ALEKSANDRA MOCH
SOIL & WETLAND SCIENTIST
CERTIFIED PROFESSIONAL IN SOIL EROSION
AND SEDIMENT CONTROL
GEOLOGIST/HYDROGEOLOGIST
LANDSCAPE DESIGNER

March 10, 2024

To: Michael Conklin, Director of Environmental Affairs

From: Aleksandra Moch, Environmental Consultant

Re: 0 Mountain Road – revised plans

Thank you again for meeting with us on Friday. Wayne had revised the plans and provided responses which are following your directions. Attached are:

1. **Right of way plan** by Fairfield County Engineering LLC, dated March 9, 2024
2. **Right of way plan south** by Fairfield County Engineering LLC, dated March 9, 2024
3. **Right of way plan north** by Fairfield County Engineering LLC, dated March 9, 2024
4. **Right of way plan wetlands closeup** by Fairfield County Engineering LLC, dated March 9, 2024
5. **Detail sheet cross-sections** by Fairfield County Engineering LLC, dated March 9, 2024
6. **Alternative crossing** by Fairfield County Engineering LLC, dated March 9, 2024
7. **Detail sheet** by Fairfield County Engineering LLC, dated March 9, 2024
8. **HydroCAD** by Fairfield County Engineering LLC, dated March 9, 2024
9. **Drainage report** by Fairfield County Engineering LLC, dated March 9, 2024
10. **Responses** to engineering comments by Fairfield County Engineering LLC, dated March 9, 2024
11. Letter from the F&G Construction Inc, dated March 11, 2024
12. Proposal for Geotechnical Investigation from Atlantic Consulting & Engineering LLC

44 Lewelyn Road, Stamford, CT 06902
cell: 203 550 9373, aleksandra_moch@yahoo.com

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Thank you for your review.

44 Lewelyn Road, Stamford, CT 06902
cell: 203 550 9373, aleksandra_moch@yahoo.com

FAIRFIELD COUNTY ENGINEERING, LLC
CIVIL ENGINEERS
60 WINFIELD ST.
NORWALK, CONNECTICUT 06855
(203) 831-8005 FAX: (203) 831-8006
E-mail to: wayne@fairfieldce.com

March 9, 2024

Please see the following in response to comments made by the consultant and commissioners at the February 22, 2024 Wetlands Commission meeting and the Engineering department's letter dated February 7, 2024.

The Hydrologic soil type on this property is Type B, not C or D. The standard source of the USDA Natural Resources Conservation Service (NRCS) website was referenced, and confirmed by the Soils Scientist. Regardless, in the ***Town of Wilton*** there is **no** prohibition to installing infiltrators or porous asphalt in any soil type. I have designed, seen approved and seen installed dozens, more likely hundreds, of infiltrators in Type C or D soils in all municipalities in lower Fairfield County. The Commission likely has other recent or pending applications proposing the same.

Despite consultant's opinion, the functional purpose of deep test holes is to locate the restrictive layer in soils in order to design a system. This is true for both septic and drainage retention systems. The soil type or color may be noted but a.) it is superfluous and b.) *does not enter into the design* in any way. (The soil type may affect or determine the infiltration rate, but that is determined by a separate percolation test.) The purpose of the test holes recently done in the accessway were specifically to determine the depth to ledge and assure a 24" separation from the bottom of the retention; that was the concern expressed. Nobody expressed a question about the soil type (gravel, clay, silt) or color.

Any soil left near a test hole would obviously be from the top layer of the hole. The last amounts excavated are the first backfilled and return to the bottom of the pit. It remains puzzling how an observer can determine the soil at the lower levels after the hole is backfilled. I leave it to the Commissioners' common sense to determine the plausibility of the comment.

Regarding the drainage design, the comprehensive retention system in the accessway was designed with the assumption that there would be ***no exfiltration***. This is basically designing for the worst case scenario. While percolation tests were not performed at each gallery location, the design is so conservative that it doesn't matter. The soil certainly percolates faster than zero. The percolation tests on the main lot were in fact very good, and the soil in the accessway is likely similar.

A contractor experienced in removing stump and roots has provided a statement that they can be removed without disturbing or entering an adjacent property. They do this routinely.

Also, there will be no roots left under any driveway area "to decompose" and create a subsidence issue as was suggested. In those areas the roots that are shallow from a removed tree will be *removed*. Again, I leave it to the Commissioners' common sense to imagine what will occur in the accessway regarding the roots.

Contractors that have been consulted assure that the project, while difficult, can be executed logistically. Despite consultant comments, a mini excavator *can* lift and carry the

precast units one by one, if necessary and install. The manufacturer's data was submitted showing a model that had the capacity in excess to lift, carry and place the precast units. There are other models that have even greater capacity, and have the same width and footprint to provide maneuverability.

There is no dispute that a heavy duty bridge can be constructed with helical piles. The issue is whether it will create *less of a disturbance in the wetlands* than the proposed precast box culverts.

A reference was made to the installation of a residential deck. The loads needed on the bridge suggested here will require a far more robust footing, having to support a minimum 66,000 pound truck (and the dead load of the structural members of the bridge itself). Three inch piles will not do; they will likely have to be more on the order of 15".

There will need to be two piles on either side of the bridge, in pairs. In order to be able to lift and place structural girders across the span between pile pairs on the restricted area of the accessway, the span length can't be too long; no more than 20 feet. This will require a minimum of 9 pairs of piles; 18 pile holes will need to be drilled. To give a sense of the operation required, for the size of the piles needed to support this bridge, the installation will require machinery and an operation similar to that depicted below.

Note that the machine will be in direct contact with the soil and advancing across the wetland area to drill each pair of piles. The machine could be kept on top of the box culverts, while the subsequent unit is placed.

Clearly, these holes will be drilled to greater depths than the 12" of stone under the precast box culverts.

In addition, as the bridge deck will be raised, concrete abutments will have to be constructed at either end of the bridge. These would presumably be poured. Formwork will have to be constructed, then later stripped. A substantial amount of fill will be needed to form the approaches to the abutments; the driveway would be raised approaching either end of the bridge.

Then, all of the structural members will have to be lifted and placed, with a mini excavator or similar machine. Workers will have to move around the area to guide and weld, bolt or rivet the girders, beams and decking in place.

The construction process would likely take weeks, if not months. The precast box culverts could be installed in a week or so.

All of this activity relating to the bridge will have to occur in or very near the wetlands and vernal pool.

In my opinion, it beggars the mind how the above could be perceived as less impactful to the wetlands than the installation of fifteen precast units.

We have suggested as an alternative a 3 sided box culvert, which would be open on the bottom and allow the native soil to remain in that area. These are essentially the same precast units flipped without the top section. They are also HL 93 rated and weigh less (13,000 pounds), so installation with a mini excavator will not be an issue.

This alternative will require a footing. Depending on the soil bearing capacity test results, this will either be spread footings, formed and poured, or piles, either the conventional driven piles or helical piles. The helical piles would be the better choice of pile type, as it would afford the least disturbance in the wetland area during construction.

Regardless of the soil bearing capacity results, piles will be a viable option to provide support to the culverts. Piles are driven to resistance (bedrock), which will support the loads. It is likely bedrock (ledge) will be encountered on this site to support the piles. If bedrock should not be found, they are driven to a sufficient depth for the friction resistance and point resistance to provide the support. Piles are often used in completely submerged situations as footings for bridges, etc., with poor silty or clay soil.

This alternative will likely provide less long term impact on the wetlands than the four sided box culverts. The short term impact may be greater than the four sided box culvert, but still far less than that of a bridge.

It was suggested the porous asphalt would "crumble the first time a truck passed over it". As stated previously porous asphalt has been used on private driveways in the area, and state DOTs have used it for *highways,* with daily truck traffic. One such highway is depicted below; Beach Road in the Lake George area of New York. Porous asphalt was chosen because of the environmental sensitivity near a pristine lake, and its ability to sustain a *highway* traffic load.

As can be seen this is a four lane highway that not only sees far more daily car volume than a section of a single family driveway will see in a year, but also has truck traffic passing on it on a daily basis. (The average *daily* traffic count was 8,600, with 5 percent being *heavy truck traffic*.) Clearly, porous asphalt on a driveway can withstand the infrequent passing of a truck.

It should be noted that the Town Engineer has never made such a fundamental comment that the infiltration, retention and attenuation of the stormwater runoff is not being achieved by the proposed design.

Several of the above comments appear to have been made more to confuse or distract the Commission, than to address any impact on the wetlands.

A mention was made regarding a pool truck to fill the pool. There are several ways the pool could be filled; for the initial filling smaller trucks could make a few trips to keep the weight below 72,000 pounds. A pool contractor consulted also confirms the water truck can be positioned below the box culverts and pumped to the pool; the considerable distance to the pool was understood and considered. After the initial filling only partial toppings would be needed that could certainly be done with a smaller truck. In any event, *this has no direct impact on the wetlands*.

Regarding the outstanding Town Engineer's comments from the February 7, 2024 letter they have been addressed as indicated below:

1. We have explained how the items on the driveway will be constructed or installed without grading on, or needing to enter on any of the adjacent properties. To summarize:
   No grading is proposed off the accessway.
   Paving can be contained within the accessway; at the chokepoint the driveway is at existing grade and no fill is required; a smaller paving box can be used or the asphalt and process can be hand spread in the area; at the chokepoint and for 20+ feet in either direction, the shoulders of the driveway will be *kept at the existing grade*. This stretch can be hand dug down to the minimal depth to place the curb, asphalt and process base for the driveway.

   The retaining walls are to be concrete block; no formwork or overdigging is required.

The recently revised plan reduces the lengths of the walls and there will be no wall in the vicinity of the 30" tree mentioned in the comments.
The galleries are centered as best as they can be to place them as far from property lines as possible. They are appropriately sized to meet the Town's Stomwater Management requirements.
The set of galleries closest to the property line has been eliminated.
Mini excavators can maneuver in the area; experienced contractors have been consulted regarding this.
The site will have to be staked in high detail and stringed to clearly demarcate property lines during construction to aid the contractor.
At the chokepoint and for 20+ feet in either direction, the shoulders of the driveway will be *kept at the existing grade*. This stretch can be hand dug down to the minimal depth to place the curb, asphalt and process base for the driveway.
The Town Engineer's opinion is just an opinion. We have provided details and tactics to support our position that no easements are indicated. In any event, *this is not an item that directly impacts the wetlands*.

4. Again, the roots to any tree can be nearly surgically removed. Contractors experienced in this have also been consulted. No trees are proposed to be cut down that are not in the accessway. In the case of a tree to be saved that may be near the driveway, the area of the roots can be excavated by hand and CU Soil used. This is a well established item that has been used in urban areas saving existing trees where streets and sidewalks have been placed.

The Tree Warden has stated that they have no jurisdiction other than trees in the Town right of way.

6. The Fire Marshall has signed off on the driveway. An email from him was forwarded to staff.

11. Two drains and a gallery were added at the lower portion (entry) of the driveway to capture and attenuate the runoff. This additional retention is not even counted as credit in the total runoff reduction calculations.

13. The galleries are primarily in a cut in the lower portion of the driveway where the accessway is narrowest, and thus are not raised, reducing the danger of bleedout.

14. The recent soil tests *in the specific area of each gallery set* confirm there will be adequate separation to ledge; the galleries will infiltrate and drain adequately. A comment was made regarding one hole in the gallery that will be in a fill area. If, as an example, ledge was discovered 4 feet below the existing grade at that point, and the galleries will be in a raised area of 2 feet of fill, then the ledge will be *6 feet below finish grade*, providing *more* separation. Again, this is common sense.

15. There is no pipe behind the proposed retaining walls, and thus won't conflict with near property lines. They will have weepholes. In the areas of the wall on the east side of the entry there is no need for fee draining stone behind the wall in the location where the property line is less than one foot off the rear of the wall. They will have weepholes. The walls are adequately designed with oversized footings.Being only 2-3 feet tall any hydrostatic pressure is neutralized.

The remaining numbered items were conceded as addressed on the letter.

The revised plan dated March 9, 2024 with improved separation from property lines and reduced walls at the entry is under review by Engineering.

Respectfully submitted,

Wayne D'Avanzo, P.E.
Principal
Fairfield County Engineering, LLC

DRAINAGE REPORT

PREPARED FOR

EXISTING AND PROPOSED SITE CONDITIONS

LOCATED AT:

FCE #2168

0 MOUNTAIN ROAD RIGHT OF WAY

WILTON, CONNECTICUT

March 8, 2024

FAIRFIELD COUNTY ENGINEERING, LLC

CIVIL ENGINEERS

60 WINFIELD ST.
NORWALK, CONNECTICUT 06855
(203) 831-8005
FAX: (203) 831-8006
E-mail to: wayne@fairfieldce.com

Fairfield County Engineering LLC

NARRATIVE:

The subject of this report is the 1.644 acre accessway to the parcel located at 0 Mountain Road in Wilton. The purpose of this report is to determine the existing and proposed runoffs resulting from the proposed site improvements in order to design a stormwater management system.

EXISTING CONDITIONS:

The subject parcel is an accessway to the rear lot located at the northwest side of Mountain Road, approximately 200 feet from its intersection with Indian Hill Road. The accessway is currently vacant.

Existing soils at this location, as identified in the NRCS Soil Survey of Fairfield County, Connecticut, consist of Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky, which has a Hydrologic classification of 'B'.

The proposed driveway contains three local watershed basins; one that drains to the road, one that drains to the vernal pool/wetlands in the central section, and one that drains to the rear (north)

The existing runoff from a 25-Year rainfall event in the road basin is 0.43 c.f.s.
The existing runoff from a 25-Year rainfall event in the wetlands basin is 2.80 c.f.s.
The existing runoff from a 25-Year rainfall event in the north basin is 1.26 c.f.s.

PROPOSED CONDITIONS:

The proposal for this site is to construct a driveway to serve the proposed single family residence.

The proposed runoff (un-mitigated) from a 25-Year rainfall in the road basin event is 0.85 c.f.s.
The proposed runoff (un-mitigated) from a 25-Year rainfall in the wetlands basin event is 3.69 c.f.s.
The proposed runoff (un-mitigated) from a 25-Year rainfall in the north basin event is 1.94 c.f.s.

COMPUTATIONS:

The following computations of the existing and proposed conditions runoff flows were derived from the HydroCAD computer software. HydroCAD follows the NRCS TR-20 procedure for computing stormwater runoff. Computations were performed for a 25-year storm event, which has a 4% chance of occurring in any given 12 month period.

Existing Conditions (Road Basin):

Woods	6,862 s.f.	CN 61
Total -	6,862 s.f.	

Weighted CN - 61

Proposed Conditions (Road Basin):

Driveway	4,017 s.f.	CN 98
Woods	2,845 s.f.	CN 61
Total -	6,862 s.f.	

Weighted CN - 83

Water Quality Volume

I = (58.5 x 0.009) + 0.05 = 0.5765

WQV = (0.5765 (0.158 acres)/12) = 0.007590 ac-ft = 330.6 ft^3.

Groundwater Recharge Volume

GWV = 330.6 x 0.25 = 82.7 ft^3.

Existing Conditions (Wetlands Basin):

Woods	44,736 s.f.	CN 61
Total -	44,736 s.f.	

Weighted CN - 61

Proposed Conditions (Wetlands Basin):

Driveway	8,204 s.f.	CN 98
Woods	36,532 s.f.	CN 61
Total -	44,736 s.f.	

Weighted CN - 68

Water Quality Volume

I = (18.3 x 0.009) + 0.05 = 0.2147
WQV = (0.2147 (1.027 acres)/12) = 0.0183747 ac-ft = 800.4 ft^3.

Groundwater Recharge Volume

GWV = 800.4 x 0.25 = 200.1 ft^3.

Existing Conditions (North Basin):

Woods	20,044 s.f.	CN 61
Total -	20,044 s.f.	

Weighted CN - 61

Proposed Conditions (North Basin):

Driveway	6,462 s.f.	CN 98
Woods	13,582 s.f.	CN 61
Total -	20,044 s.f.	

Weighted CN - 73

Water Quality Volume

I = (32.2 x 0.009) + 0.05 = 0.3398
WQV = (0.3398 (0.460 acres)/12) = 0.01302566 ac-ft = 567.4 ft^3.

Groundwater Recharge Volume

GWV = 567.4 x 0.25 = 141.8 ft^3.

SUMMARY (Road Basin)

Existing Runoff (25 Year):	0.43 c.f.s.
Proposed Runoff (25 Year):	0.85 c.f.s.
Proposed Impervious Run-off Retained (25 Year):	0.44 c.f.s
Proposed Run-off from Areas Bypassing Retention plus overflow (25 Year):	0.36 c.f.s.

SUMMARY (Wetlands Basin)

Existing Runoff (25 Year):	2.80 c.f.s.
Proposed Runoff (25 Year):	3.69 c.f.s.
Proposed Impervious Run-off Retained (25 Year):	1.23 c.f.s
Proposed Run-off from Areas Bypassing Retention plus overflow (25 Year):	2.63 c.f.s.

SUMMARY (North Basin)

Existing Runoff (25 Year):	1.26 c.f.s.
Proposed Runoff (25 Year):	1.94 c.f.s.
Proposed Impervious Run-off Retained (25 Year):	0.96 c.f.s
Proposed Run-off from Areas	1.14 c.f.s.

CONCLUSIONS:

The increased runoff resulting from the proposed site improvements will be retained in an on-site retention system. The runoff from the driveway will be routed to concrete galleries, and in one section near the wetlands to the aggregate under the porous asphalt that comprises the driveway in that area.

The system in the road basin will decrease the net peak runoff during a 25 Year storm in the road basin from its current peak of 0.43 c.f.s. to 0.36 c.f.s.

The proposed retention system in the road basin consists of 40 linear feet of 24" concrete galleries and 72 linear feet of 24" concrete galleries, which provide 942 ft^3 of storage, which will accommodate the runoff from a 25 Year rainfall event routed to the system, meets the Water Quality Volume and provides groundwater recharge.

The system in the watershed basin will decrease the net peak runoff during a 25 Year storm in the road basin from its current peak of 2.80 c.f.s. to 2.63 c.f.s.

The proposed retention system in the wetlands basin consists of 240 linear feet of 12" concrete galleries and an approximately 278 foot portion of porous asphalt with aggregate under. The aggregate under the porous asphalt is to be 15" thick in the wetlands basin. The combined system provides 3,543 ft^3 of storage, which will accommodate the runoff from a 25 Year rainfall event routed to the system, meets the Water Quality Volume and provides groundwater recharge.

The model conservatively calculates a 9 foot width of the driveway for retention capacity of the aggregate, although its entire width will have aggregate under it. The driveway is a minimum of 10 feet wide, widening to 15 feet in areas.

The system in the north basin will decrease the net peak runoff during a 25 Year storm in the road basin from its current peak of 1.26 c.f.s. to 1.14 c.f.s.

The proposed retention system in the north basin consists of 64 linear feet of 12" concrete galleries and 184 linear feet of 24" concrete galleries, which provides 1,688 ft^3 of storage, which will accommodate the runoff from a 25 Year rainfall event routed to the system, meets the Water Quality Volume and provides groundwater recharge.

The proposed improvements will have no adverse impact on the road or surrounding properties.

ATLANTIC CONSULTING & ENGINEERING, LLC **CONSULTING ENGINEERS**
525 John Street • Second Floor
Bridgeport, CT 06604
Phone (203)336-4422 Fax (203)336-1769 WWW.ATLANTIC-ENG.COM

Wayne D'Avanzo, P.E.

Fairfield County Engineering LLC
60 Winfield Street
Norwalk, CT 06855

RE: Geotechnical Investigation
0 Mountain Road
Wilton, CT

We are pleased to submit the following proposal for Geotechnical Engineering Services in connection with the above referenced property. Per our conversations and our knowledge of the area, we will provide a subsurface investigation for the proposed construction based on the following:

- One truck rig and crew to drill up to 4 holes up to 22 feet deep to naturally deposited inorganic material or rock.
- Engineering report summarizing in-place materials and recommendations for foundation system design.

Our pricing to provide borings and engineering services is as follows:

Geotechnical:
Field Exploration
The proposed field exploration program scope includes the following:

- Utilize One-Call to locate public utilities and for an additional fee a private underground utility location company to clear private utilities, if necessary.
  The borings will be drilled to the planned depths unless instability or practical refusal is encountered;
- Collect soil samples from the borings at 5 foot intervals below existing grade;
- Samples will be obtained using a Modified California Sampler or Standard Split-Spoon Sampler depending on soil conditions in general accordance with ASTM standard procedures;
- Record Standard Penetration Test blow counts (SPT-N values) in granular soils;
- Backfill the boreholes in accordance with state and local requirements;
- Soil cuttings will be spread on site at the boring locations or at a designated area within the project site.

We will communicate with Client representatives if we encounter unusual or unexpected site or subsurface conditions in the field. Our scope of services does not include environmental drilling or sampling of soil or groundwater.

Reporting
As the assigned laboratory data becomes available, analyses will be performed to develop recommendations for the design and construction of the proposed project. The reporting will include:

- Discussion of the field exploration and laboratory test results;
- Site description generalized subsurface soil conditions, and measured depth to groundwater (if encountered);
- Observations and recommendations will be compiled in an engineering report prepared by Professional engineer registered in the state of CT. An electronic copy will be sent to the Client

upon completion

Crew and light weight track rig or ATV rig (1day) Minimal Disturbance
Geotechnical Technician
Engineering report **$5,500**

We plan to undertake the following work:

1. Review available data on subsurface soil and rock conditions and groundwater levels at and near the site.
2. Arrange and coordinate with utility companies to have the borings conducted.
3. Provide test borings logs with key information including top of rock, water table, bottom of fill, bearing capacity of materials encountered, etc.
4. Seismic characteristics along with specifications for soil placement and gradation will be provided.
5. We will generate a boring location map if we are provided with an electronic file of the site plan.
6. Access planks or clearing will be by others or an extra charge

Analyze and make recommendations related to the geotechnical engineering aspects of design and construction, and prepare three copies of an engineering report which will be delivered to the Owner and will include the following items as applicable to the project and site:

a. Location plan and logs of test borings.
b. Recommended foundation type for structure (rock, soil or pile bearing) with bearing design criteria including allowable bearing capacity, water table depth, lateral earth pressures and other information needed to support the bridge
c. Recommendation for foundation design with appropriate design factors
d. Recommendation for pavement design and section
e. Recommended treatment of subgrade to support pavement and bridge.
f. Recommendations for placement and type of fill materials acceptable for the design.
g. Comments on aspects of construction related to soils and foundation including excavation and filling protection of the slope stability and dewatering, written primarily for the engineer having responsibility for preparation of plans and specification.
h. Liquefaction potential

The scope of work does not include the preparation of contract drawings or recommendations related to leaching field or other utilities.

Rock Coring add $70 plf (recommend 5 feet)
Private Utility Locator (if necessary) $1,500

This proposal is valid for a period of thirty days from the date of this letter. If acceptance and authorization to proceed is not received within thirty days, we reserve the right to renegotiate the estimated costs and overall scope of work. If the above arrangements are satisfactory to you**, please indicate your approval by signing and returning one hard copy of this proposal with a deposit of $3,500 to our office**. Insurance certificates will be provided as requested naming Owner as additionally insured.

