June 14, 2021

Mr. Christopher Carthy, Chairman
and Members of the Planning Board
Town of North Castle
17 Bedford Road
Armonk, NY 10504

RE: JMC Project 20101
Summit Club Residential
Bedford Road (Route 22)
Town of North Castle, NY

Response to Town Comments Resubmission

Dear Chairman Carthy and Members of the Planning Board:

On behalf of the owner and applicant, Summit Club Partners, LLC, we are pleased to submit the following documents for your continued review of the Site Plan Application for the proposed residential development on The Summit Club residential property:

1. JMC Drawings:

Dwg. No.	Title	Rev. #/Date	
C-000	Cover Sheet	3	06/14/2021
C-010	Overall Existing Conditions Map	3	06/14/2021
C-011	Existing Conditions Map (South)	3	06/14/2021
C-012	Existing Conditions Map (North)	3	06/14/2021
C-020	Site Demolition & Tree Removal Plan (South)	3	06/14/2021
C-021	Site Demolition & Tree Removal Plan (North)	3	06/14/2021
C-022	Site Tree Removal Table	3	06/14/2021
C-100A	Overall Site Layout and Phasing Plan	3	06/14/2021
C-100	Site Layout Plan (South)	3	06/14/2021
C-101	Site Layout Plan (North)	3	06/14/2021
C-102	Fire Truck Access Plan	3	06/14/2021
C-200	Site Grading Plan (South)	3	06/14/2021
C-201	Site Grading Plan (North)	3	06/14/2021
C-202	Road Profiles Plan	3	06/14/2021
C-300	Site Utilities Plan (South)	3	06/14/2021
C-301	Site Utilities Plan (North)	3	06/14/2021
C-302	Sanitary Sewer Profiles	3	06/14/2021

C-303	Water Main Profile	3	06/14/2021
C-304	Storm Sewer Profiles	3	06/14/2021
C-400	Site Erosion and Sediment Control Plan (South)	3	06/14/2021
C-401	Site Erosion and Sediment Control Plan (North)	3	06/14/2021
C-402	Erosion and Sediment Control/Phasing Notes	3	06/14/2021
C-900	Construction Details	3	06/14/2021
C-901	Construction Details	3	06/14/2021
C-902	Construction Details	3	06/14/2021
C-903	Construction Details	3	06/14/2021
PSP-1	Preliminary Subdivision Plat	3	06/14/2021
IPP-1	Integrated Plot Plan	3	06/14/2021

2. Granoff Architects Drawings:

Dwg. No.	Title	Rev. #/Date	
Residences:			
LS100	Overall Site Plan-Landscape	5	06/14/2021
LS101	Amenities Side Site Plan-Landscape	5	06/14/2021
LS102	Main Entry Plan-Landscape	5	06/14/2021
LS103	Residential Side Site Plan-Landscape	5	06/14/2021
LS104	Residence Typical Plan-Landscape	5	06/14/2021
LS105	Detention Basin Planting Plan		06/14/2021

3. Drawing SL-1A "Exterior Lighting Photometric Calculation", prepared by Apex Lighting Solutions, dated 06/11/2021.

4. "Preliminary Stormwater Pollution Prevention Plan", prepared by JMC, dated 06/14/2021

The revisions depicted on the above noted plans reflect responses to comments outlined in the Town of North Castle Planning Department memorandum, dated March 17, 2021. For ease of review, we have repeated and enumerated the comments in italic print, followed by our responses:

Town of North Castle Planning Department, dated March 17, 2021

General Comments

Comment No. 1

The Applicant has substantially revised the site plan to eliminate the upper seventh two-story building. The site plan now depicts 6 buildings in one area of development. The Planning Department is in full support of the revised development plan.

Response No. 1

The comment is so noted.

Comment No. 2

As requested, the plans have been revised to include a project summary comparison between the Findings Project and the currently proposed project; however, some of the table entries for the project are TBD. As the project develops, this table should be updated as necessary.

Response No. 2

Additional items previously indicated as TBD in the summary table comparing the DEIS, FEIS and current residential design has been revised accordingly.

Comment No. 3

It is understood that the Applicant is in the process of preparing a detailed and specific landscape plan for review. However, prior to the Planning Board approving the site plan, the Applicant will need to submit a detailed planting plan for review.

Response No. 3

A detailed and specific landscape plan has been prepared and included in this submission. Please refer to plans and renderings prepared by Granoff Architects.

Comment No. 4

The site plan depicts new tennis courts (structures) in the "front yard" of the property. While the tennis courts have been removed from the buffer, it is recommended that the site plan be revised to eliminate the tennis courts from the front yard since this area serves as the gateway to the project. This area should be incorporated into a formal landscaping/screening plan.

Response No. 4

The tennis courts are convenient to the Amenities Pavilion and are an important component of the club's athletic facilities. Substantial understory screening proposed along Rt 22, will serve to screen the courts from the road. Once bramble is removed to provide space for screening planting, a large number of existing trees are to be maintained, as shown on LS100. Please refer to plans and renderings prepared by Granoff Architects.

Comment No. 5

The site plan should be revised to depict the grading proposed for the future tennis courts since it is anticipated that the rough grading for the courts will be performed at this time.

Response No. 5

Grading has been depicted for the future roadway and tennis courts. Please refer to Site Grading Plans prepared by JMC.

Comment No. 6

The site plan depicts a future road to provide access to the future tennis courts. It seems like a fully designed road would not be required for access. Perhaps, a golf cart path would be more appropriate for this area.

Response No. 6

A future roadway is being proposed to the future tennis courts to provide emergency vehicular access as previously discussed with the Armonk Fire Chief and Building Inspector.

Comment No. 7

If the proposed future tennis courts or other active recreation area is not proposed to be constructed, it is recommended that a temporary use be established in this area. Consideration should be given to implementing the type of improvements constructed at the former MBIA property (path, walking trail, park like setting) that JMC prepared for that project.

Response No. 7

Given the numerous permanent recreational amenities (18-hole golf course, amenities complex pool, tennis courts, putting green course, network of cart paths and sidewalks, etc.) that will be available to residents and members of The Summit Club at Armonk, a temporary active recreation area at the future tennis court area seems unnecessary, especially since it is undetermined when the future tennis courts will be built.

Comment No. 8

The site plan shall be revised to depict a lighting plan that conforms to the minimum requirements of Section 355-45.M of the Town Code. The Applicant should indicate whether the tennis courts are proposed to be lit.

Response No. 8

A lighting plan conforming to the minimum requirements of Section 355-45.M of the Town code has been prepared and included in this submission. Please refer to plans prepared by Apex Lighting Solutions.

Comment No. 9

The site plan shall be revised to provide calculations demonstrating that the proposed units meet the minimum size requirements of the GCCFO Zoning District.

Response No. 9

Efficiency: 450 square feet;	(None Proposed)
One-bedroom: 700 square feet;	(None Proposed)
Two-bedroom: 900 square feet; and	(Minimum Proposed is 2,377sf)
Three-bedroom: 1,100 square feet	(Minimum Proposed is 2,997 sf)

Comment No. 10

A golf course community must be affiliated with an adjoining membership club which is subject to a Town Board special use permit. Such affiliation shall be established by the requirement that, except for the initial developer/sponsor of the golf course community and successor sponsors/owners of units which have not yet been sold for owner occupancy, the owner of a dwelling unit of the golf course community must for the duration of ownership be a member (whether individually or as a family) of the membership club. The terms and conditions of membership shall be determined by the membership club.

The golf course of the affiliated membership club functions as the open space for the golf course community, and preservation of that open space is a basis for the permitted density of a golf course community. Accordingly, as a condition of site development plan approval of a golf course community, the affiliated membership club shall record in the Westchester County Clerk's office a permanent conservation easement pursuant to which the membership club agrees that the property on which the golf course is located shall be used solely as a golf course or as open space. The conservation easement shall be in form and substance reasonably acceptable to the Town Board and Town Attorney.

Response No. 10

The owners of the market-rate residences will all be members of The Summit Club which is opening in April, 2021. A Temporary Special Use Permit for the club/golf course operations, including the temporary facilities was approved by the Town Board on 02/24/2021.

The golf course lot is already subject to a recorded Declaration providing that the golf course lot can only be used as a golf course/club or as open space. The landowner, Summit Club Partners, LLC, will enter into a permanent conservation easement and file it with the Westchester County Clerk's office.

Comment No. 11

The Applicant will need to file the previously discussed conservation easement prior to the issuance of the first building permit.

Response No. 11

The comment is so noted.

Comment No. 12

The site plan should be revised to depict the phasing plan agreed to by the Town of North Castle and the Applicant.

In December, 2019, in consideration of the adoption by the Town of the Amendment, the Applicant recorded a Declaration pursuant to which the Applicant may, subject to site plan approval, construct on the Development Lot a first phase of the Community ("Phase 1 "), which may consist of up to thirty-six (36) residences, which may be fee-simple homes and/or condominium units without limitation regarding form of ownership of the residences, and a second phase of the Community ("Phase 2"), which may consist of up to thirty-seven (37) residences, which may be fee-simple homes and/or condominium units without limitation regarding form of ownership of the residences; provided that unless the aggregate average of the gross sales prices of the market-rate Phase 1 condominium units is $700.00 per square foot or more, the Phase 2 condominium residences are required to be "55 and older" age-restricted housing as permitted under applicable federal law and regulations. The Declaration also requires Phase 1 to include four (4) on-site affordable units, and Phase 2 to include three (3) on-site affordable units. However, the Applicant is permitted to at any time elect to relocate all or a portion of the affordable units off-site within areas in the Armonk Hamlet that are served by public sewer and water, and thereby reduce the on-site affordable units and substitute market-rate units therefor on a one-to-one basis, provided that in no event shall the total number of residential units on the Property exceed seventy-three (73).

Response No. 12

A note and general phasing areas have been depicted on the drawings. Please refer to JMC drawing C-100A "Overall Site layout and Phasing Plan", last revised 06/14/2021.

Comment No. 13

The Applicant has indicated that chipping would be required during construction. At this time, the Applicant should provide details for review by the Planning Board.

Response No. 13

Based on the subsurface geotechnical exploration conducted at the property, rock is present in the proposed redevelopment area and blasting and/or chipping will be required to remove the rock during construction. All rock removal processes shall meet all applicable Town of North Castle. Additional information related to blasting and/or rock chipping in accordance with Town Code Chapter 22 "Blasting, Explosives and Chipping, last revised 11/18/2020 will be provided under separate cover.

Comment No. 14

The Applicant has indicated that rock processing would be proposed on the site. Additional details should be submitted regarding the proposed operation at this time.

Response No. 14

Based on the subsurface geotechnical exploration conducted at the property, rock is present in the proposed redevelopment area. Once removed, the rock will be processed on-site and used for construction. A note has been added to the site plans. All rock processing operations shall meet all applicable Town of North Castle and Westchester County Department of Health requirements. Additional information related to on-site rock processing in accordance with all local and WCDH requirements will be provided under separate cover.

Comment No. 15

The Town charges a fee in lieu of providing recreation facilities. The Applicant believes that sufficient on-site recreational facilities are being provided to meet the demand of the project, and has requested a credit be given for the market rate homes. The residents of the AFFH units would not be required to be members of the Club and would likely use Town recreation facilities. Therefore, the required $1,000 per unit fee in lieu should be paid by the Applicant for the AFFH units.

Response No. 15

The comment is so noted.

Comment No. 16

The site plan should be revised to quantify the proposed amount of Town-regulated steep slope disturbance proposed.

Response No. 16

The amount of proposed Town-regulated steep slope disturbance has been quantified and depicted in a summary table comparing the DEIS, FEIS and current residential design. Please refer to JMC drawing C-100A "Overall Site Layout and Phasing Plan", last revised 05/14/2021.

Comment No. 17

The site plan should be revised to quantify the proposed amount of Town-regulated tree removal proposed.

Response No. 17

The amount of proposed Town-regulated tree removal has been quantified and depicted in the summary table comparing the DEIS, FEIS and current residential design. Please refer to JMC drawing C-100A "Overall Site Layout and Phasing Plan", last revised 05/14/2021.

Comment No. 18

The site plan should be revised to quantify the proposed amount of Town-regulated wetland or wetland buffer disturbance proposed (including at the sewer treatment plant and water infrastructure).

Response No. 18

The applicant currently intends to use the existing sewage treatment plant (STP) to retrofit with an upgraded sewage treatment plant and continue to utilize the existing discharge pipe, therefore, there is no anticipated disturbance to Town-regulated wetlands or wetland buffer at this time. The amount of proposed Town-regulated wetland/wetland buffer disturbance has been quantified and depicted in the summary table comparing the DEIS, FEIS and current residential design. Please refer to JMC drawing C-100A "Overall Site Layout and Phasing Plan", last revised 05/14/2021.

Comment No. 19

The Applicant should update the Planning Board regarding the status of providing potable water to the project.

Response No. 19

The applicant is working with the Town Board to come up with an appropriate solution to the water supply issue.

Comment No. 20

The Applicant should update the Planning Board regarding the plans to improve the wastewater treatment plant.

Response No. 20

The applicant is in the process of retaining the services of a Sewage Treatment Plant consultant regarding the new wastewater treatment plant. The new plant will be sized appropriately to accommodate the proposed residential, golf club and various amenities facilities.

Comment No. 21

Pursuant to Section 355-56.H(2) of the Town Code, 10% of the parking share shall be landscaped. The site plan should be revised to demonstrate conformance with this requirement.

Response No. 21

Landscaping will be provided around the external off-street parking areas as required. A calculation demonstrating conformance with the 10% landscaping requirement has been prepared and included in this submission. Please refer to JMC plan C-100A "Overall Site Layout and Phasing Plan", last revised 06/14/2021.

Comment No. 22

The Applicant has stated that signage is proposed for the project. The location and design of the signage should be included on the plans at this time.

Response No. 22

New entrance signage will be proposed on the new decorative stone walls proposed at the entrance to the site. Additional signage will be provided throughout the interior of the development area as required (traffic control, directional, etc.). Details of proposed signage will be provided under separate cover.

Comment No. 23

Pursuant to Section 355-34.I(5)(b) of the Town Code, within multifamily developments, the affordable AFFH units shall be physically integrated into the design of the development and shall be distributed among various sizes (efficiency, one-, two-, three- and four-bedroom units) in the same proportion as all other units in the development. The plan should identify which units will be AFFH and demonstrate that the unit sizes are equally distributed among the various sizes.

Response No. 23

The applicant intends to locate all AFFH units off-site. Nevertheless, as required by the December, 2019 Declaration, if they are not located off-site, four of the units in the first phase will be AFFH units, and three of the units in the second phase will be AFFH units.

Comment No. 24

Pursuant to Section 355-24.I.1 of the Town Code AFFH units shall be marketed in accordance with the Westchester County Fair Affordable Housing Affirmative Marketing Plan.

Response No. 24

The comment is so noted.

Comment No. 25

Pursuant to Section 355-24-I.2 of the Town Code, the maximum monthly rent for an affordable AFFH unit and the maximum gross sales price for an AFAH unit shall be established in accordance with US Department of Housing and Urban Development guidelines as published in the current edition of the Westchester County Area Median Income AMI Sales Rent Limits available from the County of Westchester.

Response No. 25

The comment is so noted.

Comment No. 26

Pursuant to Section 355-24-I.3 of the Town Code, units designated as affordable AFFH units shall remain affordable for a minimum of 50 years from date of initial certificate of occupancy for rental properties and from date of original sale for ownership units.

Response No. 26

The comment is so noted.

Comment No. 27

Pursuant to Section 355-24-I.4 of the Town Code, a property containing any affordable AFFH units shall be restricted using a mechanism such as declaration of restrictive covenants in recordable form acceptable to the Town which shall ensure that the affordable AFFH unit shall remain subject to affordable regulations for the minimum 50-year period of affordability. The covenants shall require that the unit be the primary residence of the resident household selected to occupy the unit upon approval such declaration shall be recorded against the property containing the affordable AFFH unit prior to the issuance of a Certificate of Occupancy for the development.

Response No. 27

The comment is so noted. The applicant will comply. Section 1d of the 12/11/2019 zoning declaration applies and specifies the conditions for issuance of Certificates of Occupancy.

Comment No. 28

Pursuant to Section 355-34.I(6)(a) of the Town Code the Applicant shall submit an exhibit demonstrating that the proposed AFFH units meet the minimum size requirements and are not less than 80% of the of average floor area of market rate units.

Response No. 28

The unit sizes of the market-rate residences will range from 2500-5000 SF. Given the very large sizes of these units, the applicant intends to seek relief from the Town from the minimum AFFH unit size requirement.

We trust the attached documents and above responses are sufficient for your review and we respectfully request placement on the March 22nd Planning Board agenda. Thank you for your consideration.

If you have any questions or require additional information, please do not hesitate to contact our office at (914) 273-5225.

Sincerely,

JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC

Paul Sysak

Paul R. Sysak, RLA
Project Manager

cc: Adam R. Kaufman, AICP
Joseph M. Cermele, PE, CFM
Roland Baroni, Esq.
Jeffrey B. Mendell
Mark P. Weingarten, Esq.
Peter J. Wise, Esq.
Rich S. Granoff, AIA, LEED AP
Kenneth S. Andersen, AIA

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UNDERSTORY PLANTING PALETTE:

AMELANCHIER ARBOREA — CERCIS CANADENSIS — PICEA GLAUCA

RHODODENDRON MAXIMUM — HYDRANGEA QUERCIFOLIA — VACCINIUM CORYMBOSUM — VIBURNUM DENTATUM

ORNAMENTAL PLANTING PALETTE:

TILIA CORDATAT 'GREENSPIRE' — BUXUS VARIOUS SIZES — VIBURNUM OPULUS

SPOROBULUS HETEROLEPIS — CALAMAGROSTIS 'KARL FOERSTER' — LIRIOPE SPICATA

NEPETA 'BLUE WONDER' — SALVIA NEMOROSA 'CARADONNA' — ASTILBE 'VISIONS IN WHITE'

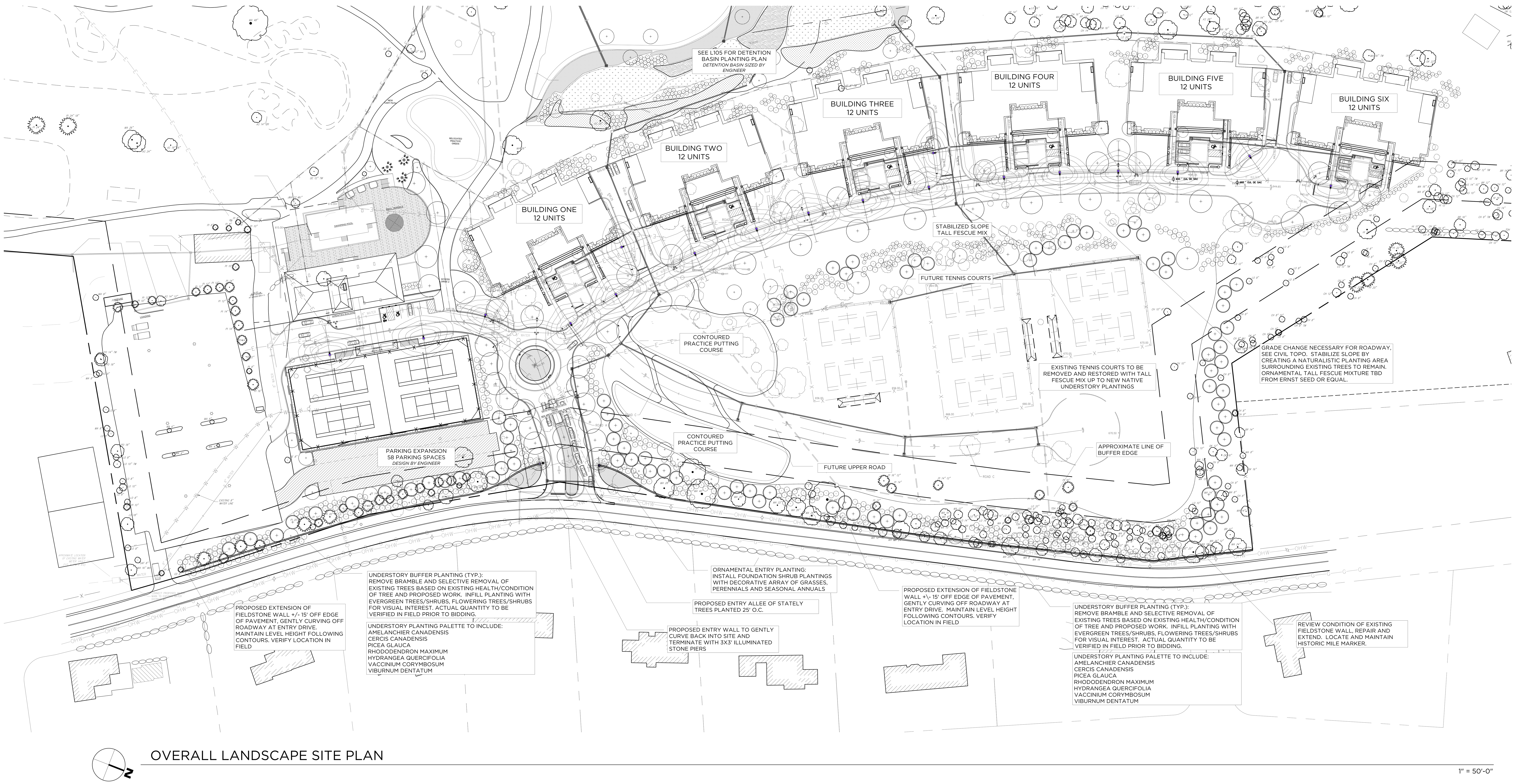
NATURALISTIC PLANTING PALETTE:

AGASTACHE MIXED WITH ECHINACEA MEADOW MIX — LARGE SWATHS OF GRASSES WITH TREES AND SHRUBS — AMSONIA DRIFTS FOR FAUL INTEREST COLOR

MASONRY WALL ALONG RT 22

PROPOSED NEW ENGLAND FIELDSTONE WALL STYLE, TERMINATING AT ENTRY ROADWAY IN 3x3' STONE PIERS WITH LIGHTS

LAYERING TRANSITIONING FROM MOWED LAWN, TO WOODED AREAS — LARGE SWATHS OF GRASSES, WITH MOWED PATHS



OVERALL LANDSCAPE SITE PLAN

1" = 50'-0"

GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830
203.625.9460
WWW.GRANOFFARCHITECTS.COM

CONSULTANTS
Landscape Architect:
Granoff Architects
330 Railroad Ave
Greenwich, CT, 06830

Civil:
JMC Site Development Consultants
120 Bedford Road
Armonk, NY, 10504

REVISIONS

#	DATE	REVISION DESCRIPTION	BY:
1	11.23.20	PLANNING BOARD SUBMISSION	KA
2	01.11.21	ARB SUBMISSION	KA
3	03.08.21	ARB SUBMISSION	KA
4	05.09.21	ARB SUBMISSION	KA
5	06.14.21	PLANNING BOARD SUBMISSION	KA

PHASE
SUBMITTAL

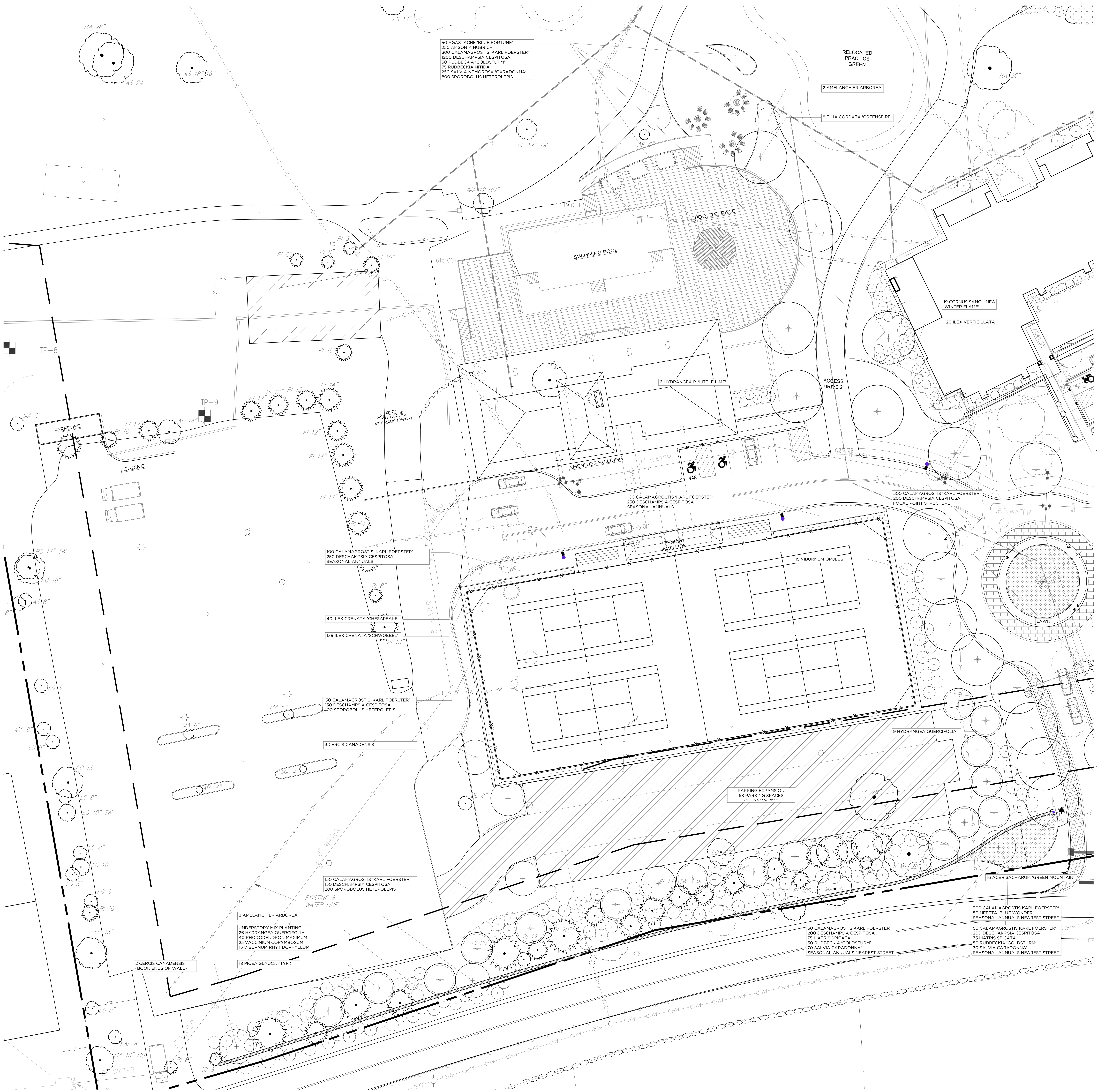
PROJECT NAME
SUMMIT CLUB PARTNERS LLC

ARMONK, NY

JOB NO.: **20035**
DRAWN BY: **JS** PROJ. MANAGER: **KA**
DATE: **03.08.21** SCALE:

DRAWING TITLE
OVERALL SITE PLAN - LANDSCAPE

DRAWING NO.
LS100



SOUTHERN BUFFER AND AMENITIES LANDSCAPE PLAN

1" = 20'-0"

PLANTING SCHEDULE

Amenity Building & Tennis Courts

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
8	TREES			
2	*Amelanchier arborea*	Serviceberry	7-8'	Multi stem
3	*Cercis canadensis*	Redbud	2" cal.	Single stem
8	*Tilia cordata 'Greenspire'*	Little Leaf Linden	3.5" cal	Specimen
239	SHRUBS			
19	*Cornus sanguinea 'Winter Flame'*	Red twig Dogwood	3 gal.	
6	*Hydrangea p. 'Little Lime'*	Little Lime Hydrangea	5 gal.	
40	*Ilex crenata 'Chesapeake'*	Chesapeake Japanese Holly	2-3'	Full, Hedge quality
139	*Ilex crenata 'Schwoebel'*	Upright Japanese Holly	4-5'	Upright, Hedge quality
20	*Ilex verticillata*	Winterberry	3'-4'	
15	*Viburnum opulus*	Snowball Viburnum	5 gal.	Full Shape
4975	GRASSES/PERENNIALS			
50	*Agastache 'Blue Fortune'*	Anise Hyssop	1 gal.	
250	*Amsonia hubrichtii*	Blue Star	1 gal.	
800	*Calamagrostis 'Karl Foerster'*	Feather Reed Grass	1 gal.	
2100	*Deschampsia cespitosa*	Tufted Hair Grass	1 gal.	
50	*Rudbeckia 'Goldsturm'*	Black Eyed Susan	1 gal.	
75	*Rudbeckia nitida*	Shiny Coneflower	1 gal.	
250	*Salvia nemorosa 'Caradonna'*	Caradonna Meadow Sage	1 gal.	
1400	*Sporobolus heterolepis*	Prarie Dropseed	1 gal.	
15000	BULBS			
15,000	*Narcissus naturalizing mix*	Naturalizing daffodils	Bulb	

PLANTING SCHEDULE

South Buffer

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
23	TREES			
3	*Amelanchier arborea*	Serviceberry	7-8'	Multi stem
2	*Cercis canadensis*	Redbud	2" cal.	Single stem
18	*Picea glauca*	White Spruce	7-8'	Full shape, Wide bas
106	SHRUBS			
26	*Hydrangea quercifolia*	Oakleaf Hydrangea	5 gal.	Full shape
40	*Rhododendron maximum*	Native Rhododendron	3'	B&B, Full Shape
25	*Vaccinium corymbosum*	Highbush Blueberry	5 gal.	Full shape
15	*Viburnum rhytidophyllum*	Leatherleaf Viburnum	3-4'	B&B, Full Shape

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PHASE

SUBMITTAL

PROJECT NAME

SUMMIT CLUB PARTNERS LLC

ARMONK, NY

JOB NO.: **20035**

DRAWN BY: **JS** PROJ. MANAGER: **KA**

DATE: **03.08.21** SCALE:

DRAWING TITLE

AMENITIES SIDE SITE PLAN - LANDSCAPE

DRAWING NO.

LS101

MAIN ENTRY LANDSCAPE PLAN

1" = 20'-0"

PUTTING COURSE AT ST ANDREWS
GOLF COURSE - SCOTLAND

PUTTING COURSE AT ERIN HILLS
GOLF COURSE - WISCONSIN

PLANTING SCHEDULE

Front Entry

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
16	TREES			
16	*Acer saccharum 'Green Mountain'*	Sugar Maple	3.5-4" cal.	Specimen, High Branching, Matching
3	*Cercis canadensis*	Redbud	2" cal.	Single stem
31	SHRUBS			
21	*Hydrangea quercifolia*	Oakleaf Hydrangea	5 gal.	Full shape
10	*Viburnum opulus*	Snowball Viburnum	5 gal.	Full Shape
1450	GRASSES/PERENNIALS			
400	*Calamagrostis 'Karl Foerster'*	Feather Reed Grass	1 gal.	
400	*Deschampsia cespitosa*	Tufted Hair Grass	1 gal.	
200	*Echinacea 'White Swan'*	Coneflower	1 gal.	
150	*Liatris spicata*	Liatris	1 gal.	
50	*Nepeta 'Blue Wonder'*	Catmint	1 gal.	
100	*Rudbeckia 'Goldsturm'*	Black Eyed Susan	1 gal.	
150	*Salvia nemorosa 'Caradonna'*	Caradonna Meadow Sage	1 gal.	
150	BULBS			
150	*Allium 'Gladiator'*	Allium	Bulb	
2500	*Narcissus naturalizing mix*	Naturalizing daffodils	Bulb	

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5	06.14.21	PLANNING BOARD SUBMISSION	KA

PHASE

SUBMITTAL

PROJECT NAME

SUMMIT CLUB PARTNERS LLC

ARMONK, NY

JOB NO.: 20035

DRAWN BY: JS   PROJ. MANAGER: KA

DATE: 03.08.21   SCALE:

DRAWING TITLE

MAIN ENTRY PLAN - LANDSCAPE

DRAWING NO.

LS102

PLANTING SCHEDULE

North Buffer

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
43	TREES			
7	*Amelanchier arborea*	Serviceberry	7-8'	Multi stem
5	*Cercis canadensis*	Redbud	2" cal.	Single stem
31	*Picea glauca*	White Spruce	7-8'	Full shape, Wide base
142	SHRUBS			
20	*Hydrangea quercifolia*	Oakleaf Hydrangea	5 gal.	Full shape
57	*Rhododendron maximum*	Native Rhododendron	3'	B&B, Full Shape
25	*Vaccinium corymbosum*	Highbush Blueberry	5 gal.	Full shape
20	*Viburnum opulus*	Snowball Viburnum	5 gal.	Full Shape
20	*Viburnum rhytidophyllum*	Leatherleaf Viburnum	3-4'	B&B, Full Shape

PLANTING SCHEDULE

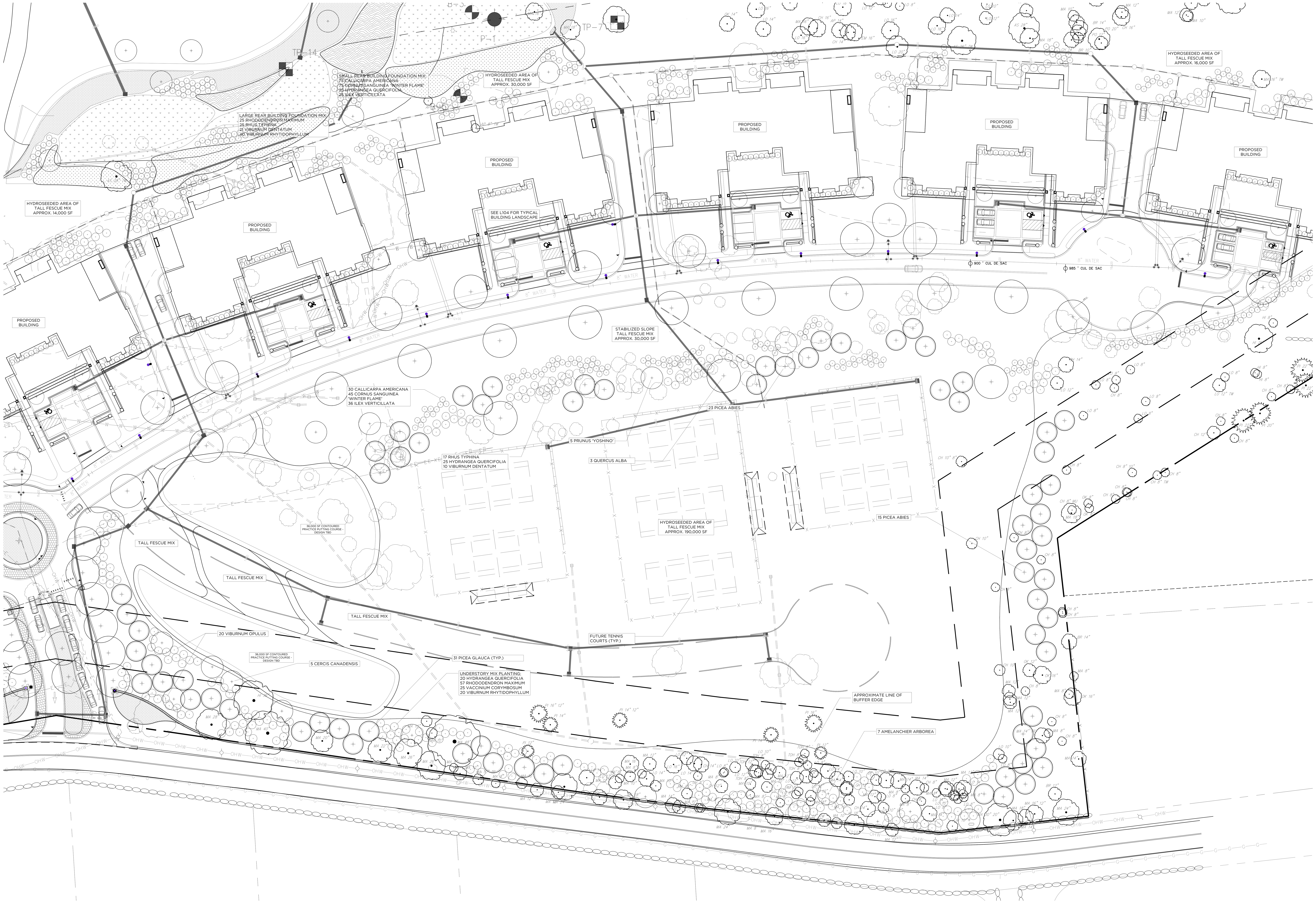
Stabilized Slope Naturalistic Planting

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
28	TREES			
18	*Picea abies*	Norway Spruce	7-8'	Full shape, Wide base
7	*Prunus x 'Okame'*	Okame Cherry	8-10'	Single stem
3	*Quercus alba*	White Oak	2' cal.	Full shape, Wide base
256	SHRUBS			
30	*Callicarpa americana*	Beauty Berry	3 gal.	
45	*Cornus sanguinea 'Winter Flame'*	Red twig Dogwood	3 gal.	
78	*Hydrangea quercifolia*	Oakleaf Hydrangea	5 gal.	Full shape
36	*Ilex verticillata*	Winterberry	3'-4'	
57	*Rhus typhina*	Staghorn Sumac	3 gal.	
10	*Viburnum dentatum*	Arrowwood Viburnum	3 gal.	Full shape

PLANTING SCHEDULE

Street Trees and Rear Building Planting

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
25	TREES			
25	*Tilia cordata 'Greenspire'*	Little Leaf Linden	3.5" cal	Specimen
311	SHRUBS			
75	*Callicarpa americana*	Beauty Berry	3 gal.	
75	*Cornus sanguinea 'Winter Flame'*	Red twig Dogwood	3 gal.	
50	*Hydrangea quercifolia*	Oakleaf Hydrangea	5 gal.	Full shape
25	*Ilex verticillata*	Winterberry	3'-4'	
40	*Rhododendron maximum*	Native Rhododendron	3'	B&B, Full Shape
25	*Rhus typhina*	Staghorn Sumac	3 gal.	
21	*Viburnum dentatum*	Arrowwood Viburnum	3 gal.	Full shape
40	*Viburnum rhytidophyllum*	Leatherleaf Viburnum	3-4'	B&B, Full Shape



NORTHERN BUFFER AND RESIDENTIAL LANDSCAPE PLAN

1" = 30'-0"

GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830
203.625.9460
WWW.GRANOFFARCHITECTS.COM

CONSULTANTS

Landscape Architect:
Granoff Architects
330 Railroad Ave
Greenwich, CT, 06830

Civil:
JMC Site Development Consultants
120 Bedford Road
Armonk, NY, 10504

REVISIONS

#	DATE	REVISION DESCRIPTION	BY:
1	11.23.20	PLANNING BOARD SUBMISSION	KA
2	01.11.21	ARB SUBMISSION	KA
3	03.08.21	ARB SUBMISSION	KA
4	05.09.21	ARB SUBMISSION	KA
5	06.14.21	PLANNING BOARD SUBMISSION	KA

PHASE

SUBMITTAL

PROJECT NAME

SUMMIT CLUB PARTNERS LLC

ARMONK, NY

JOB NO.: **20035**

DRAWN BY: **JS** PROJ. MANAGER: **KA**

DATE: **03.08.21** SCALE:

DRAWING TITLE

RESIDENTIAL SIDE SITE PLAN - LANDSCAPE

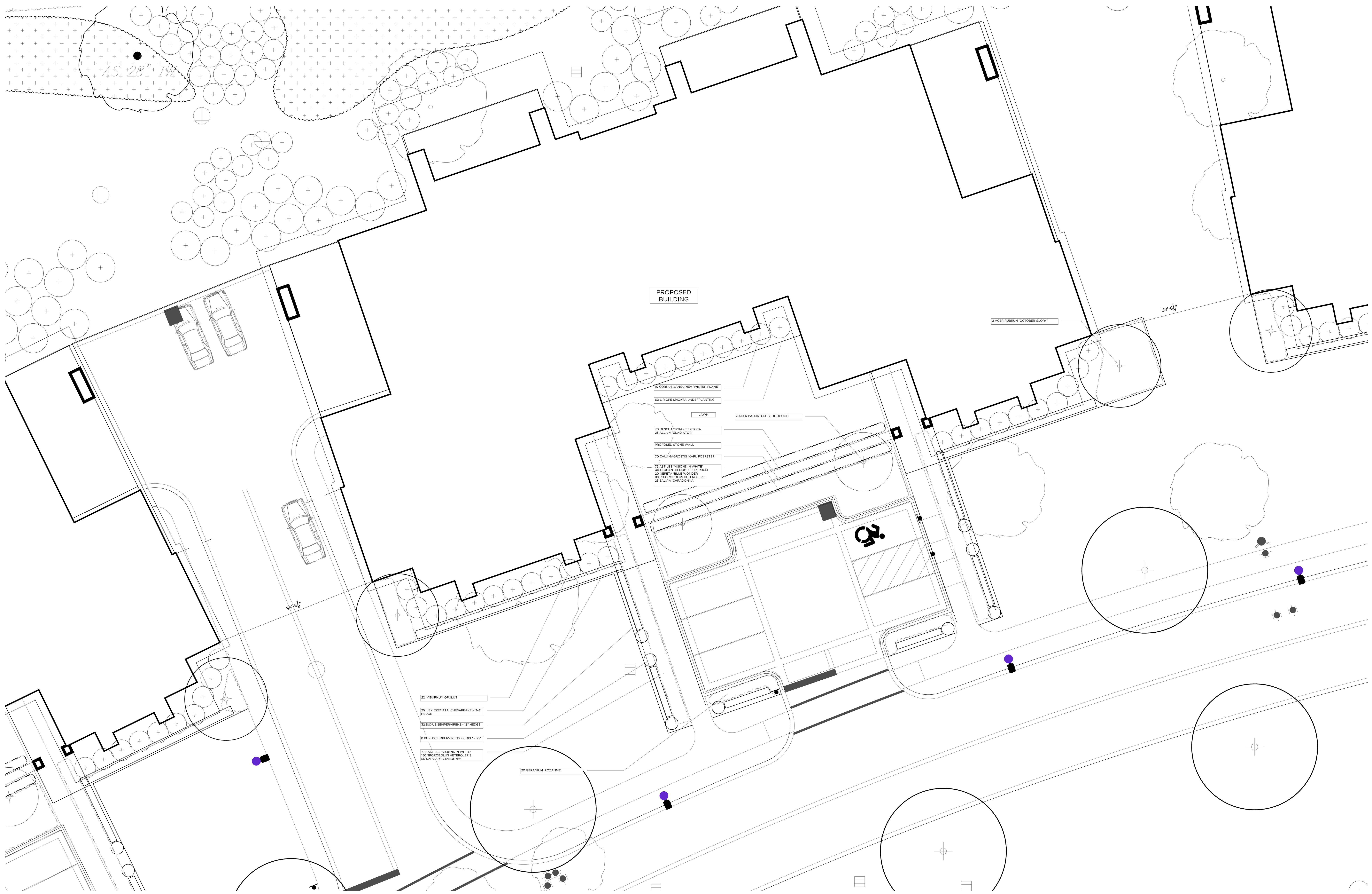
DRAWING NO.

LS103

PLANTING SCHEDULE

Residence Landscape Typical

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
4	TREES			
2	*Acer palmatum 'Bloodgood'*	Japanese Maple	8-10'	Matching
2	*Acer rubrum 'October Glory'*		3" cal,.	Matching
97	SHRUBS			
8	*Buxus sempervirens 'Globe'*	Boxwood	36"	Globe specimen
32	*Buxus sempervirens*	Boxwood	18"	Hedge quality
10	*Cornus sanguinea 'Winter Flame'*	Red twig Dogwood	3 gal.	
25	*Ilex crenata 'Chesapeake'*	Chesapeake Japanese Holly	3-4'	Full, Hedge quality
22	*Viburnum opulus*	Snowball Viburnum	5 gal.	Full Shape
751	GRASSES/PERENNIALS			
75	*Astilbe x 'Visions in White'*	White Astilbe	1 gal.	
90	*Carex 'Ice Dance'*	Sedge	1 gal.	
5	*Clematis terniflora 'Sweet Autumn'*	Sweet Autumn Clematis	1 gal.	
90	*Deschampsia cespitosa*	Tufted Hair Grass	1 gal.	
26	*Echinacea 'White Swan'*	Coneflower	1 gal.	
20	*Geranium 'Rozanne'*	Cranesbill	1 gal.	
60	*Liriope spicata*	Lilly Turf	1 gal.	
40	*Leucanthemum x superbum*	Shasta Daisy	1 gal.	
20	*Nepeta 'Blue Wonder'*	Catmint	1 gal.	
75	*Salvia nemorosa 'Caradonna'*	Caradonna Meadow Sage	1 gal.	
250	*Sporobolus heterolepis*	Prarie Dropseed	1 gal.	
25	BULBS			
25	*Allium 'Gladiator'*	Allium	Bulb	
2500	*Narcissus naturalizing mix*	Naturalizing daffodils	Bulb	



TYPICAL RESIDENCE ENTRY LANDSCAPE PLAN

1" = 10'-0"

GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830
203.625.9460
WWW.GRANOFFARCHITECTS.COM

CONSULTANTS

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PHASE

SUBMITTAL

PROJECT NAME

SUMMIT CLUB PARTNERS LLC

ARMONK, NY

JOB NO.: **20035**

DRAWN BY: **JS** PROJ. MANAGER: **KA**

DATE: **03.08.21** SCALE:

DRAWING TITLE

RESIDENCE TYPICAL PLAN - LANDSCAPE

DRAWING NO.

LS104

PLANTING SCHEDULE

Detention Basin Planting

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
18	TREES			
13	*Amelanchier canadensis*	Serviceberry	7-8'	Multistem
5	*Quercus palustris*	Pin Oak	2' cal.	Full shape
143	SHRUBS			
42	*Ilex verticillata*	Winterberry	3'-4'	
35	*Lindera benzoin*	Spicebush	3 gal.	
66	*Viburnum dentatum*	Arrowwood Viburnum	3 gal.	Full shape
6725	PERENNIALS/GRASSES			
1075	*Andropogon gerardi*	Big Bluestem	1 gal.	
1650	*Calamagrostis 'Karl Foerster'*	Feather Reed Grass	1 gal.	
n/a	*Carex pensylvanica*	Sedge	Seed	Basin Floor Seed Mix (16,000 sf)
3450	*Deschampsia cespitosa*	Tufted Hair Grass	1 gal.	
550	*Echinacea 'White Swan'*	Coneflower	1 gal.	
n/a	*Juncus effusus*	Soft Rush	Seed	Basin Floor Seed Mix (16,000 sf)
350	*Lobelia cardinalis*	Cardinal Flower	1 gal.	
100	*Nepeta 'Blue Wonder'*	Catmint	1 gal.	
200	*Perovskia atriplicifolia 'Little Spire'*	Dward Russian Sage	1 gal.	
300	*Salvia nemorosa 'Caradonna'*	Caradonna Meadow Sage	1 gal.	


PIN OAK


SERVICEBERRY


WINTERBERRY

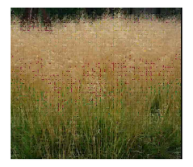

SPICEBUSH

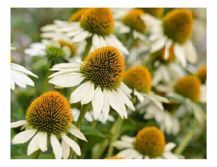

ARROWWOOD VIBURNUM


BIG BLUESTEM


FEATHER REED GRASS


SEDGE


TUFTED HAIR GRASS


CONEFLOWER


SOFT RUSH


CARDINAL FLOWER


CATMINT


DWARF RUSSIAN SAGE


CARADONNA MEADOW SAGE

DETENTION BASIN LANDSCAPE PLAN

1/16" = 1'-0"

GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830
203.625.9460
WWW.GRANOFFARCHITECTS.COM

CONSULTANTS
Landscape Architect:
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330 Railroad Ave
Greenwich, CT, 06830

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PHASE

SUBMITTAL

PROJECT NAME

SUMMIT CLUB PARTNERS LLC

ARMONK, NY

JOB NO.: **20035**
DRAWN BY: **JS** PROJ. MANAGER: **KA**
DATE: **03.08.21** SCALE:

DRAWING TITLE

DETENTION BASIN PLANTING PLAN

DRAWING NO.

LS104

SITE PLAN APPROVAL DRAWINGS

THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)

TAX MAP SECTION 101.02 | BLOCK 1 | LOT 28.1 & 28.2
WESTCHESTER COUNTY
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

Applicant/Owner:
SUMMIT CLUB PARTNERS, LLC
568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504
(914) 391-2900

Architect/Landscape Architect:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830
(203) 625-9460

Attorney
DELBELLO DONNELLAN WEINGARTEN WISE & WIEDERKEHR, LLP
THE GATEWAY BUILDING
ONE NORTH LEXINGTON AVENUE
WHITE PLAINS, NY 10601
(914) 681-0200

Lighting Consultant:
APEX LIGHTING SOLUTIONS
20-30 BEAVER ROAD
WETHERSFIELD, CT 06109
(860) 632-8766

Site Planner, Civil Engineer, Surveyor:
JMC PLANNING ENGINEERING LANDSCAPE ARCHITECTURE & LAND SURVEYING PLLC
120 BEDFORD ROAD
ARMONK, NY 10504
(914) 273-5225

JMC Drawing List:

Granoff Architects Drawing List:

Apex Lighting Solutions:

TABLE OF LAND USE

SECTION 101.02, BLOCK 1, LOT 28.1 & 28.2 (2/08/7.C1A)
ZONES "R–2A" – "ONE FAMILY RESIDENCE DISTRICT (2 ACRES)"
"GCCFO"– "GOLF COURSE COMMUNITY FLOATING OVERLAY DISTRICT"
PROPOSED USE: GOLF COURSE COMMUNITY
FIRE/AMBULANCE DISTRICT: ARMONK FIRE DEPARTMENT (NORTH CASTLE DISTRICT #2)
WATER DISTRICT: NORTH CASTLE WATER DISTRICT #2
SCHOOL DISTRICT: BYRAM HILLS CENTRAL SCHOOL DISTRICT
SEWER DISTRICT: ON–SITE SEWAGE TREATMENT PLANT (SPDES PERMIT)

DESCRIPTION	REQUIRED/ PERMITTED (R–2A)	REQUIRED/ PERMITTED (GCCFO)	EXISTING	PROPOSED/ PROVIDED (LOT 1)	PROPOSED/ PROVIDED (LOT 2)
LOT AREA (ACRES)	2.0 MIN. (1)	SEE NOTE 1	±156.30 (5)	±127.67	±28.63
LOT STREET FRONTAGE (FEET)	150 MIN. (1)	SEE NOTE 1	1,519.70	1,519.70 (1)	1,519.70 (1)
LOT WIDTH (FEET)	150 MIN. (1)	SEE NOTE 1	±2,300	±2,300 (1)	±2,300 (1)
LOT DEPTH (FEET)	150 MIN. (1)	SEE NOTE 1	±1,805	±1,805 (1)	±1,805 (1)
PRINCIPAL BUILDING MINIMUM YARDS (FEET)					
FRONT	50 (1)	SEE NOTE 1	±123.1	±294.00 (1)	±267.61 (1)
SIDE	30 (1)	SEE NOTE 1	±287.8	±84.41' (1)	±104.93 (1)
REAR	50 (1)	SEE NOTE 1	±1,645.5	±1,733.58 (1)	±881.30 (1)
MAXIMUM BUILDING COVERAGE (%)	8 (1)	3.5 (1)	0.72 (6)	0.04 (1)(7)	1.47 (1)(7)
MAXIMUM BUILDING HEIGHT (STORIES / FEET)	NA / 30	3 / 39.5 (2)	3 / < 39.5	3 / < 39.5	3 / < 39.5
PARKING SPACES					
STANDARD PARKING SPACES	2 PER DWELLING UNIT	SEE NOTE 3	–	176	172
ACCESSIBLE PARKING SPACES	N/A	–	–	5	14
TOTAL PARKING SPACES	2 PER DWELLING UNIT	–	180	181	186
LOADING SPACES	N/A	SEE NOTE 4	–	1	1

NOTES:

1. IN THE GCCFO DISTRICT, THE LOT, DIMENSIONAL, AND PARKING REQUIREMENTS FOR A GOLF COURSE COMMUNITY IN THIS SECTION SHALL SUPERSEDE THE SCHEDULE OF RESIDENCE DISTRICT REGULATIONS (§ 355–21 OF THIS CHAPTER). LOT SIZE, LOT CONFIGURATION AND OTHER LOT DIMENSIONAL REQUIREMENTS WITHIN A GCCFO DISTRICT SHALL BE DETERMINED BY THE PLANNING BOARD IN CONJUNCTION WITH SUBDIVISION APPROVAL. LOT SIZE, LOT CONFIGURATION AND OTHER LOT DIMENSIONAL REQUIREMENTS OF LOTS WITHIN A GCCFO DISTRICT SHALL BE BASED UPON THE PLANNING BOARD'S CONSIDERATION OF THE CHARACTER OF THE NEIGHBORHOOD IN WHICH THE GCCFO DISTRICT WILL BE LOCATED; THE GCCFO DISTRICT'S RELATIONSHIP TO ADJOINING DISTRICTS, PROPERTIES AND LAND USES; THE GCCFO DISTRICT'S TOPOGRAPHY; AND SUCH OTHER FACTORS THE PLANNING BOARD MAY DETERMINE TO BE APPROPRIATE. THE LOTS AND/OR PARCELS THAT TOGETHER COMPRISE A GOLF COURSE COMMUNITY SITE ARE NOT REQUIRED TO BE CONTIGUOUS, PROVIDED THAT EACH SUCH LOT AND/OR PARCEL ADJOINS THE AFFILIATED MEMBERSHIP CLUB. ALL LOT, DIMENSIONAL, AND PARKING REQUIREMENTS IN THIS SECTION, INCLUDING BUT NOT LIMITED TO MAXIMUM DENSITY, MAXIMUM BUILDING COVERAGE, MINIMUM YARDS AND REQUIRED OFF–STREET PARKING, SHALL APPLY TO THE LAND AREA IN THE GCCFO DISTRICT AS A WHOLE, NOTWITHSTANDING THAT THE GOLF COURSE COMMUNITY SITE MAY BE COMPRISED OF MORE THAN ONE LOT AND/OR PARCEL, OR THAT THE SITE MAY FROM TIME TO TIME BE SUBDIVIDED OR RESUBDIVIDED, AND ALL DETERMINATIONS AND CALCULATIONS RELATING TO SUCH REQUIREMENTS SHALL BE MADE WITH REFERENCE TO THE BOUNDARIES OF THE ENTIRE LAND AREA IN THE GCCFO DISTRICT AND AS THOUGH SUCH AREA IS A SINGLE LOT (AS DEFINED IN § 355–4 OF THIS CHAPTER), EVEN THOUGH IT IS OR WILL BE COMPRISED OF MORE THAN ONE LOT AND/OR PARCEL.

2. THE MAXIMUM BUILDING HEIGHT SHALL BE THREE STORIES AND 39 1/2 FEET TO THE MEAN LEVEL OF THE PRIMARY ROOF, MEASURED FROM THE LEVEL OF THE FINISHED GRADE AT THE MAIN ENTRY TO THE BUILDING.

3. FOR MULTI–FAMILY DWELLING UNITS: 2 FOR EACH DWELLING UNIT, PLUS $\frac{1}{2}$ FOR EACH BEDROOM, PLUS 10% VISITOR PARKING. PARKING PROVIDED FOR MULTI–FAMILY RESIDENTIAL USE AS FOLLOWS:

   72 UNITS (2 SPACES X 72 UNITS = 144 SPACES)
   54 2–BEDROOM UNITS ($\frac{1}{2}$ SPACE X 54 UNITS = 27 SPACES)
   18 3–BEDROOM UNITS ($\frac{1}{2}$ SPACE X 18 UNITS = 9 SPACES)
   TOTAL REQUIRED SPACES FOR MULTI–FAMILY DEVELOPMENT: 180 SPACES

   THE EXISTING PARKING LOT (ON LOT 1) SHALL BE RE–STRIPED AS A PART OF THE TEMPORARY CLUBHOUSE APPLICATION (123 SPACES).

4. FOR WHOLESALE BUSINESS, INDUSTRY, STORAGE, WAREHOUSE AND OTHER COMMERCIAL ESTABLISHMENTS, A MINIMUM OF ONE SPACE FOR EACH ESTABLISHMENT, AND ONE ADDITIONAL SPACE FOR EACH 10,000 SQUARE FEET OF GROSS FLOOR AREA OR MAJOR PORTION THEREOF IN EXCESS OF 4,000 SQUARE FEET OF GROSS FLOOR AREA.

5. CURRENTLY THE GOLF COURSE LOT IS ±129.96 ACRES AND THE RESIDENTIAL LOT IS ±26.34 ACRES.

6. TOTAL EXISTING BUILDING COVERAGE CALCULATED BASED ON ALL EXISTING BUILDINGS ON THE PROPERTY, INCLUDING PREVIOUSLY DEMOLISHED STRUCTURES.

7. BUILDING COVERAGE BREAKDOWN:

   LOT 1:
   EXISTING CART SHED TO REMAIN: ±2,862.12 S.F.
   TOTAL LOT 1 BUILDING COVERAGE: ±2,862.12 S.F.

   LOT 2:
   EXISTING SEWAGE TREATMENT PLANT TO REMAIN: ±2,503.26 S.F.
   RESIDENTIAL BUILDINGS: 6 X 14,364.24 S.F.
   GATE HOUSE: 903 S.F.
   TENNIS PAVILION: 672 S.F.
   AMENITIES BUILDING: 9,993.35 S.F.
   TOTAL LOT 2 BUILDING COVERAGE: ±100,257.05 S.F.
   FUTURE TENNIS PAVILIONS: 3 X 672 S.F.
   FUTURE TOTAL LOT 2 BUILDING COVERAGE: ±102,273.05

PROPOSED BUILDING AREA SUMMARY (GROSS FLOOR AREA):

AMENITIES BUILDING:
FIRST FLOOR: 5,256 SF
LOWER LEVEL: 7,000 SF (5,000 SF FINISHED + 2,000 SF UNFINISHED)
PRO SHOP: 1,188 SF
TOTAL FOR AMENITIES BUILDING: 13,444 SF

RESIDENTIAL BUILDINGS (#1–6):
EACH CONDO FLOOR: 12,350 S.F. (3 STORIES TOTAL = 37,050 S.F.)
EACH GARAGE PARKING LEVEL: 16,605 SF
TOTAL PER BUILDING (#1–6): 53,655 SF

TOTAL FOR ALL RESIDENTIAL BUILDINGS (#1–6): 321,930 SF

RESIDENTIAL UNIT PHASING DECLARATION:

IN DECEMBER, 2019, IN CONSIDERATION OF THE ADOPTION BY THE TOWN OF THE AMENDMENT, THE APPLICANT RECORDED A DECLARATION PURSUANT TO WHICH THE APPLICANT MAY, SUBJECT TO SITE PLAN APPROVAL, CONSTRUCT ON THE DEVELOPMENT LOT A FIRST PHASE OF THE COMMUNITY ("PHASE 1 "), WHICH MAY CONSIST OF UP TO THIRTY–SIX (36) RESIDENCES, WHICH MAY BE FEE–SIMPLE HOMES AND/OR CONDOMINIUM UNITS WITHOUT LIMITATION REGARDING FORM OF OWNERSHIP OF THE RESIDENCES, AND A SECOND PHASE OF THE COMMUNITY ("PHASE 2"), WHICH MAY CONSIST OF UP TO THIRTY–SEVEN (37) RESIDENCES, WHICH MAY BE FEE–SIMPLE HOMES AND/OR CONDOMINIUM UNITS WITHOUT LIMITATION REGARDING FORM OF OWNERSHIP OF THE RESIDENCES; PROVIDED THAT UNLESS THE AGGREGATE AVERAGE OF THE GROSS SALES PRICES OF THE MARKET–RATE PHASE 1 CONDOMINIUM UNITS IS $700.00 PER SQUARE FOOT OR MORE, THE PHASE 2 CONDOMINIUM RESIDENCES ARE REQUIRED TO BE "55 AND OLDER" AGE–RESTRICTED HOUSING AS PERMITTED UNDER APPLICABLE FEDERAL LAW AND REGULATIONS. THE DECLARATION ALSO REQUIRES PHASE 1 TO INCLUDE FOUR (4) ON–SITE AFFORDABLE UNITS, AND PHASE 2 TO INCLUDE THREE (3) ON–SITE AFFORDABLE UNITS. HOWEVER, THE APPLICANT IS PERMITTED TO AT ANY TIME ELECT TO RELOCATE ALL OR A PORTION OF THE AFFORDABLE UNITS OFF–SITE WITHIN AREAS IN THE ARMONK HAMLET THAT ARE SERVED BY PUBLIC SEWER AND WATER, AND THEREBY REDUCE THE ON–SITE AFFORDABLE UNITS AND SUBSTITUTE MARKET–RATE UNITS THEREFOR ON A ONE–TO–ONE BASIS, PROVIDED THAT IN NO EVENT SHALL THE TOTAL NUMBER OF RESIDENTIAL UNITS ON THE PROPERTY EXCEED SEVENTY–THREE (73).

GENERAL CONSTRUCTION NOTES APPLY TO ALL WORK HEREIN:

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CALL 811 "DIG SAFELY" (1–800–962–7962) TO HAVE UNDERGROUND UTILITIES LOCATED. EXPLORATORY EXCAVATIONS SHALL COMPLY WITH CODE 753 REQUIREMENTS. NO WORK SHALL COMMENCE UNTIL ALL THE OPERATORS HAVE NOTIFIED THE CONTRACTOR THAT THEIR UTILITIES HAVE BEEN LOCATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL PUBLIC AND PRIVATE UNDERGROUND AND SURFACE UTILITIES AND STRUCTURES AT OR ADJACENT TO THE SITE OF CONSTRUCTION, INSOFAR AS THEY MAY BE ENDANGERED BY THE CONTRACTOR'S OPERATIONS. THIS SHALL HOLD TRUE WHETHER OR NOT THEY ARE SHOWN ON THE CONTRACT DRAWINGS. IF THEY ARE SHOWN ON THE DRAWINGS, THEIR LOCATIONS ARE NOT GUARANTEED EVEN THOUGH THE INFORMATION WAS OBTAINED FROM THE BEST AVAILABLE SOURCES, AND IN ANY EVENT, OTHER UTILITIES ON THESE PLANS MAY BE ENCOUNTERED IN THE FIELD. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, IMMEDIATELY REPAIR OR REPLACE ANY STRUCTURES OR UTILITIES THAT HE DAMAGES, AND SHALL CONSTANTLY PROCEED WITH CAUTION TO PREVENT UNDUE INTERRUPTION OF UTILITY SERVICE.

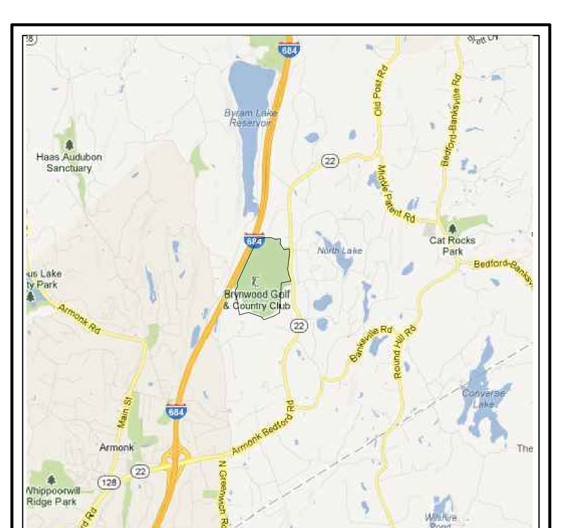
2. CONTRACTOR SHALL HAND DIG TEST PITS TO VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL VERIFY EXISTING UTILITIES DEPTHS AND ADVISE OF ANY CONFLICTS WITH PROPOSED UTILITIES. IF CONFLICTS ARE PRESENT. THE OWNER'S FIELD REPRESENTATIVE, JMC, PLLC AND THE APPLICABLE MUNICIPALITY OR AGENCY SHALL BE NOTIFIED IN WRITING. THE EXISTING/PROPOSED UTILITIES RELOCATION SHALL BE DESIGNED BY JMC, PLLC.

3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL LOCAL PERMITS REQUIRED.

4. ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES, STANDARDS, ORDINANCES, RULES, AND REGULATIONS. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL SAFETY CODES. APPLICABLE SAFETY CODES MEAN THE LATEST EDITION INCLUDING ANY AND ALL AMENDMENTS, REVISIONS, AND ADDITIONS THERETO, TO THE FEDERAL DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S OCCUPATIONAL SAFETY AND HEALTH STANDARDS (OSHA); AND APPLICABLE SAFETY, HEALTH REGULATIONS AND BUILDING CODES FOR CONSTRUCTION IN THE STATE OF NEW YORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GUARDING AND PROTECTING ALL OPEN EXCAVATIONS IN ACCORDANCE WITH THE PROVISION OF SECTION 107–05 (SAFETY AND HEALTH REQUIREMENTS) OF THE NYSDOT STANDARD SPECIFICATIONS. IF THE CONTRACTOR PERFORMS ANY HAZARDOUS CONSTRUCTION PRACTICES, ALL OPERATIONS IN THE AFFECTED AREA SHALL BE DISCONTINUED AND IMMEDIATE ACTION SHALL BE TAKEN TO CORRECT THE SITUATION TO THE SATISFACTION OF THE APPROVAL AUTHORITY HAVING JURISDICTION.

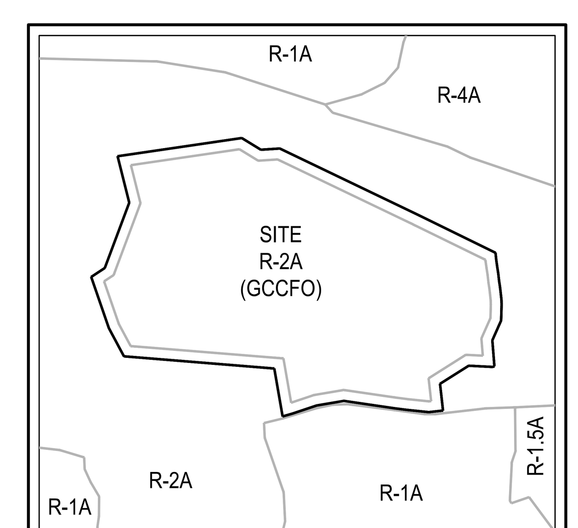
5. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AFFECTED BY THE SCOPE OF WORK SHOWN HEREON AT ALL TIMES TO THE SATISFACTION OF THE OWNERS REPRESENTATIVE. RAMPING CONSTRUCTION TO PROVIDE ACCESS MAY BE CONSTRUCTED WITH SUBBASE MATERIAL EXCEPT THAT TEMPORARY ASPHALT CONCRETE SHALL BE PLACED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE PEDESTRIAN ACCESS AT ALL TIMES.

6. CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF EXISTING PAVEMENT TO REMAIN.



ZONING MAP
SCALE: 1" = 1,000'
SOURCE: TITLE / YEAR

LEGEND	
— – – —	SITE PROPERTY LINE
— — — —	ZONING BOUNDARY
R-4A	4–ACRE RESIDENTIAL ZONE
R-2A	2–ACRE RESIDENTIAL ZONE
R-1.5A	1.5–ACRE RESIDENTIAL ZONE
R-1A	1–ACRE RESIDENTIAL ZONE
GCCFO	GOLF COURSE COMMUNITY FLOATING OVERLAY DISTRICT



ZONING MAP
SCALE: 1" = 5,000'

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ____________

____________ DATE: ____________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

____________ DATE: ____________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

SUBSURFACE UTILITY LOCATIONS ARE BASED ON A COMPILATION OF FIELD EVIDENCE, AVAILABLE RECORD PLANS AND/OR UTILITY MARK-OUTS. THE LOCATION OR COMPLETENESS OF UNDERGROUND INFORMATION CANNOT BE GUARANTEED. VERIFY THE ACTUAL LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION OR CONSTRUCTION.

811 Know what's below. Call before you dig.

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ____________

____________ DATE: ____________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

____________ DATE: ____________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

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STATE OF NEW YORK · DAVID P. LOMBARDI · LICENSED PROFESSIONAL ENGINEER · 071001

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

Drawn: NC Approved: AG
Scale: NOT TO SCALE
Date: 11/23/2020
Project No: 20101
20101-COVER COVER COVER.scr
Drawing No: C–000

NOT FOR CONSTRUCTION

LEGEND

— — —	EXISTING PROPERTY LINE
— — —	ADJACENT PROPERTY LINE
— — —	LIMIT OF REGULATED WETLAND BUFFER AREA
	EXISTING WETLAND LINE AND DELINEATION
	EXISTING BUILDING LINE
	EXISTING PAVEMENT EDGE
	EXISTING CURB LINE
172	EXISTING CONTOUR
170	EXISTING INDEX CONTOUR
	EXISTING STONE WALL
	EXISTING RETAINING WALL
	EXISTING GUIDE RAIL
—X—X—X—X—	EXISTING FENCE
	EXISTING TREE
	EXISTING TREE LINE
	EXISTING STORM DRAIN LINE
	EXISTING SANITARY LINE
—W—W—W—W—W—W—	EXISTING WATER LINE
—G—G—G—G—G—G—	EXISTING GAS LINE
—OHW—OHW—OHW—OHW—	EXISTING OVERHEAD WIRES
—E—E—E—E—E—E—	EXISTING ELECTRIC LINE
	EXISTING DRAIN INLET
	EXISTING MANHOLE
	EXISTING FIRE HYDRANT
GV	EXISTING GAS VALVE
WV	EXISTING WATER VALVE
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
W6	EXISTING WELL LOCATION AND DESIGNATION
	EXISTING GREEN-WASTE DEBRIS PILE
	EXISTING TOWN-REGULATED STEEP SLOPE AREA (GREATER THAN 25%)

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC MAP," PREPARED BY JMC, LAST REVISED 03/06/2013. PORTIONS OF EXISTING TOPOGRAPHY HAVE BEEN PROVIDED BY WESTCHESTER COUNTY GIS.
2. GEOTECHNICAL BORING/TEST PIT LOCATIONS DEPICTED ON THIS PLAN WERE TAKEN FROM THE GEOTECHNICAL REPORT ENTITLED, "REPORT ON SUBSURFACE SOIL AND FOUNDATION INVESTIGATION", DATED 10/16/2013, PREPARED BY CARLIN-SIMPSON & ASSOCIATES.

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Previous Editions Obsolete

APPLICANT/OWNER:
SUMMIT CLUB PARTNERS, LLC
568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

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JMC

OVERALL EXISTING CONDITIONS MAP

THE SUMMIT CLUB AT ARMONK
(RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

STATE OF NEW YORK
DAVID P. LOMBARDI
071001
LICENSED PROFESSIONAL ENGINEER

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________________ DATE: ________________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________________ DATE: ________________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn: NC	Approved: AG
Scale: 1" = 100'	
Date: 11/23/2020	
Project No: 20101	
20101-EXISTING	EX OV	EXIST.scr
Drawing No: C-010	

NOT FOR CONSTRUCTION

LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF REGULATED WETLAND BUFFER AREA
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING STONE WALL
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- EXISTING FENCE
- EXISTING TREE
- EXISTING TREE LINE
- EXISTING STORM DRAIN LINE
- EXISTING SANITARY LINE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- EXISTING ELECTRIC LINE
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING WELL LOCATION AND DESIGNATION
- EXISTING GREEN–WASTE DEBRIS PILE
- EXISTING TOWN–REGULATED STEEP SLOPE AREA (GREATER THAN 25%)

NOTES:

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Previous Editions Obsolete

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ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

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voice 914.273.5225 • fax 914.273.2102
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JMC

EXISTING CONDITIONS MAP (SOUTH)

THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY–22)
ARMONK, NY 10504

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STATE OF NEW YORK
DAVID P. LOMBARDI
071001
LICENSED PROFESSIONAL ENGINEER

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn:	NC	Approved:	AG
Scale:	1" = 30'		
Date:	11/23/2020		
Project No:	20101		
20101–EXISTING	EX SOUTH	GRAD.scr	
Drawing No:	C–011		

NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF REGULATED WETLAND BUFFER AREA
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
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Previous Editions Obsolete

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568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
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GREENWICH, CT 06830

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voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

JMC

EXISTING CONDITIONS MAP (NORTH)

THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
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ARMONK, NY 10504

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STATE OF NEW YORK · DAVID P. LOMBARDI · 071001 · LICENSED PROFESSIONAL ENGINEER

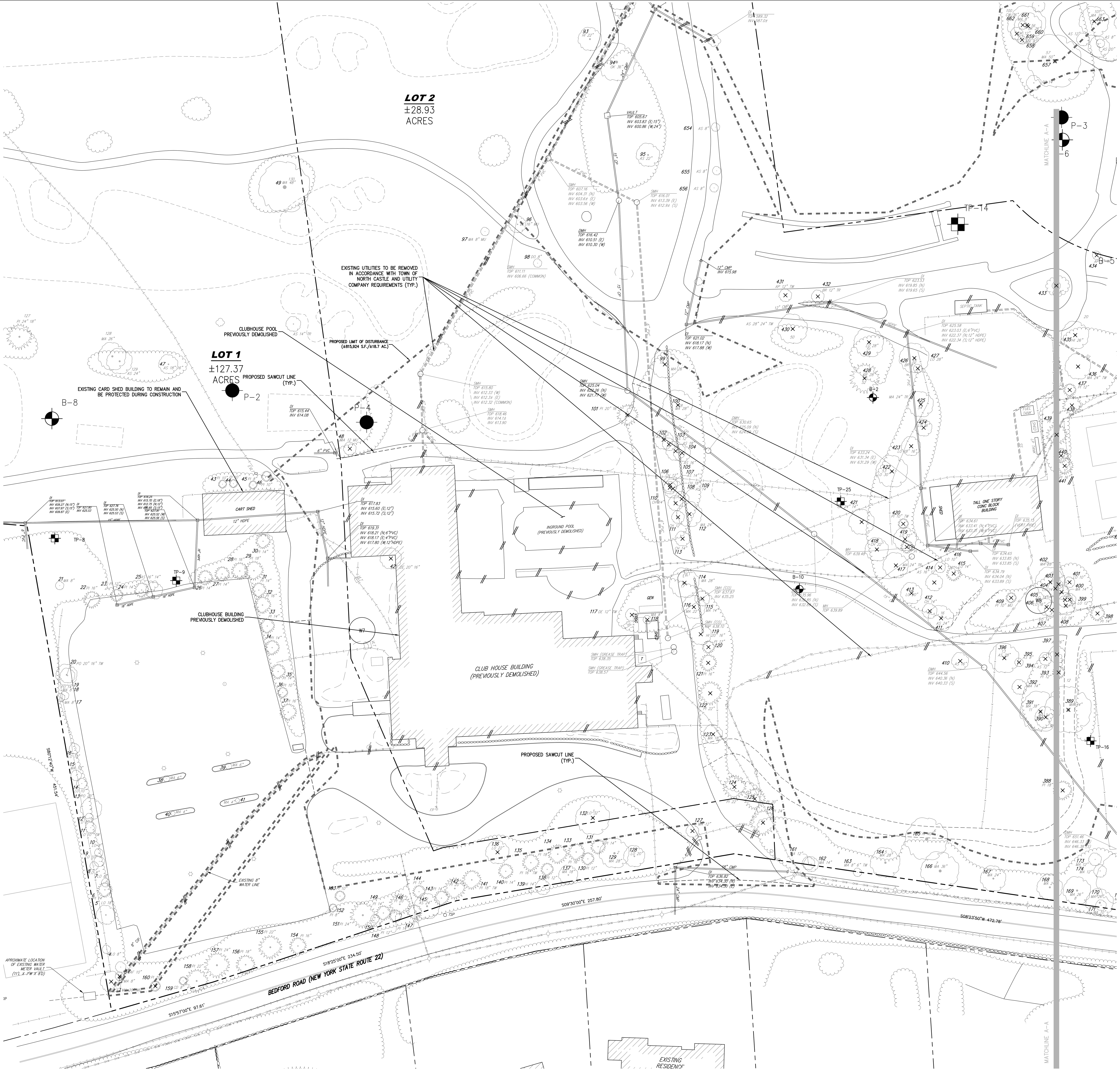
APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn: NC	Approved: AG
Scale: 1" = 30'	
Date: 11/23/2020	
Project No: 20101	
20101-EXISTING	EX NORTH · GRAD.scr
Drawing No: C-012	



LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF REGULATED WETLAND BUFFER AREA
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING LINE
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- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- EXISTING TREE LINE
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- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING WELL LOCATION AND DESIGNATION
- EXISTING FEATURE TO BE REMOVED
- PROPOSED SAWCUT LINE
- PROPOSED LIMIT OF DISTURBANCE

TOTAL NUMBER OF TREES TO BE REMOVED: 266

NOTES:

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3. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ADHERE TO ALL REQUIREMENTS OF AGENCIES HAVING JURISDICTION OVER ROCK CRUSHING OPERATIONS. PORTABLE ROCK CRUSHING EQUIPMENT USED IN WESTCHESTER COUNTY IS SUBJECT TO PERMITTING BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH (WCDOH). THE ROCK CRUSHING EQUIPMENT MUST MAINTAIN A VALID AND CURRENT PERMIT IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN CHAPTER 873, ARTICLE XIII, SECTIONS 873.1303.1 AND 873.1306.1 OF THE WESTCHESTER COUNTY CODE. IN ADDITION TO COUNTY INSPECTION OF THE EQUIPMENT, THESE REGULATIONS REQUIRE MITIGATION MEASURES TO CONTROL THE POTENTIAL FOR FUGITIVE PARTICULATE EMISSIONS (STONE DUST).
4. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED AND EXISTING UTILITIES TO BE PROTECTED. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND JMC PRIOR TO THE START OF CONSTRUCTION.
5. PRIOR TO THE START OF ANY DEMOLITION THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR APPROVALS FROM THE TOWN OF NORTH CASTLE AND ALL OTHER AUTHORITIES HAVING JURISDICTION. CONTRACTOR SHALL PAY ALL OUTSTANDING FEES, CHARGES, AND DEPOSITS TO ACQUIRE SAID PERMITS. NO DEMOLITION SHALL COMMENCE UNTIL A PERMIT HAS BEEN OBTAINED FROM THE TOWN.
6. THE CONTRACTOR SHALL COORDINATE THE DISCONNECTION OF ALL UTILITIES WITH THE UTILITY COMPANY HAVING JURISDICTION PRIOR TO THE START OF DEMOLITION. CONFIRMATION OF DISCONNECTED UTILITIES SHALL BE PROVIDED TO THE TOWN OF NORTH CASTLE BUILDING DEPARTMENT IN ACCORDANCE WITH THEIR REQUIREMENTS. LETTERS FROM THE APPROPRIATE UTILITIES STATING THAT GAS AND ELECTRIC HAVE BEEN CUT OFF SHALL BE PROVIDED TO THE TOWN.
7. THE CONTRACTOR SHALL OBTAIN, AND PROVIDE A COPY TO THE TOWN, A SEWER PLUG PERMIT INDICATING THAT A LICENSED PLUMBER HAS PLUGGED ALL EXISTING SEWER LINES TO THE EXISTING BUILDING. THE CONTRACTOR SHALL OBTAIN, AND PROVIDE A COPY TO THE TOWN, A WATER USE PERMIT INDICATING THAT A LICENSED PLUMBER HAS CUT AND SEALED ALL EXISTING WATER SERVICE TO THE EXISTING BUILDING.
8. ANY UNSUITABLE MATERIAL FOUND ON–SITE DURING DEMOLITION/CONSTRUCTION, AS DETERMINED BY THE PROJECT'S GEOTECHNICAL ENGINEER, SHALL BE PROPERLY DISPOSED OF OFF–SITE IN A MANNER APPROVED BY ALL AUTHORITIES HAVING JURISDICTION AND REPLACED WITH SUITABLE MATERIAL AS REQUIRED.
9. ALL DEMOLITION AND/OR CONSTRUCTION WITHIN THE RIGHT–OF–WAY, INCLUDING STREETS AND SIDEWALKS, SHALL BE PERFORMED IN ACCORDANCE WITH TOWN/STATE REQUIREMENTS.
10. ALL CONSTRUCTION/DEMOLITION DEBRIS NOT PROPOSED TO BE RECYCLED SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF–SITE IN ACCORDANCE WITH THE REGULATIONS OF ALL LOCAL, STATE AND FEDERAL AGENCIES HAVING JURISDICTION.
11. EXISTING CONCRETE MAY BE STORED ON SITE, AND RECYCLED FOR USE AS COMPACTED FILL. ALL MATERIAL TO BE USED AS FILL SHALL BE APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.
12. PRIOR TO THE START OF SITE DEMOLITION, EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH TOWN REQUIREMENTS, AS REQUIRED AND/OR DIRECTED BY THE TOWN OF NORTH CASTLE OR JMC.
13. EXISTING DRAINAGE PATTERNS ON SITE SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE.
14. ALL EXISTING UTILITY CASTINGS WHICH ARE TO REMAIN SHALL BE REMOVED AND RESET TO THE NEW PROPOSED GRADES IN ACCORDANCE WITH THE DIRECTIONS OF THE OWNER'S FIELD REPRESENTATIVE. EXISTING CASTINGS WHICH ARE DAMAGED OR UNFIT FOR INSTALLATION IN THE NEW CONSTRUCTION, AS DETERMINED BY THE OWNER'S FIELD REPRESENTATIVE, SHALL BE REPLACED.
15. ALL EXISTING SIDEWALKS, CURBS, PAVEMENT, ETC. TO REMAIN, WHICH ARE DISTURBED OR DAMAGED DUE TO THE NEW CONSTRUCTION, ARE TO BE REPLACED WITH MATERIALS CONSISTENT WITH EXISTING CONDITIONS.
16. THESE PLANS ARE TO BE PROVIDED TO BOTH THE DEMOLITION CONTRACTOR AND THE SITE CONTRACTOR FOR THEIR USE, INFORMATION AND COORDINATION. ANY QUESTIONS OF CONTRACTOR RESPONSIBILITY AND/OR SEPARATION OF WORK SHALL BE DIRECTED TO THE GENERAL CONTRACTOR IN WRITING PRIOR TO ISSUANCE OF BID.
17. THE OWNER SHALL RETAIN A LICENSED AND QUALIFIED PROFESSIONAL, CERTIFIED BY THE STATE, TO INSPECT FOR THE PRESENCE OF ASBESTOS AND/OR OTHER HAZARDOUS MATERIALS WITHIN DEMOLITION AREAS PRIOR TO THE COMMENCEMENT OF DEMOLITION. IF REMEDIATION IS REQUIRED, THE OWNER SHALL DO SO IN ACCORDANCE WITH THE NYS ASBESTOS RULES AND REGULATIONS AND/OR ANY AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED DOCUMENTATION TO THE STATE PRIOR TO OBTAINING A DEMOLITION PERMIT.
18. THE CONTRACTOR SHALL EXTERMINATE RODENTS AS REQUIRED BY WESTCHESTER COUNTY DEPARTMENT OF HEALTH AND MENTAL HYGIENE. A LETTER FROM THE HEALTH DEPARTMENT CERTIFYING THAT A LICENSED EXTERMINATOR HAS TREATED THE EXISTING BUILDING SHALL BE PROVIDED TO THE TOWN DEPARTMENT OF BUILDINGS.
19. PRIOR TO COMMENCEMENT OF DEMOLITION, THE CONTRACTOR MUST PROVIDE 24–HOUR NOTIFICATION TO THE TOWN.
20. THE CONTRACTOR SHALL PROVIDE VERIFICATION TO THE TOWN THAT FIVE (5)

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________________________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________________________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

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Previous Editions Obsolete

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JMC

SITE DEMOLITION & TREE REMOVAL PLAN (SOUTH)

THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
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STATE OF NEW YORK • DAVID P. LOMBARDI • 071001 • LICENSED PROFESSIONAL ENGINEER

Drawn:	NC	Approved:	AG
Scale:	1" = 30'		
Date:	11/23/2020		
Project No:	20101		
20101-DEMO	DEMO SOUTH	GRAD.scr	
Drawing No:	C–020		

LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF REGULATED WETLAND BUFFER AREA
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING LINE
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- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING WELL LOCATION AND DESIGNATION
- EXISTING FEATURE TO BE REMOVED
- PROPOSED SAWCUT LINE
- PROPOSED LIMIT OF DISTURBANCE

TOTAL NUMBER OF TREES TO BE REMOVED: 266

NOTES:

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4. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED AND EXISTING UTILITIES TO BE PROTECTED. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND JMC PRIOR TO THE START OF CONSTRUCTION.
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8. ANY UNSUITABLE MATERIAL FOUND ON-SITE DURING DEMOLITION/CONSTRUCTION, AS DETERMINED BY THE PROJECT'S GEOTECHNICAL ENGINEER, SHALL BE PROPERLY DISPOSED OF OFF-SITE IN A MANNER APPROVED BY ALL AUTHORITIES HAVING JURISDICTION AND REPLACED WITH SUITABLE MATERIAL AS REQUIRED.
9. ALL DEMOLITION AND/OR CONSTRUCTION WITHIN THE RIGHT-OF-WAY, INCLUDING STREETS AND SIDEWALKS, SHALL BE PERFORMED IN ACCORDANCE WITH TOWN/STATE REQUIREMENTS.
10. ALL CONSTRUCTION/DEMOLITION DEBRIS NOT PROPOSED TO BE RECYCLED SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE IN ACCORDANCE WITH THE REGULATIONS OF ALL LOCAL, STATE AND FEDERAL AGENCIES HAVING JURISDICTION.
11. EXISTING CONCRETE MAY BE STORED ON SITE, AND RECYCLED FOR USE AS COMPACTED FILL. ALL MATERIAL TO BE USED AS FILL SHALL BE APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.
12. PRIOR TO THE START OF SITE DEMOLITION, EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH TOWN REQUIREMENTS, AS REQUIRED AND/OR DIRECTED BY THE TOWN OF NORTH CASTLE OR JMC.
13. EXISTING DRAINAGE PATTERNS ON SITE SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE.
14. ALL EXISTING UTILITY CASTINGS WHICH ARE TO REMAIN SHALL BE REMOVED AND RESET TO THE NEW PROPOSED GRADES IN ACCORDANCE WITH THE DIRECTIONS OF THE OWNER'S FIELD REPRESENTATIVE. EXISTING CASTINGS WHICH ARE DAMAGED OR UNFIT FOR INSTALLATION IN THE NEW CONSTRUCTION, AS DETERMINED BY THE OWNER'S FIELD REPRESENTATIVE, SHALL BE REPLACED.
15. ALL EXISTING SIDEWALKS, CURBS, PAVEMENT, ETC. TO REMAIN, WHICH ARE DISTURBED OR DAMAGED DUE TO THE NEW CONSTRUCTION, ARE TO BE REPLACED WITH MATERIALS CONSISTENT WITH EXISTING CONDITIONS.
16. THESE PLANS ARE TO BE PROVIDED TO BOTH THE DEMOLITION CONTRACTOR AND THE SITE CONTRACTOR FOR THEIR USE, INFORMATION AND COORDINATION. ANY QUESTIONS OF CONTRACTOR RESPONSIBILITY AND/OR SEPARATION OF WORK SHALL BE DIRECTED TO THE GENERAL CONTRACTOR IN WRITING PRIOR TO ISSUANCE OF BID.
17. THE OWNER SHALL RETAIN A LICENSED AND QUALIFIED PROFESSIONAL, CERTIFIED BY THE STATE, TO INSPECT FOR THE PRESENCE OF ASBESTOS AND/OR OTHER HAZARDOUS MATERIALS WITHIN DEMOLITION AREAS PRIOR TO THE COMMENCEMENT OF DEMOLITION. IF REMEDIATION IS REQUIRED, THE OWNER SHALL DO SO IN ACCORDANCE WITH THE NYS ASBESTOS RULES AND REGULATIONS AND/OR ANY AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED DOCUMENTATION TO THE STATE PRIOR TO OBTAINING A DEMOLITION PERMIT.
18. THE CONTRACTOR SHALL EXTERMINATE RODENTS AS REQUIRED BY WESTCHESTER COUNTY DEPARTMENT OF HEALTH AND MENTAL HYGIENE. A LETTER FROM THE HEALTH DEPARTMENT CERTIFYING THAT A LICENSED EXTERMINATOR HAS TREATED THE EXISTING BUILDING SHALL BE PROVIDED TO THE TOWN DEPARTMENT OF BUILDINGS.
19. PRIOR TO COMMENCEMENT OF DEMOLITION, THE CONTRACTOR MUST PROVIDE 24-HOUR NOTIFICATION TO THE TOWN.
20. THE CONTRACTOR SHALL PROVIDE VERIFICATION TO THE TOWN THAT FIVE (5)

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ______

____________ DATE: ______

CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

____________ DATE: ______

JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

APPLICANT/OWNER:
SUMMIT CLUB PARTNERS, LLC
568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

JMC

SITE DEMOLITION & TREE REMOVAL PLAN (NORTH)

THE SUMMIT CLUB AT ARMONK
(RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

STATE OF NEW YORK
DAVID P. LOMBARDI
071001
LICENSED PROFESSIONAL ENGINEER

Drawn:	NC	Approved:	AG
Scale:	1" = 30'		
Date:	11/23/2020		
Project No:	20101		
20101-DEMO	DEMO NORTH	GRAD.scr	

Drawing No:
C-021

NOT FOR CONSTRUCTION

TREE REMOVAL SUMMARY

NUMBER	SPECIES	DIAMETER	REMAIN/REMOVE	NUMBER	SPECIES	DIAMETER	REMAIN/REMOVE	NUMBER	SPECIES	DIAMETER	REMAIN/REMOVE	NUMBER	SPECIES	DIAMETER	REMAIN/REMOVE	NUMBER	SPECIES	DIAMETER	REMAIN/REMOVE	NUMBER	SPECIES	DIAMETER	REMAIN/REMOVE
1	MAPLE	20" MU	REMOVE	112	MAPLE	24"	REMOVE	223	LOCUST	10"	REMAIN	334	ASH	8"	REMAIN	445	PINE	12"	REMOVE	555	LOCUST	12"	REMAIN
2	MAPLE	8"	REMOVE	113	CHERRY	14"	REMOVE	224	MAPLE	14"	REMAIN	335	CHERRY	10"	REMOVE	446	HICKORY	8"	REMOVE	556	LOCUST	8"	REMAIN
3	SASSAFRASS	10"	REMAIN	114	MAPLE	28"	REMOVE	225	LOCUST	12"	REMAIN	336	OAK	10"	REMOVE	447	HICKORY	16"	REMOVE	557	LOCUST	20"	REMOVE
4	LOCUST	8"	REMAIN	115	MAPLE	14"	REMOVE	226	MAPLE	10"	REMAIN	337	BIRCH	10"	REMOVE	448	ASH	14"	REMOVE	558	LOCUST	18"	REMOVE
5	LOCUST	18"	REMAIN	116	MAPLE	22"	REMOVE	227	LOCUST	12"	REMAIN	338	TREE OF HEAVEN	12"	REMOVE	449	CHERRY	16"	REMOVE	559	LOCUST	14"	REMOVE
6	PINE	14"	REMAIN	117	DECIDUOUS	12" TW	REMOVE	228	MAPLE	8"	REMAIN	339	TREE OF HEAVEN	12"	REMOVE	450	ASH	10"	REMOVE	560	LOCUST	16"	REMOVE
7	LOCUST	8"	REMAIN	118	MAPLE	8"	REMOVE	229	LOCUST	12"	REMAIN	340	MAPLE	8"	REMOVE	451	PINE	8"	REMOVE	561	LOCUST	10"	REMOVE
8	LOCUST	8"	REMAIN	119	HICKORY	20"–16"	REMOVE	230	LOCUST	10"	REMAIN	341	TREE OF HEAVEN	10"	REMOVE	452	ASH	14"	REMOVE	562	LOCUST	12"	REMOVE
9	LOCUST	10"	REMAIN	120	PINE	12"	REMOVE	231	LOCUST	18"	REMAIN	342	OAK	10"	REMOVE	453	HICKORY	16"	REMOVE	563	HICKORY	14"	REMOVE
10	LOCUST	8"	REMAIN	121	PINE	16"	REMOVE	232	TREE OF HEAVEN	10"	REMAIN	343	HICKORY	18"	REMOVE	454	HICKORY	10"	REMOVE	564	ASH	28"	REMOVE
11	LOCUST	10" TW	REMAIN	122	PINE	22"	REMOVE	233	TREE OF HEAVEN	12"	REMAIN	344	OAK	8"	REMOVE	455	HICKORY	16"–10"	REMOVE	565	MAPLE	20"	REMOVE
12	LOCUST	8"	REMAIN	123	MAPLE	18"	REMOVE	234	TREE OF HEAVEN	10"	REMAIN	345	OAK	12"	REMOVE	456	HICKORY	10"	REMOVE	566	CHERRY	14"	REMOVE
13	POPLAR	20"	REMAIN	124	PINE	22"	REMOVE	235	PINE	14"	REMAIN	346	HICKORY	26"	REMOVE	457	HICKORY	12"	REMOVE	567	MAPLE	10"	REMOVE
14	LOCUST	10"	REMAIN	125	PINE	20"	REMOVE	236	LOCUST	8"	REMAIN	347	CHERRY	8"	REMOVE	458	HICKORY	18"	REMOVE	568	BIRCH	14"	REMOVE
15	MAPLE	10"	REMAIN	126	PINE	24"	REMOVE	237	PINE	20"	REMAIN	348	CHERRY	10"	REMOVE	459	HICKORY	16"	REMOVE	569	POPLAR	20"	REMOVE
16	LOCUST	10"	REMAIN	127	MAPLE	12"	REMOVE	238	LOCUST	12"	REMAIN	349	HICKORY	8"	REMOVE	460	MAPLE	12"	REMOVE	570	POPLAR	14"	REMOVE
17	MAPLE	8"	REMAIN	128	LOCUST	20"	REMAIN	239	MAPLE	12"	REMAIN	350	HICKORY	26"	REMOVE	461	MAPLE	12"	REMOVE	571	BIRCH	10"	REMOVE
18	MAPLE	8"	REMAIN	129	MAPLE	28"	REMAIN	240	HICKORY	22"	REMAIN	351	CHERRY	8"	REMOVE	462	MAPLE	8"	REMOVE	572	MAPLE	16"–12"	REMOVE
19	POPLAR	14"	REMAIN	130	PINE	12"	REMAIN	241	CHERRY	14"	REMAIN	352	CHERRY	14" TW	REMOVE	463	HICKORY	8"	REMOVE	573	MAPLE	14"	REMOVE
20	POPLAR	20"–16" TW	REMAIN	131	PINE	14"	REMAIN	242	MAPLE	16"	REMAIN	353	LOCUST	8"	REMOVE	464	HICKORY	26"	REMOVE	574	CHERRY	16"	REMOVE
21	MAPLE	8"	REMAIN	132	LOCUST	32"	REMOVE	243	LOCUST	18"	REMAIN	354	HICKORY	20"	REMOVE	465	HICKORY	10"	REMOVE	575	MAPLE	16"	REMAIN
22	PINE	16"	REMAIN	133	PINE	16"	REMAIN	244	LOCUST	12"	REMAIN	355	LOCUST	24"–18"	REMOVE	466	HICKORY	18"–14"	REMOVE	576	MAPLE	14"	REMAIN
23	PINE	12"	REMAIN	134	PINE	18"	REMAIN	245	LOCUST	12"	REMAIN	356	MAPLE	10"	REMOVE	467	HICKORY	14"	REMOVE	577	MAPLE	12"	REMAIN
24	PINE	14"	REMAIN	135	PINE	16" TW	REMAIN	246	MAPLE	18"	REMAIN	357	CHERRY	12"	REMOVE	468	HICKORY	10"	REMOVE	578	MAPLE	14"	REMOVE
25	ASH	16"–14"	REMAIN	136	LOCUST	22"	REMOVE	247	MAPLE	10"	REMAIN	358	CHERRY	14"	REMOVE	469	HICKORY	10"	REMOVE	579	MAPLE	12"	REMOVE
26	PINE	14"	REMAIN	137	MAPLE	18"	REMAIN	248	MAPLE	10"	REMAIN	359	MAPLE	10" TW	REMOVE	470	MAPLE	8"	REMOVE	580	HICKORY	18"	REMAIN
27	PINE	14"	REMAIN	138	PINE	12"	REMAIN	249	MAPLE	16"	REMAIN	360	ASH	10"	REMOVE	471	MAPLE	14"	REMOVE	581	BIRCH	20"	REMAIN
28	PINE	16"	REMAIN	139	HICKORY	14"	REMAIN	250	MAPLE	14"	REMAIN	361	LOCUST	12" TW	REMOVE	472	MAPLE	12"	REMOVE	582	MAPLE	24"	REMAIN
29	PINE	18"	REMAIN	140	PINE	14"	REMAIN	251	CHERRY	8"	REMAIN	362	CHERRY	18"–10"	REMOVE	473	MAPLE	12"	REMOVE	583	MAPLE	16"	REMAIN
30	PINE	14"	REMAIN	141	PINE	18" TW	REMAIN	252	MAPLE	8"	REMAIN	363	LOCUST	8"	REMOVE	474	HICKORY	12"	REMOVE	584	MAPLE	14"	REMAIN
31	PINE	14"	REMAIN	142	PINE	20"	REMAIN	253	LOCUST	16"	REMAIN	364	LOCUST	8"	REMOVE	475	MAPLE	10"	REMOVE	585	MAPLE	12"	REMAIN
32	PINE	16"	REMAIN	143	PINE	14"	REMAIN	254	MAPLE	18"	REMAIN	365	LOCUST	8"	REMOVE	476	HICKORY	18"	REMOVE	586	MAPLE	10"	REMAIN
33	PINE	14"	REMAIN	144	PINE	12"	REMAIN	255	LOCUST	12"	REMAIN	366	CHERRY	8"	REMOVE	477	HICKORY	10"	REMOVE	587	MAPLE	18"	REMAIN
34	PINE	14"	REMAIN	145	ASH	24"	REMAIN	256	LOCUST	10"	REMAIN	367	LOCUST	12"	REMOVE	478	HICKORY	12"	REMOVE	588	MAPLE	24"	REMAIN
35	PINE	14"	REMAIN	146	PINE	20"	REMAIN	257	LOCUST	12"	REMAIN	368	LOCUST	8"	REMOVE	479	HICKORY	12"	REMOVE	589	MAPLE	24"	REMAIN
36	PINE	10"	REMAIN	147	PINE	14"	REMAIN	258	HICKORY	12"	REMAIN	369	CHERRY	8"	REMAIN	480	MAPLE	10"	REMOVE	590	OAK	18"	REMAIN
37	PINE	16"	REMAIN	148	PINE	12"	REMAIN	259	LOCUST	10"	REMAIN	370	PINE	18"	REMOVE	481	HICKORY	16" TW	REMOVE	591	MAPLE	24"	REMAIN
38	MAPLE	6"	REMAIN	149	PINE	14"	REMAIN	260	MAPLE	14"	REMAIN	371	CHERRY	8"	REMOVE	482	HICKORY	22"	REMOVE	592	MAPLE	10"	REMAIN
39	MAPLE	6"	REMAIN	150	ASH	8"	REMAIN	261	MAPLE	14"	REMAIN	372	PINE	16"	REMOVE	483	CHERRY	18" TW	REMOVE	593	MAPLE	16"	REMAIN
40	MAPLE	4"	REMAIN	151	PINE	24"	REMAIN	262	LOCUST	16"	REMAIN	373	PINE	12"	REMOVE	484	HICKORY	14"	REMOVE	594	MAPLE	18"	REMAIN
41	MAPLE	4"	REMAIN	152	PINE	8"	REMAIN	263	MAPLE	12"	REMAIN	374	PINE	14"	REMOVE	485	HICKORY	14"	REMOVE	595	MAPLE	12"	REMAIN
42	DECIDUOUS	20"–16"	REMOVE	153	PINE	10"	REMAIN	264	MAPLE	30"–20"	REMAIN	375	PINE	16"	REMOVE	486	HICKORY	10"	REMOVE	596	MAPLE	12"	REMAIN
43	PINE	10"	REMAIN	154	PINE	16"	REMAIN	265	MAPLE	22"	REMAIN	376	PINE	18"	REMOVE	487	OAK	12"	REMOVE	597	MAPLE	28"	REMAIN
44	PINE	10"	REMAIN	155	PINE	22"	REMAIN	266	MAPLE	20"–16"	REMAIN	377	PINE	20"	REMOVE	488	HICKORY	12"	REMOVE	598	ELM	14"	REMAIN
45	PINE	8"	REMAIN	156	PINE	18"	REMAIN	267	MAPLE	28"–30"	REMAIN	378	PINE	12"	REMOVE	489	HICKORY	8"	REMOVE	599	MAPLE	28"	REMAIN
46	PINE	10"	REMAIN	157	PINE	24"	REMAIN	268	BIRCH	14"	REMAIN	379	PINE	18"	REMOVE	490	HICKORY	10"	REMOVE	600	MAPLE	8"	REMAIN
47	ASH	18"–16"	REMAIN	158	PINE	22"	REMAIN	269	LOCUST	10"	REMAIN	380	PINE	12"	REMOVE	491	ASH	14"	REMOVE	601	MAPLE	26"	REMAIN
48	JAPANESE MAPLE	12" MU	REMOVE	159	CEDAR	8"	REMAIN	270	LOCUST	12"	REMAIN	381	PINE	18"	REMOVE	492	MAPLE	16"	REMOVE	602	MAPLE	18"	REMAIN
49	MAPLE	48"	REMAIN	160	PINE	10"	REMOVE	271	LOCUST	12"	REMAIN	382	PINE	8" TW	REMOVE	493	POPLAR	24"	REMOVE	603	TREE OF HEAVEN	10"–6"	REMAIN
50	MAPLE	32"	REMAIN	161	MAPLE	12"	REMAIN	272	MAPLE	18"	REMAIN	383	PINE	14" –12"	REMAIN	494	POPLAR	20"	REMOVE	604	MAPLE	18"	REMAIN
51	PINE	16"	REMAIN	162	MAPLE	14"	REMAIN	273	CHERRY	10"	REMAIN	384	PINE	8"	REMAIN	495	MAPLE	12"	REMOVE	605	MAPLE	26"	REMAIN
52	PINE	14"	REMAIN	163	MAPLE	8"–6" TW	REMAIN	274	MAPLE	10"	REMAIN	385	PINE	12"	REMAIN	496	ASH	18"	REMOVE	606	MAPLE	22"	REMAIN
53	PINE	12"	REMAIN	164	MAPLE	28"	REMAIN	275	MAPLE	14" TR	REMAIN	386	PINE	14"	REMAIN	497	OAK	18"	REMOVE	607	MAPLE	10"	REMAIN
54	PINE	8"	REMAIN	165	HICKORY	40"	REMAIN	276	CHERRY	8"	REMAIN	387	PINE	18" TW	REMAIN	498	MAPLE	20"	REMOVE	608	MAPLE	10"	REMAIN
55	PINE	10"	REMAIN	166	MAPLE	36"	REMAIN	277	MAPLE	14"	REMAIN	388	PINE	18"	REMOVE	499	OAK	16"	REMOVE	609	MAPLE	8"	REMAIN
56	PINE	8"	REMAIN	167	MAPLE	24"	REMAIN	278	MAPLE	16"	REMAIN	389	MAPLE	44"	REMOVE	500	HICKORY	20"	REMOVE	610	MAPLE	8"	REMAIN
57	PINE	8"	REMAIN	168	MAPLE	24"	REMAIN	279	OAK	18"	REMAIN	390	MAPLE	24"	REMOVE	501	BIRCH	18" TW	REMOVE	611	MAPLE	10"	REMAIN
58	PINE	10"	REMAIN	169	MAPLE	26"	REMAIN	280	MAPLE	10"	REMAIN	391	MAPLE	38"	REMOVE	502	OAK	26"	REMOVE	612	MAPLE	16"	REMAIN
59	PINE	8"	REMAIN	170	MAPLE	26"	REMAIN	281	CHERRY	8"	REMAIN	392	MAPLE	14"	REMOVE	503	HICKORY	10"	REMOVE	613	MAPLE	18"	REMAIN
60	PINE	12"	REMAIN	171	MAPLE	10"	REMAIN	282	MAPLE	14"	REMAIN	393	PINE	12"	REMOVE	504	CHERRY	18"	REMOVE	614	MAPLE	20"	REMAIN
61	PINE	10"	REMAIN	172	MAPLE	8"	REMAIN	283	CHERRY	10"	REMAIN	394	ASH	12"	REMOVE	505	MAPLE	8"	REMOVE	615	MAPLE	18"	REMAIN
62	PINE	8"	REMAIN	173	MAPLE	12"	REMAIN	284	OAK	16"	REMAIN	395	ASH	8"	REMOVE	506	HICKORY	8"	REMOVE	616	MAPLE	8"	REMAIN
63	MAPLE	18"	REMAIN	174	MAPLE	12"	REMAIN	285	OAK	20"	REMAIN	396	ASH	28"	REMOVE	507	MAPLE	22"	REMOVE	617	MAPLE	8"	REMAIN
64	MAPLE	18"	REMAIN	175	MAPLE	48"	REMAIN	286	MAPLE	12"	REMAIN	397	ASH	16"	REMOVE	508	HICKORY	20"	REMOVE	618	MAPLE	14"	REMAIN
65	MAPLE	12"	REMAIN	176	MAPLE	12"	REMAIN	287	BIRCH	14"–8"	REMAIN	398	PINE	14"	REMOVE	509	HICKORY	10"	REMOVE	619	HICKORY	16"	REMAIN
66	MAPLE	10"	REMAIN	177	MAPLE	12"	REMAIN	288	CHERRY	8"	REMAIN	399	LOCUST	12"	REMOVE	510	HICKORY	14"	REMOVE	620	MAPLE	26"	REMAIN
67	MAPLE	14"–6"	REMAIN	178	MAPLE	10"	REMAIN	289	CHERRY	12"	REMAIN	400	MAPLE	14"	REMOVE	511	HICKORY	16"	REMOVE	621	MAPLE	18"	REMAIN
68	MAPLE	10"	REMAIN	179	MAPLE	10"	REMAIN	290	CHERRY	8"	REMAIN	401	LOCUST	10"	REMOVE	512	HICKORY	18"	REMOVE	622	OAK	28"	REMAIN
69	MAPLE	8"	REMAIN	180	MAPLE	12"	REMAIN	291	BIRCH	10"	REMAIN	402	MAPLE	28"	REMOVE	513	HICKORY	18"	REMOVE	623	MAPLE	26"	REMAIN
70	MAPLE	14"	REMAIN	181	MAPLE	12" TR	REMAIN	292	CHERRY	10"	REMAIN	403	LOCUST	8"	REMOVE	514	BUTTERNUT	20"	REMOVE	624	MAPLE	20"	REMAIN
71	MAPLE	12"	REMAIN	182	MAPLE	12"	REMAIN	293	CHERRY	8"	REMAIN	404	LOCUST	14"	REMOVE	515	CHERRY	18"–14"	REMOVE	625	MAPLE	6"	REMAIN
72	DECIDUOUS	8"	REMAIN	183	MAPLE	28"	REMAIN	294	CHERRY	10"	REMAIN	405	LOCUST	14"	REMOVE	516	OAK	20"	REMOVE	626	OAK	26"	REMAIN
73	DECIDUOUS	12"	REMAIN	184	LOCUST	18"	REMAIN	295	CHERRY	8" MU	REMAIN	406	LOCUST	16"	REMOVE	517	OAK	24"	REMOVE	627	MAPLE	8"	REMAIN
74	MAPLE	10"	REMAIN	185	LOCUST	16"	REMAIN	296	MAPLE	22"	REMAIN	407	LOCUST	14"	REMOVE	518	OAK	22"	REMOVE	628	OAK	20"	REMAIN
75	MAPLE	30"	REMAIN	186	MAPLE	16"	REMAIN	297	OAK	8"	REMAIN	408	LOCUST	18"	REMOVE	519	MAPLE	12" TW	REMOVE	629	OAK	48"	REMAIN
76	LOCUST	10"	REMAIN	187	LOCUST	14"	REMAIN	298	OAK	8"	REMAIN	409	PINE	10" MU	REMOVE	520	MAPLE	16" TW	REMOVE	630	BIRCH	14"	REMAIN
77	LOCUST	12"–6"	REMAIN	188	MAPLE	10"	REMAIN	299	CHERRY	8"	REMAIN	410	ASH	16"	REMOVE	521	MAPLE	12" TW	REMOVE	631	OAK	44"	REMAIN
78	MAPLE	12"	REMAIN	189	MAPLE	10"	REMAIN	300	CHERRY	8"	REMAIN	411	ASH	24"	REMOVE	522	ASH	12"–18" TW	REMOVE	632	OAK	40"	REMAIN
79	MAPLE	14"	REMAIN	190	MAPLE	18"	REMAIN	301	CHERRY	8"	REMAIN	412	CHERRY	14"	REMOVE	523	HICKORY	18"	REMOVE	633	OAK	34"	REMAIN
80	POPLAR	6"	REMAIN	191	MAPLE	8"	REMAIN	302	CHERRY	8"–12"	REMAIN	413	LOCUST	20"	REMOVE	524	HICKORY	20"	REMOVE	634	OAK	8"	REMAIN
81	DECIDUOUS	10"	REMAIN	192	MAPLE	16"	REMAIN	303	CHERRY	8" TW	REMAIN	414	ASH	16"–12"	REMOVE	525	MAPLE	12" TR	REMOVE	635	BIRCH	12"TW	REMAIN
82	MAPLE	16"	REMAIN	193	MAPLE	12"	REMAIN	304	CHERRY	8"	REMAIN	415	LOCUST	14"	REMOVE	526	HICKORY	10"	REMOVE	636	HICKORY	8"	REMAIN
83	DECIDUOUS	16"	REMAIN	194	LOCUST	14"	REMAIN	305	CHERRY	12"	REMAIN	416	LOCUST	10"	REMOVE	527	HICKORY	24"	REMOVE	637	OAK	38"	REMAIN
84	OAK	10"	REMAIN	195	MAPLE	14"	REMAIN	306	LOCUST	12" TW	REMOVE	417	MAPLE	24" TR	REMOVE	528	OAK	18"	REMOVE	638	MAPLE	8"	REMAIN
85	MAPLE	28"	REMAIN	196	MAPLE	14"	REMAIN	307	LOCUST	8"	REMOVE	418	CHERRY	22"	REMOVE	529	HICKORY	16"	REMOVE	639	OAK	10"	REMAIN
86	MAPLE	16"	REMAIN	197	MAPLE	10"	REMAIN	308	CHERRY	8"	REMAIN	419	LOCUST	22"	REMOVE	530	ASH	26"	REMOVE	640	BIRCH	8"	REMAIN
87	MAPLE	12"–14"	REMAIN	198	LOCUST	18"	REMAIN	309	PINE	26"	REMAIN	420	PINE	10" TW	REMOVE	531	ASH	18"	REMOVE	641	OAK	30"	REMAIN
88	MAPLE	18"	REMAIN	199	LOCUST	14"	REMAIN	310	PINE	24"	REMAIN	421	CHERRY	24"–14"	REMOVE	532	ASH	20"	REMOVE	642	MAPLE	16"	REMAIN
89	MAPLE	28"	REMAIN	200	LOCUST	16"	REMAIN	311	HICKORY	10"	REMAIN	422	LOCUST	30"	REMOVE	533	ASH	26"	REMOVE	643	ASH	14"	REMAIN
90	ASH	16"	REMAIN	201	CHERRY	16"	REMAIN	312	CHERRY	10"	REMAIN	423	LOCUST	18"–16"	REMOVE	534	HICKORY	20"	REMOVE	644	MAPLE	8"	REMAIN
91	MAPLE	16"	REMAIN	202	CHERRY	12"	REMAIN	313	CHERRY	8"	REMAIN	424	LOCUST	16"	REMOVE	535	LOCUST	28"	REMOVE	645	MAPLE	12"	REMAIN
92	CHERRY	24"	REMAIN	203	MAPLE	12"	REMAIN	314	BIRCH	16"	REMAIN	425	MAPLE	24" TR	REMOVE	536	LOCUST	28"	REMOVE	646	MAPLE	24"	REMAIN
93	HICKORY	22"	REMAIN	204	LOCUST	10"	REMAIN	315	CHERRY	10"	REMAIN	426	BIRCH	8"	REMOVE	537	MAPLE	38"	REMOVE	647	MAPLE	10"	REMAIN
94	OAK	36"	REMAIN	205	LOCUST	12"	REMAIN	316	TREE OF HEAVEN	12"	REMAIN	427	LOCUST	28"	REMOVE	538	OAK	16"	REMAIN	648	MAPLE	10"	REMAIN
95	ASH	22"	REMAIN	206	TREE OF HEAVEN	12"	REMAIN	317	CHERRY	18"–14"	REMAIN	428	SPRUCE	28"	REMOVE	539	LOCUST	14"	REMAIN	649	ASH	18"	REMAIN
96	DECIDUOUS	16" MU	REMAIN	207	LOCUST	14"	REMAIN	318	MAPLE	8"	REMAIN	429	LOCUST	28"	REMOVE	540	LOCUST	14"	REMAIN	650	MAPLE	20"	REMAIN
97	MAPLE	8" MU	REMAIN	208	TREE OF HEAVEN	10"	REMAIN	319	CHERRY	12"	REMAIN	430	ASH	28"–24" TW	REMOVE	541	LOCUST	22"	REMAIN	651	BIRCH	16"	REMAIN
98	DO	8"	REMAIN	209	MAPLE	10"	REMAIN	320	HICKORY	20"	REMAIN	431	APPLE	12" TW	REMOVE	542	LOCUST	18"	REMAIN	652	CHERRY	8"	REMAIN
99	MAPLE	26"	REMOVE	210	MAPLE	12"	REMAIN	321	CHERRY	10"	REMAIN	432	BIRCH	12" TR	REMOVE	543	LOCUST	12"	REMAIN	653	POPLAR	16"	REMAIN
100	MAPLE	28"	REMOVE	211	MAPLE	10"	REMAIN	322	ASH	10"	REMAIN	433	DW	8"	REMOVE	544	MAPLE	18"	REMAIN	654	ASH	8"	REMAIN
101	PINE	20"–16"	REMOVE	212	MAPLE	10"	REMAIN	323	ASH	14"–10"	REMAIN	434	APPLE	8" TR	REMOVE	545	LOCUST	18"	REMAIN	655	ASH	8"	REMAIN
102	ASH	18"	REMOVE	213	LOCUST	14"	REMAIN	324	ASH	10" TW	REMAIN	435	HICKORY	26"	REMOVE	546	LOCUST	16"	REMAIN	656	ASH	8"	REMAIN
103	ASH	12"	REMOVE	214	LOCUST	12"	REMAIN	325	APPLE	12" TW	REMAIN	436	MAPLE	24" TW	REMOVE	547	LOCUST	14"	REMAIN	657	MAPLE	50"	REMOVE
104	ASH	18"	REMOVE	215	MAPLE	8"	REMAIN	326	CHERRY	10"	REMAIN	437	PINE	12"	REMOVE	548	LOCUST	12"	REMAIN	658	MAPLE	8"	REMOVE
105	ASH	16"	REMOVE	216	MAPLE	16"	REMAIN	327	ASH	8"	REMAIN	438	PINE	18"	REMOVE	549	LOCUST	14"	REMAIN	659	OAK	12"	REMOVE
106	CHERRY	12"	REMOVE	217	CHERRY	16"	REMAIN	328	ASH	10"	REMAIN	439	PINE	20"	REMOVE	550	MAPLE	18"	REMAIN	660	OAK	26"	REMOVE
107	ASH	14"	REMOVE	218	LOCUST	10"	REMAIN	329	HICKORY	20"	REMAIN	440	PINE	14"	REMOVE	551	CHERRY	16"	REMAIN	661	MAPLE	8"	REMOVE
108	CHERRY	18"	REMOVE	219	MAPLE	10"	REMAIN	330	HICKORY	12"	REMAIN	441	PINE	16"	REMOVE	552	APPLE	14"	REMAIN	662	COTTONWOOD	36"	REMOVE
109	ASH	14"	REMOVE	220	MAPLE	10"	REMAIN	331	MAPLE	8"	REMAIN	442	ASH	18"	REMOVE	553	LOCUST	18"	REMOVE	663	MAPLE	28"	REMOVE
110	CHERRY	14"	REMOVE	221	MAPLE	12"	REMAIN	332	MAPLE	20"–8"	REMAIN	443	HICKORY	26"	REMOVE	554	LOCUST	16"	REMAIN	664	OAK	14"	REMOVE
111	CHERRY	12"	REMOVE	222	TREE OF HEAVEN	8"	REMAIN	333	MAPLE	14"	REMAIN	444	PINE	8"	REMOVE	TOTAL NUMBER OF TREES TO BE REMOVED: 266							

APPLICANT/OWNER:
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568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
30 RAILROAD AVENUE
GREENWICH, CT 06830

No.	Revision	Date	By
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Previous Editions Obsolete

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SITE TREE REMOVAL TABLE
THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

STATE OF NEW YORK
DAVID P. LOMBARDI
LICENSED PROFESSIONAL ENGINEER

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn: NC Approved: AG
Scale: 1" = 30'
Date: 11/23/2020
Project No: 20101
Drawing No:
C-022

LANDSCAPE AREA LEGEND

PROPOSED PARKING AREA (±133,092 S.F.)

PROPOSED INTERIOR PARKING LANDSCAPED AREA (±28,637 S.F.)

PROPOSED INTERIOR PARKING LANDSCAPED AREA CALCULATION:

TOTAL PROPOSED INTERIOR PARKING LANDSCAPED AREA / TOTAL PROPOSED PARKING AREA → 28,637 S.F. / 133,092 S.F. X 100 = ±21.5%

FLOOR AREA, GROSS: 12,350 SF

FLOOR TOTAL SALEABLE: 10,484 SF

UNIT / BEDROOM COUNT			
BUILDING 1 (3 STORY)	12 UNITS	(3) 3 BEDROOMS & (9) 2 BEDROOMS	27 BEDROOMS/BLDG
BUILDING 2 (3 STORY)	12 UNITS	(3) 3 BEDROOMS & (9) 2 BEDROOMS	27 BEDROOMS/BLDG
BUILDING 3 (3 STORY)	12 UNITS	(3) 3 BEDROOMS & (9) 2 BEDROOMS	27 BEDROOMS/BLDG
BUILDING 4 (3 STORY)	12 UNITS	(3) 3 BEDROOMS & (9) 2 BEDROOMS	27 BEDROOMS/BLDG
BUILDING 5 (3 STORY)	12 UNITS	(3) 3 BEDROOMS & (9) 2 BEDROOMS	27 BEDROOMS/BLDG
BUILDING 6 (3 STORY)	12 UNITS	(3) 3 BEDROOMS & (9) 2 BEDROOMS	27 BEDROOMS/BLDG
TOTALS	72 UNITS	(18) 3 BEDROOMS & (54) 2 BEDROOMS	162 BEDROOMS
DENSITY UNITS	45 UNITS	(18) 3 BEDROOMS = 14.6 DENSITY UNITS (54) 2 BEDROOMS = 25.5 DENSITY UNITS	(18 /3) X 2= 12 54 /2 = 27
DWELLING UNITS	72 UNITS		

Density Unit Calculation:
Site:
Lot 1= 129.95872 acres
Lot 2= 26.34421 acres
Total Site =156.30293 acres x 43,560sf/ac = (6,808,555.6308 sf) / 133,000=51.1921476
51 Density Units Available
39 Density Units Proposed (COMPLIES)

Dwelling Unit Calculation:
Site:
Lot 1=129.95872 acres
Lot 2=26.34421 acres
Total Site=156.30293 acres / 1.8 Acres = 86.834961
87 Dwelling Units Available (88 Studied in the EIS)
72 Dwelling Units Proposed (COMPLIES)

PHASING NOTES:

1. IN DECEMBER, 2019, IN CONSIDERATION OF THE ADOPTION BY THE TOWN OF THE AMENDMENT, THE APPLICANT RECORDED A DECLARATION PURSUANT TO WHICH THE APPLICANT MAY, SUBJECT TO SITE PLAN APPROVAL, CONSTRUCT ON THE DEVELOPMENT LOT A FIRST PHASE OF THE COMMUNITY ("PHASE 1 "), WHICH MAY CONSIST OF UP TO THIRTY-SIX (36) RESIDENCES, WHICH MAY BE FEE-SIMPLE HOMES AND/OR CONDOMINIUM UNITS WITHOUT LIMITATION REGARDING FORM OF OWNERSHIP OF THE RESIDENCES, AND A SECOND PHASE OF THE COMMUNITY ("PHASE 2"), WHICH MAY CONSIST OF UP TO THIRTY-SEVEN (37) RESIDENCES, WHICH MAY BE FEE-SIMPLE HOMES AND/OR CONDOMINIUM UNITS WITHOUT LIMITATION REGARDING FORM OF OWNERSHIP OF THE RESIDENCES; PROVIDED THAT UNLESS THE AGGREGATE AVERAGE OF THE GROSS SALES PRICES OF THE MARKET-RATE PHASE 1 CONDOMINIUM UNITS IS $700.00 PER SQUARE FOOT OR MORE, THE PHASE 2 CONDOMINIUM RESIDENCES ARE REQUIRED TO BE "55 AND OLDER" AGE-RESTRICTED HOUSING AS PERMITTED UNDER APPLICABLE FEDERAL LAW AND REGULATIONS. THE DECLARATION ALSO REQUIRES PHASE 1 TO INCLUDE FOUR (4) ON-SITE AFFORDABLE UNITS, AND PHASE 2 TO INCLUDE THREE (3) ON-SITE AFFORDABLE UNITS. HOWEVER, THE APPLICANT IS PERMITTED TO AT ANY TIME ELECT TO RELOCATE ALL OR A PORTION OF THE AFFORDABLE UNITS OFF-SITE WITHIN AREAS IN THE ARMONK HAMLET THAT ARE SERVED BY PUBLIC SEWER AND WATER, AND THEREBY REDUCE THE ON-SITE AFFORDABLE UNITS AND SUBSTITUTE MARKET-RATE UNITS THEREFOR ON A ONE-TO-ONE BASIS, PROVIDED THAT IN NO EVENT SHALL THE TOTAL NUMBER OF RESIDENTIAL UNITS ON THE PROPERTY EXCEED SEVENTY-THREE (73).
2. REFER TO DRAWING C-402 FOR SEQUENCE OF CONSTRUCTION.

