January 10, 2024

Mike Conklin
Inlands Wetlands Commission
Town Hall Annex
238 Danbury Road
Wilton, CT 06897

RE: Inland Wetlands Commission Application
Project Site: 131 Danbury Road
Contract Purchaser: 131 Danbury Wilton Dev AMS LLC
(an affiliate of AMS Acquisitions, LLC)

Dear Mr. Conklin,

On behalf of our client, 131 Danbury Wilton Dev AMS LLC (an affiliate of AMS Acquisitions, LLC) (the "Applicant"), the contract purchaser and potential developer of 131 Danbury Road, we are submitting revised materials in response to comments received from Roy Seelye of Cardinal Engineer Associates in a letter dated December 14, 2023 and Stephen Santacroce from the Department of Public Works in a letter dated November 21, 2023. Included herewith for your consideration are 11 copies of the following documents:

1. Cardinal Engineering Response Letter, prepared by SLR International, dated January 9, 2024

2. Stephen Santacroce (DPW) Response Letter, prepared by SLR International, dated January 9, 2024

3. Site Engineering Plans prepared by SLR, dated October 23, 2023 and revised through January 9, 2024, including sheets:
    a. Title Sheet
    b. NL – Notes and Legend
    c. EX – Existing Conditions
    d. SP – Site Vicinity Plan
    e. LA – Site Plan – Layout
    f. LS – Site Plan – Landscaping
    g. GR – Site Plan – Grading
    h. UT – Site Plan – Utilities
    i. SE-1 – Sediment and Erosion Control Plans
    j. SE-2 – Sediment and Erosion Control Specifications and Details
    k. SD-1 – Site Details

l. SD-2 – Site Details
m. SD-3 – Site Details
n. SD-4 – Site Details
o. SD-5 – Site Details
p. SE-6 – Site Details
q. SD-7 – Site Details
r. ABG – Combined Average Building Grade
s. FP – Floodplain Earthwork
t. EW – Proposed Site Earthwork
u. VH-1 – Vehicle Turning Movement – Fire Truck
v. VH-2 – Vehicle Turning Movement – SU-30 and 15' Box Truck
w. SL-1B – Site Lighting Photometric Calculation (By Apex Lighting Solutions)

4. Drainage Report, prepared by SLR, dated October 23, 2023 and revised through January 9, 2024

5. Engineering Report – Floodplain Analysis, prepared by SLR, dated November 27, 2023

6. Wetland and Watercourse Delineation and Impact Assessment, prepared by SLR, dated October 23, 2023 and revised January 5, 2024

7. Preliminary Geotechnical Engineering Report, prepared by SLR, dated January 5, 2024

8. Zone Change Map, prepared by SLR, dated November 27, 2023 with the corresponding list of adjacent property owners.

The Applicant looks forward to presenting the proposal to the Commission at its meeting on January 25, 2024.

Sincerely,

Craig J. Flaherty, P.E.

REDNISS & MEAD

SLR International Corporation
99 Realty Drive, Cheshire, Connecticut, 06410

January 9, 2024

Michael Conklin
Director of Environmental Affairs
Town of Wilton
238 Danbury Road
Wilton, CT 06897

SLR Project No.: 21543.00001

RE: Wilton Inland Wetlands and Watercourses Agency Review
Application for a Significant Regulated Activity
Application #2904(S) ASML Acquisitions, LLC
131 Danbury Road, Wilton, Connecticut

Dear Mr. Conklin,

SLR International Corporation (SLR) is in receipt of a letter addressed to you from Roy Seelye, PE, Senior Project Manager and Darin Lemire, PE, CPESC, CPSWQ, Senior Hydraulic Engineer of Cardinal Engineering Associates dated December 14, 2023, in regard to the above-referenced project. We offer the following responses to the comments contained therein:

Town of Wilton Inland Wetlands Commission Application

C. APP-1: A description of chemical and physical characteristics of the fill materials to be placed in the Regulated Area was not observed.

R. APP-1: Any fill material needed in the regulated areas will be clean, native topsoil and granular materials. Note #17 has been added to the Title sheet.

Engineering Reports

Drainage Report – Proposed Multifamily Development (prepared by SLR International Corporation, dated 10/23/23)

C. RPT-1: As requested by the Town Engineering Department, additional information is needed on the development in the floodplain. The information should include calculations and a discussion to show there is no net fill within the floodplain of the Norwalk River.

R. RPT-1: Additional information on the floodplain and earthwork has been added to the set. The project does not result in an increase in fill in the floodplain.

C. RPT-2: Wilton Zoning regulations require certification by PE that encroachments in the floodway do not result in any increase in base flood elevations (0.00 ft.) for the

100-year flood. Certification by a professional engineer with supporting hydrologic and hydraulic info (e.g. Hecras modeling) is needed.

R. RPT-2: See Engineering Report – Floodplain Analysis prepared by SLR International Corporation dated November 27, 2023.

C. RPT-3: Related to hydraulic documentation, the tailwater elevation used (138.8 feet) for the 18-inch HDPE pipe discharging to the Norwalk River should be based on the hydraulic modeling for Norwalk River and a joint probability analysis.

R. RPT-3: As a conservative approach, the pipe calculations were completed using the tailwater elevation at the crown of the discharge pipe, the most restrictive condition to the flow of the discharge pipe.

C. RPT-4: Provide supporting information (percolation tests, infiltration tests, test pit data, etc.) for the infiltration rates selected (2 inches per hour) and typical groundwater elevations at the site.

R. RPT-4: Borings were performed on site on December 13, 2023, which show typical groundwater elevations of approximately 137 to 139 on the site. Boring logs and permeability tests have been added to the Drainage Report. Infiltration systems have been shifted to avoid the groundwater, and site specific permeability rates have been used to size the systems.

C. RPT-5: On page 4, a description of the soil types described hydrologic soil types B/D, C, and D at the site, but the calculations show mainly HSG D. The site is mapped by NRCS as mainly urban land.

R. RPT-5: A majority of the project is located in the area mapped by NRCS as "Urban Land," Map Unit Symbol 307, with a rating of HSG D.

C. RPT-6: Catch basins with 2-foot sumps are not classified by the CT Stormwater Manual as a stormwater BMP. The manual recommends 4-foot sumps with a hood. CCB-7, CCB-10, and CCB-26 appear to be good candidates for 4-foot sumps.

R. RPT-6: Comment noted. The sumps on these basins have been increased to 4 ft.

C. RPT-7: As related to Stormwater Best Practices, the proposed project includes significant areas of new roof and pavement which often can result in stormwater runoff that is at higher temperatures than runoff from landscaped areas. Pretreatment with respect to potential thermal pollution should be described more specifically in the report to show that it is addressed.

R. RPT-7: The overall project results in a reduction of impervious areas over existing conditions. The proposed subsurface systems will promote infiltration and extend the discharge time allowing for the water to cool off before draining to the Norwalk River. Furthermore, the use of permeable pavers in parking and plaza areas will provide additional thermal reduction. This is a significant improvement over existing conditions where all the pavement

sheet flows directly to the Norwalk River. A discussion of this has been added to the Drainage Report.

C. RPT-8: The 100-year runoff for PR-16: East Rooftop is shown on Hydrocad printout as being routed to the front lawn rain garden, but the proposed conditions drainage area map lists “Roof to CLCB 21”. Confirm where the East Rooftop drains.

R. RPT-8: PR-16: East Rooftop drains to the front lawn rain garden. The *HydroCAD®* model and plans have been revised to reflect this.

C. RPT-9: The 100-year peak flow runoff for PR-11: Building Roof is shown as 15.7 cfs with a volume of approximately 50,000 cf, but after routing through reach R1: Roof Leader (8 inch round pipe) the outflow is only 1.4 cfs. The underground detention system S-2 only provides 5,500 cubic feet of storage so there doesn’t appear to be sufficient storage to warrant such a large decrease in the peak flow in this area.

R. RPT-9: System S-2 has been sized to provide sufficient storage for the design 25-year storm event. Storage for the 100-year storm is not a requirement. For larger storms, it is expected that water from the roof will discharge through overflow scuppers and be collected by the onsite inlet structures.

C. RPT-10: The storm sewer report from Bldg to MH 13 shows only 0.77 cfs conveyed of the 4.6 cfs capacity. This seems very small based on size of building.

R. RPT-10: Pipe calculations have been updated.

C. RPT-11: The plan for the storm sewer report from CCB30 and CCB14 to the outfall (System 3) is hard to read due to the overlapping text.

R. RPT-11: Text for System 3 has been adjusted.

C. RPT-12: System 3 storm sewer tabulation in the stormsewer report shows several pipes where the total flow is very small in relation to their capacity. Could smaller pipe be used? (Line 6: Total Flow=0.3 cfs, capacity = 3.5 cfs, Line 7: Total Flow = 0.2 cfs, capacity = 2.9 cfs, Line10: Total Flow=0.8 cfs, capacity =15 cfs, Line 15: Total Flow= 1.1 cfs, capacity =12 cfs)

R. RPT-12: A minimum 12” pipe is proposed within the drive aisles and parking as is our standard practice.

C. RPT-13: The CDS unit is shown with four pipe inlets which may not be possible since the unit is one of the smaller CDS units (5-foot diameter). A site specific detail showing the inlet configuration and the treatment efficiency sheet should be provided.

R. RPT-13: The CDS unit and associated pipes have been revised. The CDS unit now has two inlet pipes and one outlet pipe.

C. RPT-14: The plan in the stormsewer report for Outlet System 1, 2, and 3 also is hard to read. Lines 7 and 9 do not show a capacity.

R. RPT-14: Storm sewer report has been updated.

C. RPT. 15: The 2004 Connecticut Stormwater Management Manual was revised in September 2023 and the Manual will be effective March 30, 2024 so it may be beneficial to incorporate the changes from the Manual (or at least the significant ones such as WQV calculated on the first 1.3 inches of rainfall) into this project if they could be reasonably accommodated.

R. RPT. 15: This project is classified as a redevelopment project as it has greater than 40% directly connected impervious area, so only 50% of the calculated water quality volume is required per Connecticut Department of Energy & Environmental Protection (CTDEEP). The current design retains the first 1 inch, so it already exceeds the new WQV requirements.

Wetland and Watercourse Delineation and Impact Assessment (prepared by SLR International Corporation, dated 10/23/23

C. WWI-1: It appears that the narrative does not conform with the current design. The report should be updated to reflect the actual design included in the application.

R. WWI-1: Comment noted. See revised wetlands report.

C. WWI-2: FEMA Mapping, Pg. 6-FEMA 100-year flood elevations on the site are slightly higher than noted, ranging from 146.3 feet to 146.6 feet.

R. WWI-2: Comment noted.

C. WWI-3: 6.0 Proposed Project, Pg. 10, Par. 1 – It is stated that there are 318 proposed parking spaces. This may require a Major Traffic Generator application to the Office of the State Traffic Administration (OSTA). Applicant should confirm the total number of spaces. A Traffic Study may be required if the total number of spaces exceeds 200.

R. WWI-3: Comment noted. An OSTA application has already been submitted.

C. WWI-4: 6.0 Proposed Project, Pg. 10, Par. 3 – Note that portions of the building (garage floor slab) is included in the URA.

R. WWI-4: Comment noted. See revised wetlands report.

C. WWI-5: 6.0 Proposed Project, Pg. 10, Par. 5 - "No significant direct impacts to the wetlands area are proposed. " Note that work includes the removal of the "concrete flume" and the installation of the storm drainage outfall, including installation of the riprap splash pad immediately adjacent to the wetlands / Norwalk River. This will require excavation and installation of riprap directly within the wetlands and within the limits of the Ordinary High Water.

R. WWI-5: Comment noted. See revised wetlands report.

C. WWI-6: 6.1 Sediment and Erosion Control Measures, Pg. 11, Par. 2 – Revise description of site access during construction. Two points of access are shown on the plans.

R. WWI-6: Comment noted. See revised wetlands report.

C. WWI-7: 6.1 Sediment and Erosion Control Measures, Pg. 11, Par. 2 – Sediment trap Riprap overflow discharges are not shown on the plans.

R. WWI-7: An arrow has been added to Sheet SE-1 to show the overflow direction of the sediment traps.

Engineering Plans

C. We recommend including a site demolition plan or site preparation plan that outlines material to be removed (including pavement and concrete) and what materials are to remain. This plan should address any removal/capping/abandonment of existing site utilities including drainage. The site demolition plan should call out the trees to be removed also.

R. Almost everything on the site is to be removed. A site demolition plan or site preparation plan will be prepared as part of the detailed building permit submission. All trees within the project disturbance area will be removed except those along the river, which have been called out to remain on Sheet LA.

<u>ALTA/NSPS Survey</u>

C. The survey prepared by BLEW & Associates shows underground electrical, a water line, and overhead electrical on the north side of the building that appear to conflict with the new building. There is an outside aboveground storage tank (AST) on the south side that appears to be using fuel oil that is not addressed in the plans. On the north side of the site, there appears to be a well with a concrete slab cover which should be investigated. Abandonment of the well according to the CT State Regulations may be necessary.

R. All conflicting existing items will be removed to construct the project. These elements will be delineated on the detailed plans for the building permit.

Sheet 1 Title Sheet

C. T-1: Project Vicinity Site Map: Note area of the Norwalk River Floodway. See Sheet 3 Comment EX-1 below regarding limits of 100-year flood.

R. T-1: Area of the Norwalk River Floodway has been noted on the revised plans.

C. T-2: Note 10. The CTDOT Standard Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 818 (2002) is scheduled to be replaced with Form 819 on January 2024. All work shall conform to the revised edition.

R. T-2: Note 10 has been revised.

C. T-3: Note 12. All Materials shall be stored above the flood limits of the Norwalk River.

R. T-3: Note 12 has been revised.

C. T-4: Add note that the site shall remain clean of trash and debris at all times. Adequate trash storage facilities (dumpsters, trash cans, etc.) shall be provided and emptied on a routine basis and as needed. Trash shall not be stored within the limits of the 100-year flood.

R. T-4: Note 15 has been added to the Title Sheet.

C. T-5: Add note stating that a CTDOT Encroachment Permit is required for all work within the Route 7 ROW.

R. T-5: Note 16 has been added to the Title Sheet.

Sheet 2 Notes and Legend

C. NL-1: Legend – Show all existing and proposed site features including bollards, bollard lights, FEMA lines, etc. Review survey and legend to verify symbols are correct. For instance, the existing stone walls along the street line and the southern property line do not match the wall as shown on the legend.

R. NL-1: The legend has been updated.

C. NL-2: Stormwater Maintenance Program – Note A; 1st Par. Four-foot sumps are called out in the note. Catch Basin Detail on Sheet SD-4 calls out a two-foot sump. Revise detail.

R. NL-2: Detail has been revised.

C. NL-3: Stormwater Maintenance Program – Note A; 2nd Par. Last sentence beginning with “Pavement sweeping” is not complete. Appears to be part of 3rd Paragraph.

R. NL-3: The sentence "Pavement Sweeping" is a sub-header for the following paragraph that discusses when the parking area and roadways shall be swept.

C. NL-4: Stormwater Maintenance Program – The hydrodynamic separator is not located prior to the underground galleries.

R. NL-4: The stormwater maintenance program has been revised.

C. NL-5: Construction Sequence- The application package contained a sequence of or staging plan prepared by AMS Construction Management LLC for the site. The construction duration was listed as 30 months. This sequence and information should be coordinated with the sequence provided on the Notes and Legend plan. Expected temporary parking and construction office locations should be designated.

R. NL-5: The plans have been revised to reference the AMS construction narrative. The construction management plan will be expanded with the building permit submission.

C. NL-6: Construction Sequence- The sequencing should include removal of the existing building and associated utility removals/disconnects prior to filling. Utility pole(s) along the roadway may need relocation. Mention of town staff should include Town Director of Environmental Affairs.

R. NL-6: The submitted construction management plan will be expanded for the building permit submission and with input from the construction manager.

C. NL-7: Construction Sequence – See erosion control note SE-1-11 about leaving pavement buffer along river as long as possible for stabilization.

R. NL-7: Reference has been made to the AMS construction narrative.

Sheet 3 Existing Conditions

C. EX-1: Limits of the 100-year flood. Per FEMA mapping (FIRM 2010) and the Flood Insurance Study (2013), the stie falls between cross section N (Elev. 141.2) and cross section O (Elev. 153.1). The limit of the 100-year flood (Zone AE) at the site is at approximate elevation 146.3 at the south end of the property and ±146.6 at the northern side. Revised the plans accordingly. Revise earthwork calculations for cuts and fills within the area of the 100-year flood and impacts on flood storage capacity of the site.

R. EX-1: As per FEMA requirements, the 100-year flood line is to be shown as graphically represented on the FEMA maps and not by interpolating

elevations. Earthwork calculations were conducted based on a floodplain elevation of ±146.5 as the most conservative approach.

C. EX-2: Existing rock wall along the southern property line varies in size/width and is not straight. Who owns the wall?

R. EX-2: Ownership of the wall is unclear. No disturbance is proposed to the wall. A callout has been added to Sheet LA.

Sheet 4 Site Vicinity Plan

C. SP-1: Addresses of adjacent properties would be helpful. It might be a plan that could be helpful in discussions with CT DOT.

R. SP-1: The project's zoning application includes a list of adjacent property owners. This information can be provided if requested by CTDOT.

Sheet 5 Site Plan-Layout

C. LA-1: On the north side of the site, the plan calls out the existing evergreen screening to remain, but seems unlikely that it could withstand the significant earthwork planned along this strip including installation of a retaining wall. Also, the landscape plan appears to show plantings here (27 Douglas Firs).

R. LA-1: Proposed evergreen screening on the plans has been removed . Proposed grades will match existing at the property line to preserve existing evergreens on the adjacent property.

C. LA-2: The proposed driveway on the north side of the site is a new connection to State Route 7. Per Town of Wilton Engineering, a traffic report or summary along with CT DOT review is necessary. Driveway profiles may be required for both locations.

R. LA-2: A Traffic Study has been included with the Planning and Zoning submission.

C. LA-3: The plan should include a zoning table indicating lot dimensions, coverage, building height, and parking numbers.

R. LA-3: Zoning data has been added to the Title sheet.

C. LA-4: ADA parking spots should be dimensioned.

R. LA-4: ADA parking spots have been dimensioned.

C. LA-5: Since all of the accessible parking is shown at the northeast entrance at the only site entrance, additional safety measures may be warranted for safety for pedestrians. Consider additional measures such as a speed hump, elevated crosswalk, speed table, and an ADA ramp on the sidewalk across from the parking towards front of the building. Review accessible route from the accessible parking area to the building entrance.

R. LA-5: The sidewalk along the east side of the front drop-off area has been extended and a drop ramp with detectable warning strip has been added to accommodate ADA access.

C. LA-6: Some dimensioning of the parking spots (standard and accessible) should be included for the spaces in the building footprint. Is 9 ft. wide spaces between elevator/stairwells and columns adequate for opening of car doors, etc.?

R. LA-6: Parking stall dimensions have been added to plan within the building footprint. A 9' wide parking stall is adequate space to open a car door.

C. LA-7: It should be checked that the building columns in the on-grade parking area don't interfere with area and access to accessible spaces. The typical building column should be called on the plans.

R. LA-7: The parking under the building was laid out by the architect and coordinated with the column layout. The typical building column has been called out on the plans.

C. LA-8: The symbol B in the sign legend appears to be outdated.

R. LA-8: Comment noted. Sign legend has been updated.

C. LA-9: Direction/orientation of one-way sign at entrance should be noted.

R. LA-9: Direction of sign has been added to the legend.

C. LA-10: Provide "Van" sign at all Van accessible parking stalls. Include in a table.

R. LA-10: Van signs have been provided in the sign legend.

C. LA-11: Site lighting does not appear to be adequate (Insufficient pole mounted lights or wall mounted lighting). A photometric plan should be prepared clearly showing all fixtures and illuminance with closeness of the property lines and river area taken into consideration.

R. LA-11: Photometric plan is included in the set.

C. LA-12: Driveway alignment plan may be required to show access to back of building by fire department trucks. The curves on the northwest and northeast corner appear to be restrictive.

R. LA-12: See Sheet VH-1 for fire truck turning movements. Additionally a fire consultant has been retained to coordinate with the Wilton Fire Department.

C. LA-13: All of the proposed walls should be indicated on the site plan. It appears that only wall #2 is being called out (36 inch high field stone wall). The eastern end of this wall may need to be relocated due to the installation of the water meter pit or the pit may need to be relocated.

R. LA-13: All proposed walls have been indicated on the site plan. The water meter pit has been relocated away from the eastern end of wall #2.

C. LA-14: The site exit should be labeled.

R. LA-14: One-way exit has been labeled.

C. LA-15: Locations for the storage of snow should be evaluated since the site is situated so close to the property lines and snow melt may impact the wetlands and river.

R. LA-15: A snow removal plan will be developed by the applicant. The expectation is that small storm events will have snow plowed to the curb line and larger storms will require trucking offsite. The site design benefits from the majority of the parking under cover.

C. LA-16: There are 9 dark circles (along the curb line in the front of the building) which appear to be bollards and should be called out on the plan.

R. LA-16: The protective bollards have been called out in the plan.

C. LA-17: Provide 4 feet between crosswalks and stop bars.

R. LA-17: Four feet of spacing has been provided between crosswalks and stop bars.

C. LA-18: Provide stop sign on north side of the exit driveway.

R. LA-18: A stop sign on the north side of the exit has been added.

C. LA-19: Area on the south side of the building, just east of garage entrance-is this double stack of parking stalls? How is back row of parking to be accessed?

R. LA-19: The tandem spaces are intended for tenant use only. The double stack of parking stalls are not counted in the zoning parking count.

C. LA-20: Indicate location and swing for doors at stairwells within the building/garage. Where do elevator doors open? Is there a location of safe entering and waiting for elevators? Appears doors to stairs and elevator open to either parking spaces or travel aisles. Note on drawing the location of the elevators.

R. LA-20: Doors to elevators and stairwells have been added to the plan.

C. LA-21: How is access to elevators from handicap spaces provided without having to travel between cars? Provide accessible route.

R. LA-21: Accessible parking spaces have been shifted to provide safe access directly to the elevator doors to limit the path of travel within the drive lane.

C. LA-22: Two move-in truck spaces (9'x24') too small for WB-30, WB-40, etc. Labeled at 15; long. Is this intended for vans and pick-up trucks only?

R. LA-22: No large moving trucks are expected for the apartments. The intended use is for vans and pickup trucks.

C. LA-23: Appears inadequate space available at the southern of 2 truck spaces for turning in and out of space.

R. LA-23: Turning movements for truck spaces have been provided on Sheet VH-2.

C. LA-24: What is the material between permeable pavers west of the garage and garage slab?

R. LA-24: A flush concrete curb edger has been added between the permeable pavers and garage slab.

C. LA-25: Appears curb is to be installed between grass pavers and paved parking/drive on west end of property. Is this flush curb? Mountable curb?

R. LA-25: The curb installed between the grass pavers and paved parking/drive on the west end of the property is a flush curb. Callouts were added to the plan.

C. LA-26: One bollard light and one tree uplight are shown and noted along stone dust path and middle concrete fire truck outrigger pad. Show all. Provide separate symbols for each.

R. LA-26: Separate symbols have been provided for both bollard lights and tree uplights.

C. LA-27: How is grass paver drive on west side of site to be maintained in winter? Plowed?

R. LA-27: In the winter, the grass paver drive on the west side of the site should be maintained by a plow where the plow is slightly raised up. Any disturbed areas would be seeded in the spring.

C. LA-28: Have location and size of concrete fire truck outrigger locations been approved by the fire marshal?

R. LA-28: A Fire Consultant has been retained and a plan review with the Wilton Fire Department is scheduled.

C. LA 29: Provide parking table with total number of spaces, standard spaces, handicap accessible spaces and van spaces.

R. LA-29: Parking data has been added to the Title sheet.

C. LA-30: Note location of all signs, including signage. It appears there may be signs on Walls 2 & 3.

R. LA-30: All signs on the walls are conceptual. Final submission of the signs will be submitted separately.

C. LA-31: How is snow to be removed from permeable parking spaces on west side of garage? Will snow removal interfere with cobble filter strip? Are spaces to be receive sand and/or salt?

R. LA-31: Snow on the permeable parking spaces on the west side of the garage will be removed by plow or snow blower. Snow removal should not interfere with cobble filter strip. It is not expected that this area will need to be sanded or salted.

C. LA-32: Stormwater infiltration areas at northwest and southwest corner of site should be delineated.

R. LA-32: Stormwater infiltration areas are shown in dashed lines and called out on plans.

C. LA-33: Is existing stone wall along street line to be removed. Note on plans.

R. LA-33: The existing stone wall along the street line is to be removed. Callout has been added to the Existing Conditions plan.

C. LA-34: Parking space on south edge of garage, between the two entrances, extends beyond the building. Is this intended? What is the pavement material?

R. LA-34: The parking space on the south edge of the garage, between the two entrances, will extend beyond the building and is a bituminous material.

C. LA-35: ADA ramp and granite stair at front of building – Does wall for ramp continue across the top of the stair? Show on detail.

R. LA-35: The wall for the ADA ramp will stop at the top of the ramp.

C. LA-36: Stair and stair detail shown on SD-4 should correspond with each other. It appears the stair detail is a typical detail that does not apply to this site.

R. LA-36: Typical detail is to be used for the stairs. A specific detail will be developed with the building permit submission.

C. LA-37: ADA ramps along Danbury Road – Identify ramp type per CTDOT Guide Sheets. Ramps may require curbing due to close proximity to roadway curbing.

R. LA-37: ADA drop ramps along Danbury Road are CTDOT Type 4a with a detectable warning pad. Notes have been added to the plans.

C. LA-38: Concrete radius curb at driveways – Note proposed concrete curb shall be tapered to match existing bituminous curb.

R. LA-38: Notes have been added to the plans.

C. LA-39: Call out on plan that the proposed concrete sidewalk along Danbury Road shall meet and match proposed sidewalk to the north. Note sidewalk to end south of exit drive and to match existing grade.

R. LA-39: Proposed concrete sidewalks along Danbury Road shall meet and match the proposed sidewalk to the north. The south sidewalk will meet existing grades. Notes have been added to the plans.

Sheet 6 Site Plan-Landscaping

C. LS-1: It appears that the plan is to keep the large sycamore on the southwest corner of the site. Installation of the proposed drainage in this location would appear to undermine its root system.

R. LS-1: The large sycamore tree has been noted as to be removed on the revised plans.

C. LS-2: New England Wetland mix may not survive in the front of the building if the area doesn’t have wetland characteristics. The bioretention mix should have a depth of at least 24 inches and the groundwater elevations expected in the area should be provided. The area may need shading by larger plantings (could the large maple remain?) to create additional biodiversity.

R. LS-2: The plans have revised to replace the Wetland Mix with the New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites. This seed mix includes a combination of Facultative Wet to Facultative Upland species that insures germination and survival during periods of extended inundation.

The detail has been revised to show 24 inches of bioretention soil mix.

Geotechnical exploration has identified groundwater in the vicinity of elevation 138.7' the bottom of our stormwater infiltration rain garden is 146.5'.

C. LS-3: The significant amount of plantings may require an irrigation system and plan.

R. LS-3: While the design intent is to propose plant species that are native and sustainable, it may be necessary to provide drip irrigation within the planting beds and spray heads for the rear lawn access drive for use during plant establishment and periods of drought.

C. LS-4: Existing evergreen screen on property adjacent to the site to the north is to remain. What is the impact of the proposed landscape buffer (27 Douglas Firs, 10 Norway Spruce) on existing root systems. What is the estimated spread of the Norway Spruce. Can be up to 40 feet. Suggest noting specific variety if smaller tree is proposed.

R. LS-4: Proposed evergreen screen is to be removed from the plans to limit impact to existing evergreen trees on adjacent site to the north.

C. LS-5: Swamp White Oak at southwest corner of garage. Seems to be too close to building for this species. Island appears to be too small.

R. LS-5: Swamp White Oak has been shifted north into a larger 8'-0" wide planting bed.

C. LS-6: Tupelo along parking areas may require pruning of lower limbs to allow for access to vehicles.

R. LS-6: A note has been added to the Plant Schedule on Sheet – LS, identifying that all proposed Tupelo are required to have a 6'-0" min. branch height.

C. LS-7: Tufted Hair Grass-concern regarding sightlines at drive intersections. May obstruct views. Also, concern over taller shrubs that may obstruct visibility for safety concerns in parking areas.

R. LS-7: Tufted Hair Grass will not grow above 3' in height and are planted far enough off the entry/exit so it will not impact sight lines. The Lowbush Blueberry plants in the parking island have a maximum growth height of 3'-0".

C. LS-8: The landscaped areas in the front of the proposed building may not benefit from the amount of proposed filling. Some of these areas may benefit from being depressed.

R. LS-8: Comment noted.

Sheet 7 Site Plan-Grading

C. GR-1: The grading in the area of Retaining Wall 4 on the northeast side of the site appears to be based on the grades at 141 Danbury Road prior to construction. Since construction, the grades in this area are higher.

R. GR-1: Grading has been revised to coordinate with the new higher grades at 141 Danbury Road.

C. GR-2: The grading plan should indicate spot grades in the accessible areas (including parking) to show that it complies with ADA requirements. Other areas may benefit from spot grades also (in the footprint of the proposed building, in the driveways close to where they connect to Route 7, in the low spot of the wildflower area, etc.)

R. GR-2: Additional spot grades have been areas added to the plans.

C. GR-3: Spot grades within the building footprint range from 143.8 to 146.00. The entire garage will be below the limits of the 100-year flood (El. 146.3 – El. 146.6). Provide a plan (or narrative) outlining where vehicles will be moved to in the event of a storm event. This is the same for surface parking outside the limits of the building as well.

R. GR-3: The applicant will prepare a storm management plan.

C. CR-4: The FEMA FIS profile of the Norwalk River indicates that the 10-year storm flood elevation is ±144.9. The western portion of the site, including the infiltration areas and the storm drainage detention systems will be under water. How will they perform in the flooded condition? Approximately 60% of the vehicles parked in the garage will be within the area of the flood and the cars parked in the eastern portion of the garage may become trapped.

R. GR-4: The infiltration basins and chambers are primarily designed for water quality as the project results in a decrease in impervious cover. Water quality features are sized for the frequent, small storms and not the larger storm events. These facilities will be temporarily flooded but will drain as the storm flow recedes. The storm water system will be inspected and cleaned (if necessary) after each flood event. The storm system will continue to function as designed after the flood event.

C. GR-5: It may assist with readability if the hatch of the proposed building was turned off on the grading plan.

R. GR-5: Comment noted. The plan has been revised.

C. GR-6: Provide top of wall and bottom of wall elevations for all site walls, including at each step/change in elevation. Suggest providing elevation view for each wall.

Walls not shown to correct width (24”) as noted on the Stone Veneer Masonry Block Wall detail.

R. GR-6: Top of wall and bottom of wall elevations for all site walls have been noted, including each change in elevation.

C. GR-7: Contour 145 near entrance to building/garage on south side seems to conflict with grading within the garage. Provide spot grades to determine floor slab grade.

R. GR-7: A proposed retaining wall breaks up the grades within the garage. Additional spot grades have been added to the plan for clarification.

C. GR-8: Construction of Wall #4 will trap water from adjacent site that is in the existing condition flows southeasterly across the site. In the proposed condition it will flow westerly between Wall #4 and the existing wall on the adjacent site and discharge onto the adjacent site. Suggest adding a yard drain at the western end of the existing wall and connect to CCB-28.

R. GR-8: All water that does not infiltrate in the grass area will continue to flow west towards the Norwalk River.

C. GR-9: Wall #4 height is greater than 6 feet at its highest point. Review typical wall section. Concrete cantilever retaining wall or geotextiles may be required for walls with greater heights. Suggest fence along top of wall to prevent falling, etc.

R. GR-9: A fence has been added to the top of the retaining wall on Sheet LA and a detail added to Sheet SD-7. Final wall design will occur with building permit submission and wall structural design will likely vary depending on the constraints.

C. GR-10: Provide spot grades at intersection of drive from drop-off area and exit drive.

R. GR-10: Additional spot grades have been added to the plans.

C. GR-11: Provide greater detail of grading of street sidewalk, particularly in relation to front wildflower meadow. Will wildflower meadow overtop and drain onto street? At the south end of the “meadow, the sidewalk drains to the street; in the middle, it drains to the “meadow”; at the north end the sidewalk drains to the street. Suggest consistency in draining in one direction or the other. Suggest providing a greater buffer between the “meadow” and the streetline. See note UT-2.

R. GR-11: Additional spot grades have been added to the plans.

C. GR-12: Show grading south of Retaining Wall #1 to property line.

R. GR-12: Grading south of Retaining Wall #1 to property line has been added to the plan.

C. GR-13: Wall #1 height is greater than 5 feet at its highest point. Review typical wall section. Concrete cantilever retaining wall or geotextiles may be required for walls with greater heights. Suggest fence along top of wall to prevent falling, etc.

R. GR-13: Modular block walls will be engineered by a structural engineer licensed in the State of Connecticut as part of the building permit submission. Design will conform to all applicable building codes. A railing has been added and called out on Sheet LA.

C. GR-14: Provide flush symbol or note flush condition where flush condition is proposed.

R. GR-14: Notes have been added to Sheet 'GR' identifying flush conditions.

C. GR-15: Show transformers and switch gear on grading plan. Provide top of slab elevations.

R. GR-15: Transformers and switch gears are now shown on Sheet 'GR'. Spot grades have been added to the transformer slab.

C. GR-16: Show generator pad and provide top of slab elevation.

R. GR-16: Generator pad is now shown on Sheet 'GR'. Spot grades have been added to the generator slab.

C. GR-17: Grading at storm drainage outlet (endwall) is not shown correctly. Proposed contours are too close together. Either extend the endwall or use wingwall type endwall.

R. GR-17: Grading at storm drainage outlet has been revised.

C. GR 18: The plan omits a small portion of the site on the northwest corner.

R. GR-18: An inset has been added to Sheet GR.

Sheet 8 Site-Plan Utilities

C. UT-1: The plan appears to indicate only one stormwater discharge from the building (located on the south side Inv=143.2). Other connections to the underground drainage system may be necessary at other parts of the building. Note all drainage piping from building and note if it is roof drainage only.

R. UT-1: The final number of connections will not be determined until a plumbing engineer is engaged for the building permit submission.

C. UT-2: OVFL-19 – An additional dome grate or drainage structure may be needed in the front wildflower area near the road in case there is a blockage with the proposed one on the south near the site exit. Is TF elev. At the top of the riser or dome? Note diameter of riser and dome.

R. UT-2: It is our opinion that one domed grate will be used in the front of the wildflower area. Additional labels have been added to the plans.

C. UT-3: Show garage floor drains and piping. Provide oil/grease separator for garage floor drains. Show connection to sanitary sewer.

R. UT-3: There are no drains proposed within the garage. The ground floor is pitched to flow to the cobble infiltration trench.

C. UT-4: CB CLCB 21 – Inv, 15" HDPE = 150.9; Top of pipe elev. = 152.25; TF elev. = 152.4; Cover = 0.15'. Provide 2.0 ft. cover minimum. Provide roof drain invert.

R. UT-4: The plans have been revised.

C. UT-5: CB CCB 18 – TF elev. = 152.2 appears high.

R. UT-5: The plans have been revised.

C. UT-6: The elevation of the 12-inch HDPE inletting to CCB 18 should be confirmed at the crossing of the water and fire service to insure adequate separation.

R. UT-6. It is our opinion adequate separation will be provided.

C. UT-7: The inlet pipe (12-inch) appears undersized to convey flow from the building roof (1.8 acres) to MH-13 and into the detention chambers.

R. UT-7: The inlet pipe has been resized, but the final pipe size will be determined when a plumbing engineer is engaged for the Building Permit submission.

C. UT-8: HDPE pipe lengths for stormwater should be measured from the structure wall to structure wall rather than center of inlet structure to outlet structure.

R. UT-8: HDPE pipe lengths have been adjusted.

C. UT-9: Type of HDPE drainage pipe (ADS N-12 or equivalent?) should be called out or reference a detail.

R. UT-9: Typical ADS N-12 HDPE pipe will be used and has been noted on the plans.

C. UT-10: The detail (SD-4) of the 18-inch discharge from the site with the flap gate shows both a flared concrete end and a splash pad. The detail shows a larger splash pad.

R. UT-10: Splash pad sizing has been coordinated between the details and the revised plans.

C. UT-11: Show connection to underslab and/or foundation drainage.

R. UT-11: A foundation drain has been added to the plans.

C. UT-12: The sanitary lateral appears significantly deep. The lateral may be able to be raised if a drop at the manhole at the street is approved by utility. Or is depth to allow for connection to garage floor drains?

R. UT-12: The proposed depth is to accommodate for the building, but final elevations will be determined when a plumbing engineer is engaged for the building permit submission.

C. UT-13: Show existing utilities to remain.

R. UT-13: No existing utilities are to remain. Utility Note 7 has been added to Sheet IN.

C. UT-14: Note utilities to be removed.

R. UT-14: All existing utilities are to be removed. Utility Note 7 has been added to Sheet IN.

C. UT-15: Proposed gas service appears to go through ex. utility pole.

R. UT-15: Proposed gas service location has been revised.

C. UT-16: 4” sanitary Lateral appears to be inadequate based on number of units. Provide pipe sizing calculations. Note pipe material.

R. UT-16: An 8” SDR-35 PVC sanitary lateral is proposed per comments from Wilton WPCA.

C. UT-17: Show any wall drains and connections to storm drainage system.

R. UT-17: Wall drains and connections to storm drainage system have been added to Sheet UT.

C. UT-18: CB CCB 26 – Invert 15” HDPE =140.1; Top of pipe = 141.45. Top of frame elev. – 143.3; Cover = 1.85. Provide 2.0 ft. cover minimum. For best hydraulics, invert of 15” HDPE outlet pipe should be 0.25’ lower than 12” HDPE inlet pipe.

R. UT-18: Invert elevation has been adjusted.

C. UT-19: Provide details for MH-15, MH-12 and MH-5-f ft. dia. with weir.

R. UT-19: Details have been provided on Sheet SD-5.

C. UT-20: Some storm manholes are relatively shallow. Eccentric cone may not apply. Provide shallow manhole detail.

R. UT-20: Manhole with a flat slab top will be used. Detail has been added to Sheet SD-4.

C. UT-21: MH-15. TF elevation incorrect ("2.4").

R. UT-21: MH-15 TF elevation has been corrected to 149.6.

C. UT-22: Verify 4" domestic water service is adequate for number of units/occupants of building.

R. UT-22: 4" domestic water service will be adequate but final sizing will be determined when a plumbing engineer is engaged for the building permit submission.

C. UT-23: Provide verification that sufficient pressure is available for fire service to serve entire building.

R. UT-23: The water company has provided a will serve letter and with the adjacent similar use, it would have the same demands. Also, a fire hydrant test has been performed to verify sufficient flow and pressure.

C. UT-24: Show limits of trenching in Route 7. Provide State Highway pavement repair detail.

R. UT-24: Trench limits have been provided.

C. UT-25: CCB 18 TF = 152.5. Grade behind CB is 150.0 Revise TF elevation.

R. UT-25: TF elevation has been revised.

C. UT-26: Show all underground utilities including but not limited to primary and secondary electric, site lighting services, telephone, CATV, etc.

R. UT-26: This detailed information will be shown on the building permit submission once an electrical engineer has coordinated with Eversource.

C. UT-27: Show location of gas meter.

R. UT-27: This detailed information will be shown on the building permit submission once the architect and mechanical engineer has coordinated with Eversource.

C. UT-28: Additional information is needed on generator. Verify approval from gas company that generator is served directly from gas main and if the meter be located at the generator. Noise of generators in relation to residential uses (across the street, etc., particularly when testing is a concern). Provide information on noise mitigation.

R. UT-28: A 4’-0” height solid board screen fence has been added to the plans and a detail has been added to Sheet SD-7. Gas company coordination will occur by the electrical/mechanical engineer prior to building permit submission Noise mitigation is not required for an emergency generator.

C. UT-29: Landscaping may interfere with access to transformers and switch gear. Suggest providing clear area from pavement to transformers and access doors.

R. UT-29: Landscaping has been revised to provide clear access from the drive isle to the transformers.

C. UT-30: Water meter vault shown adjacent to retaining wall. Wall footing and vault may be in conflict.

R. UT-30: The water meter vault has been moved.

C. UT-31: Removal of existing discharge pipe from the existing catch basin on the south side of the property will require work on adjacent property. Have rights to perform work on the property been acquired? Show work to be conducted on the adjacent parcel, including restoration after pipe is removed.

R. UT-31: The discharge pipe from the existing catch basin on the south side of the property will be plugged at the property line, a callout has been added to Sheet UT.

C. UT-32: Provide dia. of riser and dome grate at OVFL-25 and OVFL-3.

R. UT-32: A callout has been added to the riser dome and grate for OVFL-25 and OVFL-3.

C. UT-33: Has a subsurface soils investigation (borings, test pits) been conducted in the area of infiltration areas and subsurface stormwater storage systems? What is the depth to rock/ledge? What is the soil type? Will soil provide infiltration (well drained) or will it retain water (silt / clays). Total depth to bottom of stone from existing grade is up to 7.5 feet.

R. UT-33: Boring data has been added to Sheet NL and infiltration tests added into the Drainage Report.

C. UT-34: Provide observation and cleaning ports on underground detention systems and isolator rows. Provide location on plans.

R. UT-34: Observation and cleaning ports have been added to the underground chamber systems.

C. UT-35: Provide manifold to connect underground detention system rows. The underground detention systems should be labeled to prevent confusion since they are located on the south side and two are close to the same size.

R. UT-35: Manifolds have been added to the underground chamber systems and the systems have been labeled.

C. UT-36: We do not recommend connecting roof leaders from “Jewel Box” to storm system that requires treatment as roof damage is considered “clean”. Suggest connecting the roof leaders to MH-13.

R. UT-36: The storm system from the “Jewel Box” roof is stored completely within the front rain garden. It would not be necessary to connect the roof leaders to MH-13.

C. UT-37: Tupelo trees proposed on the islands along the southern parking area are on top of the subsurface detention units. Taproots may conflict with and damage stormwater units.

R. UT-37: Trees have been shifted to avoid the underground detention system.

C. UT-38: Suggest providing a sump at MH-9, MH-16 & MH-22 at inlets to isolator rows. Provide detail.

R. UT-38: A sump is not needed at MH-9, MH-16, & MH-22. The isolator row will collect sediment and provide water quality.

C. UT-39: OVFL-25-Consider considerably shortening the 8” HDPE and using a manhole to the east of the infiltration area and matching crowns with the 15” pipe.

R. UT-39: Manhole 25A has been added to the plans.

C. UT-40: Consider backflow preventers or check valves to 8” HDPE outlets from infiltration areas to protect the stormwater system from the river during flooding.

R. UT-40: The plans call for a flap gate at the outlet to the Norwalk River.

C. UT-41: Consider using RCP pipe in the area east of the main building and at the 18” discharge including at the driveway entrances and exits. RCP would be advised due to the close proximity to utilities, added durability, possible high groundwater, and floodplain location.

R. UT-41: We believe HDPE pipe is appropriate for the site.

C. UT-42: MH-9 has inverts that appear low (137.7 ft.).

R. UT-42: The storm system has been revised.

C. UT-43: The 18-inch outfall pipe doesn't appear to have enough capacity. If the 15 inch and 18-inch pipes upstream flow full, then the single 18-inch pipe at the flat slope of 0.65% seems inadequate.

R. UT-43: The size of the outfall pipe has been upgraded to a 24-inch pipe.

C. UT-44: The outfall, including the required grading and riprap splash pad, require work directly within the limits of the inland wetlands. Provide calculations to show that the remaining streambank will be stabilized and not subject to erosion due to the discharge of stormwater. The riprap pad may need to be installed further towards the river.

R. UT-44: The riprap has been sized properly based on size of outlet pipe, velocity, and flow. Calculations can be found in the. Riprap will be provided on all disturbed side slopes from the headwall to the river.

Sheet 9 Sediment and Erosion Control Plan

C. SE-1-1: Provide silt fence along edge of Danbury Road (Route 7).

R. SE-1-1: Silt fence has been added along edge of Danbury Road (Route 7).

C. SE-1-2: At the northwest corner of the site near the river, the lines for the silt fence and straw appear to be cut off and show a break in the E & S controls. It would be recommended to move the wattle farther to the east away from the river and the OHW.

R. SE-1-2: The wattle has been moved farther to the east away from the river and the OHW.

C. SE-1-3: Typically, Infiltration areas should not be used as sediment traps. If used as sediment traps, the areas should be over-excavated and thoroughly cleaned.

R. SE-1-3 Comment noted. A note has been added to the plans.

C. SE-1-4: Suggest turbidity curtain along river in this location due to excavation along riverbank.

R. SE-1-4: No riverbank excavation is needed except for where the outlet pipe is proposed. We believe the turbidity curtain would not be appropriate with the flowing water.

C. SE-1-5: Addition of a concrete wash out area (outside of the floodplain) with a sign for concrete trucks is recommended. The detail should include notes specifying its location and appropriate management.

R. SE-1-5: A concrete washout location has been added to Sheet SE-1 and detail to Sheet SE-2.

C. SE-1-6: Soil stockpile areas are in the area of the "Wildflower Meadow" in the front of the property. Where are stockpiles to be relocated during work in this area? This area may be hard to access during start of construction due to proximity of existing building. A phased soil erosion plan to address issues where stockpiles may need to be moved as site is built out seems helpful.

R. SE-1-6: The need to stockpile soils on site is minimal beyond a small pile for topsoil. The contractor will provide a final plan for stockpile areas with the building permit submission. The location on the plan is intended to identify that soil stockpiles shall require erosion control protections.

C. SE-1-7: Construction entrance pads are located in areas of fills up to 5 feet.

R. SE-1-7: The entrance pad in areas of fill will be rebuilt as the grade is raised and adjusted during construction.

C. SE-1-8: Silt fence along southern property line is shown on top of the existing stone wall and within the existing swale.

R. SE-1-8: The silt fence has been adjusted.

C. SE-1-9: The location of sediment traps and dirt bags should be located out of the floodplain. Grading of sediment traps should be mindful of groundwater elevations.

R. SE-1-9: It is necessary to have the sediment traps within the lower portion of the site to be the most effective and to capture the entire watershed.

C. SE-1-10: Recommend leaving a strip of pavement in place (25 to 30 feet) along the river in the upland review area from north side of site to the south for as long as possible for stabilization purposes. Fire truck access road with permeable pavers could be scheduled towards end of construction with landscaping.

R. SE-1-10: The ability to leave this pavement area is highly dependent on the actual construction logistics, schedule, and time of year. It may be beneficial to establish the enhanced vegetative buffer earlier in the construction-phase.

C. SE-1-11: Recommend construction fencing with gates along the front of the property. Detail(s) should be included in detail sheets.

R. SE-1-11: Comment noted. The site security plan will be developed at the time of Building Permit Submission.

C. SE-1-12: CTDEEP has modified the Guidelines for Soil Erosion and Sediment Control and revised the Water Quality Manual which becomes available effective in March 2024.

R. SE-1-12: Comment noted.

Sheet 10 Sediment and Erosion Control Specifications and Details

C. SE-2-1: Dirtbag minimum size and type should be specified.

R. SE-2-1: The specification of the dirtbag minimum size and type would depend on the pump size used, which will be determined by the contractor and the supplier.

C. SE-2-2: Coordinate Temporary Sediment Trap Detail with plans.

R. SE-2-2: Temporary Sediment Trap detail has been coordinated with plans.

C. SE-2-3: Provide inlet control detail for domed yard drains.

R. SE-2-3: The inlet control detail for the domed yard drains would be the same as all other inlet protection details.

C. SE-2-4: Recommend minimum size of 12-inch diameter for wattles to be used.

R. SE-2-4: A note has been added to the straw wattle detail.

C. SE-2-5: The dewatering plan requested by the town should have associated dewatering details such as a settling basin for dewatering discharges.

R. SE-2-5: A dewatering plan will be prepared with the building permit submission.

Sheet 11 Site Details SD-1

C. SD-1-1: The sheet shows details for stamped & colored sidewalk, concrete pavers along integral concrete walk. It is not clear on the plans where these are going to be installed. Additional call outs seem appropriate.

R. SD-1-1: Callouts have been added to the plans to coordinate with the details.

C. SD-1-2: Standard Duty Bituminous Concrete and standard Base – Is it the intent to use Marshal Mix bituminous concrete (Class 1, Class 2).

R. SD-1-2: Yes

C. SD-1-3: Concrete Pad for Fire Truck Outriggers – Thickness of concrete and base does not appear to be appropriate for proposed load. Concrete called to be "permeable" on the site plans. Modify detail accordingly. Provide mix design of permeable concrete.

R. SD-1-3: The concrete pad design will be coordinated with the fire marshal. Detail has been revised.

Sheet 12 Site Details SD-2

C. SD-2-1: Clarify if all the proposed walls will have a stone masonry veneer. Provide elevation view of all walls, including location of changes in heights, concrete base. Provide detail how concrete base transitions from one elevation to another. We suggest a course of free draining material behind the wall including weep holes or a perforated drain. As noted above, the height of the walls are as high as 6 feet. We suggest changing the wall type to concrete cantilever (with stone facia) or provide a geotextile.

R. SD-2-1: Retaining walls have been numbered on Sheet 'LA'. Retaining Walls #1 and #4 are constructed of modular blocks and Retaining Walls #2 and #3 are constructed of dry-laid fieldstones.

C. SD-2-2: At top left of sheet, there are painted pavement markings that show arrows that don't appear to be used for project. It may help to remove these for clarity.

R. SD-2-2: The pavement markings detail has been modified.

C. SD-2-3: Provide electric, telephone, utility conduit trench details. Provide handhole detail(s) as required.

R. SD-2-3: The details for electric, telephone, and utility conduit trench are conceptually shown at this level. Additional information may be provided at the time of building permit submission and after coordination with the utility companies.

C. SD-2-4: Provide transformer pad detail.

R. SD-2-4: Utility pad detail has been added to Sheet SD-1.

Sheet 13 Site Details SD-3

C. SD-3-1: Suggest providing structural planting soil in areas where plantings are adjacent to paved areas and sidewalk.

R. SD-3-1: It is our opinion structural planting soil is not needed adjacent to the paved areas and sidewalks.

C. SD-3-2: Concrete Stair with Handrail Detail – Refers to Enlarged Detail "A" which is not provided. Note height of handrail. Does not appear to correspond with site plan and stair at front of building. Trench drain not shown on plans. No retaining wall provided on plans. Detail should match sidewalk material types at top and bottom of stair (pavers). Show location of rail on site plan.

R. SD-3-2: Stair and Handrail details have been updated and added to the Detail Sheets. Handrail locations have been added to Sheet 'LA'.

C. SD-3-3: Accessible Ramp Section – Shown as concrete. Site plan calls out pavers. Coordinate between details and site plans.

R. SD-3-3: Details plan and site plans have been coordinated. Plan has been adjusted to show the accessible ramp as concrete.

C. SD-3-4: Concrete Ramp at Building Face – Suggest detail for entranceway. We do not recommend pavers at the doorway as pavers may move as result of frost, etc. and prevent the door from opening.

R. SD-3-4: Pavers will be set on concrete and will not heave as a result of frost.

C. SD-3-5: Mow strip not shown on plans.

R. SD-3-5: Mow strip callout has been added to Sheet 'LS'.

Sheet 14 Site Details SD-4

C. SD-4-1: Provide CL Basin top detail.

R. SD-4-1: Town of Wilton CLCB detail has been added.

C. SD-4-2: Provide flap gate detail.

R. SD-4-2: A flap gate detail has been added to Sheet SD-4.

C. SD-4-3: Provide end wall detail for 18-inch discharge pipe.

R. SD-4-3: End wall detail for 24-inch discharge pipe has been added to Sheet SD-4.

C. SD-4-4: Larger bollard sized may be more appropriate for the protection of the transformers and generators.

R. SD-4-4: The final size of the bollards will be coordinated with the utility company.

C. SD-4-5: Provide riprap splash pad detail for end wall outlet.

R. SD-4-5: Riprap splash pad has been sized for the end wall outlet.

C. SD-4-6: Provide manhole frame and cover detail or call-out specific type and size.

R. SD-4-6: Manhole frame and cover detail has been provided.

C. SD-4-7: Storm Trench Detail – Note Final Backfill material if existing material is deemed unsuitable.

R. SD-4-7: A note has been added to the storm trench detail.

C. SD-4-8: Where are square Area Drains located? Remove detail if not required for this project.

R. SD-4-8: The square area drain detail has been removed.

C. SD-4-9: Use Town of Wilton Standard Type C and Type C-L Catch Basin details. Or modify the currently used detail to add 2 courses of brick below top.

R. SD-4-9: A Town of Wilton Standard Type C and a Type C-L detail has been added to Sheet SD-4.

C. SD-4-10: Use Town of Wilton Standard Manhole Detail.

R. SD-4-10: A Town of Wilton Standard Manhole detail has been added to Sheet SD-4.

C. SD-4-11: Rain Garden and Filter Strip Detail – “Rain Gardens” are not identified as such on plans. Coordinate plans and details with same nomenclature. Show location of the infiltration strip on plans. Revise detail to correspond with site plans.

R. SD-4-11: “Rain Gardens” have been properly identified on the plans. Additionally, the plans and details have been amended with the same nomenclature.

C. SD-4-12: Provide detail(s) for weirs to be used in manholes.

R. SD-4-12: Details for weirs to be used for manholes 5, 12, and 15 have been provided on Sheet SD-5.

<u>Sheet 15 Site Details SD-5</u>

C. SD-5-1: Provide water meter pit detail.

R. SD-5-1: A water meter pit detail has been provided on Sheet SD-6.

C. SD-5-2: Provide site information and sizing calculations for the CONTECH CDS 2025-5-C Hydrodynamic Separator.

R. SD-5-2: Sizing calculations have been provided in the Stormwater Report.

C. SD-5-3: CTDOT Trench Repair Detail – Typically, state road sections include 9 inches of pavement. Provide verification that CTDOT has approved the pavement repair detail.

R. SD-5-3: The final pavement section will be determined by the CTDOT as part of the Encroachment Permit process.

<u>Site Plan – Alternative Compared</u>

C. A description of the alternatives should be provided. Although only a sketch is required for the alternatives, additional details such as any proposed plantings, storm drainage, rain gardens or other stormwater treatment measures, etc. should be called out.

R. The alternative plan was provided for discussion, and we believe the proposed plan is superior to the alternate plan. We are ready to discuss further with the Commission if requested.

Please feel free to contact us if you have any questions on the above responses.

Regards,

SLR International Corporation

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Jason C. Williams, PLA, NCI
Principal Landscape Architect
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Attachments

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SLR International Corporation
99 Realty Drive, Cheshire, Connecticut, 06410

January 9, 2024

Attention: Stephen Santacroce, PE
Town of Wilton
238 Danbury Road
Wilton, Connecticut 06897

SLR Project No.: 141.21543.00001

**RE: 131 Danbury Road
Wilton, Connecticut**

Dear Mr. Santacroce,

SLR International Corporation (SLR) is in receipt of a memo dated November 21, 2023, addressed to Mike Conklin, Environmental Affairs, from Stephen Santacroce, PE, of the Town of Wilton, regarding the above-referenced project. We offer the following responses to the comments contained therein:

Wetlands Application Review

C1. Note that since the property abuts Route 7, the State DOT will review the design plans as it relates to their roadway.

R1. Comment noted. An initial presentation of the plans to the CDOT has been completed

C2. For record tracking purposes, please provide the following:

Existing pervious surface area (sqft)
Existing impervious surface area directly connected to the water coarse (sqft)
Existing impervious surface area not connected to the water coarse (sqft)
Proposed pervious surface area (sqft)
Proposed impervious surface area disconnected from the water coarse (sqft)
Proposed impervious surface area directly connected to the water coarse (sqft)
(Definition of “directly connect” versus “disconnect” is as defined in the State MS4 program).