ATLANTIC CONSULTING & ENGINEERING, LLC **CONSULTING ENGINEERS**
525 John Street • Second Floor
Bridgeport, CT 06604
Phone (203)336-4422 Fax (203)336-1769 WWW.ATLANTIC-ENG.COM

If you have any questions or require additional information, please don't hesitate to contact me at your convenience. Thank you for the opportunity to submit this proposal. We look forward to our association with you on this project.

Sincerely,

James E. Quill, PE

James E. Quill, P.E.

Agreed and accepted:

BY: _____
Client Date

F&G Construction Inc
P.O. Box 195
Rowayton, CT06853
(203) 866-1312
(203) 866-5080-Fax

March 11, 2024

RE: Fairfield County Engineering LLC Right of Way Drainage Plan Dated 01/15/24 for 0 Mountain Road, Wilton, CT

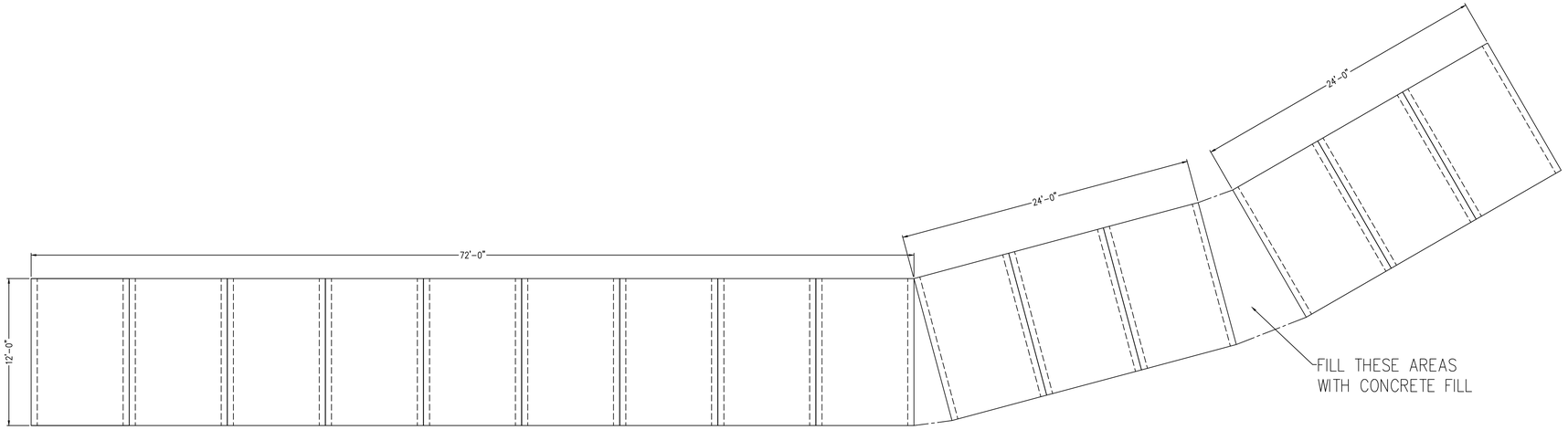
To Whom It May Concern:

After review of the plan, in my opinion it is possible to perform the improvements reflected on the plan without disturbing or accessing the neighboring properties provided the proper equipment is utilitized.

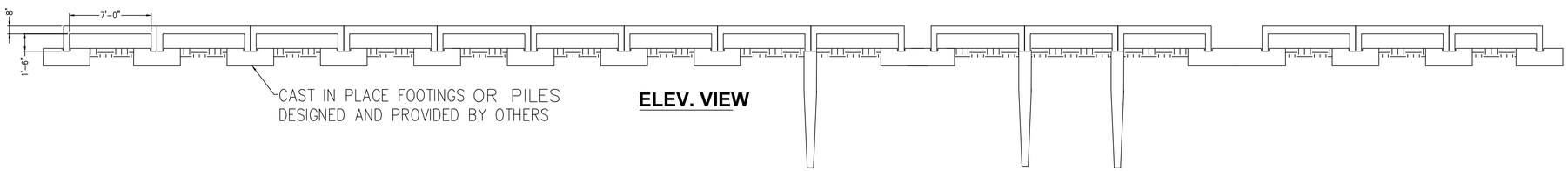
Sincerely

Joseph Cutrone
Estimator/Project Manager

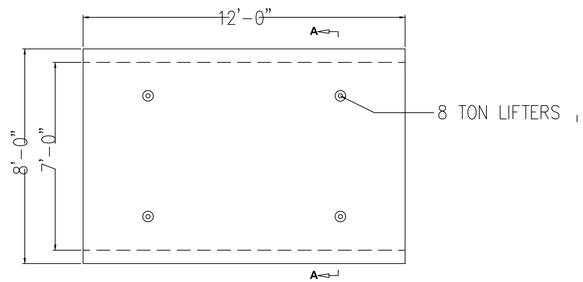
jc/dc



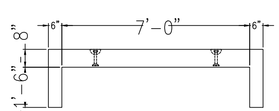
PLAN VIEW



ELEV. VIEW



PLAN VIEW
3/8" = 1'-0"



SECTION A-A
3/8" = 1'-0"

NOTES:
1. REINFORCING STEEL DEFORMED BARS CONFORM TO LATEST ASTM SPECIFICATION A706, GRADE 60 COVER 1", UNLESS NOTED.
2. CONCRETE COMPRESSIVE STRENGTH – **5,000 PSI** AT 28 DAYS SELF COMPACTING CONCRETE MIX. AIR ENTRAINMENT 6% ±1½%
3. CULVERT IS DESIGNED FOR HL-93, 6" TO 2'-0" SOIL COVER
4. BOX CULVERT SHALL BE RELEASED FROM MOLD WHEN 3,500 PSI MIN S OBTAINED.

APPROX. WEIGHT:
13,000 LBS.

UNITED CONCRETE PRODUCTS, Inc.
173 CHURCH STREET
YALESVILLE, CT 06492
TEL: (203)-269-3119
FAX: (203)-265-4941

REVISIONS:		
PROPOSED THREE SIDED CULVERT LAYOUT		PROJECT #XXX
CUSTOMER FAIRFIELD COUNTY ENGINEERING		SCALE 3/16" = 1'-0"
JOB DRIVEWAY AT MOUNTAIN ROAD		DATE 3/06/24
LOCATION WILTON CT	DRW DH	SHEET C-1
	CHK JLT	

STATE OF CONNECTICUT
DUANE J. D'AGATA
No. 24877
LICENSED PROFESSIONAL ENGINEER

10-14-23
date

REV. 3/9/24: PER ENGINEERING COMMENTS.
REV. 2/28/24: PER ENGINEERING COMMENTS.
REV. 1/15/24: PER ENGINEERING COMMENTS.
REV. 1/8/24: 1' TOPOGRAPHY ADDED.
REV. 12/13/23: PER ENGINEERING COMMENTS.
REV. 11/10/23: PER ENGINEERING COMMENTS.

OLD DRIFTWAY LLC
0 MOUNTAIN ROAD WILTON, CONNECTICUT

ALTERNATE CROSSING

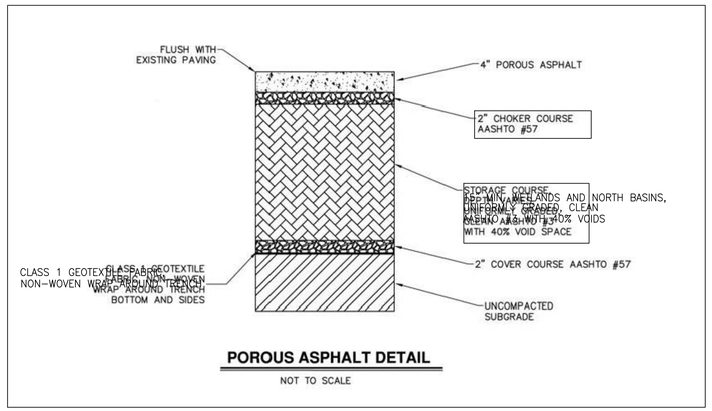
CIVIL ENGINEERS

2168 project

7 OF 7 sheet

FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831-8005 FAX: (203) 831-8006

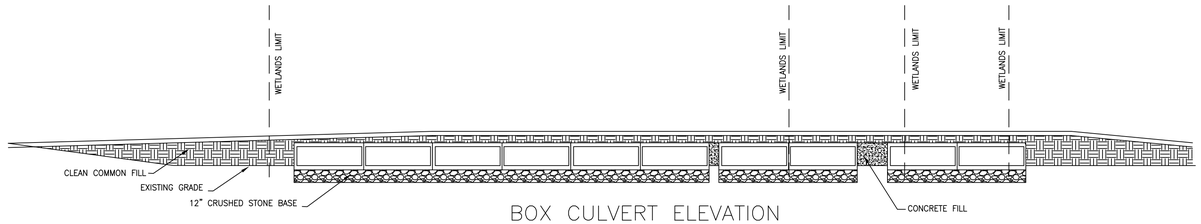
2168_240309ROW



POROUS ASPHALT DETAIL

NOT TO SCALE

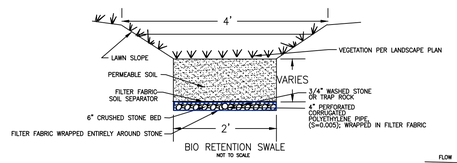
NOTE: SOILS BENEATH AGGREGATE SHALL BE SCARIFIED OR TILLED PRIOR TO INSTALLATION OF AGGRAGATE.



BOX CULVERT ELEVATION

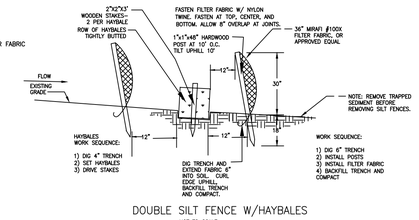
CONSTRUCTION SEQUENCE

1. Install silt fencing along both sides of R.O.W.
2. Install double silt fencing and haybales along wetlands.
3. Install mud anti tracking pad at entry.
4. Engage herpetologist as necessary.
5. Grade driveway, place box culverts.
6. Install driveway drains, coarse particle separators.
7. Install swales, plantings as indicated on Landscape Plan.
8. Pave porous and regular asphalt areas of driveway.
9. Fine grade, topsoil and seed all areas as necessary.
10. Remove erosion controls once site is stabilized.



BIO RETENTION SWALE

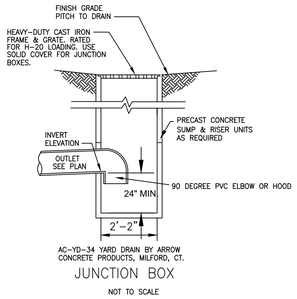
NOT TO SCALE



DOUBLE SILT FENCE W/HAYBALES

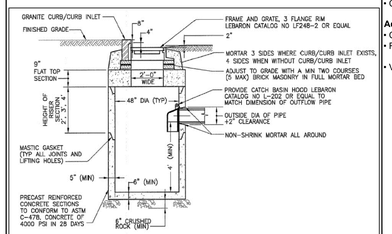
NOT TO SCALE

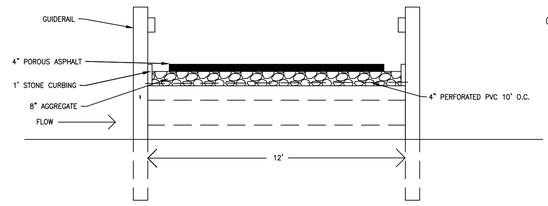
FCE Project #	2168	Date Performed:	1/30/2023
Client:	Old Driftway LLC		
Location:	0 Mountain Road, Wilton		
Observed by:	Wayne D'Avanzo		
TH 5			
	0-5"	Topsoil	
	5-62"	Brown Fine Gravel	
	No Ledge		
TH 6			
	0-5"	Topsoil	
	5-61"	Brown Fine Gravel	
	No Ledge		
TH 7	0-10"	Topsoil	
	Ledge @ 10"		
TH 8			
	0-5"	Topsoil	
	5-61"	Brown Fine Gravel	
	No Ledge		
TH 9			
	0-5"	Topsoil	
	5-60"	Brown Fine Gravel	
	No Ledge		
TH 10			
	0-5"	Topsoil	
	5-62"	Brown Fine Gravel	
	No Ledge		
TH 11			
	0-5"	Topsoil	
	5-63"	Brown Fine Gravel	
	No Ledge		
TH 12			
	0-5"	Topsoil	
	5-62"	Brown Fine Gravel	
	No Ledge		



JUNCTION BOX

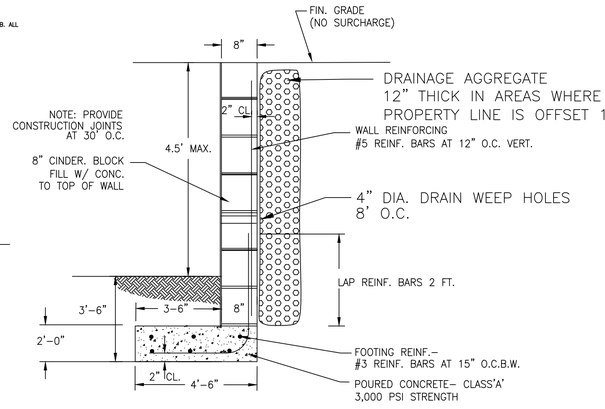
NOT TO SCALE

Stormwater BMP	Design References
Pretreatment BMPs	
Deep Sump Catch Basins	**Primary Reference:** • Connecticut Stormwater Quality Manual
	**Additional Information Sources:** • Connecticut Department of Transportation Drainage Manual • Rhode Island Stormwater Design and Installation Standards Manual • Vermont Stormwater Treatment Standards



BOX CULVERT DRIVEWAY CROSS SECTIOM

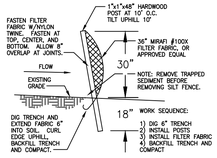
NOT TO SCALE



CONCRETE BLOCK RETAINING WALL

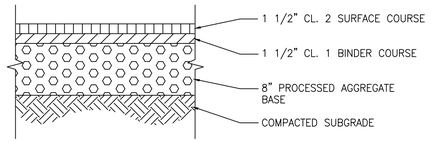
NOT TO SCALE

FCE Project #	2168	Date Performed:	10/6/2023
Client:	Old Driftway LLC		
Location:	0 Mountain Road, Wilton		
Observed by:	Wayne D'Avanzo		
Test Hole 1:			
	0-4"	Topsoil	
	4-38"	Tan Fine Gravel, rocky	
	No Ground Water		
	No Mottling		
	No Ledge		
	Compacted at 38"		
	Roots to 30"		
Test Hole 2:			
	0-4"	Topsoil	
	4-24"	Tan Fine Gravel	
	No Ground Water		
	No Mottling		
	Ledge @ 24"		
	Roots to 19"		
Test Hole 3:			
	0-5"	Topsoil	
	5-43"	Tan Fine Gravel, rocky	
	No Ground Water		
	No Mottling		
	No Ledge		
	Roots to 28"		
Test Hole 4:			
	0-4"	Topsoil	
	4-20"	Brown Fine Gravel	
	No Ground Water		
	No Mottling		
	Ledge @ 20"		
	Roots to 12"		



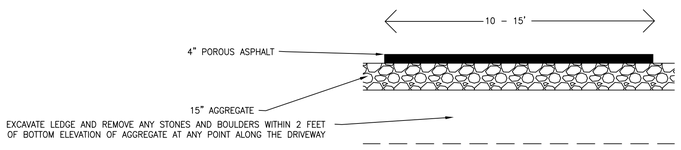
SILT FENCE

NOT TO SCALE



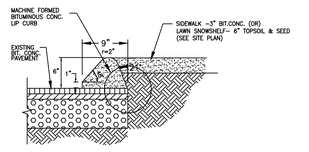
DRIVEWAY PAVEMENT

NOT TO SCALE



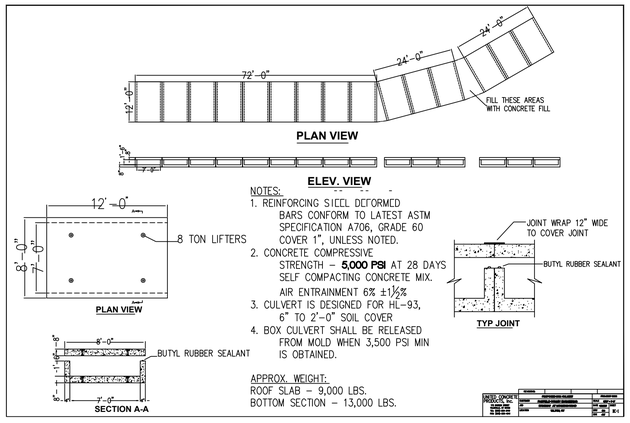
DRIVEWAY CROSS SECTIOM

NOT TO SCALE



BIT. CONC. CURB

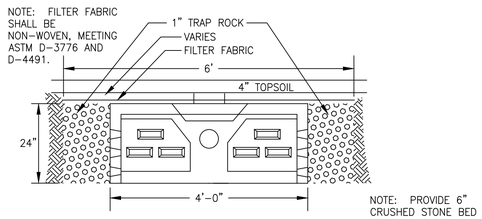
NOT TO SCALE



NOTES:

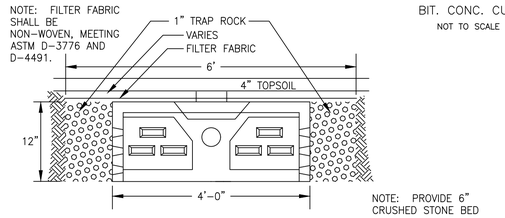
1. REINFORCING SICEL DEFORMED BARS CONFORM TO LATEST ASTM SPECIFICATION A706, GRADE 60 COVER 1", UNLESS NOTED.
2. CONCRETE COMPRESSIVE STRENGTH – **5,000 PSI** AT 28 DAYS SELF COMPACTING CONCRETE MIX. AIR ENTRAINMENT 6% ±1½%
3. CULVERT IS DESIGNED FOR HL-93, 6" TO 2'-0" SOIL COVER
4. BOX CULVERT SHALL BE RELEASED FROM MOLD WHEN 3,500 PSI MIN IS OBTAINED.

APPROX. WEIGHT:
ROOF SLAB – 9,000 LBS.
BOTTOM SECTION – 13,000 LBS.



24" LEACHING GALLERY H 20 RATED

NOT TO SCALE



12" LEACHING GALLERY H 20 RATED

NOT TO SCALE

REV. 3/9/24: PER ENGINEERING COMMENTS.
REV. 2/28/24: PER ENGINEERING COMMENTS.
REV. 1/15/24: PER ENGINEERING COMMENTS.
REV. 1/8/24: 1' TOPOGRAPHY ADDED.
REV. 12/13/23: PER ENGINEERING COMMENTS.
REV. 11/10/23: PER ENGINEERING COMMENTS.

STATE OF CONNECTICUT WAYNE J. D'AVANZO No. 24877 LICENSED PROFESSIONAL ENGINEER

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

DETAIL SHEET

10-14-23 date

Fairfield County Engineering LLC

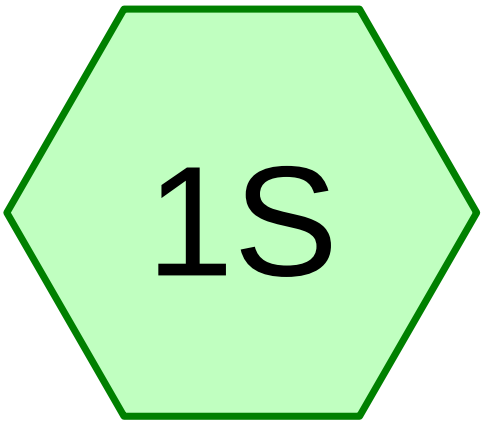
CIVIL ENGINEERS

2168 project

6 OF 7 sheet

FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831-8005 FAX: (203) 831-8006

2168_240309ROW



Existing Conditions

Subcat Reach Pond Link

Routing Diagram for 2168ROWExisting
Prepared by Fairfield County Engineering LLC, Printed 3/8/2024
HydroCAD® 10.00-26 s/n 06020 © 2020 HydroCAD Software Solutions LLC

Summary for Subcatchment 1S: Existing Conditions

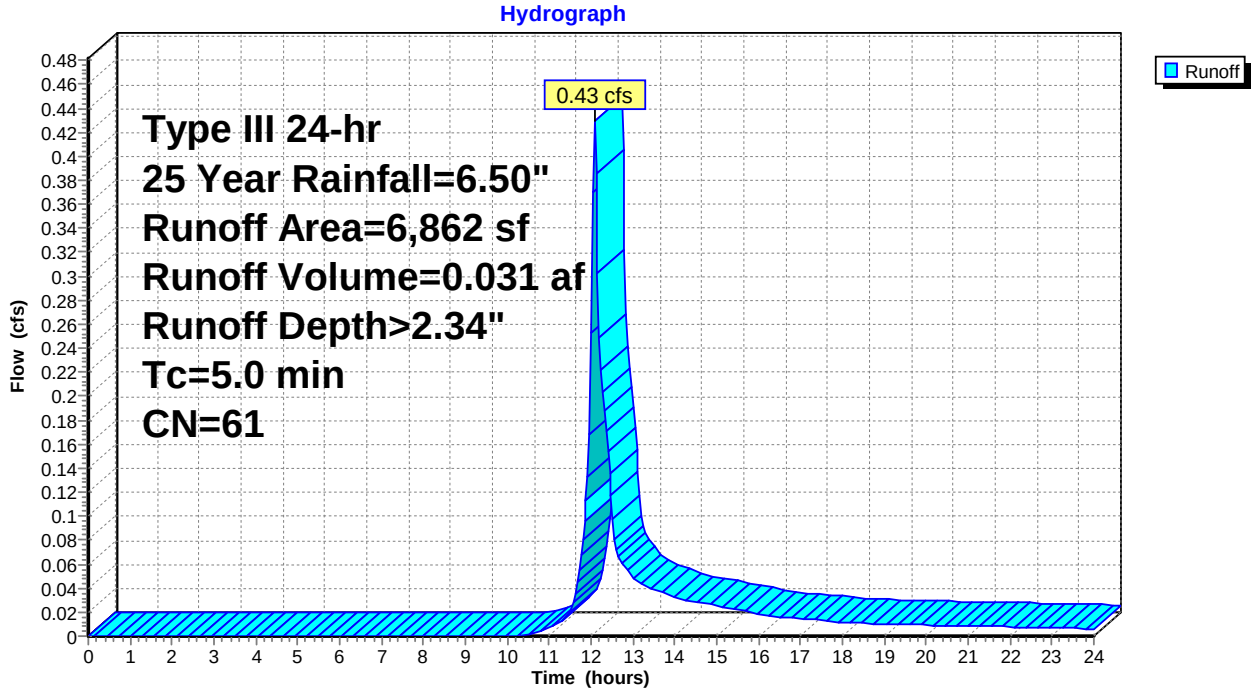
Runoff = 0.43 cfs @ 12.08 hrs, Volume= 0.031 af, Depth> 2.34"