Project Summary Comparison Table

	DEIS plan	FEIS Alternative 2	Modified Project (New Residential Development)
Market-Rate Condominiums	80	80	See Unit/Bedroom Count Table
Fair and Affordable Units	8	8*	See Unit/Bedroom Count Table
Total Residential Units	**88**	**88**	See Unit/Bedroom Count Table
Golf Cottages (4 BR)	5	10	See Unit/Bedroom Count Table
Golf Residences (2 BR)	55	70	See Unit/Bedroom Count Table
Golf Residences (2 BR)	6	0	See Unit/Bedroom Count Table
Club Villas (3 BR)	14	0	See Unit/Bedroom Count Table
Affordable Units (2 BR)	6	7*	See Unit/Bedroom Count Table
Affordable Units (3 BR)	1	0	See Unit/Bedroom Count Table
Affordable Units (4 BR)	1	1*	See Unit/Bedroom Count Table
Total Bedrooms	**209**	**198**	**162**
Buffer on Bedford Road	**25 feet**	**100 feet**	**100 feet**
Open Space	141.6 acres	141.6 acres	127.37 acres
Impervious Area	17.5 ac. (6.6 ac. *New* impervious)	16.7 acres (5.8 ac. *New* impervious)	16.0 acres (5.0 ac. *New* impervious) (3)
Length of Private Road	3,750 lf	3,258 lf	2,262 lf
Steep Slope Impact	2.75 acres	2.75 acres	0.90 acres
Trees to be Removed	879 trees	813 trees	266 trees
Wetland Impacts	add 1.25 acres of new wetland enhancements	add 1.25 acres of new wetland enhancements	N/A
Wetland Buffer Impacts	4.34 acres	4.59 acres	N/A
Trip Generation (Peak)	47 AM / 55 PM	47 AM / 55 PM (or less)	47 AM / 55 PM (or less)
Additional Water Demand	29,775 gpd	28,325 gpd	TBD
Additional Wastewater Generation	29,775 gpd	28,325 gpd	TBD
Annual Tax and Mitigation Payment Revenue	$1,493,223	$2,598,230	$2,598,230
Total Population	185-204	183-191	155-166 (1)
School Children – Local Experience	10	9	4-5 (2)
School Children – Rutgers & Local Experience	20	17	15-17 (2)
Visual Impacts	4 new residential buildings along Bedford Road, with landscaping in 25-foot buffer.	5 new detached single family Golf Cottages along Bedford Road; portion of internal road close to Route 22 eliminated; landscaping added in 100 foot buffer along Bedford Road. (100' buffer extends around the perimeter of the Site.) Repair to stone wall on Windmill Farms side of Route 22	6 new residential buildings with tennis courts and amenities building more than 100 feet from Bedford Road.

*8 AFFH units to be located off-site.

NOTES:

1. RUTGERS MULTIPLIERS

   FOR THE 54 2-BEDROOM UNITS, MULTIPLIER OF 1.88 = 101.52
   RUTGERS UNIVERSITY RESIDENTIAL DEMOGRAPHIC MULTIPLIERS (JUNE 2006): NEW YORK, OWNERSHIP UNITS IN BUILDINGS WITH 5+ UNITS, COSTING MORE THAN $329,500 (2 BEDROOM)
   FOR THE 18 3-BEDROOM UNITS, MULTIPLIER OF 3.00 = 54
   RUTGERS UNIVERSITY RESIDENTIAL DEMOGRAPHIC MULTIPLIERS (JUNE 2006): NEW YORK, OWNERSHIP UNITS IN BUILDINGS WITH 5+ UNITS, ALL VALUES (3 BEDROOMS)
   TOTAL POPULATION= 155-156 PERSONS
   LOCAL EXPERIENCE FROM THE DEIS
   APPROXIMATELY 2.3 PERSONS AVERAGE PER UNIT TIMES 72 UNITS EQUALS 165-166 PERSONS
   USING THE SAME FORMAT AS THE PROJECT SUMMARY COMPARISON TABLE, THE TOTAL POPULATION WOULD BE 155-166 PERSONS.

2. RUTGERS MULTIPLIERS

   FOR THE 54 2-BEDROOM UNITS, MULTIPLIER OF 0.05 = 2.7
   RUTGERS UNIVERSITY RESIDENTIAL DEMOGRAPHIC MULTIPLIERS (JUNE 2006): NEW YORK, SCHOOL AGE CHILDREN IN PUBLIC SCHOOLS, OWNERSHIP UNITS IN BUILDINGS WITH 5+ UNITS, COSTING MORE THAN $329,500 (2 BEDROOM)
   FOR THE 18 3-BEDROOM UNITS, MULTIPLIER OF 0.49 = 8.82
   RUTGERS UNIVERSITY RESIDENTIAL DEMOGRAPHIC MULTIPLIERS (JUNE 2006): NEW YORK, SCHOOL AGE CHILDREN IN PUBLIC SCHOOLS, OWNERSHIP UNITS IN BUILDINGS WITH 5+ UNITS, ALL VALUES (3 BEDROOMS)
   TOTAL= 11-12 SCHOOL-AGE CHILDREN
   LOCAL EXPERIENCE
   0.06 SCHOOL-CHILDREN PER UNIT TIMES 72 UNITS EQUALS 4-5 SCHOOL-AGE CHILDREN

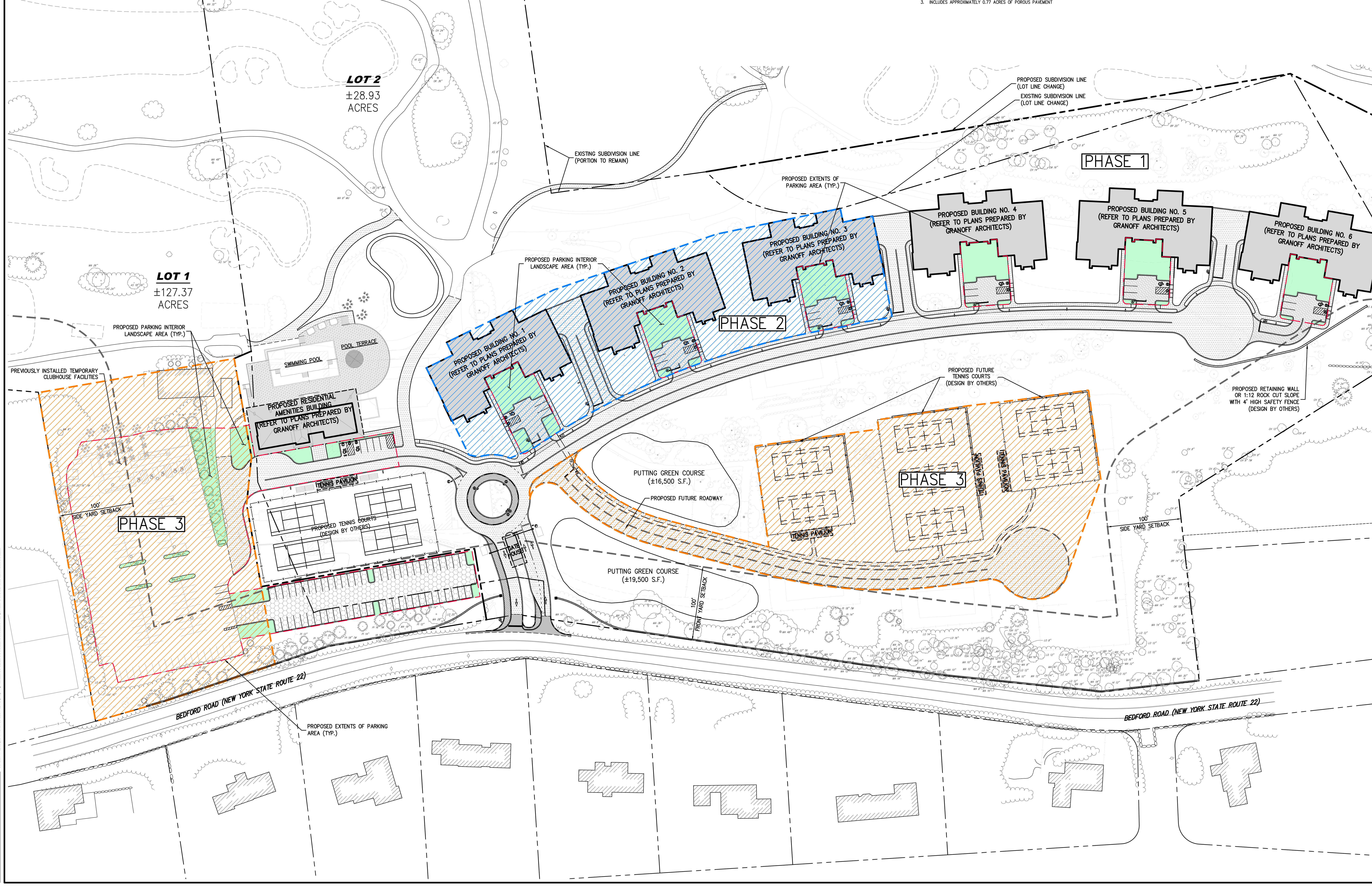
3. INCLUDES APPROXIMATELY 0.77 ACRES OF POROUS PAVEMENT

LEGEND

	EXISTING PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING SETBACK LINE
WLF-63 WLF-64 WLF-65	EXISTING WETLAND LINE AND DELINEATION
	EXISTING BUILDING LINE
	EXISTING PAVEMENT EDGE
	EXISTING CURB LINE
	EXISTING STONE WALL
	EXISTING GUIDE RAIL
	EXISTING FENCE
T10 M	EXISTING TREE AND DESIGNATION
	EXISTING TREE LINE
	EXISTING PAINT
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	PROPOSED BUILDING LINE
	PROPOSED CONCRETE CURB
	PROPOSED SAWCUT LINE
2H	PROPOSED ACCESSIBLE PARKING SPACES WITH NUMBER OF SPACES INDICATED (REFER TO STRIPING DETAILS)
5	PROPOSED PARKING SPACES WITH NUMBER OF SPACES INDICATED (REFER TO STRIPING DETAILS)
	PROPOSED CONCRETE SIDEWALK
	PROPOSED HEAVY DUTY PAVEMENT
	PROPOSED POROUS PAVEMENT
	PROPOSED PERVIOUS PAVERS
	PROPOSED RETAINING WALL (DESIGN BY OTHERS)
	PROPOSED FENCE
Y	PROPOSED 2-4" WIDE YELLOW LINES 8"O.C.
	PROPOSED 12" WIDE WHITE STOP LINE
	PROPOSED ARROW MARKING ON PAVEMENT
A	TRAFFIC SIGN LOCATION & DESIGNATION
	PEDESTRIAN CROSSING

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC MAP," PREPARED BY JMC,PLLC, LAST REVISED 03/06/2013.



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

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568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

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voice 914.273.5225 • fax 914.273.2102
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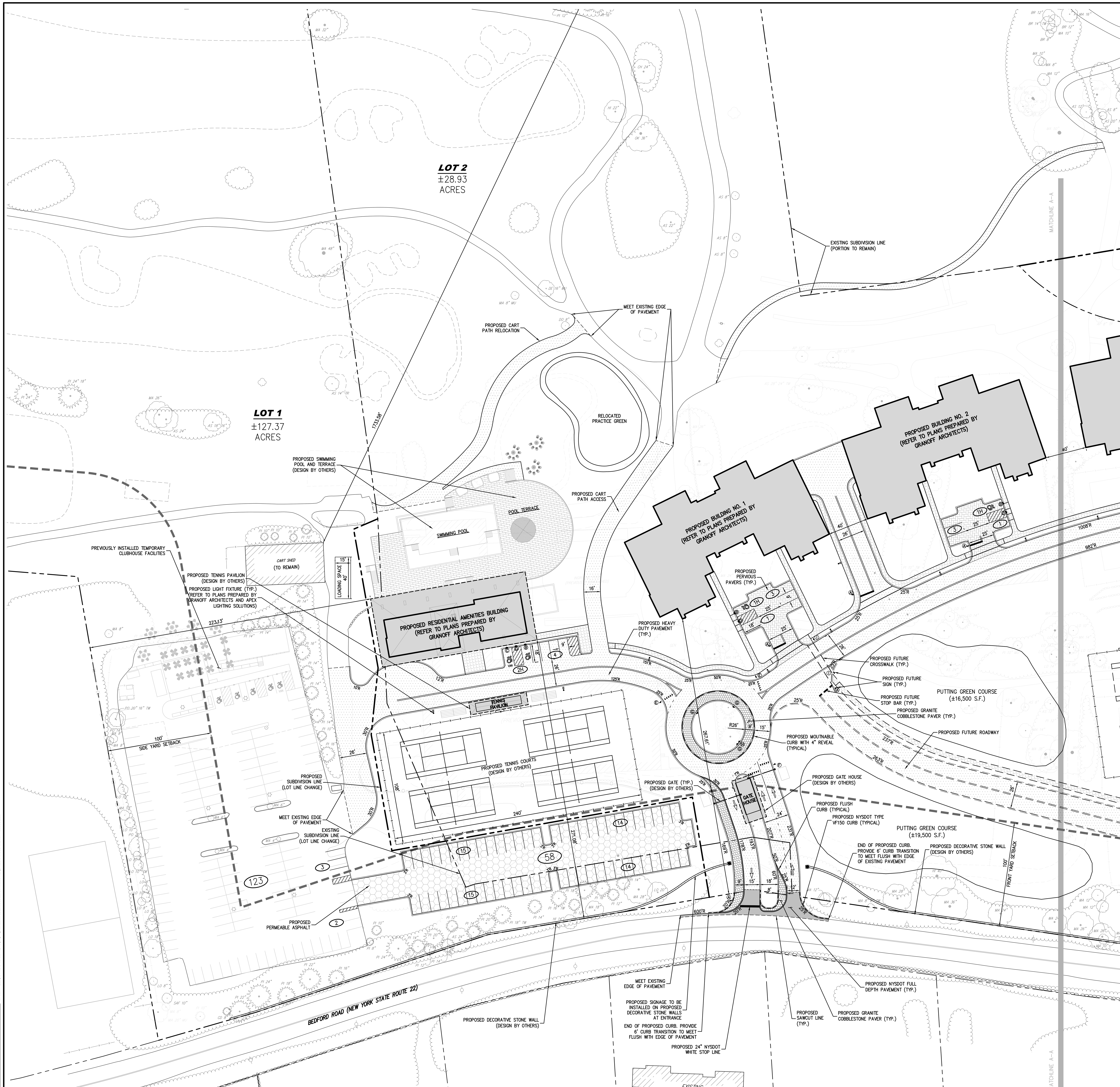
OVERALL SITE LAYOUT AND PHASING PLAN

THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

STATE OF NEW YORK • DAVID P. LOMBARDI • LICENSED PROFESSIONAL ENGINEER • 071001

Drawn: NC	Approved: AG
Scale: 1" = 30'	
Date: 11/23/2020	
Project No: 20101	
20101-LAYOUT	LAYOUT OV	LAY.scr
Drawing No: C-100A	

NOT FOR CONSTRUCTION



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- WLF-63 WLF-64 WLF-65 EXISTING WETLAND LINE AND DELINEATION
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NOTES:

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SIGN TABLE

DESIGNATION NUMBER	SIGN	SIZE	DESCRIPTION	MOUNTING TYPE	MOUNTING HEIGHT	REGULATORY	REFLECTORIZED
A	STOP	30"X30"	WHITE ON RED	STEEL CHANNEL	7'-0"	R1-1	X
B	RESERVED PARKING	12"X18"	GREEN & BLUE ON WHITE	STEEL CHANNEL	7'-0"	R7-8	X
C	RESERVED PARKING / VAN ACCESSIBLE	12"X18" 12"X6"	GREEN & BLUE ON WHITE	STEEL CHANNEL	7'-0"	R7-8 R7-8A	X
D	NO PARKING ANY TIME	12"X18"	RED ON WHITE	STEEL CHANNEL	7'-0"	NYP1-2	X
E	YIELD	30"X30"X30"	RED ON WHITE	STEEL CHANNEL	7'-0"	R1-2	X
F	YIELD / SINGLE LANE	30"X30"X30" 30"X30"	RED ON WHITE BLACK ON YELLOW	STEEL CHANNEL	6'-0"	R1-2 NYW3-15	X
G		30"X24"	BLACK ON WHITE	STEEL CHANNEL	7'-0"	R6-4	X
H	SINGLE LANE	30"X30"	BLACK ON WHITE	STEEL CHANNEL	7'-0"	NYW3-15	X
I		30"X30" 24"X12"	BLACK ON YELLOW	STEEL CHANNEL	7'-0"	W11-2 W16-7PL	X

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JMC

SITE LAYOUT PLAN (SOUTH)

THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

STATE OF NEW YORK · DAVID P. LOMBARDI · 071001 · LICENSED PROFESSIONAL ENGINEER

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
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TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn:	NC	Approved:	AG
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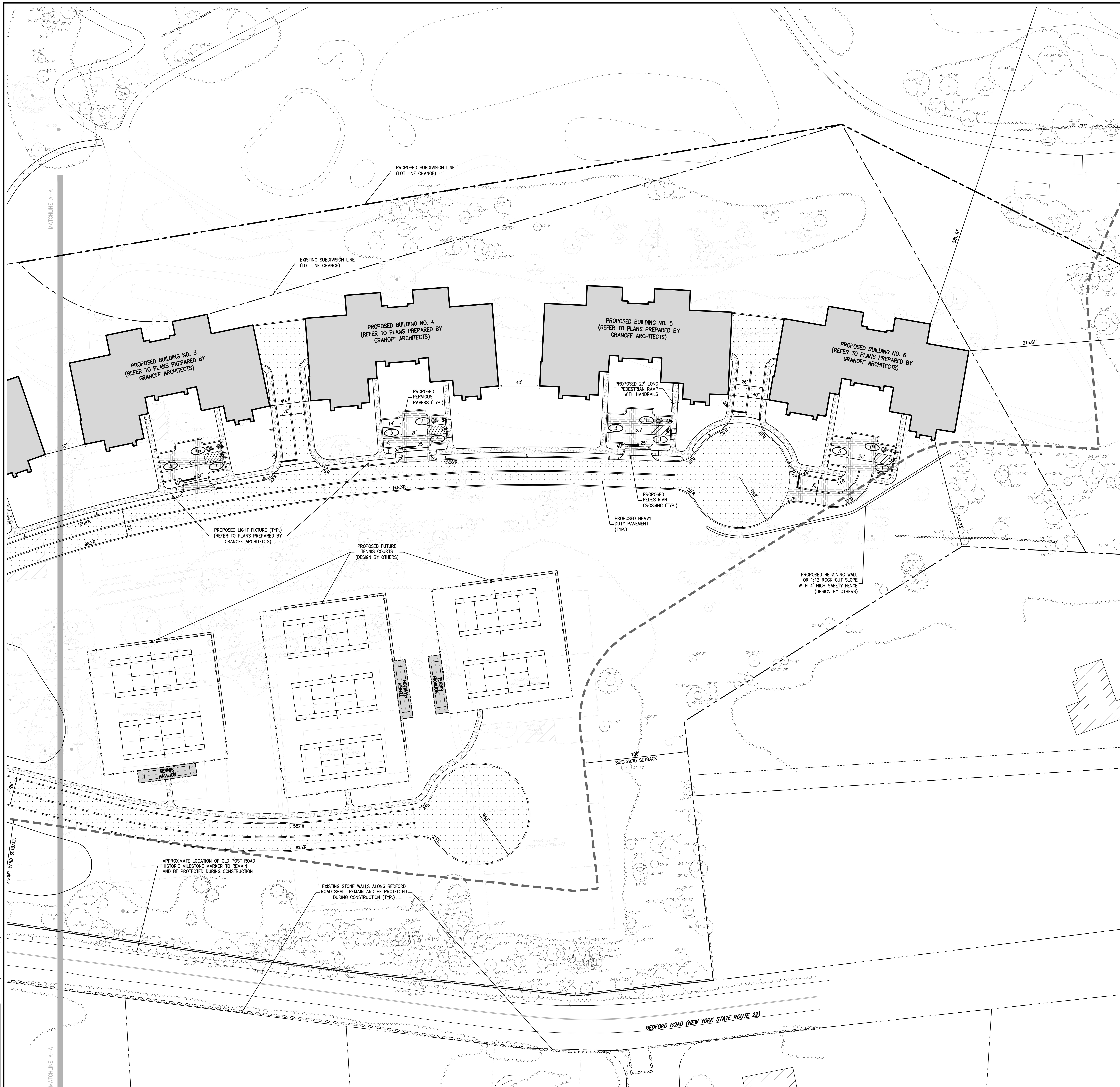
20101-LAYOUT	LAYOUT SOUTH	LAY.scr	
Drawing No:	C-100		



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A	STOP	30"X30"	WHITE ON RED	STEEL CHANNEL	7'-0"	R1-1	X
B	RESERVED PARKING	12"X18"	GREEN & BLUE ON WHITE	STEEL CHANNEL	7'-0"	R7-8	X
C	RESERVED PARKING / VAN ACCESSIBLE	12"X18" 12"X6"	GREEN & BLUE ON WHITE	STEEL CHANNEL	7'-0"	R7-8 R7-8A	X
D	NO PARKING ANY TIME	12"X18"	RED ON WHITE	STEEL CHANNEL	7'-0"	NYP1-2	X
E	YIELD	30"X30"X30"	RED ON WHITE	STEEL CHANNEL	7'-0"	R1-2	X
F	YIELD / SINGLE LANE	30"X30"X30" 30"X30"	RED ON WHITE BLACK ON YELLOW	STEEL CHANNEL	6'-0"	R1-2 NYW3-15	X
G		30"X24"	BLACK ON WHITE	STEEL CHANNEL	7'-0"	R6-4	X
H	SINGLE LANE	30"X30"	BLACK ON WHITE	STEEL CHANNEL	7'-0"	NYW3-15	X
I		30"X30" 24"X12"	BLACK ON YELLOW	STEEL CHANNEL	7'-0"	W11-2 W16-7PL	X

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

APPLICANT/OWNER:
SUMMIT CLUB PARTNERS, LLC
568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

SITE LAYOUT PLAN (NORTH)

THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

STATE OF NEW YORK · DAVID P. LOMBARDI · 071001 · LICENSED PROFESSIONAL ENGINEER

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

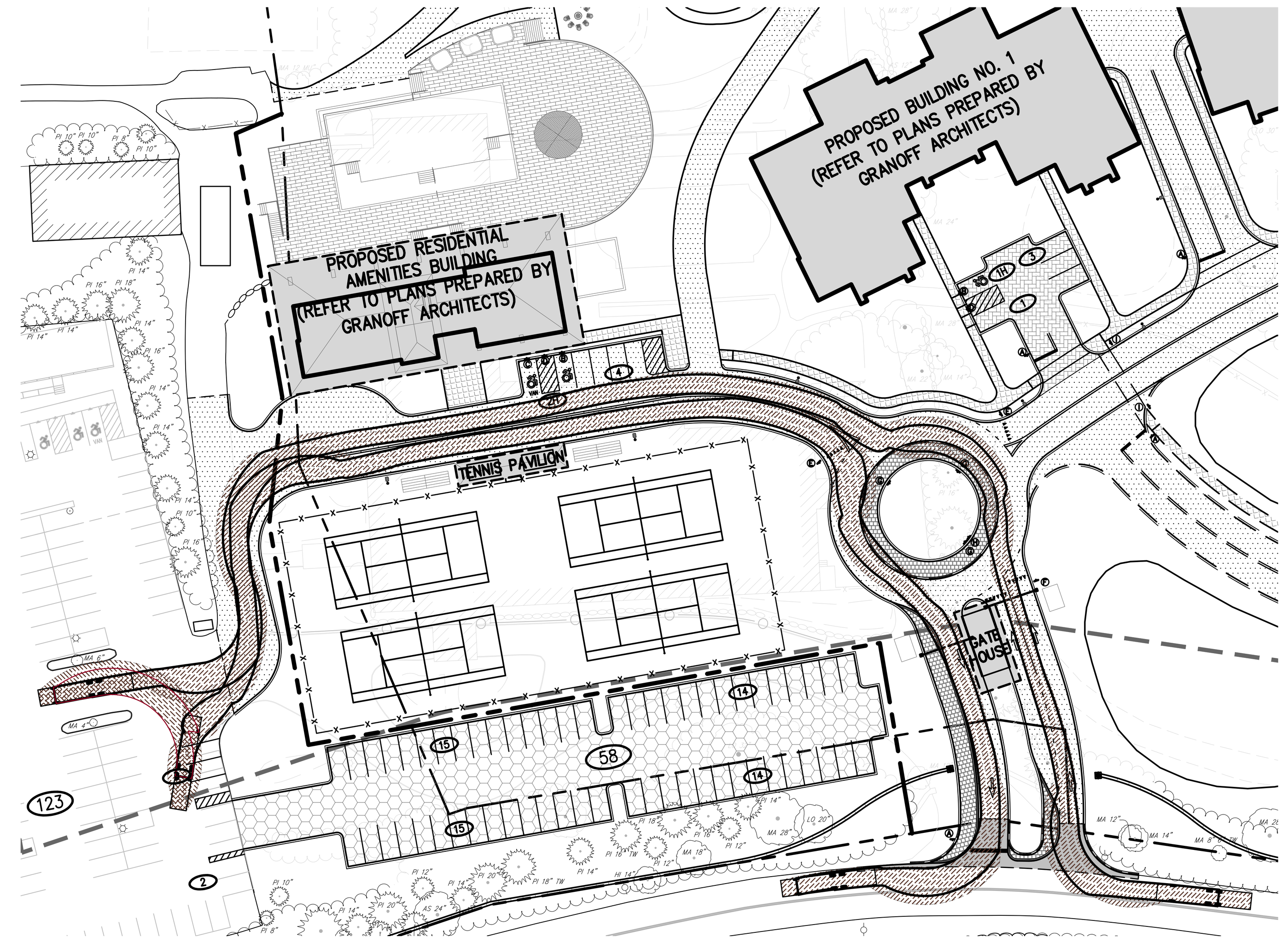
________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

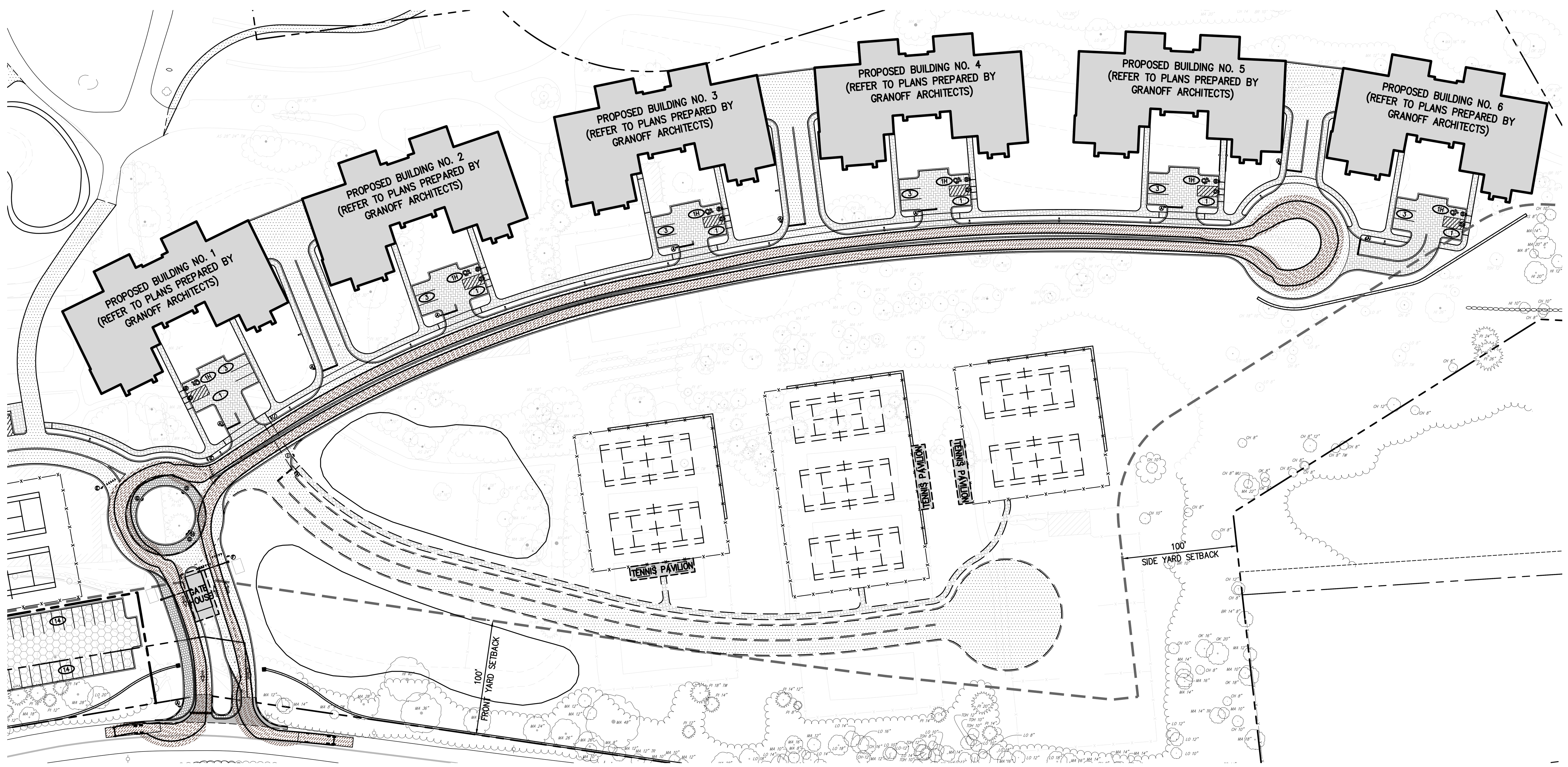
Drawn: NC	Approved: AG
Scale: 1" = 30'	
Date: 11/23/2020	
Project No: 20101	
20101-LAYOUT	LAYOUT NORTH · LAY.scr
Drawing No: C-101	

NOT FOR CONSTRUCTION



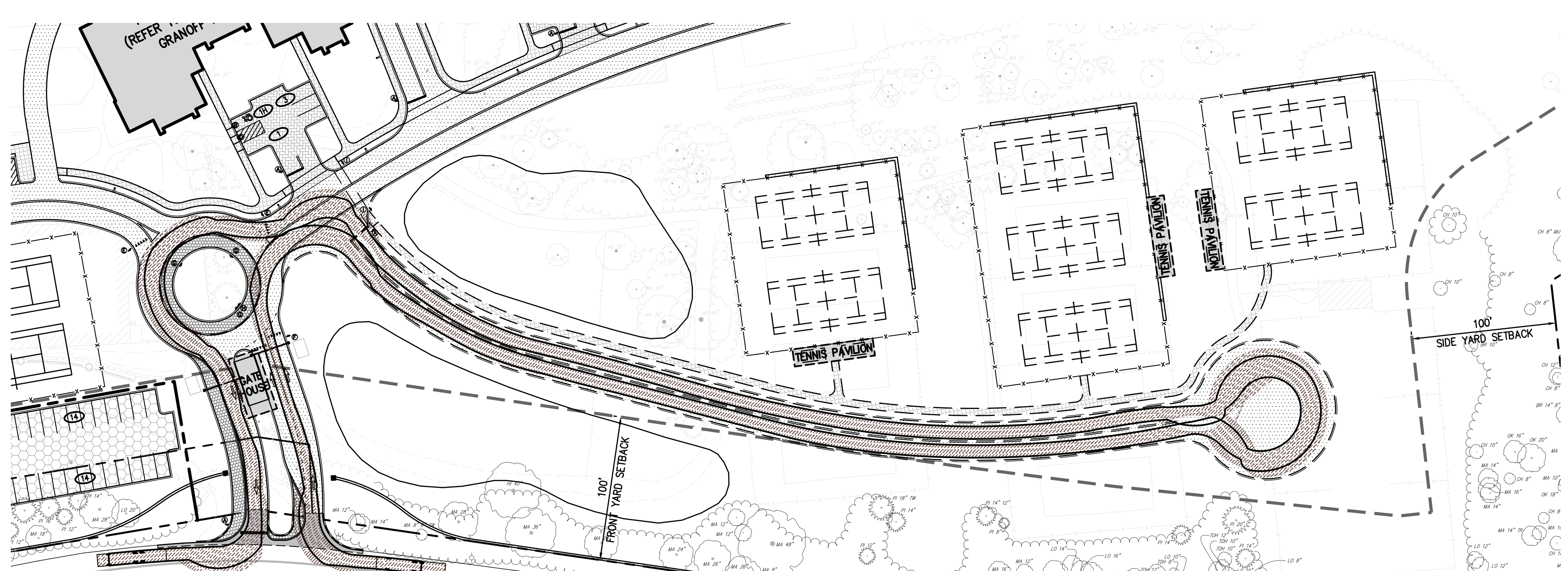
ROAD A FIRE TRUCK TURNING ANALYSIS

SCALE: 1" = 50'



ROAD B FIRE TRUCK TURNING ANALYSIS

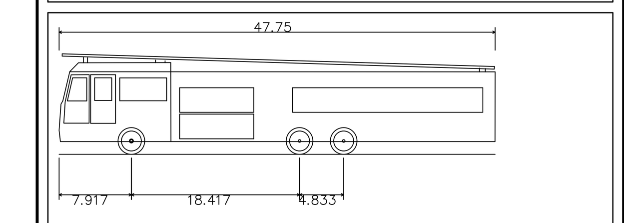
SCALE: 1" = 50'



ROAD C FIRE TRUCK TURNING ANALYSIS

SCALE: 1" = 50'

FIRE TRUCK PROFILE



E-ONE HP95 Mid Mount	
Overall Length	47.750ft
Overall Width	8.333ft
Overall Body Height	11.000ft
Min Body Ground Clearance	1.393ft
Track Width	8.333ft
Lock-to-lock time	6.00s
Max Wheel Angle	45.00°

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

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568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

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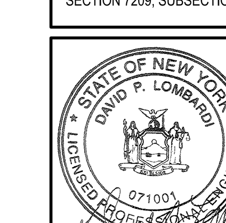
FIRE TRUCK ACCESS PLAN

THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn: NC		Approved: AG	
Scale: AS SHOWN			
Date: 11/23/2020			
Project No: 20101			
20101-LAYOUT	TRUCK TURNING	LAY.scr	
Drawing No: C-102			

NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- WLF-63 WLF-64 WLF-65 — EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- 172 — EXISTING CONTOUR
- 170 — EXISTING INDEX CONTOUR
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED DROP CURB AND RAMP
- 200 — PROPOSED FINISHED GRADE
- 191.00+ — PROPOSED SPOT GRADE
- SMH — PROPOSED SANITARY SEWER MANHOLE
- MH — PROPOSED STORM DRAIN MANHOLE
- CI — PROPOSED TYPE CI DRAIN INLET
- DI — PROPOSED TYPE DI DRAIN INLET
- PROPOSED HEADWALL
- OCS — PROPOSED SUBSURFACE DRAINAGE OUTLET CONTROL STRUCTURE
- PROPOSED RETAINING WALL (DESIGN BY OTHERS)
- DP-2 — BORING LOCATION AND DESIGNATION
- PROPOSED LIMIT OF DISTURBANCE

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC MAP," PREPARED BY JMC, LAST REVISED 03/06/2013. PORTIONS OF EXISTING TOPOGRAPHY HAVE BEEN PROVIDED BY WESTCHESTER COUNTY GIS.
2. GEOTECHNICAL BORING/TEST PIT LOCATIONS DEPICTED ON THIS PLAN WERE TAKEN FROM THE GEOTECHNICAL REPORT ENTITLED, "REPORT ON SUBSURFACE SOIL AND FOUNDATION INVESTIGATION", DATED 10/16/2013, PREPARED BY CARLIN-SIMPSON & ASSOCIATES.
3. ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PRACTICE THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.

(PROPOSED GRADE) TW+ +BW (PROPOSED GRADE)

RETAINING WALL SPOT GRADE LEGEND

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

APPLICANT/OWNER:
SUMMIT CLUB PARTNERS, LLC
568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
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voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

JMC

SITE GRADING PLAN (SOUTH)

THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

STATE OF NEW YORK
DAVID P. LOMBARDI
071001
LICENSED PROFESSIONAL ENGINEER

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn: NC		Approved: AG	
Scale:	1" = 30'		
Date:	11/23/2020		
Project No:	20101		
20101-GRADING	GRAD SOUTH	GRAD.scr	
Drawing No:	C-200		

LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED DROP CURB AND RAMP
- 200 — PROPOSED FINISHED GRADE
- 191.00 — PROPOSED SPOT GRADE
- SMH — PROPOSED SANITARY SEWER MANHOLE
- MH — PROPOSED STORM DRAIN MANHOLE
- CI — PROPOSED TYPE CI DRAIN INLET
- DI — PROPOSED TYPE DI DRAIN INLET
- PROPOSED HEADWALL
- OCS — PROPOSED SUBSURFACE DRAINAGE OUTLET CONTROL STRUCTURE
- PROPOSED RETAINING WALL (DESIGN BY OTHERS)
- DP-2 — BORING LOCATION AND DESIGNATION
- PROPOSED LIMIT OF DISTURBANCE

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC MAP," PREPARED BY JMC, LAST REVISED 03/06/2013. PORTIONS OF EXISTING TOPOGRAPHY HAVE BEEN PROVIDED BY WESTCHESTER COUNTY GIS.
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(PROPOSED GRADE) TW

BW (PROPOSED GRADE)

RETAINING WALL SPOT GRADE LEGEND

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________

CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________

JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

APPLICANT/OWNER:
SUMMIT CLUB PARTNERS, LLC
568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

JMC

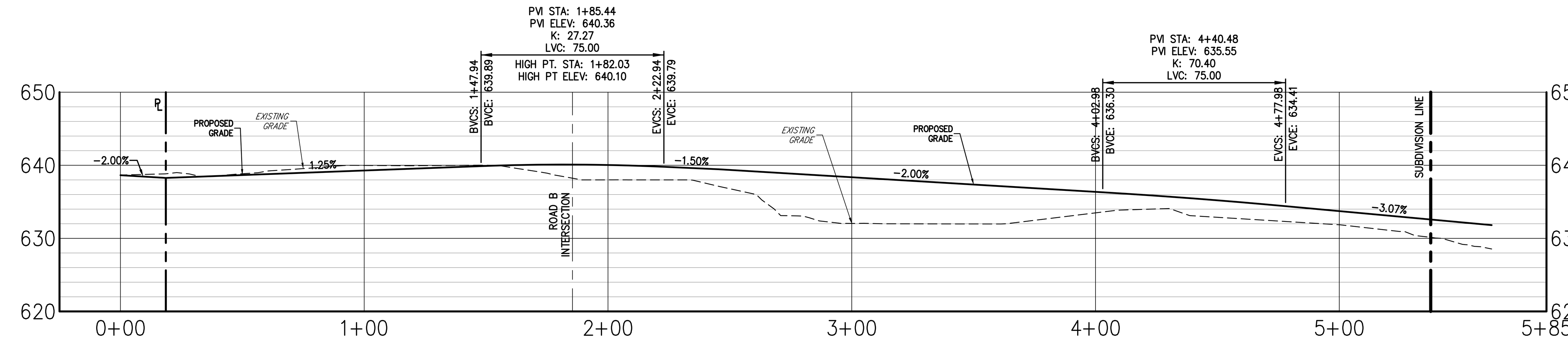
SITE GRADING PLAN (NORTH)

THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

STATE OF NEW YORK
DAVID P. LOMBARDI
071001
LICENSED PROFESSIONAL ENGINEER

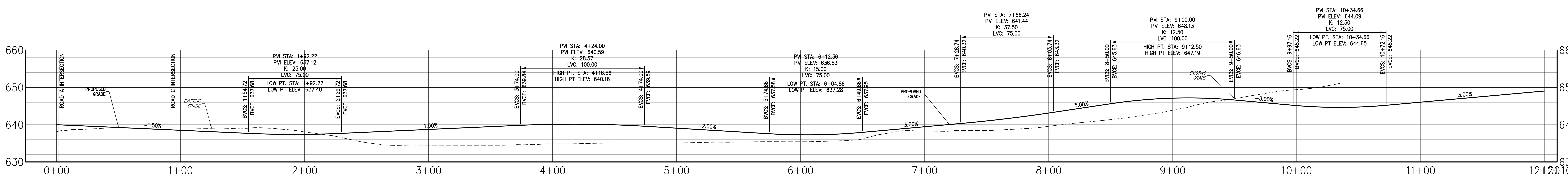
Drawn: NC		Approved: AG	
Scale:	1" = 30'		
Date:	11/23/2020		
Project No:	20101		
20101-GRADING	GRAD NORTH	GRAD.scr	
Drawing No:	C-201		

NOT FOR CONSTRUCTION



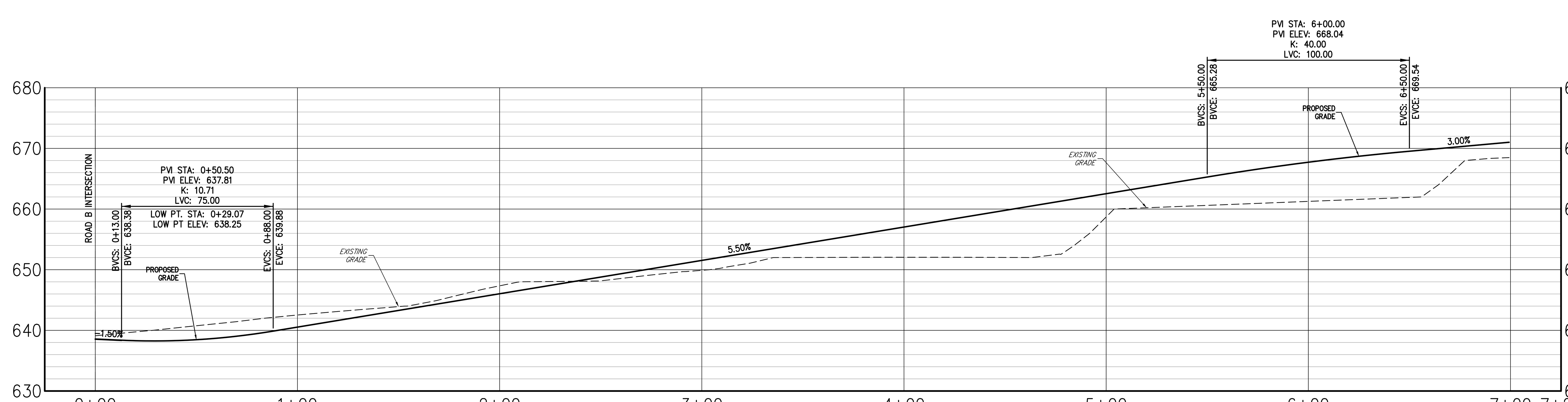
ROAD A PROFILE

HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



ROAD B PROFILE

HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



ROAD C PROFILE

HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

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ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

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John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

JMC

ROAD PROFILES PLAN

THE SUMMIT CLUB AT ARMONK
(RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

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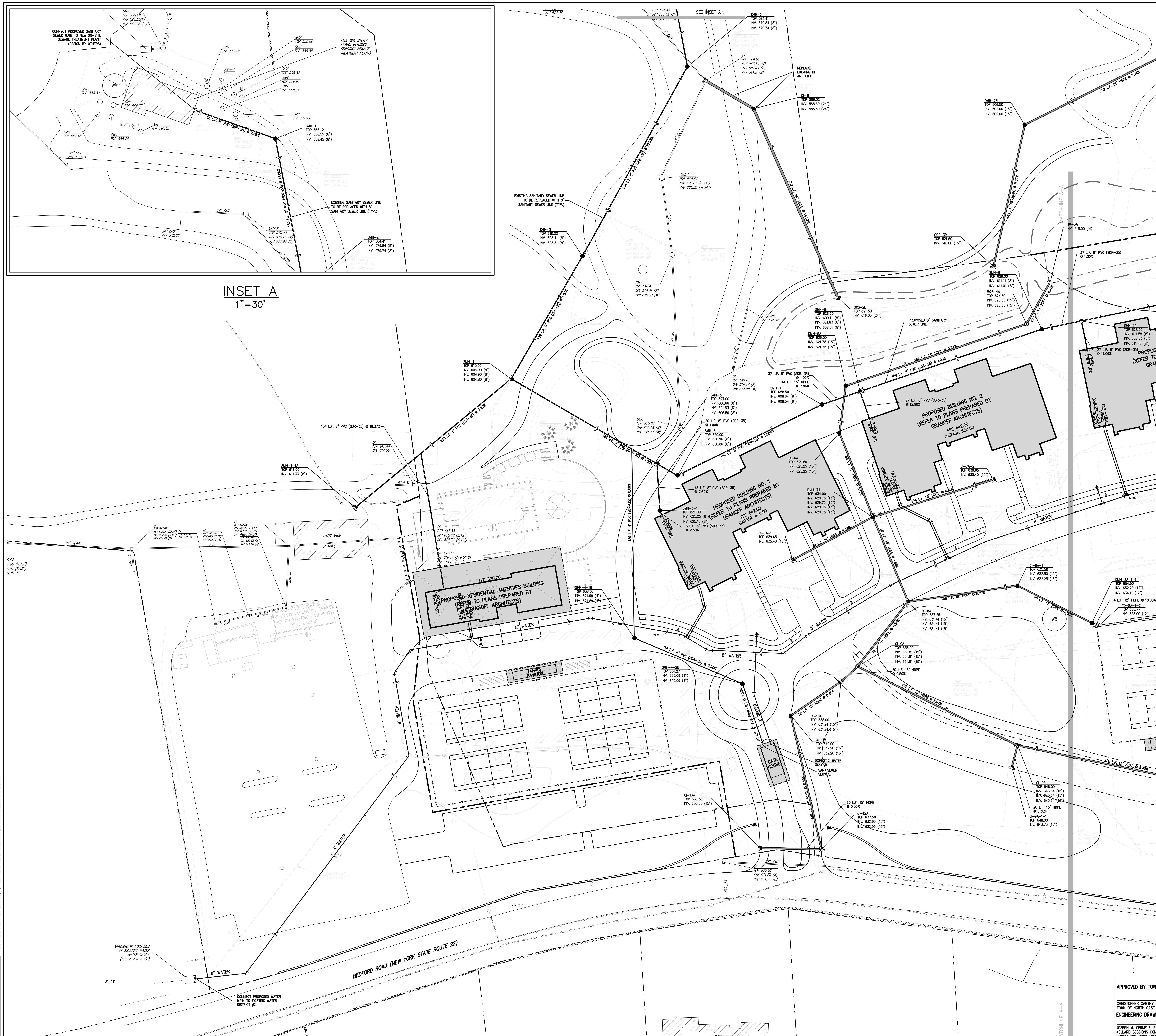
STATE OF NEW YORK
DAVID P. LOMBARDI
LICENSED PROFESSIONAL ENGINEER

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ______
______ DATE: ______
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD
ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER
______ DATE: ______
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn: NC	Approved: AG
Scale: AS SHOWN	
Date: 11/23/2020	
Project No: 20101	
20101-ZONING ROAD PROFILES GRAD.dwg	
Drawing No: C-202	

NOT FOR CONSTRUCTION



LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING STORM DRAIN LINE AND SIZE
- EXISTING SANITARY LINE AND SIZE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED DROP CURB AND RAMP
- SMH — PROPOSED SANITARY SEWER MANHOLE
- MH — PROPOSED STORM DRAIN MANHOLE
- CI — PROPOSED TYPE CI DRAIN INLET
- DI — PROPOSED TYPE DI DRAIN INLET
- PROPOSED HEADWALL
- OCS — PROPOSED SUBSURFACE DRAINAGE OUTLET CONTROL STRUCTURE
- PROPOSED HYDRANT
- 15" HDPE — PROPOSED STORM DRAIN LINE & SIZE
- 8" PVC — PROPOSED SANITARY SEWER LINE & SIZE
- 6" WATER — PROPOSED WATER LINE & SIZE
- PROPOSED GAS LINE
- E/T/C — PROPOSED ELECTRIC/TELEPHONE/CABLE
- PROPOSED WATER VALVE
- PROPOSED GAS VALVE
- PROPOSED RETAINING WALL (DESIGN BY OTHERS)

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC MAP," PREPARED BY JMC, LAST REVISED 03/06/2013. PORTIONS OF EXISTING TOPOGRAPHY HAVE BEEN PROVIDED BY WESTCHESTER COUNTY GIS.
2. ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PRACTICE THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
3. UNLESS OTHERWISE SPECIFIED, PIPE FOR STORM DRAINS SHALL BE HIGH DENSITY POLYETHYLENE PIPE (HDPE) WITH A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS IN ACCORDANCE WITH ASTM F-2648. JOINTS SHALL BE WATERTIGHT IN ACCORDANCE WITH ASTM D-3212.
4. UNLESS OTHERWISE SPECIFIED, PIPE FOR SANITARY SEWER GRAVITY LINES SHALL BE POLYVINYL CHLORIDE PIPE (PVCP), SDR-35, WITH PUSH-ON JOINTS IN ACCORDANCE WITH ASTM D-3034 AND D-3212.
5. UNLESS OTHERWISE SPECIFIED, PIPE FOR WATER LINES SHALL BE DOUBLE CEMENT-LINED DUCTILE IRON PIPE (DIP), CLASS 52, WITH PUSH-ON JOINTS IN ACCORDANCE WITH AWWA C-150, C-151, C-104 AND C-111.
6. ELECTRIC, TELEPHONE, FIRE ALARM AND CABLE TELEVISION LINES SHALL BE INSTALLED UNDERGROUND IN CONDUIT IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY HAVING JURISDICTION.

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
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Previous Editions Obsolete

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ARMONK, NY 10504

ARCHITECT:
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JMC

SITE PRELIMINARY UTILITIES PLAN (SOUTH)

THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

STATE OF NEW YORK • DAVID P. LOMBARDI • LICENSED PROFESSIONAL ENGINEER • 071001

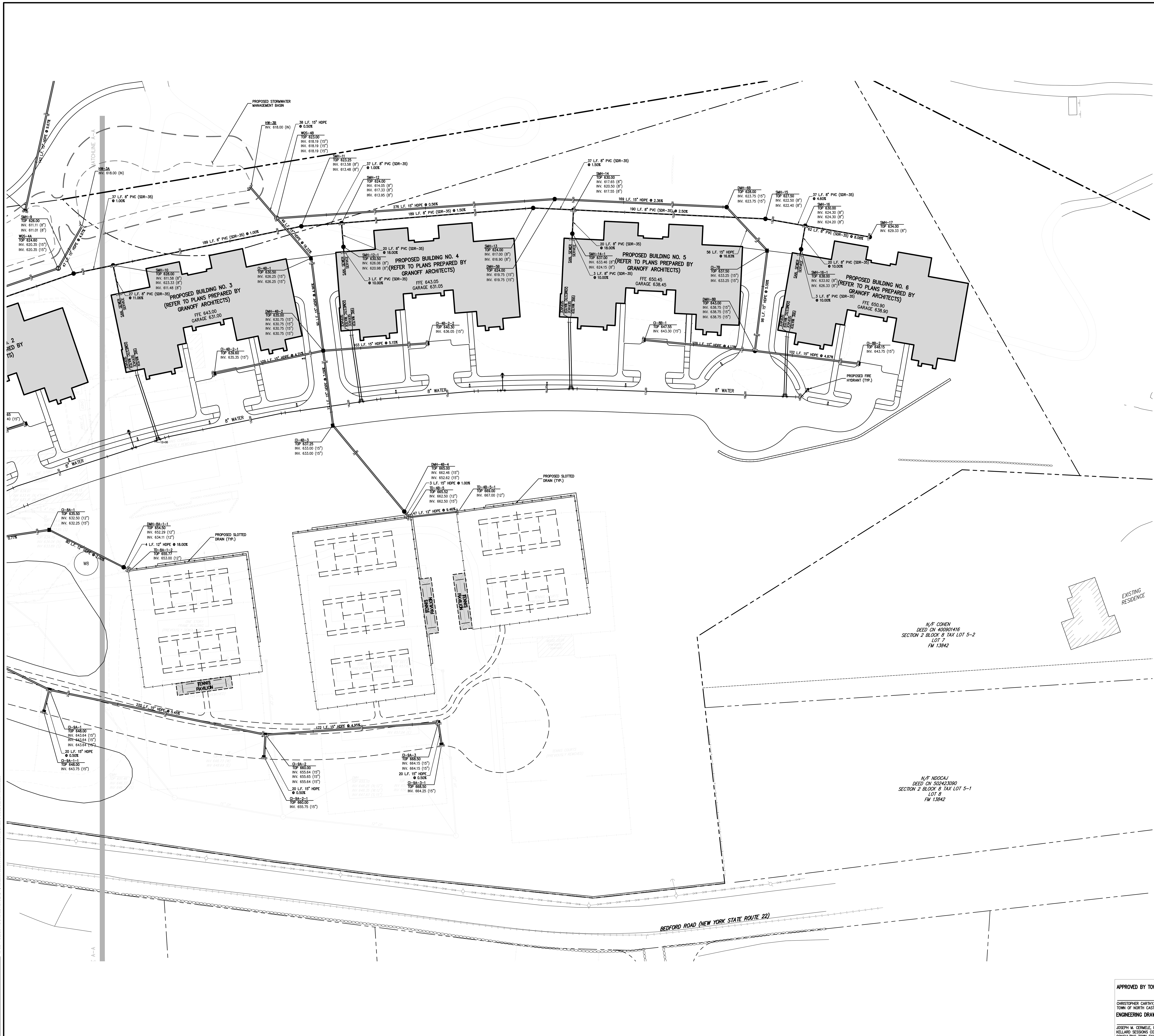
APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn:	NC	Approved:	AG
Scale:	1" = 30'		
Date:	11/23/2020		
Project No:	20101		
20101-UTILITIES	UTIL SOUTH	UTIL.scr	
Drawing No:	C-300		



LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
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- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING STORM DRAIN LINE AND SIZE
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- EXISTING WATER LINE
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- EXISTING OVERHEAD WIRES
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- EXISTING MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED DROP CURB AND RAMP
- SMH — PROPOSED SANITARY SEWER MANHOLE
- MH — PROPOSED STORM DRAIN MANHOLE
- CI — PROPOSED TYPE CI DRAIN INLET
- DI — PROPOSED TYPE DI DRAIN INLET
- PROPOSED HEADWALL
- OCS — PROPOSED SUBSURFACE DRAINAGE OUTLET CONTROL STRUCTURE
- PROPOSED HYDRANT
- 15" HDPE — PROPOSED STORM DRAIN LINE & SIZE
- 8" PVC — PROPOSED SANITARY SEWER LINE & SIZE
- 6" WATER — PROPOSED WATER LINE & SIZE
- PROPOSED GAS LINE
- E/T/C — PROPOSED ELECTRIC/TELEPHONE/CABLE
- PROPOSED WATER VALVE
- PROPOSED GAS VALVE
- PROPOSED RETAINING WALL (DESIGN BY OTHERS)

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC MAP," PREPARED BY JMC, LAST REVISED 03/06/2013. PORTIONS OF EXISTING TOPOGRAPHY HAVE BEEN PROVIDED BY WESTCHESTER COUNTY GIS.
2. ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PRACTICE THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
3. UNLESS OTHERWISE SPECIFIED, PIPE FOR STORM DRAINS SHALL BE HIGH DENSITY POLYETHYLENE PIPE (HDPE) WITH A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS IN ACCORDANCE WITH ASTM F-2648. JOINTS SHALL BE WATERTIGHT IN ACCORDANCE WITH ASTM D-3212.
4. UNLESS OTHERWISE SPECIFIED, PIPE FOR SANITARY SEWER GRAVITY LINES SHALL BE POLYVINYL CHLORIDE PIPE (PVCP), SDR-35, WITH PUSH-ON JOINTS IN ACCORDANCE WITH ASTM D-3034 AND D-3212.
5. UNLESS OTHERWISE SPECIFIED, PIPE FOR WATER LINES SHALL BE DOUBLE CEMENT-LINED DUCTILE IRON PIPE (DIP), CLASS 52, WITH PUSH-ON JOINTS IN ACCORDANCE WITH AWWA C-150, C-151, C-104 AND C-111.
6. ELECTRIC, TELEPHONE, FIRE ALARM AND CABLE TELEVISION LINES SHALL BE INSTALLED UNDERGROUND IN CONDUIT IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY HAVING JURISDICTION.

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

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ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
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JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

SITE PRELIMINARY UTILITIES PLAN (NORTH)

THE SUMMIT CLUB AT ARMONK
(RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

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STATE OF NEW YORK · DAVID P. LOMBARDI · LICENSED PROFESSIONAL ENGINEER · 071001

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

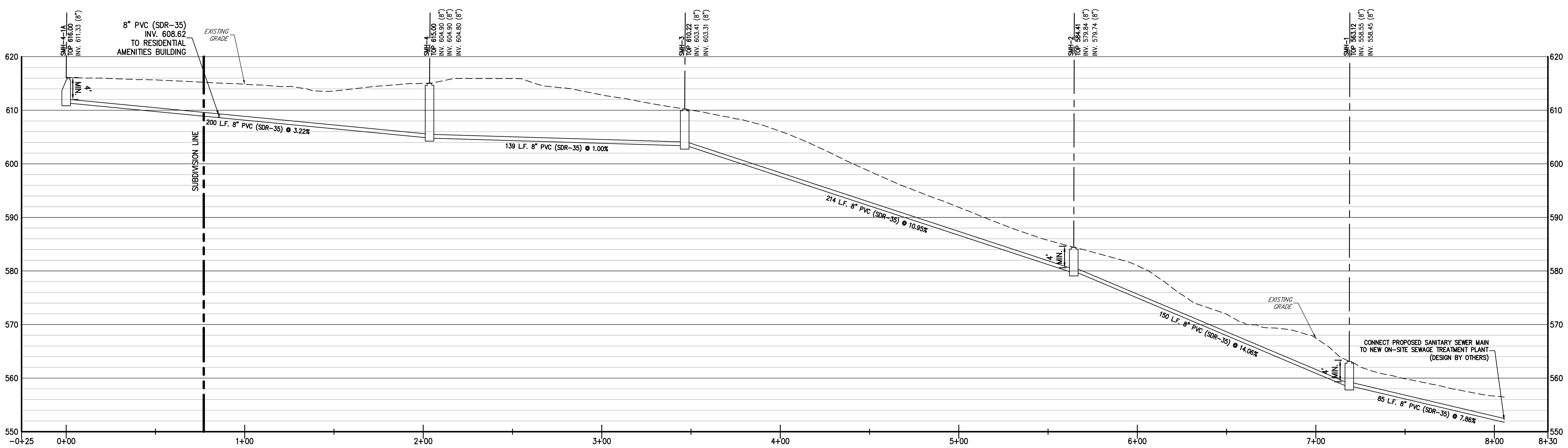
________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

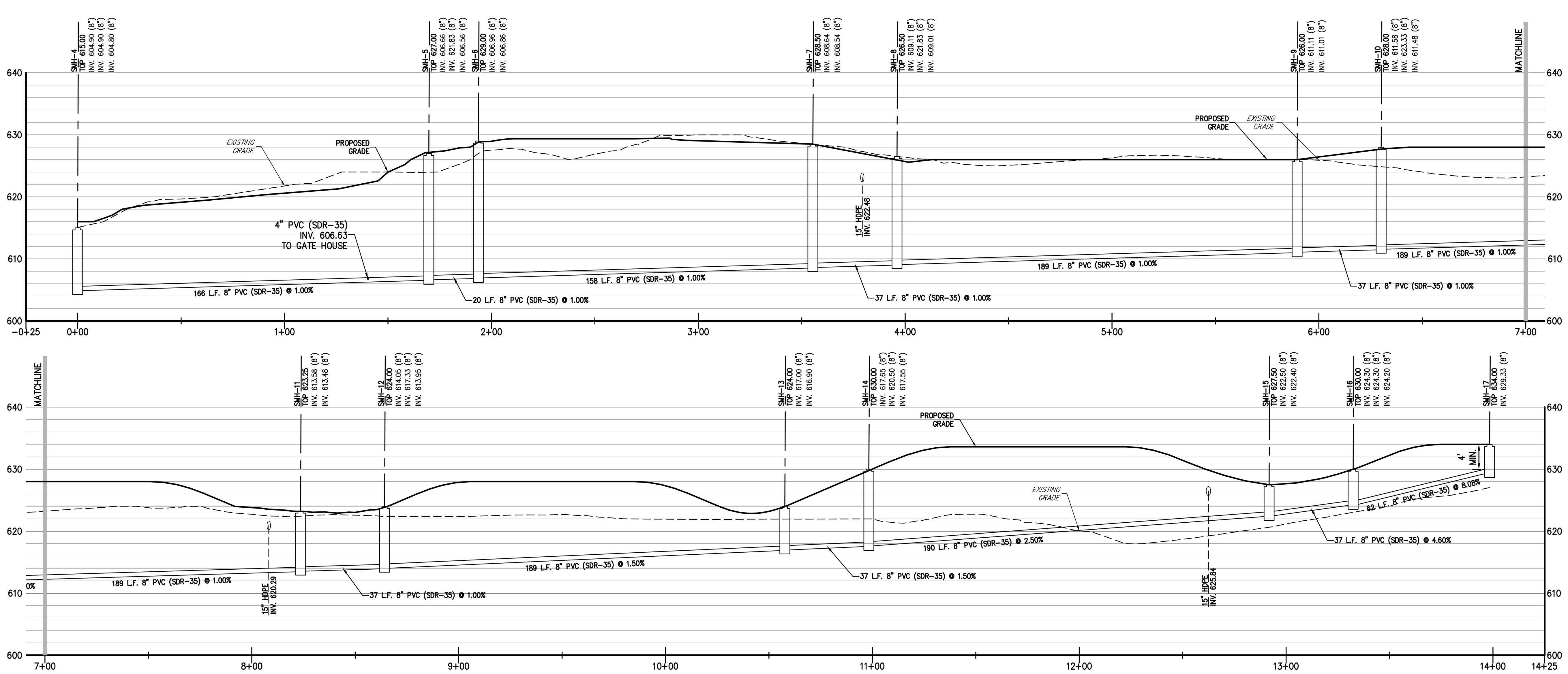
________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn: NC	Approved: AG
Scale: 1" = 30'	
Date: 11/23/2020	
Project No: 20101	
20101-UTILITIES	UTIL NORTH · UTIL.scr
Drawing No: C-301	

NOT FOR CONSTRUCTION



OSTP TO SMH-4-1A PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



SMH-4 TO SMH-17 PROFILE
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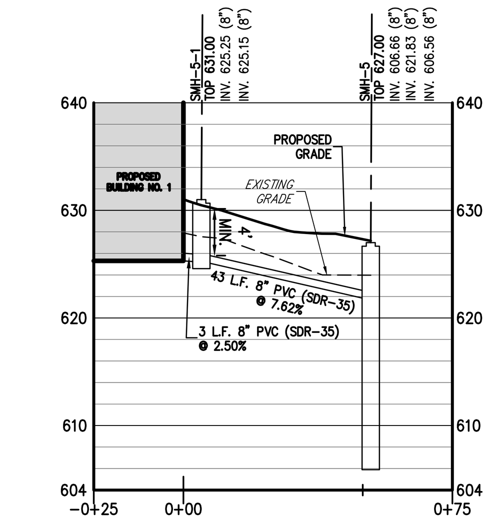
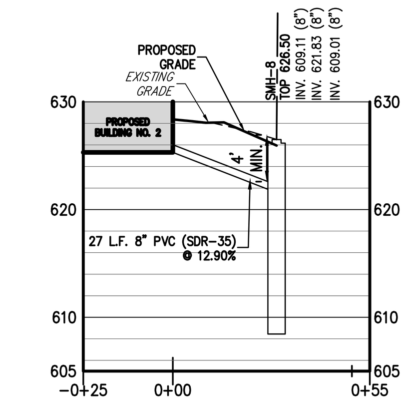
VERTICAL: 1" = 10'



SMH-5 TO BUILDING NO. 1 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



SMH-8 TO BUILDING NO. 2 PROFILE
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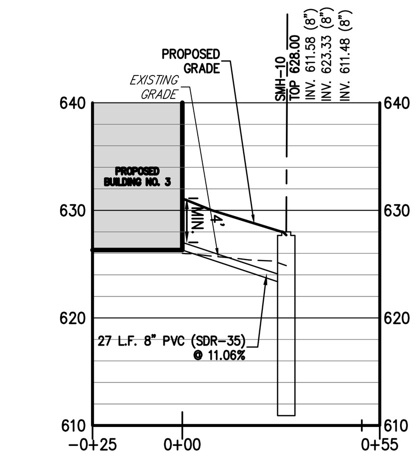
VERTICAL: 1" = 10'



SMH-10 TO BUILDING NO. 3 PROFILE
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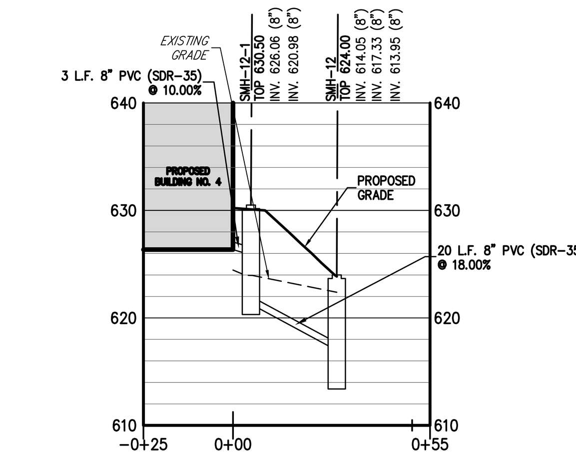
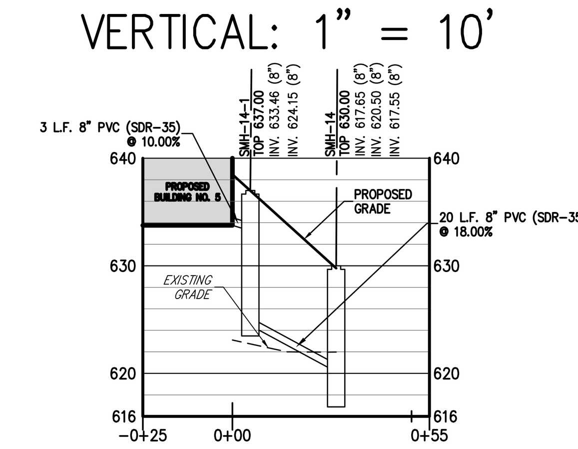
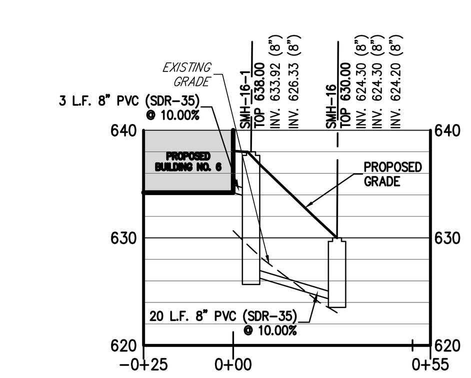
VERTICAL: 1" = 10'



SMH-12 TO BUILDING NO. 4 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



SMH-14 TO BUILDING NO. 5 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



SMH-16 TO BUILDING NO. 6 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ______
______ DATE: ______
CHRISTOPHER CARTHY, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD
ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER
______ DATE: ______
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
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3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

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330 RAILROAD AVENUE
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JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

SANITARY SEWER PROFILES
THE SUMMIT CLUB AT ARMONK
(RESIDENTIAL PHASE)
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ARMONK, NY 10504

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Drawn: NC Approved: AG
Scale: AS SHOWN
Date: 11/23/2020
Project No: 20101
Drawing No: C-302

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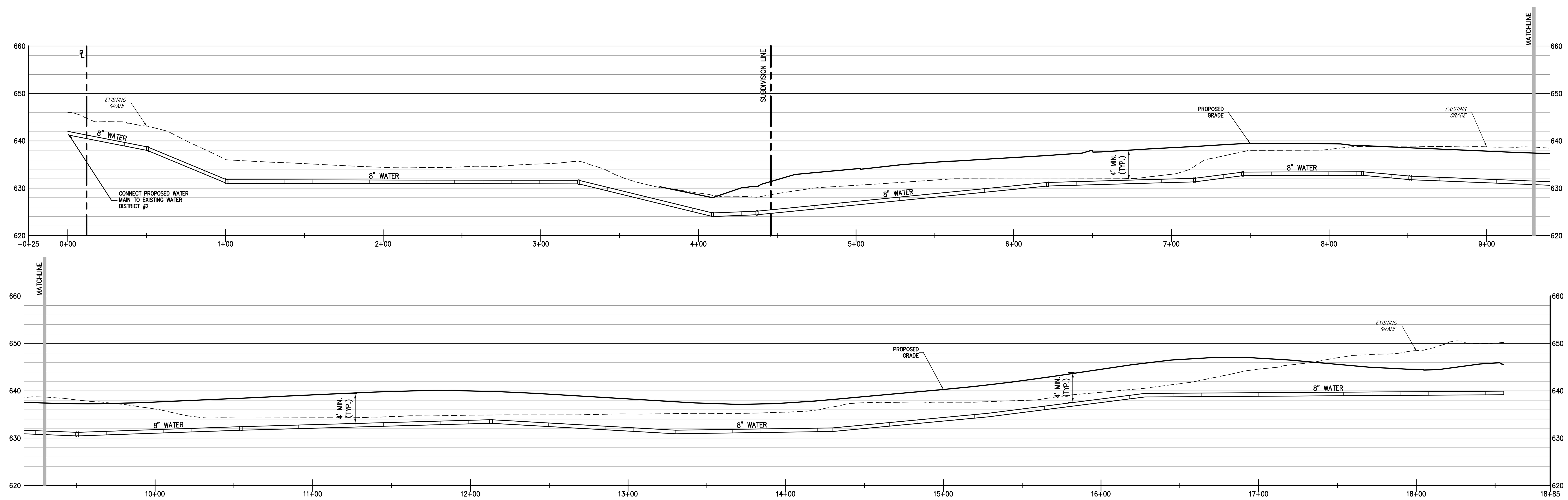

WATER MAIN PROFILE

HORIZONTAL: 1" = 30'

VERTICAL: 1" = 10'

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
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GREENWICH, CT 06830

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JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
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voice 914.273.5225 • fax 914.273.2102
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WATER MAIN PROFILE

THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

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STATE OF NEW YORK • DAVID P. LOMBARDI • 071001 • LICENSED PROFESSIONAL ENGINEER

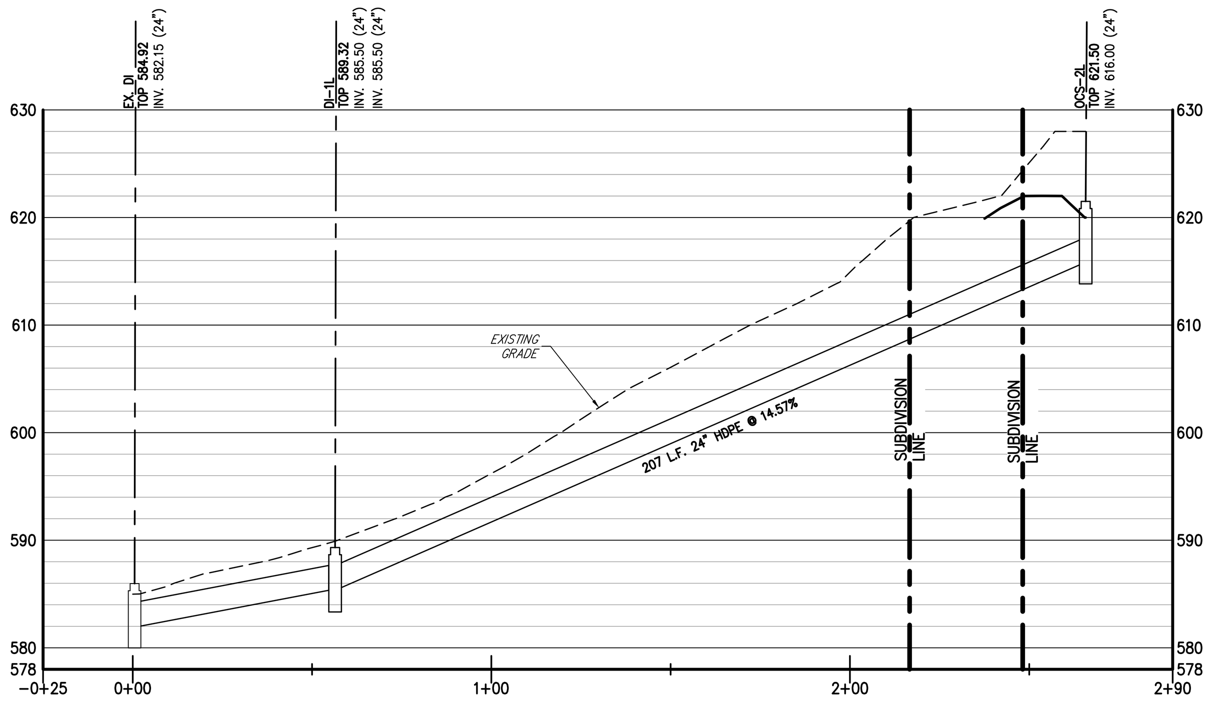
APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________________ DATE: ________________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

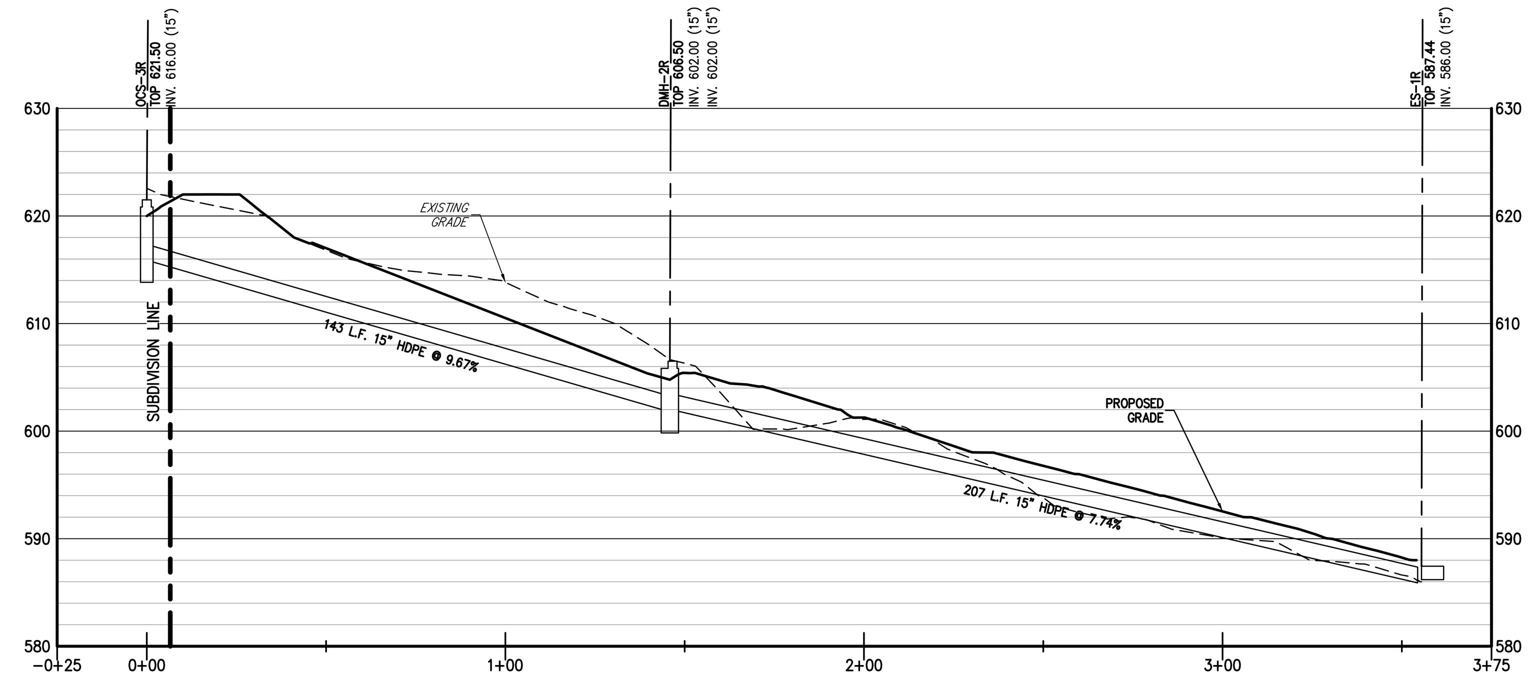
ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________________ DATE: ________________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

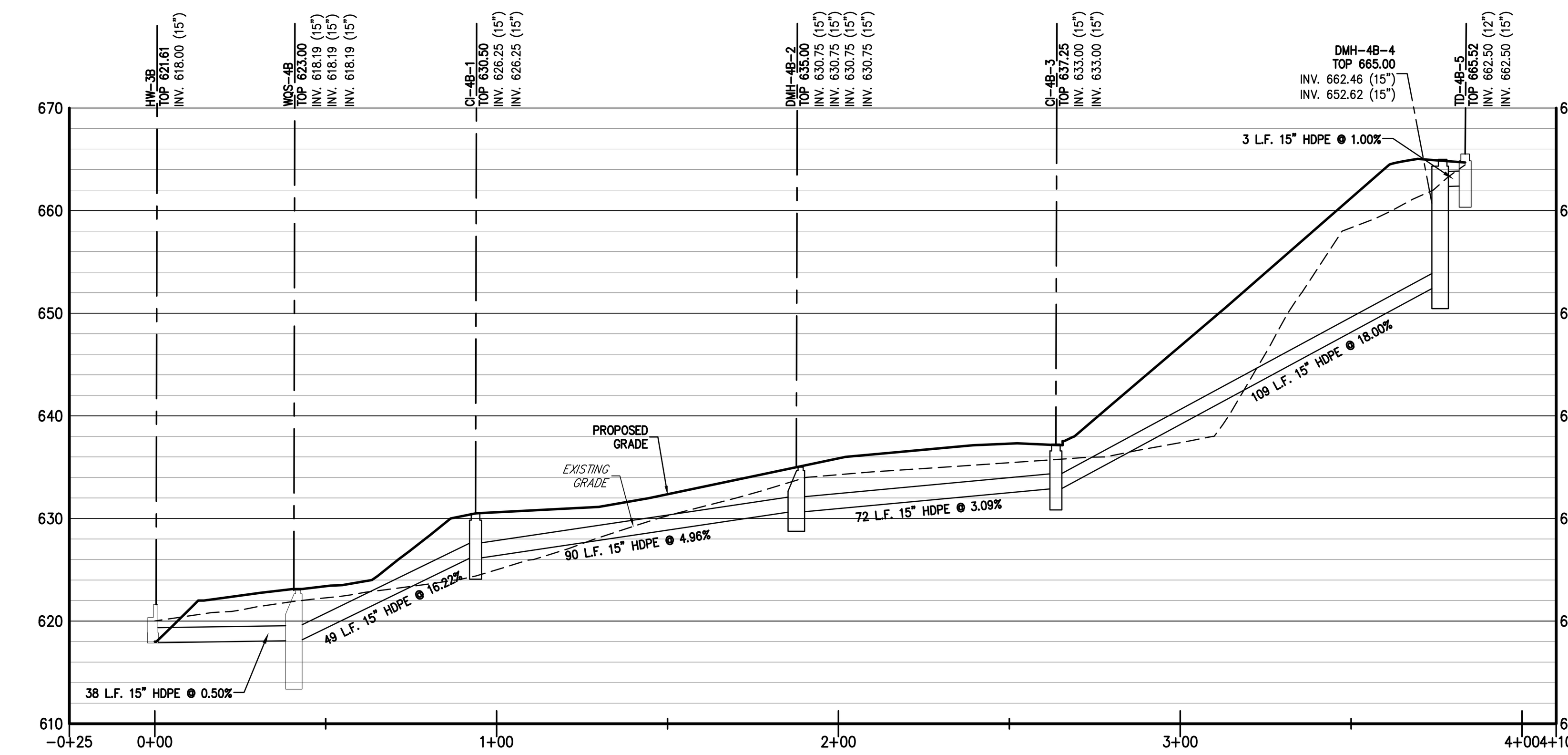
Drawn:	NC	Approved:	AG
Scale:	AS SHOWN		
Date:	11/23/2020		
Project No:	20101		
20101-UTILITIES	WATER PROFILES	UTIL.scr	
Drawing No:	C-303		



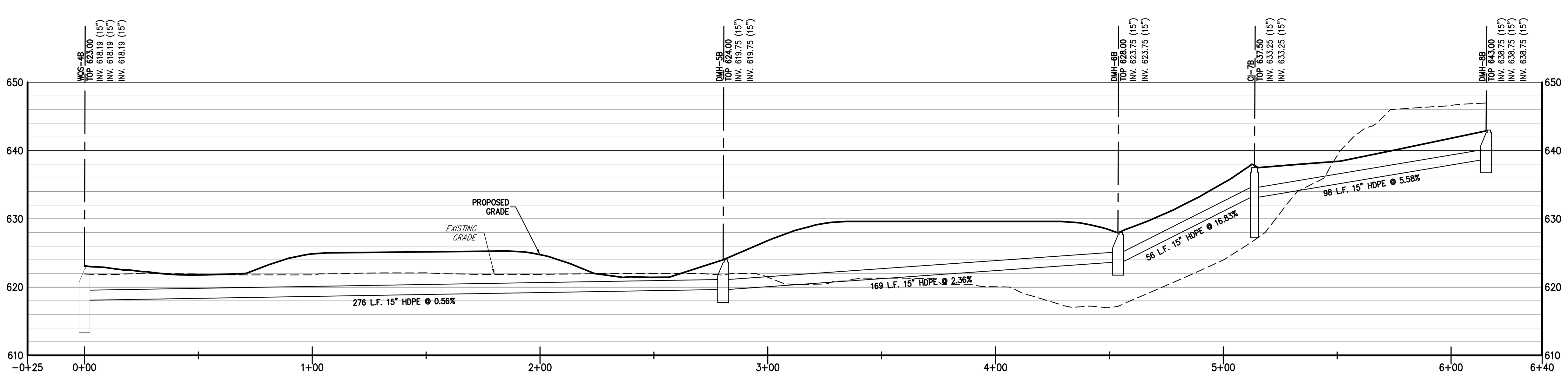
EX. DI TO OCS-2L PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



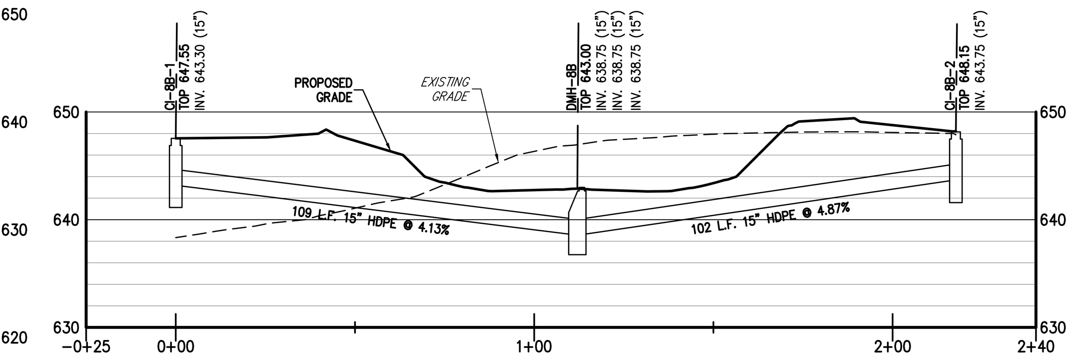
OCS-3R TO ES-1R PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



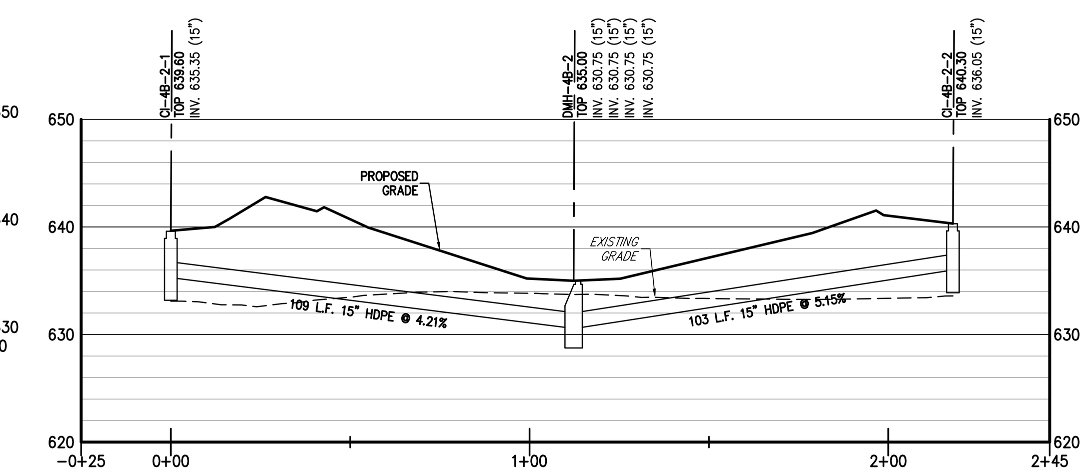
HW-3B TO TD-4B-5 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



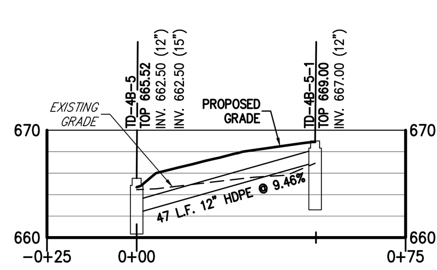
DMH-4B TO DMH-8B PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



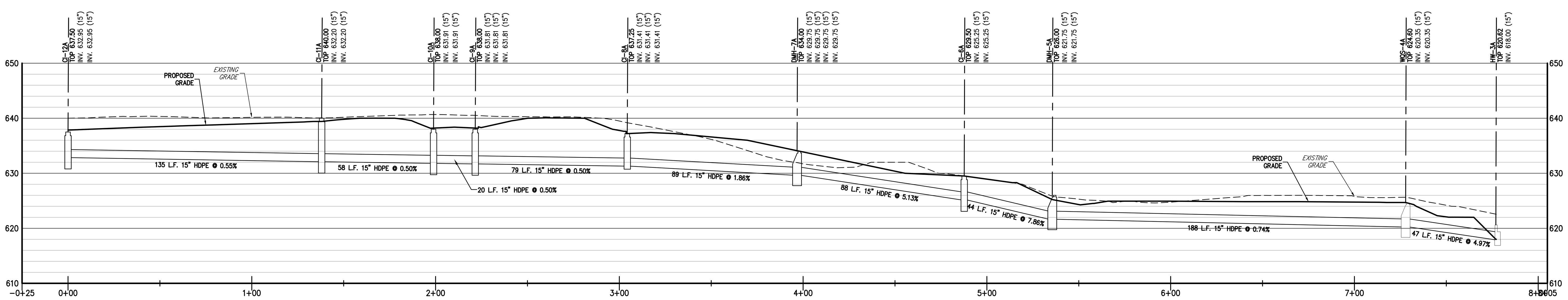
CI-8B-1 TO CI-8B-2 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



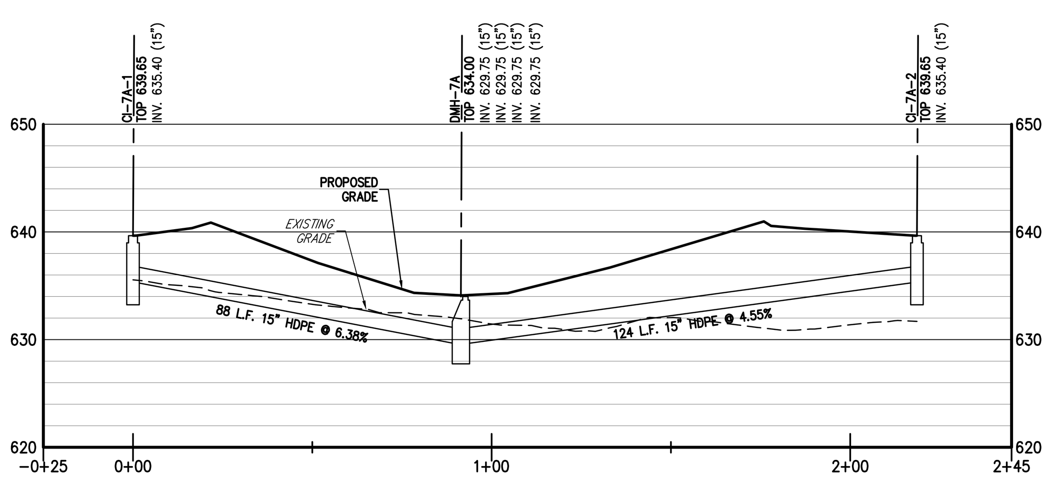
CI-4B-2-1 TO CI-4B-2-2 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



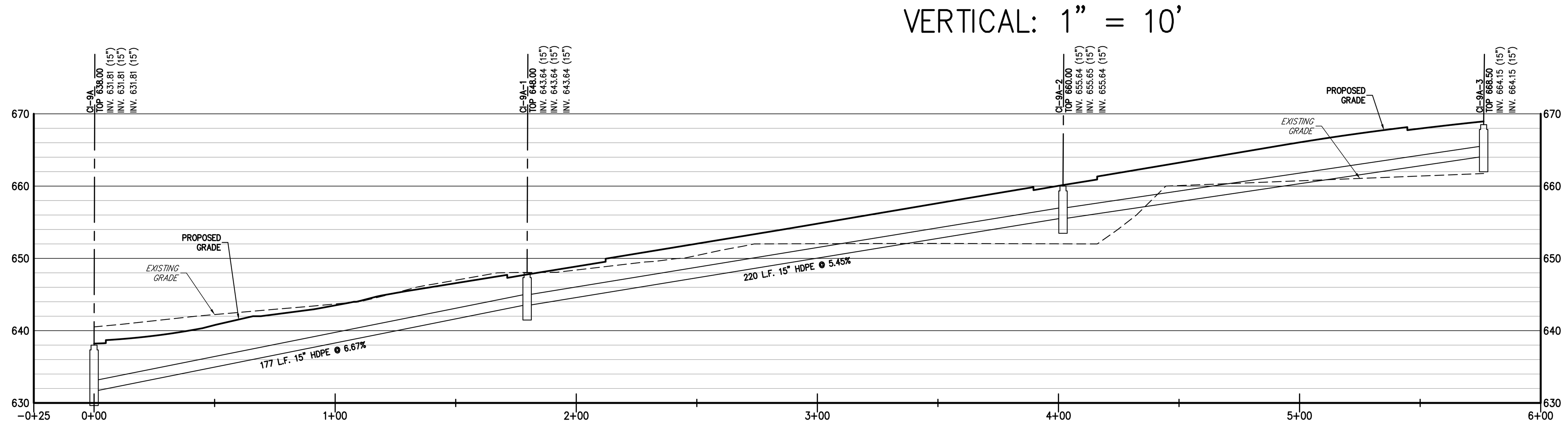
TD-4B-5 TO TD-4B-5-1 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



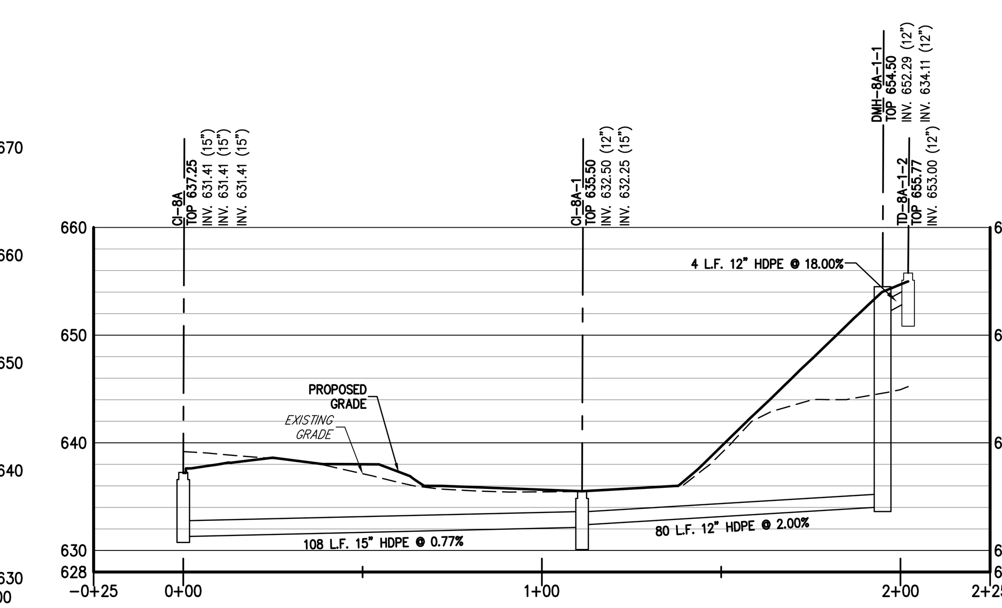
CI-12A TO HW-3A PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



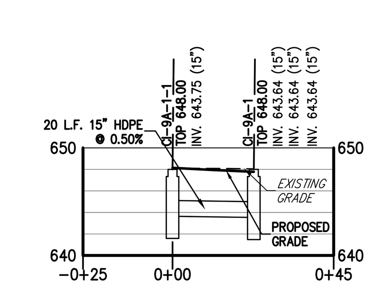
CI-7A-1 TO CI-7A-2 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



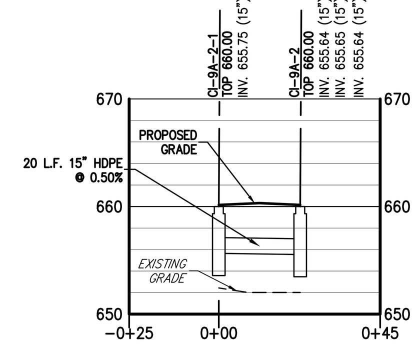
CI-9A TO CI-9A-3 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



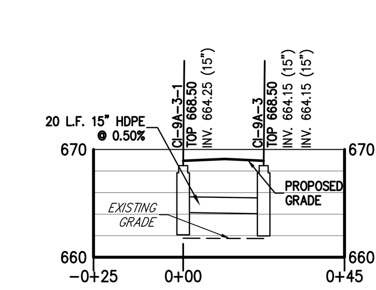
CI-8A TO TD-8A-1-2 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



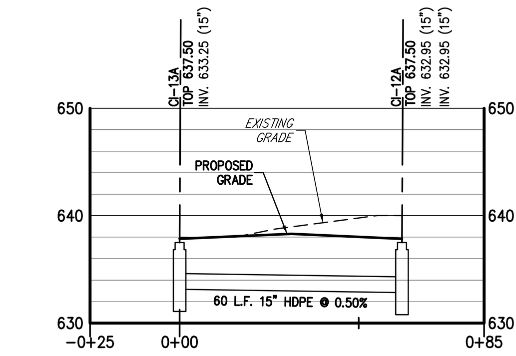
CI-9A-1-1 TO CI-9A-1 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



CI-9A-2-1 TO CI-9A-2 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



CI-9A-3-1 TO CI-9A-3 PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



CI-13A TO CI-12A PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

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STORM SEWER PROFILES
THE SUMMIT CLUB AT ARMONK
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STATE OF NEW YORK
DAVID P. LOMBARDI
071001
LICENSED PROFESSIONAL ENGINEER

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn:	NC	Approved:	AG
Scale:	AS SHOWN		
Date:	11/23/2020		
Project No:	20101		
20101-UTILITIES	STORM PROFILES	UTIL.scr	
Drawing No:	C-304		

NOT FOR CONSTRUCTION

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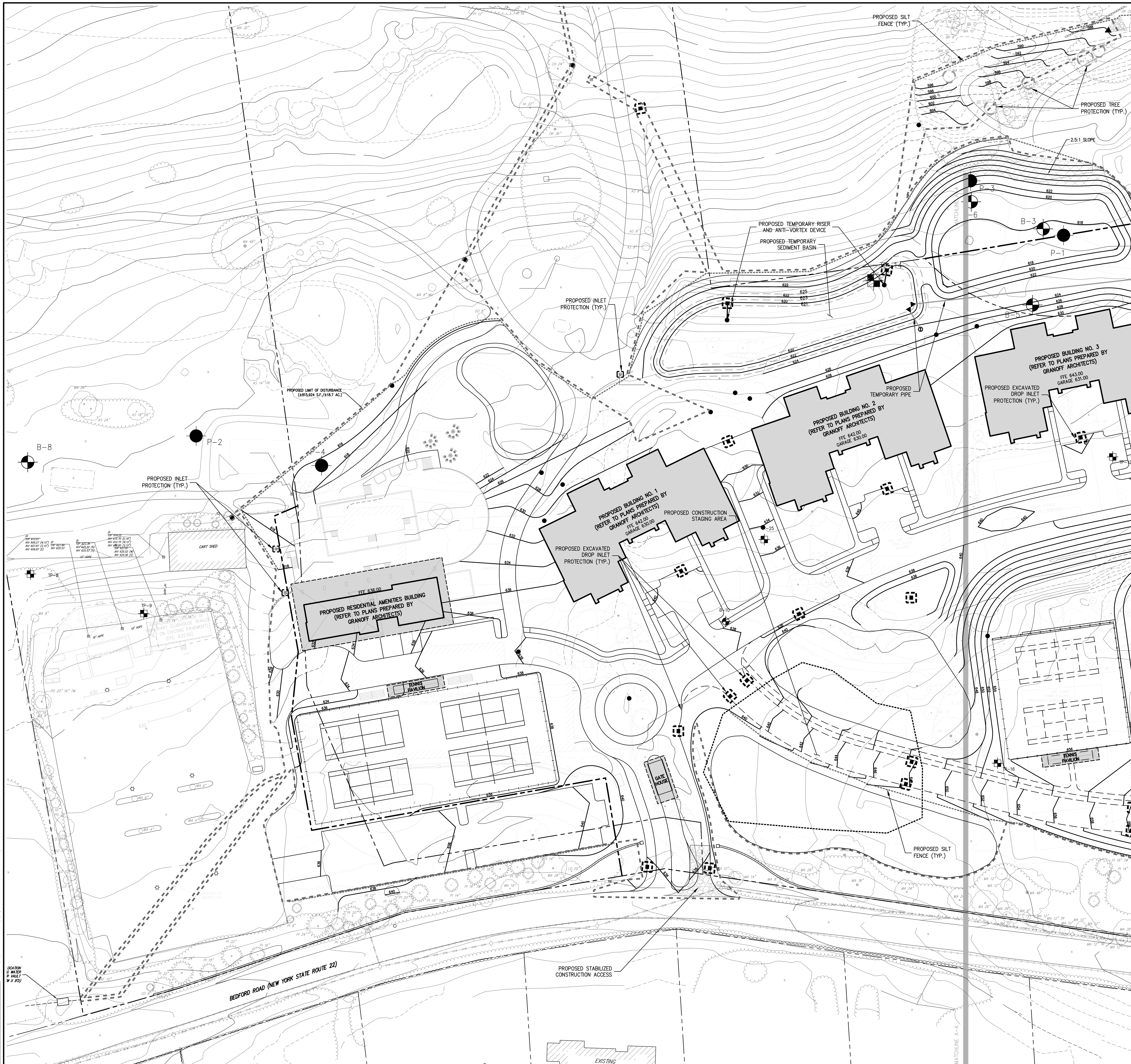

LEGEND

- PROPOSED INLET PROTECTION
- PROPOSED CONSTRUCTION FENCE
- PROPOSED SILT FENCE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED STOCKPILE AREA
- PROPOSED TEMPORARY SEDIMENT BASIN
- PROPOSED TREE PROTECTION
- PROPOSED TEMPORARY RISER & ANTI-VORTEX DEVICE

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC MAP," PREPARED BY JMC,PLLC, LAST REVISED 03/06/2013.
2. THIS PLAN IS FOR TEMPORARY EROSION AND SEDIMENT CONTROL INFORMATION ONLY.
3. PRIOR TO BEGINNING ANY CLEARING, GRUBBING OR EXCAVATION, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL THE PLANS AND SPECIFICATIONS. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED. FINAL STABILIZATION OF LANDSCAPED AREAS SHALL BE IN ACCORDANCE WITH THE LANDSCAPE PLAN.
4. THE CONTRACTOR SHALL INSPECT AND MAINTAIN ON-SITE EROSION AND SEDIMENT CONTROL MEASURES ON A DAILY BASIS. ALL COLLECTED SEDIMENT WITHIN SEDIMENT BARRIERS SHALL BE REMOVED PERIODICALLY AS REQUIRED TO MAINTAIN THE FUNCTION OF THE SEDIMENT BARRIERS. ALL SEDIMENT COLLECTED SHALL BE RESPREAD ON-SITE WITHIN STABILIZED AREAS AS DIRECTED BY THE OWNERS REPRESENTATIVE.
5. THE CONTRACTOR SHALL INSPECT DOWNSTREAM CONDITIONS FOR EVIDENCE OF SEDIMENTATION ON A WEEKLY BASIS, AFTER EACH RAINSTORM, AND AS MAY BE REQUIRED OR DIRECTED BY ALL APPLICABLE APPROVALS AND PERMITS. THE CONTRACTOR SHALL IMMEDIATELY PROVIDE A WRITTEN REPORT ON FINDINGS OF SEDIMENT IN DOWNSTREAM AREAS TO ALL AUTHORITIES HAVING JURISDICTION AND MAKE REPAIRS AS REQUIRED OR DIRECTED.
6. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR AS REQUIRED/WARRANTED BY FIELD CONDITIONS AND AS DIRECTED BY THE OWNERS REPRESENTATIVE, JMC, AND/OR ANY AUTHORITY HAVING JURISDICTION.
7. STOCKPILING OF CONSTRUCTION MATERIAL SHALL BE PLACED ON-SITE IN THE AREA DESIGNATED ON THIS PLAN OR AS APPROVED BY THE OWNERS REPRESENTATIVE. STOCKPILED EXCAVATED MATERIAL SHALL HAVE TWO ROWS OF SILT FENCE LOCATED AROUND ITS PERIMETER. ALL STOCKPILED MATERIAL SHALL BE MAINTAINED IN AN ORDERLY MANNER SO AS NOT TO IMPEDE ON PEDESTRIAN AND/OR VEHICULAR TRAFFIC CIRCULATION ROUTES.
7. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE OWNERS REPRESENTATIVE.
8. ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PRACTICE THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
9. ALL EXPOSED SLOPES AND GRADED/DISTURBED AREAS, THAT WILL NOT BE FURTHER DISTURBED WITHIN 14 CALENDAR DAYS (7 DAYS FOR CONSTRUCTION SITES THAT EITHER DIRECTLY DISCHARGE TO ONE OF THE 303(d) SEGMENTS LISTED IN APPENDIX E OF THE GENERAL PERMIT OR ARE LOCATED WITHIN ONE OF THE WATERSHEDS LISTED IN APPENDIX C OF THE GENERAL PERMIT), SHALL BE TEMPORARILY SEEDED WITHIN 24 HOURS OF DISTURBANCE, IN ACCORDANCE WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) "EROSION AND SEDIMENT CONTROL GUIDELINES" AND THE ANSI A300 "BEST MANAGEMENT PRACTICES FOR TREE AND SHRUB PLANTING, TRANSPLANTING, MAINTENANCE AND CARE," PREPARED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), LATEST EDITIONS, AS FOLLOWS:
   A. SEED MIXTURE AND RATE OF APPLICATION:
      A.1. IN SPRING, SUMMER OR EARLY FALL, SEED THE AREA WITH RYEGRASS (ANNUAL OR PERENNIAL) AT 30 POUNDS PER ACRES (APPROXIMATELY 0.7 POUNDS/1000 SQUARE FEET OR USE 1 POUND/1000 SQUARE FEET).
      A.2. IN LATE FALL OR EARLY WINTER, SEED THE AREA WITH CERTIFIED 'AROOSTOOK' WINTER RYE (CEREAL RYE) AT 100 POUNDS PER ACRE (2.5 POUNDS/1000 SQUARE FEET).
   B. APPLICATION SHALL BE UNIFORM BY MECHANICAL OR HYDROSEED METHODS.
   C. MULCH ALL SEEDED AREAS WITH STRAW AT A RATE OF 2 TONS PER ACRE (90 POUNDS PER 1,000 SQUARE FEET) SUCH THAT THE MULCH FORMS A CONTINUOUS BLANKET.
10. ALL SEEDED AREAS SHALL BE FERTILIZED, RESEEDED, AND MULCHED AS NECESSARY TO MAINTAIN VIGOROUS, DENSE VEGETATIVE COVER.
11. TEMPORARY SEED MIXTURES SHALL NOT BE PLACED ON AREAS WHERE FINAL GRADE HAS BEEN ESTABLISHED AND TOPSOIL HAS BEEN PLACED UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT.

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1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

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568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

SITE EROSION & SEDIMENT CONTROL PLAN (SOUTH)

THE SUMMIT CLUB AT ARMONK
(RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

STATE OF NEW YORK
DAVID P. LOMBARDI
071001
LICENSED PROFESSIONAL ENGINEER

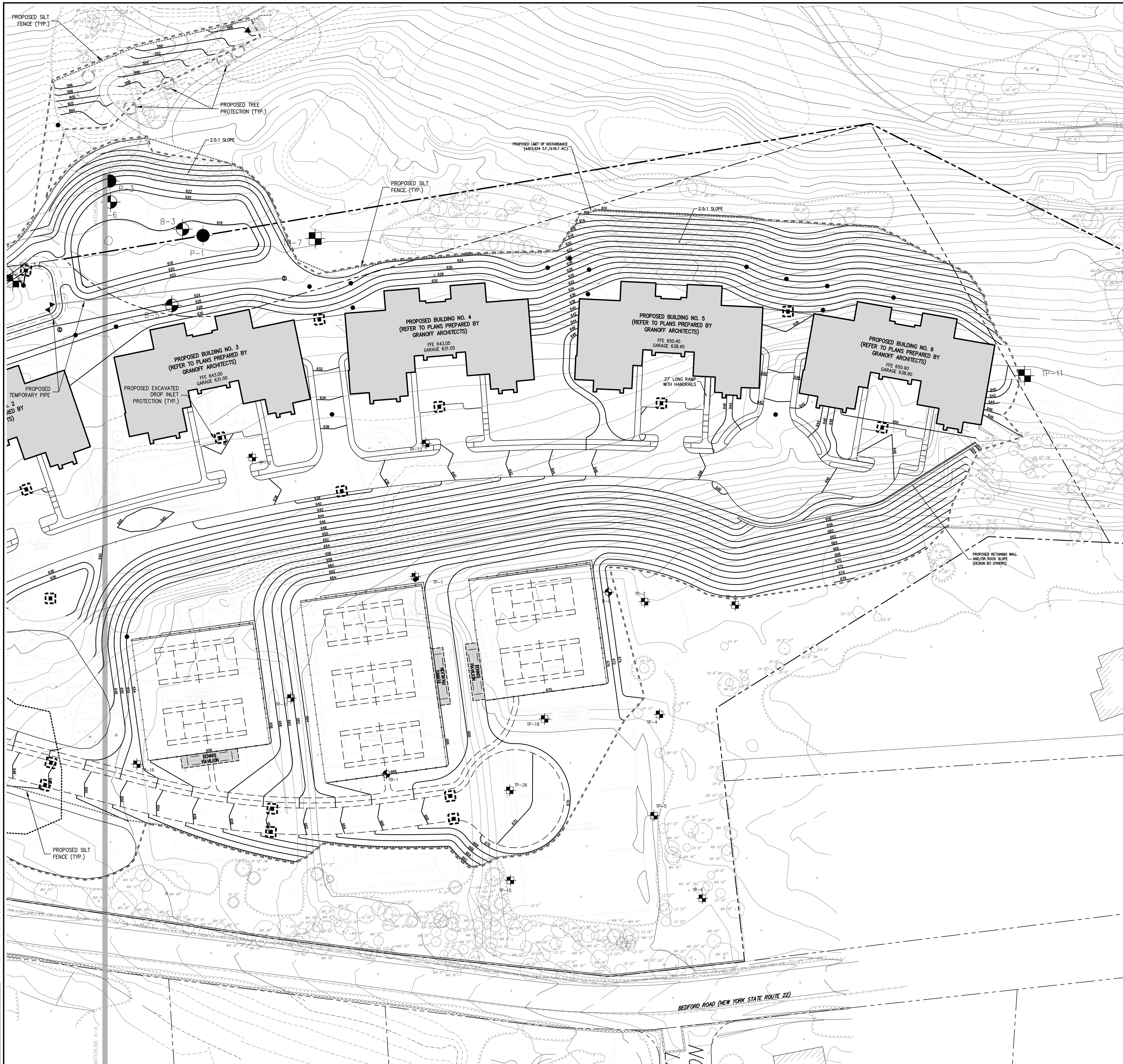
APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn:	NC	Approved:	AG
Scale:	1" = 30'		
Date:	11/23/2020		
Project No:	20101		
20101-SE	E&S SOUTH	SE.scr	
Drawing No:	C-400		



LEGEND

- PROPOSED INLET PROTECTION
- PROPOSED CONSTRUCTION FENCE
- PROPOSED SILT FENCE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED STOCKPILE AREA
- PROPOSED TEMPORARY SEDIMENT BASIN
- PROPOSED TREE PROTECTION
- PROPOSED TEMPORARY RISER & ANTI-VORTEX DEVICE

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC MAP," PREPARED BY JMC,PLLC, LAST REVISED 03/06/2013.
2. THIS PLAN IS FOR TEMPORARY EROSION AND SEDIMENT CONTROL INFORMATION ONLY.
3. PRIOR TO BEGINNING ANY CLEARING, GRUBBING OR EXCAVATION, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL THE PLANS AND SPECIFICATIONS. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED. FINAL STABILIZATION OF LANDSCAPED AREAS SHALL BE IN ACCORDANCE WITH THE LANDSCAPE PLAN.
4. THE CONTRACTOR SHALL INSPECT AND MAINTAIN ON-SITE EROSION AND SEDIMENT CONTROL MEASURES ON A DAILY BASIS. ALL COLLECTED SEDIMENT WITHIN SEDIMENT BARRIERS SHALL BE REMOVED PERIODICALLY AS REQUIRED TO MAINTAIN THE FUNCTION OF THE SEDIMENT BARRIERS. ALL SEDIMENT COLLECTED SHALL BE RESPREAD ON-SITE WITHIN STABILIZED AREAS AS DIRECTED BY THE OWNERS REPRESENTATIVE.
5. THE CONTRACTOR SHALL INSPECT DOWNSTREAM CONDITIONS FOR EVIDENCE OF SEDIMENTATION ON A WEEKLY BASIS, AFTER EACH RAINSTORM, AND AS MAY BE REQUIRED OR DIRECTED BY ALL APPLICABLE APPROVALS AND PERMITS. THE CONTRACTOR SHALL IMMEDIATELY PROVIDE A WRITTEN REPORT ON FINDINGS OF SEDIMENT IN DOWNSTREAM AREAS TO ALL AUTHORITIES HAVING JURISDICTION AND MAKE REPAIRS AS REQUIRED OR DIRECTED.
6. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR AS REQUIRED/WARRANTED BY FIELD CONDITIONS AND AS DIRECTED BY THE OWNERS REPRESENTATIVE, JMC, AND/OR ANY AUTHORITY HAVING JURISDICTION.
7. STOCKPILING OF CONSTRUCTION MATERIAL SHALL BE PLACED ON-SITE IN THE AREA DESIGNATED ON THIS PLAN OR AS APPROVED BY THE OWNERS REPRESENTATIVE. STOCKPILED EXCAVATED MATERIAL SHALL HAVE TWO ROWS OF SILT FENCE LOCATED AROUND ITS PERIMETER. ALL STOCKPILED MATERIAL SHALL BE MAINTAINED IN AN ORDERLY MANNER SO AS NOT TO IMPEDE ON PEDESTRIAN AND/OR VEHICULAR TRAFFIC CIRCULATION ROUTES.
7. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE OWNERS REPRESENTATIVE.
8. ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PRACTICE THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
9. ALL EXPOSED SLOPES AND GRADED/DISTURBED AREAS, THAT WILL NOT BE FURTHER DISTURBED WITHIN 14 CALENDAR DAYS (7 DAYS FOR CONSTRUCTION SITES THAT EITHER DIRECTLY DISCHARGE TO ONE OF THE 303(d) SEGMENTS LISTED IN APPENDIX E OF THE GENERAL PERMIT OR ARE LOCATED WITHIN ONE OF THE WATERSHEDS LISTED IN APPENDIX C OF THE GENERAL PERMIT), SHALL BE TEMPORARILY SEEDED WITHIN 24 HOURS OF DISTURBANCE, IN ACCORDANCE WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) "EROSION AND SEDIMENT CONTROL GUIDELINES" AND THE ANSI A300 "BEST MANAGEMENT PRACTICES FOR TREE AND SHRUB PLANTING, TRANSPLANTING, MAINTENANCE AND CARE," PREPARED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), LATEST EDITIONS, AS FOLLOWS:
   A. SEED MIXTURE AND RATE OF APPLICATION:
      A.1. IN SPRING, SUMMER OR EARLY FALL, SEED THE AREA WITH RYEGRASS (ANNUAL OR PERENNIAL) AT 30 POUNDS PER ACRES (APPROXIMATELY 0.7 POUNDS/1000 SQUARE FEET OR USE 1 POUND/1000 SQUARE FEET).
      A.2. IN LATE FALL OR EARLY WINTER, SEED THE AREA WITH CERTIFIED 'AROOSTOOK' WINTER RYE (CEREAL RYE) AT 100 POUNDS PER ACRE (2.5 POUNDS/1000 SQUARE FEET).
   B. APPLICATION SHALL BE UNIFORM BY MECHANICAL OR HYDROSEED METHODS.
   C. MULCH ALL SEEDED AREAS WITH STRAW AT A RATE OF 2 TONS PER ACRE (90 POUNDS PER 1,000 SQUARE FEET) SUCH THAT THE MULCH FORMS A CONTINUOUS BLANKET.
10. ALL SEEDED AREAS SHALL BE FERTILIZED, RESEEDED, AND MULCHED AS NECESSARY TO MAINTAIN VIGOROUS, DENSE VEGETATIVE COVER.
11. TEMPORARY SEED MIXTURES SHALL NOT BE PLACED ON AREAS WHERE FINAL GRADE HAS BEEN ESTABLISHED AND TOPSOIL HAS BEEN PLACED UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT.

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SITE EROSION & SEDIMENT CONTROL PLAN (NORTH)

THE SUMMIT CLUB AT ARMONK
(RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

STATE OF NEW YORK
DAVID P. LOMBARDI
071001
LICENSED PROFESSIONAL ENGINEER

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

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Drawing No:	C-401		

NOT FOR CONSTRUCTION

DISTURBANCE AUTHORIZATION, PHASING OF THE PROJECT AND SEQUENCING OF CONSTRUCTION

THE FOLLOWING SECTION DESCRIBES THE CONSTRUCTION PHASING PROPOSED FOR THIS PROJECT AND THE SEQUENCING OF THE INSTALLATION OF EROSION AND SEDIMENT CONTROLS AND THE PROPOSED CONSTRUCTION.

THE PLAN DIVIDES THE SITE INTO THREE (3) AREAS TO BE IMPACTED BY DEVELOPMENT. THE AREA OF PROPOSED GROUND DISTURBANCE WITHIN EACH OF THE THREE (3) AREAS TO BE DISTURBED BY THE RESIDENTIAL, RESIDENTIAL AMENITIES COMPLEX, AND FUTURE PERMANENT CLUBHOUSE IMPROVEMENTS WILL BE MORE THAN FIVE (5) ACRES. THEREFORE, AND IN ACCORDANCE WITH NYSDEC SPDES GENERAL PERMIT NO. GP-0-20-001 EFFECTIVE JANUARY 29, 2020 THE OPERATOR SHALL HAVE A QUALIFIED PROFESSIONAL CONDUCT AN ASSESSMENT OF THE SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND CERTIFY THAT THE APPROPRIATE EROSION AND SEDIMENT CONTROLS, AS SHOWN ON THE SEDIMENT & EROSION CONTROL PLANS, HAVE BEEN ADEQUATELY INSTALLED TO ENSURE OVERALL PREPAREDNESS OF THE SITE FOR THE COMMENCEMENT OF CONSTRUCTION. IN ADDITION, THE OPERATOR SHALL HAVE A QUALIFIED PROFESSIONAL CONDUCT TWO (2) SITE INSPECTIONS AT LEAST EVERY SEVEN (7) CALENDAR DAYS.

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITY, THE OWNER OR OPERATOR SHALL IDENTIFY THE CONTRACTOR(S) AND SUBCONTRACTOR(S) THAT WILL BE RESPONSIBLE FOR INSTALLING, CONSTRUCTING, REPAIRING, REPLACING, INSPECTING AND MAINTAINING THE EROSION AND SEDIMENT CONTROL PRACTICES INCLUDED IN THE SWPPP; AND THE CONTRACTOR(S) AND SUBCONTRACTOR(S) THAT WILL BE RESPONSIBLE FOR CONSTRUCTING THE POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES INCLUDED IN THE SWPPP. THE OWNER OR OPERATOR SHALL HAVE EACH OF THE CONTRACTORS AND SUBCONTRACTORS IDENTIFY AT LEAST ONE PERSON FROM THEIR COMPANY THAT WILL BE RESPONSIBLE FOR IMPLEMENTATION OF THE SWPPP. THIS PERSON SHALL BE KNOWN AS THE TRAINED CONTRACTOR. THE OWNER OR OPERATOR SHALL ENSURE THAT AT LEAST ONE TRAINED CONTRACTOR IS ON SITE ON A DAILY BASIS WHEN SOIL DISTURBANCE ACTIVITIES ARE BEING PERFORMED.

THE OWNER OR OPERATOR SHALL HAVE EACH OF THE CONTRACTORS AND SUBCONTRACTORS IDENTIFIED ABOVE SIGN A COPY OF THE CERTIFICATION STATEMENT PROVIDED BEFORE THEY COMMENCE ANY CONSTRUCTION ACTIVITY.

CONSTRUCTION ACCESS AND VEHICLE TRAVEL ON SITE

THE SITE ACCESS FOR CONSTRUCTION VEHICLE TRAFFIC WILL BE VIA THE EXISTING DRIVEWAY ALONG BEDFORD ROAD (NY 22). THIS ENTRANCE SHALL BE POSTED WITH "CONSTRUCTION ACCESS" SIGNS VISIBLE IN BOTH DIRECTIONS OF ONCOMING TRAFFIC. WHERE PRACTICAL, THE EXISTING PAVED DRIVEWAY AND GOLF CART PATHS WHICH TRAVERSE THE SITE WILL BE USED FOR THE CONSTRUCTION VEHICLES.

A PRIMARY CONSTRUCTION STAGING AREA AND EQUIPMENT STORAGE AREA WILL BE ESTABLISHED AND LOCATED IN THE EXISTING LAWN AREA NEXT TO THE EXISTING ENTRANCE DRIVE.
CONSTRUCTION VEHICLES SHALL NOT DISTURB ANY AREAS BEYOND THE CONSTRUCTION PHASE BEING WORKED AT THE TIME EXCEPT UNDER THE STRICT SUPERVISION OF THE OWNER'S FIELD REPRESENTATIVE AND ENCIRCLED WITH 6 FOOT TALL CHAIN LINK SECURITY FENCING.

SEQUENCE OF CONSTRUCTION

THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION OPERATION DESCRIBED BELOW AND AS NOTED ON THE PLANS.

CONSTRUCTION PHASE 1

RESIDENTIAL BUILDINGS #4,5,6, AMENITIES COMPLEX, & GATE HOUSE

1. STAKE OUT ALL LIMITS OF DISTURBANCE. (AREAS SHALL BE DELINEATED WITH ORANGE CONSTRUCTION FENCE)
2. TAG ALL EXISTING TREES TO BE REMOVED (TREES SHALL BE DELINATED WITH COLORED CONSTRUCTION TAPE)
3. CUT EXISTING TREES TO BE REMOVED.
4. INSTALL CONSTRUCTION ACCESS, SILT FENCE (DOWNHILL OF ALL DISTURBANCE AREAS), INLET PROTECTION AND OTHER NECESSARY EROSION AND SEDIMENT CONTROLS.
5. COORDINATE INSPECTION OF INITIAL EROSION CONTROLS AND TREE REMOVAL BY TOWN CONSULTING ENGINEER AND JMC.
6. DEMOLITION OF EXISTING BUILDINGS AND SITE FEATURES AS REQUIRED.
7. STRIP AND STOCKPILE TOPSOIL. REMOVE STUMPS FROM CUT TREES.
8. BEGIN BUILDING AND ROADWAY/PARKING LOT CONSTRUCTION, ROUGH GRADING.
9. INSTALL STORM DRAIN SYSTEM COMPLETE (IMMEDIATELY INSTALL INLET PROTECTION ON ALL INLETS).
10. INSTALL WATER SYSTEM AND SEWAGE TREATMENT PLANT IMPROVEMENTS.
11. INSTALL PUBLIC UTILITIES (WATER, SANITARY SEWER, GAS, ELECTRIC, AND TELEPHONE) AS REQUIRED.
12. INSTALL CONCRETE AND ASPHALT CONCRETE PAVEMENT COMPLETE.
13. FINISH GRADING, REDISTRIBUTE TOPSOIL AND ESTABLISH VEGETATION AND/OR LANDSCAPING.
14. CLEAN PAVEMENTS AND STORM DRAIN SYSTEM OF ALL ACCUMULATED SEDIMENT IN CONJUNCTION WITH THE REMOVAL OF ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES.
15. COMPLETE SITE AND BUILDING CONSTRUCTION.
16. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS APPLICABLE ONCE VEGETATION IS ESTABLISHED (80% GRASS SPROUT OVER ENTIRE AREA).

CONSTRUCTION PHASE 2

RESIDENTIAL BUILDINGS #1,2,3

1. STAKE OUT ALL LIMITS OF DISTURBANCE. (AREAS SHALL BE DELINEATED WITH ORANGE CONSTRUCTION FENCE)
2. TAG ALL EXISTING TREES TO BE REMOVED (TREES SHALL BE DELINATED WITH COLORED CONSTRUCTION TAPE)
3. CUT EXISTING TREES TO BE REMOVED.
4. INSTALL CONSTRUCTION ACCESS, SILT FENCE (DOWNHILL OF ALL DISTURBANCE AREAS), INLET PROTECTION AND OTHER NECESSARY EROSION AND SEDIMENT CONTROLS.
5. COORDINATE INSPECTION OF INITIAL EROSION CONTROLS AND TREE REMOVAL BY TOWN CONSULTING ENGINEER AND JMC.
6. DEMOLITION OF EXISTING BUILDINGS AND SITE FEATURES AS REQUIRED.
7. STRIP AND STOCKPILE TOPSOIL. REMOVE STUMPS FROM CUT TREES.
8. BEGIN BUILDING AND ROADWAY/PARKING LOT CONSTRUCTION, ROUGH GRADING.
9. INSTALL STORM DRAIN SYSTEM COMPLETE (IMMEDIATELY INSTALL INLET PROTECTION ON ALL INLETS).
10. INSTALL PUBLIC UTILITIES (WATER, SANITARY SEWER, GAS, ELECTRIC, AND TELEPHONE) AS REQUIRED.
11. INSTALL CONCRETE AND ASPHALT CONCRETE PAVEMENT COMPLETE.
12. FINISH GRADING, REDISTRIBUTE TOPSOIL AND ESTABLISH VEGETATION AND/OR LANDSCAPING.
13. CLEAN PAVEMENTS AND STORM DRAIN SYSTEM OF ALL ACCUMULATED SEDIMENT IN CONJUNCTION WITH THE REMOVAL OF ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES.
14. COMPLETE SITE AND BUILDING CONSTRUCTION.
15. 15. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS APPLICABLE ONCE VEGETATION IS ESTABLISHED (80% GRASS SPROUT OVER ENTIRE AREA).

