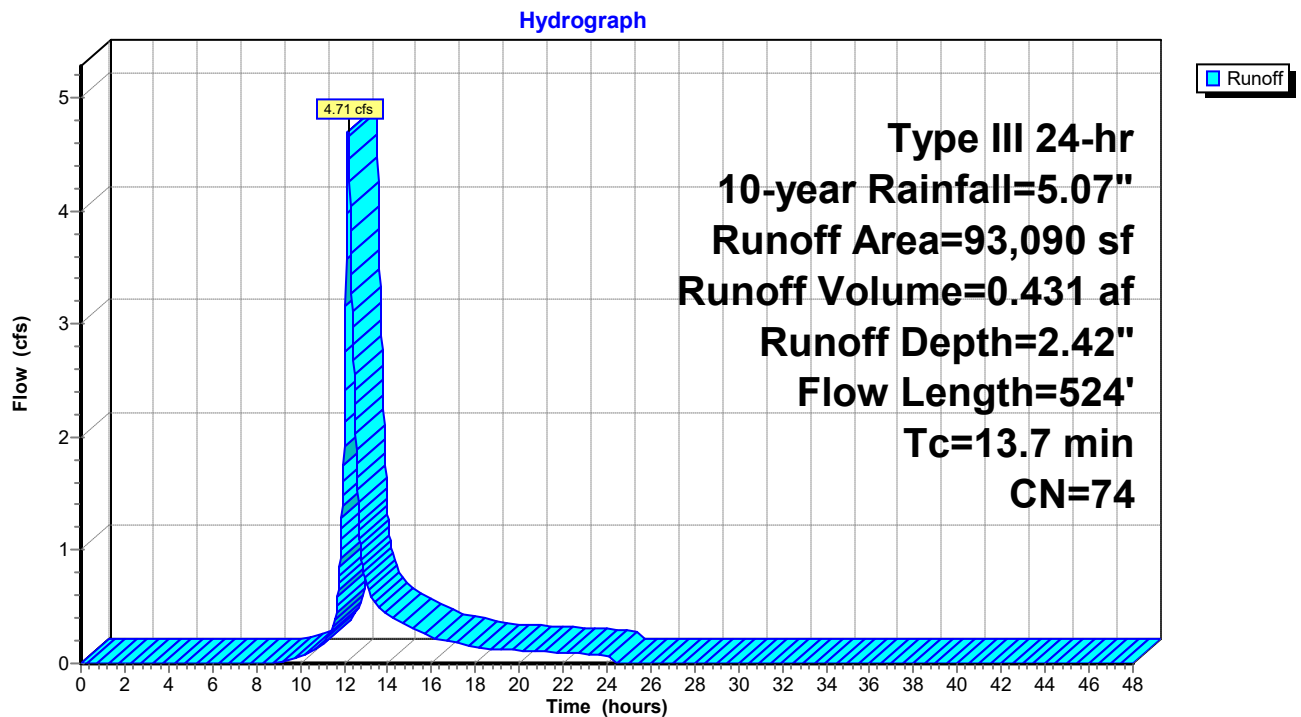
Runoff = 4.71 cfs @ 12.19 hrs, Volume= 0.431 af, Depth= 2.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-year Rainfall=5.07"

	Area (sf)	CN	Description
*	4,830	98	Impervious Surfaces
	53,418	70	Woods, Good, HSG C
	29,951	74	>75% Grass cover, Good, HSG C
*	4,891	96	Gravel surface driveway, HSG C
	93,090	74	Weighted Average
	88,260		94.81% Pervious Area
	4,830		5.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	76	0.1121	0.15		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 3.40"
0.2	11	0.0200	0.91		Sheet Flow, B-C
					Smooth surfaces n= 0.011 P2= 3.40"
0.7	147	0.0500	3.35		Shallow Concentrated Flow, C-D
					Grassed Waterway Kv= 15.0 fps
4.4	290	0.0488	1.10		Shallow Concentrated Flow, D-E
					Woodland Kv= 5.0 fps
13.7	524	Total			

Subcatchment 1S: XDA-1 to Design Point



Summary for Subcatchment 2S: FDA-1 to Design Point

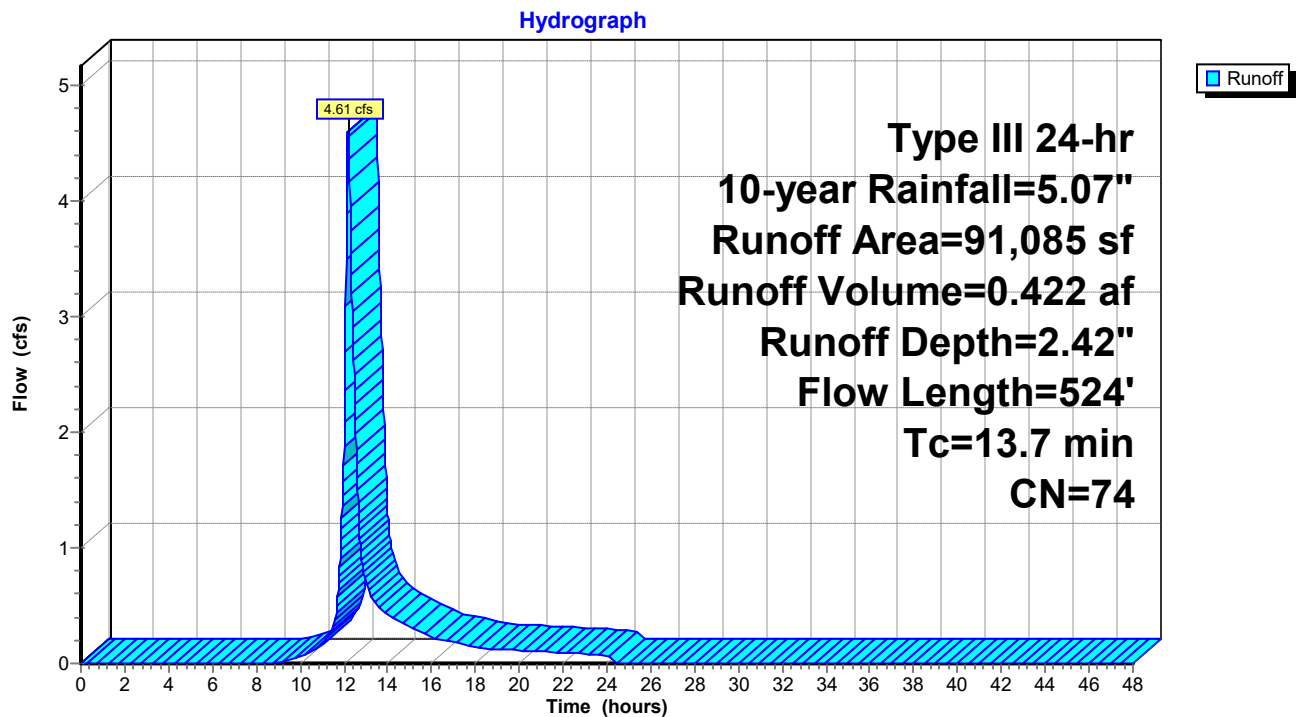
Runoff = 4.61 cfs @ 12.19 hrs, Volume= 0.422 af, Depth= 2.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-year Rainfall=5.07"

	Area (sf)	CN	Description
*	6,086	98	Impervious Surfaces
	53,183	70	Woods, Good, HSG C
	28,603	74	>75% Grass cover, Good, HSG C
*	3,213	96	Gravel surface driveway, HSG C
	91,085	74	Weighted Average
	84,999		93.32% Pervious Area
	6,086		6.68% Impervious Area

	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	8.4	76	0.1121	0.15		Sheet Flow, A-B
						Woods: Light underbrush n= 0.400 P2= 3.40"
	0.2	11	0.0200	0.91		Sheet Flow, B-C
						Smooth surfaces n= 0.011 P2= 3.40"
	0.7	147	0.0500	3.35		Shallow Concentrated Flow, C-D
						Grassed Waterway Kv= 15.0 fps
	4.4	290	0.0488	1.10		Shallow Concentrated Flow, D-E
						Woodland Kv= 5.0 fps
	13.7	524	Total			

Subcatchment 2S: FDA-1 to Design Point



Summary for Subcatchment 3S: FDA-2 to Chambers

Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af, Depth= 4.83"

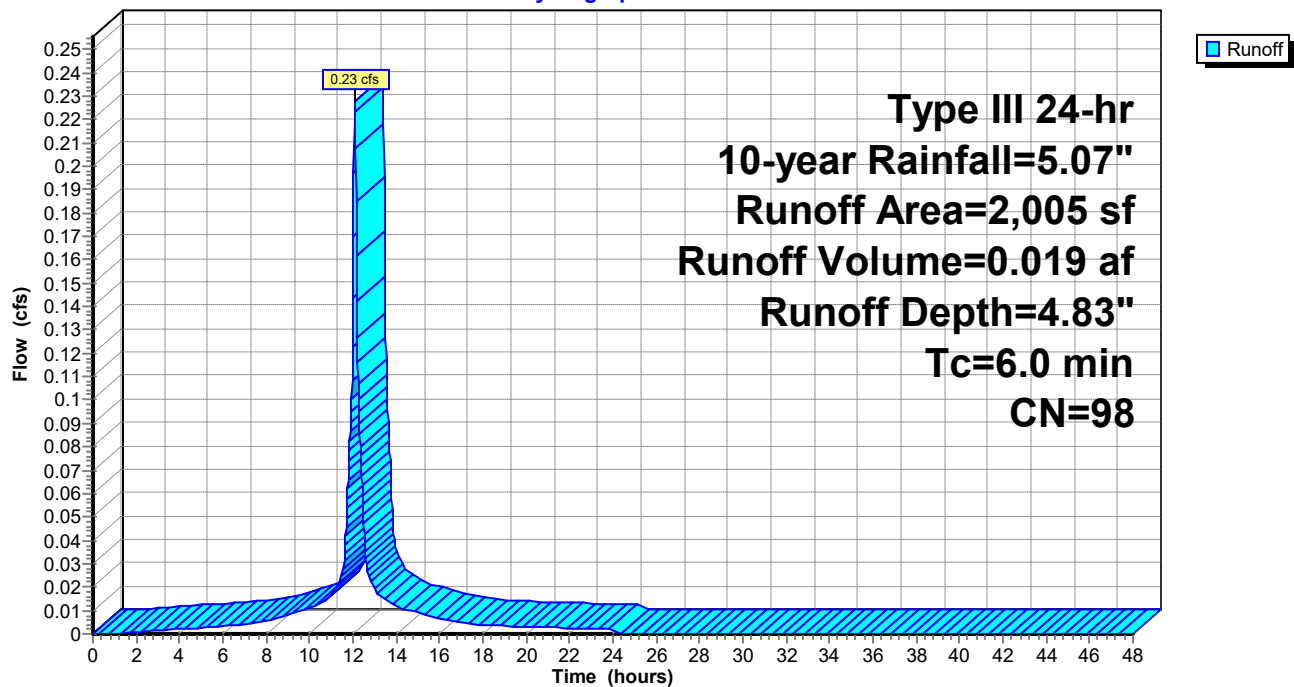
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-year Rainfall=5.07"

Area (sf)	CN	Description
2,005	98	Unconnected pavement, HSG B
2,005		100.00% Impervious Area
2,005		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 3S: FDA-2 to Chambers

Hydrograph



Summary for Subcatchment 8S: Existing Condition to Design Point

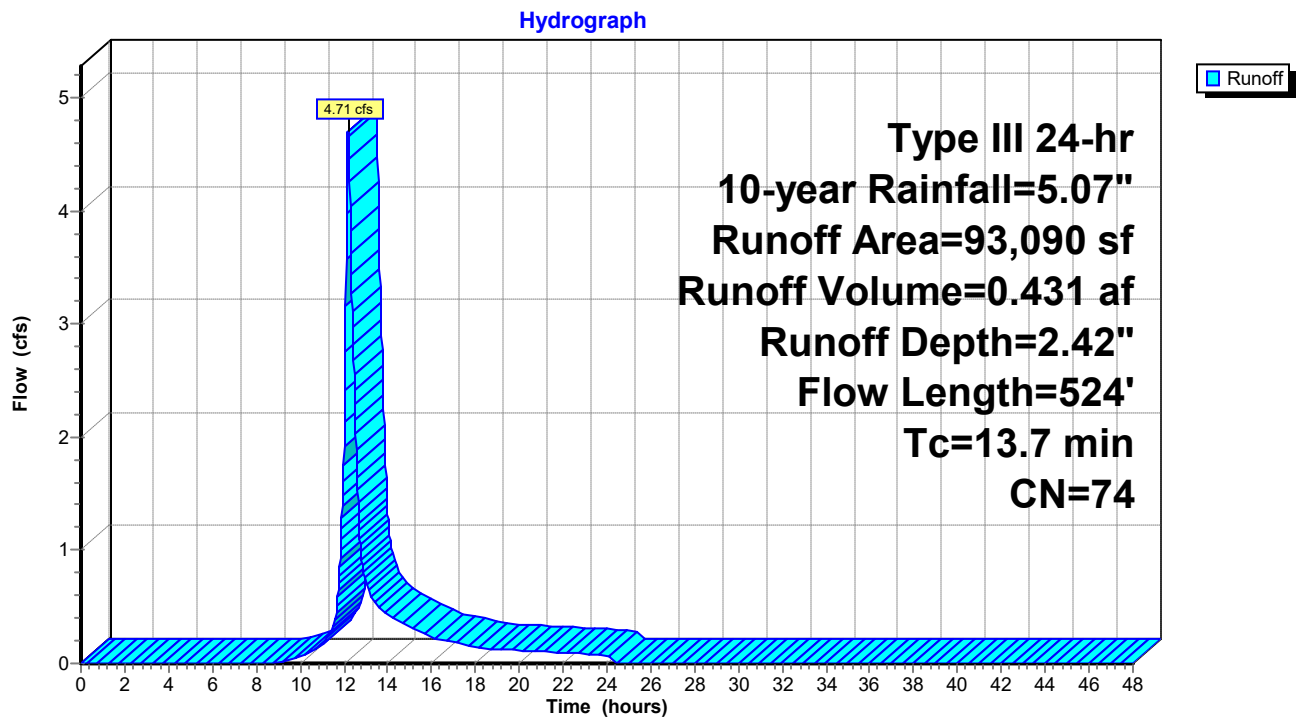
Runoff = 4.71 cfs @ 12.19 hrs, Volume= 0.431 af, Depth= 2.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-year Rainfall=5.07"

	Area (sf)	CN	Description
*	4,830	98	Impervious Surfaces
	53,418	70	Woods, Good, HSG C
	29,951	74	>75% Grass cover, Good, HSG C
*	4,891	96	Gravel surface driveway, HSG C
	93,090	74	Weighted Average
	88,260		94.81% Pervious Area
	4,830		5.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	76	0.1121	0.15		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 3.40"
0.2	11	0.0200	0.91		Sheet Flow, B-C
					Smooth surfaces n= 0.011 P2= 3.40"
0.7	147	0.0500	3.35		Shallow Concentrated Flow, C-D
					Grassed Waterway Kv= 15.0 fps
4.4	290	0.0488	1.10		Shallow Concentrated Flow, D-E
					Woodland Kv= 5.0 fps
13.7	524	Total			

Subcatchment 8S: Existing Condition to Design Point



Summary for Subcatchment 9S: Future Condition Drainage Area to Design Point

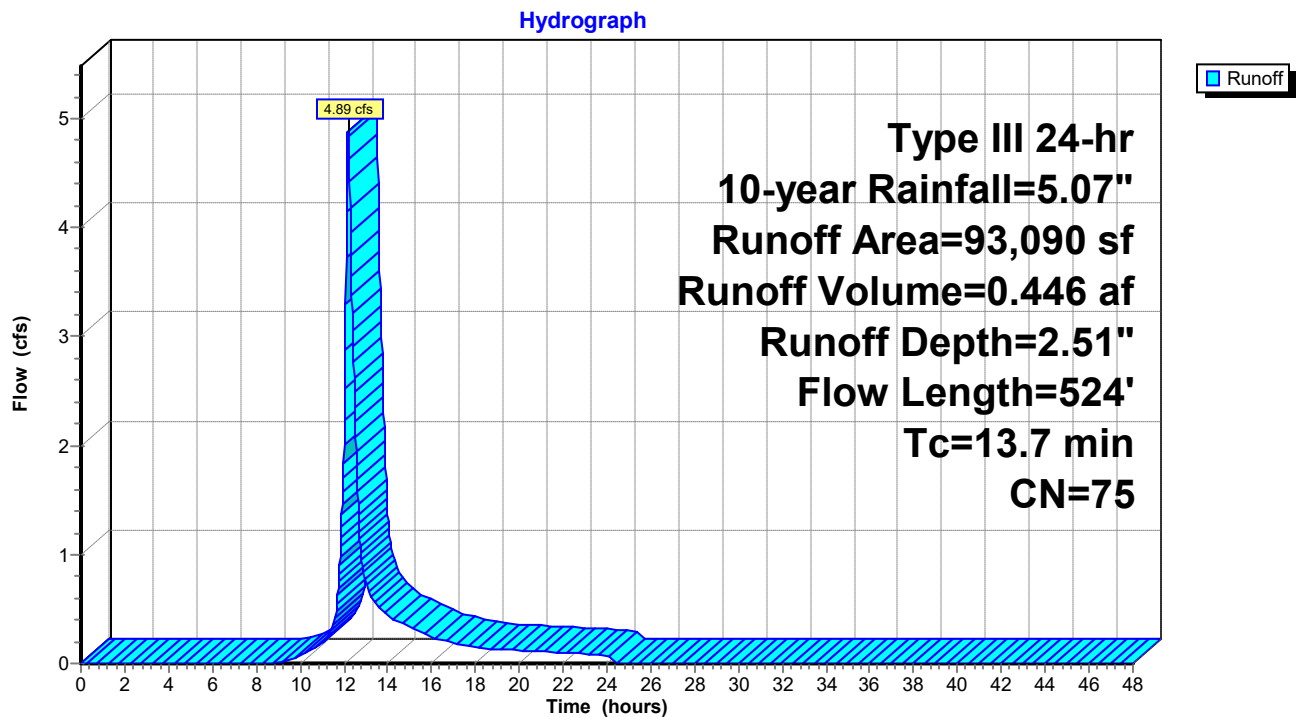
Runoff = 4.89 cfs @ 12.19 hrs, Volume= 0.446 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-year Rainfall=5.07"

	Area (sf)	CN	Description
*	8,091	98	Impervious Surfaces
	53,183	70	Woods, Good, HSG C
	28,603	74	>75% Grass cover, Good, HSG C
*	3,213	96	Gravel surface driveway, HSG C
	93,090	75	Weighted Average
	84,999		91.31% Pervious Area
	8,091		8.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	76	0.1121	0.15		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 3.40"
0.2	11	0.0200	0.91		Sheet Flow, B-C
					Smooth surfaces n= 0.011 P2= 3.40"
0.7	147	0.0500	3.35		Shallow Concentrated Flow, C-D
					Grassed Waterway Kv= 15.0 fps
4.4	290	0.0488	1.10		Shallow Concentrated Flow, D-E
					Woodland Kv= 5.0 fps
13.7	524	Total			

Subcatchment 9S: Future Condition Drainage Area to Design Point



Summary for Reach 4R: Reach 1 Lawn

Inflow Area = 0.046 ac, 100.00% Impervious, Inflow Depth = 2.70" for 10-year event
 Inflow = 0.23 cfs @ 12.10 hrs, Volume= 0.010 af
 Outflow = 0.14 cfs @ 12.29 hrs, Volume= 0.010 af, Atten= 37%, Lag= 10.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

Max. Velocity= 0.23 fps, Min. Travel Time= 5.6 min

Avg. Velocity = 0.05 fps, Avg. Travel Time= 24.4 min

Peak Storage= 48 cf @ 12.19 hrs

Average Depth at Peak Storage= 0.05', Surface Width= 13.95'

Bank-Full Depth= 0.10' Flow Area= 1.4 sf, Capacity= 0.49 cfs

12.00' x 0.10' deep channel, n= 0.240 Sheet flow over Dense Grass

Side Slope Z-value= 20.0 '/' Top Width= 16.00'

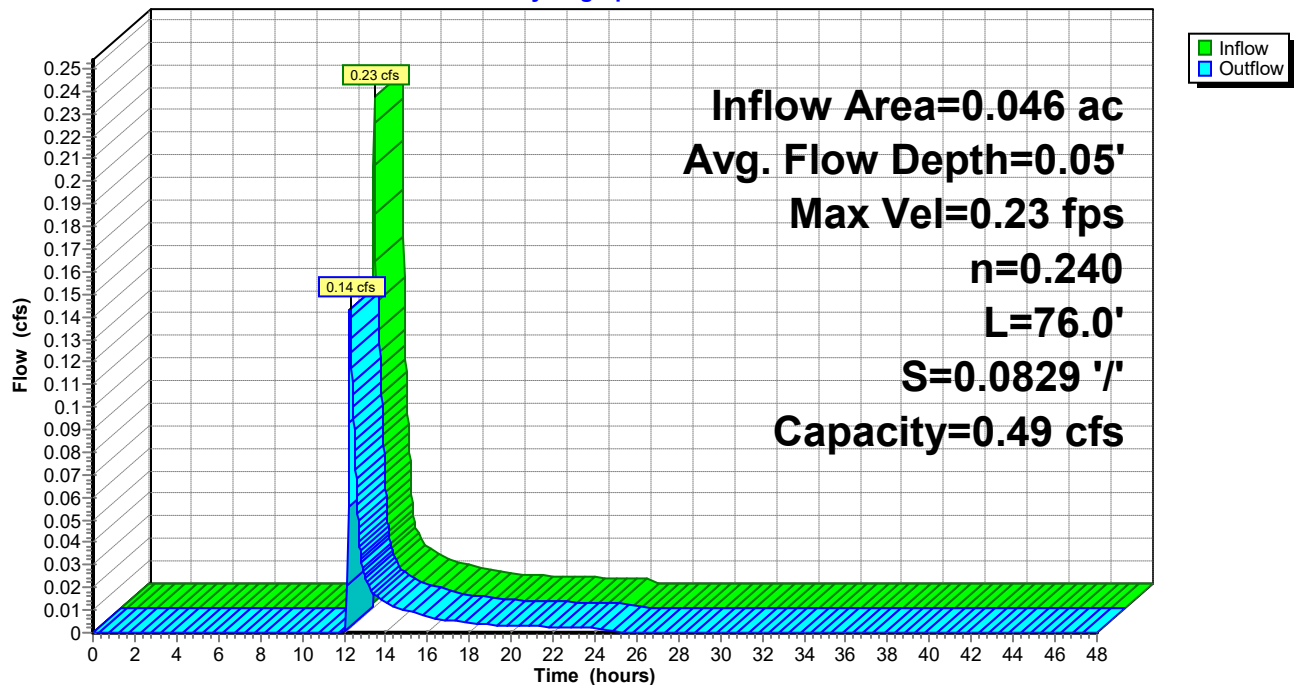
Length= 76.0' Slope= 0.0829 '/'