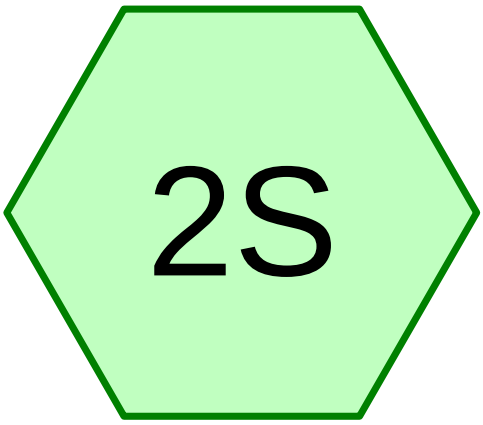
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	6,862	61	Woods, Fair, HSG B
	6,862		100.00% Pervious Area

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

Subcatchment 1S: Existing Conditions





Proposed Conditions

Subcat Reach Pond Link

Routing Diagram for 2168ROWProposed
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Summary for Subcatchment 2S: Proposed Conditions

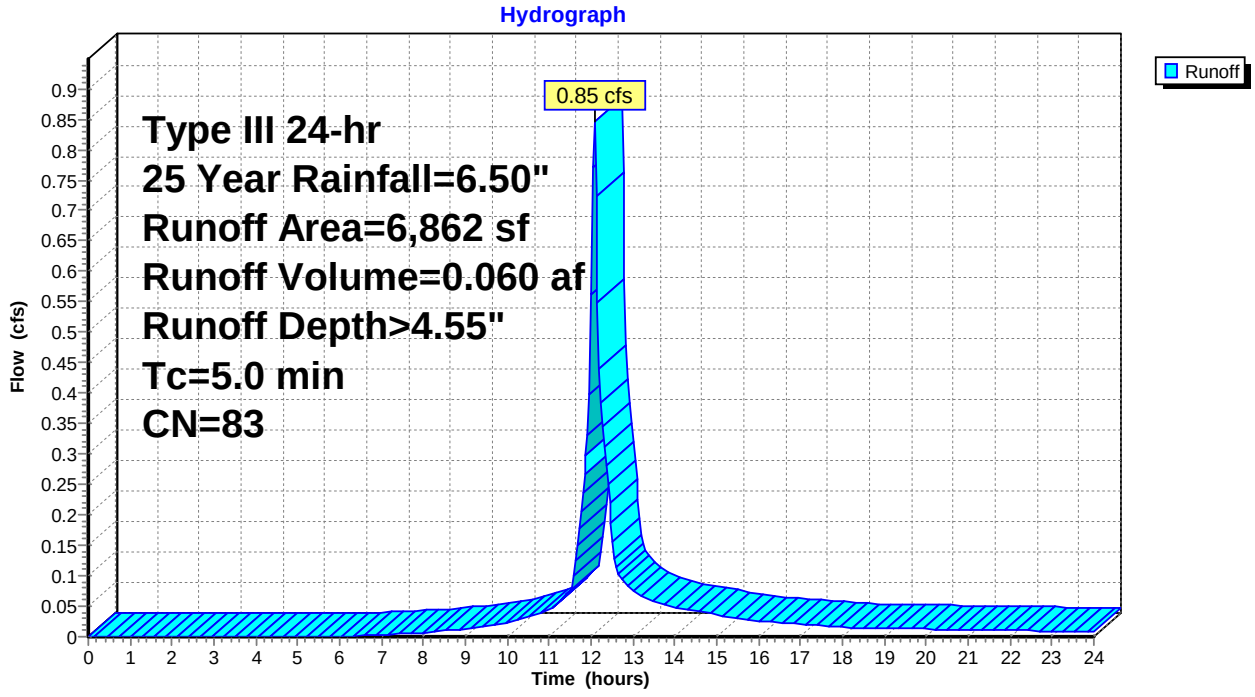
Runoff = 0.85 cfs @ 12.08 hrs, Volume= 0.060 af, Depth> 4.55"

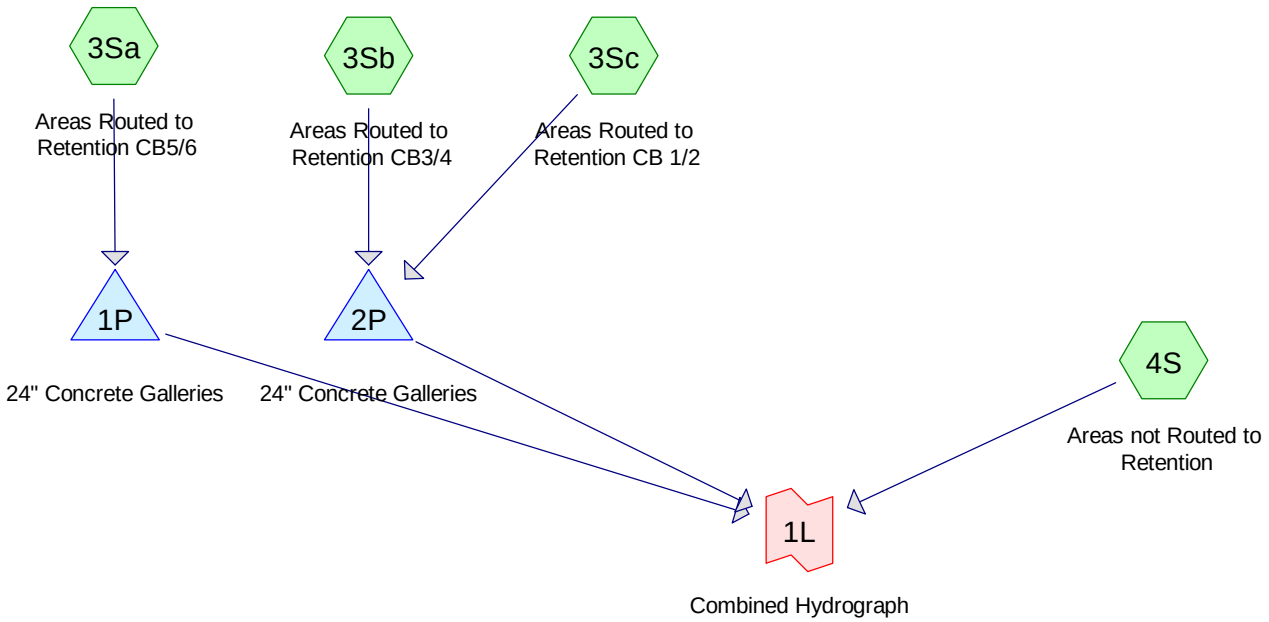
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	4,017	98	Driveway
*	2,845	61	Woods, Fair, HSG B
	6,862	83	Weighted Average
	2,845		41.46% Pervious Area
	4,017		58.54% Impervious Area

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

Subcatchment 2S: Proposed Conditions





Subcat Reach Pond Link

Routing Diagram for 2168ROWCombinedRev3
Prepared by Fairfield County Engineering LLC, Printed 3/8/2024
HydroCAD® 10.00-26 s/n 06020 © 2020 HydroCAD Software Solutions LLC

Summary for Subcatchment 3Sa: Areas Routed to Retention CB5/6

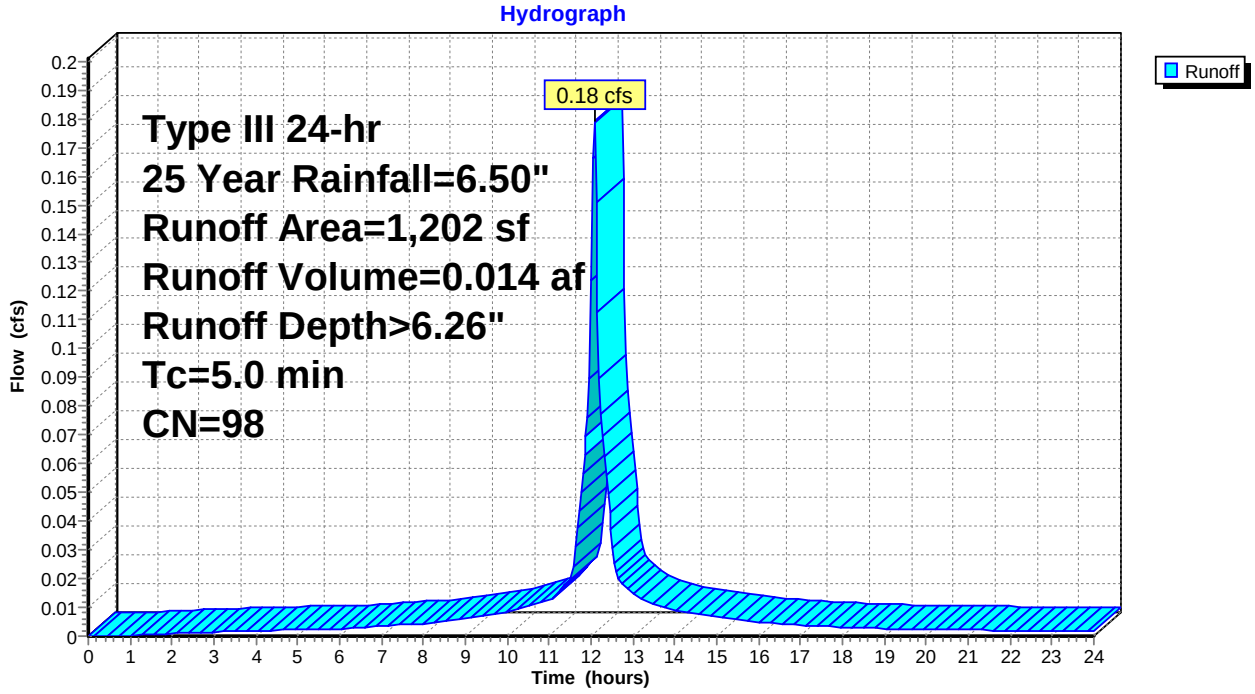
Runoff = 0.18 cfs @ 12.07 hrs, Volume= 0.014 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,202	98	Driveway
	1,202		100.00% Impervious Area

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

Subcatchment 3Sa: Areas Routed to Retention CB5/6



Summary for Subcatchment 3Sb: Areas Routed to Retention CB3/4

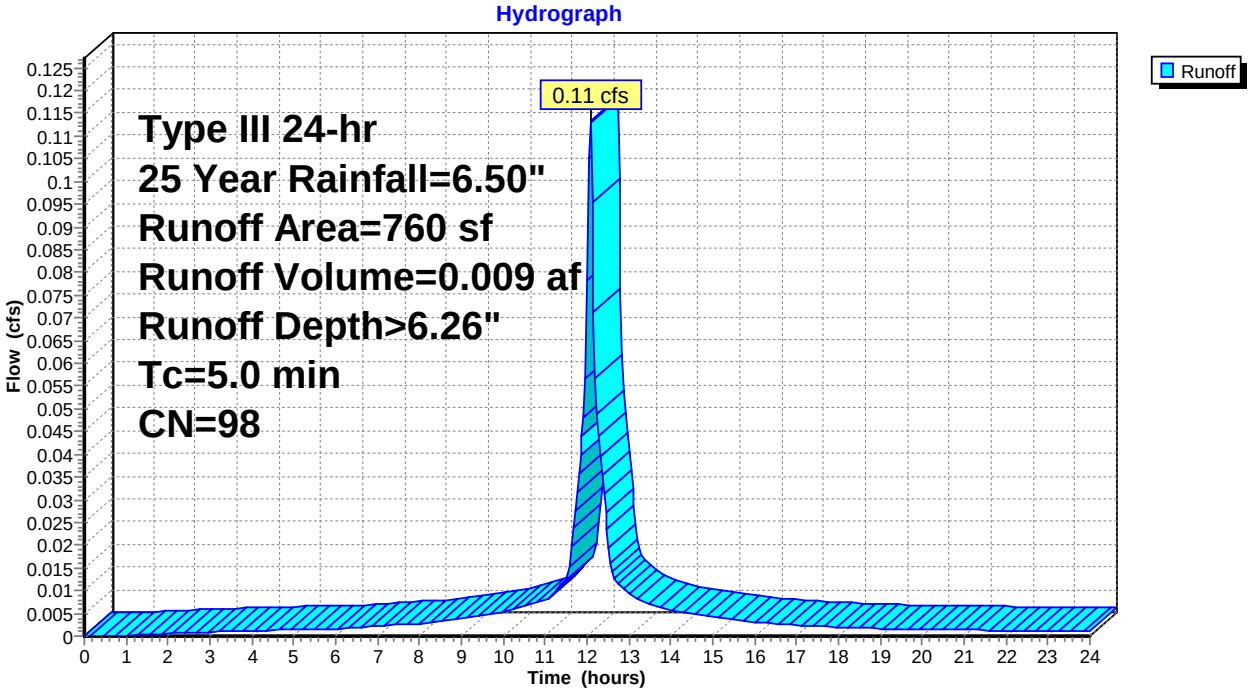
Runoff = 0.11 cfs @ 12.07 hrs, Volume= 0.009 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	760	98	Driveway
	760		100.00% Impervious Area

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

Subcatchment 3Sb: Areas Routed to Retention CB3/4



Summary for Subcatchment 3Sc: Areas Routed to Retention CB 1/2

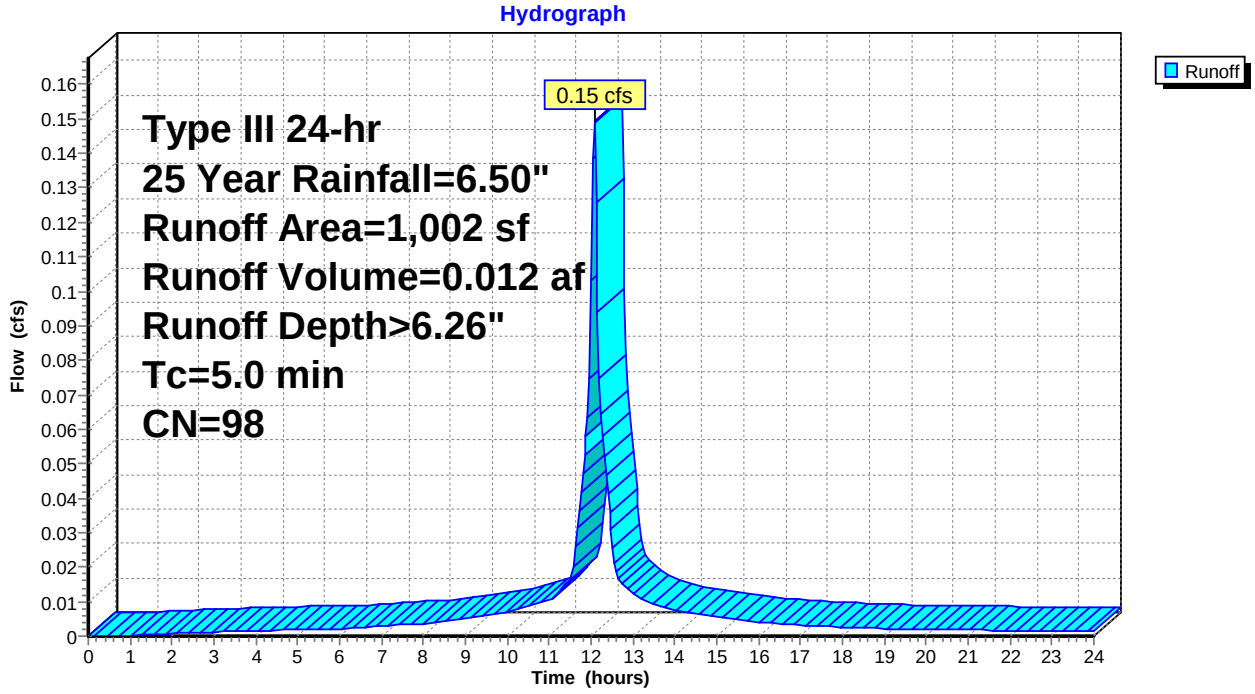
Runoff = 0.15 cfs @ 12.07 hrs, Volume= 0.012 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,002	98	Driveway
	1,002		100.00% Impervious Area

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

Subcatchment 3Sc: Areas Routed to Retention CB 1/2



Summary for Subcatchment 4S: Areas not Routed to Retention

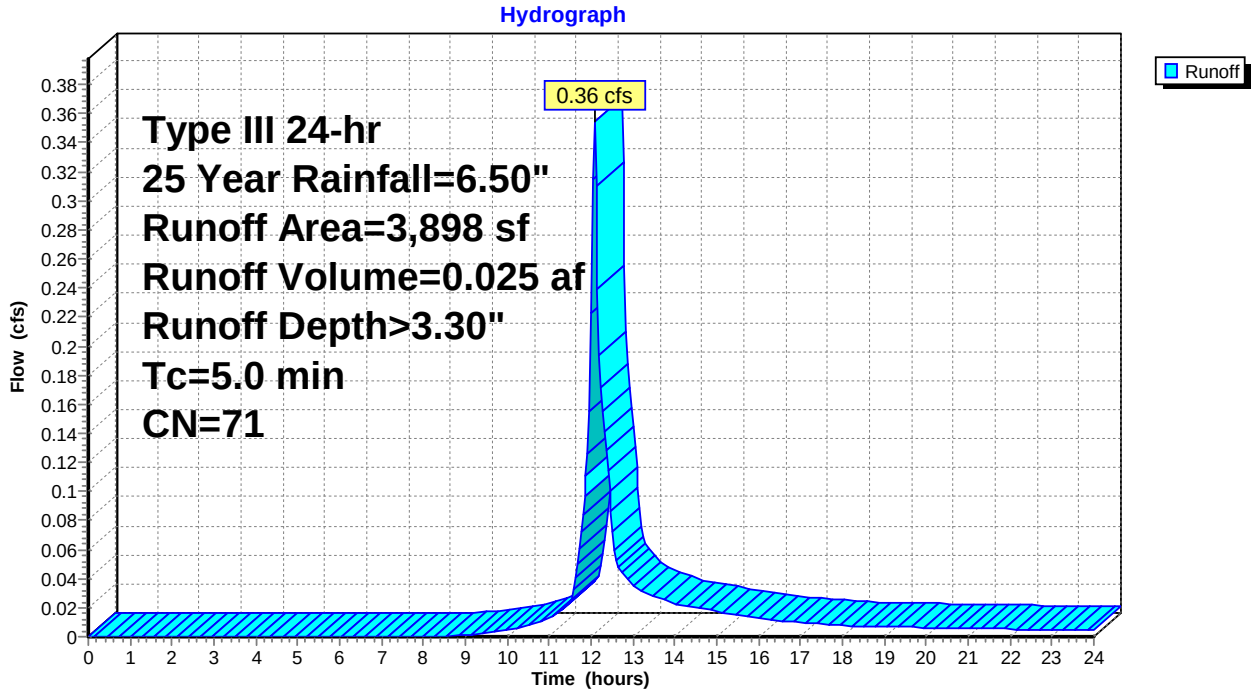
Runoff = 0.36 cfs @ 12.08 hrs, Volume= 0.025 af, Depth> 3.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,053	98	Driveway
*	2,845	61	Woods, Fair, HSG B
	3,898	71	Weighted Average
	2,845		72.99% Pervious Area
	1,053		27.01% Impervious Area

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

Subcatchment 4S: Areas not Routed to Retention



Summary for Pond 1P: 24" Concrete Galleries

Inflow Area = 0.028 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.18 cfs @ 12.07 hrs, Volume= 0.014 af
Outflow = 0.17 cfs @ 12.24 hrs, Volume= 0.006 af, Atten= 8%, Lag= 10.1 min
Primary = 0.17 cfs @ 12.24 hrs, Volume= 0.006 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 575.60' @ 12.24 hrs Surf.Area= 252 sf Storage= 362 cf

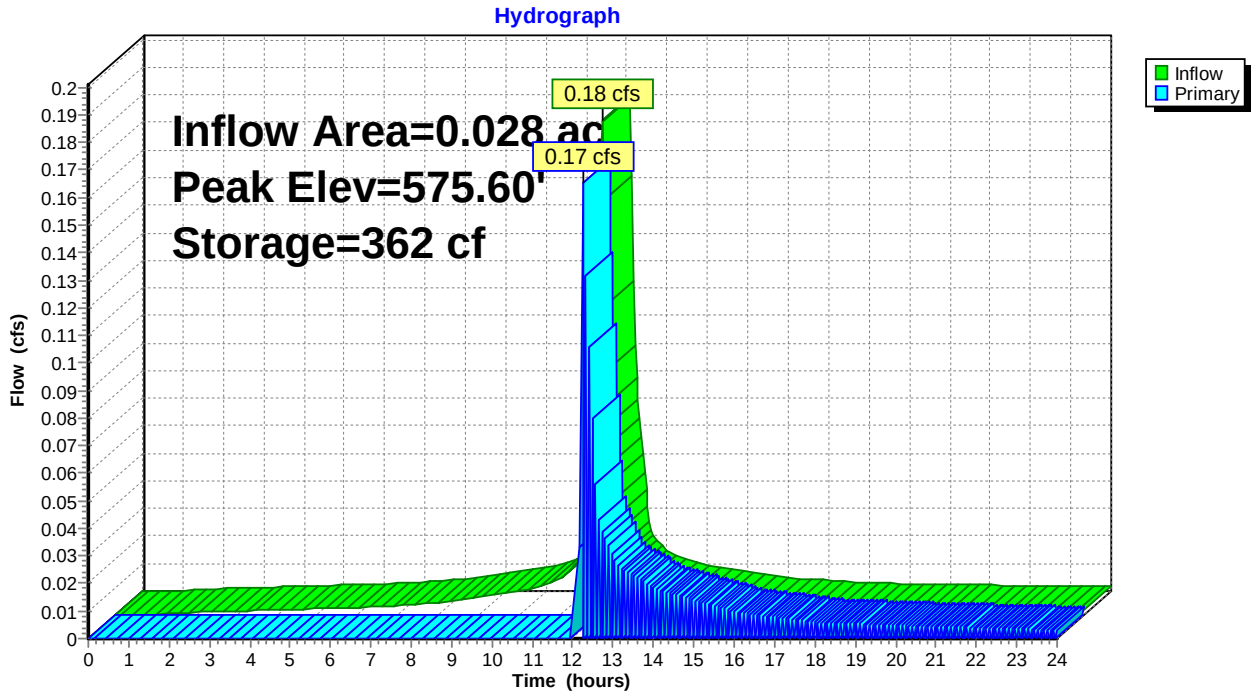
Plug-Flow detention time= 303.8 min calculated for 0.006 af (43% of inflow)
Center-of-Mass det. time= 155.8 min (898.5 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	573.50'	95 cf	**6.00'W x 42.00'L x 2.00'H Stone** 504 cf Overall - 267 cf Embedded = 237 cf x 40.0% Voids
#2	573.50'	267 cf	**4.00'W x 40.00'L x 1.67'H 24" Concrete Galleries** Inside #1
		362 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	575.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.17 cfs @ 12.24 hrs HW=575.60' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.17 cfs @ 1.04 fps)