CONSTRUCTION PHASE 3

FUTURE PERMANENT CLUBHOUSE, ROADWAY, & TENNIS COURTS

1. STAKE OUT ALL LIMITS OF DISTURBANCE. (AREAS SHALL BE DELINEATED WITH ORANGE CONSTRUCTION FENCE)
2. TAG ALL EXISTING TREES TO BE REMOVED (TREES SHALL BE DELINATED WITH COLORED CONSTRUCTION TAPE)
3. CUT EXISTING TREES TO BE REMOVED.
4. INSTALL CONSTRUCTION ACCESS, SILT FENCE (DOWNHILL OF ALL DISTURBANCE AREAS), INLET PROTECTION AND OTHER NECESSARY EROSION AND SEDIMENT CONTROLS.
5. COORDINATE INSPECTION OF INITIAL EROSION CONTROLS AND TREE REMOVAL BY TOWN CONSULTING ENGINEER AND JMC.
6. DEMOLITION OF EXISTING BUILDINGS AND SITE FEATURES AS REQUIRED.
7. STRIP AND STOCKPILE TOPSOIL. REMOVE STUMPS FROM CUT TREES.
8. BEGIN BUILDING AND ROADWAY/PARKING LOT CONSTRUCTION, ROUGH GRADING.
9. INSTALL STORM DRAIN SYSTEM COMPLETE (IMMEDIATELY INSTALL INLET PROTECTION ON ALL INLETS).
10. INSTALL PUBLIC UTILITIES (WATER, SANITARY SEWER, GAS, ELECTRIC, AND TELEPHONE) AS REQUIRED.
11. INSTALL CONCRETE AND ASPHALT CONCRETE PAVEMENT COMPLETE.
12. FINISH GRADING, REDISTRIBUTE TOPSOIL AND ESTABLISH VEGETATION AND/OR LANDSCAPING.
13. CLEAN PAVEMENTS AND STORM DRAIN SYSTEM OF ALL ACCUMULATED SEDIMENT IN CONJUNCTION WITH THE REMOVAL OF ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES.
14. COMPLETE SITE AND BUILDING CONSTRUCTION.
15. 15. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS APPLICABLE ONCE VEGETATION IS ESTABLISHED (80% GRASS SPROUT OVER ENTIRE AREA).

GENERAL NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH ALL THE PLANS, PRIOR TO BEGINNING ANY CLEARING, GRUBBING OR EXCAVATION.
2. SILT FENCE SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS PRIOR TO BEGINNING ANY CLEARING AND GRUBBING OR EARTHWORK.
3. EXPOSED SLOPES AND ALL GRADED AREAS SHALL BE SEEDED IMMEDIATELY UPON COMPLETION OF ITS CONSTRUCTION AS DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE.
4. GRASS SEED MIX FOR SEDIMENT AND EROSION CONTROL MAY BE APPLIED BY EITHER MECHANICAL OR HYDROSEEDING METHODS. HYDROSEEDING SHALL BE PERFORMED IN ACCORDANCE WITH THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION, AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION.
5. SEEDED AREAS HAVING A GRADED SLOPE OF 25% OR LESS SHALL BE MULCHED WITH STRAW AT A RATE OF 2 TONS PER ACRE (90 LBS. PER 1,000 S.F.) SUCH THAT THE MULCH FORMS A CONTINUOUS BLANKET.
6. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED ON A DAILY BASIS BY THE CONTRACTOR. ALL COLLECTED SEDIMENT WITHIN SEDIMENT BARRIERS SHALL BE REMOVED PERIODICALLY TO MAINTAIN THE FUNCTION OF THE SEDIMENT BARRIER. ALL SEDIMENT COLLECTED SHALL BE RESPREAD ON-SITE WITHIN STABILIZED AREAS AS DIRECTED BY THE OWNERS FIELD REPRESENTATIVE.
7. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE CONTRACTOR.
8. ALL FILLS SHALL BE COMPACTED TO PROVIDE STABILITY OF MATERIAL AND TO PREVENT SETTLEMENT.
9. EXCAVATIONS AND FILLS SHALL NOT ENDANGER ADJOINING PROPERTIES, NOR DIVERT WATER ONTO THE PROPERTY OF OTHERS.
10. THE CONTRACTOR SHALL INSPECT DOWNSTREAM CONDITIONS FOR EVIDENCE OF SEDIMENTATION ON A TWICE A WEEK BASIS AND AFTER RAINSTORMS.
11. AS WARRANTED BY FIELD CONDITIONS, SPECIAL ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR AS REQUIRED.
12. STOCKPILING OF CONSTRUCTION MATERIAL SHALL BE PLACED ON-SITE IN THE AREA DESIGNATED. STOCKPILED EXCAVATED MATERIAL SHALL HAVE SILT FENCE LOCATED AROUND PERIMETER. ALL STOCKPILED MATERIAL SHALL BE MAINTAINED IN AN ORDERLY MANNER SO AS NOT TO IMPEDE ON EXISTING TRAFFIC CIRCULATION ROUTES.
13. THIS PLAN IS FOR SEDIMENT AND EROSION CONTROL INFORMATION ONLY.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE OWNER'S FIELD REPRESENTATIVE AND/OR THE TOWN OF NORTH CASTLE.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH NYSDEC RULES AND REGULATIONS AS SET FORTH BY SPDES GENERAL PERMIT GP-0-20-001 FOR DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES EFFECTIVE 01/29/2020.
16. IN AREAS WHERE SOIL DISTURBANCE ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, THE APPLICATION OF SOIL STABILIZATION MEASURES SHALL BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN SEVEN (7) DAYS FROM THE DATE THE CURRENT SOIL DISTURBANCE ACTIVITY CEASED. THE SOIL STABILIZATION MEASURES SELECTED SHALL BE IN CONFORMANCE WITH THE TECHNICAL STANDARD, NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, DATED AUGUST 2005.
17. THE OWNER OR OPERATOR SHALL INSTALL ANY ADDITIONAL SITE SPECIFIC PRACTICES NEEDED TO PROTECT WATER QUALITY.
18. CONTRACTOR SHALL UTILIZE EXISTING PAVED AREAS WHERE PRACTICAL AND AS MAY BE DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE FOR ACCESS ROUTES THROUGH THE DURATION OF CONSTRUCTION. DAMAGE TO EXISTING CART PATHS CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED UPON COMPLETION OF THE PROJECT.

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

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JOSEPH M. CERMELE, P.E.
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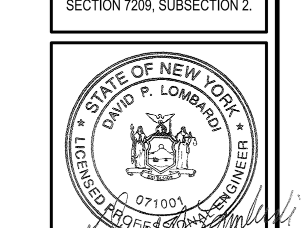

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Project No:	20101
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Drawing No:	C-402

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TOWN OF NORTH CASTLE PLANNING BOARD

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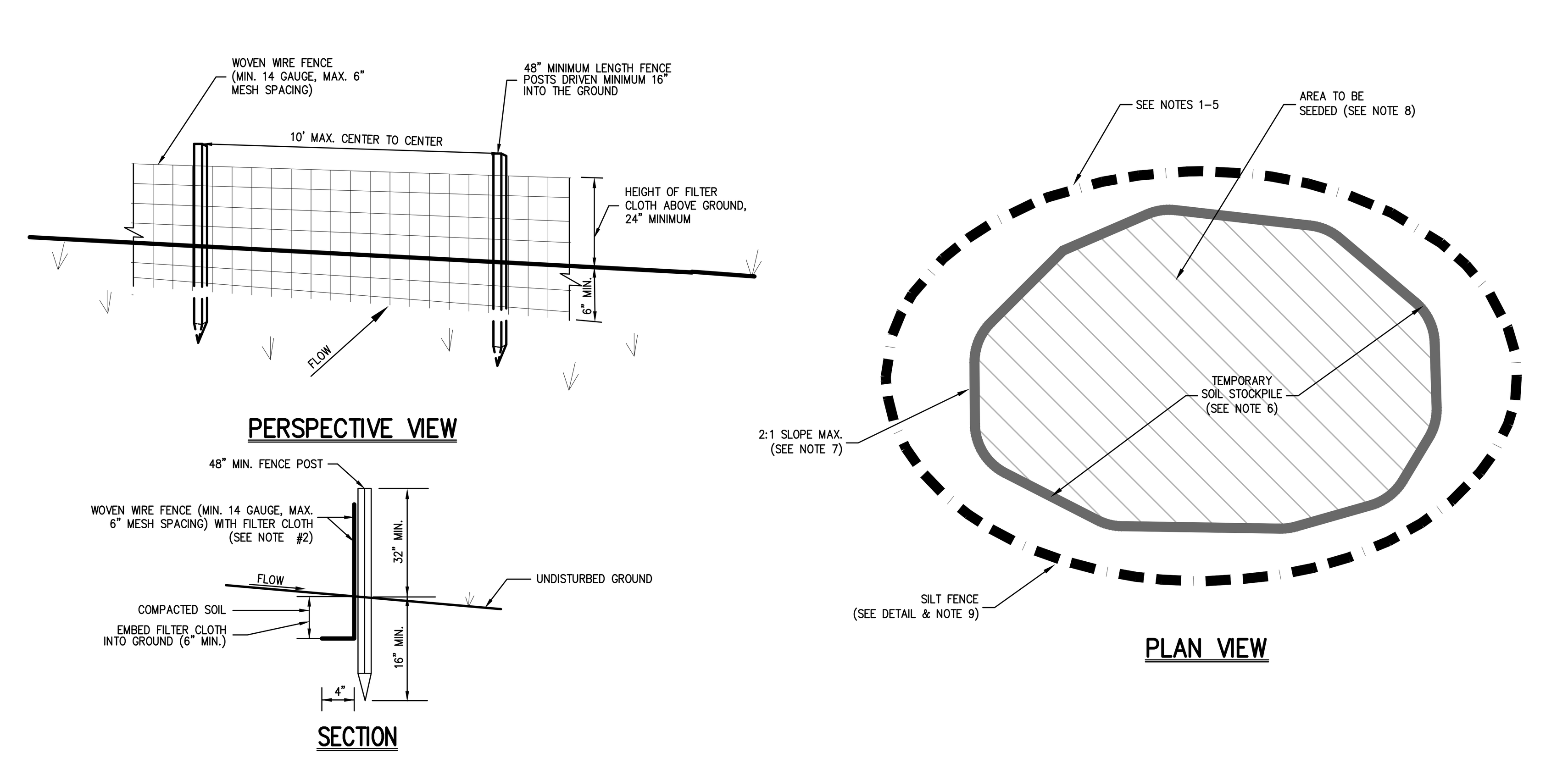
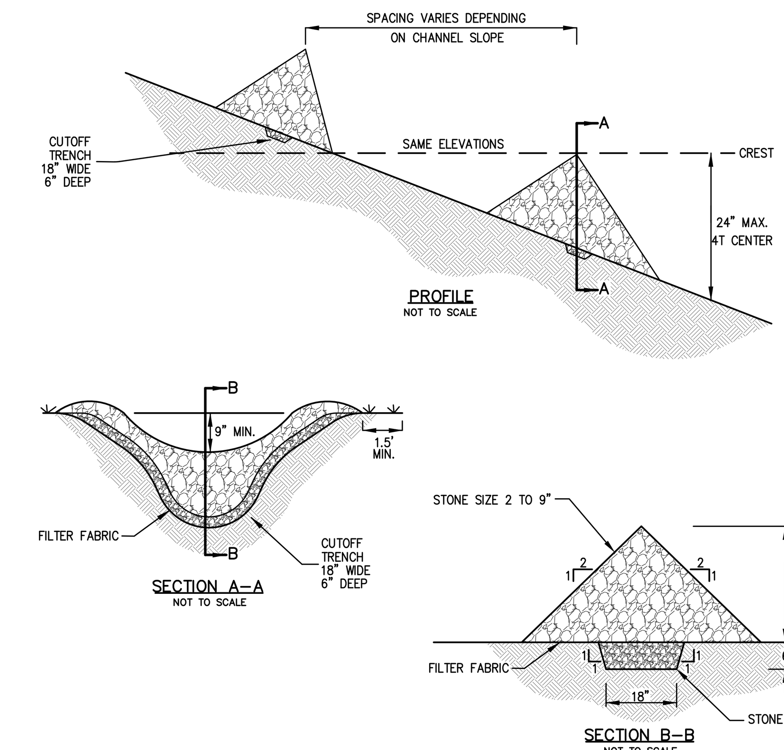


NOTES:

1. WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL, EITHER T OR U TYPE OR HARDWOOD.
2. FILTER CLOTH SHALL BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABLINKA T140N, OR APPROVED EQUAL.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED AND REPLACED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
6. THE AREA CHOSEN FOR ALL TEMPORARY SOIL STOCKPILES SHALL BE DRY AND STABLE.
7. ALL STOCKPILED SOIL SHALL NOT CONTAIN SLOPES GREATER THAN 2:1.
8. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SEEDED WITHIN 24 HOURS. PERENNIAL OR ANNUAL RYEGRASS SHALL BE PLANTED DURING SPRING, SUMMER OR EARLY FALL. WINTER RYE (CEREAL RYE) SHALL BE PLANTED DURING LATE FALL OR EARLY WINTER.
9. ALL STOCKPILES SHALL BE PROTECTED WITH SILT FENCING INSTALLED AROUND THE PERIMETER.

TEMPORARY SOIL STOCKPILE WITH SILT FENCE — 1

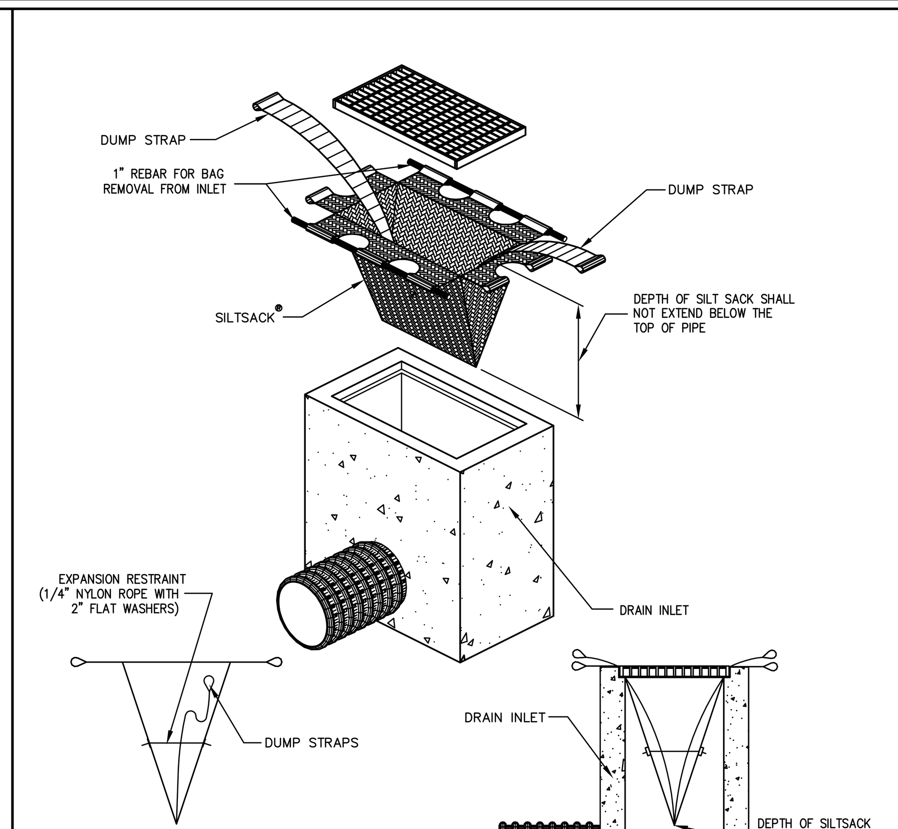


CONSTRUCTION SPECIFICATIONS:

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSURE THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANK TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.

MAXIMUM DRAINAGE AREA 2 ACRES.

STONE CHECK DAM — 2



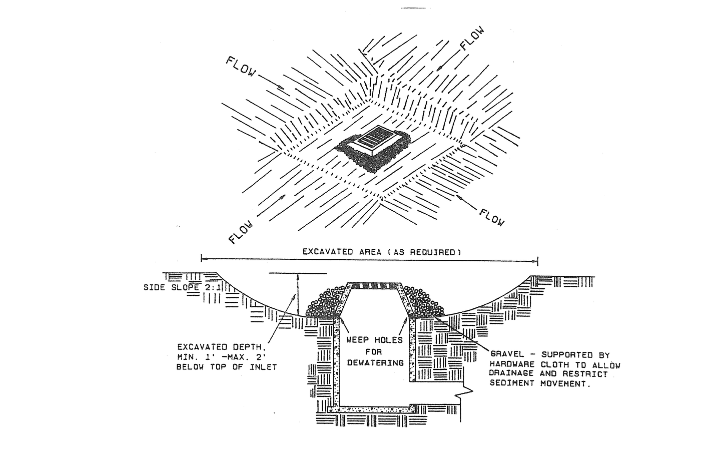
HI-FLOW SILT SACK AS MANUFACTURED BY ACF ENVIRONMENTAL OR APPROVED EQUAL®

(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

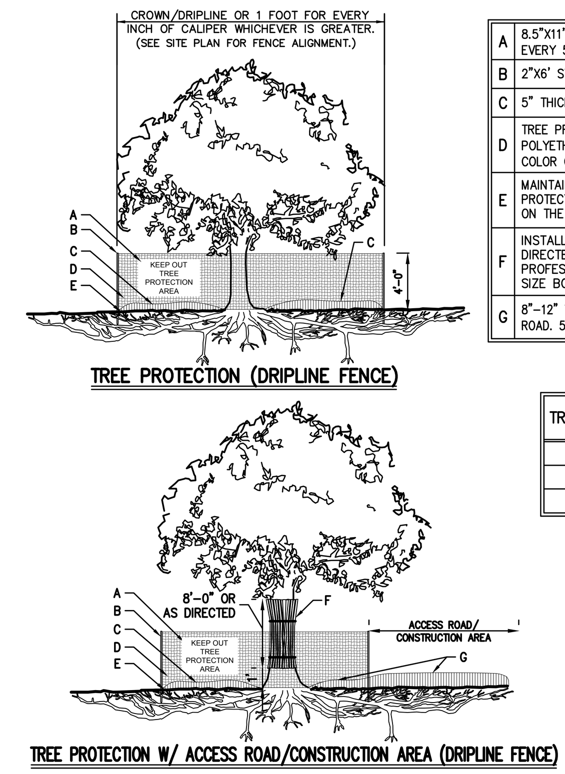
NOTE:
CURB INLETS SHALL BE TYPE B WITH CURB DEFLECTOR.

MANUFACTURED INSERT INLET PROTECTION — 3



1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROCTECTED BY/STONE.
4. PROVIDE FREQUENT INSPECTION AND MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AND REPAIR OR REPLACE INLET PROTECTION TO MAINTAIN EFFECTIVENESS OF THE INSTALLATION.
5. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA. SEAL WEEP HOLES FILL BASIN WITH STABLE SOIL TO FINAL GRADE. COMPACT IT PROPERLY AND STABILIZE WITH PERMANET SEEDING.

EXCAVATED DROP INLET PROTECTION — 4



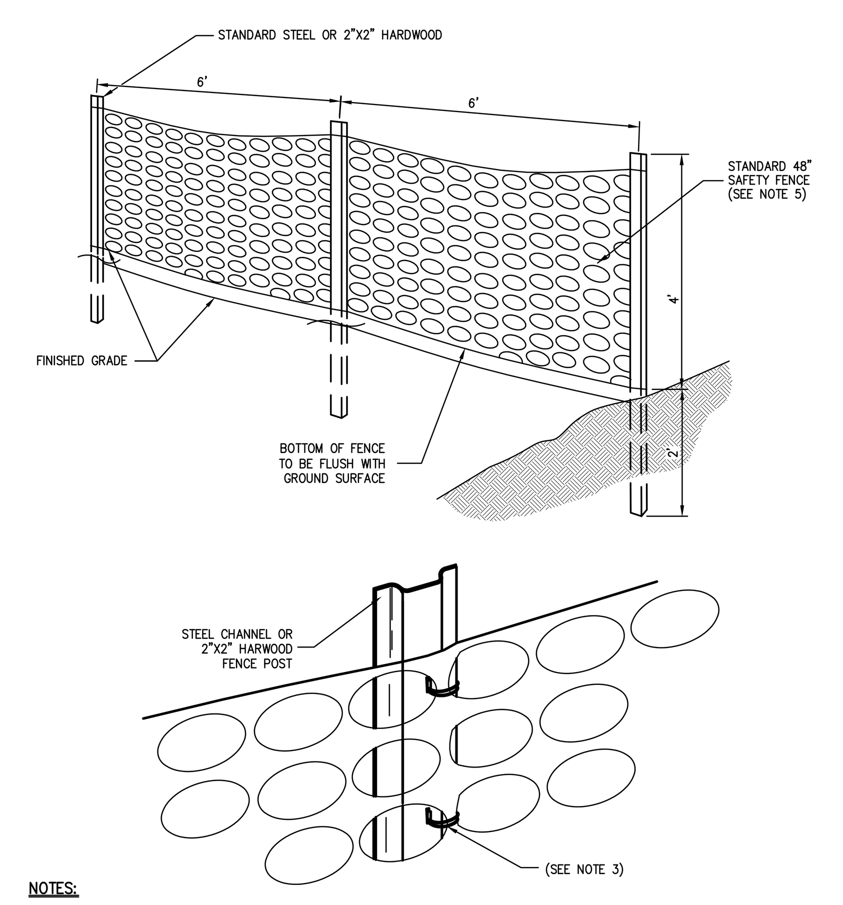
A	8.5"X11" SIGN LAMINATED IN PLASTIC SPACED EVERY 50' ALONG FENCE
B	2"X6' STEEL POSTS OR APPROVED EQUAL.
C	5" THICK LAYER OF MULCH.
D	TREE PROTECTION FENCE: HIGH DENSITY POLYETHYLENE FENCING WITH 3.5" X 1.5" OPENINGS; COLOR ORANGE. STEEL POSTS INSTALLED AT 8' O.C.
E	MAINTAIN EXISTING GRADE WITHIN THE TREE PROTECTION FENCE UNLESS OTHERWISE INDICATED ON THE PLANS.
F	INSTALL ROUGH SAWN WOOD WHERE AND AS DIRECTED BY PROJECT LANDSCAPE ARCHITECT OR PROFESSIONAL ARBORIST. SEE CHART FOR WOOD SIZE BOUND WITH 9 GAUGE WIRE.
G	8"-12" THICK LAYER OF MULCH ON MAINTENANCE ROAD. 5" THICK LAYER INSIDE TREE PROTECTION AREA.

TREE DIAMETER	ROUGH SAWN WOOD SIZE
<12"	2"X2"
13"-24"	2"X4"
>25"	2"X6"

NOTES:

1. SEE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.
2. IF THERE IS NO EXISTING IRRIGATION, SEE SPECIFICATIONS FOR WATERING REQUIREMENTS.
3. NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
4. NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
5. SEE SITE PLANS FOR IDENTIFICATIONS/LOCATIONS OF INDIVIDUAL TREES TO BE PROTECTED.
6. ALL EXCAVATION WITHIN THE CROWN/DRIPLINE OF ANY TREE SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE PROJECT LANDSCAPE ARCHITECT OR PROFESSIONAL ARBORIST. SPECIAL MEASURES, SUCH AS THE USE OF AN AIR SPADE MAY BE REQUIRED.
7. THE CONTRACTOR MAY PROPOSE THE USE OF ENGINEERED MATTING OR OTHER ENGINEERED PRODUCTS IN LIEU OF MULCH, WHICH SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION.

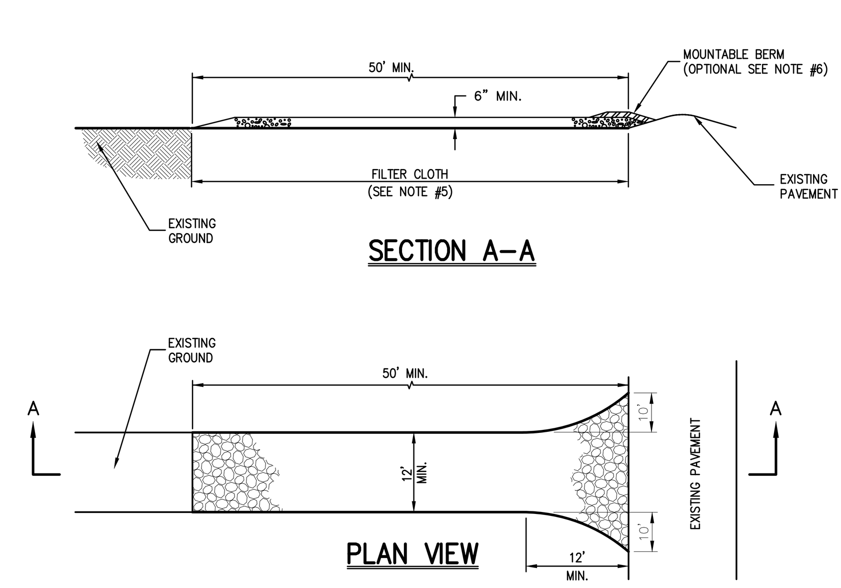
TREE PROTECTION — 5



NOTES:

1. SPACE SUPPORT FENCE POSTS AT 6 FOOT INTERVALS.
2. DRIVE SUPPORT POSTS 2 FEET INTO GROUND.
3. FIRMLY FASTEN FENCE MATERIAL IN PLACE BY WIRING TO FENCE POST WHILE MAINTAINING TENSION ACROSS FULL HEIGHT OF FENCE. WIRING SHALL BE DONE IN A MANNER THAT WILL PREVENT SAGGING OF FENCE MATERIAL.
4. PROVIDE PERIODIC INSPECTION AND MAINTENANCE OF FENCE INCLUDING REPAIRS AS NECESSARY AND REQUIRED.
5. PLASTIC FENCE SHALL BE INTERNATIONAL ORANGE COLOR, AS MANUFACTURED BY ADPI ENTERPRISES, INC. OR APPROVED EQUAL.
6. REMOVE CONSTRUCTION FENCE AS DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE.

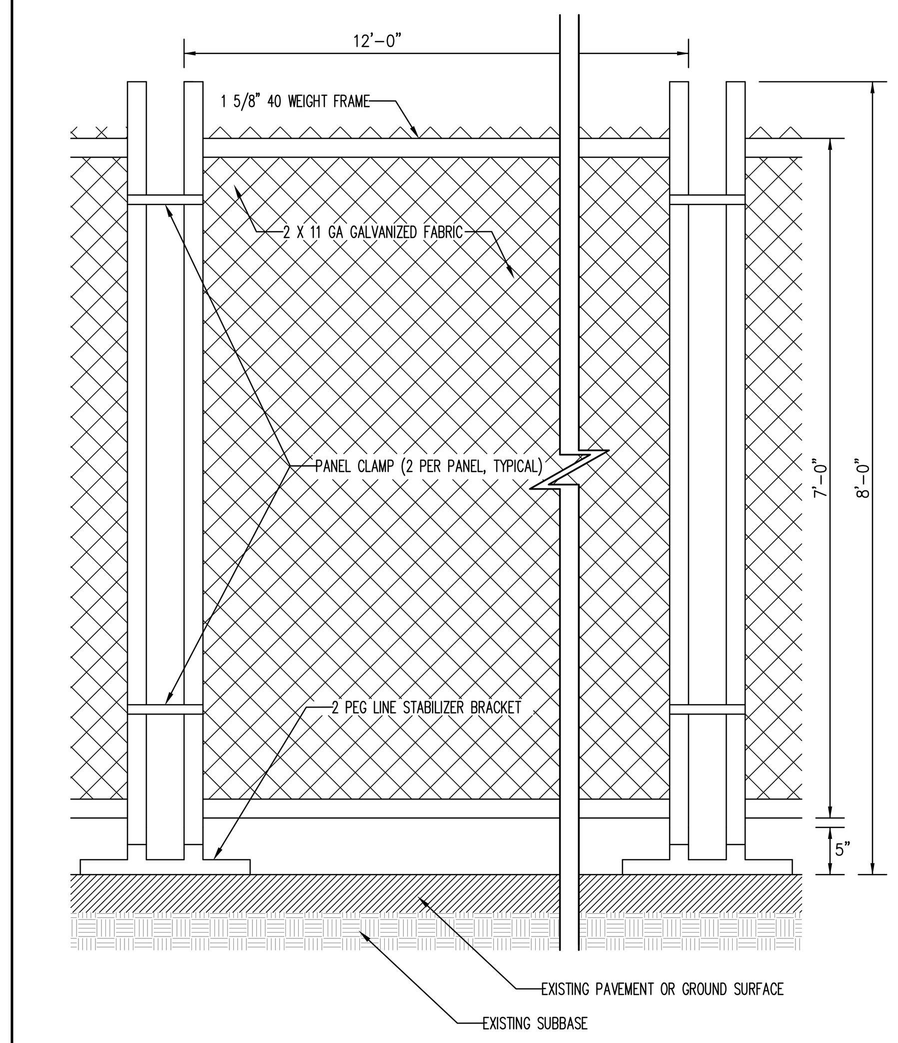
CONSTRUCTION FENCE — 6



NOTES

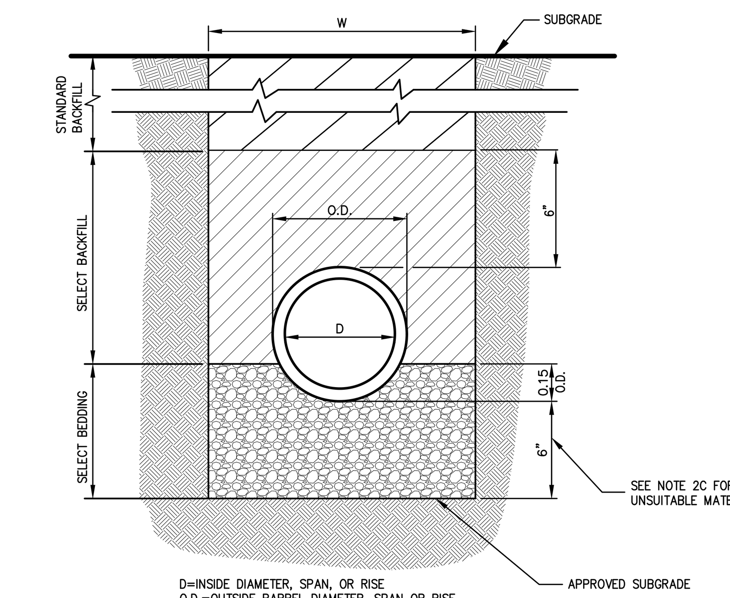
1. STONE SIZE - USE 1" TO 4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET.
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24 FOOT MINIMUM IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH TO BE PLACED OVER THE ENTIRE WIDTH AND LENGTH OF AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE — 7



NOTE:
STABILIZED BRACKET TO BE HOT DIPPED GALVANIZED STEEL PIPE.

TEMPORARY CHAIN LINK CONSTRUCTION FENCE — 8

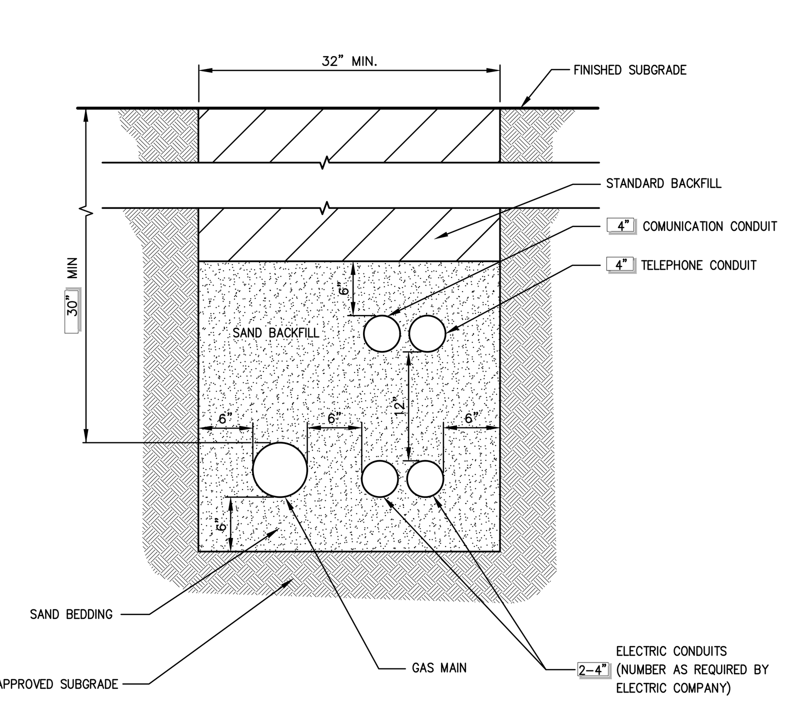


D=INSIDE DIAMETER, SPAN, OR RISE
O.D.=OUTSIDE BARREL DIAMETER, SPAN OR RISE
H.D.=OUTSIDE DIAMETER, SPAN, OR RISE @ BELL OR BAND
W=H.D. + 2.0' - FOR 48" OR SMALLER DIAMETER, SPAN, OR RISE
W=H.D. + 2.5' - FOR GREATER THAN 48" DIAMETER, SPAN, OR RISE

NOTES:

1. FOR TYPE II TRENCH, MATERIAL FOR SELECT BEDDING AND SELECT BACKFILL SHALL BE:
   A. EITHER SAND OR CRUSHED STONE IF NO WATER IS ENCOUNTERED IN TRENCH.
   B. 3/4"CRUSHED STONE IF WATER IS ENCOUNTERED IN TRENCH.
2. TYPE II TRENCH SHALL BE USED IN ALL OF THE FOLLOWING CASES:
   A. FOR ALL CORRUGATED POLYETHYLENE DRAIN PIPE (CPDP) AND PVC PIPE AND CONDUIT INSTALLATION.
   B. WHEN ROCK OR HARDPAN IS ENCOUNTERED IN BOTTOM OF TRENCH.
   C. 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.
3. 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.
4. 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 MAY THEN BE PLACED AND COMPACTED IN A MAXIMUM OF TWELVE (12) INCH LAYERS. EACH LAYER SHALL BE COMPACTED BY APPROVED MECHANICAL TAMPING MACHINES. UNLESS OTHERWISE SPECIFIED BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 92% MAXIMUM MODIFIED DENSITY IN ACCORDANCE WITH ASTM DESIGNATION D-1557 IN THE MANNER HEREIN DESCRIBED. BACKFILL SHALL PROCEED UP TO THE LINES AND GRADES AS SHOWN ON THE DRAWINGS.

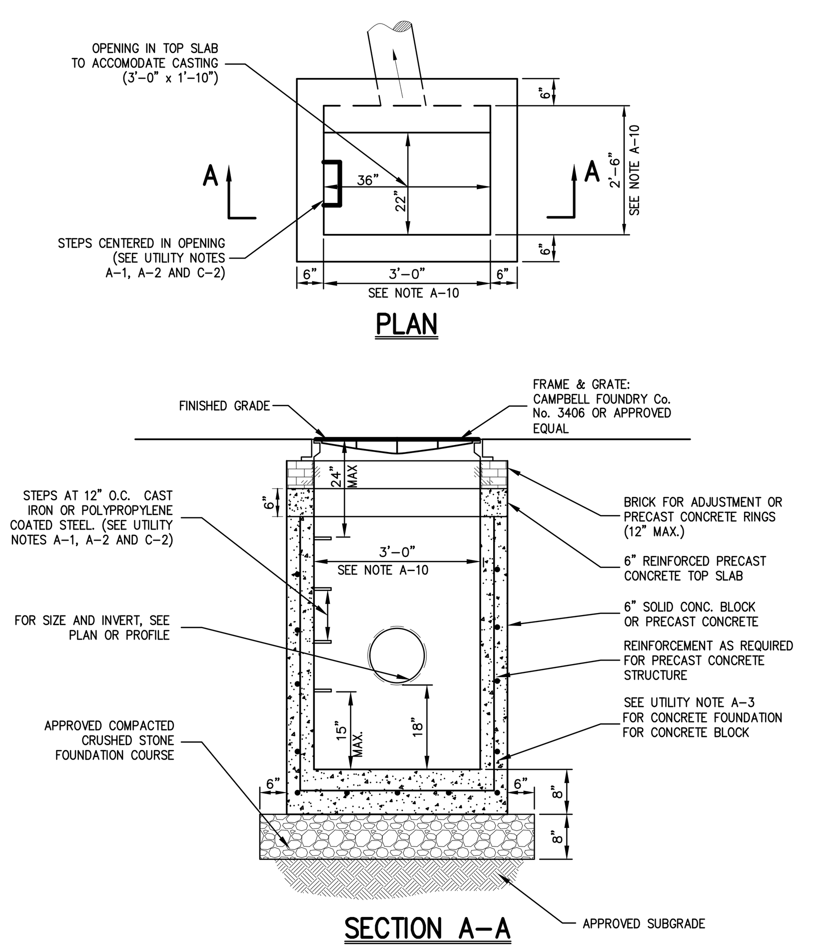
TYPE II TRENCH — 9



NOTES:

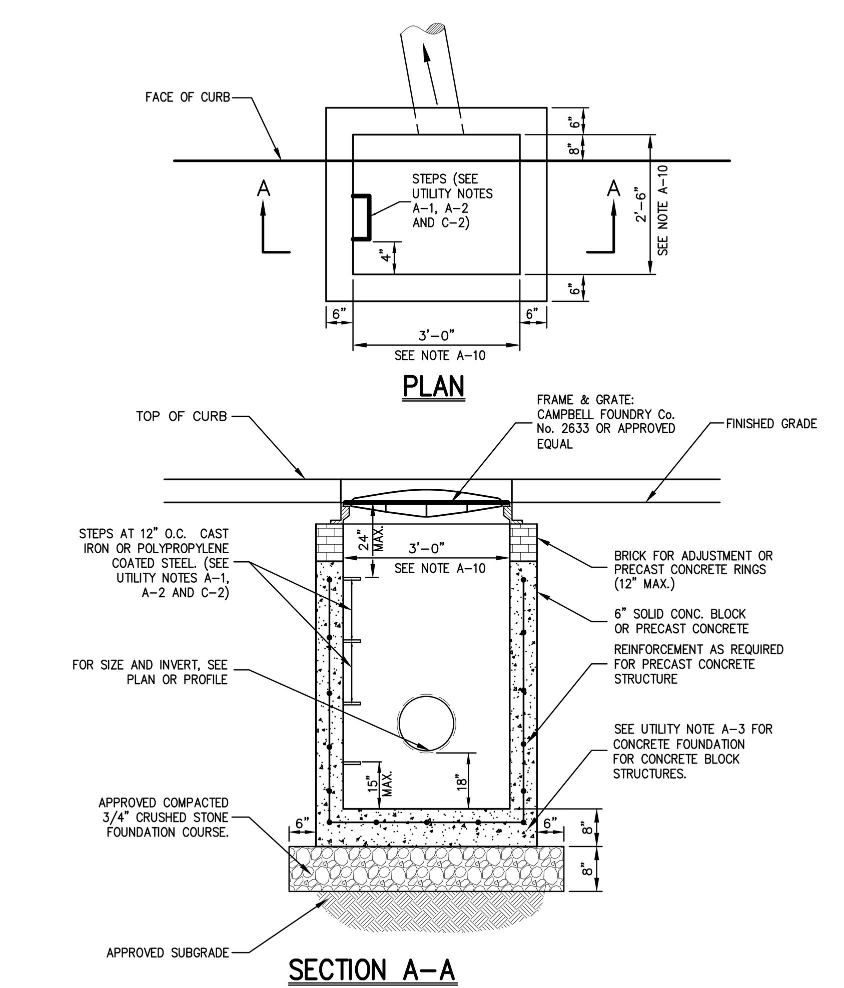
1. UTILITIES TO BE INSTALLED IN ACCORDANCE WITH THE REGULATIONS AND REQUIREMENTS OF THE UTILITY COMPANY HAVING JURISDICTION.
2. BACKFILL FOR PIPE AND CONDUIT SHALL BE PLACED EVENLY AND CAREFULLY AROUND AND OVER THE PIPE OR CONDUIT IN SIX (6) INCH MAXIMUM LAYERS. EACH LAYER SHALL BE THOROUGHLY AND CAREFULLY COMPACTED UNTIL TWELVE (12) INCHES OF COVER EXISTS OVER THE PIPE OR CONDUIT. THE REMAINDER OF THE BACKFILL MAY THEN BE PLACED AND COMPACTED IN A MAXIMUM OF TWELVE (12) INCH LAYERS. EACH LAYER SHALL BE COMPACTED BY APPROVED MECHANICAL TAMPING MACHINES. UNLESS OTHERWISE SPESIFIED BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 92% MAXIMUM MODIFIED DENSITY IN ACCORDANCE WITH ASTM DESIGNATION D-1557 IN THE MANNER HEREIN DESCRIBED. BACKFILL SHALL PROCEED UP TO THE LINES AND GRADES AS SHOWN ON THE DRAWINGS.

UTILITY TRENCH DETAIL — 10



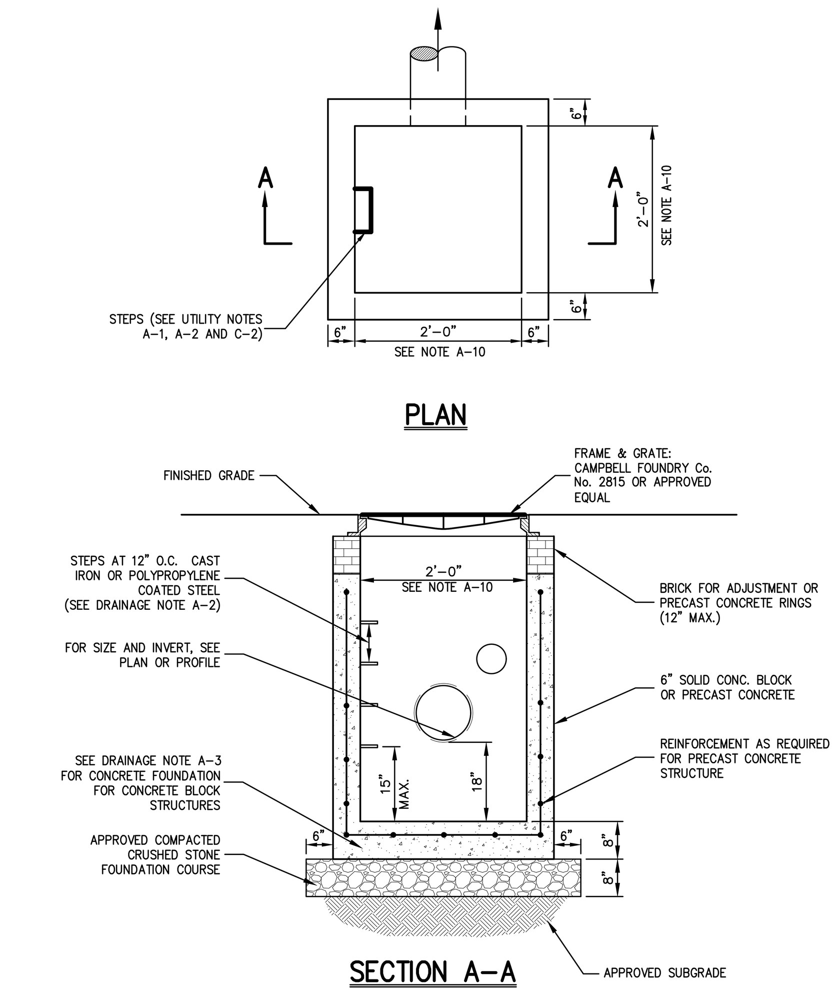
NOTE:
1. REINFORCE PRECAST CONCRETE TOP SLAB AND REINFORCE PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD.
2. SEE NOTES PERTAINING TO DRAIN INLETS UNDER UTILITY NOTES ON DRAWING C-900.

DRAIN INLET (TYPE DI) — 11
(WITH SUMP-W/O FINGER UNDERDRAINS)



NOTE:
1. SEE NOTES PERTAINING TO DRAIN INLETS UNDER UTILITY NOTES ON DRAWING C-900.

DRAIN INLET (TYPE CI) — 12
(WITH SUMP-W/O FINGER UNDERDRAINS)



NOTE:
1. SEE NOTES PERTAINING TO DRAIN INLET'S UNDER UTILITY NOTES ON DRAWING C-900.

LAWN INLET (TYPE LI) — 13
(WITH SUMP)

NOTES PERTAINING TO DRAIN INLETS

A-1 STEPS WILL NOT BE REQUIRED IN INLETS LESS THAN FOUR (4) FEET IN DEPTH. STEPS WILL BE REQUIRED IN INLETS FOUR (4) FEET OR GREATER IN DEPTH. DEPTHS FOR DRAIN INLETS SHALL BE MEASURED FROM FINISHED GRADE TO INSIDE BOTTOM OF STRUCTURE (INCLUDING SUMP AS APPLICABLE).

A-2 WHEN STEPS ARE REQUIRED, STEPS SHALL COMPLY WITH THE SAME REQUIREMENTS OF ASTM STANDARD C-478, ARTICLE 13 ENTITLED "MANHOLE STEPS & LADDERS".

A-3 FOR MASONRY STRUCTURES, THE FIRST COURSE OF MASONRY SHALL BE SET IN THE CONCRETE FOUNDATION BEFORE THE CONCRETE HAS SET. CONCRETE FOUNDATION SHALL BE CLASS "A"(4000 psi) CONCRETE, TWELVE (12) INCHES THICK AND SHALL EXTEND SIX (6) INCHES BEYOND THE OUTSIDE FACE THE STRUCTURE.

A-4 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FURNISH AND CONSTRUCT THE PROPER SIZE STRUCTURE INCLUDING THE NECESSARY OPENINGS TO ACCOMMODATE THE WORK AS SHOWN ON THE PLANS OR ORDERED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE OWNER.

A-5 ALL NECESSARY PATCHING FOR DRAIN STRUCTURES SHALL BE ACCOMPLISHED WITH NON-SHRINKING CEMENT MORTAR GROUT, APPROVED EQUAL TO SIKA-SET AS MANUFACTURED BY THE SIKA CHEMICAL CORP.

A-6 FOUNDATIONS FOR PRECAST CONCRETE STRUCTURES SHALL BE SET ON A COMPACTED LAYER OF APPROVED CRUSHED STONE HAVING A MINIMUM COMPACTED THICKNESS OF EIGHT (8) INCHES.

A-7 ALL PIPES SHALL BE CUT FLUSH WITH THE INSIDE WALL OF THE STRUCTURE.

A-8 PROVIDE REINFORCED CONCRETE TOP SLAB FOR OVERSIZED DRAIN INLETS WITH PROPER SIZE OPENING TO ACCOMMODATE INSTALLATION OF FRAME & GRATE.

A-9 FOR MASONRY STRUCTURES GREATER THAN TEN (10) FEET IN DEPTH, THICKNESS OF MASONRY WALLS SHALL BE INCREASED TO TWELVE (12) INCHES.

A-10 FOR ALL STRUCTURES GREATER THAN 10 FEET IN DEPTH, STRUCTURES SHALL PROVIDE MINIMUM INSIDE DIMENSIONS OF 4 FEET X 4 FEET.

NOTES PERTAINING TO MANHOLES

B-1 PRECAST CONCRETE MANHOLES SHALL COMPLY WITH ASTM STANDARD C-478. MANHOLE JOINTS SHALL COMPLY WITH ASTM STANDARD C-443.

B-2 FOR PRECAST CONCRETE MANHOLES FIVE (5) FEET OR LESS IN HEIGHT, TOP CONE SECTION SHALL BE REPLACED WITH PRECAST REINFORCED CONCRETE SLAB (6" MIN. THICKNESS) WITH OPENING OF SUFFICIENT SIZE TO ACCOMMODATE MANHOLE CASTING.

B-3 FOR MANHOLES 10 FEET OR MORE IN DEPTH, MANHOLE DIAMETER SHALL BE FIVE (5) FEET.

B-4 TERMINAL MANHOLE FLOORS SHALL BE SLOPED TOWARD OUTFALL PIPE.

B-5 INVERT CHANNELS FOR PRECAST CONCRETE MANHOLES SHALL BE CONSTRUCTED OF CONCRETE.

B-6 NOTES A-1, A-2, A-4, A-5, A-6 & A-7 UNDER "NOTES PERTAINING TO DRAIN INLETS" ABOVE SHALL APPLY TO MANHOLES.

NOTES PERTAINING TO PRECAST CONCRETE STRUCTURES FOR STORM DRAINS, SANITARY SEWERS AND WATER LINES

C-1 ALL PRECAST CONCRETE STRUCTURES SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD.

C-2 STEPS SHALL BE LOCATED WITHIN STRUCTURE TO AVOID PLACEMENT OVER PIPES WHEN PRACTICABLE.

UTILITY NOTES — 14

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

APPLICANT/OWNER:
SUMMIT CLUB PARTNERS, LLC
568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
30 RAILROAD AVENUE
GREENWICH, CT 06830

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

CONSTRUCTION DETAILS
THE SUMMIT CLUB AT ARMONK
(RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

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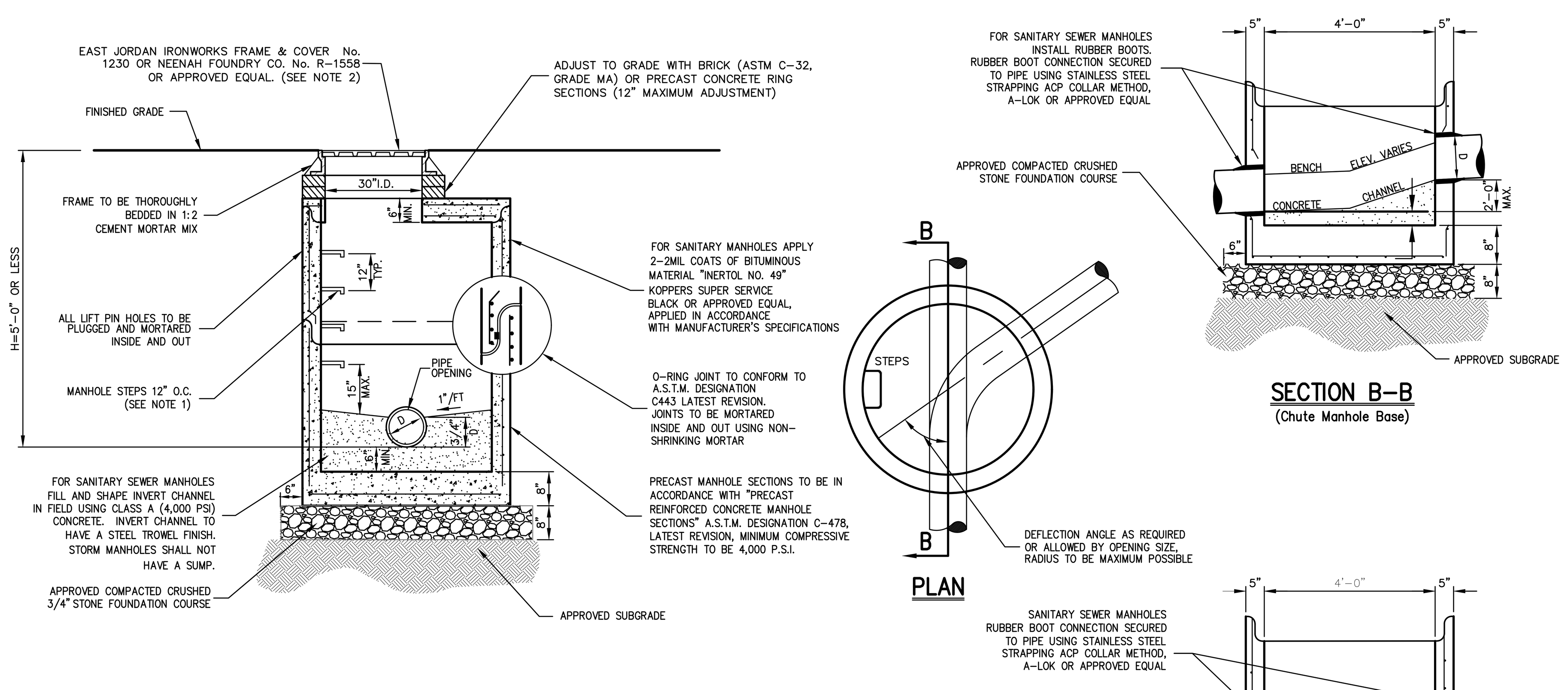
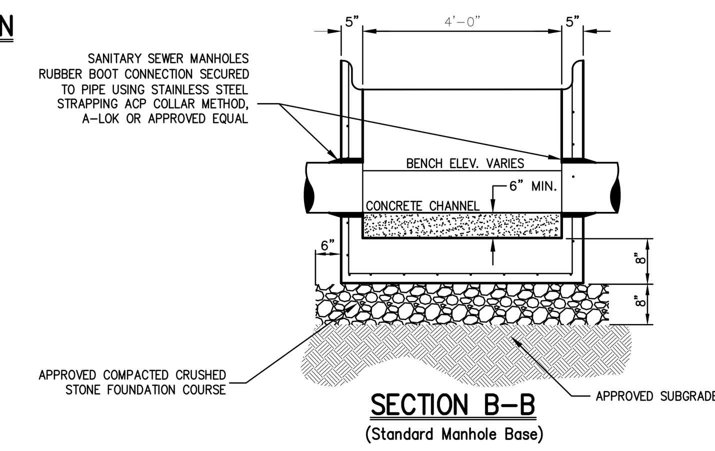
Drawn: NC	Approved: AG
Scale:	NOT TO SCALE
Date:	11/23/2020
Project No:	20101
20101-DET-1	
Drawing No:	C-900



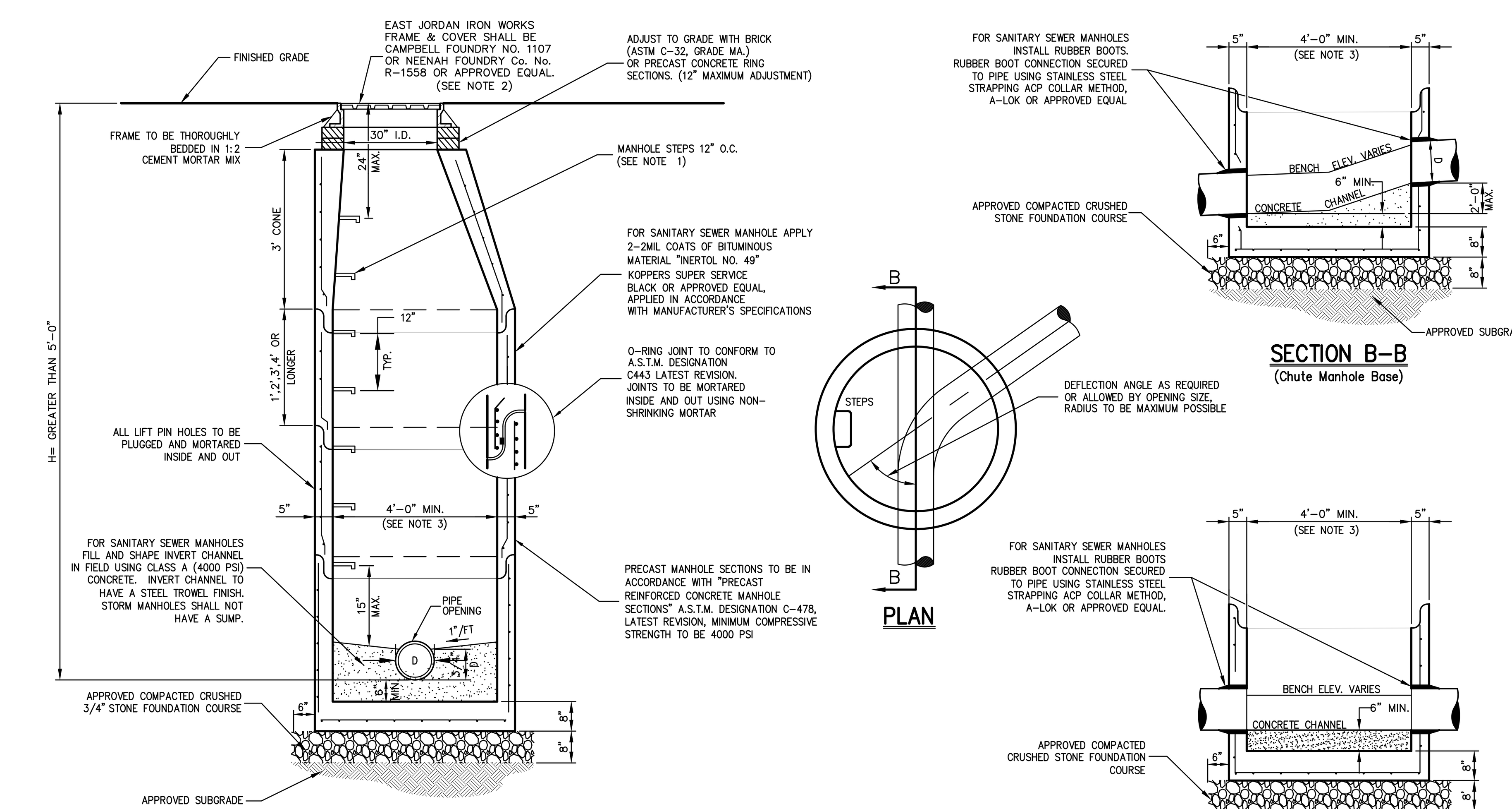


NOTES:

1. MANHOLE STEPS SHALL BE CAST IRON NEENAH No. R-1981-0 OR CAMPBELL FOUNDRY No. 2588-1 OR POLYPROPYLENE COATED STEEL (SEE SPECIFICATIONS) OR APPROVED EQUAL.
2. UNLESS OTHERWISE SPECIFIED, SANITARY SEWER MANHOLES SHALL HAVE LETTERS "SEWER" AND STORM DRAIN MANHOLES SHALL HAVE LETTERS "DRAIN" CAST ON COVER. THE COVERS SHALL HAVE VENT HOLES.
3. MANHOLES SHALL MEET OR EXCEED A.S.T.M. AND O.S.H.A. REQUIREMENTS.
4. SEE "NOTES PERTAINING TO MANHOLES" UNDER "UTILITY NOTES" ON DRAWING C-900.

MANHOLE (TYPE A)
(H < 5'-0")

15



NOTES:

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2. UNLESS OTHERWISE SPECIFIED, SANITARY SEWER MANHOLES SHALL HAVE LETTERS "SEWER" AND STORM DRAIN MANHOLES SHALL HAVE LETTERS "DRAIN" CAST ON COVER. THE COVERS SHALL HAVE VENT HOLES.
3. MANHOLES WITH DEPTH (h) 10' OR GREATER SHALL BE FIVE (5) FEET IN DIAMETER.
4. MANHOLES SHALL MEET OR EXCEED A.S.T.M. AND O.S.H.A. REQUIREMENTS.
5. SEE "NOTES PERTAINING TO MANHOLES" UNDER "UTILITY NOTES" ON DRAWING C-900.

MANHOLE (TYPE B)
(H > 5'-0")<10'-0")

16

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

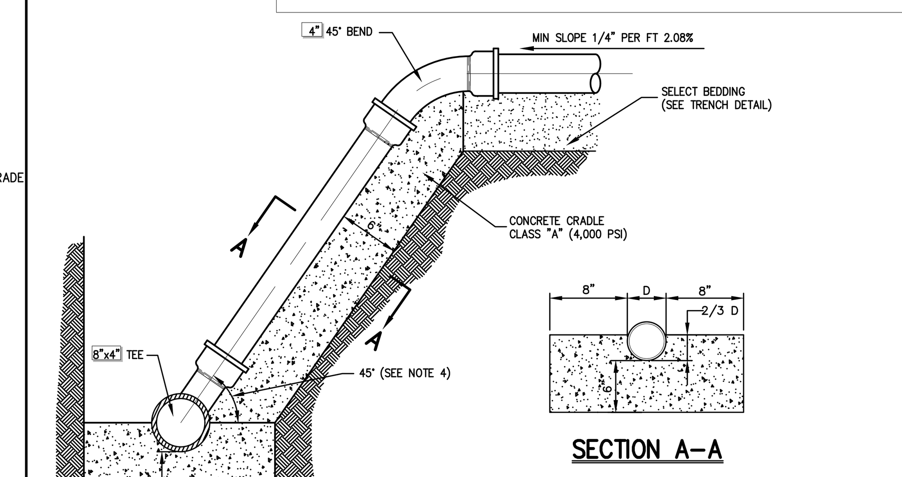
________ DATE: ________

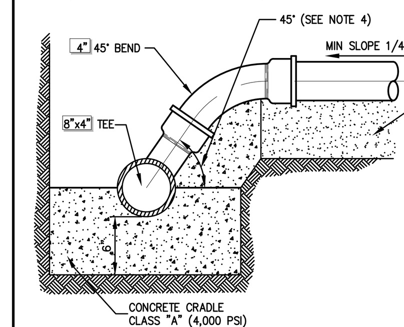
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________

JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER



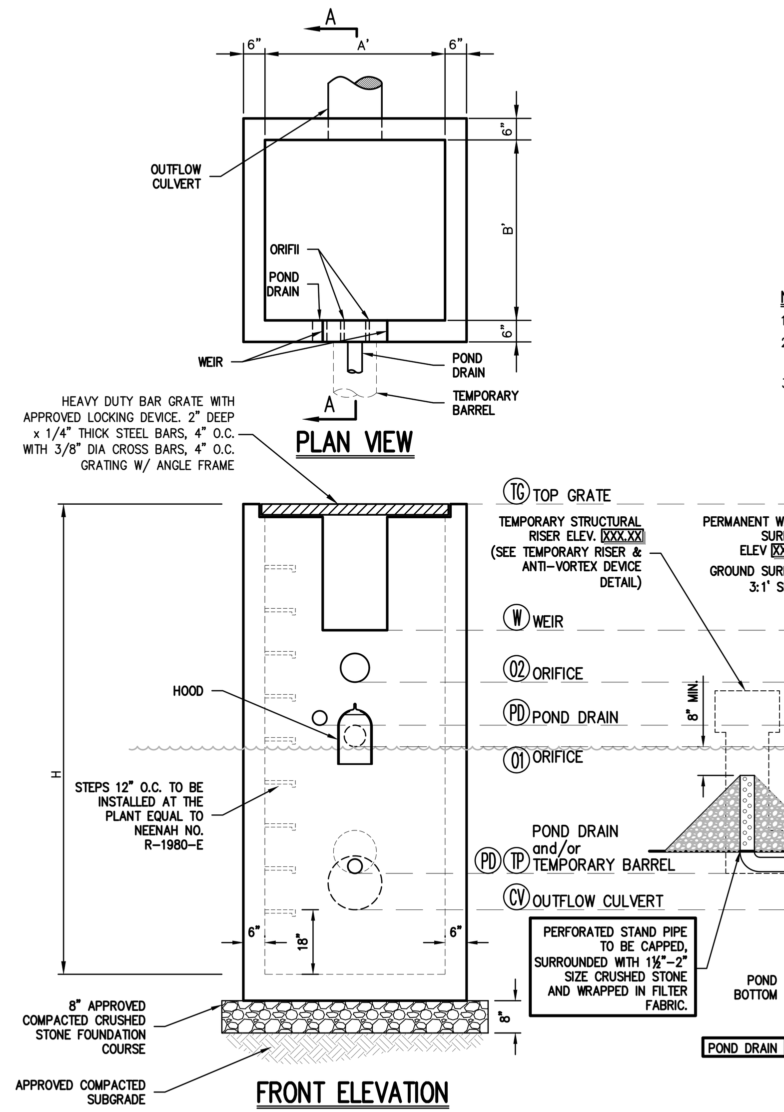


NOTES:

1. ALL SERVICE LINES SHALL HAVE A MINIMUM OF FOUR (4) FEET OF COVER.
2. SERVICE LINE LOCATION, GRADE AND ALIGNMENT SHALL BE AS SHOWN ON DRAWINGS OR AS DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE.
3. WHERE SERVICE LINES ARE TO BE DEAD-ENDED, CONTRACTOR SHALL INSTALL APPROVED WATERTIGHT AND PRESSURE-TIGHT PLUGS.
4. IF MINIMUM COVER CANNOT BE ATTAINED WHILE MAINTAINING MINIMUM SLOPE, THE ANGLE OF CONNECTION MAY BE REDUCED TO 22.5°, IF APPROVED BY THE OWNER'S FIELD REPRESENTATIVE AND GOVERNING BODY WITH JURISDICTION.
5. SANITARY SEWER SERVICE LINE INCLUDING FITTINGS SHALL BE PVC, SDR 35.

SANITARY SEWER SERVICE CONNECTION

17

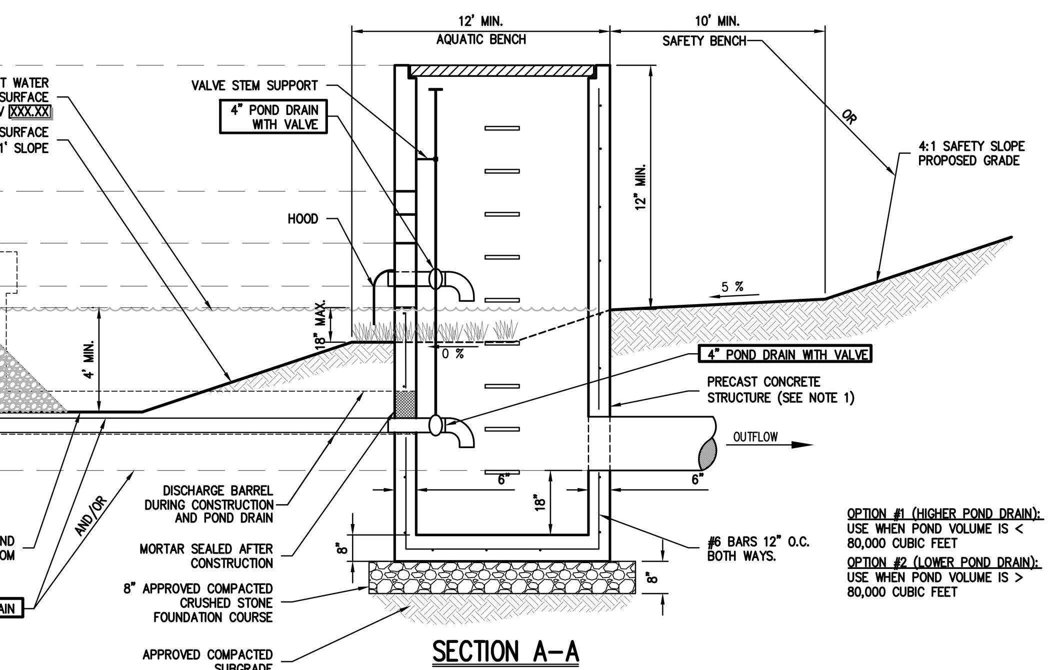


STRUCTURE CHART

BASIN	STRUCTURE	STRUCTURE		(TG)	RECT. WEIR (W)		CIRCULAR ORIFICE (O1)		CIRCULAR ORIFICE (O2)		OUTLET CULVERT (CV)		POND DRAIN (PD)		TEMPORARY (TP)	
No.	No.	SIZE A' x B'	HEIGHT H'	TOP GRATE	LENGTH	ELEV.	DIA.	INVERT ELEV.	DIA.	INVERT ELEV.	DIA.	INVERT ELEV.	DIA.	INVERT ELEV.	DIA.	INVERT ELEV.
1A	OCS 1A	4.00'X4.00'	10.50	100.00	1.5'	100.00	6"	100.00	8"	100.00	15"	100.00	4"	100.00	24"	100.00
1B	OCS 1B	4.00'X4.00'	10.50	100.00	1.5'	100.00	6"	100.00	8"	100.00	15"	100.00	4"	100.00	24"	100.00
1C	OCS 1C	4.00'X4.00'	10.50	100.00	1.5'	100.00	6"	100.00	8"	100.00	15"	100.00	4"	100.00	24"	100.00
1D	OCS 1D	4.00'X4.00'	10.50	100.00	1.5'	100.00	6"	100.00	8"	100.00	15"	100.00	4"	100.00	24"	100.00
1E	OCS 1E	4.00'X4.00'	10.50	100.00	1.5'	100.00	6"	100.00	8"	100.00	15"	100.00	4"	100.00	24"	100.00

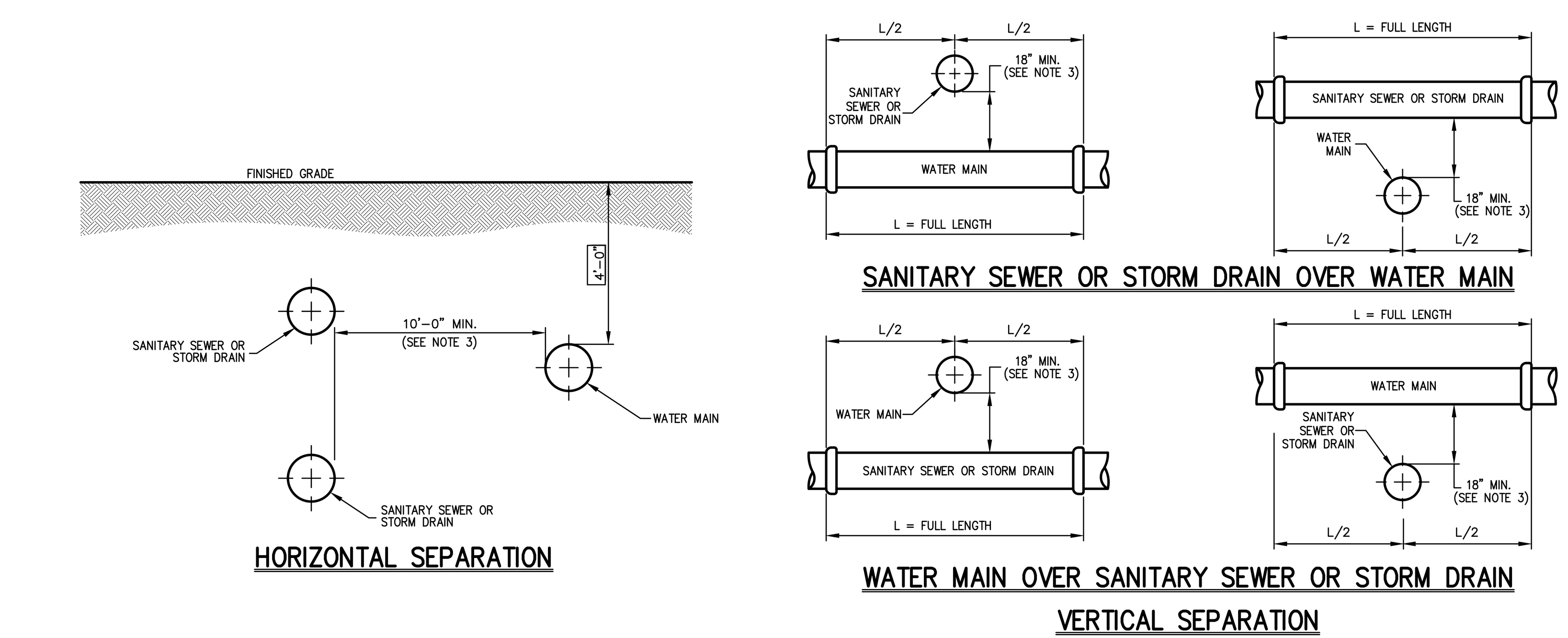
NOTES:

1. PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD.
2. UNDERDRAINS SHALL BE INSTALLED IN BASIN NOS. ____ WHERE AND AS SHOWN IN THE PLANS.
UNDERDRAINS ARE NOT REQUIRED IN BASIN NOS. ____ SEE DETAIL ____.
3. SEE UTILITY NOTES A-4 TO A-7 ON DRAWING C-900.



OUTLET CONTROL STRUCTURE

18



NOTES:

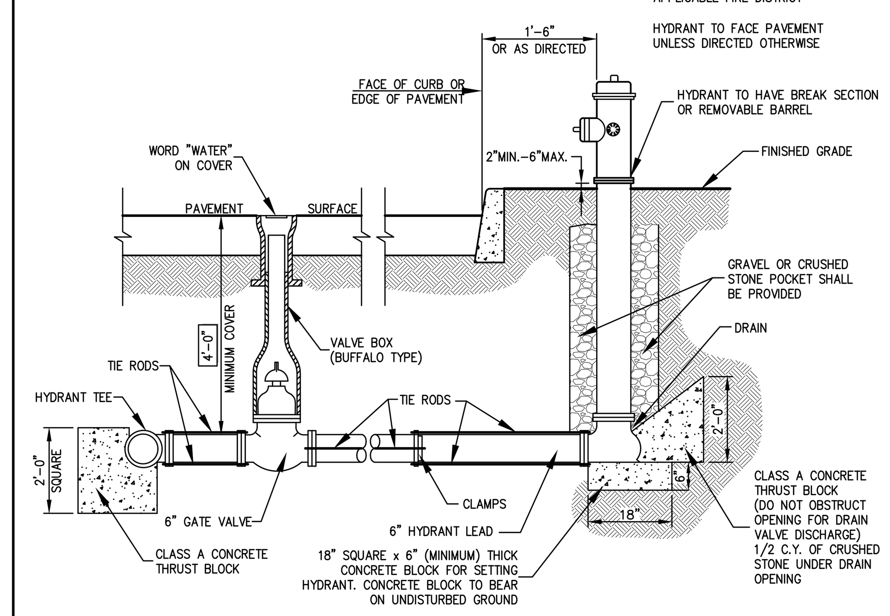
1. NORMAL CONDITIONS:
   A. WHENEVER A WATER MAIN MUST CROSS OVER OR UNDER A SANITARY SEWER OR STORM DRAIN, THE PIPES SHALL BE LAID TO PROVIDE A VERTICAL SEPARATION BETWEEN THEM OF AT LEAST 18 INCHES, AS MEASURED FROM THE BOTTOM OF THE HIGHER PIPE TO THE CROWN OF THE LOWER PIPE.
   B. FULL LENGTH OF WATER PIPE MUST BE CENTERED AT THE POINT OF CROSSING; NO JOINTS WILL BE PERMITTED AT THE POINT OF CROSSING.
2. WATER MAIN CROSSING UNDER SANITARY SEWERS:
   A. VERTICAL SEPARATION OF 18 INCHES MUST BE PROVIDED.
   B. ADEQUATE STRUCTURAL SUPPORT MUST BE PROVIDED FOR THE SANITARY SEWER TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING.
   C. FULL LENGTH OF WATER PIPE MUST BE CENTERED AT THE POINT OF CROSSING; NO JOINTS WILL BE PERMITTED AT THE POINT OF CROSSING.
3. IF DURING CONSTRUCTION IT IS FOUND THAT THE REQUIRED SEPARATION OF WATER MAINS, SANITARY SEWERS, STORM SEWERS AND BUILDING SANITARY SEWERS CANNOT BE MET, THE CONTRACTOR OR HIS AUTHORIZED REPRESENTATIVE SHALL IN WRITING ADVISE JOHN MEYER CONSULTING OF THE SPECIFIC CONDITIONS ENCOUNTERED. APPROVAL OF ALTERNATIVE SEPARATION CRITERIA SHALL BE OBTAINED FROM THE TOWN OF NORTH CASTLE PRIOR TO INSTALLATION.

SEPARATION OF WATER AND SANITARY SEWER/STORM DRAIN LINES

19

FIRE HYDRANT TO BE STANDARD OF:
TOWN OF NORTH CASTLE AND/OR APPLICABLE FIRE DISTRICT

FIRE HYDRANT TO BE PAINTED IN ACCORDANCE WITH THE TOWN OF NORTH CASTLE AND/OR APPLICABLE FIRE DISTRICT

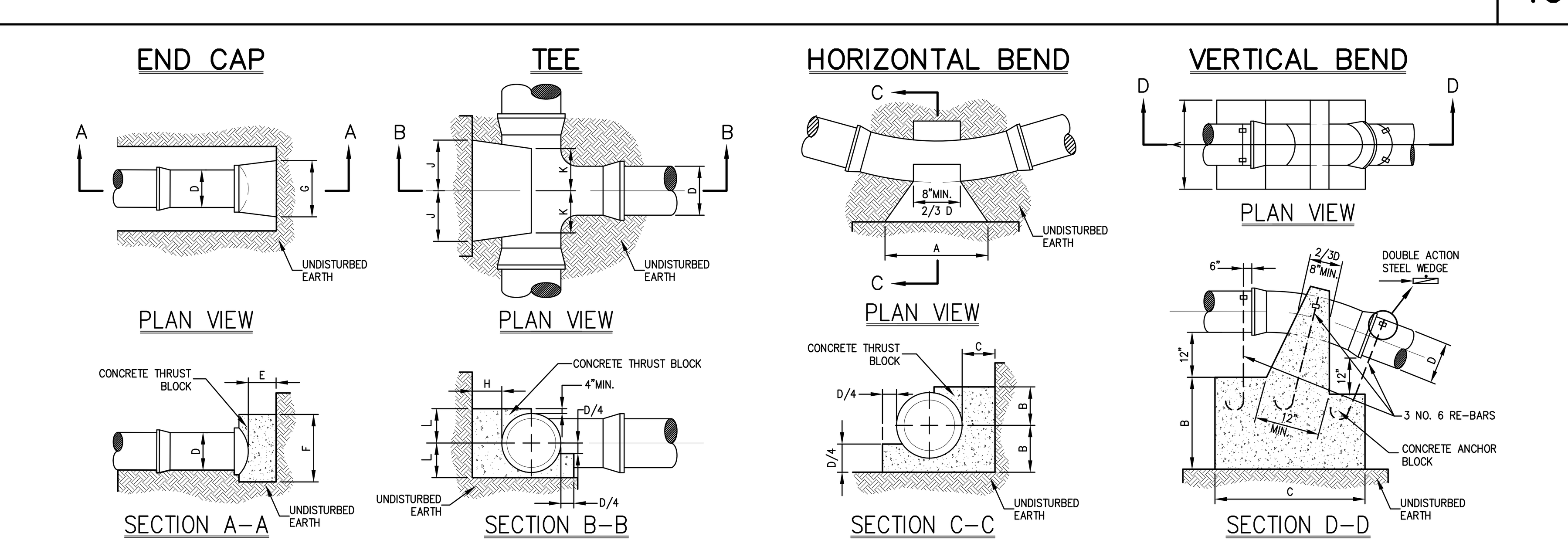


NOTES:

1. ALL CONCRETE THRUST BLOCKS SHALL BEAR ON UNDISTURBED GROUND.
2. RODDING SHALL CONSIST OF TWO 3/4" THREADED STEEL TIE RODS WITH NUTS AND WASHERS COMPLETE WITH ALL NECESSARY AND REQUIRED CLAMPS, CAREFULLY AND THOROUGHLY COVERED WITH ASPHALT OR OTHER ACCEPTABLE CORROSIVE RETARDING MATERIAL. IN GENERAL, THE METHOD AND TYPES OF MATERIAL REQUIRED IN THE INSTALLATION OF CLAMPS AND THE RODS SHALL BE IN ACCORDANCE WITH THE LATEST NATIONAL FIRE PROTECTION STANDARDS.
3. HYDRANT DRAINS SHALL NOT BE CONNECTED TO OR WITHIN TEN (10) FEET OF SANITARY SEWERS OR STORM DRAINS.
4. IF GROUND WATER IS FOUND WITHIN SEVEN (7) FEET OF THE SURFACE, HYDRANT DRAINS ARE TO BE PLUGGED. WHEN DRAINS ARE TO BE PLUGGED, THE BARRELS MUST BE PUMPED DRY AFTER USE DURING FREEZING WEATHER. SUCH HYDRANTS SHALL BE IDENTIFIED WITH A VISIBLE MARKING AS APPROVED BY THE WATER AUTHORITY.

HYDRANT INSTALLATION

20



END CAP CHART

D	4"	6"	8"	10"	12"
E	6"	6"	8"	8"	10"
F	12"	12"	1'-4"	1'-8"	2'-0"
G	1'-5"	1'-5"	2'-0"	2'-5"	3'-0"

TEE CHART

D	4"	6"	8"	10"	12"
H	6"	7"	9"	10"	12"
L	8"	8"	10"	12"	1'-3"
J	7"	7"	9"	12"	1'-2"
K	6"	6"	8"	8"	8"

HORIZONTAL BEND CHART

BEND (DEGREES)		DIAMETER (D) 4"	6"	8"	10"	12"
1/32 (11¼°)	A	8"	8"	8"	10"	12"
	B	7"	7"	8"	9"	10"
	C	7"	7"	7"	8"	8"
1/16 (22½°)	A	9"	9"	12"	1'-6"	1'-9"
	B	7"	7"	8"	9"	10"
	C	8"	8"	9"	10"	11"
1/8 (45°)	A	1'-3"	1'-3"	1'-8"	2'-1"	2'-6"
	B	7"	7"	8"	9"	11"
	C	8"	8"	9"	10"	11"
1/4 (90°)	A	2'-0"	2'-0"	2'-6"	3'-0"	3'-6"
	B	7"	7"	9"	12"	1'-3"
	C	2'-0"	2'-0"	1'-9"	1'-8"	1'-7"

VERTICAL BEND CHART

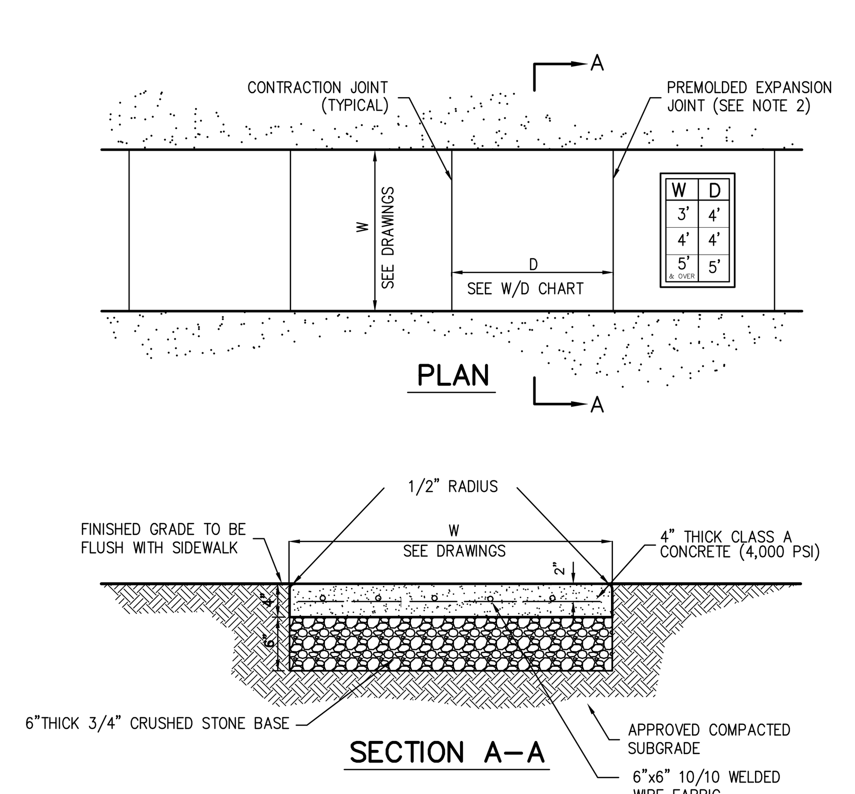
BEND (DEGREES)		DIAMETER (D) 4"	6"	8"	10"	12"	16"
1/32 (11¼°)	A	1'-6"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"
	B	1'-3"	1'-3"	1'-9"	1'-3"	2'-0"	2'-0"
	C	2'-0"	2'-0"	2'-6"	2'-9"	3'-0"	4'-0"
1/16 (22½°)	A	2'-0"	2'-0"	3'-4"	3'-8"	4'-0"	4'-4"
	B	1'-9"	1'-9"	2'-3"	2'-6"	2'-6"	2'-6"
	C	2'-6"	2'-6"	2'-8"	4'-0"	4'-0"	5'-6"
1/8 (45°)	A	2'-6"	2'-6"	3'-0"	4'-0"	4'-6"	5'-2"
	B	2'-6"	2'-6"	2'-9"	3'-0"	3'-6"	4'-0"
	C	3'-0"	3'-0"	4'-0"	4'-6"	4'-9"	6'-6"

NOTES:

1. ALL CONCRETE TO BE CLASS A (4,000 PSI).
2. ALL DIMENSIONS ARE MINIMUMS; ALL ANCHOR AND THRUST BLOCKS SHALL BEAR ON UNDISTURBED EARTH.
3. IN ALL CASES SHOWN, MEASUREMENT "D" REFERS TO THE INSIDE PIPE DIAMETER.
4. ANCHOR AND THRUST BLOCK DIMENSIONS SHOWN ARE MINIMUM FOR 100 PSI WATER PRESSURE AND SOIL RESISTANCE OF 2 KIPS PER SQ FT. CONTRACTOR SHALL ADJUST FOR OTHER CONDITIONS AND SUBMIT FOR APPROVAL.
5. IF THE OWNER OF THE WATER SYSTEM REQUIRES A METHOD THAT RESTRAINS INDIVIDUAL JOINTS, EACH JOINT THAT FALLS WITHIN THE MINIMUM RESTRAINED LENGTH, MEASURED FROM THE CENTER OF THE FITTING, AS SHOWN ON THESE SHEETS SHALL BE RESTRAINED, AND SHALL WITHSTAND THE MAXIMUM PRESSURE APPLIED TO THE SYSTEM.
6. CLASS A CONCRETE SHALL NOT BE PLACED UNDER WATER. THE CONTRACTOR SHALL DEWATER THE EXCAVATION OR PLACE TYPE G CONCRETE USING APPROPRIATE UNDERWATER PLACEMENT TECHNIQUES.
7. CONCRETE FOR THRUST BLOCKS SHALL NOT BE ALLOWED TO COVER OR INTERFERE WITH JOINT OR RESTRAINT HARDWARE, PLASTIC SHEETING OR BUILDING FELT MAY BE PLACED OVER PIPE OR FITTINGS TO PREVENT CONCRETE FROM ADHERING TO SURFACES.
8. FOR BENDS, BEARING AREA SHALL BE PARALLEL TO THE EDGE OF THE FITTING AT THE FITTING MIDPOINT.
9. FOR TEES, BEARING AREA SHALL BE PERPENDICULAR TO THE BRANCH (SINGLE LEG) AXIS.
10. FOR REDUCERS, BEARING AREA SHALL BE PERPENDICULAR TO THE FITTING AXIS. THE MINIMUM THICKNESS ALONG THE FITTING AXIS SHALL BE 1'-0" OR THE LENGTH BETWEEN THE BELLS, WHICHEVER IS SMALLER.
11. THRUST RESTRAINTS FOR SIZES OR FITTINGS NOT SHOWN ON THESE SHEETS WILL BE DESIGNED ON A CASE BY CASE BASIS, AND WILL BE SHOWN IN THE CONTRACT DOCUMENTS.

ANCHOR AND THRUST BLOCKS

21



NOTES:

1. SIDEWALK CROSS SLOPE SHALL BE 1% MIN. TO 2% MAX.
2. PROVIDE 1/2" PREMOLDED EXPANSION JOINTS AT 20' INTERVALS UNLESS OTHERWISE DIRECTED.
3. REINFORCING SHALL NOT EXTEND THROUGH EXPANSION JOINTS.
4. SIDEWALK SHALL HAVE LIGHT BROOM FINISH.

CONCRETE SIDEWALK

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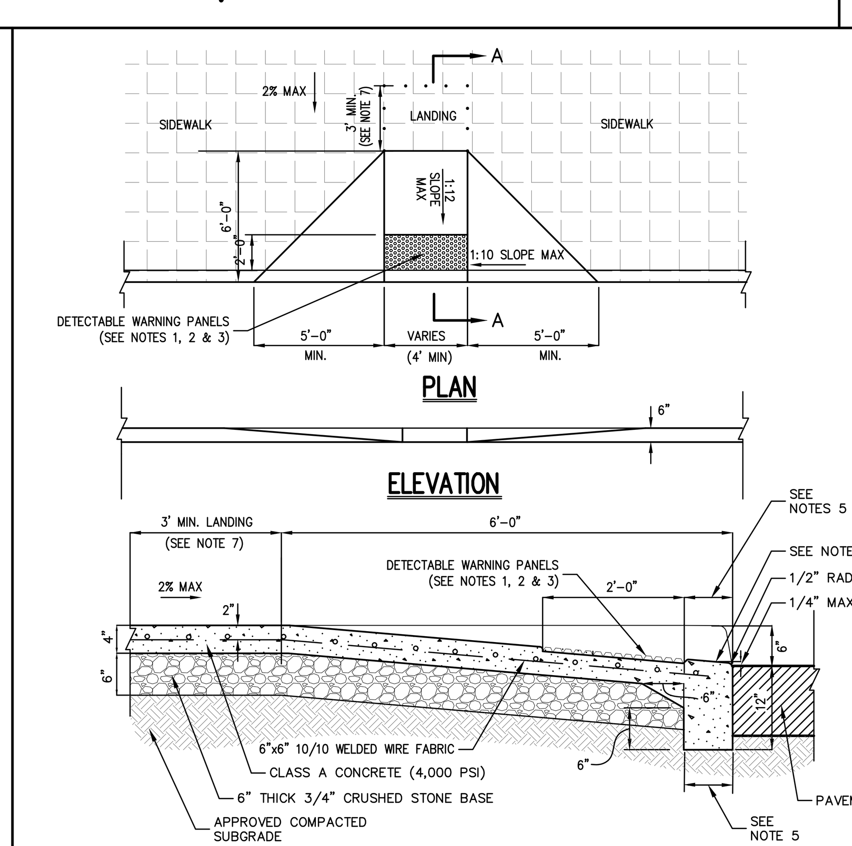
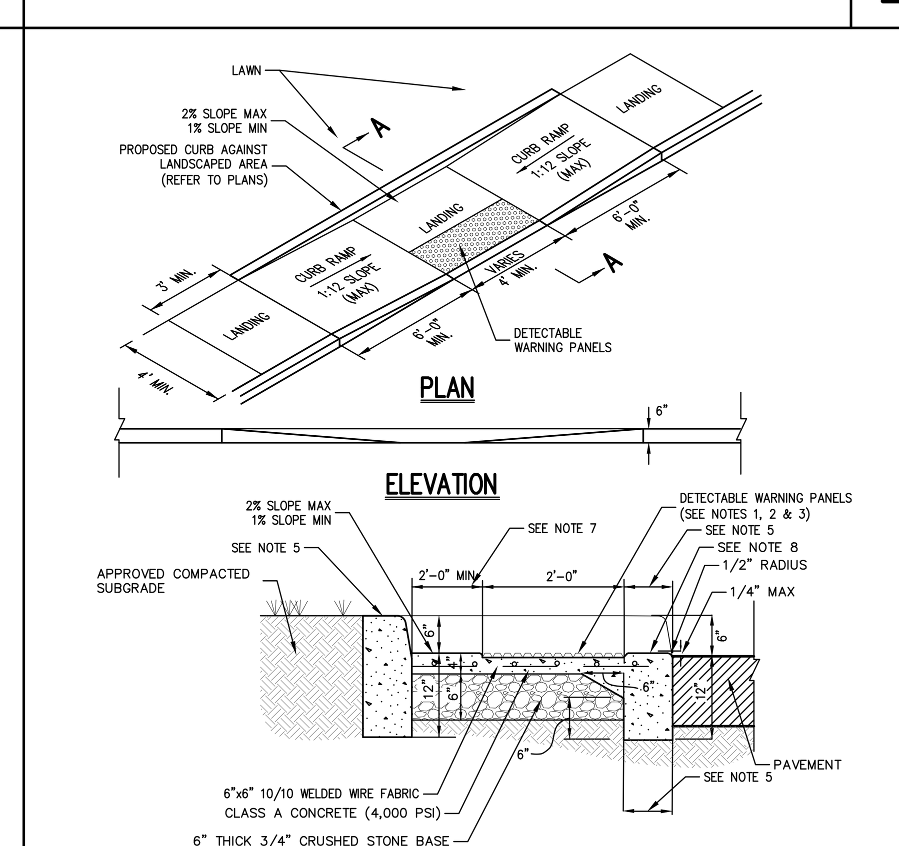


NOTES:

1. RAMPS SHALL HAVE CAST IN PLACE DETECTABLE/TACTILE WARNING SURFACE TILES AS MANUFACTURED BY ARMOR-TILE (OR APPROVED EQUAL) AND SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER TO CENTER SPACING OF NOMINAL 2.35 INCHES.
2. DETECTABLE WARNING PANELS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT IN ACCORDANCE WITH SECTION 4.29.2, FEDERAL REGISTER, VOLUME 56, NO. 144, RULES AND REGULATIONS, APPENDIX A TO PART 36 – STANDARDS FOR ACCESSIBLE DESIGN (AMERICANS WITH DISABILITIES ACT), LATEST EDITION.
3. 24" WIDTH OF PANELS TO BE INSTALLED DIRECTLY BEHIND CURB AND IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE AND SEE CURB DETAIL FOR DIMENSIONS.
6. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
7. WHEN LANDING OF RAMP ADJOINS A DOORWAY THEN THE MINIMUM DOORWAY MANEUVERING AREA SHALL BE AT LEAST THE WIDTH OF THE DOORWAY AND SHALL HAVE A MINIMUM DEPTH OF:
   MANUAL SWING DOORS = 60" MIN.
   FULL POWERED AUTOMATIC SLIDING DOORS = 48" MIN.
8. CONTRACTOR TO ENSURE TOP OF CURB MATCHES SLOPE OF RAMP.

DROP CURB & RAMP (TYPE A)
(WITH DETECTABLE WARNING)

23



NOTES:

1. RAMPS SHALL HAVE CAST IN PLACE DETECTABLE/TACTILE WARNING SURFACE TILES AS MANUFACTURED BY ARMOR-TILE (OR APPROVED EQUAL) AND SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER TO CENTER SPACING OF NOMINAL 2.35 INCHES.
2. DETECTABLE WARNING PANELS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT IN ACCORDANCE WITH SECTION 4.29.2, FEDERAL REGISTER, VOLUME 56, NO. 144, RULES AND REGULATIONS, APPENDIX A TO PART 36 – STANDARDS FOR ACCESSIBLE DESIGN (AMERICANS WITH DISABILITIES ACT), LATEST EDITION.
3. 24" WIDTH OF PANELS TO BE INSTALLED DIRECTLY BEHIND CURB AND IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE AND SEE CURB DETAIL FOR DIMENSIONS.
6. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
7. WHEN LANDING OF RAMP ADJOINS A DOORWAY THEN THE MINIMUM DOORWAY MANEUVERING AREA SHALL BE AT LEAST THE WIDTH OF THE DOORWAY AND SHALL HAVE A MINIMUM DEPTH OF:
   MANUAL SWING DOORS = 60" MIN.
   FULL POWERED AUTOMATIC SLIDING DOORS = 48" MIN.
8. CONTRACTOR TO ENSURE TOP OF CURB MATCHES SLOPE OF RAMP.

DROP CURB & RAMP (TYPE B)
(WITH DETECTABLE WARNING)

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No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

APPLICANT/OWNER:
SUMMIT CLUB PARTNERS, LLC
568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

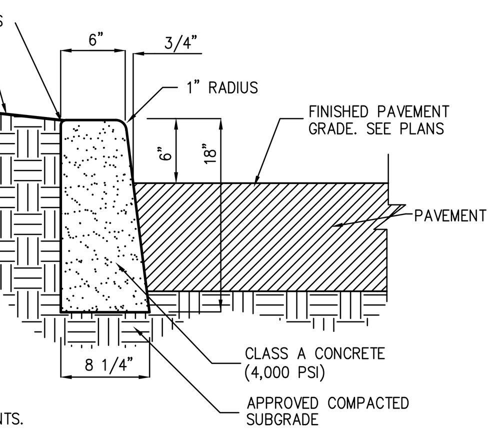
JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

JMC

CONSTRUCTION DETAILS
THE SUMMIT CLUB AT ARMONK
(RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

STATE OF NEW YORK
DAVID P. LOMBARDI
071001
LICENSED PROFESSIONAL ENGINEER

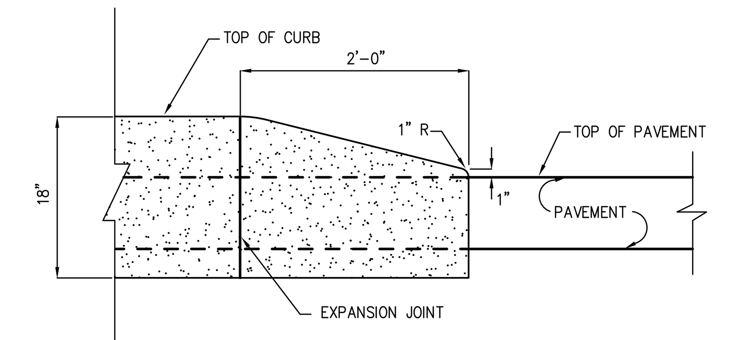
Drawn: NC	Approved: AG
Scale: NOT TO SCALE	
Date: 11/23/2020	
Project No: 20101	
20101-DETAILS	DET-2
Drawing No: C-901	



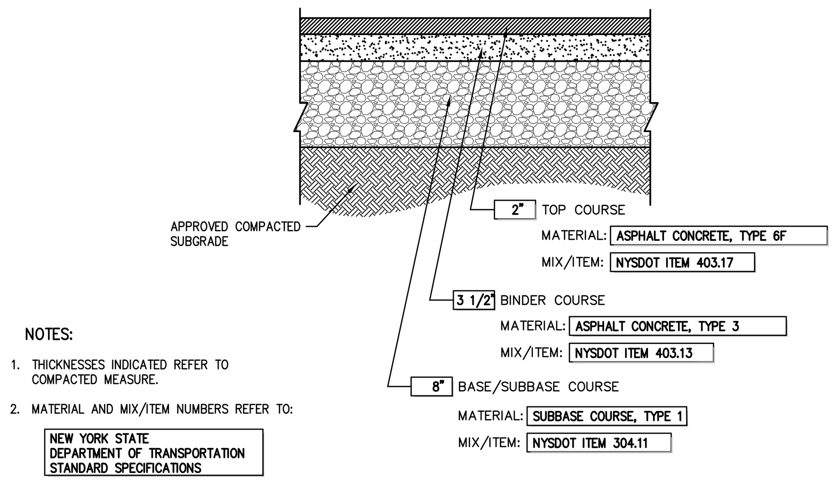
NOTES:

1. INSTALL 1/2" PREMOLDED BITUMINOUS EXPANSION JOINT EVER 20 FEET.
2. UNLESS DIRECTED OTHERWISE, EXPANSION JOINTS SHALL ALSO BE INSTALLED AT THE PC AND PT OF ALL RADIUS CURB.
3. EACH EXPANSION JOINT SHALL BE LEFT EXPOSED AND NOT COVERED WITH A SKIM COAT OF CONCRETE.
4. INSTALL CONSTRUCTION JOINTS MID-WAY BETWEEN EXPANSION JOINTS SO THAT LENGTH OF CURB SEGMENTS WILL BE TEN (10) FEET.
5. LENGTH OF CURB SEGMENTS AT CLOSURES MAY BE VARIED BUT SHALL NOT BE LESS THAN FOUR (4) FEET.
6. WHEN INSTALLED ADJACENT TO SIDEWALK OR CONCRETE PAVEMENT, MATCH EXPANSION JOINTS.

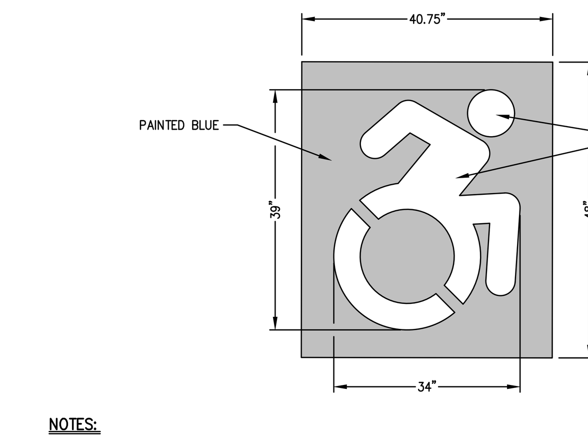
CAST-IN-PLACE CONCRETE CURB 25



CONCRETE CURB ENDING 26



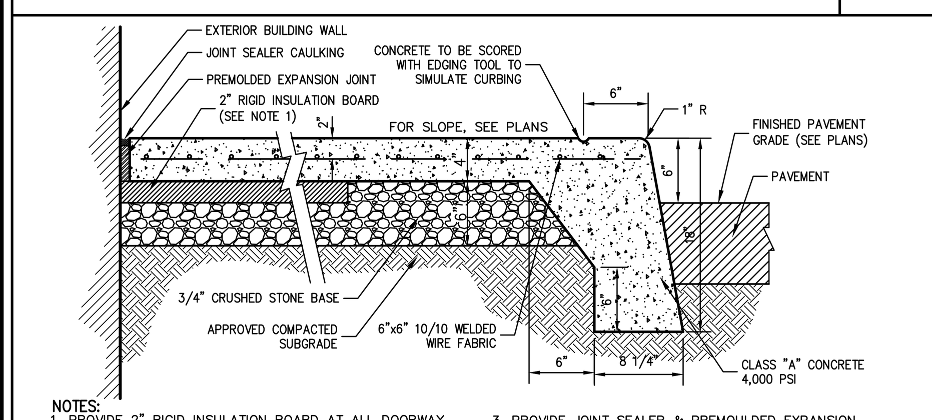
SITE PAVEMENT (HEAVY DUTY) 27



NOTES:

1. SYMBOL SHALL BE THERMOPLASTIC TYPE OR PAINTED WITH STENCIL.

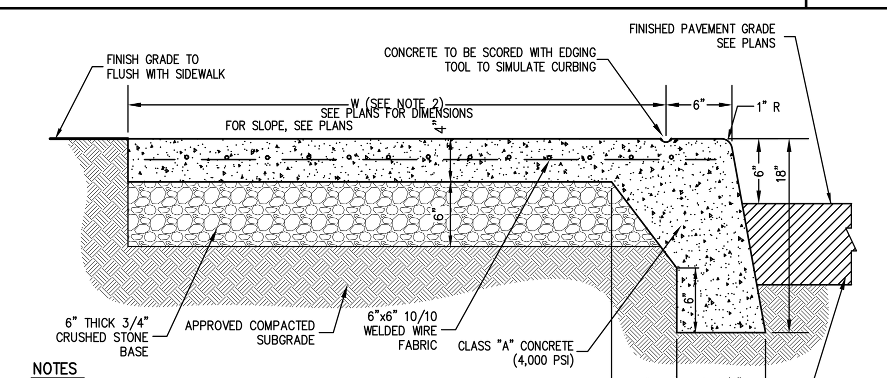
PAINTED ACCESSIBLE SYMBOL 28



NOTES:

1. PROVIDE 2" RIGID INSULATION BOARD AT ALL DOORWAY OPENINGS AND EXTEND 8' MIN. IN ALL DIRECTIONS OR TO CONSTRUCTION/CONTRACTION JOINT, WHICHEVER IS GREATER.
2. JOINT SEALER CAULKING SHALL BE PSI-641 LOW MODULUS SILICONE SEALANT, BY POLYMERIC SYSTEMS INC. OR APPROVED EQUAL. PREMOULDED EXPANSION JOINT SHALL BE FLEXCELL OR APPROVED EQUAL.
3. PROVIDE JOINT SEALER & PREMOULDED EXPANSION JOINT AT ALL BLDG. WALLS, CONSTRUCTION JOINTS AND OTHER FIXED OBJECTS (HYDRANTS, LIGHT POLES, ETC.)
4. SIDEWALK SHALL HAVE LIGHT BROOM FINISH
5. SIDEWALK CROSS SLOPE SHALL BE 1% MIN. 2% MAX.
6. FOR SIDEWALK WIDTH SEE PLAN. SIDEWALK SHALL HAVE A 3' MIN. WIDTH CLEAR FROM BACK OF CURBING.

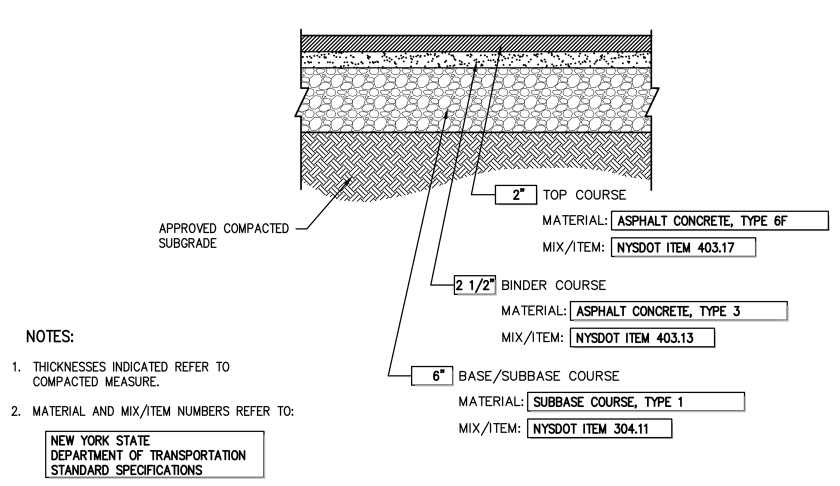
BUILDING PERIMETER MONOLITHIC CURB & SIDEWALK 29



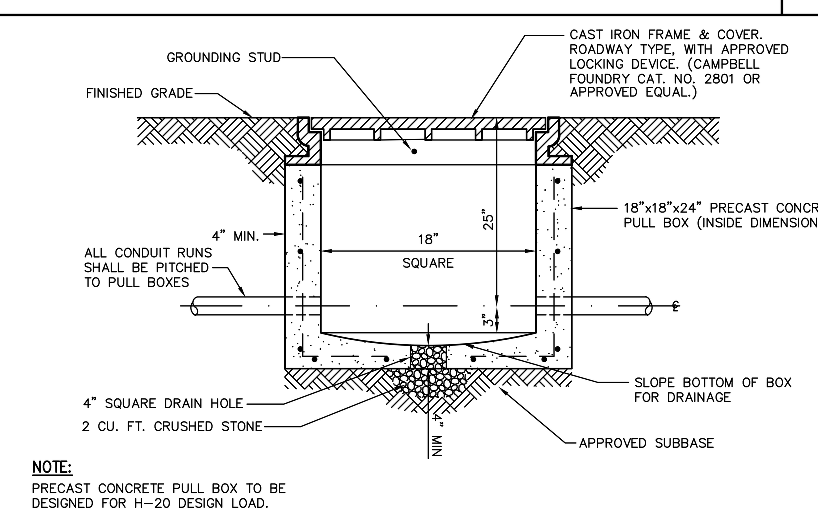
NOTES

1. SIDEWALK CROSS SLOPE SHALL BE 1% MIN. TO 2% MAX.
2. FOR SIDEWALK WIDTH SEE PLAN. SIDEWALK SHALL HAVE A 3' MIN. WIDTH CLEAR FROM BACK OF CURBING.
3. PROVIDE JOINT SEALER & PREMOULDED EXPANSION JOINT AT ALL BLDG. WALLS, CONSTRUCTION JOINTS AND OTHER FIXED OBJECTS (HYDRANTS, LIGHT POLES, ETC.)
4. SIDEWALK SHALL HAVE LIGHT BROOM FINISH.
5. PROVIDE 1/2" PREMOULDED EXPANSION JOINTS AT 20 FOOT INTERVALS UNLESS OTHERWISE DIRECTED.
6. REINFORCEMENT SHALL NOT EXTEND THROUGH EXPANSION JOINTS.

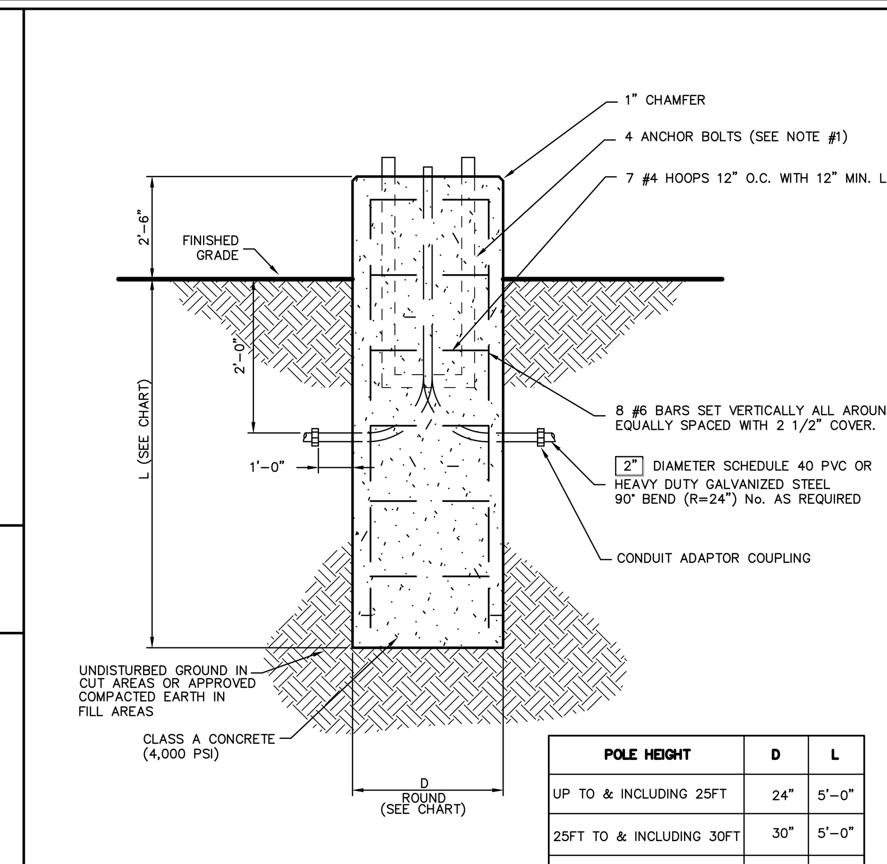
MONOLITHIC CONCRETE CURB AND SIDEWALK 30



SITE PAVEMENT (LIGHT DUTY) 31



ELECTRICAL PULL BOX 32

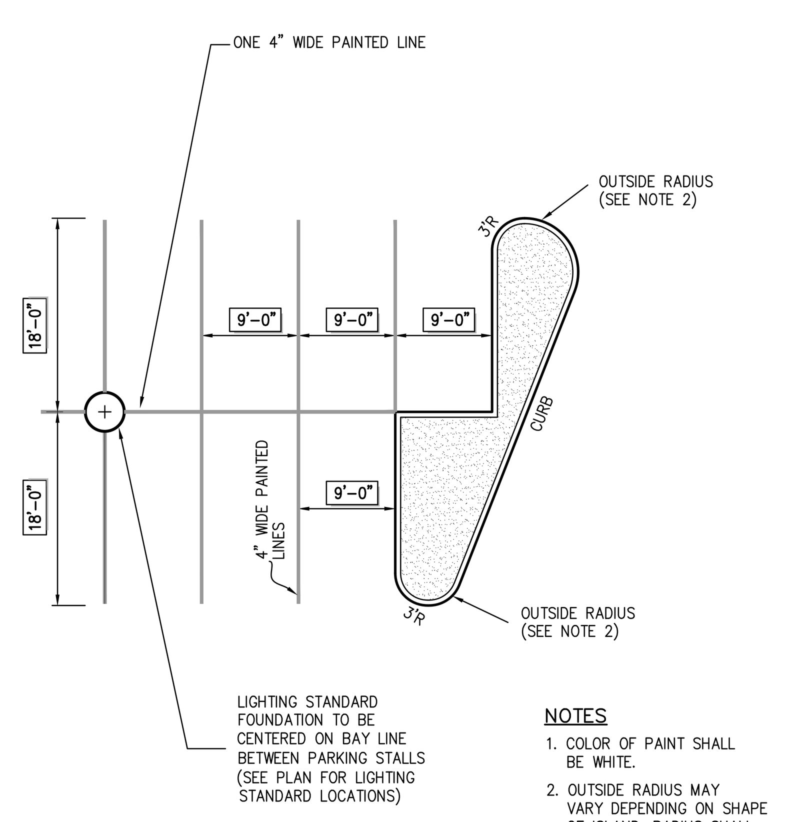


POLE HEIGHT	D	L
UP TO & INCLUDING 25FT	24"	5'-0"
25FT TO & INCLUDING 30FT	30"	5'-0"
30FT TO & INCLUDING 40FT	30"	6'-6"

NOTES:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHECK AND VERIFY ALL ANCHOR BOLT DIMENSIONS (SIZE, BOLT CIRCLE, ETC.) WITH THE CONTRACTOR WHO WILL BE INSTALLING THE LIGHTING STANDARD PRIOR TO INSTALLATION OF THE FOUNDATIONS.
2. CHAMFER EXPOSED EDGES OF ALL FOUNDATIONS.
3. PROVIDE INSULATED GROUNDING BUSHING ON EXPOSED ENDS (IN BASE OF POLE) OF ALL GALVANIZED STEEL BENDS.
4. POLES AND LUMINAIRES WILL BE FURNISHED AND INSTALLED BY OTHERS.

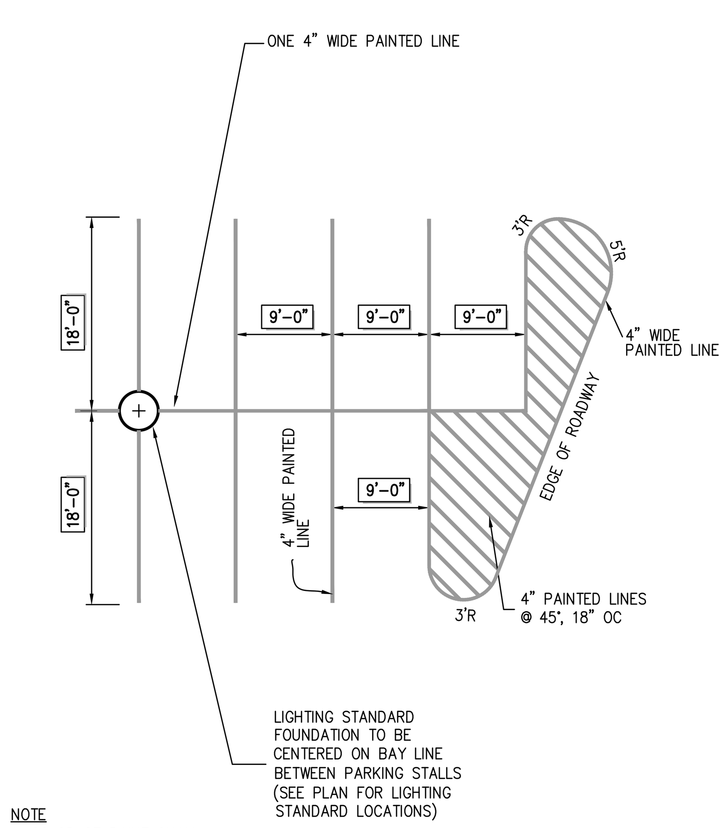
LIGHTING STANDARD FOUNDATION (ROUND) 33



NOTES

1. COLOR OF PAINT SHALL BE WHITE.
2. OUTSIDE RADIUS MAY VARY DEPENDING ON SHAPE OF ISLAND. RADIUS SHALL BE AS SHOWN ON LAYOUT PLAN.

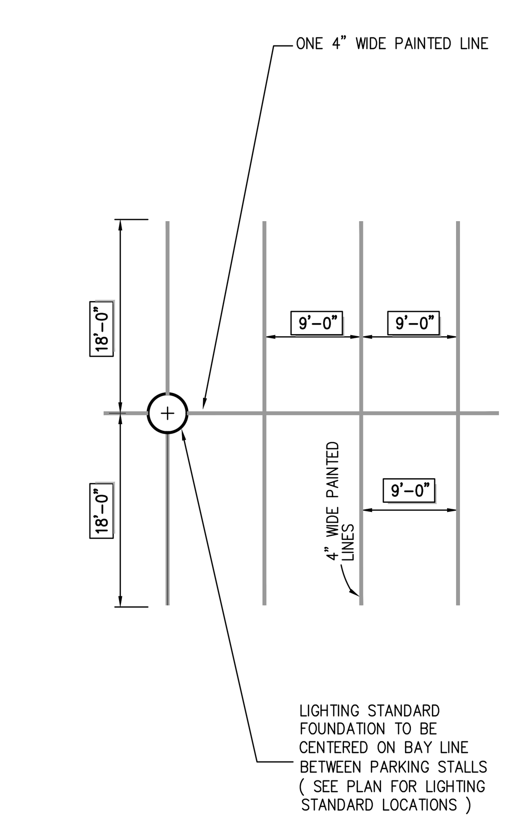
90° PARKING (SINGLE STRIPING-CURBED END) 34



NOTE

1. COLOR OF PAINT SHALL BE WHITE.

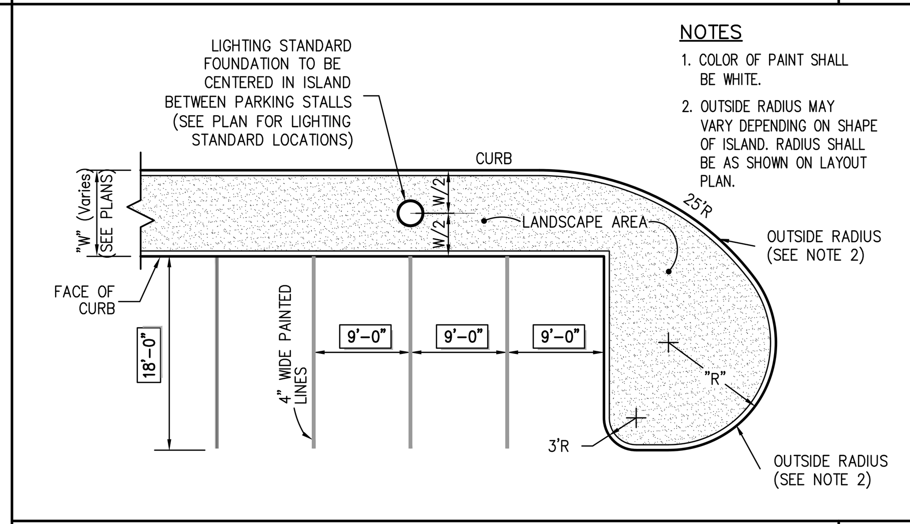
90° PARKING (SINGLE STRIPING-PAINTED END) 35



NOTE

1. COLOR OF PAINT SHALL BE WHITE.

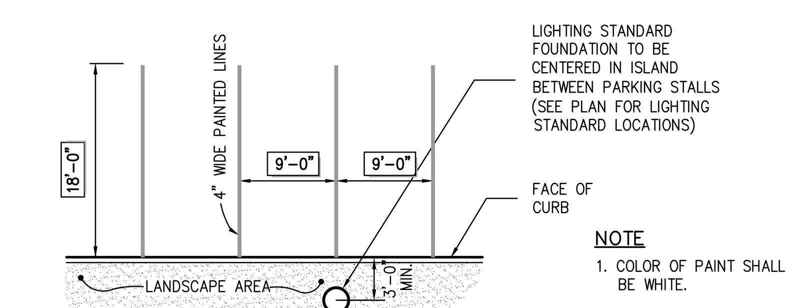
90° PARKING (SINGLE STRIPING – W/O CURBED ISLAND) 36



NOTES

1. COLOR OF PAINT SHALL BE WHITE.
2. OUTSIDE RADIUS MAY VARY DEPENDING ON SHAPE OF ISLAND. RADIUS SHALL BE AS SHOWN ON LAYOUT PLAN.

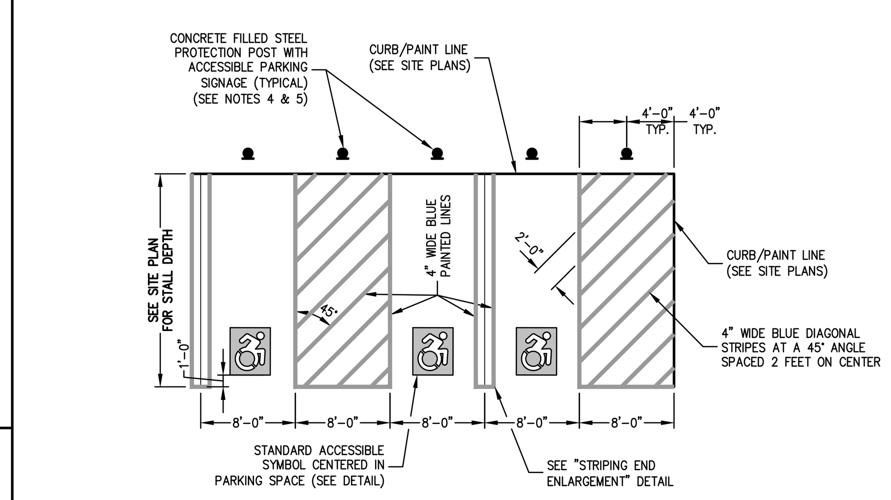
90° PARKING (SINGLE STRIPING – CURBED ISLAND AND CURBED END) 37



NOTE

1. COLOR OF PAINT SHALL BE WHITE.

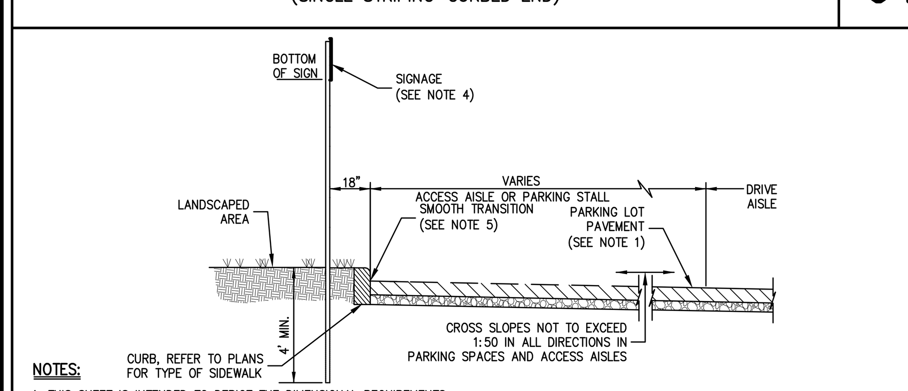
90° PARKING (SINGLE STRIPING – CURBED PERIMETER) 38



NOTES:

1. WIDTH MEASUREMENTS OF ACCESSIBLE PARKING SPACES AND ACCESS AISLES (CROSS HATCHED AREA ADJACENT TO ACCESSIBLE PARKING SPACE) SHALL BE MADE FROM THE CENTERLINE OF THE MARKINGS.
2. SLOPES IN ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0% IN ANY DIRECTION MEASURED WITH A 2 FOOT SMART LEVEL AS SPECIFIED IN "DIMENSIONAL TOLERANCES IN CONSTRUCTION AND FOR SURFACE ACCESSIBILITY", BY UNITED STATES ACCESS BOARD, LATEST EDITION.
3. GROUND SURFACES FOR ACCESSIBLE PARKING SPACES AND ACCESS AISLES SERVING THEM SHALL BE STABLE, FIRM AND SLIP RESISTANT. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE ACCESSIBLE PARKING SPACES THEY SERVE.
4. SEE SITE PLANS/SIGN TABLE FOR SIGN DESIGNATIONS, LOCATIONS AND SPECIFICATIONS.
5. SEE ACCESSIBLE PARKING SIGN DETAIL FOR CONCRETE FILLED STEEL PROTECTION POST WITH ACCESSIBLE PARKING SIGNAGE AS APPLICABLE.