Inlet Invert= 97.30', Outlet Invert= 91.00'

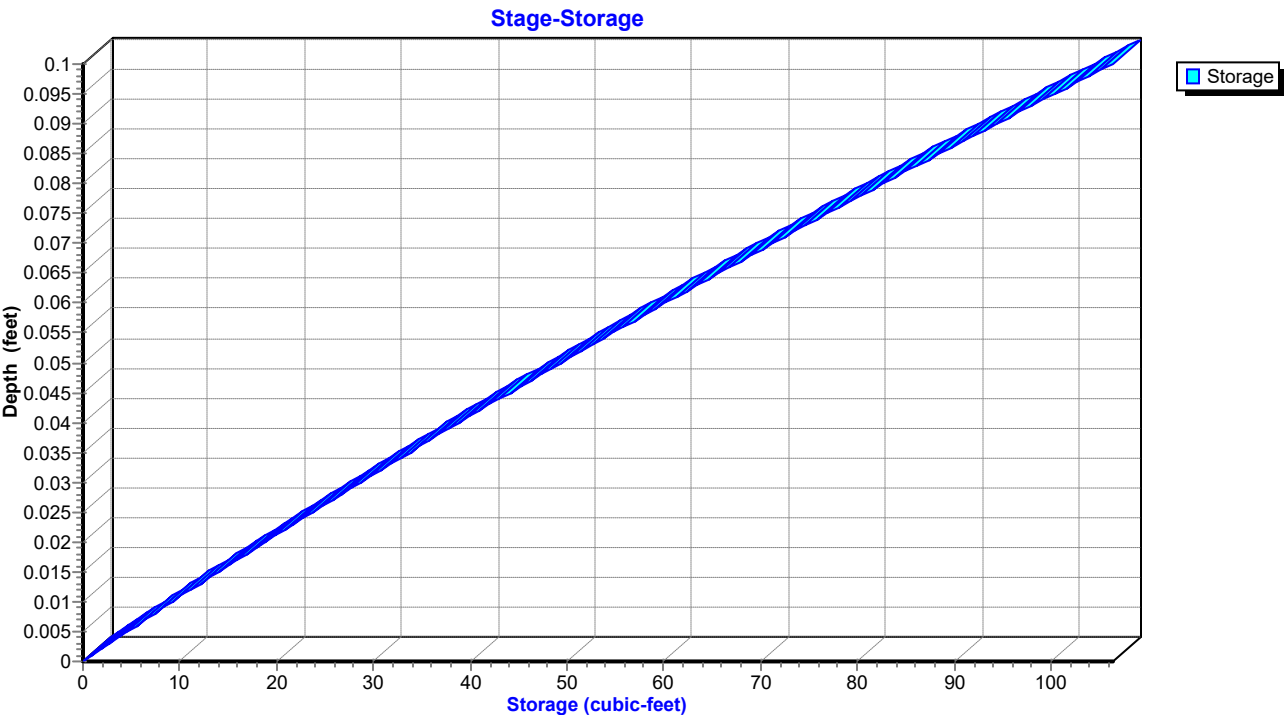


Reach 4R: Reach 1 Lawn

Hydrograph



Reach 4R: Reach 1 Lawn



Summary for Reach 5R: Reach 2 Woods

Inflow Area = 0.046 ac, 100.00% Impervious, Inflow Depth = 2.70" for 10-year event
 Inflow = 0.14 cfs @ 12.29 hrs, Volume= 0.010 af
 Outflow = 0.11 cfs @ 12.54 hrs, Volume= 0.010 af, Atten= 25%, Lag= 15.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

Max. Velocity= 0.10 fps, Min. Travel Time= 7.5 min

Avg. Velocity= 0.02 fps, Avg. Travel Time= 36.6 min

Peak Storage= 48 cf @ 12.41 hrs

Average Depth at Peak Storage= 0.07', Surface Width= 17.73'

Bank-Full Depth= 0.10' Flow Area= 1.7 sf, Capacity= 0.21 cfs

15.00' x 0.10' deep channel, n= 0.400 Sheet flow: Woods+light brush

Side Slope Z-value= 20.0 ' ' Top Width= 19.00'

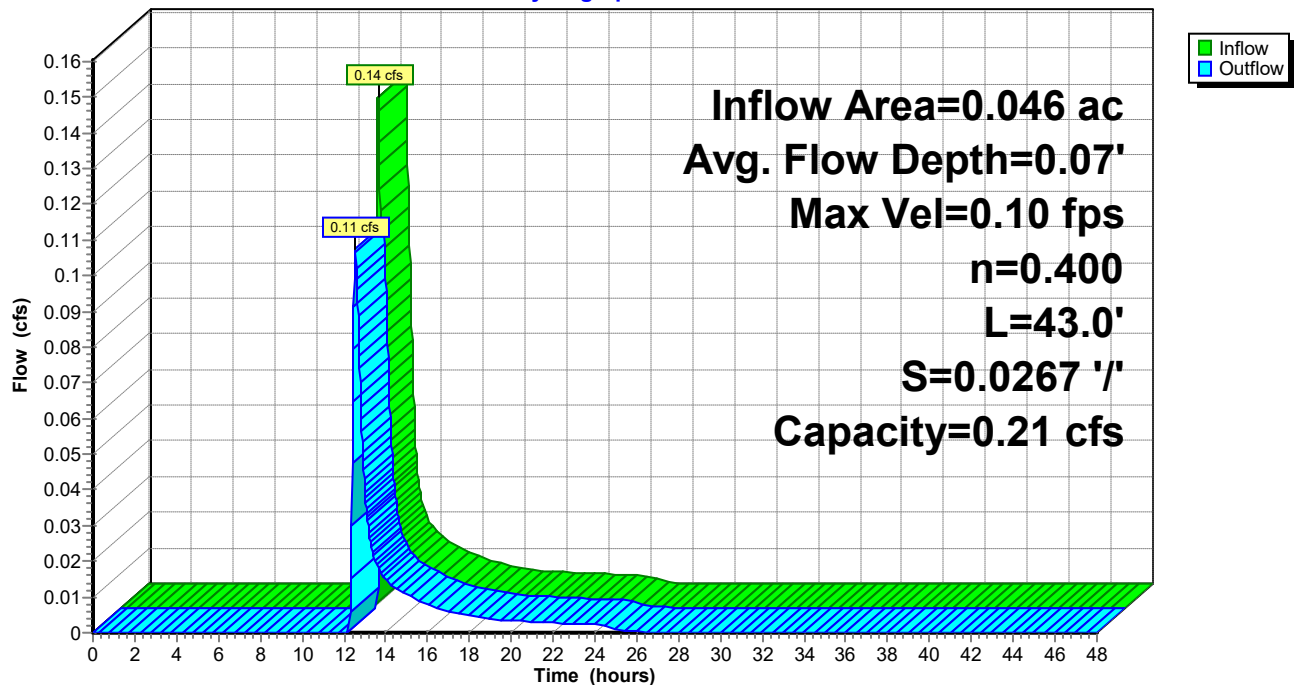
Length= 43.0' Slope= 0.0267 ' '

Inlet Invert= 90.90', Outlet Invert= 89.75'

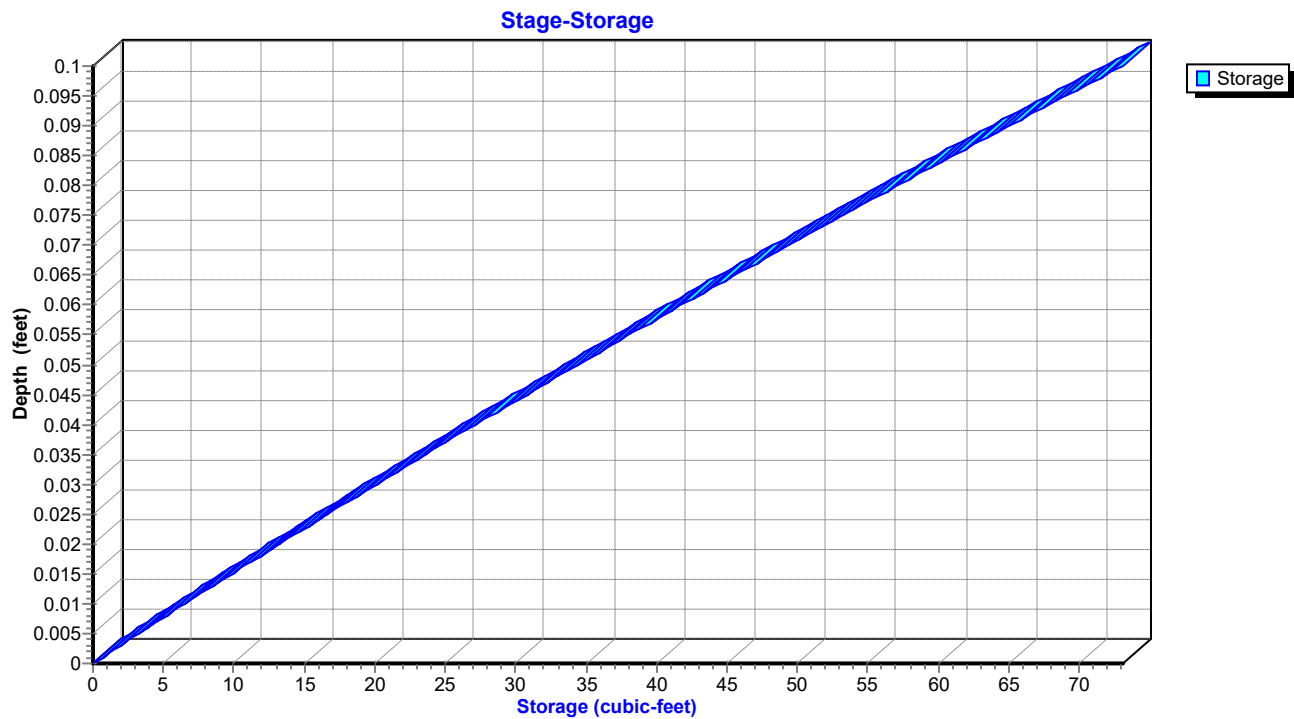


Reach 5R: Reach 2 Woods

Hydrograph



Reach 5R: Reach 2 Woods



Summary for Reach 6R: Reach 3 Intermittent Channel

Inflow Area = 0.046 ac, 100.00% Impervious, Inflow Depth = 2.70" for 10-year event
 Inflow = 0.11 cfs @ 12.54 hrs, Volume= 0.010 af
 Outflow = 0.10 cfs @ 12.68 hrs, Volume= 0.010 af, Atten= 7%, Lag= 8.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

Max. Velocity= 0.82 fps, Min. Travel Time= 3.8 min

Avg. Velocity= 0.81 fps, Avg. Travel Time= 3.8 min

Peak Storage= 23 cf @ 12.62 hrs

Average Depth at Peak Storage= 0.03' , Surface Width= 4.12'

Bank-Full Depth= 3.00' Flow Area= 30.0 sf, Capacity= 367.70 cfs

4.00' x 3.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides

Side Slope Z-value= 2.0 '/' Top Width= 16.00'

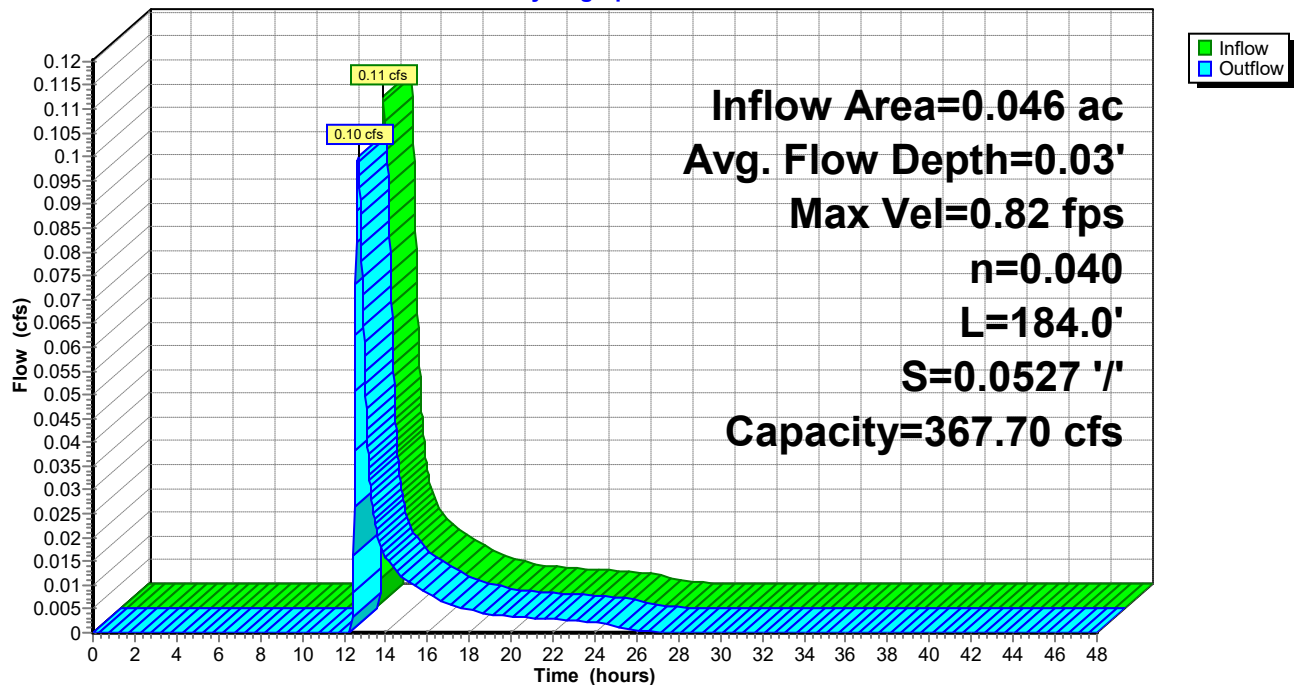
Length= 184.0' Slope= 0.0527 '/'

Inlet Invert= 89.70', Outlet Invert= 80.00'

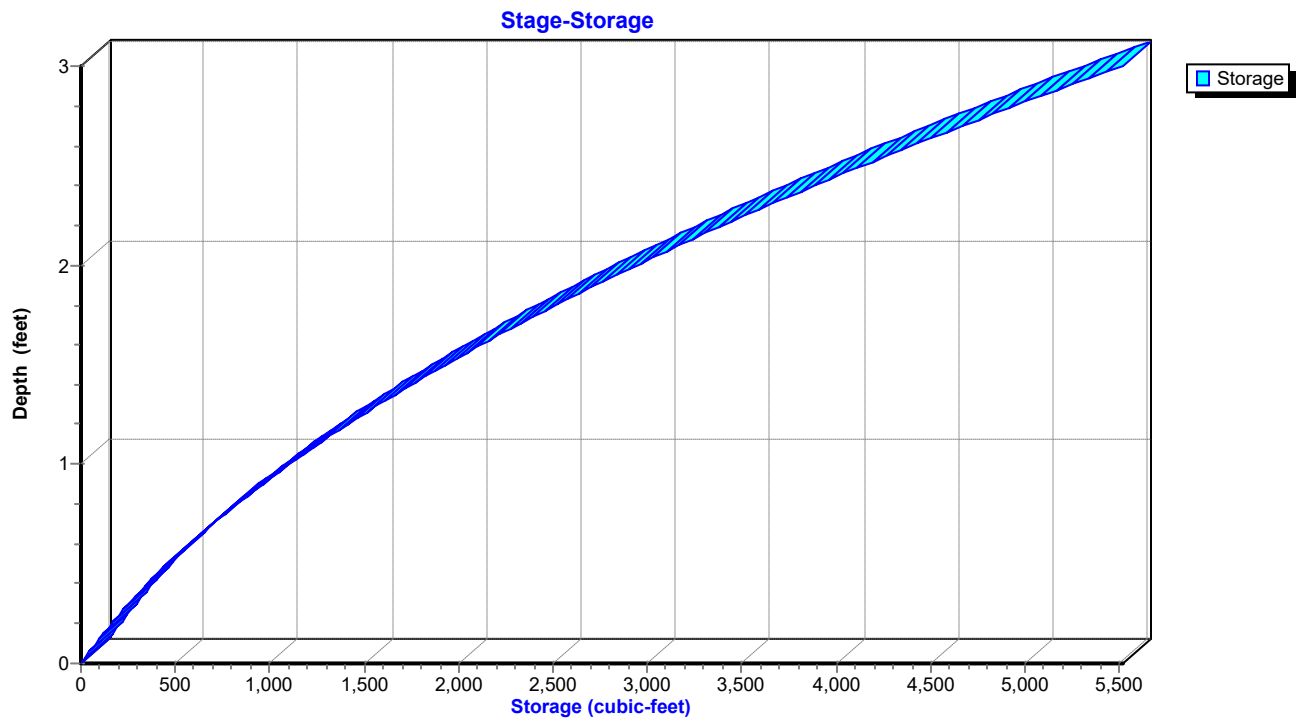


Reach 6R: Reach 3 Intermittent Channel

Hydrograph



Reach 6R: Reach 3 Intermittent Channel



Summary for Pond 4P: Cultec C-4 Chambers

Inflow Area = 0.046 ac, 100.00% Impervious, Inflow Depth = 4.83" for 10-year event
 Inflow = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af
 Outflow = 0.23 cfs @ 12.10 hrs, Volume= 0.010 af, Atten= 1%, Lag= 1.3 min
 Primary = 0.23 cfs @ 12.10 hrs, Volume= 0.010 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
 Peak Elev= 98.60' @ 12.10 hrs Surf.Area= 462 sf Storage= 368 cf

Plug-Flow detention time= 233.2 min calculated for 0.010 af (56% of inflow)
 Center-of-Mass det. time= 115.4 min (863.2 - 747.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	97.00'	92 cf	6.00'W x 26.50'L x 1.71'H Field A 272 cf Overall - 41 cf Embedded = 231 cf x 40.0% Voids
#2A	97.50'	41 cf	Cultec FD C-4 x 3 Inside #1 Effective Size= 42.0"W x 8.0"H => 1.67 sf x 8.00'L = 13.3 cf Overall Size= 48.0"W x 8.5"H x 8.50'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.67 sf x 1 rows
#3B	97.00'	175 cf	6.00'W x 50.50'L x 1.71'H Field B 518 cf Overall - 81 cf Embedded = 437 cf x 40.0% Voids
#4B	97.50'	81 cf	Cultec FD C-4 x 6 Inside #3 Effective Size= 42.0"W x 8.0"H => 1.67 sf x 8.00'L = 13.3 cf Overall Size= 48.0"W x 8.5"H x 8.50'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.67 sf x 1 rows
		389 cf	Total Available Storage

Storage Group A created with Chamber Wizard
 Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	98.53'	12.0" x 12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.22 cfs @ 12.10 hrs HW=98.60' (Free Discharge)
 ↑ **1=Orifice/Grate** (Weir Controls 0.22 cfs @ 0.84 fps)

Pond 4P: Cultec C-4 Chambers - Chamber Wizard Field A

Chamber Model = Cultec FD C-4 (Cultec Contactor® Field Drain C-4)

Effective Size= 42.0"W x 8.0"H => 1.67 sf x 8.00'L = 13.3 cf

Overall Size= 48.0"W x 8.5"H x 8.50'L with 0.50' Overlap

Row Length Adjustment= +0.50' x 1.67 sf x 1 rows

3 Chambers/Row x 8.00' Long +0.50' Row Adjustment = 24.50' Row Length +12.0" End Stone x 2 = 26.50' Base Length

1 Rows x 48.0" Wide + 12.0" Side Stone x 2 = 6.00' Base Width

6.0" Stone Base + 8.5" Chamber Height + 6.0" Stone Cover = 1.71' Field Height

3 Chambers x 13.3 cf +0.50' Row Adjustment x 1.67 sf x 1 Rows = 40.8 cf Chamber Storage

271.6 cf Field - 40.8 cf Chambers = 230.8 cf Stone x 40.0% Voids = 92.3 cf Stone Storage

Chamber Storage + Stone Storage = 133.1 cf = 0.003 af

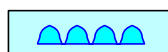
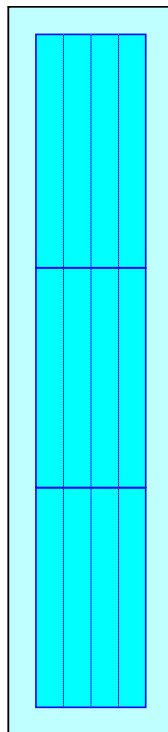
Overall Storage Efficiency = 49.0%

Overall System Size = 26.50' x 6.00' x 1.71'

3 Chambers

10.1 cy Field

8.5 cy Stone



Pond 4P: Cultec C-4 Chambers - Chamber Wizard Field B

Chamber Model = Cultec FD C-4 (Cultec Contactor® Field Drain C-4)

Effective Size= 42.0"W x 8.0"H => 1.67 sf x 8.00'L = 13.3 cf

Overall Size= 48.0"W x 8.5"H x 8.50'L with 0.50' Overlap

Row Length Adjustment= +0.50' x 1.67 sf x 1 rows

6 Chambers/Row x 8.00' Long +0.50' Row Adjustment = 48.50' Row Length +12.0" End Stone x 2 = 50.50' Base Length

1 Rows x 48.0" Wide + 12.0" Side Stone x 2 = 6.00' Base Width

6.0" Stone Base + 8.5" Chamber Height + 6.0" Stone Cover = 1.71' Field Height

6 Chambers x 13.3 cf +0.50' Row Adjustment x 1.67 sf x 1 Rows = 80.8 cf Chamber Storage

517.6 cf Field - 80.8 cf Chambers = 436.8 cf Stone x 40.0% Voids = 174.7 cf Stone Storage

Chamber Storage + Stone Storage = 255.5 cf = 0.006 af

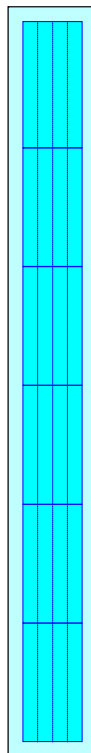
Overall Storage Efficiency = 49.4%

Overall System Size = 50.50' x 6.00' x 1.71'