Pond 1P: 24" Concrete Galleries



Summary for Pond 2P: 24" Concrete Galleries

Inflow Area = 0.040 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.26 cfs @ 12.07 hrs, Volume= 0.021 af
Outflow = 0.14 cfs @ 12.36 hrs, Volume= 0.008 af, Atten= 45%, Lag= 17.3 min
Primary = 0.14 cfs @ 12.36 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 580.09' @ 12.36 hrs Surf.Area= 364 sf Storage= 580 cf

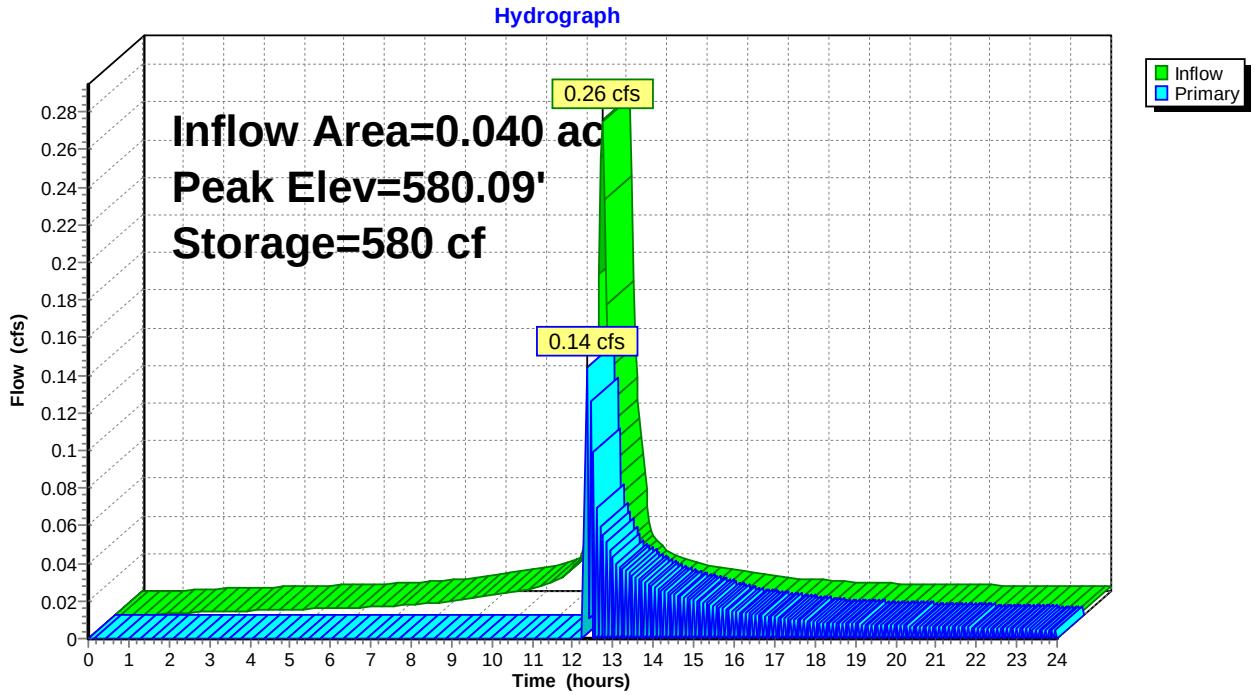
Plug-Flow detention time= 348.8 min calculated for 0.008 af (37% of inflow)
Center-of-Mass det. time= 180.8 min (923.5 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	578.00'	99 cf	**14.00'W x 26.00'L x 2.00'H Stone** 728 cf Overall - 481 cf Embedded = 247 cf x 40.0% Voids
#2	578.00'	481 cf	**12.00'W x 24.00'L x 1.67'H 24" Concrete Galleries** Inside #1
		580 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	580.00'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.14 cfs @ 12.36 hrs HW=580.09' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.14 cfs @ 0.99 fps)

Pond 2P: 24" Concrete Galleries

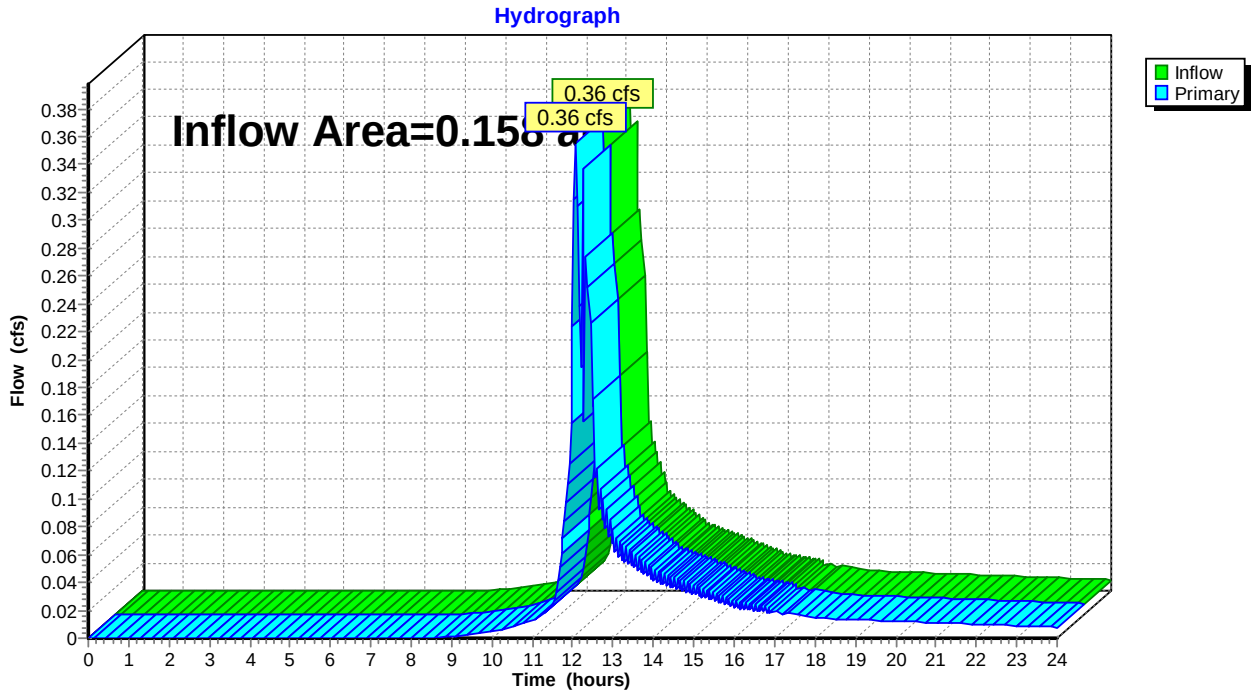


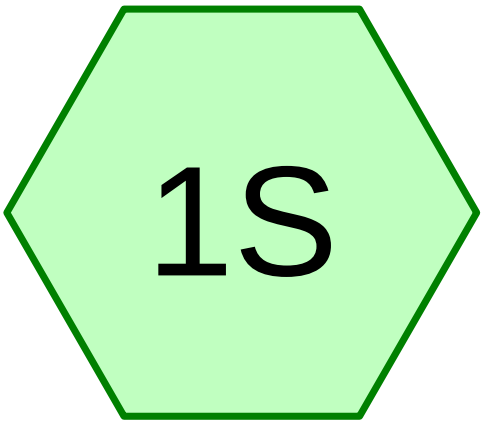
Summary for Link 1L: Combined Hydrograph

Inflow Area = 0.158 ac, 58.54% Impervious, Inflow Depth > 2.95" for 25 Year event
Inflow = 0.36 cfs @ 12.08 hrs, Volume= 0.039 af
Primary = 0.36 cfs @ 12.08 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min

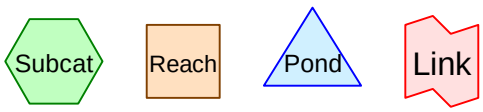
Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Link 1L: Combined Hydrograph





Existing Conditions Wetlands Basin



Routing Diagram for 2168ROWWetlandsExisting
Prepared by Fairfield County Engineering LLC, Printed 3/8/2024
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Summary for Subcatchment 1S: Existing Conditions Wetlands Basin

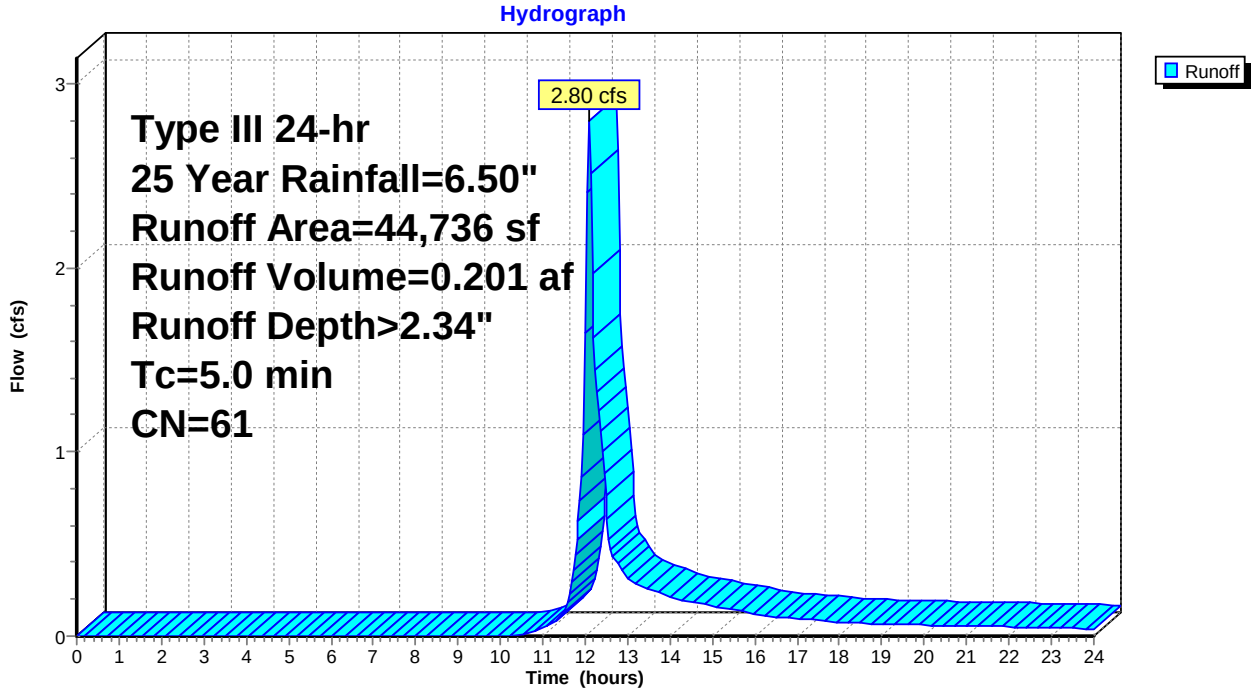
Runoff = 2.80 cfs @ 12.08 hrs, Volume= 0.201 af, Depth> 2.34"

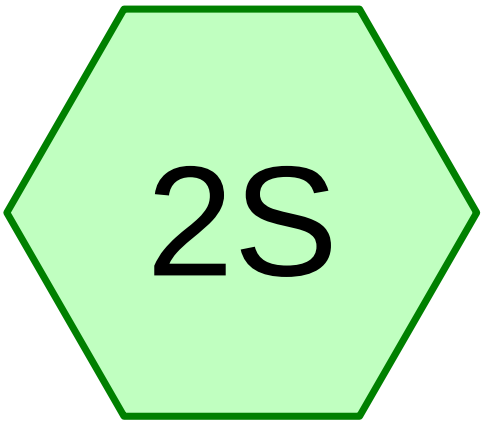
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	44,736	61	Woods, Fair, HSG B
	44,736		100.00% Pervious Area

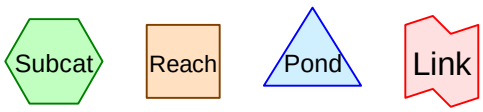
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct**

Subcatchment 1S: Existing Conditions Wetlands Basin





Proposed Conditions Wetlands Basin



Routing Diagram for 2168ROWWetlandsProposed
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Summary for Subcatchment 2S: Proposed Conditions Wetlands Basin

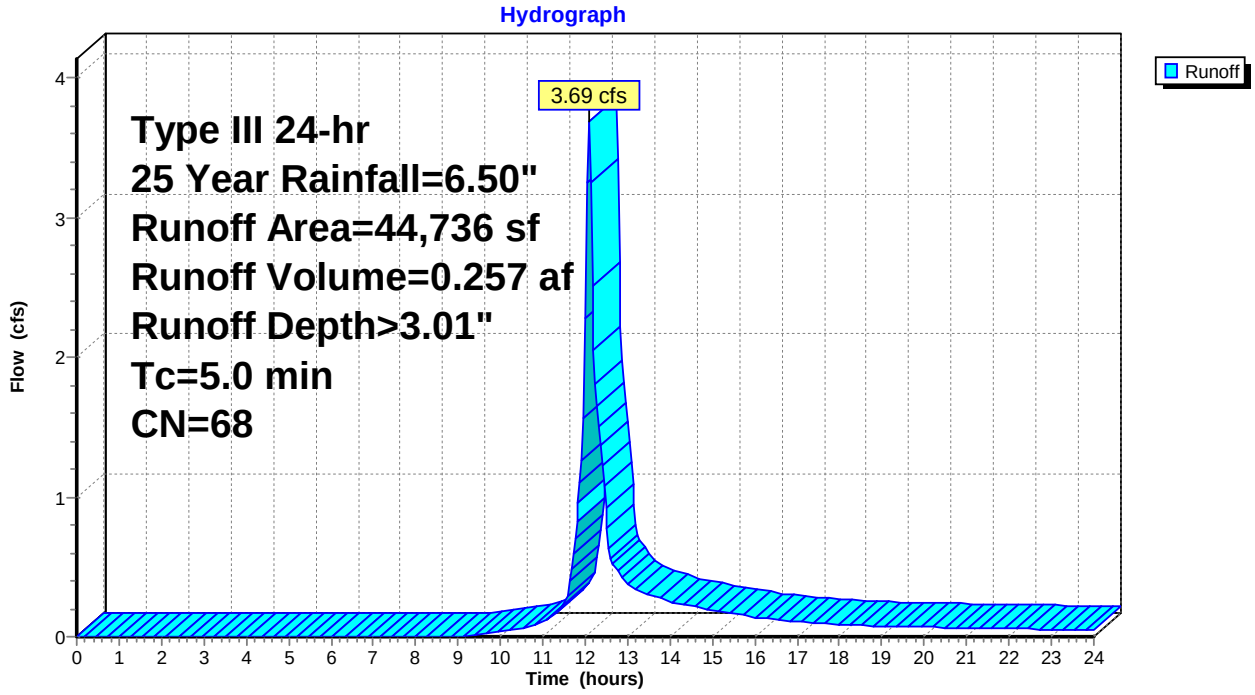
Runoff = 3.69 cfs @ 12.08 hrs, Volume= 0.257 af, Depth> 3.01"

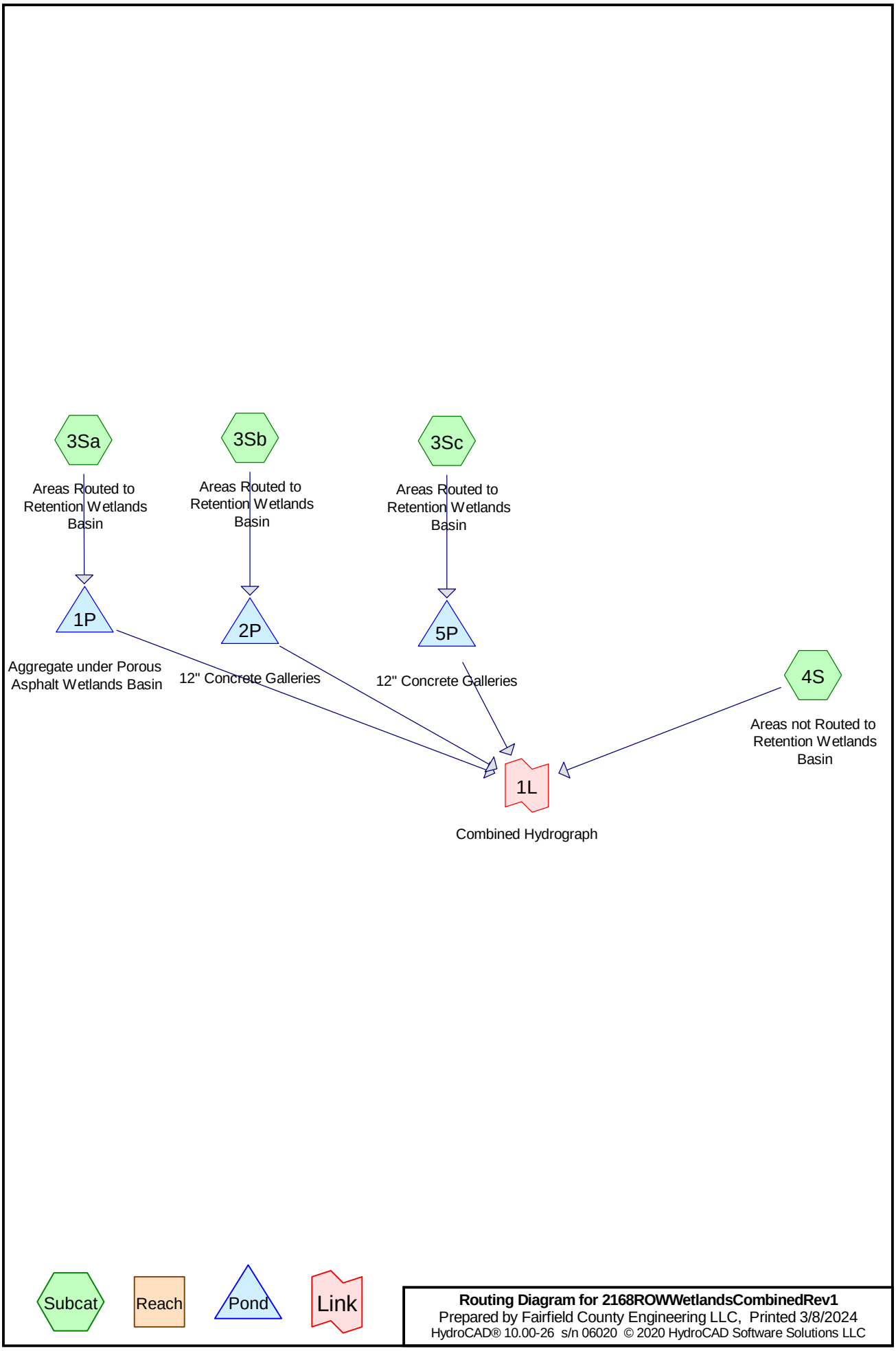
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	8,204	98	Driveway
*	36,532	61	Woods, Fair, HSG B
	44,736	68	Weighted Average
	36,532		81.66% Pervious Area
	8,204		18.34% Impervious Area

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

Subcatchment 2S: Proposed Conditions Wetlands Basin





Summary for Subcatchment 3Sa: Areas Routed to Retention Wetlands Basin

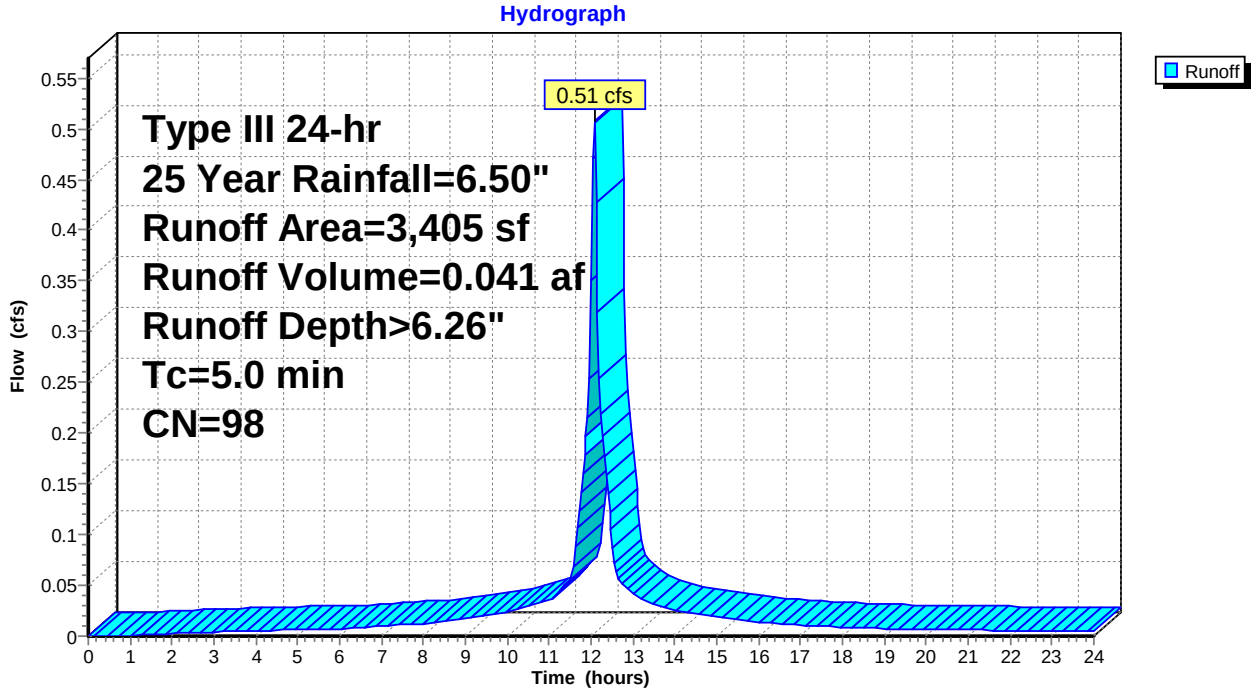
Runoff = 0.51 cfs @ 12.07 hrs, Volume= 0.041 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	3,405	98	Driveway
	3,405		100.00% Impervious Area