ACCESSIBLE PARKING (DOUBLE STRIPING – NEW YORK) 39



TYPICAL SECTION

NOTES:

1. THIS SHEET IS INTENDED TO DEPICT THE DIMENSIONAL REQUIREMENTS OF TYPICAL ACCESSIBLE PARKING SPACES. THE SIDEWALK, CURBING, AND PAVEMENT MATERIAL SHALL BE AS SPECIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS.
2. LOCATION – PARKING SPACES FOR USE BY PERSONS WITH DISABILITIES SHALL BE IN THE SPACES CLOSEST TO THE NEAREST ACCESSIBLE BUILDING OR FACILITY ENTRANCE ON AN ACCESSIBLE ROUTE.
3. SURFACE SLOPES – SLOPES AT ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ADJOINING WALKWAYS SHALL NOT EXCEED 1:50 IN ANY DIRECTION.
4. SIGNAGE – EACH ACCESSIBLE PARKING SPACE SHALL BE MARKED BY PERMANENTLY INSTALLED ABOVE GROUND SIGNS WHICH DISPLAY THE INTERNATIONAL SYMBOL OF ACCESS. EACH ACCESS AISLE SHALL BE MARKED BY PERMANENTLY INSTALLED ABOVE GROUND SIGNS INDICATING THAT PARKING IS NOT PERMITTED IN THE AISLE. SIGNS SHALL NOT BLOCK THE ACCESSIBLE CLEAR WIDTH OF ADJACENT WALKWAYS, SIGNS LOCATED WHERE THEY MAY BE HIT BY VEHICLES BEING PARKED SHALL BE INSTALLED AS SHOWN IN THE PROTECTION POST BASE DETAIL. THE BOTTOMS OF THE SIGNS LOCATED ON POST INSTALLED IN PAVED AREAS SHALL BE AT LEAST 7' ABOVE THE WALKWAY SURFACE. THE BOTTOMS OF SIGNS LOCATED IN UNPAVED AREAS SHALL BE 7' ABOVE THE ADJACENT PAVEMENT SURFACE.
5. A SMOOTH, FLUSH TRANSITION MUST BE PROVIDED BETWEEN ALL PEDESTRIAN WALKWAYS AND THE ACCESSIBLE PARKING SPACES AND AISLES.
6. VEHICLE SIDE FACE OF CONCRETE BUMPER BLOCKS SHALL BE SET 2' BACK FROM EDGE OF PARKING STALL. CONCRETE BLOCKS SHALL NOT BE INSTALLED WITHIN ACCESS AISLES.

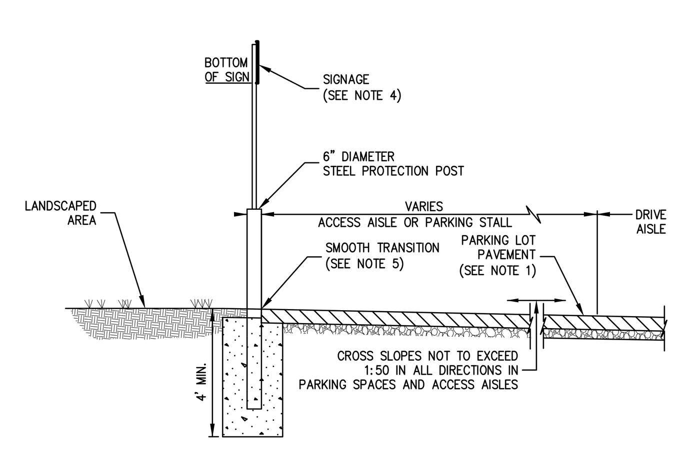
APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________________ DATE: ________________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________________ DATE: ________________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

TYPICAL ACCESSIBLE PARKING STALL AND AISLE (TYPE A) 40



TYPICAL SECTION

NOTES:

1. THIS SHEET IS INTENDED TO DEPICT THE DIMENSIONAL REQUIREMENTS OF TYPICAL ACCESSIBLE PARKING SPACES. THE SIDEWALK, CURBING, AND PAVEMENT MATERIAL SHALL BE AS SPECIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS.
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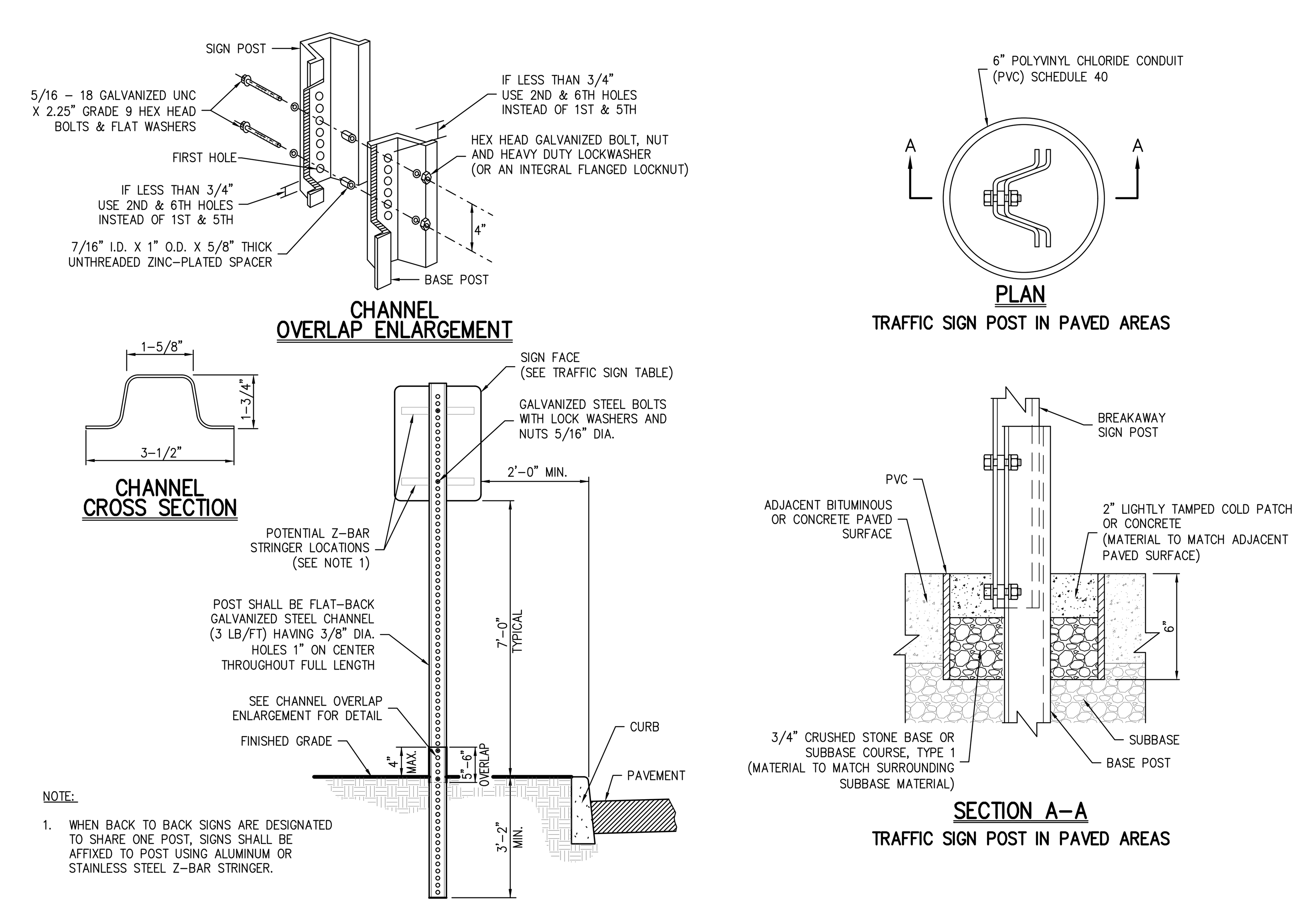
4. SIGNAGE – EACH ACCESSIBLE PARKING SPACE SHALL BE MARKED BY PERMANENTLY INSTALLED ABOVE GROUND SIGNS WHICH DISPLAY THE INTERNATIONAL SYMBOL OF ACCESS. EACH ACCESS AISLE SHALL BE MARKED BY PERMANENTLY INSTALLED ABOVE GROUND SIGNS INDICATING THAT PARKING IS NOT PERMITTED IN THE AISLE. SIGNS SHALL NOT BLOCK THE ACCESSIBLE CLEAR WIDTH OF ADJACENT WALKWAYS, SIGNS LOCATED WHERE THEY MAY BE HIT BY VEHICLES BEING PARKED SHALL BE INSTALLED AS SHOWN IN THE PROTECTION POST BASE DETAIL. THE BOTTOMS OF THE SIGNS LOCATED ON POST INSTALLED IN PAVED AREAS SHALL BE AT LEAST 7' ABOVE THE WALKWAY SURFACE. THE BOTTOMS OF SIGNS LOCATED IN UNPAVED AREAS SHALL BE 7' ABOVE THE ADJACENT PAVEMENT SURFACE.
5. A SMOOTH, FLUSH TRANSITION MUST BE PROVIDED BETWEEN ALL PEDESTRIAN WALKWAYS AND THE ACCESSIBLE PARKING SPACES AND AISLES.

TYPICAL ACCESSIBLE PARKING STALL AND AISLE (TYPE C) 41



CHANNEL OVERLAP ENLARGEMENT

CHANNEL CROSS SECTION

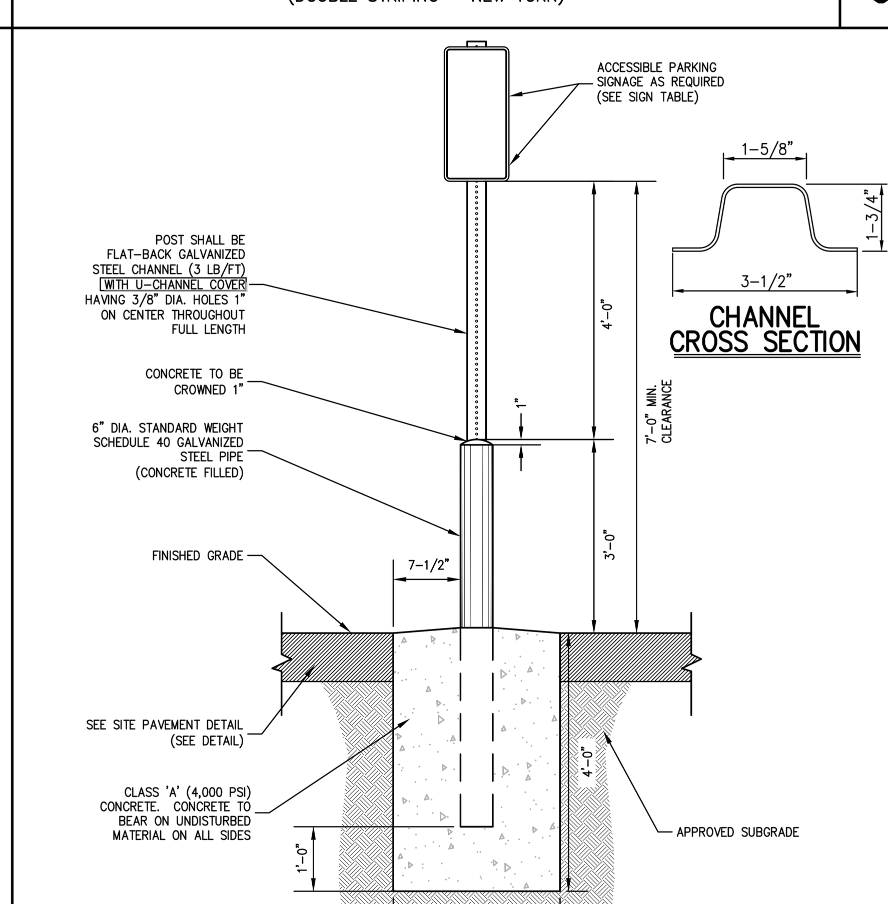
PLAN
TRAFFIC SIGN POST IN PAVED AREAS

SECTION A–A
TRAFFIC SIGN POST IN PAVED AREAS

NOTE:

1. WHEN BACK TO BACK SIGNS ARE DESIGNATED TO SHARE ONE POST, SIGNS SHALL BE AFFIXED TO POST USING ALUMINUM OR STAINLESS STEEL Z-BAR STRINGER.

TRAFFIC SIGN POST (BREAKAWAY STEEL CHANNEL) 42



CHANNEL CROSS SECTION

NOTES:

1. GALVANIZED STEEL CHANNEL SHALL BE EMBEDDED A MIN. OF 3 FT. INTO THE CONCRETE
2. POSTS FOR HANDICAP PARKING STALLS AND ACCESS AISLES SHALL BE PAINTED BLUE AS FOLLOWS:
   A. SOLVENT CLEAN TO REMOVE OIL, GREASE AND OTHER CONTAMINANTS.
   B. APPLY METAL PRIMER FOR GALVANIZED SURFACES.
   C. APPLY TWO (2) FINISH COATS OF APPROVED EXTERIOR PAINT FOR METAL SURFACES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF THE PARKING SIGNS, BOLLARDS AND FOUNDATIONS WITH THE DESIGN AND INSTALLATION OF THE SITE SIDEWALKS, CURBING, PAVEMENT AND ANY OTHER SITE FEATURES SHOWN ON THE PLANS.
4. FASTEN SIGN TO POSTS WITH GALVANIZED STEEL BOLTS, LOCK WASHERS, AND NUTS (5/16" DIA.)
5. U-CHANNEL COVERS FOR POSTS SHALL BE BLUE WITH WHITE STRIPE FOR HANDICAP PARKING STALLS AND HANDICAP ACCESS AISLES.

ACCESSIBLE PARKING SIGN DETAIL 43

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

APPLICANT/OWNER:
SUMMIT CLUB PARTNERS, LLC
568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

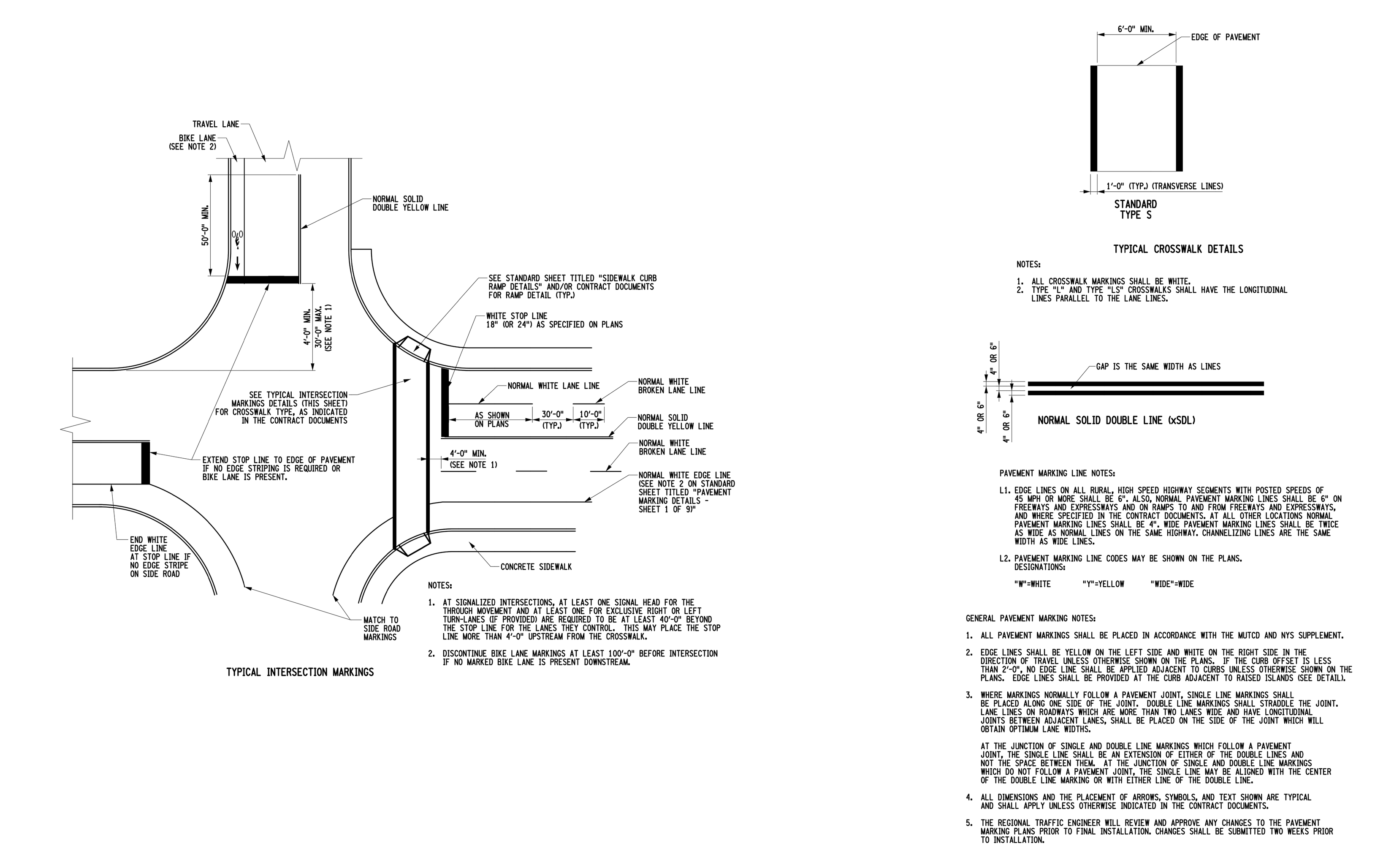
ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

CONSTRUCTION DETAILS

THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

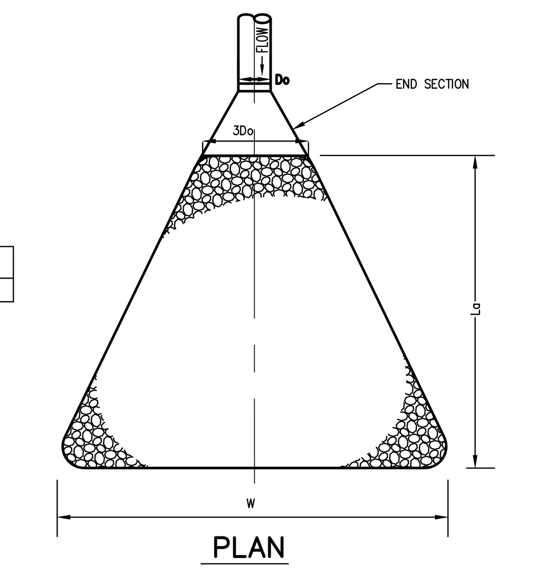
Drawn:	NC Approved: AG
Scale:	NOT TO SCALE
Date:	11/23/2020
Project No:	20101
20101-DET	DET-3
Drawing No:	C-902

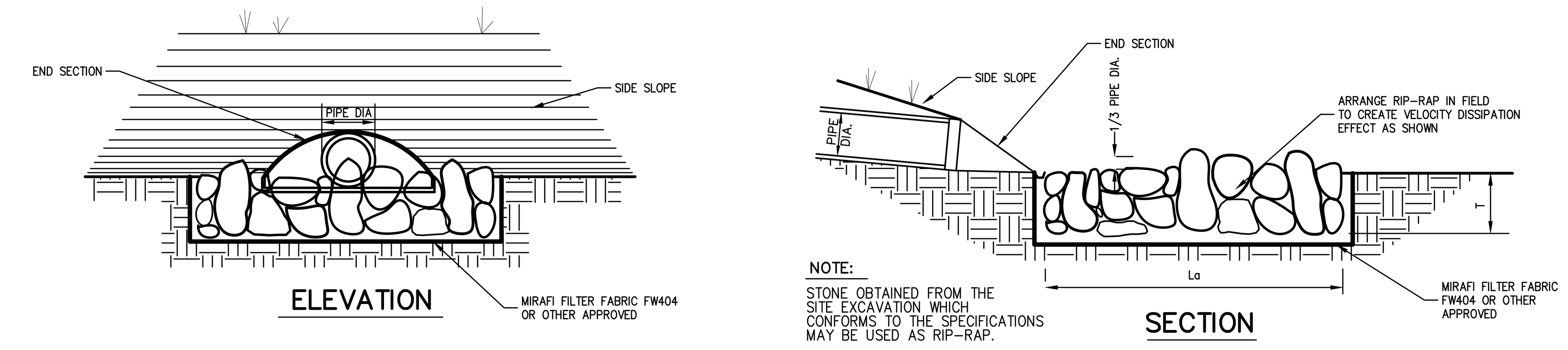


PAVEMENT MARKINGS
44

W = WIDTH (feet)
La = LENGTH (feet)
Do = DIAMETER (feet)
d50 = MEDIAN STONE DIAMETER (feet)
TW = TAILWATER (feet)
Q = DISCHARGE (cfs)
T = THICKNESS OF APRON (feet)

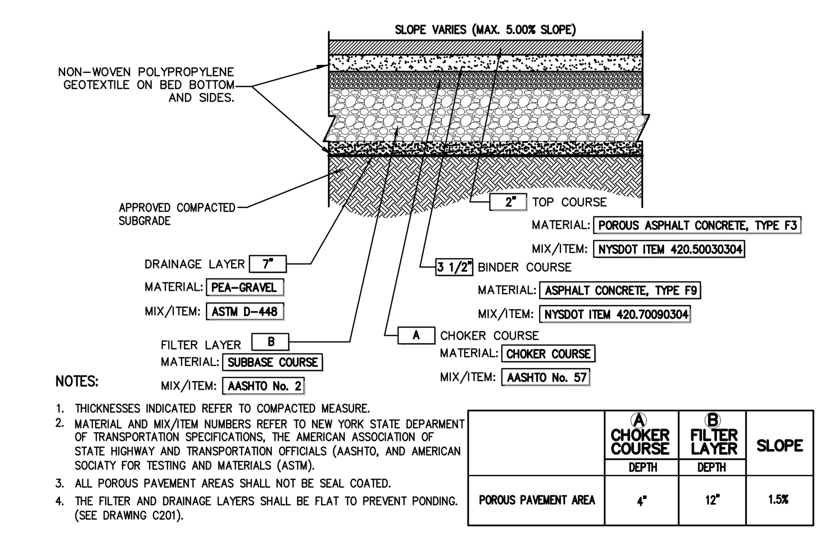
STRUCTURE	Q	Do	TW	W	La	d50	T
ES-1R	17.43	1.25	0	16.25	15	0.5	1.16



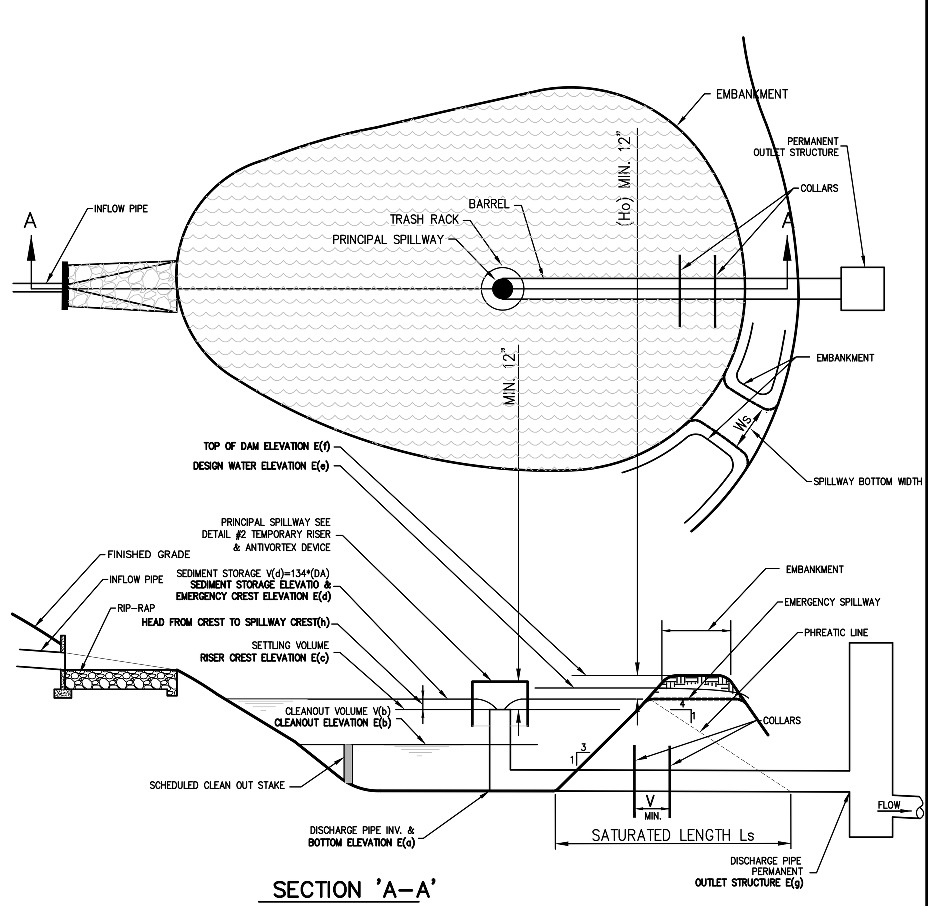


NOTE:
STONE OBTAINED FROM THE SITE EXCAVATION WHICH CONFORMS TO THE SPECIFICATIONS MAY BE USED AS RIP-RAP.

RIP-RAP APRON/ENERGY DISSIPATOR
45



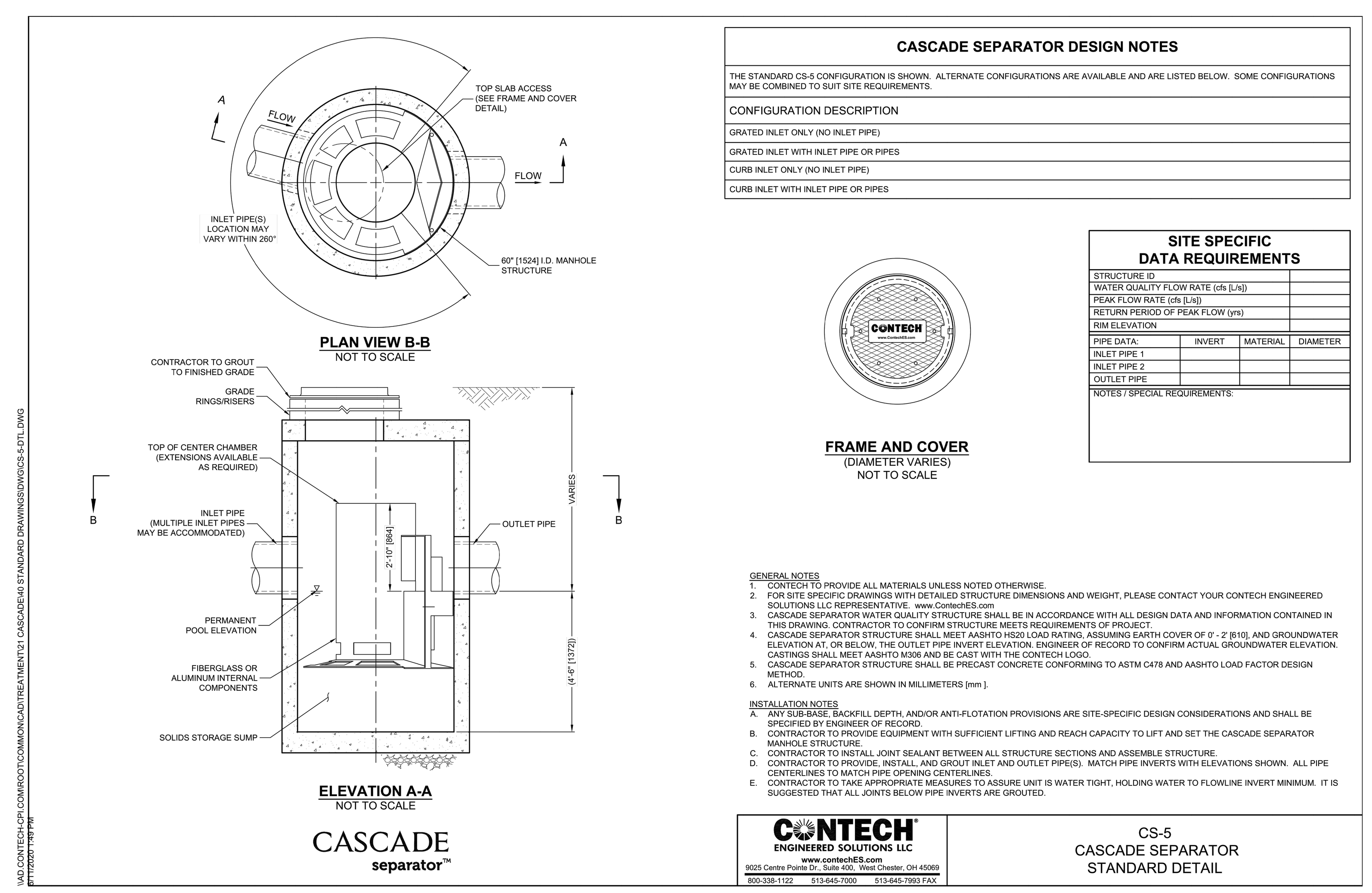
POROUS PAVEMENT
46



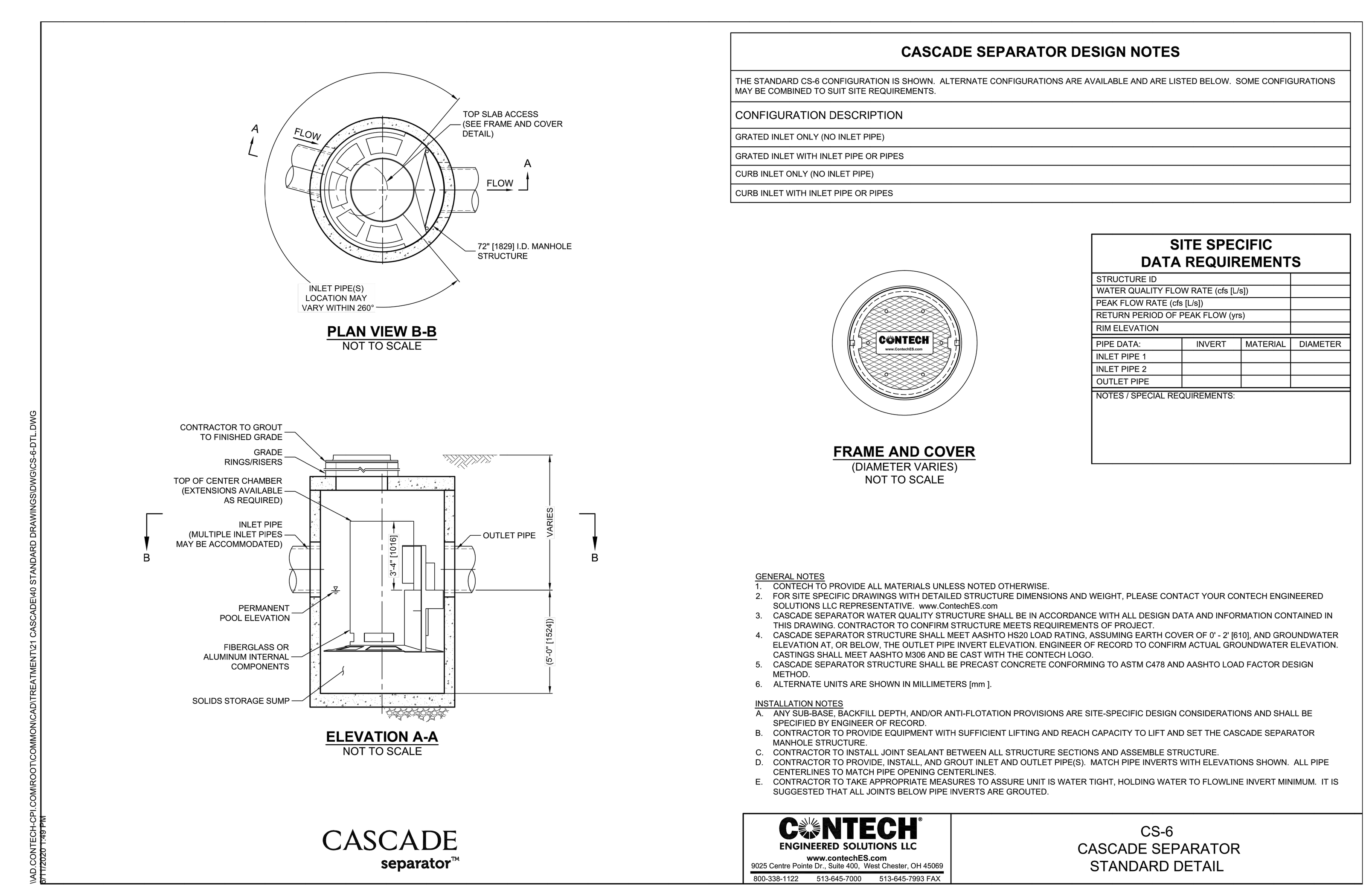
BASIN	D.A. acres	E(a) ft.	E(b) ft.	V(b) cu.yds.	E(c) ft.	E(d) ft.	V(d) cu.yds.	E(e) ft.	E(f) ft.	E(g) ft.	Ws ft.	ANTI-SEEP COLLARS Ls(ft)	QUANT.	SIZE (ft)	V (ft)
# 1a	13.56	621.00	621.50	XXX	622.00	625.00	XXXX	625.00	625.00	616.00	0	7.29	1	2X2	–

NOTES: 1. REFER TO EROSION AND SEDIMENTATION CONTROL PLANS NOTES ON DRAWING SP-5 "EROSION AND SEDIMENTATION CONTROL PLAN".

TEMPORARY SEDIMENT BASIN DETAIL
47

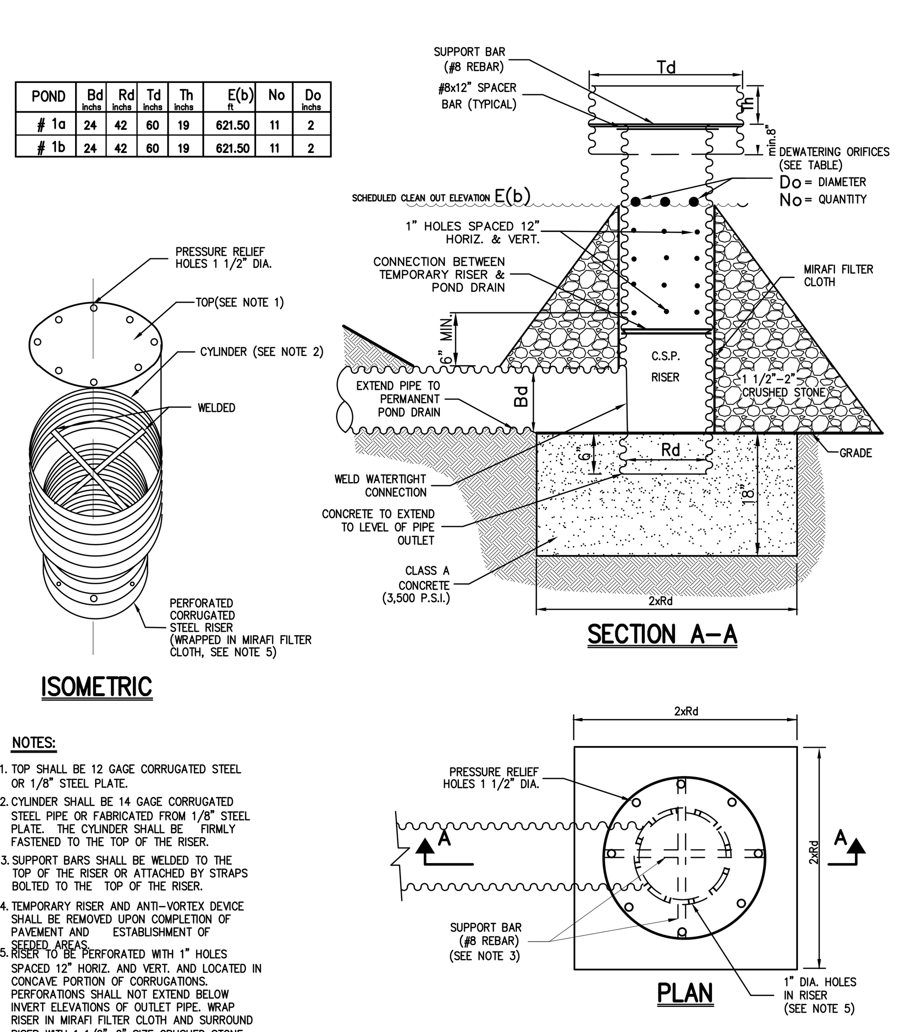


WQS-4A
48



WQS-4B
49

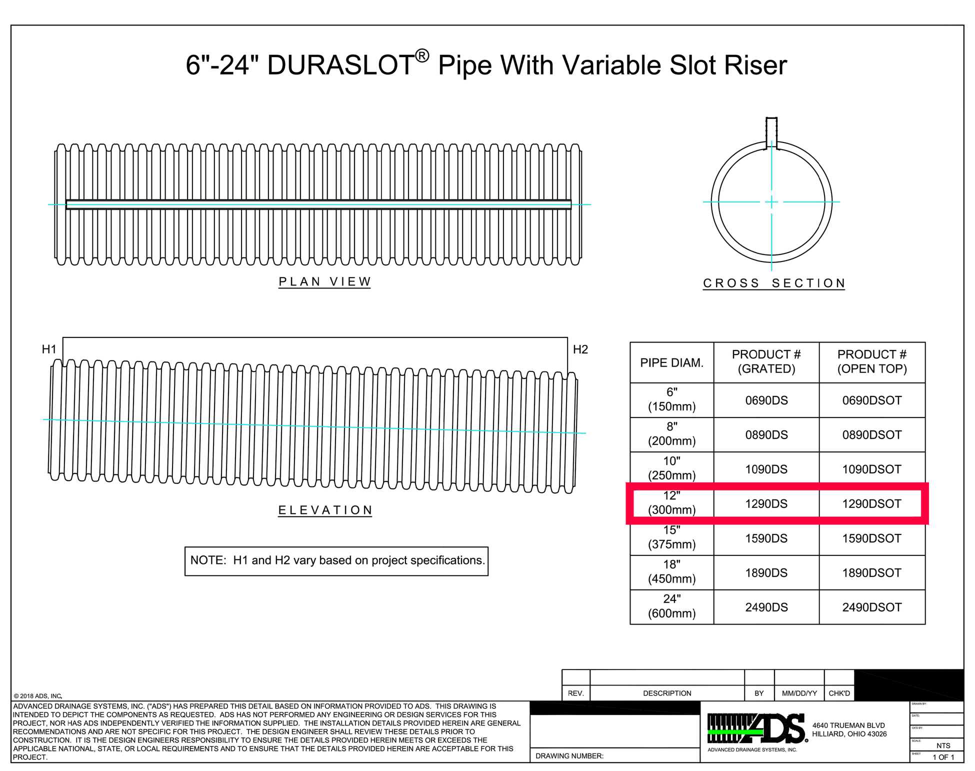
POND	Bd inchs	Rd inchs	Td inchs	Th inchs	E(b) ft	No	Do inchs
# 1a	24	42	60	19	621.50	11	2
# 1b	24	42	60	19	621.50	11	2



NOTES:
1. TOP SHALL BE 12 GAGE CORRUGATED STEEL OR 1/8" STEEL PLATE.
2. CYLINDER SHALL BE 14 GAGE CORRUGATED STEEL PIPE OR FABRICATED FROM 1/8" STEEL PLATE. THE CYLINDER SHALL BE FIRMLY FASTENED TO THE TOP OF THE RISER.
3. SUPPORT BARS SHALL BE WELDED TO THE TOP OF THE RISER OR ATTACHED BY STRAPS BOLTED TO THE TOP OF THE RISER.
4. TEMPORARY RISER AND ANTI-VORTEX DEVICE SHALL BE REMOVED UPON COMPLETION OF PAVEMENT AND ESTABLISHMENT OF GRASS AREA.
5. RISER TO BE PERFORATED WITH 1" HOLES SPACED 12" HORIZ. AND VERT. AND LOCATED IN CONCAVE PORTION OF CORRUGATIONS. PERFORATIONS SHALL NOT EXTEND BELOW INVERT ELEVATIONS OF OUTLET PIPE. WRAP RISER IN MIRAFI FILTER CLOTH AND SURROUND RISER WITH 1 1/2" SIZE CRUSHED STONE.

TEMPORARY RISER & ANTI-VORTEX DEVICE
50

6"-24" DURASLOT® Pipe With Variable Slot Riser



PIPE DIAM.	PRODUCT # (GRATED)	PRODUCT # (OPEN TOP)
6" (150mm)	0690DS	0690DSOT
8" (200mm)	0890DS	0890DSOT
10" (250mm)	1090DS	1090DSOT
12" (300mm)	1290DS	1290DSOT
15" (375mm)	1590DS	1590DSOT
18" (450mm)	1890DS	1890DSOT
24" (600mm)	2490DS	2490DSOT

ADA Compliance for DURASLOT® Surface Drains

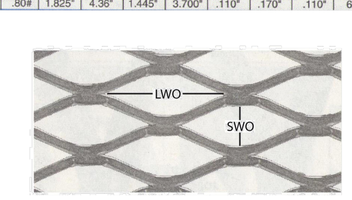
DURASLOT® Surface Drains are manufactured with a standard ½ #13 F galvanized steel grate that is ADA compliant as described by the following:

The American Disability Act; Federal register Part III,
Department of Justice, 28 CFR,
Part 36, Appendix A, Paragraph 4.5.4 Gratings, states:
"If gratings are located in walking surfaces, then they shall have spaces no greater than ½ in. (13mm) wide in one direction. If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominate direction of travel."

As shown in the below expanded metal cut sheet the SWO dimension is .265 in. which meets ADA compliance.

FLATTENED EXPANDED METAL PRODUCT DETAILS— measurements are approximate and subject to mill tolerances

Style	Approx. Weight Per SF	Design Sizes SWD	Design Sizes LWD	Opening Sizes SWO	Opening Sizes LWO	Strand Size Thickness	Strand Size Width	Overall Thickness	Meshes Per Foot SWD	Meshes Per Foot LWD	Open Area
PLAIN STEEL - Flattened											
3/16 #22 F*	.43#	.200"	.51"	.115"	.300"	.024"	.040"	.024"	60	23	55%
1/4 #20 F	.82#	.25"	1.05"	.110"	.715"	.030"	.079"	.030"	48	11.6	35%
1/4 #18 F	1.08#	.25"	1.05"	.118"	.715"	.040"	.080"	.040"	48	11.6	35%
1/2 #20 F	.40#	.50"	1.25"	.375"	1.00"	.029"	.079"	.029"	24	9.5	65%
1/2 #18 F	.66#	.50"	1.25"	.312"	1.00"	.039"	.097"	.039"	24	9.5	60%
1/2 #16 F	.82#	.50"	1.25"	.312"	1.00"	.050"	.096"	.050"	24	9.5	63%
1/2 #13 F	1.40#	.50"	1.25"	.265"	1.00"	.078"	.107"	.078"	24	9.5	52%
3/4 #16 F	.51#	.923"	2.10"	.750"	1.75"	.048"	.111"	.048"	13	5.7	74%
3/4 #14 F	.63#	.923"	2.10"	.688"	1.813"	.061"	.105"	.061"	13	5.7	74%
3/4 #13 F	.75#	.923"	2.10"	.688"	1.781"	.078"	.106"	.078"	13	5.7	74%
3/4 # 9 F 10ga.	1.71#	.923"	2.10"	.563"	1.688"	.120"	.165"	.120"	13	5.7	63%
1 #16 F	.41#	1.00"	2.50"	.813"	2.250"	.050"	.098"	.050"	12	4.68	78%
1-1/2 #16 F	.38#	1.33"	3.20"	1.062"	2.750"	.048"	.119"	.048"	9	3.75	83%
1-1/2 #14 F	.46#	1.33"	3.20"	1.062"	2.750"	.060"	.116"	.060"	9	3.75	80%
1-1/2 #13 F	.57#	1.33"	3.20"	1.062"	2.750"	.078"	.116"	.078"	9	3.75	80%
1-1/2 # 9 F 10ga.	1.14#	1.33"	3.20"	1.000"	2.563"	.110"	.158"	.110"	9	3.75	75%
2 # 9 F 10ga.	.80#	1.825"	4.36"	1.445"	3.700"	.110"	.170"	.110"	6.5	3.75	83%



Page 1 of 1

NOTE:
1. ADA COMPLIANT GRATE SHALL HAVE STAINLESS STEEL FINISH.

12" DURASLOT PIPE WITH VARIABLE SLOT RISER WITH ADA COMPLIANT GRATE
51

X

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

X

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

APPLICANT/OWNER:
SUMMIT CLUB PARTNERS, LLC
568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD · ARMONK, NY 10504
voice 914.273.5225 · fax 914.273.2102
www.jmcpllc.com

CONSTRUCTION DETAILS
THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

STATE OF NEW YORK
DAVID P. LOMBARDI
071001
LICENSED PROFESSIONAL ENGINEER

Drawn:	NC	Approved:	AG
Scale:	NOT TO SCALE		
Date:	11/23/2020		
Project No:	20101		
20101-DETAILS	DET-4	–	

Drawing No:
C-903

NOT FOR CONSTRUCTION

LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF REGULATED WETLAND BUFFER AREA
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING TREE
- EXISTING TREE LINE
- EXISTING STORM DRAIN LINE
- EXISTING SANITARY LINE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- EXISTING ELECTRIC LINE
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- TOWN-REGULATED STEEP SLOPES
- W6 EXISTING WELL LOCATION AND DESIGNATION
- EXISTING GREEN-WASTE DEBRIS PILE

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC MAP," PREPARED BY JMC, LAST REVISED 03/06/2013. PORTIONS OF EXISTING TOPOGRAPHY HAVE BEEN PROVIDED BY WESTCHESTER COUNTY GIS.

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

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voice 914.273.5225 • fax 914.273.2102
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INTEGRATED PLOT PLAN
(NO JURISDICTION SUBDIVISION)
THE SUMMIT CLUB AT ARMONK
(RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

STATE OF NEW YORK
DAVID P. LOMBARDI
071001
LICENSED PROFESSIONAL ENGINEER

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn:	JE	Approved:	AG
Scale:	1" = 100'		
Date:	11/23/2020		
Project No:	20101		
20101-SUBDIVISION	INTEGRATED PLOT PLAN	EXIST-SUB.scr	
Drawing No:	IPP-1		

NOTES:

1. IN THE GCCFO DISTRICT, THE LOT, DIMENSIONAL, AND PARKING REQUIREMENTS FOR A GOLF COURSE COMMUNITY IN THIS SECTION SHALL SUPERSEDE THE SCHEDULE OF RESIDENCE DISTRICT REGULATIONS (§ 355–21 OF THIS CHAPTER). LOT SIZE, LOT CONFIGURATION AND OTHER LOT DIMENSIONAL REQUIREMENTS WITHIN A GCCFO DISTRICT SHALL BE DETERMINED BY THE PLANNING BOARD IN CONJUNCTION WITH SUBDIVISION APPROVAL. LOT SIZE, LOT CONFIGURATION AND OTHER LOT DIMENSIONAL REQUIREMENTS OF LOTS WITHIN A GCCFO DISTRICT SHALL BE BASED UPON THE PLANNING BOARD'S CONSIDERATION OF THE CHARACTER OF THE NEIGHBORHOOD IN WHICH THE GCCFO DISTRICT WILL BE LOCATED; THE GCCFO DISTRICT'S RELATIONSHIP TO ADJOINING DISTRICTS, PROPERTIES AND LAND USES; THE GCCFO DISTRICT'S TOPOGRAPHY; AND SUCH OTHER FACTORS THE PLANNING BOARD MAY DETERMINE TO BE APPROPRIATE. THE LOTS AND/OR PARCELS THAT TOGETHER COMPRISE A GOLF COURSE COMMUNITY SITE ARE NOT REQUIRED TO BE CONTIGUOUS, PROVIDED THAT EACH SUCH LOT AND/OR PARCEL ADJOINS THE AFFILIATED MEMBERSHIP CLUB. ALL LOT, DIMENSIONAL, AND PARKING REQUIREMENTS IN THIS SECTION, INCLUDING BUT NOT LIMITED TO MAXIMUM DENSITY, MAXIMUM BUILDING COVERAGE, MINIMUM YARDS AND REQUIRED OFF–STREET PARKING, SHALL APPLY TO THE LAND AREA IN THE GCCFO DISTRICT AS A WHOLE, NOTWITHSTANDING THAT THE GOLF COURSE COMMUNITY SITE MAY BE COMPRISED OF MORE THAN ONE LOT AND/OR PARCEL, OR THAT THE SITE MAY FROM TIME TO TIME BE SUBDIVIDED OR RESUBDIVIDED, AND ALL DETERMINATIONS AND CALCULATIONS RELATING TO SUCH REQUIREMENTS SHALL BE MADE WITH REFERENCE TO THE BOUNDARIES OF THE ENTIRE LAND AREA IN THE GCCFO DISTRICT AND AS THOUGH SUCH AREA IS A SINGLE LOT (AS DEFINED IN § 355–4 OF THIS CHAPTER), EVEN THOUGH IT IS OR WILL BE COMPRISED OF MORE THAN ONE LOT AND/OR PARCEL.
2. THE MAXIMUM BUILDING HEIGHT SHALL BE THREE STORIES AND 39 1/2 FEET TO THE MEAN LEVEL OF THE PRIMARY ROOF, MEASURED FROM THE LEVEL OF THE FINISHED GRADE AT THE MAIN ENTRY TO THE BUILDING.
3. FOR MULTI–FAMILY DWELLING UNITS: 2 FOR EACH DWELLING UNIT, PLUS $\frac{1}{2}$ FOR EACH BEDROOM, PLUS 10% VISITOR PARKING. PARKING PROVIDED FOR MULTI–FAMILY RESIDENTIAL USE AS FOLLOWS:

   72 UNITS (2 SPACES X 72 UNITS = 144 SPACES)
   54 2–BEDROOM UNITS ($\frac{1}{2}$ SPACE X 54 UNITS = 27 SPACES)
   18 3–BEDROOM UNITS ($\frac{1}{2}$ SPACE X 18 UNITS = 9 SPACES)
   TOTAL REQUIRED SPACES FOR MULTI–FAMILY DEVELOPMENT: 180 SPACES

   THE EXISTING PARKING LOT (ON LOT 1) SHALL BE RE–STRIPED AS A PART OF THE TEMPORARY CLUBHOUSE APPLICATION (123 SPACES).
4. FOR WHOLESALE BUSINESS, INDUSTRY, STORAGE, WAREHOUSE AND OTHER COMMERCIAL ESTABLISHMENTS, A MINIMUM OF ONE SPACE FOR EACH ESTABLISHMENT, AND ONE ADDITIONAL SPACE FOR EACH 10,000 SQUARE FEET OF GROSS FLOOR AREA OR MAJOR PORTION THEREOF IN EXCESS OF 4,000 SQUARE FEET OF GROSS FLOOR AREA.
5. CURRENTLY THE GOLF COURSE LOT IS ±129.96 ACRES AND THE RESIDENTIAL LOT IS ±26.34 ACRES.
6. TOTAL EXISTING BUILDING COVERAGE CALCULATED BASED ON ALL EXISTING BUILDINGS ON THE PROPERTY, INCLUDING PREVIOUSLY DEMOLISHED STRUCTURES.
7. BUILDING COVERAGE BREAKDOWN:

   LOT 1:

   EXISTING CART SHED TO REMAIN: ±2,862.12 S.F.

   TOTAL LOT 1 BUILDING COVERAGE: ±2,862.12 S.F.

   LOT 2:

   EXISTING SEWAGE TREATMENT PLANT TO REMAIN: ±2,503.26 S.F.
   RESIDENTIAL BUILDINGS: 6 X 14,364.24 S.F.
   GATE HOUSE: 903 S.F.
   TENNIS PAVILION: 672 S.F.
   AMENITIES BUILDING: 9,993.35 S.F.

   TOTAL LOT 2 BUILDING COVERAGE: ±100,257.05 S.F.

   FUTURE TENNIS PAVILIONS: 3 X 672 S.F.
   FUTURE TOTAL LOT 2 BUILDING COVERAGE: ±102,273.05

LEGEND

EXISTING PROPERTY LINE
ADJACENT PROPERTY LINE
LIMIT OF REGULATED WETLAND BUFFER AREA
EXISTING WETLAND LINE AND DELINEATION
EXISTING BUILDING LINE
EXISTING PAVEMENT EDGE
EXISTING CURB LINE
EXISTING STONE WALL
EXISTING RETAINING WALL
EXISTING GUIDE RAIL
EXISTING FENCE
EXISTING TREE
EXISTING TREE LINE
EXISTING GREEN–WASTE DEBRIS PILE

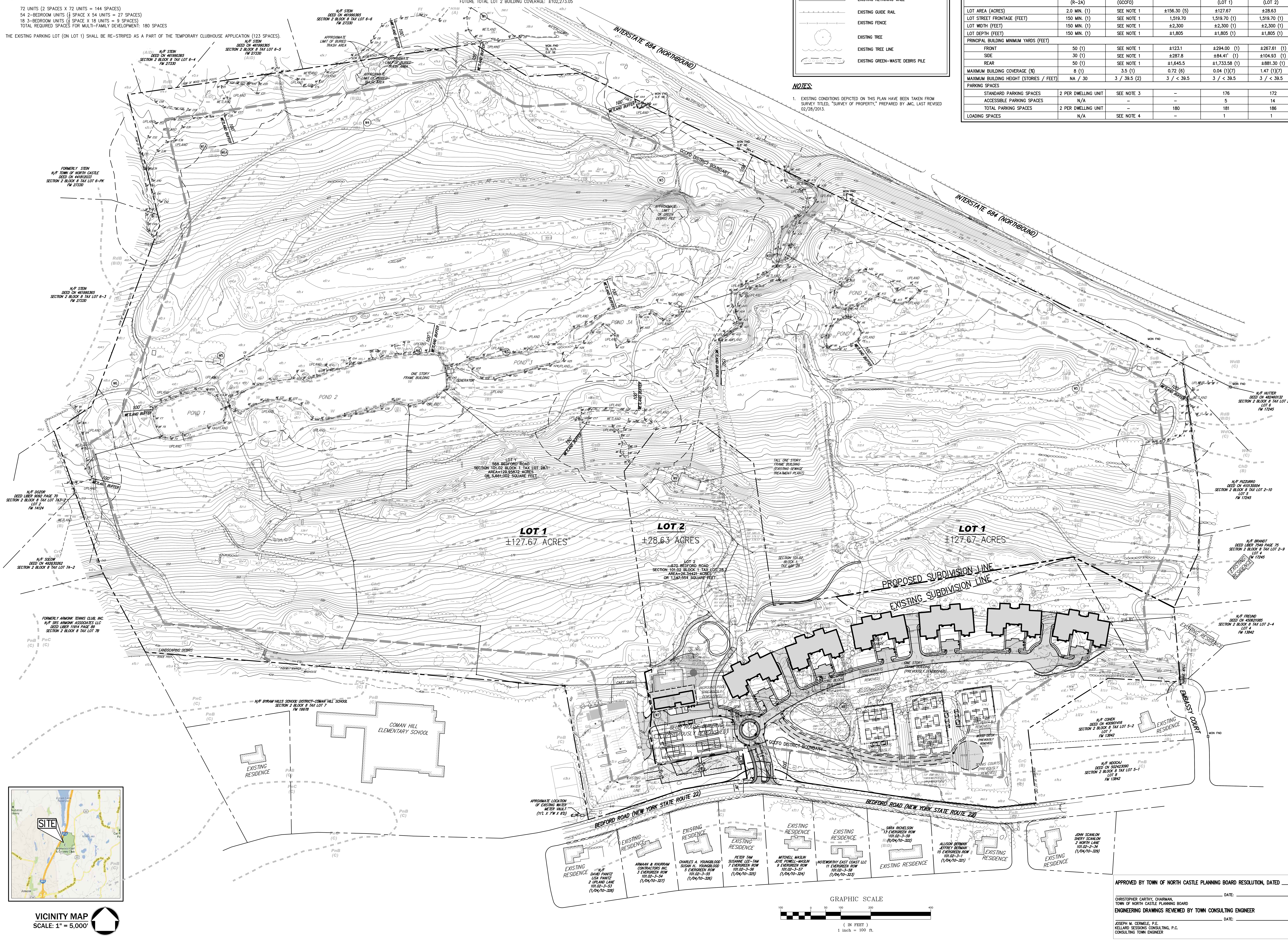
NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "SURVEY OF PROPERTY," PREPARED BY JMC, LAST REVISED 02/28/2013.

TABLE OF LAND USE

SECTION 101.02, BLOCK 1, LOT 28.1 & 28.2 (2/08/7.C1A)
ZONES "R–2A" – "ONE FAMILY RESIDENCE DISTRICT (2 ACRES)"
"GCCFO"– "GOLF COURSE COMMUNITY FLOATING OVERLAY DISTRICT"
PROPOSED USE: GOLF COURSE COMMUNITY
FIRE/AMBULANCE DISTRICT: ARMONK FIRE DEPARTMENT (NORTH CASTLE DISTRICT #2)
WATER DISTRICT: NORTH CASTLE WATER DISTRICT #2
SCHOOL DISTRICT: BYRAM HILLS CENTRAL SCHOOL DISTRICT
SEWER DISTRICT: ON–SITE SEWAGE TREATMENT PLANT (SPDES PERMIT)

DESCRIPTION	REQUIRED/ PERMITTED (R–2A)	REQUIRED/ PERMITTED (GCCFO)	EXISTING	PROPOSED/ PROVIDED (LOT 1)	PROPOSED/ PROVIDED (LOT 2)
LOT AREA (ACRES)	2.0 MIN. (1)	SEE NOTE 1	±156.30 (5)	±127.67	±28.63
LOT STREET FRONTAGE (FEET)	150 MIN. (1)	SEE NOTE 1	1,519.70	1,519.70 (1)	1,519.70 (1)
LOT WIDTH (FEET)	150 MIN. (1)	SEE NOTE 1	±2,300	±2,300 (1)	±2,300 (1)
LOT DEPTH (FEET)	150 MIN. (1)	SEE NOTE 1	±1,805	±1,805 (1)	±1,805 (1)
PRINCIPAL BUILDING MINIMUM YARDS (FEET)					
FRONT	50 (1)	SEE NOTE 1	±123.1	±294.00 (1)	±267.61 (1)
SIDE	30 (1)	SEE NOTE 1	±287.8	±84.41' (1)	±104.93 (1)
REAR	50 (1)	SEE NOTE 1	±1,645.5	±1,733.58 (1)	±881.30 (1)
MAXIMUM BUILDING COVERAGE (%)	8 (1)	3.5 (1)	0.72 (6)	0.04 (1)(7)	1.47 (1)(7)
MAXIMUM BUILDING HEIGHT (STORIES / FEET)	NA / 30	3 / 39.5 (2)	3 / < 39.5	3 / < 39.5	3 / < 39.5
PARKING SPACES					
STANDARD PARKING SPACES	2 PER DWELLING UNIT	SEE NOTE 3	–	176	172
ACCESSIBLE PARKING SPACES	N/A	–	–	5	14
TOTAL PARKING SPACES	2 PER DWELLING UNIT	–	180	181	186
LOADING SPACES	N/A	SEE NOTE 4	–	1	1



VICINITY MAP
SCALE: 1" = 5,000'

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC
3.	RESPONSE TO TOWN COMMENTS	06/14/2021	NC

Previous Editions Obsolete

APPLICANT/OWNER:
SUMMIT CLUB PARTNERS, LLC
568 BEDFORD ROAD (NY–22)
ARMONK, NY 10504

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

PRELIMINARY SUBDIVISION PLAT
(NO JURISDICTION SUBDIVISION)
THE SUMMIT CLUB AT ARMONK
(RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY–22)
ARMONK, NY 10504

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

STATE OF NEW YORK
DAVID P. LOMBARDI
071001
LICENSED PROFESSIONAL ENGINEER

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED ________

________ DATE: ________
CHRISTOPHER CARTHY, CHAIRMAN,
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING DRAWINGS REVIEWED BY TOWN CONSULTING ENGINEER

________ DATE: ________
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEER

Drawn: DK	Approved: AG
Scale: 1" = 100'	
Date: 11/23/2020	
Project No: 20101	
20101–SUBDIVISIONPRELIM SUBDIV PLATEXIST–SUB.scr	
Drawing No: PSP–1	

NOT FOR CONSTRUCTION

JOB NAME: SUMMIT CLUB
APEX LIGHTING SOLUTIONS
REFLECTANCES: N/A
WORKPLANE/CALC PLANE: @ GRADE
MOUNTING HEIGHT: SEE LUMINAIRE SCHEDULE
APPS: LED
SALES: TM

Luminaire Schedule

Qty	Label	Arrangement	Lumens	Input Watts	LLF	BUG Rating	Description
7	SL2	SINGLE	11518	86.8	0.850	B2-U0-G2	U.S. ARCH RZR-PLED-II-40LED-700MA-WW-VOLT-FINISH MOUNTED TO 18FT POLE @ 18FT AFG TO BOF
3	SL2HS	SINGLE	8423	86.8	0.850	B1-U0-G2	U.S. ARCH RZR-PLED-II-40LED-700MA-WW-VOLT-FINISH-HS-PLED MOUNTED TO 18FT POLE @ 18FT AFG TO BOF
3	SL3	SINGLE	10880	86.8	0.850	B2-U0-G3	U.S. ARCH RZR-PLED-III-W-40LED-700MA-WW-VOLT-FINISH MOUNTED TO 18FT POLE @ 18FT AFG TO BOF
5	SL4	SINGLE	10595	86.8	0.850	B2-U0-G3	U.S. ARCH RZR-PLED-IV-FT-W-40LED-700MA-WW-VOLT-FINISH MOUNTED TO 18FT POLE @ 18FT AFG TO BOF
10	SL5	SINGLE	11920	86.8	0.850	B4-U0-G2	U.S. ARCH RZR-PLED-VSQ-M-40LED-700MA-WW-VOLT-FINISH MOUNTED TO 18FT POLE @ 18FT AFG TO BOF

Calculation Summary

Label	Grid Z	Avg	Max	Min	Avg/Min	Max/Min
SITE	0	0.39	4.7	0.0	N.A.	N.A.

GENERAL DISCLAIMER:

Calculations have been performed according to IES standards and good practice Some differences between measured values and calculated results may occur due to tolerances in calculation methods, testing procedures, component performance, measurement techniques and field conditions such as voltage and temperature variations. Input data used to generate the attached calculations such as room dimensions, reflectances, furniture and architectural elements significantly affect the lighting calculations. If the real environment conditions do not match the input data, differences will occur between measured values and calculated values.

* LLF Determined Using Current Published Lamp Data

NOTE TO REVIEWER:

Total Light Loss Factor (LLF) applied at time of design is determined by applying the Lamp Lumen Depreciation (LLD) from current lamp manufacturer's catalog, a Luminaire Dirt Depreciation Factor (LDD) based on IES recommended values and a Ballast Factor (BF) from current ballast specification sheets. Application of an incorrect Light Loss Factor (LLF) will result in forecasts of performance that will not accurately depict actual results.

For proper comparison of photometric layouts, it is essential that you insist all designers use correct Light Loss Factors.

REVISIONS

REV. X XX-XX-05 XXXXX

APEX LIGHTING SOLUTIONS
THE POINT WHERE ALL ASCENDING LINES CONVERGE

20-30 BEAVER ROAD
WETHERSFIELD, CT 06109
TELEPHONE 860.632.8766
FACSIMILIE 860.632.8236
www.apexltg.com

PROJECT TITLE:
SUMMIT CLUB

DRAWING TITLE:
EXTERIOR LIGHTING
PHOTOMETRIC CALCULATION

FILE NAME: SL-1A SUMMIT CLUB 06-11-2021 LED.dwg

SCALE : 1"=40'-0"
DATE: 6/11/21
DRAWN BY: LED
SHEET:
SL-1A

PRELIMINARY STORMWATER POLLUTION PREVENTION PLAN

THE SUMMIT CLUB AT ARMONK

568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

Applicant/Operator/ Owner:	**Summit Club Partners, LLC** **c/o Mr. Jeff Mendell** (203) 813-3264

Prepared by: JMC

JMC Project 20101

Draft: 06/14/2021

STATE OF NEW YORK
DAVID P. LOMBARDI
071001
LICENSED PROFESSIONAL ENGINEER

JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC | JMC Site Development Consultants, LLC

120 BEDFORD ROAD | ARMONK, NY 10504 | 914.273.5225 | MAIL@JMCPLLC.COM | JMCPLLC.COM

TABLE OF CONTENTS

APPENDICES

<u>REFERENCED DRAWINGS FOR SWPPP DESIGN AND DETAILS</u>

JMC SITE PLANS

Dwg. No.	Title	Rev. No./Date
C-000	Cover Sheet	06/14/2021
C-010	Overall Existing Conditions	06/14/2021
C-011	Existing Conditions Map (South)	06/14/2021
C-012	Existing Conditions Map (North)	06/14/2021
C-020	Site Demolition Plan (South)	06/14/2021
C-021	Site Demolition Plan (North)	06/14/2021
C-022	Site Tree Removal Table	06/14/2021
C-100A	Overall Site Layout Plan	06/14/2021
C-100	Site Layout Plan (South)	06/14/2021
C-101	Site Layout Plan (North)	06/14/2021
C-102	Fire Truck Access Plan	06/14/2021
C-200	Site Grading Plan (South)	06/14/2021
C-201	Site Grading Plan (North)	06/14/2021
C-202	Road Profiles Plan	06/14/2021
C-300	Utilities Plan (South)	06/14/2021
C-301	Utilities Plan (North)	06/14/2021
C-302	Sanitary Profiles	06/14/2021
C-303	Water Profiles	06/14/2021
C-304	Storm Profiles	06/14/2021
C-400	SE Plan (South)	06/14/2021
C-401	SE Plan (North)	06/14/2021
C-900	Construction Details	06/14/2021
C-901	Construction Details	06/14/2021
C-902	Construction Details	06/14/2021
C-903	Construction Details	06/14/2021

I. INTRODUCTION

This Stormwater Pollution Prevention Plan has been prepared for the 156.30 acre Summit Club at Armonk site, located in the Town of North Castle, Westchester County, New York (hereinafter referred to as the "Site"). The site is bordered by residential to the north and south, NY-22 (Bedford Road) to the east, and I-684 to the west. The development has been designed in accordance with the following:

- Requirements of the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-20-001, effective January 29, 2020.
- Chapter 267 "Stormwater Management" of the Town of North Castle Zoning Code
- New York State Stormwater Management Design Manual.

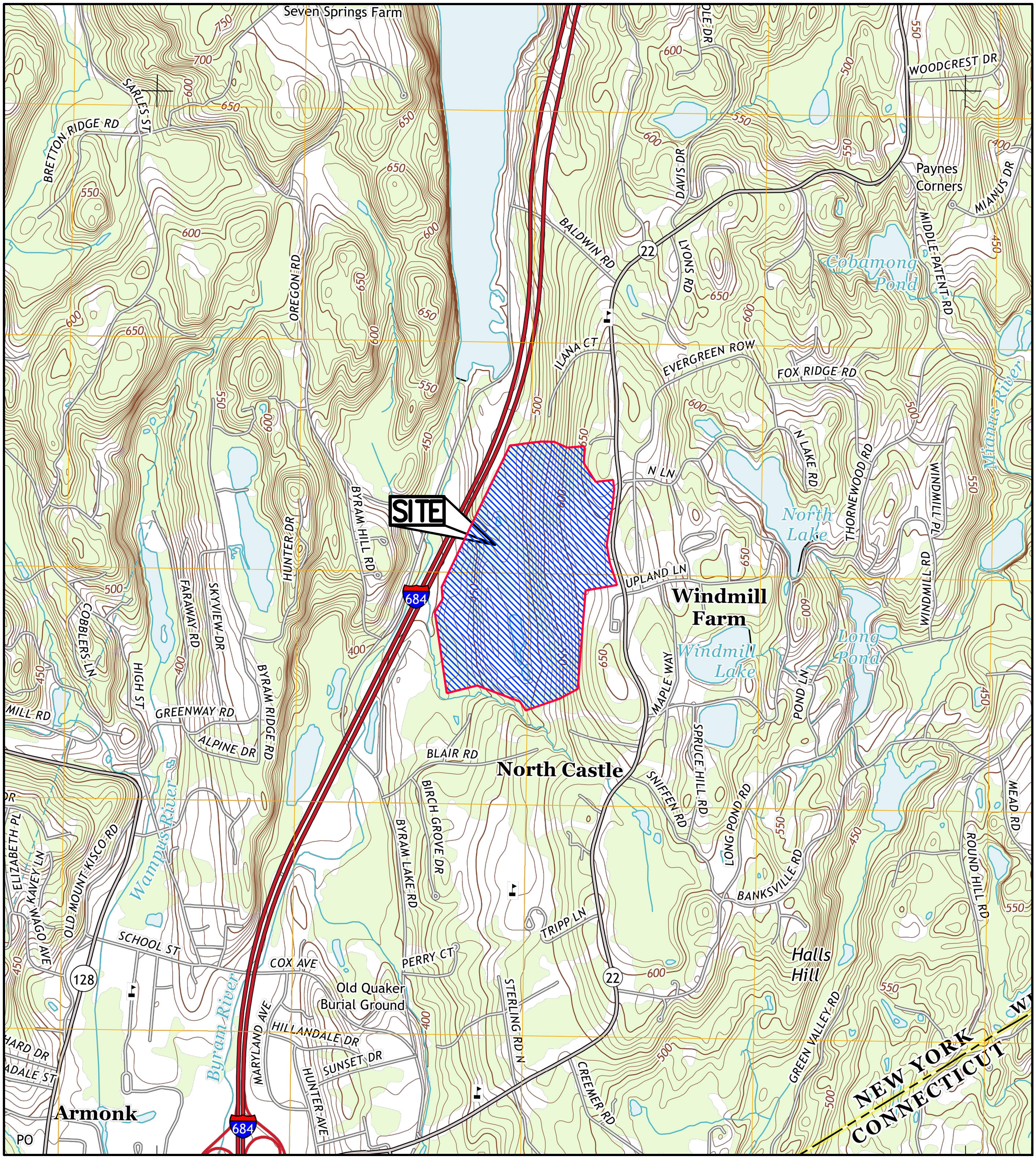
The project will consist of approximately 17.6 acres of disturbance at the east end of the site. The existing clubhouse, pool and tennis have recently been demolished. Six multifamily 3-story residential buildings are being proposed, along with a residential amenities building, pool and tennis courts. An entrance road and overflow parking area are also being added.

II. STORMWATER MANAGEMENT PLANNING

In order to be eligible for coverage under the NYSDEC SPDES General Permit No. GP-0-20-001 for Stormwater Discharges from Construction Activities, the Stormwater Pollution Prevention Plan (SWPPP) includes stormwater management practices (SMP's) from the publication "New York State Stormwater Management Design Manual," last revised January 2015.

A Stormwater Pollution Prevention Plan has been prepared for this project because it is a construction activity that involves:

- Soil disturbances of one (1) or more acres of land.



THE SUMMIT CLUB AT ARMONK

568 BEDFORD ROAD (NY 22) TOWN OF NORTH CASTLE, NY

USGS SITE LOCATION MAP

DATE: 05/27/2021 JMC PROJECT: 20101

FIGURE: 1 SCALE: 1"=2000'

120 BEDFORD RD
ARMONK
NY 10504

(914) 273-5225
fax 273-2102

JMCPLLC.COM

20101-SLM.dwg; SLM.tab

The proposed stormwater facilities have been designed such that the quantity and quality of stormwater runoff during and after construction are not adversely altered or are enhanced when compared to pre-development conditions.

Based on the GIS information provided by the website of the New York State Office of Parks, Recreation and Historic Places, the site does not contain, nor is it immediately adjacent to any properties listed on the State or National Register of Historic Places.

The Six Step Process for Stormwater Site Planning and Practice Selection

Stormwater management using green infrastructure is summarized in the six step process described below. The six step process was adhered to when developing this SWPPP. Information is provided in this SWPPP which documents compliance with the required process as follows:

Step 1: Site Planning

Implement planning practices that protect natural resources and utilize the hydrology of the site. Strong consideration must be given to reducing impervious cover to aid in the preservation of natural resources including protecting natural areas, avoiding sensitive areas and minimizing grading and soil disturbance.

Step 2: Determine Water Quality Treatment Volume (WQv)

Determine the required WQv for the site based on the site layout, impervious areas and sub-catchments. This initial calculation of WQv will have to be revised after green infrastructure techniques are applied. The following method has been used to calculate the WQv.

- **90% Rule -** According to the New York State Stormwater Design Manual, Section 4.1, the water quality volume is determined from the 90% rule. The method is based on 90% of the average annual stormwater runoff volume which must be provided due to impervious surfaces. The Water Quality Volume (denoted as the WQv) is designed to improve water quality sizing to capture and treat 90% of the average annual stormwater runoff volume. The WQv is directly related to the amount of impervious cover created at a site. The average rainfall storm depth for 90% of storms in New York State in one year is used to calculate a volume of runoff. The rainfall depth depends on the location of the site within the state. From this depth of rainfall, the required water quality volume is calculated.

The project is a redevelopment and therefore will comply with the strategies outlined within Chapter 9: Redevelopment Projects of the Design Manual. There are different options to control water quality depending on the redevelopment.

Since the redevelopment results in the creation of additional impervious area, Water Quality Treatment Option II will be utilized which requires treatment for 25% of the existing impervious area, plus 100% of the additional, new impervious area.

The plan proposes that a minimum of 25% of the water quality volume (WQv) from the disturbed area is captured and treated by the implementation of standard practices. When utilizing structural stormwater management practices, these practices should be targeted to treat areas with the greatest pollutant generation potential (e.g. parking areas, service stations, etc).

Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

RRv is required for this project since it is a combination of both new development and redevelopment.

Green infrastructure techniques or standard SMP's with RRv capacity can potentially reduce the required WQv by incorporating combinations of green infrastructure techniques and standard SMP's within each drainage area on the site.

Green infrastructure techniques are grouped into two categories:

- Practices resulting in a reduction of contributing area such as preservation/restoration of conservation areas, vegetated channels, etc.
- Practices resulting in a reduction of contributing volume such as green roofs, stormwater planters, and rain gardens.

Apply a combination of green infrastructure techniques and standard SMPs with RRv capacity to provide 100% of the WQv calculated in Step 2. If the RRv calculated in this step is greater than or equal to the WQv in Step 2, the RRv requirement has been met and Step 4 can be skipped. If the RRv provided cannot meet or exceed 100% of the WQv, the project must, at a minimum, reduce a percentage of the runoff from impervious areas to be constructed on the site. The percent reduction is based on the Hydrologic Soil Group(s) (HSG) of the site and is defined as Specific Reduction Factor (S).

The following green infrastructure techniques and practices are provided in the Design Manual:

- **Conservation of Natural Areas**
  - There are no areas on the site available to be dedicated to a conservation. Therefore, there is no area to be subtracted from the contributing area for the WQv calculation.
- **Sheet flow to Riparian Buffers or Filter Strips**
  - There are some well vegetated areas on-site with acceptable slopes that lend an opportunity as a buffer and still meet the minimum contributing length of flow. However, this practice was not used since an infiltration pond was a more practical and efficient treatment method.
- **Vegetated Swales**
  - The use of sheet flow into vegetated swales cannot be implemented along the proposed driveway because of the steep slope or throughout the parking areas due to the limited flow lengths, rock outcroppings, septic expansion areas, etc.
- **Tree Planting / Tree Pits**

- The project includes extensive tree planting around its perimeter as part of the proposed landscaping plan. However, the new trees are not credited towards area reduction for the water quality volume.

- **Disconnection of Rooftop Runoff**
  - This practice is not practical for this project since these items are typically used in a residential application with small rooftop areas.
- **Stream Daylighting**
  - This practice is not possible for this project since there are no existing streams.
- **Rain Gardens**
  - This practice is not practical for this project since a contributing drainage area is limited to 1,000 square feet of rooftop. This practice is typically used in a smaller residential application.
- **Green Roofs**
  - This practice is not proposed for this project due to the desired aesthetics of the buildings. Other more practical and efficient treatment methods were used.
- **Stormwater Planters**
  - Small drainage areas, less than 15,000 square feet can be collected by roof drains and discharged into stormwater planters which infiltrate stormwater prior to entering the underground storm pipes. However, this practice was not used in lieu of more practical and efficient treatment methods.
- **Rain Barrels and Cisterns**
  - Underground storage tanks could feasibly be installed to collect stormwater runoff to be used for irrigation purposes. However, this practice was not used in lieu of more practical and efficient treatment methods.
- **Porous Paving**
  - This practice is being utilized for the overflow parking area. In addition, pervious pavers are shown in front of the residential buildings, but have been conservatively treated as impervious areas in the calculations.
- **Standard Practices with RRv Capacity**
  - **Biofilters and Bioretention Basins –** These practices cannot be proposed because the soil within the areas that have the ability to accommodate the practices has observed

groundwater elevations that are too close to the surface which would not provide the required separation from the bottom of the practice to groundwater.

- **Infiltration Practices –** An infiltration pond is located behind the residential buildings and is proposed to treat and retain runoff from a majority of the disturbance area.

The Minimum RRv capacity required must be provided by green infrastructure techniques to verify that the RRv requirement has been met. The RRv that is provided by the green infrastructure techniques can then be subtracted from the Total Required WQv that must be provided by the SMP's.

Step 4: Determine the minimum RRv Required

The minimum RRv is calculated similar to the WQv. However, it is determined using only the new impervious cover and accounts for the hydrologic soil group present. In no case shall the runoff reduction achieved from the newly constructed impervious area be less than the minimum runoff reduction volume (RRv_{min}).

Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

Apply the standard SMP's to meet additional water quality volume requirements that cannot be addressed by applying the green infrastructure techniques. The standard SMP's with RRv capacity must be implemented to verify that the RRv requirement has been met.

- **Infiltration Practices –** An infiltration pond is proposed to treat and retain runoff from the residential portion of the site. This practice is located in an area the groundwater elevation is acceptable to provide the required separation. According to Section 3.6 of the Design Manual, 100% of the WQv provided by an Infiltration Practice can be applied towards meeting the RRv criteria.

- **Porous Pavement** – Pavement with a high void ratio which allows the water to flow though in and into a drainage area below is being used to treat the water from the proposed overflow parking area. According to Section 3.6 of the Design Manual, 100% of the WQv provided by an Infiltration Practice can be applied towards meeting the RRv criteria.

Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

The Channel Protection Volume (CPv), Overbank Flood Control (Qp) and Extreme Flood Control (Qf) must be met for the plan to be completed. This is accomplished by using practices such as infiltration basins, dry detention basins, etc. to meet water quantity requirements. The following standards must be met:

1. **Stream Channel Protection (CPv)**

   Stream Channel Protection Volume Requirements (CPv) are designed to protect stream channels from erosion. In New York State this goal is accomplished by providing 24-hour extended detention of the one-year, 24-hour storm event, remained from runoff reduction. Reduction of runoff for meeting stream channel protection objectives, where site conditions allow, is encouraged and the volume reduction achieved through green infrastructure can be deducted from CPv. Trout waters may be exempted from the 24-hour ED requirement, with only 12 hours of extended detention required to meet this criterion. Detention time may be calculated using either a center of mass method or plug flow calculation method.

   - CPv for a redevelopment project is not required if there is no increase in impervious area or changes to hydrology that increase the discharge rate. This criterion, as defined in Chapter 4 of New York State Stormwater Design Manual, is not based on a pre versus post-development comparison. However, for a redevelopment project this requirement is relaxed. If the hydrology and hydraulic study shows that the post-construction 1-year 24 hour discharge rate and velocity are less than or equal to the pre-construction discharge rate, providing 24 hour detention of the 1-year storm to meet the channel protection criteria is not required.

2. **Overbank Flood (Qp) which is the 10 year storm.**

   Overbank control requires storage to attenuate the post development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates.

3. **Extreme Storm (Qf) which is the 100 year storm.**

   100 Year Control requires storage to attenuate the post development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates.

Based on the foregoing, this project is eligible for coverage under NYSDEC SPDES General Permit No. GP-0-20-001.

III. STUDY METHODOLOGY

Runoff rates were calculated based upon the standards set forth by the United States Department of Agriculture Natural Resources Conservation Service Technical Release 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986. The methodology set forth in TR-55 considers a multitude of characteristics for watershed areas including soil types, soil permeability, vegetative cover, time of concentration, topography, rainfall intensity, ponding areas, etc.

The 1, 10, 25, 100-year storm recurrence intervals were reviewed in the design of the stormwater management facilities (see Appendix A Existing & Proposed Hydrologic Calculations).

Anticipated drainage conditions were analyzed taking into account the rate of runoff which will result from the construction of buildings, parking areas and other impervious surfaces associated with the site development.

Base Data and Design Criteria

For the stormwater management analysis, the following base information and methodology were used:

1. The site drainage patterns and outfall facilities were reviewed by JMC personnel for the purpose of gathering background data and confirming existing mapping of the watershed areas.

2. An Existing Drainage Area Map was developed from the topographical survey. The drainage area map reflects the existing conditions within and around the project area.

3. A Proposed Drainage Area Map was developed from the proposed grading design superimposed over the topographical survey. The drainage area map reflects the proposed conditions within the project area and the existing conditions to remain in the surrounding area.

4. The United States Department of Agriculture (USDA) Web Soil Survey of the site available on its website at http://websoilsurvey.nrcd.usda.gov.

5. Soil Survey of Putnam and Westchester Counties, 1994.

6. The United States Department of Agriculture Natural Resources Conservation Service Technical Report No. 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986.

7. The time of concentration was calculated using the methods described in Chapter 3 of TR-55, Second Edition, June 1986. Manning's kinematics wave equation was used to determine the travel time of sheet flow. The 2-year 24-hour precipitation amount of 3.4 inches was used in the equation for all storm events. The travel time for shallow concentrated flow was computed using Figure 3-1 and Table 3-1 of TR-55. Manning's Equation was used to determine the travel time for channel reaches.

8. All hydrologic calculations were performed with the Bentley PondPack software package version 10.0.

9. All hydraulic calculations were performed with the Civil 3D Storm Sewer Analysis software package version 2020.

10. The New York State Stormwater Management Design Manual, revised January 2015.

11. New York Standards and Specifications for Erosion and Sediment Control, November 2016.

12. The storm flows for the 1-, 10-, 25-, & 100-year recurrence interval storms were analyzed for the total watershed areas. The Type III distribution design storm for a 24 hour duration was used and the mass rainfall for each design storm was taken from the Extreme Precipitation in New York & New England developed by the Natural Resource Conservation Service (NRCS) and the Northeast Regional Climate Center (NRCC) as follows:

24 Hour Rainfall Amounts

Design Storm Recurrence Interval	Inches of Rainfall
1 Year	2.8
10 Year	5.1
25 Year	6.4
100 Year	13.8

IV. EXISTING CONDITIONS

The existing conditions of the project site consists of an existing clubhouse building with a swimming pool, fourteen tennis courts, and a parking lot to remain. The majority of the site drains through the golf course to the west, passing through a series of swales and pond before finally existing the site by I-684. A small portion of the stormwater drains to the east towards Bedford Road (NYS Route 22).

The following natural features, conservation areas, resource areas and drainage patterns of the project site have been identified and utilized to develop Drawing DA-1 "Existing Drainage Area Map" which is included in Appendix G:

- Wetlands (jurisdictional, wetland of special concern)
- Waterways (major, perennial, intermittent, springs)
- Buffers (stream, wetland, forest, etc.)
- Forest, vegetative cover
- Topography (contour lines, existing flow paths, steep slopes, etc.)
- Soil (hydrologic soil groups, highly erodible soils, etc.)

Based on the USDA Web soil survey, most on-site soils are well drained, with some moderately well drained soils. Most of the soils belong to hydrological groups B or C. The soil types, boundaries and drainage areas/designations are depicted on Drawing DA-1 within Appendix G.

Two separate Design Points (DP-1C and DP-2) were identified for comparing peak rates of runoff in existing and proposed conditions. Similarly, five separate drainage areas were identified in existing conditions based on the existing drainage divides at the site. The numbers included in the name of each drainage area correspond to the Design Point they drain towards.

The following is a description of each of the drainage areas analyzed in the existing conditions analysis. Refer to Drawing DA-1 in Appendix G.

<u>Existing Drainage Area 1C-2 (EDA-1C-2)</u> is 12.59 acres in size and is located on the southern portion of the disturbance area. This area consists of the existing clubhouse, pool, parking lot, several tennis courts, and landscaped areas. This drainage area drains towards Junction 1C-2 where it passes through several ponds before traveling to the design point. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 80 and 18 minutes, respectively.

<u>Existing Drainage Area 1C-6 (EDA-1C-6)</u> is 0.35 acres in size and is located on the western portion of the disturbance area. This area consists mostly of landscaped area. This drainage area

drains towards Junction 1C-6 where it runs via overland flow into a wetland area before traveling to the design point. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 66 and 7 minutes, respectively.

Existing Drainage Area 1C-7 (EDA-1C-7) is 1.59 acres in size and is located on the western portion of the disturbance area. This area consists mostly of landscaped area with a couple of tennis courts. This drainage area drains towards Junction 1C-7 where it runs via overland flow into a series of ponds before traveling to the design point. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 76 and 14 minutes, respectively.

Existing Drainage Area 1C-10 (EDA-1C-10) is 4.76 acres in size and is located on the western portion of the disturbance area. This area consists mostly of landscaped area with a couple of tennis courts. This drainage area drains towards Junction 1C-7 where it runs via overland flow into a series of ponds before traveling to the design point. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 67 and 9 minutes, respectively.

Existing Drainage Area 2 (EDA-2) is 3.37 acres in size and is located on the eastern portion of the disturbance area. This area consists mostly of landscaped area with a portion of the tennis courts. This drainage area drains towards a drain inlet along Bedford Road. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 79 and 11 minutes, respectively.

The peak rates of runoff to the design points from the drainage areas for each storm are shown in the table below:

Table 1
Summary of Peak Rates of Runoff in Existing Conditions
(Cubic Feet per Second)

Storm Recurrence Interval	DP-1C	DP-2
1 year	13.53	3.15
10 year	41.12	9.00
25 year	58.24	12.55
100 year	95.31	19.92

V. PROPOSED CONDITIONS

The proposed improvements consist of the entrance driveway, six residential buildings, amenities building, pool, and tennis courts.

The proposed drainage improvements include an infiltration basin, a detention basin, and porous pavement. After treatment for water quality and peak rate attenuation, stormwater discharges from the ponds will travel through overland flow and ponds/wetlands. The overland discharges provide multiple opportunities for water quality enhancement and infiltration in addition to the proposed stormwater management basins.

This section describes the design and analysis of the proposed conditions used to demonstrate that the SWPPP meets the requirements of the General Permit.

The Six Step Process For Stormwater Site Planning and Practice Selection

Step 1: Site Planning

The following practices and site features were incorporated in the site design:

- Preserving hydrology - Maintaining drainage divides
- Wetlands and buffers – The site includes 6.56 acres of wetlands and 26.01 acres of wetland buffers. The project requires the disturbance of 0 acres of wetlands and 0 acres of wetland buffers.
- Floodplain considerations - The site does not lie within the 100 year flood zone according to the National Flood Insurance Program Flood Insurance Rate Map (FIRM) No. 36119C0164F and No. 36119C0168F, effective date 09/28/2007.
- Waterways (major, perennial, intermittent, springs) – The location, setback, cross section, etc. of the existing waterway has been maintained.
- Forest, vegetative cover – The maximum amount of forest and vegetative cover has been maintained and/or provided.

- Topography (contour lines, existing flow paths, steep slopes, etc.) has been maintained or disturbed to the minimum extent practicable.
- Soil (hydrologic soil groups, highly erodible soils, etc.)

Step 2: Determine Water Quality Treatment Volume (WQv)

Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

- **Infiltration Basin**
- **Porous Pavement**

Step 4: Determine the minimum RRv Required

RRv_{min} calculations can be found in Appendix 'B'. RRv_{min} was met through infiltration basins and porous pavement.

Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

Non Standard/Alternative SMP's to Address Remaining Water Quality Volume (for Redevelopment Projects)

- **Hydrodynamic Separators (pretreatment)**

Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

- **PONDS**

Extended Detention Pond

Description

Pond that treats the water quantity volume through extended detention.

All practices exceed the required elements of SMP criteria as outlined in Chapter 6 of the NYS Stormwater Management Design Manual. A summary of each category is provided below.

1. Feasibility – Stormwater practices are designed based upon unique physical environmental considerations noted in the NYS Stormwater Management Design Manual (NYSSMDM).

2. Conveyance – The design conveys runoff to the designed stormwater practice in a manner that is safe, minimizes erosion and disruption to natural drainage channel and promotes filtering and infiltration.

3. Pretreatment – All stormwater practices provide pretreatment as required in accordance with NYSSMDM design guidelines.

4. Treatment Geometry – The plan provides water quality treatment in accordance with NYSSMDM guidelines.

5. Environmental/Landscaping –Extensive landscaping has been provided for each proposed stormwater practice to enhance pollutant removal and provide aesthetic enhancement to the property.

6. Maintenance – Maintenance for the environment practices has been provided and is detain the SWPPP Report as required. Maintenance access is provided in the design plans.

In order to determine the post-development rates of runoff generated on-site, the following drainage areas were analyzed in the post-development conditions. These areas are graphically depicted on Drawing DA-2 "Proposed Drainage Area Map" located in Appendix "G".

Two separate Design Points (DP-1C and DP-2) were identified for comparing peak rates of runoff in existing and proposed conditions. Similarly, three separate drainage areas were identified in proposed conditions based on the proposed drainage divides at the site. The numbers included in the name of each drainage area correspond to the Design Point they drain towards.

The following is a description of each of the drainage areas analyzed in the proposed conditions analysis. Refer to Drawing DA-2 in Appendix G.

Proposed Drainage Area 1C-2A (PDA-1C-2A) is 6.28 acres in size and is located on the southern portion of the disturbed area. This area consists of the existing parking area, proposed amenities building, pool, tennis courts, and parking overflow area. This drainage area also accounts for potential future impervious area from the future clubhouse building. This drainage area drains towards Junction 1C-2 where it passes through several ponds before traveling to the design point. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 87 and 17 minutes, respectively.

Proposed Drainage Area 1C-2B (PDA-1C-2B) is 13.56 acres in size and is located on the northern portion of the disturbed area. This area consists of the proposed residential buildings, roadways and parking areas, and tennis courts. This drainage area drains towards an infiltration and detention pond for quality and quantity treatment. As the stormwater exits the detention pond, it is directed towards two separate locations, Junction 1C-2 and Junction 1C-10. This is done to align post-development flows with pre-development conditions. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 79 and 10 minutes, respectively.

Proposed Drainage Area 2 (PDA-2) is 2.82 acres in size and is located on the eastern portion of the disturbed area. This area consists of existing landscaped area. This drainage area drains towards a drain inlet along Bedford Road. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 74 and 11 minutes, respectively.

The peak rates of runoff to the design point of each of the analyzed drainage areas for each storm are shown on the table below:

Table 3
Summary of Proposed Peak Rates of Runoff in Proposed Conditions
(Cubic Feet per Second)

Storm Recurrence Interval	DP-1C	DP-2
1 year	7.23	1.87
10 year	26.55	6.37
25 year	44.19	9.23
100 year	82.90	15.32

The reductions in peak rates of runoff from proposed to existing conditions are shown on the table below:

Table 4
Percent Reductions in Peak Rates of Runoff (Existing vs. Proposed Conditions)
(Cubic Feet per Second)

Design Point	Storm Recurrence Frequency (Years)	Existing Peak Runoff Rate (cfs)	Proposed Peak Runoff Rate (cfs)	Percent Reduction (%)
1C	1 year	13.53	7.23	46.6
	10 year	41.12	26.55	35.4
	25 year	58.24	44.19	24.1
	100 year	95.31	82.90	13.0
2	1 year	3.15	1.87	40.6
	10 year	9.00	6.37	29.2
	25 year	12.55	9.23	26.5
	100 year	19.92	15.32	23.1

As demonstrated in Table 4, the proposed stormwater improvements will result in significant reductions of peak rates of runoff for all storms and design points analyzed.

VI. SOIL EROSION & SEDIMENT CONTROL

A potential impact of the proposed development on any soils or slopes will be that of erosion and transport of sediment during construction. An Erosion and Sediment Control Management Program will be established for the proposed development, beginning at the start of construction and continuing throughout its course, as outlined in the "New York State Standards and

Specifications for Erosion and Sediment Control," November 2016. A continuing maintenance program will be implemented for the control of sediment transport and erosion control after construction and throughout the useful life of the project.

The Operator shall have a qualified professional conduct an assessment of the site prior to the commencement of construction and certify that the appropriate erosion and sediment controls, as shown on the Sediment & Erosion Control Plans, have been adequately installed to ensure overall preparedness of the site for the commencement of construction. In addition, the Operator shall have a qualified professional conduct one site inspection at least every seven calendar days and at least two site inspections every seven calendar days when greater than five acres of soil is disturbed at any one time. In accordance with NYSDEC SPDES General Permit No. GP-0-20-001 effective January 29, 2020 written authorization by the MS4 (Town of North Castle) to disturb greater than five (5) acres of soil at any one time is hereby requested, subject to the following provisions:

1. The owner or operator shall have a qualified inspector conduct at least two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
2. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, last revised November 2016.
3. The owner or operator shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.
4. The owner or operator shall install any additional site-specific practices needed to protect water quality.
5. The owner or operator shall include the requirements above in their SWPPP.

Prior to the commencement of construction activity, the owner or operator must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The owner or operator shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the trained contractor. The owner or operator shall ensure that at least one trained contractor is on site on a daily basis when soil disturbance activities are being performed.
The owner or operator shall have each of the contractors and subcontractors identified above sign a copy of the certification statement provided in Appendix E before they commence any construction activity.

<u>Soil Description</u>

As provided by the United States Department of Agriculture, Soil Conservation Service "Web Soil Survey," soil classifications which exist on the subject site are described below.

Soils are placed into four hydrologic groups: A, B, C, and D. In the definitions of the classes, infiltration rate is the rate at which water enters the soil at the surface and is controlled by the surface conditions. Transmission rate is the rate at which water moves in the soil and is controlled by soil properties. Definitions of the classes are as follows:

A. (Low runoff potential). The soils have a high infiltration rate even when thoroughly wetted. They chiefly consist of deep, well drained to excessively drained sands or gravels. They have a high rate of water transmission.

B. The soils have a moderate infiltration rate when thoroughly wetted. They chiefly are moderately deep to deep, moderately well drained to well drained soils that have moderately fine to moderately coarse textures. They have a moderate rate of water transmission.

C. The soils have a slow infiltration rate when thoroughly wetted. They chiefly have a layer that impedes downward movement of water or have moderately fine to fine texture. They have a slow rate of water transmission.

D. (High runoff potential). The soils have a very slow infiltration rate when thoroughly wetted. They chiefly consist of clay soils that have a high swelling potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. They have a very slow rate of water transmission.

A soil's tendency to erode is also described in the USDA web soil survey. The ratings in this interpretation indicate the hazard of soil loss from unsurfaced areas. The ratings are based on soil erosion factor K, slope, and content of rock fragments. The hazard is described as "slight," "moderate," or "SEVERE." A rating of "slight" indicates that little or no erosion is likely; "moderate" indicates that some erosion is likely, that the temporarily unsurfaced / unstabilized during construction may require occasional maintenance, and that simple erosion-control measures are needed; and "SEVERE" indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that erosion-control measures are needed.

Per the Soil Survey, the following soils listed below are present at the site. Following this list is a detailed description of each soil type found on the property:

SYM.	HYDRO. SOIL GROUP	DESCRIPTION
Ub	**B**	**Udorthents, Smoothed**
PnB	**C**	**Paxton fine sandy loam, 3 to 8 percent**
CrC	**B**	**Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky**
PnC	**C**	**Paxton fine sandy loam, 8 to 15 percent**
CsD	**B**	**Charlton-Chatfield complex, 15 to 35 percent slopes, very rocky**

Ub, Udorthents, Smoothed

This soil consists of very deep, excessively drained to moderately well drained soils that have been altered by cutting and filling. It is made up of soil material in alternating layers ranging from sand to silt loam. Slopes are mainly 3 to 15 percent, but they range from 0 to 25 percent. Because of the variability of the Udorthents, a typical pedon is not described. The fill material is commonly more than 20 inches deep over the original soil. The content of rock fragments ranges from 0 to 60 percent. The properties and characteristics of the Udorthents are so variable that onsite investigation and evaluation are required to determine the suitability and limitations for proposed uses.

Hydrologic group: **B**
Erosion Hazard Rating: **NOT RATED**

PnB, Paxton fine sandy loam, 3 to 8 percent

This soil is gently sloping, very deep, and well drained. It is on broad ridges and small hills. Individual areas are irregularly shaped or are long and narrow. Included with this soil in mapping are a few areas of the moderately well drained Woodbridge soils, small areas of the somewhat poorly drained Ridgebury soils, small areas of Charlton soils that do not have a dense substratum, and the areas of rock outcrop. Woodbridge soils are on the lower concave side slopes and at the bottom of the hills. Ridgebury soils are along drainageways. The rock outcrop is in a few areas, generally near areas of Chatfield or Hollis soils. Also included are a new soils that have a very stony surface. The seasonally high water table is 1.5 to 2.5 feet. The available water capacity is moderate.

Hydrologic group: **C**
Erosion Hazard Rating: **SLIGHT**

CrC, Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky

The unit consists of very deep and moderately deep, well drained and somewhat excessively drained Chatfield soil and the well-drained Charlton soil. It is on hilltops and hillsides that are underlain by highly folded bedrock. Included in mapping are areas of moderately well drained Sutton soils, the somewhat poorly drained and poorly drained Leicester soils, and the poorly drained and very poorly drained Sun soils. Sutton soils are along drainageways and in concave interridge areas. Leicester and Sun soils are in shallow depressions and along drainageways. Also included are the poorly drained Carlisle and Palms soils, the somewhat excessively drained and well drained Hollis soils, and areas of soils that are similar to the Chatfield soil but are deep over bedrock. Carlisle and Palms soils are in closed depressions. Hollis soils are shallow over bedrock. They are in scattered areas throughout the unit but are mostly on ridgetops. The soils that are similar to the Chatfield soils are in the western part of Putnam County, in areas where the surface is extremely stony or bouldery. The seasonally high water table is more than 6 feet. The available water capacity is moderate.

Hydrologic group: **B**
Erosion Hazard Rating: **MODERATE**

PnC, Paxton fine sandy loam, 8 to 15 percent

This soil is strongly sloping, very deep, and well drained. It is on the sides and tops broad ridges and small hills. Individual areas are irregularly shaped or are long and narrow. Included with this soil in mapping are a few areas of the moderately well drained Woodbridge soils, small areas of the somewhat poorly drained Ridgebury soils, small areas of Charlton soils that do not have a dense substratum, and the areas of rock outcrop. Woodbridge soils are on the lower concave side slopes and at the bottom of the hills. Ridgebury soils are along drainageways. The rock outcrop is in a few areas, generally near areas of Chatfield or Hollis soils. Also included are a new soils that have a very stony surface. The seasonally high water table is 1.5 to 2.5 feet. The available water capacity is moderate.

Hydrologic group: **C**
Erosion Hazard Rating: **MODERATE**

<u>CsD, Charlton-Chatfield complex, 15 to 35 percent slopes, very rocky</u>

The unit consists of very deep and moderately deep, well drained and somewhat excessively drained Chatfield soil and the well-drained Charlton soil. It is on tops ad sides of hills that are underlain by highly folded bedrock. Slopes range from 15 to 35 percent. Included in mapping are areas of moderately well drained Sutton soils, the somewhat poorly drained and poorly drained Leicester soils, and the poorly drained and very poorly drained Sun soils. Sutton soils are along drainageways and in concave interridge areas. Leicester and Sun soils are in shallow depressions and along drainageways. Also included are the poorly drained Carlisle and Palms soils, the somewhat excessively drained and well drained Hollis soils, and areas of soils that are similar to the Chatfield soil but are deep over bedrock. Carlisle and Palms soils are in closed depressions. Hollis soils are shallow over bedrock. They are in scattered areas throughout the unit but are mostly on ridgetops. The soils that are similar to the Chatfield soils are in the western part of Putnam County, in areas where the surface is extremely stony or bouldery. The seasonally high water table is more than 6 feet. The available water capacity is moderate.

Hydrologic group: **B**
Erosion Hazard Rating: **SEVERE**
<u>On-Site Pollution Prevention</u>
There are temporary pollution prevention measures used to control litter and construction debris on site, such as:

- Silt Fence
- Silt Sack
- Stone Check Dam
- Excavated Drop Inlet Protection

There will be inlet protection provided for all storm drains and inlets with the use of curb gutter inlet protection structures and stone & block drop inlet protection, which keep silt, sediment and construction litter and debris out of the on-site stormwater drainage system.

Temporary Control Measures

Temporary control measures and facilities will include silt fences, construction ditches, stabilized construction access, temporary seeding, mulching and sediment traps with temporary riser and anti-vortex devices.

Throughout the construction of the proposed redevelopment, temporary control facilities will be implemented to control on-site erosion and sediment transfer. Construction ditches, if required, will be used to direct stormwater runoff to temporary sediment traps for settlement. The sediment traps will be constructed as part of this project will serve as temporary sediment basins to remove sediment and pollutants from the stormwater runoff produced during construction. Descriptions of the temporary sediment & erosion controls that will be used during the development of the site including silt fence, stabilized construction access, seeding, mulching and inlet protection are as follows:

1. Silt Fence is constructed using a geotextile fabric. The fence will be either 18 inches or 30 inches high. The height of the fence can be increased in the event of placing these devices on uncompacted fills or extremely loose undisturbed soils. The fences will not be placed in areas which receive concentrated flows such as ditches, swales and channels nor will the filter fabric material be placed across the entrance to pipes, culverts, spillway structures, sediment traps or basins.

2. Stabilized Construction Access consists of AASHTO No. 1 rock. The rock entrance will be a minimum of 50 feet in length by 24 feet in width by 8 inches in depth.

3. Seeding will be used to create a vegetative surface to stabilize disturbed earth until at least 80% of the disturbed area has a perennial vegetative cover. This amount is required to adequately function as a sediment and erosion control facility. Grass lining will also be used to line temporary channels and the surrounding disturbed areas.

4. Mulching is used as an anchor for seeding and disturbed areas to reduce soil loss due to storm events. These areas will be mulched with straw at a rate of 3 tons per acre such that

the mulch forms a continuous blanket. Mulch must be placed after seeding or within 48 hours after seeding is completed.

5. Inlet Protection will be provided for all stormwater basins and inlets with the use of curb & gutter inlet protection and stone & block inlet protection structures, which will keep silt, sediment and construction debris out of the storm system. Existing structures within existing paved areas will be protected using "Silt Sacks" inside the structures.

6. Stone Check Dams are small barriers of crushed stone which will be laid across the grass swales which are approximately 12 inches high, located every one foot of elevation change along the swales so that the crest elevation of the downstream dam is at the same elevation of the toe of the upstream dam.

The contractor shall be responsible for maintaining the temporary sediment and erosion control measures throughout construction. This maintenance will include, but not be limited to, the following tasks:

1. For dust control purposes, moisten all exposed graded areas with water at least twice a day in those areas where soil is exposed and cannot be planted with a temporary cover due to construction operations or the season (December through March).

2. Inspection of erosion and sediment control measures shall be performed at the end of each construction day and immediately following each rainfall event. All required repairs shall be immediately executed by the contractor.

3. Sediment deposits shall be removed when they reach approximately ⅓ the height of the silt fence. All such sediment shall be properly disposed of in fill areas on the site, as directed by the Owner's Field Representative. Fill shall be protected following disposal with mulch, temporary and/or permanent vegetation and be completely circumscribed on the downhill side by silt fence.

4. Rake all exposed areas parallel to the slope during earthwork operations.

5. Following final grading, the disturbed area shall be stabilized with a permanent surface treatment (i.e. turf grass, pavement or sidewalk). During rough grading, areas which are not to be disturbed for fourteen or more days shall be stabilized with the temporary seed mixture, as defined on the plans. Seed all piles of dirt in exposed soil areas that will not receive a permanent surface treatment.

Concrete Material and Equipment Management

Concrete washouts shall be used to contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery. The washout facilities consolidate solid for easier disposal and prevent runoff of liquids. The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life. Solids that are improperly disposed of can clog storm drain pipes and cause flooding. Installing concrete washout facilities not only prevents pollution but also is a matter of good housekeeping at your construction site.

Prefabricated concrete washout containers can be delivered to the site to provide maintenance and disposal of materials. Regular pick-ups of solid and liquid waste materials will be necessary. To prevent leaks on the job site, ensure that prefabricated washout containers are watertight. A self installed concrete washout facility can be utilized although they are much less reliable than prefabricated containers and are prone to leaks. There are many design options for the washout, but they are preferably built below-grade to prevent breaches and reduce the likelihood of runoff. Above-grade structures can also be used if they are sized and constructed correctly and are diligently maintained. One of the most common problems with self-installed concrete washout facilities is that they can leak or be breached as a result of constant use, therefore the contractor shall be sure to use quality materials and inspect the facilities on a daily basis.

Washouts must be sized to handle solids, wash water, and rainfall to prevent overflow. Concrete Washout Systems, Inc. estimates that 7 gallons of wash water are used to wash one truck chute and 50 gallons are used to wash out the hopper of a concrete pump truck.

For larger sites, a below-grade washout should be at least 10 feet wide and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 12-inches of freeboard must be provided. The pit must be lined with plastic sheeting of at least 10-mil thickness without holes or tears to prevent leaching of liquids into the ground. Concrete wash water should never be placed in a pit that is connected to the storm drain system or that drains to nearby waterways.

An above-grade washout can be constructed at least 10 feet wide by 10 feet long and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 4-inches of freeboard must be provided. The washout structures can be constructed with staked straw bales or sandbags double-or triple lined with plastic sheeting of at least 10-mil thickness without holes or tears.

Concrete washout facilities shall not be located within 50 feet of storm drains, open ditches, or water bodies and should be placed in locations that allow for convenient access for concrete trucks. The contractor shall check all concrete washout facilities daily to determine if they have been filled to 75 percent capacity, which is when materials need to be removed. Both above-and below-ground self-installed washouts should be inspected daily to ensure that plastic linings are intact and sidewalls have not been damaged by construction activities. Prefabricated washout containers should be inspected daily as well as to ensure the container is not leaking or nearing 75 percent capacity. Inspectors should also note whether the facilities are being used regularly. Additional signage for washouts may be needed in more convenient locations if concrete truck operators are not utilizing them.

The washout structures must be drained or covered prior to predicted rainstorms to prevent overflows. Hardened solids either whole or broken must be removed and then they may be reused onsite or hauled away for recycling.

Once materials are removed from the concrete washout, a new structure must be built or excavated, or if the previous structure is still intact, inspect it for signs of weakening or damage and make any necessary repairs. Line the structure with new plastic that is free of holes or tears and replace signage if necessary. It is very important that new plastic be used after every cleaning because pumps and concrete removal equipment can damage the existing liner.

Construction Site Chemical Control

The purpose of this management measure is to prevent the generation of nonpoint source pollution from construction sites due to improper handling and usage of nutrients and toxic substances, and to prevent the movement of toxic substances from the construction site.

Many potential pollutants other than sediment are associated with construction activities. These pollutants include pesticides; fertilizers used for vegetative stabilization; petrochemicals; construction chemicals such as concrete products, sealers, and paints; wash water associated with these products; paper; wood; garbage; and sanitary waste.

Disposal of excess pesticides and pesticide-related wastes should conform to registered label directions for the disposal and storage of pesticides and pesticide containers set forth in applicable Federal, State and local regulations that govern their usage, handling, storage, and disposal.

Pesticides should be disposed of through either a licensed waste management firm or a treatment, storage and disposal (TSD) facility. Containers should be triple-rinsed before disposal, and rinse waters should be reused as product.
Other practices include setting aside a locked storage area, tightly closing lids, storing in a cool, dry place, checking containers periodically for leaks or deterioration, maintaining a list of products in storage, using plastic sheeting to line the storage areas, and notifying neighboring property owners prior to spraying.

When storing petroleum products, follow these guidelines:

- Create a shelter around the area with cover and wind protection;
- Line the storage area with a double layer of plastic sheeting or similar material;
- Create an impervious berm around the perimeter with a capacity of 110 percent greater than that of the largest container;
- Clearly label all products;
- Keep tanks off the ground; and
- Keep lids securely fastened.

Post spill procedure information and have persons trained in spill handling on site or on call at all times. Materials for cleaning up spills should be kept on site and easily available. Spills should be cleaned up immediately and the contaminated material properly disposed of. Maintain and wash equipment and machinery in confined areas specifically designed to control runoff.

Thinners or solvents should not be discharged into sanitary or storm systems when cleaning machinery. Use alternative methods for cleaning larger equipment parts, such as high-pressure, high-temperature water washes, or steam cleaning. Equipment-washing detergents can be used, and wash water may be discharged into sanitary sewers if solids are removed from the solution first. (This practice should be verified with the local sewer authority.) Small parts can be cleaned with degreasing solvents, which can then be reused or recycled.

<u>Solid Waste Management and Portable Sanitary Management</u>

The purpose of this management measure is to prevent the potential for solid waste such as construction debris, trash, etc. from construction sites due to improper handling and storage. Debris and litter should be removed periodically from the BMP's and surrounding areas to prevent clogging of pipes and structures. All construction material shall be stored in designated staging areas. Roll-off containers shall be placed on site and all empty containers, construction debris and litter shall be placed in the containers.

Portable sanitary units may be utilized on-site or bathrooms will be provided within construction trailers. A sanitation removal company will be hired to pump/remove any sanitary waste. In the event that portable sanitary units are used and then cleaned after being emptied, the rinse water may not be disposed of to the storm drain system. It shall be contained for later disposal if it can't be disposed of on-site. Remove paper and trash before cleaning the portable sanitary units. The portable sanitary units shall be located away from the storm drain system if possible. Provide over head cover for wash areas if possible. Maintain spill response material and equipment on site to eliminate the potential for contaminants and wash water from entering the storm drain system.

Permanent Control Measures and Facilities for Long Term Protection

Towards the completion of construction, permanent sediment and erosion control measures will be developed for long term erosion protection. The following permanent control measures and facilities have been proposed to be implemented for the project:

1. Vegetated Swales will function to provide additional treatment of stormwater runoff by removal of pollutants and will promote a reduction of peak flows and provide runoff infiltration.

2. Infiltration Basins will be used to treat the runoff volume generated from the developed area and provide improvement to water quality control. The proposed basins will provide water quality for 90% of the average annual stormwater runoff volume. The water quality volume will be retained and higher storms will be released gradually. Refer to the water quality volume calculations, in Appendix B.

3. CDS Water Quality Structure will be used to provide pretreatment of the water quality flow rate for separating sediment, debris, floatables, etc. from the runoff prior to discharge to the SMP's. The CDS Water Quality Structure has been designed to treat up to the required water quality volume and appropriately handle all storm frequencies without the resuspension of solids. The system will provide 80% TSS removal rate for particles having a mean particle size of 125 microns for stormwater runoff.

4. Catch Basins will be used to remove some of the coarse sand and grit sediment before entering the drainage system. Each catch basin will be constructed with an 18 inch deep sump.

5. Rip-Rap Energy Dissipators At discharge points from the stormwater drainage system into the stormwater management basins, rip-rap pads consisting of angular rocks will be placed to dissipate velocity and reduce the risk of erosion.

6. Seeding of at least 70% perennial vegetative cover will be used to produce a permanent uniform erosion resistant surface. The seeded areas will be mulched with straw at a rate of 2 tons per acre such that the mulch forms a continuous blanket.

Specifications for Soil Restoration

Prior to the final stabilization of the disturbed areas, soil restoration will be required for all vegetated areas to recover the original properties and porosity of the soil. Soil Restoration Requirements are provided on Table 7 below:

Table 7

Soil Restoration Requirements

<table>
<tr><th>Type of Soil Disturbance</th><th colspan="2">Soil Restoration Requirement</th><th>Comments/Examples</th></tr>
<tr><td>No soil disturbance</td><td colspan="2">Restoration not permitted</td><td>Preservation of Natural Features</td></tr>
<tr><td>Minimal soil disturbance</td><td colspan="2">Restoration not required</td><td>Clearing and grubbing</td></tr>
<tr><td rowspan="2">Areas where topsoil is stripped only – no change in grade</td><td>HSG A&B</td><td>HSG C&D</td><td rowspan="2">Protect area from any ongoing construction activities</td></tr>
<tr><td>apply 6 inches of topsoil</td><td>Aerate* and apply 6 inches of topsoil</td></tr>
<tr><td rowspan="2">Areas of cut or fill</td><td>HSG A&B</td><td>HSG C&D</td><td rowspan="2">Clearing and grubbing</td></tr>
<tr><td>Aerate and apply 6 inches of topsoil</td><td>Apply full Soil Restoration**</td></tr>
<tr><td>Heavy traffic areas on site (especially) in a zone 5-25 feet around buildings but not within a 5 foot perimeter around foundation walls)</td><td colspan="2">Apply full Soil Restoration (decompaction and compost enhancement)</td><td></td></tr>
<tr><td>Areas where Runoff Reduction and/or Infiltration practices are applied</td><td colspan="2">Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.</td><td>Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area.</td></tr>
<tr><td>Redevelopment projects</td><td colspan="2">Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.</td><td></td></tr>
</table>

* Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.

** Per "Deep Ripping and De-compaction, DEC 2008."

During periods of relatively low to moderate subsoil moisture, the disturbed subsoils are returned to rough grade and the following full soil restoration steps applied:

1. Apply 3 inches of compost over subsoil.

2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor-mounted disc, or tiller, mixing, and circulating air and compost into subsoils.

3. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site.

<u>Specifications for Final Stabilization of Graded Areas</u>

Final stabilization of graded areas consists of the placement of topsoil and installation of landscaping (unless the area is to be paved, or a building is to be constructed in the location). Topsoil is to be spread as soon as grading operations are completed. Topsoil is to be placed to a minimum depth of six inches on all embankments, planting areas and seeding/sod areas. The subgrade is to be scarified to a depth of two inches to provide a bond of the topsoil with the subsoil. Topsoil is to be raked to an even surface and cleared of all debris, roots, stones and other unsatisfactory material.

Planting operations shall be conducted under favorable weather conditions as follows:

- Permanent Lawns - April 15 (provided soil is frost-free and not excessively moist) to May 15; August 15 to October 15.
- Temporary Lawn Seeding - if outside of the time periods noted above, the areas shall be seeded immediately on completion of topsoil operations with annual ryegrass (Italian rye) at a rate of six pounds per 1,000 square feet. Temporary lawn installation is permitted provided the soil is frost-free and not excessively moist. The permanent lawn is to be installed the next planting season.

On slopes with a grade of 3 horizontal to 1 vertical or greater, and in swales, a geotextile netting or mat shall be installed for stabilization purposes as shown on the Plans. Seeded areas are to be mulched with straw or hay at an application rate of 70-90 pounds per 1,000 s.f. Straw or hay mulch must be spread uniformly and anchored immediately after spreading to prevent wind blowing. Mulches must be inspected periodically and in particular after rainstorms to check for erosion. If erosion is observed, additional mulch must be applied. Netting shall be inspected after rainstorms for dislocation or failure; any damage shall be repaired immediately.

All denuded surfaces which will be exposed for a period of over two months or more shall be temporarily hydroseeded with (a) perennial ryegrass at a rate of 40 lbs per acre (1.0 lb per 1000 square feet); (b) Certified "Aroostook" winter rye (cereal rye) @ 100 lb per acre (2.5 lb/1000 s.f.) to be used in the months of October and November.

Permanent turfgrass cover is to consist of a seed mixture as follows:

(a) <u>Sunny sites</u>

Kentucky Bluegrass	2.0-2.6 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	0.4-0.6 pounds/1000 square feet

(b) <u>Shady sites</u>

Kentucky Bluegrass	0.8-1.0 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	2.6-3.3 pounds/1000 square feet

All plant materials shall comply with the standards of the American Association Of Nurserymen with respect to height and caliper as described in its publication American Standard for Nursery Stock, latest edition.

VII. CONSTRUCTION PHASE AND POST-CONSTRUCTION MAINTENANCE

During the construction phase and following construction of the project, a number of maintenance measures will be taken with respect to the site maintenance. Measures to be taken included the following:

1. During Construction

A comprehensive sediment and erosion control plan will be in place during the construction period. Maintenance measures for sediment and erosion controls will include:

A qualified professional acceptable to the municipality will be hired by the owner or operator to monitor the installation and maintenance of the sediment and erosion control plans. The qualified professional shall report directly to the Engineering Consultant and shall be responsible for ensuring compliance with the design of the sediment and erosion control plans.

The qualified professional so hired will inspect all sediment and erosion control measures at least every seven calendar days. In the event that there has been a variance with the design of the sediment and erosion control measures so that the ability of the measures to adequately perform the intended function is lessened or compromised and/or the facilities are not adequately maintained, the qualified professional shall be required to report such variance to the Engineering Consultant within 48 hours and shall be empowered to order immediate repairs to the sediment and erosion control measures.

The qualified professional will also be responsible for observing the adequacy of the vegetation growth (trees, shrubs, groundcovers and turfgrasses) in newly graded areas and for ordering additional plantings in the event that the established plant materials do not adequately protect the ground surface from erosion.

2. Following Construction

Site maintenance activities on the property will include:

- Grounds maintenance, including mowing of lawns;
- Planting of trees, shrubs and groundcovers; pruning of trees and shrubs;
- Application of fertilizer and herbicides;
- Maintenance of stormwater management area;

Grounds maintenance on the site will be performed by landscaping contractor.

Fertilizer is typically applied twice in the year - once in the spring and once in the fall. The application of fertilizer is usually necessary to maintain healthy lawn growth due to competition for nutrients with trees and shrubs and since the clippings are often removed. It is not recommended that fertilizer be applied during the summer. It is at this time that lawns are typically dormant.

Fertilizers come in three basic types: (1) Organic; (2) Soluble synthetic and (3) Slow release.

Organic fertilizers are derived from plant or animal waste. Since they are heavier and bulkier than other fertilizers, it is necessary to apply a much greater amount at one time. Soluble synthetic fertilizers are predictable with determining the exact impact on a lawn. However more applications are necessary since their effect is often short term. Slow release fertilizers have a high percentage of nitrogen so quantities that need be handled at one time are smaller. Slow release fertilizers will be utilized by the project.

A complete fertilizer contains all three of the primary nutrients - nitrogen (N), phosphorus (P) and potassium in the form of potash (K). Typically, a 3-1-2 ratio of nutrients (N-P-K) is used for lawn applications.

Fertilizer shall be applied by the landscape contractor in accordance with the manufacturer's instructions. The application of fertilizer does require some skill on the part of the operator. Should there be a spill of fertilizer, the landscape contractor shall be required to scrape or vacuum it up. The area will then be watered in accordance with the manufacturer's instructions to ensure that the fertilizer becomes soluble and available to plants and does not run off.

Summit Club Partners, LLC will be responsible for the long-term operation and maintenance of the permanent stormwater management practices. The permanent stormwater management practices shall be maintained in accordance with the Maintenance Inspection Checklists provided in Appendix D.

VIII. CONCLUSION

This Stormwater Pollution Prevention Plan has been prepared to describe the project's pre and post-development stormwater management improvements and its sediment and erosion control improvements to be utilized during construction. The proposed permanent improvements and the interim improvements to be utilized during construction have been designed in accordance with the requirements of the:

- Requirements of the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-20-001, effective January 29, 2020.
- Chapter 267 "Stormwater Management" of the Town of North Castle Zoning Code
- New York State Stormwater Management Design Manual.

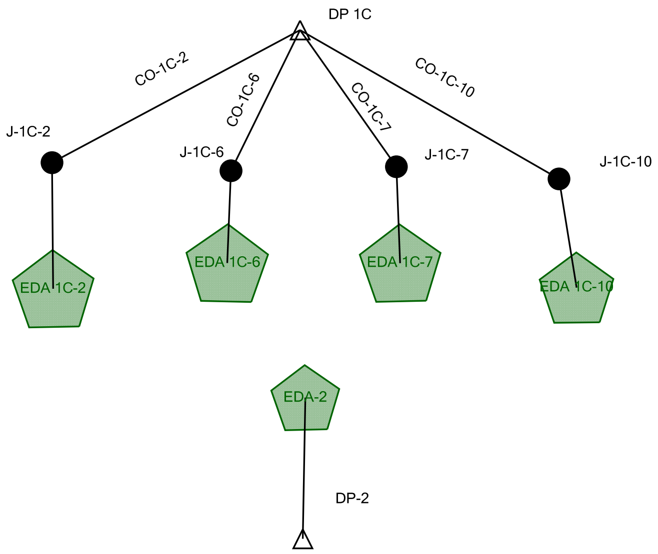
The project employs a variety of practices to enhance stormwater quality and reduce peak rates of runoff associated with the proposed improvements. These measures include an infiltration basin, detention basin, and porous pavement.

Based on the foregoing, it is our professional opinion that the proposed improvements will provide water quantity and quality enhancements which exceed the above mentioned requirements and are not anticipated to have any adverse impacts to the site or any surrounding areas.