R2. The values are as follows:
Existing pervious surface area: 60,642 s.f.
Existing impervious surface area directly connected to watercourse: 140,623 s.f.
Existing impervious surface area not connected to the watercourse: 0 s.f.
Proposed pervious surface area: 73,293 s.f.
Proposed impervious surface area directly connected to watercourse: 2,037 s.f.
Proposed impervious surface area disconnected from watercourse: 125,752 s.f.

C3. Any proposed structures and/or landscape features, including plantings, within the floodway shall be certified by an engineer to withstand calculated base flood velocities.

R3. Comment noted. If a flood results in damage, the plantings will be replaced. Based pm flood modeling, the values for various flood events are:

Flood	WSEL (ft NAVD)	Max. Depth* (ft)	Overbank Vel (ft/s)	Channel Vel (ft/s)
10-year	144.3	2.3	0.31	1.7
50-year	146.2	4.2	0.48	2.6
100-year	146.7	4.7	0.58	3.1
500-year	148.1	6.1	0.89	4.4
* - measured from a proposed elevation of 142 near the top of the channel bank were plantings are located.				

C4. There shall be no net fill proposed for the site within the regulated floodplain. Provide an earthwork cut and fill computation for review.

R4. Sheet FP has been added to the plans in the site plan submission set. The net earthwork within the floodplain is +/- 72 cubic yards (+/-1,965 cubic yards of total cut and +/-1,893 cubic yards of total fill).

C5. Provide documentation that floodplain elevation in post development meets all zoning requirements.

R5. Engineering Report – Floodplain Analysis and sheet FP are included within the submission.

C6. Provide water quality units upstream of proposed stormwater infiltration systems to minimize sediment and debris entering infiltration units.

R6. Water Quality Units have been added to the site plan submission plans.

C7. Provide manufacturer's specifications for the maintenance of the proposed stormtech infiltrators.

R7. Manufacturer's specifications have been added to sheet SD-4 in the site plan submission plans

C8. Based on the amount of infiltrators, evaluate installing a curtain drain along the southern property line to capture any potential groundwater that may infiltrate onto the property to the south.

R8. A curtain drain has been added to the plans along the southern wall in the site plan submission plans.

C9. Shift the proposed rain garden adjacent to Route 7 five feet to the west so that there's at least four feet of walkable grass area behind the sidewalk.

R9. The proposed sidewalk has moved from the front along Route 7 to the back of the rain garden in the site plan submission plans.

C10. Depict proposed catch basins for the parking area under the building, considering that most of the parking area is within a floodzone. Any drains proposed shall be routed to an oil-water separator prior to discharging to the proposed stormwater management system. Please confirm if any state regulations require that these drains have to tie into the sanitary system.

R10. No catch basins are proposed for the covered parking spaces at this time.

C11. At this time test pits are required to determine soil characteristics and groundwater depths. Soil percolation tests should be conducted to determine infiltration rates.

R11. Borings have been performed. Geotechnical report has been included with the submission, and boring data is included on Sheet NL and in the drainage report. Drainage report has been updated based on site-specific infiltration rates.

C12. Depict footing drain discharge. No footing drains shall be connected to sanitary sewers.

R12. Footing drains have been added to the plans in the site plan submission set.

C13. The excavation planned in close proximity to the river will likely result in encountering groundwater. A dewatering plan should be prepared and added to the sediment and erosion control drawings.

R13. A note has been added to sheet SE-1 in the site plan submission set.

<u>Planning & Zoning Review</u>

C14. The project is subject to obtaining approvals from Wilton's WPCA Commission to connect additional units into the sanitary sewer system. The WPCA is currently evaluating all flows from proposed development projects. Separate letter will follow for WPCA related items.

R14. Comment noted.

C15. The proposed driveway entrance may be problematic. Engineer to submit a traffic report or summary, subject to approval by the Town's Independent Consultant as well as the State's Review and approval. A DOT OSTA review approval is most likely. Coordinate with the State DOT.

R15. A Traffic Impact Study prepared by SLR International Corporation has been submitted. Coordination with CTDOT is underway.

C16. All proposed work in the State Right of Way shall be subject to the State Encroachment Permit approval.

R16. Comment noted.

C17. Proposed sidewalks along Route 7 shall be in accordance with Town of Wilton sidewalk details modified to be on 8" of process material.

R17. Sidewalk details on sheet SD-1 have been modified to show 8" of processed material in the site plan submission set.

C18. Sidewalks and grass strip shall be pitched towards roadway per town standards.

R18. A comment has been added to the GR sheet in the site plan submission set.

C19. The plan is subject to review by the Town of Wilton Fire Marshal.

R19. Comment noted. A fire consultant has been retained to coordinate with the Wilton Fire Department.

C20. 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.

R20. Comment noted.

Should you have any further questions, please do not hesitate to contact me at (203) 271-1773.

Regards,

SLR International Corporation

Thomas J Daly

Thomas J. Daly, PE
Manager of Civil & Structural Engineering
tdaly@slrconsulting.com

Cc: Ryan Sutherland, AMS Acquisitions

Proposed Multifamily Development

131 Danbury Road, Wilton, Connecticut
Drainage Report

Prepared for:

Ryan Sutherland, AMS Acquisitions Management Corporation

One Bridge Plaza North, Suite 840
Fort Lee, New Jersey 07024

Prepared by:

SLR International Corporation

99 Realty Drive, Cheshire, Connecticut, 06410

SLR Project No.: 141.21543.00001

October 23, 2023

Revised January 9, 2024

Making Sustainability Happen

Drainage Report

Proposed Multifamily Development
131 Danbury Road
Wilton, Connecticut
October 23, 2023
SLR #141.21543.00001

This Drainage Report has been prepared in support of the proposed multifamily development on Danbury Road in the town of Wilton, Connecticut. This redevelopment project will add a new building and demolish the existing building and reconfigure the parking lot and all associated site infrastructure.

Figure 1 – 131 Danbury Road, MBL: 70-1

Table 1 – Stormwater Data

Parcel Size Total	4.75 acres
Existing Impervious Area (Watershed Area)	3.23 acres
Proposed Impervious Area (Watershed Area)	2.97 acres
Soil Type (Hydrologic Soil Group)	"B/D," "C," and "D"
Existing Land Use	Open space, building, and impervious
Proposed Land Use	Open space, building, and paved/impervious
Design Storm for Stormwater Management	No increases in peak rates of runoff for the 2-, 10-, 25-, 50-, and 100-year storms; Connecticut Department of Energy & Environmental Protection (CTDEEP) water quality flow (WQF) treatment, water quality volume (WQV)
Water Quality Measures	Catch basins with 4-foot sumps, detention/infiltration storage for WQV, an isolator row within the underground infiltration systems, permeable pavers, and water quality basins
Design Storm for Storm Drainage	25-year storm
Federal Emergency Management Agency (FEMA) Special Flood Hazard Areas	Area of Minimal Flood Hazard (Zone X), Area of Undetermined Flood Hazard (Zone D), Special Flood Hazard Areas with Base Flood Elevation (Zone AE) and Regulatory Floodway
Connecticut Department of Energy & Environmental Protection Aquifer Protection Areas	None

Stormwater Management Approach

The proposed stormwater management system for the project focuses on providing water quality management while attenuating proposed peak flows. Water quality treatment in accordance with the CTDEEP requirements for WQV and WQF for a redevelopment project is provided. The proposed stormwater treatment train consists of catch basins with 4-foot sumps, water quality basins, and subsurface infiltration systems with isolator rows to provide additional water quality treatment.

The computer program entitled *Hydraflow Storm Sewers Extension for AutoCAD® Civil 3D® 2023* by Autodesk, Inc. was used for designing the proposed storm drainage collection system. Storm drainage computations performed include pipe capacity and hydraulic grade line calculations. The contributing watershed to each individual catch basin inlet was delineated to determine the drainage area and land coverage. These values were used to determine the stormwater runoff to each inlet using the Rational Method. The rainfall intensities for the site were obtained from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 10, Precipitation Frequency Data Server (PFDS). The proposed storm drainage system is designed to provide adequate capacity to convey the 25-year storm event.

Water Quality Management

Water quality measures or Best Management Practices (BMPs) have been incorporated into the design to maintain water quality to provide protection of the areas downgradient of the proposed development. The proposed stormwater management system will include catch basins with 4-foot sumps, subsurface infiltration systems with isolator rows for water quality treatment, water quality basins, and permeable pavers.

The subsurface chamber systems incorporate isolator rows that consist of a row of chambers where stormwater is further treated prior to entering the rest of the storage chamber system, thus enhancing sediment removal and protecting the storage chambers from sediment accumulation. These systems have been designed to meet criteria recommended by the CTDEEP *2004 Stormwater Quality Manual*. The device was designed based on the determined WQF, which is the peak-flow rate associated with the WQV and sized based on the manufacturer's specifications. There are also three water quality basins proposed that will provide retention volume along their bottom, thus creating a water quality feature within it. This serves several purposes, including stormwater renovation and first-flush retention. The vegetation will provide pollutant removal by filtering stormwater runoff and utilizing excess nutrients that may be present in the stormwater. The CTDEEP *2004 Stormwater Quality Manual* (Chapter 7) recommends methods for sizing stormwater treatment measures with WQV computations. The WQV addresses the initial stormwater runoff, also commonly referred to as the "first-flush" runoff. The WQV provides adequate volume to store the runoff associated with the first 1 inch of rainfall, which tends to contain the highest concentration of potential pollutants. Supporting calculations have been included in the Appendix of this report. This project is a redevelopment project with greater than 40% existing directly connected impervious area, so 50% of the calculated WQV is required. The provided WQV of approximately 11,335 CF exceeds the minimum required calculated WQV of 5,290 CF. Additionally, the WQV exceeds the required WQV that would be required under the revised Connecticut Stormwater Management Manual that will be effective March 30, 2024, which requires that the first 1.3 inches of rainfall runoff will be required to be stored. The provided WQV also exceeds the required WQV under the revised manual, which would be approximately 6,880 CF.

Subsurface infiltration allows for temperature mitigation through infiltration to the ground, convective cooling from the surrounding subsurface substrate, and removal of runoff from direct sunlight, thus preventing additional heating from solar energy. The use of permeable pavers in parking and plaza areas will also be beneficial for temperature reduction of impervious runoff.

Hydrologic Analysis

A hydrologic analysis was conducted to analyze the predevelopment and postdevelopment peak-flow rates from the site. Four analysis points that receive runoff from the site were selected. Analysis Point 1 represents a majority of the site, including the parking and building areas and drains to the Norwalk River. Analysis Point 2 represents the front lawn area. Under proposed conditions, this area will be connected to the site stormwater system that eventually drains to the Norwalk River (AP-1). Analysis Point 3 represents the area of the site that drains towards Danbury Road. Analysis Point 4 represents the area of the site the drains to the existing landscaped area south of the entrance drive. Analysis Point 5 represents the area of the site draining to the catch basin located along the paved access road on the south side of the building. No part of the site will be draining to this location under proposed conditions. The total watershed area delineated is approximately 4.6 acres under both existing and proposed conditions.

The method of predicting the surface water runoff rates utilized in this analysis was a computer program titled *HydroCAD 10.20-3c* by HydroCAD Software Solutions LLC. The *HydroCAD* program is a computer model that utilizes the methodologies set forth in the *Technical Release No. 55* (TR-55) manual and *Technical Release No. 20* (TR-20) computer model, originally developed by the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS). The *HydroCAD* computer modeling program is primarily used for conducting hydrology studies such as this one.

The *HydroCAD* computer program forecasts the rate of surface water runoff based upon several factors. The input data includes information on land use, hydrologic soil type, vegetation, contributing watershed area, time of concentration, rainfall data, storage volumes, and the hydraulic capacity of structures. The computer model predicts the amount of runoff as a function of time, with the ability to include the attenuation effect due to dams, lakes, large wetlands, floodplains, and stormwater management basins. The input data for rainfalls with statistical recurrence frequencies of 2, 10, 25, 50, and 100 years was obtained from the NOAA Atlas 14, Volume 10 database. The corresponding rainfall totals are listed below.

Storm Frequency	Rainfall (inches)
2-year	3.53
10-year	5.39
25-year	6.56
50-year	7.42
100-year	8.35

Land use for the site under existing and proposed conditions was determined from field survey and aerial photogrammetry. Land use types used in the analysis included grassed or open space, building, and impervious (paved) cover. Soil types in the watershed were determined from the CTDEEP Geographic Information System (GIS) database of the USDA-NRCS soil survey for Fairfield County, Connecticut. For the analysis, the site was determined to contain hydrologic soil types “B/D,” “C,” and “D” as classified by USDA-NRCS (see Appendix I). Composite runoff Curve Numbers (CN) for each subwatershed were calculated based on the different land use and soil types. The time of concentration (Tc) was estimated for each subwatershed using the TR-55 methodology and was computed by summing all travel times through the watershed as sheet flow, shallow concentrated flow, and channel flow.

Borings were taken on site, and laboratory permeability tests were performed in the approximate areas of the proposed infiltration BMPs. 50% of the permeability result was used for the exfiltration rates in the *HydroCAD* model. In areas where the infiltration BMPs were within the vicinity of multiple results, the more conservative value was used. Soil test results and a map of the boring locations is included in Appendix J.

The existing conditions were modeled with the *HydroCAD* program to determine the peak-flow rates for the various storm events at each analysis point. A revised model was developed incorporating the proposed site conditions, the underground chamber system, and the stormwater management basins. The flows obtained with the revised model were then compared to the results of the existing conditions model. Peak-flow rates from the project site were controlled by the storage volume provided within the underground infiltration system and the detention basins connected in series.

The following peak rates of runoff were obtained from the *HydroCAD* hydrology results:

Analysis Point 1 – Norwalk River					
	Peak Runoff Rate (cubic feet per second)				
Storm Frequency (years)	**2**	**10**	**25**	**50**	**100**
Existing Conditions	8.92	14.05	17.24	19.58	22.11
Proposed Conditions	2.43	8.13	12.14	14.21	16.45

Analysis Point 2* – Front Lawn					
	Peak Runoff Rate (cubic feet per second)				
Storm Frequency (years)	**2**	**10**	**25**	**50**	**100**
Existing Conditions	0.88	1.68	2.2	2.58	2.99
Proposed Conditions	0.00	0.00	0.00	0.37	0.93

***Note: The area draining to AP-2 subsequently drains to AP-1 under proposed conditions.**

Analysis Point 3 – Danbury Road					
	Peak Runoff Rate (cubic feet per second)				
Storm Frequency (years)	**2**	**10**	**25**	**50**	**100**
Existing Conditions	0.00	0.00	0.00	0.00	0.00
Proposed Conditions	0.09	0.14	0.17	0.20	0.22

Analysis Point 4 – Landscape Island					
	Peak Runoff Rate (cubic feet per second)				
Storm Frequency (years)	**2**	**10**	**25**	**50**	**100**
Existing Conditions	0.08	0.15	0.20	0.23	0.27
Proposed Conditions	0.29	0.57	0.75	0.89	1.04

Analysis Point 5** – Access Drive Catch Basin (Existing Only)					
	Peak Runoff Rate (cubic feet per second)				
Storm Frequency (years)	**2**	**10**	**25**	**50**	**100**
Existing Conditions	1.52	2.54	3.18	3.64	4.14
Proposed Conditions	0.00	0.00	0.00	0.00	0.00

****Note: The existing structure at AP-5 was removed under proposed conditions.**

Water Quality Basin 1 – North*					
	Water Surface Elevation (feet)				
Storm Frequency (years)	**2**	**10**	**25**	**50**	**100**
Proposed Conditions	139.6	139.9	139.9	140.0	140.0

***Top of Basin Elevation = 141.0**

Water Quality Basin 2 – South**					
	Water Surface Elevation (feet)				
Storm Frequency (years)	**2**	**10**	**25**	**50**	**100**
Proposed Conditions	139.9	140.0	140.0	140.0	140.0

****Top of Basin Elevation = 141.0**

Water Quality Basin 3 – Front Lawn Meadow***					
	Water Surface Elevation (feet)				
Storm Frequency (years)	**2**	**10**	**25**	**50**	**100**
Proposed Conditions	148.3	148.7	149.0	149.1	149.2

*****Top of Basin Elevation = 150.0**

Subsurface Infiltration System 1*					
	Water Surface Elevation (feet)				
Storm Frequency (years)	**2**	**10**	**25**	**50**	**100**
Proposed Conditions	143.8	144.3	144.5	144.7	144.9

*** Inside Top of Chamber Elevation = 145.0**

Subsurface Infiltration System 2**					
	Water Surface Elevation (feet)				
Storm Frequency (years)	**2**	**10**	**25**	**50**	**100**
Proposed Conditions	144.0	144.8	144.9	144.9	144.9

**** Inside Top of Chamber Elevation = 145.0**

Subsurface Infiltration System 3***					
	Water Surface Elevation (feet)				
Storm Frequency (years)	**2**	**10**	**25**	**50**	**100**
Proposed Conditions	142.2	142.6	143.0	143.2	143.4

***** Inside Top of Chamber Elevation = 143.4**

Conclusion

The results of the hydrologic analysis demonstrate that there will be no increases in peak-flow rates from the proposed development. This was achieved for storm events modeled through a planned stormwater management system with subsurface infiltration systems and stormwater management basins. Manholes with internal weir wall structures at the outlets of the subsurface infiltration systems were designed to provide peak-flow attenuation and maximize water quality volume within the systems. The proposed development will also introduce a new stormwater treatment train consisting of catch basins with 2-foot sumps, isolator rows in the underground infiltration systems, water quality basins, and permeable pavers.

All supporting documentation and stormwater-related computations are attached to this report along with the *Hydrographs* model results for stormwater management and *Hydraflow Storm Sewers* model results for the proposed storm drainage system. Illustrative watershed maps for both existing and proposed conditions are also attached to this report.

Appendices

Appendix A **United States Geological Survey Location Map**

Appendix B **FEMA Flood Insurance Rate Map**

Appendix C **Natural Resources Conservation Service Hydrologic Soil Group Map**

Appendix D **Storm Drainage Computations**

Appendix E **Water Quality Computations**

Appendix F **Hydrologic Analysis - Existing Conditions**

Appendix G **Hydrologic Analysis - Proposed Conditions**

Appendix H **Watershed Maps**

Appendix I NRCS Web Soil Survey

Appendix J Permeability Test Results

Appendix A
United States Geological Survey Location Map

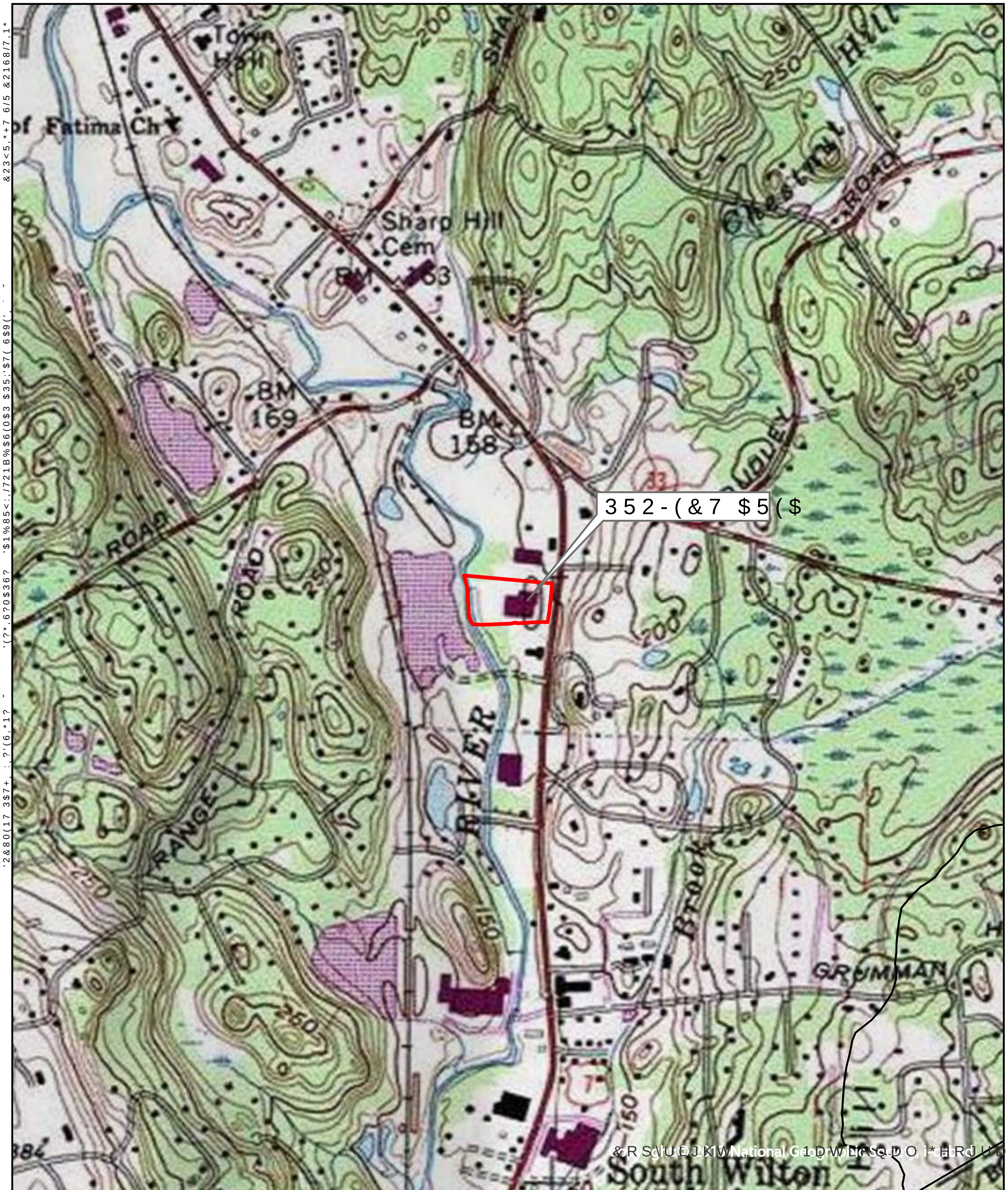
Proposed Multifamily Development

131 Danbury Road, Wilton, Connecticut
Drainage Report

Ryan Sutherland, AMS Acquisitions Management Corporation

SLR Project No.: 141.21543.0000171

October 23, 2023



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Appendix B
FEMA Flood Insurance Rate Map

Proposed Multifamily Development

131 Danbury Road, Wilton, Connecticut
Drainage Report

Ryan Sutherland, AMS Acquisitions Management Corporation

SLR Project No.: 141.21543.0000171

October 23, 2023

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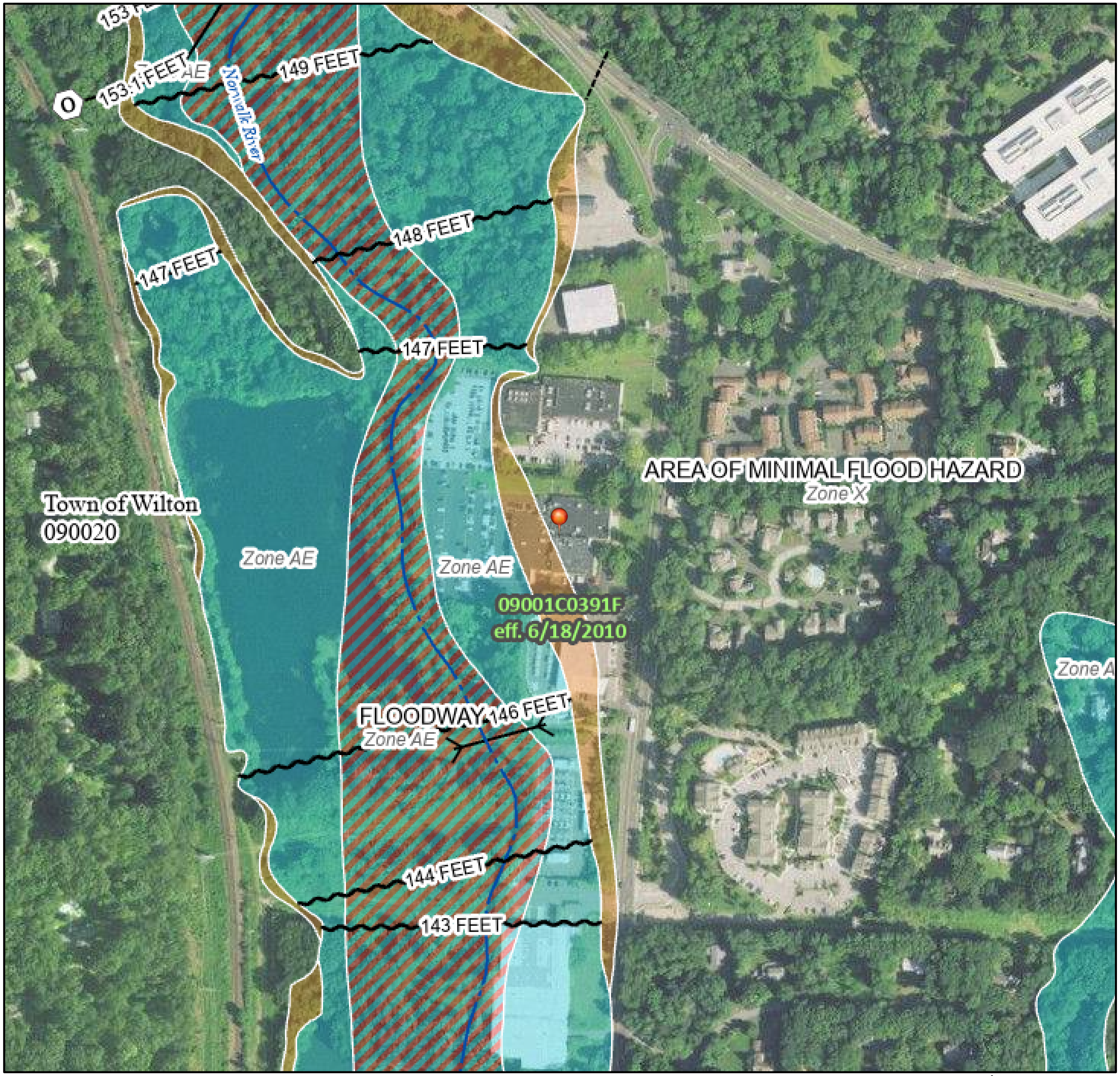

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Appendix C
Natural Resources Conservation Service Hydrologic Soil Group Map

Proposed Multifamily Development

131 Danbury Road, Wilton, Connecticut
Drainage Report

Ryan Sutherland, AMS Acquisitions Management Corporation

SLR Project No.: 141.21543.0000171

October 23, 2023

Figure 3: Soil Map—State of Connecticut

Map Scale: 1:1,180 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

N

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

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

Special Point Features

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

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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

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

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: State of Connecticut
Survey Area Data: Version 22, Sep 12, 2022

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

Date(s) aerial images were photographed: Oct 21, 2022—Oct 27, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
103	Rippowam fine sandy loam	0.5	6.6%
305	Udorthents-Pits complex, gravelly	0.9	13.2%
307	Urban land	5.3	77.0%
W	Water	0.2	3.3%
Totals for Area of Interest		**6.9**	**100.0%**

Appendix D
Storm Drainage Computations

(*will be provided at a later date)

Proposed Multifamily Development

131 Danbury Road, Wilton, Connecticut
Drainage Report

Ryan Sutherland, AMS Acquisitions Management Corporation

SLR Project No.: 141.21543.0000171

October 23, 2023

NOAA Atlas 14, Volume 10, Version 3
Location name: Wilton, Connecticut, USA*
Latitude: 41.1787°, Longitude: -73.4171°
Elevation: 147 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**4.38** (3.42-5.54)	**5.10** (3.97-6.46)	**6.28** (4.87-7.97)	**7.25** (5.60-9.25)	**8.59** (6.42-11.4)	**9.61** (7.02-13.0)	**10.7** (7.54-14.8)	**11.8** (7.94-16.8)	**13.3** (8.63-19.6)	**14.5** (9.19-21.8)
10-min	**3.10** (2.42-3.92)	**3.61** (2.81-4.58)	**4.45** (3.46-5.65)	**5.14** (3.97-6.56)	**6.08** (4.54-8.05)	**6.81** (4.97-9.17)	**7.55** (5.34-10.5)	**8.34** (5.62-11.9)	**9.43** (6.11-13.9)	**10.3** (6.51-15.4)
15-min	**2.43** (1.90-3.08)	**2.83** (2.21-3.59)	**3.48** (2.71-4.43)	**4.03** (3.11-5.14)	**4.77** (3.56-6.32)	**5.34** (3.90-7.19)	**5.92** (4.19-8.22)	**6.54** (4.41-9.32)	**7.39** (4.80-10.9)	**8.07** (5.11-12.1)
30-min	**1.70** (1.32-2.15)	**1.97** (1.54-2.50)	**2.42** (1.88-3.08)	**2.80** (2.16-3.57)	**3.31** (2.47-4.38)	**3.71** (2.70-4.98)	**4.11** (2.90-5.68)	**4.52** (3.05-6.44)	**5.07** (3.29-7.45)	**5.49** (3.47-8.22)
60-min	**1.09** (0.850-1.38)	**1.26** (0.986-1.60)	**1.55** (1.21-1.97)	**1.79** (1.38-2.29)	**2.12** (1.58-2.80)	**2.38** (1.73-3.19)	**2.63** (1.85-3.63)	**2.88** (1.95-4.11)	**3.22** (2.09-4.73)	**3.47** (2.20-5.20)
2-hr	**0.696** (0.547-0.876)	**0.821** (0.644-1.03)	**1.03** (0.802-1.30)	**1.20** (0.929-1.52)	**1.43** (1.07-1.88)	**1.61** (1.18-2.15)	**1.79** (1.27-2.48)	**1.99** (1.35-2.82)	**2.27** (1.48-3.31)	**2.49** (1.58-3.71)
3-hr	**0.532** (0.419-0.667)	**0.633** (0.498-0.793)	**0.796** (0.625-1.00)	**0.932** (0.727-1.18)	**1.12** (0.845-1.47)	**1.26** (0.931-1.69)	**1.41** (1.01-1.95)	**1.57** (1.07-2.22)	**1.81** (1.18-2.64)	**2.00** (1.28-2.97)
6-hr	**0.336** (0.266-0.418)	**0.402** (0.318-0.501)	**0.510** (0.403-0.637)	**0.600** (0.471-0.753)	**0.724** (0.549-0.946)	**0.816** (0.607-1.09)	**0.914** (0.660-1.26)	**1.03** (0.699-1.44)	**1.19** (0.779-1.72)	**1.33** (0.848-1.96)
12-hr	**0.206** (0.164-0.255)	**0.248** (0.197-0.306)	**0.315** (0.250-0.392)	**0.372** (0.294-0.464)	**0.450** (0.343-0.584)	**0.508** (0.379-0.673)	**0.569** (0.413-0.782)	**0.641** (0.438-0.893)	**0.746** (0.489-1.07)	**0.834** (0.533-1.22)
24-hr	**0.121** (0.097-0.148)	**0.147** (0.118-0.180)	**0.189** (0.151-0.233)	**0.224** (0.178-0.278)	**0.273** (0.210-0.353)	**0.309** (0.232-0.408)	**0.347** (0.254-0.476)	**0.393** (0.269-0.545)	**0.462** (0.303-0.659)	**0.519** (0.333-0.755)
2-day	**0.067** (0.054-0.081)	**0.082** (0.066-0.101)	**0.108** (0.087-0.133)	**0.130** (0.104-0.160)	**0.160** (0.124-0.206)	**0.182** (0.138-0.239)	**0.206** (0.152-0.281)	**0.235** (0.161-0.323)	**0.279** (0.184-0.396)	**0.317** (0.204-0.458)
3-day	**0.048** (0.039-0.058)	**0.059** (0.048-0.072)	**0.078** (0.063-0.096)	**0.094** (0.075-0.115)	**0.116** (0.090-0.149)	**0.132** (0.100-0.173)	**0.149** (0.111-0.204)	**0.171** (0.118-0.234)	**0.204** (0.134-0.288)	**0.232** (0.149-0.334)
4-day	**0.038** (0.031-0.046)	**0.047** (0.038-0.057)	**0.062** (0.050-0.076)	**0.075** (0.060-0.092)	**0.092** (0.072-0.118)	**0.105** (0.080-0.137)	**0.119** (0.088-0.162)	**0.136** (0.093-0.185)	**0.161** (0.107-0.228)	**0.183** (0.118-0.263)
7-day	**0.026** (0.021-0.031)	**0.031** (0.026-0.038)	**0.041** (0.033-0.050)	**0.049** (0.039-0.059)	**0.059** (0.046-0.076)	**0.067** (0.051-0.087)	**0.076** (0.056-0.102)	**0.086** (0.060-0.117)	**0.101** (0.067-0.142)	**0.114** (0.074-0.163)
10-day	**0.021** (0.017-0.025)	**0.025** (0.020-0.030)	**0.032** (0.026-0.039)	**0.038** (0.030-0.046)	**0.046** (0.036-0.058)	**0.051** (0.039-0.066)	**0.058** (0.043-0.077)	**0.065** (0.045-0.088)	**0.076** (0.050-0.106)	**0.084** (0.055-0.120)
20-day	**0.015** (0.012-0.017)	**0.017** (0.014-0.020)	**0.021** (0.017-0.025)	**0.024** (0.019-0.029)	**0.028** (0.022-0.036)	**0.032** (0.024-0.040)	**0.035** (0.026-0.046)	**0.039** (0.027-0.052)	**0.044** (0.029-0.061)	**0.048** (0.031-0.068)
30-day	**0.012** (0.010-0.014)	**0.014** (0.011-0.016)	**0.016** (0.013-0.020)	**0.019** (0.015-0.023)	**0.022** (0.017-0.027)	**0.024** (0.019-0.031)	**0.027** (0.020-0.035)	**0.029** (0.020-0.039)	**0.033** (0.022-0.045)	**0.035** (0.023-0.050)
45-day	**0.010** (0.008-0.012)	**0.011** (0.009-0.013)	**0.013** (0.011-0.016)	**0.015** (0.012-0.018)	**0.017** (0.013-0.021)	**0.019** (0.014-0.024)	**0.021** (0.015-0.027)	**0.022** (0.016-0.030)	**0.024** (0.016-0.034)	**0.026** (0.017-0.037)
60-day	**0.008** (0.007-0.010)	**0.009** (0.008-0.011)	**0.011** (0.009-0.013)	**0.012** (0.010-0.015)	**0.014** (0.011-0.018)	**0.016** (0.012-0.020)	**0.017** (0.012-0.022)	**0.018** (0.013-0.024)	**0.020** (0.013-0.028)	**0.021** (0.014-0.030)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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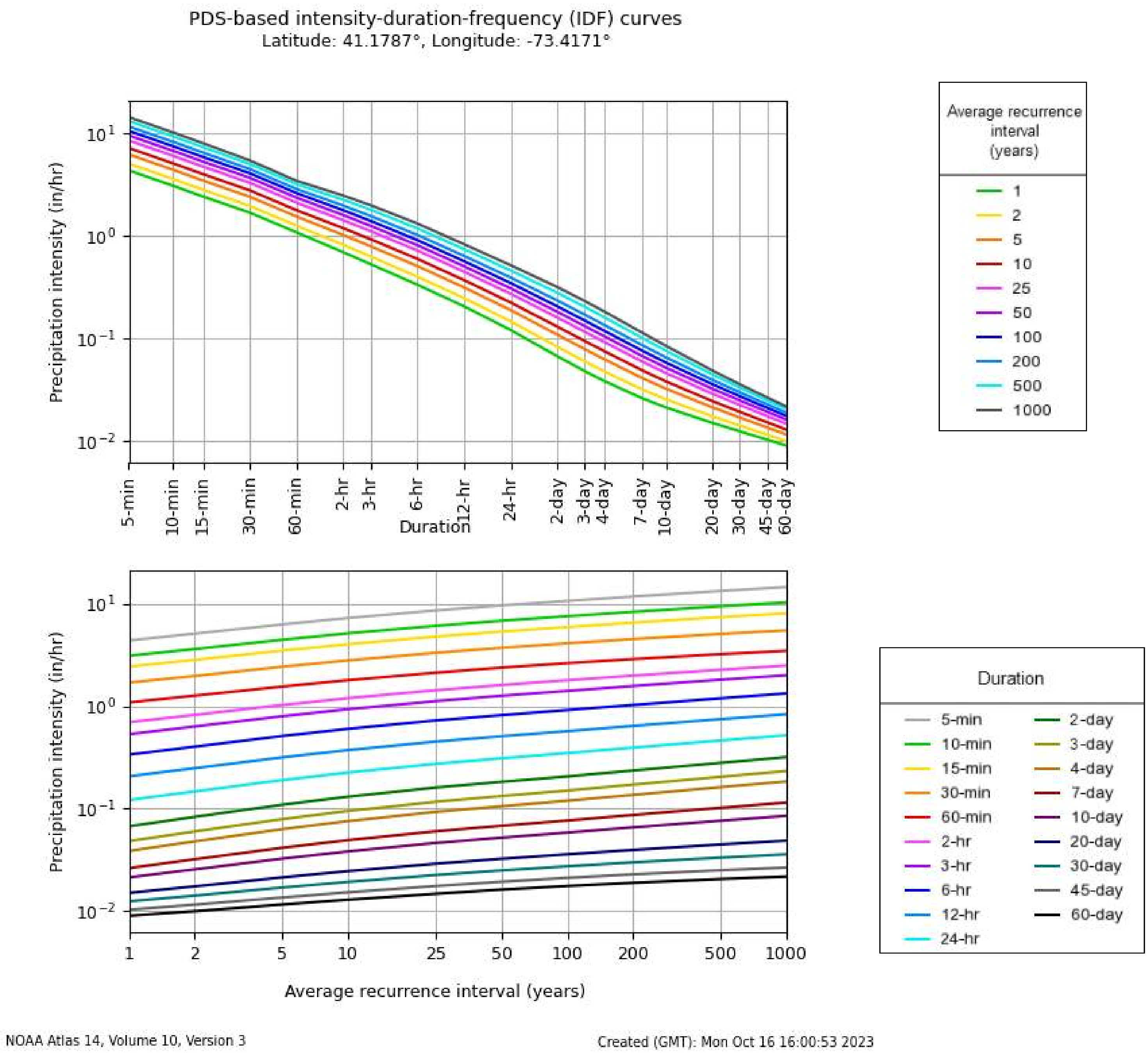
PF graphical



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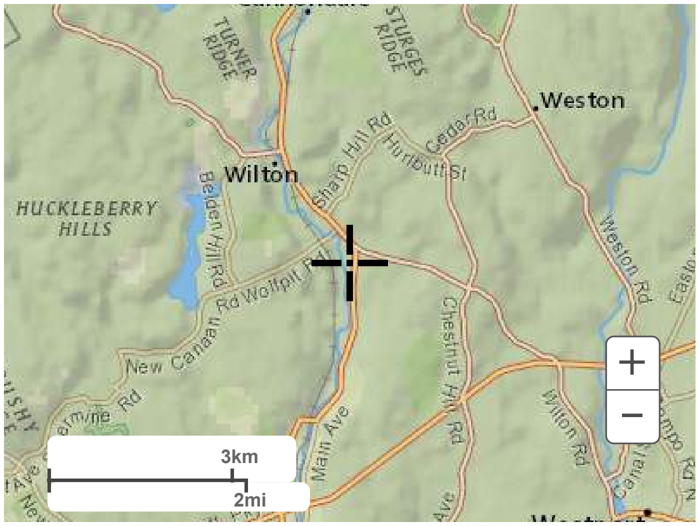
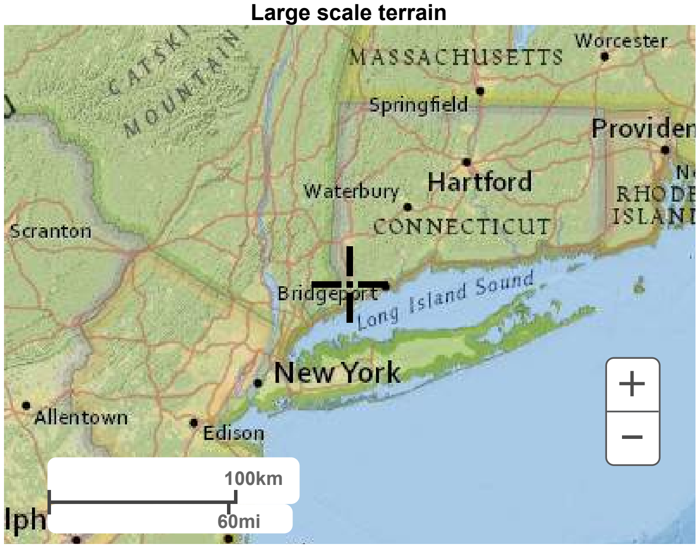
Maps & aerials

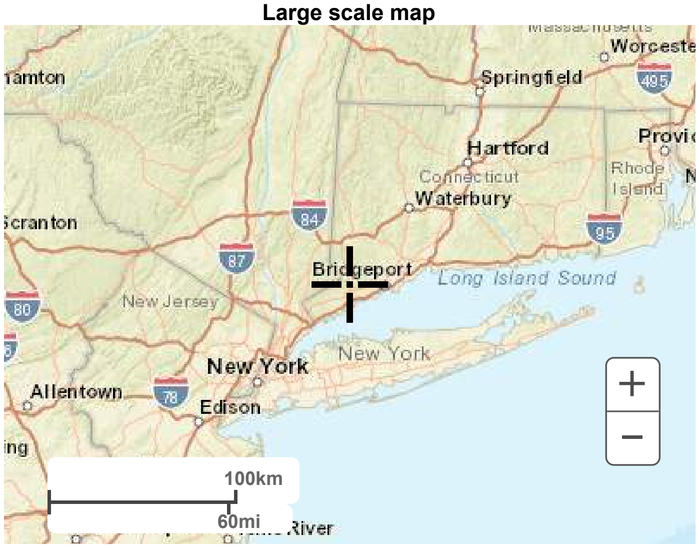
Small scale terrain



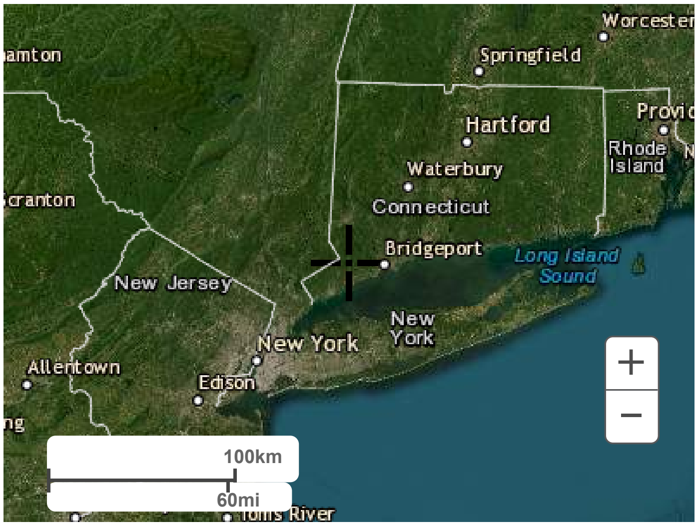
Large scale terrain



Large scale map



Large scale aerial



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National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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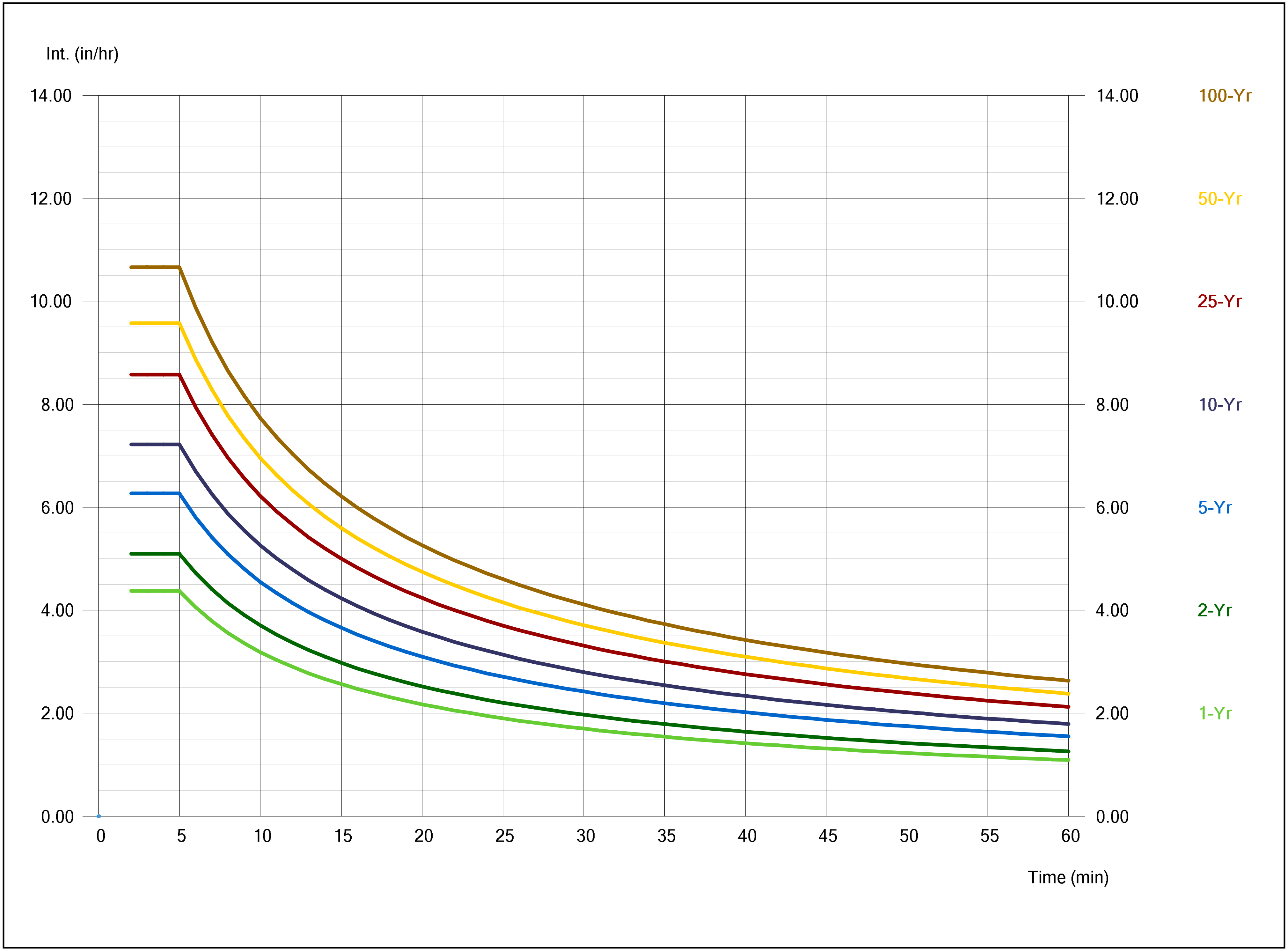
Storm Sewer IDF Curves

IDF file: wilton.IDF



Rational Method Individual Basin Calculations

Project: Proposed Multi-Family Development | By: RH | Date: Rev:1/5/24

Location: Wilton, Connecticut | Checked: | Date:

Basin Name	Impervious Area C=0.9 (sf)	Grassed Area C=0.3 (sf)	Wooded Area C=0.2 (sf)	Total Area (sf)	Total Area (ac)	Weighted C	Tc (min)
System 1 UG							
CCB 27	5008	7986	0	12994	0.30	0.53	5.0
CCB 28	8279	281	0	8560	0.20	0.88	5.0
CCB 29	678	0	0	678	0.02	0.90	5.0
CCB 30	675	0	0	675	0.02	0.90	5.0
System 3 UG							
CCB 7	4855	323	0	5178	0.12	0.86	5.0
CCB 10	4743	4000	0	8743	0.20	0.63	5.0
CCB 14	2320	74	0	2394	0.05	0.88	5.0
CCB 17	1062	0	0	1062	0.02	0.90	5.0
CCB 18	1860	1144	0	3004	0.07	0.67	5.0
OVFL 19	1883	6304	0	8187	0.19	0.44	5.0
CLCB 20	1759	0	0	1759	0.04	0.90	5.0
CLCB 21	1740	0	0	1740	0.04	0.90	5.0
Outlet							
CCB 6	3375	63	0	3438	0.08	0.89	5.0
CCB 26	3046	820	0	3866	0.09	0.77	5.0
CCB 26A	5350	1203	0	6553	0.15	0.79	5.0
OVFL 3	1885	4002	0	5887	0.14	0.49	5.0
OVFL 25	1069	5874	0	6943	0.16	0.39	5.0

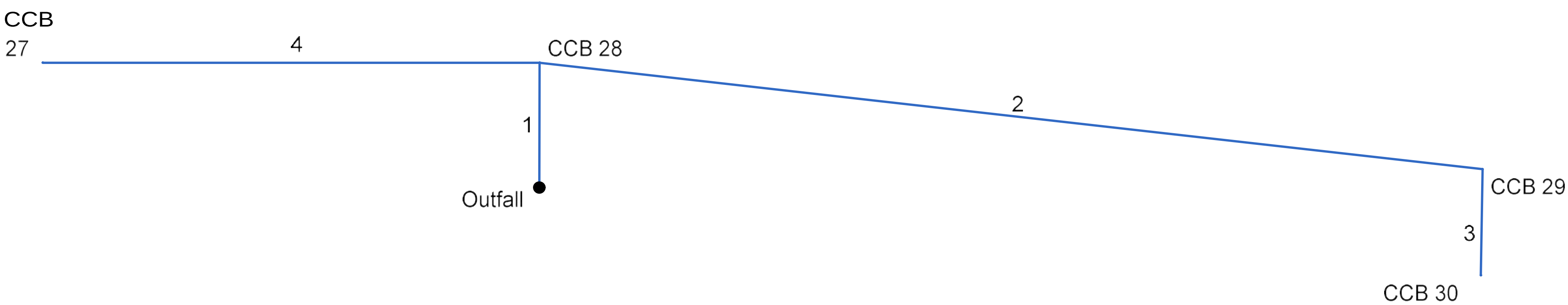
Rational Method Roof Drain System Calculations

Project: Proposed Multi-Family Development By: RH Date: Rev:1/5/24
Location: Wilton, Connecticut Checked: Date:

Total Roof Runoff to Proposed Storm Drainage System (In Hydraflow Model)

	ROOF TO FRONT LAWN RAIN GARDEN						
C	0.90						
I	8.59						
A	0.07						
Q	0.57						

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: System 1-02.stm	Number of lines: 4	Date: 1/5/2024

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	20.000	-89.848	Comb	0.00	0.20	0.88	5.0	142.60	2.00	143.00	12	Cir	0.012	1.50	151.20	MH 21 (S-1) - CCB
2	1	217.000	94.347	Comb	0.00	0.02	0.90	5.0	145.00	1.01	147.20	12	Cir	0.012	1.50	150.80	CCB 28 - CCB 29
3	2	17.000	86.938	Comb	0.00	0.02	0.90	5.0	147.20	0.59	147.30	12	Cir	0.012	1.00	150.80	CCB 29 - CCB 30
4	1	114.000	-90.149	Comb	0.00	0.30	0.53	5.0	143.00	0.88	144.00	12	Cir	0.012	1.00	147.50	CCB 28 - CCB 27

Project File: System 1-02.stm | Number of lines: 4 | Date: 1/5/2024

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Dn	Up	Dn	Up	Dn	Up	
		(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
1	End	20.000	0.20	0.54	0.88	0.18	0.37	5.0	6.6	7.6	2.83	5.46	4.13	12	2.00	142.60	143.00	143.60	143.72	151.50	151.20	MH 21 (S-1) - CC
2	1	217.000	0.02	0.04	0.90	0.02	0.04	5.0	5.2	8.4	0.30	3.88	2.61	12	1.01	145.00	147.20	145.19	147.43	151.20	150.80	CCB 28 - CCB 29
3	2	17.000	0.02	0.02	0.90	0.02	0.02	5.0	5.0	8.6	0.15	2.96	1.52	12	0.59	147.20	147.30	147.43	147.46	150.80	150.80	CCB 29 - CCB 30
4	1	114.000	0.30	0.30	0.53	0.16	0.16	5.0	5.0	8.6	1.36	3.61	2.89	12	0.88	143.00	144.00	143.72	144.49	151.20	147.50	CCB 28 - CCB 27

Project File: System 1-02.stm | Number of lines: 4 | Run Date: 1/5/2024

NOTES:Intensity = 38.51 / (Inlet time + 3.60) ^ 0.70; Return period =Yrs. 25 ; c = cir e = ellip b = box

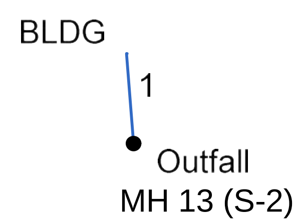
Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
	(in)	(cfs)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	(ft)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	Ave Sf (%)	Enrgy loss (ft)	(K)	(ft)
1	12	2.83	142.60	143.60	1.00	0.61	3.60	0.20	143.80	0.538	20.000	143.00	143.72 j	0.72**	0.61	4.67	0.34	144.06	0.712	0.625	n/a	1.50	0.51
2	12	0.30	145.00	145.19	0.19*	0.10	2.94	0.08	145.27	0.000	217.000	147.20	147.43	0.23**	0.13	2.27	0.08	147.51	0.000	0.000	n/a	1.50	n/a
3	12	0.15	147.20	147.43	0.23	0.08	1.15	0.06	147.48	0.000	17.000	147.30	147.46 j	0.16**	0.08	1.89	0.06	147.52	0.000	0.000	n/a	1.00	n/a
4	12	1.36	143.00	143.72	0.72	0.39	2.25	0.19	143.91	0.000	114.000	144.00	144.49 j	0.49**	0.39	3.53	0.19	144.69	0.000	0.000	n/a	1.00	0.19

Project File: System 1-02.stm | Number of lines: 4 | Run Date: 1/5/2024

Notes: * depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: System 2-02.stm	Number of lines: 1	Date: 1/5/2024

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	6.000	-93.988	None	4.54	0.00	0.00	0.0	143.20	1.67	143.30	12	Cir	0.012	1.00	151.20	MH 13 (S-2) - BLDG

Project File: System 2-02.stm	Number of lines: 1	Date: 1/5/2024

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	6.000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	4.54	4.98	5.81	12	1.67	143.20	143.30	144.20	144.27	150.70	151.20	MH 13 (S-2) - BL

Project File: System 2-02.stm | Number of lines: 1 | Run Date: 1/5/2024

NOTES:Intensity = 38.51 / (Inlet time + 3.60) ^ 0.70; Return period =Yrs. 25 ; c = cir e = ellip b = box