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

Subcatchment 3Sa: Areas Routed to Retention Wetlands Basin



Summary for Subcatchment 3Sb: Areas Routed to Retention Wetlands Basin

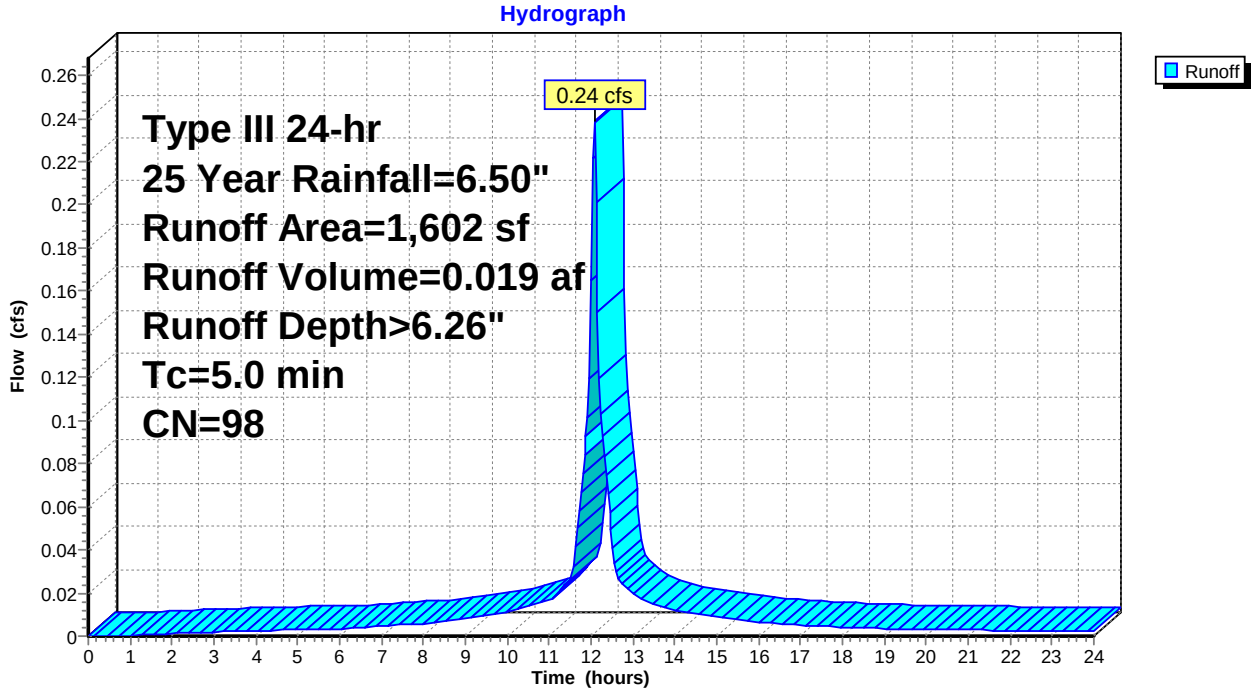
Runoff = 0.24 cfs @ 12.07 hrs, Volume= 0.019 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,602	98	Driveway
	1,602		100.00% Impervious Area

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

Subcatchment 3Sb: Areas Routed to Retention Wetlands Basin



Summary for Subcatchment 3Sc: Areas Routed to Retention Wetlands Basin

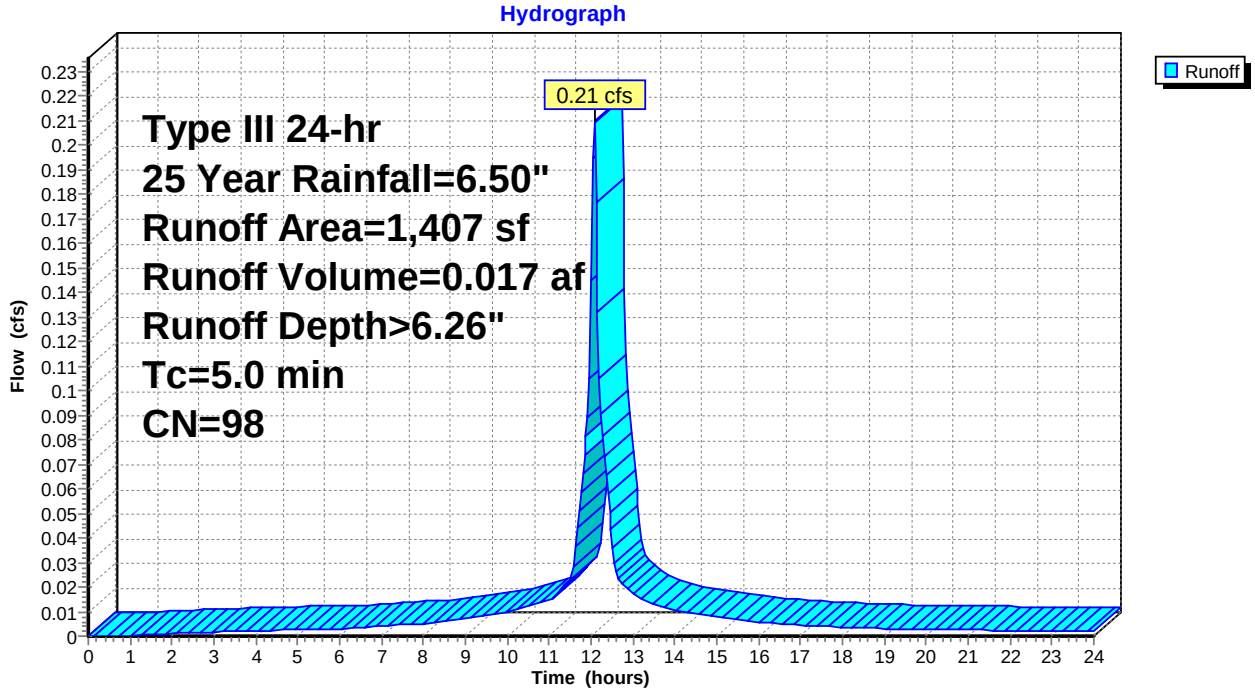
Runoff = 0.21 cfs @ 12.07 hrs, Volume= 0.017 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,407	98	Driveway
	1,407		100.00% Impervious Area

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

Subcatchment 3Sc: Areas Routed to Retention Wetlands Basin



Summary for Subcatchment 4S: Areas not Routed to Retention Wetlands Basin

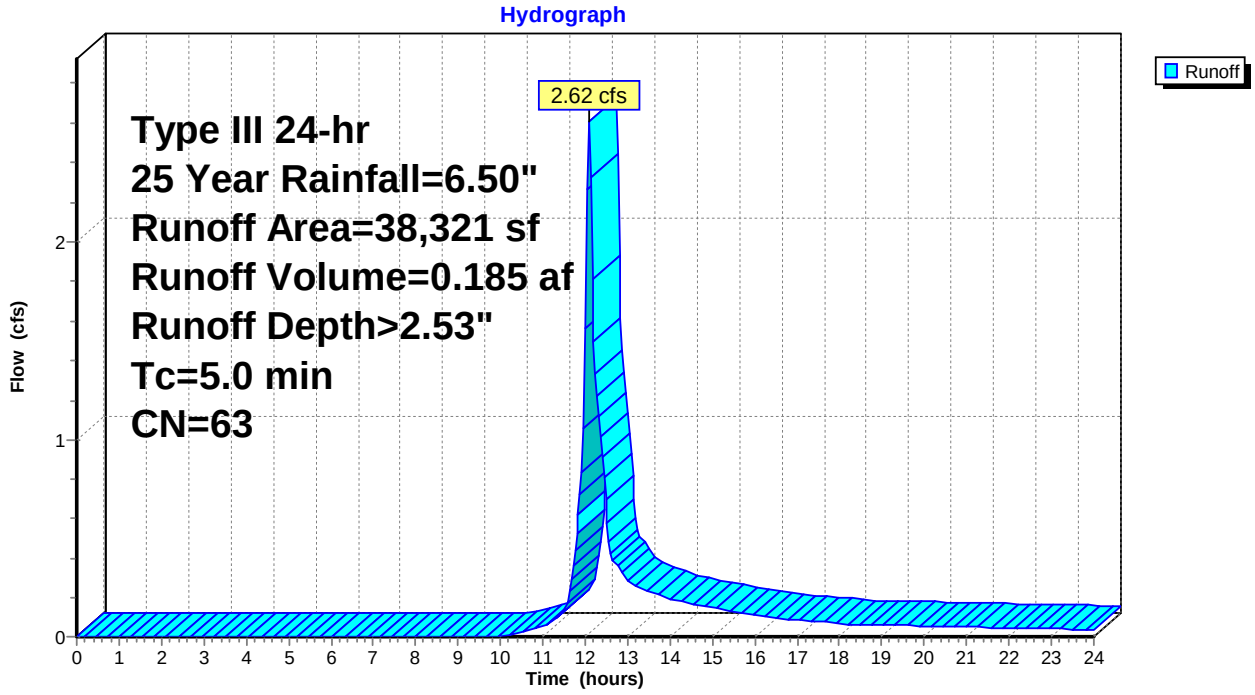
Runoff = 2.62 cfs @ 12.08 hrs, Volume= 0.185 af, Depth> 2.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,789	98	Driveway
*	36,532	61	Woods, Fair, HSG B
	38,321	63	Weighted Average
	36,532		95.33% Pervious Area
	1,789		4.67% Impervious Area

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

Subcatchment 4S: Areas not Routed to Retention Wetlands Basin



Summary for Pond 1P: Aggregate under Porous Asphalt Wetlands Basin

Inflow Area = 0.078 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.51 cfs @ 12.07 hrs, Volume= 0.041 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 0.83' @ 24.00 hrs Surf.Area= 5,373 sf Storage= 1,775 cf

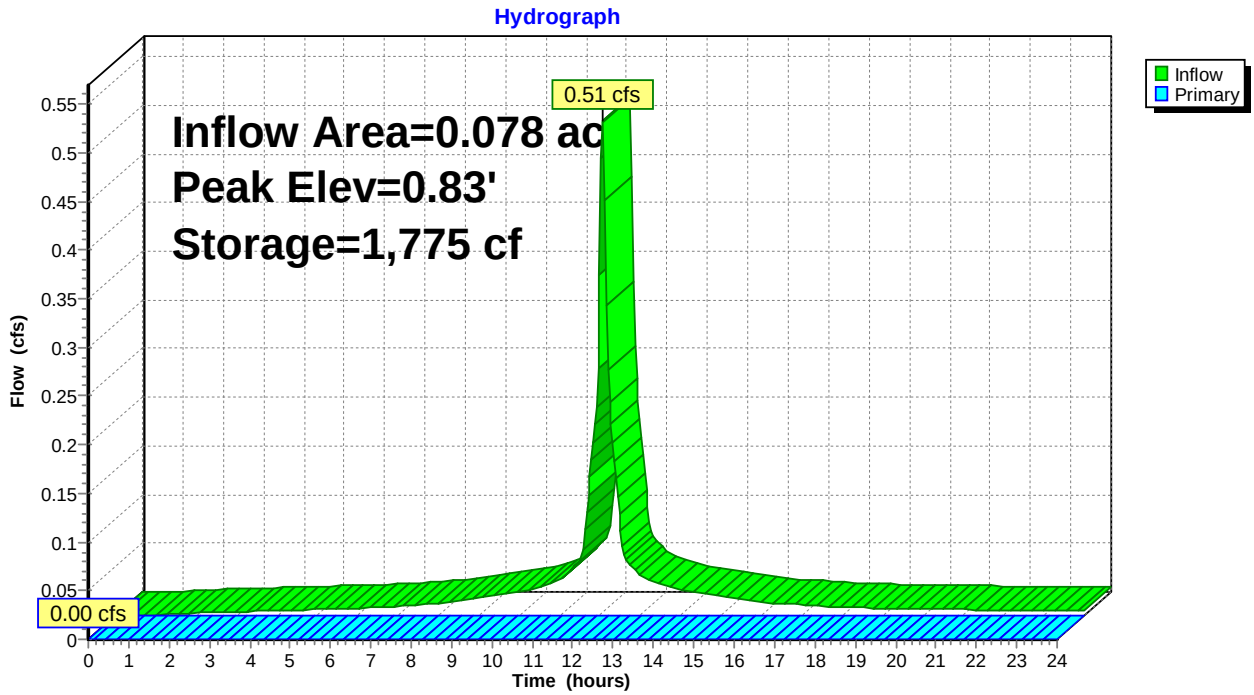
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	2,687 cf	**9.00'W x 597.00'L x 1.25'H Aggregate** 6,716 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	1.25'	**1.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 1P: Aggregate under Porous Asphalt Wetlands Basin



Summary for Pond 2P: 12" Concrete Galleries

Inflow Area = 0.037 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.24 cfs @ 12.07 hrs, Volume= 0.019 af
Outflow = 0.22 cfs @ 12.15 hrs, Volume= 0.009 af, Atten= 8%, Lag= 4.9 min
Primary = 0.22 cfs @ 12.15 hrs, Volume= 0.009 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 577.62' @ 12.15 hrs Surf.Area= 588 sf Storage= 428 cf

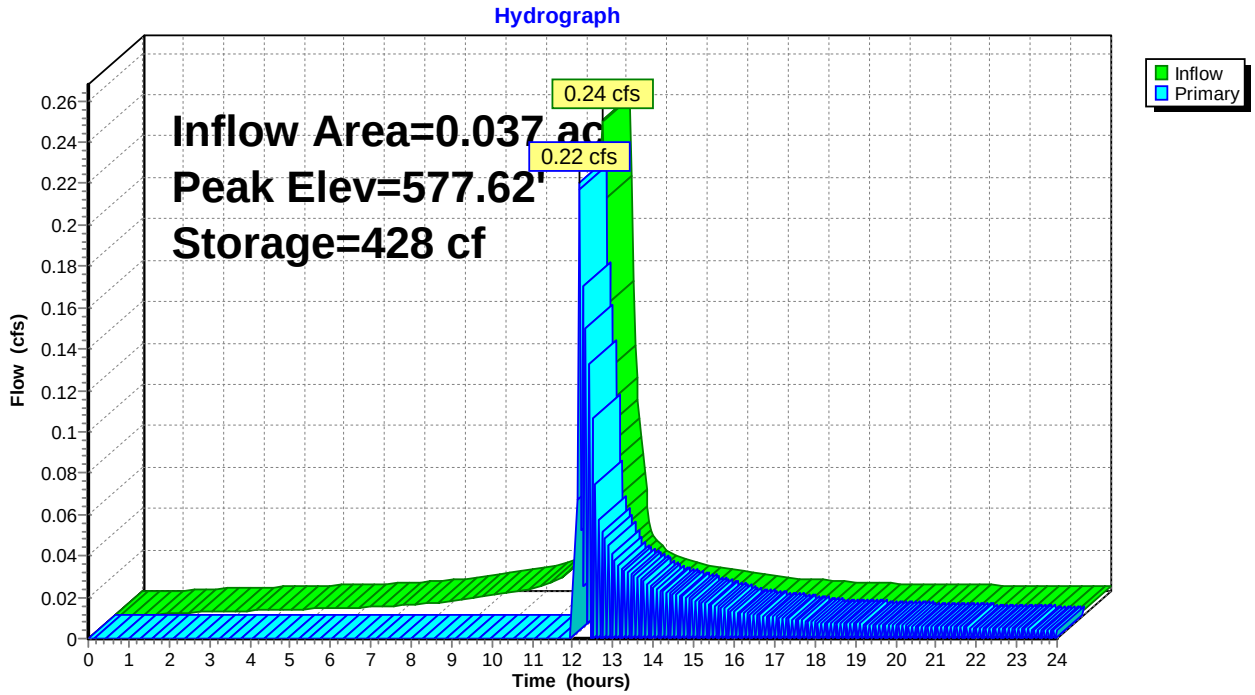
Plug-Flow detention time= 267.7 min calculated for 0.009 af (49% of inflow)
Center-of-Mass det. time= 134.9 min (877.6 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	576.50'	107 cf	**14.00'W x 42.00'L x 1.00'H Stone** 588 cf Overall - 322 cf Embedded = 266 cf x 40.0% Voids
#2	576.50'	322 cf	**12.00'W x 40.00'L x 0.67'H 12" Concrete Galleries** Inside #1
		428 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	577.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.20 cfs @ 12.15 hrs HW=577.62' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.20 cfs @ 1.11 fps)

Pond 2P: 12" Concrete Galleries



Summary for Pond 5P: 12" Concrete Galleries

Inflow Area = 0.032 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.21 cfs @ 12.07 hrs, Volume= 0.017 af
Outflow = 0.13 cfs @ 12.24 hrs, Volume= 0.007 af, Atten= 36%, Lag= 10.3 min
Primary = 0.13 cfs @ 12.24 hrs, Volume= 0.007 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 577.59' @ 12.24 hrs Surf.Area= 588 sf Storage= 428 cf

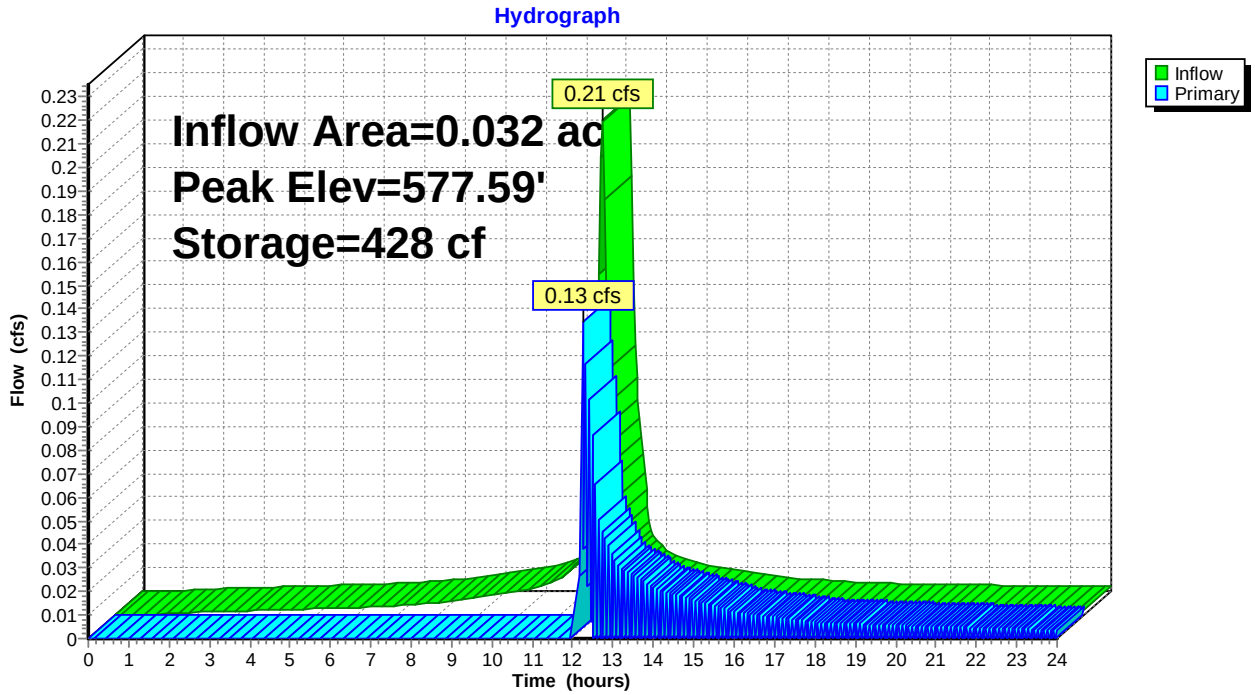
Plug-Flow detention time= 312.8 min calculated for 0.007 af (42% of inflow)
Center-of-Mass det. time= 160.4 min (903.1 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	576.50'	107 cf	**14.00'W x 42.00'L x 1.00'H Stone** 588 cf Overall - 322 cf Embedded = 266 cf x 40.0% Voids
#2	576.50'	322 cf	**12.00'W x 40.00'L x 0.67'H 12" Concrete Galleries** Inside #1
		428 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	577.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.12 cfs @ 12.24 hrs HW=577.58' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.12 cfs @ 0.95 fps)

Pond 5P: 12" Concrete Galleries

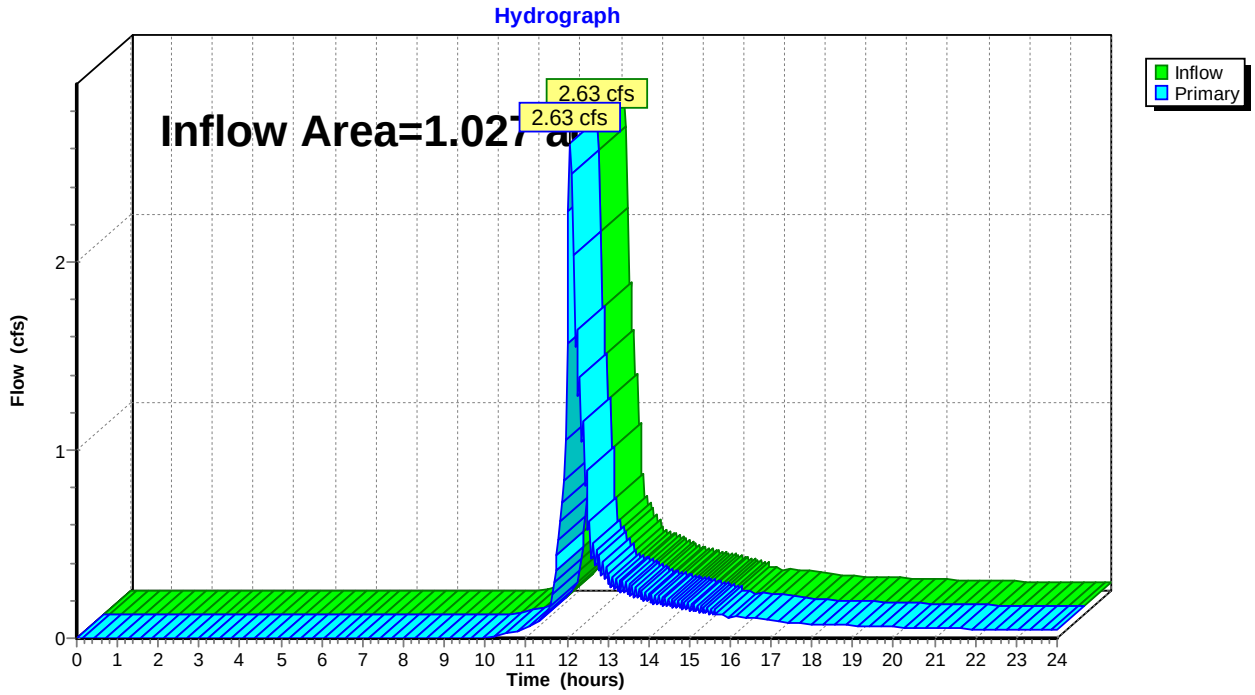


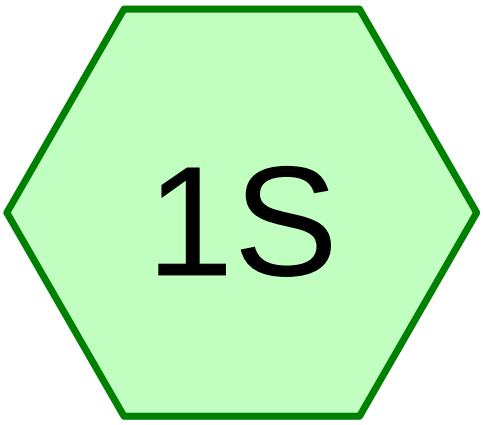
Summary for Link 1L: Combined Hydrograph

Inflow Area = 1.027 ac, 18.34% Impervious, Inflow Depth > 2.36" for 25 Year event
Inflow = 2.63 cfs @ 12.09 hrs, Volume= 0.202 af
Primary = 2.63 cfs @ 12.09 hrs, Volume= 0.202 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Link 1L: Combined Hydrograph





Existing Conditions
North Basin

Subcat Reach Pond Link

Routing Diagram for 2168ROWNorthExisting
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Summary for Subcatchment 1S: Existing Conditions North Basin