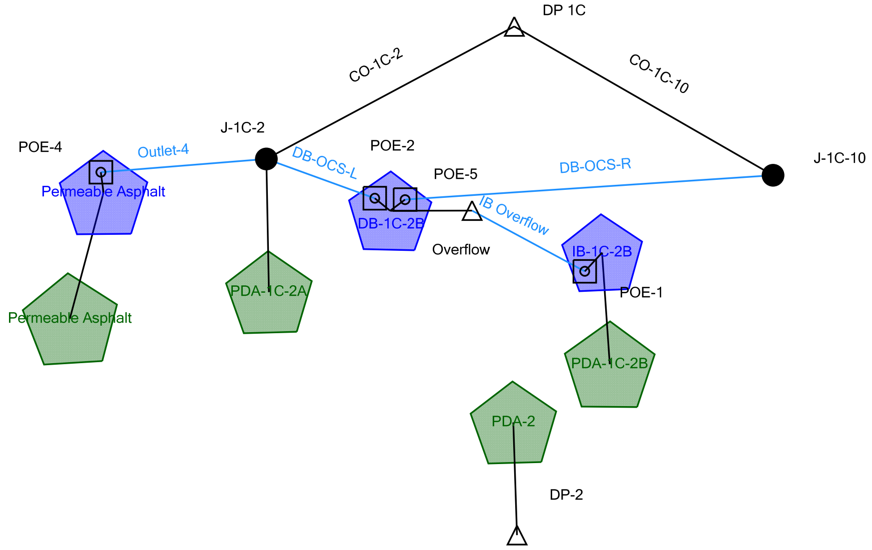
APPENDIX A

EXISTING AND PROPOSED HYDROLOGIC CALCULATIONS

Scenario: Pre-Development 1 year



Scenario: Post-Development 1 year



Stormwater Hydrologic Calculations

Project Summary

Title	The Summit Club at Armonk
Engineer	Michael Thompson, PE
Company	JMC, PLLC
Date	6/14/2021

Notes

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
EDA 1C-2	Pre-Development 1 year	1	50,159	12.250	10.75
EDA 1C-2	Pre-Development 10 year	10	136,541	12.200	30.02
EDA 1C-2	Pre-Development 25 year	25	190,446	12.200	41.73
EDA 1C-2	Pre-Development 100 year	100	305,340	12.200	65.98
EDA 1C-6	Pre-Development 1 year	1	570	12.150	0.12
EDA 1C-6	Pre-Development 10 year	10	2,282	12.100	0.60
EDA 1C-6	Pre-Development 25 year	25	3,494	12.100	0.94
EDA 1C-6	Pre-Development 100 year	100	6,254	12.100	1.71
EDA 1C-7	Pre-Development 1 year	1	5,095	12.200	1.16
EDA 1C-7	Pre-Development 10 year	10	15,216	12.150	3.61
EDA 1C-7	Pre-Development 25 year	25	21,734	12.150	5.18
EDA 1C-7	Pre-Development 100 year	100	35,850	12.150	8.48
EDA 1C-10	Pre-Development 1 year	1	8,426	12.150	1.80
EDA 1C-10	Pre-Development 10 year	10	32,561	12.150	8.53
EDA 1C-10	Pre-Development 25 year	25	49,470	12.150	13.10
EDA 1C-10	Pre-Development 100 year	100	87,757	12.150	23.15
EDA-2	Pre-Development 1 year	1	12,744	12.150	3.15
EDA-2	Pre-Development 10 year	10	35,467	12.150	9.00
EDA-2	Pre-Development 25 year	25	49,754	12.150	12.55
EDA-2	Pre-Development 100 year	100	80,319	12.150	19.92
PDA-1C-2A	Post-Development 1 year	1	31,715	12.200	7.23
PDA-1C-2A	Post-Development 10 year	10	76,089	12.200	17.11
PDA-1C-2A	Post-Development 25 year	25	102,668	12.200	22.80
PDA-1C-2A	Post-Development 100 year	100	158,215	12.200	34.36
PDA-1C-2B	Post-Development 1 year	1	51,301	12.150	13.03

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
PDA-1C-2B	Post-Development 10 year	10	142,766	12.150	36.90
PDA-1C-2B	Post-Development 25 year	25	200,273	12.150	51.35
PDA-1C-2B	Post-Development 100 year	100	323,300	12.150	81.27
PDA-2	Post-Development 1 year	1	8,007	12.150	1.87
PDA-2	Post-Development 10 year	10	25,146	12.150	6.37
PDA-2	Post-Development 25 year	25	36,373	12.150	9.23
PDA-2	Post-Development 100 year	100	60,902	12.150	15.32
Permeable Asphalt	Post-Development 1 year	1	3,781	12.100	0.94
Permeable Asphalt	Post-Development 10 year	10	7,185	12.100	1.74
Permeable Asphalt	Post-Development 25 year	25	9,126	12.100	2.20
Permeable Asphalt	Post-Development 100 year	100	13,096	12.100	3.12

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
DP-2	Pre-Development 1 year	1	12,744	12.150	3.15
DP-2	Post-Development 1 year	1	8,007	12.150	1.87
DP-2	Pre-Development 10 year	10	35,467	12.150	9.00
DP-2	Post-Development 10 year	10	25,146	12.150	6.37
DP-2	Pre-Development 25 year	25	49,754	12.150	12.55
DP-2	Post-Development 25 year	25	36,373	12.150	9.23
DP-2	Pre-Development 100 year	100	80,319	12.150	19.92
DP-2	Post-Development 100 year	100	60,902	12.150	15.32
DP 1C	Pre-Development 1 year	1	64,087	12.350	13.53
DP 1C	Post-Development 1 year	1	31,648	12.350	7.23
DP 1C	Pre-Development 10 year	10	186,221	12.350	41.12

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
DP 1C	Post-Development 10 year	10	136,271	12.450	26.55
DP 1C	Pre-Development 25 year	25	264,642	12.350	58.24
DP 1C	Post-Development 25 year	25	208,279	12.400	44.19
DP 1C	Pre-Development 100 year	100	434,447	12.300	95.31
DP 1C	Post-Development 100 year	100	368,690	12.400	82.90
J-1C-2	Pre-Development 1 year	1	50,159	12.250	10.75
J-1C-2	Post-Development 1 year	1	31,715	12.200	7.23
J-1C-2	Pre-Development 10 year	10	136,541	12.200	30.02
J-1C-2	Post-Development 10 year	10	106,244	12.250	20.93
J-1C-2	Pre-Development 25 year	25	190,446	12.200	41.73
J-1C-2	Post-Development 25 year	25	155,555	12.250	32.89
J-1C-2	Pre-Development 100 year	100	305,340	12.200	65.98
J-1C-2	Post-Development 100 year	100	273,219	12.250	65.49
J-1C-6	Pre-Development 1 year	1	570	12.150	0.12
J-1C-6	Pre-Development 10 year	10	2,282	12.100	0.60
J-1C-6	Pre-Development 25 year	25	3,494	12.100	0.94
J-1C-6	Pre-Development 100 year	100	6,254	12.100	1.71
J-1C-7	Pre-Development 1 year	1	5,095	12.200	1.16
J-1C-7	Pre-Development 10 year	10	15,216	12.150	3.61
J-1C-7	Pre-Development 25 year	25	21,734	12.150	5.18
J-1C-7	Pre-Development 100 year	100	35,850	12.150	8.48
J-1C-10	Pre-Development 1 year	1	8,426	12.150	1.80
J-1C-10	Post-Development 1 year	1	0	0.000	0.00
J-1C-10	Pre-Development 10 year	10	32,561	12.150	8.53
J-1C-10	Post-Development 10 year	10	30,163	12.450	6.62

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
J-1C-10	Pre-Development 25 year	25	49,470	12.150	13.10
J-1C-10	Post-Development 25 year	25	52,899	12.400	12.13
J-1C-10	Pre-Development 100 year	100	87,757	12.150	23.15
J-1C-10	Post-Development 100 year	100	95,726	12.300	17.43

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
IB-1C-2B (IN)	Post-Development 1 year	1	51,301	12.150	13.03	(N/A)	(N/A)
IB-1C-2B (OUT)	Post-Development 1 year	1	0	0.000	0.00	619.85	18,516
IB-1C-2B (IN)	Post-Development 10 year	10	142,766	12.150	36.90	(N/A)	(N/A)
IB-1C-2B (OUT)	Post-Development 10 year	10	60,324	12.200	25.81	620.84	32,425
IB-1C-2B (IN)	Post-Development 25 year	25	200,273	12.150	51.35	(N/A)	(N/A)
IB-1C-2B (OUT)	Post-Development 25 year	25	105,797	12.150	37.00	621.25	38,448
IB-1C-2B (IN)	Post-Development 100 year	100	323,300	12.150	81.27	(N/A)	(N/A)
IB-1C-2B (OUT)	Post-Development 100 year	100	210,756	12.150	60.09	621.94	48,603
DB-1C-2B (IN)	Post-Development 1 year	1	0	0.000	0.00	(N/A)	(N/A)
DB-1C-2B (OUT)	Post-Development 1 year	1	0	0.000	0.00	620.00	0
DB-1C-2B (IN)	Post-Development 10 year	10	60,324	12.200	25.81	(N/A)	(N/A)

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
DB-1C-2B (OUT)	Post-Development 10 year	10	60,317	12.450	13.23	620.81	11,413
DB-1C-2B (IN)	Post-Development 25 year	25	105,797	12.150	37.00	(N/A)	(N/A)
DB-1C-2B (OUT)	Post-Development 25 year	25	105,787	12.400	24.26	621.22	17,105
DB-1C-2B (IN)	Post-Development 100 year	100	210,756	12.150	60.09	(N/A)	(N/A)
DB-1C-2B (OUT)	Post-Development 100 year	100	210,730	12.300	50.68	621.90	26,660
Permeable Asphalt (IN)	Post-Development 1 year	1	3,781	12.100	0.94	(N/A)	(N/A)
Permeable Asphalt (OUT)	Post-Development 1 year	1	0	0.000	0.00	634.50	1,268
Permeable Asphalt (IN)	Post-Development 10 year	10	7,185	12.100	1.74	(N/A)	(N/A)
Permeable Asphalt (OUT)	Post-Development 10 year	10	0	0.000	0.00	634.65	2,357
Permeable Asphalt (IN)	Post-Development 25 year	25	9,126	12.100	2.20	(N/A)	(N/A)
Permeable Asphalt (OUT)	Post-Development 25 year	25	0	0.000	0.00	634.74	2,974
Permeable Asphalt (IN)	Post-Development 100 year	100	13,096	12.100	3.12	(N/A)	(N/A)
Permeable Asphalt (OUT)	Post-Development 100 year	100	0	0.000	0.00	634.94	4,365

Subsection: Time-Depth Curve | Return Event: 1 years
Label: Time-Depth - 1 | Storm Event: 1 year
Scenario: Post-Development 1 year

Time-Depth Curve: 1 year	
Label	1 year
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	1 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.0	0.0	0.0	0.0	0.0
1.500	0.0	0.0	0.0	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.1
3.000	0.1	0.1	0.1	0.1	0.1
3.500	0.1	0.1	0.1	0.1	0.1
4.000	0.1	0.1	0.1	0.1	0.1
4.500	0.1	0.1	0.1	0.2	0.2
5.000	0.2	0.2	0.2	0.2	0.2
5.500	0.2	0.2	0.2	0.2	0.2
6.000	0.2	0.2	0.2	0.2	0.2
6.500	0.2	0.2	0.2	0.2	0.2
7.000	0.3	0.3	0.3	0.3	0.3
7.500	0.3	0.3	0.3	0.3	0.3
8.000	0.3	0.3	0.3	0.3	0.4
8.500	0.4	0.4	0.4	0.4	0.4
9.000	0.4	0.4	0.4	0.4	0.5
9.500	0.5	0.5	0.5	0.5	0.5
10.000	0.5	0.5	0.6	0.6	0.6
10.500	0.6	0.6	0.6	0.7	0.7
11.000	0.7	0.7	0.7	0.8	0.8
11.500	0.8	0.9	1.0	1.0	1.2
12.000	1.4	1.6	1.8	1.8	1.9
12.500	2.0	2.0	2.0	2.1	2.1
13.000	2.1	2.1	2.1	2.2	2.2
13.500	2.2	2.2	2.2	2.2	2.3
14.000	2.3	2.3	2.3	2.3	2.3
14.500	2.3	2.3	2.4	2.4	2.4
15.000	2.4	2.4	2.4	2.4	2.4
15.500	2.4	2.4	2.5	2.5	2.5
16.000	2.5	2.5	2.5	2.5	2.5
16.500	2.5	2.5	2.5	2.5	2.5
17.000	2.5	2.6	2.6	2.6	2.6
17.500	2.6	2.6	2.6	2.6	2.6
18.000	2.6	2.6	2.6	2.6	2.6
18.500	2.6	2.6	2.6	2.6	2.6

Subsection: Time-Depth Curve Return Event: 1 years
Label: Time-Depth - 1 Storm Event: 1 year
Scenario: Post-Development 1 year

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
19.000	2.6	2.6	2.6	2.7	2.7
19.500	2.7	2.7	2.7	2.7	2.7
20.000	2.7	2.7	2.7	2.7	2.7
20.500	2.7	2.7	2.7	2.7	2.7
21.000	2.7	2.7	2.7	2.7	2.7
21.500	2.7	2.7	2.7	2.7	2.7
22.000	2.7	2.7	2.8	2.8	2.8
22.500	2.8	2.8	2.8	2.8	2.8
23.000	2.8	2.8	2.8	2.8	2.8
23.500	2.8	2.8	2.8	2.8	2.8
24.000	2.8	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve Return Event: 10 years
Label: Time-Depth - 1 Storm Event: 10 year
Scenario: Post-Development 10 year

Time-Depth Curve: 10 year	
Label	10 year
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	10 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.1	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.1	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.2
3.000	0.2	0.2	0.2	0.2	0.2
3.500	0.2	0.2	0.2	0.2	0.2
4.000	0.2	0.2	0.2	0.2	0.2
4.500	0.3	0.3	0.3	0.3	0.3
5.000	0.3	0.3	0.3	0.3	0.3
5.500	0.3	0.3	0.3	0.4	0.4
6.000	0.4	0.4	0.4	0.4	0.4
6.500	0.4	0.4	0.4	0.4	0.5
7.000	0.5	0.5	0.5	0.5	0.5
7.500	0.5	0.5	0.5	0.6	0.6
8.000	0.6	0.6	0.6	0.6	0.6
8.500	0.7	0.7	0.7	0.7	0.7
9.000	0.7	0.8	0.8	0.8	0.8
9.500	0.8	0.9	0.9	0.9	0.9
10.000	1.0	1.0	1.0	1.0	1.1
10.500	1.1	1.1	1.2	1.2	1.2
11.000	1.3	1.3	1.4	1.4	1.5
11.500	1.5	1.6	1.7	1.9	2.1
12.000	2.6	3.0	3.2	3.4	3.5
12.500	3.6	3.7	3.7	3.8	3.8
13.000	3.8	3.9	3.9	3.9	4.0
13.500	4.0	4.0	4.1	4.1	4.1
14.000	4.2	4.2	4.2	4.2	4.2
14.500	4.3	4.3	4.3	4.3	4.4
15.000	4.4	4.4	4.4	4.4	4.4
15.500	4.5	4.5	4.5	4.5	4.5
16.000	4.5	4.5	4.6	4.6	4.6
16.500	4.6	4.6	4.6	4.6	4.6
17.000	4.7	4.7	4.7	4.7	4.7
17.500	4.7	4.7	4.7	4.7	4.7
18.000	4.8	4.8	4.8	4.8	4.8
18.500	4.8	4.8	4.8	4.8	4.8

Subsection: Time-Depth Curve | Return Event: 10 years
Label: Time-Depth - 1 | Storm Event: 10 year
Scenario: Post-Development 10 year

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
19.000	4.8	4.8	4.8	4.9	4.9
19.500	4.9	4.9	4.9	4.9	4.9
20.000	4.9	4.9	4.9	4.9	4.9
20.500	4.9	4.9	4.9	5.0	5.0
21.000	5.0	5.0	5.0	5.0	5.0
21.500	5.0	5.0	5.0	5.0	5.0
22.000	5.0	5.0	5.0	5.0	5.0
22.500	5.0	5.1	5.1	5.1	5.1
23.000	5.1	5.1	5.1	5.1	5.1
23.500	5.1	5.1	5.1	5.1	5.1
24.000	5.1	(N/A)	(N/A)	(N/A)	(N/A)

Time-Depth Curve: 100 year	
Label	100 year
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.1	0.1	0.1	0.1
1.000	0.1	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.2	0.2	0.2
2.000	0.2	0.2	0.2	0.2	0.2
2.500	0.2	0.2	0.3	0.3	0.3
3.000	0.3	0.3	0.3	0.3	0.3
3.500	0.3	0.3	0.4	0.4	0.4
4.000	0.4	0.4	0.4	0.4	0.4
4.500	0.5	0.5	0.5	0.5	0.5
5.000	0.5	0.5	0.5	0.6	0.6
5.500	0.6	0.6	0.6	0.6	0.6
6.000	0.7	0.7	0.7	0.7	0.7
6.500	0.7	0.8	0.8	0.8	0.8
7.000	0.8	0.8	0.9	0.9	0.9
7.500	0.9	1.0	1.0	1.0	1.0
8.000	1.0	1.1	1.1	1.1	1.1
8.500	1.2	1.2	1.2	1.3	1.3
9.000	1.3	1.4	1.4	1.4	1.5
9.500	1.5	1.6	1.6	1.6	1.7
10.000	1.7	1.8	1.8	1.9	1.9
10.500	2.0	2.0	2.1	2.2	2.2
11.000	2.3	2.4	2.4	2.5	2.6
11.500	2.7	2.9	3.1	3.4	3.8
12.000	4.6	5.3	5.7	6.0	6.3
12.500	6.4	6.5	6.6	6.7	6.8
13.000	6.9	6.9	7.0	7.0	7.1
13.500	7.2	7.2	7.3	7.3	7.4
14.000	7.4	7.5	7.5	7.5	7.6
14.500	7.6	7.7	7.7	7.7	7.8
15.000	7.8	7.8	7.9	7.9	7.9
15.500	8.0	8.0	8.0	8.0	8.1
16.000	8.1	8.1	8.1	8.2	8.2
16.500	8.2	8.2	8.3	8.3	8.3
17.000	8.3	8.3	8.4	8.4	8.4
17.500	8.4	8.4	8.4	8.5	8.5
18.000	8.5	8.5	8.5	8.5	8.5
18.500	8.6	8.6	8.6	8.6	8.6

Subsection: Time-Depth Curve
Return Event: 100 years
Label: Time-Depth - 1
Storm Event: 100 year
Scenario: Post-Development 100 year

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
19.000	8.6	8.6	8.6	8.7	8.7
19.500	8.7	8.7	8.7	8.7	8.7
20.000	8.7	8.8	8.8	8.8	8.8
20.500	8.8	8.8	8.8	8.8	8.8
21.000	8.9	8.9	8.9	8.9	8.9
21.500	8.9	8.9	8.9	8.9	9.0
22.000	9.0	9.0	9.0	9.0	9.0
22.500	9.0	9.0	9.0	9.0	9.0
23.000	9.1	9.1	9.1	9.1	9.1
23.500	9.1	9.1	9.1	9.1	9.1
24.000	9.1	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve | Return Event: 25 years
Label: Time-Depth - 1 | Storm Event: 25 year
Scenario: Post-Development 25 year

Time-Depth Curve: 25 year	
Label	25 year
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	25 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.1	0.1
1.000	0.1	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.1	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.2
2.500	0.2	0.2	0.2	0.2	0.2
3.000	0.2	0.2	0.2	0.2	0.2
3.500	0.2	0.2	0.3	0.3	0.3
4.000	0.3	0.3	0.3	0.3	0.3
4.500	0.3	0.3	0.3	0.3	0.4
5.000	0.4	0.4	0.4	0.4	0.4
5.500	0.4	0.4	0.4	0.4	0.5
6.000	0.5	0.5	0.5	0.5	0.5
6.500	0.5	0.5	0.5	0.6	0.6
7.000	0.6	0.6	0.6	0.6	0.6
7.500	0.7	0.7	0.7	0.7	0.7
8.000	0.7	0.8	0.8	0.8	0.8
8.500	0.8	0.8	0.9	0.9	0.9
9.000	0.9	1.0	1.0	1.0	1.0
9.500	1.1	1.1	1.1	1.2	1.2
10.000	1.2	1.2	1.3	1.3	1.4
10.500	1.4	1.4	1.5	1.5	1.6
11.000	1.6	1.7	1.7	1.8	1.8
11.500	1.9	2.0	2.2	2.4	2.7
12.000	3.2	3.8	4.0	4.3	4.4
12.500	4.5	4.6	4.7	4.7	4.8
13.000	4.8	4.9	4.9	5.0	5.0
13.500	5.0	5.1	5.1	5.2	5.2
14.000	5.2	5.3	5.3	5.3	5.3
14.500	5.4	5.4	5.4	5.5	5.5
15.000	5.5	5.5	5.5	5.6	5.6
15.500	5.6	5.6	5.7	5.7	5.7
16.000	5.7	5.7	5.7	5.8	5.8
16.500	5.8	5.8	5.8	5.8	5.8
17.000	5.9	5.9	5.9	5.9	5.9
17.500	5.9	5.9	5.9	6.0	6.0
18.000	6.0	6.0	6.0	6.0	6.0
18.500	6.0	6.0	6.0	6.1	6.1

Subsection: Time-Depth Curve
Return Event: 25 years
Label: Time-Depth - 1
Storm Event: 25 year
Scenario: Post-Development 25 year

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
19.000	6.1	6.1	6.1	6.1	6.1
19.500	6.1	6.1	6.1	6.1	6.2
20.000	6.2	6.2	6.2	6.2	6.2
20.500	6.2	6.2	6.2	6.2	6.2
21.000	6.2	6.3	6.3	6.3	6.3
21.500	6.3	6.3	6.3	6.3	6.3
22.000	6.3	6.3	6.3	6.3	6.3
22.500	6.3	6.4	6.4	6.4	6.4
23.000	6.4	6.4	6.4	6.4	6.4
23.500	6.4	6.4	6.4	6.4	6.4
24.000	6.4	(N/A)	(N/A)	(N/A)	(N/A)

Stormwater Hydrologic Calculations

Subsection: Time of Concentration Calculations
Label: EDA 1C-10
Scenario: Pre-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.23 ft/s
Segment Time of Concentration	0.120 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	405.00 ft
Is Paved?	False
Slope	0.079 ft/ft
Average Velocity	4.53 ft/s
Segment Time of Concentration	0.025 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.145 hours

Subsection: Time of Concentration Calculations | Return Event: 1 years
Label: EDA 1C-10 | Storm Event: 1 year
Scenario: Pre-Development 1 year

==== SCS Channel Flow

Tc =	R = Qa / Wp V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n (Lf / V) / 3600
Where:	R= Hydraulic radius Aq= Flow area, square feet Wp= Wetted perimeter, feet V= Velocity, ft/sec Sf= Slope, ft/ft n= Manning's n Tc= Time of concentration, hours Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =	Unpaved surface: V = 16.1345 * (Sf**0.5) Paved Surface: V = 20.3282 * (Sf**0.5) (Lf / V) / 3600
Where:	V= Velocity, ft/sec Sf= Slope, ft/ft Tc= Time of concentration, hours Lf= Flow length, feet

Stormwater Hydrologic Calculations

Subsection: Time of Concentration Calculations
Label: EDA 1C-2
Scenario: Pre-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.150
Slope	0.020 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.18 ft/s
Segment Time of Concentration	0.158 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	2,090.00 ft
Is Paved?	False
Slope	0.063 ft/ft
Average Velocity	4.05 ft/s
Segment Time of Concentration	0.143 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.302 hours

Subsection: Time of Concentration Calculations | Return Event: 1 years
Label: EDA 1C-2 | Storm Event: 1 year
Scenario: Pre-Development 1 year

==== SCS Channel Flow

Tc =	R = Qa / Wp V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n (Lf / V) / 3600
Where:	R= Hydraulic radius Aq= Flow area, square feet Wp= Wetted perimeter, feet V= Velocity, ft/sec Sf= Slope, ft/ft n= Manning's n Tc= Time of concentration, hours Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =	Unpaved surface: V = 16.1345 * (Sf**0.5) Paved Surface: V = 20.3282 * (Sf**0.5) (Lf / V) / 3600
Where:	V= Velocity, ft/sec Sf= Slope, ft/ft Tc= Time of concentration, hours Lf= Flow length, feet

Stormwater Hydrologic Calculations

Subsection: Time of Concentration Calculations	Return Event: 1 years
Label: EDA 1C-6	Storm Event: 1 year
Scenario: Pre-Development 1 year	

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.23 ft/s
Segment Time of Concentration	0.120 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	24.00 ft
Is Paved?	False
Slope	0.040 ft/ft
Average Velocity	3.23 ft/s
Segment Time of Concentration	0.002 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.122 hours

Subsection: Time of Concentration Calculations | Return Event: 1 years
Label: EDA 1C-6 | Storm Event: 1 year
Scenario: Pre-Development 1 year

==== SCS Channel Flow

Tc =	R = Qa / Wp V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n (Lf / V) / 3600
Where:	R= Hydraulic radius Aq= Flow area, square feet Wp= Wetted perimeter, feet V= Velocity, ft/sec Sf= Slope, ft/ft n= Manning's n Tc= Time of concentration, hours Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =	Unpaved surface: V = 16.1345 * (Sf**0.5) Paved Surface: V = 20.3282 * (Sf**0.5) (Lf / V) / 3600
Where:	V= Velocity, ft/sec Sf= Slope, ft/ft Tc= Time of concentration, hours Lf= Flow length, feet

Stormwater Hydrologic Calculations

Subsection: Time of Concentration Calculations — Return Event: 1 years
Label: EDA 1C-7 — Storm Event: 1 year
Scenario: Pre-Development 1 year

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.150
Slope	0.220 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.46 ft/s
Segment Time of Concentration	0.061 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	1,250.00 ft
Is Paved?	False
Slope	0.016 ft/ft
Average Velocity	2.04 ft/s
Segment Time of Concentration	0.170 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.231 hours

==== SCS Channel Flow

Tc =	R = Qa / Wp V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n (Lf / V) / 3600
Where:	R= Hydraulic radius Aq= Flow area, square feet Wp= Wetted perimeter, feet V= Velocity, ft/sec Sf= Slope, ft/ft n= Manning's n Tc= Time of concentration, hours Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =	Unpaved surface: V = 16.1345 * (Sf**0.5) Paved Surface: V = 20.3282 * (Sf**0.5) (Lf / V) / 3600
Where:	V= Velocity, ft/sec Sf= Slope, ft/ft Tc= Time of concentration, hours Lf= Flow length, feet

Subsection: Time of Concentration Calculations
Label: EDA-2
Scenario: Pre-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.150
Slope	0.060 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.27 ft/s
Segment Time of Concentration	0.102 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	945.00 ft
Is Paved?	False
Slope	0.034 ft/ft
Average Velocity	2.98 ft/s
Segment Time of Concentration	0.088 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.190 hours

==== SCS Channel Flow

Tc =	R = Qa / Wp V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n (Lf / V) / 3600
Where:	R= Hydraulic radius Aq= Flow area, square feet Wp= Wetted perimeter, feet V= Velocity, ft/sec Sf= Slope, ft/ft n= Manning's n Tc= Time of concentration, hours Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =	Unpaved surface: V = 16.1345 * (Sf**0.5) Paved Surface: V = 20.3282 * (Sf**0.5) (Lf / V) / 3600
Where:	V= Velocity, ft/sec Sf= Slope, ft/ft Tc= Time of concentration, hours Lf= Flow length, feet

Subsection: Time of Concentration Calculations | Return Event: 1 years
Label: PDA-1C-2A | Storm Event: 1 year
Scenario: Post-Development 1 year

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.150
Slope	0.030 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.21 ft/s
Segment Time of Concentration	0.135 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	51.00 ft
Is Paved?	False
Slope	0.040 ft/ft
Average Velocity	3.23 ft/s
Segment Time of Concentration	0.004 hours

Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	705.00 ft
Is Paved?	True
Slope	0.011 ft/ft
Average Velocity	2.13 ft/s
Segment Time of Concentration	0.092 hours

Segment #4: TR-55 Shallow Concentrated Flow	
Hydraulic Length	847.00 ft
Is Paved?	False
Slope	0.099 ft/ft
Average Velocity	5.08 ft/s
Segment Time of Concentration	0.046 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.277 hours

==== SCS Channel Flow

Tc =	R = Qa / Wp V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n (Lf / V) / 3600
Where:	R= Hydraulic radius Aq= Flow area, square feet Wp= Wetted perimeter, feet V= Velocity, ft/sec Sf= Slope, ft/ft n= Manning's n Tc= Time of concentration, hours Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =	Unpaved surface: V = 16.1345 * (Sf**0.5) Paved Surface: V = 20.3282 * (Sf**0.5) (Lf / V) / 3600
Where:	V= Velocity, ft/sec Sf= Slope, ft/ft Tc= Time of concentration, hours Lf= Flow length, feet

Stormwater Hydrologic Calculations

Subsection: Time of Concentration Calculations — Return Event: 1 years
Label: PDA-1C-2B — Storm Event: 1 year
Scenario: Post-Development 1 year

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.23 ft/s
Segment Time of Concentration	0.120 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	650.00 ft
Is Paved?	False
Slope	0.060 ft/ft
Average Velocity	3.95 ft/s
Segment Time of Concentration	0.046 hours

Segment #3: TR-55 Channel Flow	
Flow Area	1.2 ft²
Hydraulic Length	272.00 ft
Manning's n	0.011
Slope	0.058 ft/ft
Wetted Perimeter	3.93 ft
Average Velocity	14.97 ft/s
Segment Time of Concentration	0.005 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.171 hours

==== SCS Channel Flow

Tc =	R = Qa / Wp V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n (Lf / V) / 3600
Where:	R= Hydraulic radius Aq= Flow area, square feet Wp= Wetted perimeter, feet V= Velocity, ft/sec Sf= Slope, ft/ft n= Manning's n Tc= Time of concentration, hours Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =	Unpaved surface: V = 16.1345 * (Sf**0.5) Paved Surface: V = 20.3282 * (Sf**0.5) (Lf / V) / 3600
Where:	V= Velocity, ft/sec Sf= Slope, ft/ft Tc= Time of concentration, hours Lf= Flow length, feet

==== SCS TR-55 Sheet Flow

Tc =	(0.007 * ((n * Lf)**0.8)) / ((P**0.5) * (Sf**0.4))
Where:	Tc= Time of concentration, hours n= Manning's n Lf= Flow length, feet P= 2yr, 24hr Rain depth, inches Sf= Slope, %

Stormwater Hydrologic Calculations

Subsection: Time of Concentration Calculations — Return Event: 1 years
Label: PDA-2 — Storm Event: 1 year
Scenario: Post-Development 1 year

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.150
Slope	0.060 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.27 ft/s
Segment Time of Concentration	0.102 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	945.00 ft
Is Paved?	False
Slope	0.034 ft/ft
Average Velocity	2.98 ft/s
Segment Time of Concentration	0.088 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.190 hours

Subsection: Time of Concentration Calculations | Return Event: 1 years
Label: PDA-2 | Storm Event: 1 year
Scenario: Post-Development 1 year

==== SCS Channel Flow

Tc =	R = Qa / Wp V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n (Lf / V) / 3600
Where:	R= Hydraulic radius Aq= Flow area, square feet Wp= Wetted perimeter, feet V= Velocity, ft/sec Sf= Slope, ft/ft n= Manning's n Tc= Time of concentration, hours Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =	Unpaved surface: V = 16.1345 * (Sf**0.5) Paved Surface: V = 20.3282 * (Sf**0.5) (Lf / V) / 3600
Where:	V= Velocity, ft/sec Sf= Slope, ft/ft Tc= Time of concentration, hours Lf= Flow length, feet

Stormwater Hydrologic Calculations

Subsection: Time of Concentration Calculations	Return Event: 1 years
Label: Permeable Asphalt	Storm Event: 1 year
Scenario: Post-Development 1 year	

Time of Concentration Results

Segment #1: User Defined Tc	
Time of Concentration	0.083 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.083 hours

Subsection: Time of Concentration Calculations Return Event: 1 years
Label: Permeable Asphalt Storm Event: 1 year
Scenario: Post-Development 1 year

==== User Defined

Tc =	Value entered by user
Where:	Tc= Time of concentration, hours

Stormwater Hydrologic Calculations

Subsection: Runoff CN-Area
Label: EDA 1C-10
Scenario: Pre-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft^2)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil C	98.000	12,431	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	139,499	0.0	0.0	61.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	55,495	0.0	0.0	74.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	207,425	(N/A)	(N/A)	66.695

Stormwater Hydrologic Calculations

Subsection: Runoff CN-Area | Return Event: 1 years
Label: EDA 1C-2 | Storm Event: 1 year
Scenario: Pre-Development 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft^2)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	220,539	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	141,879	0.0	0.0	61.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	185,851	0.0	0.0	74.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	548,269	(N/A)	(N/A)	80.290

Stormwater Hydrologic Calculations

Subsection: Runoff CN-Area | Return Event: 1 years
Label: EDA 1C-6 | Storm Event: 1 year
Scenario: Pre-Development 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft²)	C (%)	UC (%)	Adjusted CN
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	5,565	0.0	0.0	74.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	9,586	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	15,151	(N/A)	(N/A)	65.775

Stormwater Hydrologic Calculations

Subsection: Runoff CN-Area
Label: EDA 1C-7
Scenario: Pre-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft^2)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil C	98.000	18,249	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	23,115	0.0	0.0	61.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	28,113	0.0	0.0	74.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	69,477	(N/A)	(N/A)	75.979

Subsection: Runoff CN-Area
Label: EDA-2
Scenario: Pre-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft²)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil C	98.000	32,054	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	4,452	0.0	0.0	61.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	110,290	0.0	0.0	74.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	146,796	(N/A)	(N/A)	78.846

Stormwater Hydrologic Calculations

Subsection: Runoff CN-Area | Return Event: 1 years
Label: PDA-1C-2A | Storm Event: 1 year
Scenario: Post-Development 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft²)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil C	98.000	151,972	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	41,642	0.0	0.0	61.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	62,131	0.0	0.0	74.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	255,745	(N/A)	(N/A)	86.145

Stormwater Hydrologic Calculations

Subsection: Runoff CN-Area | Return Event: 1 years
Label: PDA-1C-2B | Storm Event: 1 year
Scenario: Post-Development 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft²)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil C	98.000	249,385	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	216,907	0.0	0.0	61.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	124,512	0.0	0.0	74.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	590,804	(N/A)	(N/A)	79.358

Stormwater Hydrologic Calculations

Subsection: Runoff CN-Area
Label: PDA-2
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft^2)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil C	98.000	1,577	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	121,342	0.0	0.0	74.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	122,919	(N/A)	(N/A)	74.308

Subsection: Runoff CN-Area | Return Event: 1 years
Label: Permeable Asphalt | Storm Event: 1 year
Scenario: Post-Development 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft^2)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	17,669	0.0	0.0	98.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	17,669	(N/A)	(N/A)	98.000

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.145 hours
Area (User Defined)	207,425 ft²

Computational Time Increment	0.019 hours
Time to Peak (Computed)	12.150 hours
Flow (Peak, Computed)	1.80 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	1.80 ft³/s

Drainage Area	
SCS CN (Composite)	67.000
Area (User Defined)	207,425 ft²
Maximum Retention (Pervious)	4.9 in
Maximum Retention (Pervious, 20 percent)	1.0 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.5 in
Runoff Volume (Pervious)	8,447 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	8,426 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.145 hours
Computational Time Increment	0.019 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	37.24 ft³/s
Unit peak time, Tp	0.097 hours
Unit receding limb, Tr	0.386 hours
Total unit time, Tb	0.483 hours

SCS Unit Hydrograph Parameters

Storm Event	10 year
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.145 hours
Area (User Defined)	207,425 ft²

Computational Time Increment	0.019 hours
Time to Peak (Computed)	12.130 hours
Flow (Peak, Computed)	8.60 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	8.53 ft³/s

Drainage Area

SCS CN (Composite)	67.000
Area (User Defined)	207,425 ft²
Maximum Retention (Pervious)	4.9 in
Maximum Retention (Pervious, 20 percent)	1.0 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	1.9 in
Runoff Volume (Pervious)	32,619 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	32,561 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.145 hours
Computational Time Increment	0.019 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	37.24 ft³/s
Unit peak time, Tp	0.097 hours
Unit receding limb, Tr	0.386 hours
Total unit time, Tb	0.483 hours

SCS Unit Hydrograph Parameters

Subsection: Unit Hydrograph Summary | Return Event: 25 years

Label: EDA 1C-10 | Storm Event: 25 year

Scenario: Pre-Development 25 year

Storm Event	25 year
Return Event	25 years
Duration	24.000 hours
Depth	6.4 in
Time of Concentration (Composite)	0.145 hours
Area (User Defined)	207,425 ft²

Computational Time Increment	0.019 hours
Time to Peak (Computed)	12.130 hours
Flow (Peak, Computed)	13.28 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	13.10 ft³/s

Drainage Area

SCS CN (Composite)	67.000
Area (User Defined)	207,425 ft²
Maximum Retention (Pervious)	4.9 in
Maximum Retention (Pervious, 20 percent)	1.0 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	2.9 in
Runoff Volume (Pervious)	49,550 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	49,470 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.145 hours
Computational Time Increment	0.019 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	37.24 ft³/s
Unit peak time, Tp	0.097 hours
Unit receding limb, Tr	0.386 hours
Total unit time, Tb	0.483 hours

SCS Unit Hydrograph Parameters

Stormwater Hydrologic Calculations

Subsection: Unit Hydrograph Summary | Return Event: 100 years
Label: EDA 1C-10 | Storm Event: 100 year
Scenario: Pre-Development 100 year

Storm Event	100 year
Return Event	100 years
Duration	24.000 hours
Depth	9.1 in
Time of Concentration (Composite)	0.145 hours
Area (User Defined)	207,425 ft²

Computational Time Increment	0.019 hours
Time to Peak (Computed)	12.130 hours
Flow (Peak, Computed)	23.61 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	23.15 ft³/s

Drainage Area	
SCS CN (Composite)	67.000
Area (User Defined)	207,425 ft²
Maximum Retention (Pervious)	4.9 in
Maximum Retention (Pervious, 20 percent)	1.0 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.1 in
Runoff Volume (Pervious)	87,882 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	87,757 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.145 hours
Computational Time Increment	0.019 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	37.24 ft³/s
Unit peak time, Tp	0.097 hours
Unit receding limb, Tr	0.386 hours
Total unit time, Tb	0.483 hours

SCS Unit Hydrograph Parameters

Stormwater Hydrologic Calculations

Subsection: Unit Hydrograph Summary | Return Event: 1 years
Label: EDA 1C-2 | Storm Event: 1 year
Scenario: Pre-Development 1 year

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.302 hours
Area (User Defined)	548,269 ft²

Computational Time Increment	0.040 hours
Time to Peak (Computed)	12.232 hours
Flow (Peak, Computed)	10.86 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.250 hours
Flow (Peak Interpolated Output)	10.75 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	548,269 ft²
Maximum Retention (Pervious)	2.5 in
Maximum Retention (Pervious, 20 percent)	0.5 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.1 in
Runoff Volume (Pervious)	50,353 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	50,159 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.302 hours
Computational Time Increment	0.040 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	47.26 ft³/s
Unit peak time, Tp	0.201 hours
Unit receding limb, Tr	0.805 hours
Total unit time, Tb	1.006 hours

SCS Unit Hydrograph Parameters

Subsection: Unit Hydrograph Summary | Return Event: 10 years
Label: EDA 1C-2 | Storm Event: 10 year
Scenario: Pre-Development 10 year

Storm Event	10 year
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.302 hours
Area (User Defined)	548,269 ft²

Computational Time Increment	0.040 hours
Time to Peak (Computed)	12.232 hours
Flow (Peak, Computed)	30.13 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.200 hours
Flow (Peak Interpolated Output)	30.02 ft³/s

Drainage Area

SCS CN (Composite)	80.000
Area (User Defined)	548,269 ft²
Maximum Retention (Pervious)	2.5 in
Maximum Retention (Pervious, 20 percent)	0.5 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	3.0 in
Runoff Volume (Pervious)	136,967 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	136,541 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.302 hours
Computational Time Increment	0.040 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	47.26 ft³/s
Unit peak time, Tp	0.201 hours
Unit receding limb, Tr	0.805 hours
Total unit time, Tb	1.006 hours

SCS Unit Hydrograph Parameters

Stormwater Hydrologic Calculations

Subsection: Unit Hydrograph Summary — Return Event: 25 years
Label: EDA 1C-2 — Storm Event: 25 year
Scenario: Pre-Development 25 year

Storm Event	25 year
Return Event	25 years
Duration	24.000 hours
Depth	6.4 in
Time of Concentration (Composite)	0.302 hours
Area (User Defined)	548,269 ft²

Computational Time Increment	0.040 hours
Time to Peak (Computed)	12.192 hours
Flow (Peak, Computed)	41.73 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.200 hours
Flow (Peak Interpolated Output)	41.73 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	548,269 ft²
Maximum Retention (Pervious)	2.5 in
Maximum Retention (Pervious, 20 percent)	0.5 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.2 in
Runoff Volume (Pervious)	191,004 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	190,446 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.302 hours
Computational Time Increment	0.040 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	47.26 ft³/s
Unit peak time, Tp	0.201 hours
Unit receding limb, Tr	0.805 hours
Total unit time, Tb	1.006 hours

SCS Unit Hydrograph Parameters

Stormwater Hydrologic Calculations

Storm Event	100 year
Return Event	100 years
Duration	24.000 hours
Depth	9.1 in
Time of Concentration (Composite)	0.302 hours
Area (User Defined)	548,269 ft²

Computational Time Increment	0.040 hours
Time to Peak (Computed)	12.192 hours
Flow (Peak, Computed)	66.05 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.200 hours
Flow (Peak Interpolated Output)	65.98 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	548,269 ft²
Maximum Retention (Pervious)	2.5 in
Maximum Retention (Pervious, 20 percent)	0.5 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.7 in
Runoff Volume (Pervious)	306,164 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	305,340 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.302 hours
Computational Time Increment	0.040 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	47.26 ft³/s
Unit peak time, Tp	0.201 hours
Unit receding limb, Tr	0.805 hours
Total unit time, Tb	1.006 hours

Stormwater Hydrologic Calculations

Subsection: Unit Hydrograph Summary	Return Event: 100 years
Label: EDA 1C-2	Storm Event: 100 year
Scenario: Pre-Development 100 year	

SCS Unit Hydrograph Parameters

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.122 hours
Area (User Defined)	15,151 ft²

Computational Time Increment	0.016 hours
Time to Peak (Computed)	12.148 hours
Flow (Peak, Computed)	0.12 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	0.12 ft³/s

Drainage Area	
SCS CN (Composite)	66.000
Area (User Defined)	15,151 ft²
Maximum Retention (Pervious)	5.2 in
Maximum Retention (Pervious, 20 percent)	1.0 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.5 in
Runoff Volume (Pervious)	571 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	570 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.122 hours
Computational Time Increment	0.016 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	3.23 ft³/s
Unit peak time, Tp	0.081 hours
Unit receding limb, Tr	0.326 hours
Total unit time, Tb	0.407 hours

Subsection: Unit Hydrograph Summary
Return Event: 1 years
Label: EDA 1C-6
Storm Event: 1 year
Scenario: Pre-Development 1 year

SCS Unit Hydrograph Parameters

Stormwater Hydrologic Calculations

Subsection: Unit Hydrograph Summary | Return Event: 10 years
Label: EDA 1C-6 | Storm Event: 10 year
Scenario: Pre-Development 10 year

Storm Event	10 year
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.122 hours
Area (User Defined)	15,151 ft²

Computational Time Increment	0.016 hours
Time to Peak (Computed)	12.131 hours
Flow (Peak, Computed)	0.62 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.60 ft³/s

Drainage Area	
SCS CN (Composite)	66.000
Area (User Defined)	15,151 ft²
Maximum Retention (Pervious)	5.2 in
Maximum Retention (Pervious, 20 percent)	1.0 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.8 in
Runoff Volume (Pervious)	2,285 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2,282 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.122 hours
Computational Time Increment	0.016 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	3.23 ft³/s
Unit peak time, Tp	0.081 hours
Unit receding limb, Tr	0.326 hours
Total unit time, Tb	0.407 hours

SCS Unit Hydrograph Parameters

Stormwater Hydrologic Calculations

Subsection: Unit Hydrograph Summary — Return Event: 25 years

Label: EDA 1C-6 — Storm Event: 25 year

Scenario: Pre-Development 25 year

Storm Event	25 year
Return Event	25 years
Duration	24.000 hours
Depth	6.4 in
Time of Concentration (Composite)	0.122 hours
Area (User Defined)	15,151 ft²

Computational Time Increment	0.016 hours
Time to Peak (Computed)	12.131 hours
Flow (Peak, Computed)	0.96 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.94 ft³/s

Drainage Area

SCS CN (Composite)	66.000
Area (User Defined)	15,151 ft²
Maximum Retention (Pervious)	5.2 in
Maximum Retention (Pervious, 20 percent)	1.0 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	2.8 in
Runoff Volume (Pervious)	3,499 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	3,494 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.122 hours
Computational Time Increment	0.016 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	3.23 ft³/s
Unit peak time, Tp	0.081 hours
Unit receding limb, Tr	0.326 hours
Total unit time, Tb	0.407 hours

SCS Unit Hydrograph Parameters

Subsection: Unit Hydrograph Summary | Return Event: 100 years
Label: EDA 1C-6 | Storm Event: 100 year
Scenario: Pre-Development 100 year

Storm Event	100 year
Return Event	100 years
Duration	24.000 hours
Depth	9.1 in
Time of Concentration (Composite)	0.122 hours
Area (User Defined)	15,151 ft²

Computational Time Increment	0.016 hours
Time to Peak (Computed)	12.115 hours
Flow (Peak, Computed)	1.73 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	1.71 ft³/s

Drainage Area

SCS CN (Composite)	66.000
Area (User Defined)	15,151 ft²
Maximum Retention (Pervious)	5.2 in
Maximum Retention (Pervious, 20 percent)	1.0 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	5.0 in
Runoff Volume (Pervious)	6,262 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	6,254 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.122 hours
Computational Time Increment	0.016 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	3.23 ft³/s
Unit peak time, Tp	0.081 hours
Unit receding limb, Tr	0.326 hours
Total unit time, Tb	0.407 hours

SCS Unit Hydrograph Parameters

Stormwater Hydrologic Calculations

Subsection: Unit Hydrograph Summary — Return Event: 1 years
Label: EDA 1C-7 — Storm Event: 1 year
Scenario: Pre-Development 1 year

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.231 hours
Area (User Defined)	69,477 ft²

Computational Time Increment	0.031 hours
Time to Peak (Computed)	12.189 hours
Flow (Peak, Computed)	1.16 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.200 hours
Flow (Peak Interpolated Output)	1.16 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	69,477 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.9 in
Runoff Volume (Pervious)	5,111 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	5,095 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.231 hours
Computational Time Increment	0.031 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	7.83 ft³/s
Unit peak time, Tp	0.154 hours
Unit receding limb, Tr	0.616 hours
Total unit time, Tb	0.769 hours

Stormwater Hydrologic Calculations

Subsection: Unit Hydrograph Summary
Return Event: 1 years
Label: EDA 1C-7
Storm Event: 1 year
Scenario: Pre-Development 1 year

SCS Unit Hydrograph Parameters

Stormwater Hydrologic Calculations

Subsection: Unit Hydrograph Summary — Return Event: 10 years
Label: EDA 1C-7 — Storm Event: 10 year
Scenario: Pre-Development 10 year

Storm Event	10 year
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.231 hours
Area (User Defined)	69,477 ft²

Computational Time Increment	0.031 hours
Time to Peak (Computed)	12.189 hours
Flow (Peak, Computed)	3.66 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	3.61 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	69,477 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.6 in
Runoff Volume (Pervious)	15,254 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	15,216 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.231 hours
Computational Time Increment	0.031 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	7.83 ft³/s
Unit peak time, Tp	0.154 hours
Unit receding limb, Tr	0.616 hours
Total unit time, Tb	0.769 hours

SCS Unit Hydrograph Parameters

Subsection: Unit Hydrograph Summary | Return Event: 25 years
Label: EDA 1C-7 | Storm Event: 25 year
Scenario: Pre-Development 25 year

Storm Event	25 year
Return Event	25 years
Duration	24.000 hours
Depth	6.4 in
Time of Concentration (Composite)	0.231 hours
Area (User Defined)	69,477 ft²

Computational Time Increment	0.031 hours
Time to Peak (Computed)	12.158 hours
Flow (Peak, Computed)	5.23 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	5.18 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	69,477 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.8 in
Runoff Volume (Pervious)	21,785 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	21,734 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.231 hours
Computational Time Increment	0.031 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	7.83 ft³/s
Unit peak time, Tp	0.154 hours
Unit receding limb, Tr	0.616 hours
Total unit time, Tb	0.769 hours

SCS Unit Hydrograph Parameters

Storm Event	100 year
Return Event	100 years
Duration	24.000 hours
Depth	9.1 in
Time of Concentration (Composite)	0.231 hours
Area (User Defined)	69,477 ft²

Computational Time Increment	0.031 hours
Time to Peak (Computed)	12.158 hours
Flow (Peak, Computed)	8.56 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	8.48 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	69,477 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.2 in
Runoff Volume (Pervious)	35,927 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	35,850 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.231 hours
Computational Time Increment	0.031 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	7.83 ft³/s
Unit peak time, Tp	0.154 hours
Unit receding limb, Tr	0.616 hours
Total unit time, Tb	0.769 hours

Subsection: Unit Hydrograph Summary | Return Event: 100 years

Label: EDA 1C-7 | Storm Event: 100 year

Scenario: Pre-Development 100 year

SCS Unit Hydrograph Parameters

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.190 hours
Area (User Defined)	146,796 ft²

Computational Time Increment	0.025 hours
Time to Peak (Computed)	12.155 hours
Flow (Peak, Computed)	3.17 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	3.15 ft³/s

Drainage Area	
SCS CN (Composite)	79.000
Area (User Defined)	146,796 ft²
Maximum Retention (Pervious)	2.7 in
Maximum Retention (Pervious, 20 percent)	0.5 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.0 in
Runoff Volume (Pervious)	12,776 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	12,744 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.190 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	20.06 ft³/s
Unit peak time, Tp	0.127 hours
Unit receding limb, Tr	0.508 hours
Total unit time, Tb	0.634 hours

SCS Unit Hydrograph Parameters

Subsection: Unit Hydrograph Summary | Return Event: 10 years
Label: EDA-2 | Storm Event: 10 year
Scenario: Pre-Development 10 year

Storm Event	10 year
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.190 hours
Area (User Defined)	146,796 ft²

Computational Time Increment	0.025 hours
Time to Peak (Computed)	12.155 hours
Flow (Peak, Computed)	9.02 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	9.00 ft³/s

Drainage Area

SCS CN (Composite)	79.000
Area (User Defined)	146,796 ft²
Maximum Retention (Pervious)	2.7 in
Maximum Retention (Pervious, 20 percent)	0.5 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	2.9 in
Runoff Volume (Pervious)	35,540 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	35,467 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.190 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	20.06 ft³/s
Unit peak time, Tp	0.127 hours
Unit receding limb, Tr	0.508 hours
Total unit time, Tb	0.634 hours

Subsection: Unit Hydrograph Summary | Return Event: 10 years

Label: EDA-2 | Storm Event: 10 year

Scenario: Pre-Development 10 year

SCS Unit Hydrograph Parameters

Subsection: Unit Hydrograph Summary — Return Event: 25 years
Label: EDA-2 — Storm Event: 25 year
Scenario: Pre-Development 25 year

Storm Event	25 year
Return Event	25 years
Duration	24.000 hours
Depth	6.4 in
Time of Concentration (Composite)	0.190 hours
Area (User Defined)	146,796 ft²

Computational Time Increment	0.025 hours
Time to Peak (Computed)	12.155 hours
Flow (Peak, Computed)	12.57 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	12.55 ft³/s

Drainage Area

SCS CN (Composite)	79.000
Area (User Defined)	146,796 ft²
Maximum Retention (Pervious)	2.7 in
Maximum Retention (Pervious, 20 percent)	0.5 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	4.1 in
Runoff Volume (Pervious)	49,849 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	49,754 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.190 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	20.06 ft³/s
Unit peak time, Tp	0.127 hours
Unit receding limb, Tr	0.508 hours
Total unit time, Tb	0.634 hours

SCS Unit Hydrograph Parameters

Stormwater Hydrologic Calculations

Subsection: Unit Hydrograph Summary — Return Event: 100 years
Label: EDA-2 — Storm Event: 100 year
Scenario: Pre-Development 100 year

Storm Event	100 year
Return Event	100 years
Duration	24.000 hours
Depth	9.1 in
Time of Concentration (Composite)	0.190 hours
Area (User Defined)	146,796 ft²

Computational Time Increment	0.025 hours
Time to Peak (Computed)	12.155 hours
Flow (Peak, Computed)	19.92 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	19.92 ft³/s

Drainage Area

SCS CN (Composite)	79.000
Area (User Defined)	146,796 ft²
Maximum Retention (Pervious)	2.7 in
Maximum Retention (Pervious, 20 percent)	0.5 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	6.6 in
Runoff Volume (Pervious)	80,460 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	80,319 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.190 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	20.06 ft³/s
Unit peak time, Tp	0.127 hours
Unit receding limb, Tr	0.508 hours
Total unit time, Tb	0.634 hours

SCS Unit Hydrograph Parameters

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.277 hours
Area (User Defined)	255,745 ft²

Computational Time Increment	0.037 hours
Time to Peak (Computed)	12.201 hours
Flow (Peak, Computed)	7.24 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.200 hours
Flow (Peak Interpolated Output)	7.23 ft³/s

Drainage Area	
SCS CN (Composite)	86.000
Area (User Defined)	255,745 ft²
Maximum Retention (Pervious)	1.6 in
Maximum Retention (Pervious, 20 percent)	0.3 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.5 in
Runoff Volume (Pervious)	31,808 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	31,715 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.277 hours
Computational Time Increment	0.037 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	23.99 ft³/s
Unit peak time, Tp	0.185 hours
Unit receding limb, Tr	0.739 hours
Total unit time, Tb	0.924 hours

Subsection: Unit Hydrograph Summary | Return Event: 1 years
Label: PDA-1C-2A | Storm Event: 1 year
Scenario: Post-Development 1 year

SCS Unit Hydrograph Parameters

Storm Event	10 year
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.277 hours
Area (User Defined)	255,745 ft²

Computational Time Increment	0.037 hours
Time to Peak (Computed)	12.201 hours
Flow (Peak, Computed)	17.12 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.200 hours
Flow (Peak Interpolated Output)	17.11 ft³/s

Drainage Area

SCS CN (Composite)	86.000
Area (User Defined)	255,745 ft²
Maximum Retention (Pervious)	1.6 in
Maximum Retention (Pervious, 20 percent)	0.3 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	3.6 in
Runoff Volume (Pervious)	76,279 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	76,089 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.277 hours
Computational Time Increment	0.037 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	23.99 ft³/s
Unit peak time, Tp	0.185 hours
Unit receding limb, Tr	0.739 hours
Total unit time, Tb	0.924 hours

SCS Unit Hydrograph Parameters

Storm Event	25 year
Return Event	25 years
Duration	24.000 hours
Depth	6.4 in
Time of Concentration (Composite)	0.277 hours
Area (User Defined)	255,745 ft²

Computational Time Increment	0.037 hours
Time to Peak (Computed)	12.201 hours
Flow (Peak, Computed)	22.81 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.200 hours
Flow (Peak Interpolated Output)	22.80 ft³/s

Drainage Area

SCS CN (Composite)	86.000
Area (User Defined)	255,745 ft²
Maximum Retention (Pervious)	1.6 in
Maximum Retention (Pervious, 20 percent)	0.3 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	4.8 in
Runoff Volume (Pervious)	102,912 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	102,668 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.277 hours
Computational Time Increment	0.037 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	23.99 ft³/s
Unit peak time, Tp	0.185 hours
Unit receding limb, Tr	0.739 hours
Total unit time, Tb	0.924 hours

SCS Unit Hydrograph Parameters

Storm Event	100 year
Return Event	100 years
Duration	24.000 hours
Depth	9.1 in
Time of Concentration (Composite)	0.277 hours
Area (User Defined)	255,745 ft²

Computational Time Increment	0.037 hours
Time to Peak (Computed)	12.201 hours
Flow (Peak, Computed)	34.37 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.200 hours
Flow (Peak Interpolated Output)	34.36 ft³/s

Drainage Area

SCS CN (Composite)	86.000
Area (User Defined)	255,745 ft²
Maximum Retention (Pervious)	1.6 in
Maximum Retention (Pervious, 20 percent)	0.3 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	7.4 in
Runoff Volume (Pervious)	158,568 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	158,215 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.277 hours
Computational Time Increment	0.037 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	23.99 ft³/s
Unit peak time, Tp	0.185 hours
Unit receding limb, Tr	0.739 hours
Total unit time, Tb	0.924 hours

SCS Unit Hydrograph Parameters

Stormwater Hydrologic Calculations

Subsection: Unit Hydrograph Summary — Return Event: 1 years
Label: PDA-1C-2B — Storm Event: 1 year
Scenario: Post-Development 1 year

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.171 hours
Area (User Defined)	590,804 ft²

Computational Time Increment	0.023 hours
Time to Peak (Computed)	12.138 hours
Flow (Peak, Computed)	13.04 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	13.03 ft³/s

Drainage Area	
SCS CN (Composite)	79.000
Area (User Defined)	590,804 ft²
Maximum Retention (Pervious)	2.7 in
Maximum Retention (Pervious, 20 percent)	0.5 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.0 in
Runoff Volume (Pervious)	51,421 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	51,301 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.171 hours
Computational Time Increment	0.023 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	89.98 ft³/s
Unit peak time, Tp	0.114 hours
Unit receding limb, Tr	0.455 hours
Total unit time, Tb	0.569 hours

Subsection: Unit Hydrograph Summary | Return Event: 1 years
Label: PDA-1C-2B | Storm Event: 1 year
Scenario: Post-Development 1 year

SCS Unit Hydrograph Parameters

Storm Event	10 year
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.171 hours
Area (User Defined)	590,804 ft²

Computational Time Increment	0.023 hours
Time to Peak (Computed)	12.138 hours
Flow (Peak, Computed)	37.18 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	36.90 ft³/s

Drainage Area

SCS CN (Composite)	79.000
Area (User Defined)	590,804 ft²
Maximum Retention (Pervious)	2.7 in
Maximum Retention (Pervious, 20 percent)	0.5 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	2.9 in
Runoff Volume (Pervious)	143,035 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	142,766 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.171 hours
Computational Time Increment	0.023 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	89.98 ft³/s
Unit peak time, Tp	0.114 hours
Unit receding limb, Tr	0.455 hours
Total unit time, Tb	0.569 hours

SCS Unit Hydrograph Parameters

Storm Event	25 year
Return Event	25 years
Duration	24.000 hours
Depth	6.4 in
Time of Concentration (Composite)	0.171 hours
Area (User Defined)	590,804 ft²

Computational Time Increment	0.023 hours
Time to Peak (Computed)	12.138 hours
Flow (Peak, Computed)	51.84 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	51.35 ft³/s

Drainage Area

SCS CN (Composite)	79.000
Area (User Defined)	590,804 ft²
Maximum Retention (Pervious)	2.7 in
Maximum Retention (Pervious, 20 percent)	0.5 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	4.1 in
Runoff Volume (Pervious)	200,626 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	200,273 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.171 hours
Computational Time Increment	0.023 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	89.98 ft³/s
Unit peak time, Tp	0.114 hours
Unit receding limb, Tr	0.455 hours
Total unit time, Tb	0.569 hours

SCS Unit Hydrograph Parameters

Storm Event	100 year
Return Event	100 years
Duration	24.000 hours
Depth	9.1 in
Time of Concentration (Composite)	0.171 hours
Area (User Defined)	590,804 ft²

Computational Time Increment	0.023 hours
Time to Peak (Computed)	12.138 hours
Flow (Peak, Computed)	82.21 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	81.27 ft³/s

Drainage Area	
SCS CN (Composite)	79.000
Area (User Defined)	590,804 ft²
Maximum Retention (Pervious)	2.7 in
Maximum Retention (Pervious, 20 percent)	0.5 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.6 in
Runoff Volume (Pervious)	323,825 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	323,300 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.171 hours
Computational Time Increment	0.023 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	89.98 ft³/s
Unit peak time, Tp	0.114 hours
Unit receding limb, Tr	0.455 hours
Total unit time, Tb	0.569 hours

SCS Unit Hydrograph Parameters

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.190 hours
Area (User Defined)	122,919 ft²

Computational Time Increment	0.025 hours
Time to Peak (Computed)	12.155 hours
Flow (Peak, Computed)	1.88 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	1.87 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	122,919 ft²
Maximum Retention (Pervious)	3.5 in
Maximum Retention (Pervious, 20 percent)	0.7 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.8 in
Runoff Volume (Pervious)	8,030 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	8,007 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.190 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	16.80 ft³/s
Unit peak time, Tp	0.127 hours
Unit receding limb, Tr	0.508 hours
Total unit time, Tb	0.634 hours

SCS Unit Hydrograph Parameters

Storm Event	10 year
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.190 hours
Area (User Defined)	122,919 ft²

Computational Time Increment	0.025 hours
Time to Peak (Computed)	12.155 hours
Flow (Peak, Computed)	6.39 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	6.37 ft³/s

Drainage Area

SCS CN (Composite)	74.000
Area (User Defined)	122,919 ft²
Maximum Retention (Pervious)	3.5 in
Maximum Retention (Pervious, 20 percent)	0.7 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	2.5 in
Runoff Volume (Pervious)	25,202 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	25,146 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.190 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	16.80 ft³/s
Unit peak time, Tp	0.127 hours
Unit receding limb, Tr	0.508 hours
Total unit time, Tb	0.634 hours

Subsection: Unit Hydrograph Summary | Return Event: 10 years
Label: PDA-2 | Storm Event: 10 year
Scenario: Post-Development 10 year

SCS Unit Hydrograph Parameters

Subsection: Unit Hydrograph Summary | Return Event: 25 years
Label: PDA-2 | Storm Event: 25 year
Scenario: Post-Development 25 year

Storm Event	25 year
Return Event	25 years
Duration	24.000 hours
Depth	6.4 in
Time of Concentration (Composite)	0.190 hours
Area (User Defined)	122,919 ft²

Computational Time Increment	0.025 hours
Time to Peak (Computed)	12.155 hours
Flow (Peak, Computed)	9.26 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	9.23 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	122,919 ft²
Maximum Retention (Pervious)	3.5 in
Maximum Retention (Pervious, 20 percent)	0.7 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.6 in
Runoff Volume (Pervious)	36,448 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	36,373 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.190 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	16.80 ft³/s
Unit peak time, Tp	0.127 hours
Unit receding limb, Tr	0.508 hours
Total unit time, Tb	0.634 hours

Subsection: Unit Hydrograph Summary

Return Event: 25 years

Label: PDA-2

Storm Event: 25 year

Scenario: Post-Development 25 year

SCS Unit Hydrograph Parameters

Storm Event	100 year
Return Event	100 years
Duration	24.000 hours
Depth	9.1 in
Time of Concentration (Composite)	0.190 hours
Area (User Defined)	122,919 ft²

Computational Time Increment	0.025 hours
Time to Peak (Computed)	12.155 hours
Flow (Peak, Computed)	15.34 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	15.32 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	122,919 ft²
Maximum Retention (Pervious)	3.5 in
Maximum Retention (Pervious, 20 percent)	0.7 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.0 in
Runoff Volume (Pervious)	61,016 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	60,902 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.190 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	16.80 ft³/s
Unit peak time, Tp	0.127 hours
Unit receding limb, Tr	0.508 hours
Total unit time, Tb	0.634 hours

Subsection: Unit Hydrograph Summary

Return Event: 100 years

Label: PDA-2

Storm Event: 100 year

Scenario: Post-Development 100 year

SCS Unit Hydrograph Parameters

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	17,669 ft²

Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	0.94 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.94 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	17,669 ft²
Maximum Retention (Pervious)	0.2 in
Maximum Retention (Pervious, 20 percent)	0.0 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.6 in
Runoff Volume (Pervious)	3,783 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	3,781 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	5.52 ft³/s
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

SCS Unit Hydrograph Parameters

Storm Event	10 year
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	17,669 ft²

Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	1.74 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	1.74 ft³/s

Drainage Area

SCS CN (Composite)	98.000
Area (User Defined)	17,669 ft²
Maximum Retention (Pervious)	0.2 in
Maximum Retention (Pervious, 20 percent)	0.0 in

Cumulative Runoff

Cumulative Runoff Depth (Pervious)	4.9 in
Runoff Volume (Pervious)	7,190 ft³

Hydrograph Volume (Area under Hydrograph curve)

Volume	7,185 ft³

SCS Unit Hydrograph Parameters

Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	5.52 ft³/s
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

SCS Unit Hydrograph Parameters

Storm Event	25 year
Return Event	25 years
Duration	24.000 hours
Depth	6.4 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	17,669 ft²

Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	2.20 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	2.20 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	17,669 ft²
Maximum Retention (Pervious)	0.2 in
Maximum Retention (Pervious, 20 percent)	0.0 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.2 in
Runoff Volume (Pervious)	9,131 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	9,126 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	5.52 ft³/s
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

SCS Unit Hydrograph Parameters

Storm Event	100 year
Return Event	100 years
Duration	24.000 hours
Depth	9.1 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	17,669 ft²

Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	3.12 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	3.12 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	17,669 ft²
Maximum Retention (Pervious)	0.2 in
Maximum Retention (Pervious, 20 percent)	0.0 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	8.9 in
Runoff Volume (Pervious)	13,104 ft³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	13,096 ft³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	5.52 ft³/s
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

SCS Unit Hydrograph Parameters

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary	Return Event: 1 years
Label: CO-1C-10	Storm Event: 1 year
Scenario: Post-Development 1 year	

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.138 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	0.050	0.200
Peak Time (hours)...	0.000	0.000
Peak Flow (ft³/s)...	0.00	0.00

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	0 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	0 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary	Return Event: 1 years
Label: CO-1C-10	Storm Event: 1 year
Scenario: Pre-Development 1 year	

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.138 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.150	12.300
Peak Flow (ft³/s)...	1.80	1.80

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	8,426 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	8,426 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary	Return Event: 10 years
Label: CO-1C-10	Storm Event: 10 year
Scenario: Post-Development 10 year	

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.138 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.450	12.600
Peak Flow (ft³/s)...	6.62	6.62

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	30,163 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	30,163 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary — Return Event: 10 years
Label: CO-1C-10 — Storm Event: 10 year
Scenario: Pre-Development 10 year

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.138 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.150	12.300
Peak Flow (ft³/s)...	8.53	8.53

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	32,561 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	32,561 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary | Return Event: 25 years
Label: CO-1C-10 | Storm Event: 25 year
Scenario: Post-Development 25 year

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.138 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.400	12.550
Peak Flow (ft³/s)...	12.13	12.13

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	52,899 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	52,899 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary | Return Event: 25 years
Label: CO-1C-10 | Storm Event: 25 year
Scenario: Pre-Development 25 year

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.138 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.150	12.300
Peak Flow (ft³/s)...	13.10	13.10

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	49,470 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	49,470 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary	Return Event: 100 years
Label: CO-1C-10	Storm Event: 100 year
Scenario: Post-Development 100 year	

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.138 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.300	12.450
Peak Flow (ft³/s)...	17.43	17.43

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	95,726 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	95,726 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary	Return Event: 100 years
Label: CO-1C-10	Storm Event: 100 year
Scenario: Pre-Development 100 year	

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.138 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.150	12.300
Peak Flow (ft³/s)...	23.15	23.15

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	87,757 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	87,757 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary
Label: CO-1C-2
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.165 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.200	12.350
Peak Flow (ft³/s)...	7.23	7.23

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	31,715 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	31,715 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary
Label: CO-1C-2
Scenario: Pre-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.165 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.250	12.400
Peak Flow (ft³/s)...	10.75	10.75

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	50,159 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	50,159 ft³

Subsection: Channel Routing Summary — Return Event: 10 years
Label: CO-1C-2 — Storm Event: 10 year
Scenario: Post-Development 10 year

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.165 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.250	12.400
Peak Flow (ft³/s)...	20.93	20.93

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	106,244 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	106,244 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary	Return Event: 10 years
Label: CO-1C-2	Storm Event: 10 year
Scenario: Pre-Development 10 year	

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.165 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.200	12.350
Peak Flow (ft³/s)...	30.02	30.02

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	136,541 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	136,541 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary	Return Event: 25 years
Label: CO-1C-2	Storm Event: 25 year
Scenario: Post-Development 25 year	

Infiltration

Infiltration Method	No Infiltration

Translation Routing Summary

Flow (Base)	0.00 ft³/s
Translate	0.165 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.250	12.400
Peak Flow (ft³/s)...	32.89	32.89

Inflow/Outflow Volumes

Volume (Routing, Inflow)	155,555 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	155,555 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary	Return Event: 25 years
Label: CO-1C-2	Storm Event: 25 year
Scenario: Pre-Development 25 year	

Infiltration

Infiltration Method	No Infiltration

Translation Routing Summary

Flow (Base)	0.00 ft³/s
Translate	0.165 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.200	12.350
Peak Flow (ft³/s)...	41.73	41.73

Inflow/Outflow Volumes

Volume (Routing, Inflow)	190,446 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	190,446 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary | Return Event: 100 years
Label: CO-1C-2 | Storm Event: 100 year
Scenario: Post-Development 100 year

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.165 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.250	12.400
Peak Flow (ft³/s)...	65.49	65.49

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	273,219 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	273,219 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary	Return Event: 100 years
Label: CO-1C-2	Storm Event: 100 year
Scenario: Pre-Development 100 year	

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.165 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.150
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.150
Peak Time (hours)...	12.200	12.350
Peak Flow (ft³/s)...	65.98	65.98

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	305,340 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	305,340 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary | Return Event: 1 years
Label: CO-1C-6 | Storm Event: 1 year
Scenario: Pre-Development 1 year

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.096 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.100
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.100
Peak Time (hours)...	12.150	12.250
Peak Flow (ft³/s)...	0.12	0.12

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	570 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	570 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary | Return Event: 10 years
Label: CO-1C-6 | Storm Event: 10 year
Scenario: Pre-Development 10 year

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.096 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.100
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.100
Peak Time (hours)...	12.100	12.200
Peak Flow (ft³/s)...	0.60	0.60

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	2,282 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	2,282 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary	Return Event: 25 years
Label: CO-1C-6	Storm Event: 25 year
Scenario: Pre-Development 25 year	

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.096 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.100
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.100
Peak Time (hours)...	12.100	12.200
Peak Flow (ft³/s)...	0.94	0.94

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	3,494 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	3,494 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary | Return Event: 100 years
Label: CO-1C-6 | Storm Event: 100 year
Scenario: Pre-Development 100 year

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.096 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.100
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.100
Peak Time (hours)...	12.100	12.200
Peak Flow (ft³/s)...	1.71	1.71

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	6,254 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	6,254 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary | Return Event: 1 years
Label: CO-1C-7 | Storm Event: 1 year
Scenario: Pre-Development 1 year

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.084 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.100
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.100
Peak Time (hours)...	12.200	12.300
Peak Flow (ft³/s)...	1.16	1.16

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	5,095 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	5,095 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary	Return Event: 10 years
Label: CO-1C-7	Storm Event: 10 year
Scenario: Pre-Development 10 year	

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.084 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.100
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.100
Peak Time (hours)...	12.150	12.250
Peak Flow (ft³/s)...	3.61	3.61

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	15,216 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	15,216 ft³

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary	Return Event: 25 years
Label: CO-1C-7	Storm Event: 25 year
Scenario: Pre-Development 25 year	

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft^3/s
Translate	0.084 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.100
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.100
Peak Time (hours)...	12.150	12.250
Peak Flow (ft^3/s)...	5.18	5.18

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	21,734 ft^3
Volume (Routing, Unrouted)	0 ft^3
Volume (Routing, Base Flow)	0 ft^3
Volume (Routing, Infiltration)	0 ft^3
Volume (Routing, Outflow)	21,734 ft^3

Stormwater Hydrologic Calculations

Subsection: Channel Routing Summary	Return Event: 100 years
Label: CO-1C-7	Storm Event: 100 year
Scenario: Pre-Development 100 year	

Infiltration	
Infiltration Method	No Infiltration

Translation Routing Summary	
Flow (Base)	0.00 ft³/s
Translate	0.084 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.100
Time Step (hours)...	0.050	0.050
Time End (hours)...	24.000	24.100
Peak Time (hours)...	12.150	12.250
Peak Flow (ft³/s)...	8.48	8.48

Inflow/Outflow Volumes	
Volume (Routing, Inflow)	35,850 ft³
Volume (Routing, Unrouted)	0 ft³
Volume (Routing, Base Flow)	0 ft³
Volume (Routing, Infiltration)	0 ft³
Volume (Routing, Outflow)	35,850 ft³

Subsection: Addition Summary | Return Event: 1 years
Label: DP 1C | Storm Event: 1 year
Scenario: Post-Development 1 year

Summary for Hydrograph Addition at 'DP 1C'

Upstream Link	Upstream Node
CO-1C-10	J-1C-10
CO-1C-2	J-1C-2

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	CO-1C-10	0	0.000	0.00
Flow (From)	CO-1C-2	31,715	12.350	7.23
Flow (In)	DP 1C	31,648	12.350	7.23

Subsection: Addition Summary
Label: DP 1C
Scenario: Pre-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Summary for Hydrograph Addition at 'DP 1C'

Upstream Link	Upstream Node
CO-1C-7	J-1C-7
CO-1C-10	J-1C-10
CO-1C-2	J-1C-2
CO-1C-6	J-1C-6

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	CO-1C-7	5,095	12.300	1.16
Flow (From)	CO-1C-10	8,426	12.300	1.80
Flow (From)	CO-1C-2	50,159	12.400	10.75
Flow (From)	CO-1C-6	570	12.250	0.12
Flow (In)	DP 1C	64,087	12.350	13.53

Subsection: Addition Summary | Return Event: 10 years
Label: DP 1C | Storm Event: 10 year
Scenario: Post-Development 10 year

Summary for Hydrograph Addition at 'DP 1C'

Upstream Link	Upstream Node
CO-1C-10	J-1C-10
CO-1C-2	J-1C-2

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	CO-1C-10	30,163	12.600	6.62
Flow (From)	CO-1C-2	106,244	12.400	20.93
Flow (In)	DP 1C	136,271	12.450	26.55

Subsection: Addition Summary | Return Event: 10 years
Label: DP 1C | Storm Event: 10 year
Scenario: Pre-Development 10 year

Summary for Hydrograph Addition at 'DP 1C'

Upstream Link	Upstream Node
CO-1C-7	J-1C-7
CO-1C-10	J-1C-10
CO-1C-2	J-1C-2
CO-1C-6	J-1C-6

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	CO-1C-7	15,216	12.250	3.61
Flow (From)	CO-1C-10	32,561	12.300	8.53
Flow (From)	CO-1C-2	136,541	12.350	30.02
Flow (From)	CO-1C-6	2,282	12.200	0.60
Flow (In)	DP 1C	186,221	12.350	41.12

Subsection: Addition Summary
Label: DP 1C
Scenario: Post-Development 25 year

Return Event: 25 years
Storm Event: 25 year

Summary for Hydrograph Addition at 'DP 1C'

Upstream Link	Upstream Node
CO-1C-10	J-1C-10
CO-1C-2	J-1C-2

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	CO-1C-10	52,899	12.550	12.13
Flow (From)	CO-1C-2	155,555	12.400	32.89
Flow (In)	DP 1C	208,279	12.400	44.19

Subsection: Addition Summary — Return Event: 25 years
Label: DP 1C — Storm Event: 25 year
Scenario: Pre-Development 25 year

Summary for Hydrograph Addition at 'DP 1C'

Upstream Link	Upstream Node
CO-1C-7	J-1C-7
CO-1C-10	J-1C-10
CO-1C-2	J-1C-2
CO-1C-6	J-1C-6

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	CO-1C-7	21,734	12.250	5.18
Flow (From)	CO-1C-10	49,470	12.300	13.10
Flow (From)	CO-1C-2	190,446	12.350	41.73
Flow (From)	CO-1C-6	3,494	12.200	0.94
Flow (In)	DP 1C	264,642	12.350	58.24

Subsection: Addition Summary
Label: DP 1C
Scenario: Post-Development 100 year

Return Event: 100 years
Storm Event: 100 year

Summary for Hydrograph Addition at 'DP 1C'

Upstream Link	Upstream Node
CO-1C-10	J-1C-10
CO-1C-2	J-1C-2

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	CO-1C-10	95,726	12.450	17.43
Flow (From)	CO-1C-2	273,219	12.400	65.49
Flow (In)	DP 1C	368,690	12.400	82.90

Subsection: Addition Summary | Return Event: 100 years
Label: DP 1C | Storm Event: 100 year
Scenario: Pre-Development 100 year

Summary for Hydrograph Addition at 'DP 1C'

Upstream Link	Upstream Node
CO-1C-7	J-1C-7
CO-1C-10	J-1C-10
CO-1C-2	J-1C-2
CO-1C-6	J-1C-6

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	CO-1C-7	35,850	12.250	8.48
Flow (From)	CO-1C-10	87,757	12.300	23.15
Flow (From)	CO-1C-2	305,340	12.350	65.98
Flow (From)	CO-1C-6	6,254	12.200	1.71
Flow (In)	DP 1C	434,447	12.300	95.31

Subsection: Addition Summary | Return Event: 1 years
Label: J-1C-2 | Storm Event: 1 year
Scenario: Post-Development 1 year

Summary for Hydrograph Addition at 'J-1C-2'

Upstream Link	Upstream Node
DB-OCS-L	DB-1C-2B
<Catchment to Outflow Node>	PDA-1C-2A
Outlet-4	Permeable Asphalt

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	DB-OCS-L	0	0.000	0.00
Flow (From)	PDA-1C-2A	31,715	12.200	7.23
Flow (From)	Outlet-4	0	0.000	0.00
Flow (In)	J-1C-2	31,715	12.200	7.23

Subsection: Addition Summary | Return Event: 10 years

Label: J-1C-2 | Storm Event: 10 year

Scenario: Post-Development 10 year

Summary for Hydrograph Addition at 'J-1C-2'

Upstream Link	Upstream Node
DB-OCS-L	DB-1C-2B
<Catchment to Outflow Node>	PDA-1C-2A
Outlet-4	Permeable Asphalt

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	DB-OCS-L	30,155	12.450	6.61
Flow (From)	PDA-1C-2A	76,089	12.200	17.11
Flow (From)	Outlet-4	0	0.000	0.00
Flow (In)	J-1C-2	106,244	12.250	20.93

Subsection: Addition Summary — Return Event: 25 years

Label: J-1C-2 — Storm Event: 25 year

Scenario: Post-Development 25 year

Summary for Hydrograph Addition at 'J-1C-2'

Upstream Link	Upstream Node
DB-OCS-L	DB-1C-2B
<Catchment to Outflow Node>	PDA-1C-2A
Outlet-4	Permeable Asphalt

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	DB-OCS-L	52,887	12.400	12.13
Flow (From)	PDA-1C-2A	102,668	12.200	22.80
Flow (From)	Outlet-4	0	0.000	0.00
Flow (In)	J-1C-2	155,555	12.250	32.89

Subsection: Addition Summary | Return Event: 100 years
Label: J-1C-2 | Storm Event: 100 year
Scenario: Post-Development 100 year

Summary for Hydrograph Addition at 'J-1C-2'

Upstream Link	Upstream Node
DB-OCS-L	DB-1C-2B
<Catchment to Outflow Node>	PDA-1C-2A
Outlet-4	Permeable Asphalt

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	DB-OCS-L	115,004	12.300	33.26
Flow (From)	PDA-1C-2A	158,215	12.200	34.36
Flow (From)	Outlet-4	0	0.000	0.00
Flow (In)	J-1C-2	273,219	12.250	65.49

Subsection: Time vs. Elevation
Label: DB-1C-2B (IN)
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	620.00	620.00	620.00	620.00	620.00
0.250	620.00	620.00	620.00	620.00	620.00
0.500	620.00	620.00	620.00	620.00	620.00
0.750	620.00	620.00	620.00	620.00	620.00
1.000	620.00	620.00	620.00	620.00	620.00
1.250	620.00	620.00	620.00	620.00	620.00
1.500	620.00	620.00	620.00	620.00	620.00
1.750	620.00	620.00	620.00	620.00	620.00
2.000	620.00	620.00	620.00	620.00	620.00
2.250	620.00	620.00	620.00	620.00	620.00
2.500	620.00	620.00	620.00	620.00	620.00
2.750	620.00	620.00	620.00	620.00	620.00
3.000	620.00	620.00	620.00	620.00	620.00
3.250	620.00	620.00	620.00	620.00	620.00
3.500	620.00	620.00	620.00	620.00	620.00
3.750	620.00	620.00	620.00	620.00	620.00
4.000	620.00	620.00	620.00	620.00	620.00
4.250	620.00	620.00	620.00	620.00	620.00
4.500	620.00	620.00	620.00	620.00	620.00
4.750	620.00	620.00	620.00	620.00	620.00
5.000	620.00	620.00	620.00	620.00	620.00
5.250	620.00	620.00	620.00	620.00	620.00
5.500	620.00	620.00	620.00	620.00	620.00
5.750	620.00	620.00	620.00	620.00	620.00
6.000	620.00	620.00	620.00	620.00	620.00
6.250	620.00	620.00	620.00	620.00	620.00
6.500	620.00	620.00	620.00	620.00	620.00
6.750	620.00	620.00	620.00	620.00	620.00
7.000	620.00	620.00	620.00	620.00	620.00
7.250	620.00	620.00	620.00	620.00	620.00
7.500	620.00	620.00	620.00	620.00	620.00
7.750	620.00	620.00	620.00	620.00	620.00
8.000	620.00	620.00	620.00	620.00	620.00
8.250	620.00	620.00	620.00	620.00	620.00
8.500	620.00	620.00	620.00	620.00	620.00
8.750	620.00	620.00	620.00	620.00	620.00
9.000	620.00	620.00	620.00	620.00	620.00
9.250	620.00	620.00	620.00	620.00	620.00
9.500	620.00	620.00	620.00	620.00	620.00
9.750	620.00	620.00	620.00	620.00	620.00
10.000	620.00	620.00	620.00	620.00	620.00
10.250	620.00	620.00	620.00	620.00	620.00
10.500	620.00	620.00	620.00	620.00	620.00
10.750	620.00	620.00	620.00	620.00	620.00
11.000	620.00	620.00	620.00	620.00	620.00

Subsection: Time vs. Elevation | Return Event: 1 years
Label: DB-1C-2B (IN) | Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.250	620.00	620.00	620.00	620.00	620.00
11.500	620.00	620.00	620.00	620.00	620.00
11.750	620.00	620.00	620.00	620.00	620.00
12.000	620.00	620.00	620.00	620.00	620.00
12.250	620.00	620.00	620.00	620.00	620.00
12.500	620.00	620.00	620.00	620.00	620.00
12.750	620.00	620.00	620.00	620.00	620.00
13.000	620.00	620.00	620.00	620.00	620.00
13.250	620.00	620.00	620.00	620.00	620.00
13.500	620.00	620.00	620.00	620.00	620.00
13.750	620.00	620.00	620.00	620.00	620.00
14.000	620.00	620.00	620.00	620.00	620.00
14.250	620.00	620.00	620.00	620.00	620.00
14.500	620.00	620.00	620.00	620.00	620.00
14.750	620.00	620.00	620.00	620.00	620.00
15.000	620.00	620.00	620.00	620.00	620.00
15.250	620.00	620.00	620.00	620.00	620.00
15.500	620.00	620.00	620.00	620.00	620.00
15.750	620.00	620.00	620.00	620.00	620.00
16.000	620.00	620.00	620.00	620.00	620.00
16.250	620.00	620.00	620.00	620.00	620.00
16.500	620.00	620.00	620.00	620.00	620.00
16.750	620.00	620.00	620.00	620.00	620.00
17.000	620.00	620.00	620.00	620.00	620.00
17.250	620.00	620.00	620.00	620.00	620.00
17.500	620.00	620.00	620.00	620.00	620.00
17.750	620.00	620.00	620.00	620.00	620.00
18.000	620.00	620.00	620.00	620.00	620.00
18.250	620.00	620.00	620.00	620.00	620.00
18.500	620.00	620.00	620.00	620.00	620.00
18.750	620.00	620.00	620.00	620.00	620.00
19.000	620.00	620.00	620.00	620.00	620.00
19.250	620.00	620.00	620.00	620.00	620.00
19.500	620.00	620.00	620.00	620.00	620.00
19.750	620.00	620.00	620.00	620.00	620.00
20.000	620.00	620.00	620.00	620.00	620.00
20.250	620.00	620.00	620.00	620.00	620.00
20.500	620.00	620.00	620.00	620.00	620.00
20.750	620.00	620.00	620.00	620.00	620.00
21.000	620.00	620.00	620.00	620.00	620.00
21.250	620.00	620.00	620.00	620.00	620.00
21.500	620.00	620.00	620.00	620.00	620.00
21.750	620.00	620.00	620.00	620.00	620.00
22.000	620.00	620.00	620.00	620.00	620.00
22.250	620.00	620.00	620.00	620.00	620.00

Subsection: Time vs. Elevation | Return Event: 1 years
Label: DB-1C-2B (IN) | Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.500	620.00	620.00	620.00	620.00	620.00
22.750	620.00	620.00	620.00	620.00	620.00
23.000	620.00	620.00	620.00	620.00	620.00
23.250	620.00	620.00	620.00	620.00	620.00
23.500	620.00	620.00	620.00	620.00	620.00
23.750	620.00	620.00	620.00	620.00	620.00
24.000	620.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation Return Event: 10 years
Label: DB-1C-2B (IN) Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	620.00	620.00	620.00	620.00	620.00
0.250	620.00	620.00	620.00	620.00	620.00
0.500	620.00	620.00	620.00	620.00	620.00
0.750	620.00	620.00	620.00	620.00	620.00
1.000	620.00	620.00	620.00	620.00	620.00
1.250	620.00	620.00	620.00	620.00	620.00
1.500	620.00	620.00	620.00	620.00	620.00
1.750	620.00	620.00	620.00	620.00	620.00
2.000	620.00	620.00	620.00	620.00	620.00
2.250	620.00	620.00	620.00	620.00	620.00
2.500	620.00	620.00	620.00	620.00	620.00
2.750	620.00	620.00	620.00	620.00	620.00
3.000	620.00	620.00	620.00	620.00	620.00
3.250	620.00	620.00	620.00	620.00	620.00
3.500	620.00	620.00	620.00	620.00	620.00
3.750	620.00	620.00	620.00	620.00	620.00
4.000	620.00	620.00	620.00	620.00	620.00
4.250	620.00	620.00	620.00	620.00	620.00
4.500	620.00	620.00	620.00	620.00	620.00
4.750	620.00	620.00	620.00	620.00	620.00
5.000	620.00	620.00	620.00	620.00	620.00
5.250	620.00	620.00	620.00	620.00	620.00
5.500	620.00	620.00	620.00	620.00	620.00
5.750	620.00	620.00	620.00	620.00	620.00
6.000	620.00	620.00	620.00	620.00	620.00
6.250	620.00	620.00	620.00	620.00	620.00
6.500	620.00	620.00	620.00	620.00	620.00
6.750	620.00	620.00	620.00	620.00	620.00
7.000	620.00	620.00	620.00	620.00	620.00
7.250	620.00	620.00	620.00	620.00	620.00
7.500	620.00	620.00	620.00	620.00	620.00
7.750	620.00	620.00	620.00	620.00	620.00
8.000	620.00	620.00	620.00	620.00	620.00
8.250	620.00	620.00	620.00	620.00	620.00
8.500	620.00	620.00	620.00	620.00	620.00
8.750	620.00	620.00	620.00	620.00	620.00
9.000	620.00	620.00	620.00	620.00	620.00
9.250	620.00	620.00	620.00	620.00	620.00
9.500	620.00	620.00	620.00	620.00	620.00
9.750	620.00	620.00	620.00	620.00	620.00
10.000	620.00	620.00	620.00	620.00	620.00
10.250	620.00	620.00	620.00	620.00	620.00
10.500	620.00	620.00	620.00	620.00	620.00
10.750	620.00	620.00	620.00	620.00	620.00
11.000	620.00	620.00	620.00	620.00	620.00

Subsection: Time vs. Elevation | Return Event: 10 years
Label: DB-1C-2B (IN) | Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.250	620.00	620.00	620.00	620.00	620.00
11.500	620.00	620.00	620.00	620.00	620.00
11.750	620.00	620.00	620.00	620.00	620.00
12.000	620.00	620.00	620.05	620.22	620.45
12.250	620.65	620.76	620.79	620.80	620.81
12.500	620.81	620.79	620.77	620.74	620.71
12.750	620.68	620.65	620.62	620.60	620.57
13.000	620.55	620.53	620.50	620.48	620.47
13.250	620.45	620.43	620.42	620.40	620.39
13.500	620.38	620.36	620.35	620.34	620.33
13.750	620.32	620.31	620.31	620.30	620.29
14.000	620.28	620.27	620.27	620.26	620.25
14.250	620.25	620.24	620.23	620.23	620.22
14.500	620.22	620.21	620.21	620.20	620.20
14.750	620.20	620.19	620.19	620.18	620.18
15.000	620.17	620.17	620.17	620.16	620.16
15.250	620.16	620.15	620.15	620.14	620.14
15.500	620.14	620.13	620.13	620.13	620.12
15.750	620.12	620.12	620.11	620.11	620.11
16.000	620.10	620.10	620.10	620.09	620.09
16.250	620.09	620.08	620.08	620.08	620.08
16.500	620.07	620.07	620.07	620.07	620.07
16.750	620.06	620.06	620.06	620.06	620.06
17.000	620.06	620.06	620.05	620.05	620.05
17.250	620.05	620.05	620.05	620.05	620.05
17.500	620.05	620.04	620.04	620.04	620.04
17.750	620.04	620.04	620.03	620.03	620.03
18.000	620.03	620.03	620.03	620.03	620.03
18.250	620.02	620.02	620.02	620.02	620.02
18.500	620.02	620.02	620.02	620.02	620.02
18.750	620.02	620.01	620.01	620.01	620.01
19.000	620.01	620.01	620.01	620.01	620.01
19.250	620.01	620.01	620.01	620.01	620.01
19.500	620.01	620.01	620.01	620.01	620.01
19.750	620.01	620.01	620.01	620.01	620.00
20.000	620.00	620.00	620.00	620.00	620.00
20.250	620.00	620.00	620.00	620.00	620.00
20.500	620.00	620.00	620.00	620.00	620.00
20.750	620.00	620.00	620.00	620.00	620.00
21.000	620.00	620.00	620.00	620.00	620.00
21.250	620.00	620.00	620.00	620.00	620.00
21.500	620.00	620.00	620.00	620.00	620.00
21.750	620.00	620.00	620.00	620.00	620.00
22.000	620.00	620.00	620.00	620.00	620.00
22.250	620.00	620.00	620.00	620.00	620.00

Subsection: Time vs. Elevation
Label: DB-1C-2B (IN)
Scenario: Post-Development 10 year

Return Event: 10 years
Storm Event: 10 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.500	620.00	620.00	620.00	620.00	620.00
22.750	620.00	620.00	620.00	620.00	620.00
23.000	620.00	620.00	620.00	620.00	620.00
23.250	620.00	620.00	620.00	620.00	620.00
23.500	620.00	620.00	620.00	620.00	620.00
23.750	620.00	620.00	620.00	620.00	620.00
24.000	620.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation
Label: DB-1C-2B (IN)
Scenario: Post-Development 25 year

Return Event: 25 years
Storm Event: 25 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	620.00	620.00	620.00	620.00	620.00
0.250	620.00	620.00	620.00	620.00	620.00
0.500	620.00	620.00	620.00	620.00	620.00
0.750	620.00	620.00	620.00	620.00	620.00
1.000	620.00	620.00	620.00	620.00	620.00
1.250	620.00	620.00	620.00	620.00	620.00
1.500	620.00	620.00	620.00	620.00	620.00
1.750	620.00	620.00	620.00	620.00	620.00
2.000	620.00	620.00	620.00	620.00	620.00
2.250	620.00	620.00	620.00	620.00	620.00
2.500	620.00	620.00	620.00	620.00	620.00
2.750	620.00	620.00	620.00	620.00	620.00
3.000	620.00	620.00	620.00	620.00	620.00
3.250	620.00	620.00	620.00	620.00	620.00
3.500	620.00	620.00	620.00	620.00	620.00
3.750	620.00	620.00	620.00	620.00	620.00
4.000	620.00	620.00	620.00	620.00	620.00
4.250	620.00	620.00	620.00	620.00	620.00
4.500	620.00	620.00	620.00	620.00	620.00
4.750	620.00	620.00	620.00	620.00	620.00
5.000	620.00	620.00	620.00	620.00	620.00
5.250	620.00	620.00	620.00	620.00	620.00
5.500	620.00	620.00	620.00	620.00	620.00
5.750	620.00	620.00	620.00	620.00	620.00
6.000	620.00	620.00	620.00	620.00	620.00
6.250	620.00	620.00	620.00	620.00	620.00
6.500	620.00	620.00	620.00	620.00	620.00
6.750	620.00	620.00	620.00	620.00	620.00
7.000	620.00	620.00	620.00	620.00	620.00
7.250	620.00	620.00	620.00	620.00	620.00
7.500	620.00	620.00	620.00	620.00	620.00
7.750	620.00	620.00	620.00	620.00	620.00
8.000	620.00	620.00	620.00	620.00	620.00
8.250	620.00	620.00	620.00	620.00	620.00
8.500	620.00	620.00	620.00	620.00	620.00
8.750	620.00	620.00	620.00	620.00	620.00
9.000	620.00	620.00	620.00	620.00	620.00
9.250	620.00	620.00	620.00	620.00	620.00
9.500	620.00	620.00	620.00	620.00	620.00
9.750	620.00	620.00	620.00	620.00	620.00
10.000	620.00	620.00	620.00	620.00	620.00
10.250	620.00	620.00	620.00	620.00	620.00
10.500	620.00	620.00	620.00	620.00	620.00
10.750	620.00	620.00	620.00	620.00	620.00
11.000	620.00	620.00	620.00	620.00	620.00

Stormwater Hydrologic Calculations

Subsection: Time vs. Elevation | Return Event: 25 years
Label: DB-1C-2B (IN) | Storm Event: 25 year
Scenario: Post-Development 25 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.250	620.00	620.00	620.00	620.00	620.00
11.500	620.00	620.00	620.00	620.00	620.00
11.750	620.00	620.00	620.00	620.00	620.02
12.000	620.10	620.30	620.57	620.84	621.05
12.250	621.16	621.20	621.22	621.22	621.20
12.500	621.17	621.13	621.08	621.02	620.97
12.750	620.92	620.87	620.83	620.79	620.75
13.000	620.72	620.69	620.66	620.63	620.60
13.250	620.58	620.56	620.54	620.52	620.50
13.500	620.48	620.47	620.45	620.44	620.43
13.750	620.42	620.41	620.40	620.38	620.37
14.000	620.37	620.36	620.35	620.34	620.33
14.250	620.32	620.32	620.31	620.30	620.30
14.500	620.29	620.29	620.28	620.27	620.27
14.750	620.26	620.26	620.25	620.25	620.25
15.000	620.24	620.24	620.23	620.23	620.22
15.250	620.22	620.22	620.21	620.21	620.20
15.500	620.20	620.20	620.19	620.19	620.18
15.750	620.18	620.18	620.17	620.17	620.17
16.000	620.16	620.16	620.15	620.15	620.15
16.250	620.14	620.14	620.13	620.13	620.13
16.500	620.12	620.12	620.12	620.12	620.11
16.750	620.11	620.11	620.10	620.10	620.10
17.000	620.10	620.09	620.09	620.09	620.08
17.250	620.08	620.08	620.08	620.07	620.07
17.500	620.07	620.07	620.07	620.06	620.06
17.750	620.06	620.06	620.06	620.06	620.06
18.000	620.05	620.05	620.05	620.05	620.05
18.250	620.05	620.05	620.05	620.05	620.04
18.500	620.04	620.04	620.04	620.04	620.04
18.750	620.03	620.03	620.03	620.03	620.03
19.000	620.03	620.03	620.02	620.02	620.02
19.250	620.02	620.02	620.02	620.02	620.02
19.500	620.02	620.02	620.02	620.01	620.01
19.750	620.01	620.01	620.01	620.01	620.01
20.000	620.01	620.01	620.01	620.01	620.01
20.250	620.01	620.01	620.01	620.01	620.01
20.500	620.01	620.01	620.01	620.01	620.01
20.750	620.01	620.01	620.00	620.00	620.00
21.000	620.00	620.00	620.00	620.00	620.00
21.250	620.00	620.00	620.00	620.00	620.00
21.500	620.00	620.00	620.00	620.00	620.00
21.750	620.00	620.00	620.00	620.00	620.00
22.000	620.00	620.00	620.00	620.00	620.00
22.250	620.00	620.00	620.00	620.00	620.00

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.500	620.00	620.00	620.00	620.00	620.00
22.750	620.00	620.00	620.00	620.00	620.00
23.000	620.00	620.00	620.00	620.00	620.00
23.250	620.00	620.00	620.00	620.00	620.00
23.500	620.00	620.00	620.00	620.00	620.00
23.750	620.00	620.00	620.00	620.00	620.00
24.000	620.00	(N/A)	(N/A)	(N/A)	(N/A)

Stormwater Hydrologic Calculations

Subsection: Time vs. Elevation | Return Event: 100 years
Label: DB-1C-2B (IN) | Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	620.00	620.00	620.00	620.00	620.00
0.250	620.00	620.00	620.00	620.00	620.00
0.500	620.00	620.00	620.00	620.00	620.00
0.750	620.00	620.00	620.00	620.00	620.00
1.000	620.00	620.00	620.00	620.00	620.00
1.250	620.00	620.00	620.00	620.00	620.00
1.500	620.00	620.00	620.00	620.00	620.00
1.750	620.00	620.00	620.00	620.00	620.00
2.000	620.00	620.00	620.00	620.00	620.00
2.250	620.00	620.00	620.00	620.00	620.00
2.500	620.00	620.00	620.00	620.00	620.00
2.750	620.00	620.00	620.00	620.00	620.00
3.000	620.00	620.00	620.00	620.00	620.00
3.250	620.00	620.00	620.00	620.00	620.00
3.500	620.00	620.00	620.00	620.00	620.00
3.750	620.00	620.00	620.00	620.00	620.00
4.000	620.00	620.00	620.00	620.00	620.00
4.250	620.00	620.00	620.00	620.00	620.00
4.500	620.00	620.00	620.00	620.00	620.00
4.750	620.00	620.00	620.00	620.00	620.00
5.000	620.00	620.00	620.00	620.00	620.00
5.250	620.00	620.00	620.00	620.00	620.00
5.500	620.00	620.00	620.00	620.00	620.00
5.750	620.00	620.00	620.00	620.00	620.00
6.000	620.00	620.00	620.00	620.00	620.00
6.250	620.00	620.00	620.00	620.00	620.00
6.500	620.00	620.00	620.00	620.00	620.00
6.750	620.00	620.00	620.00	620.00	620.00
7.000	620.00	620.00	620.00	620.00	620.00
7.250	620.00	620.00	620.00	620.00	620.00
7.500	620.00	620.00	620.00	620.00	620.00
7.750	620.00	620.00	620.00	620.00	620.00
8.000	620.00	620.00	620.00	620.00	620.00
8.250	620.00	620.00	620.00	620.00	620.00
8.500	620.00	620.00	620.00	620.00	620.00
8.750	620.00	620.00	620.00	620.00	620.00
9.000	620.00	620.00	620.00	620.00	620.00
9.250	620.00	620.00	620.00	620.00	620.00
9.500	620.00	620.00	620.00	620.00	620.00
9.750	620.00	620.00	620.00	620.00	620.00
10.000	620.00	620.00	620.00	620.00	620.00
10.250	620.00	620.00	620.00	620.00	620.00
10.500	620.00	620.00	620.00	620.00	620.00
10.750	620.00	620.00	620.00	620.00	620.00
11.000	620.00	620.00	620.00	620.00	620.00

Subsection: Time vs. Elevation | Return Event: 100 years
Label: DB-1C-2B (IN) | Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.250	620.00	620.00	620.00	620.00	620.00
11.500	620.00	620.02	620.06	620.12	620.20
11.750	620.30	620.41	620.53	620.65	620.79
12.000	620.96	621.18	621.44	621.68	621.83
12.250	621.90	621.90	621.87	621.82	621.76
12.500	621.69	621.62	621.54	621.45	621.36
12.750	621.28	621.21	621.14	621.08	621.02
13.000	620.97	620.93	620.88	620.84	620.81
13.250	620.78	620.75	620.72	620.69	620.67
13.500	620.65	620.63	620.61	620.60	620.58
13.750	620.57	620.55	620.54	620.53	620.51
14.000	620.50	620.49	620.48	620.47	620.46
14.250	620.45	620.44	620.43	620.43	620.42
14.500	620.41	620.41	620.40	620.39	620.39
14.750	620.38	620.37	620.37	620.36	620.36
15.000	620.35	620.35	620.34	620.34	620.33
15.250	620.33	620.32	620.32	620.31	620.31
15.500	620.31	620.30	620.30	620.29	620.29
15.750	620.28	620.28	620.27	620.27	620.26
16.000	620.26	620.25	620.25	620.25	620.24
16.250	620.24	620.23	620.23	620.22	620.22
16.500	620.22	620.21	620.21	620.21	620.20
16.750	620.20	620.20	620.19	620.19	620.19
17.000	620.18	620.18	620.18	620.17	620.17
17.250	620.17	620.17	620.16	620.16	620.16
17.500	620.15	620.15	620.15	620.15	620.14
17.750	620.14	620.14	620.13	620.13	620.13
18.000	620.12	620.12	620.12	620.12	620.11
18.250	620.11	620.11	620.11	620.10	620.10
18.500	620.10	620.10	620.09	620.09	620.09
18.750	620.09	620.08	620.08	620.08	620.08
19.000	620.08	620.07	620.07	620.07	620.07
19.250	620.07	620.07	620.06	620.06	620.06
19.500	620.06	620.06	620.06	620.06	620.05
19.750	620.05	620.05	620.05	620.05	620.05
20.000	620.05	620.05	620.05	620.04	620.04
20.250	620.04	620.04	620.04	620.04	620.03
20.500	620.03	620.03	620.03	620.03	620.03
20.750	620.03	620.03	620.02	620.02	620.02
21.000	620.02	620.02	620.02	620.02	620.02
21.250	620.02	620.02	620.01	620.01	620.01
21.500	620.01	620.01	620.01	620.01	620.01
21.750	620.01	620.01	620.01	620.01	620.01
22.000	620.01	620.01	620.01	620.01	620.01
22.250	620.01	620.01	620.01	620.01	620.01

Subsection: Time vs. Elevation — Return Event: 100 years
Label: DB-1C-2B (IN) — Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.500	620.01	620.01	620.00	620.00	620.00
22.750	620.00	620.00	620.00	620.00	620.00
23.000	620.00	620.00	620.00	620.00	620.00
23.250	620.00	620.00	620.00	620.00	620.00
23.500	620.00	620.00	620.00	620.00	620.00
23.750	620.00	620.00	620.00	620.00	620.00
24.000	620.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation | Return Event: 1 years
Label: IB-1C-2B (IN) | Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	618.00	618.00	618.00	618.00	618.00
0.250	618.00	618.00	618.00	618.00	618.00
0.500	618.00	618.00	618.00	618.00	618.00
0.750	618.00	618.00	618.00	618.00	618.00
1.000	618.00	618.00	618.00	618.00	618.00
1.250	618.00	618.00	618.00	618.00	618.00
1.500	618.00	618.00	618.00	618.00	618.00
1.750	618.00	618.00	618.00	618.00	618.00
2.000	618.00	618.00	618.00	618.00	618.00
2.250	618.00	618.00	618.00	618.00	618.00
2.500	618.00	618.00	618.00	618.00	618.00
2.750	618.00	618.00	618.00	618.00	618.00
3.000	618.00	618.00	618.00	618.00	618.00
3.250	618.00	618.00	618.00	618.00	618.00
3.500	618.00	618.00	618.00	618.00	618.00
3.750	618.00	618.00	618.00	618.00	618.00
4.000	618.00	618.00	618.00	618.00	618.00
4.250	618.00	618.00	618.00	618.00	618.00
4.500	618.00	618.00	618.00	618.00	618.00
4.750	618.00	618.00	618.00	618.00	618.00
5.000	618.00	618.00	618.00	618.00	618.00
5.250	618.00	618.00	618.00	618.00	618.00
5.500	618.00	618.00	618.00	618.00	618.00
5.750	618.00	618.00	618.00	618.00	618.00
6.000	618.00	618.00	618.00	618.00	618.00
6.250	618.00	618.00	618.00	618.00	618.00
6.500	618.00	618.00	618.00	618.00	618.00
6.750	618.00	618.00	618.00	618.00	618.00
7.000	618.00	618.00	618.00	618.00	618.00
7.250	618.00	618.00	618.00	618.00	618.00
7.500	618.00	618.00	618.00	618.00	618.00
7.750	618.00	618.00	618.00	618.00	618.00
8.000	618.00	618.00	618.00	618.00	618.00
8.250	618.00	618.00	618.00	618.00	618.00
8.500	618.00	618.00	618.00	618.00	618.00
8.750	618.00	618.00	618.00	618.00	618.00
9.000	618.00	618.00	618.00	618.00	618.00
9.250	618.00	618.00	618.00	618.00	618.00
9.500	618.00	618.00	618.00	618.00	618.00
9.750	618.00	618.00	618.00	618.00	618.00
10.000	618.00	618.00	618.00	618.00	618.00
10.250	618.00	618.00	618.00	618.00	618.00
10.500	618.00	618.00	618.00	618.00	618.00
10.750	618.00	618.00	618.00	618.00	618.00
11.000	618.00	618.00	618.00	618.00	618.00

Subsection: Time vs. Elevation | Return Event: 1 years
Label: IB-1C-2B (IN) | Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.250	618.00	618.00	618.00	618.01	618.01
11.500	618.01	618.01	618.01	618.01	618.01
11.750	618.02	618.03	618.05	618.08	618.14
12.000	618.22	618.35	618.52	618.71	618.91
12.250	619.08	619.22	619.34	619.45	619.53
12.500	619.60	619.66	619.70	619.73	619.75
12.750	619.77	619.78	619.80	619.81	619.82
13.000	619.82	619.83	619.83	619.83	619.83
13.250	619.83	619.83	619.83	619.83	619.83
13.500	619.83	619.83	619.83	619.83	619.83
13.750	619.83	619.84	619.84	619.84	619.84
14.000	619.84	619.84	619.84	619.84	619.84
14.250	619.84	619.84	619.84	619.84	619.84
14.500	619.84	619.84	619.84	619.84	619.84
14.750	619.84	619.84	619.84	619.84	619.84
15.000	619.84	619.84	619.84	619.84	619.84
15.250	619.84	619.84	619.84	619.84	619.84
15.500	619.84	619.84	619.84	619.84	619.84
15.750	619.84	619.84	619.84	619.84	619.84
16.000	619.84	619.84	619.84	619.84	619.84
16.250	619.84	619.84	619.84	619.84	619.84
16.500	619.84	619.84	619.84	619.84	619.84
16.750	619.84	619.84	619.84	619.84	619.84
17.000	619.84	619.84	619.84	619.84	619.84
17.250	619.84	619.84	619.84	619.84	619.84
17.500	619.84	619.84	619.84	619.84	619.84
17.750	619.84	619.84	619.84	619.84	619.84
18.000	619.84	619.84	619.84	619.84	619.84
18.250	619.84	619.84	619.84	619.84	619.84
18.500	619.84	619.84	619.84	619.84	619.84
18.750	619.84	619.84	619.84	619.84	619.84
19.000	619.84	619.84	619.84	619.84	619.84
19.250	619.84	619.84	619.84	619.84	619.84
19.500	619.84	619.84	619.84	619.84	619.84
19.750	619.84	619.84	619.84	619.84	619.84
20.000	619.84	619.84	619.84	619.84	619.84
20.250	619.84	619.84	619.84	619.84	619.84
20.500	619.84	619.84	619.84	619.84	619.84
20.750	619.84	619.84	619.84	619.84	619.84
21.000	619.84	619.84	619.84	619.84	619.84
21.250	619.84	619.84	619.84	619.84	619.84
21.500	619.84	619.84	619.84	619.84	619.84
21.750	619.84	619.84	619.84	619.84	619.84
22.000	619.84	619.84	619.84	619.84	619.84
22.250	619.84	619.84	619.84	619.84	619.84

Subsection: Time vs. Elevation
Return Event: 1 years
Label: IB-1C-2B (IN)
Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.500	619.84	619.84	619.84	619.84	619.84
22.750	619.84	619.84	619.84	619.84	619.84
23.000	619.85	619.85	619.85	619.85	619.85
23.250	619.85	619.85	619.85	619.85	619.85
23.500	619.85	619.85	619.85	619.85	619.85
23.750	619.85	619.85	619.85	619.85	619.85
24.000	619.85	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation　　Return Event: 10 years
Label: IB-1C-2B (IN)　　Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	618.00	618.00	618.00	618.00	618.00
0.250	618.00	618.00	618.00	618.00	618.00
0.500	618.00	618.00	618.00	618.00	618.00
0.750	618.00	618.00	618.00	618.00	618.00
1.000	618.00	618.00	618.00	618.00	618.00
1.250	618.00	618.00	618.00	618.00	618.00
1.500	618.00	618.00	618.00	618.00	618.00
1.750	618.00	618.00	618.00	618.00	618.00
2.000	618.00	618.00	618.00	618.00	618.00
2.250	618.00	618.00	618.00	618.00	618.00
2.500	618.00	618.00	618.00	618.00	618.00
2.750	618.00	618.00	618.00	618.00	618.00
3.000	618.00	618.00	618.00	618.00	618.00
3.250	618.00	618.00	618.00	618.00	618.00
3.500	618.00	618.00	618.00	618.00	618.00
3.750	618.00	618.00	618.00	618.00	618.00
4.000	618.00	618.00	618.00	618.00	618.00
4.250	618.00	618.00	618.00	618.00	618.00
4.500	618.00	618.00	618.00	618.00	618.00
4.750	618.00	618.00	618.00	618.00	618.00
5.000	618.00	618.00	618.00	618.00	618.00
5.250	618.00	618.00	618.00	618.00	618.00
5.500	618.00	618.00	618.00	618.00	618.00
5.750	618.00	618.00	618.00	618.00	618.00
6.000	618.00	618.00	618.00	618.00	618.00
6.250	618.00	618.00	618.00	618.00	618.00
6.500	618.00	618.00	618.00	618.00	618.00
6.750	618.00	618.00	618.00	618.00	618.00
7.000	618.00	618.00	618.00	618.00	618.00
7.250	618.00	618.00	618.00	618.00	618.00
7.500	618.00	618.00	618.00	618.00	618.00
7.750	618.00	618.00	618.00	618.00	618.00
8.000	618.00	618.00	618.00	618.00	618.00
8.250	618.00	618.00	618.00	618.00	618.00
8.500	618.00	618.00	618.00	618.00	618.00
8.750	618.00	618.00	618.00	618.00	618.00
9.000	618.00	618.00	618.00	618.00	618.00
9.250	618.00	618.00	618.00	618.00	618.00
9.500	618.00	618.01	618.01	618.01	618.01
9.750	618.01	618.01	618.01	618.01	618.01
10.000	618.01	618.01	618.01	618.01	618.01
10.250	618.01	618.01	618.01	618.01	618.01
10.500	618.01	618.01	618.01	618.01	618.01
10.750	618.01	618.01	618.01	618.02	618.02
11.000	618.02	618.02	618.03	618.04	618.04

Stormwater Hydrologic Calculations

Subsection: Time vs. Elevation — Return Event: 10 years
Label: IB-1C-2B (IN) — Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.250	618.06	618.07	618.09	618.11	618.14
11.500	618.16	618.20	618.24	618.29	618.37
11.750	618.47	618.60	618.76	618.96	619.21
12.000	619.55	620.00	620.28	620.45	620.54
12.250	620.61	620.70	620.79	620.82	620.83
12.500	620.84	620.84	620.82	620.79	620.76
12.750	620.73	620.70	620.67	620.64	620.61
13.000	620.59	620.57	620.54	620.52	620.50
13.250	620.48	620.46	620.45	620.43	620.42
13.500	620.41	620.39	620.38	620.37	620.36
13.750	620.35	620.34	620.33	620.32	620.31
14.000	620.31	620.30	620.29	620.28	620.27
14.250	620.27	620.26	620.26	620.25	620.24
14.500	620.24	620.23	620.23	620.22	620.22
14.750	620.21	620.21	620.20	620.20	620.20
15.000	620.19	620.19	620.18	620.18	620.17
15.250	620.17	620.17	620.16	620.16	620.16
15.500	620.15	620.15	620.15	620.14	620.14
15.750	620.13	620.13	620.13	620.12	620.12
16.000	620.11	620.11	620.11	620.10	620.10
16.250	620.10	620.10	620.09	620.09	620.09
16.500	620.09	620.08	620.08	620.08	620.08
16.750	620.08	620.07	620.07	620.07	620.07
17.000	620.07	620.06	620.06	620.06	620.06
17.250	620.06	620.06	620.06	620.06	620.05
17.500	620.05	620.05	620.05	620.05	620.05
17.750	620.05	620.05	620.05	620.05	620.05
18.000	620.05	620.05	620.05	620.05	620.05
18.250	620.05	620.05	620.05	620.05	620.05
18.500	620.05	620.05	620.05	620.05	620.05
18.750	620.05	620.05	620.05	620.05	620.05
19.000	620.05	620.05	620.05	620.05	620.05
19.250	620.05	620.05	620.05	620.05	620.05
19.500	620.05	620.05	620.05	620.05	620.05
19.750	620.05	620.05	620.05	620.05	620.05
20.000	620.05	620.05	620.05	620.05	620.05
20.250	620.05	620.05	620.05	620.05	620.05
20.500	620.05	620.05	620.05	620.05	620.05
20.750	620.05	620.05	620.05	620.05	620.05
21.000	620.05	620.05	620.05	620.05	620.05
21.250	620.05	620.05	620.05	620.05	620.05
21.500	620.05	620.05	620.05	620.05	620.05
21.750	620.05	620.05	620.05	620.05	620.05
22.000	620.05	620.05	620.05	620.05	620.05
22.250	620.05	620.05	620.05	620.05	620.05

Subsection: Time vs. Elevation Return Event: 10 years
Label: IB-1C-2B (IN) Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.500	620.05	620.05	620.05	620.05	620.05
22.750	620.05	620.05	620.05	620.05	620.05
23.000	620.05	620.05	620.05	620.05	620.05
23.250	620.05	620.05	620.05	620.05	620.05
23.500	620.05	620.05	620.05	620.05	620.05
23.750	620.05	620.05	620.05	620.05	620.05
24.000	620.05	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation | Return Event: 25 years
Label: IB-1C-2B (IN) | Storm Event: 25 year
Scenario: Post-Development 25 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	618.00	618.00	618.00	618.00	618.00
0.250	618.00	618.00	618.00	618.00	618.00
0.500	618.00	618.00	618.00	618.00	618.00
0.750	618.00	618.00	618.00	618.00	618.00
1.000	618.00	618.00	618.00	618.00	618.00
1.250	618.00	618.00	618.00	618.00	618.00
1.500	618.00	618.00	618.00	618.00	618.00
1.750	618.00	618.00	618.00	618.00	618.00
2.000	618.00	618.00	618.00	618.00	618.00
2.250	618.00	618.00	618.00	618.00	618.00
2.500	618.00	618.00	618.00	618.00	618.00
2.750	618.00	618.00	618.00	618.00	618.00
3.000	618.00	618.00	618.00	618.00	618.00
3.250	618.00	618.00	618.00	618.00	618.00
3.500	618.00	618.00	618.00	618.00	618.00
3.750	618.00	618.00	618.00	618.00	618.00
4.000	618.00	618.00	618.00	618.00	618.00
4.250	618.00	618.00	618.00	618.00	618.00
4.500	618.00	618.00	618.00	618.00	618.00
4.750	618.00	618.00	618.00	618.00	618.00
5.000	618.00	618.00	618.00	618.00	618.00
5.250	618.00	618.00	618.00	618.00	618.00
5.500	618.00	618.00	618.00	618.00	618.00
5.750	618.00	618.00	618.00	618.00	618.00
6.000	618.00	618.00	618.00	618.00	618.00
6.250	618.00	618.00	618.00	618.00	618.00
6.500	618.00	618.00	618.00	618.00	618.00
6.750	618.00	618.00	618.00	618.00	618.00
7.000	618.00	618.00	618.00	618.00	618.00
7.250	618.00	618.00	618.00	618.00	618.00
7.500	618.00	618.00	618.00	618.00	618.00
7.750	618.00	618.00	618.00	618.00	618.00
8.000	618.00	618.00	618.00	618.00	618.00
8.250	618.00	618.00	618.00	618.00	618.00
8.500	618.00	618.00	618.00	618.00	618.01
8.750	618.01	618.01	618.01	618.01	618.01
9.000	618.01	618.01	618.01	618.01	618.01
9.250	618.01	618.01	618.01	618.01	618.01
9.500	618.01	618.01	618.01	618.01	618.01
9.750	618.01	618.01	618.01	618.01	618.01
10.000	618.01	618.01	618.01	618.01	618.02
10.250	618.02	618.02	618.02	618.03	618.03
10.500	618.04	618.05	618.06	618.07	618.08
10.750	618.10	618.11	618.13	618.15	618.17
11.000	618.19	618.22	618.24	618.27	618.30

Subsection: Time vs. Elevation | Return Event: 25 years
Label: IB-1C-2B (IN) | Storm Event: 25 year
Scenario: Post-Development 25 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.250	618.34	618.38	618.43	618.48	618.53
11.500	618.59	618.66	618.74	618.83	618.96
11.750	619.12	619.33	619.58	619.89	620.15
12.000	620.34	620.50	620.65	620.79	620.95
12.250	621.10	621.20	621.24	621.25	621.25
12.500	621.23	621.19	621.15	621.10	621.04
12.750	620.99	620.94	620.89	620.85	620.81
13.000	620.77	620.74	620.71	620.67	620.65
13.250	620.62	620.60	620.57	620.55	620.53
13.500	620.52	620.50	620.49	620.47	620.46
13.750	620.45	620.43	620.42	620.41	620.40
14.000	620.39	620.38	620.37	620.36	620.36
14.250	620.35	620.34	620.33	620.33	620.32
14.500	620.31	620.31	620.30	620.30	620.29
14.750	620.29	620.28	620.28	620.27	620.27
15.000	620.26	620.26	620.25	620.25	620.24
15.250	620.24	620.24	620.23	620.23	620.22
15.500	620.22	620.21	620.21	620.21	620.20
15.750	620.20	620.20	620.19	620.19	620.18
16.000	620.18	620.17	620.17	620.17	620.16
16.250	620.16	620.15	620.15	620.15	620.14
16.500	620.14	620.14	620.13	620.13	620.13
16.750	620.12	620.12	620.12	620.11	620.11
17.000	620.11	620.10	620.10	620.10	620.10
17.250	620.09	620.09	620.09	620.09	620.08
17.500	620.08	620.08	620.08	620.08	620.07
17.750	620.07	620.07	620.07	620.07	620.07
18.000	620.06	620.06	620.06	620.06	620.06
18.250	620.06	620.06	620.05	620.05	620.05
18.500	620.05	620.05	620.05	620.05	620.05
18.750	620.05	620.05	620.05	620.05	620.05
19.000	620.05	620.05	620.05	620.05	620.05
19.250	620.05	620.05	620.05	620.05	620.05
19.500	620.05	620.05	620.05	620.05	620.05
19.750	620.05	620.05	620.05	620.05	620.05
20.000	620.05	620.05	620.05	620.05	620.05
20.250	620.05	620.05	620.05	620.05	620.05
20.500	620.05	620.05	620.05	620.05	620.05
20.750	620.05	620.05	620.05	620.05	620.05
21.000	620.05	620.05	620.05	620.05	620.05
21.250	620.05	620.05	620.05	620.05	620.05
21.500	620.05	620.05	620.05	620.05	620.05
21.750	620.05	620.05	620.05	620.05	620.05
22.000	620.05	620.05	620.05	620.05	620.05
22.250	620.05	620.05	620.05	620.05	620.05

Subsection: Time vs. Elevation | Return Event: 25 years
Label: IB-1C-2B (IN) | Storm Event: 25 year
Scenario: Post-Development 25 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.500	620.05	620.05	620.05	620.05	620.05
22.750	620.05	620.05	620.05	620.05	620.05
23.000	620.05	620.05	620.05	620.05	620.05
23.250	620.05	620.05	620.05	620.05	620.05
23.500	620.05	620.05	620.05	620.05	620.05
23.750	620.05	620.05	620.05	620.05	620.05
24.000	620.05	(N/A)	(N/A)	(N/A)	(N/A)

Stormwater Hydrologic Calculations

Subsection: Time vs. Elevation | Return Event: 100 years
Label: IB-1C-2B (IN) | Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	618.00	618.00	618.00	618.00	618.00
0.250	618.00	618.00	618.00	618.00	618.00
0.500	618.00	618.00	618.00	618.00	618.00
0.750	618.00	618.00	618.00	618.00	618.00
1.000	618.00	618.00	618.00	618.00	618.00
1.250	618.00	618.00	618.00	618.00	618.00
1.500	618.00	618.00	618.00	618.00	618.00
1.750	618.00	618.00	618.00	618.00	618.00
2.000	618.00	618.00	618.00	618.00	618.00
2.250	618.00	618.00	618.00	618.00	618.00
2.500	618.00	618.00	618.00	618.00	618.00
2.750	618.00	618.00	618.00	618.00	618.00
3.000	618.00	618.00	618.00	618.00	618.00
3.250	618.00	618.00	618.00	618.00	618.00
3.500	618.00	618.00	618.00	618.00	618.00
3.750	618.00	618.00	618.00	618.00	618.00
4.000	618.00	618.00	618.00	618.00	618.00
4.250	618.00	618.00	618.00	618.00	618.00
4.500	618.00	618.00	618.00	618.00	618.00
4.750	618.00	618.00	618.00	618.00	618.00
5.000	618.00	618.00	618.00	618.00	618.00
5.250	618.00	618.00	618.00	618.00	618.00
5.500	618.00	618.00	618.00	618.00	618.00
5.750	618.00	618.00	618.00	618.00	618.00
6.000	618.00	618.00	618.00	618.00	618.00
6.250	618.00	618.00	618.00	618.00	618.00
6.500	618.00	618.00	618.00	618.00	618.00
6.750	618.00	618.00	618.00	618.00	618.00
7.000	618.00	618.00	618.00	618.00	618.00
7.250	618.00	618.01	618.01	618.01	618.01
7.500	618.01	618.01	618.01	618.01	618.01
7.750	618.01	618.01	618.01	618.01	618.01
8.000	618.01	618.01	618.01	618.01	618.01
8.250	618.01	618.01	618.01	618.01	618.01
8.500	618.01	618.01	618.01	618.01	618.01
8.750	618.01	618.01	618.01	618.01	618.02
9.000	618.02	618.02	618.02	618.03	618.03
9.250	618.04	618.05	618.06	618.07	618.08
9.500	618.09	618.10	618.12	618.13	618.15
9.750	618.17	618.19	618.21	618.23	618.25
10.000	618.28	618.30	618.33	618.36	618.39
10.250	618.42	618.45	618.49	618.53	618.57
10.500	618.61	618.65	618.70	618.75	618.80
10.750	618.85	618.91	618.97	619.03	619.10
11.000	619.16	619.23	619.30	619.38	619.46

Subsection: Time vs. Elevation | Return Event: 100 years
Label: IB-1C-2B (IN) | Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.250	619.55	619.65	619.75	619.87	619.99
11.500	620.07	620.14	620.20	620.24	620.30
11.750	620.36	620.44	620.53	620.63	620.75
12.000	620.91	621.10	621.31	621.54	621.75
12.250	621.88	621.94	621.94	621.91	621.85
12.500	621.79	621.72	621.64	621.57	621.48
12.750	621.38	621.30	621.23	621.16	621.10
13.000	621.05	621.00	620.95	620.91	620.87
13.250	620.83	620.80	620.77	620.74	620.72
13.500	620.69	620.67	620.65	620.63	620.62
13.750	620.60	620.59	620.57	620.56	620.55
14.000	620.53	620.52	620.51	620.50	620.49
14.250	620.48	620.47	620.46	620.46	620.45
14.500	620.44	620.43	620.42	620.42	620.41
14.750	620.41	620.40	620.39	620.39	620.38
15.000	620.38	620.37	620.37	620.36	620.36
15.250	620.35	620.35	620.34	620.34	620.33
15.500	620.33	620.32	620.32	620.31	620.31
15.750	620.30	620.30	620.29	620.29	620.29
16.000	620.28	620.27	620.27	620.27	620.26
16.250	620.26	620.25	620.25	620.24	620.24
16.500	620.24	620.23	620.23	620.22	620.22
16.750	620.22	620.21	620.21	620.21	620.20
17.000	620.20	620.20	620.20	620.19	620.19
17.250	620.19	620.18	620.18	620.18	620.17
17.500	620.17	620.17	620.16	620.16	620.16
17.750	620.16	620.15	620.15	620.15	620.14
18.000	620.14	620.14	620.13	620.13	620.13
18.250	620.12	620.12	620.12	620.12	620.11
18.500	620.11	620.11	620.11	620.10	620.10
18.750	620.10	620.10	620.10	620.10	620.09
19.000	620.09	620.09	620.09	620.09	620.08
19.250	620.08	620.08	620.08	620.07	620.07
19.500	620.07	620.07	620.07	620.07	620.06
19.750	620.06	620.06	620.06	620.06	620.06
20.000	620.06	620.05	620.05	620.05	620.05
20.250	620.05	620.05	620.05	620.05	620.05
20.500	620.05	620.05	620.05	620.05	620.05
20.750	620.05	620.05	620.05	620.05	620.05
21.000	620.05	620.05	620.05	620.05	620.05
21.250	620.05	620.05	620.05	620.05	620.05
21.500	620.05	620.05	620.05	620.05	620.05
21.750	620.05	620.05	620.05	620.05	620.05
22.000	620.05	620.05	620.05	620.05	620.05
22.250	620.05	620.05	620.05	620.05	620.05