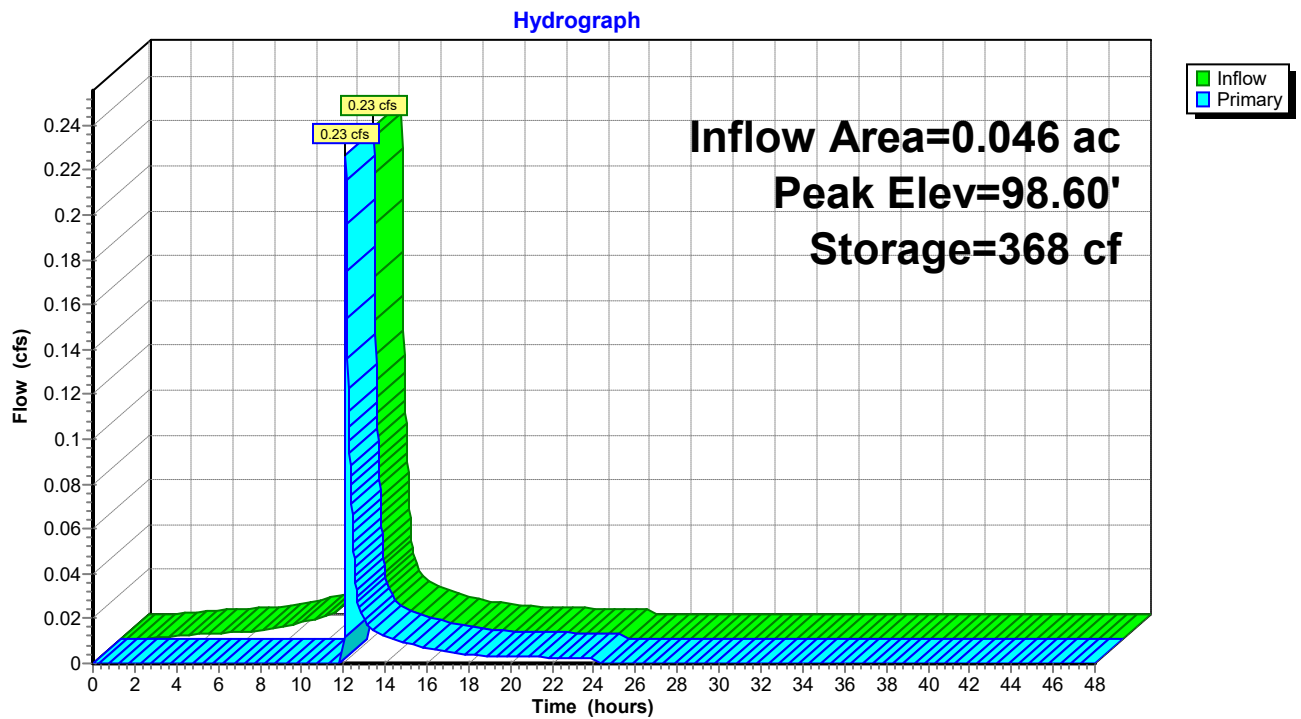
6 Chambers

19.2 cy Field

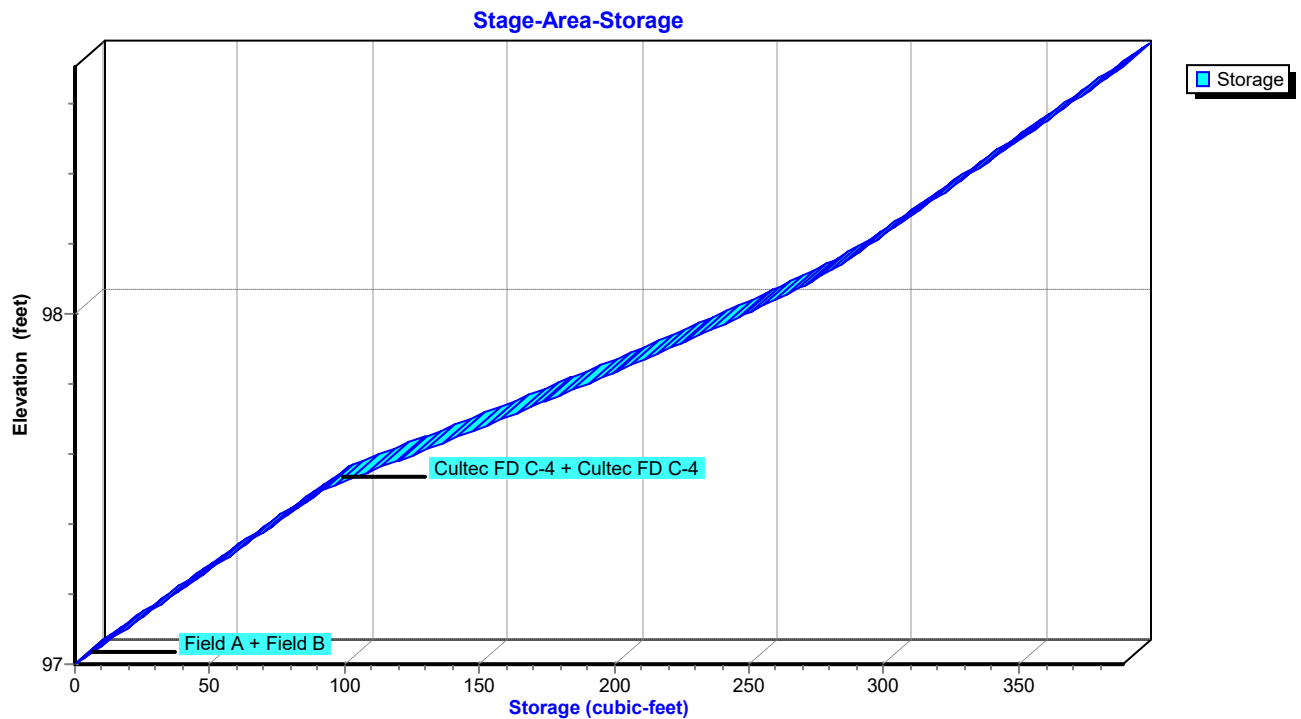
16.2 cy Stone



Pond 4P: Cultec C-4 Chambers



Pond 4P: Cultec C-4 Chambers

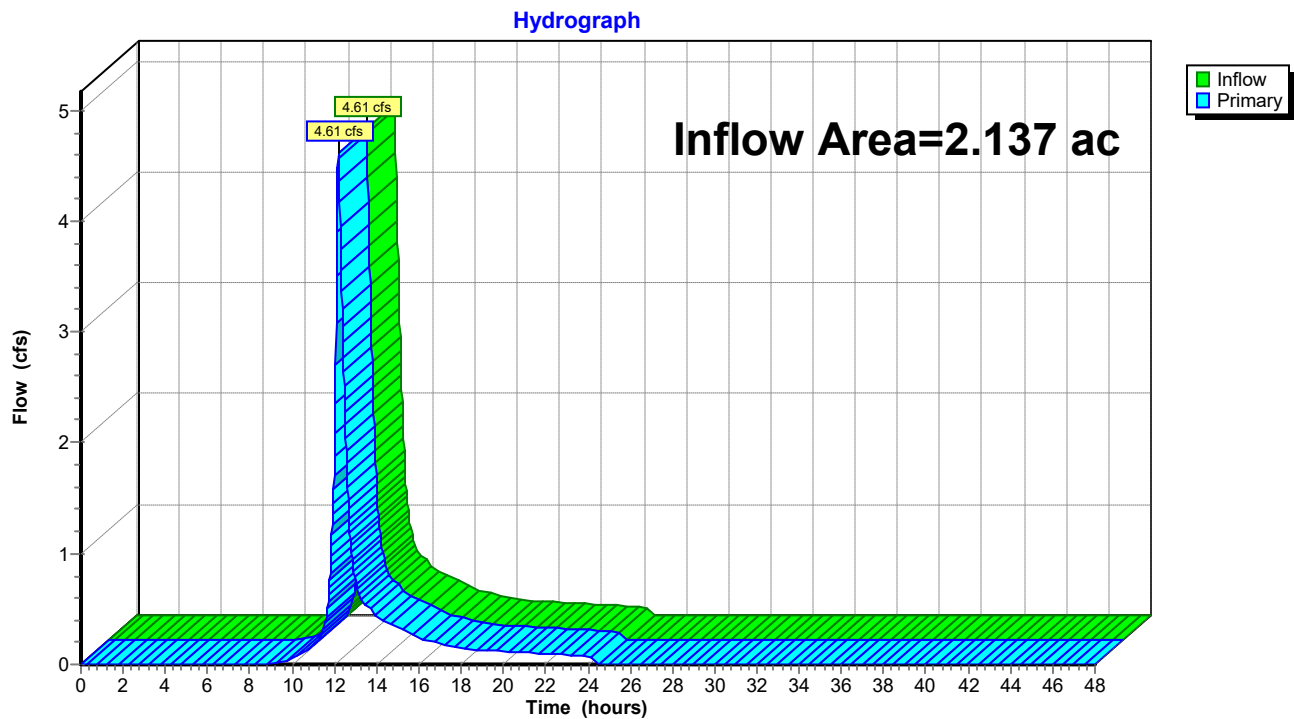


Summary for Link 7L: Design Point

Inflow Area = 2.137 ac, 8.69% Impervious, Inflow Depth = 2.43" for 10-year event
Inflow = 4.61 cfs @ 12.19 hrs, Volume= 0.432 af
Primary = 4.61 cfs @ 12.19 hrs, Volume= 0.432 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

Link 7L: Design Point



Time span=0.00-48.00 hrs, dt=0.02 hrs, 2401 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: XDA-1 to Design Point Runoff Area=93,090 sf 5.19% Impervious Runoff Depth=3.50"
Flow Length=524' Tc=13.7 min CN=74 Runoff=6.86 cfs 0.623 af

Subcatchment 2S: FDA-1 to Design Point Runoff Area=91,085 sf 6.68% Impervious Runoff Depth=3.50"
Flow Length=524' Tc=13.7 min CN=74 Runoff=6.71 cfs 0.610 af

Subcatchment 3S: FDA-2 to Chambers Runoff Area=2,005 sf 100.00% Impervious Runoff Depth=6.13"
Tc=6.0 min CN=98 Runoff=0.29 cfs 0.024 af

Subcatchment 8S: Existing Condition to Runoff Area=93,090 sf 5.19% Impervious Runoff Depth=3.50"
Flow Length=524' Tc=13.7 min CN=74 Runoff=6.86 cfs 0.623 af

Subcatchment 9S: Future Condition Runoff Area=93,090 sf 8.69% Impervious Runoff Depth=3.60"
Flow Length=524' Tc=13.7 min CN=75 Runoff=7.06 cfs 0.641 af

Reach 4R: Reach 1 Lawn Avg. Flow Depth=0.07' Max Vel=0.28 fps Inflow=0.28 cfs 0.015 af
n=0.240 L=76.0' S=0.0829 '/' Capacity=0.49 cfs Outflow=0.25 cfs 0.015 af

Reach 5R: Reach 2 Woods Avg. Flow Depth=0.10' Max Vel=0.12 fps Inflow=0.25 cfs 0.015 af
n=0.400 L=43.0' S=0.0267 '/' Capacity=0.21 cfs Outflow=0.21 cfs 0.015 af

Reach 6R: Reach 3 Intermittent Channel Avg. Flow Depth=0.04' Max Vel=1.11 fps Inflow=0.21 cfs 0.015 af
n=0.040 L=184.0' S=0.0527 '/' Capacity=367.70 cfs Outflow=0.20 cfs 0.015 af

Pond 4P: Cultec C-4 Chambers Peak Elev=98.61' Storage=370 cf Inflow=0.29 cfs 0.024 af
Outflow=0.28 cfs 0.015 af

Link 7L: Design Point Inflow=6.71 cfs 0.625 af
Primary=6.71 cfs 0.625 af

Total Runoff Area = 8.548 ac Runoff Volume = 2.520 af Average Runoff Depth = 3.54"
93.06% Pervious = 7.955 ac 6.94% Impervious = 0.593 ac

Summary for Subcatchment 1S: XDA-1 to Design Point

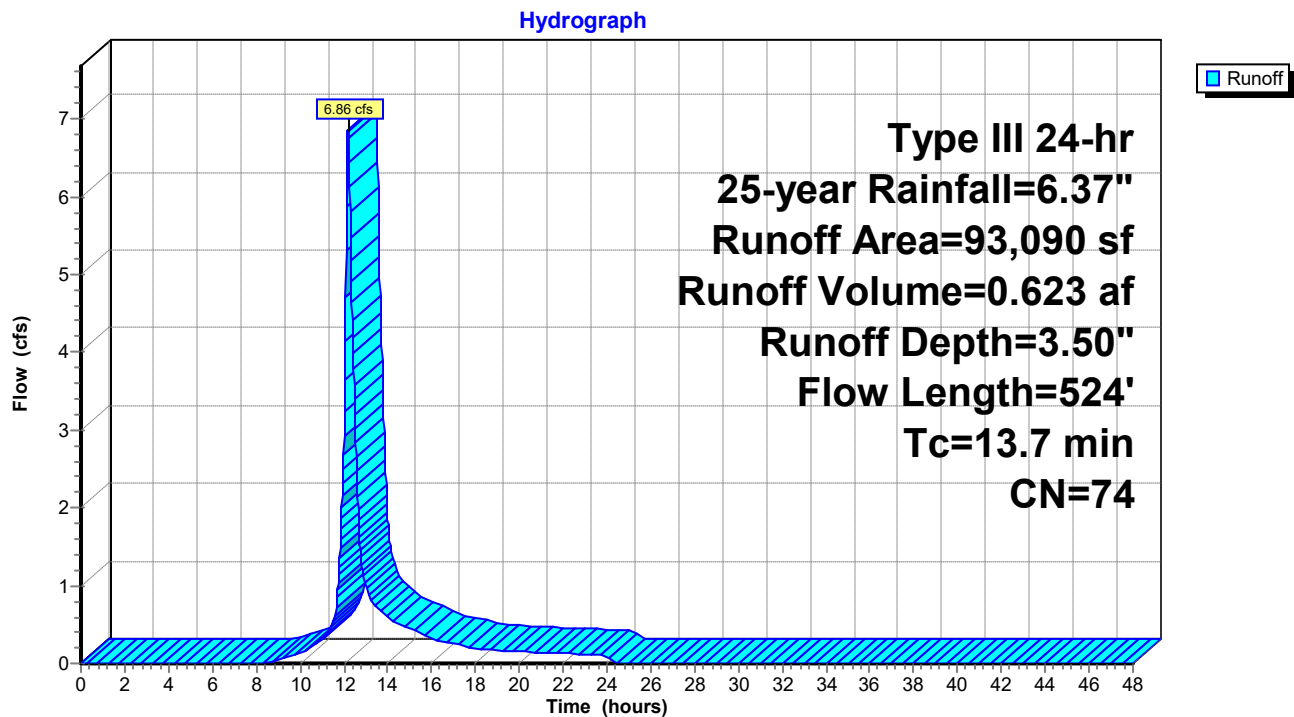
Runoff = 6.86 cfs @ 12.19 hrs, Volume= 0.623 af, Depth= 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-year Rainfall=6.37"

	Area (sf)	CN	Description
*	4,830	98	Impervious Surfaces
	53,418	70	Woods, Good, HSG C
	29,951	74	>75% Grass cover, Good, HSG C
*	4,891	96	Gravel surface driveway, HSG C
	93,090	74	Weighted Average
	88,260		94.81% Pervious Area
	4,830		5.19% Impervious Area

	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	8.4	76	0.1121	0.15		Sheet Flow, A-B
						Woods: Light underbrush n= 0.400 P2= 3.40"
	0.2	11	0.0200	0.91		Sheet Flow, B-C
						Smooth surfaces n= 0.011 P2= 3.40"
	0.7	147	0.0500	3.35		Shallow Concentrated Flow, C-D
						Grassed Waterway Kv= 15.0 fps
	4.4	290	0.0488	1.10		Shallow Concentrated Flow, D-E
						Woodland Kv= 5.0 fps
	13.7	524	Total			

Subcatchment 1S: XDA-1 to Design Point



Summary for Subcatchment 2S: FDA-1 to Design Point

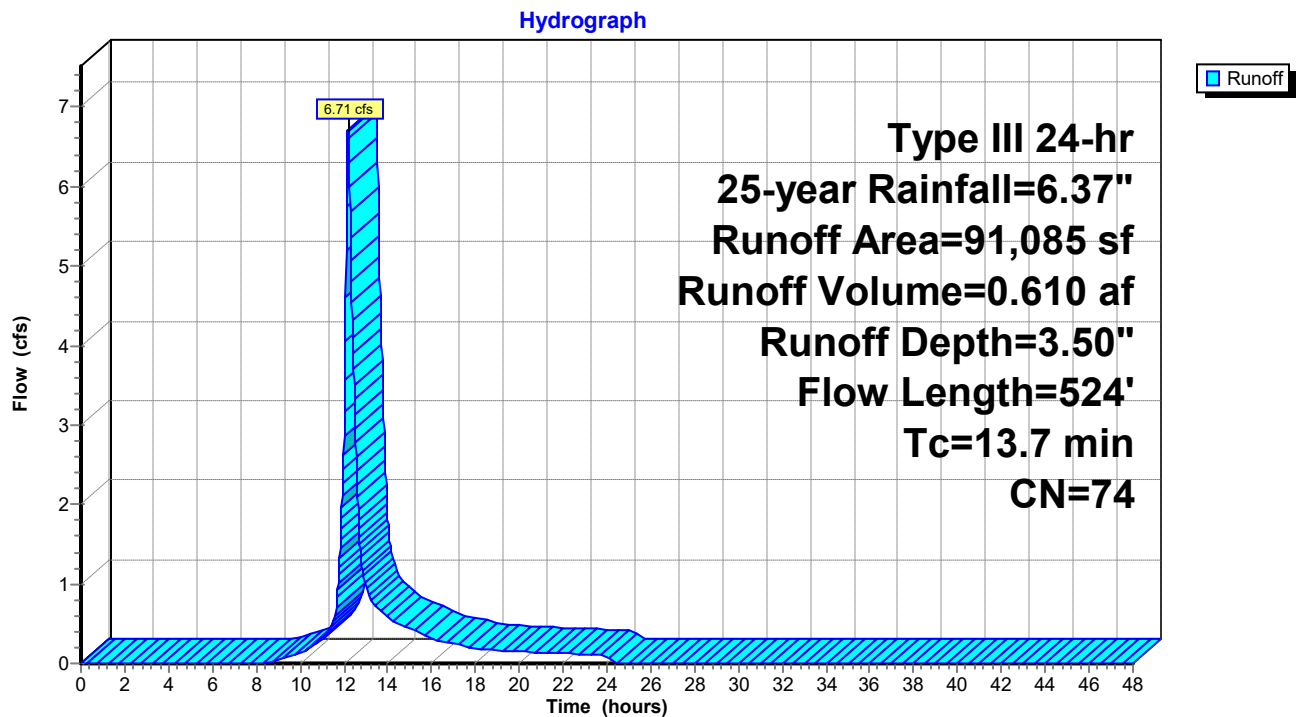
Runoff = 6.71 cfs @ 12.19 hrs, Volume= 0.610 af, Depth= 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-year Rainfall=6.37"

	Area (sf)	CN	Description
*	6,086	98	Impervious Surfaces
	53,183	70	Woods, Good, HSG C
	28,603	74	>75% Grass cover, Good, HSG C
*	3,213	96	Gravel surface driveway, HSG C
	91,085	74	Weighted Average
	84,999		93.32% Pervious Area
	6,086		6.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	76	0.1121	0.15		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 3.40"
0.2	11	0.0200	0.91		Sheet Flow, B-C
					Smooth surfaces n= 0.011 P2= 3.40"
0.7	147	0.0500	3.35		Shallow Concentrated Flow, C-D
					Grassed Waterway Kv= 15.0 fps
4.4	290	0.0488	1.10		Shallow Concentrated Flow, D-E
					Woodland Kv= 5.0 fps
13.7	524	Total			

Subcatchment 2S: FDA-1 to Design Point



Summary for Subcatchment 3S: FDA-2 to Chambers

Runoff = 0.29 cfs @ 12.08 hrs, Volume= 0.024 af, Depth= 6.13"

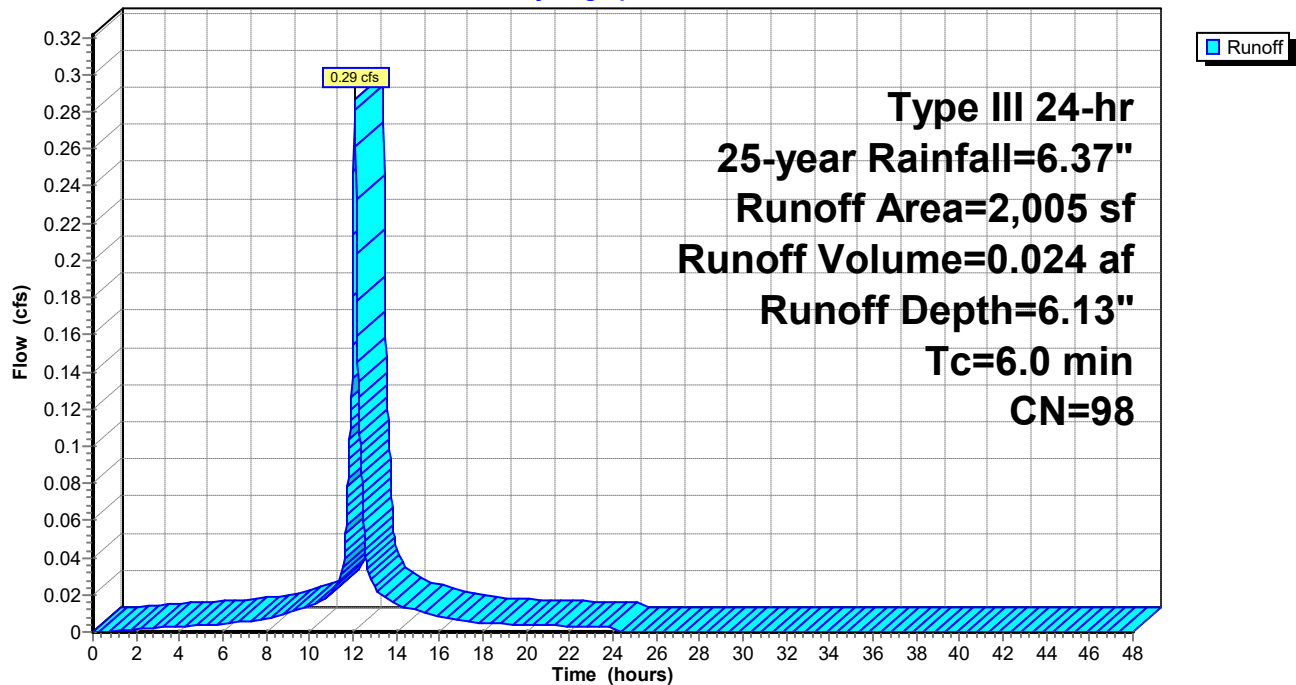
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-year Rainfall=6.37"

Area (sf)	CN	Description
2,005	98	Unconnected pavement, HSG B
2,005		100.00% Impervious Area
2,005		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 3S: FDA-2 to Chambers