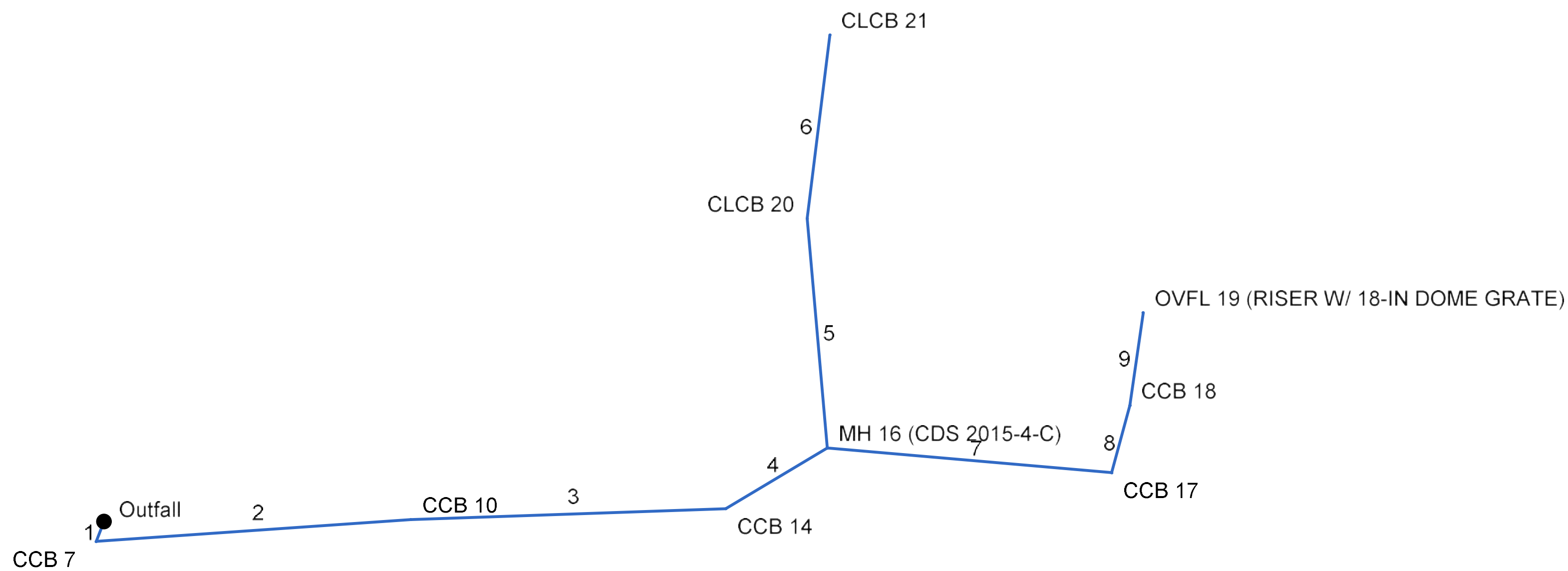
Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
1	12	4.54	143.20	144.20	1.00	0.79	5.78	0.52	144.72	1.385	6.000	143.30	144.27	0.97	0.78	5.84	0.53	144.80	1.216	1.301	0.078	1.00	0.53

Project File: System 2-02.stm	Number of lines: 1	Run Date: 1/5/2024

; c = cir e = ellip b = box

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: System 3-02.stm	Number of lines: 9	Date: 1/5/2024

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	8.000	111.000	Comb	0.00	0.12	0.86	5.0	141.00	1.25	141.10	18	Cir	0.012	1.50	144.80	MH 5 (S-3) - CCB 7
2	1	117.000	-115.000	Comb	0.00	0.20	0.63	5.0	141.10	1.20	142.50	12	Cir	0.012	0.50	147.10	CCB 7 - CCB 10
3	2	117.000	2.000	Comb	0.00	0.05	0.88	5.0	142.50	1.03	143.70	12	Cir	0.012	0.81	150.90	CCB 10 - CCB 14
4	3	44.000	-29.000	MH	0.00	0.00	0.00	0.0	143.70	1.36	144.30	12	Cir	0.012	0.92	152.50	CCB 14 - MH 16
5	4	86.000	-64.000	Grate	0.00	0.04	0.90	5.0	147.00	3.48	149.99	12	Cir	0.012	0.50	154.40	MH 16 - CLCB 20
6	5	69.000	12.000	Grate	0.00	0.04	0.90	5.0	150.00	0.94	150.65	12	Cir	0.012	1.00	154.40	CLCB 20 - CLCB 21
7	4	106.000	36.000	Comb	0.00	0.02	0.90	5.0	144.30	1.32	145.70	12	Cir	0.012	1.48	149.50	MH 16 - CCB 17
8	7	26.000	-80.000	Comb	0.00	0.07	0.67	5.0	145.70	0.77	145.90	12	Cir	0.012	0.50	149.60	CCB 17 - CCB 18
9	8	35.000	-7.000	DrGrt	0.00	0.19	0.44	5.0	145.55	1.00	145.90	12	Cir	0.012	1.00	149.00	CCB 18 - OVFL 19

Project File: System 3-02.stm | Number of lines: 9 | Date: 1/5/2024

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Dn	Up	Dn	Up	Dn	Up	
		(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
1	End	8.000	0.12	0.73	0.86	0.10	0.49	5.0	7.2	7.3	3.60	12.72	2.07	18	1.25	141.00	141.10	142.50	142.50	144.90	144.80	MH 5 (S-3) - CCB
2	1	117.000	0.20	0.61	0.63	0.13	0.39	5.0	6.8	7.5	2.94	4.22	4.23	12	1.20	141.10	142.50	142.61	143.24	144.80	147.10	CCB 7 - CCB 10
3	2	117.000	0.05	0.41	0.88	0.04	0.26	5.0	6.2	7.8	2.07	3.91	3.42	12	1.03	142.50	143.70	143.41	144.31	147.10	150.90	CCB 10 - CCB 14
4	3	44.000	0.00	0.36	0.00	0.00	0.22	0.0	6.0	7.9	1.75	4.51	3.65	12	1.36	143.70	144.30	144.31	144.86	150.90	152.50	CCB 14 - MH 16
5	4	86.000	0.04	0.08	0.90	0.04	0.07	5.0	5.6	8.2	0.59	7.19	4.12	12	3.48	147.00	149.99	147.19	150.31	152.50	154.40	MH 16 - CLCB 20
6	5	69.000	0.04	0.04	0.90	0.04	0.04	5.0	5.0	8.6	0.31	3.74	1.89	12	0.94	150.00	150.65	150.31	150.88	154.40	154.40	CLCB 20 - CLCB
7	4	106.000	0.02	0.28	0.90	0.02	0.15	5.0	5.4	8.3	1.23	4.43	3.06	12	1.32	144.30	145.70	144.86	146.17	152.50	149.50	MH 16 - CCB 17
8	7	26.000	0.07	0.26	0.67	0.05	0.13	5.0	5.3	8.4	1.09	3.38	3.16	12	0.77	145.70	145.90	146.17	146.34	149.50	149.60	CCB 17 - CCB 18
9	8	35.000	0.19	0.19	0.44	0.08	0.08	5.0	5.0	8.6	0.72	3.86	1.99	12	1.00	145.55	145.90	146.34	146.25	149.60	149.00	CCB 18 - OVFL 1

Project File: System 3-02.stm | Number of lines: 9 | Run Date: 1/5/2024

NOTES:Intensity = 38.51 / (Inlet time + 3.60) ^ 0.70; Return period =Yrs. 25 ; c = cir e = ellip b = box

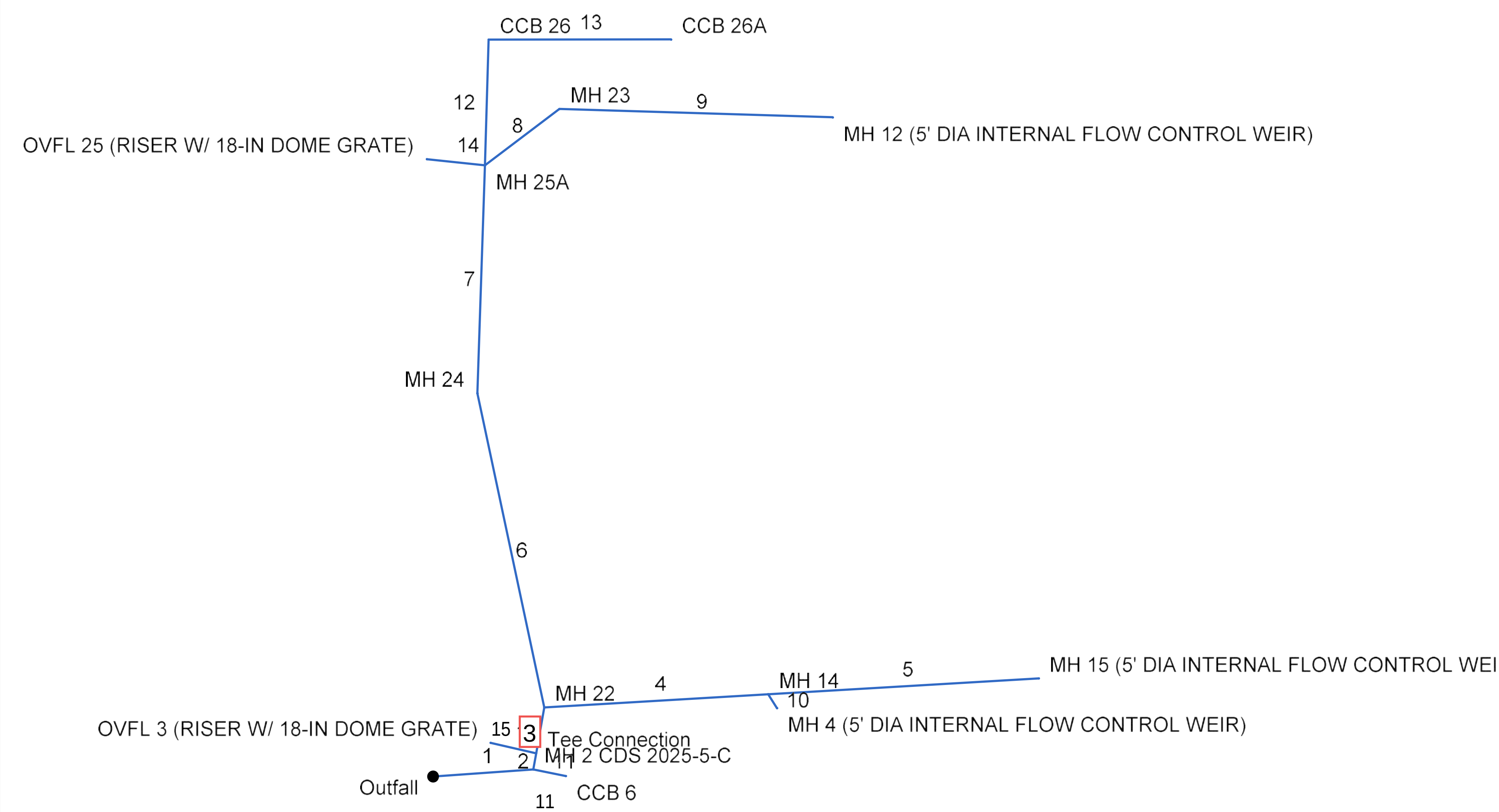
Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
1	18	3.60	141.00	142.50	1.50	1.77	2.04	0.06	142.56	0.100	8.000	141.10	142.50	1.40	1.72	2.09	0.07	142.57	0.087	0.093	0.007	1.50	0.10
2	12	2.94	141.10	142.61	1.00	0.62	3.74	0.22	142.82	0.579	117.000	142.50	143.24 j	0.74**	0.62	4.72	0.35	143.59	0.723	0.651	0.762	0.50	0.17
3	12	2.07	142.50	143.41	0.91	0.51	2.75	0.26	143.67	0.000	117.000	143.70	144.31 j	0.61**	0.51	4.09	0.26	144.57	0.000	0.000	n/a	0.81	0.21
4	12	1.75	143.70	144.31	0.61	0.45	3.46	0.23	144.54	0.000	44.000	144.30	144.86 j	0.56**	0.45	3.85	0.23	145.09	0.000	0.000	n/a	0.92	0.21
5	12	0.59	147.00	147.19	0.19*	0.11	5.52	0.12	147.31	0.000	86.000	149.99	150.31	0.32**	0.22	2.73	0.12	150.42	0.000	0.000	n/a	0.50	n/a
6	12	0.31	150.00	150.31	0.31	0.14	1.50	0.08	150.39	0.000	69.000	150.65	150.88 j	0.23**	0.14	2.28	0.08	150.96	0.000	0.000	n/a	1.00	n/a
7	12	1.23	144.30	144.86	0.56	0.36	2.71	0.18	145.04	0.000	106.000	145.70	146.17 j	0.47**	0.36	3.41	0.18	146.35	0.000	0.000	n/a	1.48	0.27
8	12	1.09	145.70	146.17	0.47	0.33	3.03	0.17	146.34	0.000	26.000	145.90	146.34 j	0.44**	0.33	3.29	0.17	146.51	0.000	0.000	n/a	0.50	0.08
9	12	0.72	145.55	146.34	0.79	0.25	1.08	0.13	146.47	0.000	35.000	145.90	146.25	0.35**	0.25	2.89	0.13	146.38	0.000	0.000	n/a	1.00	n/a

Project File: System 3-02.stm | Number of lines: 9 | Run Date: 1/5/2024

Notes: * depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: Outlet System 1 2 and 3 - 02.stm	Number of lines: 15	Date: 1/5/2024

Storm Sewers v2023.00

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	43.000	-4.075	MH	0.00	0.00	0.00	0.0	137.30	0.70	137.60	24	Cir	0.012	0.98	142.70	HEADWALL 1 - MH 2
2	1	7.000	-75.824	None	0.00	0.00	0.00	0.0	137.60	1.43	137.70	24	Cir	0.012	1.00	143.00	MH 2 - TEE
3	2	20.000	0.000	MH	0.00	0.00	0.00	0.0	137.70	0.50	137.80	24	Cir	0.012	0.98	143.30	TEE - MH 22
4	3	96.000	76.527	MH	0.00	0.00	0.00	0.0	137.80	3.73	141.38	15	Cir	0.012	0.90	145.10	MH 22 - MH 14
5	4	116.000	0.000	MH	4.07	0.00	0.00	0.0	141.50	1.98	143.80	15	Cir	0.012	1.00	147.30	MH 14 - MH 15
6	3	138.000	-22.113	MH	0.00	0.00	0.00	0.0	137.80	0.43	138.40	18	Cir	0.012	0.29	143.10	MH 22 - MH 24
7	6	98.000	13.934	MH	0.00	0.00	0.00	0.0	138.40	0.41	138.80	18	Cir	0.012	1.00	143.10	MH 24 - MH 25A
8	7	40.000	50.948	MH	0.00	0.00	0.00	0.0	139.60	0.50	139.80	15	Cir	0.012	0.68	143.30	MH 25A - MH 23
9	8	117.000	38.878	MH	3.10	0.00	0.00	0.0	139.80	2.91	143.20	12	Cir	0.012	1.00	146.70	MH 23 - MH 12
10	4	7.000	60.852	MH	3.34	0.00	0.00	0.0	141.50	1.43	141.60	12	Cir	0.012	1.00	145.10	MH 14 - MH 4
11	1	14.203	15.546	Comb	0.00	0.08	0.89	5.0	139.86	0.99	140.00	12	Cir	0.012	1.00	143.20	MH 2 - CCB 6
12	7	54.000	-0.186	Comb	0.00	0.09	0.77	5.0	138.80	0.74	139.20	15	Cir	0.012	1.50	142.70	MH 25A - CCB 26
13	12	78.000	88.216	Comb	0.00	0.15	0.79	5.0	139.20	1.41	140.30	12	Cir	0.012	1.00	143.80	CCB 26 - CCB 26A
14	7	25.000	-85.916	DrGrt	1.09	0.00	0.00	0.0	138.80	0.80	139.00	8	Cir	0.012	1.00	140.00	MH 25A - OVFL 25
15	2	20.000	-87.138	DrGrt	0.85	0.00	0.00	0.0	137.65	1.75	138.00	8	Cir	0.012	1.00	141.00	TEE - OVFL 3

Project File: Outlet System 1 2 and 3 - 02.stm | Number of lines: 15 | Date: 1/5/2024

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	43.000	0.00	0.32	0.00	0.00	0.26	0.0	7.7	8.8	14.74	20.47	4.81	24	0.70	137.30	137.60	139.30	139.41	139.43	142.70	HEADWALL 1 - M
2	1	7.000	0.00	0.24	0.00	0.00	0.19	0.0	7.6	8.8	14.11	29.28	4.49	24	1.43	137.60	137.70	139.78	139.80	142.70	143.00	MH 2 - TEE
3	2	20.000	0.00	0.24	0.00	0.00	0.19	0.0	7.6	8.9	13.27	17.33	4.22	24	0.50	137.70	137.80	140.12	140.18	143.00	143.30	TEE - MH 22
4	3	96.000	0.00	0.00	0.00	0.00	0.00	0.0	0.4	0.0	7.41	13.51	6.30	15	3.73	137.80	141.38	140.45	142.46	143.30	145.10	MH 22 - MH 14
5	4	116.000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	4.07	9.85	4.40	15	1.98	141.50	143.80	142.46	144.62	145.10	147.30	MH 14 - MH 15
6	3	138.000	0.00	0.24	0.00	0.00	0.19	0.0	6.9	9.3	5.93	7.50	3.36	18	0.43	137.80	138.40	140.45	140.82	143.30	143.10	MH 22 - MH 24
7	6	98.000	0.00	0.24	0.00	0.00	0.19	0.0	6.4	9.6	5.99	7.27	3.39	18	0.41	138.40	138.80	140.88	141.15	143.10	143.10	MH 24 - MH 25A
8	7	40.000	0.00	0.00	0.00	0.00	0.00	0.0	0.4	0.0	3.10	4.95	2.53	15	0.50	139.60	139.80	141.33	141.41	143.10	143.30	MH 25A - MH 23
9	8	117.000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	3.10	6.58	4.41	12	2.91	139.80	143.20	141.47	143.95	143.30	146.70	MH 23 - MH 12
10	4	7.000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	3.34	4.61	4.69	12	1.43	141.50	141.60	142.46	142.38	145.10	145.10	MH 14 - MH 4
11	1	14.203	0.08	0.08	0.89	0.07	0.07	5.0	5.0	10.7	0.76	3.83	3.37	12	0.99	139.86	140.00	140.16	140.36	142.70	143.20	MH 2 - CCB 6
12	7	54.000	0.09	0.24	0.77	0.07	0.19	5.0	5.8	10.0	1.88	6.02	1.53	15	0.74	138.80	139.20	141.33	141.37	143.10	142.70	MH 25A - CCB 26
13	12	78.000	0.15	0.15	0.79	0.12	0.12	5.0	5.0	10.7	1.26	4.58	1.61	12	1.41	139.20	140.30	141.42	141.50	142.70	143.80	CCB 26 - CCB 26
14	7	25.000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	1.09	1.17	3.12	8	0.80	138.80	139.00	141.33	141.50	143.10	140.00	MH 25A - OVFL 2
15	2	20.000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.85	1.73	2.44	8	1.75	137.65	138.00	140.12	140.20	143.00	141.00	TEE - OVFL 3

Project File: Outlet System 1 2 and 3 - 02.stm | Number of lines: 15 | Run Date: 1/5/2024

NOTES:Intensity = 48.06 / (Inlet time + 3.60) ^ 0.70; Return period =Yrs. 100 ; c = cir e = ellip b = box

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
1	24	14.74	137.30	139.30	2.00	3.14	4.69	0.34	139.64	0.362	43.000	137.60	139.41	1.81	2.99	4.93	0.38	139.79	0.317	0.339	0.146	0.98	0.37
2	24	14.11	137.60	139.78	2.00	3.14	4.49	0.31	140.10	0.332	7.000	137.70	139.80	2.00	3.14	4.49	0.31	140.12	0.332	0.332	0.023	1.00	0.31
3	24	13.27	137.70	140.12	2.00	3.14	4.22	0.28	140.40	0.293	20.000	137.80	140.18	2.00	3.14	4.22	0.28	140.45	0.293	0.293	0.059	0.98	0.27
4	15	7.41	137.80	140.45	1.25	1.13	6.04	0.57	141.02	1.122	96.000	141.38	142.46 j	1.08**	1.13	6.56	0.67	143.13	1.028	1.075	n/a	0.90	0.60
5	15	4.07	141.50	142.46	0.96	0.85	4.01	0.36	142.82	0.000	116.000	143.80	144.62 j	0.82**	0.85	4.80	0.36	144.97	0.000	0.000	n/a	1.00	n/a
6	18	5.93	137.80	140.45	1.50	1.77	3.36	0.18	140.62	0.272	138.000	138.40	140.82	1.50	1.77	3.36	0.18	141.00	0.272	0.272	0.376	0.29	0.05
7	18	5.99	138.40	140.88	1.50	1.77	3.39	0.18	141.05	0.278	98.000	138.80	141.15	1.50	1.77	3.39	0.18	141.33	0.278	0.278	0.272	1.00	0.18
8	15	3.10	139.60	141.33	1.25	1.23	2.53	0.10	141.43	0.196	40.000	139.80	141.41	1.25	1.23	2.53	0.10	141.50	0.196	0.196	0.079	0.68	0.07
9	12	3.10	139.80	141.47	1.00	0.64	3.95	0.24	141.71	0.646	117.000	143.20	143.95 j	0.75**	0.64	4.88	0.37	144.32	0.767	0.707	n/a	1.00	0.37
10	12	3.34	141.50	142.46	0.96	0.66	4.30	0.40	142.86	0.000	7.000	141.60	142.38	0.78**	0.66	5.07	0.40	142.78	0.000	0.000	n/a	1.00	n/a
11	12	0.76	139.86	140.16	0.30*	0.20	3.80	0.13	140.30	0.000	14.203	140.00	140.36	0.36**	0.26	2.94	0.13	140.50	0.000	0.000	n/a	1.00	0.13
12	15	1.88	138.80	141.33	1.25	1.23	1.53	0.04	141.36	0.072	54.000	139.20	141.37	1.25	1.23	1.53	0.04	141.40	0.072	0.072	0.039	1.50	0.05
13	12	1.26	139.20	141.42	1.00	0.79	1.61	0.04	141.46	0.107	78.000	140.30	141.50	1.00	0.79	1.61	0.04	141.54	0.107	0.107	0.084	1.00	0.04
14	8	1.09	138.80	141.33	0.67	0.35	3.12	0.15	141.48	0.694	25.000	139.00	141.50	0.67	0.35	3.12	0.15	141.65	0.694	0.694	0.174	1.00	0.15
15	8	0.85	137.65	140.12	0.67	0.35	2.44	0.09	140.21	0.422	20.000	138.00	140.20	0.67	0.35	2.44	0.09	140.30	0.422	0.422	0.084	1.00	0.09

Project File: Outlet System 1 2 and 3 - 02.stm	Number of lines: 15	Run Date: 1/5/2024

Notes: * depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box

	SLR Consulting	Project	**21543.00001**
	COMPUTATION SHEET - WATER QUALITY FLOW (WQF)	Made By:	JLS
Subject:	**131 Danbury Rd, Wilton, Connecticut**	Date:	1/5/2024
		Chkd by:	
		Date:	

CDS Unit - MH 16

Contributing Basins	Imperv. Area (acres)	Total Area (acres)
Total	0.89	1.11

Table 4.1: WQV = (P)(R_v)(A)/12 =	0.071	acre-feet	
Where:			
I = % of Impervious Cover =	80%		
R_v = volumetric runoff coeff. 0.05 + 0.009(I) =	0.772		
P = design precipitation (1.0" for water quality storm) =	1	inch	
A = site area (acres) =	1.11	acres =	0.0017 miles^2

Q = runoff depth (in watershed inches) = [WQV(acrefeet)]*[12(inches/foot)]/drainage area (acres)

Q = 0.772

CN = 1000 / [10+ 5P + 10Q -10(Q^2 + 1.25QP)$^{0.5}$] = 98

Where:

Q = runoff depth (in watershed inches)

t_c = 0.1 hours

Type III Rainfall Distribution:

From Table 4-1, Ia =	0.041		Ia/P =	0.041
(TR-55)				
From Exhibit 4-III, q_u =	700	csm/in.		
(TR-55)				
WQF = (qu)(A)(Q) =	0.94	cfs		**CDS 2025-5-C Flow = 3.2 cfs -> OK**

MH 2

2. Compute the time of concentration (t_c) based on the methods described in Chapter 3 of TR-55. A minimum value of 0.167 hours (10 minutes) should be used. For sheet flow, the flow path should not be longer than 300 feet.

3. Using the computed CN, t_c, and drainage area (A) in acres, compute the peak discharge for the water quality storm (i.e., the water quality flow [WQF]), based on the procedures described in Chapter 4 of TR-55.

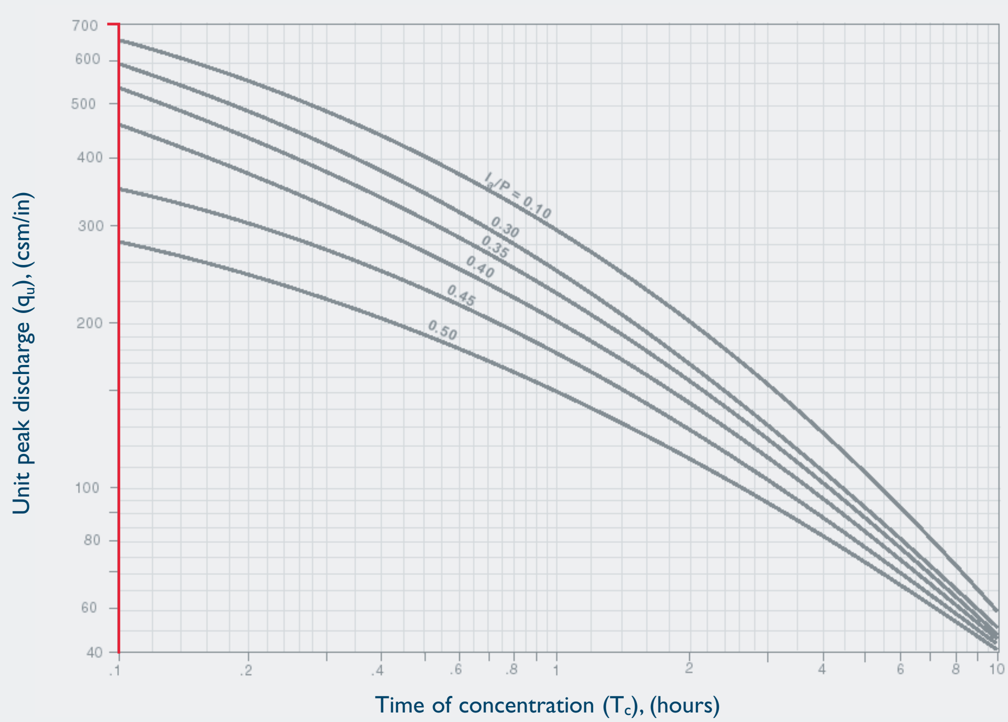
   ❍ *Read initial abstraction (I_a) from Table 4-1 in Chapter 4 of TR-55 (reproduced below); compute I_a/P*

Table 4-1 I_a values for runoff curve numbers

Curve number	I_a (in)	Curve number	I_a (in)	Curve number	I_a (in)	Curve number	I_a (in)
40	3.000	55	1.636	70	0.857	85	0.353
41	2.878	56	1.571	71	0.817	86	0.326
42	2.762	57	1.509	72	0.778	87	0.299
43	2.651	58	1.448	73	0.740	88	0.273
44	2.545	59	1.390	74	0.703	89	0.247
45	2.444	60	1.333	75	0.667	90	0.222
46	2.348	61	1.279	76	0.632	91	0.198
47	2.255	62	1.226	77	0.597	92	0.174
48	2.167	63	1.175	78	0.564	93	0.151
49	2.082	64	1.125	79	0.532	94	0.128
50	2.000	65	1.077	80	0.500	95	0.105
51	1.922	66	1.030	81	0.469	96	0.083
52	1.846	67	0.985	82	0.439	97	0.062
53	1.774	68	0.941	83	0.410	98	0.041
54	1.704	69	0.899	84	0.381		

   ❍ *Read the unit peak discharge (q_u) from Exhibit 4-III in Chapter 4 of TR-55 (reproduced below) for appropriate t_c*

Exhibit 4-III Unit peak discharge (q_u) for NRCS (SCS) type III rainfall distribution



MH 2

Product Flow Rates

CASCADE

Model	Treatment Rate (cfs)	Sediment Capacity[1] (CF)
CS-4	2.00	19
CS-5	3.50	29
CS-6	5.60	42
CS-8	12.00	75
CS-10	18.00	118

CDS

Model	Treatment Rate[2] (cfs)	Sediment Capacity[1] (CF)
1515-3	1.00	14
2015-4	1.40	25
2015-5	1.40	39
2015-6	1.40	57
2020-5	2.20	39
2020-6	2.20	57
2025-5	3.20	39
2025-6	3.20	57
3020-6	3.90	57
3025-6	5.00	57
3030-6	5.70	57
3035-6	6.50	57
4030-8	7.50	151
4040-8	9.50	151

VORTECHS

Model	Treatment Rate (cfs)	Sediment Capacity[3] (CF)
1000	1.60	16
2000	2.80	32
3000	4.50	49
4000	6.00	65
5000	8.50	86
7000	11.00	108
9000	14.00	130
11000	17.5	151
16000	25	192

STORMCEPTOR STC

Model	Treatment Rate (cfs)	Sediment Capacity[1] (CF)
STC 450i	0.40	46
STC 900	0.89	89
STC 2400	1.58	205
STC 4800	2.47	543
STC 7200	3.56	839
STC 11000	4.94	1086
STC 16000	7.12	1677

1 *Additional sediment storage capacity available – Check with your local representative for information.*

2 *Treatment Capacity is based on laboratory testing using OK-110 (average D50 particle size of approximately 100 microns) and a 2400 micron screen.*

3 *Maintenance recommended when sediment depth has accumulated to within 12-18 inches of the dry weather water surface elevation.*

	SLR Consulting		Project	**21543.00001**
	COMPUTATION SHEET - WATER QUALITY FLOW (WQF)		Made By:	JLS
Subject:	**131 Danbury Rd, Wilton, Connecticut**		Date:	11/29/2023
			Chkd by:	
			Date:	

CDS Unit - MH 13								
Contributing Basins			Imperv. Area (acres)	Total Area (acres)				
Total			1.84	1.84				
Table 4.1: WQV = (P)(R_v)(A)/12 =				0.146	acre-feet			
Where:								
I = % of Impervious Cover =				100%				
R_v = volumetric runoff coeff. 0.05 + 0.009(I) =				0.950				
P = design precipitation (1.0" for water quality storm) =					1	inch		
A = site area (acres) =				1.838	acres =	0.0029	miles^2	
Q = runoff depth (in watershed inches) = [WQV(acrefeet)]*[12(inches/foot)]/drainage area (acres)								
			Q =	0.950				
CN = 1000 / [10+ 5P + 10Q -10(Q^2 + 1.25QP)$^{0.5}$] =					100			
Where:								
Q = runoff depth (in watershed inches)								
			t_c =	0.1	hours			
Type III Rainfall Distribution:								
From Table 4-1, Ia =		98		Ia/P =	98			
(TR-55)								
From Exhibit 4-III, q_u =		700	csm/in.					
(TR-55)								
WQF = (qu)(A)(Q) =		1.91	cfs		**Cascade CS-4 Flow = 2.0 cfs -> OK**			

2. Compute the time of concentration (t_c) based on the methods described in Chapter 3 of TR-55. A minimum value of 0.167 hours (10 minutes) should be used. For sheet flow, the flow path should not be longer than 300 feet.

3. Using the computed CN, t_c, and drainage area (A) in acres, compute the peak discharge for the water quality storm (i.e., the water quality flow [WQF]), based on the procedures described in Chapter 4 of TR-55.

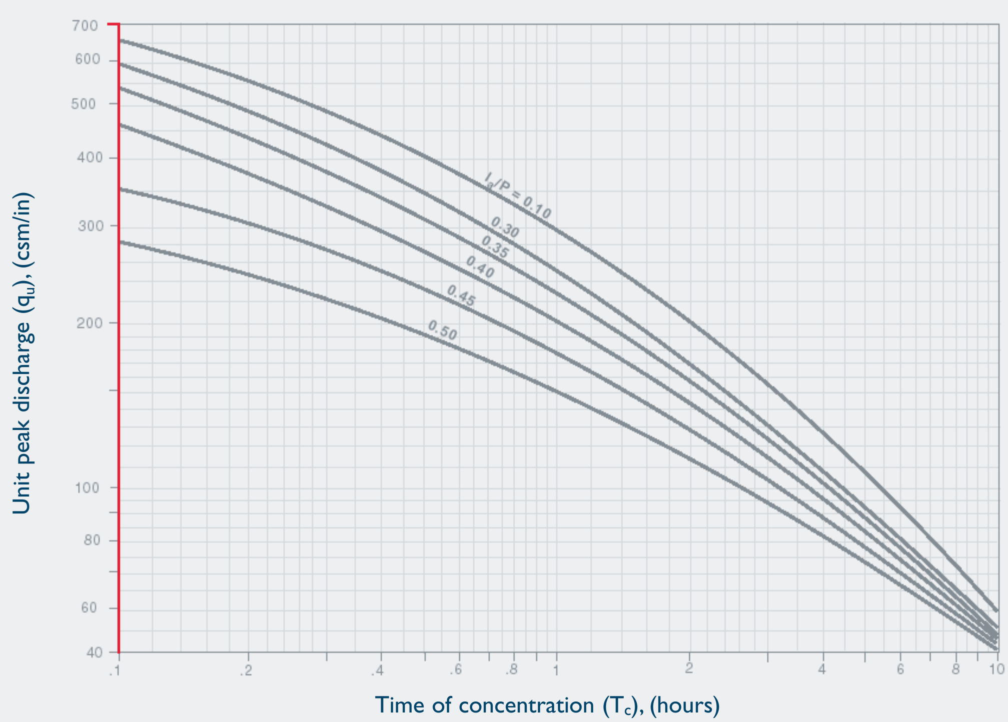
   ❍ *Read initial abstraction (I_a) from Table 4-1 in Chapter 4 of TR-55 (reproduced below); compute I_a/P*

Table 4-1 I_a values for runoff curve numbers

Curve number	I_a (in)	Curve number	I_a (in)	Curve number	I_a (in)	Curve number	I_a (in)
40	3.000	55	1.636	70	0.857	85	0.353
41	2.878	56	1.571	71	0.817	86	0.326
42	2.762	57	1.509	72	0.778	87	0.299
43	2.651	58	1.448	73	0.740	88	0.273
44	2.545	59	1.390	74	0.703	89	0.247
45	2.444	60	1.333	75	0.667	90	0.222
46	2.348	61	1.279	76	0.632	91	0.198
47	2.255	62	1.226	77	0.597	92	0.174
48	2.167	63	1.175	78	0.564	93	0.151
49	2.082	64	1.125	79	0.532	94	0.128
50	2.000	65	1.077	80	0.500	95	0.105
51	1.922	66	1.030	81	0.469	96	0.083
52	1.846	67	0.985	82	0.439	97	0.062
53	1.774	68	0.941	83	0.410	98	0.041
54	1.704	69	0.899	84	0.381		

   ❍ *Read the unit peak discharge (q_u) from Exhibit 4-III in Chapter 4 of TR-55 (reproduced below) for appropriate t_c*

Exhibit 4-III Unit peak discharge (q_u) for NRCS (SCS) type III rainfall distribution



Product Flow Rates

CASCADE

Model	Treatment Rate (cfs)	Sediment Capacity[1] (CF)
CS-4	2.00	19
CS-5	3.50	29
CS-6	5.60	42
CS-8	12.00	75
CS-10	18.00	118

CDS

Model	Treatment Rate[2] (cfs)	Sediment Capacity[1] (CF)
1515-3	1.00	14
2015-4	1.40	25
2015-5	1.40	39
2015-6	1.40	57
2020-5	2.20	39
2020-6	2.20	57
2025-5	3.20	39
2025-6	3.20	57
3020-6	3.90	57
3025-6	5.00	57
3030-6	5.70	57
3035-6	6.50	57
4030-8	7.50	151
4040-8	9.50	151

VORTECHS

Model	Treatment Rate (cfs)	Sediment Capacity[3] (CF)
1000	1.60	16
2000	2.80	32
3000	4.50	49
4000	6.00	65
5000	8.50	86
7000	11.00	108
9000	14.00	130
11000	17.5	151
16000	25	192

STORMCEPTOR STC

Model	Treatment Rate (cfs)	Sediment Capacity[1] (CF)
STC 450i	0.40	46
STC 900	0.89	89
STC 2400	1.58	205
STC 4800	2.47	543
STC 7200	3.56	839
STC 11000	4.94	1086
STC 16000	7.12	1677

1 *Additional sediment storage capacity available – Check with your local representative for information.*
2 *Treatment Capacity is based on laboratory testing using OK-110 (average D50 particle size of approximately 100 microns) and a 2400 micron screen.*
3 *Maintenance recommended when sediment depth has accumulated to within 12-18 inches of the dry weather water surface elevation.*

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Outlet Protection Calculations

Project:	Proposed Multi-Family Development	By:	RH	Date:	11/02/23
Location:	Wilton, Connecticut	Checked:		Date:	Rev:1/5/24
Outlet I.D.	**HEADWALL 1 TO RIVER**				

*Based on Connecticut DOT Drainage Manual, Section 11.13

Description:

CONCRETE HEADWALL 1 TO RIVER

Design Criteria (100-yr Storm Event):

Q (cfs) =	14.74	R_p (ft)=	2
D (in) =	24	S_p (ft) =	2
V (fps) =	4.81	Tw (ft)=	0.3

Q= Flow rate at discharge point in cubic feet per second (cfs)
D= Outlet pipe diameter (in)
V= Flow velocity at discharge point (ft/s)
R_p= Maximum inside pipe rise (ft)
S_p= inside diametere for circular sections of maximum inside pipe span for non-circular sections (ft)
T_w= Tailwater depth (ft)

Based on **Table 11-12.1** use Type 'A' ---> TW< 0.5 Rp

Rip Rap Stone Size:

Velocity	Rip Rap Specification	D_{50} Stone Size
0-8 fps	Modified	5 inches

Preformed Scour Hole Dimensions:

F(ft)=0.5(R_p)	=	n/a
C(ft)=3.0(S_p)+6.0(F)	=	n/a
B(ft)=2.0(S_p)+6.0(F)	=	n/a

Rip Rap Splash Pad Dimensions:

L_a	=	15	ft
W1 = 3.0(S_p) min.	=	6	ft
W2 = 3.0(Sp)+0.7(La) min.	=	17	ft
d (Depth of Stone)	=	12	inches

SLR

Outlet Protection Calculations

Project:	Proposed Multi-Family Development	By:	RH	Date:	Rev:1/5/24
Location:	Wilton, Connecticut	Checked:		Date:	
Outlet I.D.	**JEWEL BOX ROOFDRAIN**				

*Based on Connecticut DOT Drainage Manual, Section 11.13

Description:

Jewel Box roof drain to front lawn

Design Criteria (100-yr Storm Event):

Q (cfs) =	0.57	R_p (ft)=	1
D (in) =	12	S_p (ft) =	1
V (fps) =	1.87	Tw (ft)=	1

Q= Flow rate at discharge point in cubic feet per second (cfs)
D= Outlet pipe diameter (in)
V= Flow velocity at discharge point (ft/s)
R_p= Maximum inside pipe rise (ft)
S_p= inside diametere for circular sections of maximum inside pipe span for non-circular sections (ft)
T_w= Tailwater depth (ft)

Based on **Table 11-13.1** use Type 'B' ---> TW≥ 0.5 Rp

Rip Rap Stone Size:

Velocity	Rip Rap Specification	D_{50} Stone Size
0-8 fps	Modified	5 inches

Preformed Scour Hole Dimensions:

F(ft)=0.5(R_p)	=	n/a
C(ft)=3.0(S_p)+6.0(F)	=	n/a
B(ft)=2.0(S_p)+6.0(F)	=	n/a

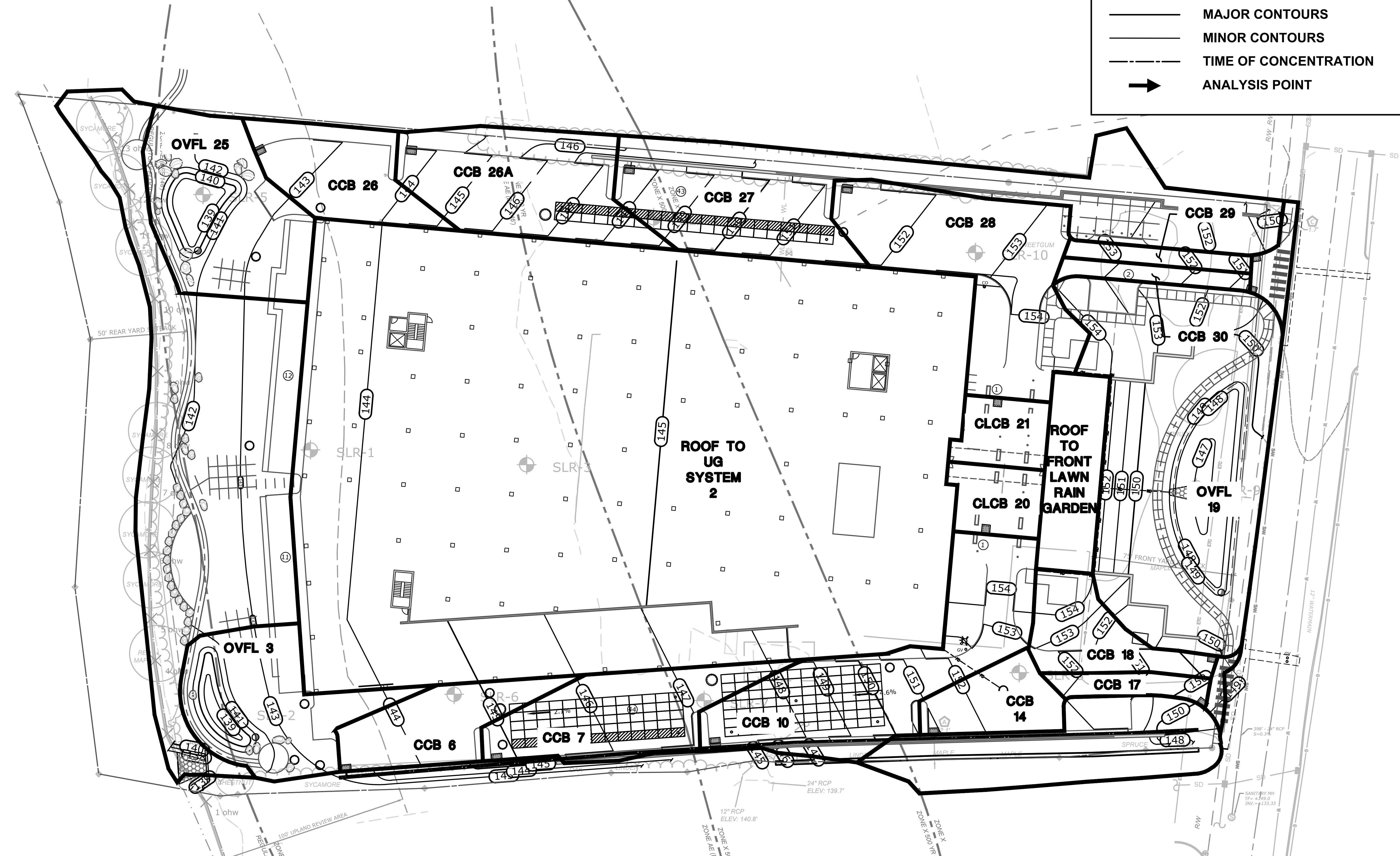
Rip Rap Splash Pad Dimensions:

L_a	=	10	ft
W1 = 3.0(S_p) min.	=	3	ft
W2 = 3.0(Sp)+0.4(La) min.	=	7	ft
d (Depth of Stone)	=	12	inches

SLR

LEGEND

- PROPOSED WATERSHED AREA
- MAJOR CONTOURS
- MINOR CONTOURS
- TIME OF CONCENTRATION
- ANALYSIS POINT



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REVISIONS
1/05/2024

DRAINAGE AREA MAP - PROPOSED CONDITIONS
PROPOSED MULTI-FAMILY DEVELOPMENT
131 DANBURY ROAD
WILTON, CONNECTICUT

DESIGNED	DRAWN	CHECKED
HM	HM	MG

SCALE: 1"=50'
DATE: NOVEMBER 2, 2023
PROJECT NO.: 21543.00001
SHEET NO.: CB

Appendix E
Water Quality Computations

Proposed Multifamily Development

131 Danbury Road, Wilton, Connecticut
Drainage Report

Ryan Sutherland, AMS Acquisitions Management Corporation

SLR Project No.: 141.21543.0000171

October 23, 2023

Water Quality Volume (WQV)

Site Area	=	4.752	ac
Impervious Area	=	2.96	ac
Percent Impervious Cover, I	=	62	%
Volumetric Runoff Coefficient, R $R = 0.05 + 0.009(I)$	=	0.610	
Water Quality Volume $WQV = \frac{(1")(R)(A)}{12}$	**=**	**0.243**	**ac-ft**
	=	**10580**	**cf**
Current site DCIA > 40%	=	**5290**	**cf**

Provided Water Quality Volume

North Infiltration Basin	=	580	cf
South Infiltration Basin	=	330	cf
Front Lawn Rain Garden	=	2410	CF
Infiltration System S-1	=	1700	cf
Infiltration System S-2	=	4005	cf
Infiltration System S-3	=	2310	cf
Total	**=**	**11335**	**cf**

Required Water Quality Flow (WQF)

Water Quality Volume	=	0.243	ac-ft
Drainage Area, A	=	4.752	ac

Runoff Depth in Watershed inches, Q

$$Q = \frac{WQVx12}{A}$$ = 0.613 in

Design Precipitation, P	=	1	in
Runoff Curve Number, CN	=	96	

$$CN = \frac{1000}{[10 + 5P + 10Q - 10(Q^2 + 1.25QP)^{\frac{1}{2}}}$$

From Table 4-1 in Chapter 4 of TR-55

Initial Abstraction, Ia	=	0.128	in
Ia/P	=	0.128	

From Exhibit 4-III in Chapter 4 of TR-55

qu = Unit Peak Discharge	=	650	csm/in

Water Quality Flow (WQF)

$$WQF = (q_u)(A)(Q)$$ = 2.96 cfs

Appendix F
Hydrologic Analysis - Existing Conditions

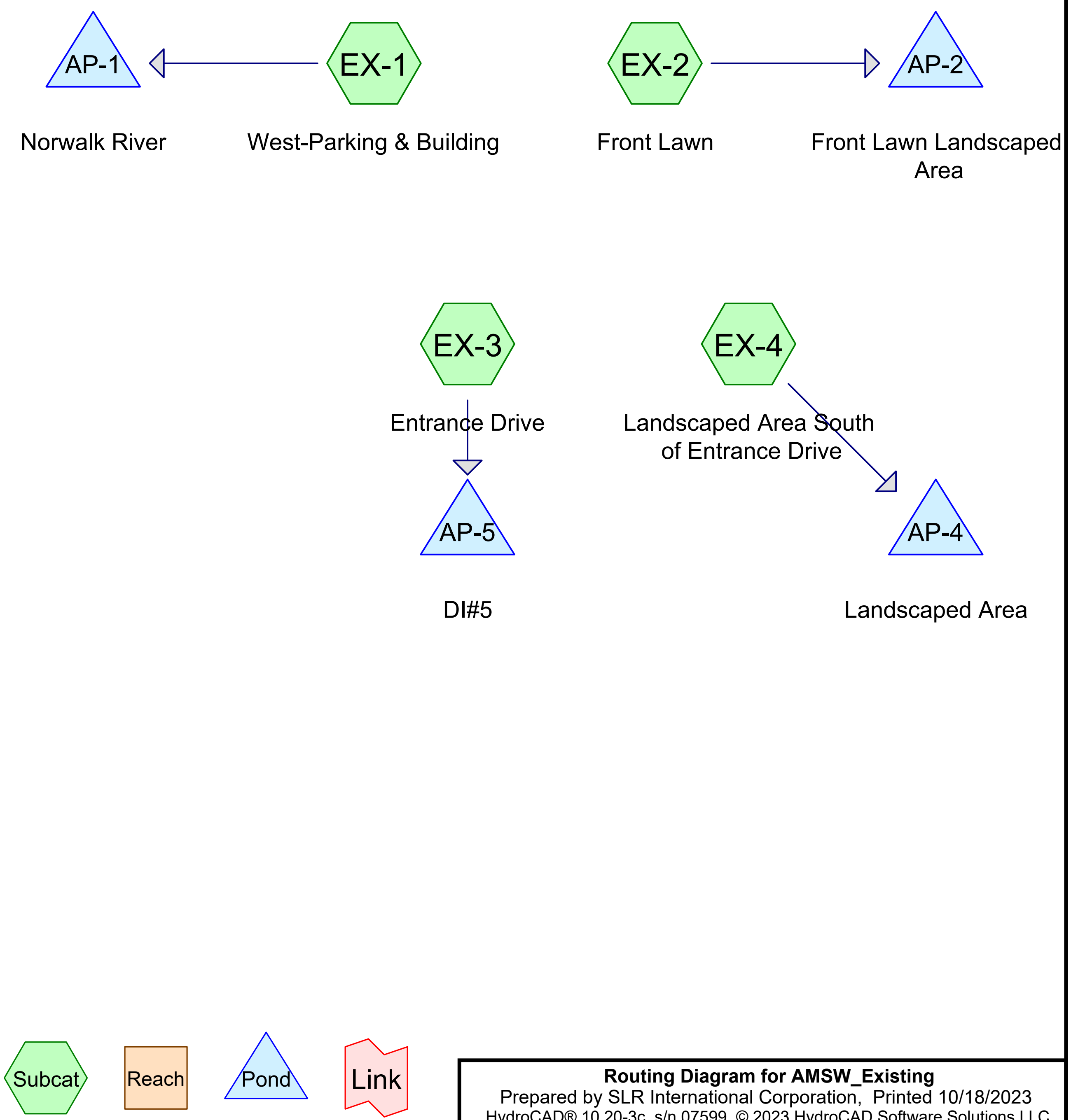
Proposed Multifamily Development

131 Danbury Road, Wilton, Connecticut
Drainage Report

Ryan Sutherland, AMS Acquisitions Management Corporation

SLR Project No.: 141.21543.0000171

October 23, 2023



Routing Diagram for AMSW_Existing
Prepared by SLR International Corporation, Printed 10/18/2023
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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-yr	NRCC 24-hr	C	Default	24.00	1	3.53	2
2	10-yr	NRCC 24-hr	C	Default	24.00	1	5.39	2
3	25-yr	NRCC 24-hr	C	Default	24.00	1	6.56	2
4	50-yr	NRCC 24-hr	C	Default	24.00	1	7.42	2
5	100-yr	NRCC 24-hr	C	Default	24.00	1	8.35	2

Summary for Subcatchment EX-1: West-Parking & Building

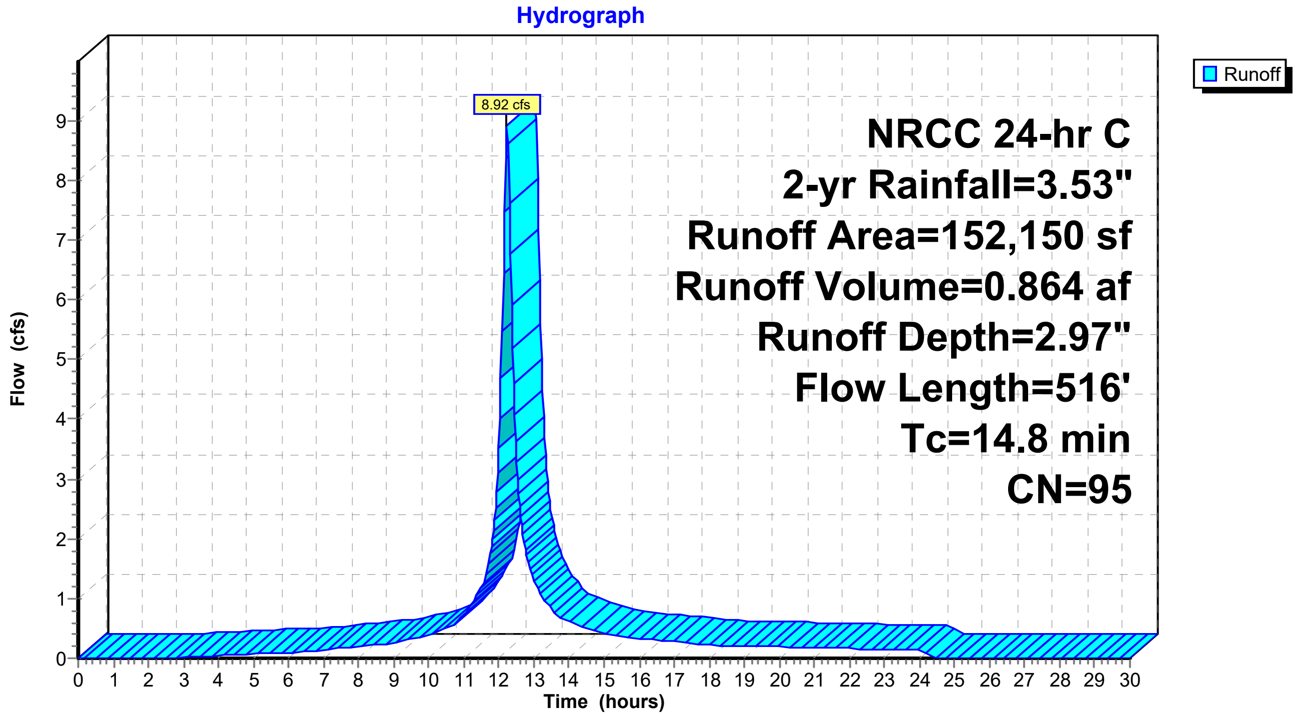
Runoff = 8.92 cfs @ 12.22 hrs, Volume= 0.864 af, Depth= 2.97"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
	67,673	98	Paved parking, HSG D
	18,349	98	Paved parking, HSG C
*	1,675	98	Concrete, HSG D
	38,351	98	Roofs, HSG D
	17,092	80	>75% Grass cover, Good, HSG D
*	144	79	Landscaping., Good, HSG D
	8,301	77	Woods, Good, HSG D
	565	70	Woods, Good, HSG C
	152,150	95	Weighted Average
	26,102		17.16% Pervious Area
	126,048		82.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0270	0.20		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
5.5	275	0.0140	0.83		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.8	119	0.0150	2.49		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.2	22	0.2270	2.38		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
14.8	516	Total			

Subcatchment EX-1: West-Parking & Building



Summary for Subcatchment EX-2: Front Lawn

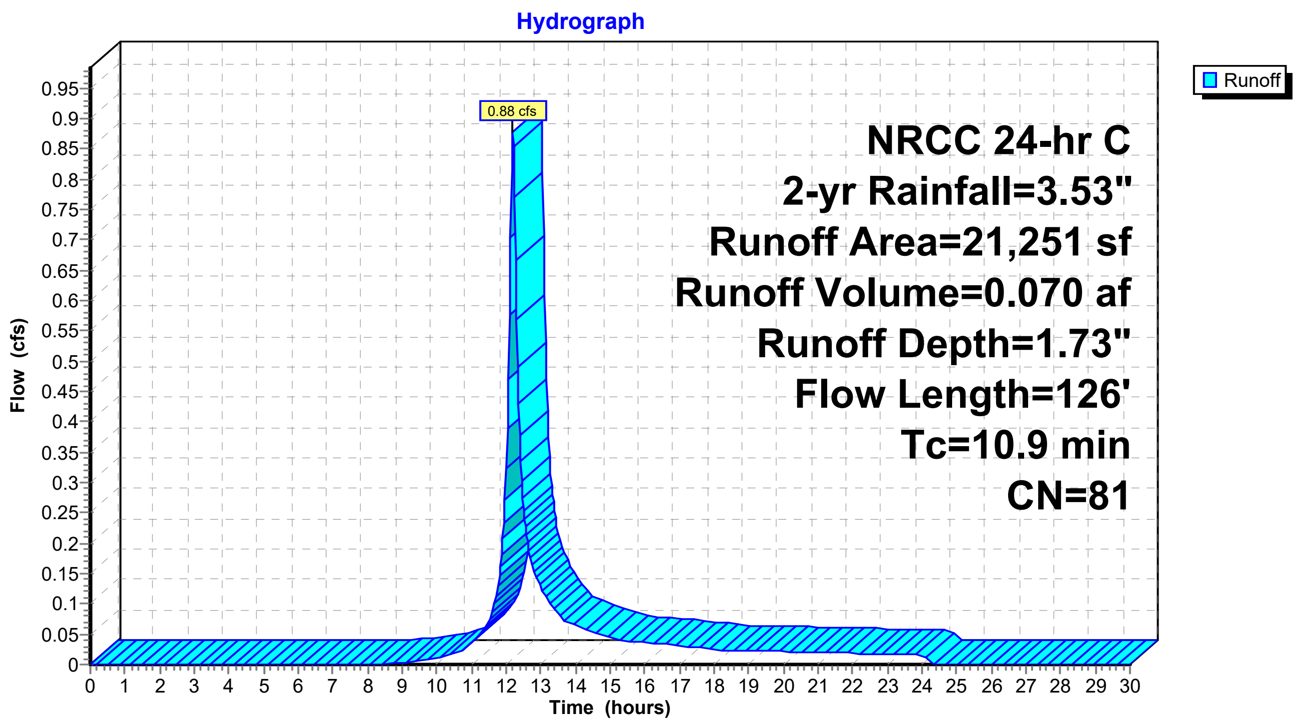
Runoff = 0.88 cfs @ 12.19 hrs, Volume= 0.070 af, Depth= 1.73"
Routed to Pond AP-2 : Front Lawn Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
*	721	98	Concrete, HSG D
	19,154	80	>75% Grass cover, Good, HSG D
*	1,376	79	Landscaping, Good, HSG D
	21,251	81	Weighted Average
	20,530		96.61% Pervious Area
	721		3.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.5	100	0.0150	0.16		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
0.4	26	0.0190	0.96		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
10.9	126	Total			