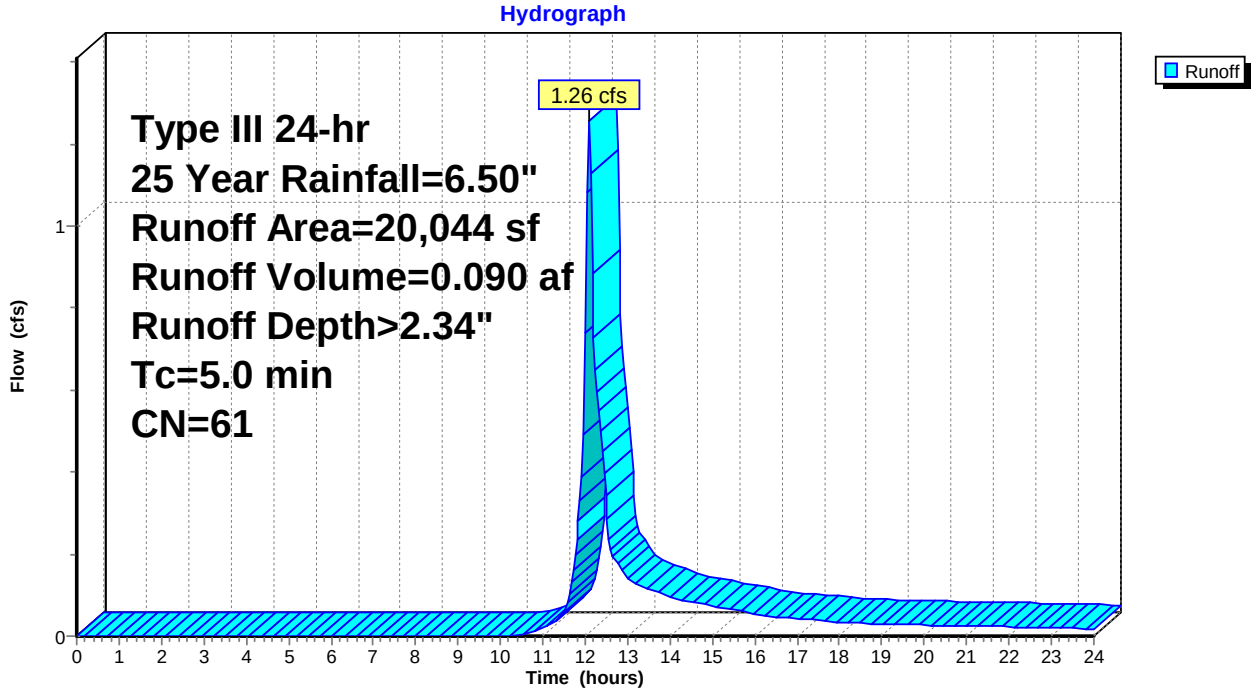
Runoff = 1.26 cfs @ 12.08 hrs, Volume= 0.090 af, Depth> 2.34"

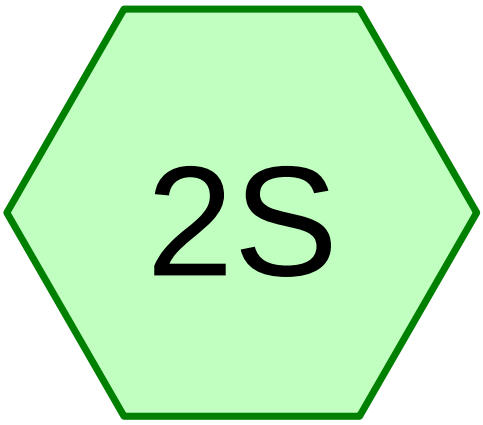
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	20,044	61	Woods, Fair, HSG B
	20,044		100.00% Pervious Area

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

Subcatchment 1S: Existing Conditions North Basin





Proposed Conditions
North Basin

Subcat Reach Pond Link

Routing Diagram for 2168ROWNorthProposed
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Summary for Subcatchment 2S: Proposed Conditions North Basin

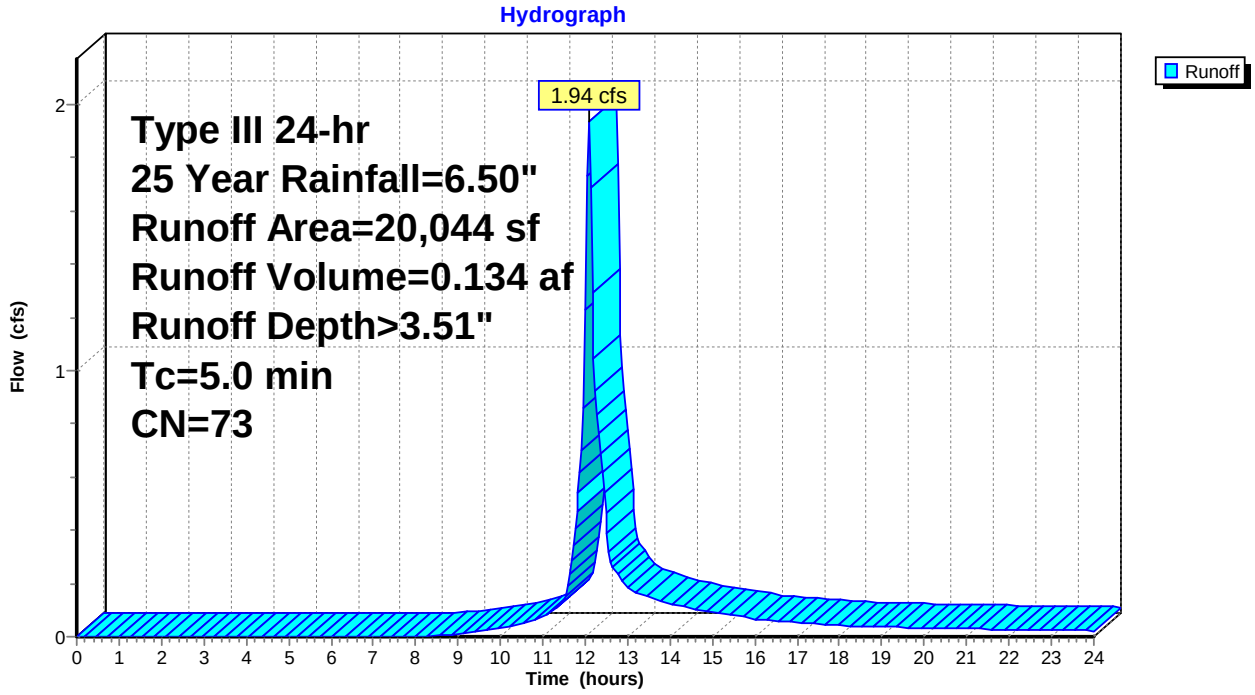
Runoff = 1.94 cfs @ 12.08 hrs, Volume= 0.134 af, Depth> 3.51"

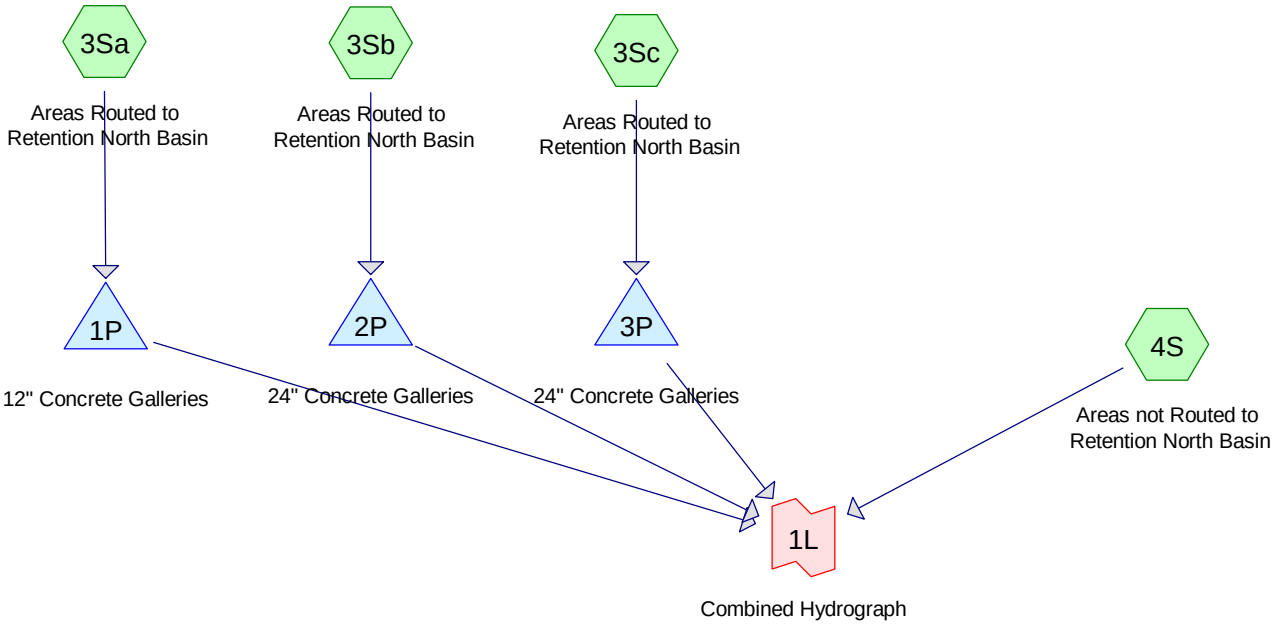
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	6,462	98	Driveway
*	13,582	61	Woods, Fair, HSG B
	20,044	73	Weighted Average
	13,582		67.76% Pervious Area
	6,462		32.24% Impervious Area

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

Subcatchment 2S: Proposed Conditions North Basin





Subcat Reach Pond Link

Routing Diagram for 2168ROWNorthCombinedRev1
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Summary for Subcatchment 3Sa: Areas Routed to Retention North Basin

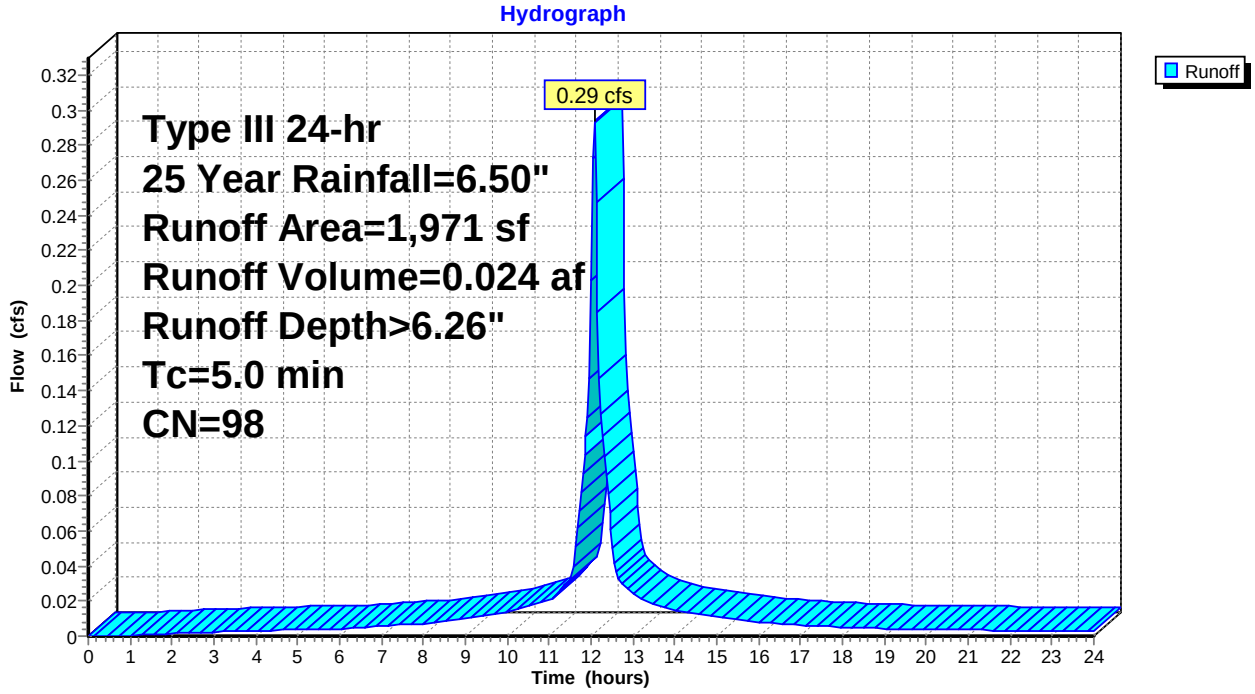
Runoff = 0.29 cfs @ 12.07 hrs, Volume= 0.024 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,971	98	Driveway
	1,971		100.00% Impervious Area

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

Subcatchment 3Sa: Areas Routed to Retention North Basin



Summary for Subcatchment 3Sb: Areas Routed to Retention North Basin

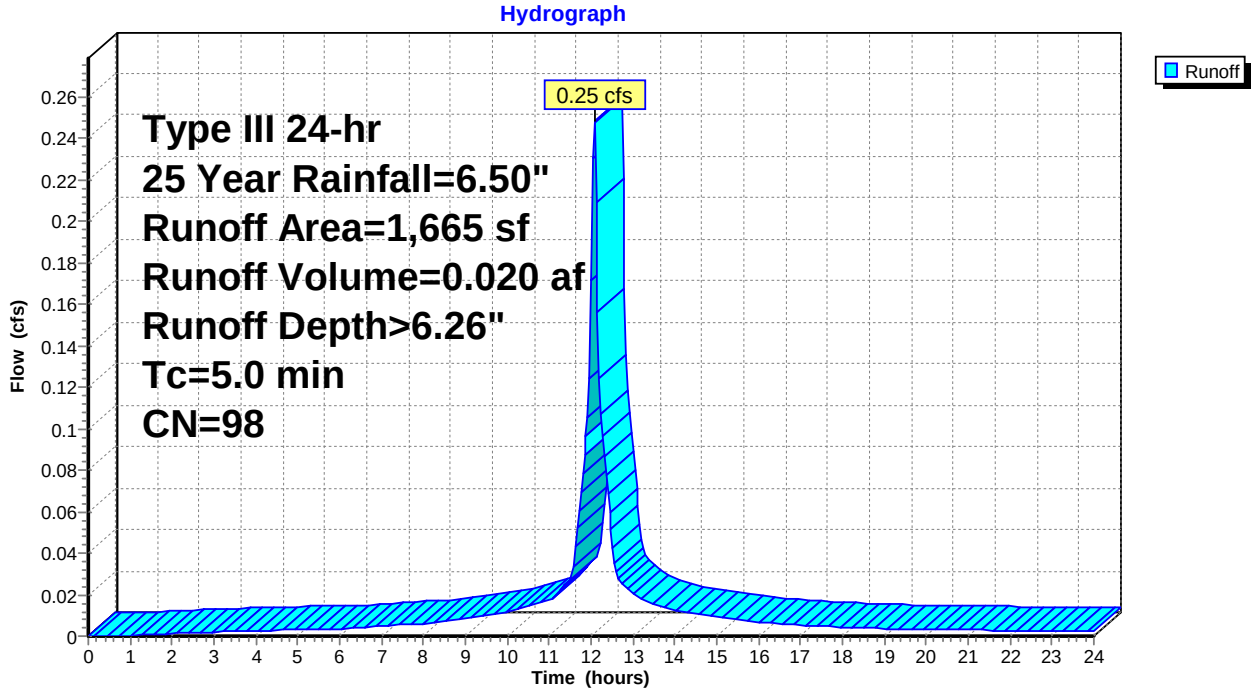
Runoff = 0.25 cfs @ 12.07 hrs, Volume= 0.020 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,665	98	Driveway
	1,665		100.00% Impervious Area

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

Subcatchment 3Sb: Areas Routed to Retention North Basin



Summary for Subcatchment 3Sc: Areas Routed to Retention North Basin

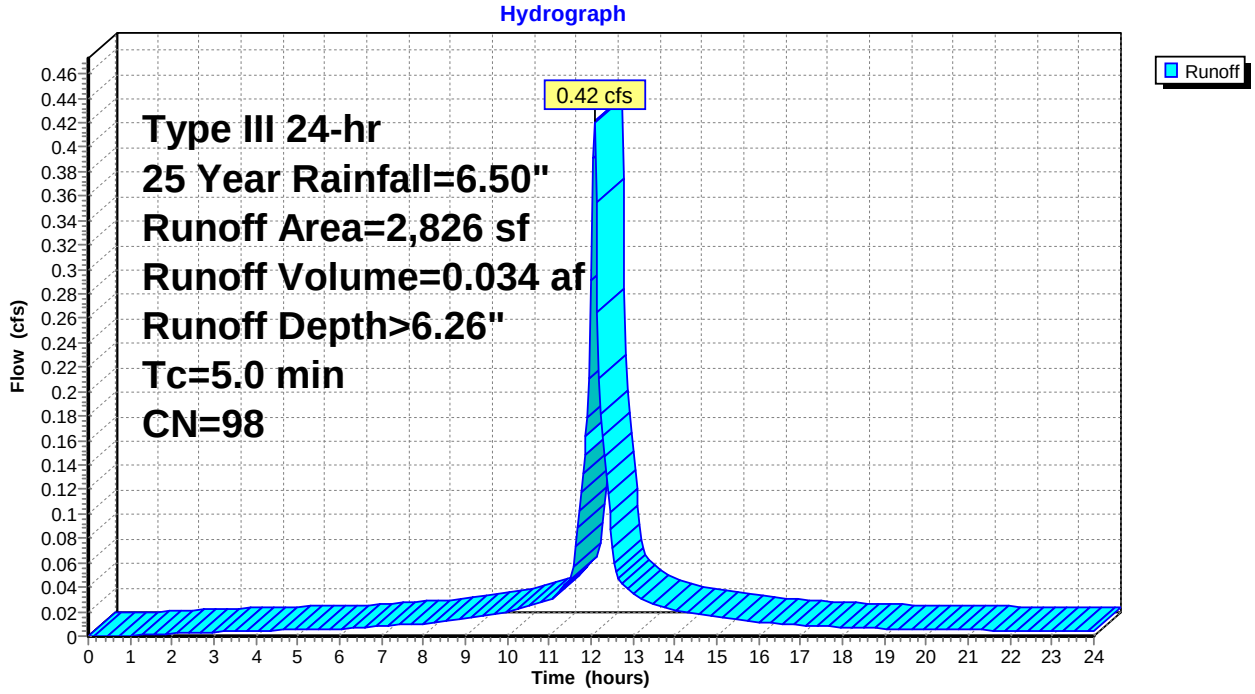
Runoff = 0.42 cfs @ 12.07 hrs, Volume= 0.034 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	2,826	98	Driveway
	2,826		100.00% Impervious Area

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

Subcatchment 3Sc: Areas Routed to Retention North Basin



Summary for Subcatchment 4S: Areas not Routed to Retention North Basin

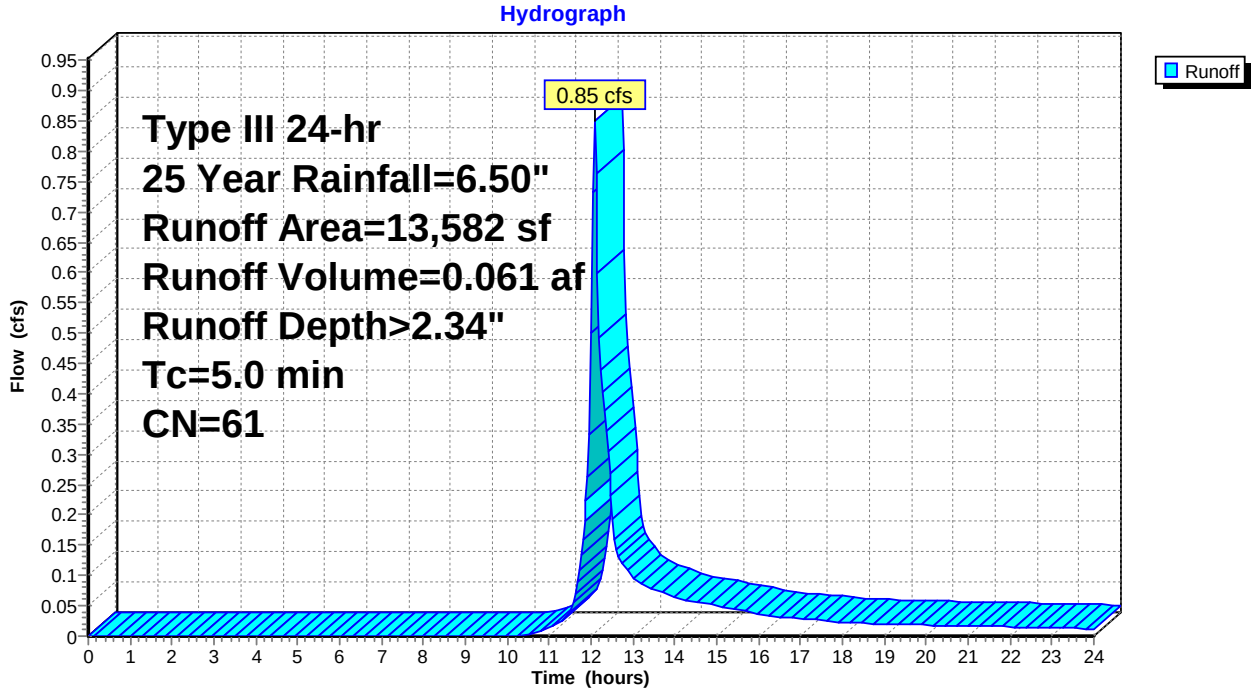
Runoff = 0.85 cfs @ 12.08 hrs, Volume= 0.061 af, Depth> 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	13,582	61	Woods, Fair, HSG B
	13,582		100.00% Pervious Area

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

Subcatchment 4S: Areas not Routed to Retention North Basin



Summary for Pond 1P: 12" Concrete Galleries

Inflow Area = 0.045 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.29 cfs @ 12.07 hrs, Volume= 0.024 af
Outflow = 0.29 cfs @ 12.07 hrs, Volume= 0.018 af, Atten= 1%, Lag= 0.0 min
Primary = 0.29 cfs @ 12.07 hrs, Volume= 0.018 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 573.65' @ 12.07 hrs Surf.Area= 324 sf Storage= 233 cf