Hydrograph



Summary for Subcatchment 8S: Existing Condition to Design Point

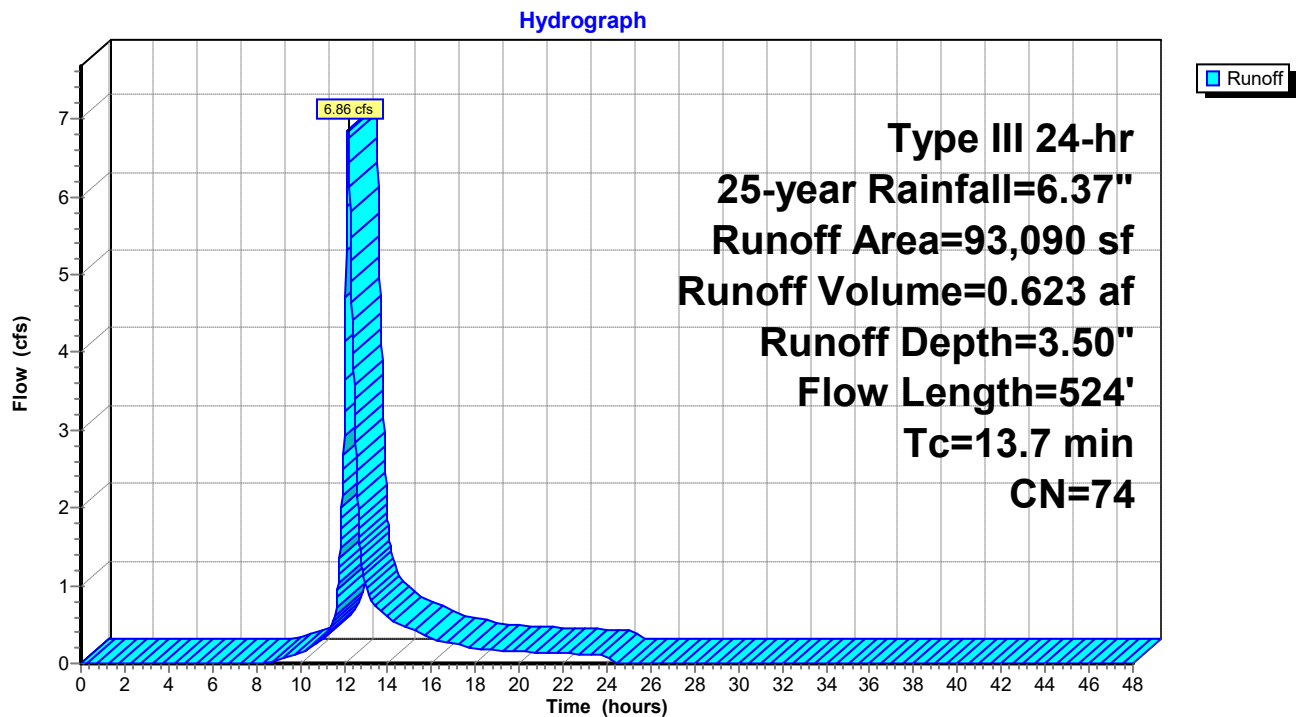
Runoff = 6.86 cfs @ 12.19 hrs, Volume= 0.623 af, Depth= 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-year Rainfall=6.37"

	Area (sf)	CN	Description
*	4,830	98	Impervious Surfaces
	53,418	70	Woods, Good, HSG C
	29,951	74	>75% Grass cover, Good, HSG C
*	4,891	96	Gravel surface driveway, HSG C
	93,090	74	Weighted Average
	88,260		94.81% Pervious Area
	4,830		5.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	76	0.1121	0.15		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 3.40"
0.2	11	0.0200	0.91		Sheet Flow, B-C
					Smooth surfaces n= 0.011 P2= 3.40"
0.7	147	0.0500	3.35		Shallow Concentrated Flow, C-D
					Grassed Waterway Kv= 15.0 fps
4.4	290	0.0488	1.10		Shallow Concentrated Flow, D-E
					Woodland Kv= 5.0 fps
13.7	524	Total			

Subcatchment 8S: Existing Condition to Design Point



Summary for Subcatchment 9S: Future Condition Drainage Area to Design Point

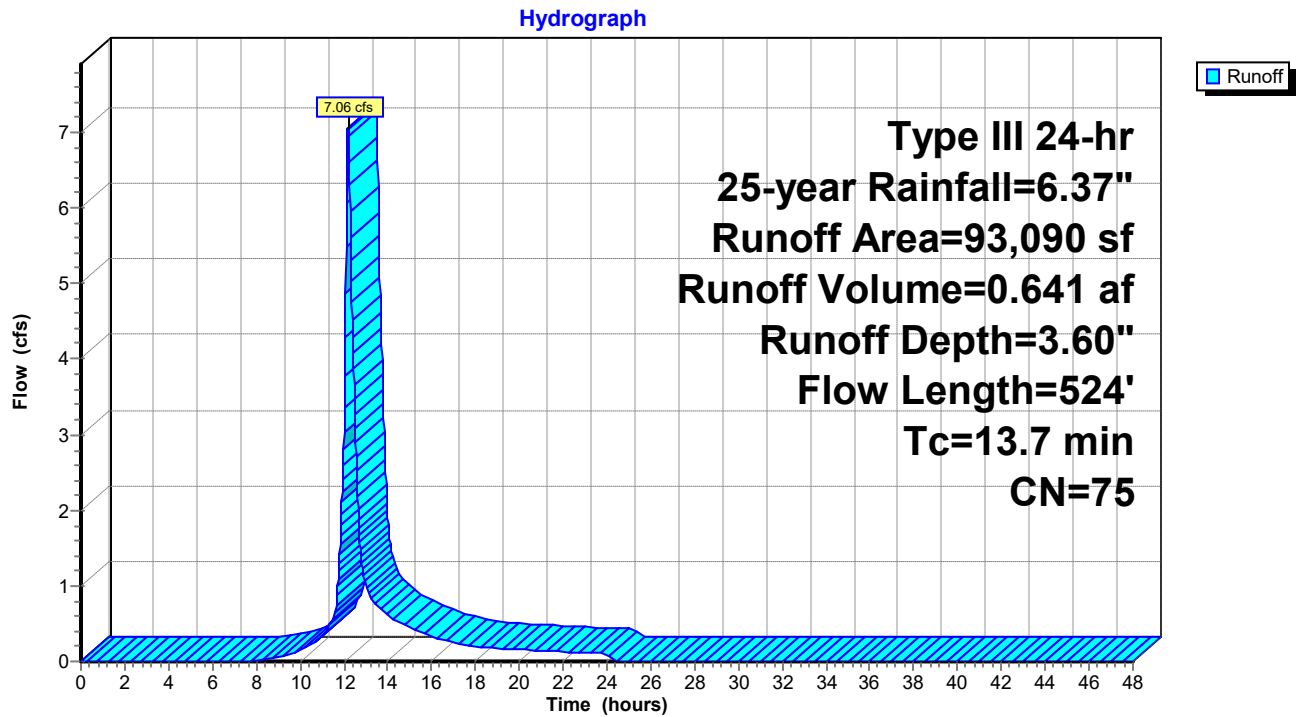
Runoff = 7.06 cfs @ 12.19 hrs, Volume= 0.641 af, Depth= 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-year Rainfall=6.37"

	Area (sf)	CN	Description
*	8,091	98	Impervious Surfaces
	53,183	70	Woods, Good, HSG C
	28,603	74	>75% Grass cover, Good, HSG C
*	3,213	96	Gravel surface driveway, HSG C
	93,090	75	Weighted Average
	84,999		91.31% Pervious Area
	8,091		8.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	76	0.1121	0.15		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 3.40"
0.2	11	0.0200	0.91		Sheet Flow, B-C
					Smooth surfaces n= 0.011 P2= 3.40"
0.7	147	0.0500	3.35		Shallow Concentrated Flow, C-D
					Grassed Waterway Kv= 15.0 fps
4.4	290	0.0488	1.10		Shallow Concentrated Flow, D-E
					Woodland Kv= 5.0 fps
13.7	524	Total			

Subcatchment 9S: Future Condition Drainage Area to Design Point



Summary for Reach 4R: Reach 1 Lawn

Inflow Area = 0.046 ac, 100.00% Impervious, Inflow Depth = 4.00" for 25-year event
 Inflow = 0.28 cfs @ 12.09 hrs, Volume= 0.015 af
 Outflow = 0.25 cfs @ 12.22 hrs, Volume= 0.015 af, Atten= 13%, Lag= 7.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

Max. Velocity= 0.28 fps, Min. Travel Time= 4.6 min

Avg. Velocity= 0.06 fps, Avg. Travel Time= 22.0 min

Peak Storage= 68 cf @ 12.14 hrs

Average Depth at Peak Storage= 0.07', Surface Width= 14.70'

Bank-Full Depth= 0.10' Flow Area= 1.4 sf, Capacity= 0.49 cfs

12.00' x 0.10' deep channel, n= 0.240 Sheet flow over Dense Grass

Side Slope Z-value= 20.0 ' ' Top Width= 16.00'

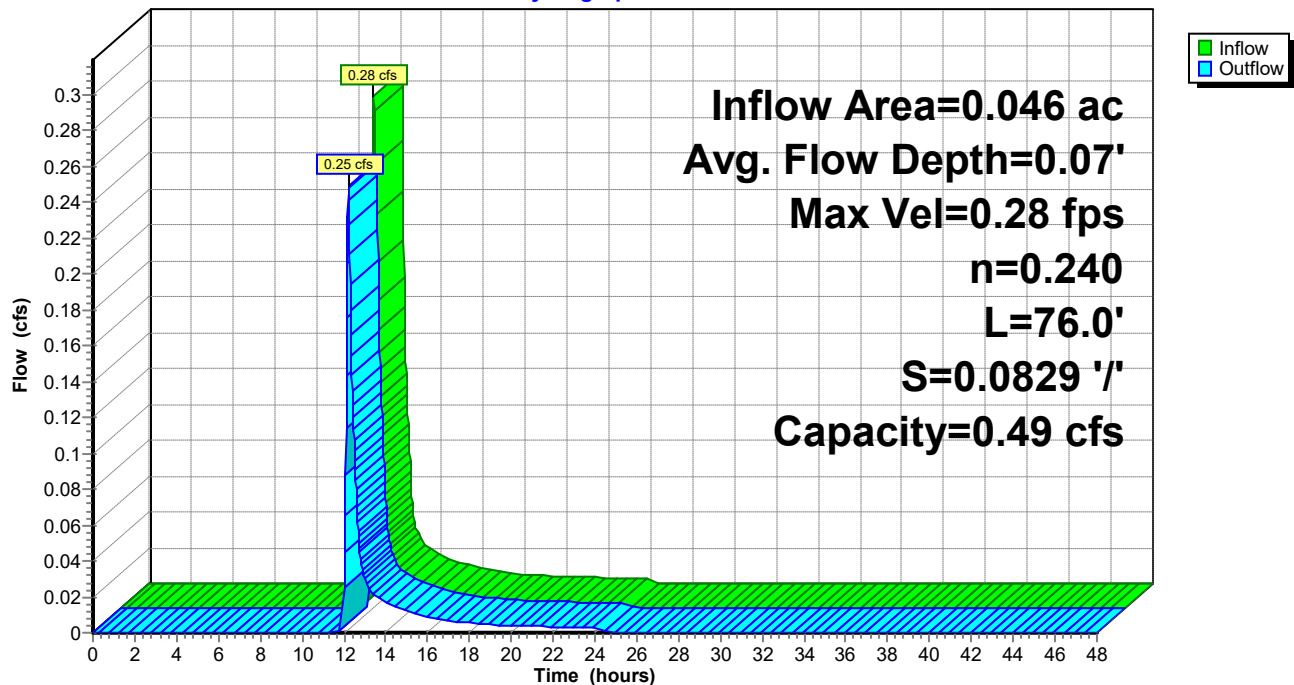
Length= 76.0' Slope= 0.0829 ' '

Inlet Invert= 97.30', Outlet Invert= 91.00'

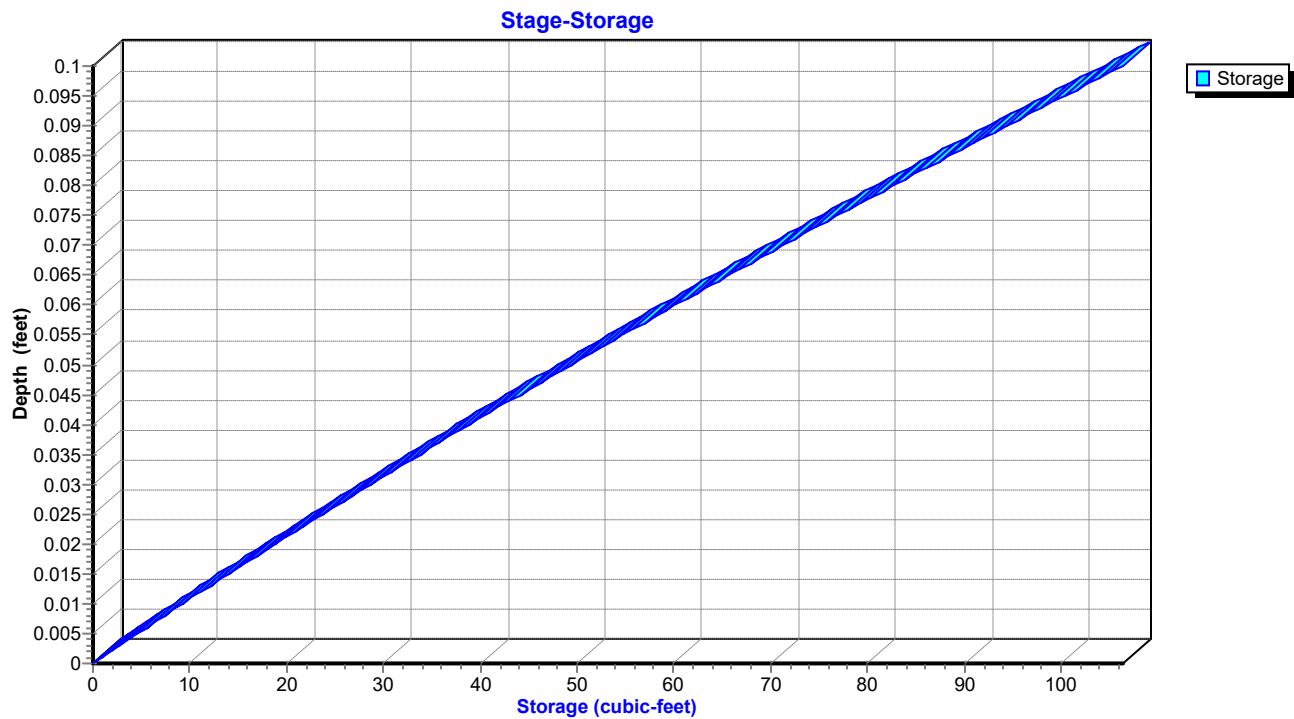


Reach 4R: Reach 1 Lawn

Hydrograph



Reach 4R: Reach 1 Lawn



Summary for Reach 5R: Reach 2 Woods

[55] Hint: Peak inflow is 120% of Manning's capacity

Inflow Area = 0.046 ac, 100.00% Impervious, Inflow Depth = 4.00" for 25-year event
Inflow = 0.25 cfs @ 12.22 hrs, Volume = 0.015 af
Outflow = 0.21 cfs @ 12.39 hrs, Volume = 0.015 af, Atten = 17%, Lag = 10.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

Max. Velocity= 0.12 fps, Min. Travel Time= 5.9 min

Avg. Velocity = 0.02 fps, Avg. Travel Time= 33.3 min

Peak Storage= 73 cf @ 12.29 hrs

Average Depth at Peak Storage= 0.10' , Surface Width= 19.00'

Bank-Full Depth= 0.10' Flow Area= 1.7 sf, Capacity= 0.21 cfs

15.00' x 0.10' deep channel, $n = 0.400$ Sheet flow: Woods+light brush

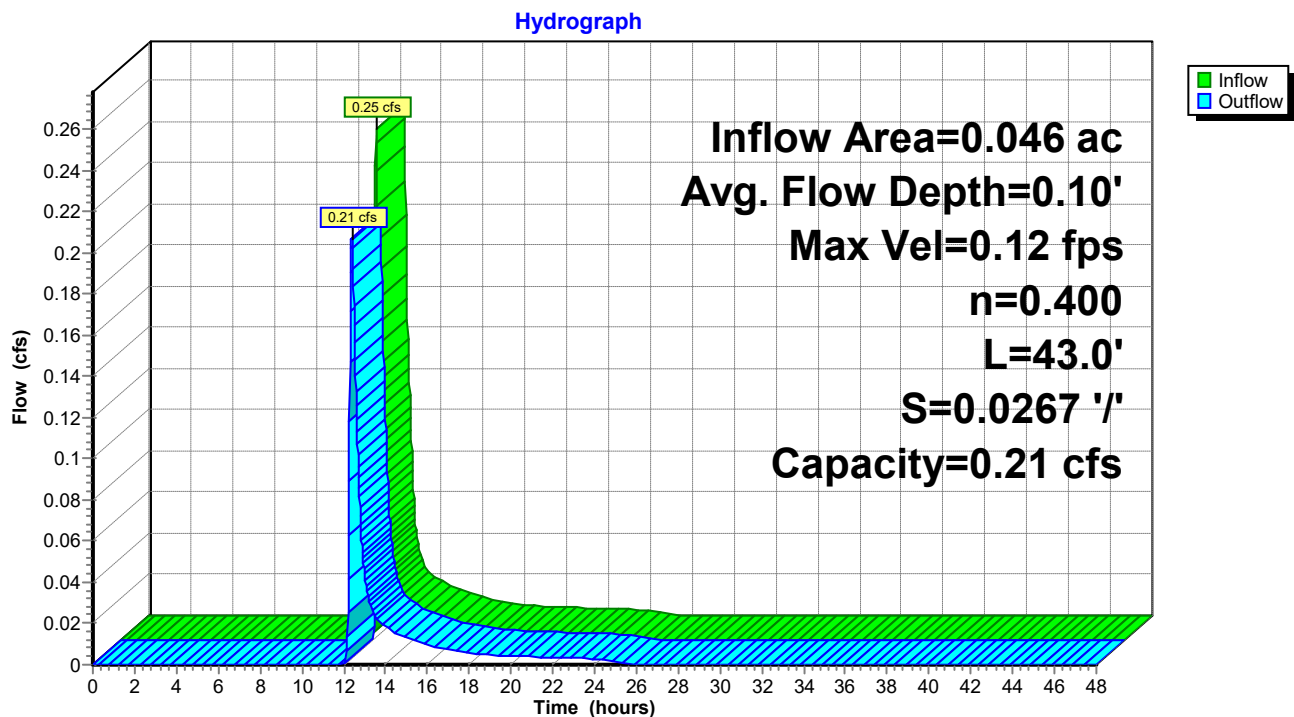
Side Slope Z-value= 20.0 ' / ' Top Width= 19.00'

Length= 43.0' Slope= 0.0267 '/'

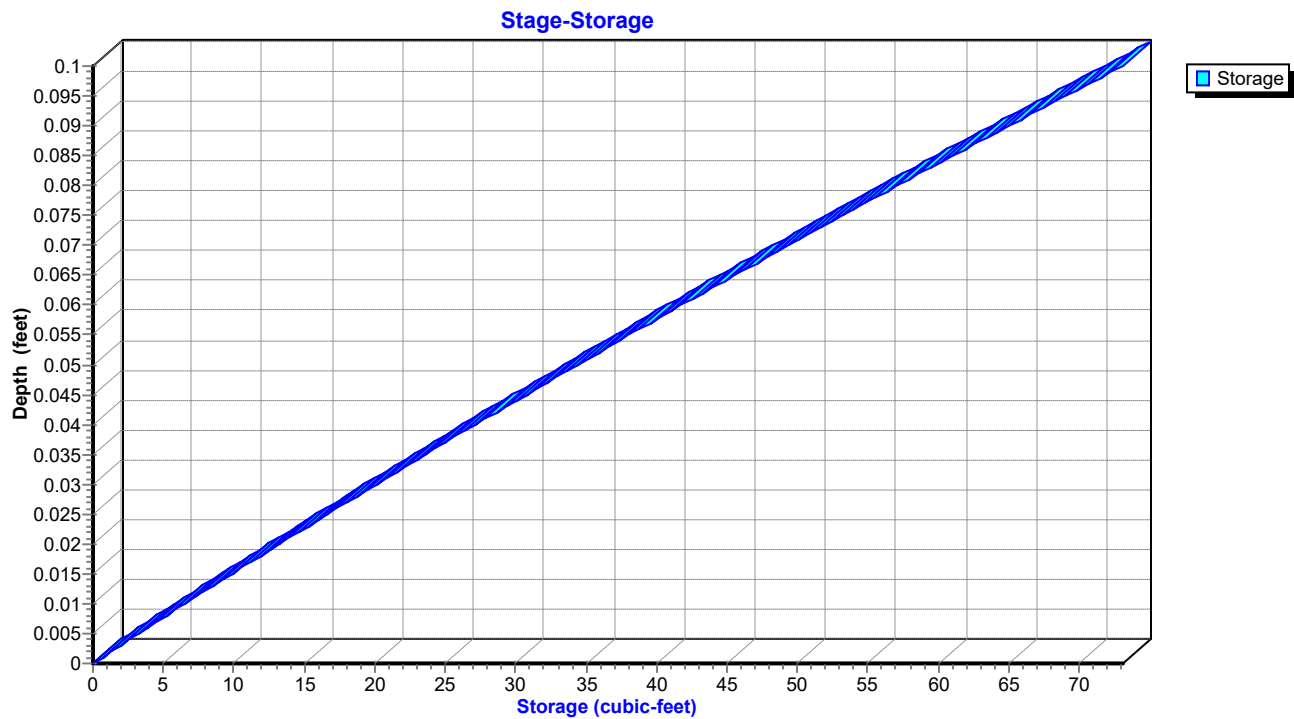
Inlet Invert= 90.90', Outlet Invert= 89.75'



Reach 5R: Reach 2 Woods



Reach 5R: Reach 2 Woods



Summary for Reach 6R: Reach 3 Intermittent Channel

Inflow Area = 0.046 ac, 100.00% Impervious, Inflow Depth = 4.00" for 25-year event
 Inflow = 0.21 cfs @ 12.39 hrs, Volume= 0.015 af
 Outflow = 0.20 cfs @ 12.47 hrs, Volume= 0.015 af, Atten= 4%, Lag= 5.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

Max. Velocity= 1.11 fps, Min. Travel Time= 2.8 min

Avg. Velocity = 0.82 fps, Avg. Travel Time= 3.7 min

Peak Storage= 33 cf @ 12.42 hrs

Average Depth at Peak Storage= 0.04' , Surface Width= 4.18'

Bank-Full Depth= 3.00' Flow Area= 30.0 sf, Capacity= 367.70 cfs

4.00' x 3.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides

Side Slope Z-value= 2.0 '/' Top Width= 16.00'