Subcatchment EX-2: Front Lawn



Summary for Subcatchment EX-3: Entrance Drive

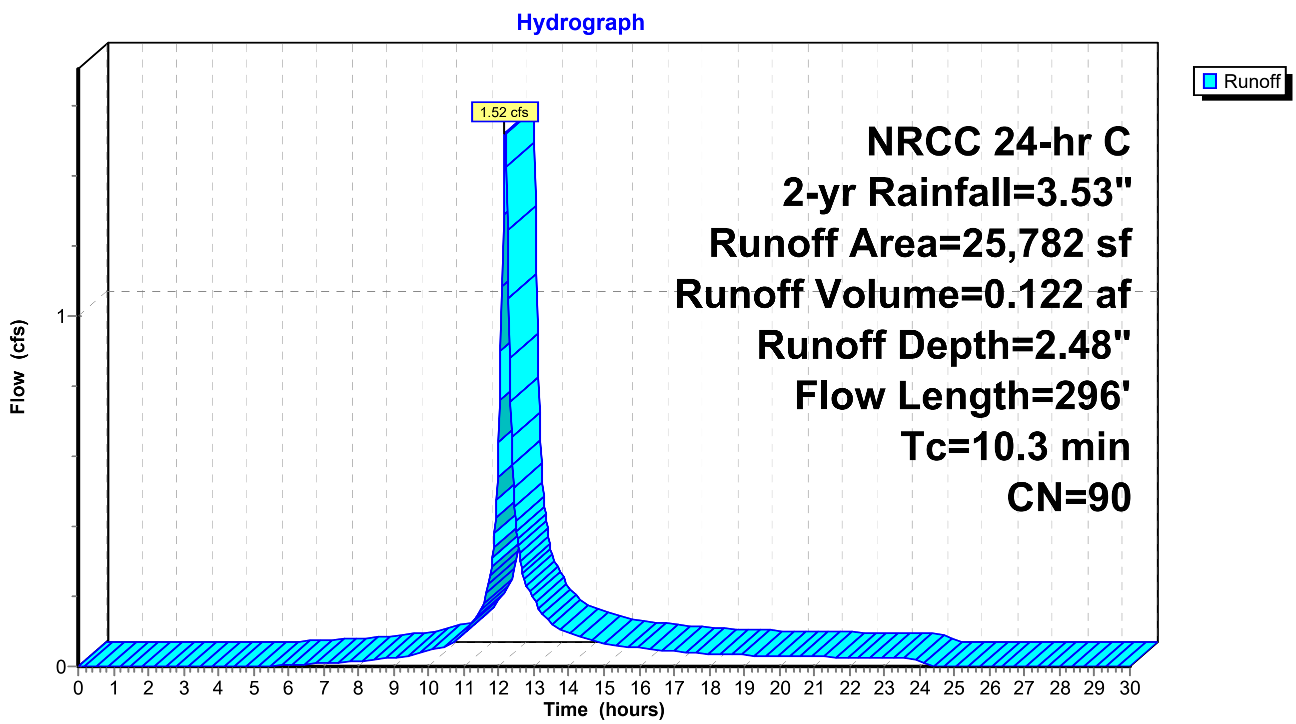
Runoff = 1.52 cfs @ 12.18 hrs, Volume= 0.122 af, Depth= 2.48"
Routed to Pond AP-5 : DI#5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
	9,910	98	Paved parking, HSG D
*	814	98	Concrete, HSG D
	3,130	98	Roofs, HSG D
	9,334	80	>75% Grass cover, Good, HSG D
*	2,594	79	Landscaping, Good, HSG D
	25,782	90	Weighted Average
	11,928		46.26% Pervious Area
	13,854		53.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	92	0.0200	0.18		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
1.6	204	0.0110	2.13		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
10.3	296	Total			

Subcatchment EX-3: Entrance Drive



Summary for Subcatchment EX-4: Landscaped Area South of Entrance Drive

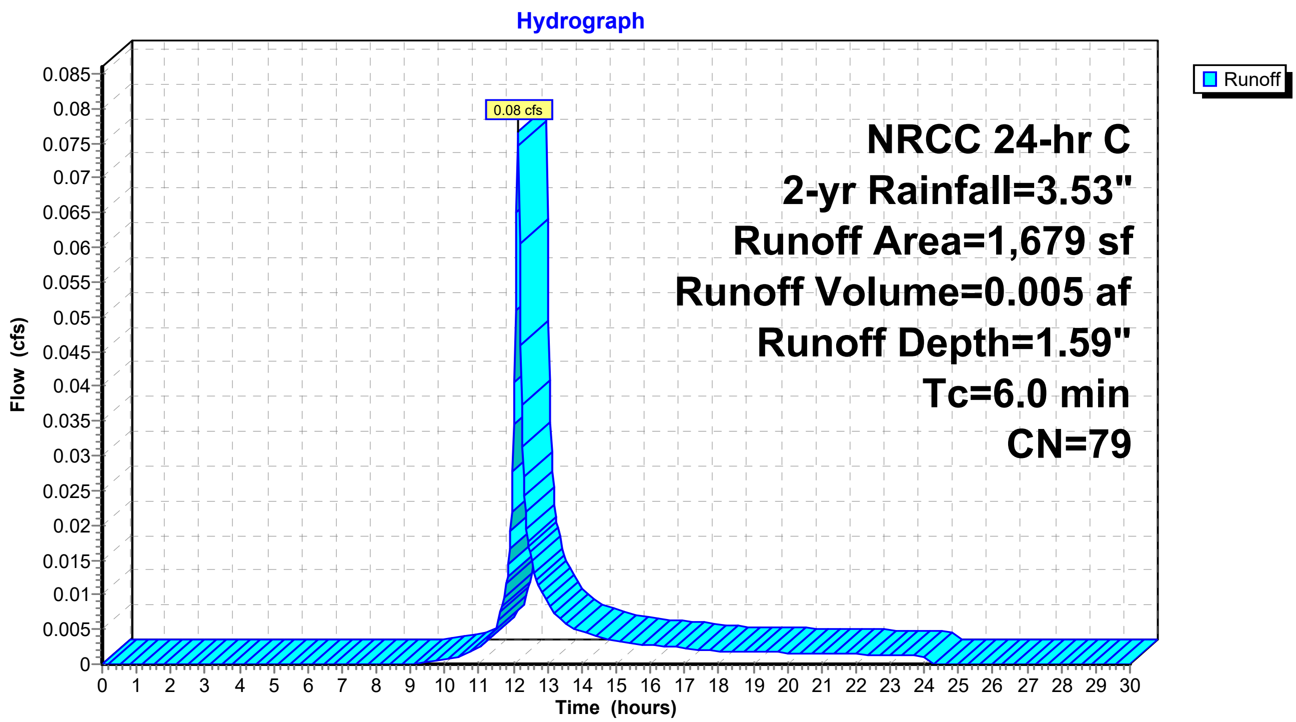
Runoff = 0.08 cfs @ 12.13 hrs, Volume= 0.005 af, Depth= 1.59"
Routed to Pond AP-4 : Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
	510	80	>75% Grass cover, Good, HSG D
*	1,169	79	Landscaping, Good, HSG D
	1,679	79	Weighted Average
	1,679		100.00% Pervious Area

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

Subcatchment EX-4: Landscaped Area South of Entrance Drive

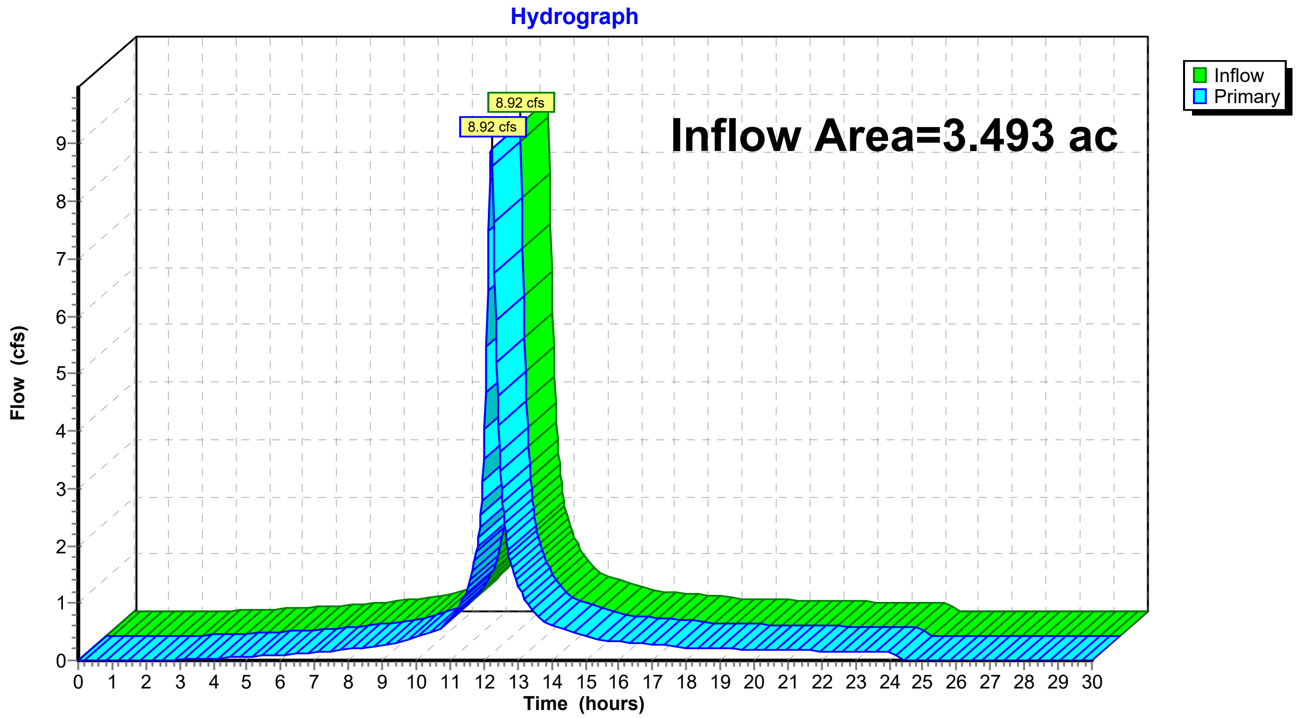


Summary for Pond AP-1: Norwalk River

Inflow Area = 3.493 ac, 82.84% Impervious, Inflow Depth = 2.97" for 2-yr event
Inflow = 8.92 cfs @ 12.22 hrs, Volume= 0.864 af
Primary = 8.92 cfs @ 12.22 hrs, Volume= 0.864 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-1: Norwalk River

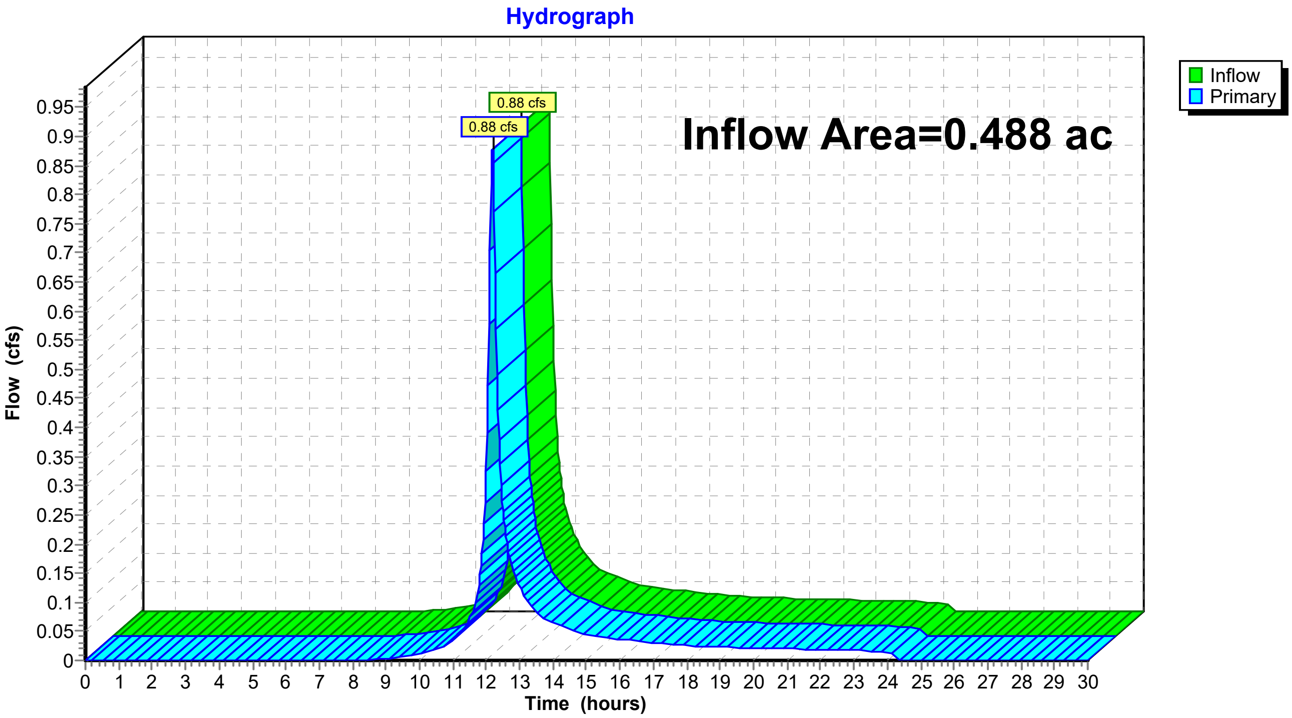


Summary for Pond AP-2: Front Lawn Landscaped Area

Inflow Area = 0.488 ac, 3.39% Impervious, Inflow Depth = 1.73" for 2-yr event
Inflow = 0.88 cfs @ 12.19 hrs, Volume= 0.070 af
Primary = 0.88 cfs @ 12.19 hrs, Volume= 0.070 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-2: Front Lawn Landscaped Area

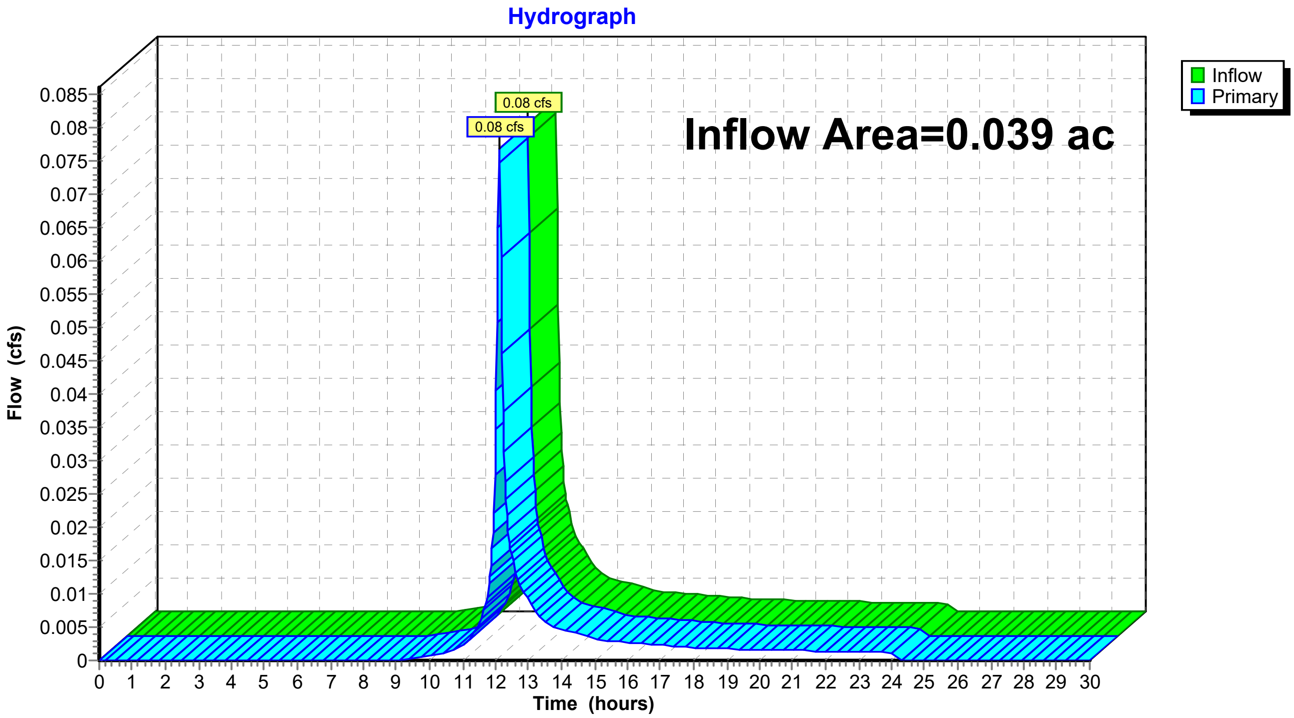


Summary for Pond AP-4: Landscaped Area

Inflow Area =	0.039 ac,	0.00% Impervious, Inflow Depth = 1.59"	for 2-yr event	
Inflow =	0.08 cfs @	12.13 hrs, Volume=	0.005 af	
Primary =	0.08 cfs @	12.13 hrs, Volume=	0.005 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-4: Landscaped Area

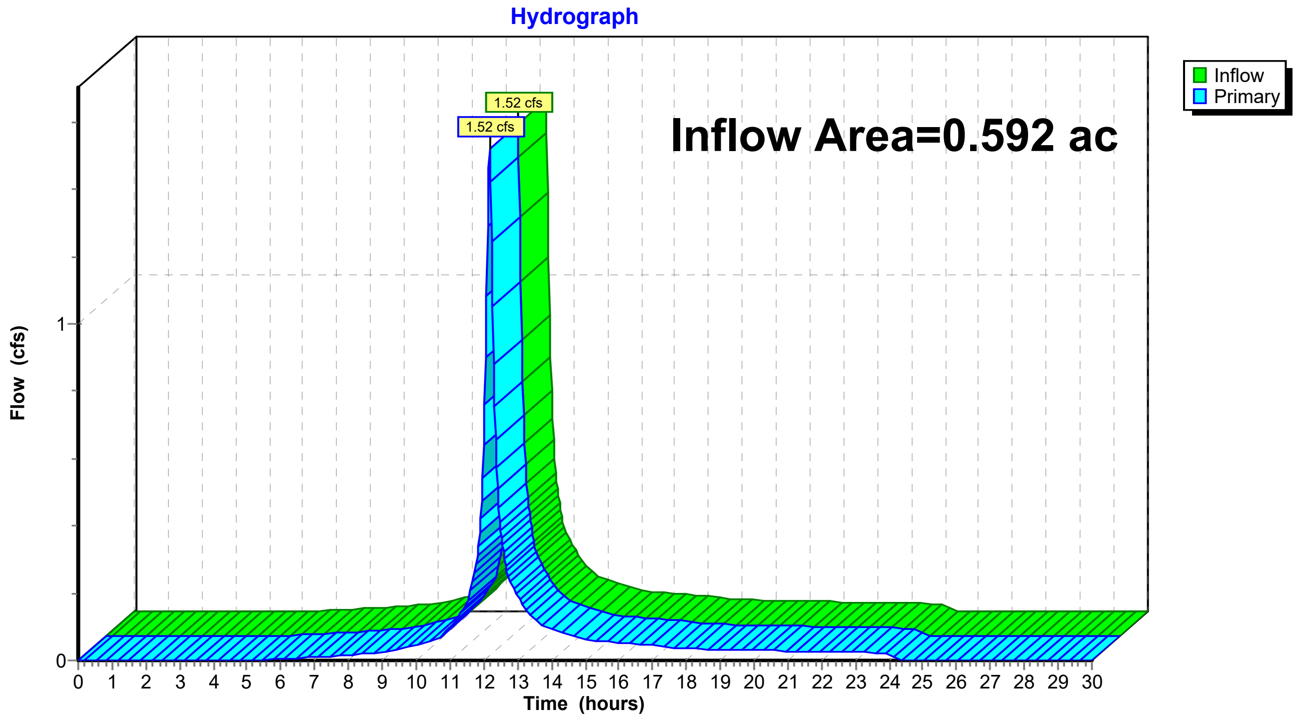


Summary for Pond AP-5: DI#5

Inflow Area = 0.592 ac, 53.74% Impervious, Inflow Depth = 2.48" for 2-yr event
Inflow = 1.52 cfs @ 12.18 hrs, Volume= 0.122 af
Primary = 1.52 cfs @ 12.18 hrs, Volume= 0.122 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-5: DI#5



Summary for Subcatchment EX-1: West-Parking & Building

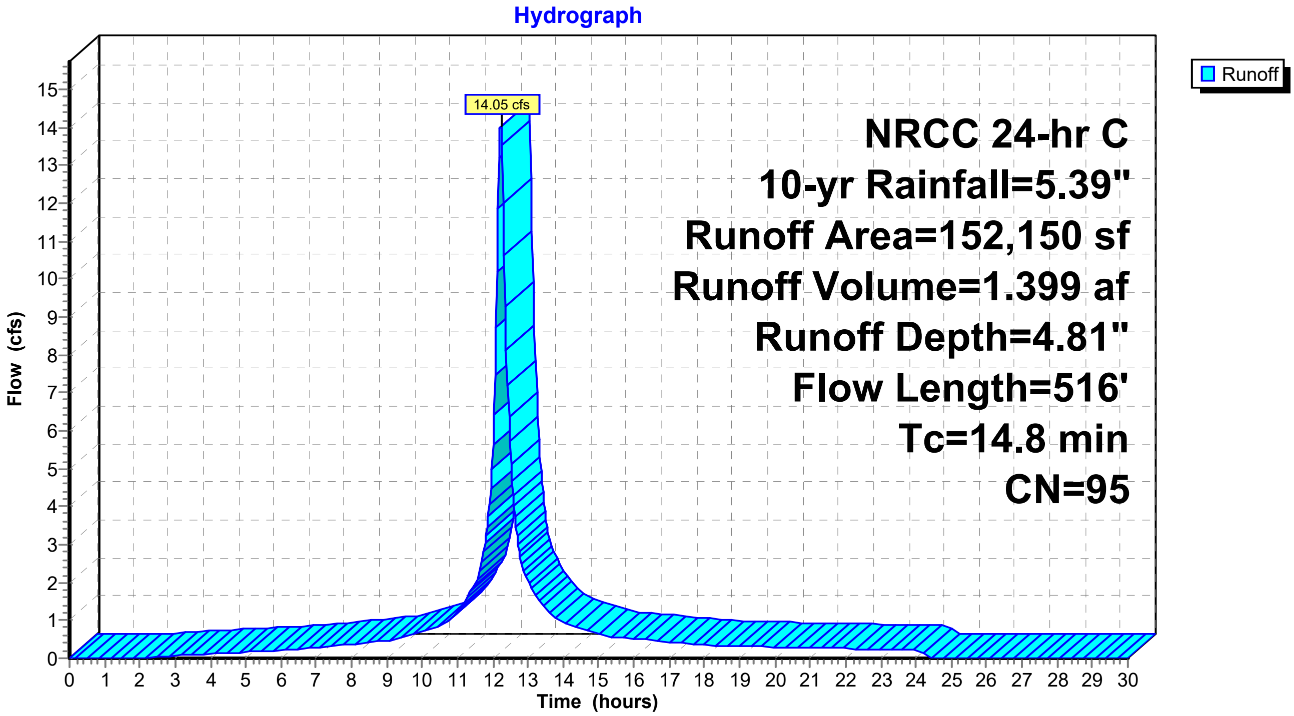
Runoff = 14.05 cfs @ 12.22 hrs, Volume= 1.399 af, Depth= 4.81"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
	67,673	98	Paved parking, HSG D
	18,349	98	Paved parking, HSG C
*	1,675	98	Concrete, HSG D
	38,351	98	Roofs, HSG D
	17,092	80	>75% Grass cover, Good, HSG D
*	144	79	Landscaping., Good, HSG D
	8,301	77	Woods, Good, HSG D
	565	70	Woods, Good, HSG C
	152,150	95	Weighted Average
	26,102		17.16% Pervious Area
	126,048		82.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0270	0.20		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
5.5	275	0.0140	0.83		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.8	119	0.0150	2.49		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.2	22	0.2270	2.38		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
14.8	516	Total			

Subcatchment EX-1: West-Parking & Building



Summary for Subcatchment EX-2: Front Lawn

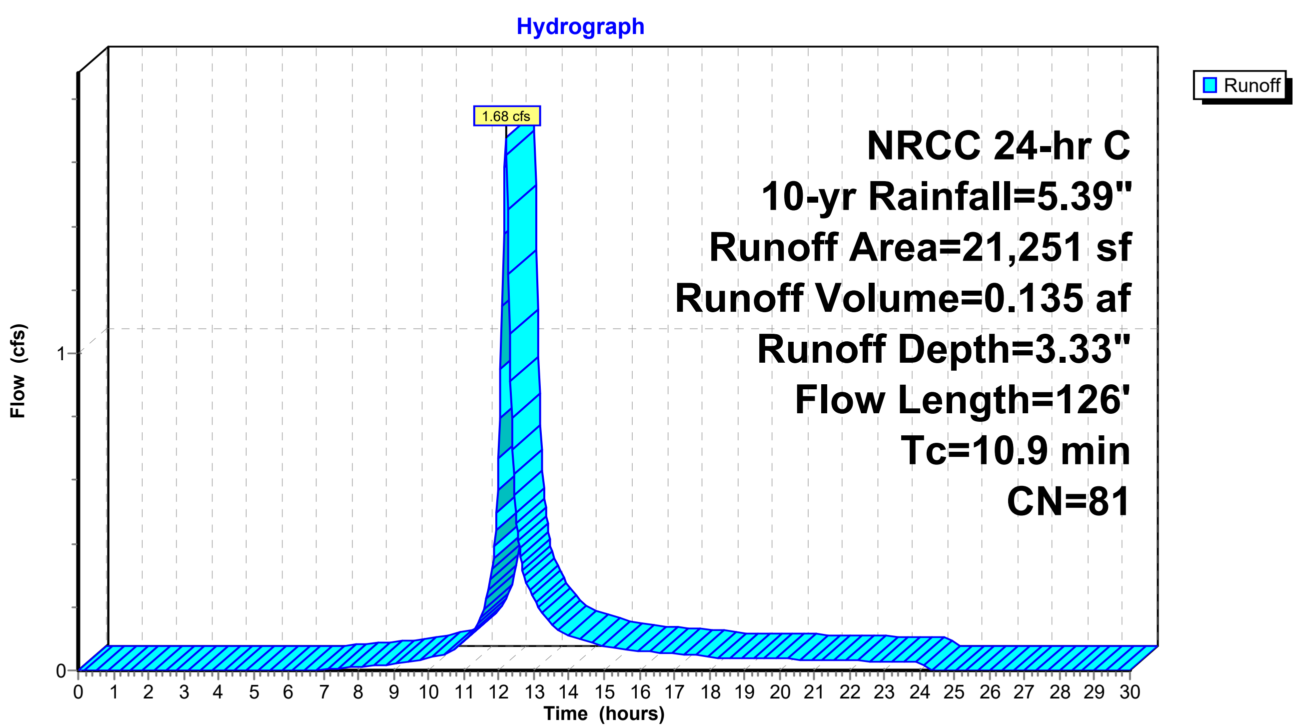
Runoff = 1.68 cfs @ 12.18 hrs, Volume= 0.135 af, Depth= 3.33"
Routed to Pond AP-2 : Front Lawn Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
*	721	98	Concrete, HSG D
	19,154	80	>75% Grass cover, Good, HSG D
*	1,376	79	Landscaping, Good, HSG D
	21,251	81	Weighted Average
	20,530		96.61% Pervious Area
	721		3.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.5	100	0.0150	0.16		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
0.4	26	0.0190	0.96		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
10.9	126	Total			

Subcatchment EX-2: Front Lawn



Summary for Subcatchment EX-3: Entrance Drive

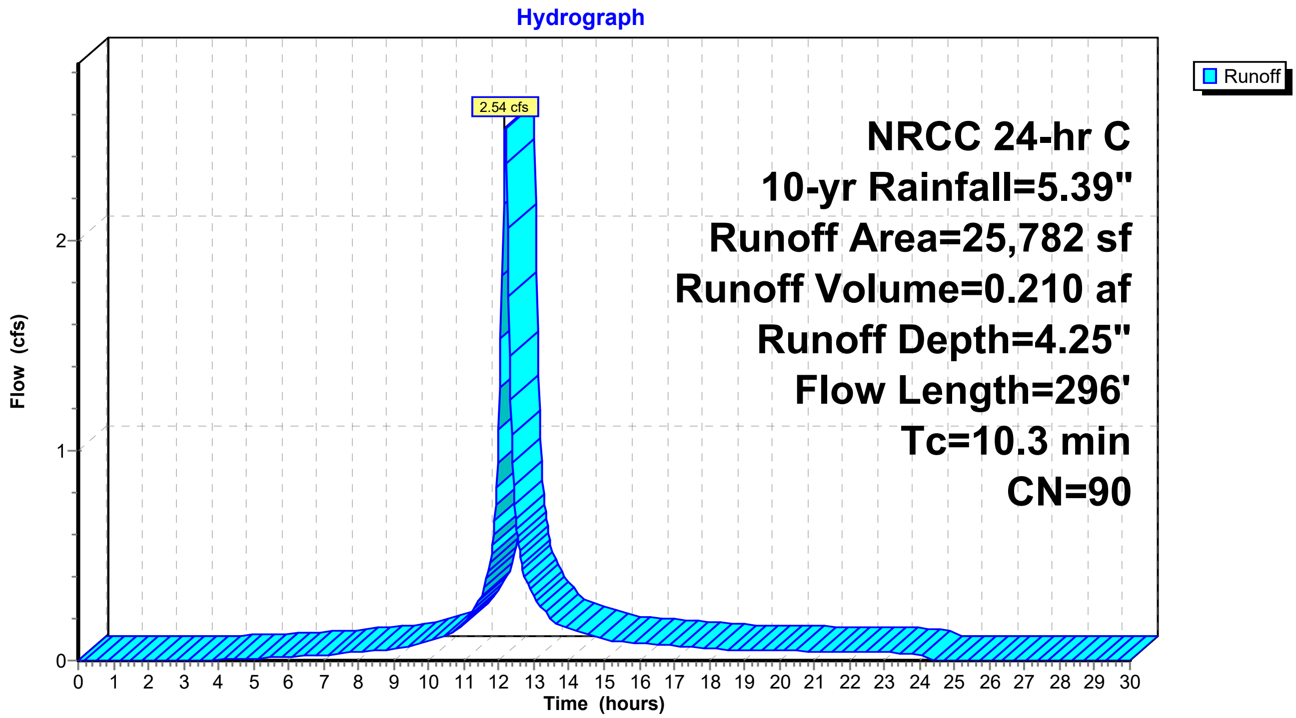
Runoff = 2.54 cfs @ 12.17 hrs, Volume= 0.210 af, Depth= 4.25"
Routed to Pond AP-5 : DI#5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
	9,910	98	Paved parking, HSG D
*	814	98	Concrete, HSG D
	3,130	98	Roofs, HSG D
	9,334	80	>75% Grass cover, Good, HSG D
*	2,594	79	Landscaping, Good, HSG D
	25,782	90	Weighted Average
	11,928		46.26% Pervious Area
	13,854		53.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	92	0.0200	0.18		**Sheet Flow, A-B**
					Grass: Short n= 0.150 P2= 3.53"
1.6	204	0.0110	2.13		**Shallow Concentrated Flow, B-C**
					Paved Kv= 20.3 fps
10.3	296	Total			

Subcatchment EX-3: Entrance Drive



Summary for Subcatchment EX-4: Landscaped Area South of Entrance Drive

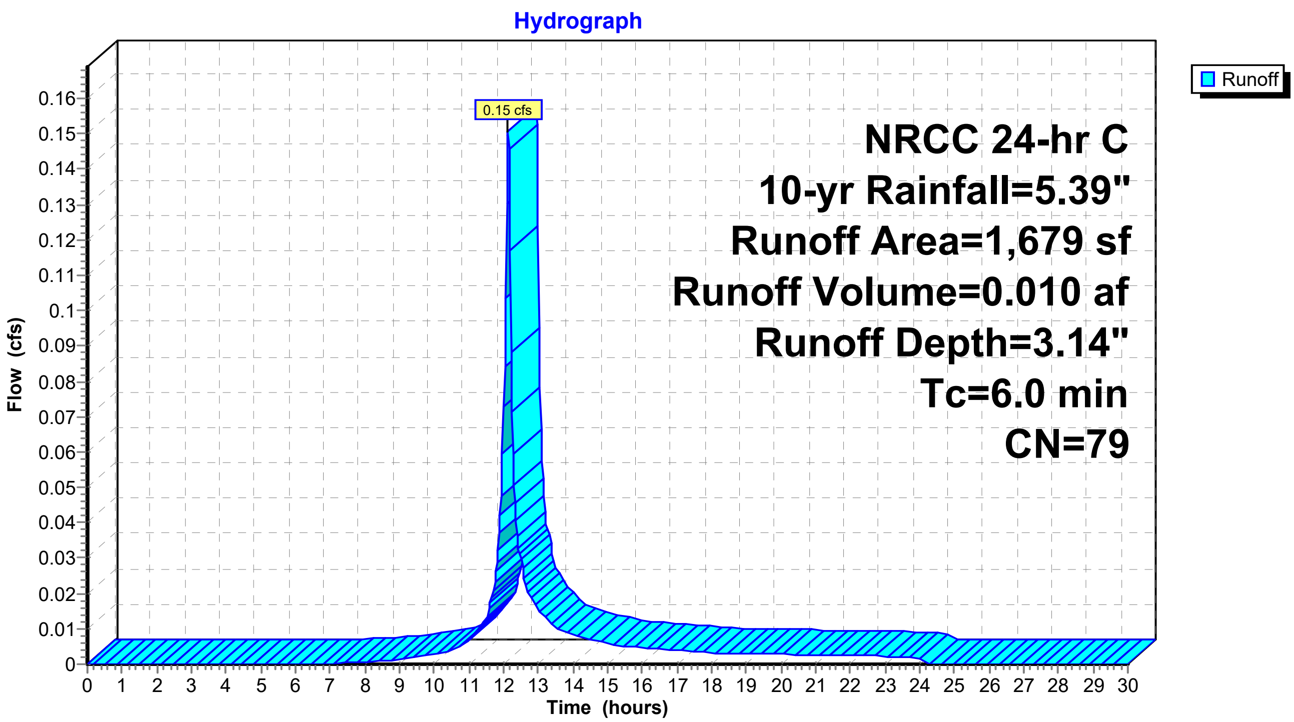
Runoff = 0.15 cfs @ 12.13 hrs, Volume= 0.010 af, Depth= 3.14"
Routed to Pond AP-4 : Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
	510	80	>75% Grass cover, Good, HSG D
*	1,169	79	Landscaping, Good, HSG D
	1,679	79	Weighted Average
	1,679		100.00% Pervious Area

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

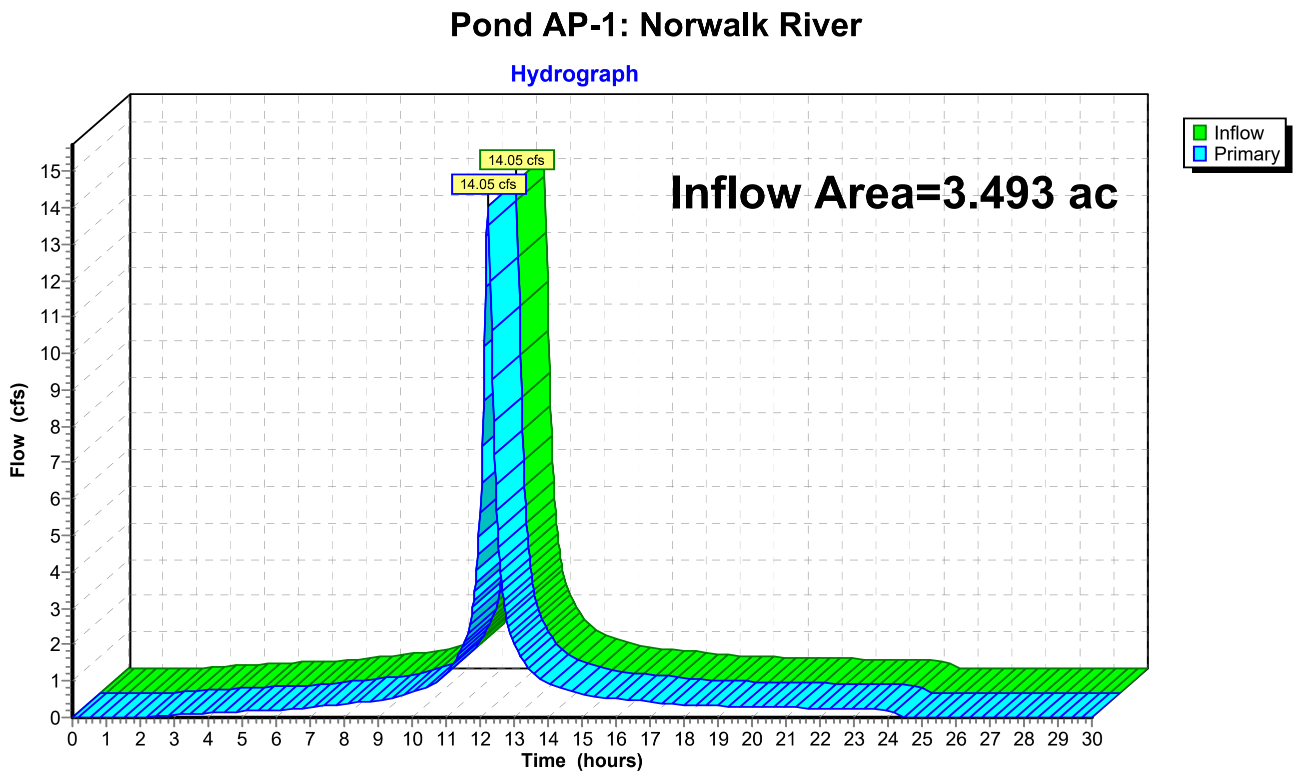
Subcatchment EX-4: Landscaped Area South of Entrance Drive



Summary for Pond AP-1: Norwalk River

Inflow Area = 3.493 ac, 82.84% Impervious, Inflow Depth = 4.81" for 10-yr event
Inflow = 14.05 cfs @ 12.22 hrs, Volume= 1.399 af
Primary = 14.05 cfs @ 12.22 hrs, Volume= 1.399 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

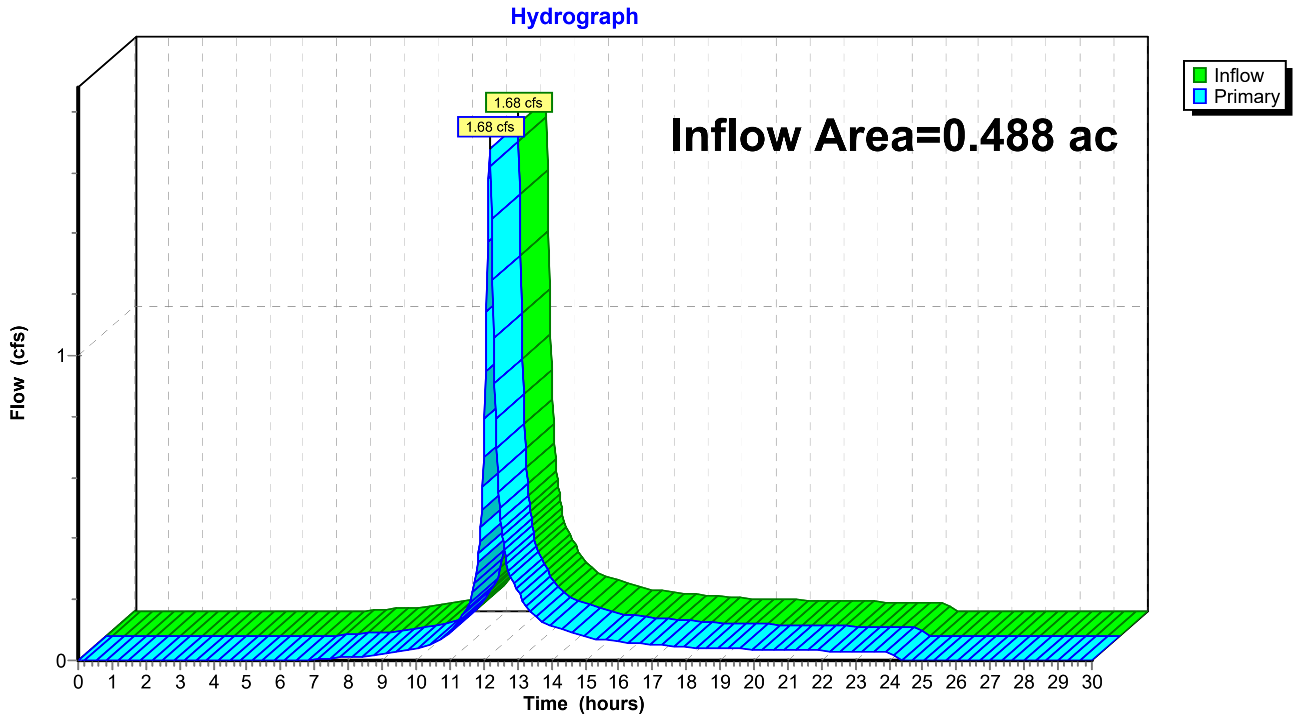


Summary for Pond AP-2: Front Lawn Landscaped Area

Inflow Area = 0.488 ac, 3.39% Impervious, Inflow Depth = 3.33" for 10-yr event
Inflow = 1.68 cfs @ 12.18 hrs, Volume= 0.135 af
Primary = 1.68 cfs @ 12.18 hrs, Volume= 0.135 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-2: Front Lawn Landscaped Area

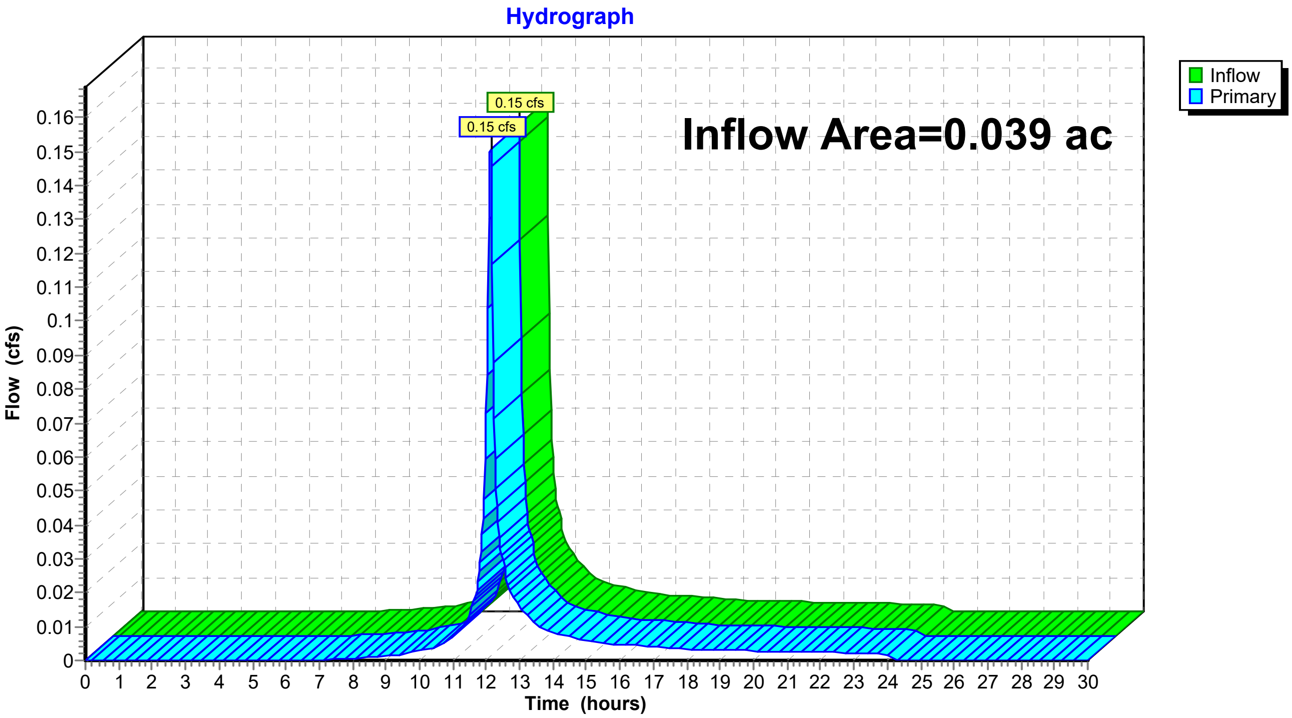


Summary for Pond AP-4: Landscaped Area

Inflow Area =	0.039 ac,	0.00% Impervious, Inflow Depth = 3.14"	for 10-yr event	
Inflow =	0.15 cfs @	12.13 hrs, Volume=	0.010 af	
Primary =	0.15 cfs @	12.13 hrs, Volume=	0.010 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

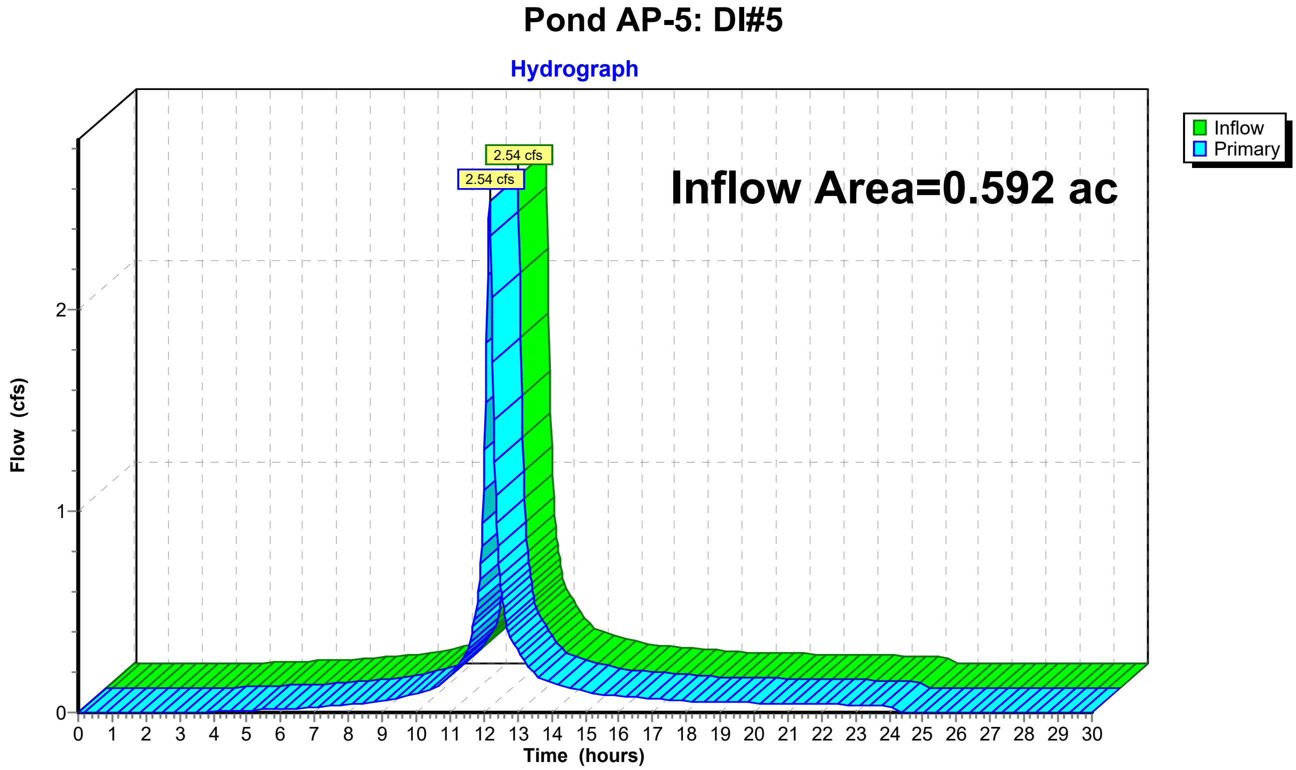
Pond AP-4: Landscaped Area



Summary for Pond AP-5: DI#5

Inflow Area =	0.592 ac,	53.74% Impervious,	Inflow Depth = 4.25"	for 10-yr event
Inflow =	2.54 cfs @	12.17 hrs, Volume=	0.210 af	
Primary =	2.54 cfs @	12.17 hrs, Volume=	0.210 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs



Summary for Subcatchment EX-1: West-Parking & Building

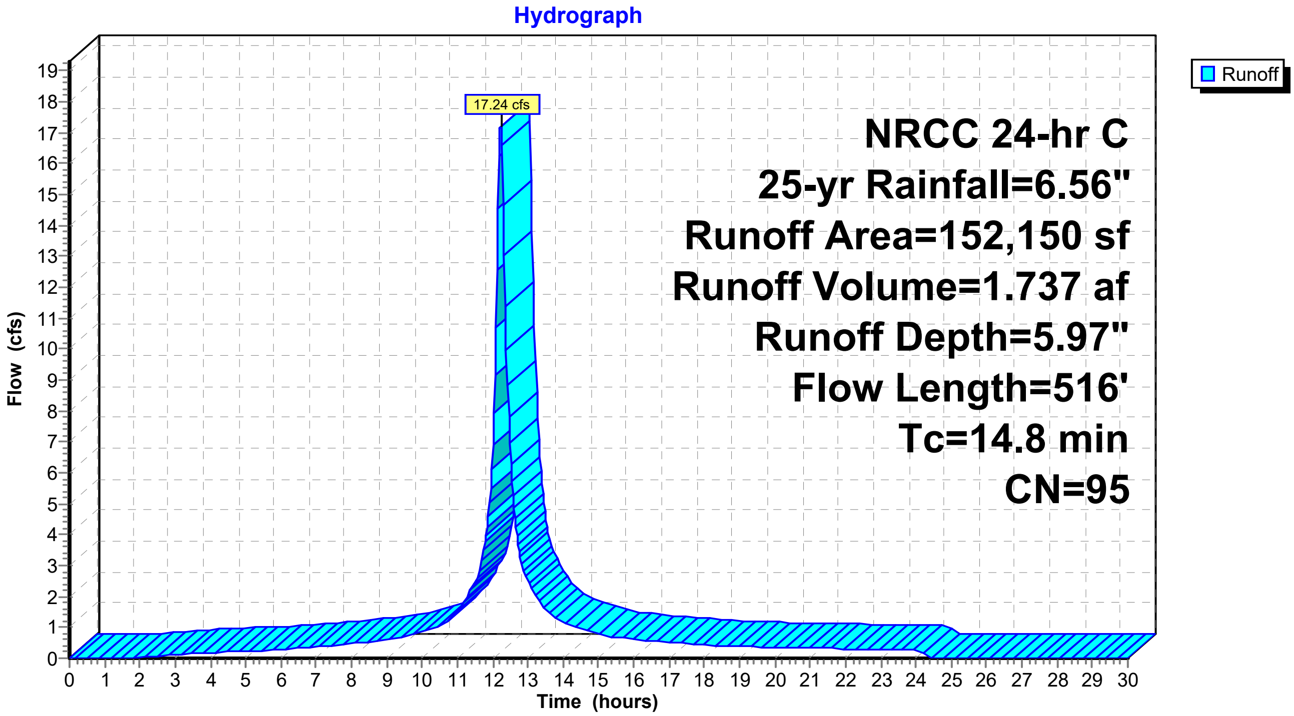
Runoff = 17.24 cfs @ 12.22 hrs, Volume= 1.737 af, Depth= 5.97"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
	67,673	98	Paved parking, HSG D
	18,349	98	Paved parking, HSG C
*	1,675	98	Concrete, HSG D
	38,351	98	Roofs, HSG D
	17,092	80	>75% Grass cover, Good, HSG D
*	144	79	Landscaping., Good, HSG D
	8,301	77	Woods, Good, HSG D
	565	70	Woods, Good, HSG C
	152,150	95	Weighted Average
	26,102		17.16% Pervious Area
	126,048		82.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0270	0.20		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
5.5	275	0.0140	0.83		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.8	119	0.0150	2.49		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.2	22	0.2270	2.38		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
14.8	516	Total			

Subcatchment EX-1: West-Parking & Building



Summary for Subcatchment EX-2: Front Lawn

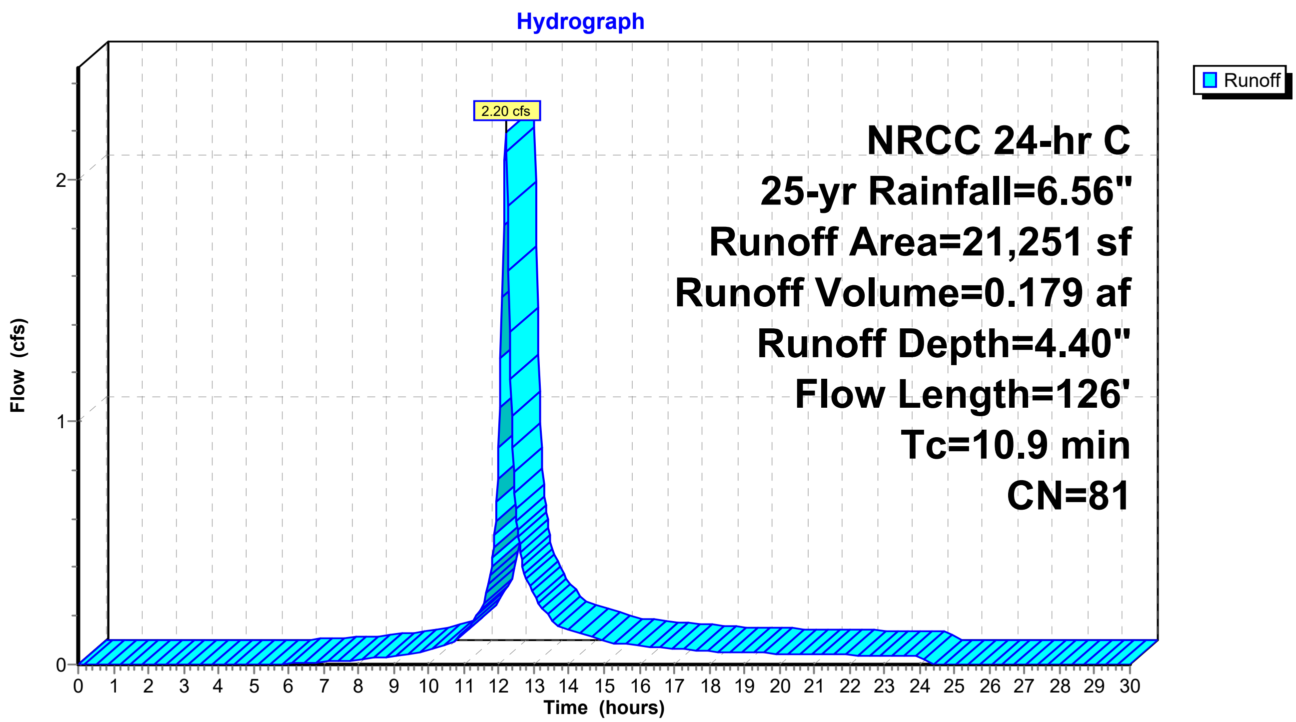
Runoff = 2.20 cfs @ 12.18 hrs, Volume= 0.179 af, Depth= 4.40"
Routed to Pond AP-2 : Front Lawn Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
*	721	98	Concrete, HSG D
	19,154	80	>75% Grass cover, Good, HSG D
*	1,376	79	Landscaping, Good, HSG D
	21,251	81	Weighted Average
	20,530		96.61% Pervious Area
	721		3.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.5	100	0.0150	0.16		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
0.4	26	0.0190	0.96		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
10.9	126	Total			