Subsection: Time vs. Elevation
Label: IB-1C-2B (IN)
Scenario: Post-Development 100 year

Return Event: 100 years
Storm Event: 100 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.500	620.05	620.05	620.05	620.05	620.05
22.750	620.05	620.05	620.05	620.05	620.05
23.000	620.05	620.05	620.05	620.05	620.05
23.250	620.05	620.05	620.05	620.05	620.05
23.500	620.05	620.05	620.05	620.05	620.05
23.750	620.05	620.05	620.05	620.05	620.05
24.000	620.05	(N/A)	(N/A)	(N/A)	(N/A)

Stormwater Hydrologic Calculations

Subsection: Time vs. Elevation | Return Event: 1 years
Label: Permeable Asphalt (IN) | Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	634.32	634.32	634.32	634.32	634.32
0.250	634.32	634.32	634.32	634.32	634.32
0.500	634.32	634.32	634.32	634.32	634.32
0.750	634.32	634.32	634.32	634.32	634.32
1.000	634.32	634.32	634.32	634.32	634.32
1.250	634.32	634.32	634.32	634.32	634.32
1.500	634.32	634.32	634.32	634.32	634.32
1.750	634.32	634.32	634.32	634.32	634.32
2.000	634.32	634.32	634.32	634.32	634.32
2.250	634.32	634.32	634.32	634.32	634.32
2.500	634.32	634.32	634.32	634.32	634.32
2.750	634.32	634.32	634.32	634.32	634.32
3.000	634.32	634.32	634.32	634.32	634.32
3.250	634.32	634.32	634.32	634.32	634.32
3.500	634.32	634.32	634.32	634.32	634.32
3.750	634.32	634.32	634.32	634.32	634.32
4.000	634.32	634.32	634.32	634.32	634.32
4.250	634.32	634.32	634.32	634.32	634.32
4.500	634.32	634.32	634.32	634.32	634.32
4.750	634.32	634.32	634.32	634.32	634.32
5.000	634.32	634.32	634.32	634.32	634.32
5.250	634.32	634.32	634.32	634.32	634.32
5.500	634.32	634.32	634.33	634.33	634.33
5.750	634.33	634.33	634.33	634.33	634.33
6.000	634.33	634.33	634.33	634.33	634.33
6.250	634.33	634.33	634.33	634.33	634.33
6.500	634.33	634.33	634.33	634.33	634.33
6.750	634.33	634.33	634.33	634.33	634.33
7.000	634.33	634.33	634.33	634.33	634.33
7.250	634.33	634.33	634.33	634.33	634.33
7.500	634.33	634.33	634.33	634.33	634.33
7.750	634.33	634.33	634.33	634.33	634.33
8.000	634.33	634.33	634.33	634.33	634.33
8.250	634.33	634.33	634.33	634.33	634.33
8.500	634.33	634.33	634.33	634.33	634.33
8.750	634.33	634.33	634.33	634.33	634.34
9.000	634.34	634.34	634.34	634.34	634.34
9.250	634.34	634.34	634.34	634.34	634.34
9.500	634.34	634.34	634.34	634.34	634.34
9.750	634.34	634.34	634.34	634.34	634.34
10.000	634.34	634.34	634.34	634.34	634.34
10.250	634.34	634.34	634.34	634.35	634.35
10.500	634.35	634.35	634.35	634.35	634.35
10.750	634.35	634.35	634.35	634.35	634.35
11.000	634.35	634.35	634.35	634.35	634.35

Subsection: Time vs. Elevation

Label: Permeable Asphalt (IN)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.250	634.36	634.36	634.36	634.36	634.36
11.500	634.36	634.36	634.37	634.37	634.37
11.750	634.38	634.38	634.39	634.40	634.41
12.000	634.42	634.44	634.46	634.48	634.49
12.250	634.49	634.50	634.50	634.50	634.50
12.500	634.50	634.49	634.49	634.49	634.48
12.750	634.48	634.48	634.47	634.47	634.47
13.000	634.46	634.46	634.45	634.45	634.45
13.250	634.44	634.44	634.44	634.44	634.43
13.500	634.43	634.43	634.42	634.42	634.42
13.750	634.42	634.41	634.41	634.41	634.41
14.000	634.41	634.40	634.40	634.40	634.40
14.250	634.40	634.39	634.39	634.39	634.39
14.500	634.39	634.39	634.38	634.38	634.38
14.750	634.38	634.38	634.38	634.38	634.38
15.000	634.37	634.37	634.37	634.37	634.37
15.250	634.37	634.37	634.37	634.37	634.36
15.500	634.36	634.36	634.36	634.36	634.36
15.750	634.36	634.36	634.36	634.36	634.36
16.000	634.36	634.36	634.35	634.35	634.35
16.250	634.35	634.35	634.35	634.35	634.35
16.500	634.35	634.35	634.35	634.35	634.35
16.750	634.35	634.35	634.35	634.35	634.35
17.000	634.34	634.34	634.34	634.34	634.34
17.250	634.34	634.34	634.34	634.34	634.34
17.500	634.34	634.34	634.34	634.34	634.34
17.750	634.34	634.34	634.34	634.34	634.34
18.000	634.34	634.34	634.34	634.34	634.34
18.250	634.34	634.34	634.34	634.34	634.34
18.500	634.34	634.34	634.34	634.34	634.33
18.750	634.33	634.33	634.33	634.33	634.33
19.000	634.33	634.33	634.33	634.33	634.33
19.250	634.33	634.33	634.33	634.33	634.33
19.500	634.33	634.33	634.33	634.33	634.33
19.750	634.33	634.33	634.33	634.33	634.33
20.000	634.33	634.33	634.33	634.33	634.33
20.250	634.33	634.33	634.33	634.33	634.33
20.500	634.33	634.33	634.33	634.33	634.33
20.750	634.33	634.33	634.33	634.33	634.33
21.000	634.33	634.33	634.33	634.33	634.33
21.250	634.33	634.33	634.33	634.33	634.33
21.500	634.33	634.33	634.33	634.33	634.33
21.750	634.33	634.33	634.33	634.33	634.33
22.000	634.33	634.33	634.33	634.33	634.33
22.250	634.33	634.33	634.33	634.33	634.33

Subsection: Time vs. Elevation
Label: Permeable Asphalt (IN)
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.500	634.33	634.33	634.33	634.33	634.33
22.750	634.33	634.33	634.33	634.33	634.33
23.000	634.33	634.33	634.33	634.33	634.33
23.250	634.33	634.33	634.33	634.33	634.33
23.500	634.33	634.33	634.33	634.33	634.33
23.750	634.33	634.33	634.33	634.33	634.33
24.000	634.33	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation
Label: Permeable Asphalt (IN)
Scenario: Post-Development 10 year

Return Event: 10 years
Storm Event: 10 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	634.32	634.32	634.32	634.32	634.32
0.250	634.32	634.32	634.32	634.32	634.32
0.500	634.32	634.32	634.32	634.32	634.32
0.750	634.32	634.32	634.32	634.32	634.32
1.000	634.32	634.32	634.32	634.32	634.32
1.250	634.32	634.32	634.32	634.32	634.32
1.500	634.32	634.32	634.32	634.32	634.32
1.750	634.32	634.32	634.32	634.32	634.32
2.000	634.32	634.32	634.32	634.32	634.32
2.250	634.32	634.32	634.32	634.32	634.32
2.500	634.32	634.32	634.32	634.32	634.32
2.750	634.32	634.32	634.32	634.32	634.32
3.000	634.32	634.33	634.33	634.33	634.33
3.250	634.33	634.33	634.33	634.33	634.33
3.500	634.33	634.33	634.33	634.33	634.33
3.750	634.33	634.33	634.33	634.33	634.33
4.000	634.33	634.33	634.33	634.33	634.33
4.250	634.33	634.33	634.33	634.33	634.33
4.500	634.33	634.33	634.33	634.33	634.33
4.750	634.33	634.33	634.33	634.33	634.33
5.000	634.33	634.33	634.33	634.33	634.33
5.250	634.33	634.33	634.33	634.33	634.33
5.500	634.33	634.33	634.33	634.33	634.33
5.750	634.33	634.33	634.33	634.33	634.33
6.000	634.33	634.33	634.33	634.33	634.33
6.250	634.33	634.33	634.34	634.34	634.34
6.500	634.34	634.34	634.34	634.34	634.34
6.750	634.34	634.34	634.34	634.34	634.34
7.000	634.34	634.34	634.34	634.34	634.34
7.250	634.34	634.34	634.34	634.34	634.34
7.500	634.34	634.34	634.34	634.34	634.34
7.750	634.34	634.34	634.34	634.34	634.34
8.000	634.34	634.34	634.34	634.34	634.34
8.250	634.34	634.35	634.35	634.35	634.35
8.500	634.35	634.35	634.35	634.35	634.35
8.750	634.35	634.35	634.35	634.35	634.35
9.000	634.35	634.35	634.35	634.35	634.35
9.250	634.35	634.35	634.36	634.36	634.36
9.500	634.36	634.36	634.36	634.36	634.36
9.750	634.36	634.36	634.36	634.36	634.36
10.000	634.36	634.36	634.37	634.37	634.37
10.250	634.37	634.37	634.37	634.37	634.37
10.500	634.37	634.37	634.37	634.37	634.38
10.750	634.38	634.38	634.38	634.38	634.38
11.000	634.38	634.38	634.38	634.39	634.39

Stormwater Hydrologic Calculations

Subsection: Time vs. Elevation | Return Event: 10 years
Label: Permeable Asphalt (IN) | Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.250	634.39	634.39	634.39	634.40	634.40
11.500	634.40	634.40	634.41	634.41	634.42
11.750	634.43	634.44	634.45	634.47	634.49
12.000	634.52	634.55	634.58	634.61	634.63
12.250	634.64	634.65	634.65	634.65	634.65
12.500	634.65	634.64	634.64	634.63	634.62
12.750	634.62	634.61	634.60	634.60	634.59
13.000	634.58	634.58	634.57	634.56	634.56
13.250	634.55	634.54	634.54	634.53	634.53
13.500	634.52	634.52	634.51	634.51	634.50
13.750	634.50	634.49	634.49	634.49	634.48
14.000	634.48	634.47	634.47	634.47	634.46
14.250	634.46	634.46	634.45	634.45	634.45
14.500	634.44	634.44	634.44	634.44	634.43
14.750	634.43	634.43	634.43	634.42	634.42
15.000	634.42	634.42	634.42	634.41	634.41
15.250	634.41	634.41	634.41	634.40	634.40
15.500	634.40	634.40	634.40	634.40	634.39
15.750	634.39	634.39	634.39	634.39	634.39
16.000	634.39	634.38	634.38	634.38	634.38
16.250	634.38	634.38	634.38	634.38	634.38
16.500	634.37	634.37	634.37	634.37	634.37
16.750	634.37	634.37	634.37	634.37	634.37
17.000	634.37	634.36	634.36	634.36	634.36
17.250	634.36	634.36	634.36	634.36	634.36
17.500	634.36	634.36	634.36	634.36	634.36
17.750	634.36	634.36	634.35	634.35	634.35
18.000	634.35	634.35	634.35	634.35	634.35
18.250	634.35	634.35	634.35	634.35	634.35
18.500	634.35	634.35	634.35	634.35	634.35
18.750	634.35	634.35	634.35	634.35	634.35
19.000	634.35	634.35	634.34	634.34	634.34
19.250	634.34	634.34	634.34	634.34	634.34
19.500	634.34	634.34	634.34	634.34	634.34
19.750	634.34	634.34	634.34	634.34	634.34
20.000	634.34	634.34	634.34	634.34	634.34
20.250	634.34	634.34	634.34	634.34	634.34
20.500	634.34	634.34	634.34	634.34	634.34
20.750	634.34	634.34	634.34	634.34	634.34
21.000	634.34	634.34	634.34	634.34	634.34
21.250	634.34	634.34	634.34	634.34	634.34
21.500	634.34	634.34	634.34	634.34	634.34
21.750	634.34	634.34	634.34	634.34	634.34
22.000	634.34	634.34	634.34	634.34	634.34
22.250	634.34	634.34	634.34	634.34	634.34

Subsection: Time vs. Elevation | Return Event: 10 years
Label: Permeable Asphalt (IN) | Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.500	634.34	634.34	634.33	634.33	634.33
22.750	634.33	634.33	634.33	634.33	634.33
23.000	634.33	634.33	634.33	634.33	634.33
23.250	634.33	634.33	634.33	634.33	634.33
23.500	634.33	634.33	634.33	634.33	634.33
23.750	634.33	634.33	634.33	634.33	634.33
24.000	634.33	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation
Label: Permeable Asphalt (IN)
Scenario: Post-Development 25 year

Return Event: 25 years
Storm Event: 25 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	634.32	634.32	634.32	634.32	634.32
0.250	634.32	634.32	634.32	634.32	634.32
0.500	634.32	634.32	634.32	634.32	634.32
0.750	634.32	634.32	634.32	634.32	634.32
1.000	634.32	634.32	634.32	634.32	634.32
1.250	634.32	634.32	634.32	634.32	634.32
1.500	634.32	634.32	634.32	634.32	634.32
1.750	634.32	634.32	634.32	634.32	634.32
2.000	634.32	634.32	634.32	634.32	634.32
2.250	634.32	634.32	634.32	634.33	634.33
2.500	634.33	634.33	634.33	634.33	634.33
2.750	634.33	634.33	634.33	634.33	634.33
3.000	634.33	634.33	634.33	634.33	634.33
3.250	634.33	634.33	634.33	634.33	634.33
3.500	634.33	634.33	634.33	634.33	634.33
3.750	634.33	634.33	634.33	634.33	634.33
4.000	634.33	634.33	634.33	634.33	634.33
4.250	634.33	634.33	634.33	634.33	634.33
4.500	634.33	634.33	634.33	634.33	634.33
4.750	634.33	634.33	634.33	634.33	634.34
5.000	634.34	634.34	634.34	634.34	634.34
5.250	634.34	634.34	634.34	634.34	634.34
5.500	634.34	634.34	634.34	634.34	634.34
5.750	634.34	634.34	634.34	634.34	634.34
6.000	634.34	634.34	634.34	634.34	634.34
6.250	634.34	634.34	634.34	634.34	634.34
6.500	634.34	634.34	634.34	634.34	634.34
6.750	634.34	634.34	634.34	634.34	634.34
7.000	634.34	634.34	634.34	634.34	634.34
7.250	634.35	634.35	634.35	634.35	634.35
7.500	634.35	634.35	634.35	634.35	634.35
7.750	634.35	634.35	634.35	634.35	634.35
8.000	634.35	634.35	634.35	634.35	634.35
8.250	634.35	634.35	634.35	634.35	634.35
8.500	634.35	634.36	634.36	634.36	634.36
8.750	634.36	634.36	634.36	634.36	634.36
9.000	634.36	634.36	634.36	634.36	634.36
9.250	634.36	634.37	634.37	634.37	634.37
9.500	634.37	634.37	634.37	634.37	634.37
9.750	634.37	634.37	634.37	634.37	634.38
10.000	634.38	634.38	634.38	634.38	634.38
10.250	634.38	634.38	634.38	634.38	634.38
10.500	634.39	634.39	634.39	634.39	634.39
10.750	634.39	634.39	634.39	634.40	634.40
11.000	634.40	634.40	634.40	634.40	634.41

Subsection: Time vs. Elevation | Return Event: 25 years
Label: Permeable Asphalt (IN) | Storm Event: 25 year
Scenario: Post-Development 25 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.250	634.41	634.41	634.41	634.42	634.42
11.500	634.42	634.43	634.43	634.44	634.45
11.750	634.46	634.47	634.49	634.51	634.53
12.000	634.57	634.61	634.65	634.69	634.71
12.250	634.73	634.73	634.74	634.74	634.74
12.500	634.74	634.73	634.72	634.71	634.70
12.750	634.69	634.69	634.68	634.67	634.66
13.000	634.65	634.64	634.63	634.63	634.62
13.250	634.61	634.60	634.60	634.59	634.58
13.500	634.58	634.57	634.56	634.56	634.55
13.750	634.55	634.54	634.53	634.53	634.52
14.000	634.52	634.51	634.51	634.51	634.50
14.250	634.50	634.49	634.49	634.48	634.48
14.500	634.48	634.47	634.47	634.47	634.46
14.750	634.46	634.46	634.45	634.45	634.45
15.000	634.45	634.44	634.44	634.44	634.44
15.250	634.43	634.43	634.43	634.43	634.42
15.500	634.42	634.42	634.42	634.42	634.41
15.750	634.41	634.41	634.41	634.41	634.41
16.000	634.40	634.40	634.40	634.40	634.40
16.250	634.40	634.39	634.39	634.39	634.39
16.500	634.39	634.39	634.39	634.38	634.38
16.750	634.38	634.38	634.38	634.38	634.38
17.000	634.38	634.38	634.38	634.37	634.37
17.250	634.37	634.37	634.37	634.37	634.37
17.500	634.37	634.37	634.37	634.37	634.37
17.750	634.37	634.36	634.36	634.36	634.36
18.000	634.36	634.36	634.36	634.36	634.36
18.250	634.36	634.36	634.36	634.36	634.36
18.500	634.36	634.36	634.36	634.35	634.35
18.750	634.35	634.35	634.35	634.35	634.35
19.000	634.35	634.35	634.35	634.35	634.35
19.250	634.35	634.35	634.35	634.35	634.35
19.500	634.35	634.35	634.35	634.35	634.35
19.750	634.35	634.35	634.35	634.35	634.35
20.000	634.35	634.35	634.35	634.35	634.35
20.250	634.35	634.35	634.34	634.34	634.34
20.500	634.34	634.34	634.34	634.34	634.34
20.750	634.34	634.34	634.34	634.34	634.34
21.000	634.34	634.34	634.34	634.34	634.34
21.250	634.34	634.34	634.34	634.34	634.34
21.500	634.34	634.34	634.34	634.34	634.34
21.750	634.34	634.34	634.34	634.34	634.34
22.000	634.34	634.34	634.34	634.34	634.34
22.250	634.34	634.34	634.34	634.34	634.34

Subsection: Time vs. Elevation | Return Event: 25 years
Label: Permeable Asphalt (IN) | Storm Event: 25 year
Scenario: Post-Development 25 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.500	634.34	634.34	634.34	634.34	634.34
22.750	634.34	634.34	634.34	634.34	634.34
23.000	634.34	634.34	634.34	634.34	634.34
23.250	634.34	634.34	634.34	634.34	634.34
23.500	634.34	634.34	634.34	634.34	634.34
23.750	634.34	634.34	634.34	634.34	634.34
24.000	634.34	(N/A)	(N/A)	(N/A)	(N/A)

Stormwater Hydrologic Calculations

Subsection: Time vs. Elevation | Return Event: 100 years
Label: Permeable Asphalt (IN) | Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	634.32	634.32	634.32	634.32	634.32
0.250	634.32	634.32	634.32	634.32	634.32
0.500	634.32	634.32	634.32	634.32	634.32
0.750	634.32	634.32	634.32	634.32	634.32
1.000	634.32	634.32	634.32	634.32	634.32
1.250	634.32	634.32	634.32	634.32	634.32
1.500	634.32	634.32	634.33	634.33	634.33
1.750	634.33	634.33	634.33	634.33	634.33
2.000	634.33	634.33	634.33	634.33	634.33
2.250	634.33	634.33	634.33	634.33	634.33
2.500	634.33	634.33	634.33	634.33	634.33
2.750	634.33	634.33	634.33	634.33	634.33
3.000	634.33	634.33	634.33	634.33	634.33
3.250	634.33	634.34	634.34	634.34	634.34
3.500	634.34	634.34	634.34	634.34	634.34
3.750	634.34	634.34	634.34	634.34	634.34
4.000	634.34	634.34	634.34	634.34	634.34
4.250	634.34	634.34	634.34	634.34	634.34
4.500	634.34	634.34	634.34	634.34	634.34
4.750	634.34	634.34	634.34	634.34	634.34
5.000	634.34	634.34	634.34	634.34	634.34
5.250	634.35	634.35	634.35	634.35	634.35
5.500	634.35	634.35	634.35	634.35	634.35
5.750	634.35	634.35	634.35	634.35	634.35
6.000	634.35	634.35	634.35	634.35	634.35
6.250	634.35	634.35	634.35	634.35	634.35
6.500	634.35	634.35	634.35	634.35	634.35
6.750	634.35	634.35	634.35	634.35	634.35
7.000	634.36	634.36	634.36	634.36	634.36
7.250	634.36	634.36	634.36	634.36	634.36
7.500	634.36	634.36	634.36	634.36	634.36
7.750	634.36	634.36	634.36	634.36	634.36
8.000	634.36	634.37	634.37	634.37	634.37
8.250	634.37	634.37	634.37	634.37	634.37
8.500	634.37	634.37	634.37	634.37	634.37
8.750	634.37	634.38	634.38	634.38	634.38
9.000	634.38	634.38	634.38	634.38	634.38
9.250	634.38	634.39	634.39	634.39	634.39
9.500	634.39	634.39	634.39	634.39	634.39
9.750	634.40	634.40	634.40	634.40	634.40
10.000	634.40	634.40	634.40	634.40	634.41
10.250	634.41	634.41	634.41	634.41	634.41
10.500	634.41	634.42	634.42	634.42	634.42
10.750	634.42	634.43	634.43	634.43	634.43
11.000	634.43	634.44	634.44	634.44	634.44

Stormwater Hydrologic Calculations

Subsection: Time vs. Elevation | Return Event: 100 years
Label: Permeable Asphalt (IN) | Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.250	634.45	634.45	634.45	634.46	634.46
11.500	634.47	634.47	634.48	634.49	634.50
11.750	634.52	634.54	634.56	634.59	634.62
12.000	634.67	634.73	634.79	634.85	634.88
12.250	634.90	634.92	634.93	634.94	634.94
12.500	634.94	634.93	634.92	634.91	634.90
12.750	634.89	634.88	634.87	634.86	634.84
13.000	634.83	634.82	634.80	634.79	634.78
13.250	634.76	634.75	634.74	634.73	634.72
13.500	634.71	634.70	634.69	634.68	634.67
13.750	634.66	634.65	634.64	634.64	634.63
14.000	634.62	634.61	634.61	634.60	634.59
14.250	634.58	634.58	634.57	634.57	634.56
14.500	634.55	634.55	634.54	634.54	634.53
14.750	634.53	634.52	634.52	634.51	634.51
15.000	634.51	634.50	634.50	634.49	634.49
15.250	634.49	634.48	634.48	634.48	634.47
15.500	634.47	634.47	634.46	634.46	634.46
15.750	634.45	634.45	634.45	634.45	634.44
16.000	634.44	634.44	634.44	634.43	634.43
16.250	634.43	634.43	634.43	634.42	634.42
16.500	634.42	634.42	634.42	634.41	634.41
16.750	634.41	634.41	634.41	634.41	634.40
17.000	634.40	634.40	634.40	634.40	634.40
17.250	634.40	634.40	634.39	634.39	634.39
17.500	634.39	634.39	634.39	634.39	634.39
17.750	634.38	634.38	634.38	634.38	634.38
18.000	634.38	634.38	634.38	634.38	634.38
18.250	634.38	634.37	634.37	634.37	634.37
18.500	634.37	634.37	634.37	634.37	634.37
18.750	634.37	634.37	634.37	634.37	634.37
19.000	634.37	634.37	634.36	634.36	634.36
19.250	634.36	634.36	634.36	634.36	634.36
19.500	634.36	634.36	634.36	634.36	634.36
19.750	634.36	634.36	634.36	634.36	634.36
20.000	634.36	634.36	634.36	634.36	634.36
20.250	634.36	634.36	634.36	634.36	634.35
20.500	634.35	634.35	634.35	634.35	634.35
20.750	634.35	634.35	634.35	634.35	634.35
21.000	634.35	634.35	634.35	634.35	634.35
21.250	634.35	634.35	634.35	634.35	634.35
21.500	634.35	634.35	634.35	634.35	634.35
21.750	634.35	634.35	634.35	634.35	634.35
22.000	634.35	634.35	634.35	634.35	634.35
22.250	634.35	634.35	634.35	634.35	634.35

Subsection: Time vs. Elevation
Label: Permeable Asphalt (IN)
Scenario: Post-Development 100 year

Return Event: 100 years
Storm Event: 100 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.500	634.35	634.35	634.35	634.35	634.35
22.750	634.35	634.35	634.35	634.35	634.35
23.000	634.35	634.35	634.35	634.35	634.34
23.250	634.34	634.34	634.34	634.34	634.34
23.500	634.34	634.34	634.34	634.34	634.34
23.750	634.34	634.34	634.34	634.34	634.34
24.000	634.34	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume | Return Event: 1 years
Label: DB-1C-2B | Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	0
8.500	0	0	0	0	0
8.750	0	0	0	0	0
9.000	0	0	0	0	0
9.250	0	0	0	0	0
9.500	0	0	0	0	0
9.750	0	0	0	0	0
10.000	0	0	0	0	0
10.250	0	0	0	0	0
10.500	0	0	0	0	0
10.750	0	0	0	0	0
11.000	0	0	0	0	0

Subsection: Time vs. Volume Return Event: 1 years
Label: DB-1C-2B Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
11.250	0	0	0	0	0
11.500	0	0	0	0	0
11.750	0	0	0	0	0
12.000	0	0	0	0	0
12.250	0	0	0	0	0
12.500	0	0	0	0	0
12.750	0	0	0	0	0
13.000	0	0	0	0	0
13.250	0	0	0	0	0
13.500	0	0	0	0	0
13.750	0	0	0	0	0
14.000	0	0	0	0	0
14.250	0	0	0	0	0
14.500	0	0	0	0	0
14.750	0	0	0	0	0
15.000	0	0	0	0	0
15.250	0	0	0	0	0
15.500	0	0	0	0	0
15.750	0	0	0	0	0
16.000	0	0	0	0	0
16.250	0	0	0	0	0
16.500	0	0	0	0	0
16.750	0	0	0	0	0
17.000	0	0	0	0	0
17.250	0	0	0	0	0
17.500	0	0	0	0	0
17.750	0	0	0	0	0
18.000	0	0	0	0	0
18.250	0	0	0	0	0
18.500	0	0	0	0	0
18.750	0	0	0	0	0
19.000	0	0	0	0	0
19.250	0	0	0	0	0
19.500	0	0	0	0	0
19.750	0	0	0	0	0
20.000	0	0	0	0	0
20.250	0	0	0	0	0
20.500	0	0	0	0	0
20.750	0	0	0	0	0
21.000	0	0	0	0	0
21.250	0	0	0	0	0
21.500	0	0	0	0	0
21.750	0	0	0	0	0
22.000	0	0	0	0	0
22.250	0	0	0	0	0

Subsection: Time vs. Volume | Return Event: 1 years
Label: DB-1C-2B | Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
22.500	0	0	0	0	0
22.750	0	0	0	0	0
23.000	0	0	0	0	0
23.250	0	0	0	0	0
23.500	0	0	0	0	0
23.750	0	0	0	0	0
24.000	0	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume | Return Event: 10 years
Label: DB-1C-2B | Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	0
8.500	0	0	0	0	0
8.750	0	0	0	0	0
9.000	0	0	0	0	0
9.250	0	0	0	0	0
9.500	0	0	0	0	0
9.750	0	0	0	0	0
10.000	0	0	0	0	0
10.250	0	0	0	0	0
10.500	0	0	0	0	0
10.750	0	0	0	0	0
11.000	0	0	0	0	0

Subsection: Time vs. Volume
Return Event: 10 years
Label: DB-1C-2B
Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
11.250	0	0	0	0	0
11.500	0	0	0	0	0
11.750	0	0	0	0	0
12.000	0	0	766	3,090	6,291
12.250	9,061	10,596	11,034	11,196	11,413
12.500	11,391	11,113	10,768	10,386	9,951
12.750	9,517	9,117	8,732	8,364	8,013
13.000	7,686	7,375	7,074	6,792	6,526
13.250	6,277	6,053	5,835	5,634	5,455
13.500	5,274	5,103	4,956	4,815	4,669
13.750	4,528	4,404	4,290	4,177	4,063
14.000	3,946	3,835	3,737	3,645	3,553
14.250	3,464	3,375	3,284	3,198	3,123
14.500	3,055	2,988	2,921	2,858	2,796
14.750	2,735	2,670	2,600	2,536	2,479
15.000	2,427	2,377	2,325	2,275	2,225
15.250	2,176	2,127	2,078	2,027	1,971
15.500	1,912	1,854	1,803	1,758	1,713
15.750	1,668	1,622	1,576	1,530	1,483
16.000	1,438	1,394	1,351	1,305	1,253
16.250	1,202	1,157	1,119	1,086	1,055
16.500	1,027	999	973	949	925
16.750	902	880	859	838	819
17.000	800	782	764	748	732
17.250	716	701	687	672	655
17.500	634	613	591	569	547
17.750	525	504	483	463	443
18.000	424	405	387	370	354
18.250	338	322	308	294	280
18.500	267	255	243	231	220
18.750	210	200	191	182	173
19.000	165	157	150	143	136
19.250	130	124	118	113	108
19.500	103	98	94	89	85
19.750	82	78	74	71	68
20.000	65	62	59	57	54
20.250	52	50	48	46	44
20.500	42	40	38	37	35
20.750	34	33	31	30	29
21.000	28	27	25	24	24
21.250	23	22	21	20	20
21.500	19	18	18	17	17
21.750	16	15	15	15	14
22.000	14	13	13	13	12
22.250	12	12	11	11	11

Subsection: Time vs. Volume
Label: DB-1C-2B
Scenario: Post-Development 10 year

Return Event: 10 years
Storm Event: 10 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
22.500	11	10	10	10	10
22.750	9	9	9	9	9
23.000	9	8	8	8	8
23.250	8	8	8	8	8
23.500	7	7	7	7	7
23.750	7	7	7	7	7
24.000	7	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume
Label: DB-1C-2B
Scenario: Post-Development 25 year

Return Event: 25 years
Storm Event: 25 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	0
8.500	0	0	0	0	0
8.750	0	0	0	0	0
9.000	0	0	0	0	0
9.250	0	0	0	0	0
9.500	0	0	0	0	0
9.750	0	0	0	0	0
10.000	0	0	0	0	0
10.250	0	0	0	0	0
10.500	0	0	0	0	0
10.750	0	0	0	0	0
11.000	0	0	0	0	0

Subsection: Time vs. Volume | Return Event: 25 years
Label: DB-1C-2B | Storm Event: 25 year
Scenario: Post-Development 25 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
11.250	0	0	0	0	0
11.500	0	0	0	0	0
11.750	0	0	0	0	220
12.000	1,470	4,220	7,961	11,769	14,722
12.250	16,308	16,849	17,059	17,105	16,839
12.500	16,366	15,787	15,096	14,345	13,604
12.750	12,903	12,247	11,640	11,078	10,555
13.000	10,075	9,627	9,191	8,798	8,441
13.250	8,100	7,788	7,504	7,238	6,993
13.500	6,774	6,558	6,357	6,181	6,002
13.750	5,830	5,681	5,539	5,392	5,246
14.000	5,117	4,999	4,881	4,762	4,642
14.250	4,531	4,435	4,345	4,255	4,169
14.500	4,084	3,996	3,912	3,839	3,771
14.750	3,704	3,638	3,573	3,511	3,450
15.000	3,384	3,314	3,249	3,190	3,135
15.250	3,081	3,027	2,973	2,920	2,867
15.500	2,814	2,761	2,704	2,642	2,580
15.750	2,523	2,470	2,420	2,370	2,318
16.000	2,266	2,214	2,163	2,111	2,060
16.250	2,005	1,946	1,887	1,833	1,786
16.500	1,743	1,702	1,660	1,619	1,579
16.750	1,539	1,500	1,462	1,424	1,386
17.000	1,346	1,302	1,253	1,204	1,159
17.250	1,121	1,088	1,057	1,028	1,001
17.500	975	951	927	904	882
17.750	861	841	821	803	785
18.000	767	751	735	719	704
18.250	690	674	657	637	615
18.500	593	571	548	526	504
18.750	483	462	441	422	403
19.000	384	367	350	334	318
19.250	303	289	276	263	251
19.500	239	228	217	207	197
19.750	188	179	171	163	156
20.000	148	142	135	129	123
20.250	117	112	107	102	98
20.500	93	89	85	81	78
20.750	74	71	68	65	62
21.000	59	57	54	52	50
21.250	48	46	44	42	40
21.500	39	37	36	34	33
21.750	32	31	29	28	27
22.000	26	25	25	24	23
22.250	22	21	21	20	20

Subsection: Time vs. Volume | Return Event: 25 years
Label: DB-1C-2B | Storm Event: 25 year
Scenario: Post-Development 25 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
22.500	19	18	18	17	17
22.750	16	16	16	15	15
23.000	14	14	14	14	13
23.250	13	13	12	12	12
23.500	12	12	11	11	11
23.750	11	11	11	10	10
24.000	10	(N/A)	(N/A)	(N/A)	(N/A)

Stormwater Hydrologic Calculations

Subsection: Time vs. Volume | Return Event: 100 years
Label: DB-1C-2B | Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	0
8.500	0	0	0	0	0
8.750	0	0	0	0	0
9.000	0	0	0	0	0
9.250	0	0	0	0	0
9.500	0	0	0	0	0
9.750	0	0	0	0	0
10.000	0	0	0	0	0
10.250	0	0	0	0	0
10.500	0	0	0	0	0
10.750	0	0	0	0	0
11.000	0	0	0	0	0

Subsection: Time vs. Volume | Return Event: 100 years
Label: DB-1C-2B | Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
11.250	0	0	0	0	0
11.500	38	269	834	1,718	2,864
11.750	4,214	5,731	7,386	9,160	11,111
12.000	13,475	16,524	20,225	23,531	25,596
12.250	26,575	26,660	26,205	25,461	24,645
12.500	23,739	22,692	21,592	20,356	19,075
12.750	17,954	16,933	15,989	15,138	14,362
13.000	13,661	13,007	12,399	11,838	11,328
13.250	10,877	10,458	10,067	9,721	9,401
13.500	9,105	8,842	8,584	8,346	8,131
13.750	7,920	7,729	7,551	7,366	7,192
14.000	7,043	6,892	6,732	6,583	6,457
14.250	6,335	6,213	6,091	5,973	5,874
14.500	5,783	5,689	5,599	5,513	5,421
14.750	5,329	5,251	5,181	5,107	5,033
15.000	4,963	4,894	4,825	4,749	4,671
15.250	4,603	4,541	4,478	4,413	4,349
15.500	4,287	4,224	4,160	4,092	4,020
15.750	3,950	3,886	3,825	3,763	3,700
16.000	3,637	3,574	3,511	3,448	3,381
16.250	3,310	3,245	3,188	3,135	3,084
16.500	3,033	2,984	2,936	2,889	2,843
16.750	2,798	2,754	2,705	2,652	2,602
17.000	2,555	2,512	2,472	2,433	2,394
17.250	2,355	2,316	2,278	2,239	2,201
17.500	2,163	2,125	2,087	2,046	2,002
17.750	1,954	1,907	1,862	1,820	1,782
18.000	1,745	1,708	1,671	1,633	1,596
18.250	1,560	1,524	1,490	1,457	1,425
18.500	1,394	1,363	1,328	1,289	1,249
18.750	1,210	1,173	1,140	1,111	1,086
19.000	1,062	1,039	1,017	994	973
19.250	951	930	909	888	867
19.500	846	827	807	789	771
19.750	754	737	721	706	691
20.000	676	659	639	618	596
20.250	574	552	529	507	486
20.500	465	445	425	406	387
20.750	370	353	337	321	306
21.000	292	278	265	253	241
21.250	230	219	209	200	190
21.500	182	173	165	158	151
21.750	144	137	131	125	119
22.000	114	109	104	100	95
22.250	91	87	84	80	77

Subsection: Time vs. Volume
Return Event: 100 years
Label: DB-1C-2B
Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
22.500	73	70	67	65	62
22.750	59	57	55	53	51
23.000	49	47	45	44	42
23.250	40	39	38	36	35
23.500	34	33	32	31	30
23.750	29	28	27	26	26
24.000	25	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume　　Return Event: 1 years
Label: IB-1C-2B　　Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	0
8.500	0	0	0	0	0
8.750	0	0	0	0	0
9.000	0	0	0	0	0
9.250	0	0	0	0	0
9.500	0	0	0	0	0
9.750	0	0	0	0	0
10.000	0	0	0	1	1
10.250	2	3	4	5	6
10.500	8	9	10	12	13
10.750	15	17	18	20	22
11.000	24	26	28	31	34

Subsection: Time vs. Volume | Return Event: 1 years
Label: IB-1C-2B | Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
11.250	38	43	47	52	57
11.500	63	71	86	107	139
11.750	179	290	507	850	1,370
12.000	2,207	3,485	5,186	7,154	9,114
12.250	10,830	12,265	13,478	14,513	15,382
12.500	16,089	16,641	17,055	17,358	17,584
12.750	17,761	17,907	18,029	18,131	18,213
13.000	18,278	18,325	18,357	18,376	18,386
13.250	18,389	18,391	18,394	18,396	18,398
13.500	18,400	18,402	18,405	18,407	18,409
13.750	18,412	18,414	18,416	18,419	18,421
14.000	18,423	18,426	18,428	18,429	18,431
14.250	18,432	18,433	18,434	18,436	18,437
14.500	18,438	18,439	18,440	18,441	18,442
14.750	18,443	18,445	18,446	18,447	18,448
15.000	18,449	18,450	18,452	18,453	18,454
15.250	18,455	18,456	18,458	18,459	18,460
15.500	18,461	18,462	18,464	18,465	18,466
15.750	18,467	18,469	18,470	18,471	18,472
16.000	18,474	18,475	18,476	18,477	18,478
16.250	18,478	18,479	18,479	18,480	18,481
16.500	18,481	18,482	18,482	18,483	18,483
16.750	18,484	18,484	18,485	18,485	18,486
17.000	18,486	18,487	18,488	18,488	18,489
17.250	18,489	18,490	18,490	18,491	18,492
17.500	18,492	18,493	18,493	18,494	18,494
17.750	18,495	18,495	18,496	18,497	18,497
18.000	18,498	18,498	18,499	18,499	18,499
18.250	18,500	18,500	18,500	18,500	18,500
18.500	18,500	18,501	18,501	18,501	18,501
18.750	18,501	18,501	18,502	18,502	18,502
19.000	18,502	18,502	18,502	18,503	18,503
19.250	18,503	18,503	18,503	18,503	18,504
19.500	18,504	18,504	18,504	18,504	18,504
19.750	18,505	18,505	18,505	18,505	18,505
20.000	18,505	18,506	18,506	18,506	18,506
20.250	18,506	18,506	18,506	18,507	18,507
20.500	18,507	18,507	18,507	18,507	18,507
20.750	18,507	18,508	18,508	18,508	18,508
21.000	18,508	18,508	18,508	18,508	18,509
21.250	18,509	18,509	18,509	18,509	18,509
21.500	18,509	18,509	18,510	18,510	18,510
21.750	18,510	18,510	18,510	18,510	18,510
22.000	18,511	18,511	18,511	18,511	18,511
22.250	18,511	18,511	18,512	18,512	18,512

Stormwater Hydrologic Calculations

Subsection: Time vs. Volume | Return Event: 1 years
Label: IB-1C-2B | Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
22.500	18,512	18,512	18,512	18,512	18,512
22.750	18,513	18,513	18,513	18,513	18,513
23.000	18,513	18,513	18,513	18,514	18,514
23.250	18,514	18,514	18,514	18,514	18,514
23.500	18,514	18,515	18,515	18,515	18,515
23.750	18,515	18,515	18,515	18,516	18,516
24.000	18,516	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume | Return Event: 10 years
Label: IB-1C-2B | Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	1	1	2	3	3
8.000	4	5	6	7	8
8.250	8	10	11	12	13
8.500	14	15	17	18	20
8.750	21	23	24	26	27
9.000	29	31	33	35	37
9.250	38	40	43	45	47
9.500	49	51	54	56	58
9.750	61	63	66	68	71
10.000	74	76	79	83	86
10.250	90	94	99	103	107
10.500	112	117	122	126	132
10.750	137	142	147	153	167
11.000	192	230	283	354	448

Subsection: Time vs. Volume Return Event: 10 years
Label: IB-1C-2B Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
11.250	568	719	901	1,116	1,367
11.500	1,653	1,986	2,401	2,950	3,693
11.750	4,689	5,983	7,613	9,613	12,124
12.000	15,528	20,140	24,193	26,713	28,083
12.250	29,025	30,298	31,637	32,182	32,288
12.500	32,425	32,363	32,077	31,677	31,268
12.750	30,793	30,338	29,901	29,499	29,111
13.000	28,739	28,385	28,059	27,734	27,448
13.250	27,160	26,896	26,666	26,433	26,213
13.500	26,036	25,848	25,662	25,494	25,354
13.750	25,210	25,060	24,919	24,787	24,666
14.000	24,559	24,442	24,321	24,208	24,101
14.250	23,998	23,907	23,826	23,743	23,652
14.500	23,566	23,485	23,407	23,331	23,257
14.750	23,186	23,130	23,075	23,016	22,950
15.000	22,884	22,820	22,758	22,697	22,636
15.250	22,576	22,517	22,458	22,405	22,358
15.500	22,313	22,266	22,208	22,149	22,089
15.750	22,030	21,971	21,912	21,853	21,794
16.000	21,737	21,684	21,633	21,595	21,563
16.250	21,533	21,498	21,460	21,422	21,384
16.500	21,347	21,312	21,278	21,245	21,213
16.750	21,183	21,153	21,125	21,098	21,072
17.000	21,047	21,023	21,000	20,977	20,956
17.250	20,935	20,916	20,896	20,878	20,866
17.500	20,856	20,847	20,841	20,835	20,831
17.750	20,827	20,824	20,821	20,819	20,818
18.000	20,816	20,815	20,814	20,813	20,812
18.250	20,811	20,810	20,809	20,809	20,808
18.500	20,808	20,807	20,807	20,807	20,807
18.750	20,807	20,806	20,806	20,806	20,806
19.000	20,806	20,806	20,806	20,806	20,806
19.250	20,806	20,806	20,806	20,806	20,806
19.500	20,806	20,806	20,806	20,806	20,806
19.750	20,806	20,806	20,806	20,806	20,806
20.000	20,806	20,806	20,806	20,806	20,806
20.250	20,806	20,806	20,806	20,806	20,806
20.500	20,806	20,806	20,806	20,806	20,806
20.750	20,806	20,806	20,805	20,806	20,806
21.000	20,805	20,805	20,805	20,806	20,806
21.250	20,806	20,806	20,806	20,805	20,806
21.500	20,806	20,806	20,806	20,805	20,806
21.750	20,806	20,805	20,805	20,805	20,806
22.000	20,806	20,806	20,806	20,806	20,806
22.250	20,806	20,806	20,806	20,806	20,805

Subsection: Time vs. Volume | Return Event: 10 years
Label: IB-1C-2B | Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
22.500	20,806	20,806	20,805	20,805	20,805
22.750	20,806	20,806	20,806	20,806	20,806
23.000	20,806	20,806	20,806	20,806	20,806
23.250	20,805	20,806	20,806	20,805	20,805
23.500	20,805	20,806	20,806	20,806	20,806
23.750	20,806	20,806	20,806	20,806	20,806
24.000	20,806	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume | Return Event: 25 years
Label: IB-1C-2B | Storm Event: 25 year
Scenario: Post-Development 25 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	1	1	2	2	3
7.000	4	5	6	7	7
7.250	8	9	10	11	12
7.500	13	14	15	16	18
7.750	19	20	21	22	23
8.000	25	26	27	29	30
8.250	32	34	36	38	40
8.500	42	44	46	49	51
8.750	53	56	58	61	63
9.000	66	69	72	75	78
9.250	81	84	87	90	93
9.500	96	100	103	107	110
9.750	114	117	121	125	129
10.000	132	136	141	146	151
10.250	162	185	221	269	330
10.500	405	493	595	711	842
10.750	987	1,147	1,322	1,513	1,719
11.000	1,942	2,181	2,442	2,730	3,051

Subsection: Time vs. Volume | Return Event: 25 years
Label: IB-1C-2B | Storm Event: 25 year
Scenario: Post-Development 25 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
11.250	3,412	3,817	4,268	4,767	5,317
11.500	5,919	6,588	7,378	8,364	9,636
11.750	11,276	13,347	15,894	18,963	22,279
12.000	25,042	27,414	29,583	31,736	33,977
12.250	36,187	37,720	38,272	38,448	38,448
12.500	38,137	37,618	36,979	36,238	35,439
12.750	34,652	33,911	33,220	32,582	31,999
13.000	31,426	30,920	30,459	29,986	29,576
13.250	29,189	28,842	28,506	28,222	27,934
13.500	27,670	27,450	27,219	26,999	26,824
13.750	26,638	26,451	26,282	26,137	25,994
14.000	25,838	25,692	25,556	25,430	25,321
14.250	25,201	25,080	24,970	24,867	24,767
14.500	24,679	24,602	24,520	24,432	24,348
14.750	24,269	24,192	24,116	24,042	23,971
15.000	23,912	23,855	23,793	23,727	23,660
15.250	23,594	23,530	23,466	23,402	23,339
15.500	23,276	23,214	23,161	23,111	23,058
15.750	23,002	22,938	22,874	22,812	22,749
16.000	22,686	22,623	22,560	22,497	22,436
16.250	22,385	22,338	22,293	22,242	22,187
16.500	22,132	22,078	22,025	21,974	21,923
16.750	21,873	21,823	21,774	21,726	21,679
17.000	21,635	21,598	21,565	21,535	21,500
17.250	21,462	21,424	21,387	21,350	21,315
17.500	21,281	21,248	21,217	21,187	21,157
17.750	21,129	21,102	21,076	21,051	21,027
18.000	21,004	20,982	20,960	20,939	20,919
18.250	20,899	20,880	20,867	20,856	20,847
18.500	20,840	20,834	20,829	20,825	20,821
18.750	20,819	20,817	20,815	20,813	20,812
19.000	20,811	20,810	20,810	20,809	20,809
19.250	20,808	20,808	20,808	20,807	20,807
19.500	20,807	20,807	20,807	20,807	20,807
19.750	20,807	20,807	20,807	20,807	20,807
20.000	20,807	20,807	20,807	20,807	20,806
20.250	20,806	20,806	20,806	20,806	20,806
20.500	20,806	20,806	20,806	20,806	20,806
20.750	20,806	20,806	20,806	20,806	20,806
21.000	20,806	20,806	20,806	20,806	20,806
21.250	20,806	20,806	20,806	20,806	20,806
21.500	20,806	20,806	20,806	20,806	20,806
21.750	20,806	20,806	20,806	20,806	20,806
22.000	20,806	20,806	20,806	20,806	20,806
22.250	20,806	20,806	20,806	20,806	20,806

Subsection: Time vs. Volume | Return Event: 25 years
Label: IB-1C-2B | Storm Event: 25 year
Scenario: Post-Development 25 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
22.500	20,806	20,806	20,806	20,806	20,806
22.750	20,806	20,806	20,806	20,806	20,806
23.000	20,806	20,806	20,806	20,806	20,806
23.250	20,806	20,806	20,806	20,806	20,806
23.500	20,806	20,806	20,806	20,806	20,806
23.750	20,806	20,806	20,806	20,806	20,806
24.000	20,806	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume | Return Event: 100 years
Label: IB-1C-2B | Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	1	1	2	3	4
5.500	5	5	6	7	8
5.750	9	10	11	12	13
6.000	13	14	15	16	18
6.250	19	20	21	22	24
6.500	25	26	28	29	31
6.750	32	34	35	37	39
7.000	40	42	44	45	47
7.250	49	51	53	55	57
7.500	59	61	63	65	67
7.750	69	71	74	76	78
8.000	80	83	85	88	92
8.250	95	99	102	106	110
8.500	114	118	123	127	131
8.750	136	140	145	150	156
9.000	173	199	236	282	339
9.250	406	484	572	671	782
9.500	903	1,036	1,180	1,336	1,503
9.750	1,683	1,874	2,078	2,293	2,521
10.000	2,762	3,015	3,282	3,565	3,865
10.250	4,185	4,525	4,886	5,268	5,673
10.500	6,099	6,548	7,021	7,516	8,036
10.750	8,578	9,146	9,737	10,354	10,995
11.000	11,662	12,356	13,084	13,858	14,689

Subsection: Time vs. Volume | Return Event: 100 years
Label: IB-1C-2B | Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
11.250	15,585	16,556	17,604	18,733	19,944
11.500	21,161	22,156	22,951	23,657	24,422
11.750	25,345	26,472	27,818	29,368	31,166
12.000	33,438	36,238	39,395	42,770	45,777
12.250	47,767	48,591	48,603	48,138	47,281
12.500	46,378	45,410	44,261	43,104	41,775
12.750	40,434	39,266	38,172	37,201	36,296
13.000	35,467	34,725	34,034	33,411	32,816
13.250	32,266	31,794	31,359	30,946	30,591
13.500	30,247	29,926	29,662	29,385	29,141
13.750	28,916	28,686	28,474	28,306	28,107
14.000	27,916	27,746	27,603	27,440	27,277
14.250	27,133	26,997	26,885	26,769	26,640
14.500	26,526	26,422	26,319	26,218	26,142
14.750	26,059	25,963	25,872	25,790	25,707
15.000	25,624	25,544	25,466	25,405	25,339
15.250	25,262	25,184	25,110	25,037	24,964
15.500	24,890	24,817	24,745	24,682	24,622
15.750	24,555	24,482	24,408	24,335	24,262
16.000	24,189	24,115	24,042	23,969	23,910
16.250	23,852	23,790	23,724	23,659	23,597
16.500	23,537	23,479	23,421	23,365	23,310
16.750	23,257	23,205	23,163	23,123	23,081
17.000	23,037	22,990	22,941	22,893	22,845
17.250	22,797	22,750	22,703	22,656	22,609
17.500	22,563	22,516	22,470	22,427	22,390
17.750	22,354	22,317	22,279	22,235	22,187
18.000	22,139	22,090	22,042	21,994	21,948
18.250	21,902	21,858	21,815	21,774	21,733
18.500	21,694	21,657	21,628	21,603	21,580
18.750	21,558	21,536	21,509	21,479	21,447
19.000	21,416	21,384	21,353	21,321	21,290
19.250	21,259	21,228	21,198	21,167	21,137
19.500	21,109	21,082	21,057	21,032	21,008
19.750	20,985	20,963	20,942	20,921	20,902
20.000	20,883	20,869	20,858	20,849	20,841
20.250	20,835	20,830	20,826	20,822	20,820
20.500	20,817	20,815	20,814	20,813	20,812
20.750	20,811	20,810	20,809	20,809	20,809
21.000	20,808	20,808	20,808	20,808	20,808
21.250	20,807	20,807	20,807	20,807	20,807
21.500	20,807	20,807	20,807	20,807	20,807
21.750	20,807	20,807	20,807	20,807	20,807
22.000	20,807	20,807	20,807	20,807	20,807
22.250	20,807	20,807	20,807	20,807	20,807

Subsection: Time vs. Volume
Return Event: 100 years
Label: IB-1C-2B
Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
22.500	20,807	20,807	20,807	20,807	20,807
22.750	20,807	20,807	20,807	20,807	20,807
23.000	20,807	20,807	20,807	20,807	20,807
23.250	20,807	20,807	20,807	20,807	20,807
23.500	20,807	20,807	20,807	20,807	20,807
23.750	20,807	20,807	20,807	20,807	20,807
24.000	20,807	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume | Return Event: 1 years
Label: Permeable Asphalt | Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	1
2.000	1	1	1	2	2
2.250	2	3	3	3	3
2.500	4	4	4	5	5
2.750	6	6	6	7	7
3.000	8	8	9	9	9
3.250	10	10	11	11	12
3.500	12	13	13	14	14
3.750	15	15	16	16	17
4.000	17	18	18	19	20
4.250	20	21	21	22	22
4.500	23	23	24	25	25
4.750	26	26	27	27	28
5.000	28	29	30	30	31
5.250	31	32	32	33	34
5.500	34	35	35	36	36
5.750	37	38	38	39	39
6.000	40	40	41	42	42
6.250	43	44	44	45	46
6.500	46	47	48	49	50
6.750	50	51	52	53	54
7.000	55	56	57	58	59
7.250	60	61	62	63	64
7.500	65	66	67	68	69
7.750	70	71	72	74	75
8.000	76	77	78	80	81
8.250	82	84	85	87	88
8.500	90	91	93	95	97
8.750	99	100	102	104	106
9.000	108	110	113	115	117
9.250	119	121	124	126	128
9.500	131	133	135	138	140
9.750	143	145	148	150	153
10.000	155	158	161	163	166
10.250	169	172	176	179	182
10.500	186	190	193	197	201
10.750	205	209	213	218	222
11.000	226	231	236	241	247

Subsection: Time vs. Volume | Return Event: 1 years
Label: Permeable Asphalt | Storm Event: 1 year
Scenario: Post-Development 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
11.250	254	261	269	278	287
11.500	296	308	323	344	372
11.750	407	450	499	555	630
12.000	738	867	997	1,107	1,179
12.250	1,220	1,246	1,262	1,268	1,264
12.500	1,252	1,234	1,210	1,184	1,158
12.750	1,131	1,105	1,079	1,053	1,027
13.000	1,001	976	951	926	902
13.250	879	857	835	814	794
13.500	774	755	736	718	700
13.750	683	666	650	634	619
14.000	604	589	575	561	548
14.250	535	522	510	498	487
14.500	476	465	455	445	435
14.750	425	416	407	399	390
15.000	382	374	366	359	351
15.250	344	337	330	323	317
15.500	310	304	298	292	286
15.750	281	275	270	264	259
16.000	254	249	244	239	234
16.250	230	225	221	217	213
16.500	209	205	202	198	194
16.750	191	188	185	181	178
17.000	175	172	170	167	164
17.250	161	159	156	154	151
17.500	149	147	144	142	140
17.750	138	136	134	131	129
18.000	127	125	124	122	120
18.250	118	116	115	113	112
18.500	110	109	107	106	105
18.750	103	102	101	100	99
19.000	98	97	96	95	94
19.250	93	92	91	90	89
19.500	88	87	86	86	85
19.750	84	83	83	82	81
20.000	81	80	79	79	78
20.250	77	77	76	76	75
20.500	74	74	73	73	72
20.750	72	71	71	70	70
21.000	70	69	69	68	68
21.250	67	67	67	66	66
21.500	65	65	65	64	64
21.750	63	63	63	62	62
22.000	62	61	61	61	60
22.250	60	60	59	59	59

Subsection: Time vs. Volume

Label: Permeable Asphalt

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
22.500	58	58	58	57	57
22.750	57	56	56	56	55
23.000	55	55	54	54	54
23.250	54	53	53	53	52
23.500	52	52	51	51	51
23.750	51	50	50	50	49
24.000	49	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume | Return Event: 10 years
Label: Permeable Asphalt | Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	1	1	2
1.250	2	3	4	4	5
1.500	6	6	7	8	9
1.750	10	10	11	12	13
2.000	14	15	16	17	18
2.250	19	20	21	22	23
2.500	24	25	26	27	28
2.750	29	30	31	32	33
3.000	34	35	36	37	39
3.250	40	41	42	43	44
3.500	45	46	47	49	50
3.750	51	52	53	54	55
4.000	56	57	58	60	61
4.250	62	63	64	65	66
4.500	67	68	69	70	72
4.750	73	74	75	76	77
5.000	78	79	80	81	82
5.250	83	84	85	86	87
5.500	88	89	90	91	92
5.750	93	94	95	96	97
6.000	98	99	100	101	102
6.250	104	105	106	107	109
6.500	110	111	113	114	116
6.750	117	119	120	122	124
7.000	125	127	129	131	133
7.250	134	136	138	140	142
7.500	144	146	148	150	152
7.750	154	156	158	160	162
8.000	164	166	168	170	173
8.250	175	178	181	183	186
8.500	189	192	196	199	202
8.750	206	209	213	216	220
9.000	224	227	231	235	239
9.250	243	247	252	256	260
9.500	264	269	273	277	282
9.750	286	291	295	300	305
10.000	309	314	319	324	329
10.250	334	340	346	352	358
10.500	365	372	378	385	392
10.750	400	407	415	423	430
11.000	438	447	456	466	477

Subsection: Time vs. Volume | Return Event: 10 years
Label: Permeable Asphalt | Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
11.250	489	502	517	533	549
11.500	567	589	617	655	707
11.750	773	852	944	1,048	1,187
12.000	1,387	1,624	1,863	2,066	2,198
12.250	2,273	2,320	2,347	2,357	2,350
12.500	2,327	2,292	2,248	2,199	2,150
12.750	2,100	2,051	2,002	1,953	1,905
13.000	1,857	1,810	1,763	1,717	1,673
13.250	1,630	1,588	1,548	1,509	1,471
13.500	1,434	1,398	1,363	1,330	1,297
13.750	1,265	1,234	1,203	1,174	1,145
14.000	1,117	1,090	1,063	1,038	1,013
14.250	989	965	943	921	900
14.500	879	860	840	822	803
14.750	786	769	752	736	720
15.000	705	690	676	662	648
15.250	635	622	609	596	584
15.500	573	561	550	539	528
15.750	517	507	497	487	477
16.000	468	458	449	440	432
16.250	423	415	407	400	392
16.500	385	378	371	364	358
16.750	352	346	340	334	328
17.000	323	317	312	307	302
17.250	297	292	288	283	278
17.500	274	270	265	261	257
17.750	253	249	245	242	238
18.000	234	231	227	224	220
18.250	217	214	211	208	205
18.500	203	200	197	195	193
18.750	190	188	186	184	181
19.000	179	177	176	174	172
19.250	170	168	167	165	163
19.500	162	160	159	157	156
19.750	155	153	152	151	149
20.000	148	147	145	144	143
20.250	142	141	140	139	138
20.500	137	136	135	134	133
20.750	132	131	130	129	128
21.000	128	127	126	125	124
21.250	124	123	122	121	121
21.500	120	119	118	118	117
21.750	116	116	115	114	114
22.000	113	112	112	111	111
22.250	110	109	109	108	107

Stormwater Hydrologic Calculations

Subsection: Time vs. Volume — Return Event: 10 years
Label: Permeable Asphalt — Storm Event: 10 year
Scenario: Post-Development 10 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
22.500	107	106	106	105	104
22.750	104	103	103	102	102
23.000	101	100	100	99	99
23.250	98	98	97	97	96
23.500	95	95	94	94	93
23.750	93	92	92	91	91
24.000	90	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume
Return Event: 25 years

Label: Permeable Asphalt
Storm Event: 25 year

Scenario: Post-Development 25 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	1	2
1.000	2	3	4	5	6
1.250	7	8	9	10	11
1.500	12	13	15	16	17
1.750	19	20	21	22	24
2.000	25	26	28	29	30
2.250	32	33	34	36	37
2.500	39	40	41	43	44
2.750	46	47	48	50	51
3.000	53	54	56	57	58
3.250	60	61	63	64	66
3.500	67	68	70	71	73
3.750	74	75	77	78	80
4.000	81	82	84	85	87
4.250	88	89	91	92	93
4.500	95	96	97	99	100
4.750	101	103	104	105	106
5.000	108	109	110	112	113
5.250	114	115	117	118	119
5.500	120	122	123	124	125
5.750	126	128	129	130	131
6.000	132	134	135	136	138
6.250	139	140	142	143	145
6.500	147	148	150	152	154
6.750	156	158	160	162	164
7.000	166	168	170	172	175
7.250	177	179	182	184	186
7.500	189	191	194	196	198
7.750	201	203	206	209	211
8.000	214	216	219	222	225
8.250	228	231	235	238	242
8.500	245	249	253	257	261
8.750	266	270	275	279	284
9.000	289	293	298	303	308
9.250	313	318	324	329	334
9.500	339	345	350	356	361
9.750	367	373	378	384	390
10.000	396	402	408	414	421
10.250	427	434	442	449	457
10.500	465	474	482	491	500
10.750	509	519	528	538	548
11.000	558	568	579	592	606

Subsection: Time vs. Volume | Return Event: 25 years
Label: Permeable Asphalt | Storm Event: 25 year
Scenario: Post-Development 25 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
11.250	621	638	656	676	697
11.500	720	747	782	831	896
11.750	979	1,079	1,194	1,326	1,501
12.000	1,753	2,052	2,352	2,609	2,774
12.250	2,868	2,928	2,962	2,974	2,965
12.500	2,936	2,891	2,835	2,774	2,711
12.750	2,649	2,587	2,525	2,464	2,403
13.000	2,342	2,282	2,223	2,166	2,110
13.250	2,055	2,003	1,952	1,902	1,854
13.500	1,808	1,763	1,719	1,676	1,635
13.750	1,594	1,555	1,517	1,480	1,443
14.000	1,408	1,374	1,340	1,308	1,276
14.250	1,246	1,217	1,188	1,161	1,134
14.500	1,108	1,083	1,059	1,035	1,012
14.750	990	969	948	927	908
15.000	888	870	851	834	816
15.250	799	783	767	751	736
15.500	721	707	692	678	665
15.750	652	638	626	613	601
16.000	589	577	566	554	544
16.250	533	523	513	503	494
16.500	485	476	467	459	451
16.750	443	435	428	420	413
17.000	406	400	393	386	380
17.250	374	368	362	356	351
17.500	345	340	334	329	324
17.750	319	314	309	304	300
18.000	295	290	286	282	277
18.250	273	270	266	262	259
18.500	255	252	249	245	242
18.750	239	237	234	231	228
19.000	226	223	221	219	216
19.250	214	212	210	208	206
19.500	204	202	200	198	196
19.750	194	193	191	189	188
20.000	186	185	183	182	180
20.250	179	177	176	175	173
20.500	172	171	170	168	167
20.750	166	165	164	163	162
21.000	161	160	159	158	157
21.250	156	155	154	153	152
21.500	151	150	149	148	147
21.750	146	146	145	144	143
22.000	142	141	141	140	139
22.250	138	138	137	136	135

Subsection: Time vs. Volume — Return Event: 25 years
Label: Permeable Asphalt — Storm Event: 25 year
Scenario: Post-Development 25 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
22.500	134	134	133	132	131
22.750	131	130	129	129	128
23.000	127	126	126	125	124
23.250	124	123	122	121	121
23.500	120	119	119	118	117
23.750	117	116	115	115	114
24.000	113	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume | Return Event: 100 years
Label: Permeable Asphalt | Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Volume (ft^3)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)	Volume (ft^3)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	1	2
0.750	3	4	5	7	9
1.000	10	12	14	16	18
1.250	20	22	24	26	29
1.500	31	33	35	37	40
1.750	42	44	46	48	51
2.000	53	55	57	59	61
2.250	63	65	67	69	71
2.500	74	76	78	80	82
2.750	84	86	88	90	92
3.000	94	96	99	101	103
3.250	105	107	109	111	113
3.500	115	117	119	121	122
3.750	124	126	128	130	132
4.000	134	136	138	140	141
4.250	143	145	147	149	151
4.500	152	154	156	158	159
4.750	161	163	165	166	168
5.000	170	172	173	175	177
5.250	178	180	182	183	185
5.500	187	188	190	191	193
5.750	195	196	198	199	201
6.000	202	204	206	207	209
6.250	211	213	215	217	219
6.500	222	224	226	229	232
6.750	234	237	240	242	245
7.000	248	251	254	257	260
7.250	263	267	270	273	276
7.500	280	283	287	290	293
7.750	297	300	304	307	311
8.000	315	318	322	326	330
8.250	335	339	344	349	354
8.500	359	365	370	376	382
8.750	388	394	400	407	413
9.000	420	427	434	441	448
9.250	455	462	469	477	484
9.500	492	499	507	515	523
9.750	531	539	547	555	563
10.000	571	580	588	597	606
10.250	616	626	636	647	658
10.500	670	681	694	706	719
10.750	732	745	758	772	786
11.000	800	815	831	849	868

Stormwater Hydrologic Calculations

Subsection: Time vs. Volume — Return Event: 100 years
Label: Permeable Asphalt — Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
11.250	890	914	940	968	998
11.500	1,030	1,068	1,119	1,188	1,281
11.750	1,399	1,540	1,705	1,892	2,141
12.000	2,499	2,924	3,351	3,719	3,966
12.250	4,120	4,229	4,304	4,350	4,365
12.500	4,352	4,313	4,256	4,188	4,114
12.750	4,037	3,956	3,873	3,786	3,696
13.000	3,603	3,508	3,413	3,321	3,232
13.250	3,145	3,061	2,980	2,901	2,825
13.500	2,751	2,679	2,610	2,542	2,477
13.750	2,413	2,351	2,291	2,233	2,176
14.000	2,120	2,067	2,014	1,964	1,915
14.250	1,868	1,822	1,778	1,735	1,694
14.500	1,653	1,615	1,577	1,541	1,505
14.750	1,471	1,438	1,405	1,374	1,343
15.000	1,314	1,285	1,257	1,230	1,204
15.250	1,178	1,153	1,128	1,105	1,081
15.500	1,059	1,037	1,015	994	973
15.750	953	934	914	896	877
16.000	859	841	824	807	791
16.250	775	760	745	731	717
16.500	703	690	677	665	653
16.750	641	630	619	608	597
17.000	587	577	567	558	548
17.250	539	530	521	513	505
17.500	496	488	481	473	465
17.750	458	451	444	437	430
18.000	423	416	410	404	398
18.250	392	386	381	375	370
18.500	365	360	355	351	347
18.750	342	338	334	330	326
19.000	323	319	315	312	309
19.250	306	302	299	296	293
19.500	291	288	285	282	280
19.750	277	275	272	270	268
20.000	265	263	261	259	257
20.250	255	253	251	249	247
20.500	245	243	241	240	238
20.750	236	235	233	231	230
21.000	228	227	226	224	223
21.250	221	220	218	217	216
21.500	214	213	212	211	209
21.750	208	207	206	205	203
22.000	202	201	200	199	198
22.250	197	195	194	193	192

Subsection: Time vs. Volume | Return Event: 100 years
Label: Permeable Asphalt | Storm Event: 100 year
Scenario: Post-Development 100 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
22.500	191	190	189	188	187
22.750	186	185	184	183	182
23.000	181	180	179	178	177
23.250	176	175	174	173	172
23.500	171	170	169	168	167
23.750	166	165	164	163	162
24.000	161	(N/A)	(N/A)	(N/A)	(N/A)

Stormwater Hydrologic Calculations

Subsection: Elevation-Area Volume Curve | Return Event: 1 years
Label: DB-1C-2B | Storm Event: 1 year
Scenario: Post-Development 1 year

Elevation (ft)	Planimeter (ft²)	Area (ft²)	A1+A2+sqr (A1*A2) (ft²)	Volume (ft³)
620.00	0.0	12,133	0	0
622.00	0.0	15,988	42,049	28,033

Volume (Total) (ft³)
0
28,033

Stormwater Hydrologic Calculations

Subsection: Elevation-Area Volume Curve — Return Event: 1 years

Label: IB-1C-2B — Storm Event: 1 year

Scenario: Post-Development 1 year

Elevation (ft)	Planimeter (ft^2)	Area (ft^2)	A1+A2+sqr (A1*A2) (ft^2)	Volume (ft^3)	Volume (Total) (ft^3)
618.00	0.0	7,148	0	0	0
620.00	0.0	13,230	30,103	20,068	20,068
622.00	0.0	16,253	44,147	29,431	49,500

Subsection: Elevation vs. Volume Curve
Return Event: 1 years
Label: Permeable Asphalt
Storm Event: 1 year
Scenario: Post-Development 1 year

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft^3)
634.32	0
635.32	7,068
636.00	11,873

Subsection: Multiple Outfall Rating Curves
Label: DB-1C-2B (IN)
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Total Pond Outflow Curve for Multiple Outfalls

Headwater Elevation (ft)	Outfall: DB-OCS-R (ft^3/s)	Outfall: DB-OCS-L (ft^3/s)	Total Flow (ft^3/s)
620.00	0.00	0.00	0.00
620.05	0.10	0.10	0.20
620.10	0.28	0.28	0.57
620.15	0.52	0.52	1.05
620.20	0.81	0.80	1.61
620.25	1.13	1.13	2.25
620.30	1.48	1.48	2.96
620.35	1.86	1.86	3.73
620.40	2.28	2.28	4.55
620.45	2.72	2.72	5.43
620.50	3.18	3.18	6.37
620.55	3.67	3.67	7.34
620.60	4.18	4.18	8.36
620.65	4.72	4.72	9.44
620.70	5.27	5.27	10.54
620.75	5.84	5.85	11.69
620.80	6.44	6.44	12.88
620.85	7.05	7.05	14.10
620.90	7.68	7.68	15.36
620.95	8.33	8.33	16.66
621.00	9.00	9.00	18.00
621.05	9.69	9.69	19.38
621.10	10.38	10.38	20.76
621.15	11.10	11.11	22.21
621.20	11.83	11.82	23.65
621.25	12.58	12.58	25.15
621.30	13.34	13.33	26.67
621.35	13.97	14.13	28.10
621.40	14.34	14.91	29.25
621.45	14.65	15.72	30.37
621.50	14.93	16.53	31.45
621.55	15.32	17.91	33.23
621.60	15.74	19.74	35.48
621.65	16.14	21.86	38.00
621.70	16.50	24.25	40.74
621.75	16.80	26.83	43.64
621.80	17.06	29.58	46.63
621.85	17.26	31.57	48.84
621.90	17.42	33.20	50.62
621.95	17.55	34.58	52.13
622.00	17.65	35.77	53.42

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve — Return Event: 1 years
Label: Detention Basin OCS L — Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.00	0.00	(N/A)	0.00
620.05	0.10	(N/A)	0.00
620.10	0.28	(N/A)	0.00
620.15	0.52	(N/A)	0.00
620.20	0.80	(N/A)	0.00
620.25	1.13	(N/A)	0.00
620.30	1.48	(N/A)	0.00
620.35	1.86	(N/A)	0.00
620.40	2.28	(N/A)	0.00
620.45	2.72	(N/A)	0.00
620.50	3.18	(N/A)	0.00
620.55	3.67	(N/A)	0.00
620.60	4.18	(N/A)	0.00
620.65	4.72	(N/A)	0.00
620.70	5.27	(N/A)	0.00
620.75	5.85	(N/A)	0.00
620.80	6.44	(N/A)	0.00
620.85	7.05	(N/A)	0.00
620.90	7.68	(N/A)	0.00
620.95	8.33	(N/A)	0.00
621.00	9.00	(N/A)	0.00
621.05	9.69	(N/A)	0.00
621.10	10.38	(N/A)	0.00
621.15	11.11	(N/A)	0.00
621.20	11.82	(N/A)	0.00
621.25	12.58	(N/A)	0.00
621.30	13.33	(N/A)	0.00
621.35	14.13	(N/A)	0.00
621.40	14.91	(N/A)	0.00
621.45	15.72	(N/A)	0.00
621.50	16.53	(N/A)	0.00
621.55	17.91	(N/A)	0.00
621.60	19.74	(N/A)	0.00
621.65	21.86	(N/A)	0.00
621.70	24.25	(N/A)	0.00
621.75	26.83	(N/A)	0.00
621.80	29.58	(N/A)	0.00
621.85	31.57	(N/A)	0.00
621.90	33.20	(N/A)	0.00
621.95	34.58	(N/A)	0.00
622.00	35.77	(N/A)	0.00

Contributing Structures
(no Q: Riser - 1,Weir - 1,Culvert - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)

Subsection: Composite Rating Curve
Label: Detention Basin OCS L
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
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Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)

Subsection: Composite Rating Curve
Label: Detention Basin OCS L
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve — Return Event: 1 years
Label: Detention Basin OCS R — Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.00	0.00	(N/A)	0.00
620.05	0.10	(N/A)	0.00
620.10	0.28	(N/A)	0.00
620.15	0.52	(N/A)	0.00
620.20	0.81	(N/A)	0.00
620.25	1.13	(N/A)	0.00
620.30	1.48	(N/A)	0.00
620.35	1.86	(N/A)	0.00
620.40	2.28	(N/A)	0.00
620.45	2.72	(N/A)	0.00
620.50	3.18	(N/A)	0.00
620.55	3.67	(N/A)	0.00
620.60	4.18	(N/A)	0.00
620.65	4.72	(N/A)	0.00
620.70	5.27	(N/A)	0.00
620.75	5.84	(N/A)	0.00
620.80	6.44	(N/A)	0.00
620.85	7.05	(N/A)	0.00
620.90	7.68	(N/A)	0.00
620.95	8.33	(N/A)	0.00
621.00	9.00	(N/A)	0.00
621.05	9.69	(N/A)	0.00
621.10	10.38	(N/A)	0.00
621.15	11.10	(N/A)	0.00
621.20	11.83	(N/A)	0.00
621.25	12.58	(N/A)	0.00
621.30	13.34	(N/A)	0.00
621.35	13.97	(N/A)	0.00
621.40	14.34	(N/A)	0.00
621.45	14.65	(N/A)	0.00
621.50	14.93	(N/A)	0.00
621.55	15.32	(N/A)	0.00
621.60	15.74	(N/A)	0.00
621.65	16.14	(N/A)	0.00
621.70	16.50	(N/A)	0.00
621.75	16.80	(N/A)	0.00
621.80	17.06	(N/A)	0.00
621.85	17.26	(N/A)	0.00
621.90	17.42	(N/A)	0.00
621.95	17.55	(N/A)	0.00
622.00	17.65	(N/A)	0.00

Contributing Structures
(no Q: Riser - 1,Weir - 1,Culvert - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)

Subsection: Composite Rating Curve
Label: Detention Basin OCS R
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Detention Basin OCS R | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1)
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Weir - 1,Culvert - 1
Riser - 1,Culvert - 1 (no Q: Weir - 1)

Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	0.00	620.00	0.00
618.05	0.00	620.00	0.00
618.10	0.00	620.00	0.00
618.15	0.00	620.00	0.00
618.20	0.00	620.00	0.00
618.25	0.00	620.00	0.00
618.30	0.00	620.00	0.00
618.35	0.00	620.00	0.00
618.40	0.00	620.00	0.00
618.45	0.00	620.00	0.00
618.50	0.00	620.00	0.00
618.55	0.00	620.00	0.00
618.60	0.00	620.00	0.00
618.65	0.00	620.00	0.00
618.70	0.00	620.00	0.00
618.75	0.00	620.00	0.00
618.80	0.00	620.00	0.00
618.85	0.00	620.00	0.00
618.90	0.00	620.00	0.00
618.95	0.00	620.00	0.00
619.00	0.00	620.00	0.00
619.05	0.00	620.00	0.00
619.10	0.00	620.00	0.00
619.15	0.00	620.00	0.00
619.20	0.00	620.00	0.00
619.25	0.00	620.00	0.00
619.30	0.00	620.00	0.00
619.35	0.00	620.00	0.00
619.40	0.00	620.00	0.00
619.45	0.00	620.00	0.00
619.50	0.00	620.00	0.00
619.55	0.00	620.00	0.00
619.60	0.00	620.00	0.00
619.65	0.00	620.00	0.00
619.70	0.00	620.00	0.00
619.75	0.00	620.00	0.00
619.80	0.00	620.00	0.00
619.85	0.00	620.00	0.00
619.90	0.00	620.00	0.00
619.95	0.00	620.00	0.00
620.00	0.00	620.00	0.00
620.05	0.00	620.00	0.00
620.10	0.91	620.00	0.00
620.15	2.56	620.00	0.00
620.20	4.71	620.00	0.00
620.25	7.24	620.00	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	10.13	620.00	0.00
620.35	13.31	620.00	0.00
620.40	16.77	620.00	0.00
620.45	20.49	620.00	0.00
620.50	24.45	620.00	0.00
620.55	28.64	620.00	0.00
620.60	33.04	620.00	0.00
620.65	37.65	620.00	0.00
620.70	42.45	620.00	0.00
620.75	47.44	620.00	0.00
620.80	52.61	620.00	0.00
620.85	57.96	620.00	0.00
620.90	63.48	620.00	0.00
620.95	69.16	620.00	0.00
621.00	75.00	620.00	0.00
621.05	81.00	620.00	0.00
621.10	87.15	620.00	0.00
621.15	93.45	620.00	0.00
621.20	99.89	620.00	0.00
621.25	106.48	620.00	0.00
621.30	113.20	620.00	0.00
621.35	120.06	620.00	0.00
621.40	127.05	620.00	0.00
621.45	134.18	620.00	0.00
621.50	141.43	620.00	0.00
621.55	148.81	620.00	0.00
621.60	156.31	620.00	0.00
621.65	163.93	620.00	0.00
621.70	171.68	620.00	0.00
621.75	179.54	620.00	0.00
621.80	187.52	620.00	0.00
621.85	195.61	620.00	0.00
621.90	203.82	620.00	0.00
621.95	212.14	620.00	0.00
622.00	220.57	620.00	0.00

Contributing Structures
None Contributing
None Contributing
None Contributing
None Contributing
None Contributing
None Contributing
None Contributing
None Contributing
None Contributing
None Contributing

Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
None Contributing
None Contributing
None Contributing
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
Weir - 1
Weir - 1
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Weir - 1
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	0.00	620.05	0.00
618.05	0.00	620.05	0.00
618.10	0.00	620.05	0.00
618.15	0.00	620.05	0.00
618.20	0.00	620.05	0.00
618.25	0.00	620.05	0.00
618.30	0.00	620.05	0.00
618.35	0.00	620.05	0.00
618.40	0.00	620.05	0.00
618.45	0.00	620.05	0.00
618.50	0.00	620.05	0.00
618.55	0.00	620.05	0.00
618.60	0.00	620.05	0.00
618.65	0.00	620.05	0.00
618.70	0.00	620.05	0.00
618.75	0.00	620.05	0.00
618.80	0.00	620.05	0.00
618.85	0.00	620.05	0.00
618.90	0.00	620.05	0.00
618.95	0.00	620.05	0.00
619.00	0.00	620.05	0.00
619.05	0.00	620.05	0.00
619.10	0.00	620.05	0.00
619.15	0.00	620.05	0.00
619.20	0.00	620.05	0.00
619.25	0.00	620.05	0.00
619.30	0.00	620.05	0.00
619.35	0.00	620.05	0.00
619.40	0.00	620.05	0.00
619.45	0.00	620.05	0.00
619.50	0.00	620.05	0.00
619.55	0.00	620.05	0.00
619.60	0.00	620.05	0.00
619.65	0.00	620.05	0.00
619.70	0.00	620.05	0.00
619.75	0.00	620.05	0.00
619.80	0.00	620.05	0.00
619.85	0.00	620.05	0.00
619.90	0.00	620.05	0.00
619.95	0.00	620.05	0.00
620.00	0.00	620.05	0.00
620.05	0.00	620.05	0.00
620.10	0.91	620.05	0.00
620.15	2.56	620.05	0.00
620.20	4.71	620.05	0.00
620.25	7.24	620.05	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	10.13	620.05	0.00
620.35	13.31	620.05	0.00
620.40	16.77	620.05	0.00
620.45	20.49	620.05	0.00
620.50	24.45	620.05	0.00
620.55	28.64	620.05	0.00
620.60	33.04	620.05	0.00
620.65	37.65	620.05	0.00
620.70	42.45	620.05	0.00
620.75	47.44	620.05	0.00
620.80	52.61	620.05	0.00
620.85	57.96	620.05	0.00
620.90	63.48	620.05	0.00
620.95	69.16	620.05	0.00
621.00	75.00	620.05	0.00
621.05	81.00	620.05	0.00
621.10	87.15	620.05	0.00
621.15	93.45	620.05	0.00
621.20	99.89	620.05	0.00
621.25	106.48	620.05	0.00
621.30	113.20	620.05	0.00
621.35	120.06	620.05	0.00
621.40	127.05	620.05	0.00
621.45	134.18	620.05	0.00
621.50	141.43	620.05	0.00
621.55	148.81	620.05	0.00
621.60	156.31	620.05	0.00
621.65	163.93	620.05	0.00
621.70	171.68	620.05	0.00
621.75	179.54	620.05	0.00
621.80	187.52	620.05	0.00
621.85	195.61	620.05	0.00
621.90	203.82	620.05	0.00
621.95	212.14	620.05	0.00
622.00	220.57	620.05	0.00

Contributing Structures
Weir - 1
Weir - 1
Weir - 1
Weir - 1
Weir - 1
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve — Return Event: 1 years
Label: Infiltration Basin Overflow — Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
Weir - 1
Weir - 1
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
Weir - 1
Weir - 1
Weir - 1
Weir - 1
Weir - 1
Weir - 1
Weir - 1
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-0.91	620.10	0.00
618.05	-0.91	620.10	0.00
618.10	-0.91	620.10	0.00
618.15	-0.91	620.10	0.00
618.20	-0.91	620.10	0.00
618.25	-0.91	620.10	0.00
618.30	-0.91	620.10	0.00
618.35	-0.91	620.10	0.00
618.40	-0.91	620.10	0.00
618.45	-0.91	620.10	0.00
618.50	-0.91	620.10	0.00
618.55	-0.91	620.10	0.00
618.60	-0.91	620.10	0.00
618.65	-0.91	620.10	0.00
618.70	-0.91	620.10	0.00
618.75	-0.91	620.10	0.00
618.80	-0.91	620.10	0.00
618.85	-0.91	620.10	0.00
618.90	-0.91	620.10	0.00
618.95	-0.91	620.10	0.00
619.00	-0.91	620.10	0.00
619.05	-0.91	620.10	0.00
619.10	-0.91	620.10	0.00
619.15	-0.91	620.10	0.00
619.20	-0.91	620.10	0.00
619.25	-0.91	620.10	0.00
619.30	-0.91	620.10	0.00
619.35	-0.91	620.10	0.00
619.40	-0.91	620.10	0.00
619.45	-0.91	620.10	0.00
619.50	-0.91	620.10	0.00
619.55	-0.91	620.10	0.00
619.60	-0.91	620.10	0.00
619.65	-0.91	620.10	0.00
619.70	-0.91	620.10	0.00
619.75	-0.91	620.10	0.00
619.80	-0.91	620.10	0.00
619.85	-0.91	620.10	0.00
619.90	-0.91	620.10	0.00
619.95	-0.91	620.10	0.00
620.00	-0.91	620.10	0.00
620.05	-0.91	620.10	0.00
620.10	0.00	620.10	0.00
620.15	2.17	620.10	0.00
620.20	4.33	620.10	0.00
620.25	6.88	620.10	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	9.77	620.10	0.00
620.35	12.95	620.10	0.00
620.40	16.42	620.10	0.00
620.45	20.14	620.10	0.00
620.50	24.10	620.10	0.00
620.55	28.29	620.10	0.00
620.60	32.69	620.10	0.00
620.65	37.29	620.10	0.00
620.70	42.10	620.10	0.00
620.75	47.09	620.10	0.00
620.80	52.26	620.10	0.00
620.85	57.61	620.10	0.00
620.90	63.13	620.10	0.00
620.95	68.81	620.10	0.00
621.00	74.65	620.10	0.00
621.05	80.65	620.10	0.00
621.10	86.80	620.10	0.00
621.15	93.10	620.10	0.00
621.20	99.54	620.10	0.00
621.25	106.13	620.10	0.00
621.30	112.85	620.10	0.00
621.35	119.71	620.10	0.00
621.40	126.70	620.10	0.00
621.45	133.83	620.10	0.00
621.50	141.08	620.10	0.00
621.55	148.46	620.10	0.00
621.60	155.96	620.10	0.00
621.65	163.58	620.10	0.00
621.70	171.33	620.10	0.00
621.75	179.19	620.10	0.00
621.80	187.17	620.10	0.00
621.85	195.26	620.10	0.00
621.90	203.47	620.10	0.00
621.95	211.79	620.10	0.00
622.00	220.22	620.10	0.00

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-2.56	620.15	0.00
618.05	-2.56	620.15	0.00
618.10	-2.56	620.15	0.00
618.15	-2.56	620.15	0.00
618.20	-2.56	620.15	0.00
618.25	-2.56	620.15	0.00
618.30	-2.56	620.15	0.00
618.35	-2.56	620.15	0.00
618.40	-2.56	620.15	0.00
618.45	-2.56	620.15	0.00
618.50	-2.56	620.15	0.00
618.55	-2.56	620.15	0.00
618.60	-2.56	620.15	0.00
618.65	-2.56	620.15	0.00
618.70	-2.56	620.15	0.00
618.75	-2.56	620.15	0.00
618.80	-2.56	620.15	0.00
618.85	-2.56	620.15	0.00
618.90	-2.56	620.15	0.00
618.95	-2.56	620.15	0.00
619.00	-2.56	620.15	0.00
619.05	-2.56	620.15	0.00
619.10	-2.56	620.15	0.00
619.15	-2.56	620.15	0.00
619.20	-2.56	620.15	0.00
619.25	-2.56	620.15	0.00
619.30	-2.56	620.15	0.00
619.35	-2.56	620.15	0.00
619.40	-2.56	620.15	0.00
619.45	-2.56	620.15	0.00
619.50	-2.56	620.15	0.00
619.55	-2.56	620.15	0.00
619.60	-2.56	620.15	0.00
619.65	-2.56	620.15	0.00
619.70	-2.56	620.15	0.00
619.75	-2.56	620.15	0.00
619.80	-2.56	620.15	0.00
619.85	-2.56	620.15	0.00
619.90	-2.56	620.15	0.00
619.95	-2.56	620.15	0.00
620.00	-2.56	620.15	0.00
620.05	-2.56	620.15	0.00
620.10	-2.17	620.15	0.00
620.15	0.00	620.15	0.00
620.20	3.48	620.15	0.00
620.25	6.12	620.15	0.00

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	9.05	620.15	0.00
620.35	12.26	620.15	0.00
620.40	15.74	620.15	0.00
620.45	19.46	620.15	0.00
620.50	23.43	620.15	0.00
620.55	27.62	620.15	0.00
620.60	32.03	620.15	0.00
620.65	36.64	620.15	0.00
620.70	41.44	620.15	0.00
620.75	46.44	620.15	0.00
620.80	51.61	620.15	0.00
620.85	56.96	620.15	0.00
620.90	62.48	620.15	0.00
620.95	68.16	620.15	0.00
621.00	74.00	620.15	0.00
621.05	80.00	620.15	0.00
621.10	86.16	620.15	0.00
621.15	92.45	620.15	0.00
621.20	98.90	620.15	0.00
621.25	105.48	620.15	0.00
621.30	112.21	620.15	0.00
621.35	119.07	620.15	0.00
621.40	126.06	620.15	0.00
621.45	133.18	620.15	0.00
621.50	140.44	620.15	0.00
621.55	147.82	620.15	0.00
621.60	155.32	620.15	0.00
621.65	162.94	620.15	0.00
621.70	170.69	620.15	0.00
621.75	178.55	620.15	0.00
621.80	186.53	620.15	0.00
621.85	194.62	620.15	0.00
621.90	202.83	620.15	0.00
621.95	211.15	620.15	0.00
622.00	219.58	620.15	0.00

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-4.71	620.20	0.00
618.05	-4.71	620.20	0.00
618.10	-4.71	620.20	0.00
618.15	-4.71	620.20	0.00
618.20	-4.71	620.20	0.00
618.25	-4.71	620.20	0.00
618.30	-4.71	620.20	0.00
618.35	-4.71	620.20	0.00
618.40	-4.71	620.20	0.00
618.45	-4.71	620.20	0.00
618.50	-4.71	620.20	0.00
618.55	-4.71	620.20	0.00
618.60	-4.71	620.20	0.00
618.65	-4.71	620.20	0.00
618.70	-4.71	620.20	0.00
618.75	-4.71	620.20	0.00
618.80	-4.71	620.20	0.00
618.85	-4.71	620.20	0.00
618.90	-4.71	620.20	0.00
618.95	-4.71	620.20	0.00
619.00	-4.71	620.20	0.00
619.05	-4.71	620.20	0.00
619.10	-4.71	620.20	0.00
619.15	-4.71	620.20	0.00
619.20	-4.71	620.20	0.00
619.25	-4.71	620.20	0.00
619.30	-4.71	620.20	0.00
619.35	-4.71	620.20	0.00
619.40	-4.71	620.20	0.00
619.45	-4.71	620.20	0.00
619.50	-4.71	620.20	0.00
619.55	-4.71	620.20	0.00
619.60	-4.71	620.20	0.00
619.65	-4.71	620.20	0.00
619.70	-4.71	620.20	0.00
619.75	-4.71	620.20	0.00
619.80	-4.71	620.20	0.00
619.85	-4.71	620.20	0.00
619.90	-4.71	620.20	0.00
619.95	-4.71	620.20	0.00
620.00	-4.71	620.20	0.00
620.05	-4.71	620.20	0.00
620.10	-4.33	620.20	0.00
620.15	-3.48	620.20	0.00
620.20	0.00	620.20	0.00
620.25	4.84	620.20	0.00

Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	7.96	620.20	0.00
620.35	11.25	620.20	0.00
620.40	14.78	620.20	0.00
620.45	18.53	620.20	0.00
620.50	22.52	620.20	0.00
620.55	26.73	620.20	0.00
620.60	31.14	620.20	0.00
620.65	35.76	620.20	0.00
620.70	40.57	620.20	0.00
620.75	45.57	620.20	0.00
620.80	50.75	620.20	0.00
620.85	56.10	620.20	0.00
620.90	61.62	620.20	0.00
620.95	67.31	620.20	0.00
621.00	73.15	620.20	0.00
621.05	79.15	620.20	0.00
621.10	85.31	620.20	0.00
621.15	91.61	620.20	0.00
621.20	98.05	620.20	0.00
621.25	104.64	620.20	0.00
621.30	111.37	620.20	0.00
621.35	118.23	620.20	0.00
621.40	125.22	620.20	0.00
621.45	132.35	620.20	0.00
621.50	139.60	620.20	0.00
621.55	146.98	620.20	0.00
621.60	154.48	620.20	0.00
621.65	162.10	620.20	0.00
621.70	169.85	620.20	0.00
621.75	177.71	620.20	0.00
621.80	185.69	620.20	0.00
621.85	193.79	620.20	0.00
621.90	201.99	620.20	0.00
621.95	210.31	620.20	0.00
622.00	218.74	620.20	0.00

Contributing Structures
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Composite Outflow Summary

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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-7.24	620.25	0.00
618.05	-7.24	620.25	0.00
618.10	-7.24	620.25	0.00
618.15	-7.24	620.25	0.00
618.20	-7.24	620.25	0.00
618.25	-7.24	620.25	0.00
618.30	-7.24	620.25	0.00
618.35	-7.24	620.25	0.00
618.40	-7.24	620.25	0.00
618.45	-7.24	620.25	0.00
618.50	-7.24	620.25	0.00
618.55	-7.24	620.25	0.00
618.60	-7.24	620.25	0.00
618.65	-7.24	620.25	0.00
618.70	-7.24	620.25	0.00
618.75	-7.24	620.25	0.00
618.80	-7.24	620.25	0.00
618.85	-7.24	620.25	0.00
618.90	-7.24	620.25	0.00
618.95	-7.24	620.25	0.00
619.00	-7.24	620.25	0.00
619.05	-7.24	620.25	0.00
619.10	-7.24	620.25	0.00
619.15	-7.24	620.25	0.00
619.20	-7.24	620.25	0.00
619.25	-7.24	620.25	0.00
619.30	-7.24	620.25	0.00
619.35	-7.24	620.25	0.00
619.40	-7.24	620.25	0.00
619.45	-7.24	620.25	0.00
619.50	-7.24	620.25	0.00
619.55	-7.24	620.25	0.00
619.60	-7.24	620.25	0.00
619.65	-7.24	620.25	0.00
619.70	-7.24	620.25	0.00
619.75	-7.24	620.25	0.00
619.80	-7.24	620.25	0.00
619.85	-7.24	620.25	0.00
619.90	-7.24	620.25	0.00
619.95	-7.24	620.25	0.00
620.00	-7.24	620.25	0.00
620.05	-7.24	620.25	0.00
620.10	-6.88	620.25	0.00
620.15	-6.12	620.25	0.00
620.20	-4.84	620.25	0.00
620.25	0.00	620.25	0.00

Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	6.24	620.25	0.00
620.35	9.83	620.25	0.00
620.40	13.49	620.25	0.00
620.45	17.32	620.25	0.00
620.50	21.36	620.25	0.00
620.55	25.60	620.25	0.00
620.60	30.04	620.25	0.00
620.65	34.67	620.25	0.00
620.70	39.50	620.25	0.00
620.75	44.51	620.25	0.00
620.80	49.69	620.25	0.00
620.85	55.05	620.25	0.00
620.90	60.58	620.25	0.00
620.95	66.27	620.25	0.00
621.00	72.12	620.25	0.00
621.05	78.13	620.25	0.00
621.10	84.29	620.25	0.00
621.15	90.59	620.25	0.00
621.20	97.04	620.25	0.00
621.25	103.63	620.25	0.00
621.30	110.35	620.25	0.00
621.35	117.22	620.25	0.00
621.40	124.21	620.25	0.00
621.45	131.34	620.25	0.00
621.50	138.59	620.25	0.00
621.55	145.97	620.25	0.00
621.60	153.48	620.25	0.00
621.65	161.10	620.25	0.00
621.70	168.85	620.25	0.00
621.75	176.71	620.25	0.00
621.80	184.69	620.25	0.00
621.85	192.79	620.25	0.00
621.90	201.00	620.25	0.00
621.95	209.32	620.25	0.00
622.00	217.75	620.25	0.00

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-10.13	620.30	0.00
618.05	-10.13	620.30	0.00
618.10	-10.13	620.30	0.00
618.15	-10.13	620.30	0.00
618.20	-10.13	620.30	0.00
618.25	-10.13	620.30	0.00
618.30	-10.13	620.30	0.00
618.35	-10.13	620.30	0.00
618.40	-10.13	620.30	0.00
618.45	-10.13	620.30	0.00
618.50	-10.13	620.30	0.00
618.55	-10.13	620.30	0.00
618.60	-10.13	620.30	0.00
618.65	-10.13	620.30	0.00
618.70	-10.13	620.30	0.00
618.75	-10.13	620.30	0.00
618.80	-10.13	620.30	0.00
618.85	-10.13	620.30	0.00
618.90	-10.13	620.30	0.00
618.95	-10.13	620.30	0.00
619.00	-10.13	620.30	0.00
619.05	-10.13	620.30	0.00
619.10	-10.13	620.30	0.00
619.15	-10.13	620.30	0.00
619.20	-10.13	620.30	0.00
619.25	-10.13	620.30	0.00
619.30	-10.13	620.30	0.00
619.35	-10.13	620.30	0.00
619.40	-10.13	620.30	0.00
619.45	-10.13	620.30	0.00
619.50	-10.13	620.30	0.00
619.55	-10.13	620.30	0.00
619.60	-10.13	620.30	0.00
619.65	-10.13	620.30	0.00
619.70	-10.13	620.30	0.00
619.75	-10.13	620.30	0.00
619.80	-10.13	620.30	0.00
619.85	-10.13	620.30	0.00
619.90	-10.13	620.30	0.00
619.95	-10.13	620.30	0.00
620.00	-10.13	620.30	0.00
620.05	-10.13	620.30	0.00
620.10	-9.77	620.30	0.00
620.15	-9.05	620.30	0.00
620.20	-7.96	620.30	0.00
620.25	-6.24	620.30	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	0.00	620.30	0.00
620.35	7.67	620.30	0.00
620.40	11.74	620.30	0.00
620.45	15.76	620.30	0.00
620.50	19.90	620.30	0.00
620.55	24.21	620.30	0.00
620.60	28.70	620.30	0.00
620.65	33.37	620.30	0.00
620.70	38.22	620.30	0.00
620.75	43.25	620.30	0.00
620.80	48.45	620.30	0.00
620.85	53.83	620.30	0.00
620.90	59.37	620.30	0.00
620.95	65.07	620.30	0.00
621.00	70.93	620.30	0.00
621.05	76.94	620.30	0.00
621.10	83.10	620.30	0.00
621.15	89.41	620.30	0.00
621.20	95.87	620.30	0.00
621.25	102.46	620.30	0.00
621.30	109.19	620.30	0.00
621.35	116.06	620.30	0.00
621.40	123.06	620.30	0.00
621.45	130.18	620.30	0.00
621.50	137.44	620.30	0.00
621.55	144.82	620.30	0.00
621.60	152.33	620.30	0.00
621.65	159.96	620.30	0.00
621.70	167.71	620.30	0.00
621.75	175.57	620.30	0.00
621.80	183.55	620.30	0.00
621.85	191.65	620.30	0.00
621.90	199.86	620.30	0.00
621.95	208.18	620.30	0.00
622.00	216.61	620.30	0.00

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Composite Outflow Summary

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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-13.31	620.35	0.00
618.05	-13.31	620.35	0.00
618.10	-13.31	620.35	0.00
618.15	-13.31	620.35	0.00
618.20	-13.31	620.35	0.00
618.25	-13.31	620.35	0.00
618.30	-13.31	620.35	0.00
618.35	-13.31	620.35	0.00
618.40	-13.31	620.35	0.00
618.45	-13.31	620.35	0.00
618.50	-13.31	620.35	0.00
618.55	-13.31	620.35	0.00
618.60	-13.31	620.35	0.00
618.65	-13.31	620.35	0.00
618.70	-13.31	620.35	0.00
618.75	-13.31	620.35	0.00
618.80	-13.31	620.35	0.00
618.85	-13.31	620.35	0.00
618.90	-13.31	620.35	0.00
618.95	-13.31	620.35	0.00
619.00	-13.31	620.35	0.00
619.05	-13.31	620.35	0.00
619.10	-13.31	620.35	0.00
619.15	-13.31	620.35	0.00
619.20	-13.31	620.35	0.00
619.25	-13.31	620.35	0.00
619.30	-13.31	620.35	0.00
619.35	-13.31	620.35	0.00
619.40	-13.31	620.35	0.00
619.45	-13.31	620.35	0.00
619.50	-13.31	620.35	0.00
619.55	-13.31	620.35	0.00
619.60	-13.31	620.35	0.00
619.65	-13.31	620.35	0.00
619.70	-13.31	620.35	0.00
619.75	-13.31	620.35	0.00
619.80	-13.31	620.35	0.00
619.85	-13.31	620.35	0.00
619.90	-13.31	620.35	0.00
619.95	-13.31	620.35	0.00
620.00	-13.31	620.35	0.00
620.05	-13.31	620.35	0.00
620.10	-12.95	620.35	0.00
620.15	-12.26	620.35	0.00
620.20	-11.25	620.35	0.00
620.25	-9.83	620.35	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-7.67	620.35	0.00
620.35	0.00	620.35	0.00
620.40	9.14	620.35	0.00
620.45	13.69	620.35	0.00
620.50	18.07	620.35	0.00
620.55	22.51	620.35	0.00
620.60	27.09	620.35	0.00
620.65	31.82	620.35	0.00
620.70	36.72	620.35	0.00
620.75	41.79	620.35	0.00
620.80	47.02	620.35	0.00
620.85	52.42	620.35	0.00
620.90	57.98	620.35	0.00
620.95	63.70	620.35	0.00
621.00	69.57	620.35	0.00
621.05	75.59	620.35	0.00
621.10	81.76	620.35	0.00
621.15	88.08	620.35	0.00
621.20	94.54	620.35	0.00
621.25	101.14	620.35	0.00
621.30	107.88	620.35	0.00
621.35	114.75	620.35	0.00
621.40	121.75	620.35	0.00
621.45	128.89	620.35	0.00
621.50	136.15	620.35	0.00
621.55	143.53	620.35	0.00
621.60	151.04	620.35	0.00
621.65	158.67	620.35	0.00
621.70	166.42	620.35	0.00
621.75	174.29	620.35	0.00
621.80	182.28	620.35	0.00
621.85	190.38	620.35	0.00
621.90	198.59	620.35	0.00
621.95	206.91	620.35	0.00
622.00	215.34	620.35	0.00

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve — Return Event: 1 years
Label: Infiltration Basin Overflow — Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-16.77	620.40	0.00
618.05	-16.77	620.40	0.00
618.10	-16.77	620.40	0.00
618.15	-16.77	620.40	0.00
618.20	-16.77	620.40	0.00
618.25	-16.77	620.40	0.00
618.30	-16.77	620.40	0.00
618.35	-16.77	620.40	0.00
618.40	-16.77	620.40	0.00
618.45	-16.77	620.40	0.00
618.50	-16.77	620.40	0.00
618.55	-16.77	620.40	0.00
618.60	-16.77	620.40	0.00
618.65	-16.77	620.40	0.00
618.70	-16.77	620.40	0.00
618.75	-16.77	620.40	0.00
618.80	-16.77	620.40	0.00
618.85	-16.77	620.40	0.00
618.90	-16.77	620.40	0.00
618.95	-16.77	620.40	0.00
619.00	-16.77	620.40	0.00
619.05	-16.77	620.40	0.00
619.10	-16.77	620.40	0.00
619.15	-16.77	620.40	0.00
619.20	-16.77	620.40	0.00
619.25	-16.77	620.40	0.00
619.30	-16.77	620.40	0.00
619.35	-16.77	620.40	0.00
619.40	-16.77	620.40	0.00
619.45	-16.77	620.40	0.00
619.50	-16.77	620.40	0.00
619.55	-16.77	620.40	0.00
619.60	-16.77	620.40	0.00
619.65	-16.77	620.40	0.00
619.70	-16.77	620.40	0.00
619.75	-16.77	620.40	0.00
619.80	-16.77	620.40	0.00
619.85	-16.77	620.40	0.00
619.90	-16.77	620.40	0.00
619.95	-16.77	620.40	0.00
620.00	-16.77	620.40	0.00
620.05	-16.77	620.40	0.00
620.10	-16.42	620.40	0.00
620.15	-15.74	620.40	0.00
620.20	-14.78	620.40	0.00
620.25	-13.49	620.40	0.00

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-11.74	620.40	0.00
620.35	-9.14	620.40	0.00
620.40	0.00	620.40	0.00
620.45	10.62	620.40	0.00
620.50	15.66	620.40	0.00
620.55	20.40	620.40	0.00
620.60	25.15	620.40	0.00
620.65	30.00	620.40	0.00
620.70	34.98	620.40	0.00
620.75	40.10	620.40	0.00
620.80	45.38	620.40	0.00
620.85	50.82	620.40	0.00
620.90	56.40	620.40	0.00
620.95	62.15	620.40	0.00
621.00	68.04	620.40	0.00
621.05	74.08	620.40	0.00
621.10	80.27	620.40	0.00
621.15	86.60	620.40	0.00
621.20	93.07	620.40	0.00
621.25	99.68	620.40	0.00
621.30	106.42	620.40	0.00
621.35	113.30	620.40	0.00
621.40	120.31	620.40	0.00
621.45	127.45	620.40	0.00
621.50	134.72	620.40	0.00
621.55	142.11	620.40	0.00
621.60	149.62	620.40	0.00
621.65	157.26	620.40	0.00
621.70	165.01	620.40	0.00
621.75	172.89	620.40	0.00
621.80	180.87	620.40	0.00
621.85	188.98	620.40	0.00
621.90	197.19	620.40	0.00
621.95	205.52	620.40	0.00
622.00	213.95	620.40	0.00

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-20.49	620.45	0.00
618.05	-20.49	620.45	0.00
618.10	-20.49	620.45	0.00
618.15	-20.49	620.45	0.00
618.20	-20.49	620.45	0.00
618.25	-20.49	620.45	0.00
618.30	-20.49	620.45	0.00
618.35	-20.49	620.45	0.00
618.40	-20.49	620.45	0.00
618.45	-20.49	620.45	0.00
618.50	-20.49	620.45	0.00
618.55	-20.49	620.45	0.00
618.60	-20.49	620.45	0.00
618.65	-20.49	620.45	0.00
618.70	-20.49	620.45	0.00
618.75	-20.49	620.45	0.00
618.80	-20.49	620.45	0.00
618.85	-20.49	620.45	0.00
618.90	-20.49	620.45	0.00
618.95	-20.49	620.45	0.00
619.00	-20.49	620.45	0.00
619.05	-20.49	620.45	0.00
619.10	-20.49	620.45	0.00
619.15	-20.49	620.45	0.00
619.20	-20.49	620.45	0.00
619.25	-20.49	620.45	0.00
619.30	-20.49	620.45	0.00
619.35	-20.49	620.45	0.00
619.40	-20.49	620.45	0.00
619.45	-20.49	620.45	0.00
619.50	-20.49	620.45	0.00
619.55	-20.49	620.45	0.00
619.60	-20.49	620.45	0.00
619.65	-20.49	620.45	0.00
619.70	-20.49	620.45	0.00
619.75	-20.49	620.45	0.00
619.80	-20.49	620.45	0.00
619.85	-20.49	620.45	0.00
619.90	-20.49	620.45	0.00
619.95	-20.49	620.45	0.00
620.00	-20.49	620.45	0.00
620.05	-20.49	620.45	0.00
620.10	-20.14	620.45	0.00
620.15	-19.46	620.45	0.00
620.20	-18.53	620.45	0.00
620.25	-17.32	620.45	0.00

Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-15.76	620.45	0.00
620.35	-13.69	620.45	0.00
620.40	-10.62	620.45	0.00
620.45	0.00	620.45	0.00
620.50	12.13	620.45	0.00
620.55	17.65	620.45	0.00
620.60	22.76	620.45	0.00
620.65	27.82	620.45	0.00
620.70	32.93	620.45	0.00
620.75	38.16	620.45	0.00
620.80	43.51	620.45	0.00
620.85	49.00	620.45	0.00
620.90	54.63	620.45	0.00
620.95	60.41	620.45	0.00
621.00	66.33	620.45	0.00
621.05	72.40	620.45	0.00
621.10	78.61	620.45	0.00
621.15	84.95	620.45	0.00
621.20	91.44	620.45	0.00
621.25	98.07	620.45	0.00
621.30	104.82	620.45	0.00
621.35	111.71	620.45	0.00
621.40	118.73	620.45	0.00
621.45	125.88	620.45	0.00
621.50	133.16	620.45	0.00
621.55	140.56	620.45	0.00
621.60	148.08	620.45	0.00
621.65	155.72	620.45	0.00
621.70	163.48	620.45	0.00
621.75	171.35	620.45	0.00
621.80	179.35	620.45	0.00
621.85	187.45	620.45	0.00
621.90	195.67	620.45	0.00
621.95	204.00	620.45	0.00
622.00	212.44	620.45	0.00

Contributing Structures
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Subsection: Composite Rating Curve　　Return Event: 1 years
Label: Infiltration Basin Overflow　　Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-24.45	620.50	0.00
618.05	-24.45	620.50	0.00
618.10	-24.45	620.50	0.00
618.15	-24.45	620.50	0.00
618.20	-24.45	620.50	0.00
618.25	-24.45	620.50	0.00
618.30	-24.45	620.50	0.00
618.35	-24.45	620.50	0.00
618.40	-24.45	620.50	0.00
618.45	-24.45	620.50	0.00
618.50	-24.45	620.50	0.00
618.55	-24.45	620.50	0.00
618.60	-24.45	620.50	0.00
618.65	-24.45	620.50	0.00
618.70	-24.45	620.50	0.00
618.75	-24.45	620.50	0.00
618.80	-24.45	620.50	0.00
618.85	-24.45	620.50	0.00
618.90	-24.45	620.50	0.00
618.95	-24.45	620.50	0.00
619.00	-24.45	620.50	0.00
619.05	-24.45	620.50	0.00
619.10	-24.45	620.50	0.00
619.15	-24.45	620.50	0.00
619.20	-24.45	620.50	0.00
619.25	-24.45	620.50	0.00
619.30	-24.45	620.50	0.00
619.35	-24.45	620.50	0.00
619.40	-24.45	620.50	0.00
619.45	-24.45	620.50	0.00
619.50	-24.45	620.50	0.00
619.55	-24.45	620.50	0.00
619.60	-24.45	620.50	0.00
619.65	-24.45	620.50	0.00
619.70	-24.45	620.50	0.00
619.75	-24.45	620.50	0.00
619.80	-24.45	620.50	0.00
619.85	-24.45	620.50	0.00
619.90	-24.45	620.50	0.00
619.95	-24.45	620.50	0.00
620.00	-24.45	620.50	0.00
620.05	-24.45	620.50	0.00
620.10	-24.10	620.50	0.00
620.15	-23.43	620.50	0.00
620.20	-22.52	620.50	0.00
620.25	-21.36	620.50	0.00

Subsection: Composite Rating Curve	Return Event: 1 years
Label: Infiltration Basin Overflow	Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-19.90	620.50	0.00
620.35	-18.07	620.50	0.00
620.40	-15.66	620.50	0.00
620.45	-12.13	620.50	0.00
620.50	0.00	620.50	0.00
620.55	13.66	620.50	0.00
620.60	19.67	620.50	0.00
620.65	25.14	620.50	0.00
620.70	30.51	620.50	0.00
620.75	35.89	620.50	0.00
620.80	41.36	620.50	0.00
620.85	46.94	620.50	0.00
620.90	52.64	620.50	0.00
620.95	58.47	620.50	0.00
621.00	64.43	620.50	0.00
621.05	70.53	620.50	0.00
621.10	76.77	620.50	0.00
621.15	83.15	620.50	0.00
621.20	89.66	620.50	0.00
621.25	96.30	620.50	0.00
621.30	103.08	620.50	0.00
621.35	109.98	620.50	0.00
621.40	117.02	620.50	0.00
621.45	124.18	620.50	0.00
621.50	131.46	620.50	0.00
621.55	138.87	620.50	0.00
621.60	146.40	620.50	0.00
621.65	154.05	620.50	0.00
621.70	161.82	620.50	0.00
621.75	169.70	620.50	0.00
621.80	177.70	620.50	0.00
621.85	185.81	620.50	0.00
621.90	194.03	620.50	0.00
621.95	202.37	620.50	0.00
622.00	210.81	620.50	0.00

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-28.64	620.55	0.00
618.05	-28.64	620.55	0.00
618.10	-28.64	620.55	0.00
618.15	-28.64	620.55	0.00
618.20	-28.64	620.55	0.00
618.25	-28.64	620.55	0.00
618.30	-28.64	620.55	0.00
618.35	-28.64	620.55	0.00
618.40	-28.64	620.55	0.00
618.45	-28.64	620.55	0.00
618.50	-28.64	620.55	0.00
618.55	-28.64	620.55	0.00
618.60	-28.64	620.55	0.00
618.65	-28.64	620.55	0.00
618.70	-28.64	620.55	0.00
618.75	-28.64	620.55	0.00
618.80	-28.64	620.55	0.00
618.85	-28.64	620.55	0.00
618.90	-28.64	620.55	0.00
618.95	-28.64	620.55	0.00
619.00	-28.64	620.55	0.00
619.05	-28.64	620.55	0.00
619.10	-28.64	620.55	0.00
619.15	-28.64	620.55	0.00
619.20	-28.64	620.55	0.00
619.25	-28.64	620.55	0.00
619.30	-28.64	620.55	0.00
619.35	-28.64	620.55	0.00
619.40	-28.64	620.55	0.00
619.45	-28.64	620.55	0.00
619.50	-28.64	620.55	0.00
619.55	-28.64	620.55	0.00
619.60	-28.64	620.55	0.00
619.65	-28.64	620.55	0.00
619.70	-28.64	620.55	0.00
619.75	-28.64	620.55	0.00
619.80	-28.64	620.55	0.00
619.85	-28.64	620.55	0.00
619.90	-28.64	620.55	0.00
619.95	-28.64	620.55	0.00
620.00	-28.64	620.55	0.00
620.05	-28.64	620.55	0.00
620.10	-28.29	620.55	0.00
620.15	-27.62	620.55	0.00
620.20	-26.73	620.55	0.00
620.25	-25.60	620.55	0.00

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-24.21	620.55	0.00
620.35	-22.51	620.55	0.00
620.40	-20.40	620.55	0.00
620.45	-17.65	620.55	0.00
620.50	-13.66	620.55	0.00
620.55	0.00	620.55	0.00
620.60	15.20	620.55	0.00
620.65	21.71	620.55	0.00
620.70	27.55	620.55	0.00
620.75	33.22	620.55	0.00
620.80	38.87	620.55	0.00
620.85	44.58	620.55	0.00
620.90	50.39	620.55	0.00
620.95	56.29	620.55	0.00
621.00	62.32	620.55	0.00
621.05	68.48	620.55	0.00
621.10	74.76	620.55	0.00
621.15	81.17	620.55	0.00
621.20	87.71	620.55	0.00
621.25	94.38	620.55	0.00
621.30	101.18	620.55	0.00
621.35	108.10	620.55	0.00
621.40	115.15	620.55	0.00
621.45	122.33	620.55	0.00
621.50	129.63	620.55	0.00
621.55	137.05	620.55	0.00
621.60	144.59	620.55	0.00
621.65	152.25	620.55	0.00
621.70	160.03	620.55	0.00
621.75	167.92	620.55	0.00
621.80	175.93	620.55	0.00
621.85	184.05	620.55	0.00
621.90	192.28	620.55	0.00
621.95	200.62	620.55	0.00
622.00	209.07	620.55	0.00

Contributing Structures
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Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-33.04	620.60	0.00
618.05	-33.04	620.60	0.00
618.10	-33.04	620.60	0.00
618.15	-33.04	620.60	0.00
618.20	-33.04	620.60	0.00
618.25	-33.04	620.60	0.00
618.30	-33.04	620.60	0.00
618.35	-33.04	620.60	0.00
618.40	-33.04	620.60	0.00
618.45	-33.04	620.60	0.00
618.50	-33.04	620.60	0.00
618.55	-33.04	620.60	0.00
618.60	-33.04	620.60	0.00
618.65	-33.04	620.60	0.00
618.70	-33.04	620.60	0.00
618.75	-33.04	620.60	0.00
618.80	-33.04	620.60	0.00
618.85	-33.04	620.60	0.00
618.90	-33.04	620.60	0.00
618.95	-33.04	620.60	0.00
619.00	-33.04	620.60	0.00
619.05	-33.04	620.60	0.00
619.10	-33.04	620.60	0.00
619.15	-33.04	620.60	0.00
619.20	-33.04	620.60	0.00
619.25	-33.04	620.60	0.00
619.30	-33.04	620.60	0.00
619.35	-33.04	620.60	0.00
619.40	-33.04	620.60	0.00
619.45	-33.04	620.60	0.00
619.50	-33.04	620.60	0.00
619.55	-33.04	620.60	0.00
619.60	-33.04	620.60	0.00
619.65	-33.04	620.60	0.00
619.70	-33.04	620.60	0.00
619.75	-33.04	620.60	0.00
619.80	-33.04	620.60	0.00
619.85	-33.04	620.60	0.00
619.90	-33.04	620.60	0.00
619.95	-33.04	620.60	0.00
620.00	-33.04	620.60	0.00
620.05	-33.04	620.60	0.00
620.10	-32.69	620.60	0.00
620.15	-32.03	620.60	0.00
620.20	-31.14	620.60	0.00
620.25	-30.04	620.60	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-28.70	620.60	0.00
620.35	-27.09	620.60	0.00
620.40	-25.15	620.60	0.00
620.45	-22.76	620.60	0.00
620.50	-19.67	620.60	0.00
620.55	-15.20	620.60	0.00
620.60	0.00	620.60	0.00
620.65	16.77	620.60	0.00
620.70	23.77	620.60	0.00
620.75	29.98	620.60	0.00
620.80	35.95	620.60	0.00
620.85	41.88	620.60	0.00
620.90	47.83	620.60	0.00
620.95	53.86	620.60	0.00
621.00	59.97	620.60	0.00
621.05	66.20	620.60	0.00
621.10	72.54	620.60	0.00
621.15	79.00	620.60	0.00
621.20	85.58	620.60	0.00
621.25	92.29	620.60	0.00
621.30	99.12	620.60	0.00
621.35	106.07	620.60	0.00
621.40	113.14	620.60	0.00
621.45	120.34	620.60	0.00
621.50	127.66	620.60	0.00
621.55	135.10	620.60	0.00
621.60	142.65	620.60	0.00
621.65	150.33	620.60	0.00
621.70	158.11	620.60	0.00
621.75	166.02	620.60	0.00
621.80	174.03	620.60	0.00
621.85	182.16	620.60	0.00
621.90	190.40	620.60	0.00
621.95	198.75	620.60	0.00
622.00	207.21	620.60	0.00

Contributing Structures
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Composite Outflow Summary

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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-37.65	620.65	0.00
618.05	-37.65	620.65	0.00
618.10	-37.65	620.65	0.00
618.15	-37.65	620.65	0.00
618.20	-37.65	620.65	0.00
618.25	-37.65	620.65	0.00
618.30	-37.65	620.65	0.00
618.35	-37.65	620.65	0.00
618.40	-37.65	620.65	0.00
618.45	-37.65	620.65	0.00
618.50	-37.65	620.65	0.00
618.55	-37.65	620.65	0.00
618.60	-37.65	620.65	0.00
618.65	-37.65	620.65	0.00
618.70	-37.65	620.65	0.00
618.75	-37.65	620.65	0.00
618.80	-37.65	620.65	0.00
618.85	-37.65	620.65	0.00
618.90	-37.65	620.65	0.00
618.95	-37.65	620.65	0.00
619.00	-37.65	620.65	0.00
619.05	-37.65	620.65	0.00
619.10	-37.65	620.65	0.00
619.15	-37.65	620.65	0.00
619.20	-37.65	620.65	0.00
619.25	-37.65	620.65	0.00
619.30	-37.65	620.65	0.00
619.35	-37.65	620.65	0.00
619.40	-37.65	620.65	0.00
619.45	-37.65	620.65	0.00
619.50	-37.65	620.65	0.00
619.55	-37.65	620.65	0.00
619.60	-37.65	620.65	0.00
619.65	-37.65	620.65	0.00
619.70	-37.65	620.65	0.00
619.75	-37.65	620.65	0.00
619.80	-37.65	620.65	0.00
619.85	-37.65	620.65	0.00
619.90	-37.65	620.65	0.00
619.95	-37.65	620.65	0.00
620.00	-37.65	620.65	0.00
620.05	-37.65	620.65	0.00
620.10	-37.29	620.65	0.00
620.15	-36.64	620.65	0.00
620.20	-35.76	620.65	0.00
620.25	-34.67	620.65	0.00

Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-33.37	620.65	0.00
620.35	-31.82	620.65	0.00
620.40	-30.00	620.65	0.00
620.45	-27.82	620.65	0.00
620.50	-25.14	620.65	0.00
620.55	-21.71	620.65	0.00
620.60	-16.77	620.65	0.00
620.65	0.00	620.65	0.00
620.70	18.34	620.65	0.00
620.75	25.84	620.65	0.00
620.80	32.42	620.65	0.00
620.85	38.71	620.65	0.00
620.90	44.90	620.65	0.00
620.95	51.10	620.65	0.00
621.00	57.35	620.65	0.00
621.05	63.68	620.65	0.00
621.10	70.10	620.65	0.00
621.15	76.62	620.65	0.00
621.20	83.26	620.65	0.00
621.25	90.01	620.65	0.00
621.30	96.88	620.65	0.00
621.35	103.87	620.65	0.00
621.40	110.98	620.65	0.00
621.45	118.20	620.65	0.00
621.50	125.54	620.65	0.00
621.55	133.00	620.65	0.00
621.60	140.58	620.65	0.00
621.65	148.27	620.65	0.00
621.70	156.07	620.65	0.00
621.75	163.99	620.65	0.00
621.80	172.02	620.65	0.00
621.85	180.16	620.65	0.00
621.90	188.41	620.65	0.00
621.95	196.77	620.65	0.00
622.00	205.23	620.65	0.00

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-42.45	620.70	0.00
618.05	-42.45	620.70	0.00
618.10	-42.45	620.70	0.00
618.15	-42.45	620.70	0.00
618.20	-42.45	620.70	0.00
618.25	-42.45	620.70	0.00
618.30	-42.45	620.70	0.00
618.35	-42.45	620.70	0.00
618.40	-42.45	620.70	0.00
618.45	-42.45	620.70	0.00
618.50	-42.45	620.70	0.00
618.55	-42.45	620.70	0.00
618.60	-42.45	620.70	0.00
618.65	-42.45	620.70	0.00
618.70	-42.45	620.70	0.00
618.75	-42.45	620.70	0.00
618.80	-42.45	620.70	0.00
618.85	-42.45	620.70	0.00
618.90	-42.45	620.70	0.00
618.95	-42.45	620.70	0.00
619.00	-42.45	620.70	0.00
619.05	-42.45	620.70	0.00
619.10	-42.45	620.70	0.00
619.15	-42.45	620.70	0.00
619.20	-42.45	620.70	0.00
619.25	-42.45	620.70	0.00
619.30	-42.45	620.70	0.00
619.35	-42.45	620.70	0.00
619.40	-42.45	620.70	0.00
619.45	-42.45	620.70	0.00
619.50	-42.45	620.70	0.00
619.55	-42.45	620.70	0.00
619.60	-42.45	620.70	0.00
619.65	-42.45	620.70	0.00
619.70	-42.45	620.70	0.00
619.75	-42.45	620.70	0.00
619.80	-42.45	620.70	0.00
619.85	-42.45	620.70	0.00
619.90	-42.45	620.70	0.00
619.95	-42.45	620.70	0.00
620.00	-42.45	620.70	0.00
620.05	-42.45	620.70	0.00
620.10	-42.10	620.70	0.00
620.15	-41.44	620.70	0.00
620.20	-40.57	620.70	0.00
620.25	-39.50	620.70	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-38.22	620.70	0.00
620.35	-36.72	620.70	0.00
620.40	-34.98	620.70	0.00
620.45	-32.93	620.70	0.00
620.50	-30.51	620.70	0.00
620.55	-27.55	620.70	0.00
620.60	-23.77	620.70	0.00
620.65	-18.34	620.70	0.00
620.70	0.00	620.70	0.00
620.75	19.94	620.70	0.00
620.80	27.94	620.70	0.00
620.85	34.89	620.70	0.00
620.90	41.48	620.70	0.00
620.95	47.95	620.70	0.00
621.00	54.39	620.70	0.00
621.05	60.86	620.70	0.00
621.10	67.40	620.70	0.00
621.15	74.02	620.70	0.00
621.20	80.73	620.70	0.00
621.25	87.54	620.70	0.00
621.30	94.46	620.70	0.00
621.35	101.50	620.70	0.00
621.40	108.64	620.70	0.00
621.45	115.90	620.70	0.00
621.50	123.27	620.70	0.00
621.55	130.76	620.70	0.00
621.60	138.36	620.70	0.00
621.65	146.07	620.70	0.00
621.70	153.89	620.70	0.00
621.75	161.83	620.70	0.00
621.80	169.87	620.70	0.00
621.85	178.03	620.70	0.00
621.90	186.29	620.70	0.00
621.95	194.66	620.70	0.00
622.00	203.14	620.70	0.00

Contributing Structures
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Subsection: Composite Rating Curve — Return Event: 1 years

Label: Infiltration Basin Overflow — Storm Event: 1 year

Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve	Return Event: 1 years
Label: Infiltration Basin Overflow	Storm Event: 1 year
Scenario: Post-Development 1 year	