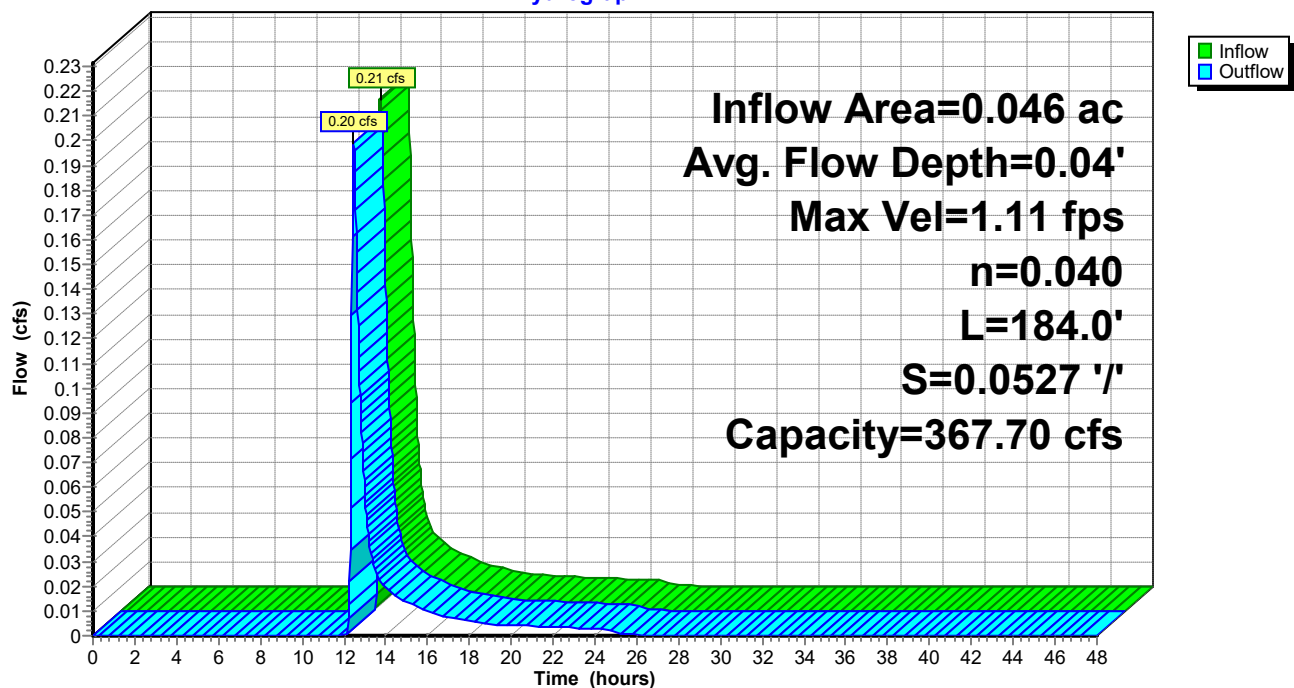
Length= 184.0' Slope= 0.0527 '/'

Inlet Invert= 89.70', Outlet Invert= 80.00'

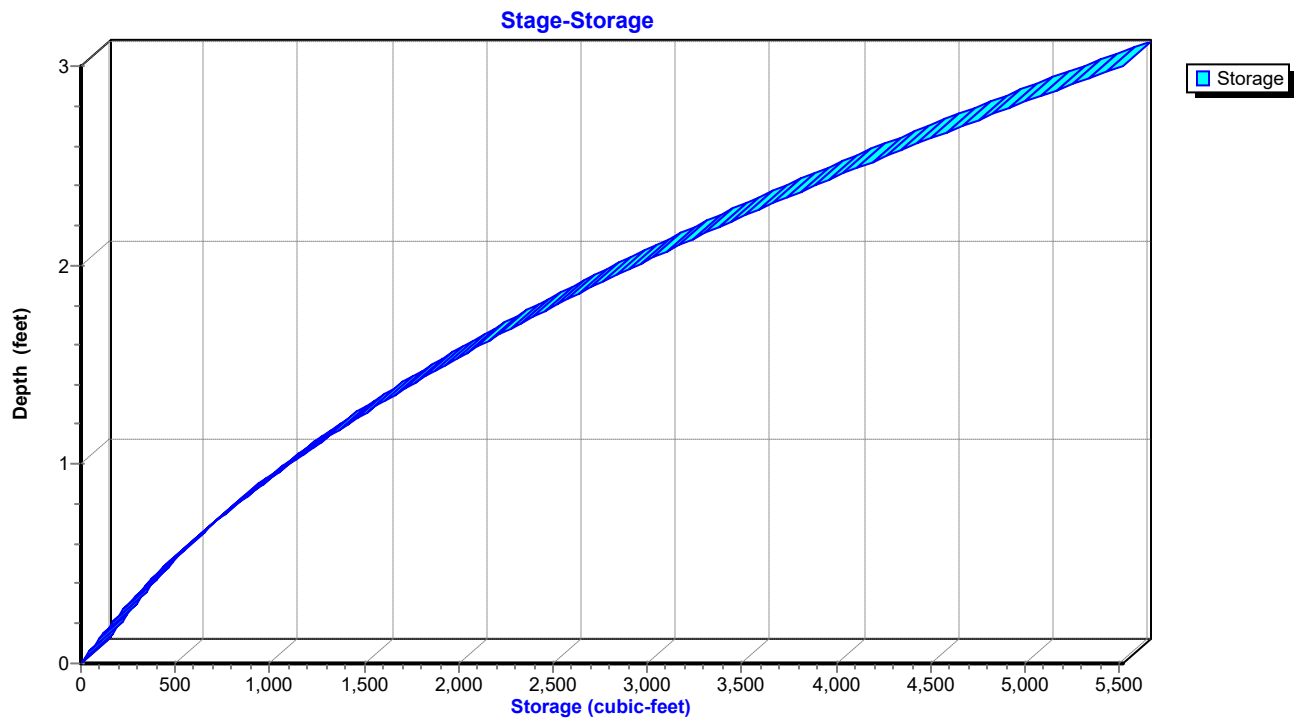


Reach 6R: Reach 3 Intermittent Channel

Hydrograph



Reach 6R: Reach 3 Intermittent Channel



Summary for Pond 4P: Cultec C-4 Chambers

Inflow Area = 0.046 ac, 100.00% Impervious, Inflow Depth = 6.13" for 25-year event
 Inflow = 0.29 cfs @ 12.08 hrs, Volume= 0.024 af
 Outflow = 0.28 cfs @ 12.09 hrs, Volume= 0.015 af, Atten= 1%, Lag= 0.6 min
 Primary = 0.28 cfs @ 12.09 hrs, Volume= 0.015 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs
 Peak Elev= 98.61' @ 12.09 hrs Surf.Area= 462 sf Storage= 370 cf

Plug-Flow detention time= 200.4 min calculated for 0.015 af (65% of inflow)
 Center-of-Mass det. time= 97.3 min (841.5 - 744.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	97.00'	92 cf	6.00'W x 26.50'L x 1.71'H Field A 272 cf Overall - 41 cf Embedded = 231 cf x 40.0% Voids
#2A	97.50'	41 cf	Cultec FD C-4 x 3 Inside #1 Effective Size= 42.0"W x 8.0"H => 1.67 sf x 8.00'L = 13.3 cf Overall Size= 48.0"W x 8.5"H x 8.50'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.67 sf x 1 rows
#3B	97.00'	175 cf	6.00'W x 50.50'L x 1.71'H Field B 518 cf Overall - 81 cf Embedded = 437 cf x 40.0% Voids
#4B	97.50'	81 cf	Cultec FD C-4 x 6 Inside #3 Effective Size= 42.0"W x 8.0"H => 1.67 sf x 8.00'L = 13.3 cf Overall Size= 48.0"W x 8.5"H x 8.50'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.67 sf x 1 rows
		389 cf	Total Available Storage

Storage Group A created with Chamber Wizard
 Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	98.53'	12.0" x 12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.28 cfs @ 12.09 hrs HW=98.61' (Free Discharge)
 ↑ **1=Orifice/Grate** (Weir Controls 0.28 cfs @ 0.91 fps)

Pond 4P: Cultec C-4 Chambers - Chamber Wizard Field A

Chamber Model = Cultec FD C-4 (Cultec Contactor® Field Drain C-4)

Effective Size= 42.0"W x 8.0"H => 1.67 sf x 8.00'L = 13.3 cf

Overall Size= 48.0"W x 8.5"H x 8.50'L with 0.50' Overlap

Row Length Adjustment= +0.50' x 1.67 sf x 1 rows

3 Chambers/Row x 8.00' Long +0.50' Row Adjustment = 24.50' Row Length +12.0" End Stone x 2 = 26.50' Base Length

1 Rows x 48.0" Wide + 12.0" Side Stone x 2 = 6.00' Base Width

6.0" Stone Base + 8.5" Chamber Height + 6.0" Stone Cover = 1.71' Field Height

3 Chambers x 13.3 cf +0.50' Row Adjustment x 1.67 sf x 1 Rows = 40.8 cf Chamber Storage

271.6 cf Field - 40.8 cf Chambers = 230.8 cf Stone x 40.0% Voids = 92.3 cf Stone Storage

Chamber Storage + Stone Storage = 133.1 cf = 0.003 af

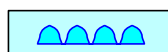
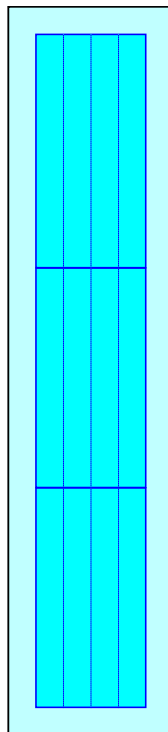
Overall Storage Efficiency = 49.0%

Overall System Size = 26.50' x 6.00' x 1.71'

3 Chambers

10.1 cy Field

8.5 cy Stone



Pond 4P: Cultec C-4 Chambers - Chamber Wizard Field B

Chamber Model = Cultec FD C-4 (Cultec Contactor® Field Drain C-4)

Effective Size= 42.0"W x 8.0"H => 1.67 sf x 8.00'L = 13.3 cf

Overall Size= 48.0"W x 8.5"H x 8.50'L with 0.50' Overlap

Row Length Adjustment= +0.50' x 1.67 sf x 1 rows

6 Chambers/Row x 8.00' Long +0.50' Row Adjustment = 48.50' Row Length +12.0" End Stone x 2 = 50.50' Base Length

1 Rows x 48.0" Wide + 12.0" Side Stone x 2 = 6.00' Base Width

6.0" Stone Base + 8.5" Chamber Height + 6.0" Stone Cover = 1.71' Field Height

6 Chambers x 13.3 cf +0.50' Row Adjustment x 1.67 sf x 1 Rows = 80.8 cf Chamber Storage

517.6 cf Field - 80.8 cf Chambers = 436.8 cf Stone x 40.0% Voids = 174.7 cf Stone Storage

Chamber Storage + Stone Storage = 255.5 cf = 0.006 af

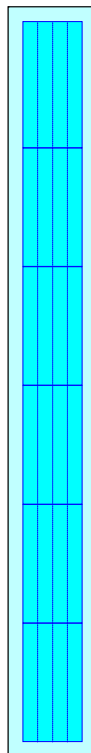
Overall Storage Efficiency = 49.4%

Overall System Size = 50.50' x 6.00' x 1.71'

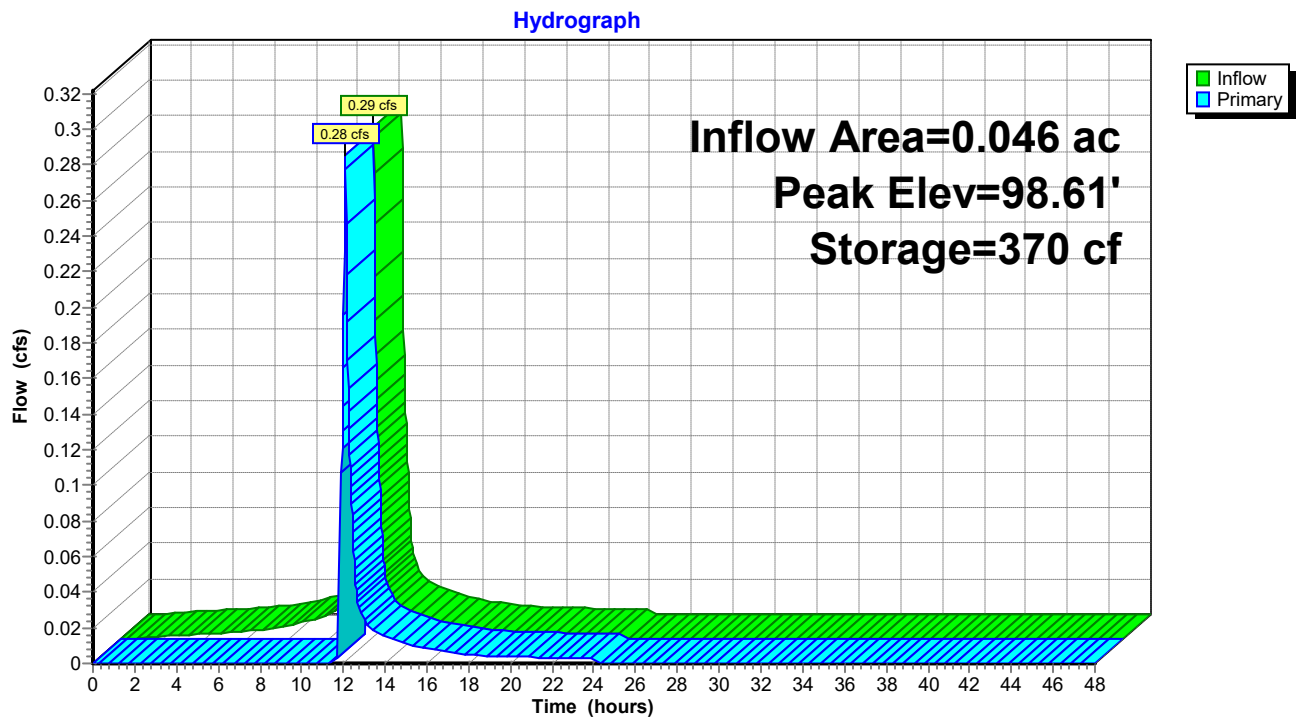
6 Chambers

19.2 cy Field

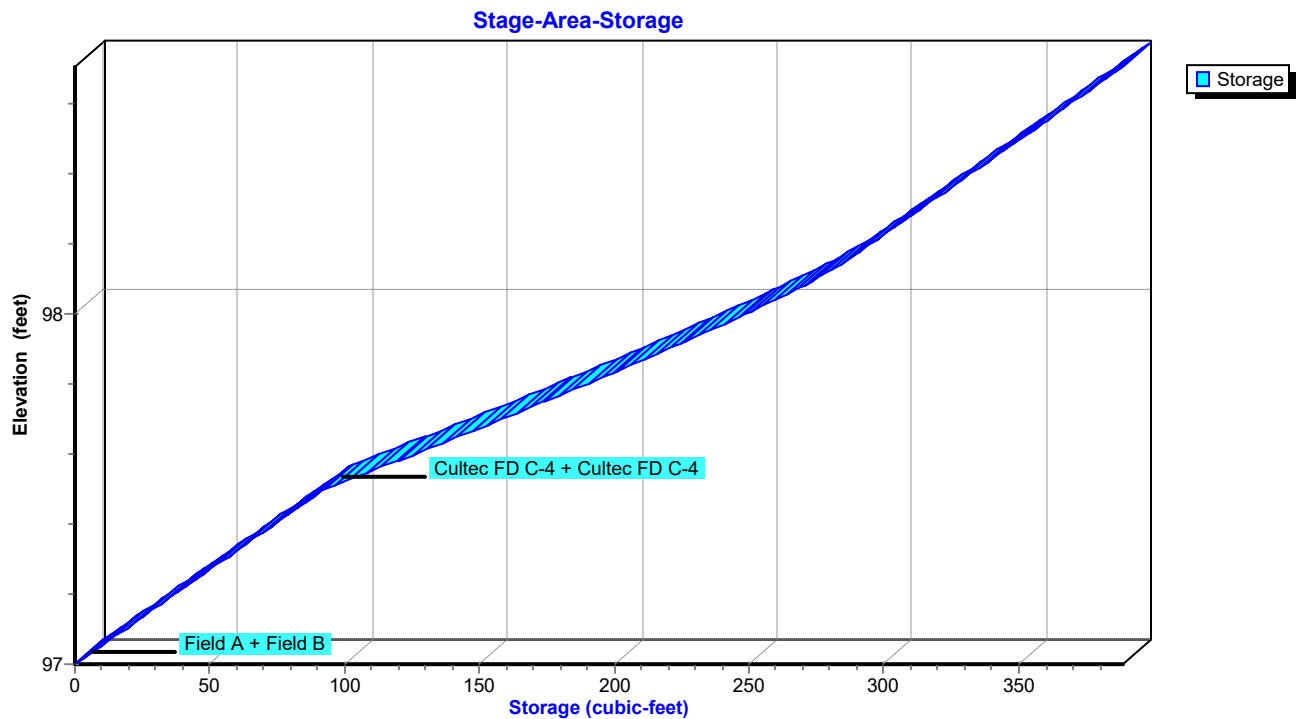
16.2 cy Stone



Pond 4P: Cultec C-4 Chambers



Pond 4P: Cultec C-4 Chambers



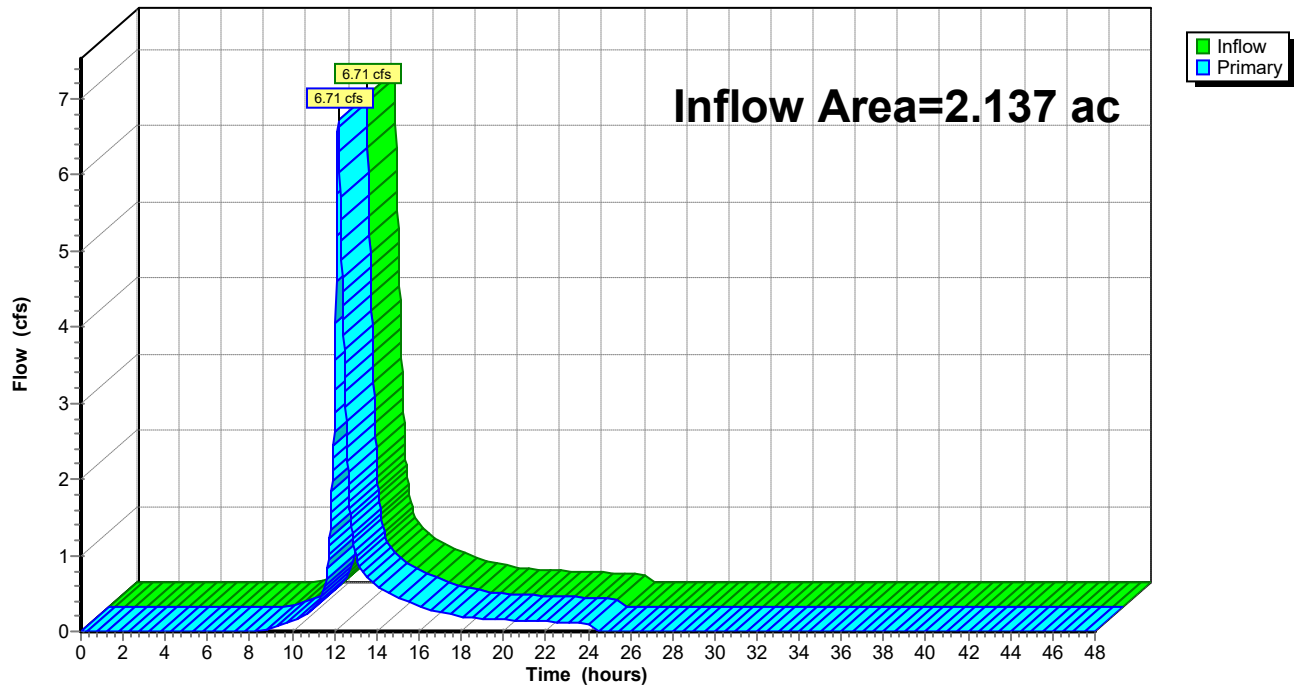
Summary for Link 7L: Design Point

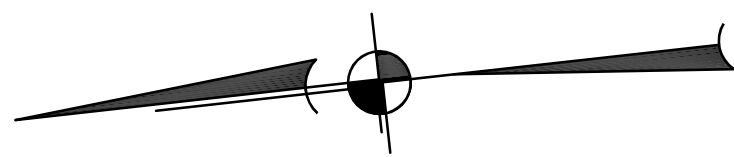
Inflow Area = 2.137 ac, 8.69% Impervious, Inflow Depth = 3.51" for 25-year event
Inflow = 6.71 cfs @ 12.19 hrs, Volume= 0.625 af
Primary = 6.71 cfs @ 12.19 hrs, Volume= 0.625 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

Link 7L: Design Point

Hydrograph





Now Or Formerly Country Club Wascobuc

Property corner monuments were not placed as part of this survey.

This map may not be used in connection with a "Survey Affidavit" or similar document, statement or mechanism to obtain title insurance for any subsequent or future grantees.