Subcatchment EX-2: Front Lawn



Summary for Subcatchment EX-3: Entrance Drive

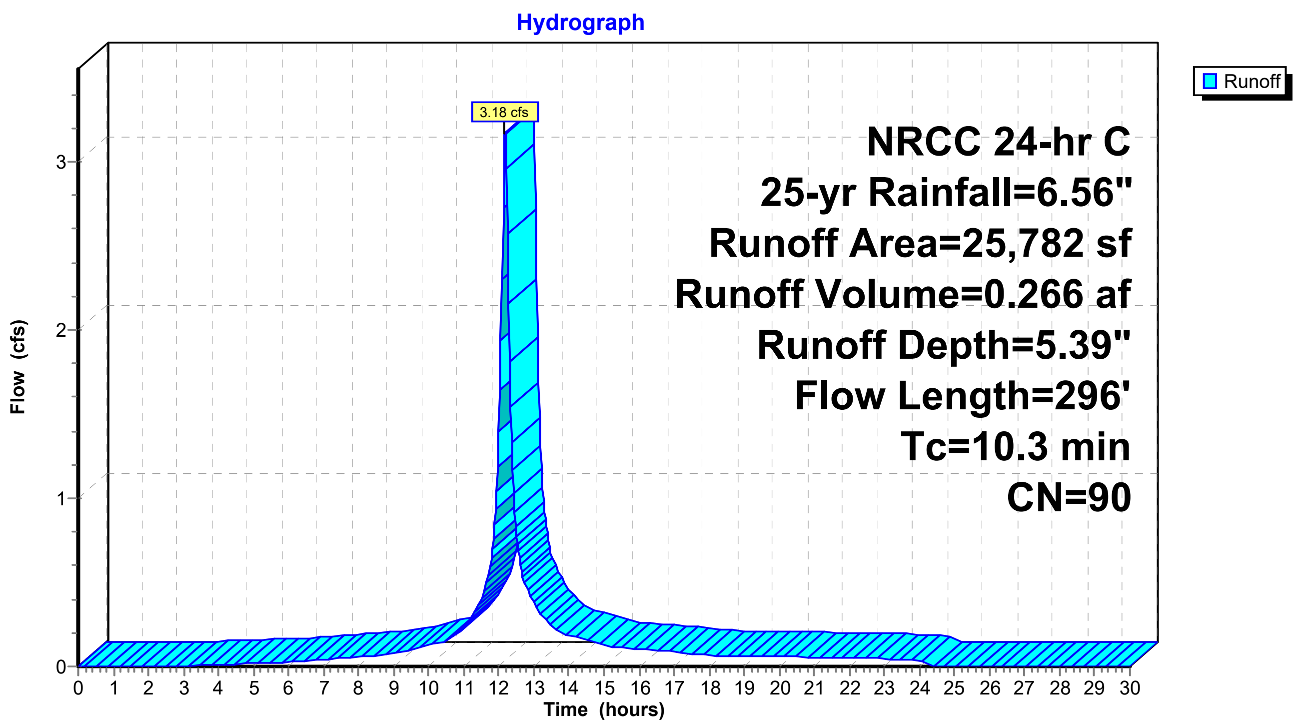
Runoff = 3.18 cfs @ 12.17 hrs, Volume= 0.266 af, Depth= 5.39"
Routed to Pond AP-5 : DI#5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
	9,910	98	Paved parking, HSG D
*	814	98	Concrete, HSG D
	3,130	98	Roofs, HSG D
	9,334	80	>75% Grass cover, Good, HSG D
*	2,594	79	Landscaping, Good, HSG D
	25,782	90	Weighted Average
	11,928		46.26% Pervious Area
	13,854		53.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	92	0.0200	0.18		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
1.6	204	0.0110	2.13		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
10.3	296	Total			

Subcatchment EX-3: Entrance Drive



Summary for Subcatchment EX-4: Landscaped Area South of Entrance Drive

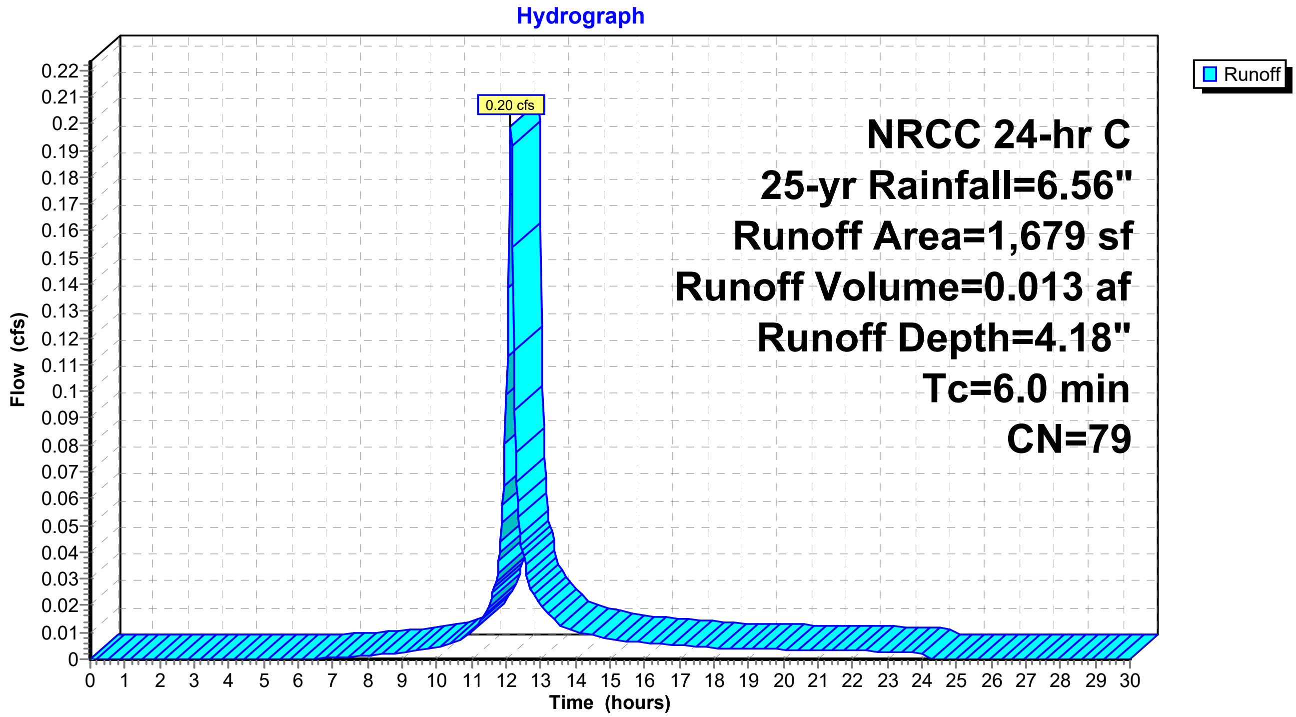
Runoff = 0.20 cfs @ 12.13 hrs, Volume= 0.013 af, Depth= 4.18"
Routed to Pond AP-4 : Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
	510	80	>75% Grass cover, Good, HSG D
*	1,169	79	Landscaping, Good, HSG D
	1,679	79	Weighted Average
	1,679		100.00% Pervious Area

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

Subcatchment EX-4: Landscaped Area South of Entrance Drive

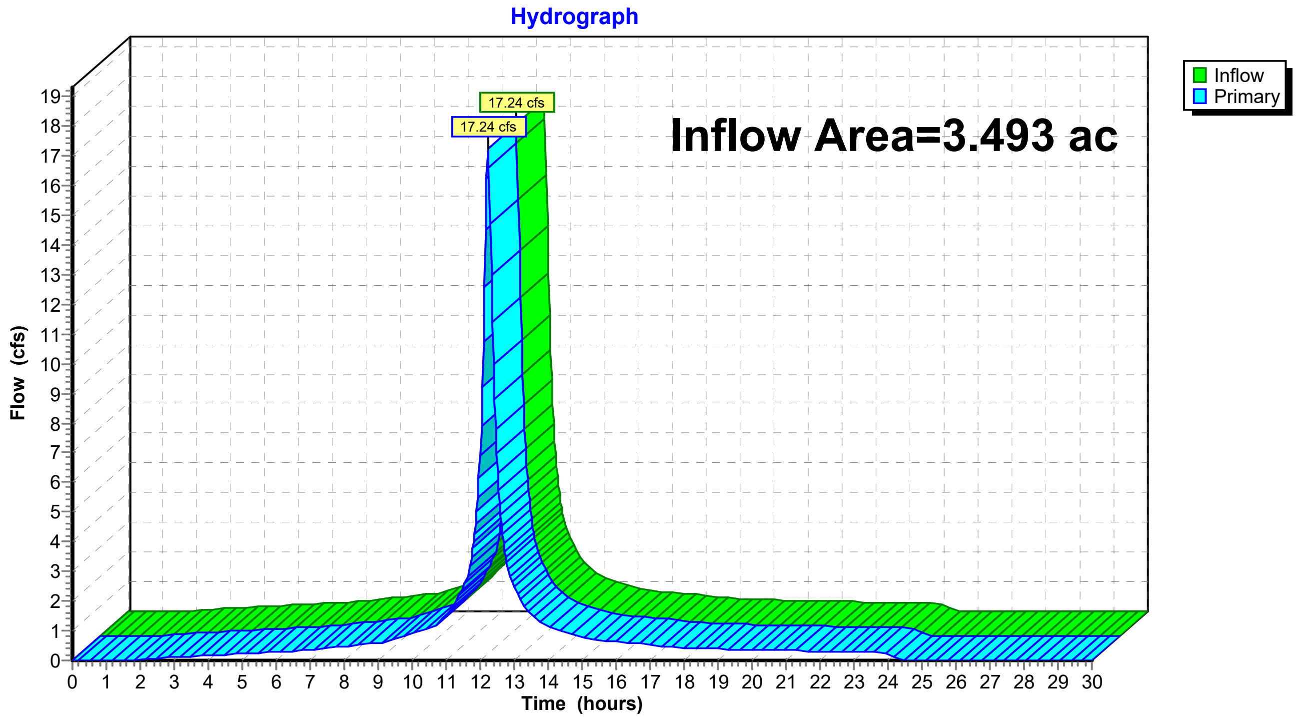


Summary for Pond AP-1: Norwalk River

Inflow Area =	3.493 ac, 82.84% Impervious,	Inflow Depth = 5.97"		for 25-yr event
Inflow =	17.24 cfs @	12.22 hrs, Volume=	1.737 af	
Primary =	17.24 cfs @	12.22 hrs, Volume=	1.737 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-1: Norwalk River

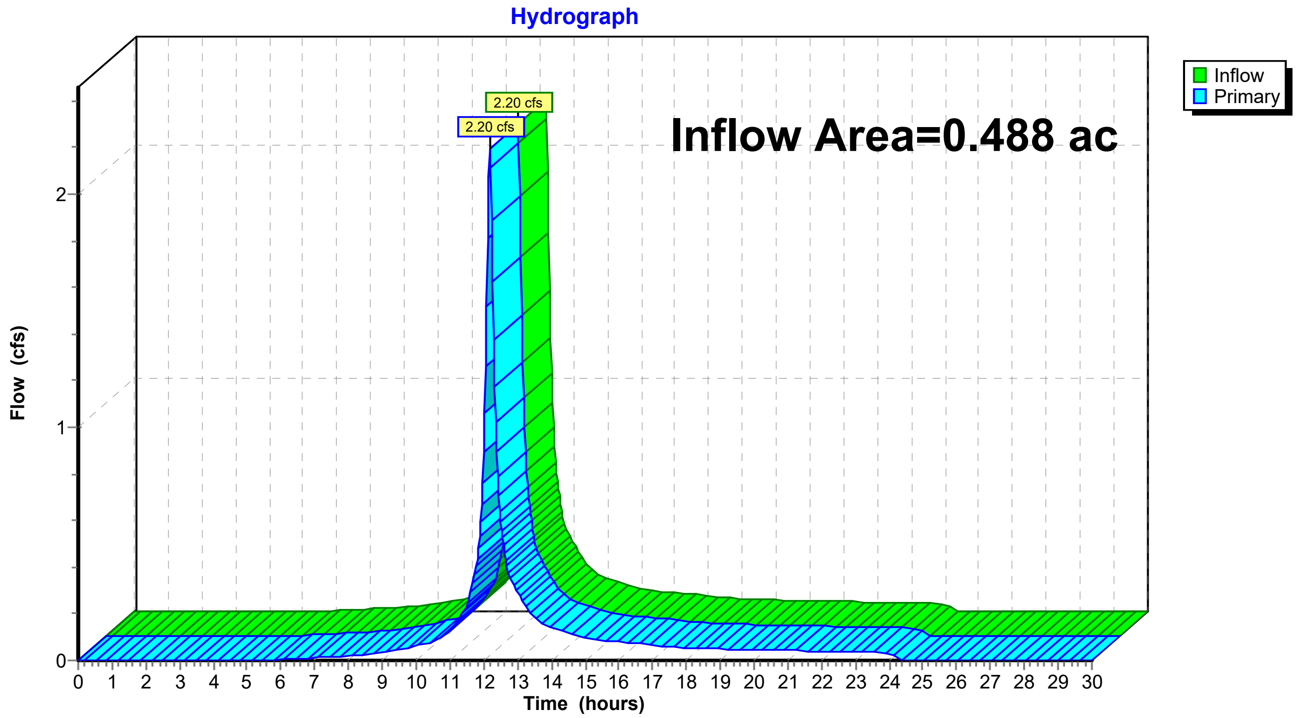


Summary for Pond AP-2: Front Lawn Landscaped Area

Inflow Area =	0.488 ac,	3.39% Impervious,	Inflow Depth = 4.40"	for 25-yr event	
Inflow =	2.20 cfs @	12.18 hrs,	Volume=	0.179 af	
Primary =	2.20 cfs @	12.18 hrs,	Volume=	0.179 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-2: Front Lawn Landscaped Area

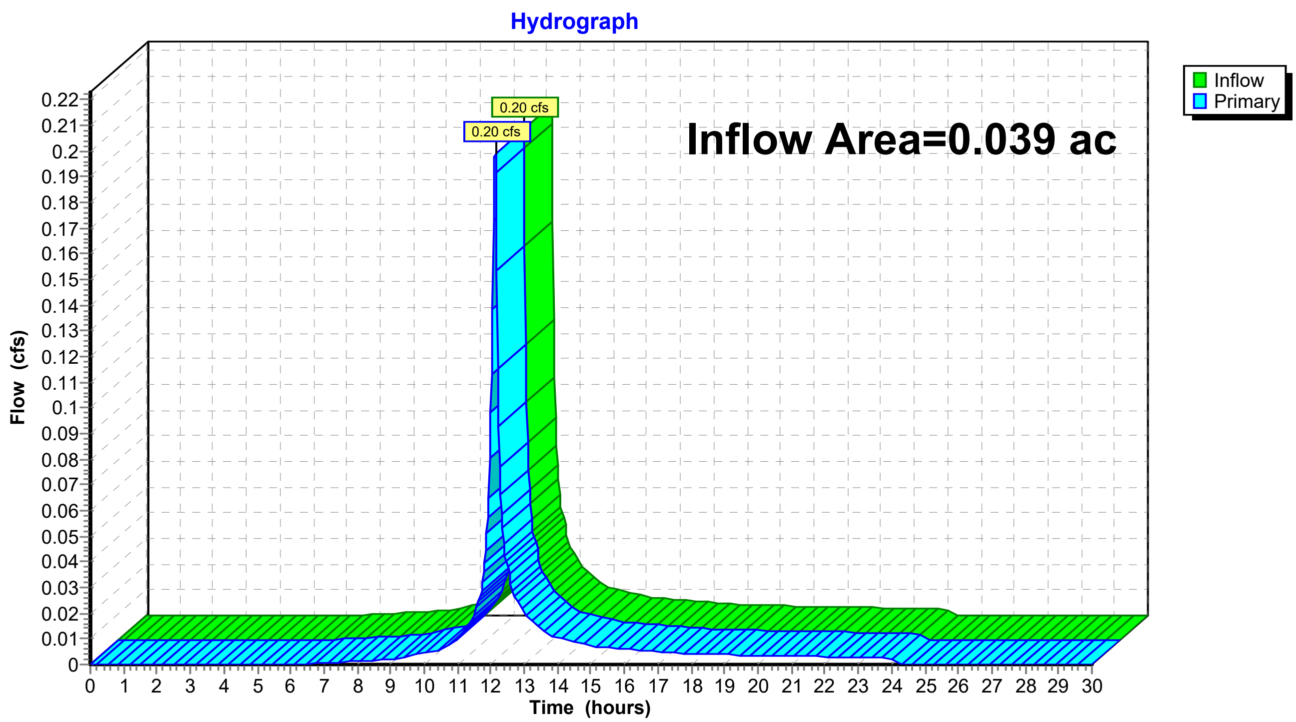


Summary for Pond AP-4: Landscaped Area

Inflow Area = 0.039 ac, 0.00% Impervious, Inflow Depth = 4.18" for 25-yr event
Inflow = 0.20 cfs @ 12.13 hrs, Volume= 0.013 af
Primary = 0.20 cfs @ 12.13 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

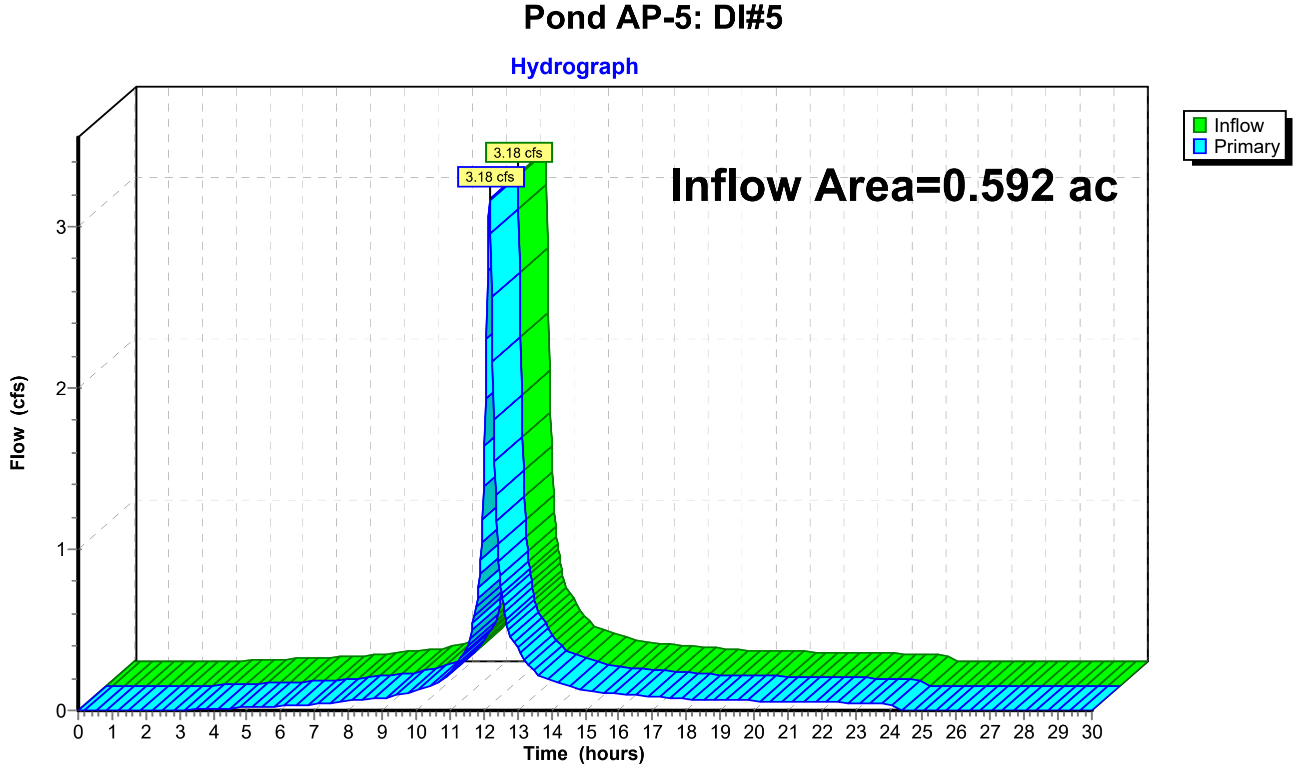
Pond AP-4: Landscaped Area



Summary for Pond AP-5: DI#5

Inflow Area = 0.592 ac, 53.74% Impervious, Inflow Depth = 5.39" for 25-yr event
Inflow = 3.18 cfs @ 12.17 hrs, Volume= 0.266 af
Primary = 3.18 cfs @ 12.17 hrs, Volume= 0.266 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs



Summary for Subcatchment EX-1: West-Parking & Building

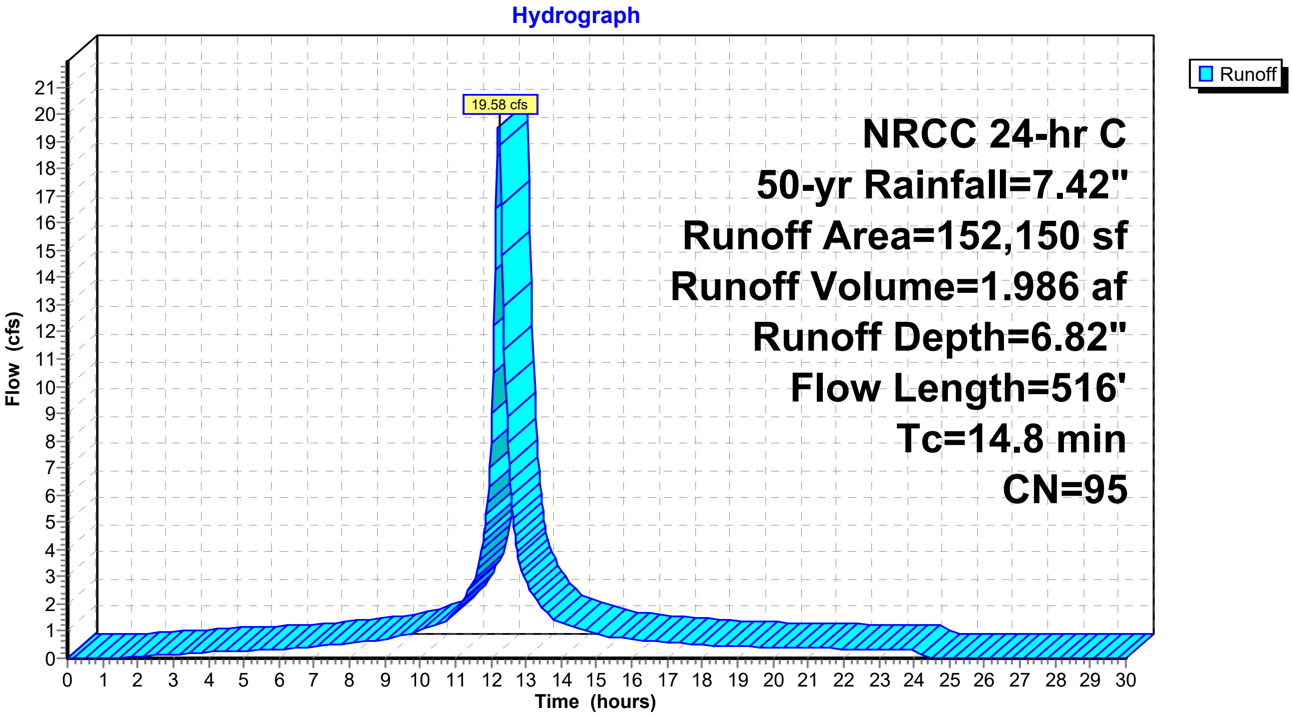
Runoff = 19.58 cfs @ 12.22 hrs, Volume= 1.986 af, Depth= 6.82"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
	67,673	98	Paved parking, HSG D
	18,349	98	Paved parking, HSG C
*	1,675	98	Concrete, HSG D
	38,351	98	Roofs, HSG D
	17,092	80	>75% Grass cover, Good, HSG D
*	144	79	Landscaping., Good, HSG D
	8,301	77	Woods, Good, HSG D
	565	70	Woods, Good, HSG C
	152,150	95	Weighted Average
	26,102		17.16% Pervious Area
	126,048		82.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0270	0.20		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
5.5	275	0.0140	0.83		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.8	119	0.0150	2.49		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.2	22	0.2270	2.38		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
14.8	516	Total			

Subcatchment EX-1: West-Parking & Building



Summary for Subcatchment EX-2: Front Lawn

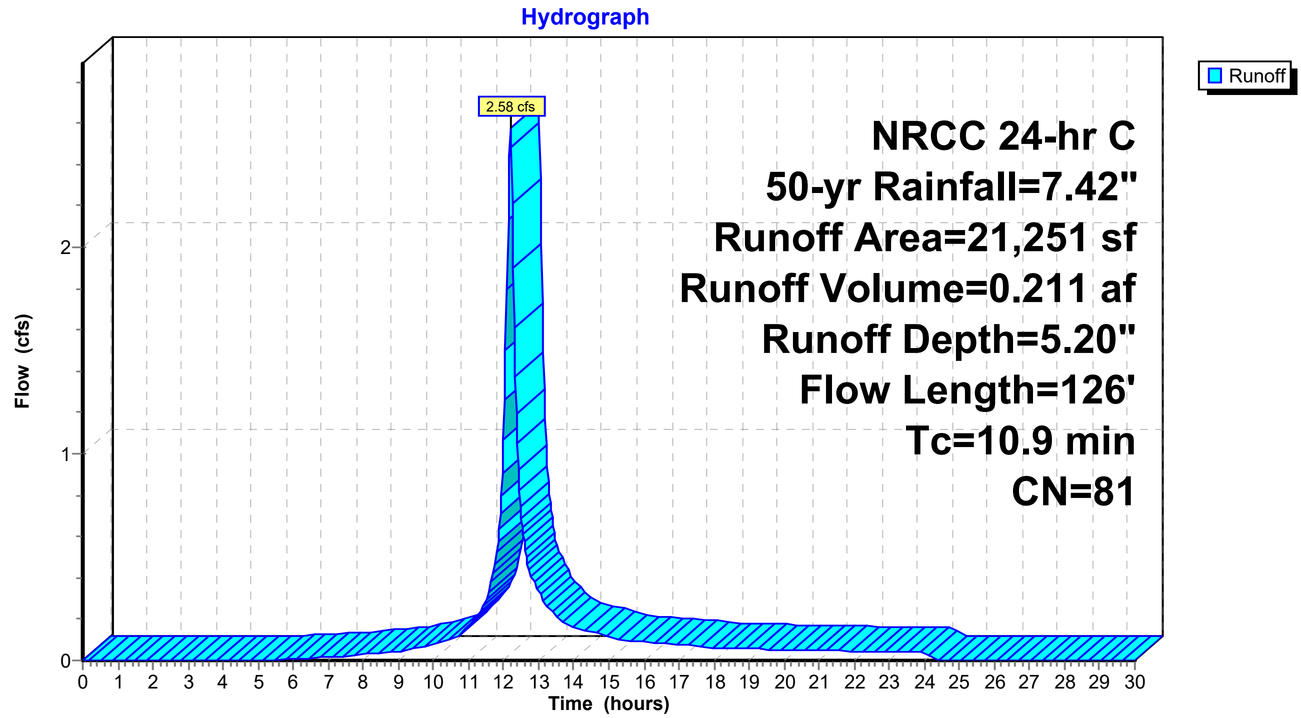
Runoff = 2.58 cfs @ 12.18 hrs, Volume= 0.211 af, Depth= 5.20"
Routed to Pond AP-2 : Front Lawn Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
*	721	98	Concrete, HSG D
	19,154	80	>75% Grass cover, Good, HSG D
*	1,376	79	Landscaping, Good, HSG D
	21,251	81	Weighted Average
	20,530		96.61% Pervious Area
	721		3.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.5	100	0.0150	0.16		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
0.4	26	0.0190	0.96		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
10.9	126	Total			

Subcatchment EX-2: Front Lawn



Summary for Subcatchment EX-3: Entrance Drive

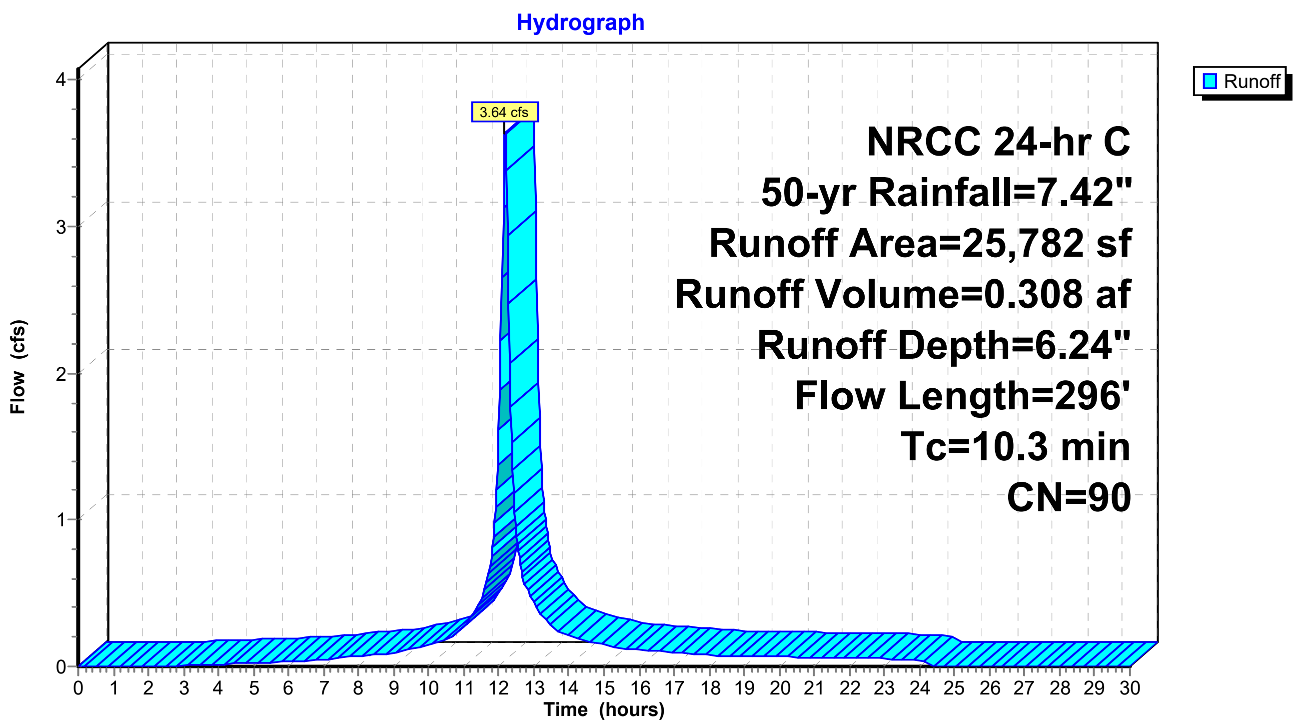
Runoff = 3.64 cfs @ 12.17 hrs, Volume= 0.308 af, Depth= 6.24"
Routed to Pond AP-5 : DI#5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
	9,910	98	Paved parking, HSG D
*	814	98	Concrete, HSG D
	3,130	98	Roofs, HSG D
	9,334	80	>75% Grass cover, Good, HSG D
*	2,594	79	Landscaping, Good, HSG D
	25,782	90	Weighted Average
	11,928		46.26% Pervious Area
	13,854		53.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	92	0.0200	0.18		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
1.6	204	0.0110	2.13		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
10.3	296	Total			

Subcatchment EX-3: Entrance Drive



Summary for Subcatchment EX-4: Landscaped Area South of Entrance Drive

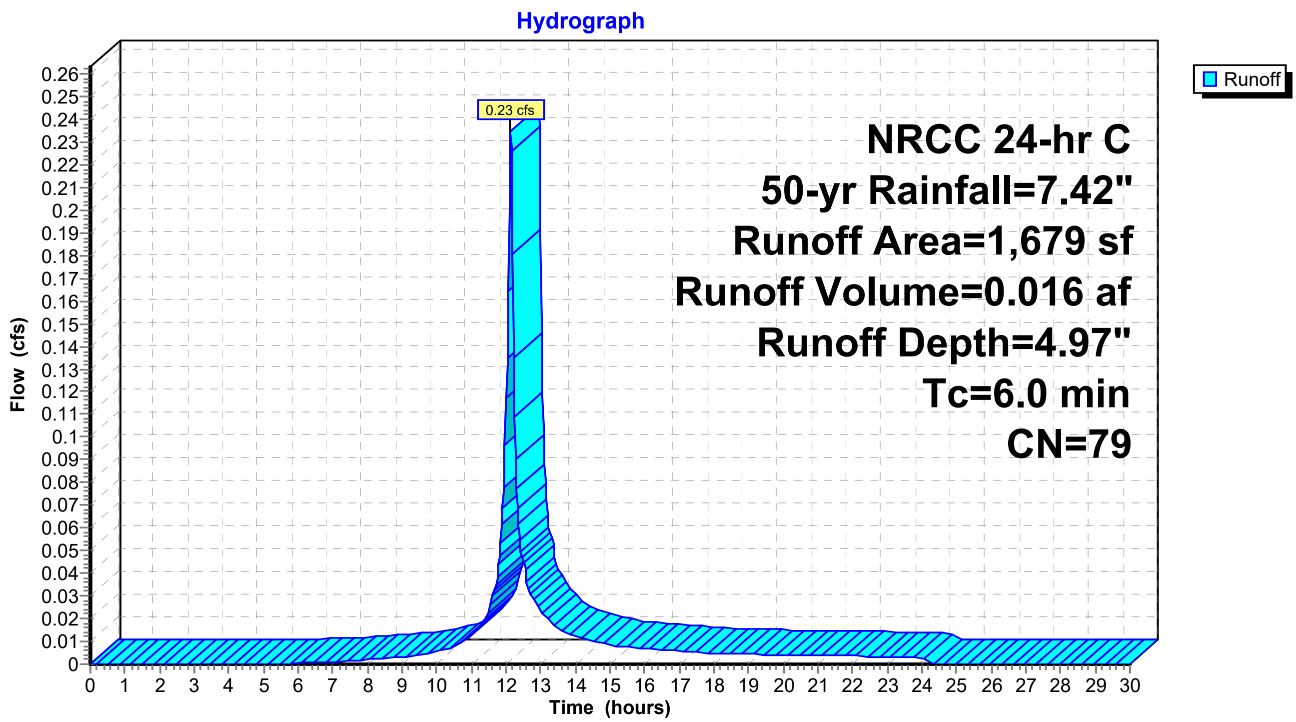
Runoff = 0.23 cfs @ 12.13 hrs, Volume= 0.016 af, Depth= 4.97"
Routed to Pond AP-4 : Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
	510	80	>75% Grass cover, Good, HSG D
*	1,169	79	Landscaping, Good, HSG D
	1,679	79	Weighted Average
	1,679		100.00% Pervious Area

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

Subcatchment EX-4: Landscaped Area South of Entrance Drive

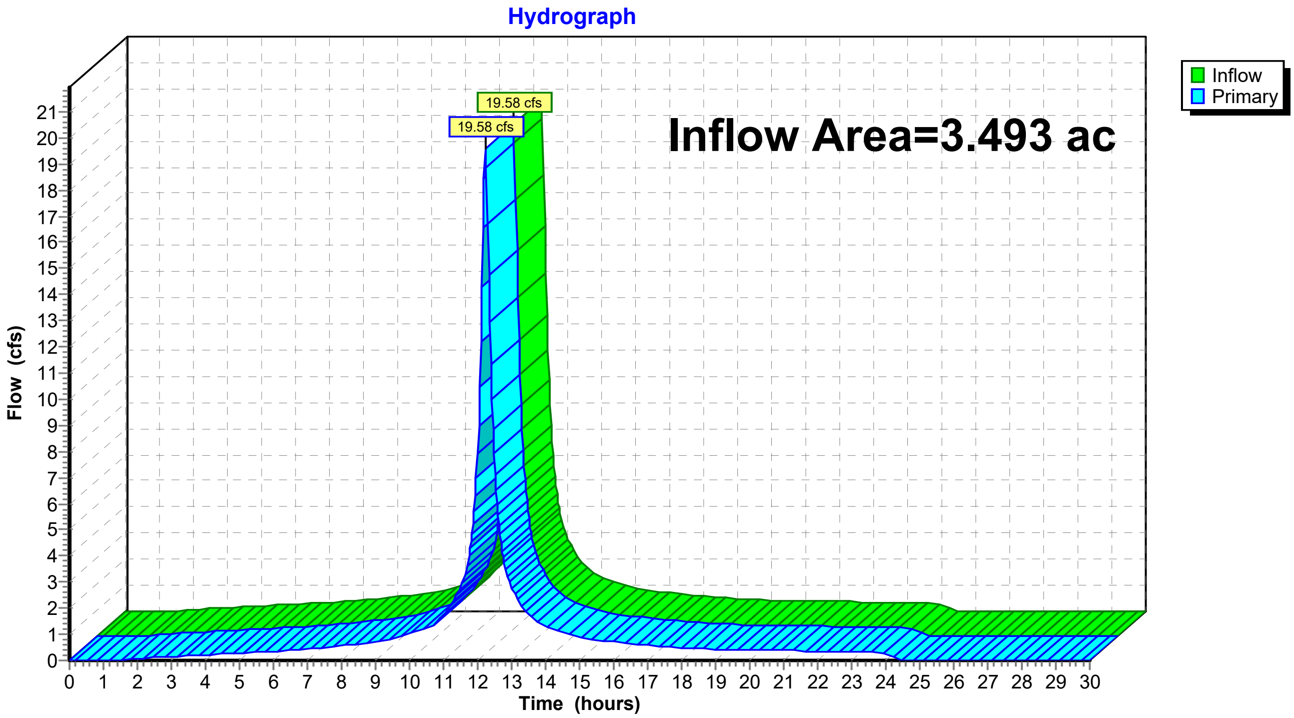


Summary for Pond AP-1: Norwalk River

Inflow Area = 3.493 ac, 82.84% Impervious, Inflow Depth = 6.82" for 50-yr event
Inflow = 19.58 cfs @ 12.22 hrs, Volume= 1.986 af
Primary = 19.58 cfs @ 12.22 hrs, Volume= 1.986 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-1: Norwalk River

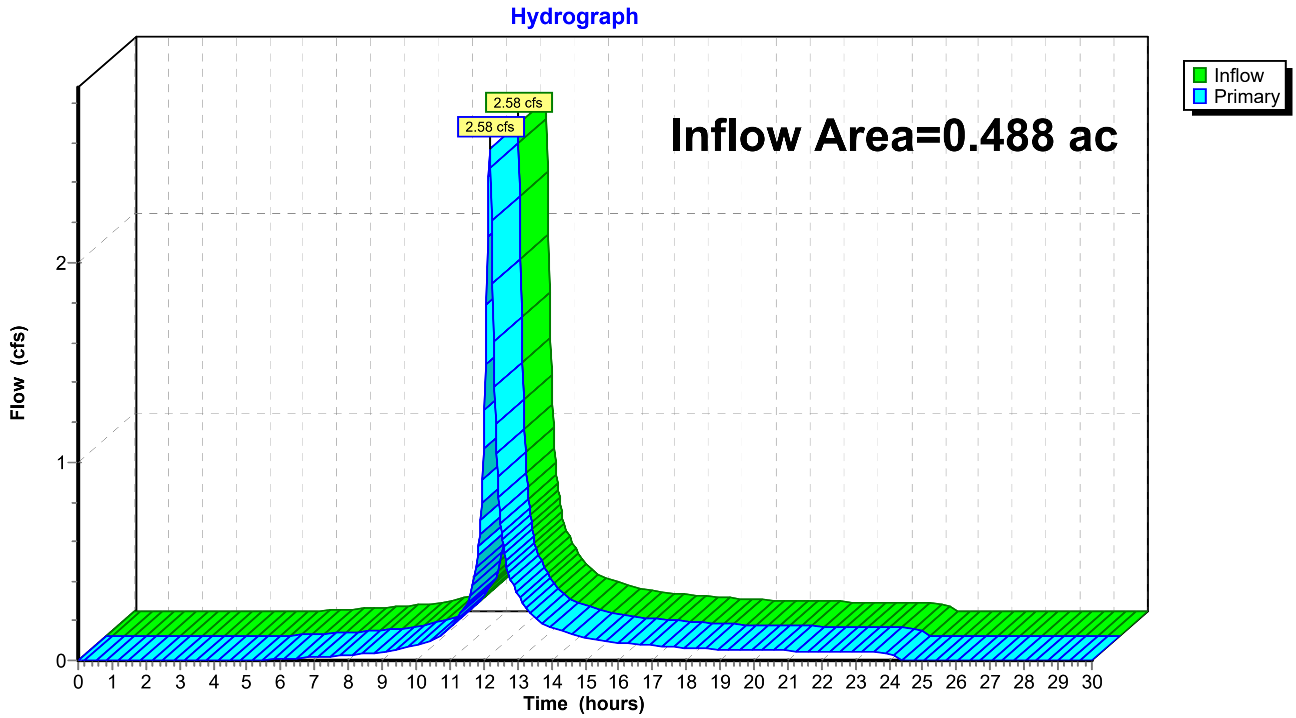


Summary for Pond AP-2: Front Lawn Landscaped Area

Inflow Area = 0.488 ac, 3.39% Impervious, Inflow Depth = 5.20" for 50-yr event
Inflow = 2.58 cfs @ 12.18 hrs, Volume= 0.211 af
Primary = 2.58 cfs @ 12.18 hrs, Volume= 0.211 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-2: Front Lawn Landscaped Area

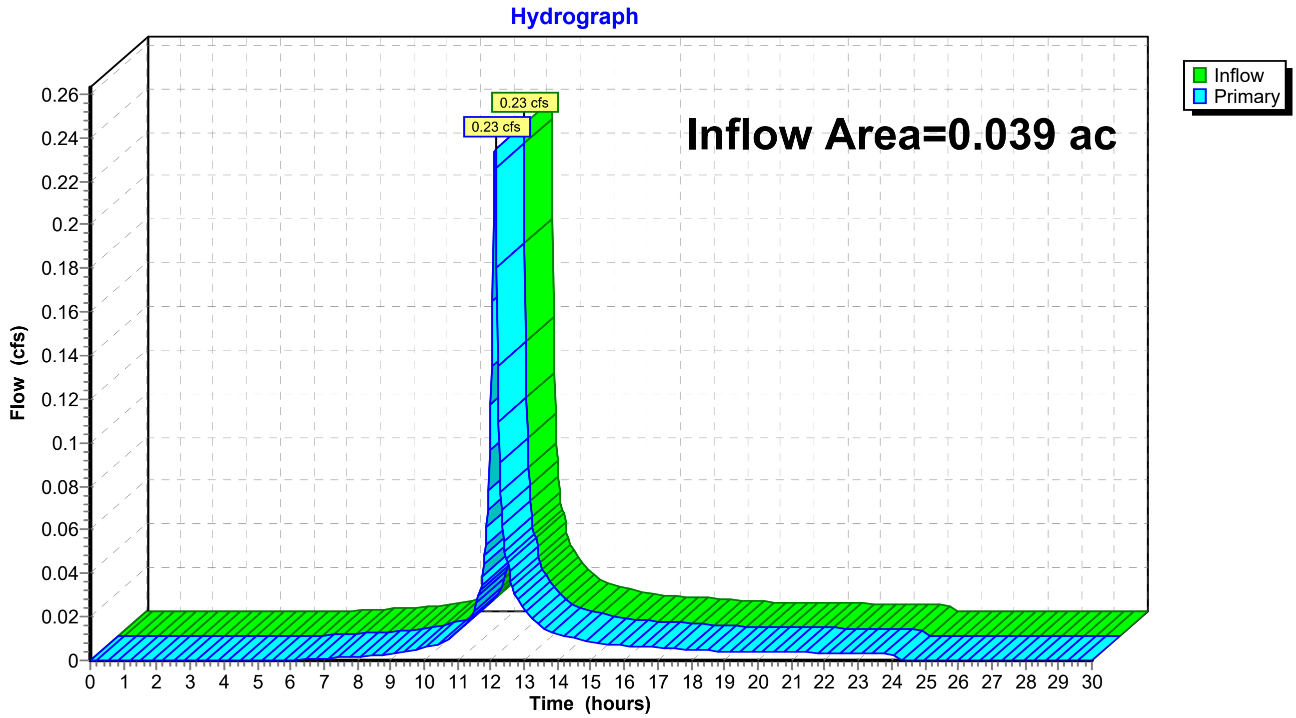


Summary for Pond AP-4: Landscaped Area

Inflow Area = 0.039 ac, 0.00% Impervious, Inflow Depth = 4.97" for 50-yr event
Inflow = 0.23 cfs @ 12.13 hrs, Volume= 0.016 af
Primary = 0.23 cfs @ 12.13 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

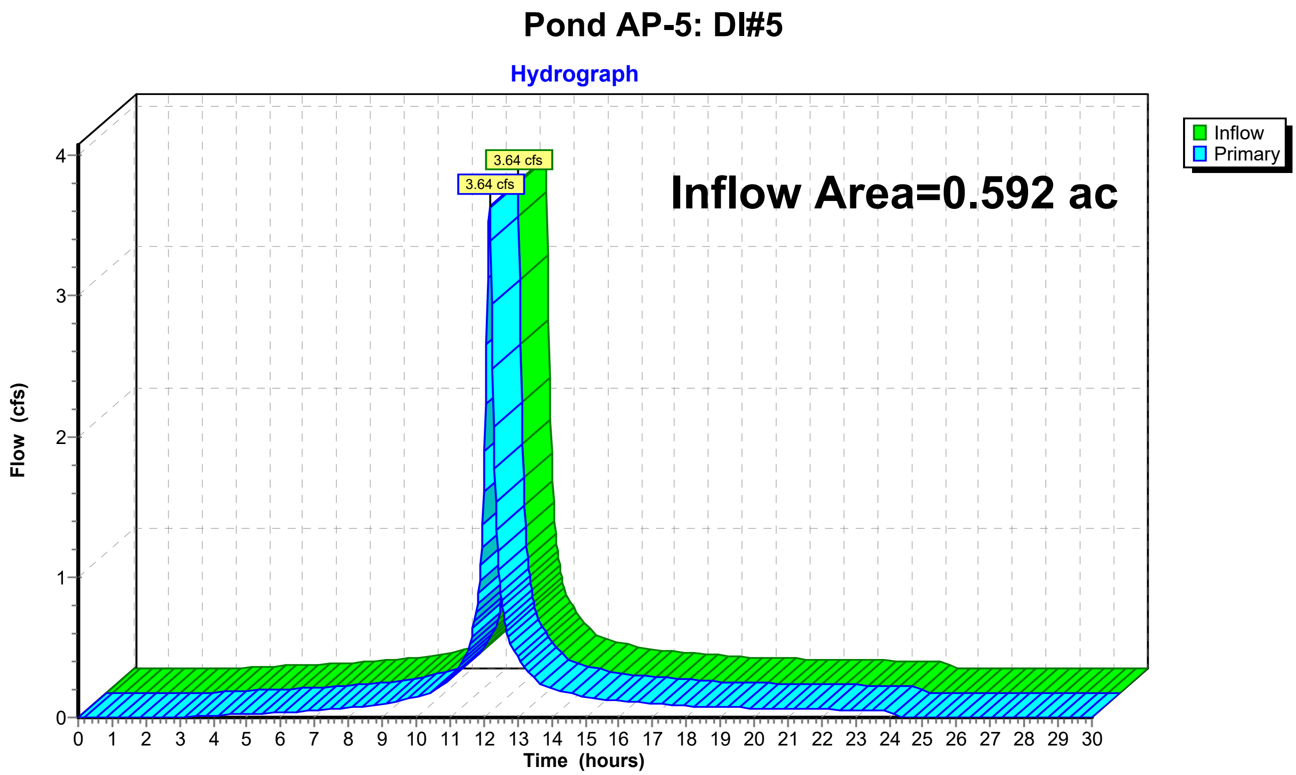
Pond AP-4: Landscaped Area



Summary for Pond AP-5: DI#5

Inflow Area = 0.592 ac, 53.74% Impervious, Inflow Depth = 6.24" for 50-yr event
Inflow = 3.64 cfs @ 12.17 hrs, Volume= 0.308 af
Primary = 3.64 cfs @ 12.17 hrs, Volume= 0.308 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs



Summary for Subcatchment EX-1: West-Parking & Building

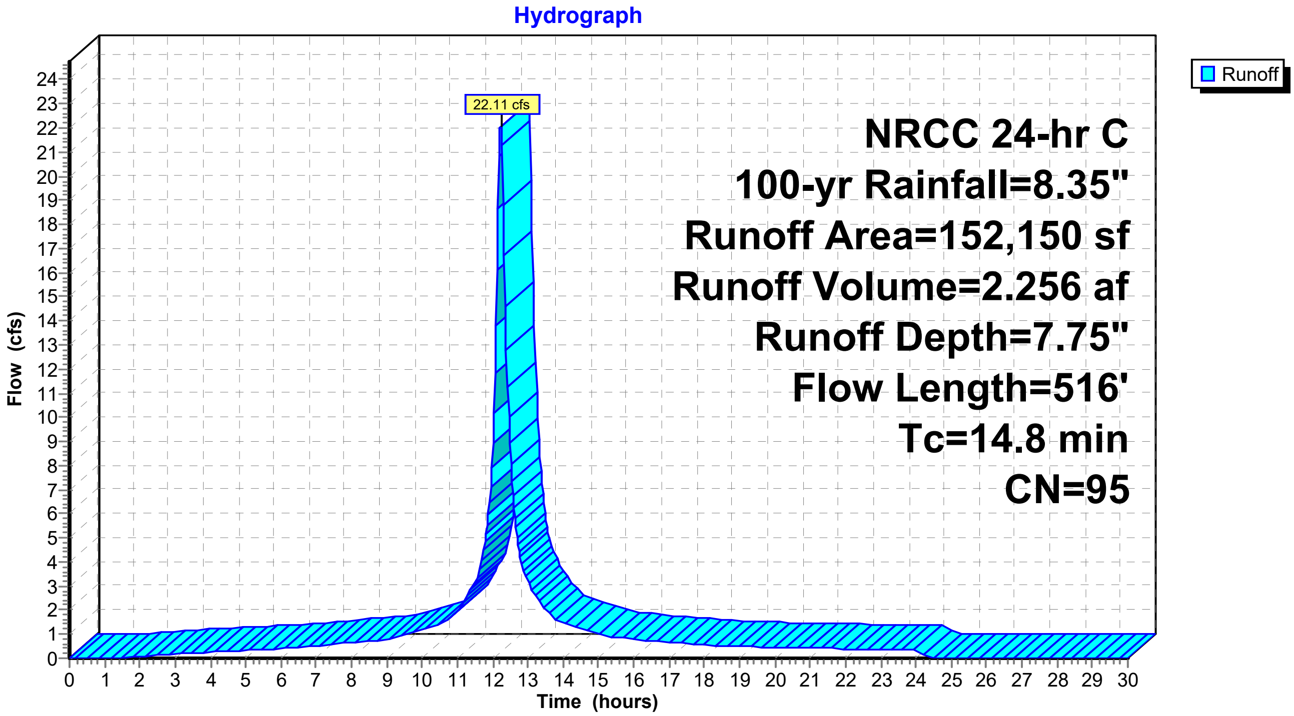
Runoff = 22.11 cfs @ 12.22 hrs, Volume= 2.256 af, Depth= 7.75"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
	67,673	98	Paved parking, HSG D
	18,349	98	Paved parking, HSG C
*	1,675	98	Concrete, HSG D
	38,351	98	Roofs, HSG D
	17,092	80	>75% Grass cover, Good, HSG D
*	144	79	Landscaping., Good, HSG D
	8,301	77	Woods, Good, HSG D
	565	70	Woods, Good, HSG C
	152,150	95	Weighted Average
	26,102		17.16% Pervious Area
	126,048		82.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0270	0.20		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
5.5	275	0.0140	0.83		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.8	119	0.0150	2.49		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.2	22	0.2270	2.38		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
14.8	516	Total			

Subcatchment EX-1: West-Parking & Building



Summary for Subcatchment EX-2: Front Lawn

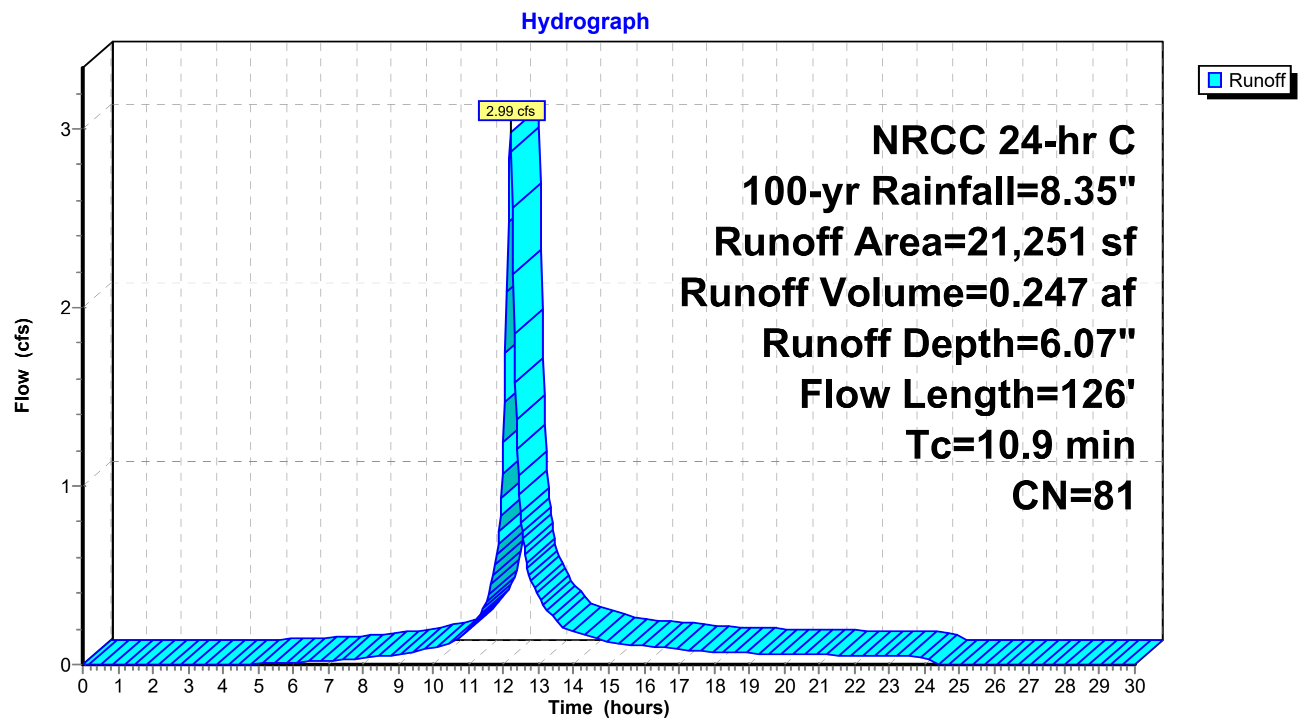
Runoff = 2.99 cfs @ 12.18 hrs, Volume= 0.247 af, Depth= 6.07"
Routed to Pond AP-2 : Front Lawn Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
*	721	98	Concrete, HSG D
	19,154	80	>75% Grass cover, Good, HSG D
*	1,376	79	Landscaping, Good, HSG D
	21,251	81	Weighted Average
	20,530		96.61% Pervious Area
	721		3.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.5	100	0.0150	0.16		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
0.4	26	0.0190	0.96		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
10.9	126	Total			