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-47.44	620.75	0.00
618.05	-47.44	620.75	0.00
618.10	-47.44	620.75	0.00
618.15	-47.44	620.75	0.00
618.20	-47.44	620.75	0.00
618.25	-47.44	620.75	0.00
618.30	-47.44	620.75	0.00
618.35	-47.44	620.75	0.00
618.40	-47.44	620.75	0.00
618.45	-47.44	620.75	0.00
618.50	-47.44	620.75	0.00
618.55	-47.44	620.75	0.00
618.60	-47.44	620.75	0.00
618.65	-47.44	620.75	0.00
618.70	-47.44	620.75	0.00
618.75	-47.44	620.75	0.00
618.80	-47.44	620.75	0.00
618.85	-47.44	620.75	0.00
618.90	-47.44	620.75	0.00
618.95	-47.44	620.75	0.00
619.00	-47.44	620.75	0.00
619.05	-47.44	620.75	0.00
619.10	-47.44	620.75	0.00
619.15	-47.44	620.75	0.00
619.20	-47.44	620.75	0.00
619.25	-47.44	620.75	0.00
619.30	-47.44	620.75	0.00
619.35	-47.44	620.75	0.00
619.40	-47.44	620.75	0.00
619.45	-47.44	620.75	0.00
619.50	-47.44	620.75	0.00
619.55	-47.44	620.75	0.00
619.60	-47.44	620.75	0.00
619.65	-47.44	620.75	0.00
619.70	-47.44	620.75	0.00
619.75	-47.44	620.75	0.00
619.80	-47.44	620.75	0.00
619.85	-47.44	620.75	0.00
619.90	-47.44	620.75	0.00
619.95	-47.44	620.75	0.00
620.00	-47.44	620.75	0.00
620.05	-47.44	620.75	0.00
620.10	-47.09	620.75	0.00
620.15	-46.44	620.75	0.00
620.20	-45.57	620.75	0.00
620.25	-44.51	620.75	0.00

Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-43.25	620.75	0.00
620.35	-41.79	620.75	0.00
620.40	-40.10	620.75	0.00
620.45	-38.16	620.75	0.00
620.50	-35.89	620.75	0.00
620.55	-33.22	620.75	0.00
620.60	-29.98	620.75	0.00
620.65	-25.84	620.75	0.00
620.70	-19.94	620.75	0.00
620.75	0.00	620.75	0.00
620.80	21.54	620.75	0.00
620.85	30.05	620.75	0.00
620.90	37.38	620.75	0.00
620.95	44.28	620.75	0.00
621.00	51.01	620.75	0.00
621.05	57.70	620.75	0.00
621.10	64.39	620.75	0.00
621.15	71.14	620.75	0.00
621.20	77.95	620.75	0.00
621.25	84.85	620.75	0.00
621.30	91.84	620.75	0.00
621.35	98.93	620.75	0.00
621.40	106.13	620.75	0.00
621.45	113.43	620.75	0.00
621.50	120.84	620.75	0.00
621.55	128.36	620.75	0.00
621.60	135.99	620.75	0.00
621.65	143.73	620.75	0.00
621.70	151.58	620.75	0.00
621.75	159.53	620.75	0.00
621.80	167.60	620.75	0.00
621.85	175.77	620.75	0.00
621.90	184.05	620.75	0.00
621.95	192.44	620.75	0.00
622.00	200.93	620.75	0.00

Contributing Structures
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Composite Outflow Summary

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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-52.61	620.80	0.00
618.05	-52.61	620.80	0.00
618.10	-52.61	620.80	0.00
618.15	-52.61	620.80	0.00
618.20	-52.61	620.80	0.00
618.25	-52.61	620.80	0.00
618.30	-52.61	620.80	0.00
618.35	-52.61	620.80	0.00
618.40	-52.61	620.80	0.00
618.45	-52.61	620.80	0.00
618.50	-52.61	620.80	0.00
618.55	-52.61	620.80	0.00
618.60	-52.61	620.80	0.00
618.65	-52.61	620.80	0.00
618.70	-52.61	620.80	0.00
618.75	-52.61	620.80	0.00
618.80	-52.61	620.80	0.00
618.85	-52.61	620.80	0.00
618.90	-52.61	620.80	0.00
618.95	-52.61	620.80	0.00
619.00	-52.61	620.80	0.00
619.05	-52.61	620.80	0.00
619.10	-52.61	620.80	0.00
619.15	-52.61	620.80	0.00
619.20	-52.61	620.80	0.00
619.25	-52.61	620.80	0.00
619.30	-52.61	620.80	0.00
619.35	-52.61	620.80	0.00
619.40	-52.61	620.80	0.00
619.45	-52.61	620.80	0.00
619.50	-52.61	620.80	0.00
619.55	-52.61	620.80	0.00
619.60	-52.61	620.80	0.00
619.65	-52.61	620.80	0.00
619.70	-52.61	620.80	0.00
619.75	-52.61	620.80	0.00
619.80	-52.61	620.80	0.00
619.85	-52.61	620.80	0.00
619.90	-52.61	620.80	0.00
619.95	-52.61	620.80	0.00
620.00	-52.61	620.80	0.00
620.05	-52.61	620.80	0.00
620.10	-52.26	620.80	0.00
620.15	-51.61	620.80	0.00
620.20	-50.75	620.80	0.00
620.25	-49.69	620.80	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-48.45	620.80	0.00
620.35	-47.02	620.80	0.00
620.40	-45.38	620.80	0.00
620.45	-43.51	620.80	0.00
620.50	-41.36	620.80	0.00
620.55	-38.87	620.80	0.00
620.60	-35.95	620.80	0.00
620.65	-32.42	620.80	0.00
620.70	-27.94	620.80	0.00
620.75	-21.54	620.80	0.00
620.80	0.00	620.80	0.00
620.85	23.16	620.80	0.00
620.90	32.17	620.80	0.00
620.95	39.88	620.80	0.00
621.00	47.09	620.80	0.00
621.05	54.10	620.80	0.00
621.10	61.03	620.80	0.00
621.15	67.95	620.80	0.00
621.20	74.90	620.80	0.00
621.25	81.91	620.80	0.00
621.30	88.99	620.80	0.00
621.35	96.16	620.80	0.00
621.40	103.42	620.80	0.00
621.45	110.78	620.80	0.00
621.50	118.24	620.80	0.00
621.55	125.80	620.80	0.00
621.60	133.47	620.80	0.00
621.65	141.24	620.80	0.00
621.70	149.12	620.80	0.00
621.75	157.10	620.80	0.00
621.80	165.19	620.80	0.00
621.85	173.39	620.80	0.00
621.90	181.69	620.80	0.00
621.95	190.09	620.80	0.00
622.00	198.60	620.80	0.00

Contributing Structures
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Subsection: Composite Rating Curve Return Event: 1 years
Label: Infiltration Basin Overflow Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-57.96	620.85	0.00
618.05	-57.96	620.85	0.00
618.10	-57.96	620.85	0.00
618.15	-57.96	620.85	0.00
618.20	-57.96	620.85	0.00
618.25	-57.96	620.85	0.00
618.30	-57.96	620.85	0.00
618.35	-57.96	620.85	0.00
618.40	-57.96	620.85	0.00
618.45	-57.96	620.85	0.00
618.50	-57.96	620.85	0.00
618.55	-57.96	620.85	0.00
618.60	-57.96	620.85	0.00
618.65	-57.96	620.85	0.00
618.70	-57.96	620.85	0.00
618.75	-57.96	620.85	0.00
618.80	-57.96	620.85	0.00
618.85	-57.96	620.85	0.00
618.90	-57.96	620.85	0.00
618.95	-57.96	620.85	0.00
619.00	-57.96	620.85	0.00
619.05	-57.96	620.85	0.00
619.10	-57.96	620.85	0.00
619.15	-57.96	620.85	0.00
619.20	-57.96	620.85	0.00
619.25	-57.96	620.85	0.00
619.30	-57.96	620.85	0.00
619.35	-57.96	620.85	0.00
619.40	-57.96	620.85	0.00
619.45	-57.96	620.85	0.00
619.50	-57.96	620.85	0.00
619.55	-57.96	620.85	0.00
619.60	-57.96	620.85	0.00
619.65	-57.96	620.85	0.00
619.70	-57.96	620.85	0.00
619.75	-57.96	620.85	0.00
619.80	-57.96	620.85	0.00
619.85	-57.96	620.85	0.00
619.90	-57.96	620.85	0.00
619.95	-57.96	620.85	0.00
620.00	-57.96	620.85	0.00
620.05	-57.96	620.85	0.00
620.10	-57.61	620.85	0.00
620.15	-56.96	620.85	0.00
620.20	-56.10	620.85	0.00
620.25	-55.05	620.85	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-53.83	620.85	0.00
620.35	-52.42	620.85	0.00
620.40	-50.82	620.85	0.00
620.45	-49.00	620.85	0.00
620.50	-46.94	620.85	0.00
620.55	-44.58	620.85	0.00
620.60	-41.88	620.85	0.00
620.65	-38.71	620.85	0.00
620.70	-34.89	620.85	0.00
620.75	-30.05	620.85	0.00
620.80	-23.16	620.85	0.00
620.85	0.00	620.85	0.00
620.90	24.78	620.85	0.00
620.95	34.31	620.85	0.00
621.00	42.39	620.85	0.00
621.05	49.92	620.85	0.00
621.10	57.20	620.85	0.00
621.15	64.37	620.85	0.00
621.20	71.52	620.85	0.00
621.25	78.68	620.85	0.00
621.30	85.88	620.85	0.00
621.35	93.15	620.85	0.00
621.40	100.49	620.85	0.00
621.45	107.92	620.85	0.00
621.50	115.44	620.85	0.00
621.55	123.06	620.85	0.00
621.60	130.77	620.85	0.00
621.65	138.59	620.85	0.00
621.70	146.50	620.85	0.00
621.75	154.52	620.85	0.00
621.80	162.64	620.85	0.00
621.85	170.86	620.85	0.00
621.90	179.18	620.85	0.00
621.95	187.61	620.85	0.00
622.00	196.14	620.85	0.00

Contributing Structures
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Composite Outflow Summary

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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-63.48	620.90	0.00
618.05	-63.48	620.90	0.00
618.10	-63.48	620.90	0.00
618.15	-63.48	620.90	0.00
618.20	-63.48	620.90	0.00
618.25	-63.48	620.90	0.00
618.30	-63.48	620.90	0.00
618.35	-63.48	620.90	0.00
618.40	-63.48	620.90	0.00
618.45	-63.48	620.90	0.00
618.50	-63.48	620.90	0.00
618.55	-63.48	620.90	0.00
618.60	-63.48	620.90	0.00
618.65	-63.48	620.90	0.00
618.70	-63.48	620.90	0.00
618.75	-63.48	620.90	0.00
618.80	-63.48	620.90	0.00
618.85	-63.48	620.90	0.00
618.90	-63.48	620.90	0.00
618.95	-63.48	620.90	0.00
619.00	-63.48	620.90	0.00
619.05	-63.48	620.90	0.00
619.10	-63.48	620.90	0.00
619.15	-63.48	620.90	0.00
619.20	-63.48	620.90	0.00
619.25	-63.48	620.90	0.00
619.30	-63.48	620.90	0.00
619.35	-63.48	620.90	0.00
619.40	-63.48	620.90	0.00
619.45	-63.48	620.90	0.00
619.50	-63.48	620.90	0.00
619.55	-63.48	620.90	0.00
619.60	-63.48	620.90	0.00
619.65	-63.48	620.90	0.00
619.70	-63.48	620.90	0.00
619.75	-63.48	620.90	0.00
619.80	-63.48	620.90	0.00
619.85	-63.48	620.90	0.00
619.90	-63.48	620.90	0.00
619.95	-63.48	620.90	0.00
620.00	-63.48	620.90	0.00
620.05	-63.48	620.90	0.00
620.10	-63.13	620.90	0.00
620.15	-62.48	620.90	0.00
620.20	-61.62	620.90	0.00
620.25	-60.58	620.90	0.00

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-59.37	620.90	0.00
620.35	-57.98	620.90	0.00
620.40	-56.40	620.90	0.00
620.45	-54.63	620.90	0.00
620.50	-52.64	620.90	0.00
620.55	-50.39	620.90	0.00
620.60	-47.83	620.90	0.00
620.65	-44.90	620.90	0.00
620.70	-41.48	620.90	0.00
620.75	-37.38	620.90	0.00
620.80	-32.17	620.90	0.00
620.85	-24.78	620.90	0.00
620.90	0.00	620.90	0.00
620.95	26.42	620.90	0.00
621.00	36.47	620.90	0.00
621.05	44.93	620.90	0.00
621.10	52.77	620.90	0.00
621.15	60.32	620.90	0.00
621.20	67.73	620.90	0.00
621.25	75.10	620.90	0.00
621.30	82.47	620.90	0.00
621.35	89.87	620.90	0.00
621.40	97.32	620.90	0.00
621.45	104.85	620.90	0.00
621.50	112.44	620.90	0.00
621.55	120.13	620.90	0.00
621.60	127.90	620.90	0.00
621.65	135.76	620.90	0.00
621.70	143.72	620.90	0.00
621.75	151.78	620.90	0.00
621.80	159.94	620.90	0.00
621.85	168.19	620.90	0.00
621.90	176.54	620.90	0.00
621.95	185.00	620.90	0.00
622.00	193.55	620.90	0.00

Contributing Structures
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Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-69.16	620.95	0.00
618.05	-69.16	620.95	0.00
618.10	-69.16	620.95	0.00
618.15	-69.16	620.95	0.00
618.20	-69.16	620.95	0.00
618.25	-69.16	620.95	0.00
618.30	-69.16	620.95	0.00
618.35	-69.16	620.95	0.00
618.40	-69.16	620.95	0.00
618.45	-69.16	620.95	0.00
618.50	-69.16	620.95	0.00
618.55	-69.16	620.95	0.00
618.60	-69.16	620.95	0.00
618.65	-69.16	620.95	0.00
618.70	-69.16	620.95	0.00
618.75	-69.16	620.95	0.00
618.80	-69.16	620.95	0.00
618.85	-69.16	620.95	0.00
618.90	-69.16	620.95	0.00
618.95	-69.16	620.95	0.00
619.00	-69.16	620.95	0.00
619.05	-69.16	620.95	0.00
619.10	-69.16	620.95	0.00
619.15	-69.16	620.95	0.00
619.20	-69.16	620.95	0.00
619.25	-69.16	620.95	0.00
619.30	-69.16	620.95	0.00
619.35	-69.16	620.95	0.00
619.40	-69.16	620.95	0.00
619.45	-69.16	620.95	0.00
619.50	-69.16	620.95	0.00
619.55	-69.16	620.95	0.00
619.60	-69.16	620.95	0.00
619.65	-69.16	620.95	0.00
619.70	-69.16	620.95	0.00
619.75	-69.16	620.95	0.00
619.80	-69.16	620.95	0.00
619.85	-69.16	620.95	0.00
619.90	-69.16	620.95	0.00
619.95	-69.16	620.95	0.00
620.00	-69.16	620.95	0.00
620.05	-69.16	620.95	0.00
620.10	-68.81	620.95	0.00
620.15	-68.16	620.95	0.00
620.20	-67.31	620.95	0.00
620.25	-66.27	620.95	0.00

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-65.07	620.95	0.00
620.35	-63.70	620.95	0.00
620.40	-62.15	620.95	0.00
620.45	-60.41	620.95	0.00
620.50	-58.47	620.95	0.00
620.55	-56.29	620.95	0.00
620.60	-53.86	620.95	0.00
620.65	-51.10	620.95	0.00
620.70	-47.95	620.95	0.00
620.75	-44.28	620.95	0.00
620.80	-39.88	620.95	0.00
620.85	-34.31	620.95	0.00
620.90	-26.42	620.95	0.00
620.95	0.00	620.95	0.00
621.00	28.07	620.95	0.00
621.05	38.63	620.95	0.00
621.10	47.47	620.95	0.00
621.15	55.63	620.95	0.00
621.20	63.45	620.95	0.00
621.25	71.11	620.95	0.00
621.30	78.71	620.95	0.00
621.35	86.28	620.95	0.00
621.40	93.88	620.95	0.00
621.45	101.52	620.95	0.00
621.50	109.21	620.95	0.00
621.55	116.98	620.95	0.00
621.60	124.82	620.95	0.00
621.65	132.75	620.95	0.00
621.70	140.77	620.95	0.00
621.75	148.87	620.95	0.00
621.80	157.07	620.95	0.00
621.85	165.37	620.95	0.00
621.90	173.76	620.95	0.00
621.95	182.24	620.95	0.00
622.00	190.82	620.95	0.00

Contributing Structures
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Subsection: Composite Rating Curve Return Event: 1 years
Label: Infiltration Basin Overflow Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-75.00	621.00	0.00
618.05	-75.00	621.00	0.00
618.10	-75.00	621.00	0.00
618.15	-75.00	621.00	0.00
618.20	-75.00	621.00	0.00
618.25	-75.00	621.00	0.00
618.30	-75.00	621.00	0.00
618.35	-75.00	621.00	0.00
618.40	-75.00	621.00	0.00
618.45	-75.00	621.00	0.00
618.50	-75.00	621.00	0.00
618.55	-75.00	621.00	0.00
618.60	-75.00	621.00	0.00
618.65	-75.00	621.00	0.00
618.70	-75.00	621.00	0.00
618.75	-75.00	621.00	0.00
618.80	-75.00	621.00	0.00
618.85	-75.00	621.00	0.00
618.90	-75.00	621.00	0.00
618.95	-75.00	621.00	0.00
619.00	-75.00	621.00	0.00
619.05	-75.00	621.00	0.00
619.10	-75.00	621.00	0.00
619.15	-75.00	621.00	0.00
619.20	-75.00	621.00	0.00
619.25	-75.00	621.00	0.00
619.30	-75.00	621.00	0.00
619.35	-75.00	621.00	0.00
619.40	-75.00	621.00	0.00
619.45	-75.00	621.00	0.00
619.50	-75.00	621.00	0.00
619.55	-75.00	621.00	0.00
619.60	-75.00	621.00	0.00
619.65	-75.00	621.00	0.00
619.70	-75.00	621.00	0.00
619.75	-75.00	621.00	0.00
619.80	-75.00	621.00	0.00
619.85	-75.00	621.00	0.00
619.90	-75.00	621.00	0.00
619.95	-75.00	621.00	0.00
620.00	-75.00	621.00	0.00
620.05	-75.00	621.00	0.00
620.10	-74.65	621.00	0.00
620.15	-74.00	621.00	0.00
620.20	-73.15	621.00	0.00
620.25	-72.12	621.00	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-70.93	621.00	0.00
620.35	-69.57	621.00	0.00
620.40	-68.04	621.00	0.00
620.45	-66.33	621.00	0.00
620.50	-64.43	621.00	0.00
620.55	-62.32	621.00	0.00
620.60	-59.97	621.00	0.00
620.65	-57.35	621.00	0.00
620.70	-54.39	621.00	0.00
620.75	-51.01	621.00	0.00
620.80	-47.09	621.00	0.00
620.85	-42.39	621.00	0.00
620.90	-36.47	621.00	0.00
620.95	-28.07	621.00	0.00
621.00	0.00	621.00	0.00
621.05	29.73	621.00	0.00
621.10	40.81	621.00	0.00
621.15	50.04	621.00	0.00
621.20	58.50	621.00	0.00
621.25	66.60	621.00	0.00
621.30	74.51	621.00	0.00
621.35	82.33	621.00	0.00
621.40	90.11	621.00	0.00
621.45	97.90	621.00	0.00
621.50	105.73	621.00	0.00
621.55	113.60	621.00	0.00
621.60	121.53	621.00	0.00
621.65	129.54	621.00	0.00
621.70	137.62	621.00	0.00
621.75	145.79	621.00	0.00
621.80	154.04	621.00	0.00
621.85	162.38	621.00	0.00
621.90	170.81	621.00	0.00
621.95	179.34	621.00	0.00
622.00	187.95	621.00	0.00

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-81.00	621.05	0.00
618.05	-81.00	621.05	0.00
618.10	-81.00	621.05	0.00
618.15	-81.00	621.05	0.00
618.20	-81.00	621.05	0.00
618.25	-81.00	621.05	0.00
618.30	-81.00	621.05	0.00
618.35	-81.00	621.05	0.00
618.40	-81.00	621.05	0.00
618.45	-81.00	621.05	0.00
618.50	-81.00	621.05	0.00
618.55	-81.00	621.05	0.00
618.60	-81.00	621.05	0.00
618.65	-81.00	621.05	0.00
618.70	-81.00	621.05	0.00
618.75	-81.00	621.05	0.00
618.80	-81.00	621.05	0.00
618.85	-81.00	621.05	0.00
618.90	-81.00	621.05	0.00
618.95	-81.00	621.05	0.00
619.00	-81.00	621.05	0.00
619.05	-81.00	621.05	0.00
619.10	-81.00	621.05	0.00
619.15	-81.00	621.05	0.00
619.20	-81.00	621.05	0.00
619.25	-81.00	621.05	0.00
619.30	-81.00	621.05	0.00
619.35	-81.00	621.05	0.00
619.40	-81.00	621.05	0.00
619.45	-81.00	621.05	0.00
619.50	-81.00	621.05	0.00
619.55	-81.00	621.05	0.00
619.60	-81.00	621.05	0.00
619.65	-81.00	621.05	0.00
619.70	-81.00	621.05	0.00
619.75	-81.00	621.05	0.00
619.80	-81.00	621.05	0.00
619.85	-81.00	621.05	0.00
619.90	-81.00	621.05	0.00
619.95	-81.00	621.05	0.00
620.00	-81.00	621.05	0.00
620.05	-81.00	621.05	0.00
620.10	-80.65	621.05	0.00
620.15	-80.00	621.05	0.00
620.20	-79.15	621.05	0.00
620.25	-78.13	621.05	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-76.94	621.05	0.00
620.35	-75.59	621.05	0.00
620.40	-74.08	621.05	0.00
620.45	-72.40	621.05	0.00
620.50	-70.53	621.05	0.00
620.55	-68.48	621.05	0.00
620.60	-66.20	621.05	0.00
620.65	-63.68	621.05	0.00
620.70	-60.86	621.05	0.00
620.75	-57.70	621.05	0.00
620.80	-54.10	621.05	0.00
620.85	-49.92	621.05	0.00
620.90	-44.93	621.05	0.00
620.95	-38.63	621.05	0.00
621.00	-29.73	621.05	0.00
621.05	0.00	621.05	0.00
621.10	31.40	621.05	0.00
621.15	43.01	621.05	0.00
621.20	52.61	621.05	0.00
621.25	61.39	621.05	0.00
621.30	69.77	621.05	0.00
621.35	77.92	621.05	0.00
621.40	85.96	621.05	0.00
621.45	93.96	621.05	0.00
621.50	101.94	621.05	0.00
621.55	109.95	621.05	0.00
621.60	118.00	621.05	0.00
621.65	126.10	621.05	0.00
621.70	134.27	621.05	0.00
621.75	142.51	621.05	0.00
621.80	150.83	621.05	0.00
621.85	159.22	621.05	0.00
621.90	167.71	621.05	0.00
621.95	176.28	621.05	0.00
622.00	184.93	621.05	0.00

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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve — Return Event: 1 years
Label: Infiltration Basin Overflow — Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-87.15	621.10	0.00
618.05	-87.15	621.10	0.00
618.10	-87.15	621.10	0.00
618.15	-87.15	621.10	0.00
618.20	-87.15	621.10	0.00
618.25	-87.15	621.10	0.00
618.30	-87.15	621.10	0.00
618.35	-87.15	621.10	0.00
618.40	-87.15	621.10	0.00
618.45	-87.15	621.10	0.00
618.50	-87.15	621.10	0.00
618.55	-87.15	621.10	0.00
618.60	-87.15	621.10	0.00
618.65	-87.15	621.10	0.00
618.70	-87.15	621.10	0.00
618.75	-87.15	621.10	0.00
618.80	-87.15	621.10	0.00
618.85	-87.15	621.10	0.00
618.90	-87.15	621.10	0.00
618.95	-87.15	621.10	0.00
619.00	-87.15	621.10	0.00
619.05	-87.15	621.10	0.00
619.10	-87.15	621.10	0.00
619.15	-87.15	621.10	0.00
619.20	-87.15	621.10	0.00
619.25	-87.15	621.10	0.00
619.30	-87.15	621.10	0.00
619.35	-87.15	621.10	0.00
619.40	-87.15	621.10	0.00
619.45	-87.15	621.10	0.00
619.50	-87.15	621.10	0.00
619.55	-87.15	621.10	0.00
619.60	-87.15	621.10	0.00
619.65	-87.15	621.10	0.00
619.70	-87.15	621.10	0.00
619.75	-87.15	621.10	0.00
619.80	-87.15	621.10	0.00
619.85	-87.15	621.10	0.00
619.90	-87.15	621.10	0.00
619.95	-87.15	621.10	0.00
620.00	-87.15	621.10	0.00
620.05	-87.15	621.10	0.00
620.10	-86.80	621.10	0.00
620.15	-86.16	621.10	0.00
620.20	-85.31	621.10	0.00
620.25	-84.29	621.10	0.00

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve Return Event: 1 years
Label: Infiltration Basin Overflow Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-83.10	621.10	0.00
620.35	-81.76	621.10	0.00
620.40	-80.27	621.10	0.00
620.45	-78.61	621.10	0.00
620.50	-76.77	621.10	0.00
620.55	-74.76	621.10	0.00
620.60	-72.54	621.10	0.00
620.65	-70.10	621.10	0.00
620.70	-67.40	621.10	0.00
620.75	-64.39	621.10	0.00
620.80	-61.03	621.10	0.00
620.85	-57.20	621.10	0.00
620.90	-52.77	621.10	0.00
620.95	-47.47	621.10	0.00
621.00	-40.81	621.10	0.00
621.05	-31.40	621.10	0.00
621.10	0.00	621.10	0.00
621.15	33.08	621.10	0.00
621.20	45.21	621.10	0.00
621.25	55.20	621.10	0.00
621.30	64.30	621.10	0.00
621.35	72.95	621.10	0.00
621.40	81.35	621.10	0.00
621.45	89.61	621.10	0.00
621.50	97.82	621.10	0.00
621.55	106.00	621.10	0.00
621.60	114.19	621.10	0.00
621.65	122.42	621.10	0.00
621.70	130.69	621.10	0.00
621.75	139.02	621.10	0.00
621.80	147.41	621.10	0.00
621.85	155.88	621.10	0.00
621.90	164.42	621.10	0.00
621.95	173.05	621.10	0.00
622.00	181.75	621.10	0.00

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Composite Outflow Summary

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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-93.45	621.15	0.00
618.05	-93.45	621.15	0.00
618.10	-93.45	621.15	0.00
618.15	-93.45	621.15	0.00
618.20	-93.45	621.15	0.00
618.25	-93.45	621.15	0.00
618.30	-93.45	621.15	0.00
618.35	-93.45	621.15	0.00
618.40	-93.45	621.15	0.00
618.45	-93.45	621.15	0.00
618.50	-93.45	621.15	0.00
618.55	-93.45	621.15	0.00
618.60	-93.45	621.15	0.00
618.65	-93.45	621.15	0.00
618.70	-93.45	621.15	0.00
618.75	-93.45	621.15	0.00
618.80	-93.45	621.15	0.00
618.85	-93.45	621.15	0.00
618.90	-93.45	621.15	0.00
618.95	-93.45	621.15	0.00
619.00	-93.45	621.15	0.00
619.05	-93.45	621.15	0.00
619.10	-93.45	621.15	0.00
619.15	-93.45	621.15	0.00
619.20	-93.45	621.15	0.00
619.25	-93.45	621.15	0.00
619.30	-93.45	621.15	0.00
619.35	-93.45	621.15	0.00
619.40	-93.45	621.15	0.00
619.45	-93.45	621.15	0.00
619.50	-93.45	621.15	0.00
619.55	-93.45	621.15	0.00
619.60	-93.45	621.15	0.00
619.65	-93.45	621.15	0.00
619.70	-93.45	621.15	0.00
619.75	-93.45	621.15	0.00
619.80	-93.45	621.15	0.00
619.85	-93.45	621.15	0.00
619.90	-93.45	621.15	0.00
619.95	-93.45	621.15	0.00
620.00	-93.45	621.15	0.00
620.05	-93.45	621.15	0.00
620.10	-93.10	621.15	0.00
620.15	-92.45	621.15	0.00
620.20	-91.61	621.15	0.00
620.25	-90.59	621.15	0.00

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-89.41	621.15	0.00
620.35	-88.08	621.15	0.00
620.40	-86.60	621.15	0.00
620.45	-84.95	621.15	0.00
620.50	-83.15	621.15	0.00
620.55	-81.17	621.15	0.00
620.60	-79.00	621.15	0.00
620.65	-76.62	621.15	0.00
620.70	-74.02	621.15	0.00
620.75	-71.14	621.15	0.00
620.80	-67.95	621.15	0.00
620.85	-64.37	621.15	0.00
620.90	-60.32	621.15	0.00
620.95	-55.63	621.15	0.00
621.00	-50.04	621.15	0.00
621.05	-43.01	621.15	0.00
621.10	-33.08	621.15	0.00
621.15	0.00	621.15	0.00
621.20	34.77	621.15	0.00
621.25	47.42	621.15	0.00
621.30	57.80	621.15	0.00
621.35	67.22	621.15	0.00
621.40	76.14	621.15	0.00
621.45	84.79	621.15	0.00
621.50	93.28	621.15	0.00
621.55	101.69	621.15	0.00
621.60	110.07	621.15	0.00
621.65	118.45	621.15	0.00
621.70	126.85	621.15	0.00
621.75	135.29	621.15	0.00
621.80	143.78	621.15	0.00
621.85	152.33	621.15	0.00
621.90	160.95	621.15	0.00
621.95	169.63	621.15	0.00
622.00	178.40	621.15	0.00

Contributing Structures
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Composite Outflow Summary

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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-99.89	621.20	0.00
618.05	-99.89	621.20	0.00
618.10	-99.89	621.20	0.00
618.15	-99.89	621.20	0.00
618.20	-99.89	621.20	0.00
618.25	-99.89	621.20	0.00
618.30	-99.89	621.20	0.00
618.35	-99.89	621.20	0.00
618.40	-99.89	621.20	0.00
618.45	-99.89	621.20	0.00
618.50	-99.89	621.20	0.00
618.55	-99.89	621.20	0.00
618.60	-99.89	621.20	0.00
618.65	-99.89	621.20	0.00
618.70	-99.89	621.20	0.00
618.75	-99.89	621.20	0.00
618.80	-99.89	621.20	0.00
618.85	-99.89	621.20	0.00
618.90	-99.89	621.20	0.00
618.95	-99.89	621.20	0.00
619.00	-99.89	621.20	0.00
619.05	-99.89	621.20	0.00
619.10	-99.89	621.20	0.00
619.15	-99.89	621.20	0.00
619.20	-99.89	621.20	0.00
619.25	-99.89	621.20	0.00
619.30	-99.89	621.20	0.00
619.35	-99.89	621.20	0.00
619.40	-99.89	621.20	0.00
619.45	-99.89	621.20	0.00
619.50	-99.89	621.20	0.00
619.55	-99.89	621.20	0.00
619.60	-99.89	621.20	0.00
619.65	-99.89	621.20	0.00
619.70	-99.89	621.20	0.00
619.75	-99.89	621.20	0.00
619.80	-99.89	621.20	0.00
619.85	-99.89	621.20	0.00
619.90	-99.89	621.20	0.00
619.95	-99.89	621.20	0.00
620.00	-99.89	621.20	0.00
620.05	-99.89	621.20	0.00
620.10	-99.54	621.20	0.00
620.15	-98.90	621.20	0.00
620.20	-98.05	621.20	0.00
620.25	-97.04	621.20	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-95.87	621.20	0.00
620.35	-94.54	621.20	0.00
620.40	-93.07	621.20	0.00
620.45	-91.44	621.20	0.00
620.50	-89.66	621.20	0.00
620.55	-87.71	621.20	0.00
620.60	-85.58	621.20	0.00
620.65	-83.26	621.20	0.00
620.70	-80.73	621.20	0.00
620.75	-77.95	621.20	0.00
620.80	-74.90	621.20	0.00
620.85	-71.52	621.20	0.00
620.90	-67.73	621.20	0.00
620.95	-63.45	621.20	0.00
621.00	-58.50	621.20	0.00
621.05	-52.61	621.20	0.00
621.10	-45.21	621.20	0.00
621.15	-34.77	621.20	0.00
621.20	0.00	621.20	0.00
621.25	36.47	621.20	0.00
621.30	49.65	621.20	0.00
621.35	60.41	621.20	0.00
621.40	70.15	621.20	0.00
621.45	79.35	621.20	0.00
621.50	88.24	621.20	0.00
621.55	96.96	621.20	0.00
621.60	105.58	621.20	0.00
621.65	114.16	621.20	0.00
621.70	122.72	621.20	0.00
621.75	131.30	621.20	0.00
621.80	139.91	621.20	0.00
621.85	148.56	621.20	0.00
621.90	157.26	621.20	0.00
621.95	166.03	621.20	0.00
622.00	174.86	621.20	0.00

Contributing Structures
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Composite Outflow Summary

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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-106.48	621.25	0.00
618.05	-106.48	621.25	0.00
618.10	-106.48	621.25	0.00
618.15	-106.48	621.25	0.00
618.20	-106.48	621.25	0.00
618.25	-106.48	621.25	0.00
618.30	-106.48	621.25	0.00
618.35	-106.48	621.25	0.00
618.40	-106.48	621.25	0.00
618.45	-106.48	621.25	0.00
618.50	-106.48	621.25	0.00
618.55	-106.48	621.25	0.00
618.60	-106.48	621.25	0.00
618.65	-106.48	621.25	0.00
618.70	-106.48	621.25	0.00
618.75	-106.48	621.25	0.00
618.80	-106.48	621.25	0.00
618.85	-106.48	621.25	0.00
618.90	-106.48	621.25	0.00
618.95	-106.48	621.25	0.00
619.00	-106.48	621.25	0.00
619.05	-106.48	621.25	0.00
619.10	-106.48	621.25	0.00
619.15	-106.48	621.25	0.00
619.20	-106.48	621.25	0.00
619.25	-106.48	621.25	0.00
619.30	-106.48	621.25	0.00
619.35	-106.48	621.25	0.00
619.40	-106.48	621.25	0.00
619.45	-106.48	621.25	0.00
619.50	-106.48	621.25	0.00
619.55	-106.48	621.25	0.00
619.60	-106.48	621.25	0.00
619.65	-106.48	621.25	0.00
619.70	-106.48	621.25	0.00
619.75	-106.48	621.25	0.00
619.80	-106.48	621.25	0.00
619.85	-106.48	621.25	0.00
619.90	-106.48	621.25	0.00
619.95	-106.48	621.25	0.00
620.00	-106.48	621.25	0.00
620.05	-106.48	621.25	0.00
620.10	-106.13	621.25	0.00
620.15	-105.48	621.25	0.00
620.20	-104.64	621.25	0.00
620.25	-103.63	621.25	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-102.46	621.25	0.00
620.35	-101.14	621.25	0.00
620.40	-99.68	621.25	0.00
620.45	-98.07	621.25	0.00
620.50	-96.30	621.25	0.00
620.55	-94.38	621.25	0.00
620.60	-92.29	621.25	0.00
620.65	-90.01	621.25	0.00
620.70	-87.54	621.25	0.00
620.75	-84.85	621.25	0.00
620.80	-81.91	621.25	0.00
620.85	-78.68	621.25	0.00
620.90	-75.10	621.25	0.00
620.95	-71.11	621.25	0.00
621.00	-66.60	621.25	0.00
621.05	-61.39	621.25	0.00
621.10	-55.20	621.25	0.00
621.15	-47.42	621.25	0.00
621.20	-36.47	621.25	0.00
621.25	0.00	621.25	0.00
621.30	38.17	621.25	0.00
621.35	51.88	621.25	0.00
621.40	63.04	621.25	0.00
621.45	73.09	621.25	0.00
621.50	82.57	621.25	0.00
621.55	91.71	621.25	0.00
621.60	100.66	621.25	0.00
621.65	109.49	621.25	0.00
621.70	118.26	621.25	0.00
621.75	127.01	621.25	0.00
621.80	135.76	621.25	0.00
621.85	144.54	621.25	0.00
621.90	153.35	621.25	0.00
621.95	162.21	621.25	0.00
622.00	171.12	621.25	0.00

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-113.20	621.30	0.00
618.05	-113.20	621.30	0.00
618.10	-113.20	621.30	0.00
618.15	-113.20	621.30	0.00
618.20	-113.20	621.30	0.00
618.25	-113.20	621.30	0.00
618.30	-113.20	621.30	0.00
618.35	-113.20	621.30	0.00
618.40	-113.20	621.30	0.00
618.45	-113.20	621.30	0.00
618.50	-113.20	621.30	0.00
618.55	-113.20	621.30	0.00
618.60	-113.20	621.30	0.00
618.65	-113.20	621.30	0.00
618.70	-113.20	621.30	0.00
618.75	-113.20	621.30	0.00
618.80	-113.20	621.30	0.00
618.85	-113.20	621.30	0.00
618.90	-113.20	621.30	0.00
618.95	-113.20	621.30	0.00
619.00	-113.20	621.30	0.00
619.05	-113.20	621.30	0.00
619.10	-113.20	621.30	0.00
619.15	-113.20	621.30	0.00
619.20	-113.20	621.30	0.00
619.25	-113.20	621.30	0.00
619.30	-113.20	621.30	0.00
619.35	-113.20	621.30	0.00
619.40	-113.20	621.30	0.00
619.45	-113.20	621.30	0.00
619.50	-113.20	621.30	0.00
619.55	-113.20	621.30	0.00
619.60	-113.20	621.30	0.00
619.65	-113.20	621.30	0.00
619.70	-113.20	621.30	0.00
619.75	-113.20	621.30	0.00
619.80	-113.20	621.30	0.00
619.85	-113.20	621.30	0.00
619.90	-113.20	621.30	0.00
619.95	-113.20	621.30	0.00
620.00	-113.20	621.30	0.00
620.05	-113.20	621.30	0.00
620.10	-112.85	621.30	0.00
620.15	-112.21	621.30	0.00
620.20	-111.37	621.30	0.00
620.25	-110.35	621.30	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-109.19	621.30	0.00
620.35	-107.88	621.30	0.00
620.40	-106.42	621.30	0.00
620.45	-104.82	621.30	0.00
620.50	-103.08	621.30	0.00
620.55	-101.18	621.30	0.00
620.60	-99.12	621.30	0.00
620.65	-96.88	621.30	0.00
620.70	-94.46	621.30	0.00
620.75	-91.84	621.30	0.00
620.80	-88.99	621.30	0.00
620.85	-85.88	621.30	0.00
620.90	-82.47	621.30	0.00
620.95	-78.71	621.30	0.00
621.00	-74.51	621.30	0.00
621.05	-69.77	621.30	0.00
621.10	-64.30	621.30	0.00
621.15	-57.80	621.30	0.00
621.20	-49.65	621.30	0.00
621.25	-38.17	621.30	0.00
621.30	0.00	621.30	0.00
621.35	39.88	621.30	0.00
621.40	54.13	621.30	0.00
621.45	65.67	621.30	0.00
621.50	76.05	621.30	0.00
621.55	85.80	621.30	0.00
621.60	95.19	621.30	0.00
621.65	104.36	621.30	0.00
621.70	113.41	621.30	0.00
621.75	122.37	621.30	0.00
621.80	131.31	621.30	0.00
621.85	140.24	621.30	0.00
621.90	149.18	621.30	0.00
621.95	158.15	621.30	0.00
622.00	167.17	621.30	0.00

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-120.06	621.35	0.00
618.05	-120.06	621.35	0.00
618.10	-120.06	621.35	0.00
618.15	-120.06	621.35	0.00
618.20	-120.06	621.35	0.00
618.25	-120.06	621.35	0.00
618.30	-120.06	621.35	0.00
618.35	-120.06	621.35	0.00
618.40	-120.06	621.35	0.00
618.45	-120.06	621.35	0.00
618.50	-120.06	621.35	0.00
618.55	-120.06	621.35	0.00
618.60	-120.06	621.35	0.00
618.65	-120.06	621.35	0.00
618.70	-120.06	621.35	0.00
618.75	-120.06	621.35	0.00
618.80	-120.06	621.35	0.00
618.85	-120.06	621.35	0.00
618.90	-120.06	621.35	0.00
618.95	-120.06	621.35	0.00
619.00	-120.06	621.35	0.00
619.05	-120.06	621.35	0.00
619.10	-120.06	621.35	0.00
619.15	-120.06	621.35	0.00
619.20	-120.06	621.35	0.00
619.25	-120.06	621.35	0.00
619.30	-120.06	621.35	0.00
619.35	-120.06	621.35	0.00
619.40	-120.06	621.35	0.00
619.45	-120.06	621.35	0.00
619.50	-120.06	621.35	0.00
619.55	-120.06	621.35	0.00
619.60	-120.06	621.35	0.00
619.65	-120.06	621.35	0.00
619.70	-120.06	621.35	0.00
619.75	-120.06	621.35	0.00
619.80	-120.06	621.35	0.00
619.85	-120.06	621.35	0.00
619.90	-120.06	621.35	0.00
619.95	-120.06	621.35	0.00
620.00	-120.06	621.35	0.00
620.05	-120.06	621.35	0.00
620.10	-119.71	621.35	0.00
620.15	-119.07	621.35	0.00
620.20	-118.23	621.35	0.00
620.25	-117.22	621.35	0.00

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-116.06	621.35	0.00
620.35	-114.75	621.35	0.00
620.40	-113.30	621.35	0.00
620.45	-111.71	621.35	0.00
620.50	-109.98	621.35	0.00
620.55	-108.10	621.35	0.00
620.60	-106.07	621.35	0.00
620.65	-103.87	621.35	0.00
620.70	-101.50	621.35	0.00
620.75	-98.93	621.35	0.00
620.80	-96.16	621.35	0.00
620.85	-93.15	621.35	0.00
620.90	-89.87	621.35	0.00
620.95	-86.28	621.35	0.00
621.00	-82.33	621.35	0.00
621.05	-77.92	621.35	0.00
621.10	-72.95	621.35	0.00
621.15	-67.22	621.35	0.00
621.20	-60.41	621.35	0.00
621.25	-51.88	621.35	0.00
621.30	-39.88	621.35	0.00
621.35	0.00	621.35	0.00
621.40	41.60	621.35	0.00
621.45	56.38	621.35	0.00
621.50	68.32	621.35	0.00
621.55	79.02	621.35	0.00
621.60	89.05	621.35	0.00
621.65	98.69	621.35	0.00
621.70	108.09	621.35	0.00
621.75	117.34	621.35	0.00
621.80	126.50	621.35	0.00
621.85	135.62	621.35	0.00
621.90	144.73	621.35	0.00
621.95	153.84	621.35	0.00
622.00	162.97	621.35	0.00

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-127.05	621.40	0.00
618.05	-127.05	621.40	0.00
618.10	-127.05	621.40	0.00
618.15	-127.05	621.40	0.00
618.20	-127.05	621.40	0.00
618.25	-127.05	621.40	0.00
618.30	-127.05	621.40	0.00
618.35	-127.05	621.40	0.00
618.40	-127.05	621.40	0.00
618.45	-127.05	621.40	0.00
618.50	-127.05	621.40	0.00
618.55	-127.05	621.40	0.00
618.60	-127.05	621.40	0.00
618.65	-127.05	621.40	0.00
618.70	-127.05	621.40	0.00
618.75	-127.05	621.40	0.00
618.80	-127.05	621.40	0.00
618.85	-127.05	621.40	0.00
618.90	-127.05	621.40	0.00
618.95	-127.05	621.40	0.00
619.00	-127.05	621.40	0.00
619.05	-127.05	621.40	0.00
619.10	-127.05	621.40	0.00
619.15	-127.05	621.40	0.00
619.20	-127.05	621.40	0.00
619.25	-127.05	621.40	0.00
619.30	-127.05	621.40	0.00
619.35	-127.05	621.40	0.00
619.40	-127.05	621.40	0.00
619.45	-127.05	621.40	0.00
619.50	-127.05	621.40	0.00
619.55	-127.05	621.40	0.00
619.60	-127.05	621.40	0.00
619.65	-127.05	621.40	0.00
619.70	-127.05	621.40	0.00
619.75	-127.05	621.40	0.00
619.80	-127.05	621.40	0.00
619.85	-127.05	621.40	0.00
619.90	-127.05	621.40	0.00
619.95	-127.05	621.40	0.00
620.00	-127.05	621.40	0.00
620.05	-127.05	621.40	0.00
620.10	-126.70	621.40	0.00
620.15	-126.06	621.40	0.00
620.20	-125.22	621.40	0.00
620.25	-124.21	621.40	0.00

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-123.06	621.40	0.00
620.35	-121.75	621.40	0.00
620.40	-120.31	621.40	0.00
620.45	-118.73	621.40	0.00
620.50	-117.02	621.40	0.00
620.55	-115.15	621.40	0.00
620.60	-113.14	621.40	0.00
620.65	-110.98	621.40	0.00
620.70	-108.64	621.40	0.00
620.75	-106.13	621.40	0.00
620.80	-103.42	621.40	0.00
620.85	-100.49	621.40	0.00
620.90	-97.32	621.40	0.00
620.95	-93.88	621.40	0.00
621.00	-90.11	621.40	0.00
621.05	-85.96	621.40	0.00
621.10	-81.35	621.40	0.00
621.15	-76.14	621.40	0.00
621.20	-70.15	621.40	0.00
621.25	-63.04	621.40	0.00
621.30	-54.13	621.40	0.00
621.35	-41.60	621.40	0.00
621.40	0.00	621.40	0.00
621.45	43.33	621.40	0.00
621.50	58.65	621.40	0.00
621.55	70.98	621.40	0.00
621.60	82.00	621.40	0.00
621.65	92.31	621.40	0.00
621.70	102.19	621.40	0.00
621.75	111.82	621.40	0.00
621.80	121.28	621.40	0.00
621.85	130.64	621.40	0.00
621.90	139.95	621.40	0.00
621.95	149.23	621.40	0.00
622.00	158.51	621.40	0.00

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-134.18	621.45	0.00
618.05	-134.18	621.45	0.00
618.10	-134.18	621.45	0.00
618.15	-134.18	621.45	0.00
618.20	-134.18	621.45	0.00
618.25	-134.18	621.45	0.00
618.30	-134.18	621.45	0.00
618.35	-134.18	621.45	0.00
618.40	-134.18	621.45	0.00
618.45	-134.18	621.45	0.00
618.50	-134.18	621.45	0.00
618.55	-134.18	621.45	0.00
618.60	-134.18	621.45	0.00
618.65	-134.18	621.45	0.00
618.70	-134.18	621.45	0.00
618.75	-134.18	621.45	0.00
618.80	-134.18	621.45	0.00
618.85	-134.18	621.45	0.00
618.90	-134.18	621.45	0.00
618.95	-134.18	621.45	0.00
619.00	-134.18	621.45	0.00
619.05	-134.18	621.45	0.00
619.10	-134.18	621.45	0.00
619.15	-134.18	621.45	0.00
619.20	-134.18	621.45	0.00
619.25	-134.18	621.45	0.00
619.30	-134.18	621.45	0.00
619.35	-134.18	621.45	0.00
619.40	-134.18	621.45	0.00
619.45	-134.18	621.45	0.00
619.50	-134.18	621.45	0.00
619.55	-134.18	621.45	0.00
619.60	-134.18	621.45	0.00
619.65	-134.18	621.45	0.00
619.70	-134.18	621.45	0.00
619.75	-134.18	621.45	0.00
619.80	-134.18	621.45	0.00
619.85	-134.18	621.45	0.00
619.90	-134.18	621.45	0.00
619.95	-134.18	621.45	0.00
620.00	-134.18	621.45	0.00
620.05	-134.18	621.45	0.00
620.10	-133.83	621.45	0.00
620.15	-133.18	621.45	0.00
620.20	-132.35	621.45	0.00
620.25	-131.34	621.45	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-130.18	621.45	0.00
620.35	-128.89	621.45	0.00
620.40	-127.45	621.45	0.00
620.45	-125.88	621.45	0.00
620.50	-124.18	621.45	0.00
620.55	-122.33	621.45	0.00
620.60	-120.34	621.45	0.00
620.65	-118.20	621.45	0.00
620.70	-115.90	621.45	0.00
620.75	-113.43	621.45	0.00
620.80	-110.78	621.45	0.00
620.85	-107.92	621.45	0.00
620.90	-104.85	621.45	0.00
620.95	-101.52	621.45	0.00
621.00	-97.90	621.45	0.00
621.05	-93.96	621.45	0.00
621.10	-89.61	621.45	0.00
621.15	-84.79	621.45	0.00
621.20	-79.35	621.45	0.00
621.25	-73.09	621.45	0.00
621.30	-65.67	621.45	0.00
621.35	-56.38	621.45	0.00
621.40	-43.33	621.45	0.00
621.45	0.00	621.45	0.00
621.50	45.07	621.45	0.00
621.55	60.92	621.45	0.00
621.60	73.64	621.45	0.00
621.65	84.99	621.45	0.00
621.70	95.58	621.45	0.00
621.75	105.71	621.45	0.00
621.80	115.57	621.45	0.00
621.85	125.24	621.45	0.00
621.90	134.80	621.45	0.00
621.95	144.29	621.45	0.00
622.00	153.75	621.45	0.00

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-141.43	621.50	0.00
618.05	-141.43	621.50	0.00
618.10	-141.43	621.50	0.00
618.15	-141.43	621.50	0.00
618.20	-141.43	621.50	0.00
618.25	-141.43	621.50	0.00
618.30	-141.43	621.50	0.00
618.35	-141.43	621.50	0.00
618.40	-141.43	621.50	0.00
618.45	-141.43	621.50	0.00
618.50	-141.43	621.50	0.00
618.55	-141.43	621.50	0.00
618.60	-141.43	621.50	0.00
618.65	-141.43	621.50	0.00
618.70	-141.43	621.50	0.00
618.75	-141.43	621.50	0.00
618.80	-141.43	621.50	0.00
618.85	-141.43	621.50	0.00
618.90	-141.43	621.50	0.00
618.95	-141.43	621.50	0.00
619.00	-141.43	621.50	0.00
619.05	-141.43	621.50	0.00
619.10	-141.43	621.50	0.00
619.15	-141.43	621.50	0.00
619.20	-141.43	621.50	0.00
619.25	-141.43	621.50	0.00
619.30	-141.43	621.50	0.00
619.35	-141.43	621.50	0.00
619.40	-141.43	621.50	0.00
619.45	-141.43	621.50	0.00
619.50	-141.43	621.50	0.00
619.55	-141.43	621.50	0.00
619.60	-141.43	621.50	0.00
619.65	-141.43	621.50	0.00
619.70	-141.43	621.50	0.00
619.75	-141.43	621.50	0.00
619.80	-141.43	621.50	0.00
619.85	-141.43	621.50	0.00
619.90	-141.43	621.50	0.00
619.95	-141.43	621.50	0.00
620.00	-141.43	621.50	0.00
620.05	-141.43	621.50	0.00
620.10	-141.08	621.50	0.00
620.15	-140.44	621.50	0.00
620.20	-139.60	621.50	0.00
620.25	-138.59	621.50	0.00

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-137.44	621.50	0.00
620.35	-136.15	621.50	0.00
620.40	-134.72	621.50	0.00
620.45	-133.16	621.50	0.00
620.50	-131.46	621.50	0.00
620.55	-129.63	621.50	0.00
620.60	-127.66	621.50	0.00
620.65	-125.54	621.50	0.00
620.70	-123.27	621.50	0.00
620.75	-120.84	621.50	0.00
620.80	-118.24	621.50	0.00
620.85	-115.44	621.50	0.00
620.90	-112.44	621.50	0.00
620.95	-109.21	621.50	0.00
621.00	-105.73	621.50	0.00
621.05	-101.94	621.50	0.00
621.10	-97.82	621.50	0.00
621.15	-93.28	621.50	0.00
621.20	-88.24	621.50	0.00
621.25	-82.57	621.50	0.00
621.30	-76.05	621.50	0.00
621.35	-68.32	621.50	0.00
621.40	-58.65	621.50	0.00
621.45	-45.07	621.50	0.00
621.50	0.00	621.50	0.00
621.55	46.81	621.50	0.00
621.60	63.20	621.50	0.00
621.65	76.32	621.50	0.00
621.70	87.99	621.50	0.00
621.75	98.86	621.50	0.00
621.80	109.25	621.50	0.00
621.85	119.33	621.50	0.00
621.90	129.21	621.50	0.00
621.95	138.97	621.50	0.00
622.00	148.65	621.50	0.00

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-148.81	621.55	0.00
618.05	-148.81	621.55	0.00
618.10	-148.81	621.55	0.00
618.15	-148.81	621.55	0.00
618.20	-148.81	621.55	0.00
618.25	-148.81	621.55	0.00
618.30	-148.81	621.55	0.00
618.35	-148.81	621.55	0.00
618.40	-148.81	621.55	0.00
618.45	-148.81	621.55	0.00
618.50	-148.81	621.55	0.00
618.55	-148.81	621.55	0.00
618.60	-148.81	621.55	0.00
618.65	-148.81	621.55	0.00
618.70	-148.81	621.55	0.00
618.75	-148.81	621.55	0.00
618.80	-148.81	621.55	0.00
618.85	-148.81	621.55	0.00
618.90	-148.81	621.55	0.00
618.95	-148.81	621.55	0.00
619.00	-148.81	621.55	0.00
619.05	-148.81	621.55	0.00
619.10	-148.81	621.55	0.00
619.15	-148.81	621.55	0.00
619.20	-148.81	621.55	0.00
619.25	-148.81	621.55	0.00
619.30	-148.81	621.55	0.00
619.35	-148.81	621.55	0.00
619.40	-148.81	621.55	0.00
619.45	-148.81	621.55	0.00
619.50	-148.81	621.55	0.00
619.55	-148.81	621.55	0.00
619.60	-148.81	621.55	0.00
619.65	-148.81	621.55	0.00
619.70	-148.81	621.55	0.00
619.75	-148.81	621.55	0.00
619.80	-148.81	621.55	0.00
619.85	-148.81	621.55	0.00
619.90	-148.81	621.55	0.00
619.95	-148.81	621.55	0.00
620.00	-148.81	621.55	0.00
620.05	-148.81	621.55	0.00
620.10	-148.46	621.55	0.00
620.15	-147.82	621.55	0.00
620.20	-146.98	621.55	0.00
620.25	-145.97	621.55	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-144.82	621.55	0.00
620.35	-143.53	621.55	0.00
620.40	-142.11	621.55	0.00
620.45	-140.56	621.55	0.00
620.50	-138.87	621.55	0.00
620.55	-137.05	621.55	0.00
620.60	-135.10	621.55	0.00
620.65	-133.00	621.55	0.00
620.70	-130.76	621.55	0.00
620.75	-128.36	621.55	0.00
620.80	-125.80	621.55	0.00
620.85	-123.06	621.55	0.00
620.90	-120.13	621.55	0.00
620.95	-116.98	621.55	0.00
621.00	-113.60	621.55	0.00
621.05	-109.95	621.55	0.00
621.10	-106.00	621.55	0.00
621.15	-101.69	621.55	0.00
621.20	-96.96	621.55	0.00
621.25	-91.71	621.55	0.00
621.30	-85.80	621.55	0.00
621.35	-79.02	621.55	0.00
621.40	-70.98	621.55	0.00
621.45	-60.92	621.55	0.00
621.50	-46.81	621.55	0.00
621.55	0.00	621.55	0.00
621.60	48.56	621.55	0.00
621.65	65.50	621.55	0.00
621.70	79.01	621.55	0.00
621.75	91.00	621.55	0.00
621.80	102.15	621.55	0.00
621.85	112.79	621.55	0.00
621.90	123.10	621.55	0.00
621.95	133.20	621.55	0.00
622.00	143.15	621.55	0.00

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve — Return Event: 1 years
Label: Infiltration Basin Overflow — Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-156.31	621.60	0.00
618.05	-156.31	621.60	0.00
618.10	-156.31	621.60	0.00
618.15	-156.31	621.60	0.00
618.20	-156.31	621.60	0.00
618.25	-156.31	621.60	0.00
618.30	-156.31	621.60	0.00
618.35	-156.31	621.60	0.00
618.40	-156.31	621.60	0.00
618.45	-156.31	621.60	0.00
618.50	-156.31	621.60	0.00
618.55	-156.31	621.60	0.00
618.60	-156.31	621.60	0.00
618.65	-156.31	621.60	0.00
618.70	-156.31	621.60	0.00
618.75	-156.31	621.60	0.00
618.80	-156.31	621.60	0.00
618.85	-156.31	621.60	0.00
618.90	-156.31	621.60	0.00
618.95	-156.31	621.60	0.00
619.00	-156.31	621.60	0.00
619.05	-156.31	621.60	0.00
619.10	-156.31	621.60	0.00
619.15	-156.31	621.60	0.00
619.20	-156.31	621.60	0.00
619.25	-156.31	621.60	0.00
619.30	-156.31	621.60	0.00
619.35	-156.31	621.60	0.00
619.40	-156.31	621.60	0.00
619.45	-156.31	621.60	0.00
619.50	-156.31	621.60	0.00
619.55	-156.31	621.60	0.00
619.60	-156.31	621.60	0.00
619.65	-156.31	621.60	0.00
619.70	-156.31	621.60	0.00
619.75	-156.31	621.60	0.00
619.80	-156.31	621.60	0.00
619.85	-156.31	621.60	0.00
619.90	-156.31	621.60	0.00
619.95	-156.31	621.60	0.00
620.00	-156.31	621.60	0.00
620.05	-156.31	621.60	0.00
620.10	-155.96	621.60	0.00
620.15	-155.32	621.60	0.00
620.20	-154.48	621.60	0.00
620.25	-153.48	621.60	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-152.33	621.60	0.00
620.35	-151.04	621.60	0.00
620.40	-149.62	621.60	0.00
620.45	-148.08	621.60	0.00
620.50	-146.40	621.60	0.00
620.55	-144.59	621.60	0.00
620.60	-142.65	621.60	0.00
620.65	-140.58	621.60	0.00
620.70	-138.36	621.60	0.00
620.75	-135.99	621.60	0.00
620.80	-133.47	621.60	0.00
620.85	-130.77	621.60	0.00
620.90	-127.90	621.60	0.00
620.95	-124.82	621.60	0.00
621.00	-121.53	621.60	0.00
621.05	-118.00	621.60	0.00
621.10	-114.19	621.60	0.00
621.15	-110.07	621.60	0.00
621.20	-105.58	621.60	0.00
621.25	-100.66	621.60	0.00
621.30	-95.19	621.60	0.00
621.35	-89.05	621.60	0.00
621.40	-82.00	621.60	0.00
621.45	-73.64	621.60	0.00
621.50	-63.20	621.60	0.00
621.55	-48.56	621.60	0.00
621.60	0.00	621.60	0.00
621.65	50.31	621.60	0.00
621.70	67.79	621.60	0.00
621.75	81.70	621.60	0.00
621.80	94.02	621.60	0.00
621.85	105.45	621.60	0.00
621.90	116.34	621.60	0.00
621.95	126.88	621.60	0.00
622.00	137.19	621.60	0.00

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-163.93	621.65	0.00
618.05	-163.93	621.65	0.00
618.10	-163.93	621.65	0.00
618.15	-163.93	621.65	0.00
618.20	-163.93	621.65	0.00
618.25	-163.93	621.65	0.00
618.30	-163.93	621.65	0.00
618.35	-163.93	621.65	0.00
618.40	-163.93	621.65	0.00
618.45	-163.93	621.65	0.00
618.50	-163.93	621.65	0.00
618.55	-163.93	621.65	0.00
618.60	-163.93	621.65	0.00
618.65	-163.93	621.65	0.00
618.70	-163.93	621.65	0.00
618.75	-163.93	621.65	0.00
618.80	-163.93	621.65	0.00
618.85	-163.93	621.65	0.00
618.90	-163.93	621.65	0.00
618.95	-163.93	621.65	0.00
619.00	-163.93	621.65	0.00
619.05	-163.93	621.65	0.00
619.10	-163.93	621.65	0.00
619.15	-163.93	621.65	0.00
619.20	-163.93	621.65	0.00
619.25	-163.93	621.65	0.00
619.30	-163.93	621.65	0.00
619.35	-163.93	621.65	0.00
619.40	-163.93	621.65	0.00
619.45	-163.93	621.65	0.00
619.50	-163.93	621.65	0.00
619.55	-163.93	621.65	0.00
619.60	-163.93	621.65	0.00
619.65	-163.93	621.65	0.00
619.70	-163.93	621.65	0.00
619.75	-163.93	621.65	0.00
619.80	-163.93	621.65	0.00
619.85	-163.93	621.65	0.00
619.90	-163.93	621.65	0.00
619.95	-163.93	621.65	0.00
620.00	-163.93	621.65	0.00
620.05	-163.93	621.65	0.00
620.10	-163.58	621.65	0.00
620.15	-162.94	621.65	0.00
620.20	-162.10	621.65	0.00
620.25	-161.10	621.65	0.00

Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-159.96	621.65	0.00
620.35	-158.67	621.65	0.00
620.40	-157.26	621.65	0.00
620.45	-155.72	621.65	0.00
620.50	-154.05	621.65	0.00
620.55	-152.25	621.65	0.00
620.60	-150.33	621.65	0.00
620.65	-148.27	621.65	0.00
620.70	-146.07	621.65	0.00
620.75	-143.73	621.65	0.00
620.80	-141.24	621.65	0.00
620.85	-138.59	621.65	0.00
620.90	-135.76	621.65	0.00
620.95	-132.75	621.65	0.00
621.00	-129.54	621.65	0.00
621.05	-126.10	621.65	0.00
621.10	-122.42	621.65	0.00
621.15	-118.45	621.65	0.00
621.20	-114.16	621.65	0.00
621.25	-109.49	621.65	0.00
621.30	-104.36	621.65	0.00
621.35	-98.69	621.65	0.00
621.40	-92.31	621.65	0.00
621.45	-84.99	621.65	0.00
621.50	-76.32	621.65	0.00
621.55	-65.50	621.65	0.00
621.60	-50.31	621.65	0.00
621.65	0.00	621.65	0.00
621.70	52.07	621.65	0.00
621.75	70.10	621.65	0.00
621.80	84.41	621.65	0.00
621.85	97.05	621.65	0.00
621.90	108.77	621.65	0.00
621.95	119.91	621.65	0.00
622.00	130.68	621.65	0.00

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Composite Outflow Summary

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Composite Outflow Summary

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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-171.68	621.70	0.00
618.05	-171.68	621.70	0.00
618.10	-171.68	621.70	0.00
618.15	-171.68	621.70	0.00
618.20	-171.68	621.70	0.00
618.25	-171.68	621.70	0.00
618.30	-171.68	621.70	0.00
618.35	-171.68	621.70	0.00
618.40	-171.68	621.70	0.00
618.45	-171.68	621.70	0.00
618.50	-171.68	621.70	0.00
618.55	-171.68	621.70	0.00
618.60	-171.68	621.70	0.00
618.65	-171.68	621.70	0.00
618.70	-171.68	621.70	0.00
618.75	-171.68	621.70	0.00
618.80	-171.68	621.70	0.00
618.85	-171.68	621.70	0.00
618.90	-171.68	621.70	0.00
618.95	-171.68	621.70	0.00
619.00	-171.68	621.70	0.00
619.05	-171.68	621.70	0.00
619.10	-171.68	621.70	0.00
619.15	-171.68	621.70	0.00
619.20	-171.68	621.70	0.00
619.25	-171.68	621.70	0.00
619.30	-171.68	621.70	0.00
619.35	-171.68	621.70	0.00
619.40	-171.68	621.70	0.00
619.45	-171.68	621.70	0.00
619.50	-171.68	621.70	0.00
619.55	-171.68	621.70	0.00
619.60	-171.68	621.70	0.00
619.65	-171.68	621.70	0.00
619.70	-171.68	621.70	0.00
619.75	-171.68	621.70	0.00
619.80	-171.68	621.70	0.00
619.85	-171.68	621.70	0.00
619.90	-171.68	621.70	0.00
619.95	-171.68	621.70	0.00
620.00	-171.68	621.70	0.00
620.05	-171.68	621.70	0.00
620.10	-171.33	621.70	0.00
620.15	-170.69	621.70	0.00
620.20	-169.85	621.70	0.00
620.25	-168.85	621.70	0.00

Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-167.71	621.70	0.00
620.35	-166.42	621.70	0.00
620.40	-165.01	621.70	0.00
620.45	-163.48	621.70	0.00
620.50	-161.82	621.70	0.00
620.55	-160.03	621.70	0.00
620.60	-158.11	621.70	0.00
620.65	-156.07	621.70	0.00
620.70	-153.89	621.70	0.00
620.75	-151.58	621.70	0.00
620.80	-149.12	621.70	0.00
620.85	-146.50	621.70	0.00
620.90	-143.72	621.70	0.00
620.95	-140.77	621.70	0.00
621.00	-137.62	621.70	0.00
621.05	-134.27	621.70	0.00
621.10	-130.69	621.70	0.00
621.15	-126.85	621.70	0.00
621.20	-122.72	621.70	0.00
621.25	-118.26	621.70	0.00
621.30	-113.41	621.70	0.00
621.35	-108.09	621.70	0.00
621.40	-102.19	621.70	0.00
621.45	-95.58	621.70	0.00
621.50	-87.99	621.70	0.00
621.55	-79.01	621.70	0.00
621.60	-67.79	621.70	0.00
621.65	-52.07	621.70	0.00
621.70	0.00	621.70	0.00
621.75	53.84	621.70	0.00
621.80	72.42	621.70	0.00
621.85	87.12	621.70	0.00
621.90	100.09	621.70	0.00
621.95	112.09	621.70	0.00
622.00	123.49	621.70	0.00

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-179.54	621.75	0.00
618.05	-179.54	621.75	0.00
618.10	-179.54	621.75	0.00
618.15	-179.54	621.75	0.00
618.20	-179.54	621.75	0.00
618.25	-179.54	621.75	0.00
618.30	-179.54	621.75	0.00
618.35	-179.54	621.75	0.00
618.40	-179.54	621.75	0.00
618.45	-179.54	621.75	0.00
618.50	-179.54	621.75	0.00
618.55	-179.54	621.75	0.00
618.60	-179.54	621.75	0.00
618.65	-179.54	621.75	0.00
618.70	-179.54	621.75	0.00
618.75	-179.54	621.75	0.00
618.80	-179.54	621.75	0.00
618.85	-179.54	621.75	0.00
618.90	-179.54	621.75	0.00
618.95	-179.54	621.75	0.00
619.00	-179.54	621.75	0.00
619.05	-179.54	621.75	0.00
619.10	-179.54	621.75	0.00
619.15	-179.54	621.75	0.00
619.20	-179.54	621.75	0.00
619.25	-179.54	621.75	0.00
619.30	-179.54	621.75	0.00
619.35	-179.54	621.75	0.00
619.40	-179.54	621.75	0.00
619.45	-179.54	621.75	0.00
619.50	-179.54	621.75	0.00
619.55	-179.54	621.75	0.00
619.60	-179.54	621.75	0.00
619.65	-179.54	621.75	0.00
619.70	-179.54	621.75	0.00
619.75	-179.54	621.75	0.00
619.80	-179.54	621.75	0.00
619.85	-179.54	621.75	0.00
619.90	-179.54	621.75	0.00
619.95	-179.54	621.75	0.00
620.00	-179.54	621.75	0.00
620.05	-179.54	621.75	0.00
620.10	-179.19	621.75	0.00
620.15	-178.55	621.75	0.00
620.20	-177.71	621.75	0.00
620.25	-176.71	621.75	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-175.57	621.75	0.00
620.35	-174.29	621.75	0.00
620.40	-172.89	621.75	0.00
620.45	-171.35	621.75	0.00
620.50	-169.70	621.75	0.00
620.55	-167.92	621.75	0.00
620.60	-166.02	621.75	0.00
620.65	-163.99	621.75	0.00
620.70	-161.83	621.75	0.00
620.75	-159.53	621.75	0.00
620.80	-157.10	621.75	0.00
620.85	-154.52	621.75	0.00
620.90	-151.78	621.75	0.00
620.95	-148.87	621.75	0.00
621.00	-145.79	621.75	0.00
621.05	-142.51	621.75	0.00
621.10	-139.02	621.75	0.00
621.15	-135.29	621.75	0.00
621.20	-131.30	621.75	0.00
621.25	-127.01	621.75	0.00
621.30	-122.37	621.75	0.00
621.35	-117.34	621.75	0.00
621.40	-111.82	621.75	0.00
621.45	-105.71	621.75	0.00
621.50	-98.86	621.75	0.00
621.55	-91.00	621.75	0.00
621.60	-81.70	621.75	0.00
621.65	-70.10	621.75	0.00
621.70	-53.84	621.75	0.00
621.75	0.00	621.75	0.00
621.80	55.61	621.75	0.00
621.85	74.74	621.75	0.00
621.90	89.85	621.75	0.00
621.95	103.14	621.75	0.00
622.00	115.43	621.75	0.00

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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-187.52	621.80	0.00
618.05	-187.52	621.80	0.00
618.10	-187.52	621.80	0.00
618.15	-187.52	621.80	0.00
618.20	-187.52	621.80	0.00
618.25	-187.52	621.80	0.00
618.30	-187.52	621.80	0.00
618.35	-187.52	621.80	0.00
618.40	-187.52	621.80	0.00
618.45	-187.52	621.80	0.00
618.50	-187.52	621.80	0.00
618.55	-187.52	621.80	0.00
618.60	-187.52	621.80	0.00
618.65	-187.52	621.80	0.00
618.70	-187.52	621.80	0.00
618.75	-187.52	621.80	0.00
618.80	-187.52	621.80	0.00
618.85	-187.52	621.80	0.00
618.90	-187.52	621.80	0.00
618.95	-187.52	621.80	0.00
619.00	-187.52	621.80	0.00
619.05	-187.52	621.80	0.00
619.10	-187.52	621.80	0.00
619.15	-187.52	621.80	0.00
619.20	-187.52	621.80	0.00
619.25	-187.52	621.80	0.00
619.30	-187.52	621.80	0.00
619.35	-187.52	621.80	0.00
619.40	-187.52	621.80	0.00
619.45	-187.52	621.80	0.00
619.50	-187.52	621.80	0.00
619.55	-187.52	621.80	0.00
619.60	-187.52	621.80	0.00
619.65	-187.52	621.80	0.00
619.70	-187.52	621.80	0.00
619.75	-187.52	621.80	0.00
619.80	-187.52	621.80	0.00
619.85	-187.52	621.80	0.00
619.90	-187.52	621.80	0.00
619.95	-187.52	621.80	0.00
620.00	-187.52	621.80	0.00
620.05	-187.52	621.80	0.00
620.10	-187.17	621.80	0.00
620.15	-186.53	621.80	0.00
620.20	-185.69	621.80	0.00
620.25	-184.69	621.80	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-183.55	621.80	0.00
620.35	-182.28	621.80	0.00
620.40	-180.87	621.80	0.00
620.45	-179.35	621.80	0.00
620.50	-177.70	621.80	0.00
620.55	-175.93	621.80	0.00
620.60	-174.03	621.80	0.00
620.65	-172.02	621.80	0.00
620.70	-169.87	621.80	0.00
620.75	-167.60	621.80	0.00
620.80	-165.19	621.80	0.00
620.85	-162.64	621.80	0.00
620.90	-159.94	621.80	0.00
620.95	-157.07	621.80	0.00
621.00	-154.04	621.80	0.00
621.05	-150.83	621.80	0.00
621.10	-147.41	621.80	0.00
621.15	-143.78	621.80	0.00
621.20	-139.91	621.80	0.00
621.25	-135.76	621.80	0.00
621.30	-131.31	621.80	0.00
621.35	-126.50	621.80	0.00
621.40	-121.28	621.80	0.00
621.45	-115.57	621.80	0.00
621.50	-109.25	621.80	0.00
621.55	-102.15	621.80	0.00
621.60	-94.02	621.80	0.00
621.65	-84.41	621.80	0.00
621.70	-72.42	621.80	0.00
621.75	-55.61	621.80	0.00
621.80	0.00	621.80	0.00
621.85	57.39	621.80	0.00
621.90	77.07	621.80	0.00
621.95	92.58	621.80	0.00
622.00	106.20	621.80	0.00

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-195.61	621.85	0.00
618.05	-195.61	621.85	0.00
618.10	-195.61	621.85	0.00
618.15	-195.61	621.85	0.00
618.20	-195.61	621.85	0.00
618.25	-195.61	621.85	0.00
618.30	-195.61	621.85	0.00
618.35	-195.61	621.85	0.00
618.40	-195.61	621.85	0.00
618.45	-195.61	621.85	0.00
618.50	-195.61	621.85	0.00
618.55	-195.61	621.85	0.00
618.60	-195.61	621.85	0.00
618.65	-195.61	621.85	0.00
618.70	-195.61	621.85	0.00
618.75	-195.61	621.85	0.00
618.80	-195.61	621.85	0.00
618.85	-195.61	621.85	0.00
618.90	-195.61	621.85	0.00
618.95	-195.61	621.85	0.00
619.00	-195.61	621.85	0.00
619.05	-195.61	621.85	0.00
619.10	-195.61	621.85	0.00
619.15	-195.61	621.85	0.00
619.20	-195.61	621.85	0.00
619.25	-195.61	621.85	0.00
619.30	-195.61	621.85	0.00
619.35	-195.61	621.85	0.00
619.40	-195.61	621.85	0.00
619.45	-195.61	621.85	0.00
619.50	-195.61	621.85	0.00
619.55	-195.61	621.85	0.00
619.60	-195.61	621.85	0.00
619.65	-195.61	621.85	0.00
619.70	-195.61	621.85	0.00
619.75	-195.61	621.85	0.00
619.80	-195.61	621.85	0.00
619.85	-195.61	621.85	0.00
619.90	-195.61	621.85	0.00
619.95	-195.61	621.85	0.00
620.00	-195.61	621.85	0.00
620.05	-195.61	621.85	0.00
620.10	-195.26	621.85	0.00
620.15	-194.62	621.85	0.00
620.20	-193.79	621.85	0.00
620.25	-192.79	621.85	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-191.65	621.85	0.00
620.35	-190.38	621.85	0.00
620.40	-188.98	621.85	0.00
620.45	-187.45	621.85	0.00
620.50	-185.81	621.85	0.00
620.55	-184.05	621.85	0.00
620.60	-182.16	621.85	0.00
620.65	-180.16	621.85	0.00
620.70	-178.03	621.85	0.00
620.75	-175.77	621.85	0.00
620.80	-173.39	621.85	0.00
620.85	-170.86	621.85	0.00
620.90	-168.19	621.85	0.00
620.95	-165.37	621.85	0.00
621.00	-162.38	621.85	0.00
621.05	-159.22	621.85	0.00
621.10	-155.88	621.85	0.00
621.15	-152.33	621.85	0.00
621.20	-148.56	621.85	0.00
621.25	-144.54	621.85	0.00
621.30	-140.24	621.85	0.00
621.35	-135.62	621.85	0.00
621.40	-130.64	621.85	0.00
621.45	-125.24	621.85	0.00
621.50	-119.33	621.85	0.00
621.55	-112.79	621.85	0.00
621.60	-105.45	621.85	0.00
621.65	-97.05	621.85	0.00
621.70	-87.12	621.85	0.00
621.75	-74.74	621.85	0.00
621.80	-57.39	621.85	0.00
621.85	0.00	621.85	0.00
621.90	59.18	621.85	0.00
621.95	79.41	621.85	0.00
622.00	95.32	621.85	0.00

Contributing Structures
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Composite Outflow Summary

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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-203.82	621.90	0.00
618.05	-203.82	621.90	0.00
618.10	-203.82	621.90	0.00
618.15	-203.82	621.90	0.00
618.20	-203.82	621.90	0.00
618.25	-203.82	621.90	0.00
618.30	-203.82	621.90	0.00
618.35	-203.82	621.90	0.00
618.40	-203.82	621.90	0.00
618.45	-203.82	621.90	0.00
618.50	-203.82	621.90	0.00
618.55	-203.82	621.90	0.00
618.60	-203.82	621.90	0.00
618.65	-203.82	621.90	0.00
618.70	-203.82	621.90	0.00
618.75	-203.82	621.90	0.00
618.80	-203.82	621.90	0.00
618.85	-203.82	621.90	0.00
618.90	-203.82	621.90	0.00
618.95	-203.82	621.90	0.00
619.00	-203.82	621.90	0.00
619.05	-203.82	621.90	0.00
619.10	-203.82	621.90	0.00
619.15	-203.82	621.90	0.00
619.20	-203.82	621.90	0.00
619.25	-203.82	621.90	0.00
619.30	-203.82	621.90	0.00
619.35	-203.82	621.90	0.00
619.40	-203.82	621.90	0.00
619.45	-203.82	621.90	0.00
619.50	-203.82	621.90	0.00
619.55	-203.82	621.90	0.00
619.60	-203.82	621.90	0.00
619.65	-203.82	621.90	0.00
619.70	-203.82	621.90	0.00
619.75	-203.82	621.90	0.00
619.80	-203.82	621.90	0.00
619.85	-203.82	621.90	0.00
619.90	-203.82	621.90	0.00
619.95	-203.82	621.90	0.00
620.00	-203.82	621.90	0.00
620.05	-203.82	621.90	0.00
620.10	-203.47	621.90	0.00
620.15	-202.83	621.90	0.00
620.20	-201.99	621.90	0.00
620.25	-201.00	621.90	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-199.86	621.90	0.00
620.35	-198.59	621.90	0.00
620.40	-197.19	621.90	0.00
620.45	-195.67	621.90	0.00
620.50	-194.03	621.90	0.00
620.55	-192.28	621.90	0.00
620.60	-190.40	621.90	0.00
620.65	-188.41	621.90	0.00
620.70	-186.29	621.90	0.00
620.75	-184.05	621.90	0.00
620.80	-181.69	621.90	0.00
620.85	-179.18	621.90	0.00
620.90	-176.54	621.90	0.00
620.95	-173.76	621.90	0.00
621.00	-170.81	621.90	0.00
621.05	-167.71	621.90	0.00
621.10	-164.42	621.90	0.00
621.15	-160.95	621.90	0.00
621.20	-157.26	621.90	0.00
621.25	-153.35	621.90	0.00
621.30	-149.18	621.90	0.00
621.35	-144.73	621.90	0.00
621.40	-139.95	621.90	0.00
621.45	-134.80	621.90	0.00
621.50	-129.21	621.90	0.00
621.55	-123.10	621.90	0.00
621.60	-116.34	621.90	0.00
621.65	-108.77	621.90	0.00
621.70	-100.09	621.90	0.00
621.75	-89.85	621.90	0.00
621.80	-77.07	621.90	0.00
621.85	-59.18	621.90	0.00
621.90	0.00	621.90	0.00
621.95	60.97	621.90	0.00
622.00	81.75	621.90	0.00

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Contributing Structures
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Composite Outflow Summary

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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-212.14	621.95	0.00
618.05	-212.14	621.95	0.00
618.10	-212.14	621.95	0.00
618.15	-212.14	621.95	0.00
618.20	-212.14	621.95	0.00
618.25	-212.14	621.95	0.00
618.30	-212.14	621.95	0.00
618.35	-212.14	621.95	0.00
618.40	-212.14	621.95	0.00
618.45	-212.14	621.95	0.00
618.50	-212.14	621.95	0.00
618.55	-212.14	621.95	0.00
618.60	-212.14	621.95	0.00
618.65	-212.14	621.95	0.00
618.70	-212.14	621.95	0.00
618.75	-212.14	621.95	0.00
618.80	-212.14	621.95	0.00
618.85	-212.14	621.95	0.00
618.90	-212.14	621.95	0.00
618.95	-212.14	621.95	0.00
619.00	-212.14	621.95	0.00
619.05	-212.14	621.95	0.00
619.10	-212.14	621.95	0.00
619.15	-212.14	621.95	0.00
619.20	-212.14	621.95	0.00
619.25	-212.14	621.95	0.00
619.30	-212.14	621.95	0.00
619.35	-212.14	621.95	0.00
619.40	-212.14	621.95	0.00
619.45	-212.14	621.95	0.00
619.50	-212.14	621.95	0.00
619.55	-212.14	621.95	0.00
619.60	-212.14	621.95	0.00
619.65	-212.14	621.95	0.00
619.70	-212.14	621.95	0.00
619.75	-212.14	621.95	0.00
619.80	-212.14	621.95	0.00
619.85	-212.14	621.95	0.00
619.90	-212.14	621.95	0.00
619.95	-212.14	621.95	0.00
620.00	-212.14	621.95	0.00
620.05	-212.14	621.95	0.00
620.10	-211.79	621.95	0.00
620.15	-211.15	621.95	0.00
620.20	-210.31	621.95	0.00
620.25	-209.32	621.95	0.00

Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-208.18	621.95	0.00
620.35	-206.91	621.95	0.00
620.40	-205.52	621.95	0.00
620.45	-204.00	621.95	0.00
620.50	-202.37	621.95	0.00
620.55	-200.62	621.95	0.00
620.60	-198.75	621.95	0.00
620.65	-196.77	621.95	0.00
620.70	-194.66	621.95	0.00
620.75	-192.44	621.95	0.00
620.80	-190.09	621.95	0.00
620.85	-187.61	621.95	0.00
620.90	-185.00	621.95	0.00
620.95	-182.24	621.95	0.00
621.00	-179.34	621.95	0.00
621.05	-176.28	621.95	0.00
621.10	-173.05	621.95	0.00
621.15	-169.63	621.95	0.00
621.20	-166.03	621.95	0.00
621.25	-162.21	621.95	0.00
621.30	-158.15	621.95	0.00
621.35	-153.84	621.95	0.00
621.40	-149.23	621.95	0.00
621.45	-144.29	621.95	0.00
621.50	-138.97	621.95	0.00
621.55	-133.20	621.95	0.00
621.60	-126.88	621.95	0.00
621.65	-119.91	621.95	0.00
621.70	-112.09	621.95	0.00
621.75	-103.14	621.95	0.00
621.80	-92.58	621.95	0.00
621.85	-79.41	621.95	0.00
621.90	-60.97	621.95	0.00
621.95	0.00	621.95	0.00
622.00	62.76	621.95	0.00

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve — Return Event: 1 years
Label: Infiltration Basin Overflow — Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
618.00	-220.57	622.00	0.00
618.05	-220.57	622.00	0.00
618.10	-220.57	622.00	0.00
618.15	-220.57	622.00	0.00
618.20	-220.57	622.00	0.00
618.25	-220.57	622.00	0.00
618.30	-220.57	622.00	0.00
618.35	-220.57	622.00	0.00
618.40	-220.57	622.00	0.00
618.45	-220.57	622.00	0.00
618.50	-220.57	622.00	0.00
618.55	-220.57	622.00	0.00
618.60	-220.57	622.00	0.00
618.65	-220.57	622.00	0.00
618.70	-220.57	622.00	0.00
618.75	-220.57	622.00	0.00
618.80	-220.57	622.00	0.00
618.85	-220.57	622.00	0.00
618.90	-220.57	622.00	0.00
618.95	-220.57	622.00	0.00
619.00	-220.57	622.00	0.00
619.05	-220.57	622.00	0.00
619.10	-220.57	622.00	0.00
619.15	-220.57	622.00	0.00
619.20	-220.57	622.00	0.00
619.25	-220.57	622.00	0.00
619.30	-220.57	622.00	0.00
619.35	-220.57	622.00	0.00
619.40	-220.57	622.00	0.00
619.45	-220.57	622.00	0.00
619.50	-220.57	622.00	0.00
619.55	-220.57	622.00	0.00
619.60	-220.57	622.00	0.00
619.65	-220.57	622.00	0.00
619.70	-220.57	622.00	0.00
619.75	-220.57	622.00	0.00
619.80	-220.57	622.00	0.00
619.85	-220.57	622.00	0.00
619.90	-220.57	622.00	0.00
619.95	-220.57	622.00	0.00
620.00	-220.57	622.00	0.00
620.05	-220.57	622.00	0.00
620.10	-220.22	622.00	0.00
620.15	-219.58	622.00	0.00
620.20	-218.74	622.00	0.00
620.25	-217.75	622.00	0.00

Subsection: Composite Rating Curve | Return Event: 1 years
Label: Infiltration Basin Overflow | Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
620.30	-216.61	622.00	0.00
620.35	-215.34	622.00	0.00
620.40	-213.95	622.00	0.00
620.45	-212.44	622.00	0.00
620.50	-210.81	622.00	0.00
620.55	-209.07	622.00	0.00
620.60	-207.21	622.00	0.00
620.65	-205.23	622.00	0.00
620.70	-203.14	622.00	0.00
620.75	-200.93	622.00	0.00
620.80	-198.60	622.00	0.00
620.85	-196.14	622.00	0.00
620.90	-193.55	622.00	0.00
620.95	-190.82	622.00	0.00
621.00	-187.95	622.00	0.00
621.05	-184.93	622.00	0.00
621.10	-181.75	622.00	0.00
621.15	-178.40	622.00	0.00
621.20	-174.86	622.00	0.00
621.25	-171.12	622.00	0.00
621.30	-167.17	622.00	0.00
621.35	-162.97	622.00	0.00
621.40	-158.51	622.00	0.00
621.45	-153.75	622.00	0.00
621.50	-148.65	622.00	0.00
621.55	-143.15	622.00	0.00
621.60	-137.19	622.00	0.00
621.65	-130.68	622.00	0.00
621.70	-123.49	622.00	0.00
621.75	-115.43	622.00	0.00
621.80	-106.20	622.00	0.00
621.85	-95.32	622.00	0.00
621.90	-81.75	622.00	0.00
621.95	-62.76	622.00	0.00
622.00	0.00	622.00	0.00

Contributing Structures
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Subsection: Composite Rating Curve
Label: Infiltration Basin Overflow
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
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Composite Outflow Summary

Contributing Structures
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Stormwater Hydrologic Calculations

Subsection: Composite Rating Curve — Return Event: 1 years
Label: Permeable Asphalt — Storm Event: 1 year
Scenario: Post-Development 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
634.32	0.00	(N/A)	0.00
634.82	0.00	(N/A)	0.00
635.32	0.00	(N/A)	0.00
635.82	26.52	(N/A)	0.00
636.00	42.06	(N/A)	0.00

Contributing Structures
None Contributing
None Contributing
Weir - 1
Weir - 1
Weir - 1

Stormwater Hydrologic Calculations

Subsection: Interconnected Pond Routing Summary
Label: DB-1C-2B
Scenario: Post-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	620.00	ft	Flow Tolerance (Minimum)	0.000	ft^3/s
Volume (Starting)	0	ft^3	Maximum Iterations	35	
Outflow (Starting)	0.00	ft^3/s	ICPM Time Step	0.050	hours

	Maximum Storage	
Time to Peak (hours)	Elevation (ft)	Volume (ft^3)
0.000	620.00	0

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft^3/s)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Pond Inflow....	0.000	0.00	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft^3)	Direction	Volume (ft^3)	Direction
Pond Inflow....	0	Forward	0	Reverse
Pond Outflow...	0	Reverse	0	Forward

Mass Balance (ft^3)	
Volume (Initial ICPM)	0 ft^3
Volume (Total In ICPM)	0 ft^3
Volume (Total Out ICPM)	0 ft^3
Volume (Ending)	0 ft^3
Elevation (Ending)	620.00 ft
Difference	0 ft^3
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Stormwater Hydrologic Calculations

Subsection: Interconnected Pond Routing Summary — Return Event: 10 years
Label: DB-1C-2B — Storm Event: 10 year
Scenario: Post-Development 10 year

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	620.00	ft	Flow Tolerance (Minimum)	0.000	ft³/s
Volume (Starting)	0	ft³	Maximum Iterations	35	
Outflow (Starting)	0.00	ft³/s	ICPM Time Step	0.050	hours

	Maximum Storage	
Time to Peak (hours)	Elevation (ft)	Volume (ft³)
12.450	620.81	11,413

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft³/s)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Pond Inflow....	12.200	25.81	0.000	0.00
Pond Outflow...	12.450	13.23	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft³)	Direction	Volume (ft³)	Direction
Pond Inflow....	60,324	Forward	0	Reverse
Pond Outflow...	0	Reverse	60,317	Forward

Mass Balance (ft³)	
Volume (Initial ICPM)	0 ft³
Volume (Total In ICPM)	60,324 ft³
Volume (Total Out ICPM)	60,317 ft³
Volume (Ending)	7 ft³
Elevation (Ending)	620.00 ft
Difference	0 ft³
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Stormwater Hydrologic Calculations

Subsection: Interconnected Pond Routing Summary — Return Event: 25 years
Label: DB-1C-2B — Storm Event: 25 year
Scenario: Post-Development 25 year

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	620.00	ft	Flow Tolerance (Minimum)	0.000	ft³/s
Volume (Starting)	0	ft³	Maximum Iterations	35	
Outflow (Starting)	0.00	ft³/s	ICPM Time Step	0.050	hours

	Maximum Storage	
Time to Peak (hours)	Elevation (ft)	Volume (ft³)
12.400	621.22	17,105

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft³/s)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Pond Inflow....	12.150	37.00	0.000	0.00
Pond Outflow...	12.400	24.26	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft³)	Direction	Volume (ft³)	Direction
Pond Inflow....	105,797	Forward	0	Reverse
Pond Outflow...	0	Reverse	105,787	Forward

Mass Balance (ft³)	
Volume (Initial ICPM)	0 ft³
Volume (Total In ICPM)	105,797 ft³
Volume (Total Out ICPM)	105,787 ft³
Volume (Ending)	10 ft³
Elevation (Ending)	620.00 ft
Difference	0 ft³
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Stormwater Hydrologic Calculations

Subsection: Interconnected Pond Routing Summary | Return Event: 100 years
Label: DB-1C-2B | Storm Event: 100 year
Scenario: Post-Development 100 year

Infiltration

Infiltration Method (Computed)	No Infiltration

Initial Conditions / Calculation Tolerances

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	620.00	ft	Flow Tolerance (Minimum)	0.000	ft³/s
Volume (Starting)	0	ft³	Maximum Iterations	35	
Outflow (Starting)	0.00	ft³/s	ICPM Time Step	0.050	hours

	Maximum Storage	
Time to Peak (hours)	Elevation (ft)	Volume (ft³)
12.300	621.90	26,660

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft³/s)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Pond Inflow....	12.150	60.09	0.000	0.00
Pond Outflow...	12.300	50.68	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft³)	Direction	Volume (ft³)	Direction
Pond Inflow....	210,756	Forward	0	Reverse
Pond Outflow...	0	Reverse	210,730	Forward

Mass Balance (ft³)

Volume (Initial ICPM)	0 ft³
Volume (Total In ICPM)	210,756 ft³
Volume (Total Out ICPM)	210,730 ft³
Volume (Ending)	25 ft³
Elevation (Ending)	620.00 ft
Difference	1 ft³
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Stormwater Hydrologic Calculations

Subsection: Interconnected Pond Routing Summary | Return Event: 1 years
Label: IB-1C-2B | Storm Event: 1 year
Scenario: Post-Development 1 year

Infiltration

Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	1.65 ft³/s

Initial Conditions

Elevation (Starting Water Surface Computed)	618.00	ft
Volume (Starting)	0	ft³
Infiltration (Starting ICPM)	0.00	ft³/s
Outflow (Starting)	0.00	ft³/s

Calculation Tolerances

Flow Tolerance (Minimum)	0.000	ft³/s
Maximum Iterations	35	
ICPM Time Step	0.050	hours
Output Increment	0.050	hours

Time to Peak (hours)	Maximum Storage Elevation (ft)	Maximum Storage Volume (ft³)
23.900	619.85	18,516

	Forward Flow Peaks Time to Peak (hours)	Forward Flow Peaks Flow (Peak) (ft³/s)	Reverse Flow Peaks Time to Peak (hours)	Reverse Flow Peaks Flow (Peak) (ft³/s)
Pond Inflow....	12.150	13.03	0.000	0.00
Infiltration...	11.800	1.65	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00

	Total Volume In Volume (ft³)	Total Volume In Direction	Total Volume Out Volume (ft³)	Total Volume Out Direction
Pond Inflow....	51,301	Forward	0	Reverse
Infiltration...	0	Reverse	32,764	Forward
Pond Outflow...	0	Reverse	0	Forward

Mass Balance (ft³)

Volume (Initial ICPM)	0 ft³
Volume (Total In ICPM)	51,301 ft³
Volume (Total Out ICPM)	32,764 ft³
Volume (Ending)	18,516 ft³
Elevation (Ending)	619.85 ft
Difference	21 ft³
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Stormwater Hydrologic Calculations

Subsection: Interconnected Pond Routing Summary	Return Event: 10 years
Label: IB-1C-2B	Storm Event: 10 year
Scenario: Post-Development 10 year	

Infiltration

Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	1.65 ft³/s

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	618.00	ft	Flow Tolerance (Minimum)	0.000	ft³/s
Volume (Starting)	0	ft³	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft³/s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft³/s	Output Increment	0.050	hours

Time to Peak (hours)	Maximum Storage Elevation (ft)	Maximum Storage Volume (ft³)
12.500	620.84	32,425

	Forward Flow Peaks Time to Peak (hours)	Forward Flow Peaks Flow (Peak) (ft³/s)	Reverse Flow Peaks Time to Peak (hours)	Reverse Flow Peaks Flow (Peak) (ft³/s)
Pond Inflow....	12.150	36.90	0.000	0.00
Infiltration...	10.950	1.65	0.000	0.00
Pond Outflow...	12.200	25.81	0.000	0.00

	Total Volume In Volume (ft³)	Total Volume In Direction	Total Volume Out Volume (ft³)	Total Volume Out Direction
Pond Inflow....	142,766	Forward	0	Reverse
Infiltration...	0	Reverse	61,589	Forward
Pond Outflow...	0	Reverse	60,324	Forward

Mass Balance (ft³)

Volume (Initial ICPM)	0 ft³
Volume (Total In ICPM)	142,766 ft³
Volume (Total Out ICPM)	121,914 ft³
Volume (Ending)	20,806 ft³
Elevation (Ending)	620.05 ft
Difference	47 ft³
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Stormwater Hydrologic Calculations

Subsection: Interconnected Pond Routing Summary | Return Event: 25 years
Label: IB-1C-2B | Storm Event: 25 year
Scenario: Post-Development 25 year

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	1.65 ft³/s

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	618.00	ft	Flow Tolerance (Minimum)	0.000	ft³/s
Volume (Starting)	0	ft³	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft³/s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft³/s	Output Increment	0.050	hours

	Maximum Storage	
Time to Peak (hours)	Elevation (ft)	Volume (ft³)
12.400	621.25	38,448

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft³/s)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Pond Inflow....	12.150	51.35	0.000	0.00
Infiltration...	10.250	1.65	0.000	0.00
Pond Outflow...	12.150	37.00	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft³)	Direction	Volume (ft³)	Direction
Pond Inflow....	200,273	Forward	0	Reverse
Infiltration...	0	Reverse	73,610	Forward
Pond Outflow...	0	Reverse	105,797	Forward

Mass Balance (ft³)	
Volume (Initial ICPM)	0 ft³
Volume (Total In ICPM)	200,273 ft³
Volume (Total Out ICPM)	179,408 ft³
Volume (Ending)	20,806 ft³
Elevation (Ending)	620.05 ft
Difference	59 ft³
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Stormwater Hydrologic Calculations

Subsection: Interconnected Pond Routing Summary — Return Event: 100 years
Label: IB-1C-2B — Storm Event: 100 year
Scenario: Post-Development 100 year

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	1.65 ft³/s

Initial Conditions		
Elevation (Starting Water Surface Computed)	618.00	ft
Volume (Starting)	0	ft³
Infiltration (Starting ICPM)	0.00	ft³/s
Outflow (Starting)	0.00	ft³/s

Calculation Tolerances		
Flow Tolerance (Minimum)	0.000	ft³/s
Maximum Iterations	35	
ICPM Time Step	0.050	hours
Output Increment	0.050	hours

Time to Peak (hours)	Maximum Storage Elevation (ft)	Maximum Storage Volume (ft³)
12.350	621.94	48,603

	Forward Flow Peaks Time to Peak (hours)	Forward Flow Peaks Flow (Peak) (ft³/s)	Reverse Flow Peaks Time to Peak (hours)	Reverse Flow Peaks Flow (Peak) (ft³/s)
Pond Inflow....	12.150	81.27	0.000	0.00
Infiltration...	8.950	1.65	0.000	0.00
Pond Outflow...	12.150	60.09	0.000	0.00

	Total Volume In Volume (ft³)	Total Volume In Direction	Total Volume Out Volume (ft³)	Total Volume Out Direction
Pond Inflow....	323,300	Forward	0	Reverse
Infiltration...	0	Reverse	91,646	Forward
Pond Outflow...	0	Reverse	210,756	Forward

Mass Balance (ft³)	
Volume (Initial ICPM)	0 ft³
Volume (Total In ICPM)	323,300 ft³
Volume (Total Out ICPM)	302,401 ft³
Volume (Ending)	20,807 ft³
Elevation (Ending)	620.05 ft
Difference	92 ft³
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Stormwater Hydrologic Calculations

Subsection: Elevation-Volume-Flow Table (Pond) Return Event: 1 years
Label: Permeable Asphalt Storm Event: 1 year
Scenario: Post-Development 1 year

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.82 ft³/s

Initial Conditions	
Elevation (Water Surface, Initial)	634.32 ft
Volume (Initial)	0 ft³
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft³/s)	Storage (ft³)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
634.32	0.00	0	0	0.00	0.00	0.00
634.82	0.00	3,534	0	0.82	0.82	40.09
635.32	0.00	7,068	0	0.82	0.82	79.35
635.82	26.52	10,601	0	0.82	27.34	145.13
636.00	42.06	11,873	0	0.82	42.88	174.80

Stormwater Hydrologic Calculations

Subsection: Level Pool Pond Routing Summary | Return Event: 1 years
Label: Permeable Asphalt (IN) | Storm Event: 1 year
Scenario: Post-Development 1 year

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.82 ft³/s

Initial Conditions	
Elevation (Water Surface, Initial)	634.32 ft
Volume (Initial)	0 ft³
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	0.94 ft³/s	Time to Peak (Flow, In)	12.100 hours
Infiltration (Peak)	0.29 ft³/s	Time to Peak (Infiltration)	12.400 hours
Flow (Peak Outlet)	0.00 ft³/s	Time to Peak (Flow, Outlet)	0.000 hours

Elevation (Water Surface, Peak)	634.50 ft
Volume (Peak)	1,268 ft³

Mass Balance (ft³)	
Volume (Initial)	0 ft³
Volume (Total Inflow)	3,781 ft³
Volume (Total Infiltration)	3,733 ft³
Volume (Total Outlet Outflow)	0 ft³
Volume (Retained)	47 ft³
Volume (Unrouted)	0 ft³
Error (Mass Balance)	0.0 %

Stormwater Hydrologic Calculations

Subsection: Level Pool Pond Routing Summary — Return Event: 10 years
Label: Permeable Asphalt (IN) — Storm Event: 10 year
Scenario: Post-Development 10 year

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.82 ft³/s

Initial Conditions	
Elevation (Water Surface, Initial)	634.32 ft
Volume (Initial)	0 ft³
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	1.74 ft³/s	Time to Peak (Flow, In)	12.100 hours
Infiltration (Peak)	0.55 ft³/s	Time to Peak (Infiltration)	12.400 hours
Flow (Peak Outlet)	0.00 ft³/s	Time to Peak (Flow, Outlet)	0.000 hours

Elevation (Water Surface, Peak)	634.65 ft
Volume (Peak)	2,357 ft³

Mass Balance (ft³)	
Volume (Initial)	0 ft³
Volume (Total Inflow)	7,185 ft³
Volume (Total Infiltration)	7,099 ft³
Volume (Total Outlet Outflow)	0 ft³
Volume (Retained)	86 ft³
Volume (Unrouted)	0 ft³
Error (Mass Balance)	0.0 %

Stormwater Hydrologic Calculations

Subsection: Level Pool Pond Routing Summary — Return Event: 25 years
Label: Permeable Asphalt (IN) — Storm Event: 25 year
Scenario: Post-Development 25 year

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.82 ft³/s

Initial Conditions	
Elevation (Water Surface, Initial)	634.32 ft
Volume (Initial)	0 ft³
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	2.20 ft³/s	Time to Peak (Flow, In)	12.100 hours
Infiltration (Peak)	0.69 ft³/s	Time to Peak (Infiltration)	12.400 hours
Flow (Peak Outlet)	0.00 ft³/s	Time to Peak (Flow, Outlet)	0.000 hours

Elevation (Water Surface, Peak)	634.74 ft
Volume (Peak)	2,974 ft³

Mass Balance (ft³)	
Volume (Initial)	0 ft³
Volume (Total Inflow)	9,126 ft³
Volume (Total Infiltration)	9,017 ft³
Volume (Total Outlet Outflow)	0 ft³
Volume (Retained)	109 ft³
Volume (Unrouted)	0 ft³
Error (Mass Balance)	0.0 %

Stormwater Hydrologic Calculations

Subsection: Level Pool Pond Routing Summary — Return Event: 100 years
Label: Permeable Asphalt (IN) — Storm Event: 100 year
Scenario: Post-Development 100 year

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.82 ft³/s

Initial Conditions	
Elevation (Water Surface, Initial)	634.32 ft
Volume (Initial)	0 ft³
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	3.12 ft³/s	Time to Peak (Flow, In)	12.100 hours
Infiltration (Peak)	0.82 ft³/s	Time to Peak (Infiltration)	12.150 hours
Flow (Peak Outlet)	0.00 ft³/s	Time to Peak (Flow, Outlet)	0.000 hours

Elevation (Water Surface, Peak)	634.94 ft
Volume (Peak)	4,365 ft³

Mass Balance (ft³)	
Volume (Initial)	0 ft³
Volume (Total Inflow)	13,096 ft³
Volume (Total Infiltration)	12,942 ft³
Volume (Total Outlet Outflow)	0 ft³
Volume (Retained)	154 ft³
Volume (Unrouted)	0 ft³
Error (Mass Balance)	0.0 %

Subsection: Pond Inflow Summary | Return Event: 1 years
Label: Permeable Asphalt (IN) | Storm Event: 1 year
Scenario: Post-Development 1 year

Summary for Hydrograph Addition at 'Permeable Asphalt'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Permeable Asphalt

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	Permeable Asphalt	3,781	12.100	0.94
Flow (In)	Permeable Asphalt	3,781	12.100	0.94

Subsection: Pond Inflow Summary
Label: Permeable Asphalt (IN)
Scenario: Post-Development 10 year

Return Event: 10 years
Storm Event: 10 year

Summary for Hydrograph Addition at 'Permeable Asphalt'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Permeable Asphalt

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	Permeable Asphalt	7,185	12.100	1.74
Flow (In)	Permeable Asphalt	7,185	12.100	1.74

Subsection: Pond Inflow Summary
Label: Permeable Asphalt (IN)
Scenario: Post-Development 25 year

Return Event: 25 years
Storm Event: 25 year

Summary for Hydrograph Addition at 'Permeable Asphalt'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Permeable Asphalt

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	Permeable Asphalt	9,126	12.100	2.20
Flow (In)	Permeable Asphalt	9,126	12.100	2.20

Subsection: Pond Inflow Summary
Label: Permeable Asphalt (IN)
Scenario: Post-Development 100 year

Return Event: 100 years
Storm Event: 100 year

Summary for Hydrograph Addition at 'Permeable Asphalt'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Permeable Asphalt

Node Inflows

Inflow Type	Element	Volume (ft³)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	Permeable Asphalt	13,096	12.100	3.12
Flow (In)	Permeable Asphalt	13,096	12.100	3.12

APPENDIX B

NYSDEC STORMWATER SIZING CALCULATIONS

RUNOFF REDUCTION VOLUME, WATER QUALITY VOLUME AND STREAM CHANNEL PROTECTION SIZING CALCULATIONS

The Summit Club at Armonk

Bedford Road

Town of North Castle, NY

JMC Project: **20101**

Drawing Reference: **DA-1, DA-2**

Computed by: **MT**

Checked by: **XX**

Date Printed: 6/8/2021

WATER QUALITY VOLUME WORKSHEET
FOR REDEVELOPMENT PROJECTS

JMC Project:	**20101**
Design Point:	**1C**

The Summit Club at Armonk	Drainage Area:	**PDA-1C-2A/B**

Initial Water Quality Treatment Volume

DESCRIPTION	Design Storm	Area	Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I_E	I_N	%I	R_V	WQ_V
VALUE	1.5	18.90	4.42	5.05	50.10	0.500869548	**51,549**
UNITS	In	Ac	Ac	Ac	%	CF	CF
VALUE	Enhanced Phosphorus Removal (WQ_V = 1-yr Storm Runoff)						

Runoff Reduction Techniques (Area)

DESCRIPTION	Total Area	Impervious Area
SYMBOL	A	I
Conservation of Natural Areas		
Sheetflow to Riparian Buffers or Filter Strips		
Vegetated Swale		
Tree Planting / Tree Pit		
Disconnection of Rooftop Runoff		
Stream Daylighting		
TOTAL		
UNITS	Ac	Ac

Adjusted Water Quality Treatment Volume from Runoff Reduction Techniques

DESCRIPTION	Design Storm	Area	Adjusted Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I_{EA}	I_N	%I	R_V	WQ_V
VALUE	1.5	18.90	4.42	5.05	50.10	0.500869548	**51,549**
UNITS	In	Ac	Ac	Ac	%	CF	CF
VALUE	Enhanced Phosphorus Removal (WQ_V = 1-yr Storm Runoff)						

Net Water Quality Treatment Volume = Adjusted WQv - Provided RRv

Initial Water Quality Treatment Volume	51,549	CF
Adjusted Water Quality Treatment Volume	51,549	CF
Provided Runoff Reduction Volume	53,399	CF
Net Water Quality Treatment Volume	-1,850	CF

Date Printed: 6/8/2021

RUNOFF REDUCTION VOLUME WORKSHEET

JMC Project:	**20101**
Design Point:	**1C**

The Summit Club at Armonk	Drainage Area:	**PDA-1C-2A/B**

Total Water Quality Treatment Volume			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Initial Water Quality Volume	WQ_V	**51,549**	CF
Adjusted Water Quality Volume	WQ_V	**51,549**	CF

Minimum Runoff Reduction Volume			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	1.5	In
Total Area of *new* Impervious Cover	Aic	5.05	Ac
Hydrologic Soil Group (HSG) Specific Reduction Factor	S	0.35	
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.95	CF
Impervious Cover targeted for Runoff Reduction [S x Aic]	Ai	1.77	Ac
TOTAL VOLUME Required [RR_V = (P x R_V x Ai) / 12]	RR_V	**9,134**	CF

Runoff Reduction Techniques (Volume)			
GREEN INFRASTRUCTURE PRACTICE / SMP	*SYMBOL*	*VALUE*	*UNITS*
Permeable Asphalt	RR_V	2,098	CF
Infiltration Basin 1C-2B	RR_V	51,301	CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
TOTAL	RR_V	**53,399**	CF

Runoff Reduction	
Is Total RR_V > Adjusted WQ_V ?	**YES**
Is Total RR_V > Minimum RR_V ?	**YES**

Date Printed: 6/8/2021

INFILTRATION WORKSHEET

JMC Project:	**20101**
Design Point:	**1C**
Drainage Area:	**PDA-1C-2A**

Permeable Asphalt

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	0.41	Ac
Area	A	0.41	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.95	CF
TOTAL VOLUME Required [WQ_V = (P x R_V x A) / 12]	WQ_V	**2,098**	CF

Minimum Porous Pavement Area			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Volume	WQ_V	2,098	CF
Porosity	*n*	0.40	Ft / Day
Trench Depth	d_t	1.00	Ft
Surface Area Required [$A_R = WQ_v / (n \times d_t)$]	A_R	**5,245**	SF

Proposed Porous Pavement			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Surface Area of Porous Pavement Provided [A_p]	A_p	**17,669**	SF
Actual Volume Provided	WQ_{VP}	7,068	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
100% Runoff Reduction capacity	RR_V	**2,098**	CF

INFILTRATION WORKSHEET

JMC Project:	**20101**
Design Point:	**1C**
Drainage Area:	**PDA-1C-2B**

Infiltration Basin 1C-2B

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	3.74	Ac
Area	A	12.63	Ac
Percent Impervious	%I	29.66	%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.32	CF
TOTAL VOLUME Required [WQ_V = (P x R_V x A) / 12]	WQ_V	**21,785**	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required *(TMDL)* [WQ_V = 1-yr Storm Runoff]	WQ_V		CF

Water Quality Volume Provided			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
1 Year Storm Entering System	Q_1 IN	51,301	CF
1 Year Storm Exiting System	Q_1OUT	0	CF
Runoff Volume Infiltrated		**51,301**	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
100% Runoff Reduction capacity	RR_V	**51,301**	CF
Total Area of Infiltration Basin Provided	A_p	**13,231.00**	SF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
90% Runoff Reduction capacity	RR_V	**51,301**	CF

PROPRIETARY PRACTICE WORKSHEET

JMC Project:	**20101**
Design Point:	**1C**
Drainage Area:	**PDA-1C-2B**

Water Quality Structure 4A

Rainfall Distribution Type:	**III**

Coefficients for the equation unit peak $[R = I_a / P]$ $[C_i = A \times R^2 + B \times R + C]$		**A**	**B**	**C**
	C_0	-1.774	0.3301	2.4577
	C_1	1.8622	-0.7397	-0.4627
	C_2	-0.0648	0.2276	-0.1932

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	2.22	Ac
Area	A	3.79	Ac
Percent Impervious	%I	58.57	%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.58	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**11,896**	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required *(TMDL)* [WQ_V = 1-yr Storm Runoff]	WQ_V		CF

Water Quality Peak Flow Calculation

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Volume	WQ_V	11,896	CF
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	1.5	In
Time of Concentration	t_c	0.1667	Hr
Runoff Volume [$Q = WQ_V / (A \times 3630)$]	Q	0.87	In
Curve Number [$CN = 1000 / (10 + 5P + 10Q - 10 \times (Q^2 + 1.25\,QP)^{½}$]	CN	92.99	
Curve Number	CN	93	
Initial Abstraction [$I_a = 200 / CN - 2$]	I_a	0.15	In
Ratio [$R = I_a / P$]	R	0.10	
$C_0 = A \times R^2 + B \times R + C$	C_0	2.47	
C_1 = A x R2 + B x R + C	C_1	-0.52	
C_2 = A x R2 + B x R + C	C_2	-0.17	
Unit Peak Discharge	q_u	592.50	cfs/mi^2/in
Peak Discharge [$Q_p = q_u \times A \times Q / 640$]	Q_p	**3.03**	cfs

Proposed Device

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Peak Flow Provided	Q_p	**3.5**	cfs
Water Quality Volume Provided [$WQ_V = 640 \times 3600 \times Q_P / q_u$]	WQ_V	**13,610**	CF
Model Designation		CS-5	
Quantity		1	

Date Printed: 6/8/2021

PROPRIETARY PRACTICE WORKSHEET

JMC Project:	**20101**
Design Point:	**1C**
Drainage Area:	**PDA-1C-2B**

Water Quality Structure 4B

Rainfall Distribution Type: **III**

		A	B	C
Coefficients for the equation unit peak	C_0	-1.774	0.3301	2.4577
$[R = I_a / P]$	C_1	1.8622	-0.7397	-0.4627
$[C_i = A \times R^2 + B \times R + C]$	C_2	-0.0648	0.2276	-0.1932

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	3.51	Ac
Area	A	8.06	Ac
Percent Impervious	%I	43.54	%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.44	CF
TOTAL VOLUME Required $[WQ_V = (P \times R_V \times A) / 12]$	WQ_V	**19,394**	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required *(TMDL)* $[WQ_V$ = 1-yr Storm Runoff]	WQ_V		CF

Water Quality Peak Flow Calculation

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Volume	WQ_V	19,394	CF
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	1.5	In
Time of Concentration	t_c	0.1667	Hr
Runoff Volume $[Q = WQ_V / (A \times 3630)]$	Q	0.66	In
Curve Number $[CN = 1000 / (10 + 5P + 10Q - 10 \times (Q^2 + 1.25\,QP)^{½}]$	CN	89.62	
Curve Number	CN	90	
Initial Abstraction $[I_a = 200 / CN - 2]$	I_a	0.23	In
Ratio $[R = I_a / P]$	R	0.15	
$C_0 = A \times R^2 + B \times R + C$	C_0	2.47	
C_1 = A x R2 + B x R + C	C_1	-0.53	
C_2 = A x R2 + B x R + C	C_2	-0.16	
Unit Peak Discharge	q_u	608.30	$cfs/mi^2/in$
Peak Discharge $[Q_p = q_u \times A \times Q / 640]$	Q_p	**5.08**	cfs

Proposed Device

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Peak Flow Provided	Q_p	**5.6**	cfs
Water Quality Volume Provided $[WQ_V = 640 \times 3600 \times Q_P / q_u]$	WQ_V	**21,211**	CF
Model Designation		CS-6	
Quantity		1	

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APPENDIX C

SOIL TESTING DATA

CARLIN • SIMPSON & ASSOCIATES
Consulting Geotechnical and Environmental Engineers

61 Main Street, Sayreville, New Jersey 08872
Tel. (732) 432-5757
Fax. (732) 432-5717

Principal:
Robert B. Simpson, P.E.

Associates:
Robert H. Barnes, P.E.
Meredith R. Anke, P.E.
Kurt W. Anke
Eric J. Shaw

13 February 2013
Revised 16 October 2013

Brynwood Partners, LLC
c/o Corigin Holdings
505 Fifth Avenue, 22nd Floor
New York, NY 10017

Attn: Ms. Megan Maciejowski

Re: Report on Subsurface Soil and Foundation Investigation
Brynwood Club Development
Bedford Road
Town of North Castle, NY (12-175)

Dear Ms. Maciejowski:

In accordance with our proposals dated 20 November 2012 and 9 September 2013 and your subsequent authorization, we have completed a Subsurface Soil and Foundation Investigation for the referenced site. The purpose of this study is to preliminarily determine the nature and engineering properties of the subsurface soil and bedrock as well as the groundwater conditions for the planned development, to recommend a practical foundation scheme, to determine the allowable bearing capacity of the site soils, and to determine the subsurface soil and groundwater conditions and soil permeability in the new stormwater management areas.

We understand that the planned construction will consist of 21 new structures, roadways, parking areas, retaining walls, tennis courts, underground utilities, and a stormwater management system. To guide us in our study, you have provided us with a site plan that indicates the existing site conditions and the location of the planned new development.

Our scope of work for this project included the following:

1. Reviewed the proposed layout, the existing site conditions, the expected soil conditions, and planned this study.

2. Retained General Borings, Inc. to advance 11 test borings at the subject site.

3. Retained Traficante Contracting Inc. to excavate 18 test pits at the subject site.

4. Inspected ten (10) supplemental test pits that were excavated at the site by Brynwood Club personnel.

5. Laid out the boring and test pit locations in the field, provided full time inspection of the explorations, obtained soil samples, and prepared detailed logs and a Boring and Test Pit Location Plan.

6. Performed three (3) field percolation tests and one (1) borehole permeability test.

7. Performed soil identification tests on selected soil samples in our laboratory.

8. Analyzed the field and laboratory test data and prepared this report containing the results of this study.

SITE DESCRIPTION

The project site is located on the Brynwood Club property on Bedford Road in North Castle, Westchester County, New York. The subject property is currently occupied by a golf club with a clubhouse building, tennis courts, and a few smaller out-structures. The proposed development area is also occupied by an asphalt paved parking lot and driveways as well as grass lawn areas and wooded areas. There are numerous existing underground utilities located throughout the property.

Within the proposed development area, the existing site grades vary from approximately elevation +610.0 at the southwest corner of the subject site and the westernmost portion of the site, to elevation +640.0 on the east side of the existing clubhouse building, to elevation +674.5 in the existing tennis court area in the northeastern portion of the property.

SUBSURFACE CONDITIONS

To determine the subsurface soil, bedrock, and groundwater conditions, we advanced 11 test borings and 28 test pits at the site. The borings and test pits were performed at the locations shown on the enclosed Boring and Test Pit Location Plan. Detailed logs have been prepared and are included in this report. Our field engineer visually identified all soil samples and selected soil samples were tested in our laboratory. The results of these tests are also included in this report.

Soil

The soil descriptions shown on the boring and test pit logs are based on the Burmister Classification System. In this system, the soil is divided into three components: Sand (S), Silt ($) and Gravel (G). The major component is indicated in all capital letters, the lesser in lower case letters. The following modifiers indicate the quantity of each lesser component:

Modifier	Quantity
trace (t)	0 -10%
little (l)	10% - 20%
some (s)	20% - 35%
and (a)	35% - 50%

The subsurface soil conditions observed in the borings and test pits can be summarized as follows:

Stratum 1 Topsoil	The surface layer at most of the boring and test pit locations consists of brown topsoil that typically ranges from about 0’3” to 1’6” in thickness.
Stratum 2 Existing Fill	Beneath the topsoil and at the surface in three (3) of the borings (B-6, B-8, and B-9) and ten (10) of the test pits (TP-2, TP-9, TP-10, TP-12, TP-14, TP-16, TP-19, TP-21, TP-26, and TP-28) is existing fill that consists of loose to medium dense brown coarse to fine SAND, little (to and) Silt, trace (to some) coarse to fine Gravel. Cobbles, boulders, topsoil, roots, and debris were also present within the fill at some of the test locations. The existing fill was encountered to depths ranging from 1’0” to more than 9’0” beneath the existing ground surface. Test pits TP-9 and TP-28 were terminated in the fill at final depths of 6’9” and 9’0” beneath the ground surface, respectively.
Stratum 3 Sandy Silt or Silty Sand	Underlying the topsoil and existing fill is virgin soil that is comprised of medium dense to dense brown, light brown, or gray brown SILT some (to and), coarse to fine Sand, trace (to little) coarse to fine Gravel or coarse to fine SAND, little (to and) Silt, trace (to and) coarse to fine Gravel, with occasional cobbles and boulders. The Sandy Silt or Silty Sand stratum continued to depths ranging from 2’0” to 12’0” below the existing ground surface. Boring B-8 and test pits TP-8, TP-10, TP-12, TP-19, TP-20, TP-22, and TP-26 were terminated in this stratum at final depths ranging from 5’0” to 12’0” beneath the ground surface.
Stratum 4 Sand or Sandy Gravel	Below the Sandy Silt or Silty Sand at several test locations is completely weathered Gneiss bedrock that generally consists of dense to very dense brown or gray brown coarse to fine SAND, little (to some) Silt, trace (to some) coarse to fine Gravel or coarse to fine GRAVEL and, coarse to fine Sand, trace Silt. Where encountered in the borings and test pits, the completely weathered bedrock was present at depths ranging from 2’0” to 7’0” beneath the ground surface and continued to depths ranging from 4’7” to 15’2” below the existing ground surface.

Stratum 5 Gneiss Bedrock	Gneiss bedrock was encountered at 27 of the 39 test locations. Where encountered in the borings and test pits, gneiss bedrock was observed at depths ranging from 1’8” to 15’2” beneath the existing ground surface. In general, the quality of the bedrock will improve with depth. At boring B-10, the bedrock was cored between the depths of 2’0” and 7’0”. The core recovery was 86% and the Rock Quality Designation (RQD) of the recovered core was 53%. This indicates that the quality of the upper five (5) feet of the Gneiss bedrock is fair. The Gneiss bedrock is moderately weathered and in a blocky and seamy condition.

Groundwater

Observations for groundwater were made during sampling and upon completion of the drilling operations at each boring location. In auger drilling operations, water is not introduced into the boreholes, and the groundwater position can often be determined by observing water flowing into or out of the boreholes. Furthermore, visual observation of the soil samples retrieved during the auger drilling and in the test pits can often be used in evaluating the groundwater conditions.

Groundwater was encountered in test pit TP-8 at a depth of 4’1” (+609.9), in test pit TP-13 at a depth of 4’10” (+631.2), in boring B-8 at a depth of 3’3” (+608.3), in test pit TP-22 at a depth of 4’6” (+470.5), and in test pit TP-28 at a depth of 8’0” (+491.0) beneath the ground surface. Groundwater was not encountered in any of the other borings or test pits that were performed at the subject site during this investigation.

Variations in the location of the long-term water table may occur as a result of changes in precipitation, evaporation, surface water runoff, and other factors not immediately apparent at the time of this exploration. Based on the site conditions, trapped groundwater may be encountered in the silty site soils and/or along the soil/rock interface during wet periods. Proper groundwater control measures will be required in the event that trapped water is encountered in the site excavations.

Bedrock

Bedrock was encountered in 27 of the 39 explorations that were performed at the site during this investigation. Completely weathered bedrock was encountered at ten (10) test locations at depths ranging from 2’0” to 7’0” below the existing ground surface. Harder bedrock was encountered in the remaining locations and below the completely weathered rock at depths ranging from 1’8” to 15’2” beneath the ground surface. These depths correspond to bedrock elevations ranging between approximately elevation +471.0 and elevation +669.8.

Based on the boring and test pit data and the site plans provided to this office, bedrock was encountered above the planned finished floor elevation in portions of the site. The observed depth to bedrock at each boring and test pit location is summarized in Table 1 in the following section of this report.

The bedrock encountered at the site consists of weathered Gneiss. Based on our experience, the in-situ bedrock will range from highly weathered, fractured rock to massive, intact rock. Penetration into the bedrock with excavation equipment will depend of the degree of weathering and fracturing in the rock. We anticipate that the "rippability" of the bedrock will be variable and very limited. Based on our observations, harder rock will be encountered and blasting and/or the use of hydraulic hammers will be required to excavate the harder, intact bedrock. Rock removal is discussed further in a separate section of this report.

EVALUATION

At the time of this report, the proposed layout, the proposed finished floor elevations, and the site grading were preliminary. Therefore, the following evaluation is preliminary in nature and has been generalized for the expected development. The recommendations below are intended for planning purposes only and are not intended for final design and construction. Additional subsurface investigation will be required for the proposed buildings and retaining walls. Preliminarily, we estimate that an additional 12 to 15 explorations will be required for this project. Once the site plans have been further developed, a copy shall be forwarded to our office so that we can review it along with the recommendations in this report. At that time, we will provide specific recommendations for additional subsurface investigation. After the supplemental investigation has been completed, additional geotechnical recommendations will be provided for the project site. As a result, the recommendations within this report are subject to change.

Based on the preliminary site plans, we understand that the planned construction will consist of 21 new structures that will include seven (7) golf residences, seven (7) club villas, five (5) golf cottages, one (1) fairway residences building, and one (1) clubhouse building. The proposed construction will also include new asphalt paved roadways and parking areas, retaining walls, tennis courts, underground utilities, and a stormwater management system.

The grading plan provided to this office indicates that the proposed finished floor elevations vary across the site. In addition, the fairway residences, golf cottages, and golf residences will have basements. Based on the existing and proposed grades, cuts ranging up to approximately 14'0" and fills ranging up to approximately 10'0" are expected to achieve the proposed floor slab subgrade elevations. In the proposed pavement areas, cuts ranging up to approximately 6'0" and fills ranging up to approximately 8'0" are expected to achieve the proposed pavement subgrade elevations.

The boring and test pit data indicates that there is existing fill (Stratum 2) present in portions of the site to depths ranging from 1'0" to more than 9'0" below the existing ground surface. The existing fill generally consists of loose to medium dense Sand with varying amounts of Silt and Gravel and occasional cobbles, boulders, topsoil, roots, and debris. Underlying the existing fill is medium dense to dense Sandy Silt or Silty Sand (Stratum 3). The Sandy Silt or Silty Sand is underlain by dense to very dense completely weathered Gneiss bedrock (Stratum 4) in areas followed by more competent Gneiss bedrock (Stratum 5), which was encountered at depths ranging from 2'0" to 15'2" beneath the existing ground surface. The existing fill and bedrock observations are summarized in Table 1 below.