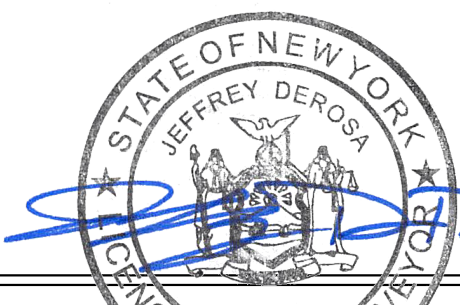
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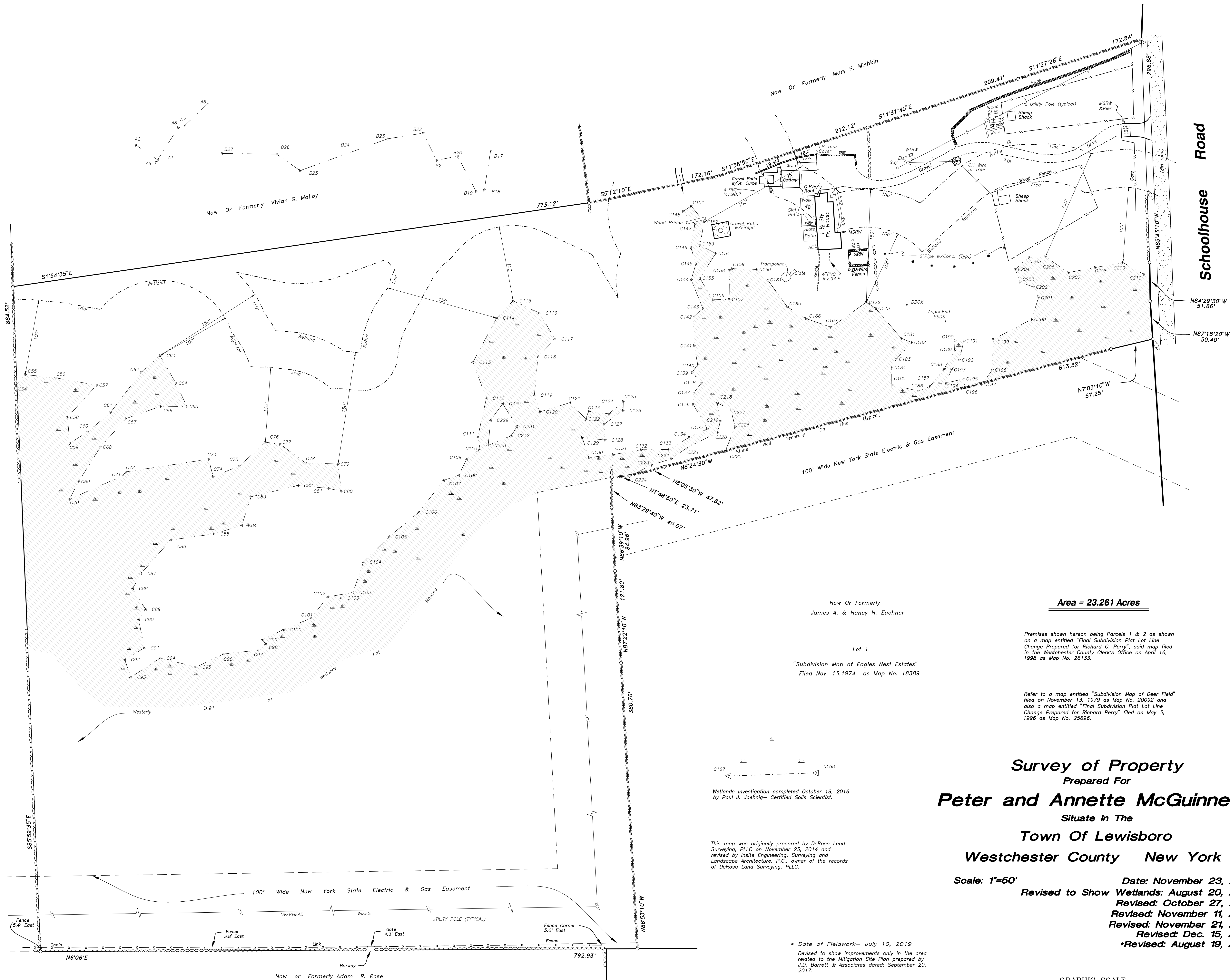
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INSITE
ENGINEERING, SURVEYING &
LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place • Carmel, New York 10512
Phone (845) 225-9690 • Fax (845) 225-9717
www.insite-eng.com



MEMORANDUM

TO: Chairperson Janet Andersen and
Members of Lewisboro Planning Board

CC: Ciorsdan Conran
Judson Siebert, Esq.
Joseph Angiello

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

DATE: February 18, 2021

RE: Wetland Permit Approval
Lara Gorton
22 Gilbert Road
Sheet 36F, Block 10806, Lot 24

PROJECT DESCRIPTION

The subject property consists of ±0.52 acres of land and is located at 22 Gilbert Street within the R-1/4A Zoning District. The subject property is located on Truesdale Lake and is developed with a residence, dock, gravel driveway, septic system, sea wall. The owner was issued a Wetland Permit in 2009 (Permit No. 46-09 W.P.), which included a renovation to the residence, removal and reconfiguration of the driveway, related site work and the installation of a rain garden as mitigation for stormwater runoff. While the majority of the work has been completed, the Wetland Permit was left open and this office was recently asked to inspect the property in an attempt to close the permit. Upon our inspection, we observed that the majority of the work was completed per plan; however, the rain garden was never installed and it appears that the sea wall along the lake was reconstructed and reconfigured, which was not part of the original application.

SEQRA

The proposed action has been preliminarily identified as a Type II Action and is therefore categorically exempt from the State Environmental Quality Review Act (SEQRA).

REQUIRED APPROVALS/REFERRALS

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

COMMENTS

1. The previously issued Wetland Permit and plan should be provided to the Planning Board for review.
2. Provide a construction detail for the seawall that was installed without authorization.
3. The plan shall illustrate and quantify the limits of disturbance (s.f.), including construction access. The plan shall note that disturbance limits shall be staked in the field prior to construction.
4. Rain garden sizing calculations shall be provided and shall follow the NYS Stormwater Design Manual, accounting for ponding, soil media and gravel layer volumes.
5. The applicant shall perform a percolation test in the vicinity of the proposed rain garden; test results should appear on the plan.
6. The rain garden should include a stabilized overflow.
7. It appears that access to the dock could be affected by the proposed mitigation/planting area. It is recommended that the planting area be extend to the south along the lake edge.

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

PLAN REVIEWED, PREPARED BY BENEDEK & TICEHURST, DATED JANUARY 14, 2021:

- Wetland Mitigation Plan (Drawing Number WL-1)

Chairperson Janet Andersen
February 18, 2021
Page 3 of 3

DOCUMENTS REVIEWED:

- Cover Letter, prepared by Benedek & Ticehurst, Landscape Architects & Site Planners, P.C., dated January 19, 2021
- Project Narrative, prepared by Benedek & Ticehurst, Landscape Architects & Site Planners, P.C., dated January 19, 2021
- Town of Lewisboro Wetland Permit Application
- Deed
- Letter of Authorization on behalf of Benedek & Ticehurst, prepared by Property Owner

JKJ/dc

https://kellardsessionsconsulti.sharepoint.com/sites/Kellard/Municipal/Lewisboro/Correspondence/2021-02-18_LWPB_Gorton - 22 Gilbert Road_Review Memo.docx

BENEDEK & TICEHURST
LANDSCAPE ARCHITECTS & SITE PLANNERS, P.C.

January 19, 2021

Town of Lewisboro Planning Board
79 Bouton Road
South Salem, N.Y. 10590

Re: Gorton Residence
22 Gilbert Street, South Salem, N.Y.

Dear Chair Anderson and Planning Board Members,

We are formally requesting a Wetlands Approval to close out an existing wetlands permit. The original wetlands permit was issued in 2009 and included renovations to the existing residence and associated site work including the removal and restoration of the existing asphalt driveway to the north, converting the existing asphalt driveway to the south to gravel and installing a rain garden.

The above approved work was completed with the exception of the rain garden, which we have designed as a part of this application. Also included in this application is additional wetland buffer planting (approximately 450 sq. ft.) to mitigate an area of sea wall that was filled in (approximately 200 sq. ft.) without a permit.

In closing, we believe that these improvements address the conditions of the existing wetlands permit and will provide s benefit to the environment. We look forward to presenting this application at the February 23rd Planning Board meeting. Please contact me in the meantime if you have any questions.

Sincerely,



Glenn Ticehurst, RLA, ASLA

cc: Jan Johannessen
Lara Gorton

Application No.: _____

Fee: _____ Date: _____

**TOWN OF LEWISBORO
WETLAND PERMIT APPLICATION**

79 Bouton Road, South Salem, NY 10590

Phone: (914) 763-5592

Fax: (914) 875-9148

Project Address: 22 Gilbert Street

Sheet: 036F Block: 10806 Lot(s): 24

Project Description (Identify the improvements proposed within the wetland/wetland buffer and the approximate amount of wetland/wetland buffer disturbance): Installation of rain garden and mitigation planting at modified sea wall.

Owner's Name: Lara Gorton Phone: _____

Owner's Address: 22 Gilbert Street, South Salem, N.Y. Email: lara.gorton@gmail.com

Applicant's Name (if different): Glenn Ticehurst, RLA, ASLA Phone: 914-234-9666

Applicant's Address: 448H Old Post Rd., Bedford, N.Y. 10506 Email: glenn@btlandarch.com

Agent's Name (if applicable): _____ Phone: _____

Agent's Address: _____ Email: _____

TO BE COMPLETED BY OWNER/APPLICANT

What type of Wetland Permit is required? (see §217-5C and §217-5D of the Town Code)

☐ Administrative ☒ Planning Board

Is the project located within the NYCDEP Watershed? ☒ Yes ☐ No

Total area of proposed disturbance: ☒ < 5,000 s.f. ☐ 5,000 s.f. - < 1 acre ☐ ≥1 acre

Does the proposed action require any other permits/approvals from other agencies/departments? (Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: _____

Note: Initially, all applications shall be submitted with a plan that illustrates the existing conditions and proposed improvements. Said plan must include a line which encircles the total area of proposed land disturbance and the approximate area of disturbance must be calculated (square feet). The Planning Board and/or Town Wetland Inspector may require additional materials, information, reports and plans, as determined necessary, to review and evaluate the proposed action. If the proposed action requires a Planning Board Wetland Permit, the application materials outlined under §217-7 of the Town Code must be submitted, unless waived by the Planning Board. The Planning Board may establish an initial escrow deposit to cover the cost of application/plan review and inspections conducted by the Town's consultants.

For administrative wetland permits, see attached Administrative Wetland Permit Fee Schedule.

Owner Signature: 

Date: 1/5/21

TOWN OF LEWISBORO PLANNING BOARD

79 Bouton Road, South Salem, NY 10590
Email: planning@lewisborogov.com
Tel: (914) 763-5592 Fax: (914) 875-9148

Tax Payment Affidavit Requirement

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant (Please type or print)

Glenn Ticehurst, RLA, ASLA

Name of Applicant

22 Gilbert Street Wetlands Permit

Project Name

Property Description

Tax Block(s): 10806

Tax Lot(s): 24

Tax Sheet(s): 036F

Property Assessed to:

Lara Gorton

Name

22 Gilbert Street

Address

South Salem

N.Y.

10590

City

State

Zip

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes:

Denise C. Gorton

Date

1/22/21

Sworn to before me this

22nd day of January, 2021

Janet L. Donohue
Signature - Notary Public (affix stamp)

JANET L. DONOHUE
NOTARY PUBLIC, STATE OF NEW YORK
No. 01D06259627
Qualified in Westchester County
Commission Expires April 16, 2025

TOWN OF LEWISBORO PLANNING BOARD

79 Bouton Road, South Salem, NY 10590

Email: planning@lewisborogov.com

Tel: (914) 763-5592

Fax: (914) 875-9148

Affidavit of Ownership

State of : New York

County of: Westchester

Lara Gorton, being duly sworn, deposes and says that he/she
resides at 22 Gilbert Street, South Salem, N.Y.

in the County of Westchester, State of New York

and that he/she is (check one) ☒ the owner, or ☐ the _____
Title

of _____
Name of corporation, partnership, or other legal entity

which is the owner, in fee of all that certain log, piece or parcel of land situated, lying and being in the
Town of Lewisboro, New York, aforesaid and know and designated on the Tax Map in the Town of
Lewisboro as:

Block 10806, Lot 24, on Sheet 036F.


Owner's Signature

Sworn to before me this

05 day of Jan, 2021



NATALYA SOBOLEV
Notary Public, State of New York
No. 01SO6170885
Qualified in Kings County
Commission Expires July 23, 2023

Notary Public – affix stamp

Lara Gorton
22 Gilbert Street
South Salem, N.Y. 10590

January 6, 2021

Town of Lewisboro
79 Bouton Road
South Salem, N.Y. 10590

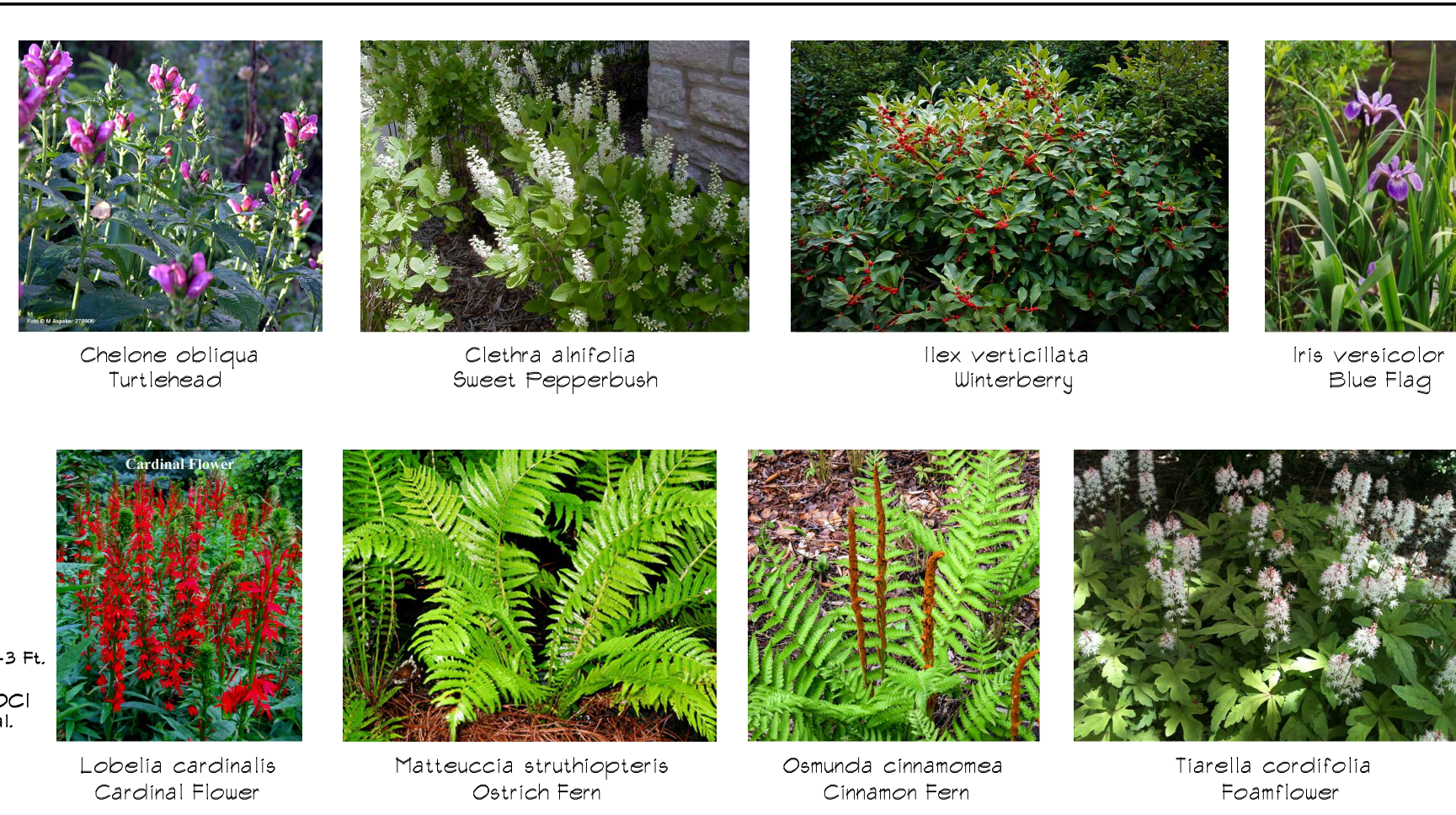
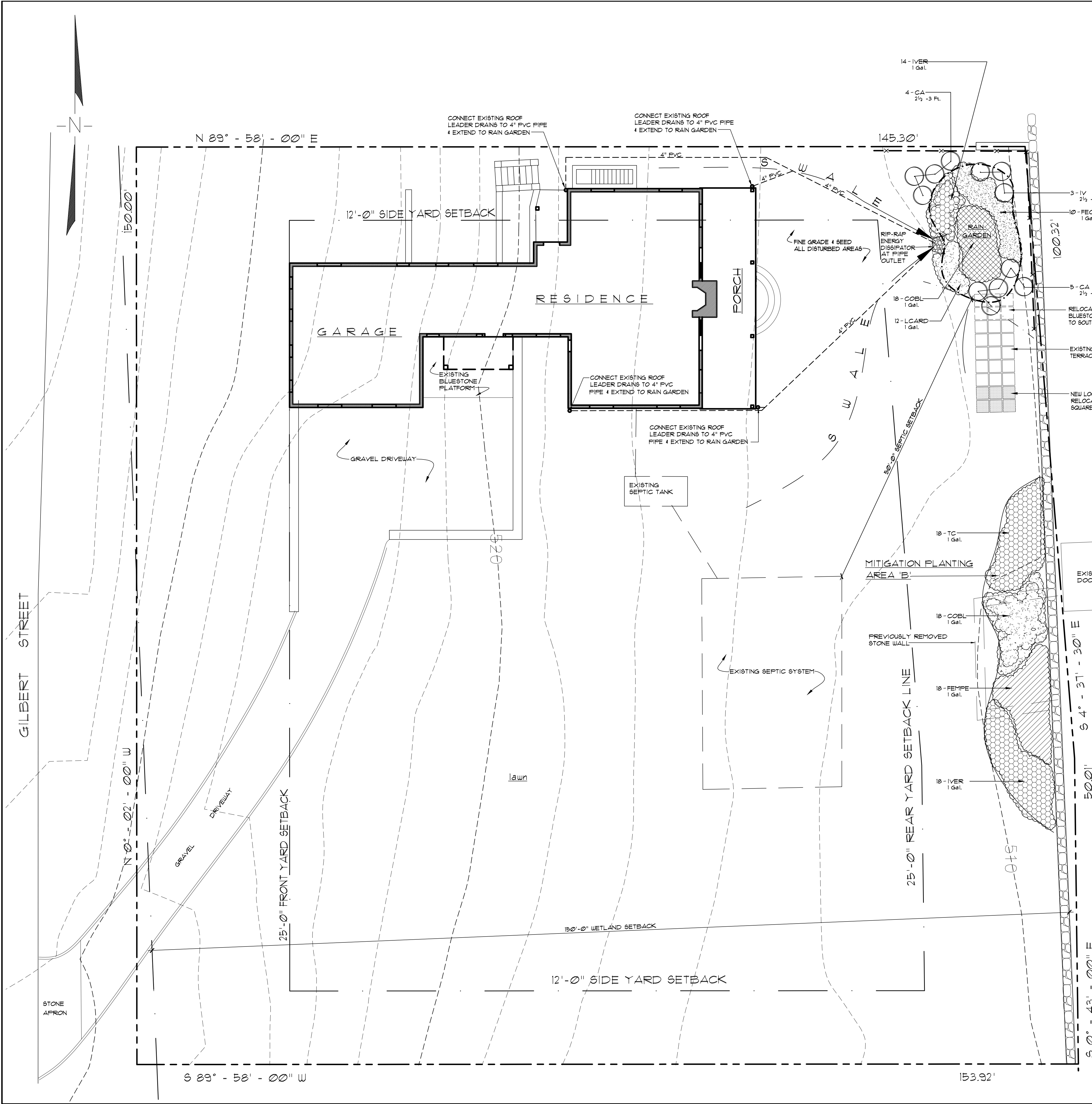
To Whom It Concerns:

I hereby authorize Benedek & Ticehurst, Landscape Architects and Site Planners, P.C. to represent me as the applicant in all aspects of our submission to the Planning Board and all other boards and commissions.

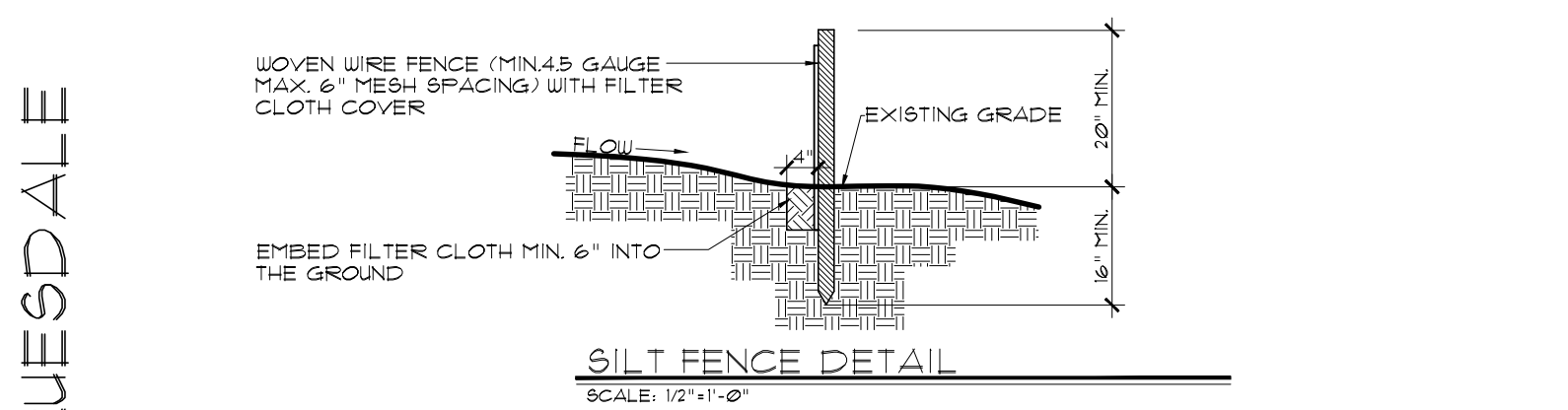
Sincerely,

A handwritten signature in black ink, appearing to read "Lara Gorton", written in a cursive style.

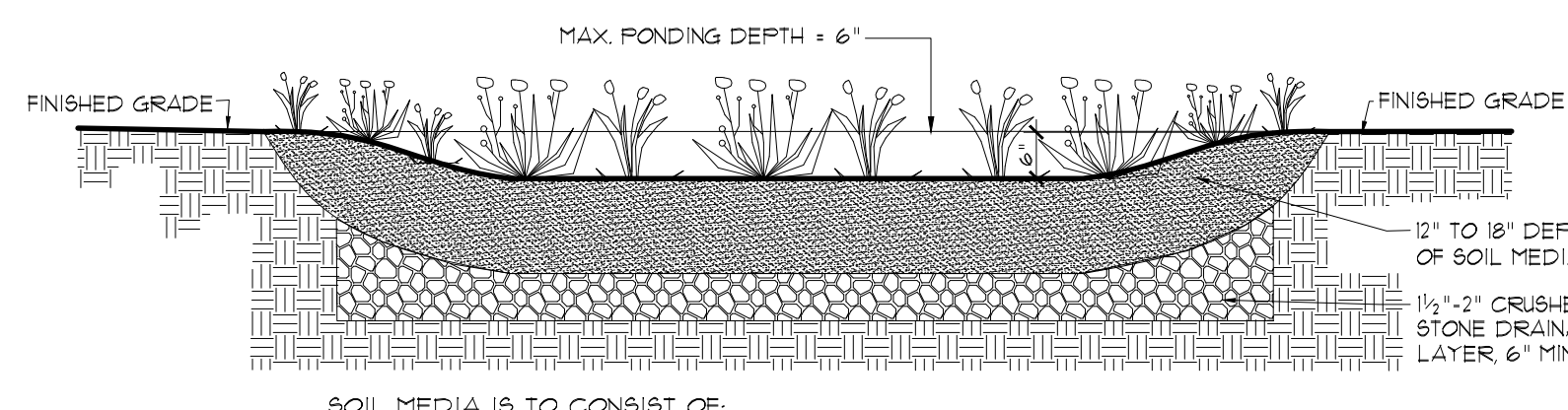
Lara Gorton



PLANT LIST				
QTY.	INITIALS	BOTANICAL NAME	COMMON NAME	SIZE
AREA 'A': RAIN GARDEN PLANT LIST				
9	CA	Clethra alnifolia	Sweet Pepperbush	2½ - 3 Ft. Height
18	COBL	Chelone obliqua	Turtlehead	1 Gallon
10	FEOCI	Osmunda cinnamomea	Cinnamon Fern	1 Gallon
3	IV	Ilex verticillata	Winterberry	2½ - 3 Ft. Height
14	IVER	Iris versicolor	Blue Flag	1 Gallon
12	LCARD	Lobelia cardinalis	Cardinal Flower	1 Gallon
AREA 'B' MITIGATION PLANTING				
18	COBL	Chelone obliqua	Turtlehead	1 Gallon
18	FEMFE	Matteuccia struthiopteris	Ostrich Fern	1 Gallon
18	IVER	Iris versicolor	Blue Flag	1 Gallon
18	TC	Tiarella cordifolia	Foamflower	1 Gallon



- SILT FENCE NOTES:**
1. WOVEN WIRE FENCING TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE OR STAPLES.
 2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MIDDLE.
 3. WHEN TWO SECTIONS OF FILTER CLOTH ARE JOINED TOGETHER, THEY NEED TO BE OVERLAPPED BY 6" AND FOLDED.
 4. MAINTENANCE SHALL BE PERFORMED WHEN NEEDED AND MATERIAL REMOVED WHEN BULGES OR RIPS OCCUR IN FENCE.