Subcatchment EX-2: Front Lawn



Summary for Subcatchment EX-3: Entrance Drive

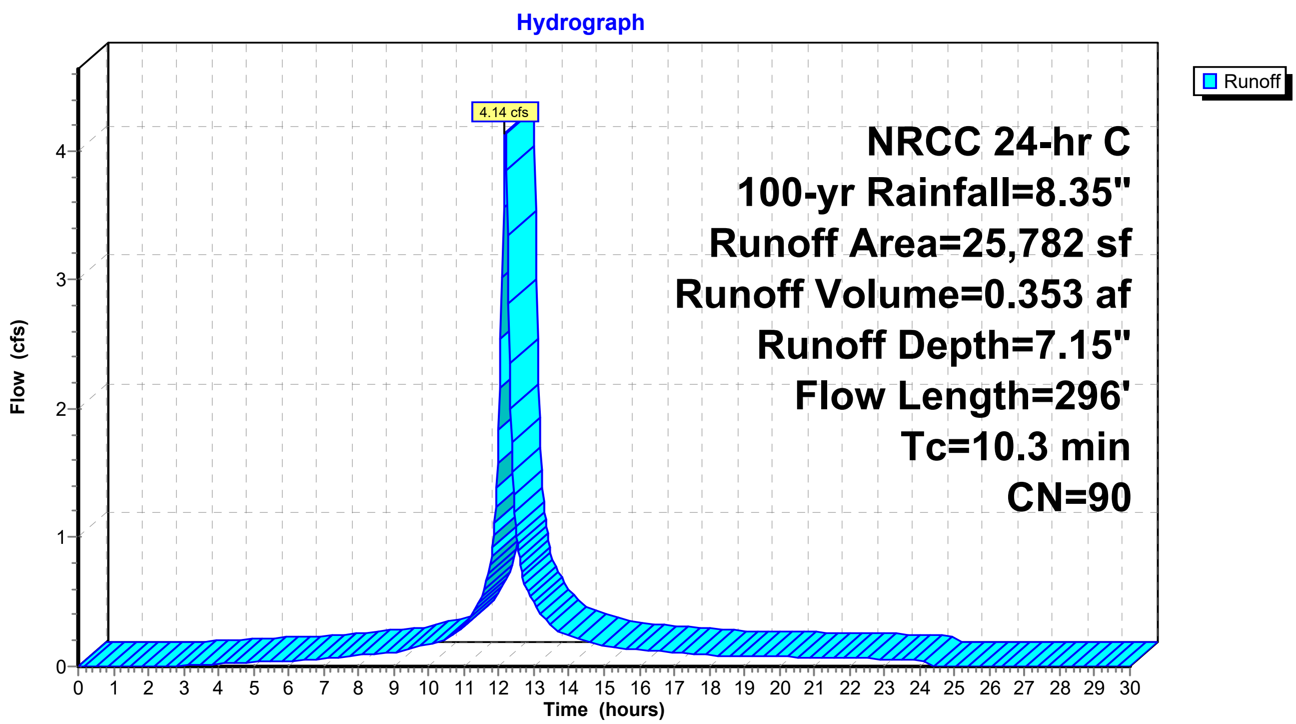
Runoff = 4.14 cfs @ 12.17 hrs, Volume= 0.353 af, Depth= 7.15"
Routed to Pond AP-5 : DI#5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
	9,910	98	Paved parking, HSG D
*	814	98	Concrete, HSG D
	3,130	98	Roofs, HSG D
	9,334	80	>75% Grass cover, Good, HSG D
*	2,594	79	Landscaping, Good, HSG D
	25,782	90	Weighted Average
	11,928		46.26% Pervious Area
	13,854		53.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	92	0.0200	0.18		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.53"
1.6	204	0.0110	2.13		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
10.3	296	Total			

Subcatchment EX-3: Entrance Drive



Summary for Subcatchment EX-4: Landscaped Area South of Entrance Drive

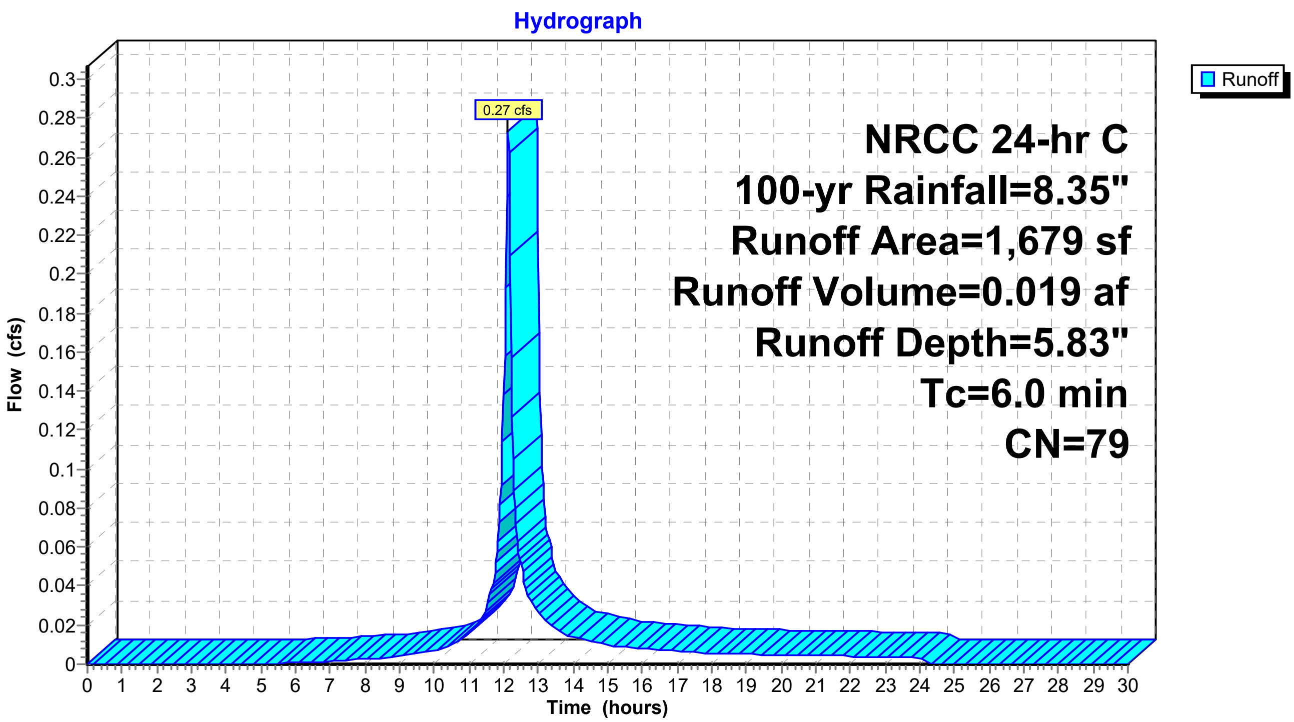
Runoff = 0.27 cfs @ 12.13 hrs, Volume= 0.019 af, Depth= 5.83"
Routed to Pond AP-4 : Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
	510	80	>75% Grass cover, Good, HSG D
*	1,169	79	Landscaping, Good, HSG D
	1,679	79	Weighted Average
	1,679		100.00% Pervious Area

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

Subcatchment EX-4: Landscaped Area South of Entrance Drive

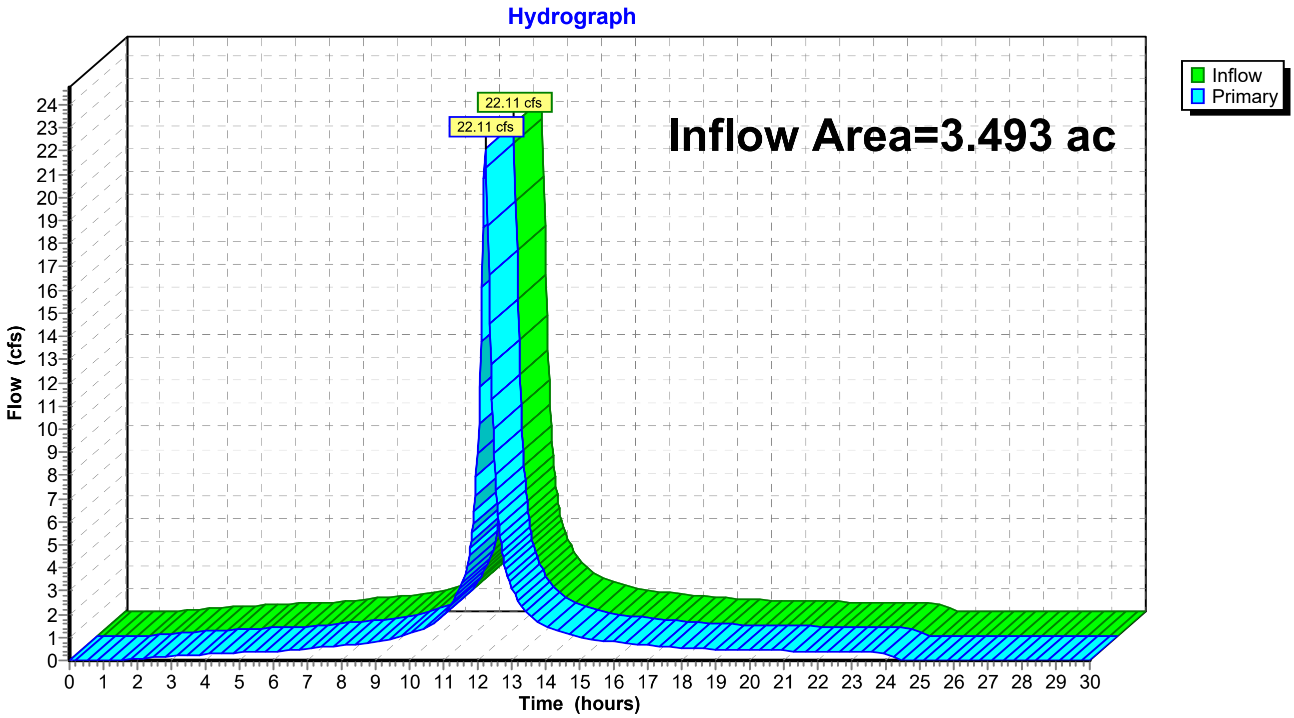


Summary for Pond AP-1: Norwalk River

Inflow Area =	3.493 ac, 82.84% Impervious, Inflow Depth = 7.75" for 100-yr event		
Inflow =	22.11 cfs @ 12.22 hrs, Volume=	2.256 af	
Primary =	22.11 cfs @ 12.22 hrs, Volume=	2.256 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-1: Norwalk River

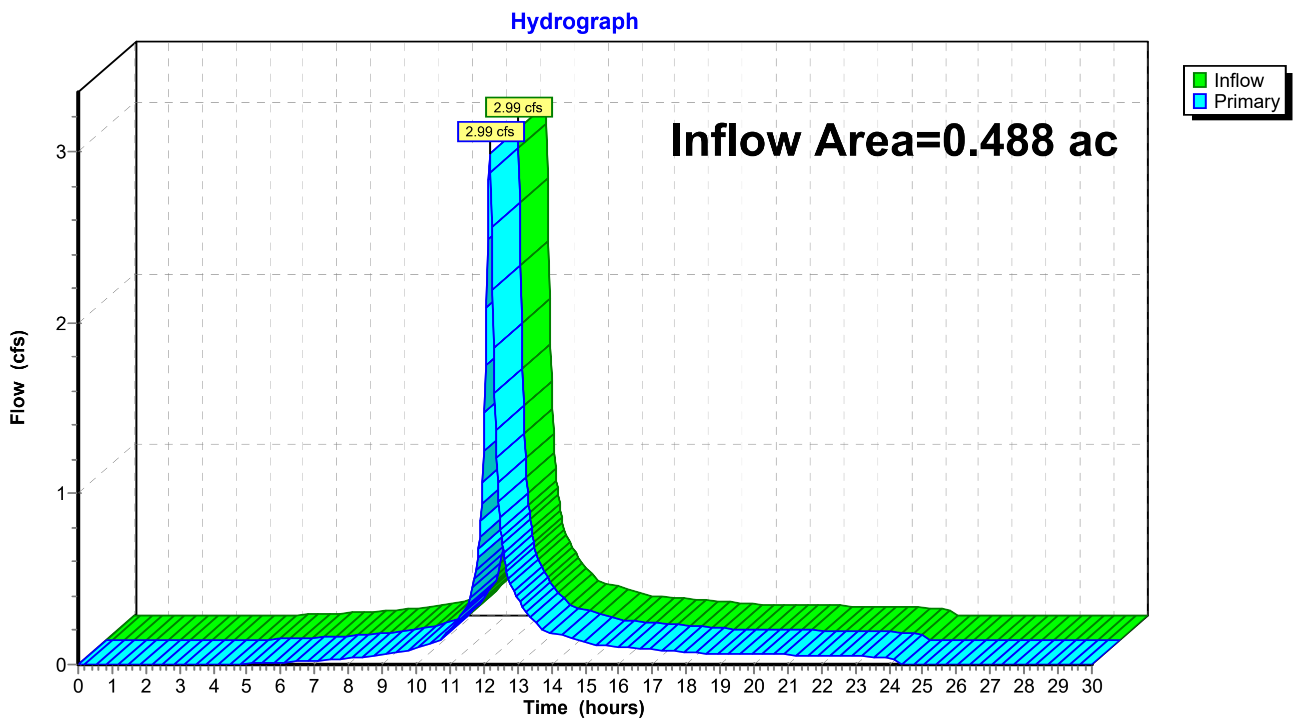


Summary for Pond AP-2: Front Lawn Landscaped Area

Inflow Area =	0.488 ac,	3.39% Impervious,	Inflow Depth = 6.07"	for 100-yr event	
Inflow =	2.99 cfs @	12.18 hrs,	Volume=	0.247 af	
Primary =	2.99 cfs @	12.18 hrs,	Volume=	0.247 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-2: Front Lawn Landscaped Area

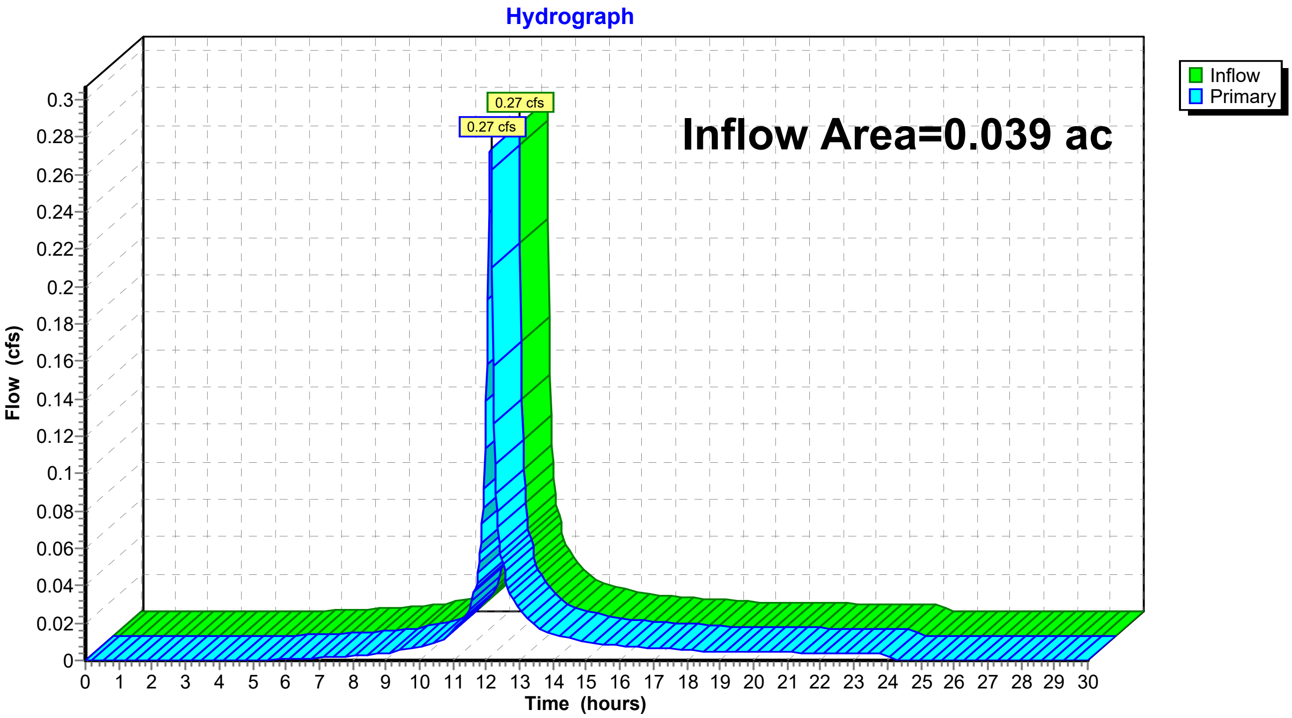


Summary for Pond AP-4: Landscaped Area

Inflow Area = 0.039 ac, 0.00% Impervious, Inflow Depth = 5.83" for 100-yr event
Inflow = 0.27 cfs @ 12.13 hrs, Volume= 0.019 af
Primary = 0.27 cfs @ 12.13 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-4: Landscaped Area

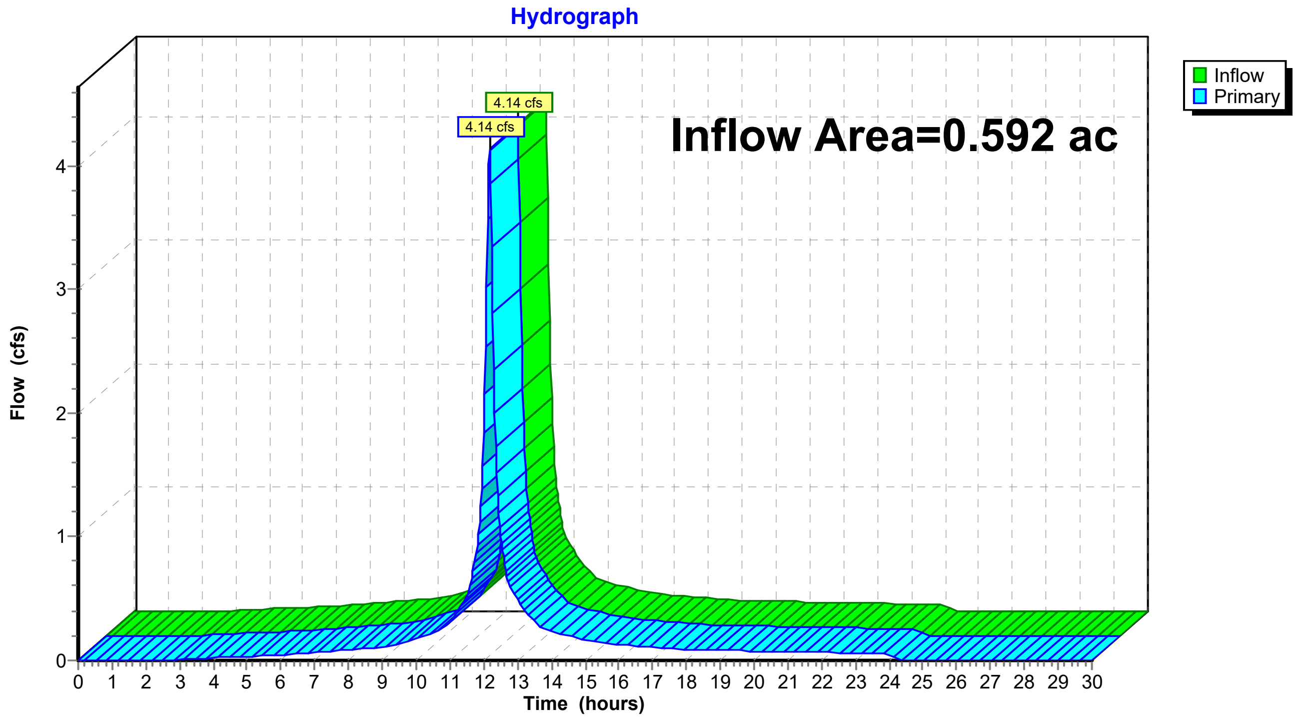


Summary for Pond AP-5: DI#5

Inflow Area = 0.592 ac, 53.74% Impervious, Inflow Depth = 7.15" for 100-yr event
Inflow = 4.14 cfs @ 12.17 hrs, Volume= 0.353 af
Primary = 4.14 cfs @ 12.17 hrs, Volume= 0.353 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-5: DI#5



Appendix G
Hydrologic Analysis - Proposed Conditions

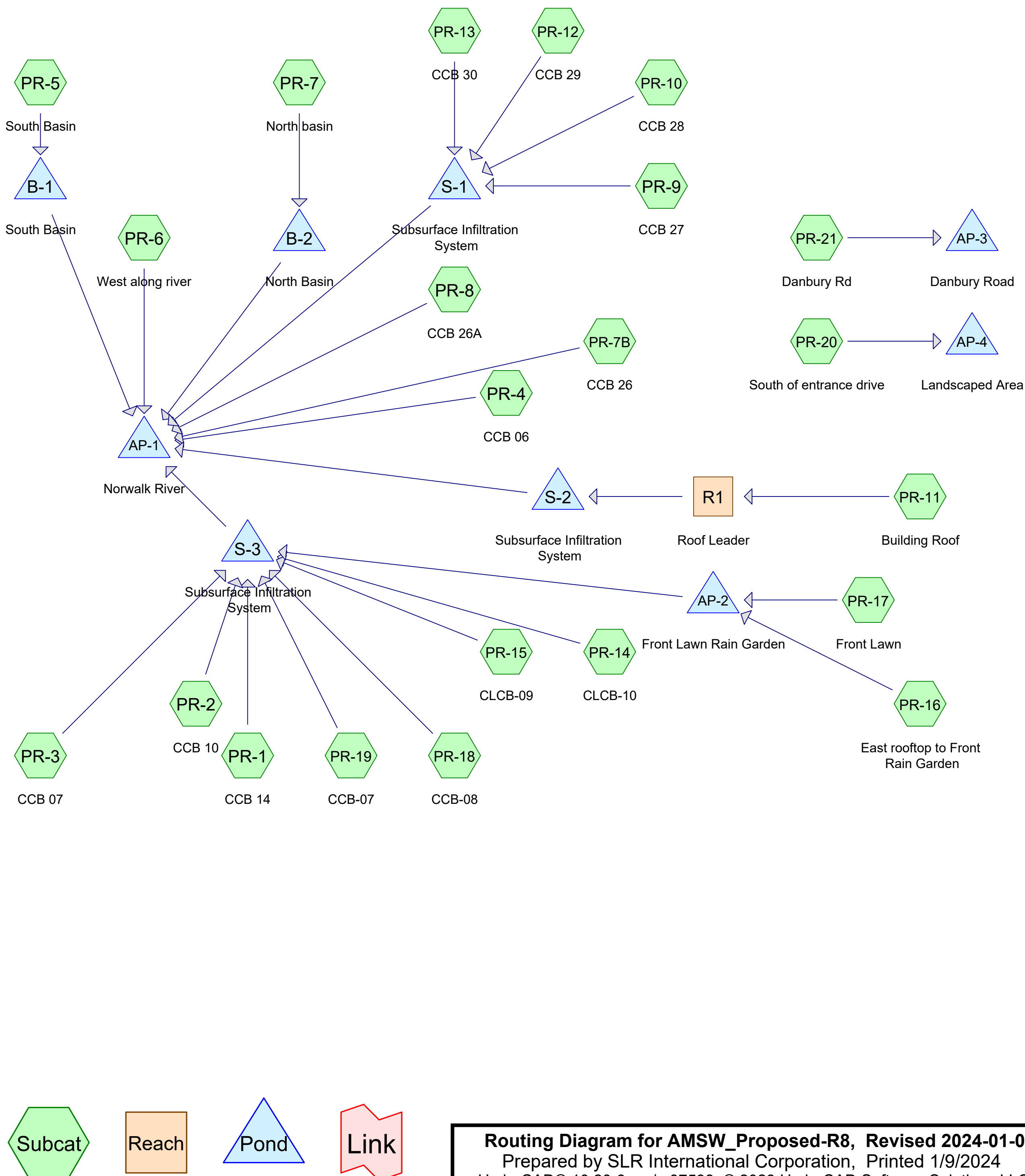
Proposed Multifamily Development

131 Danbury Road, Wilton, Connecticut
Drainage Report

Ryan Sutherland, AMS Acquisitions Management Corporation

SLR Project No.: 141.21543.0000171

October 23, 2023



Routing Diagram for AMSW_Proposed-R8, Revised 2024-01-05
Prepared by SLR International Corporation, Printed 1/9/2024
HydroCAD® 10.20-3g s/n 07599 © 2023 HydroCAD Software Solutions LLC

Summary for Subcatchment PR-1: CCB 14

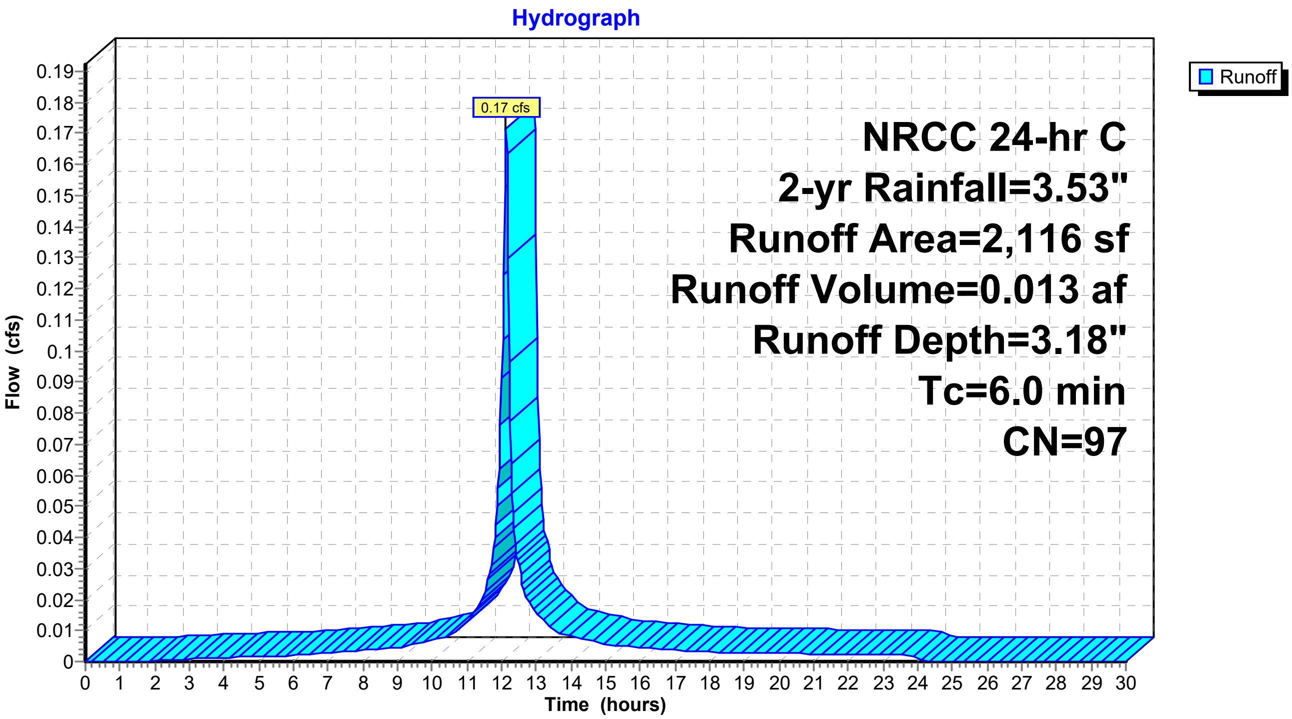
Runoff = 0.17 cfs @ 12.13 hrs, Volume= 0.013 af, Depth= 3.18"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
	2,045	98	Paved parking, HSG D
*	71	79	Landscaping, Good, HSG D
	2,116	97	Weighted Average
	71		3.36% Pervious Area
	2,045		96.64% Impervious Area

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

Subcatchment PR-1: CCB 14



Summary for Subcatchment PR-10: CCB 28

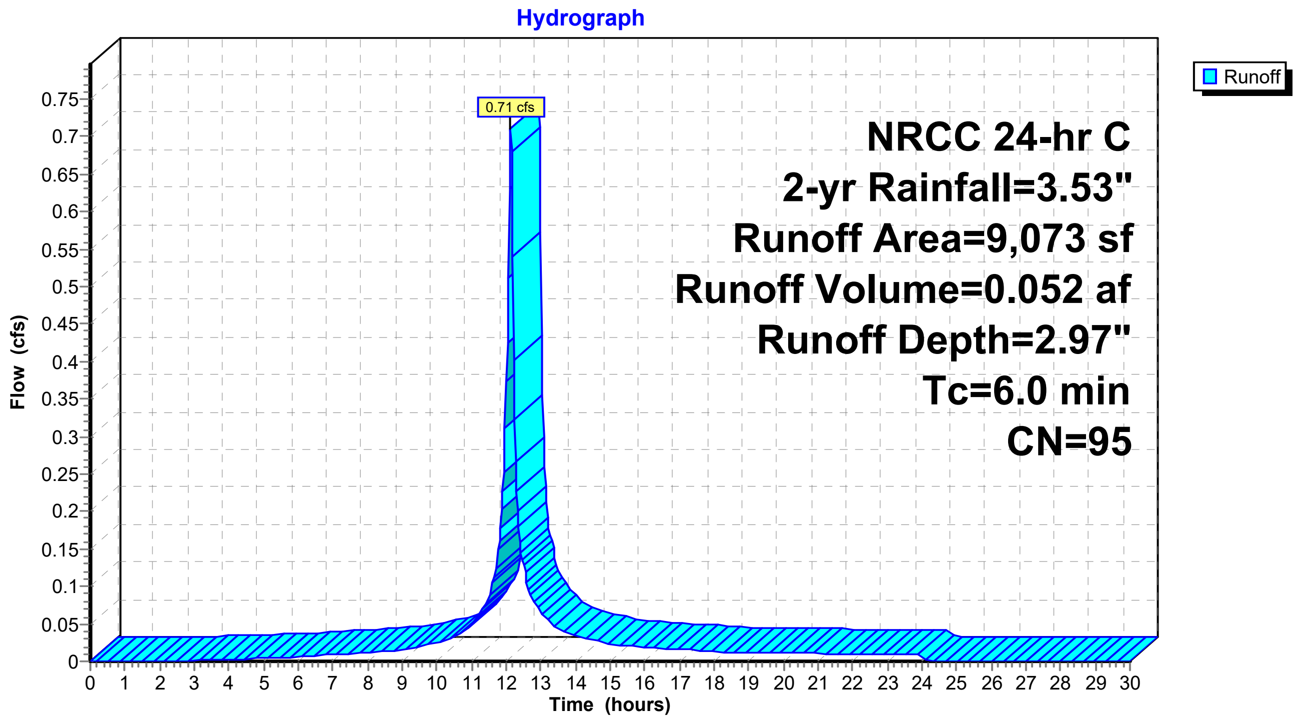
Runoff = 0.71 cfs @ 12.13 hrs, Volume= 0.052 af, Depth= 2.97"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
	7,450	98	Paved parking, HSG D
	440	80	>75% Grass cover, Good, HSG D
*	1,183	79	Landscaping, Good, HSG D
	9,073	95	Weighted Average
	1,623		17.89% Pervious Area
	7,450		82.11% Impervious Area

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

Subcatchment PR-10: CCB 28



Summary for Subcatchment PR-11: Building Roof

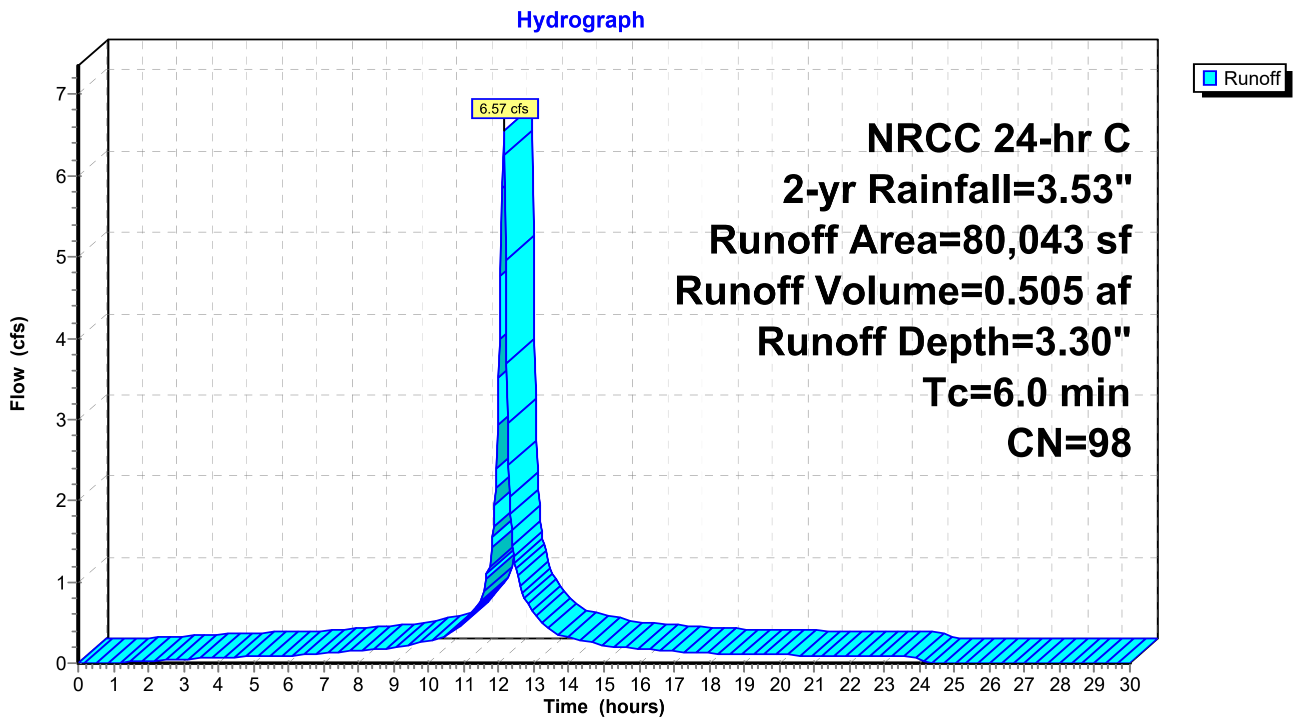
Runoff = 6.57 cfs @ 12.13 hrs, Volume= 0.505 af, Depth= 3.30"
Routed to Reach R1 : Roof Leader

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

Area (sf)	CN	Description
80,043	98	Roofs, HSG D
80,043		100.00% Impervious Area

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

Subcatchment PR-11: Building Roof



Summary for Subcatchment PR-12: CCB 29

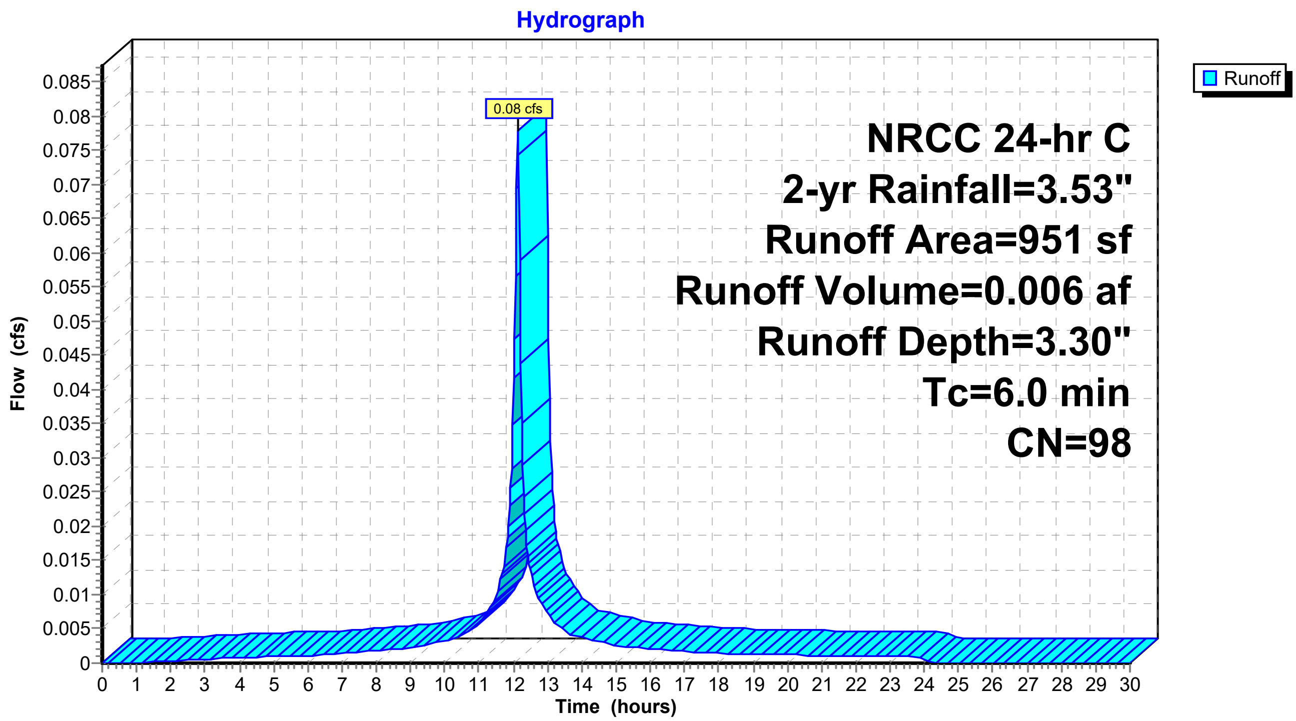
Runoff = 0.08 cfs @ 12.13 hrs, Volume= 0.006 af, Depth= 3.30"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

Area (sf)	CN	Description
951	98	Paved parking, HSG D
951		100.00% Impervious Area

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

Subcatchment PR-12: CCB 29



Summary for Subcatchment PR-13: CCB 30

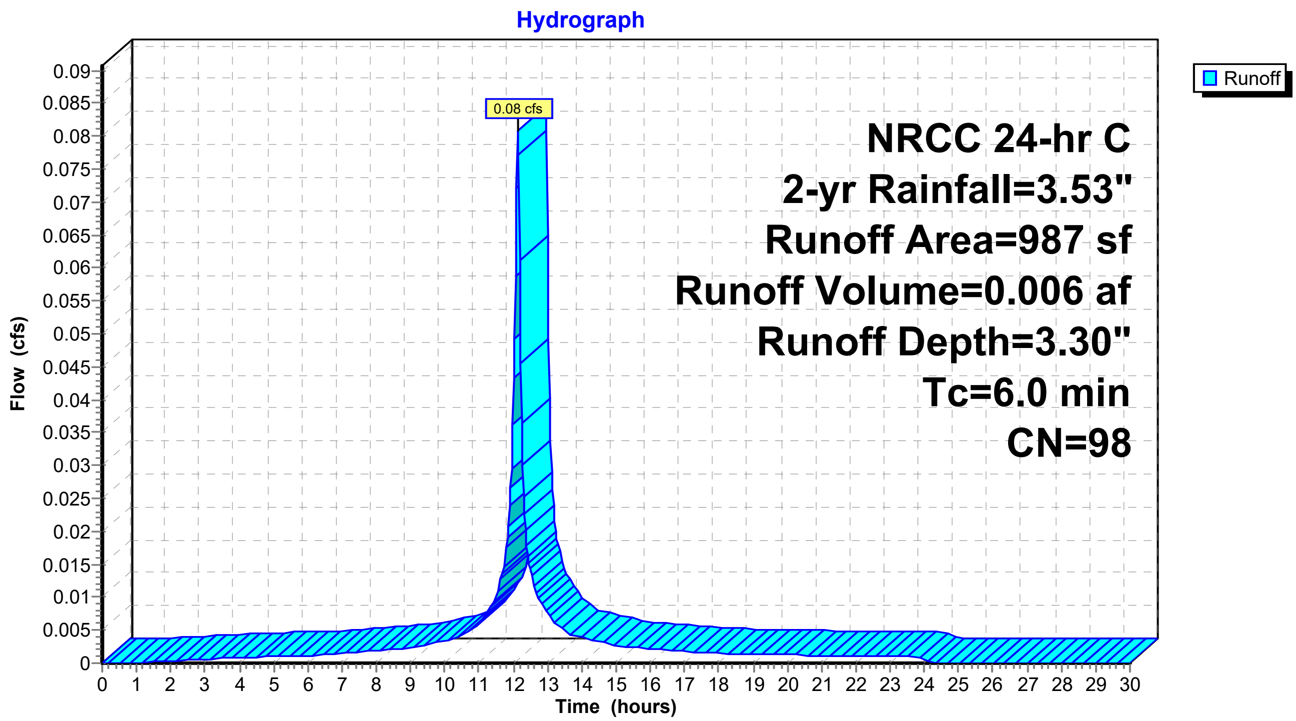
Runoff = 0.08 cfs @ 12.13 hrs, Volume= 0.006 af, Depth= 3.30"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

Area (sf)	CN	Description
987	98	Paved parking, HSG D
987		100.00% Impervious Area

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

Subcatchment PR-13: CCB 30



Summary for Subcatchment PR-14: CLCB-10

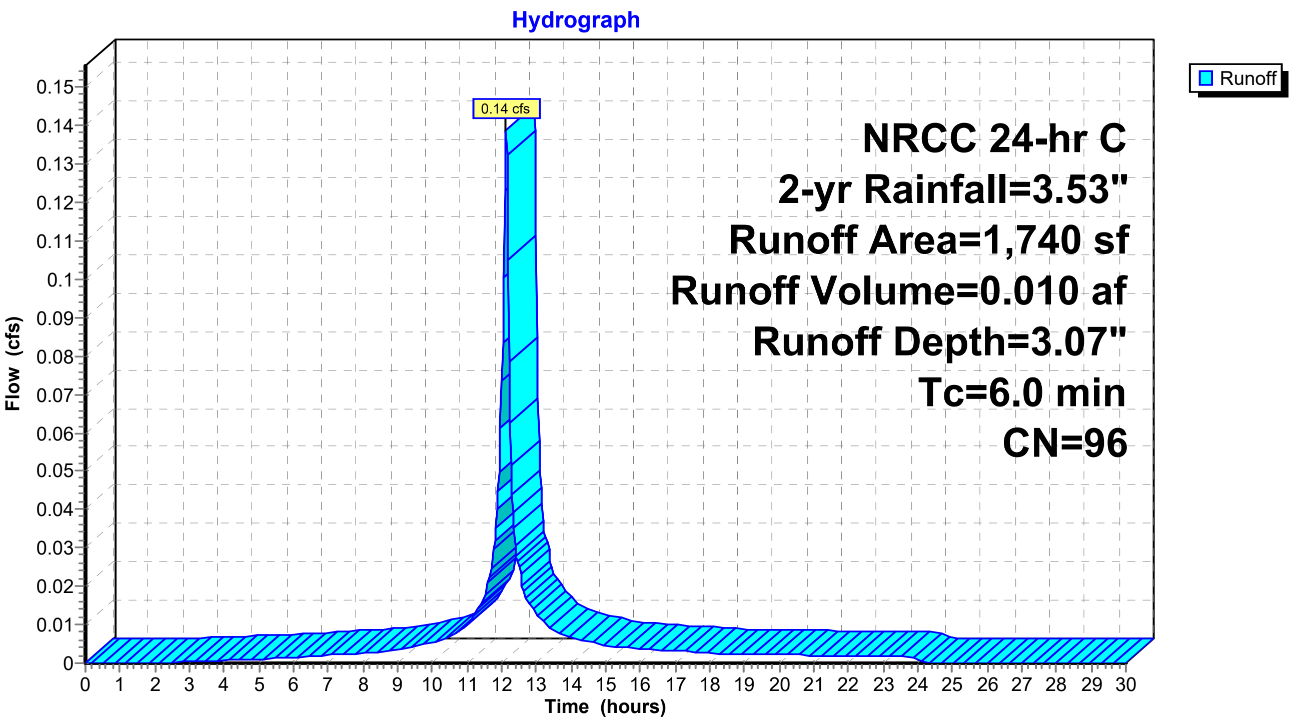
Runoff = 0.14 cfs @ 12.13 hrs, Volume= 0.010 af, Depth= 3.07"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
*	1,740	96	Concrete paver, HSG D
	1,740		100.00% Pervious Area

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

Subcatchment PR-14: CLCB-10



Summary for Subcatchment PR-15: CLCB-09

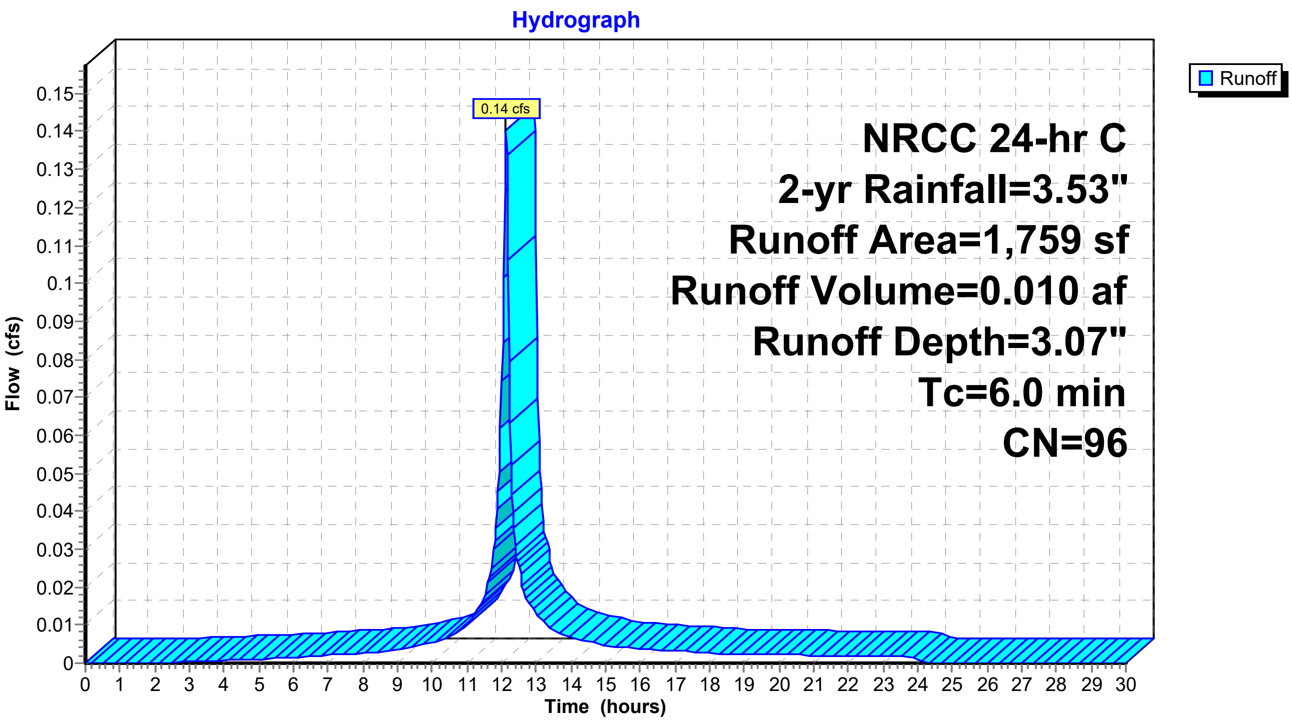
Runoff = 0.14 cfs @ 12.13 hrs, Volume= 0.010 af, Depth= 3.07"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
*	1,759	96	Pevious paver, HSG D
	1,759		100.00% Pervious Area

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

Subcatchment PR-15: CLCB-09



Summary for Subcatchment PR-16: East rooftop to Front Rain Garden

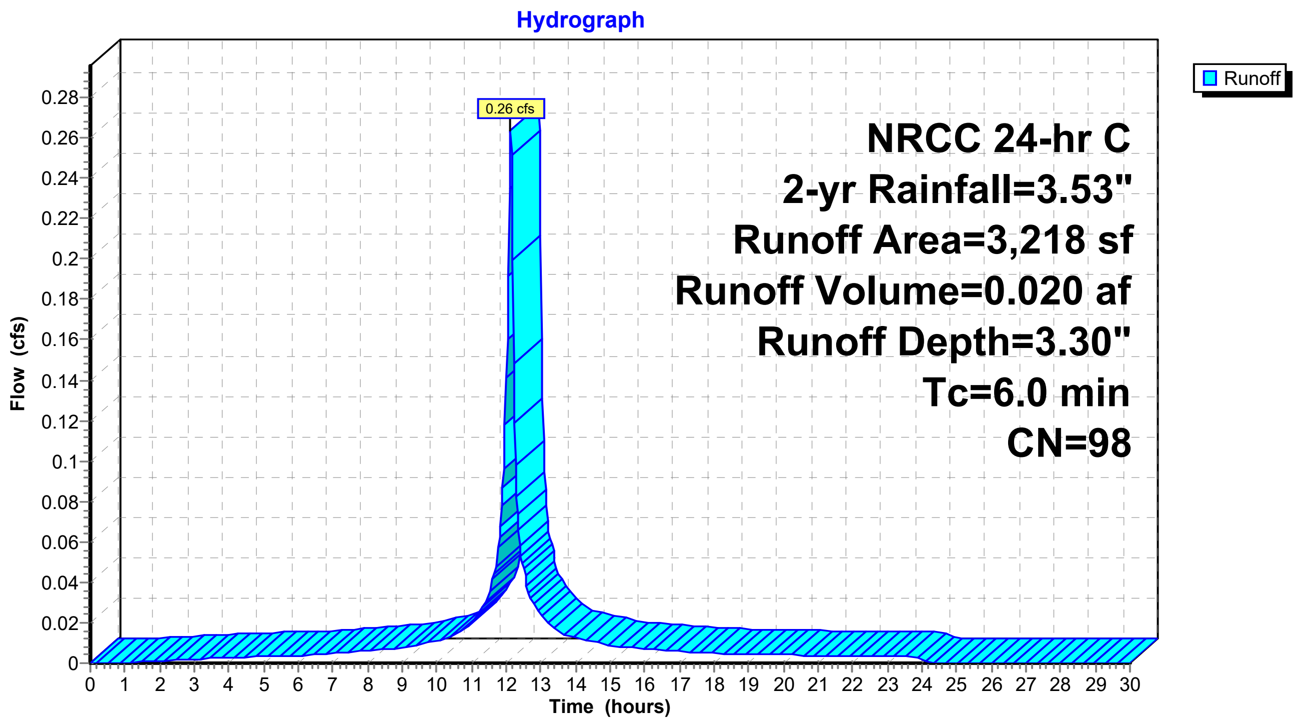
Runoff = 0.26 cfs @ 12.13 hrs, Volume= 0.020 af, Depth= 3.30"
Routed to Pond AP-2 : Front Lawn Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

Area (sf)	CN	Description
3,218	98	Roofs, HSG D
3,218		100.00% Impervious Area

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

Subcatchment PR-16: East rooftop to Front Rain Garden



Summary for Subcatchment PR-17: Front Lawn

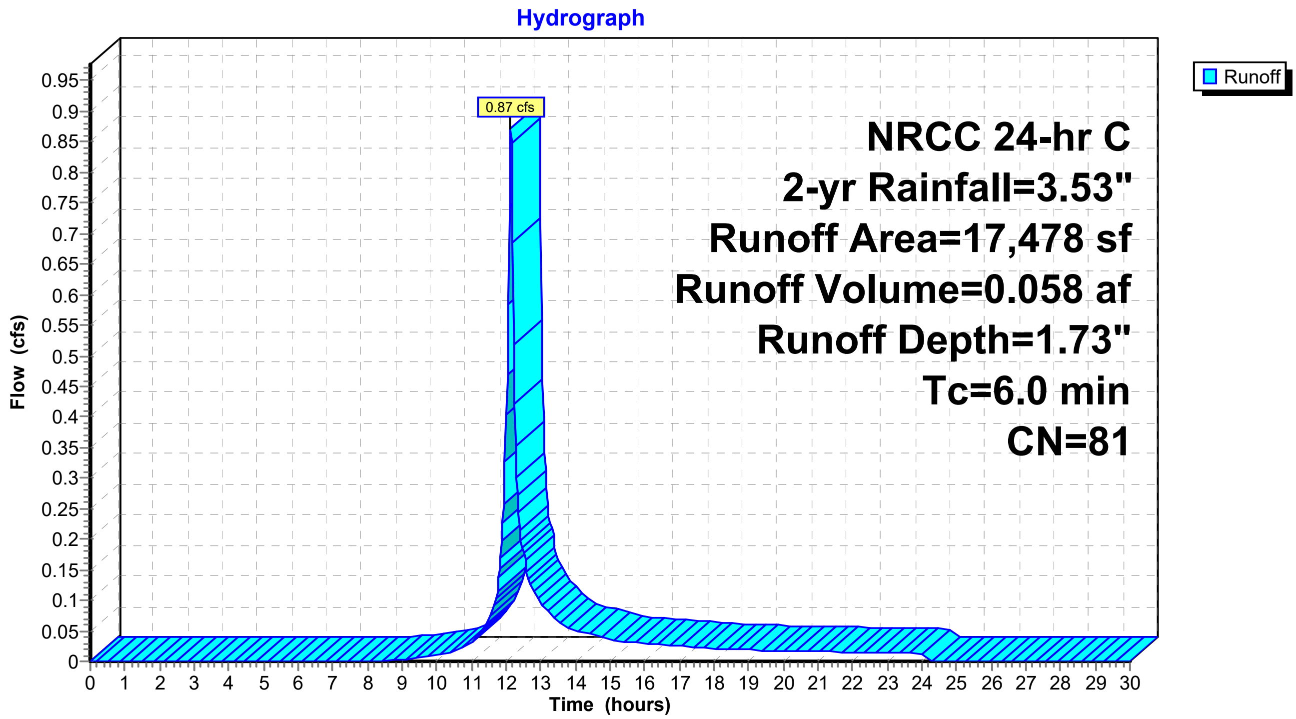
Runoff = 0.87 cfs @ 12.13 hrs, Volume= 0.058 af, Depth= 1.73"
Routed to Pond AP-2 : Front Lawn Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
	1,883	98	Paved parking, HSG D
	6,950	80	>75% Grass cover, Good, HSG D
*	8,645	79	Landscaping, Good, HSG D
	17,478	81	Weighted Average
	15,595		89.23% Pervious Area
	1,883		10.77% Impervious Area