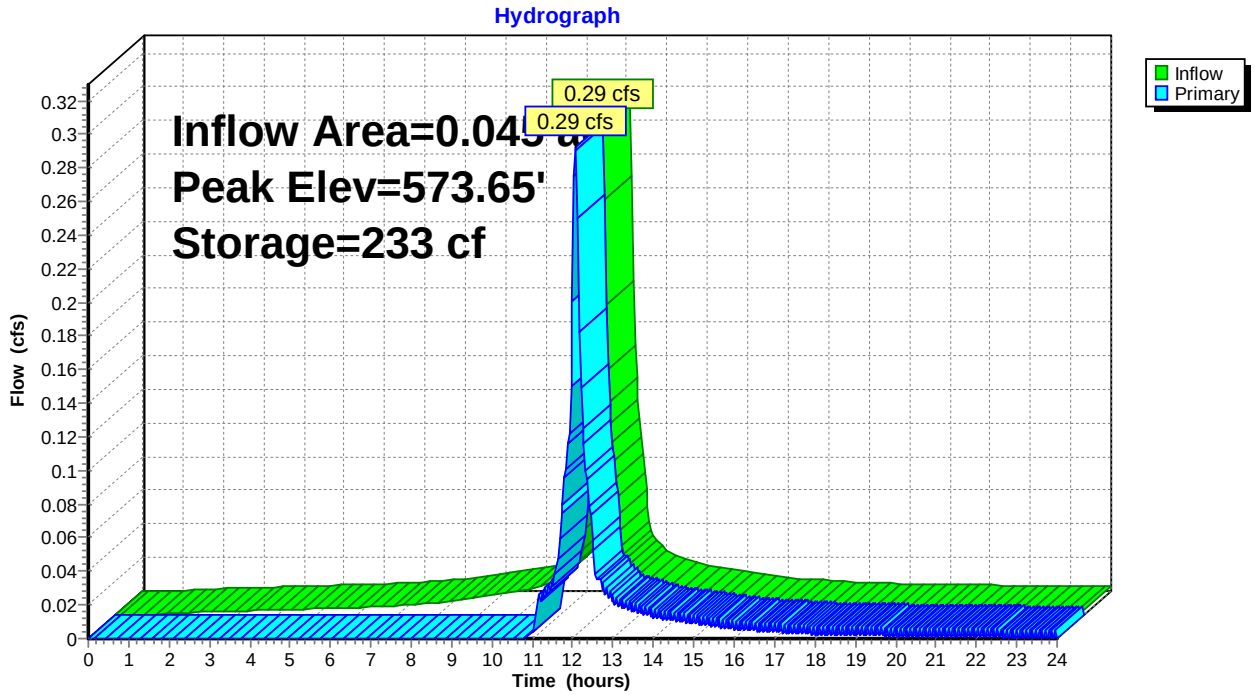
Plug-Flow detention time= 154.8 min calculated for 0.018 af (77% of inflow)
Center-of-Mass det. time= 73.2 min (815.9 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	572.50'	61 cf	**18.00'W x 18.00'L x 1.00'H Stone** 324 cf Overall - 172 cf Embedded = 152 cf x 40.0% Voids
#2	572.50'	172 cf	**16.00'W x 16.00'L x 0.67'H 12" Concrete Galleries** Inside #1
		233 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	573.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.29 cfs @ 12.07 hrs HW=573.65' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.29 cfs @ 1.25 fps)

Pond 1P: 12" Concrete Galleries



Summary for Pond 2P: 24" Concrete Galleries

Inflow Area = 0.038 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.25 cfs @ 12.07 hrs, Volume= 0.020 af
Outflow = 0.17 cfs @ 12.28 hrs, Volume= 0.008 af, Atten= 31%, Lag= 12.4 min
Primary = 0.17 cfs @ 12.28 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 569.60' @ 12.28 hrs Surf.Area= 324 sf Storage= 516 cf

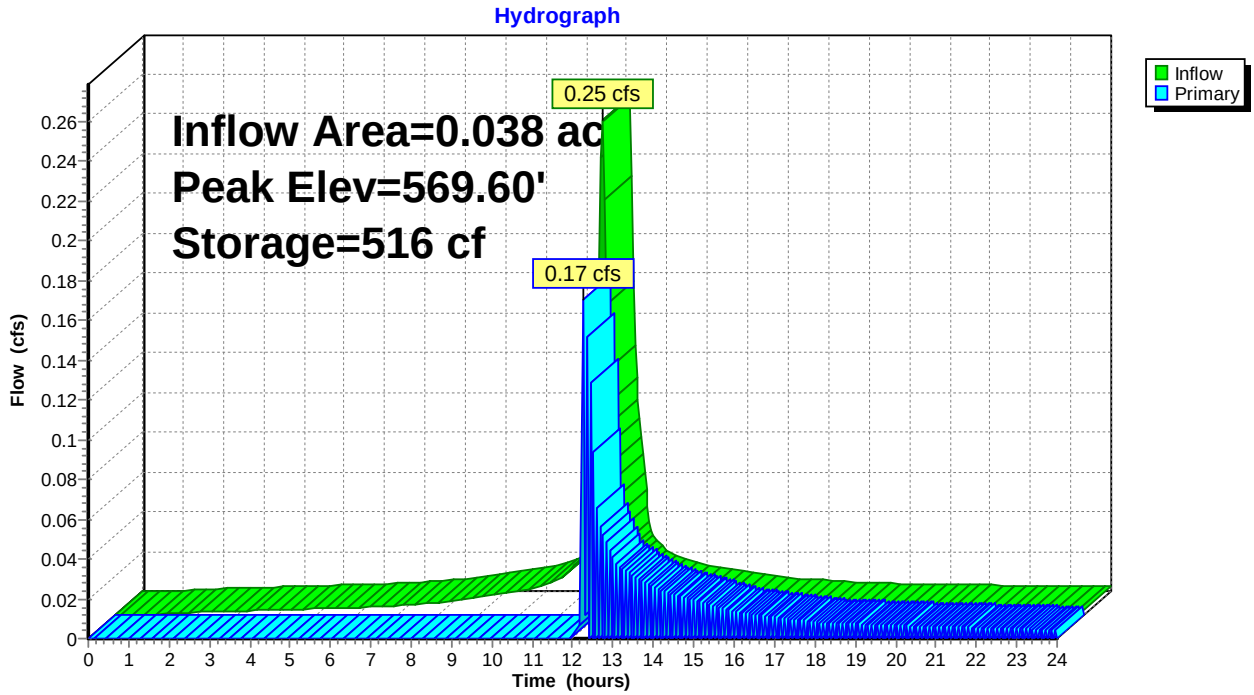
Plug-Flow detention time= 318.7 min calculated for 0.008 af (41% of inflow)
Center-of-Mass det. time= 163.5 min (906.2 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	567.50'	88 cf	**18.00'W x 18.00'L x 2.00'H Stone** 648 cf Overall - 428 cf Embedded = 220 cf x 40.0% Voids
#2	567.50'	428 cf	**16.00'W x 16.00'L x 1.67'H 24" Concrete Galleries** Inside #1
		516 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	569.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.16 cfs @ 12.28 hrs HW=569.60' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.16 cfs @ 1.04 fps)

Pond 2P: 24" Concrete Galleries



Summary for Pond 3P: 24" Concrete Galleries

Inflow Area = 0.065 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.42 cfs @ 12.07 hrs, Volume= 0.034 af
Outflow = 0.14 cfs @ 12.39 hrs, Volume= 0.012 af, Atten= 67%, Lag= 19.2 min
Primary = 0.14 cfs @ 12.39 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 557.59' @ 12.39 hrs Surf.Area= 572 sf Storage= 939 cf

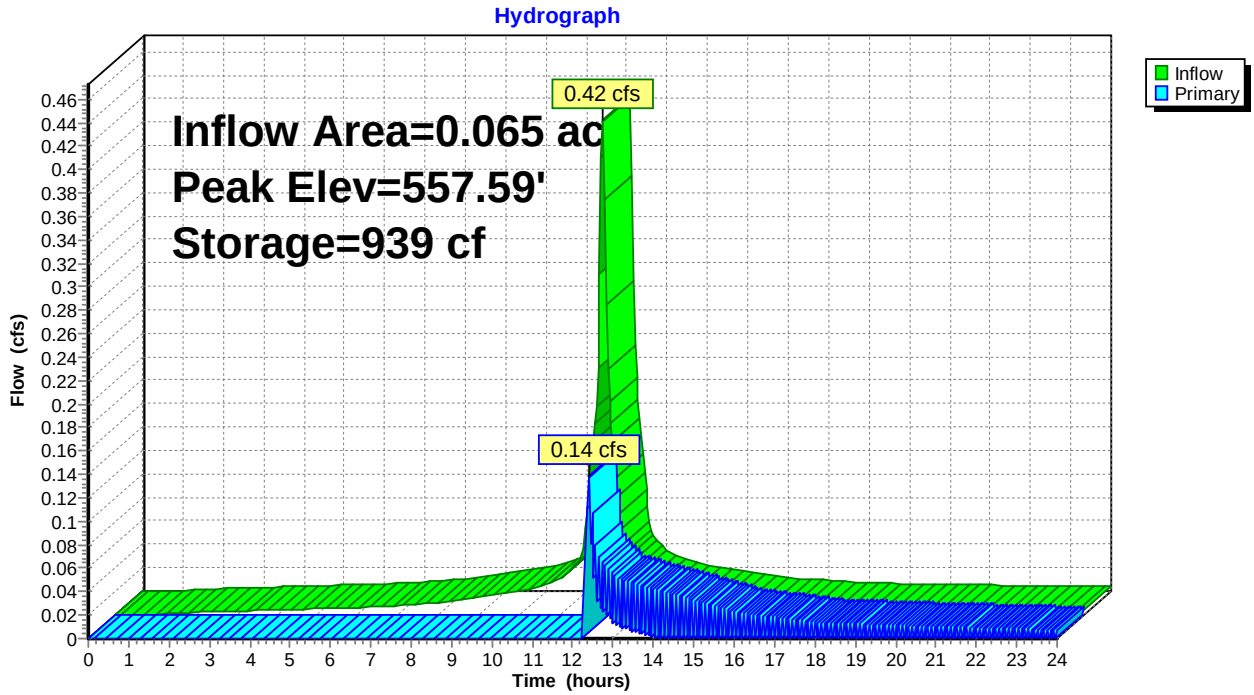
Plug-Flow detention time= 358.3 min calculated for 0.012 af (36% of inflow)
Center-of-Mass det. time= 186.0 min (928.7 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	555.50'	137 cf	**22.00'W x 26.00'L x 2.00'H Stone** 1,144 cf Overall - 802 cf Embedded = 342 cf x 40.0% Voids
#2	555.50'	802 cf	**20.00'W x 24.00'L x 1.67'H 24" Concrete Galleries** Inside #1
		939 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	557.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.13 cfs @ 12.39 hrs HW=557.59' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.13 cfs @ 0.96 fps)

Pond 3P: 24" Concrete Galleries

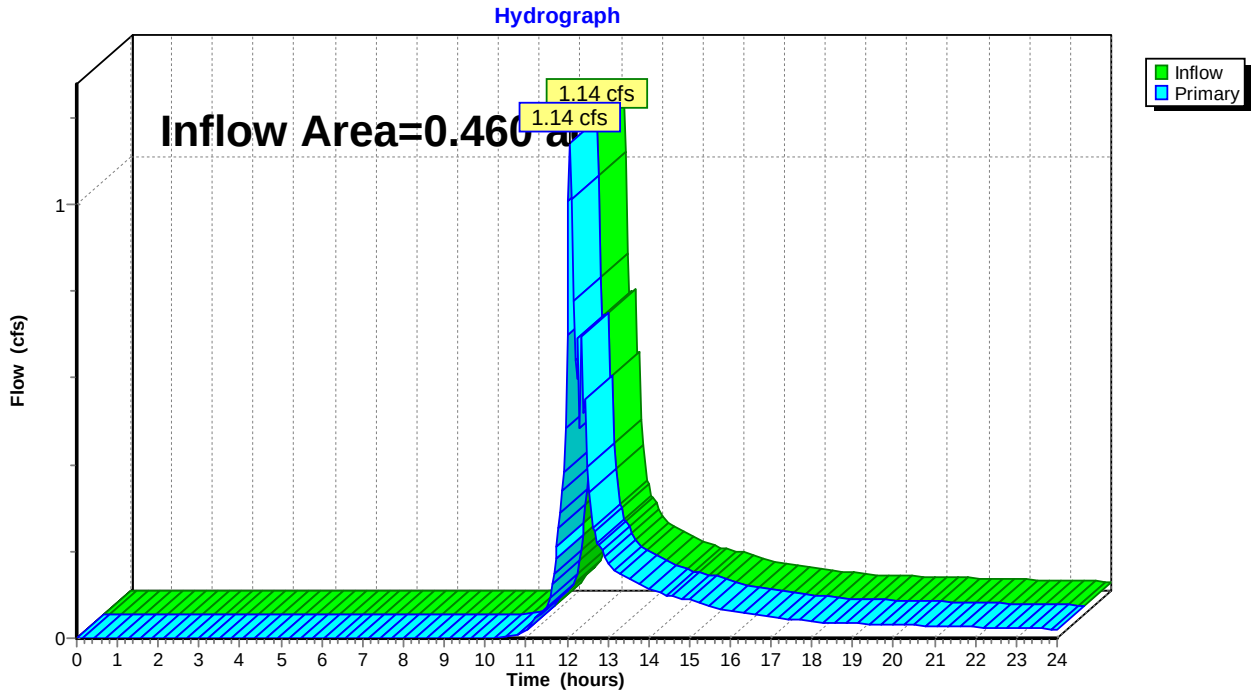


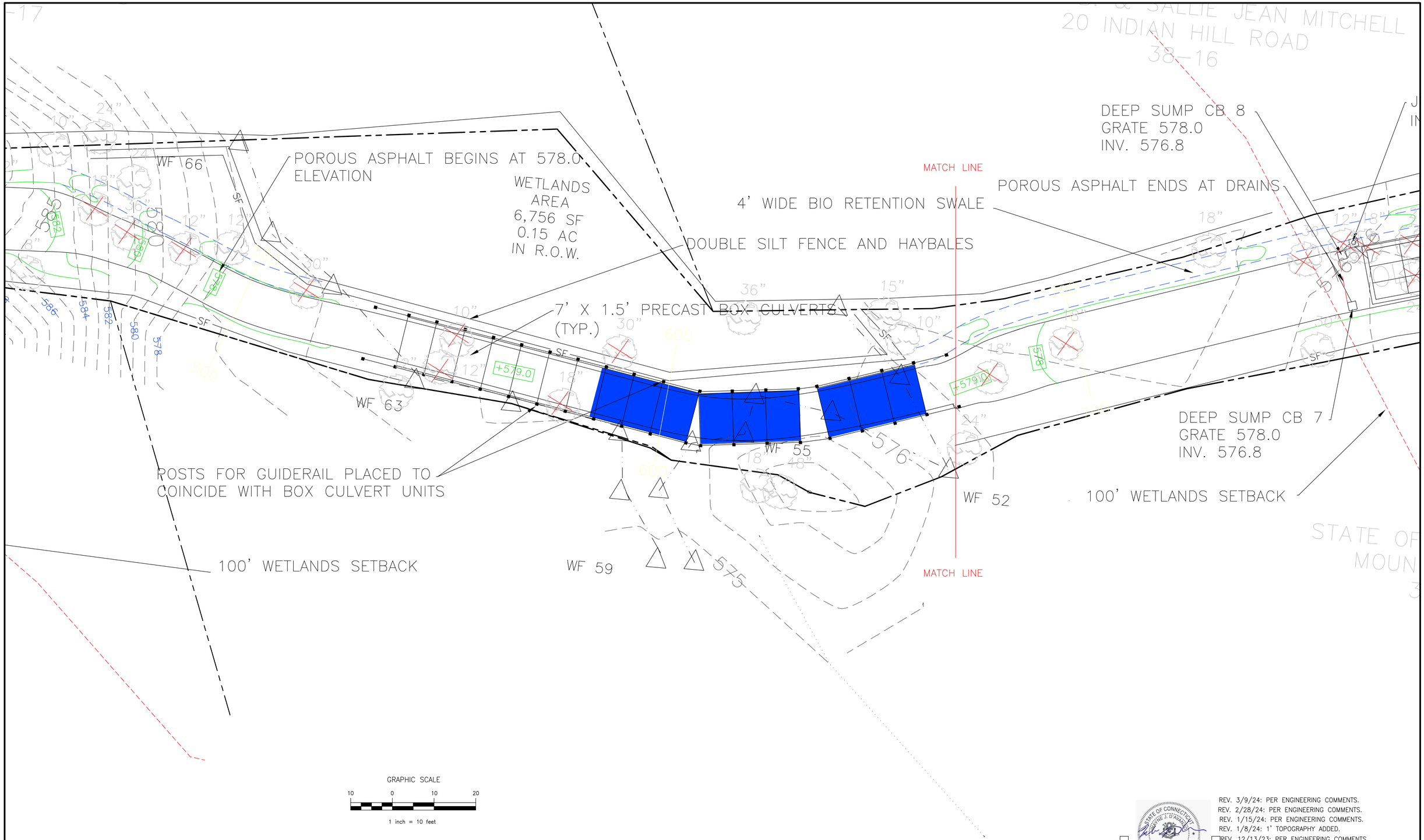
Summary for Link 1L: Combined Hydrograph

Inflow Area = 0.460 ac, 32.24% Impervious, Inflow Depth > 2.60" for 25 Year event
Inflow = 1.14 cfs @ 12.08 hrs, Volume= 0.100 af
Primary = 1.14 cfs @ 12.08 hrs, Volume= 0.100 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Link 1L: Combined Hydrograph





GRAPHIC SCALE

10 0 10 20

1 inch = 10 feet

REV. 3/9/24: PER ENGINEERING COMMENTS.
REV. 2/28/24: PER ENGINEERING COMMENTS.
REV. 1/15/24: PER ENGINEERING COMMENTS.
REV. 1/8/24: 1' TOPOGRAPHY ADDED.
REV. 12/13/23: PER ENGINEERING COMMENTS.
REV. 11/10/23: PER ENGINEERING COMMENTS.

STATE OF CONNECTICUT
DANIEL T. D'AURIA
No. 24877
LICENSED PROFESSIONAL ENGINEER

10-14-23
date

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

RIGHT OF WAY PLAN WETLANDS CLOSEUP

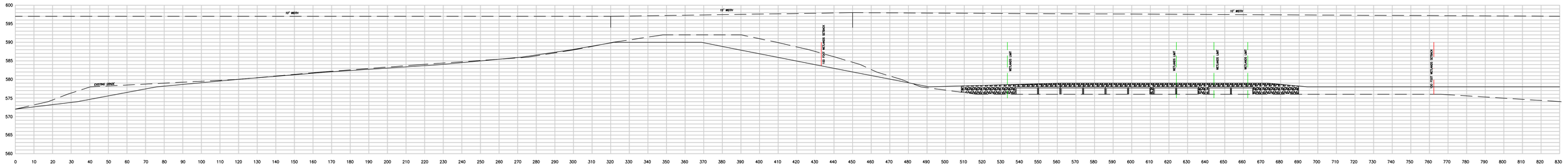
CIVIL ENGINEERS

2168
project

4 OF 7
sheet

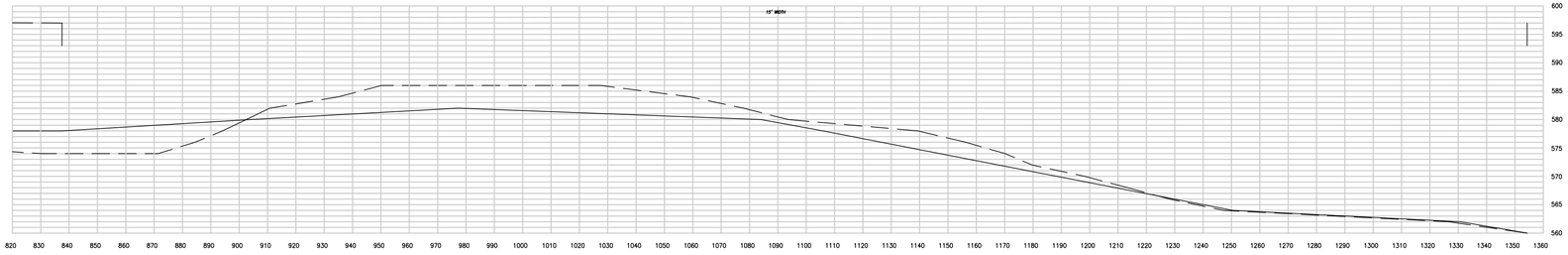
FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831-8005 FAX: (203) 831-8006

2168_240309ROW



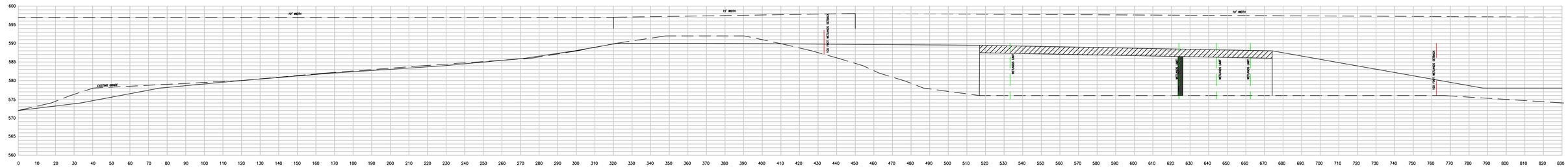
DRIVEWAY PROFILE

SCALE– H: 1"–25'
V: 1"–12.5'



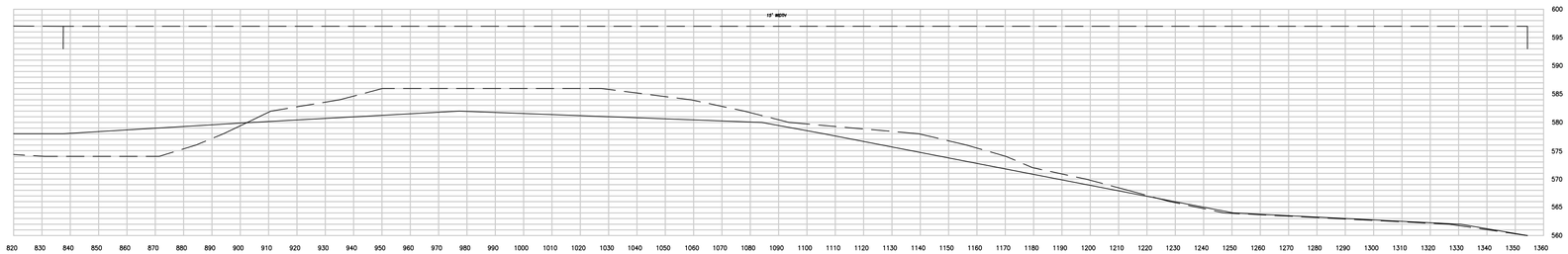
DRIVEWAY PROFILE

SCALE– H: 1"–25'
V: 1"–12.5'



DRIVEWAY PROFILE (ALTERNATE – BRIDGE)

SCALE– H: 1"–25'
V: 1"–12.5'



DRIVEWAY PROFILE (ALTERNATE – BRIDGE)

SCALE– H: 1"–25'
V: 1"–12.5'

STATE OF CONNECTICUT
CRAIG T. D'AURIA
No. 24877
LICENSED PROFESSIONAL ENGINEER

10–14–23
date

Fairfield County Engineering LLC

REV. 3/9/24: PER ENGINEERING COMMENTS.
REV. 2/28/24: PER ENGINEERING COMMENTS.
REV. 1/15/24: PER ENGINEERING COMMENTS.
REV. 1/8/24: 1' TOPOGRAPHY ADDED.
REV. 12/13/23: PER ENGINEERING COMMENTS.
REV. 11/10/23: PER ENGINEERING COMMENTS.