Table 1 - Summary of Boring and Test Pit Data

Boring or Test Pit No.	Approximate Ground Surface Elevation	Depth to Bottom of Existing Fill (Elevation)	Depth to Weathered Bedrock (Elevation)	Depth to Bedrock or Auger Refusal (Elevation)
B-1	+661.0	NE	5'0" (+656.0)	8'0" (+653.0)
B-2	+628.0	NE	NE	7'0" (+621.0)
B-3	+620.0	NE	2'0" (+618.0)	4'9" (+615.3)
B-4	+628.0	NE	2'0" (+626.0)	10'6" (+617.5)
B-5	+623.0	NE	2'0" (+621.0)	8'6" (+614.5)
B-6	+617.0	1'0" (+616.0)	NE	5'6" (+611.5)
B-7	+628.0	NE	5'0" (+623.0)	15'2" (+612.8)
B-8	+609.0	5'6" (+603.5)	NE	NE to 12'0"
B-9	+674.0	7'0" (+667.0)	7'0" (+667.0)	7'6" (+666.5)
B-10	+638.8	NE	NE	2'0" (+636.8)
B-11	+640.0	NE	4'0" (+636.0)	5'6" (+634.5)
TP-1	+662.0	NE	NE	2'0" (+660.0)
TP-2	+672.0	1'10" (+670.2)	NE	4'4" (+667.7)
TP-3	+672.0	NE	NE	2'2" (+669.8)
TP-4	+672.0	NE	NE	3'6" (+668.5)
TP-5	+670.0	NE	3'8" (+666.3)	4'9" (+665.3)
TP-6	+672.0	NE	2'10" (+669.2)	4'7" (+667.4)
TP-7	+620.0	NE	NE	2'8" (+617.3)
TP-8	+614.0	NE	NE	NE to 5'0"
TP-9	+628.0	>6'9" (<+621.3)	NE	NE to 6'9"
TP-10	+625.0	3'0" (+622.0)	NE	NE to 8'0"
TP-11	+642.0	NE	3'9" (+638.3)	6'0" (+636.0)
TP-12	+635.0	5'0" (+630.0)	NE	NE to 6'6"
TP-13	+636.0	NE	NE	7'5" (+628.6)
TP-14	+625.0	5'0" (+620.0)	NE	5'0" (+620.0)
TP-15	+668.0	NE	NE	1'8" (+666.3)
TP-16	+651.0	1'10" (+649.2)	NE	4'10" (+646.2)
TP-17	+655.0	NE	NE	NE to 1'0"
TP-18	+670.0	NE	NE	NE to 7'0"
TP-19	+427.0	2'5" (+424.6)	NE	NE to 7'0"
TP-20	+415.0	NE	NE	NE to 8'0"
TP-21	+478.0	1'4" (+476.7)	NE	7'0" (+471.0)
TP-22	+475.0	NE	NE	NE to 7'6"
TP-23	+496.0	NE	NE	3'10" (+492.2)
TP-24	+564.0	NE	NE	6'8" (+557.3)
TP-25	+633.0	NE	NE	3'4" (+629.7)
TP-26	+669.0	5'6" (+663.5)	NE	NE to 8'0"

Boring or Test Pit No.	Approximate Ground Surface Elevation	Depth to Bottom of Existing Fill (Elevation)	Depth to Weathered Bedrock (Elevation)	Depth to Bedrock or Auger Refusal (Elevation)
TP-27	+561.0	NE	NE	4'4" (+556.7)
TP-28	+499.0	>9'0" (<+490.0)	NE	NE to 9'0"

Notes: NE – Not Encountered
B-8: Groundwater at +608.3
TP-8: Groundwater at +609.9
TP-9: Terminated in the Existing Fill
TP-13: Groundwater at +631.2
TP-22: Groundwater at +470.5
TP-28: Groundwater at +491.0
TP-28: Terminated in the Existing Fill

Removal of Existing Structures from New Building and Pavement Areas

Building Areas

The site plan indicates that existing structures are present in some of the proposed building areas. The existing structures will be removed as part of the proposed development. All debris resulting from the demolition of these items must be completely removed from the new building areas, extending at least ten (10) feet beyond the new building limits, where practical. This shall include the complete removal of all foundations, walls, slabs, utilities, sidewalks, pavement, and miscellaneous debris. Where the removal of existing items or associated materials extends below the planned building, the resulting excavations shall be backfilled with new compacted fill as described below.

Existing utilities, where they are encountered within the planned building areas, should be either abandoned or rerouted around the new structures. Once the utility has been rerouted or abandoned, the section of pipe and any associated structure within the building areas should be completely removed. The removal of the pipe and structure must also include any loose fill around the pipe or structure. After the pipe, associated structure, and associated loose backfill have been removed, the resulting excavation shall be backfilled with new controlled fill as described below.

New compacted fill shall consist of either suitable on-site soil or imported sand and gravel. Imported sand and gravel fill shall contain less than 20% by weight passing a No. 200 sieve. The fill shall be placed in layers not exceeding one (1) foot in loose thickness. In the proposed building area, new fill shall be compacted to at least 95% of its Maximum Modified Dry Density (ASTM D1557). Each layer shall be compacted, tested, and approved prior to placing subsequent layers.

Pavement Areas

In the proposed pavement areas, any existing structures and debris resulting from the demolition of the structures must be completely removed from the new pavement areas, extending at least five (5) feet beyond the new paving limits, where practical. The excavations resulting from the removal of existing items shall be backfilled using controlled compacted fill. New fill shall consist of either suitable on-site soil or imported sand and gravel placed in one (1) foot loose layers and compacted to at least 92% of its Maximum Modified Dry Density (ASTM D1557).

Implications of Existing Fill

The boring and test pit data indicates that existing fill is present in portions of the site. Where encountered in the borings and test pits, the fill extended to depths ranging from 1'0" to more than 9'0" beneath the existing ground surface. These depths correspond to elevations ranging from approximately +424.6 to elevation +670.2. The depth of the existing fill is expected to be variable and may be deeper in unexplored areas of the site and around the existing site buildings.

The existing fill is not an acceptable bearing material for the new building foundations or floor slabs. The consistency and density of the fill material are not predictable. Certain areas may contain clean dense soils while other areas may contain loose material, topsoil, and/or debris. The existing fill creates the possibility of intolerable differential settlements under loading.

To eliminate the potential for damaging differential settlements, we recommend that the existing fill be completely removed from the new building areas. Based on the existing grades and the proposed finished floor elevations, we expect that some of the existing fill will be removed during the planned building excavations. However, existing fill is expected to be encountered below the planned subgrade elevation in portions of the site. Undercutting of the subgrade will be required in these areas to remove the existing fill or otherwise unsuitable materials from the building areas. The over-excavated areas shall then be replaced with new structural fill, as necessary, to achieve the planned subgrade elevations.

To further evaluate the existing fill conditions in and around the planned building areas, we recommend that a series of supplemental test pits be performed at the time of construction. The test pits should be conducted under the full time observation of a Carlin-Simpson & Associates representative. These test pits will allow us to confirm the consistency, thickness, and horizontal limits of the existing fill material.

Provided that the existing fill and any other unsuitable materials encountered during construction are removed, it is our opinion that the new structural fill and virgin soils can adequately support the new building foundations and floor slabs.

Rock Removal - Blasting Issues

As discussed above, bedrock was encountered at 27 of the 39 test locations during this study. The bedrock was encountered at depths ranging from 1'8" to 15'2" beneath the ground surface. These depths correspond to bedrock elevations ranging between approximately elevation +611.5 and elevation +669.8. Based on the site plans provided to this office, bedrock was encountered above the planned finished floor elevation in portions of the site. Bedrock may also be encountered at higher elevations in the unexplored areas of the site.

The bedrock encountered in the borings and test pits consists of weathered Gneiss. Based on our experience, the in-situ bedrock will range from highly weathered, fractured rock to massive, intact rock. To excavate the rock, the upper 1’0” to 5’0” of rock may be “rippable” by using large construction equipment. The use of hydraulic hammers and/or blasting will be required in order to achieve deeper excavations. Zones of weathered rock may exist deeper than 5’0” but conditions are expected to be highly variable. Hard rock will be encountered during construction.

In order to develop the site, rock removal will be required in areas to achieve the proposed grades. Rock removal may also be required for the new pavement and utilities in portions of the site. Rock blasting will likely be required to achieve the proposed grades in areas. Nearby buildings and existing underground utilities could be affected by the blasting.

The Blasting Contractor should avoid over-blasting the rock. Over-blasting will disturb the deeper intact rock that will be used as bearing material for the proposed foundations and floor slab.

The blasting operation will be monitored by a seismologist using a seismograph. The Peak Particle Velocity emanating from any blast will be restricted to 2.0 in/sec. Each blast will be monitored to insure that this criteria is not exceeded.

The U.S. Bureau of Mines [Nicholas et al (1971)] has established that a threshold of 4.0 in/sec will likely crack plaster and thus they recommend that the safe vibrational criterion be 2.0 in/sec. This criterion has been used successfully in the industry. Each blast will be monitored independently to insure that this criterion is not exceeded. The monitoring results shall be provided to the Blasting Contractor as soon as possible so that the blasting program can be modified if necessary.

We recommend that a minimum of four (4) monitoring points be established, to the north, east, south and west of the planned blast area. The seismograph sensors should be placed near the closest structure and at any structures identified during the pre-blast survey that are considered to be susceptible to vibration damage.

Prior to the start of any construction, a Blasting Management Plan shall be prepared by the Blasting Contractor for this project. This plan shall be in accordance with State regulations and the Explosive Materials Code, NFPA No. 495, National Fire Prevention Association. Additionally, all blasting should adhere to the provisions of 29 CFR Ch. XVII Section 1910.109 for explosives and blasting agents and to all local requirements.

Prior to any blasting work being done, a licensed professional engineer shall be retained to perform a detailed pre-blast survey of existing structures located within 500 feet of the planned blast area. The pre-blast survey shall be conducted in accordance with the requirements of local authorities. A copy of all reports prepared by the licensed engineer shall be submitted to the Town Engineer and the Owner’s representative in a timely manner.

Prior to the beginning of blasting, a notice will be sent to all residential and commercial property owners within a 500 foot radius of the blast area. This notification will be given at least 48 hours before blasting takes place. A contact person will be established and named in this notice to respond to all concerns raised by nearby residents during the blasting phase of the project. The contact person will respond to any inquiries within 24 hours.

Preparation of New Building Areas and Removal of Existing Fill

In order to prepare the building areas for construction, all surface materials such as topsoil, asphalt, and surface vegetation shall be removed from the planned building areas, extending at least ten (10) feet beyond the new construction limits, where feasible.

The boring data indicates that existing fill is present within portions the proposed building areas. Fill material may also be present in other unexplored portions of the site. Where encountered in the test borings, the existing fill extended to depths ranging from about 1'0" to 7'0" below the existing ground surface. As shown in Table 1 above, the approximate bottom of the fill material ranges from elevation +603.5 to elevation +670.2. The existing fill is expected to vary in thickness across the site and may extend deeper in the unexplored areas and around the existing site structures.

After the surface materials are removed, the existing fill shall be excavated from the new building areas. The removal of the existing fill from the new building areas shall extend through the existing fill, down to the virgin soil or weathered bedrock. At the bottom of the excavation, the removal of the unsuitable material shall extend horizontally beyond the building lines a minimum distance of three (3) feet plus a distance equal to the depth of the excavation below the planned finished floor elevation. For example, if the removal of the existing fill extends vertically five (5) feet below the planned finished floor elevation, the excavation must extend horizontally a minimum of eight (8) feet (3 feet plus 5 feet) beyond the new building line at that location.

The removal of the existing fill from the planned building areas shall be performed under the full time observation of Carlin-Simpson & Associates. The on-site representative from Carlin-Simpson & Associates shall direct the Contractor during this operation to ensure that all of the unsuitable material has been removed from the proposed building areas.

During the removal of the unsuitable material from the building areas, the Contractor should segregate the potentially re-usable existing fill material from the non-reusable fill (i.e. debris and topsoil). The on-site representative from Carlin-Simpson & Associate shall evaluate the suitability of the excavated materials for use as structural fill during the excavation and prior to its re-use. Potentially usable fill should be stockpiled and covered with tarps or plastic sheeting for protection from excess moisture. Any fill material that is wet must be dried prior to its re-use.

After the surface materials and existing fill have been removed and prior to the placement of new structural fill, the exposed subgrade must be graded level and proofrolled by several passes of a vibratory drum roller. The proofrolling operation is necessary to densify the underlying soils. Carlin-Simpson & Associates shall be retained to observe the proofrolling of the subgrade. If any soft or otherwise unsuitable soils are noted, the unsuitable material shall be removed and replaced with new structural fill. Carlin-Simpson & Associates shall be responsible for determining what material, if any, is to be removed and will direct the contractor during this operation.

New structural fill required to achieve final grades shall consist of either suitable on-site soil or imported sand and gravel. Imported fill shall contain less than 20% by weight passing a No. 200 sieve. The structural fill shall be placed in layers not exceeding one (1) foot in loose thickness and each layer shall be compacted to at least 95% of its Maximum Modified Dry Density (ASTM D1557). Each layer must be compacted, tested, and approved prior to placing subsequent layers. The suitability of the excavated soil for reuse as structural fill is discussed in a following section of this report.

After the installation of structural fill has been completed to the required subgrade elevations, the virgin soil and new structural fill may be used to support the proposed building foundations and floor slabs.

New Building Foundations

According to the boring data, the foundation bearing materials will consist of medium dense to dense virgin soil, weathered bedrock, and new structural fill. Foundations for the proposed structures may be designed as a shallow spread footing bearing on the virgin soil, weathered bedrock, or new structural fill utilizing a net allowable bearing pressure of 4,000 psf (2.0 TSF).

Exterior footings shall bear at a depth of at least 42 inches below finished outside grade for protection from frost. Interior column footings may bear on the virgin soil, weathered bedrock, or new structural fill just below the floor slab provided the building is heated during winter. Column footings shall have a minimum dimension of 30 inches. The wall footings shall have a minimum width of 18 inches.

Prior to the placement of formwork, reinforcement steel, and concrete, the bearing subgrade soil shall be cleaned of all loose soil and compacted with several passes of a small vibratory drum trench compactor (i.e. Wacker Model RT560), a heavy vibratory plate tamper (i.e. Wacker BPU 3545A or equivalent), or “jumping jack” style tamper (i.e. Wacker Model BS 600). This must be performed under the inspection of a representative from Carlin-Simpson & Associates. If instability is observed during the compaction of the bearing subgrade, the soft soil shall be removed and replaced with new compacted fill.

Where rock is encountered in the foundation excavations, “Special Construction Procedures” must be employed. When continuous wall footings or closely spaced column footings (20 feet or less) bear on dissimilar material (i.e. rock and soil) the potential for differential movement exists. A footing bearing in rock will not move, whereas a footing bearing on soil will settle slightly due to the compressive nature of all soils when subjected to new loads. The area between movement and non-movement will develop a (shear) stress point. Cracks in foundations and walls will be the result from such movement. Therefore, continuous wall footings must bear either entirely on rock or entirely on soil for any individual building. Alternatively, for larger structures, transition zones can be constructed to create a gradual transition from a soil to a rock bearing subgrade.

Adjacent column footings greater than 20 feet apart may bear on dissimilar material (i.e. soil and rock). Any individual column footing must bear entirely on the same type bearing material (i.e. all soil or all rock).

Where rock and soil both exist at the bearing elevation within a foundation excavation, the footings must either be lowered to bear entirely on rock, or a minimum of 18 inches of rock must be removed from below planned footing bottom. The over-excavated 18 inches must then be filled with a granular material having a maximum particle size of ½-inch and containing at least 15% but not more than 30% material by weight passing a No. 200 sieve. The fill shall be placed in six (6) inch layers and each layer shall be compacted to at least 95% of its Maximum Modified Dry Density (ASTM D1557). This procedure will create a "cushion" atop the rock and reduce the potential for differential movement. For soft, rippable rock, this procedure will not be required.

If during the excavation for continuous foundations, the transition from soil to rock is gradual (i.e. from medium dense soil to dense weathered rock to very dense rock) over a distance of 20 feet or more, the "Special Construction Procedures" may not be required. This would have to be evaluated in the field on a case-by-case basis by the representative from Carlin-Simpson & Associates at the time of construction.

Where the transition from rock to soil is abrupt within the excavation for continuous wall foundations, transition zones can be constructed by over-excavating the rock in steps and increasing the "soil cushion" thickness over a distance of 24 feet or more. To construct the transition zone, the bedrock is over-excavated in a series of steps, each step being six (6) inches in depth and at least eight (8) feet in length. The first step is six (6) inches deep, the second step is 12 inches deep, and the final step is 18 inches deep. The over-excavation is then backfilled with the soil cushion material described above.

Floor Slab

After the footings and foundation walls are installed, fill will be required to backfill the excavations and to raise grades in the building areas to the slab subgrade elevations. New fill for the floor slab shall consist of either suitable on-site soil or imported sand and gravel containing less than 20% material by weight passing a No. 200 sieve. The fill shall be placed in layers not exceeding one (1) foot in loose thickness and each layer shall be compacted to at least 92% of its Maximum Modified Dry Density (ASTM D1557). Fill layers shall be compacted, tested, and approved before placing subsequent layers.

The floor may be designed as a slab on grade, bearing on virgin soil, weathered bedrock, bedrock, or new structural fill. We recommend a Modulus of Subgrade Reaction (k) of 200 pounds per cubic inch (pci) be used for design. A six (6) inch layer of 3/4-inch crushed stone is recommended beneath the concrete slab for additional support and drainage. In the event that the floor slab is constructed directly on Gneiss bedrock, a minimum of 12 inches of crushed stone or DGA should be provided beneath the floor slab for drainage and to act as a cushion on the rock. Sump pits and pumps are recommended where basements are planned.

Settlement

Settlement of individual footings, designed in accordance with recommendations presented in this report, is expected to be within tolerable limits for the proposed structure. For footings placed on natural soils or new compacted fill approved by Carlin-Simpson & Associates and constructed in accordance with the requirements outlined in this report, maximum total settlement is expected to be on the order of 1/2-inch or less. Maximum differential settlement between adjacent columns or load bearing walls is expected to be half the total settlement.

The above settlement values are based on our engineering experience with similar soil conditions and the anticipated structural loading, and are to guide the Structural Engineer with his design. To minimize difficulties during the foundation installation phase, it is critical that Carlin-Simpson & Associates be retained to observe the foundation bearing surfaces and to confirm the recommended bearing pressures and that the existing fill and unsuitable materials have been removed from beneath the new foundations.

Foundation Walls

In the event that foundation walls are required, the soil adjacent to the building walls will exert a horizontal pressure against the walls. This pressure is based on the soil density and Coefficient of Earth Pressure at Rest (k_o), which is applicable to non-yielding building walls. We estimate that the backfill material will have an in-place (moist) density of about 130 pcf and a k_o of 0.5. Based on these properties, the soil will produce an Equivalent Fluid Pressure of 65 pcf against the building walls.

For sliding, the coefficient of friction between concrete and the virgin site soils or new structural fill is 0.45. For clean sound rock, a friction coefficient of 0.55 can be used. Where passive lateral earth pressure is to be included in the design of the wall, a design value of 195 psf/ft may be used. This is based on a Coefficient of Passive Earth Pressure (k_p) of 3.0, an in-place soil backfill density of 130 pcf, and a factor of safety of 2.0.

Where foundation walls are required, we recommend that a footing drain be placed around the exterior of the new structure to prevent water from accumulating against the foundation wall. This drain may consist of a minimum four (4) inch diameter, rigid wall perforated PVC pipe surrounded by at least 12 inches of 3/4-inch clean crushed stone. The stone shall be wrapped in a geotextile fabric, Mirafi 140N or equivalent. The foundation drainpipe should be extended to daylight or to the stormwater collection system. The outside face of the foundation wall, where it extends below grade, must be damp proofed or waterproofed.

The foundation walls should be backfilled with suitable structural fill placed in layers up to one (1) foot in loose thickness. The new fill should be compacted with a vibratory drum trench compactor (i.e. Wacker Model RT560), a heavy vibratory plate tamper (i.e. Wacker BPU 3545A or equivalent) or "jumping jack" style tamper (i.e. Wacker Model BS 600) to at least 92% of its Maximum Modified Dry Density (ASTM D1557). Heavy equipment should not be operated near the wall as damage to the wall could occur.

Outside the structure, the backfill placed adjacent to the foundation walls and above the footing drain shall consist of either clean crushed stone or an imported sand and gravel mixture containing less than 10% by weight passing a No. 200 sieve and placed in layers not exceeding one (1) foot in thickness. This clean sand and gravel or crushed stone backfill shall extend a minimum of one (1) foot horizontally from the back face of the foundation walls, and shall extend vertically up the wall face to two (2) feet below the finished ground surface elevation.

Beyond this point, the foundation walls should be backfilled with suitable soil placed in layers up to one (1) foot in thickness. The new fill should be compacted with a vibratory drum trench compactor (i.e. Wacker Model RT560), a heavy vibratory plate tamper (i.e. Wacker BPU 3545A or equivalent), or "jumping jack" style tamper (i.e. Wacker Model BS 600) to at least 92% of its Maximum Modified Dry Density (ASTM D1557). Heavy equipment should not be operated near the walls as damage to the walls could occur. Material excavated from the cut areas on site will be suitable for reuse as compacted fill, provided that it remains relatively dry enough to be adequately compacted to the required density and does not contain any debris or organic material (i.e. topsoil and roots).

Seismic Design Considerations

From site-specific test boring data, the Site Class was determined from Table 1615.1.1 of the New York State Building Code. The site-specific data used to determine the Site Class typically includes soil test borings to determine Standard Penetration resistances (N-values). Based on the average N-values in the upper 100 feet of soil profile, the site can be classified as Site Class C – Very Dense Soil and Soft Rock Profile.

New structures should be designed to resist stress produced by lateral forces computed in accordance with Section 1615 of the New York State Building Code. The values in Table 2 shall be used for this project. Based on the information obtained from the borings, it is our opinion that the potential for liquefaction of the native soils at the site due to earthquake activity is relatively low.

Table 2 – Seismic Design Parameter Values

Mapped Spectral Response Acceleration for Short Periods, [Fig 1615 (1)]	S_S=0.347g
Mapped Spectral Response Acceleration at 1-Second Period, [Fig 1615 (2)]	S_{S1}=0.070g
Site Coefficient [Table 1615.1.2 (1)]	F_a=1.20
Site Coefficient [Table 1615.1.2 (2)]	F_v=1.70
Max Considered Earthquake Spectral Response for Short Periods [Eq 16-16]	S_{MS}=0.416g
Max Considered Earthquake Spectral Respond at 1-Second Period [Eq 16-17]	S_{M1}=0.119g
Design Spectral Response Acceleration for Short Periods [Eq 16-18]	S_{DS}=0.278g
Design Spectral Response Acceleration for 1-Second Period [Eq 16-19]	S_{D1}=0.079g

Site Retaining Walls

In order to develop the site, retaining walls will be required in areas. The site retaining walls may be designed as either cast-in-place steel reinforced concrete walls or geogrid reinforced modular block (MSE) walls. The preliminary site plans show five (5) retaining walls. The maximum exposed height of these walls ranges from approximately seven (7) feet to 12 feet but the top and bottom wall elevations were not finalized at the time of this report.

The following recommendations are preliminary in nature based on the boring and test pit data from other areas of the project site during this investigation. The recommendations below are intended for planning purposes only and are not intended for final design and construction. A supplemental subsurface investigation is required for the proposed retaining walls so that additional design recommendations can be provided.

In the event that existing fill materials are present within the proposed wall areas, these materials must be completely removed from the limits of new wall construction. The removal of the topsoil or other unsuitable fill materials shall extend horizontally a minimum distance of five (5) feet beyond the front face of the new wall or extend horizontally a minimum distance equivalent to the vertical depth of the required excavation below the proposed wall base or foundation bearing elevation, whichever is greater. This is required to ensure that all unsuitable material has been removed from beneath the wall base or foundation zone of influence, which shall be defined by an imaginary plane projecting downward and away from the front edge of the wall base or foundation on a one horizontal to one vertical (1H:1V) projection.

The foundations for the new retaining wall may be placed on the virgin soil, weathered bedrock, or on new compacted fill approved by Carlin-Simpson & Associates. New compacted fill shall consist of either suitable on-site soil or imported sand and gravel. Imported fill shall contain less than 20% by weight passing the No. 200 sieve. The fill shall be placed in one (1) foot thick loose layers and compacted to at least 95% of its Maximum Modified Dry Density. Preliminarily, the footings or base of the wall can be designed using a net design bearing pressure of 4,000 psf (2.0 TSF).

For MSE walls, the wall base or foundation must be adequately embedded for internal and global stability. The embedment depth will be determined by the Wall Design Engineer. For reinforced concrete walls, the footing or base of the wall shall bear at least 42 inches below finished grade of the outside face of the wall for protection from frost. The wall foundation or base may bear at shallower depths when installed directly on the bedrock since rock is not susceptible to frost. Where both soil and rock are encountered within the wall foundation or base excavation, the "Special Construction Procedures" discussed above for the building foundations must be utilized.

Drains must be provided behind the retaining walls to prevent the buildup of hydrostatic pressure against the walls. The drain should consist of a 4-inch diameter perforated PVC pipe, surrounded with 3/4-inch clean crushed stone and wrapped in a geotextile fabric, Mirafi 140N or equivalent. The drain should be installed behind the base or foundation of the retaining wall to collect the water behind the wall and be connected into the site stormwater collection system or extended to daylight beyond the wall area.

Backfill placed directly behind the retaining walls shall consist of either suitable on-site soil or imported sand and gravel containing less than 20% by weight passing a No. 200 sieve. Each layer shall be compacted using a hand guided mechanical tamper to 92% of its

Maximum Modified Dry Density (ASTM D1557). Excessive compaction adjacent to the retaining walls must be avoided. Layers shall be tested and approved before placing subsequent layers. Large compaction equipment must not be used within ten (10) feet of the new walls to prevent potential damage to the walls.

The soil adjacent to the site retaining walls will exert a horizontal pressure against the walls. This pressure is based on the soil density and the Coefficient of Active Earth Pressure (k_a). We estimate that the backfill material will have an in-place (moist) density of about 130 pcf and an angle of internal friction (ϕ) of 30^o. For design, soil cohesion is assumed to be zero for the foundation soil, retained soil, and reinforced backfill. The active earth pressure coefficient (k_a) is 0.33 provided the grade behind the wall is level. Based on these properties, the retained soil will produce an Equivalent Fluid Pressure of 42.9 pcf against the retaining walls. If a sloping grade exists behind the new walls, the k_a and the Equivalent Fluid Pressure must be adjusted accordingly. In addition, any surcharge loads from structures, vehicles, or other retaining walls (i.e. tiered walls) must be considered in the wall design.

For sliding, the friction coefficient between mass concrete and the virgin site soils or new compacted fill is 0.45. For clean sound rock, a friction coefficient of 0.55 can be used. Where passive lateral earth pressure is to be included in the design of the wall, a maximum design value of 195 psf/ft may be used. This is based on a Coefficient of Passive Earth Pressure (k_p) of 3.0, an in-place soil backfill density of 130 pcf, and a factor of safety of 2.0.

The Wall Design Engineer shall prepare a complete wall design (i.e. drawings, specifications, and calculations), which shall be designed and sealed by a Professional Engineer registered in the State of New York and submitted to Carlin-Simpson & Associates for review and approval. MSE retaining walls shall be designed in accordance with the recommendations of the NCMA Design Manual for Segmental Retaining Walls (Current Edition).

The MSE wall design shall consider the internal stability of the reinforced soil mass and shall be in completed accordance with acceptable engineering practice. In addition, external stability, including sliding, overturning, and bearing, as well as global slope stability shall be evaluated in accordance with acceptable engineering practice.

The MSE Wall Designer Engineer shall be responsible for determining the required geogrid reinforcement lengths and elevations based on his stability analysis (including global stability) and the properties of the geogrid reinforcement used in the design. We anticipate that in the critical areas of the wall, global stability will be the controlling design criteria for the design of the geogrid reinforcement.

Stormwater Management Areas

We understand that the planned development will include one or more stormwater management areas. The preliminary grading plan shows a proposed infiltration basin with a forebay in the western portion of the project site. The plan also indicates that the basin will have a bottom elevation at +610.0. We also understand that there is an alternate stormwater management area in the southwestern portion of the site, near the proposed fairway residences building. In addition, stormwater management areas will likely be required throughout the golf course property. However, at the time this report was prepared, the proposed stormwater management system had not been designed and the location, grades, and invert elevations of the system had not been finalized.

During this study, four (4) borings, one (1) test pit, one (1) borehole permeability test, and four (4) percolation tests were performed within or near the planned stormwater management areas. An addition ten (10) test pits (TP-19 through TP-28) were excavated at potential stormwater management areas throughout the golf course property. The tests were performed at the locations shown on the attached Boring and Test Pit Location Plan. The proposed test depths were provided by the project Site Engineer. The test depths were modified, however, based on the depth to bedrock encountered at the test locations.

The soil conditions encountered within the proposed infiltration basin area consist of a surface layer of topsoil (Stratum 1), approximately 0’6” to 0’9” in thickness, followed by existing fill (Stratum 2) in boring B-6. Below the topsoil and fill is virgin soil that consists of layers of Sandy Silt, Silty Sand, Sandy Gravel, Gravelly Sand, or Silty Gravelly Sand (Strata 3 and 4) followed by Gneiss bedrock (Stratum 5). Bedrock was encountered in the proposed infiltration basin area at depths ranging from 2’8” to 8’6” beneath the ground surface. These depths correspond to bedrock elevations ranging between elevation +611.5 and elevation +617.3, which is above the proposed bottom elevation of the infiltration basin.

In the alternate stormwater management area, the topsoil was underlain by approximately 5’6” of existing fill (Stratum 2) followed by layers of Sandy Silt and Silty Sand (Stratum 3). Groundwater was encountered in this portion of the site at depths ranging from 0’6” to 3’3” below the ground surface, which corresponds to groundwater levels ranging from approximately elevation +608.3 to elevation +613.2.

The subsurface soil and groundwater conditions encountered in the potential stormwater management areas throughout the golf course property vary across the site. The boring and test pit observations are summarized in Table 1 above.

In December 2012 and January 2013, permeability tests were performed within the proposed stormwater management areas. One (1) borehole permeability test (BP-4) and four (4) percolation tests (P-1 through P-4) were performed. The infiltration rates at the test locations are summarized in Table 3 below.

Table 3 – Field Permeability Test Results

Permeability Test No.	**Permeability Test Depth (Elevation)**	**Permeability Rate**	**Soil Description**
BP-4	7’0” (+621.0)	2.4 in/hour	Brown coarse to fine SAND, little Silt, some (+) coarse to fine Gravel
P-1	3’6” (+616.5)	>20 in/hour	Brown coarse to fine GRAVEL and, coarse to fine Sand, trace Silt
P-2	1’8” (+610.3)	NR	*Groundwater encountered 0’6” below the ground surface*

Permeability Test No.	Permeability Test Depth (Elevation)	Permeability Rate	Soil Description
P-3	2'8" (+613.3)	>20 in/hour	Brown coarse to fine SAND, some Silt, and (-) coarse to fine Gravel
P-4	2'0" (+613.0)	NR	*Groundwater encountered 1'10" below the ground surface*

NR – Not Recorded

Based on the field tests, the virgin soil in the areas of tests P-1 and P-3 has a permeability rate that exceeds 20 inches per hour. However, these tests were performed at elevations of +616.5 and +613.3, which are approximately 6'6" and 3'3" higher than the planned bottom of the proposed infiltration basin. Bedrock was encountered at depths of 4'9" (+615.3) and 5'6" (+611.5) below the surface at these test locations. In the event the virgin soil in the areas of tests P-1 and P-3 can be utilized for the stormwater management system, a permeability rate of 10 inches per hour should be used for preliminary design. This design permeability rate includes a factor of safety of 2.0.

Field permeability tests could not be performed at test locations P-2 and P-4 during this study since groundwater was encountered at depths of 0'6" (+611.5) and 1'10" (+613.2) below the ground surface, respectively. Should stormwater management areas be planned in other portions of the site, they must be evaluated on a case-by-case basis.

The stormwater management system should be designed in accordance with the applicable New York State Department of Conservation (NYSDEC) regulations and the New York State Stormwater Management Design Manual (August 2010). The testing requirements are outlined in Appendix D of the manual. The testing that was performed during this preliminary study was for initial feasibility testing for the stormwater management areas. Therefore, additional testing within the proposed subsurface system areas will be required to confirm the soil conditions and infiltration rates at the bottom of the system and to finalize the design of the system.

Pavement

We understand that the proposed construction will also include new asphalt paved driveways and parking areas. Based on the preliminary grading plan provided to this office, cuts ranging up to approximately 6'0" and fills ranging up to approximately 8'0" are anticipated to achieve the proposed pavement subgrade elevations. To prepare the new pavement areas, the existing surface materials (i.e. topsoil, vegetation, asphalt, etc.) must be removed from the planned pavement areas.

After all surface materials have been removed; the exposed subgrade that is either at or below the planned subgrade elevation shall be proofrolled with a large vibratory drum roller (i.e. Dynapac 250 or equivalent) to densify the underlying soils. The on-site representative from Carlin-Simpson & Associates shall witness the proofrolling operation. If any excessive movement is noted during the proofrolling, the soft or unsuitable soil shall be removed and replaced with new compacted fill.

Areas where existing fill is encountered shall be compacted in place. Carlin-Simpson & Associates must evaluate these areas for the presence of soft or unsuitable material within the existing fill matrix. Portions of this fill may have to be removed and replaced with new compacted fill. Carlin-Simpson & Associates will determine this during construction.

Where new fill is required to achieve final grades, it shall consist of either suitable on-site soil or imported sand and gravel. Imported sand and gravel shall contain less than 20% by weight passing a No. 200 sieve. New fill shall be placed in layers not exceeding one (1) foot in loose thickness and each layer shall be compacted to at least 92% of its Maximum Modified Dry Density (ASTM D1557). After the planned subgrade has been proofrolled and new compacted fill has been placed as required, the new pavement subbase may be placed on the existing site soils and new compacted fill.

When new fill is placed on a sloped subgrade, the fill layers must be benched a minimum of three (3) feet into the existing embankment. Fill layers shall be placed in horizontal layers, beginning at the base of the slope. End dumping over the top of a slope is not permitted.

The new pavement subbase may be placed on engineer-approved densified existing fill, virgin soil, or new compacted fill. A minimum of six (6) inches of dense graded aggregate (DGA) is recommended for the subbase layer for drainage and additional pavement support. We recommend that the following pavement sections be used for the parking lots and driveways. These pavement sections are subject to local government approval.

Parking Lots (Light Duty)

1 ½”	Asphalt Wearing Surface Course	NYSDOT, Type 6F
2”	Asphalt Base Course	NYSDOT, Type 1
6”	Stone Subbase (DGA)	NYSDOT, Type 4
	Approved Compacted Subgrade (Minimum CBR = 10)	

Driveways (Medium Duty)

1 ½”	Asphalt Wearing Surface Course	NYSDOT, Type 6F
2 ½”	Asphalt Base Course	NYSDOT, Type 1
8”	Stone Subbase (DGA)	NYSDOT, Type 4
	Approved Compacted Subgrade (Minimum CBR = 10)	

Based on the boring and test pit data, we anticipate that the existing site soils and new compacted fill will provide a CBR value that is equal to or greater than 10, which can adequately support the above pavement sections.

Utilities

New utilities may bear in the virgin soil, existing fill, new compacted fill, weathered rock, or rock. The bottom of all trenches should be excavated clean so a hard bottom is provided for pipe support. If any soft areas or unsuitable existing fill conditions are encountered during the construction operation, these materials must be removed and replaced with new compacted fill.

In the event that the trench bottom becomes soft due to the inflow of surface or trapped water, the soft soil shall be removed and the excavation filled with a minimum of six (6) inches of 3/4-inch clean crushed stone to provide a firm base for support of the pipe. Sump pits and pumps should be adequate to keep the excavations dry.

After the utility is installed, the trench must be backfilled with compacted fill. The fill shall consist of suitable on-site soil or imported sand and gravel containing less than 20% by weight passing a No. 200 sieve. Large rock fragments must not be placed directly against the pipe. Controlled compacted fill shall be placed in one (1) foot loose layers and each layer shall be compacted to at least 92% of its Maximum Modified Dry Density (ASTM D1557). The backfill must be free of topsoil, debris and large boulders or rock fragments.

Temporary Construction Excavations

Temporary construction excavations shall be conducted in accordance with the most recent OSHA guidelines or applicable federal, state, or local codes. Based on the results of the borings and test pits, we believe the site soils and rock would have the following classifications as defined by OSHA guidelines.

Soil/Rock Type	**Possible Classification**
On Site Fill	Type "C"
Virgin Sandy Soils	Type "B" or "C"
Weathered or Intact Bedrock	Type "A" or Stable Rock

Further evaluation of the site soil deposits will be required in the field by a qualified person at the time of the excavation to determine the proper OSHA classification and allowable slope configuration. Temporary support (i.e. sheeting and shoring) should be used for any excavation that cannot be sloped or benched in accordance with the applicable regulations.

Suitability of the In-Situ Soils for Use as Compacted Fill

The suitability of each soil stratum for use as compacted fill is discussed below.

Stratum 1
Topsoil

Topsoil is not suitable for use as compacted fill. During construction, it may be stockpiled on site for later use in the landscaped areas or removed from the site.

Stratum 2
Existing Fill

The existing fill that was encountered at the site generally consists of brown coarse to fine Sand, little (to and) Silt, trace (to some) coarse to fine Gravel with occasional cobbles, boulders, topsoil, roots, and debris. Some of the existing fill may be suitable for use as compacted fill at the site provided that it remains relatively dry for optimum compaction and that any debris (i.e. concrete, wood, etc.) and organic material (i.e. topsoil, roots, etc.) have been removed prior to its reuse.

Strata 3 & 4
Sandy Silt, Silty Sand, Sand, or Sandy Gravel

The virgin site soils that may be excavated during construction consist of layers of Sandy Silt, Silty Sand, Sand or Sandy Gravel with occasional cobbles and boulders. This material is generally suitable for use as compacted fill, provided that it remains relatively dry for optimum compaction. Large cobbles and boulders shall not be used as new structural fill in the proposed building areas or in utility trenches.

Stratum 5
Gneiss Bedrock

Excavated rock may also be used as fill material for the building and paved areas provided that the material conforms to the required gradation, is well-graded, and has been approved prior to use by Carlin-Simpson & Associates. All rock fill must be well blended with smaller rock fragments and/or soil. Open voids within the rock fill matrix must be avoided. Small boulders up to 24 inches in diameter may be placed in parking lot fills deeper than ten (10) feet below the finished pavement. Boulders must not be clustered and must be sufficiently surrounded with soil fill. We recommend that the boulders and excavated rock be processed by a crusher to provide suitable fill material for the building and pavement areas.

Rock fill shall be placed in 12-inch loose layers and compacted with multiple passes of a large vibratory roller to a firm and non-yielding state as determined by the on-site representative from Carlin-Simpson & Associates. Rock fill should not be used where it will interfere with the installation of foundations or utilities. Also, it shall not be used as backfill directly against concrete walls or utilities. Use of rock fill within the planned building and pavement areas shall be limited to the gradations limitations provided in Table 4 below.

Table 4 - Gradation Limitations for Rock Fill

Area	Location	Maximum Particle Size
Building Area	Within 4 feet of Finished Floor	3 inches
	More than 4 feet below Finished Floor	12 inches
Pavement Area	Within 4 feet of Finished Grade	6 inches
	More than 4 feet below Finished Grade	18 inches
	More than 10 feet below Finished Grade	24 inches

Proper moisture conditioning of the soil will be required. In the event that the on-site material is too wet at the time of placement and cannot be adequately compacted, the soil should be aerated and allowed to dry or the material removed and a drier cleaner fill material used. In the event that the on-site material is too dry at the time of placement and cannot be adequately compacted, water may be needed to increase the soil moisture content for proper compaction.

The in-situ soils which exist throughout the site may become soft and weave if exposed to excessive moisture and construction traffic. The instability will occur quickly when exposed to these elements and it will be difficult to stabilize the subgrade. We recommend that adequate site drainage be implemented early in the construction schedule and if the subgrade becomes wet, the Contractor should limit construction activity until the soil has dried.

GENERAL

The findings, conclusions and recommendations presented in this report represent our professional opinions concerning subsurface conditions at the site. The opinions presented are relative to the dates of our site work and should not be relied on to represent conditions at later dates or at locations not explored. The opinions included herein are based on information provided to us, the data obtained at specific locations during the study and our past experience. If additional information becomes available that might impact our geotechnical opinions, it will be necessary for Carlin-Simpson & Associates to review the information, reassess the potential concerns, and re-evaluate our conclusions and recommendations. Additional subsurface exploration may be required.

Regardless of the thoroughness of a geotechnical exploration, there is the possibility that conditions between borings and test pits will differ from those encountered at specific boring or test pit locations, that conditions are not as anticipated by the designers and/or the contractors, or that either natural events or the construction process have altered the subsurface conditions. These variations are an inherent risk associated with subsurface conditions in this region and the approximate methods used to obtain the data. These variations may not be apparent until construction.

The professional opinions presented in this geotechnical report are not final. Field observations and foundation installation monitoring by the geotechnical engineer, as well as soil density testing and other quality assurance functions associated with site earthwork and foundation construction, are an extension of this report. Therefore, Carlin-Simpson & Associates should be retained by the Owner to observe all earthwork and foundation construction, to document that the conditions anticipated in this study actually exist, and to finalize or amend our conclusions and recommendations Carlin-Simpson & Associates is not responsible or liable for the conclusions and recommendations presented in this report if Carlin-Simpson & Associates does not perform these observation and testing services.

Therefore, in order to preserve continuity in this project, the Owner must retain the services of Carlin-Simpson & Associates to provide full time geotechnical related monitoring and testing during construction. At a minimum, this shall include the observation and testing of the following: 1) the removal of existing fill and unsuitable soil, where required; 2) the proofrolling of the subgrade soil prior to the placement of new compacted fill; 3) the placement and compaction of controlled fill; 4) the excavation for the building foundations; 5) the preparation of the subgrade for the floor slabs and pavement areas; and 6) the construction of the proposed retaining walls.

This report has been prepared in accordance with generally accepted geotechnical engineering practice. No other warranty is expressed or implied. The evaluations and recommendations presented in this report are based on the available project information, as well as on the results of the exploration. Carlin-Simpson & Associates should be given the opportunity to review the final drawings and site plans for this project to determine if changes to the recommendations outlined in this report are needed. Should the nature of the project change, these recommendations should be re-evaluated.

This report is provided for the exclusive use of Brynwood Partners, LLC and the project specific design team and may not be used or relied upon in connection with other projects or by other third parties. Carlin-Simpson & Associates disclaims liability for any such third party use or reliance without express written permission. Use of this report or the findings, conclusions or recommendations by others will be at the sole risk of the user. Carlin-Simpson & Associates is not responsible or liable for the interpretation by others of the data in this report, nor their conclusions, recommendations or opinions.

If the conditions encountered during construction vary significantly from those stated in this report, this office should be notified immediately so that additional recommendations can be made.

Thank you for allowing us to assist you with this project. Should you have any questions or comments, please contact this office.

Very truly yours,

CARLIN-SIMPSON & ASSOCIATES

M. Anke

MEREDITH R. ANKE, P.E.
Project Engineer

Robert Simpson

ROBERT B. SIMPSON, P.E.

File No. 12-175

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG	BORING NUMBER B-1

Project:	Proposed Renovations, Byrnwood Club Development, North Castle, NY	SHEET NO.:	1 of 1
Client:	JBM Realty	JOB NUMBER:	12-175
Drilling Contractor:	General Borings, Inc.	ELEVATION:	+661.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE		
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			DATUM:	
No water encountered				DIA.	3 1/4"	1 3/8"			START DATE:	18 Dec 12
				WGHT		140#			FINISH DATE:	18 Dec 12
				FALL		30"			DRILLER:	T. McGovern
									INSPECTOR:	JB

Depth (ft.)	Casing Blows per Foot	Sample No.	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			7		**Clay Tennis Court** 0'6"	
1		S-1	9		Br $ a (+), cf S, l (-) mf G	Rec = 17"
			12			moist
2			14			
			19		same	
3		S-2	23		**Brown SILT and (+), coarse to fine**	Rec = 15"
			50/3"		**Sand, little (-) medium to fine Gravel**	moist
4						possible weathered rock in tip
5					5'0"	
			29		Br cf S, l (+) $ (completely weathered gneiss)	
6		S-3	75/4"			Rec = 6"
					Brown coarse to fine SAND, little (+)	moist
7					**Silt (completely weathered Gneiss)**	
		S-4	70/3"			Rec = 3"
8					8'0"	moist
					End of Boring @ 8'0"	Auger refusal @ 8'0"
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG	BORING NUMBER B-2

Project:	**Proposed Renovations, Byrnwood Club Development, North Castle, NY**	**SHEET NO.:**	1 of 1
Client:	**JBM Realty**	**JOB NUMBER:**	12-175
Drilling Contractor:	**General Borings, Inc.**	**ELEVATION:**	+628.0

GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**	**DATUM:**	
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:**	18 Dec 12
No water encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:**	18 Dec 12
				WGHT		**140#**			**DRILLER:**	T. McGovern
				FALL		**30"**			**INSPECTOR:**	JB

Depth (ft.)	Casing Blows per Foot	Sample No.	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			2		**Topsoil** 0'6"	
1		**S-1**	3		Br $ a (+), cf S, t mf G	Rec = 15"
			2			moist
2			2			
			3		same	
3		**S-2**	9			Rec = 16"
			11		**Brown SILT and (+), coarse to fine**	moist
4			15		**Sand, trace medium to fine Gravel**	
5						
			10		same	
6		**S-3**	12			Rec = 17"
			16			moist
7			50/3"		7'0"	weathered rock in tip
					End of Boring @ 7'0"	Auger refusal @ 7'0"
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG	BORING NUMBER B-3

Project:	**Proposed Renovations, Byrnwood Club Development, North Castle, NY**	**SHEET NO.:** 1 of 1
Client:	**JBM Realty**	**JOB NUMBER:** 12-175
Drilling Contractor:	**General Borings, Inc.**	**ELEVATION:** +620.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	DATUM:	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE:	18 Dec 12
No water encountered				DIA.	3 1/4"	1 3/8"			FINISH DATE:	18 Dec 12
				WGHT		140#			DRILLER:	T. McGovern
				FALL		30"			INSPECTOR:	JB

Depth (ft.)	Casing Blows per Foot	Sample No.	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			3		**Topsoil** 0'6"	
1		S-1	6		Br $ a (-), cf S, t mf G	Rec = 17"
			6		**Brown SILT and (-), coarse to fine**	moist
2			14		**Sand, trace medium to fine Gravel** 2'0"	
		S-2	25/5"		Lt br cf G a, cf S, t $ (completely weathered gneiss)	Rec = 5"
3					**Light brown coarse to fine GRAVEL**	moist
					and, coarse to fine Sand, trace	
4					**Silt (completely weathered Gneiss)**	
			23		Br cf G s, cf S, t $ (completely weathered gneiss)	
5		S-3	75/3"		4'9"	Rec = 6"
					End of Boring @ 4'9"	moist
6						Auger refusal @ 4'9"
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG	BORING NUMBER B-4

Project:	**Proposed Renovations, Byrnwood Club Development, North Castle, NY**	**SHEET NO.:**	1 of 1
Client:	**JBM Realty**	**JOB NUMBER:**	12-175
Drilling Contractor:	**General Borings, Inc.**	**ELEVATION:**	+628.0

GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**	**DATUM:**	
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:**	18 Dec 12
No water encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:**	18 Dec 12
				WGHT		**140#**			**DRILLER:**	T. McGovern
				FALL		**30"**			**INSPECTOR:**	JB

Depth (ft.)	Casing Blows per Foot	Sample No.	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			2		**Topsoil** 0'6"	
1		**S-1**	1		Br cf S, a $, t f G	Rec = 14"
			2		**Brown coarse to fine SAND, and**	moist
2			2		**Silt, trace fine Gravel** 2'0"	
			10		Gr cf S t $, a cf G (completely weathered gneiss)	
3		**S-2**	20			Rec = 13"
			45			moist
4			35			weathered rock 3'-4'
5						
			9		Br cf S, l $, s (+) cf G (completely weathered gneiss)	
6		**S-3**	11			Rec = 17"
			13		**Brown coarse to fine SAND, little**	moist
7			10		**Silt, some (+) coarse to fine Gravel**	
			18		same **(completely weathered Gneiss)**	
8		**S-4**	26			Rec = 14"
			30			moist
9			43			
10						
		S-5	75/6"		same 10'6"	Refusal on spoon @ 10'6"
11					**End of Boring @ 10'6"**	
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG	BORING NUMBER B-5

Project:	**Proposed Renovations, Byrnwood Club Development, North Castle, NY**	**SHEET NO.:**	1 of 1
Client:	**JBM Realty**	**JOB NUMBER:**	12-175
Drilling Contractor:	**General Borings, Inc.**	**ELEVATION:**	+623.0

GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**	**DATUM:**	
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:**	18 Dec 12
No water encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:**	18 Dec 12
				WGHT		**140#**			**DRILLER:**	T. McGovern
				FALL		**30"**			**INSPECTOR:**	JB

Depth (ft.)	Casing Blows per Foot	Sample No.	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			2		Br cf S, s (+) $, t f G	
1		S-1	2		**Brown coarse to fine SAND,**	Rec = 17"
			3		**some (+) Silt, trace fine Gravel**	moist
2			13		2'0"	
			22		Br cf S, l $, s cf G	
3		S-2	10			Rec = 17"
			16		**Brown coarse to fine SAND, little**	moist
4			26		**Silt, some coarse to fine Gravel**	weathered rock in tip
					(completely weathered Gneiss)	
5						
			23		same, weathered gneiss	
6		S-3	62			Rec = 18"
			55			moist
7			81			weathered rock
8						
					8'6"	Auger refusal @ 8'6"
9					**End of Boring @ 8'6"**	
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG	BORING NUMBER B-6

Project:	**Proposed Renovations, Byrnwood Club Development, North Castle, NY**	**SHEET NO.:**	1 of 1
Client:	**JBM Realty**	**JOB NUMBER:**	12-175
Drilling Contractor:	**General Borings, Inc.**	**ELEVATION:**	+617.0

GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**	**DATUM:**	
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:**	19 Dec 12
No water encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:**	19 Dec 12
				WGHT		**140#**			**DRILLER:**	T. McGovern
				FALL		**30"**			**INSPECTOR:**	KWA

Depth (ft.)	Casing Blows per Foot	Sample No.	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			2		**Topsoil** 0'6"	
1		**S-1**	6		FILL (Br cf S, l $) 1'0"	Rec = 10"
			5		**FILL (Brown coarse to fine SAND,**	moist
2			10		**little Silt)**	
			12		Br cf S, s $, a (-) cf G	
3		**S-2**	11			Rec = 11"
			11		same	moist
4			52		**Brown coarse to fine SAND, some**	
					Silt, and (-) coarse to fine Gravel	
5						
		S-3	75/2"		5'6"	No recovery
6					**End of Boring @ 5'6"**	Auger refusal @ 5'6"
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG	BORING NUMBER B-7

Project:	Proposed Renovations, Byrnwood Club Development, North Castle, NY	**SHEET NO.:**	1 of 1
Client:	JBM Realty	**JOB NUMBER:**	12-175
Drilling Contractor:	General Borings, Inc.	**ELEVATION:**	+628.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	DATUM:	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE:	19 Dec 12
No water encountered				DIA.	3 1/4"	1 3/8"			FINISH DATE:	19 Dec 12
				WGHT		140#			DRILLER:	T. McGovern
				FALL		30"			INSPECTOR:	KWA

Depth (ft.)	Casing Blows per Foot	Sample No.	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			2		**Topsoil** 0'6"	
1		S-1	4		Br cf S, l $,l f G	Rec = 18"
			4			moist
2			5			
			13		same	
3		S-2	28		**Brown coarse to fine SAND,**	Rec = 17"
			21		**little Silt, little fine Gravel**	moist
4			22			
5					5'0"	
			12		Br cf S, l $, t f G (completely weathered gniess)	
6		S-3	14			Rec = 15"
			19			moist
7			28		**Brown coarse to fine SAND, little**	very dense augering 7'-10'
					Silt, trace fine Gravel (completely	
8					**weathered Geniss)**	
9						
10						
			75		same	
11		S-4	50/3"			Rec = 6"
						moist
12						very dense augering 10'-15'
13						
14						
15						
		S-4	50/2"		same 15'2"	No recovery
16					**End of Boring @ 15'2"**	Spoon bouncing @ 15'2"
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG	BORING NUMBER B-8
Project: Proposed Renovations, Byrnwood Club Development, North Castle, NY		SHEET NO.: 1 of 1
Client: JBM Realty		JOB NUMBER: 12-175
Drilling Contractor: General Borings, Inc.		ELEVATION: +609.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	DATUM:	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE:	19 Dec 12
19 Dec 12	1130	3'3"	None	DIA.	3 1/4"	1 3/8"			FINISH DATE:	19 Dec 12
				WGHT		140#			DRILLER:	T. McGovern
				FALL		30"			INSPECTOR:	KWA

Depth (ft.)	Casing Blows per Foot	Sample No.	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			2		**Brown Topsoil** 0'6"	
1		S-1	4		FILL (Br cf S, a $, t cf G)	Rec = 4"
			8			moist
2			7			
			10		FILL (same)	
3		S-2	11			No recovery
			11		**FILL (Brown coarse to fine SAND,**	moist
4			13		**and Silt, trace coarse to fine Gravel)**	
5						
			13		FILL (same) 5'6"	
6		S-3	8		Mtld gr, or br Cy $ s, cf S, w/t roots	Rec = 18"
			7		**Mottled gray, orange brown Clayey**	moist
7			8		**SILT some, coarse to fine Sand, with** 7'0"	
			8		**roots**	
8		S-4	8		Gr br cf S, s (+) $, l cf G	Rec = 15"
			7			wet
9			8		**Gray brown coarse to fine SAND,**	
					some (+) Silt, little coarse to fine	
10					**Gravel**	
			15		same, l cf G	
11		S-5	25			Rec = 16"
			26			wet
12			35		12'0"	
					End of Boring @ 12'0"	
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG	BORING NUMBER B-9
Project: Proposed Renovations, Byrnwood Club Development, North Castle, NY		**SHEET NO.:** 1 of 1
Client: JBM Realty		**JOB NUMBER:** 12-175
Drilling Contractor: General Borings, Inc.		**ELEVATION:** +674.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	DATUM:
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE: 19 Dec 12
No water encountered				DIA.	3 1/4"	1 3/8"			FINISH DATE: 19 Dec 12
				WGHT		140#			DRILLER: T. McGovern
				FALL		30"			INSPECTOR: KWA

Depth (ft.)	Casing Blows per Foot	Sample No.	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION		REMARKS
			8		**Clay Tennis Court**	0'6"	
1		S-1	8		FILL (Br cf S, s $, s (+) cf G)		Rec = 17"
			8				moist
2			17				
			17		FILL (same)		
3		S-2	12				Rec = 15"
			7		**FILL (Brown coarse to fine Sand,**		moist
4			13		**some Silt, some (+) coarse to fine**		
					Gravel)		
5							
			10		FILL (Br cf S, s $, l cf G)		
6		S-3	4				Rec = 15"
			5				moist
7			11			7'0"	
		S-4	50/3"		**Highly to moderately weathered**	7'6"	Rec = 3"
8					**Gneiss**		moist
					Eknd of Boring @ 7'6"		Auger refusal @ 7'0"
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG	BORING NUMBER B-10

Project:	Proposed Renovations, Byrnwood Club Development, North Castle, NY							**SHEET NO.:**	1 of 1
Client:	JBM Realty							**JOB NUMBER:**	12-175
Drilling Contractor:	General Borings, Inc.							**ELEVATION:**	+638.8
GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**	**DATUM:**
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	HSA	SS			**START DATE:** 19 Dec 12
No water encountered				**DIA.**	3 1/4"	1 3/8"			**FINISH DATE:** 19 Dec 12
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** JB

Depth (ft.)	Casing Blows per Foot	Sample No.	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			2		**Topsoil** 0'1"	
1		S-1	3		Br cf $ s, cf S, l cf G	Rec = 15"
			6		**Brown coarse to fine SILT some, coarse to**	moist
2			50/3"		**fine Sand, little coarse to fine Gravel** 2'0"	Auger refusal @ 2'0"
3						
		Run #1			**Gray, white Gneiss**	Run #1
4						2'0"-7'0"
						Run = 60"
5					5'0"	Rec = 52" = 86%
					Soil seam	RQD = 53%
6					5'8"	
					Gray, white Gneiss	
7					7'0"	
					End of Boring @ 7'0"	
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG	BORING NUMBER B-11

Project:	**Proposed Renovations, Byrnwood Club Development, North Castle, NY**	**SHEET NO.:**	1 of 1
Client:	**JBM Realty**	**JOB NUMBER:**	12-175
Drilling Contractor:	**General Borings, Inc.**	**ELEVATION:**	+640.0

GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**	**DATUM:**	
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:**	19 Dec 12
No water encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:**	19 Dec 12
				WGHT		**140#**			**DRILLER:**	T. McGovern
				FALL		**30"**			**INSPECTOR:**	KWA

Depth (ft.)	Casing Blows per Foot	Sample No.	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			2		**Topsoil**	
1		**S-1**	3		0'9"	Rec = 20"
			3		Br cf S, l (+) $	moist
2			7			
			5		same, dk br	
3		**S-2**	6		**Brown coarse to fine SAND,**	Rec = 17"
			8		**little (+) Silt**	moist
4			23		4'0"	
5					**Completely to highly weathered**	
					Gneiss	
6					5'6"	Auger refusal @ 5'6"
					End of Boring @ 5'6"	
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

Byrnwood Club Development
Bedford Road
Town of New Castle, NY
(12-175)

3 January 2013

TEST PIT LOGS

TP-1	Elevation +662		
0-0'9"	Brown Topsoil		
0'9"-2'0"	Brown coarse to fine SAND, and Silt, trace (+) medium to fine Gravel	medium dense	moist
2'0"	Gneiss bedrock No water encountered		

TP-2	Elevation +672		
0-1'10"	FILL (Brown coarse to fine SAND, some silt, little (-) coarse to fine Gravel, with topsoil)	medium dense	moist
1'10"-4'4"	Light brown coarse to fine SAND, some (+) Silt	medium dense	moist
4'4"	Gneiss bedrock No water encountered		

TP-3	Elevation +672		
0-0'9"	Dark brown Topsoil with surface debris		
0'9"-2'2"	Brown coarse to fine SAND, some Silt	medium dense	moist
2'2"	Gneiss bedrock No water encountered		

Byrnwood Club Development
Bedford Road
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TEST PIT LOGS

TP-4	Elevation +672		
0-0’6”	Brown Topsoil		
0’6”-3’6”	Brown coarse to fine SAND, and (-) Silt, some coarse to fine Gravel	medium dense	moist
3’6”	Gneiss bedrock No water encountered		

TP-5	Elevation +670		
0-0’7”	Brown Topsoil		
0’7”-3’8”	Light brown coarse to fine SAND, some (+) Silt	medium dense	moist
3’8”-4’9”	Brown coarse to fine SAND, some Silt (completely weathered gneiss)	dense	moist
4’9”	Gneiss bedrock No water encountered		

TEST PIT LOGS

TP-6	Elevation +672		
0-0’10”	Brown Topsoil		
0’10”-2’10”	Light brown coarse to fine SAND, some (-) Silt, little coarse to fine Gravel	medium dense	moist
2’10”-4’7”	Brown coarse to fine SAND, some Silt, little coarse to fine Gravel (completely weathered gneiss)	dense	moist
4’7”	Gneiss bedrock No water encountered		

TP-7	Elevation +620		
0-0’9”	Brown Topsoil		
0’9”-2’8”	Brown coarse to fine SAND, some Silt, trace coarse to fine Gravel	medium dense	moist
2’8”	Probable Gneiss bedrock		
	Test pit abandoned No water encountered		

TP-8	Elevation +614		
0-0’8”	Dark brown Topsoil		
0’8”-5’0”	Mottled orange brown, gray coarse to fine SAND, and (-) Silt	medium dense	moist
	Groundwater encountered @ 4’1”	slow inflow	

Byrnwood Club Development
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TEST PIT LOGS

TP-9	Elevation +628		
0-0'4"	Topsoil		
0'4"-6'9"	FILL (Brown coarse to fine SAND, some (+) Silt, some (+) coarse to fine Gravel, with cobbles and boulders)	medium dense	moist
6'9"	FILL (Gray coarse to fine SAND, trace (+) Silt)	medium dense	moist
	Possible cover over for utility Test pit was abandoned		
	No water encountered		

TP-10	Elevation +625		
0-0'4"	Topsoil		
0'4"-3'0"	FILL (Boulders with topsoil)	loose	moist
3'0"-8'0"	Brown coarse to fine SAND, some (+) Silt	medium dense	moist
	No water encountered		

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TEST PIT LOGS

TP-11	Elevation +642		
0-0'6"	Brown Topsoil		
0'6"-3'9"	Brown coarse to fine SAND, some Silt, little coarse to fine Gravel, with occasional cobbles and boulders	medium dense	moist
3'9"-6'0"	Brown coarse to fine SAND, little (+) Silt, some coarse to fine Gravel (completely weathered gneiss)	dense	moist
6'0"	Weathered Gneiss bedrock No water encountered		

TP-12	Elevation +635		
0-0'6"	Brown Topsoil		
0'6"-5'0"	FILL (Brown coarse to fine SAND, some (+) Silt, little (-) coarse to fine Gravel, with trace of debris)	loose	moist
5'0"-6'6"	Orange brown, gray coarse to fine SAND and Silt	dense	moist
	Refusal on boulder No water encountered		

Byrnwood Club Development
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4 January 2013

TEST PIT LOGS

TP-13	Elevation +636		
0-0’9”	Brown Topsoil with roots		
0’9”-6’3”	Brown coarse to fine SAND, and Silt, little coarse to fine Gravel	medium dense	moist
6’3”-7’5”	Brown coarse to fine SAND, some (+) Silt, little (-) coarse to fine Gravel	dense	moist
7’5”	Gneiss bedrock		
	Groundwater encountered @ 4’10”	slow inflow	

TP-14	Elevation +625		
0-0’3”	Brown Topsoil		
0’3”-3’4”	FILL (Gray brown coarse to fine SAND, some Silt, little coarse to fine Gravel, with cobbles and boulders)	loose	moist
3’4”-5’0”	FILL (Brown coarse to fine SAND, little Silt)	medium dense	moist
5’0”	Gneiss bedrock No water encountered		

4 January 2013

TEST PIT LOGS

TP-15	Elevation +668		
0-0'3"	Brown Topsoil		
0'3"-1'8"	Brown coarse to fine SAND, some (+) Silt, some (-) coarse to fine Gravel, with occasional cobbles and boulders	medium dense	moist
1'8"	Gneiss bedrock No water encountered		

TP-16	Elevation +651		
0-0'8"	Dark brown Topsoil		
0'8"-1'10"	FILL (Brown coarse to fine SAND, some (+) Silt, trace medium to fine Gravel, with cobbles)	medium dense	moist
1'10"-4'10"	Brown coarse to fine SAND, some (+) Silt, trace medium to fine Gravel	medium dense	moist
4'10"	Gneiss bedrock No water encountered		

Byrnwood Club Development
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TEST PIT LOGS

TP-17	Elevation +655		
0-0'3"	Topsoil		
0'3"-1'0"	Brown coarse to fine SAND, some (+) Silt, little coarse to fine Gravel	medium dense	moist
	Encountered irrigation pipes Test pit abandoned No water encountered		

TP-18	Elevation +670		
0-0'10"	Brown Topsoil		
0'10"-7'0"	Brown SILT and, coarse to fine Sand, little (-) medium to fine Gravel	medium dense	moist
	No water encountered		

Brynwood Club Development
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13 September 2013

TEST PIT LOGS

TP-19

0-2'5"	FILL (Brown coarse to fine SAND, some Silt, some coarse to fine Gravel, with topsoil, cobbles, boulders)	loose	moist
2'5"-7'0"	Brown coarse to fine SAND, some Silt, little coarse to fine Gravel	medium dense	moist
	No water encountered		

TP-20

0-0'6"	Brown Topsoil		
0'6"-4'3"	Brown, orange brown coarse to fine SAND, some Silt, little coarse to fine Gravel	medium dense	moist
4'3"-8'0"	Orange brown coarse to fine SAND, little (-) Silt, some coarse to fine Gravel, with occasional cobbles	medium dense	moist
	No water encountered		

Brynwood Club Development
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TEST PIT LOGS

TP-21

0-0’6”	Dark brown Topsoil		
0’6”-1’4”	FILL (Brown coarse to fine SAND, some (-) Silt, trace medium to fine Gravel, with few roots)	medium dense	moist
1’4”-7’0”	Brown coarse to fine SAND, little Silt, trace (+) coarse to fine Gravel, with occasional cobbles	medium dense	moist
7’0”	Possible weathered bedrock		
	No water encountered		

TP-22

0-1’6”	Dark brown Topsoil, with roots		
1’6”-2’8”	Mottled gray brown, orange brown Clayey SILT, little medium to fine Sand	medium dense	moist
2’8”-3’6”	Brown coarse to fine SAND, some (+) Silt, little medium to fine Gravel	medium dense	moist
3’6”-6’0”	Brown coarse to fine SAND, little (+) Silt, come coarse to fine Gravel	medium dense	wet
6’0”-7’6”	Gray brown SILT little, coarse to fine Sand, trace medium to fine Gravel	medium dense	wet
	Groundwater encountered @ 4’6”	slow inflow	

Brynwood Club Development
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TEST PIT LOGS

TP-23

0-0'7"	Brown Topsoil		
0'7"-3'10"	Brown coarse to fine SAND, and (-) Silt, little (-) coarse to fine Gravel	dense	moist
3'10"	Weathered bedrock		
	No water encountered		

TP-24

0-0'8"	Brown Topsoil		
0'8"-6'8"	Brown coarse to fine SAND, some (+) Silt, little (-) coarse to fine Gravel, with occasional cobbles	medium dense	moist
6'8"	Possible weathered bedrock or boulder		
	No water encountered		

TP-25

0-0'4"	Brown Topsoil		
0'4"-3'4"	Brown coarse to fine SAND, and Silt, trace medium to fine Gravel	medium dense	moist
3'4"	Possible bedrock or boulder		
	No water encountered		

Brynwood Club Development
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TEST PIT LOGS

TP-26

0-0’6”	Brown Topsoil		
0’6”-2’8”	FILL (Brown coarse to fine SAND, some (-) Silt, little coarse to fine Gravel, with cobbles and boulders)	medium dense	moist
2’8”-4’0”	FILL (Brown Topsoil, with trace roots)		
4’0”-5’6”	FILL (Dark gray brown Clayey SILT, and, coarse to fine Sand, with trace roots, trace debris)	medium stiff	moist
5’6”-8’0”	Brown coarse to fine SAND, and (-) Silt, trace coarse to fine Gravel	medium dense	moist
	No water encountered		

TP-27

0-0’9”	Brown Topsoil, with roots		
0’9”-4’4”	Light brown coarse to fine SAND, little Silt, trace coarse to fine Gravel	medium dense	dry
4’4”	Probable weathered bedrock		
	No water encountered		

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TEST PIT LOGS

TP-28

0-0’4”	Brown Topsoil		
0’4”-8‘6”	FILL (Brown coarse to fine SAND, little Silt, little coarse to fine Gravel, with organics, debris)	loose	moist
8’6”-9’0”	FILL (Gray coarse to fine SAND, some Silt, little coarse to fine Gravel, with organics)	medium dense	wet
	Groundwater encountered @ 8’0”		

18 -19 December 2012

Borehole Permeability Test (B-4)

Ground Surface Elevation: +628.0
Top of Casing Elevation: +631.5
Bottom of Test Hole Elevation: +621.0
Test Hole Depth from Ground Surface Elevation: 7'0" (84")

Pre-Soak:

Start Date: 18 Dec 2012 Time: 1545 Water Level*: 4'4"
End Date: 19 Dec 2012 Time: 0900 Water Level*: 7'1"

33" drop H_2O in 1035 minutes (17 hr. 15 min.) = 0.03 inches per minute

Test:

Start Date: 19 Dec 2012 Time: 1000 Water Level*: 4'3"
End Date: 19 Dec 2012 Time: 1515 Water Level*: 5'3.5"

12.5" drop H_2O in 315 minutes (5 hr. 15 min.) = 0.04 inches per minute

Time	Water Level*	Interval Water Level Drop (Inches)	Cumulative Water Level Drop (Inches)
1000	4'3"	0	0
1100	4'6"	3	3
1200	4'8"	2	5
1300	4'10"	2	7
1400	5'1"	3	10
1515	5'3.5"	2.5	12.5

Water Level* - Depth below top of casing (elevation +631.5)

Byrnwood Club Development
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Town of New Castle, NY
(12-175)

3 January 2013

<u>Percolation Test P-1</u>
(Elevation +620)

Test hole depth 42” from ground surface elevation

<u>Pre-Soak</u>

0-10 min, 22” drop of H2O (pipe drained)
22” drop H2O in 10 minutes = 2.20 inches per minute

<u>Test Run #1</u>

5 min, 15” drop H2O (re-filled pipe)

<u>Test Run #2</u>

5 min, 14” drop H2O (re-filled pipe)

<u>Test Run #3</u>

5 min, 12” drop H2O (re-filled pipe)

<u>Final Test Reading</u>

Start @ 1245, 14” from top of pipe
Finish @ 1300, 36” drop from top of pipe (pipe drained)
22” drop H2O in 15 minutes = 1.46 inches per minute

<u>Percolation Hole P-2</u>
(Elevation + 612)

Test hole depth 20” from ground elevation
Groundwater @ 0’6” below surface
Percolation test unable to be performed

Byrnwood Club Development
Bedford Road
Town of New Castle, NY
(12-175)

3 January 2013

<u>Percolation Test P-3</u>
(Elevation + 616)

Test hole depth 32" from ground surface elevation

<u>Pre-Soak</u>

0-24 min, 17" drop of $H2O$ (pipe drained)
17" drop $H2O$ in 24 minutes = 0.71 inches per minute

<u>Test Run #1</u>

5 min, 5" drop $H2O$ (re-filled pipe)

<u>Test Run #2</u>

5 min, 5" drop $H2O$ (re-filled pipe)

<u>Test Run #3</u>

5 min, 4" drop $H2O$ (re-filled pipe)

<u>Final Test Reading</u>

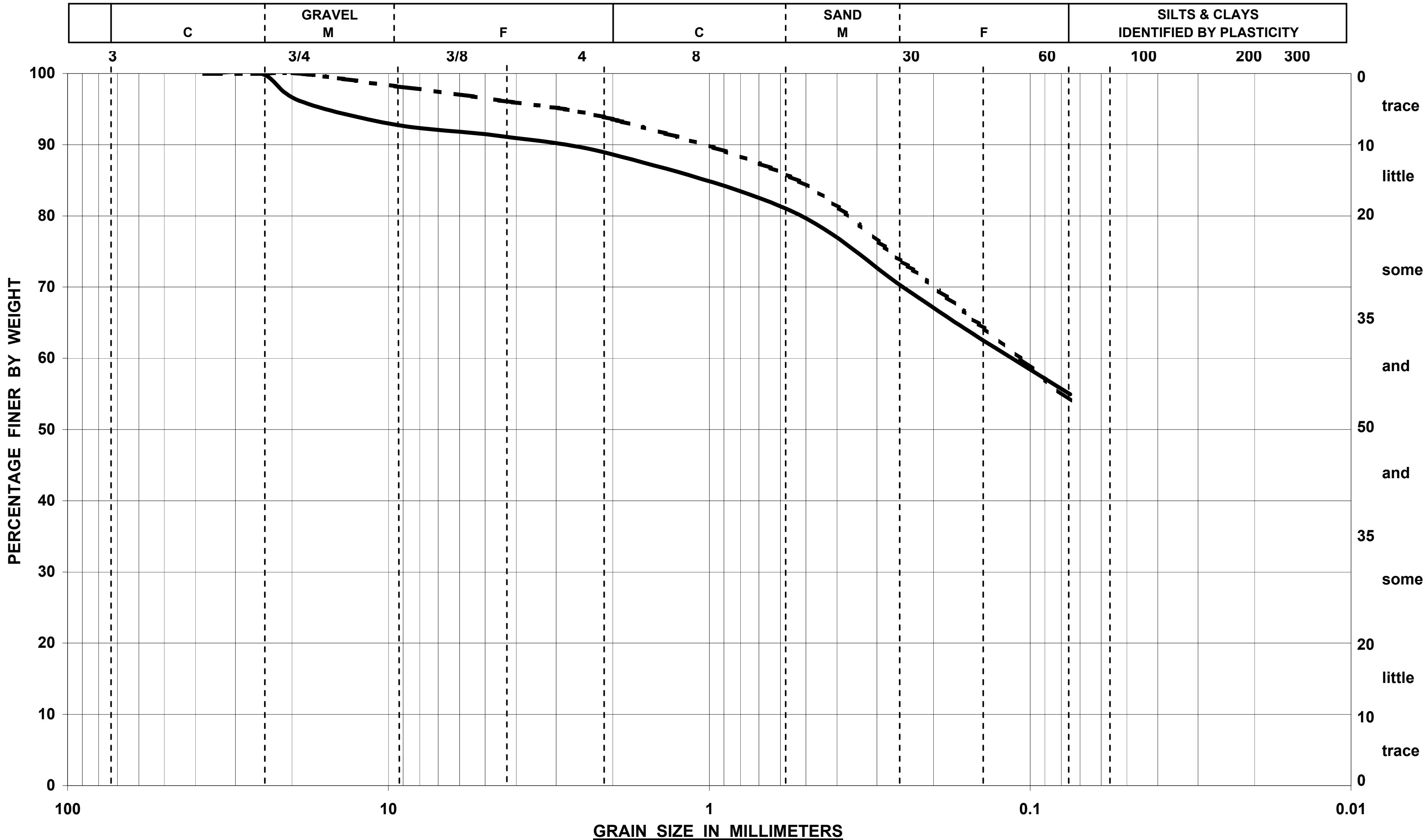
Start @ 1535, 15" from top of pipe
Finish @ 1605, 28" drop from top of pipe
13" drop H2O in 30 minutes = 0.43 inches per minute

<u>Percolation Hole P-4</u>
(Elevation + 615)

Test hole depth 24" from ground elevation
Groundwater @ 1'10" below surface
Percolation test unable to be performed

CARLIN-SIMPSON & ASSOCIATES
SAYREVILLE, NJ 08872

SIEVE ANALYSIS

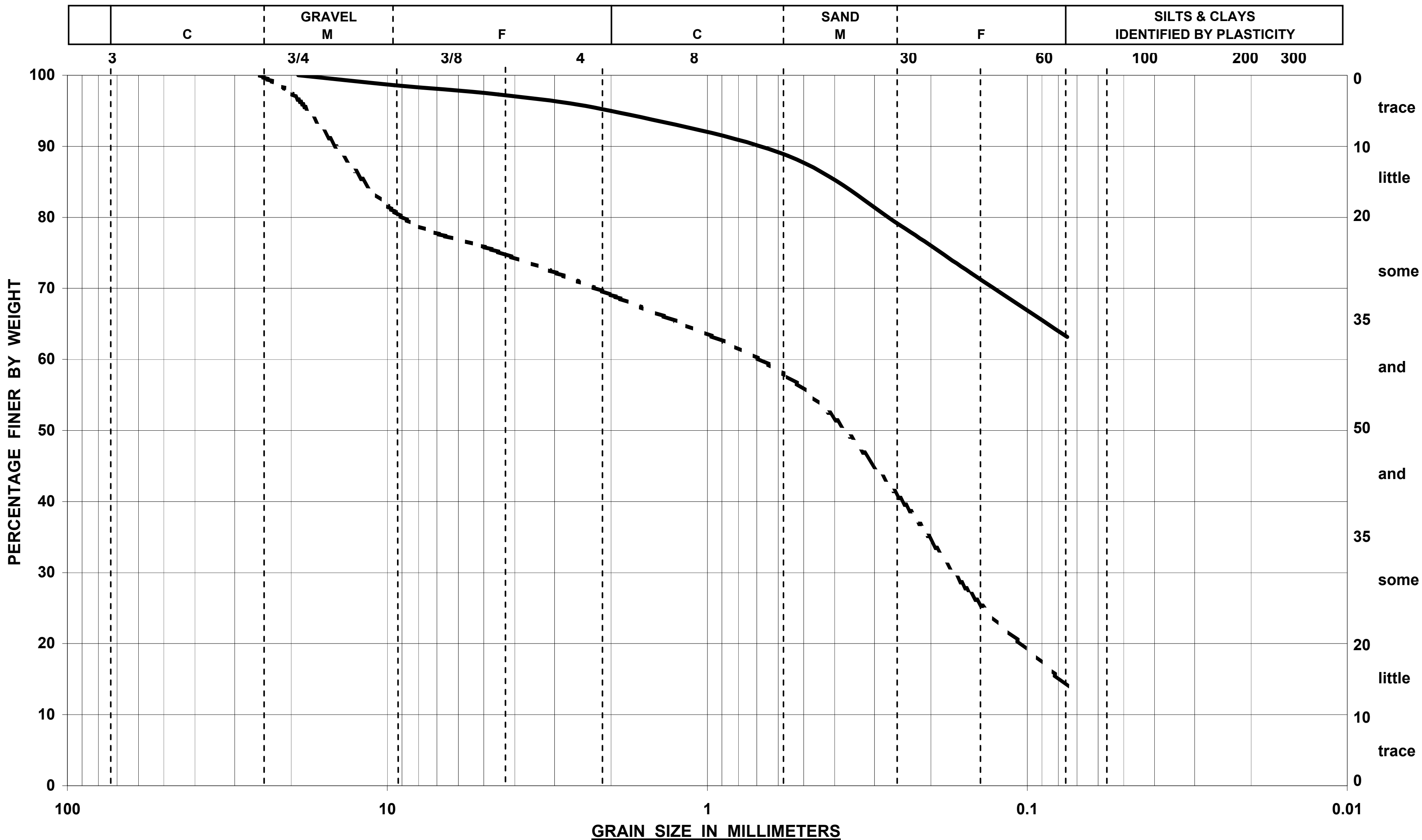


SYMBOL	BORING	SAMPLE	DEPTH	DESCRIPTION	NAT MC
———	B-1	S-1	0' 0" - 2' 0"	Brown SILT and (+), coarse to fine Sand, little (-) medium to fine Gravel	14.0%
— -	B-2	S-2	2' 0" - 4' 0"	Brown SILT and (+), coarse to fine Sand, trace medium to fine Gravel	14.2%

PROJECT Brynwood Club, Bedford Road, North Castle, NY **BY** MW **DATE** 7-Jan-13 **JOB NO** 12-175

CARLIN-SIMPSON & ASSOCIATES
SAYREVILLE, NJ 08872

SIEVE ANALYSIS



SYMBOL	BORING	SAMPLE	DEPTH	DESCRIPTION	NAT MC
———	B-3	S-1	0' 0" - 2' 0"	Brown SILT and (-), coarse to fine Sand, trace medium to fine Gravel	24.2%
— -	B-4	S-3	5' 0" - 7' 0"	Brown coarse to fine SAND, little Silt, some (+) medium to fine Gravel	12.1%

PROJECT Brynwood Club, Bedford Road, North Castle, NY **BY** MW **DATE** 7-Jan-13 **JOB NO** 12-175

CARLIN-SIMPSON & ASSOCIATES
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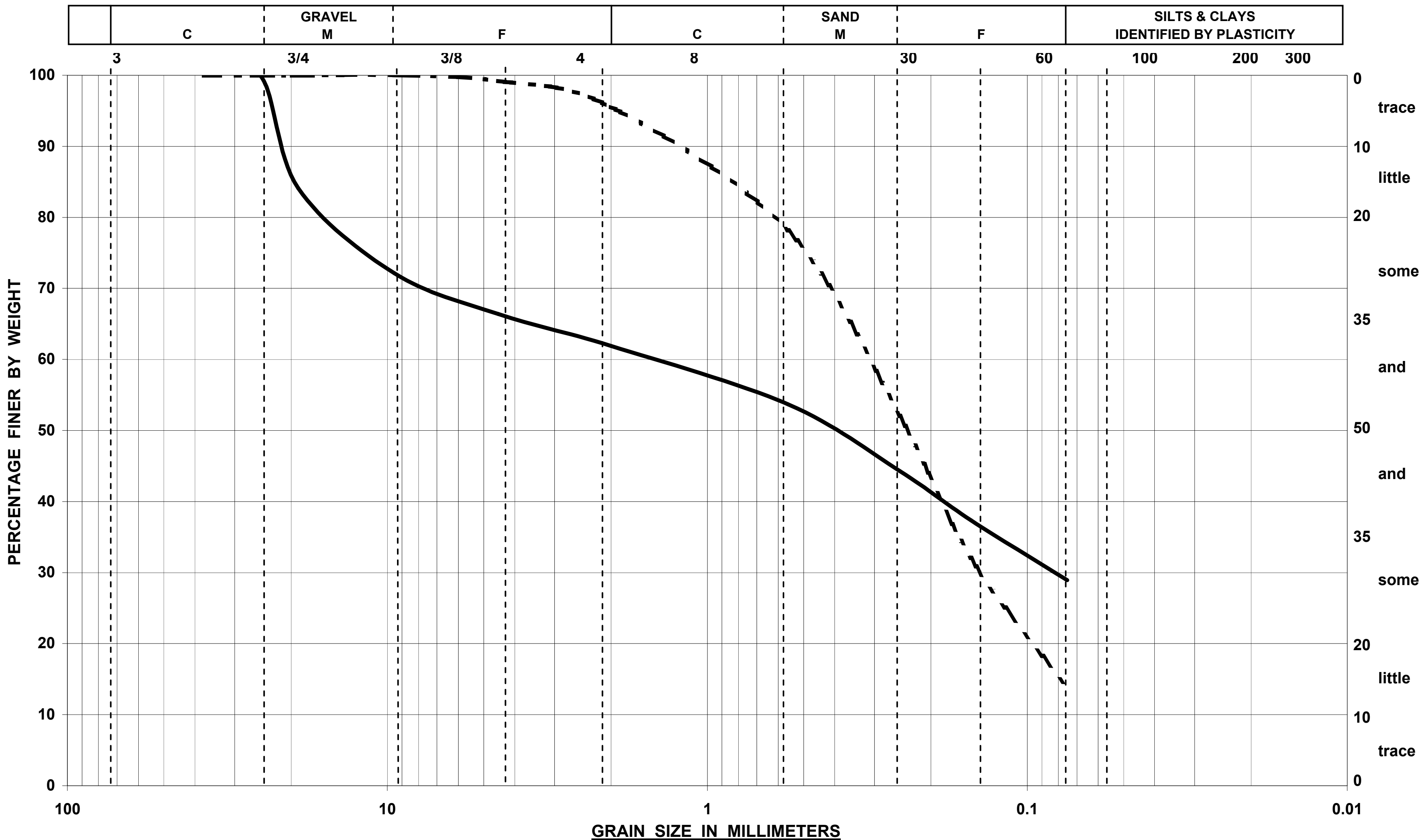
SIEVE ANALYSIS

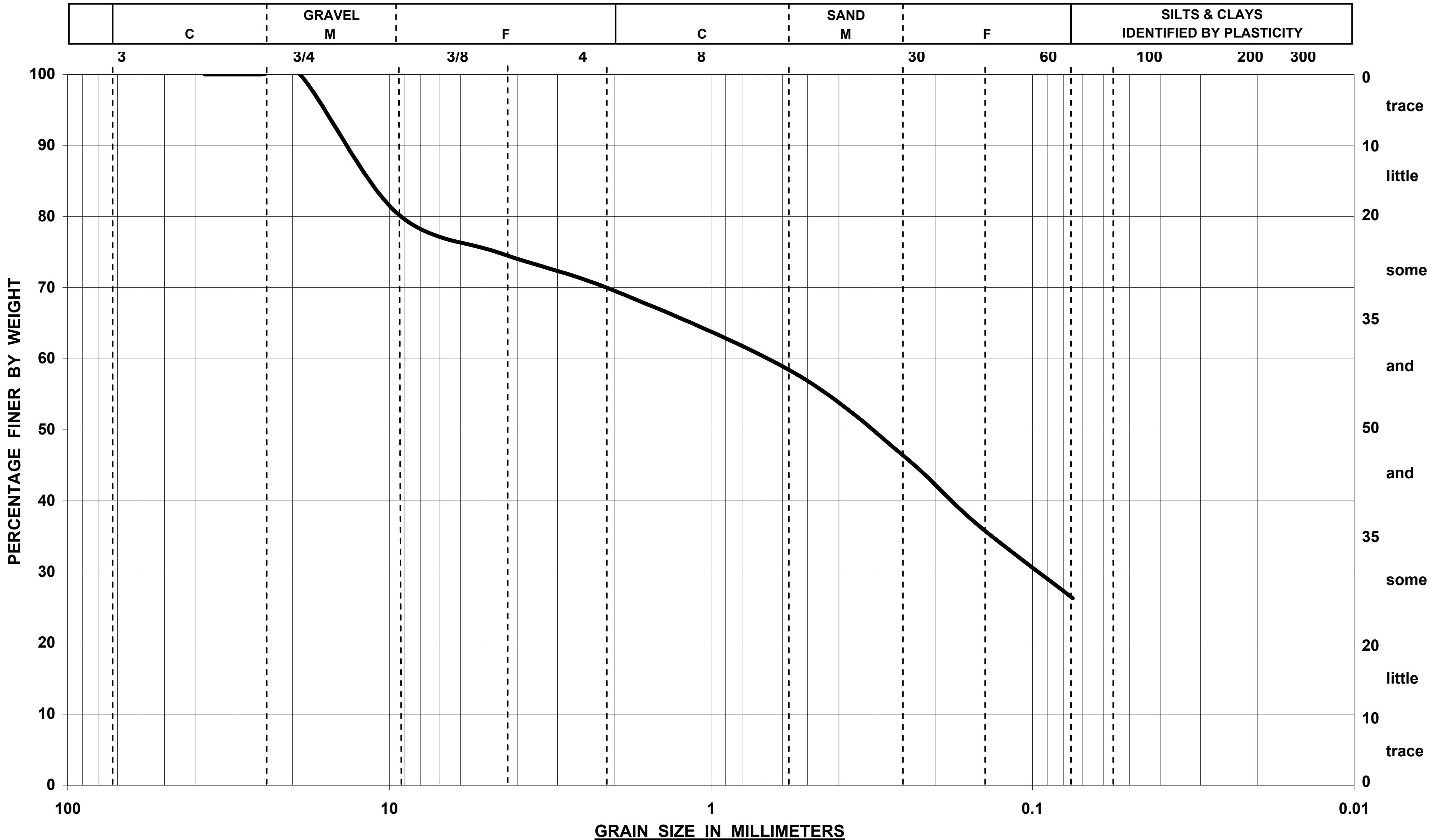


SYMBOL	BORING	SAMPLE	DEPTH	DESCRIPTION	NAT MC
———	B-6	S-2	2' 0" - 4' 0"	Brown coarse to fine Sand, some Silt, and (-) coarse to fine Gravel	9.9%
— -	B-7	S-3	5' 0" - 7' 0"	Brown coarse to fine SAND, little Silt, trace fine Gravel	8.7%

PROJECT Brynwood Club, Bedford Road, North Castle, NY **BY** MW **DATE** 10-Jan-13 **JOB NO** 12-175

CARLIN-SIMPSON & ASSOCIATES
SAYREVILLE, NJ 08872

SIEVE ANALYSIS

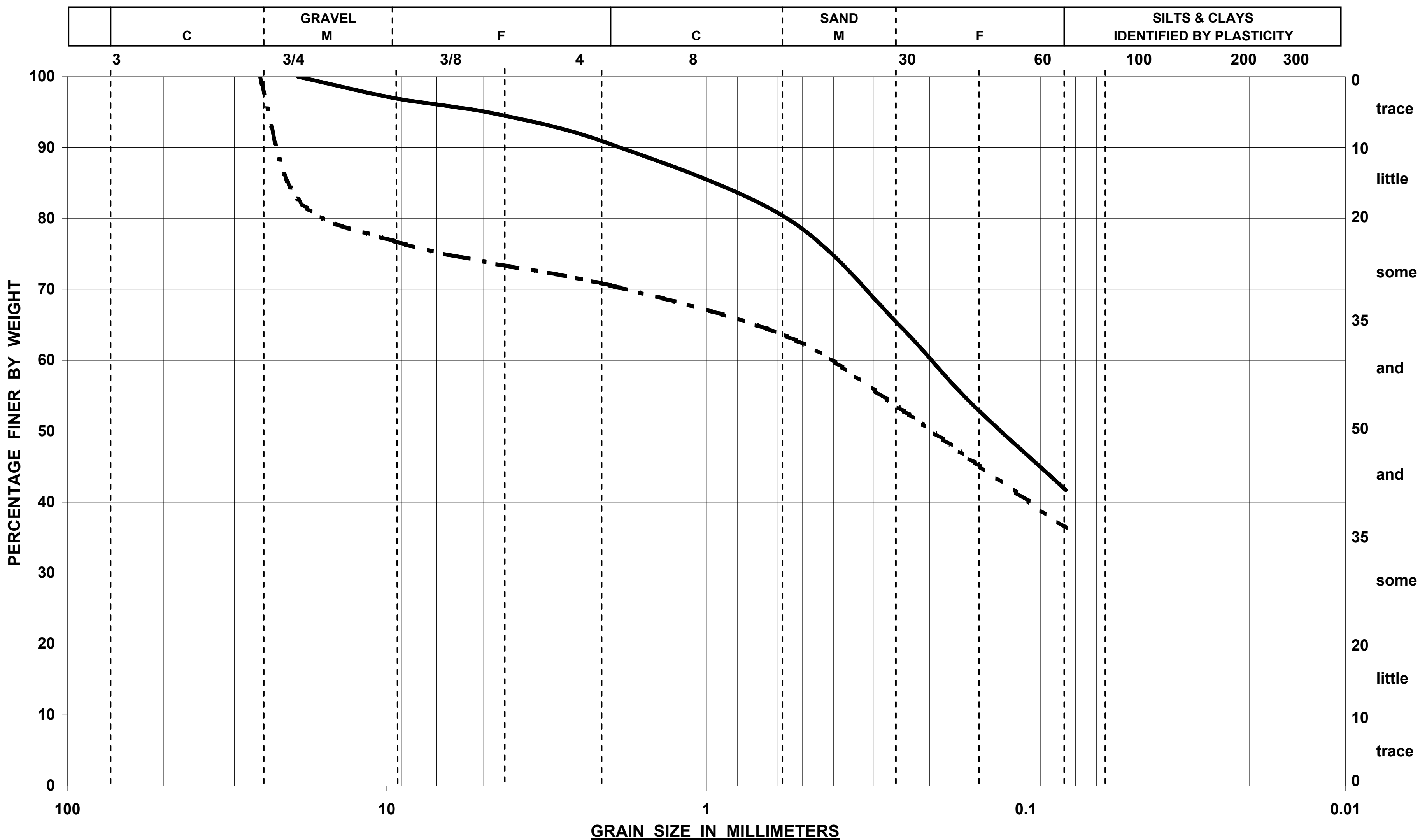


SYMBOL	BORING	SAMPLE	DEPTH	DESCRIPTION	NAT MC
——	B-9	S-2	2' 0" - 4' 0"	FILL (brown coarse to fine Sand, some Silt, some (+) medium to fine Gravel	15.0%

PROJECT Brynwood Club, Bedford Road, North Castle, NY BY MW DATE 7-Jan-13 JOB NO 12-175

CARLIN-SIMPSON & ASSOCIATES
SAYREVILLE, NJ 08872

SIEVE ANALYSIS



SYMBOL	Test Pit	SAMPLE	DEPTH	DESCRIPTION	NAT MC
——	TP-1	S-1		Brown coarse to fine SAND, and Silt, trace (+) medium to fine Gravel	18.2%
— -	TP-4	S-1		Brown coarse to fine Sand, and (-) Silt, some coarse to fine Gravel	14.0%

PROJECT Brynwood Club, Bedford Road, North Castle, NY **BY** MW **DATE** 7-Jan-13 **JOB NO** 12-175

CARLIN-SIMPSON & ASSOCIATES
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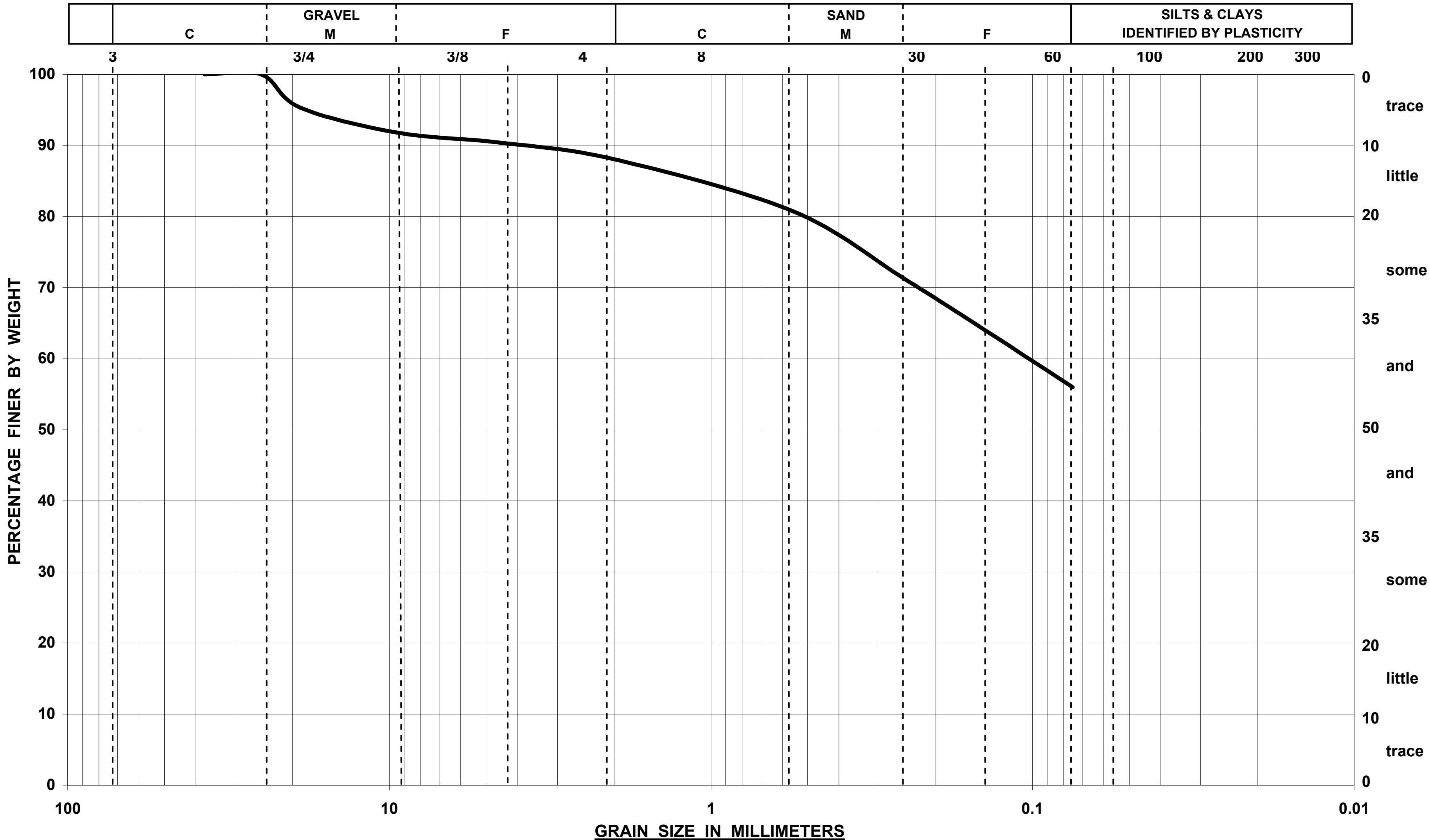
SIEVE ANALYSIS



SYMBOL	Test Pit	SAMPLE	DEPTH	DESCRIPTION	NAT MC
——	TP-18	S-1	0' 10" - 7' 0"	Brown SILT and, coarse to fine Sand, little (-) medium to fine Gravel	18.0%

PROJECT Brynwood Club, Bedford Road, North Castle, NY **BY** MW **DATE** 7-Jan-13 **JOB NO** 12-175

GENERAL NOTES:

1. GENERAL LAYOUT WAS OBTAINED FROM A DRAWING PREPARED BY JOHN MEYER CONSULTING, PC ENTITLED "TEST PIT PLAN, BRYNWOOD CLUB, BEDFORD ROAD (NY 22), TOWN OF NORTH CASTLE NEW YORK," DRAWING TP-1, DATED DECEMBER 17, 2012.
2. BORING, TEST PIT, PERMEABILITY TEST, AND PERCOLATION TEST LOCATIONS WERE LAID OUT IN THE FIELD BY CARLIN-SIMPSON & ASSOCIATES (CSA).
3. BORINGS (B-1 THROUGH B-11) WERE PERFORMED BY GENERAL BORINGS INC. ON 18 & 19 DECEMBER 2012 UNDER THE FULL TIME INSPECTION OF CSA.
4. THE BOREHOLE PERMEABILITY TEST (BP-4) WAS PERFORMED BY CSA ON 18 & 19 DECEMBER 2012.
5. PERCOLATION TESTS (P-1, P-2, AND P-3) WERE PERFORMED BY CSA ON 3 JANUARY 2013.
6. TEST PITS (TP-1 THROUGH TP-18) WERE PERFORMED BY TRAFICANTE CONTRACTING, INC ON 3 & 4 JANUARY 2013 UNDER THE FULL TIME INSPECTION OF CSA.
7. TEST PITS (TP-19 THROUGH TP-28) WERE PERFORMED BY BRYNWOOD CLUB PERSONNEL IN SEPTEMBER 2013 UNDER THE FULL TIME INSPECTION OF CSA.
8. LOCATIONS ARE APPROXIMATE.

LEGEND:

- BORING LOCATION (DEC. 2012)
- TEST PIT LOCATION (JAN. 2013)
- TEST PIT LOCATION (SEPT. 2013)
- PERCOLATION TEST LOCATION (JAN. 2013)
- BOREHOLE PERMEABILITY TEST LOCATION (DEC. 2012)

ROBERT B. SIMPSON, P.E.
PROFESSIONAL ENGINEER

LICENSE NO. SIGNATURE

BORING & TEST PIT LOCATION PLAN

BRYNWOOD CLUB DEVELOPMENT
NORTH CASTLE, NEW YORK

DRAWN	SCALE
MRA	1" = 120'
CHECKED	DATE
RBS	16 OCT 13
PROJECT NO.	DWG NO.
12-175	FIG -1
APPROVED	

CARLIN-SIMPSON AND ASSOCIATES
61 Main Street
Sayreville, NJ 08872

Consulting Geotechnical and Environmental Engineers

APPENDIX D

TEMPORARY & PERMANENT EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE CHECKLIST

JMC Project 20101
The Summit Club at Armonk
568 & 570 Bedford Road (NY-22)
Armonk, NY 10504

<u>Temporary Erosion and Sediment Control Inspection and Maintenance Checklist</u>

Erosion and Sediment Control Measure	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Stabilized Construction Entrance	Daily	• Periodic top dressing with additional aggregate as required • Clean sediment in public right-of-ways immediately
Silt Fence	Weekly + After Each Rain	• Remove & redistribute sediment when bulges develop in the silt fence.
Inlet Protection	Weekly + After Each Rain	• Remove sediment as necessary and replace filter fabric, crushed stone etc. • Any broken and damaged components should be replaced. • Check all materials for proper anchorage and secure as necessary.
Concrete Washout	Daily	• Damaged or leaking facilities shall be deactivated and repaired or replaced immediately.
	After Each Rain	• Pump excess rainwater that has accumulated over hardened concrete to a stabilized area.
		• Remove accumulated hardened material when 75% of the storage capacity of the structure is filled. Replace plastic liner with each cleaning of the washout facility.

Temporary Erosion and Sediment Control Inspection and Maintenance Checklist (Cont'd)

Erosion and Sediment Control Measure	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Level Spreader	Weekly + After Each Rain	• Remove sediment accumulated as needed to ensure the level spreader operates properly and large flows are prevented from carrying sediment over the level lip. • Check for rilling within/around the level spreader and repair as required.
Temporary Sediment Basin	Weekly + After Each Rain	• Remove and redistribute sediment when it reaches an elevation indicated on the construction documents. • Check for rilling within and around the sediment basin and repair as required. • Remove all sediment and debris from the outlet control structure as maybe required.

Permanent Stormwater Management Practice Inspection and Maintenance Checklist

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Rip-Rap Apron/Energy Dissipator and Check Dams	Annually + After Major Storms	• Check for evidence of flows going around the structure. • Check for evidence at downstream toe and repair as needed. • Clean sediment and install additional aggregate as necessary.
Stormwater Management Basin	Monthly	• Check Permanent Pool for undesirable vegetative growth and floatings or floatable debris. Remove as needed. • Check Forebays for sediment and cleanout when it depth <50% design depth. • Check Dry Pond areas for adequate vegetation, undesirable vegetative growth, low flow channels are clear of obstructions, standing water or wet spots and sediment and/or trash accumulation. Repair/remove as necessary.

Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Stormwater Management Basin	Annually + After Major Storms	• Check adequacy of vegetation and ground cover; for evidence of embankment erosion, animal burrows, unauthorized plantings and cracking, bulging or sliding of dam, clear/properly functioning drains, seeps/leaks on downstream face, failure of slope protection or riprap. Repair/remove as necessary. • Confirm emergency spillway is clear of obstructions and debris. • Confirm all inlets and outlet structures/pipes are operating properly.
Drain Inlets	Monthly	• Check for blockage and/or erosion at top of each inlet. Repair/remove as necessary. • Check for sediment and debris collected within sumps and clean out as necessary.

Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Porous Pavement and Permeable Pavers	Monthly and As Needed	• Ensure that paving area is clean of debris • Ensure that paving dewaters between storms • Ensure that the area is clean of sediments • Mow upland and adjacent areas, and seed bare areas
	Quarterly	• Vacuum sweep frequently to keep surface free of sediments
	Annually	• Inspect the surface for deterioration or spalling
Hydrodynamic Water Quality Structure	(See Maintenance Guidelines in Appendix D)	• Open access cover for visual inspection and measure the distance from the standing water surface to the sediment pile with a measuring stick or tape. If less than 4 feet, insert hose from vacuum truck into the sump and screen through both access covers to clean out the standing water, layer of oil, sediment, trash, etc. • The screen must be powerwashed to ensure it is free of trash and debris.

The owner/operator responsible for inspection and maintenance as outlined above:

Summit Club Partners, LLC
Mr. Jeff Mendell
10 Glenville Street, 1st Floor
Greenwich, CT 06831
Phone: 203-813-3264
Fax:
Email: jbmendell@greenwichdp.com

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CONTECH®
ENGINEERED SOLUTIONS

Cascade Separator® Inspection and Maintenance Guide

CASCADE
separator®

Maintenance

The Cascade Separator® system should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects sediment and debris will depend upon on-site activities and site pollutant characteristics. For example, unstable soils or heavy winter sanding will cause the sediment storage sump to fill more quickly but regular sweeping of paved surfaces will slow accumulation.

Inspection

Inspection is the key to effective maintenance and is easily performed. Pollutant transport and deposition may vary from year to year and regular inspections will help ensure that the system is cleaned out at the appropriate time. At a minimum, inspections should be performed twice per year (i.e. spring and fall). However, more frequent inspections may be necessary in climates where winter sanding operations may lead to rapid accumulations, or in equipment wash-down areas. Installations should also be inspected more frequently where excessive amounts of trash are expected.

A visual inspection should ascertain that the system components are in working order and that there are no blockages or obstructions in the inlet chamber, flumes or outlet channel. The inspection should also quantify the accumulation of hydrocarbons, trash and sediment in the system. Measuring pollutant accumulation can be done with a calibrated dipstick, tape measure or other measuring instrument. If absorbent material is used for enhanced removal of hydrocarbons, the level of discoloration of the sorbent material should also be identified during inspection. It is useful and often required as part of an operating permit to keep a record of each inspection. A simple form for doing so is provided in this Inspection and Maintenance Guide.

Access to the Cascade Separator unit is typically achieved through one manhole access cover. The opening allows for inspection and cleanout of the center chamber (cylinder) and sediment storage sump, as well as inspection of the inlet chamber and slanted skirt. For large units, multiple manhole covers allow access to the chambers and sump.

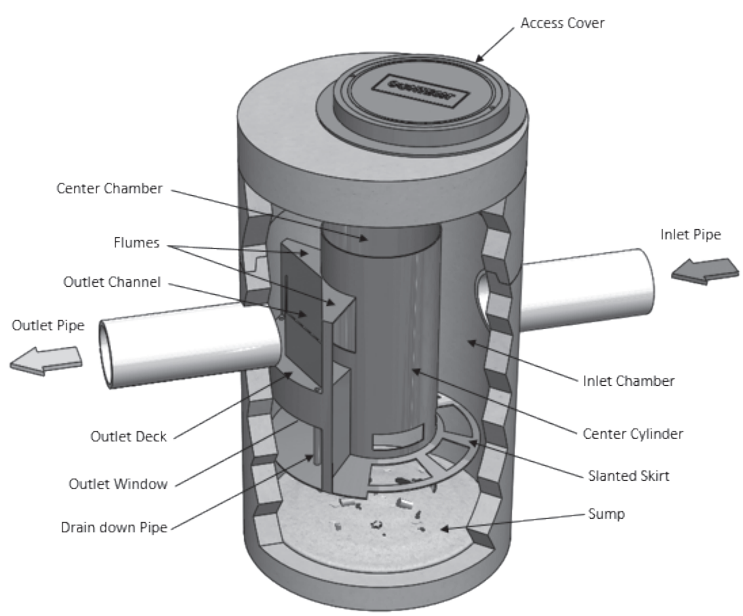
The Cascade Separator system should be cleaned before the level of sediment in the sump reaches the maximum sediment depth and/or when an appreciable level of hydrocarbons and trash has accumulated. If sorbent material is used, it must be replaced when significant discoloration has occurred. Performance may be impacted when maximum sediment storage capacity is exceeded. Contech recommends maintaining the system when sediment level reaches 50% of maximum storage volume. The level of sediment is easily determined by measuring the distance from the system outlet invert (standing water level) to the top of the sediment pile. To avoid underestimating the level of sediment in the chamber, the measuring device must be lowered to the top of the sediment pile carefully. Finer, silty particles at the top of the pile typically offer less resistance to the end of the rod than larger particles toward the bottom of the pile. Once this measurement is recorded, it should be compared to the chart in this document to determine if the height of the sediment pile off the bottom of the sump floor exceeds 50% of the maximum sediment storage.

Cleaning

Cleaning of a Cascade Separator system should be done during dry weather conditions when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method of removing pollutants from the system. Simply remove the manhole cover and insert the vacuum tube down through the center chamber and into the sump. The system should be completely drained down and the sump fully evacuated of sediment. The areas outside the center chamber and the slanted skirt should also be washed off if pollutant build-up exists in these areas.

In installations where the risk of petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, the system should be cleaned out immediately in the event of an oil or gasoline spill. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use absorbent pads since they are usually less expensive to dispose than the oil/water emulsion that may be created by vacuuming the oily layer. Trash and debris can be netted out to separate it from the other pollutants. Then the system should be power washed to ensure it is free of trash and debris.

Manhole covers should be securely seated following cleaning activities to prevent leakage of runoff into the system from above and to ensure proper safety precautions. Confined space entry procedures need to be followed if physical access is required. Disposal of all material removed from the Cascade Separator system must be done in accordance with local regulations. In many locations, disposal of evacuated sediments may be handled in the same manner as disposal of sediments removed from catch basins or deep sump manholes. Check your local regulations for specific requirements on disposal. If any components are damaged, replacement parts can be ordered from the manufacturer.



Cascade Separator® Maintenance Indicators and Sediment Storage Capacities

Model Number	Diameter		Distance from Water Surface to Top of Sediment Pile		Sediment Storage Capacity	
	ft	m	ft	m	y^3	m^3
CS-3	3	0.9	1.5	0.5	0.4	0.3
CS-4	4	1.2	1.5	0.5	0.7	0.5
CS-5	5	1.3	1.5	0.5	1.1	0.8
CS-6	6	1.8	1.5	0.5	1.6	1.2
CS-8	8	2.4	1.5	0.5	2.8	2.1
CS-10	10	3.0	1.5	0.5	4.4	3.3
CS-12	12	3.6	1.5	0.5	6.3	4.8

Note: The information in the chart is for standard units. Units may have been designed with non-standard sediment storage depth.

A Cascade Separator unit can be easily cleaned in less than 30 minutes.

A vacuum truck excavates pollutants from the systems.

Cascade Separator® Inspection & Maintenance Log					
Cascade Model:			Location:		
Date	Depth Below Invert to Top of Sediment[1]	Floatable Layer Thickness[2]	Describe Maintenance Performed	Maintenance Personnel	Comments

1. The depth to sediment is determined by taking a measurement from the manhole outlet invert (standing water level) to the top of the sediment pile. Once this measurement is recorded, it should be compared to the chart in the maintenance guide to determine if the height of the sediment pile off the bottom of the sump floor exceeds 50% of the maximum sediment storage. Note: to avoid underestimating the volume of sediment in the chamber, the measuring device must be carefully lowered to the top of the sediment pile.
2. For optimum performance, the system should be cleaned out when the floating hydrocarbon layer accumulates to an appreciable thickness. In the event of an oil spill, the system should be cleaned immediately.

SUPPORT

- Drawings and specifications are available at www.ContechES.com.
- Site-specific design support is available from our engineers.

Contech Engineered Solutions LLC provides site solutions for the civil engineering industry. Contech's portfolio includes bridges, drainage, sanitary sewer, stormwater, and earth stabilization products. For information, visit www.ContechES.com or call 800.338.1122

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APPENDIX E

CONTRACTOR'S CERTIFICATION

JMC Project 20101
The Summit Club at Armonk
568 & 570 Bedford Road (NY-22)
Armonk, NY

CONTRACTOR'S CERTIFICATION

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

Company Name: ____

Address: ____

Telephone Number: ____

Name and Title: ____

Signature: ___________________________________Date: ______________

Permit Identification No.:____

Name and Title of Trained Contractor:_______________________________

Elements of the SWPPP Contractor is responsible for:____________________

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APPENDIX F

TEMPORARY SEDIMENT BASIN DESIGN DATA SHEETS

TEMPORARY SEDIMENT BASIN DESIGN DATA SHEET

Computed by ____________________________ Date _____________Checked by _________________Date _________

Project____Basin #___________________________

Location ____________________________ Total Area draining to basin (≤50 Ac.) ______________________Acres

BASIN SIZE DESIGN

1. Sediment storage zone volume = 1,000 cu. ft. x number of disturbed acres = _______ cu. ft., Top of Zone Elev. _____
2. Dewatering zone volume = 3,600 cu. ft. x number of drainage area acres = _______cu. ft., Top of Zone Elev. _______
3. Length to width ratio = _____________
4. A. Cleanout at 50% of sediment storage zone volume, Elev. _____________
   B. Distance below top of riser ___________ feet
5. Minimum surface area is larger of 0.01 $Q_{(10)}$ _________or, 0.015 DA = ___________ use ___________acres

DESIGN OF SPILLWAYS & ELEVATIONS

Runoff

6. $Q_{p(10)}$ = ____________________________cfs (Attach runoff computation sheets)

Pipe Spillway (Q_{ps})

7. Min. pipe spillway cap., Q_{ps} = 0.2 x _______Drainage Area, acres = ________cfs
   Note: If there is no emergency spillway, then required $Q_{ps} = Q_{p(10)}$ = ________cfs.
8. H, head = ________ft. Barrel length = ________ft
9. Barrel: Diam. _______inches; Q_{ps} = (Q) ___________x (cor.fac.)________=_________cfs.
10. Riser: Diam. _______inches; Length ________ft.; h = _________ft. Crest Elev. _____________
11. Trash Rack: Diameter = ________inches; H, height = __________inches

Emergency Spillway Design

12. Emergency Spillway Flow, $Q_{es} = Q_p - Q_{ps}$ = ___________ - ____________ = ___________cfs.
13. Width _______ft.; H_p _________ft Crest elevation ___________; Design High Water Elev. ___________
    Entrance channel slope___________________________% ; Top of Dam Elev. ________________
    Exit channel slope ______________________________%

ANTI-SEEP COLLAR/SEEPAGE DIAPHRAGM DESIGN

Collars:

14. y = ________ft.; z = _______:1; pipe slope = ________%, L_s = _______ft.
    Use _______ collars, ______ - ______inches square; projection = ________ft.

Diaphragms:

#_________ width_________ ft. height _________ft.

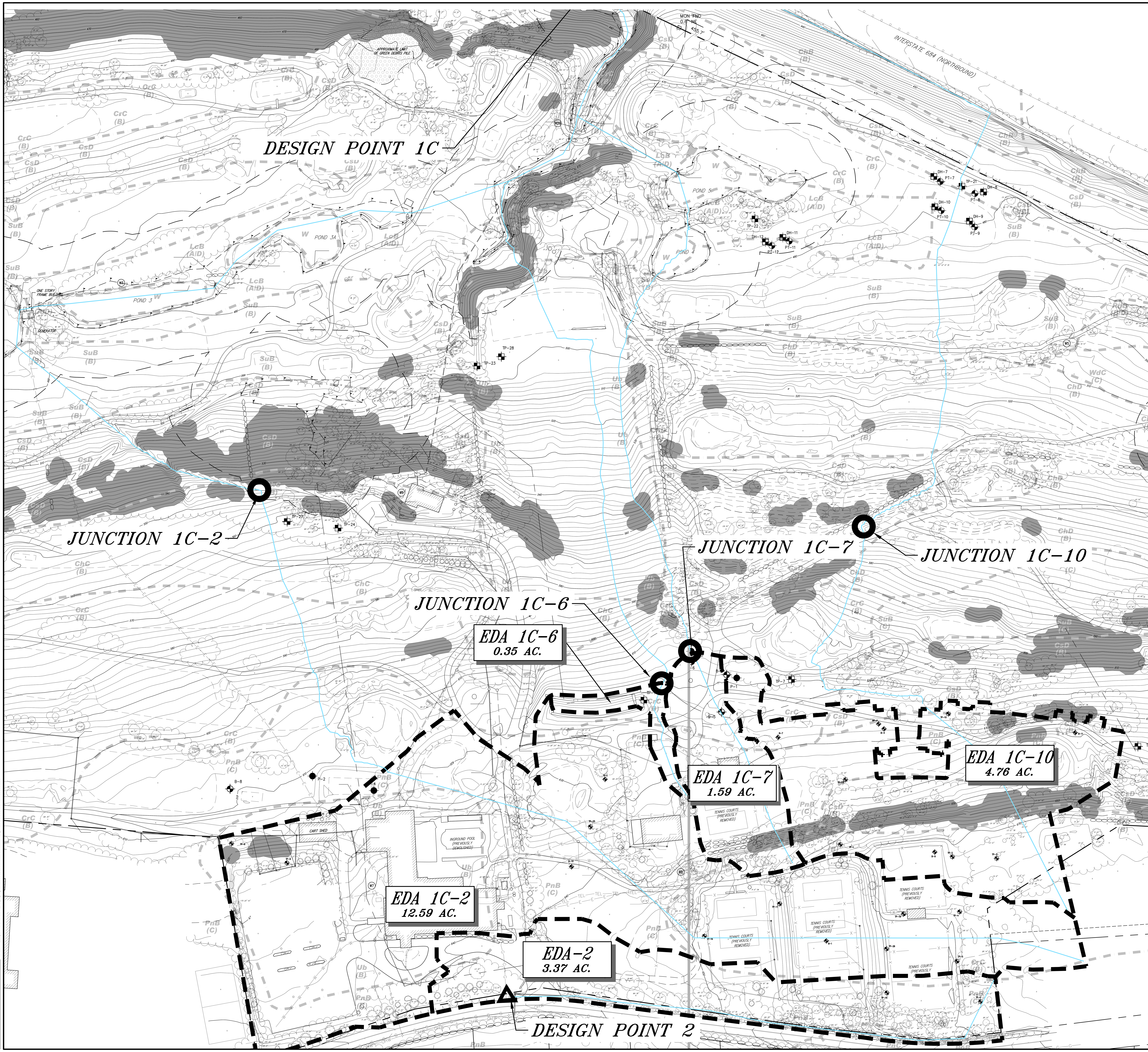
DEWATERING ORIFICE SIZING

(Determined from the Dewatering Device Standard)

15. Dewatering orifice diameter = ________ inches. Skimmer ___ or Riser ____ (check one)
16. Design dewatering time ________ days (Min. 2 days required)

APPENDIX G

DRAWINGS



EXISTING DRAINAGE LEGEND

- EXISTING GRADE
- FLAGGED WETLANDS WITH FLAG NUMBERS
- EXISTING STONE WALL
- WATERSHED BOUNDARY LINE
- BOUNDARY OF COVER TYPE LINE
- LIMIT OF SOIL GROUPS LINE
- FLOW PATH LINE
- HYDROLOGIC SOIL GROUP 'C'
- HYDROLOGIC SOIL GROUP 'B'

SOIL TYPE TABLE

DESIGNATION	HYDROLOGIC GROUP	DESCRIPTION
Ub	B	UDORTHENTS, SMOOTHED
PnB	C	PAXTON FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES
CrC	B	CHARLTON–CHATFIELD COMPLEX, 0 TO 15 PERCENT SLOPES, VERY ROCKY
PnC	C	PAXTON FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES
CsD	B	CHARLTON–CHATFIELD COMPLEX, 15 TO 35 PERCENT SLOPES, VERY ROCKY

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	01/11/2021	NC
2.	RESPONSE TO TOWN COMMENTS	03/08/2021	NC

SUMMIT CLUB PARTNERS, LLC
568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

JMC

EXISTING DRAINAGE AREA MAP
THE SUMMIT CLUB AT ARMONK (RESIDENTIAL PHASE)
568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

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Drawn: NC Approved: AG
Scale: 1" = XX'
Date: 11/23/2020
Project No: 20101
Drawing No: DA-1

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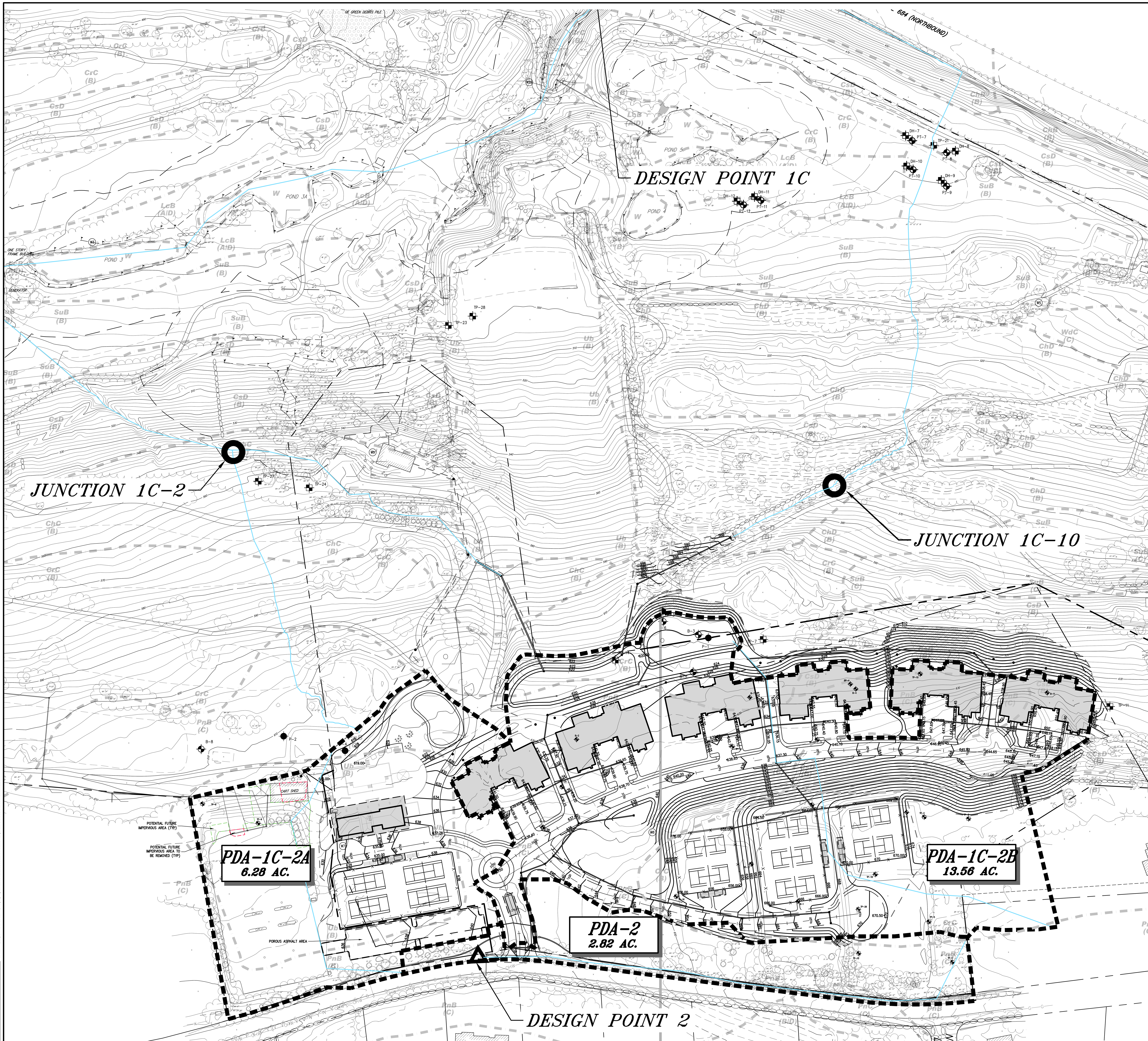

PROPOSED DRAINAGE LEGEND

- EXISTING GRADE
- PROPOSED FINISHED GRADE
- FLAGGED WETLANDS WITH FLAG NUMBERS
- EXISTING STONE WALL
- WATERSHED BOUNDARY LINE
- LIMIT OF SOIL GROUPS LINE
- FLOW PATH LINE
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED MANHOLE (MH)
- EXISTING DRAIN INLET
- PROPOSED DRAIN INLET (DI)
- PROPOSED END SECTION (ES)
- RIP RAP ENERGY DISSIPATOR
- NwC (B) SOIL DESIGNATION AND HYDROLOGIC SOIL GROUP

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Previous Editions Obsolete

APPLICANT/OWNER:
SUMMIT CLUB PARTNERS, LLC
568 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

ARCHITECT:
GRANOFF ARCHITECTS
330 RAILROAD AVENUE
GREENWICH, CT 06830

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
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www.jmcpllc.com

PROPOSED DRAINAGE AREA MAP

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568 & 570 BEDFORD ROAD (NY-22)
ARMONK, NY 10504

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20101-DRAINAGE PDA --
Drawing No:
DA-2

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