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

Subcatchment PR-17: Front Lawn



Summary for Subcatchment PR-18: CCB-08

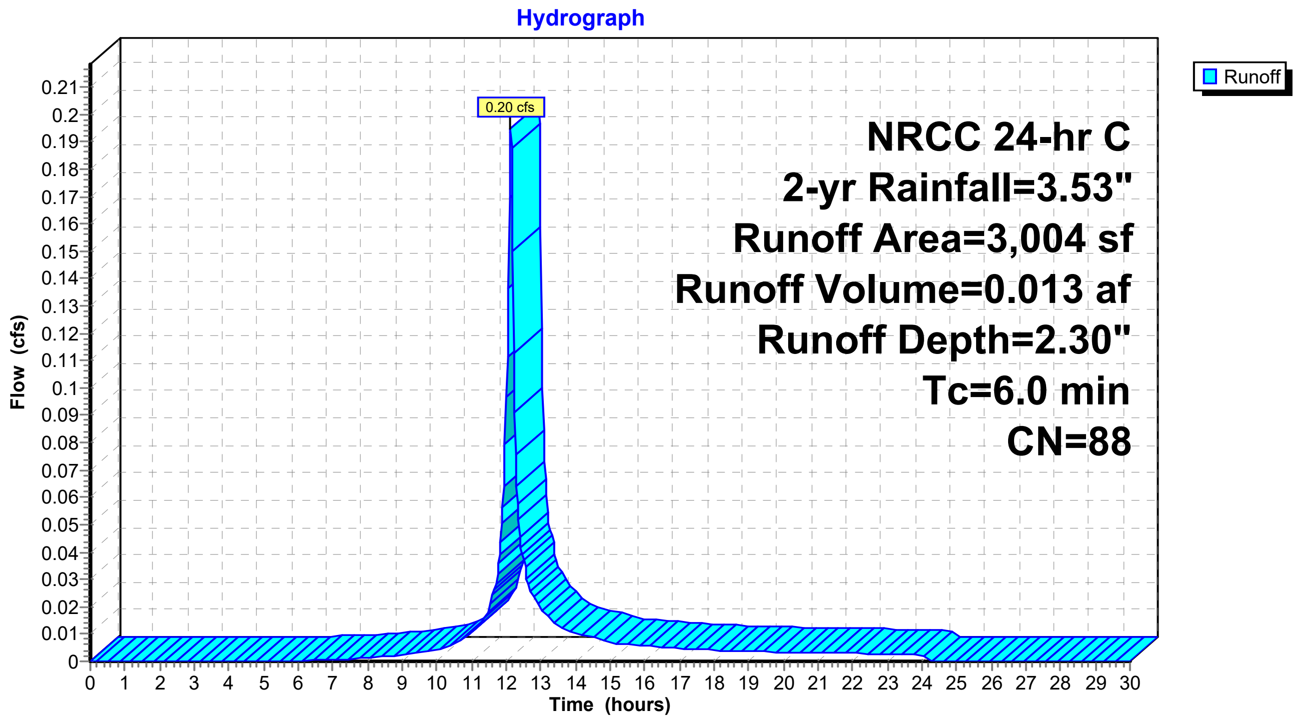
Runoff = 0.20 cfs @ 12.13 hrs, Volume= 0.013 af, Depth= 2.30"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
	1,482	98	Paved parking, HSG D
	192	80	>75% Grass cover, Good, HSG D
*	1,330	79	Landscaping, Good, HSG D
	3,004	88	Weighted Average
	1,522		50.67% Pervious Area
	1,482		49.33% Impervious Area

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

Subcatchment PR-18: CCB-08



Summary for Subcatchment PR-19: CCB-07

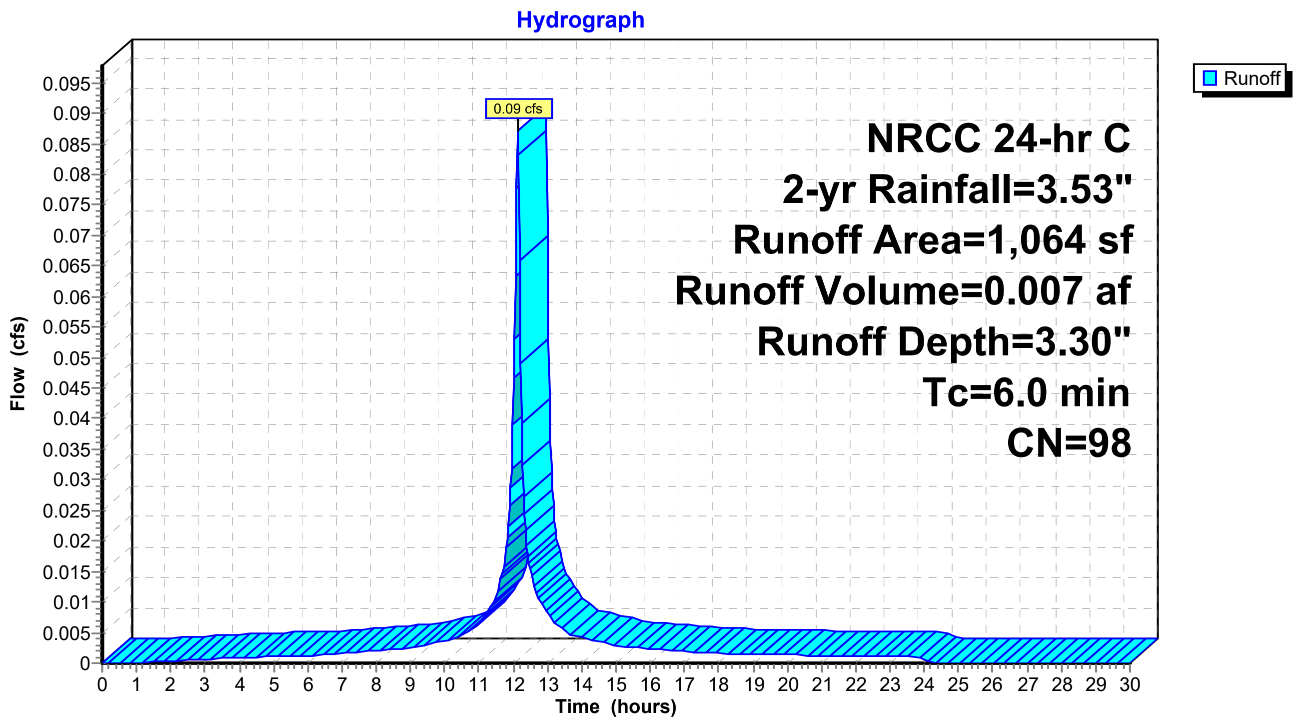
Runoff = 0.09 cfs @ 12.13 hrs, Volume= 0.007 af, Depth= 3.30"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

Area (sf)	CN	Description
1,064	98	Paved parking, HSG D
1,064		100.00% Impervious Area

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

Subcatchment PR-19: CCB-07



Summary for Subcatchment PR-2: CCB 10

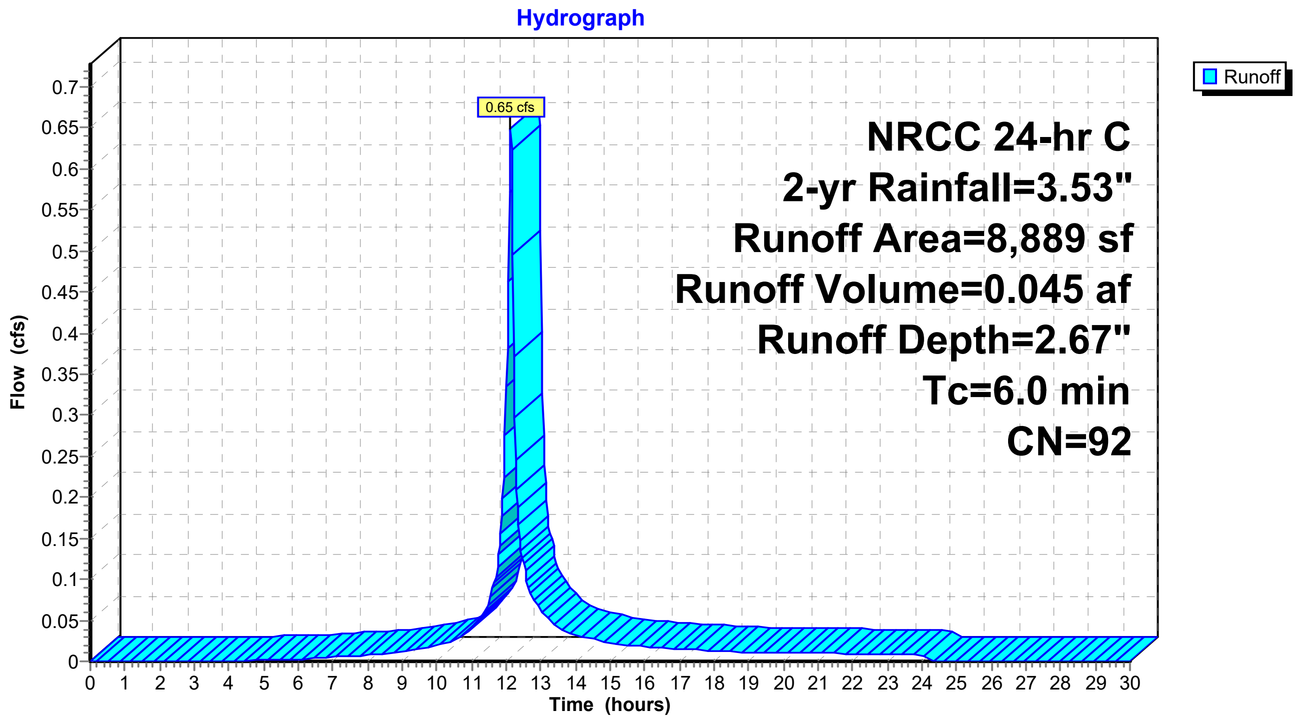
Runoff = 0.65 cfs @ 12.13 hrs, Volume= 0.045 af, Depth= 2.67"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
*	6,733	98	Paved parking, HSG C
*	1,772	72	Landscaping, Good, HSG C
	384	74	>75% Grass cover, Good, HSG C
	8,889	92	Weighted Average
	2,156		24.25% Pervious Area
	6,733		75.75% Impervious Area

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

Subcatchment PR-2: CCB 10



Summary for Subcatchment PR-20: South of entrance drive

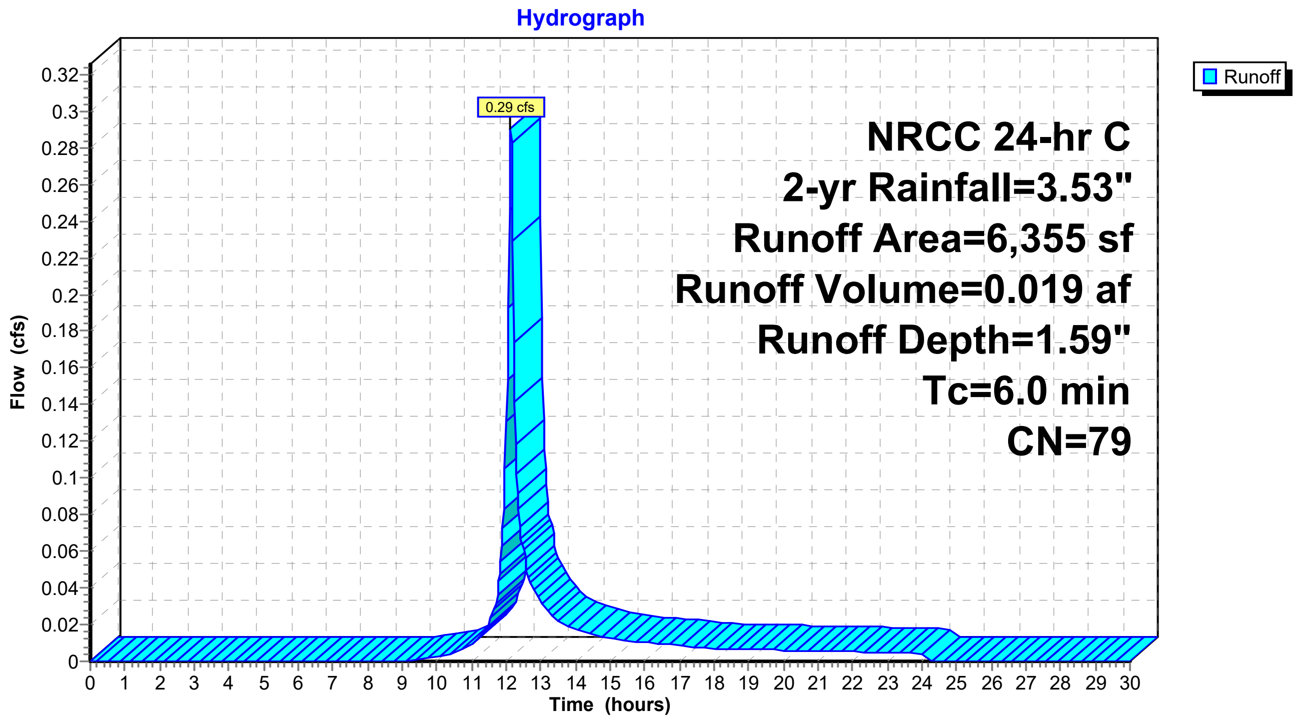
Runoff = 0.29 cfs @ 12.13 hrs, Volume= 0.019 af, Depth= 1.59"
Routed to Pond AP-4 : Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
	93	98	Paved parking, HSG D
	755	80	>75% Grass cover, Good, HSG D
*	5,507	79	Landscaping, Good, HSG D
	6,355	79	Weighted Average
	6,262		98.54% Pervious Area
	93		1.46% Impervious Area

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

Subcatchment PR-20: South of entrance drive



Summary for Subcatchment PR-21: Danbury Rd

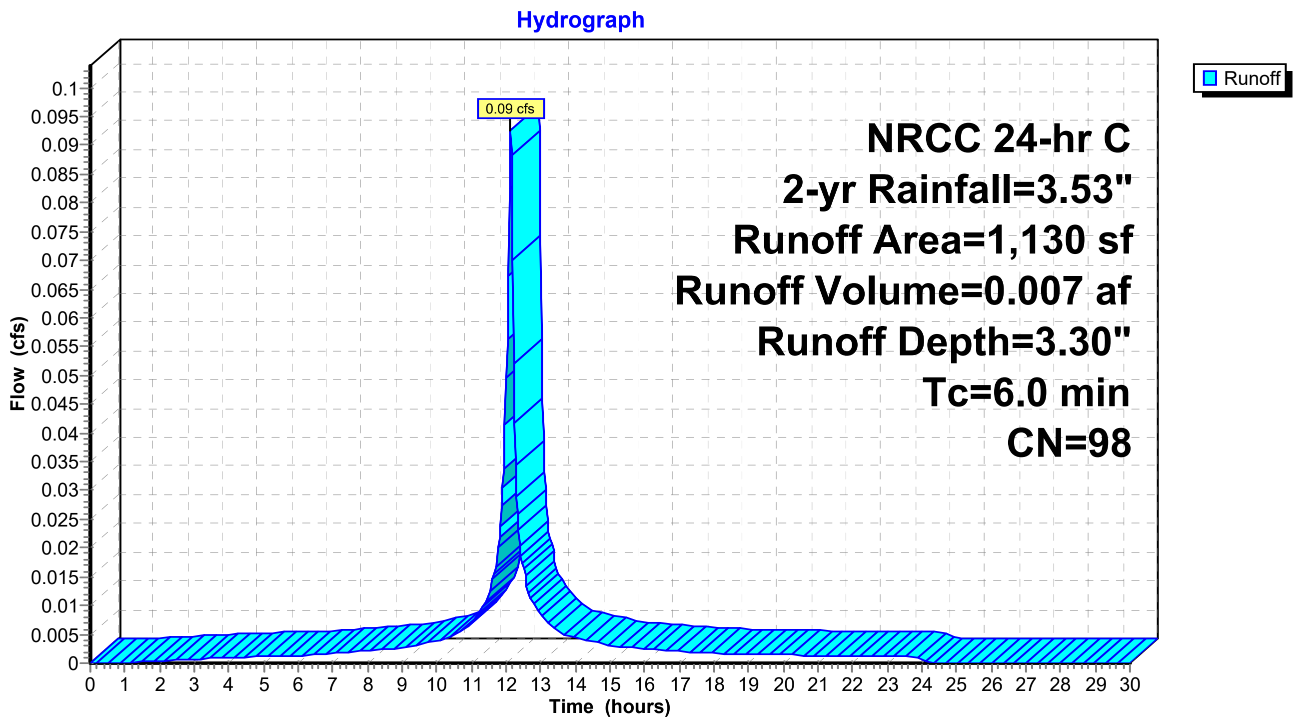
Runoff = 0.09 cfs @ 12.13 hrs, Volume= 0.007 af, Depth= 3.30"
Routed to Pond AP-3 : Danbury Road

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

Area (sf)	CN	Description
1,130	98	Paved parking, HSG D
1,130		100.00% Impervious Area

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

Subcatchment PR-21: Danbury Rd



Summary for Subcatchment PR-3: CCB 07

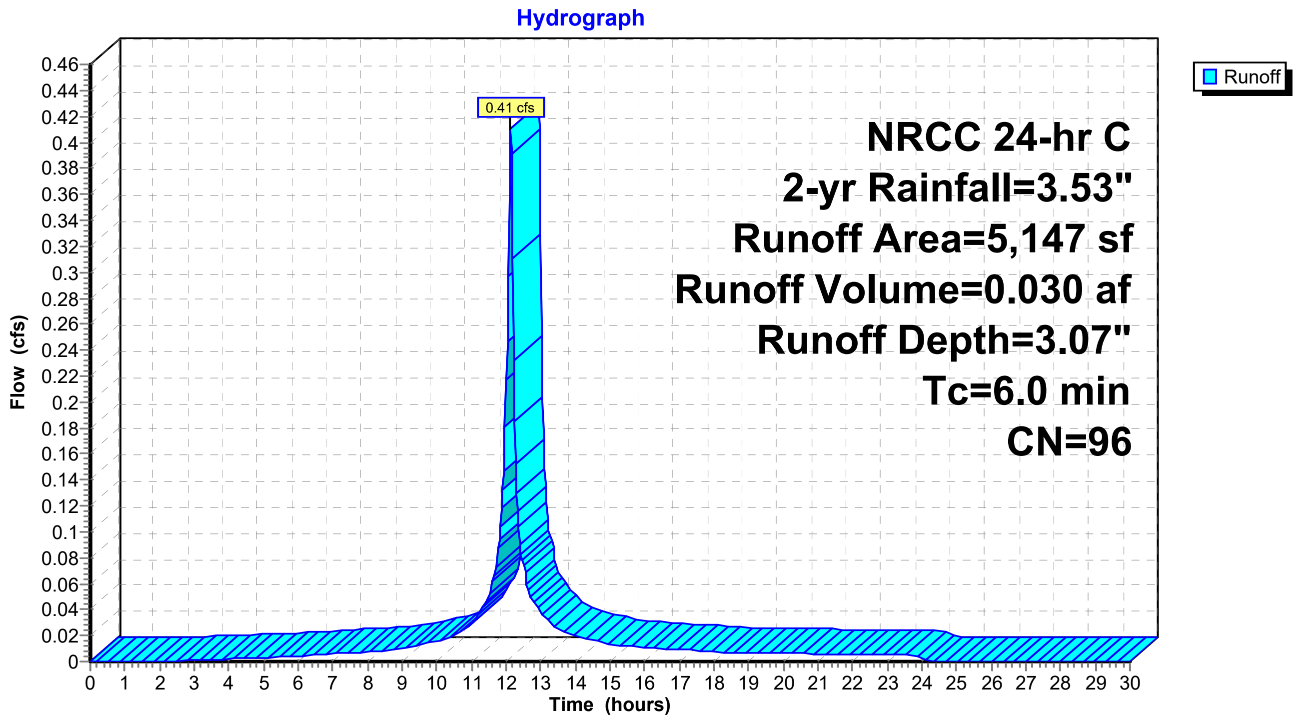
Runoff = 0.41 cfs @ 12.13 hrs, Volume= 0.030 af, Depth= 3.07"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
*	4,715	98	Paved parking, HSG C
*	432	72	Landscaping, Good, HSG C
	5,147	96	Weighted Average
	432		8.39% Pervious Area
	4,715		91.61% Impervious Area

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

Subcatchment PR-3: CCB 07



Summary for Subcatchment PR-4: CCB 06

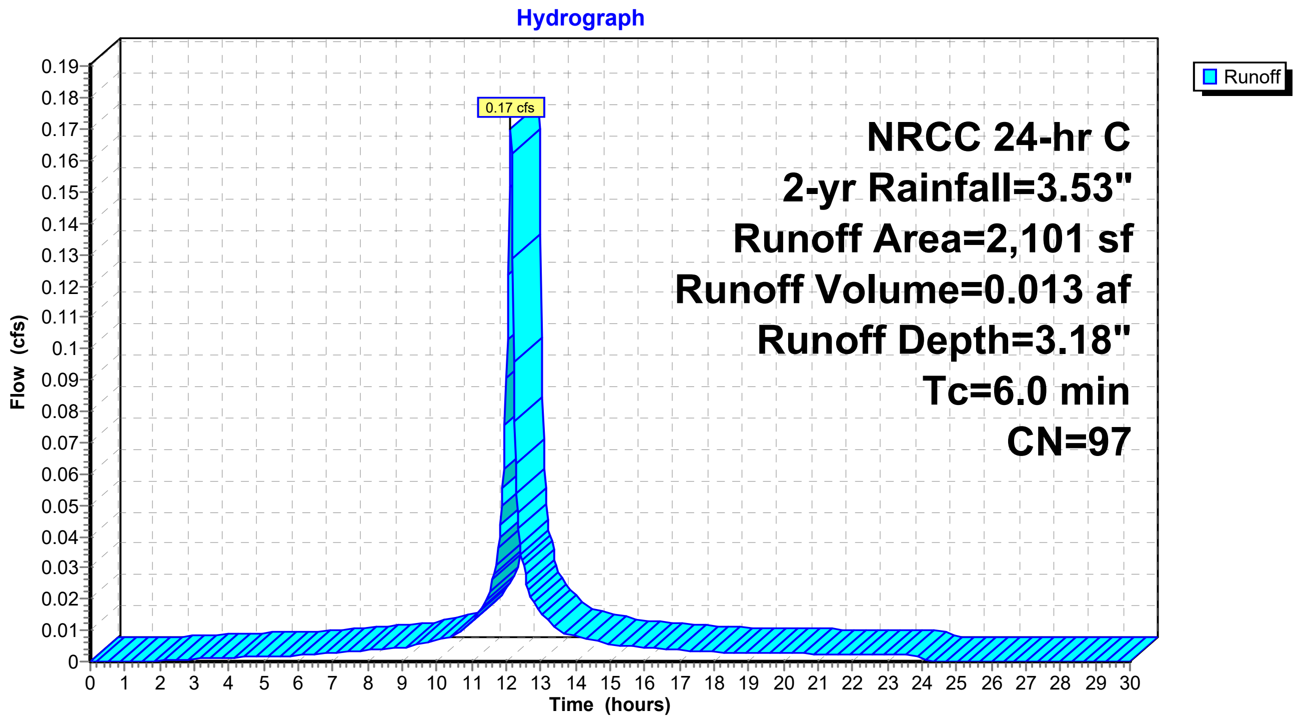
Runoff = 0.17 cfs @ 12.13 hrs, Volume= 0.013 af, Depth= 3.18"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
	2,026	98	Paved parking, HSG D
*	75	79	Landscaping, Good, HSG D
	2,101	97	Weighted Average
	75		3.57% Pervious Area
	2,026		96.43% Impervious Area

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

Subcatchment PR-4: CCB 06



Summary for Subcatchment PR-5: South Basin

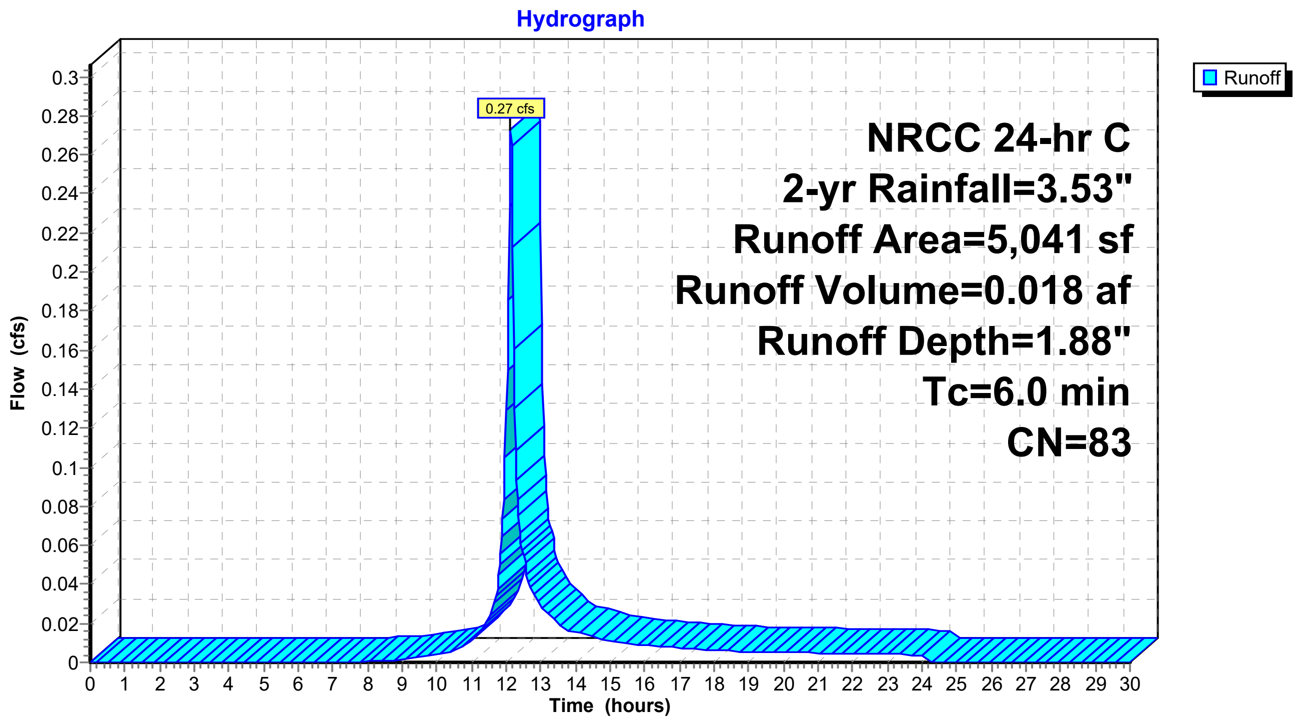
Runoff = 0.27 cfs @ 12.13 hrs, Volume= 0.018 af, Depth= 1.88"
Routed to Pond B-1 : South Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
*	595	96	Permable Paver, HSG C
*	366	96	Gravel surface, HSG C
*	2,205	72	Landscaping, Good, HSG C
*	890	98	Paved parking, HSG C
	985	80	>75% Grass cover, Good, HSG D
	5,041	83	Weighted Average
	4,151		82.34% Pervious Area
	890		17.66% Impervious Area

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

Subcatchment PR-5: South Basin



Summary for Subcatchment PR-6: West along river

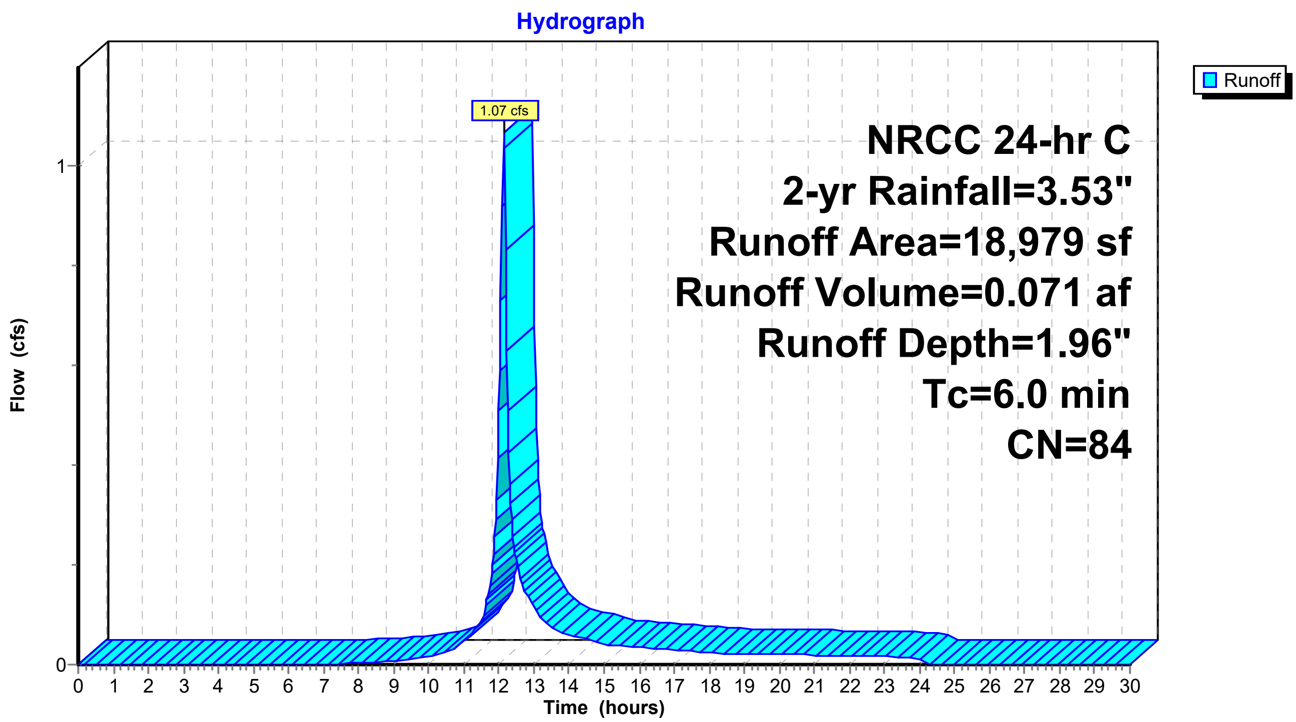
Runoff = 1.07 cfs @ 12.13 hrs, Volume= 0.071 af, Depth= 1.96"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
*	4,195	96	Permeable paver, HSG D
	461	96	Gravel surface, HSG D
	911	98	Paved parking, HSG D
	2,775	80	>75% Grass cover, Good, HSG D
*	6,489	79	Landscaping, Good, HSG D
	4,148	77	Woods, Good, HSG D
	18,979	84	Weighted Average
	18,068		95.20% Pervious Area
	911		4.80% Impervious Area

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

Subcatchment PR-6: West along river



Summary for Subcatchment PR-7: North basin

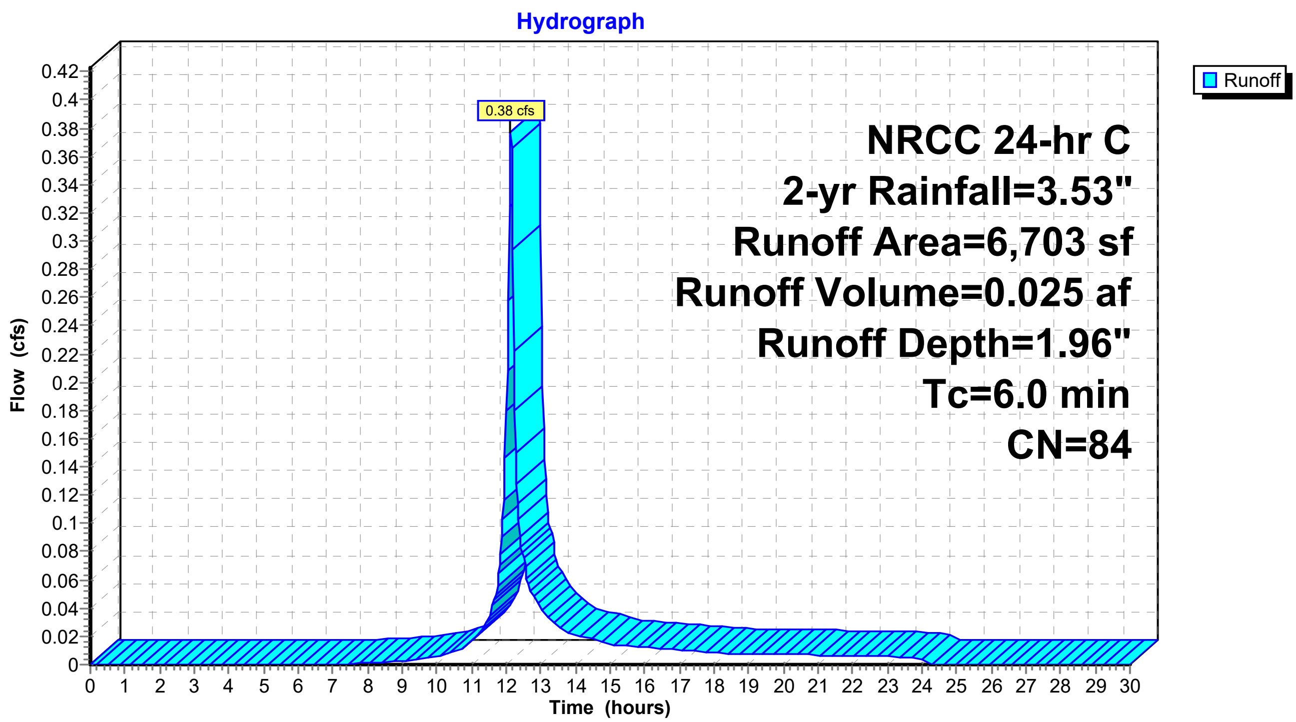
Runoff = 0.38 cfs @ 12.13 hrs, Volume= 0.025 af, Depth= 1.96"
Routed to Pond B-2 : North Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
	453	96	Gravel surface, HSG D
*	1,031	96	Permeable paver, HSG D
	445	80	>75% Grass cover, Good, HSG D
*	3,601	79	Landscaping, Good, HSG D
	692	77	Woods, Good, HSG D
	481	98	Paved parking, HSG D
	6,703	84	Weighted Average
	6,222		92.82% Pervious Area
	481		7.18% Impervious Area

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

Subcatchment PR-7: North basin



Summary for Subcatchment PR-7B: CCB 26

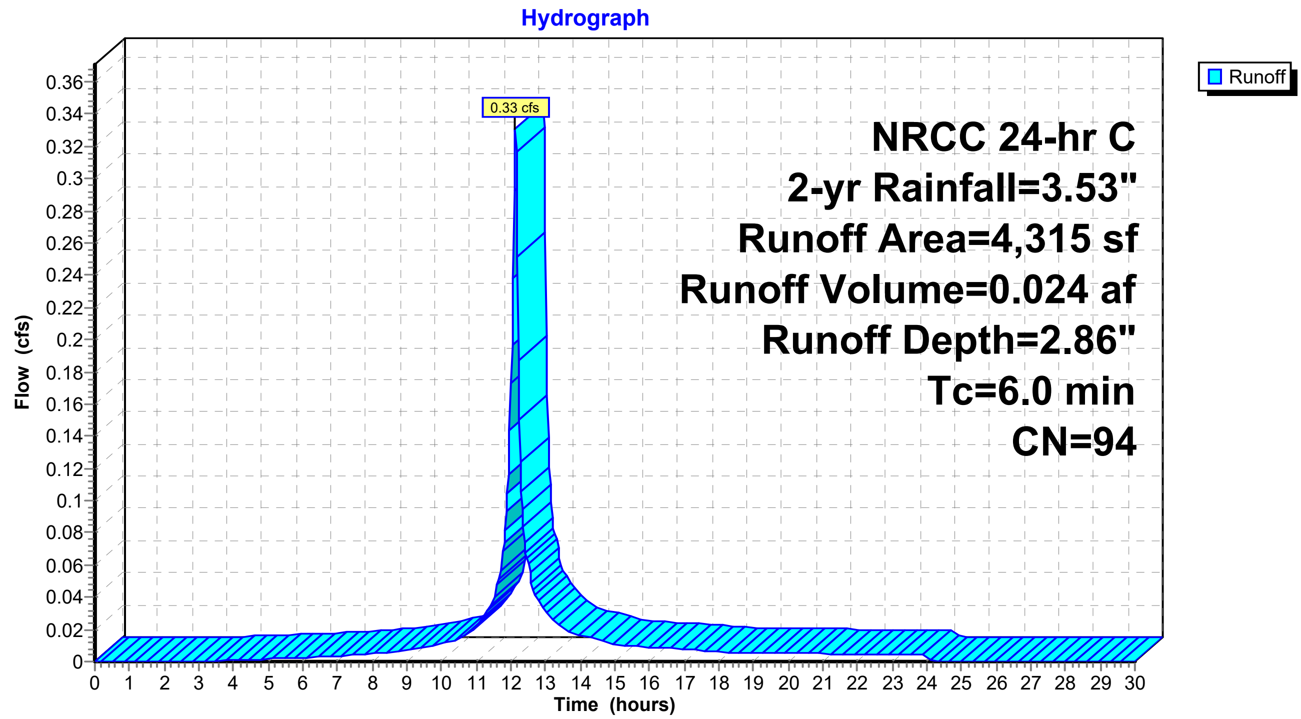
Runoff = 0.33 cfs @ 12.13 hrs, Volume= 0.024 af, Depth= 2.86"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
	3,518	98	Paved parking, HSG D
*	797	79	Landscaping, Good, HSG D
	4,315	94	Weighted Average
	797		18.47% Pervious Area
	3,518		81.53% Impervious Area

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

Subcatchment PR-7B: CCB 26



Summary for Subcatchment PR-8: CCB 26A

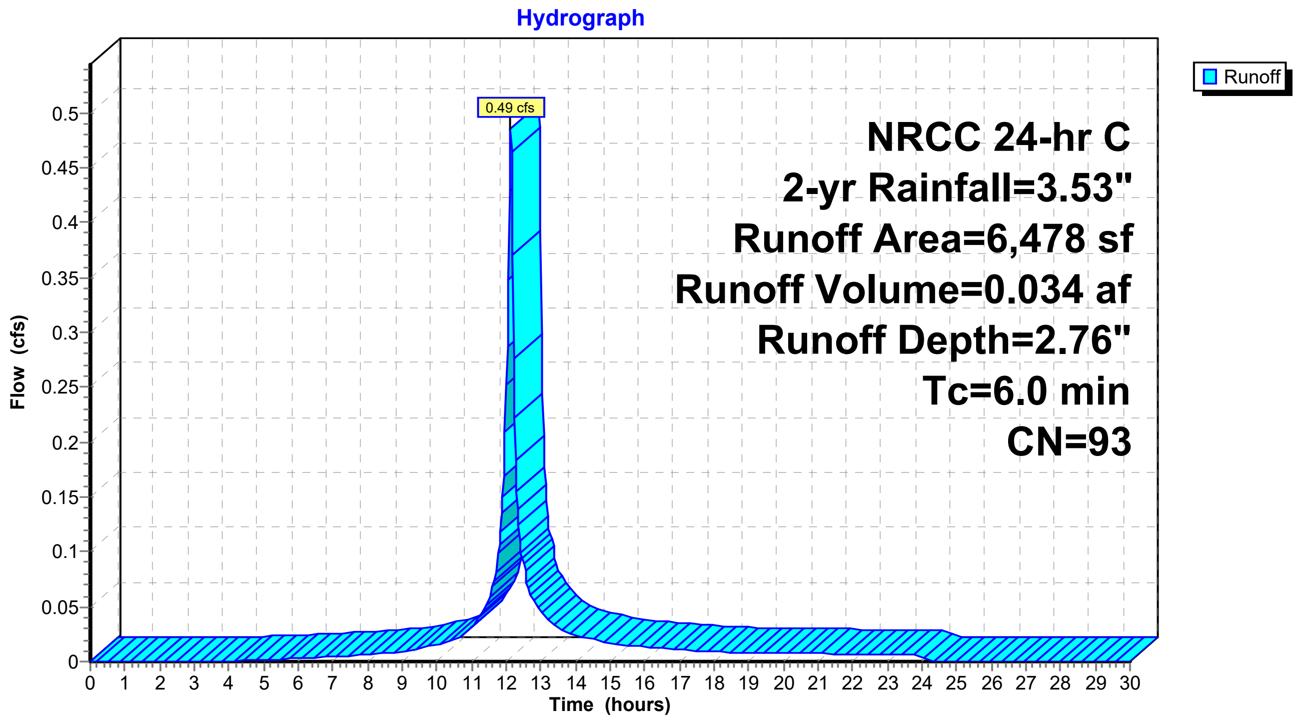
Runoff = 0.49 cfs @ 12.13 hrs, Volume= 0.034 af, Depth= 2.76"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
	4,737	98	Paved parking, HSG D
*	1,741	79	Landscaping, Good, HSG D
	6,478	93	Weighted Average
	1,741		26.88% Pervious Area
	4,737		73.12% Impervious Area

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

Subcatchment PR-8: CCB 26A



Summary for Subcatchment PR-9: CCB 27

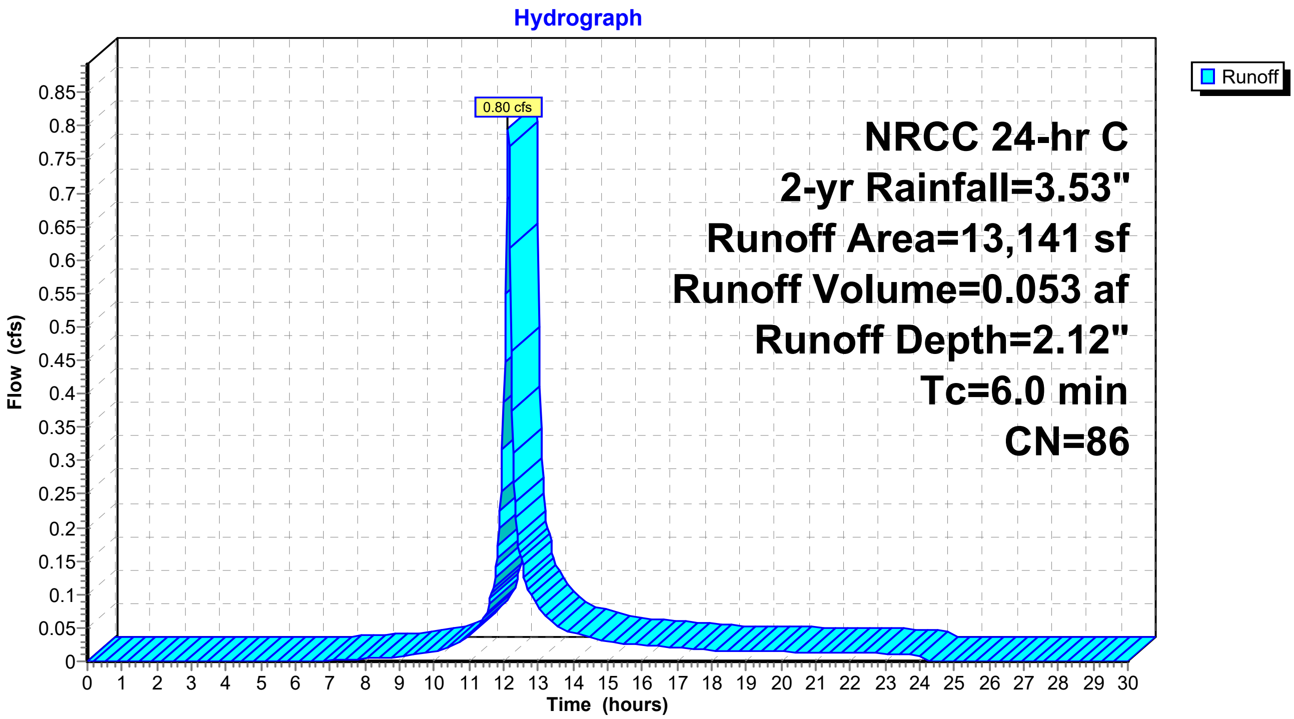
Runoff = 0.80 cfs @ 12.13 hrs, Volume= 0.053 af, Depth= 2.12"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 2-yr Rainfall=3.53"

	Area (sf)	CN	Description
	4,730	98	Paved parking, HSG D
	817	80	>75% Grass cover, Good, HSG D
*	7,594	79	Landscaping, Good, HSG D
	13,141	86	Weighted Average
	8,411		64.01% Pervious Area
	4,730		35.99% Impervious Area

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

Subcatchment PR-9: CCB 27



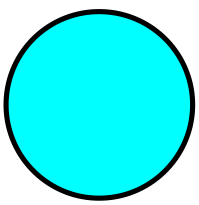
Summary for Reach R1: Roof Leader

Inflow Area = 1.838 ac,100.00% Impervious, Inflow Depth = 3.30" for 2-yr event
Inflow = 6.57 cfs @ 12.13 hrs, Volume= 0.505 af
Outflow = 4.79 cfs @ 12.07 hrs, Volume= 0.505 af, Atten= 27%, Lag= 0.0 min
Routed to Pond S-2 : Subsurface Infiltration System

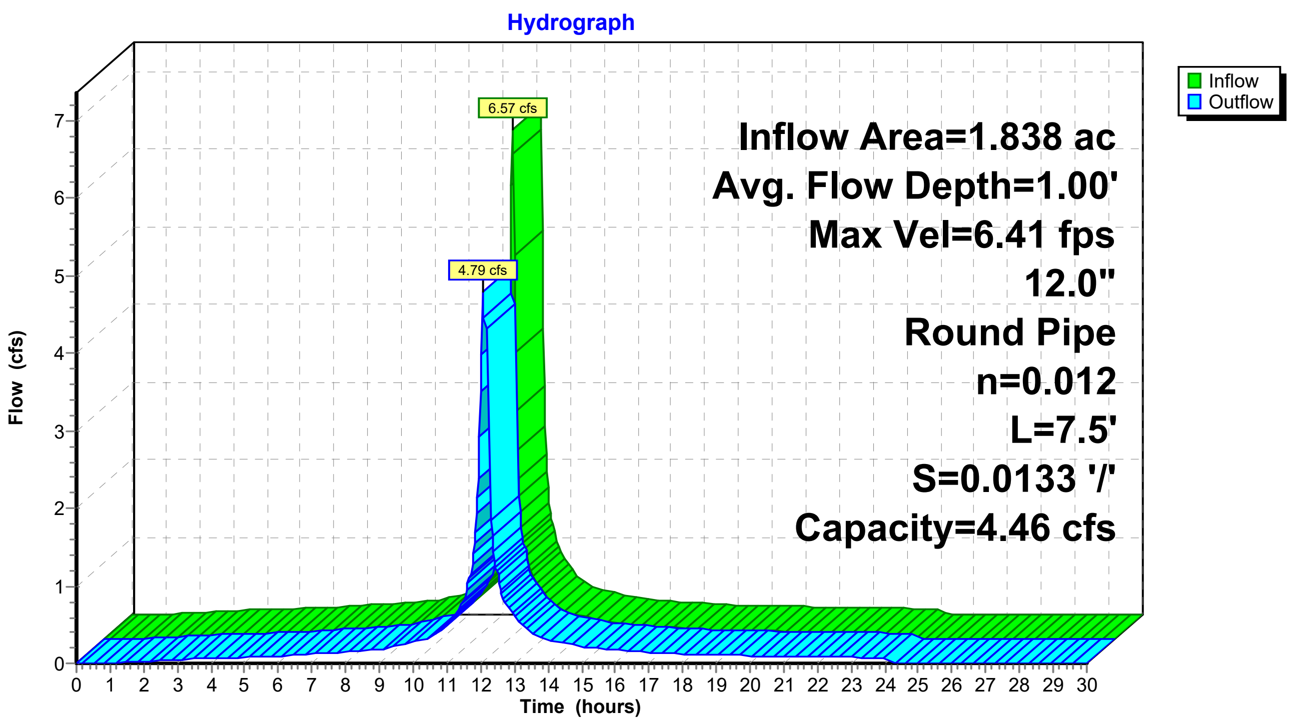
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Max. Velocity= 6.41 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.64 fps, Avg. Travel Time= 0.0 min

Peak Storage= 6 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.00'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.46 cfs

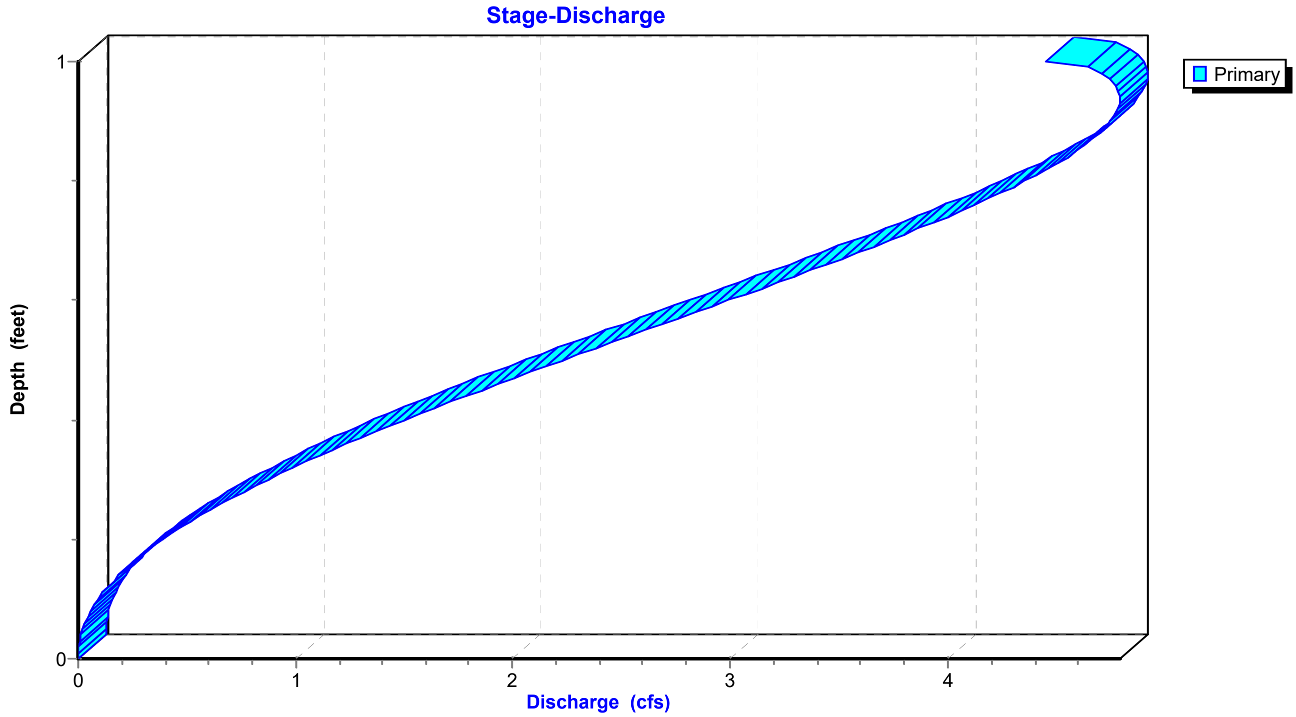
12.0" Round Pipe
n= 0.012
Length= 7.5' Slope= 0.0133 '/'
Inlet Invert= 142.20', Outlet Invert= 142.10'



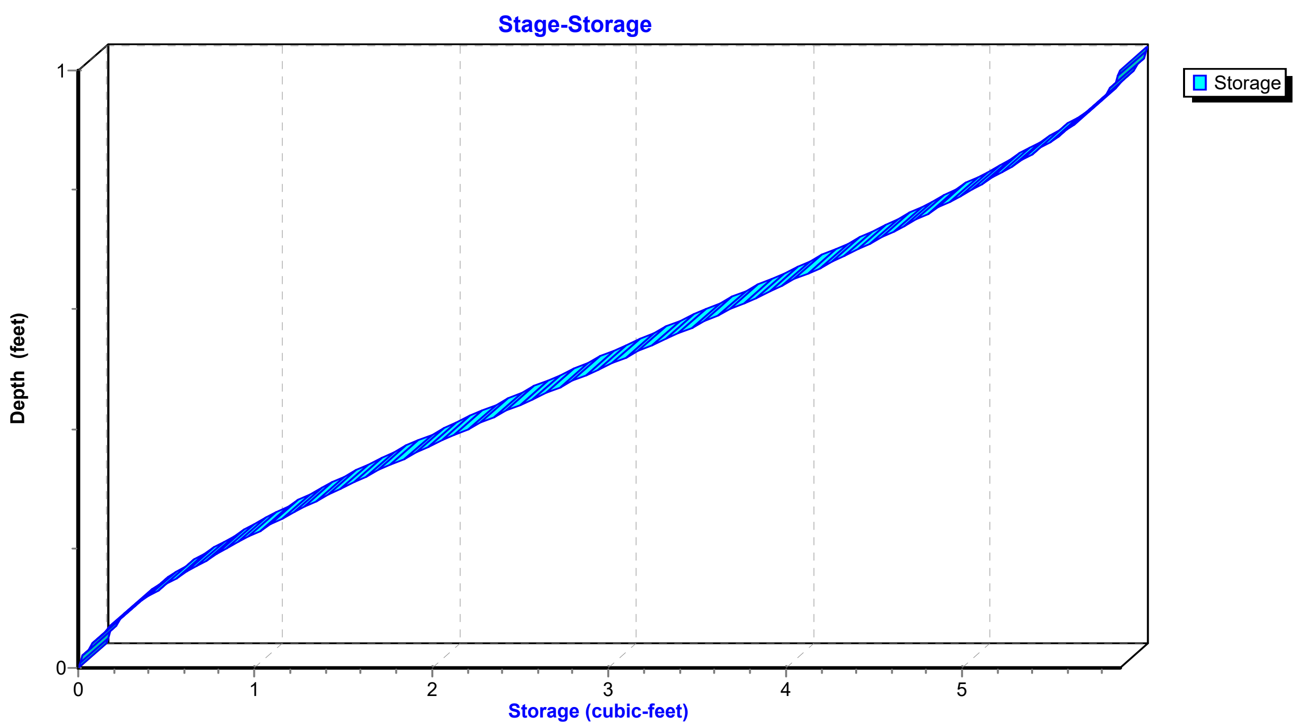
Reach R1: Roof Leader



Reach R1: Roof Leader



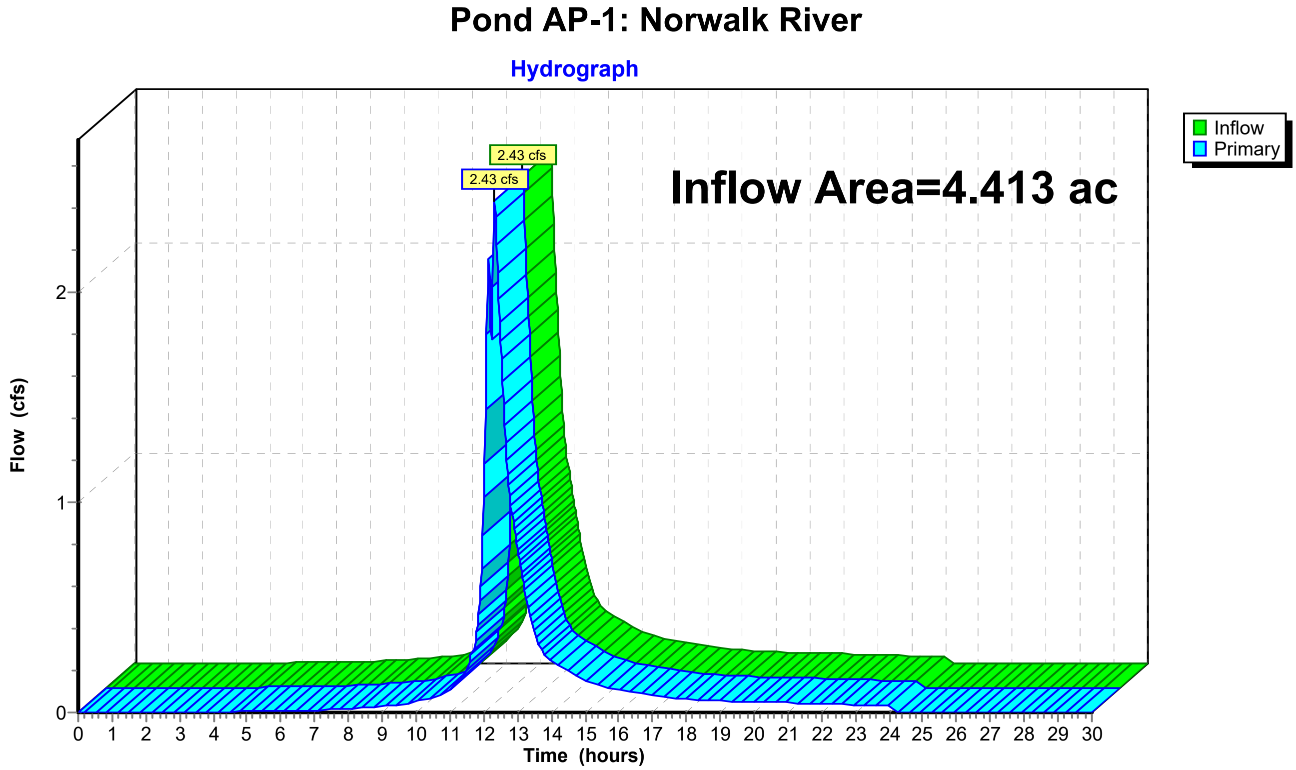
Reach R1: Roof Leader



Summary for Pond AP-1: Norwalk River

Inflow Area =	4.413 ac,	66.52% Impervious,	Inflow Depth = 0.72"	for 2-yr event
Inflow =	2.43 cfs @	12.33 hrs, Volume=	0.265 af	
Primary =	2.43 cfs @	12.33 hrs, Volume=	0.265 af, Atten= 0%, Lag= 0.0 min	