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

DETAIL SHEET

CIVIL ENGINEERS

2168
project

5 OF 7
sheet

FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831–8005 FAX: (203) 831–8006

2168_240309ROW

JAMES R. & CORINE J. LUCAS
2 INDIAN HILL ROAD
38-18

N/F
ROBERT E. & MICHELE N. TUPPER
154 MOUNTAIN ROAD
38-19

40 L.F. 24" CONCRETE GALLERIES
BOTTOM ELEV. GALLERIES 576.5
INV. 576.5

72 L.F. 24" CONCRETE GALLERIES
BOTTOM ELEV. GALLERIES 578.0
INV. 578.0

DEEP SUMP CB 2
GRATE 579.0
INV. 576.7

JUNCTION BOX 1
INV. IN/OUT 576.6

JUNCTION BOX 3
INV. IN/OUT 582.3

DEEP SUMP CB 6
GRATE 586.1
INV. 582.4

DEEP SUMP CB 4
GRATE 582.4
INV. 579.4

DEEP SUMP CB 1
GRATE 579.0
INV. 576.7

6" PVC INSPECTION PORT
CAPPED AT GRADE (TYP.)

JUNCTION BOX 2
INV. IN/OUT 579.3

DEEP SUMP CB 3
GRATE 582.4
INV. 579.4

DEEP SUMP CB 5
GRATE 585.7
INV. 582.4

STONE
PILLARS

13.63'
11.63'
15.77'
15.38'
10.24'

SIGHTLINE 266' ±

AY DRAIN 1
572.0
0.5

MOUNTAIN ROAD

OLD HIGHWAY

POROUS ASPHALT BEGINS AT 578.0
ELEVATION

WETLANDS
AREA
6,756 SF
0.15 AC
IN R.O.W.

WF 66
WF 63
WF 59
WF 55

4' WIDE BIO RETENTION SWALE

DOUBLE SILT FENCE AND HAYBALES

7' X 1.5' PRECAST BOX CULVERTS
(TYP.)

POSTS FOR GUIDERAIL PLACED TO
COINCIDE WITH BOX CULVERT UNITS

100' WETLANDS SETBACK

MATCH LINE

MATCH LINE

× = TREE TO BE REMOVED
(41 TREES)

EXISTING SPOT ELEVATIONS IN BLUE
PROPOSED ELEVATIONS IN GREEN

NOTE: SOME PROPOSED 1' CONTOURS
ARE OMITTED FOR CLARITY.

GRAPHIC SCALE
20 0 20 40
1 inch = 20 feet

SILT FENCING TO BE INSTALLED DURING CONSTRUCTION ALONG BOTH SIDES OF R.O.W. OMITTED IN SOME AREAS FOR CLARITY.

MUD ANTI TRACKING PAD TO BE INSTALLED AT ENTRY OF R.O.W. DURING CONSTRUCTION. OMITTED FOR CLARITY.

STORAGE COURSE OF POROUS ASPHALT BED TO BE MINIMUM 1.25 FEET THICK.

ALL PIPES ARE TO BE 6" PVC (S=0.01 MIN.) UNLESS OTHERWISE INDICATED.

NO ACTIVITY PROPOSED ON ADJOINING PROPERTIES; NO EASEMENTS REQUIRED.

NO CURBING ALONG POROUS ASPHALT IN WETLANDS SECTION OF DRIVEWAY.

DRIVEWAY MINIMUM 10' WIDE, WIDENING TO 15' IN AREAS AS SHOWN ON PLAN.

DRIVEWAY SECTION IN WETLANDS BASIN TO CONSIST OF POROUS ASPHALT.

ALL GALLERIES TO BE H-20 RATED.

4" PERFORATED DRAIN PVC TO BE PLACED AT BOTTOM OF AGGREGATE STORAGE BASE AT 10' INTERVALS OVER CULVERT AREA. EITHER END TO BE OPEN OVER SIDE OF CULVERTS.

ALL LEDGE AND
THE BOTTOM EL
CONCRETE GALL
BASE UNDER PO
REMOVED AS NE

BOX CULVERTS
LOADING. (72,00

PLAY AREA

MOUNTAIN ROAD

OLD HIGHWAY

JUNCTION BOX 1
INV. IN/OUT 576.6

DEEP SUMP CB 1
GRATE 579.0
INV. 576.7

6" PVC INSPECTION PORT
CAPPED AT GRADE (TYP.)

DRIVEWAY DRAIN 2
GRATE 572.0
INV. 570.5

DRIVEWAY DRAIN 1
GRATE 572.0
INV. 570.5

JUNCTION BOX 2
INV. IN/OUT 579.3

DEEP SUMP CB 3
GRATE 582.4
INV. 579.4

GRAPHIC SCALE
10 0 10 20
1 inch = 10 feet

REV. 3/9/24: PER ENGINEERING COMMENTS.
REV. 2/28/24: PER ENGINEERING COMMENTS.
REV. 1/15/24: PER ENGINEERING COMMENTS.
REV. 1/8/24: 1' TOPOGRAPHY ADDED.
REV. 12/13/23: PER ENGINEERING COMMENTS.
REV. 11/10/23: PER ENGINEERING COMMENTS.

STATE OF CONNECTICUT
CHRISTOPHER J. BAUER
No. 24877
LICENSED PROFESSIONAL ENGINEER

10-14-23
date

Fairfield County Engineering LLC

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

RIGHT OF WAY PLAN SOUTH

CIVIL ENGINEERS

2168
project

2 OF 7
sheet

FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831-8005 FAX: (203) 831-8006

2168_240309ROW

N/F
RICHARD B. & SALLIE JEAN MITCHELL
20 INDIAN HILL ROAD
38-16

N/F
PAUL & MICHELE O'GRADY
32 INDIAN HILL ROAD
39-58

N/F
STATE OF CONNECTICUT
MOUNTAIN ROAD
38-20

N/F
STATE OF CONNECTICUT
132 MOUNTAIN ROAD
25-3

EXPOSED ROCK

DEEP SUMP CB 8
GRATE 578.0
INV. 576.8

JUNCTION BOX 4
INV. IN/OUT 576.6

JUNCTION BOX 5
INV. IN/OUT 576.6

DEEP SUMP CB 10
GRATE 579.5
INV. 576.8

64 L.F. 12" CONCRETE GALLERIES
BOTTOM ELEV. GALLERIES 572.5
INV. 572.5

DEEP SUMP CB 12
GRATE 577.4
INV. 572.9

DEEP SUMP CB 14
GRATE 570.0
INV. 566.0

DEEP SUMP CB 16
GRATE 559.5
INV. 555.8

DEEP SUM
GRATE 557
INV. 555.9

JUNCTION BOX 8
INV. IN/OUT 555.6

MATCH LINE

POROUS ASPHALT ENDS AT DRAINS

RETENTION SWALE

AND HAYBALES

DEEP SUMP CB 9
GRATE 579.5
INV. 576.8

120 L.F. 12" CONCRETE GALLERIES
BOTTOM ELEV. GALLERIES 576.5
INV. 576.5

120 L.F. 12" CONCRETE GALLERIES
BOTTOM ELEV. GALLERIES 576.5
INV. 576.5

DEEP SUMP CB 11
GRATE 577.4
INV. 572.9

JUNCTION BOX 6
INV. IN/OUT 572.6

DEEP SUMP CB 13
GRATE 570.0
INV. 566.0

JUNCTION BOX 7
INV. IN/OUT 563.0

64 L.F. 24" CONCRETE GALLERIES
BOTTOM ELEV. GALLERIES 562.5
INV. 562.5

DEEP SUMP CB 15
GRATE 561.0
INV. 555.9

120 L.F. 24" CONCRETE GA
BOTTOM ELEV. GALLERIES 5
INV. 555.5

DEEP SUMP CB 7
GRATE 578.0
INV. 576.8

WF 52

100' WETLANDS SETBACK

EXISTING PERVIOUS SURFACE 71,642 SF
EXISTING IMPERVIOUS SURFACE CONNECTED TO WATERCOURSE 0 SF
EXISTING IMPERVIOUS SURFACE NOT CONNECTED TO WATERCOURSE 0 SF
PROPOSED PERVIOUS SURFACE 52,959 SF
PROPOSED IMPERVIOUS SURFACE CONNECTED TO WATERCOURSE 1789 SF
PROPOSED IMPERVIOUS SURFACE NOT CONNECTED TO WATERCOURSE 6415 SF

LEDGE AND ROCK WITHIN 2' OF
BOTTOM ELEVATION OF ANY
RETE GALLERY OR AGGREGATE
UNDER POROUS ASPHALT TO BE
VED AS NECESSARY.

CULVERTS DESIGNED FOR HL 93
NG. (72,000 POUND VEHICLE)

GRAPHIC SCALE
20 0 20 40
1 inch = 20 feet

MATCH LINE

DEEP SUMP CB 17
GRATE 557.0
INV. 555.9

DEEP SUMP CB 16
GRATE 559.5
INV. 555.8

JUNCTION BOX 8
INV. IN/OUT 555.6

64 L.F. 24" CONCRETE GALLERIES
BOTTOM ELEV. GALLERIES 562.5
INV. 562.5

DEEP SUMP CB 15
GRATE 561.0
INV. 555.9

120 L.F. 24" CONCRETE GALLERIES
BOTTOM ELEV. GALLERIES 555.5
INV. 555.5

JUNCTION BOX 9
INV. IN/OUT 555.6

MATCH LINE

REV. 3/9/24: PER ENGINEERING COMMENTS.
REV. 2/28/24: PER ENGINEERING COMMENTS.
REV. 1/15/24: PER ENGINEERING COMMENTS.
REV. 1/8/24: 1' TOPOGRAPHY ADDED.
REV. 12/13/23: PER ENGINEERING COMMENTS.
REV. 11/10/23: PER ENGINEERING COMMENTS.

STATE OF CONNECTICUT
MICHAEL J. D'AURIA
No. 24877
LICENSED PROFESSIONAL ENGINEER

10-14-23
date

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

RIGHT OF WAY PLAN NORTH

CIVIL ENGINEERS

2168
project

3 OF 7
sheet

FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831-8005 FAX: (203) 831-8006

2168_240309ROW

CONSTRUCTION SEQUENCE

INSTALL SILT FENCING AND HAYBALES AS SHOWN ON PLAN. SECURE CROSSING WITH PLYWOOD. FILL AND STONE WILL BE BROUGHT TO THE NORTH END OF THE CROSSING. TWO EXCAVATORS WILL BE BROUGHT TO THE NORTH END. ONE WILL POSITION THE CULVERTS AS SHOWN ON THE PLAN AS IT RETURNS TO THE SOUTH END. THE EXCAVATOR ON THE NORTH WILL FILL BETWEEN CULVERTS, WORKING TO THE SOUTH, AS THE SOUTH MACHINE DOES THE SAME WORKING TO THE NORTH. THE POSTS FOR THE GUIDE RAILS WILL BE INSTALLED TO COINCIDE WITH THE SOLID PORTION OF EACH CULVERT. THE PROCESS BASE FOR THE POROUS DRIVEWAY WILL BE PLACED ACROSS THE AREA. THE POROUS PAVEMENT WILL BE PLACED.

ANY NECESSARY ROCK REMOVAL SHALL BE BY MEANS OF CHIPPING. REMOVED MATERIAL SHALL BE REMOVED FROM SITE IMMEDIATELY AND NOT STOCKPILED. HOURS OF OPERATION SHALL BE LIMITED TO 8 AM TO 6 PM, MONDAYS THROUGH FRIDAY, SUBJECT TO ANY FURTHER REGULATION FROM THE TOWN OF WILTON.

PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, A CERTIFIED AS-BUILT DRAWING AND CERTIFIED LETTER SIGNED BY A PROFESSIONAL ENGINEER INDICATING THAT ALL WORK WAS COMPLETED IN ACCORDANCE WITH THE DESIGN PLANS SHALL BE SUBMITTED TO THE TOWN OF WILTON.

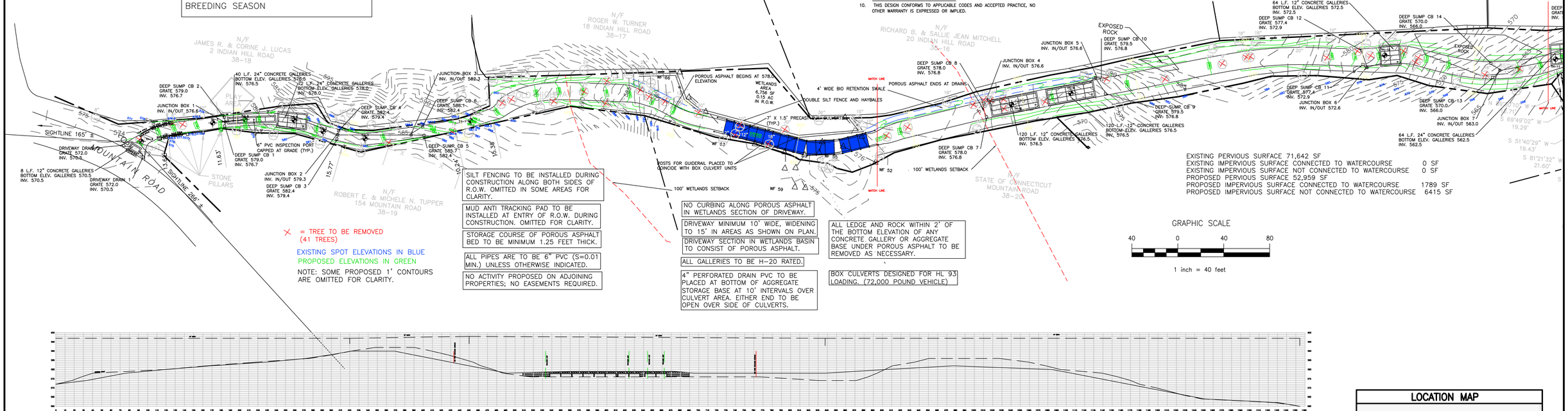
CROSSING TO BE CONSTRUCTED DURING DRY SEASON (AUGUST-SEPTEMBER) AND OUTSIDE OF THE AMPHIBIAN BREEDING SEASON

GENERAL CONSTRUCTION NOTES:

1. CONSTRUCTION AND STRUCTURES SHALL COMPLY WITH ALL MUNICIPAL OR STATE REQUIREMENTS. ALL WORK SHALL BE CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER, TO THE SATISFACTION OF THE ENGINEERING BUREAU, THAT CONSTRUCTION IS IN ACCORDANCE WITH THESE PLANS.
2. THE ENGINEERING BUREAU OF THE DEPARTMENT OF PUBLIC WORKS AND THE ENGINEER OF RECORD SHALL BE NOTIFIED THREE DAYS PRIOR TO THE COMMENCEMENT OF EACH PHASE OF CONSTRUCTION.
3. NO CERTIFICATE OF CONFORMANCE TO STANDARDS SHALL BE ISSUED BY THE DESIGN ENGINEER IF PROPER NOTICE IS NOT PROVIDED FOR INSPECTIONS OR IF INSPECTIONS ARE NOT MADE PRIOR TO BACKFILLING OF BELOW GROUND STRUCTURES AND APPURTENANCES.
4. SUBSURFACE STRUCTURES AND UTILITIES HAVE BEEN DETERMINED FROM EXISTING RECORDS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. IN ORDER TO AVOID CONFLICT OF THE PROPOSED WORK AND EXISTING UTILITIES, THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES BY EXCAVATING TEST HOLES. IF THE CONTRACTOR DETERMINES THAT A CONFLICT EXISTS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER, WHO WILL MAKE THE NECESSARY ADJUSTMENTS.
5. EXISTING PROPERTY AND UTILITY INFORMATION WAS TAKEN FROM A SURVEY BY ALL SEASONS LAND SURVEYING TITLED "TOPOGRAPHIC SURVEY PREPARED FOR OLD DRIFTWAY LLC", DATED MARCH 30, 2023.
6. THESE PLANS ARE FOR MUNICIPAL OR STATE AGENCY APPROVAL ONLY. NOT FOR CONSTRUCTION.
7. NO PIPE SHALL HAVE A BEND OF GREATER THAN 45 DEGREES.
8. THE CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922-4455, OR OTHER APPROPRIATE CONTACT POINT PRIOR TO START OF CONSTRUCTION.
9. ALL UTILITY LOCATIONS ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE LOCATION OF THE UTILITIES IN THE FIELD BY WHATEVER MEANS HE DEEMS PRUDENT.
10. THIS DESIGN CONFORMS TO APPLICABLE CODES AND ACCEPTED PRACTICE, NO OTHER WARRANTY IS EXPRESSED OR IMPLIED.

SEDIMENTATION AND EROSION CONTROL NOTES

1. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM. PERMANENT STABILIZATION SHALL BE SCHEDULED AS SOON AS FINAL GRADES ARE ESTABLISHED.
2. ALL DISTURBED AREAS SHALL BE FINE GRADED AND SEEDED WITH AN APPROVED SEED MIXTURE. COVER NEWLY SEEDED AREAS WITH MULCH HAY OR SALT HAY.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE 2002 CONNECTICUT "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" HANDBOOK.
4. ALL CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. CHECK AFTER EACH STORM EVENT.
5. ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD, IF REQUIRED BY TOWN AUTHORITIES.
6. SEDIMENT DEPOSITS REMOVED FROM FILTER BARRIERS SHALL BE PLACED IN FILL AREAS OR SPREAD WHERE THERE IS PROPOSED VEGETATIVE COVER. ANY SEDIMENT DEPOSITS REMAINING AFTER THE FILTER BARRIER IS REMOVED SHALL BE FINE GRADED AND PLANTED ACCORDING TO PLAN.
7. THE SITE CONSTRUCTION CONTRACTOR IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFYING THE PLANNING AND ZONING OFFICE (AND/OR THE CONSERVATION COMMISSION) OF ANY TRANSFER OF THIS RESPONSIBILITY AND CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED TO A NEW OWNER.



= TREE TO BE REMOVED (41 TREES)

EXISTING SPOT ELEVATIONS IN BLUE
PROPOSED ELEVATIONS IN GREEN

NOTE: SOME PROPOSED 1' CONTOURS ARE OMITTED FOR CLARITY.

SILT FENCING TO BE INSTALLED DURING CONSTRUCTION ALONG BOTH SIDES OF R.O.W. OMITTED IN SOME AREAS FOR CLARITY.

MUD ANTI TRACKING PAD TO BE INSTALLED AT ENTRY OF R.O.W. DURING CONSTRUCTION. OMITTED FOR CLARITY.

STORAGE COURSE OF POROUS ASPHALT BED TO BE MINIMUM 1.25 FEET THICK.

ALL PIPES ARE TO BE 6" PVC (S=0.01 MIN.) UNLESS OTHERWISE INDICATED.

NO ACTIVITY PROPOSED ON ADJOINING PROPERTIES; NO EASEMENTS REQUIRED.

NO CURBING ALONG POROUS ASPHALT IN WETLANDS SECTION OF DRIVEWAY.

DRIVEWAY MINIMUM 10' WIDE, WIDENING TO 15' IN AREAS AS SHOWN ON PLAN.

DRIVEWAY SECTION IN WETLANDS BASIN TO CONSIST OF POROUS ASPHALT.

ALL GALLERIES TO BE H-20 RATED.

4" PERFORATED DRAIN PVC TO BE PLACED AT BOTTOM OF AGGREGATE STORAGE BASE AT 10' INTERVALS OVER CULVERT AREA. EITHER END TO BE OPEN OVER SIDE OF CULVERTS.

ALL LEDGE AND ROCK WITHIN 2' OF THE BOTTOM ELEVATION OF ANY CONCRETE GALLERY OR AGGREGATE BASE UNDER POROUS ASPHALT TO BE REMOVED AS NECESSARY.

BOX CULVERTS DESIGNED FOR HL 93 LOADING. (72,000 POUND VEHICLE)

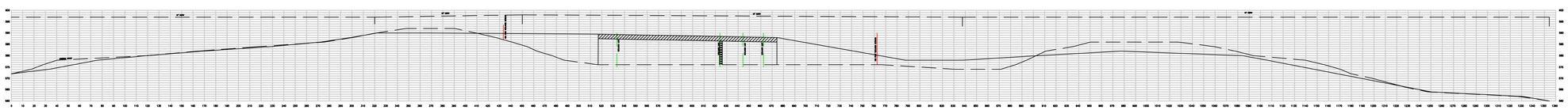
EXISTING PERVIOUS SURFACE 71,642 SF
EXISTING IMPERVIOUS SURFACE CONNECTED TO WATERCOURSE 0 SF
EXISTING IMPERVIOUS SURFACE NOT CONNECTED TO WATERCOURSE 0 SF
PROPOSED PERVIOUS SURFACE 52,959 SF
PROPOSED IMPERVIOUS SURFACE CONNECTED TO WATERCOURSE 1789 SF
PROPOSED IMPERVIOUS SURFACE NOT CONNECTED TO WATERCOURSE 6415 SF

GRAPHIC SCALE

40 0 40 80

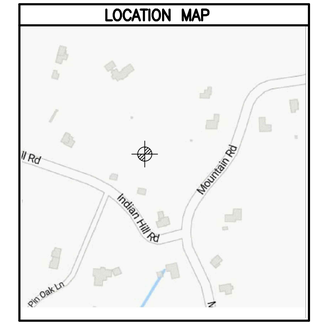
1 inch = 40 feet

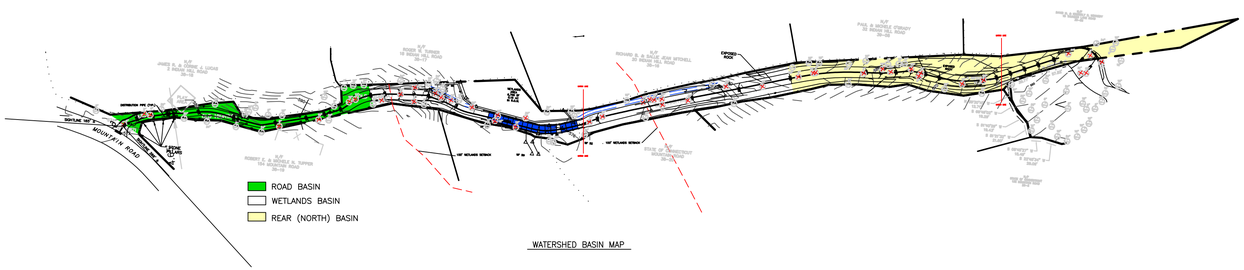
DRIVEWAY PROFILE
SCALE- H: 1"=50'
V: 1"=25'



DRIVEWAY PROFILE (ALTERNATE - BRIDGE)
SCALE- H: 1"=50'
V: 1"=25'

LOCATION MAP





WATERSHED BASIN MAP

STATE OF CONNECTICUT
WAYNE J. D'ANDREA
No. 24877
LICENSED PROFESSIONAL ENGINEER

10-14-23
date

Fairfield County Engineering LLC

REV. 3/9/24: PER ENGINEERING COMMENTS.
REV. 3/8/24: PER ENGINEERING COMMENTS.
REV. 2/28/24: PER ENGINEERING COMMENTS.
REV. 1/15/24: PER ENGINEERING COMMENTS.
REV. 1/8/24: 1' TOPOGRAPHY ADDED.
REV. 12/13/23: PER ENGINEERING COMMENTS.
REV. 11/10/23: PER ENGINEERING COMMENTS.

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

RIGHT OF WAY PLAN

CIVIL ENGINEERS

2168 project

1 OF 7 sheet

FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831-8005 FAX: (203) 831-8006

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