RAIN GARDEN MAINTENANCE

RAIN GARDENS ARE INTENDED TO BE RELATIVELY LOW MAINTENANCE. WEEDING AND WATERING ARE ESSENTIAL THE FIRST YEAR, AND CAN BE MINIMIZED WITH THE USE OF A WEED FREE MULCH LAYER. RAIN GARDENS SHOULD BE TREATED AS A COMPONENT OF THE LANDSCAPING, WITH ROUTINE MAINTENANCE PROVIDED BY THE HOMEOWNER, INCLUDING THE OCCASIONAL REPLACEMENT OF PLANTS, MULCHING, WEEDING AND THINNING TO MAINTAIN THE DESIRED APPEARANCE. HOMEOWNERS AND LANDSCAPERS SHOULD BE EDUCATED REGARDING THE PURPOSE OF THE RAIN GARDEN, SO THE DESIRABLE ASPECTS OF PONDED WATER ARE RECOGNIZED AND MAINTAINED.

OWNER:
LARA GORTON
22 GILBERT STREET
SOUTH SALEM, N.Y.

SHEET 036F, BLOCK 10806, LOT 24

ZONING DISTRICT: R-14A

LOT AREA: 52 ACRES ± 22.650 6F.

SITE INFORMATION TAKEN FROM DRAWING TITLED 'PROPOSED ARCHITECTURAL SITE PLAN' PREPARED BY MICHAEL DeCANDIA ARCHITECTS, KATONAH, N.Y. DATED JULY 8, 2009

TOPOGRAPHY TAKEN FROM WESTCHESTER GIS.

WETLAND MITIGATION PLAN

FOR

THE GORTON RESIDENCE

22 GILBERT STREET SOUTH SALEM, N.Y.

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

Drawn: EF.

Date: JANUARY 14, 2021

Revisions:

Date	Item

BENEDEK & TICEHURST

LANDSCAPE ARCHITECTS & SITE PLANNERS, P.C.

448H Old Post Road, Bedford Village, New York 10506

P: 914.234.9666 / F: 914.234.6882

www.btlandscape.com

Members-American Society of Landscape Architects

Drawing Number:

WL-1

MEMORANDUM

TO: Chairperson Janet Andersen and
Members of Lewisboro Planning Board

CC: Ciorsdan Conran
Judson Siebert, Esq.
Joseph Angiello

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

DATE: February 18, 2021

RE: Wetland Permit Approval
Ted and Janice Strauss
399 Pound Ridge Road
Sheet 29B, Block 10510, Lot 64

PROJECT DESCRIPTION

The subject property consists of ±2.58 acres of land and is located at 399 Pound Ridge Road (Route 124) within the R-2A Zoning District. The subject property is developed with a residence, two (2) garages, and a workshop structure; the residence is listed on the Register of Historic Places. The applicant is proposing to remove an existing 10' x 10' wood deck and construct a new 17' x 12', one (1) story frame Sunroom and a new 10' x 12' wood deck adjacent to the existing workshop. There is a stream running west along the southerly end of the property that runs under the workshop.

SEQRA

The proposed action has been preliminarily identified as a Type II Action and is therefore categorically exempt from the State Environmental Quality Review Act (SEQRA).

REQUIRED APPROVALS/REFERRALS

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

COMMENTS

1. The applicant shall sign and date the submitted Wetland Permit Application; the application shall be revised to identify that the wetland permit is jurisdictional to the Planning Board (not administrative) and that the property is located within the NYCPEP watershed. The applicant also submitted a Site Development Plan application, which is not required and can be disregarded.
2. When weather permits, the applicant should contact this office to schedule a site visit.
3. This office defers review of the plan for zoning compliance to the Building Inspector. It is recommended that the application be referred to the Building Inspector for review.
4. The plan shall be revised to illustrate and dimension all required minimum zoning setbacks lines (front, rear, side yard setbacks). The Bulk Zoning Table is incorrect and shall be reviewed for accuracy.
5. The applicant shall submit an updated Existing Conditions Survey, signed and sealed by a NYS Licensed Land Surveyor. The updated survey should become the basis for the site plan.
6. Provide a floor plan for the existing woodshop and proposed building and identify use of same.
7. The plan shall illustrate the location of all existing and proposed utilities (electric, water, sewer, gas, etc.).
8. The plan shall illustrate and identify the location, specie type and diameter at breast height (dbh) of all trees with a dbh of eight (8) inches or greater and located within the limits of disturbance and 25 feet beyond. Indicate trees to be removed and/or protected. If no trees are proposed to be removed, a note to this effect shall be added to the plan.
9. The applicant shall provide stormwater mitigation and design calculations for the runoff generated by the existing workshop and proposed building addition for the 25-year, 24-hour storm event. Roof leader downspouts and connection to the infiltration system shall be illustrated. Provide details of the stormwater mitigation system. The applicant shall demonstrate that all applicable Westchester County Department of Health (WCHD) separation distances are satisfied.

Chairperson Janet Andersen

February 18, 2021

Page 3 of 3

10. Deep and percolation soil test shall be conducted in the area of the proposed stormwater infiltration system which shall be witnessed by this office.
11. The existing septic fields shall be shown to be cordoned off with construction fence during construction.
12. The Planting Plan submitted by the applicant appears acceptable. Portions of the stream is conveyed via a culvert; the applicant should evaluate whether the stream can be uncovered as part of the proposed mitigation plan.
13. All plans shall be signed/sealed by the Design Professional.
14. The names of the adjacent property owners and the location of any neighboring driveways, structures, buildings, wells and septic areas shall appear on the plan.

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 CROSS RIVER ARCHITECTS, LLC, DATED JANUARY 14, 2021:

- Site Plan Drawing (A/1)
- Enlarged Site Plan with Contours (Drawing A/1.1)
- Foundation & Roof Framing Plans (Drawing A/2)
- Proposed Floor Plan & Electric Plan (Drawing A/3)
- Deck & Sunroom Front/Rear Elevations (Drawing A/4)
- Deck & Sunroom Left/Right Elevations (Drawing A/5)

DOCUMENTS REVIEWED:

- Cover Letter, prepared by Cross River Architects, LLC, dated January 14, 2021
- Town of Lewisboro Wetland Permit Application
- Short Environmental Assessment Form (EAF) Part 1
- Deed

JKJ/dc

TO: The Town of Lewisboro Planning Board
FROM: Lewisboro Conservation Advisory Council
SUBJECT: **Strauss Residence, 399 Pound Ridge Road
South Salem, NY 10590**
DATE: February 10, 2021

The Conservation Advisory Council (CAC) has reviewed the materials recently submitted by the applicant. The existing workshop has a stream flowing beneath it and the proposed new construction is very close to the stream. The plat included a very brief description of stormwater mitigation, wetland mitigation and steps to be taken during construction to protect the wetland.

The CAC would like to see additional details on the wetland mitigation including types of mitigation and descriptions of planting if these are part of the plan. The applicant should also provide details for the stormwater mitigation.

CROSS
RIVER
ARCHITECTS,
LLC

ROBERT J. EBERTS, R.A.
PRINCIPAL

TRANSMITTAL

DATE: 1/14/2021

TO: Janet Andersen, Chair
Lewisboro Planning Board

FROM: Bob Eberts
Cross River Architects, LLC

RE: Strauss Sunroom and Deck Wetland Permit Application
399 Poundridge Rd., South Salem, NY 10590

Planning Board Members:

Thank you for hearing our proposal during this challenging time. We are hereby making an application to the Lewisboro Planning Board for a Wetland Permit. We are proposing to remove an existing 10' x 10' wood deck and construct a new 17' x 12' one story frame Sunroom and a new 10' x 12' wood deck adjacent to an existing workshop. The Sunroom and Deck will be constructed on 10 concrete piers.

The property is a 2.58 acre parcel on Pound Ridge Rd. Existing on the property is a residence, two garages and a workshop structure. The residence was constructed in the 1700's and is on the State and National Registers of Historic Places. There is a stream running west along the south end of the property that runs under a corner of the workshop. Many years ago, the workshop was used a springhouse that was used to keep milk and other dairy products cool. The stream runs in a swale into and out of the workshop, then thru stone headwalls that guides it through two culverts before crossing under Pound Ridge Rd and eventually draining into the Waccabuc River.

The proposed Sunroom is within 50' of the stream and therefore we are making application to this Board for the Wetland Permit. We are not proposing to alter the stream in any way. The total disturbed is 518 sf.

Attached please find the following documents:

- 9 copies of this Narrative
- 9 copies of the Planning Board Application
- 9 copies of the Wetland Permit Application
- 9 copies of the Short Form EAF
- 9 copies of the affidavit of Ownership
- 9 copies of the of drawings A1- A5
- 1 CD with the documents listed above in .pdf format.

Thank you once again for your time in reviewing this proposal.

PO Box 384
19 NO. SALEM RD. 2nd FL.
CROSS RIVER, NY 10518
914.763.5887
Email RJE@CRARCH.com

Application No.: _____

Fee: _____ Date: _____

**TOWN OF LEWISBORO
WETLAND PERMIT APPLICATION**

79 Bouton Road, South Salem, NY 10590

Phone: (914) 763-5592

Fax: (914) 875-9148

Project Address: **399 Pound Ridge Rd, South Salem, NY 10590**

Sheet: **29B** Block: **10510** Lot(s): **64**

Project Description (Identify the improvements proposed within the wetland/wetland buffer and the approximate amount of wetland/wetland buffer disturbance): Remove 10' x 10' Deck. Sunroom / Deck and bluestone platform

Owner's Name: **Ted and Janice Strauss** Phone: **(914) 763-5933**

Owner's Address: 399 Pound Ridge Rd., South Salem, NY 10590 Email: ted@tedstrausswebsites.com

Applicant's Name (if different): _____ Phone: _____

Applicant's Address: _____ Email: _____

Agent's Name (if applicable): Bob Eberts, Cross River Architects, LLC Phone: **914-763-5887**

Agent's Address: PO Box 384, Cross River, NY 10518 Email: rje@crarch.com

TO BE COMPLETED BY OWNER/APPLICANT

What type of Wetland Permit is required? (see §217-5C and §217-5D of the Town Code)

☒ Administrative ☐ Planning Board

Is the project located within the NYCDEP Watershed? ☐ Yes ☒ No

Total area of proposed disturbance: ☒ < 5,000 s.f. ☐ 5,000 s.f. - < 1 acre ☐ ≥ 1 acre

Does the proposed action require any other permits/approvals from other agencies/departments? (Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: _____

Building Permit

Note: Initially, all applications shall be submitted with a plan that illustrates the existing conditions and proposed improvements. Said plan must include a line which encircles the total area of proposed land disturbance and the approximate area of disturbance must be calculated (square feet). The Planning Board and/or Town Wetland Inspector may require additional materials, information, reports and plans, as determined necessary, to review and evaluate the proposed action. If the proposed action requires a Planning Board Wetland Permit, the application materials outlined under §217-7 of the Town Code must be submitted, unless waived by the Planning Board. The Planning Board may establish an initial escrow deposit to cover the cost of application/plan review and inspections conducted by the Town's consultants.

For administrative wetland permits, see attached Administrative Wetland Permit Fee Schedule.

Owner Signature: _____

Date: _____

TOWN OF LEWISBORO PLANNING BOARD

79 Bouton Road, South Salem, NY 10590
Email: planning@lewisborogov.com
Tel: (914) 763-5592 Fax: (914) 875-9148

Tax Payment Affidavit Requirement

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant (Please type or print)

Ted Strauss	Strauss Sunroom and deck
<u>Name of Applicant</u>	<u>Project Name</u>
<u>Property Description</u>	<u>Property Assessed to:</u>
Tax Block(s): 10510	Ted and Janice Strauss
Tax Lot(s): 64	<u>Name</u> 399 Poundridge Rd.
Tax Sheet(s): 29B	<u>Address</u> South Salem, NY 10590
	<u>City</u> <u>State</u> <u>Zip</u>

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes: Deirdre T. Rapp 1/11/2021
Date

Sworn to before me this

11th day of January, 2021

Janet L. Donohue
Signature - Notary Public (affix stamp)

JANET L. DONOHUE
NOTARY PUBLIC, STATE OF NEW YORK
No. 011006259627
Qualified in Westchester County
Commission Expires April 16, 2029

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			
Name of Action or Project: Strauss Sunroom and Deck			
Project Location (describe, and attach a location map): 399 Pound Ridge Rd. South Salem, NY 10590			
Brief Description of Proposed Action: Remove existing 10' x 10' Deck. Construct new 12' x 17' Sunroom and New 10' x 12' Deck on Concrete Piers.			
Name of Applicant or Sponsor: Ted Strauss		Telephone: 763-5933	
		E-Mail: ted@tedstrausswebsites.com	
Address: 399 Pound Ridge Rd.			
City/PO: South Salem		State: NY	Zip Code: 10590
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.			NO ☒
			YES ☐
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: Lewisboro Building Dept			NO ☐
			YES ☒
3.a. Total acreage of the site of the proposed action? 2.58 acres			
b. Total acreage to be physically disturbed? 0.1 acres			
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 2.58 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			

5. Is the proposed action, a. A permitted use under the zoning regulations?	NO	YES	N/A
	☐	☒	☐
	☐	☒	☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	☐	☒	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: <u>NYSDEC Wetland is located across the road.</u>	NO	YES	
	☐	☒	
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?	NO	YES	
	☒	☐	
	☒	☐	
	☒	☐	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies:	NO	YES	
	☐	☒	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____	NO	YES	
	☒	☐	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____ None	NO	YES	
	☒	☐	
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?	NO	YES	
	☐	☒	
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: _____	NO	YES	
	☒	☐	
	☒	☐	
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			
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES	
	☒	☐	
16. Is the project site located in the 100 year flood plain?	NO	YES	
	☒	☐	
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 Roof Drain will run to new drywell on site	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: _____ _____ _____	NO ☒	YES ☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____ _____ _____	NO ☒	YES ☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____ _____ _____	NO ☒	YES ☐
I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor name: <u>Ted Strauss</u> Date: _____ Signature: _____		

CODE NOTES

All work shall conform to all applicable local and state Building codes including, but not limited to the 2020 NYS Building Code, 2020 NYS Residential Code, 2017 National Electric Code (NFPA 70) and any local or other codes or bodies having jurisdiction as well as highest standards of practice for each trade.

DESIGN LOADS

1. Soil Bearing Capacity – 4000 psf
2. Deck Floor – 40 lbs. /sf Live load, 15 lbs. dead load
3. Railing – 50 lbs. / sf Horizontal
4. Posts – 200 lbs. horizontal
5. First Floor (Hardwood) - 40 lbs. /sf Live load, 15 lbs. dead load
6. Roof - 30 lbs. /sf Live load, 15 lbs. dead load
7. Wind Load – Special Wind Region – Design based on 126 mph

Occupancy Classification – R3

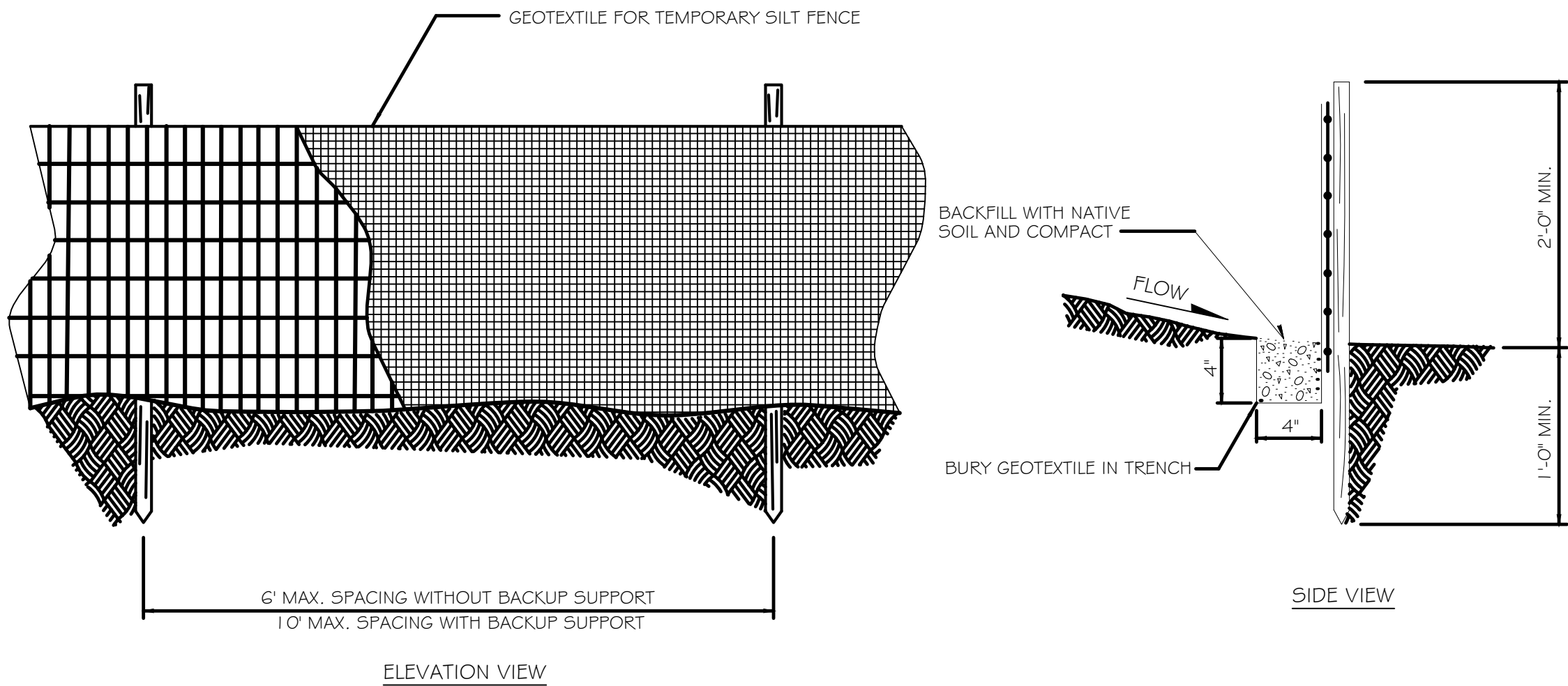
Construction Type – 5B

Proposed Construction Sequence

1. Pre-construction on-site meeting of all involved parties, including but not limited to: owner, architect, contractor responsible for erosion and sediment controls (E&SC) installation and maintenance, owner's environmental specialist responsible for E&SC inspections and reports.
2. Field delineation of limits of disturbance.
3. Field delineation of remediation area
4. Install down slope silt fence.
5. Excavate for piers and drainage basin.
6. Install stormwater mitigation systems. Pour concrete piers.
7. Construct sunroom and deck.
8. Install landscape materials, eg. walks, plant materials
9. Spread topsoil, rake, seed and mulch disturbed area.
10. Remove all E&SC's once site has fully stabilized.

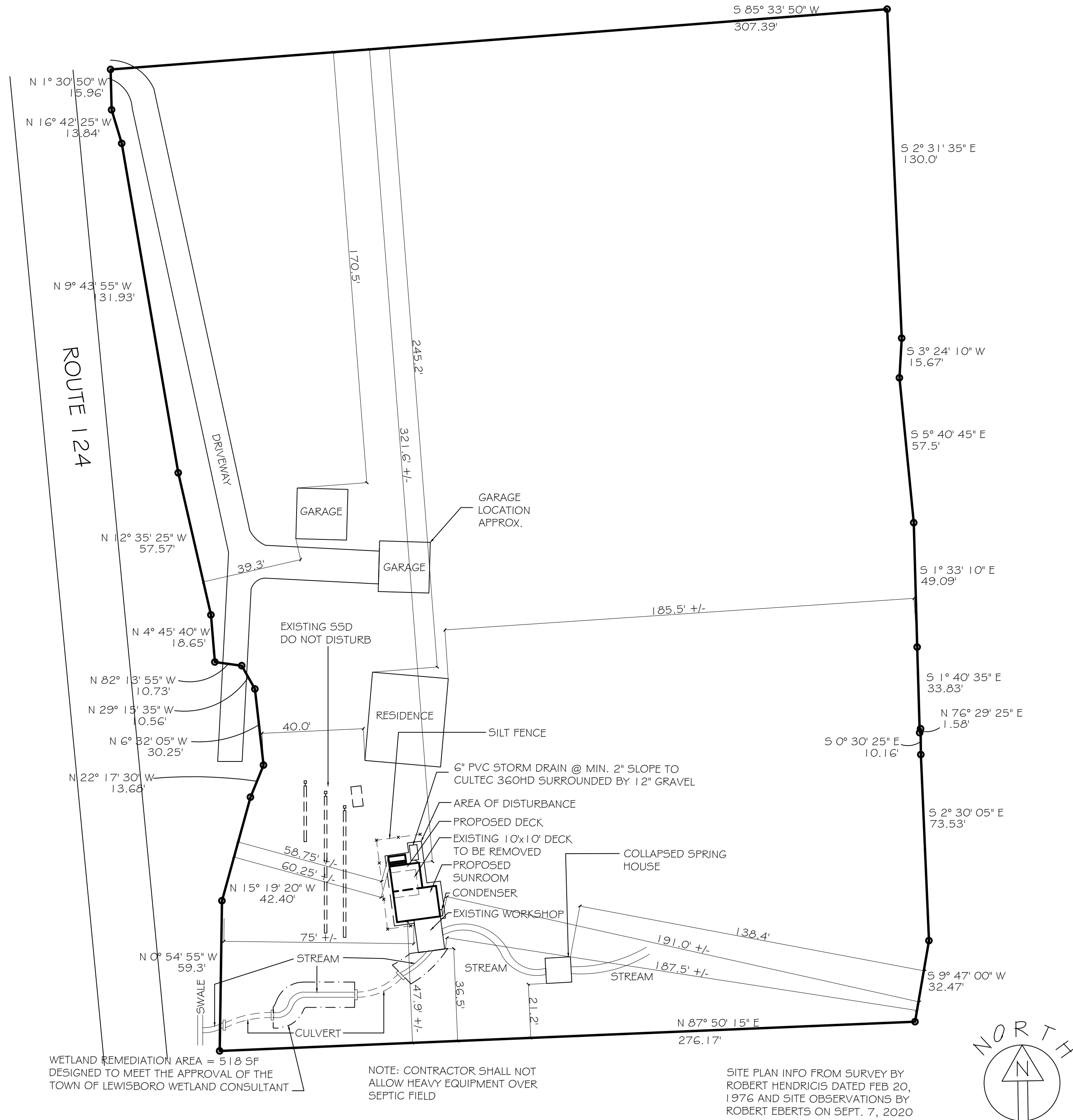
NOTES

1. MAXIMIZE DETENTION OF STORMWATER BY PLACING FENCE AS FAR AWAY FROM THE TOE OF SLOPE AS POSSIBLE WITHOUT ENCRoACHING ON SENSITIVE AREAS OR OUTSIDE OF THE CLEARING BOUNDARIES.
2. INSTALL SILT FENCING ALONG CONTOURS WHENEVER POSSIBLE.
3. INSTALL THE ENDS OF THE SILT FENCE TO POINT SLIGHTLY UP-SLOPE TO PREVENT SEDIMENT FROM FLOWING AROUND THE ENDS OF THE FENCE.



ELEVATION VIEW

2 SILT FENCE
SCALE: NTS



1 SITE PLAN
SCALE: 1" = 30'-0"

CLIMATIC AND GEOGRAPHICAL DESIGN CRITERIA - LEWISBORO, NY											
GROUND SNOW LOAD	WIND SPEED (mph)	TOPO EFFECT	WIND-BORNE DEBRIS ZONE	SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM:				WINTER DESIGN TEMPERATURE	ICE SHEILD UNDERLAYMENT REQUIRED	FLOOD HAZARD
					WEATHERING	FROST LINE DEPTH	TERMITE	DECAY			
30	Special Wind Region (126 mph)	NO	NO	C	SEVERE	42"	MODERATE / HEAVY	SLIGHT / MODERATE	7° F	YES	—
										1500 OR LESS	51.6

ZONING COMPLIANCE TABLE

TAX LOT – SECTION 29B, BLOCK 10510, LOT 64

ZONE –R2A

	REQUIRED	EXISTING	PROPOSED
MIN. LOT SIZE –	1 ACRE	2.582 ACRES	-
FRONTAGE	100'	404.47'	-
YARDS			
FRONT (FROM CL STREET)	65'	80'+/-	110' +/-
FRONT (FROM PROPERTY LINE)	40'	39.3'	58.75'
SIDE	15'	36.5' / 170.5'	-
REAR	40'	185'+/-	191.0' +/-
MAXIMUM BLDG HEIGHT	30'	21'	13'
MAX. BLDG COVERAGE	12% / 13,496 SF	0.14%, 1580 SF	1.7%, 1920 SF

REVISIONS

SEAL

CROSS RIVER ARCHITECTS

ROBERT J. EBERTS R.A., PRINCIPAL

P.O. BOX 384
19 NO. SALEM RD., 2nd FL.
CROSS RIVER, N.Y. 10518
914.765.5887
FAX 914.765.8409

PROJECT
STRAUSS DECK & SUNROOM
399 FOUND RIDGE RD.
LEWISBORO, NY

TITLE
SITE PLAN

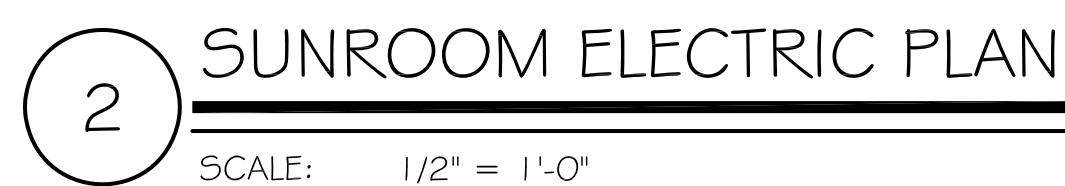
DATE
NOV. 5, 2020

SCALE
1" = 30'-0"

PROJ. #

DRAWING

A / 1



REVISIONS		NOV. 9, 2020
Δ	ELIMINATE RECEIPTACLE	
No.	Desc.	Date

SEAL

CROSS RIVER ARCHITECTS

P.O. BOX 384
1919 NO. SALEM RD., 2nd FL.,
CROSS RIVER, N.Y. 10518
914.763.5887
FAX 914.763.8409

PROJECT
STRAUSS DECK & SUNROOM
399 POUND RIDGE RD.
LEWISBORO, NY

TITLE

PROPOSED FLOOR PLAN & ELECTRIC PLAN

DATE

NOV 9 2020

SCALE

1/4" = 1'-0"

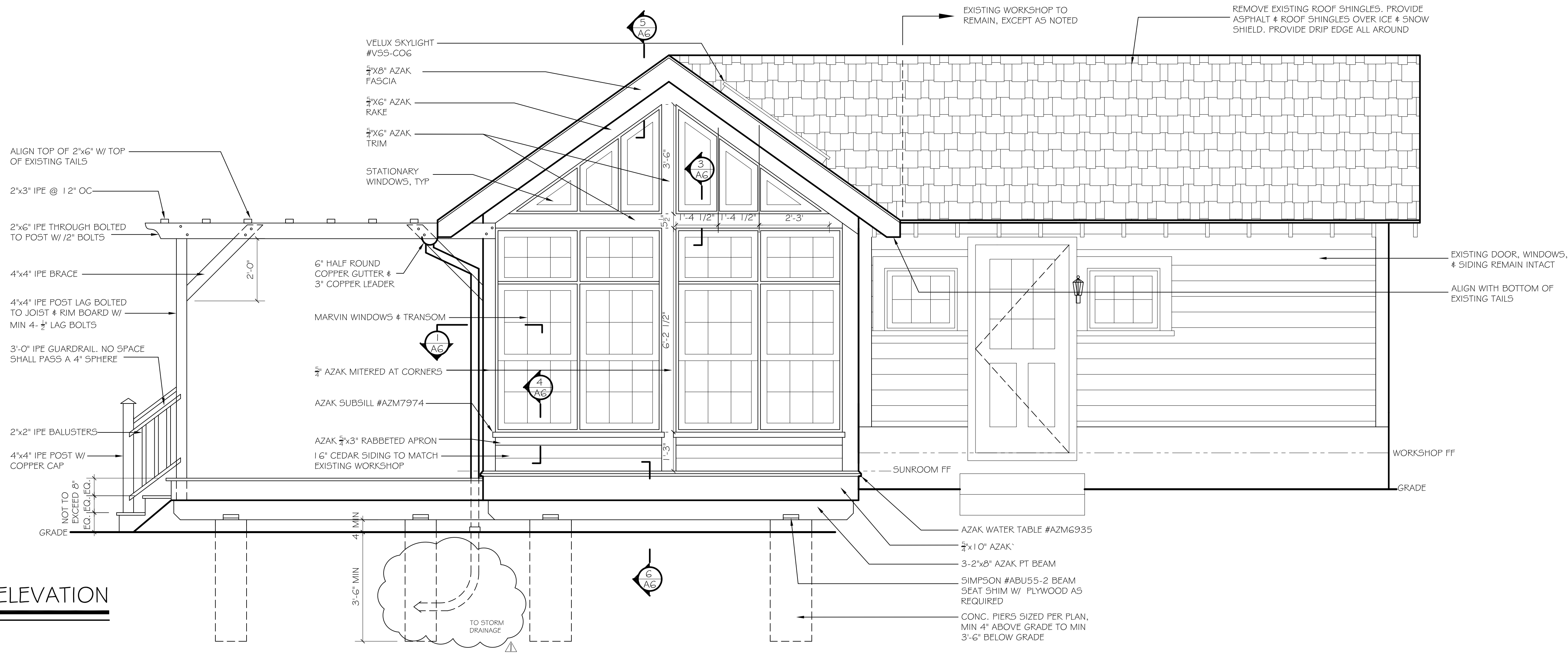
PROJ. #

DRAWING

$$A/3$$

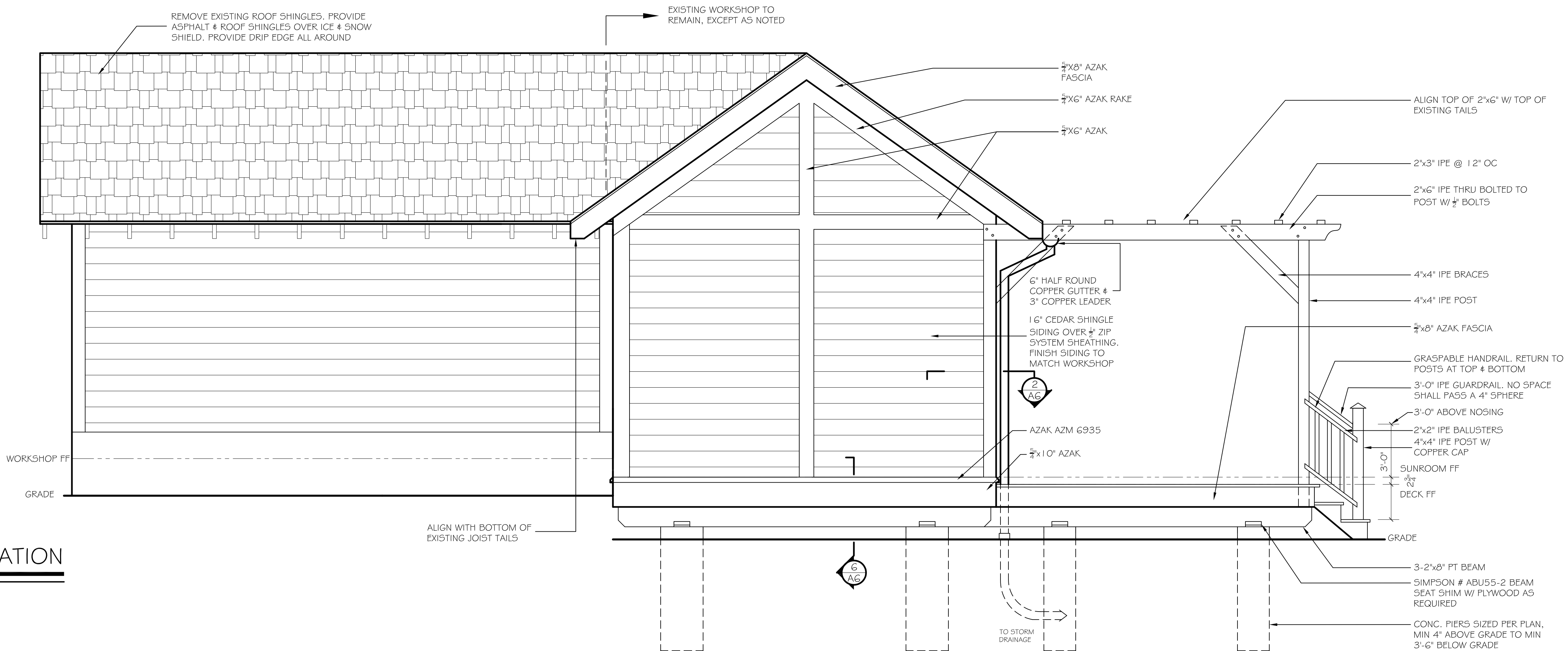
1 PROPOSED FRONT ELEVATION

SCALE: 1/2" = 1'-0"



2 PROPOSED REAR ELEVATION

SCALE: 1/2" = 1'-0"



REVISIONS			
1	CHANGE DIRECTION TO STORM DRAINAGE	NOV. 9, 2020	

CROSS RIVER ARCHITECTS

ROBERT J. EBERTS R.A., PRINCIPAL

P.O. BOX 384
19 NO. SALEM RD. 2nd FL.
CROSS RIVER, N.Y. 10518

914.763.5887
FAX 914.763.8409

PROJECT
STRAUSS DECK & SUNROOM
399 POUND RIDGE RD.
LEWISBORO, NY

TITLE
DECK & SUNROOM FRONT/REAR ELEVATIONS

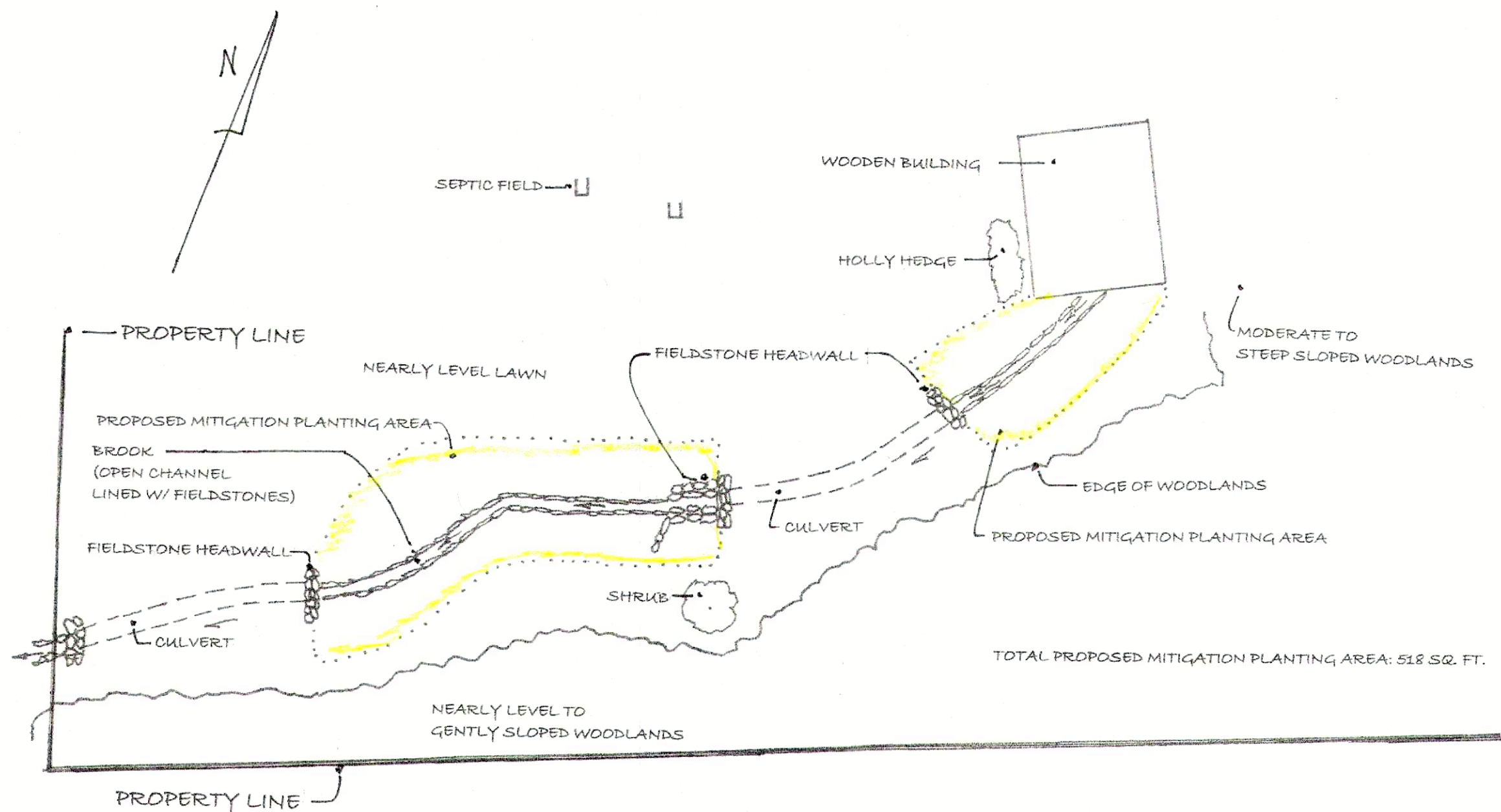
DATE
NOV. 5, 2020

PROJ. #

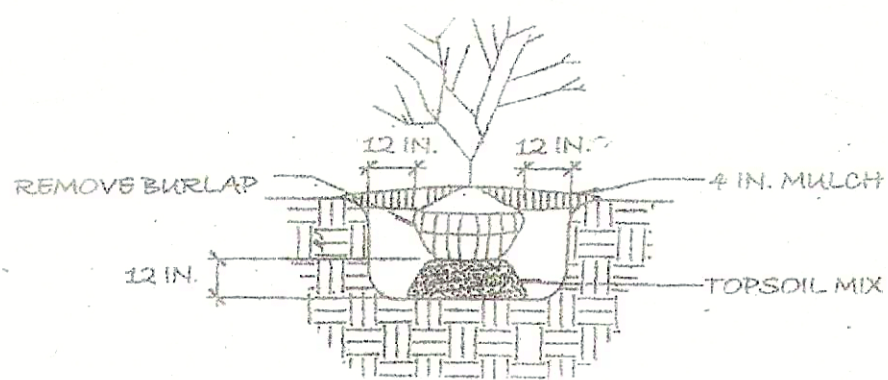
SCALE
1/2" = 1'-0"

DRAWING

A/4



EXISTING CONDITIONS MAP
SCALE: 1 INCH = 10 FT.



SHRUB PLANTING DETAIL
N.T.S.

GENERAL NOTES TO MITIGATION PLANTING PLAN:

1. LOCATION OF PROPERTY LINE, BUILDING, AND DRAINAGE COURSE WITH DRAINAGE STRUCTURES PROVIDED BY CROSS RIVER ARCHITECTS.
2. PLANTING MITIGATION PLAN PREPARED BY PAUL J. JAEHNIG - WETLANDS AND SOILS CONSULTING.



PROPOSED MITIGATION PLANTING PLAN
SCALE: 1 INCH = 10 FT.

KEY TO PROPOSED MITIGATION PLANTING PLAN

PLAN LOCATION	COMMON NAME	BOTANICAL NAME	FORM	SIZE	QUANT.
HERBACEOUS: 180					
CHR	CHRISTMAS FERN	POLYSTICHUM ACROSTICHOIDES	1 QUART CONT.	N/A	40
CF	CINNAMON FERN	OSMUNDA CINNAMOMEA	1 QUART CONT.	N/A	20
HSF	HAY-SCENTED FERN	DENNSTAEDIA PUNCTILOBULA	1 QUART CONT.	N/A	20
LF	LADY FERN	ATHYRIUM ANGSTUM	1 QUART CONT.	N/A	20
MHF	MAIDENHAIR FERN	ADIANTUM PEDATUM	1 QUART CONT.	N/A	20
NYF	NEW YORK FERN	THELYPTERIS NOVEBORACENSIS	1 QUART CONT.	N/A	20
SF	SENSITIVE FERN	ONOCLEA SENSIBILIS	1 QUART CONT.	N/A	40

GENERAL PLANTING NOTES:

1. VERIFY ANY BURIED UTILITIES.
2. PLANTING TO BE CARRIED-OUT BETWEEN APRIL 15 TO JUNE 1 AND AUG. 15 TO NOV. 1 (UNLESS OTHERWISE DIRECTED BY THE TOWN OF LEWISBORO WETLAND INSPECTOR.
3. PLANTS ARE TO BE INSTALLED AS DEPICTED ON THE PLAN, AS IS FEASIBLE.
4. PLANT HOLES AND GROUND PREPARATION TO BE CARRIED-OUT AS DEPICTED IN DETAIL. HOLES FOR PLANTINGS SHOULD BE EXCAVATED TO AT LEAST 4 INCHES CLEARANCE AROUND THE SOIL BALL AND BELOW ROOT SYSTEM, AS IS PRACTICAL. THE SOIL IN THE BOTTOM OF THE HOLE SHALL BE LOOSENEED TO A DEPTH OF 4 INCHES.
5. THE PLANTS WILL BE PLACED IN AN UPRIGHT POSITION IN THE HOLES ON A PEDESTAL OF COMPACTED TOPSOIL MIX TO A DEPTH SUCH THAT THE ROOT "COLLAR" IS COINCIDENT WITH THE ESTABLISHED GROUND LEVEL.
6. EACH HOLE WILL BE BACKFILLED WITH TOP SOIL HAVING A TWO TO TWENTY PERCENT ORGANIC CONTENT. PLACE THIN COVER OF SHREDED BARK MULCH OR APPROPRIATE SUBSTITUTE, AROUND THE BASE OF INSTALLED PLANTS. INSTALL TEMPORARY DEER FENCING AROUND YOUNG PLANTS BASED ON SITE CONDITIONS.
7. MAINTAIN REMAINING LAWN BETWEEN INSTALLED PLANTS, AS IS PRACTICAL, IN ORDER TO ANCHOR SOIL IN PLANTING AREA WHILE PLANTS ARE FILLING IN.
8. ALL PLANTS WILL BE THOROUGHLY WATERED ON THE DAY OF PLANTING, AS IS WARRANTED.
9. WATER PLANTS DAILY FOR TWO WEEKS AFTER PLANTING, IF NEEDED. CONTINUE WATERING PLANTS EVERY TWO WEEKS, IF NEEDED, DURING DRY PERIODS THAT EXCEED THREE WEEKS WITHOUT A GOOD SOAKING.
10. ALL AREAS DISTURBED BY PLANTING MITIGATION WORK, INCLUDING ACCESS ROUTE, WILL BE RESTORED TO EXISTING OR BETTER CONDITIONS.
11. NOTIFY TOWN OF LEWISBORO WETLAND INSPECTOR ONCE PLANTINGS ARE INSTALLED SO THAT THE TOWN CAN MAKE A SITE VISIT TO INSPECT THE WORK.

GENERAL MAINTENANCE SCHEDULE FOR MITIGATION PLANTING AREA.

1. PERIODICALLY INSPECT PLANTING AREAS TO SELECTIVELY REMOVE, BY HAND, UN-WANTED INVASIVE PLANTS (WEEDS).
2. SELECTIVELY HAND CUT REMAINING LAWN AREA WITHIN MITIGATION PLANTING AREA, AS NEEDED, SO AS TO REMOVE ANY UN-WANTED WEED GROWTH (WEEDS) OVER PERIOD OF MINIMUM OF 2-3 YEARS.
3. REMOVAL OF LEAF LITTER SHOULD BE LIMITED TO HAND CLEARING IN PLANTED AREAS.
4. THE PROPERTY OWNER AGREES TO REFRAIN FROM USE OF CHEMICAL APPLICATIONS, INCLUDING, BUT NOT LIMITED TO, FERTILIZER, HERBICIDES, PESTICIDES, AND FUNGICIDES.

PROPOSED MITIGATION PLANTING PLAN &
EXISTING CONDITIONS MAP

THE STRAUSS SITE
399 POUND RIDGE ROAD
LEWISBORO, NY

PREPARED FOR
TED AND JANICE STRAUSS

FEB. 7, 2021

PREPARED BY

PAUL J. JAEHNIG - WETLANDS AND SOILS CONSULTING
P.O. BOX 1071 RIDGEFIELD, CT 06877 TEL. 203 438 9993

PLAN SCALE: 1 INCH = 10 FT.