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs



Summary for Pond AP-2: Front Lawn Rain Garden

Inflow Area = 0.475 ac, 24.65% Impervious, Inflow Depth = 1.98" for 2-yr event
Inflow = 1.14 cfs @ 12.13 hrs, Volume= 0.078 af
Outflow = 0.28 cfs @ 12.38 hrs, Volume= 0.078 af, Atten= 75%, Lag= 15.2 min
Discarded = 0.28 cfs @ 12.38 hrs, Volume= 0.078 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond S-3 : Subsurface Infiltration System

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 148.30' @ 12.38 hrs Surf.Area= 2,241 sf Storage= 638 cf

Plug-Flow detention time= 12.9 min calculated for 0.078 af (100% of inflow)
Center-of-Mass det. time= 12.9 min (835.0 - 822.1)

Volume	Invert	Avail.Storage	Storage Description
#1	148.00'	6,536 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

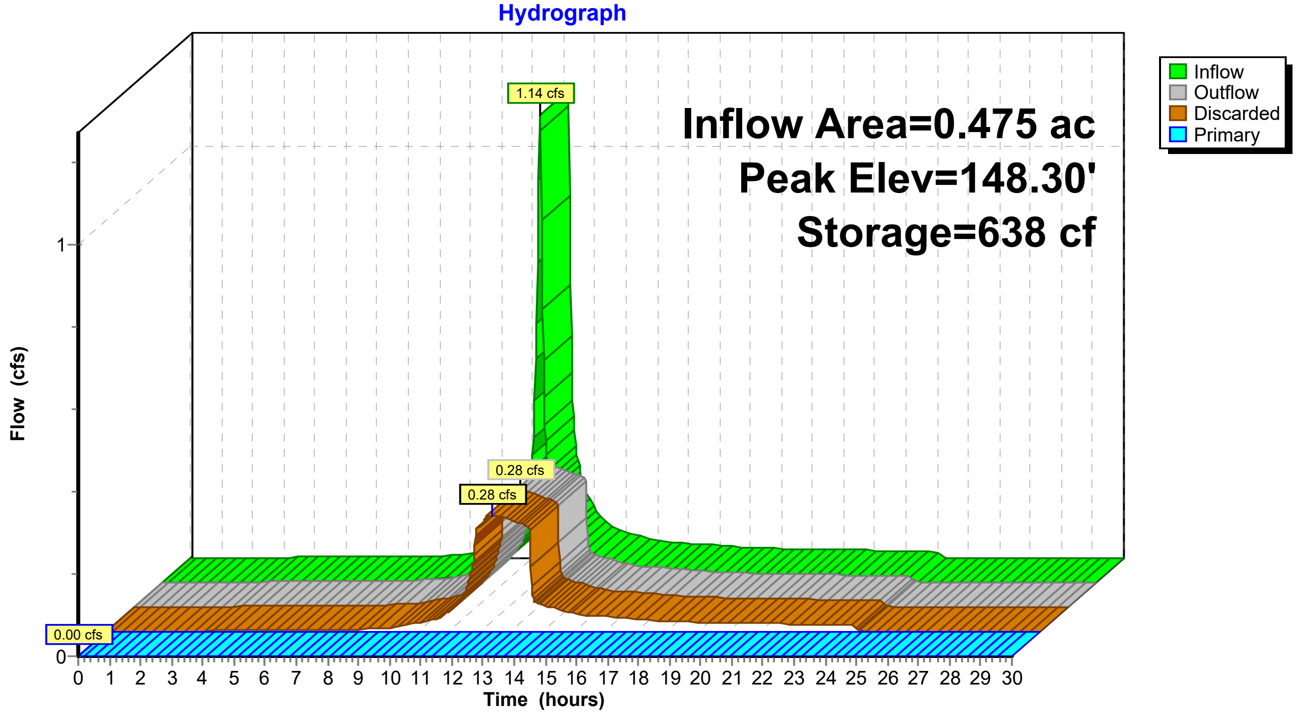
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
148.00	1,985	0	0
149.00	2,833	2,409	2,409
150.00	5,420	4,127	6,536

Device	Routing	Invert	Outlet Devices
#1	Primary	145.90'	**15.0" Round Culvert** L= 34.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 145.90' / 145.55' S= 0.0101 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	149.00'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	148.00'	**5.450 in/hr Exfiltration over Surface area**

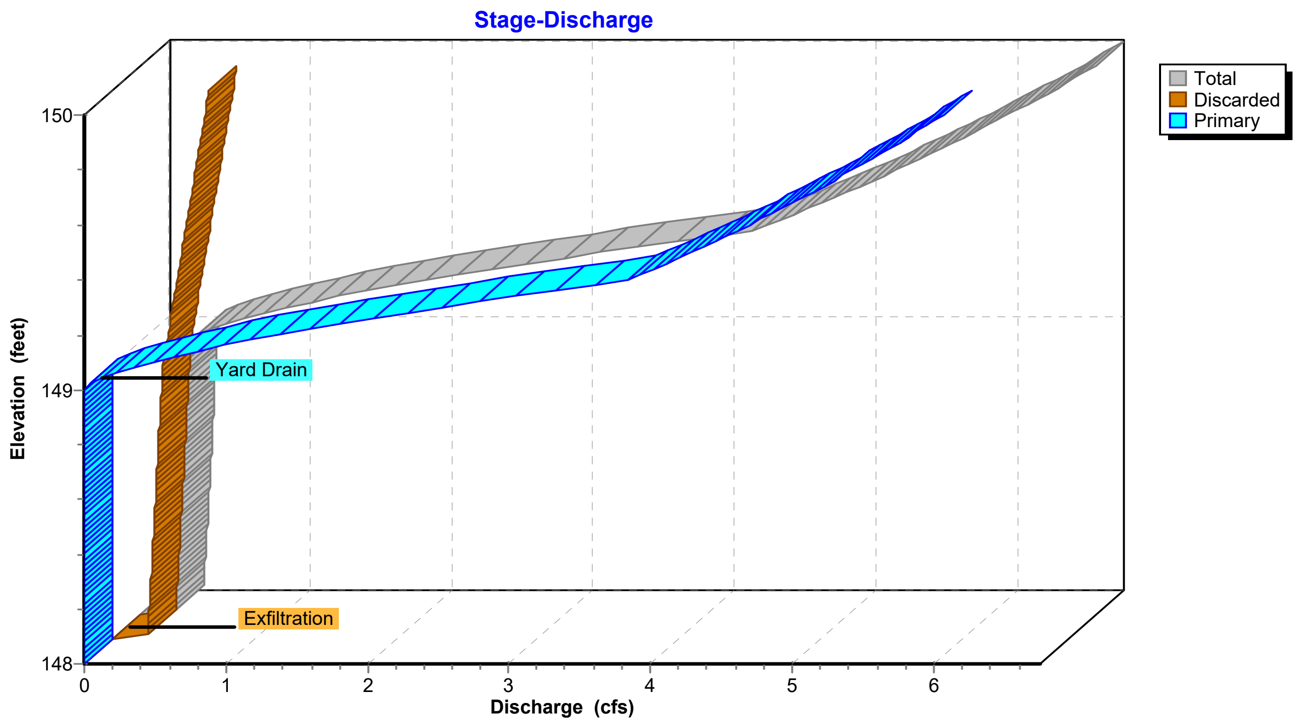
Discarded OutFlow Max=0.28 cfs @ 12.38 hrs HW=148.30' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=148.00' (Free Discharge)
└─**1=Culvert** (Passes 0.00 cfs of 7.18 cfs potential flow)
  └─**2=Yard Drain** (Controls 0.00 cfs)

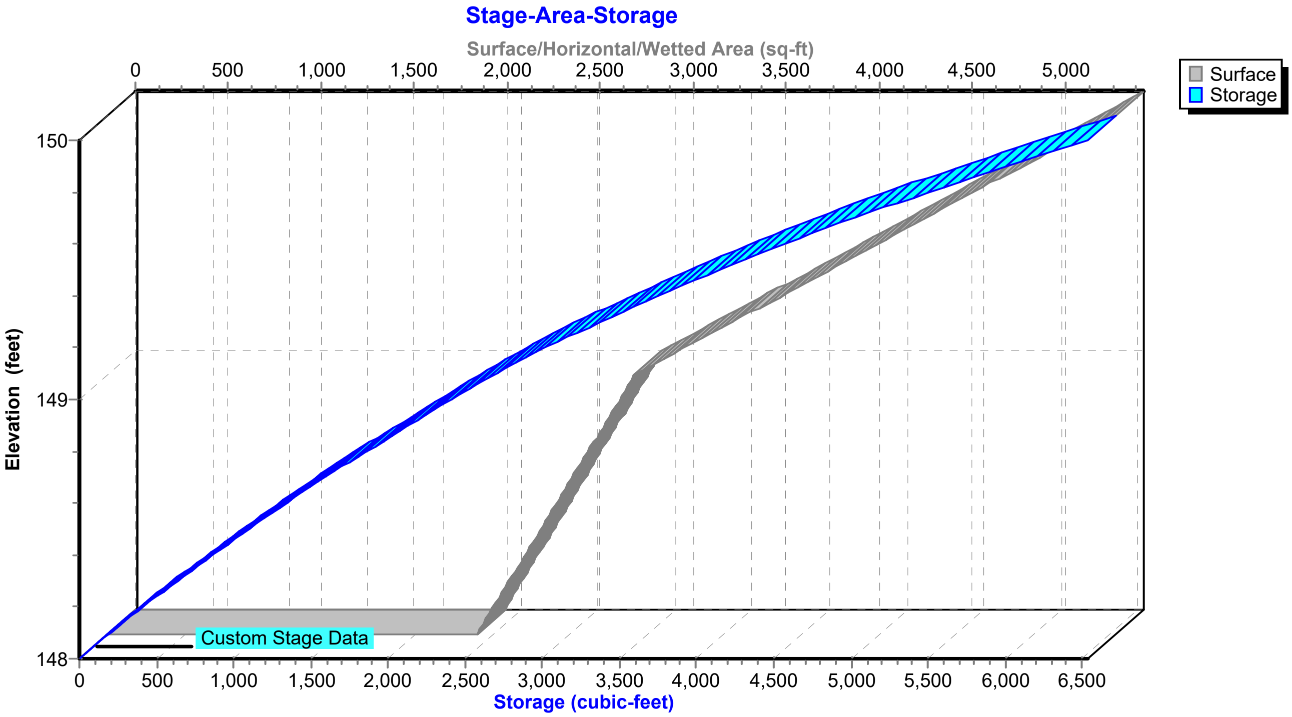
Pond AP-2: Front Lawn Rain Garden



Pond AP-2: Front Lawn Rain Garden



Pond AP-2: Front Lawn Rain Garden

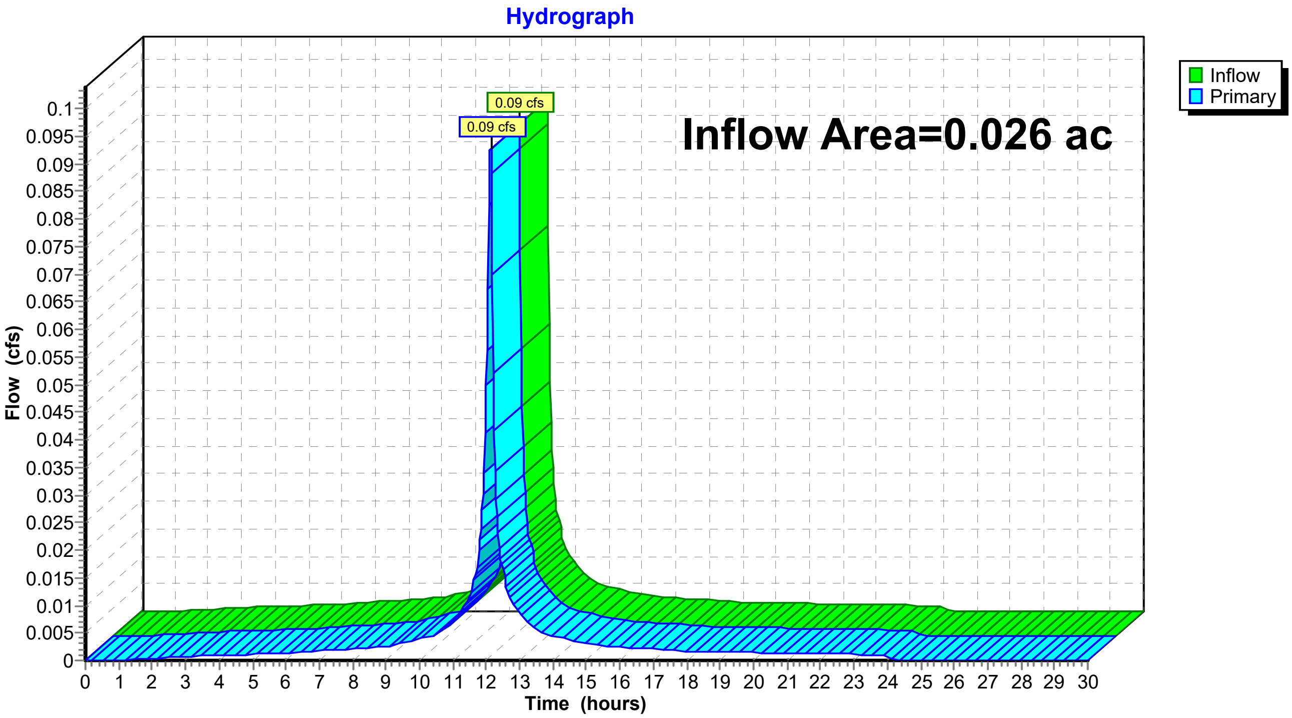


Summary for Pond AP-3: Danbury Road

Inflow Area = 0.026 ac,100.00% Impervious, Inflow Depth = 3.30" for 2-yr event
Inflow = 0.09 cfs @ 12.13 hrs, Volume= 0.007 af
Primary = 0.09 cfs @ 12.13 hrs, Volume= 0.007 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-3: Danbury Road

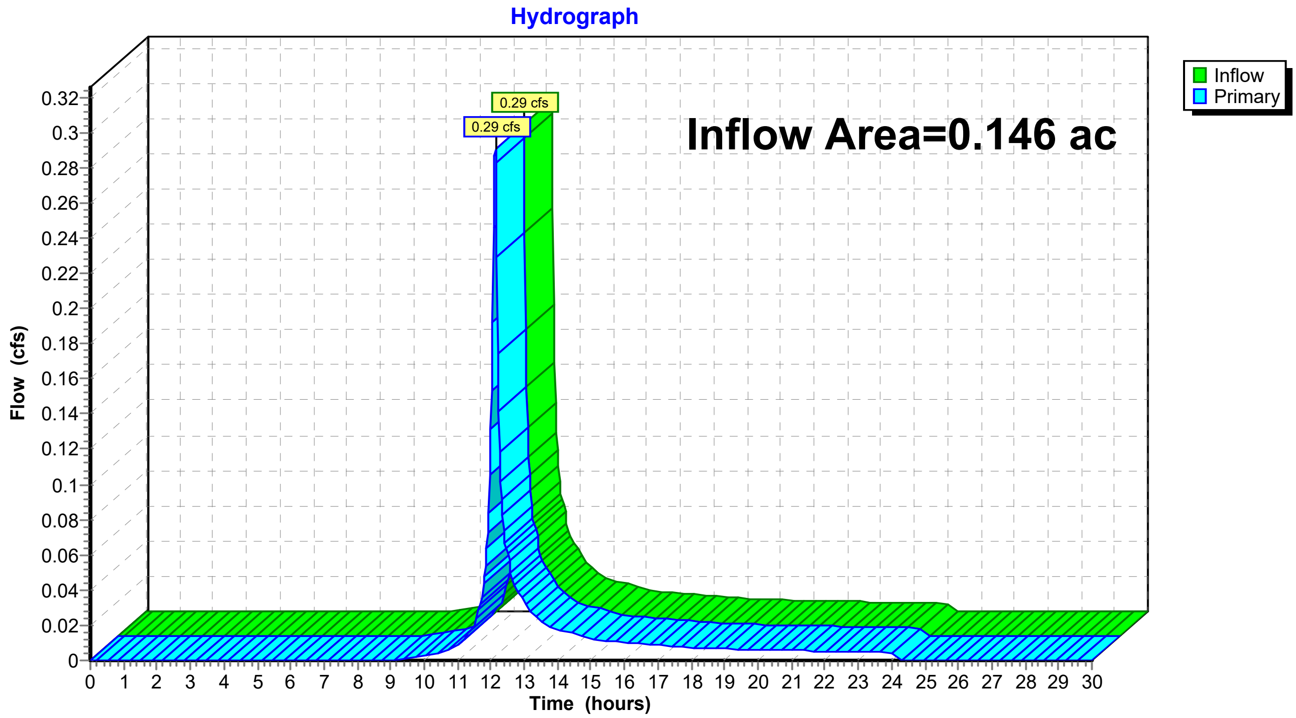


Summary for Pond AP-4: Landscaped Area

Inflow Area =	0.146 ac,	1.46% Impervious,	Inflow Depth = 1.59"	for 2-yr event	
Inflow =	0.29 cfs @	12.13 hrs,	Volume=	0.019 af	
Primary =	0.29 cfs @	12.13 hrs,	Volume=	0.019 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-4: Landscaped Area



Summary for Pond B-1: South Basin

Inflow Area = 0.116 ac, 17.66% Impervious, Inflow Depth = 1.88" for 2-yr event
Inflow = 0.27 cfs @ 12.13 hrs, Volume= 0.018 af
Outflow = 0.06 cfs @ 12.45 hrs, Volume= 0.013 af, Atten= 79%, Lag= 19.2 min
Discarded = 0.00 cfs @ 12.45 hrs, Volume= 0.007 af
Primary = 0.05 cfs @ 12.45 hrs, Volume= 0.005 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 139.92' @ 12.45 hrs Surf.Area= 515 sf Storage= 343 cf

Plug-Flow detention time= 315.8 min calculated for 0.013 af (70% of inflow)
Center-of-Mass det. time= 211.2 min (1,049.4 - 838.2)

Volume	Invert	Avail.Storage	Storage Description
#1	139.00'	1,118 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

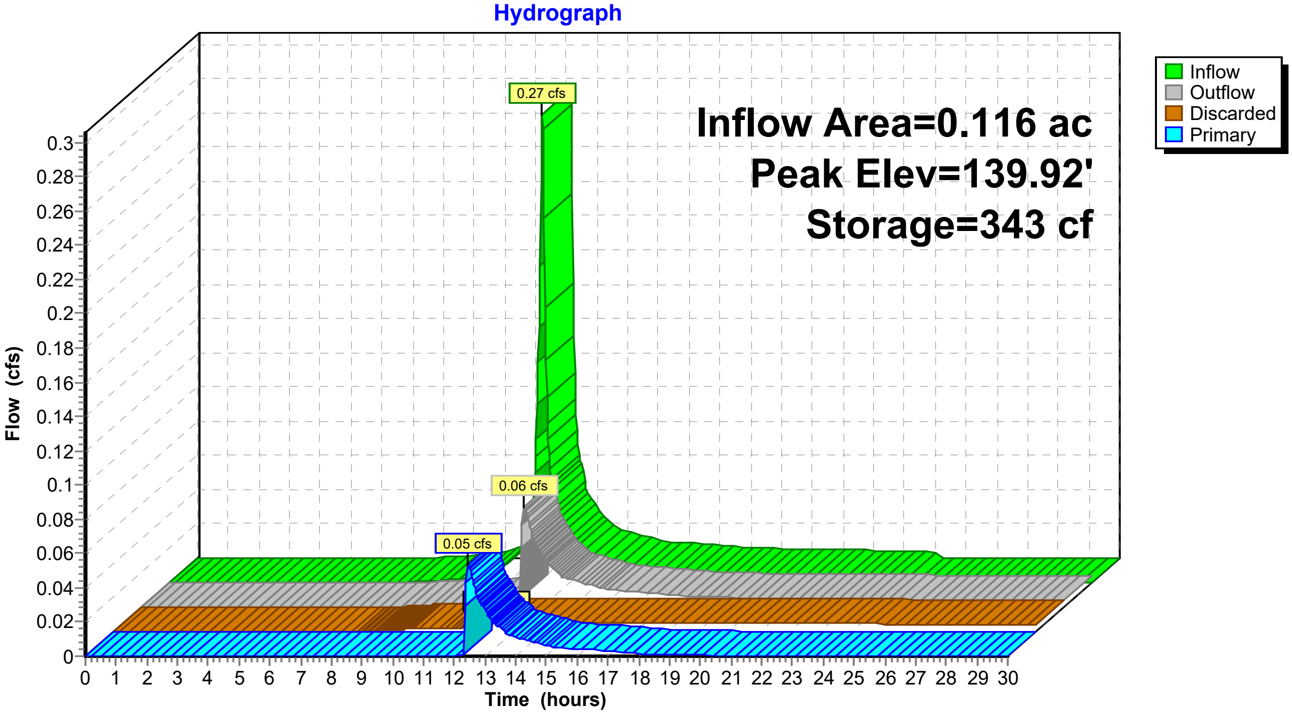
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.00	228	0	0
140.00	539	384	384
141.00	929	734	1,118

Device	Routing	Invert	Outlet Devices
#1	Primary	138.00'	**8.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 138.00' / 137.60' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Device 1	139.90'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	139.00'	**0.400 in/hr Exfiltration over Surface area**

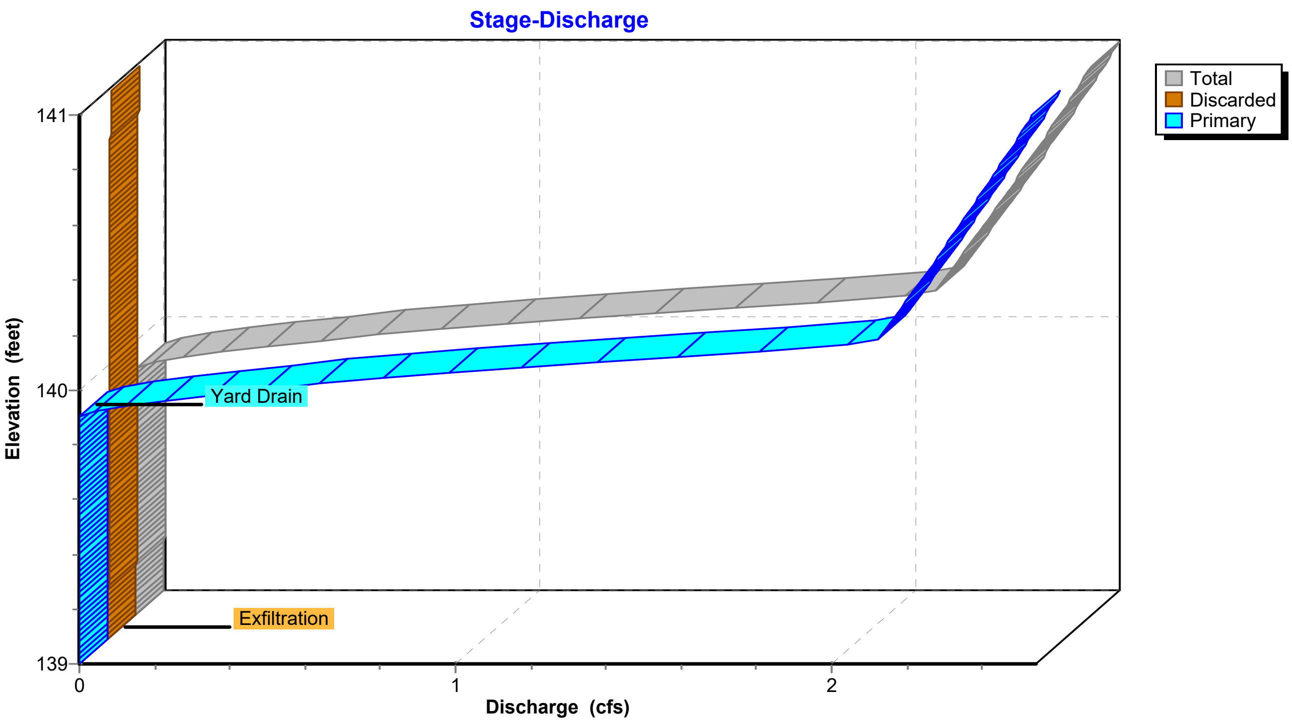
Discarded OutFlow Max=0.00 cfs @ 12.45 hrs HW=139.92' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.05 cfs @ 12.45 hrs HW=139.92' (Free Discharge)
└─**1=Culvert** (Passes 0.05 cfs of 1.97 cfs potential flow)
  └─**2=Yard Drain** (Weir Controls 0.05 cfs @ 0.49 fps)

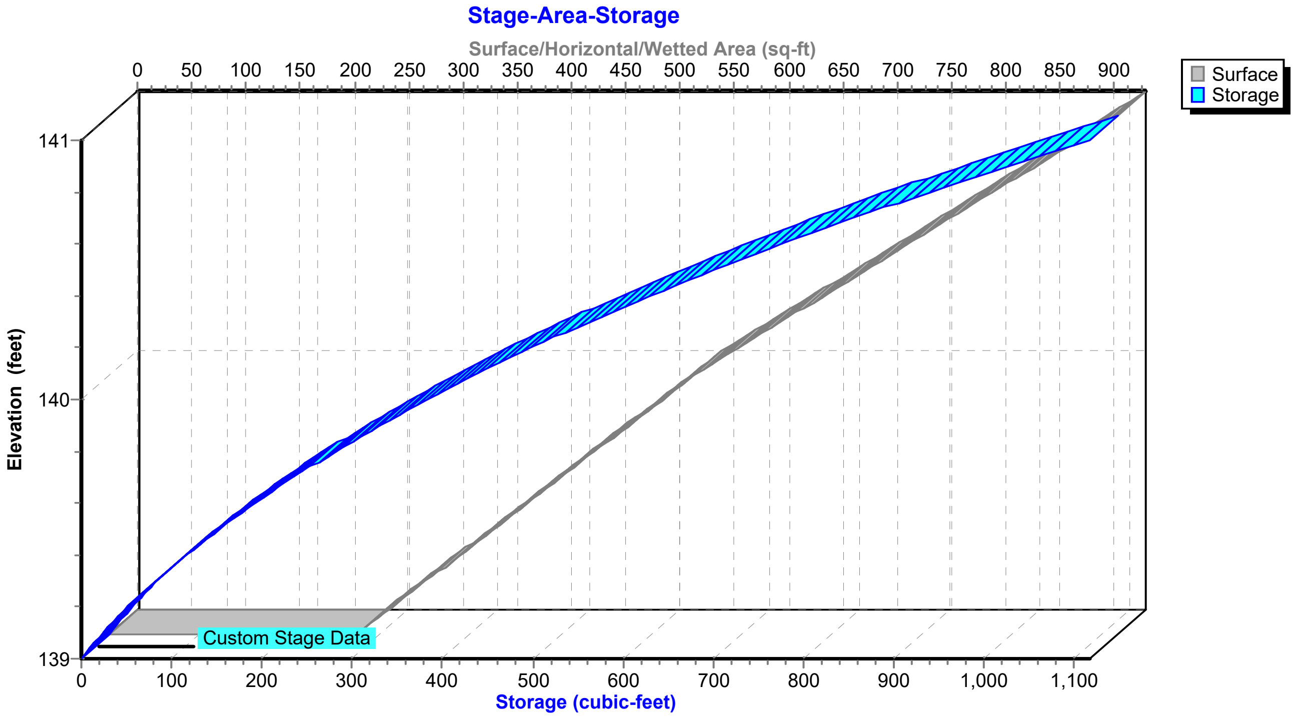
Pond B-1: South Basin



Pond B-1: South Basin



Pond B-1: South Basin



Summary for Pond B-2: North Basin

Inflow Area = 0.154 ac, 7.18% Impervious, Inflow Depth = 1.96" for 2-yr event
Inflow = 0.38 cfs @ 12.13 hrs, Volume= 0.025 af
Outflow = 0.02 cfs @ 13.64 hrs, Volume= 0.025 af, Atten= 94%, Lag= 90.3 min
Discarded = 0.02 cfs @ 13.64 hrs, Volume= 0.025 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 139.69' @ 13.64 hrs Surf.Area= 824 sf Storage= 488 cf

Plug-Flow detention time= 207.5 min calculated for 0.025 af (100% of inflow)
Center-of-Mass det. time= 207.3 min (1,041.9 - 834.6)

Volume	Invert	Avail.Storage	Storage Description
#1	139.00'	1,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

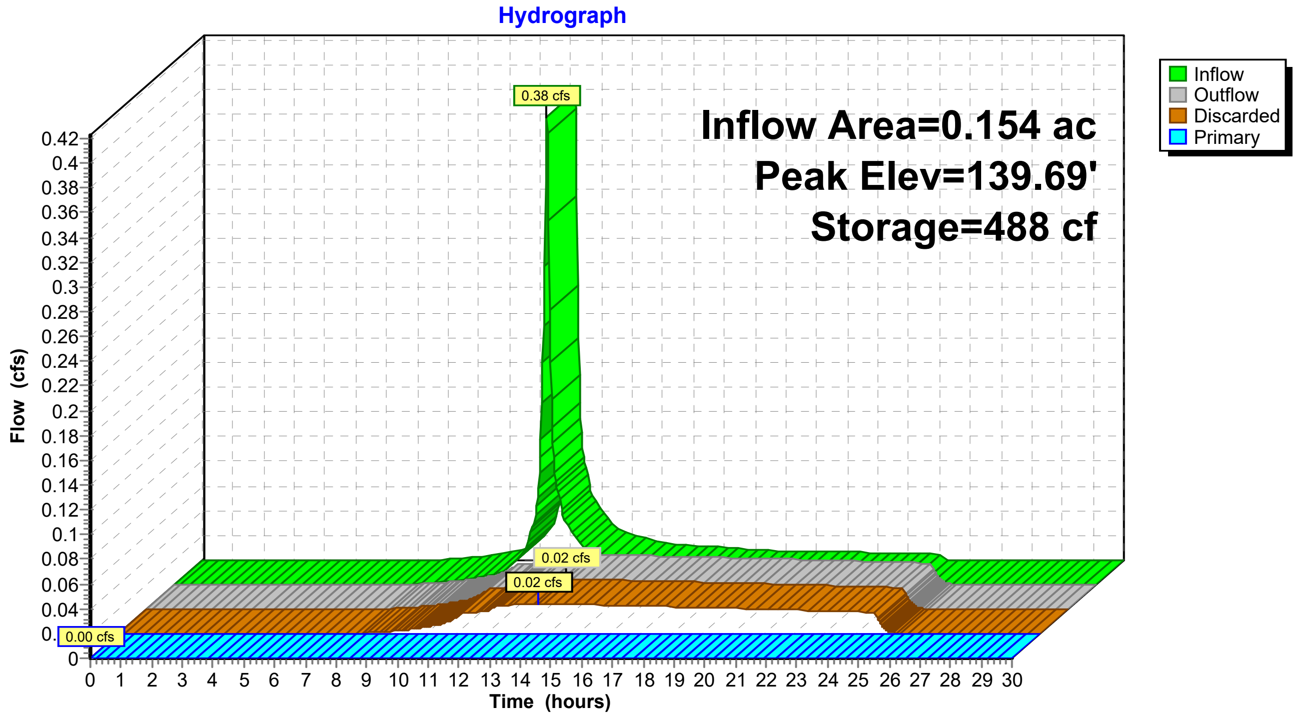
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.00	589	0	0
140.00	930	760	760
141.00	1,327	1,129	1,888

Device	Routing	Invert	Outlet Devices
#1	Primary	138.00'	**10.0" Round Culvert** L= 200.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 138.00' / 137.00' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf
#2	Device 1	139.80'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	139.00'	**1.250 in/hr Exfiltration over Surface area**

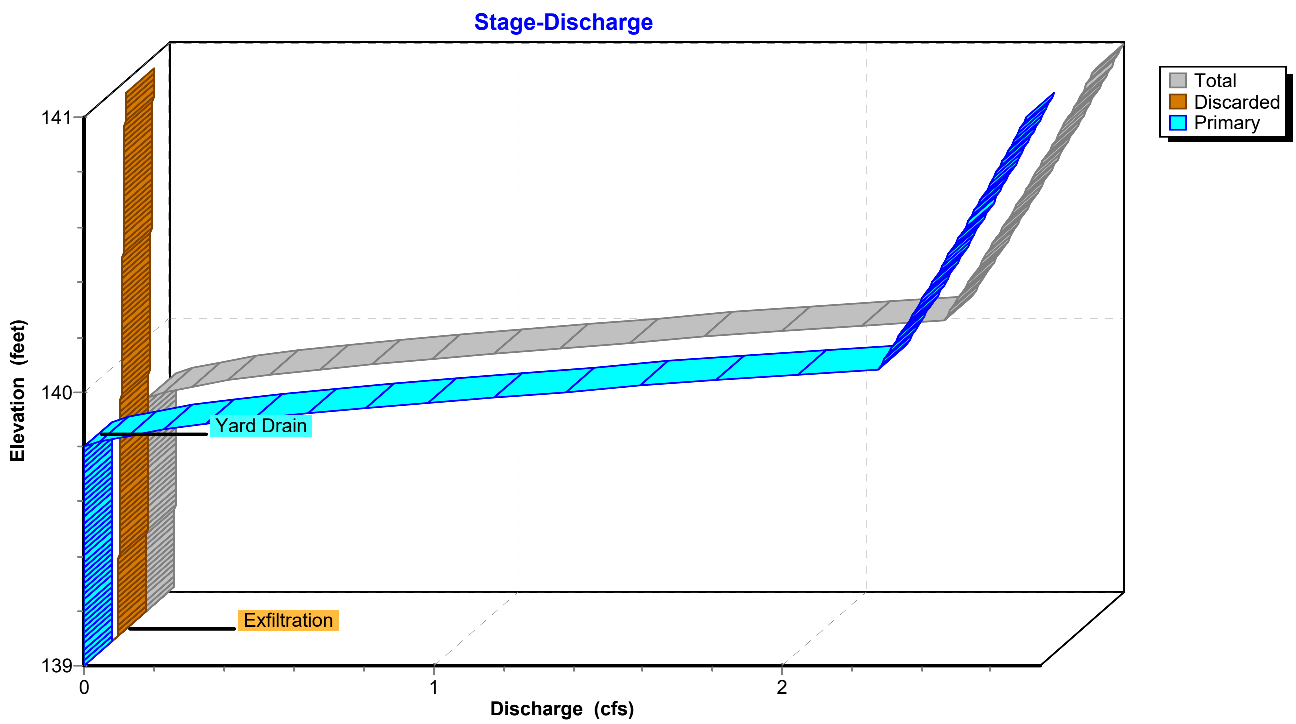
Discarded OutFlow Max=0.02 cfs @ 13.64 hrs HW=139.69' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=139.00' (Free Discharge)
└─**1=Culvert** (Passes 0.00 cfs of 1.77 cfs potential flow)
  └─**2=Yard Drain** (Controls 0.00 cfs)

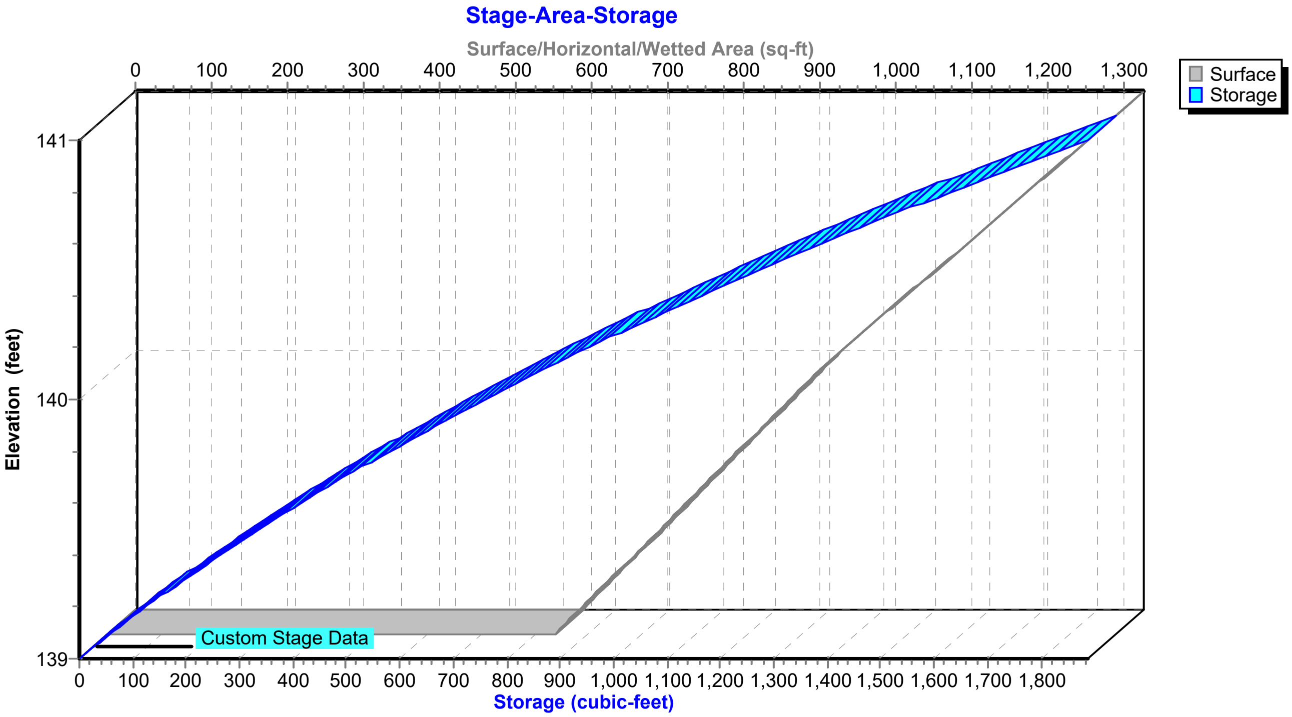
Pond B-2: North Basin



Pond B-2: North Basin



Pond B-2: North Basin



Summary for Pond S-1: Subsurface Infiltration System

Inflow Area = 0.554 ac, 58.45% Impervious, Inflow Depth = 2.54" for 2-yr event
Inflow = 1.67 cfs @ 12.13 hrs, Volume= 0.117 af
Outflow = 0.73 cfs @ 12.25 hrs, Volume= 0.087 af, Atten= 56%, Lag= 7.4 min
Discarded = 0.02 cfs @ 7.83 hrs, Volume= 0.031 af
Primary = 0.71 cfs @ 12.25 hrs, Volume= 0.055 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 143.81' @ 12.25 hrs Surf.Area= 0.039 ac Storage= 0.046 af

Plug-Flow detention time= 229.5 min calculated for 0.087 af (74% of inflow)
Center-of-Mass det. time= 133.0 min (932.9 - 799.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	142.00'	0.036 af	**11.00'W x 153.14'L x 3.50'H Field A** 0.135 af Overall - 0.044 af Embedded = 0.091 af x 40.0% Voids
#2A	142.50'	0.044 af	**ADS_StormTech SC-740 +Cap** x 42 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 42 Chambers in 2 Rows
		0.081 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	143.35'	**12.0" Round Culvert** L= 114.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 143.35' / 142.21' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	143.50'	**6.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	144.90'	**5.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#4	Discarded	142.00'	**0.400 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 7.83 hrs HW=142.04' (Free Discharge)
└—**4=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.70 cfs @ 12.25 hrs HW=143.80' (Free Discharge)
└—**1=Culvert** (Passes 0.70 cfs of 0.80 cfs potential flow)
  ├—**2=Orifice** (Orifice Controls 0.70 cfs @ 1.88 fps)
  └—**3=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)

Pond S-1: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

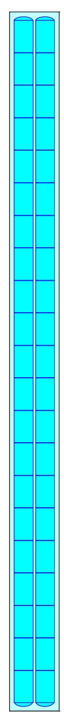
21 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 151.14' Row Length +12.0" End Stone x 2 = 153.14' Base Length
2 Rows x 51.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.00' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

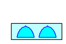
42 Chambers x 45.9 cf = 1,929.5 cf Chamber Storage

5,895.8 cf Field - 1,929.5 cf Chambers = 3,966.3 cf Stone x 40.0% Voids = 1,586.5 cf Stone Storage

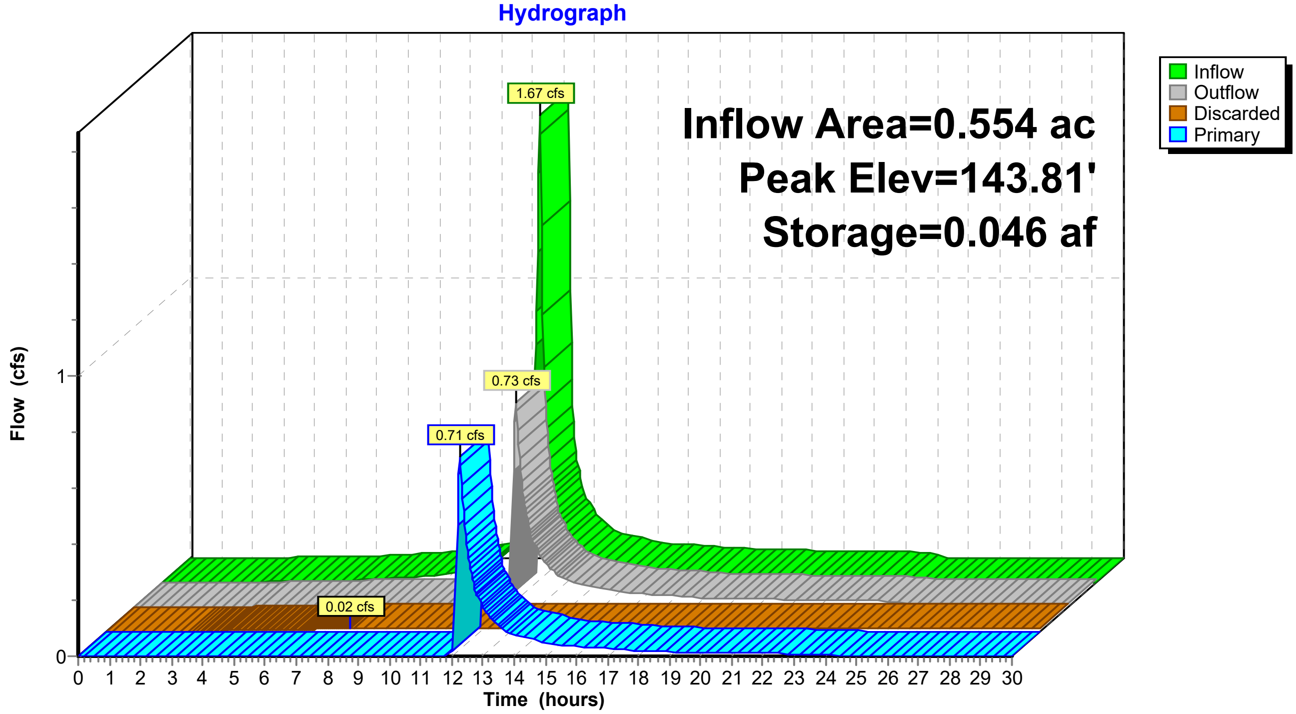
Chamber Storage + Stone Storage = 3,516.0 cf = 0.081 af
Overall Storage Efficiency = 59.6%
Overall System Size = 153.14' x 11.00' x 3.50'

42 Chambers
218.4 cy Field
146.9 cy Stone

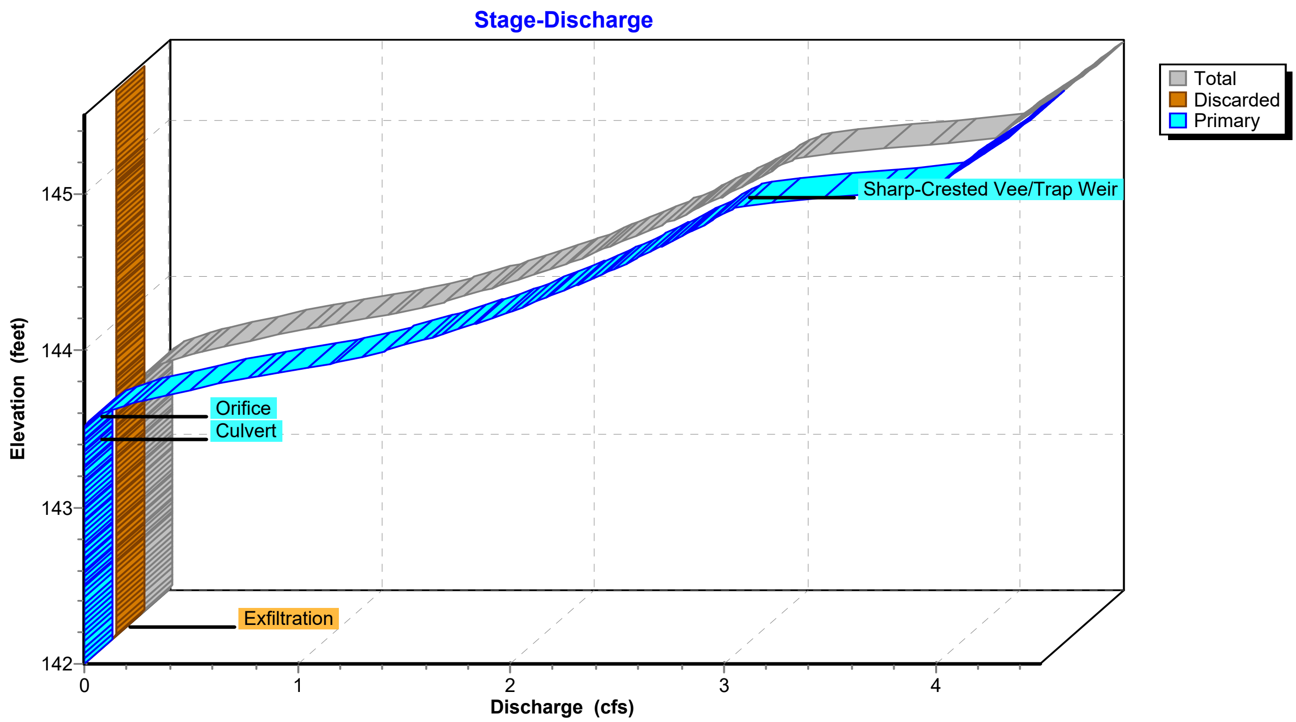




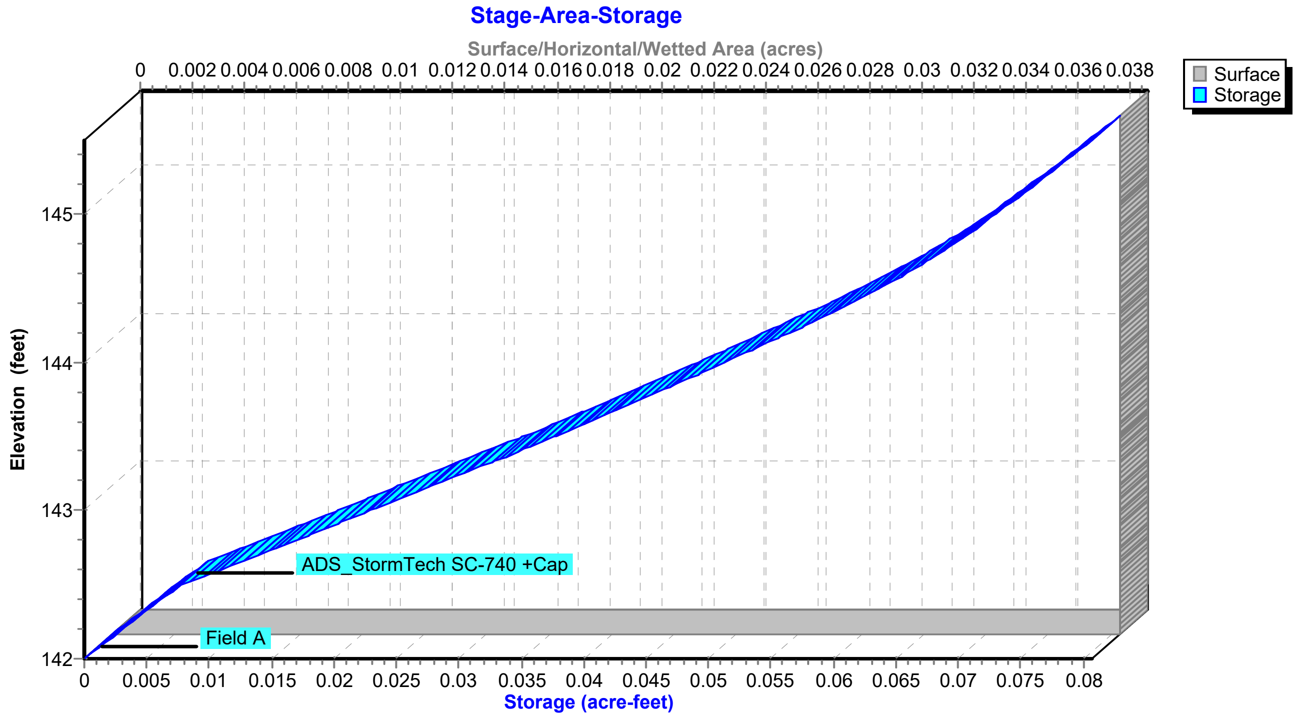
Pond S-1: Subsurface Infiltration System



Pond S-1: Subsurface Infiltration System



Pond S-1: Subsurface Infiltration System



Summary for Pond S-2: Subsurface Infiltration System

Inflow Area = 1.838 ac,100.00% Impervious, Inflow Depth = 3.30" for 2-yr event
Inflow = 4.79 cfs @ 12.07 hrs, Volume= 0.505 af
Outflow = 1.71 cfs @ 12.35 hrs, Volume= 0.505 af, Atten= 64%, Lag= 17.0 min
Discarded = 0.50 cfs @ 11.04 hrs, Volume= 0.452 af
Primary = 1.21 cfs @ 12.35 hrs, Volume= 0.052 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 144.03' @ 12.35 hrs Surf.Area= 0.091 ac Storage= 0.145 af

Plug-Flow detention time= 65.8 min calculated for 0.504 af (100% of inflow)
Center-of-Mass det. time= 65.7 min (822.2 - 756.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	141.50'	0.100 af	**30.00'W x 131.78'L x 4.00'H Field A** 0.363 af Overall - 0.114 af Embedded = 0.249 af x 40.0% Voids
#2A	142.50'	0.114 af	**ADS_StormTech SC-740 +Cap** x 108 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 108 Chambers in 6 Rows
		0.214 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	143.15'	**15.0" Round Culvert** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 143.15' / 142.69' S= 0.0061 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	143.64'	**7.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	144.90'	**5.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#4	Discarded	141.50'	**5.450 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.50 cfs @ 11.04 hrs HW=141.54' (Free Discharge)
└─**4=Exfiltration** (Exfiltration Controls 0.50 cfs)

Primary OutFlow Max=1.21 cfs @ 12.35 hrs HW=144.03' (Free Discharge)
└─**1=Culvert** (Passes 1.21 cfs of 2.54 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 1.21 cfs @ 2.13 fps)
  └─**3=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)

Pond S-2: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

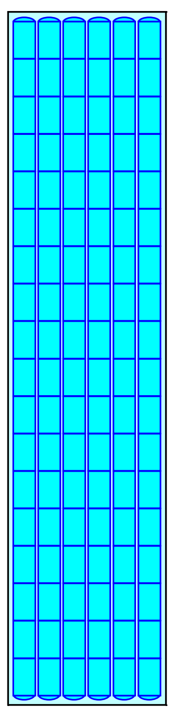
18 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 129.78' Row Length +12.0" End Stone x 2 = 131.78' Base Length
6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width
12.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 4.00' Field Height

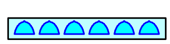
108 Chambers x 45.9 cf = 4,961.5 cf Chamber Storage

15,813.2 cf Field - 4,961.5 cf Chambers = 10,851.7 cf Stone x 40.0% Voids = 4,340.7 cf Stone Storage

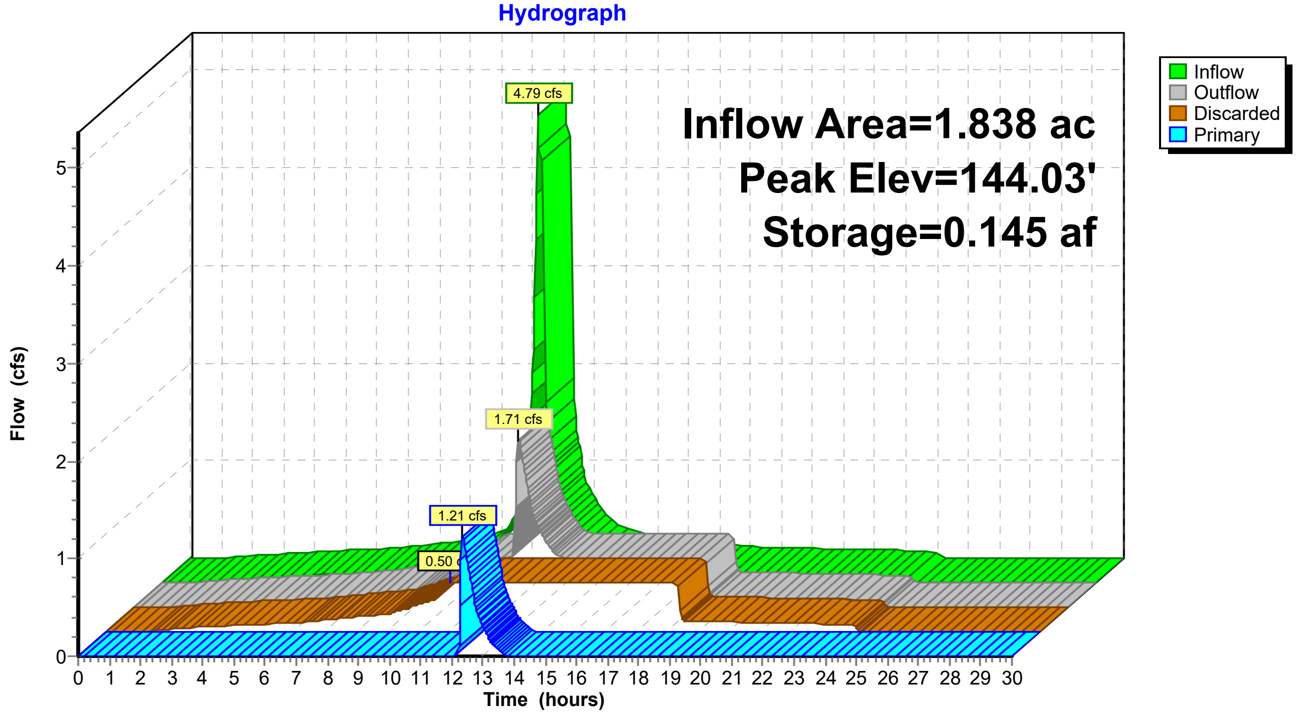
Chamber Storage + Stone Storage = 9,302.2 cf = 0.214 af
Overall Storage Efficiency = 58.8%
Overall System Size = 131.78' x 30.00' x 4.00'

108 Chambers
585.7 cy Field
401.9 cy Stone

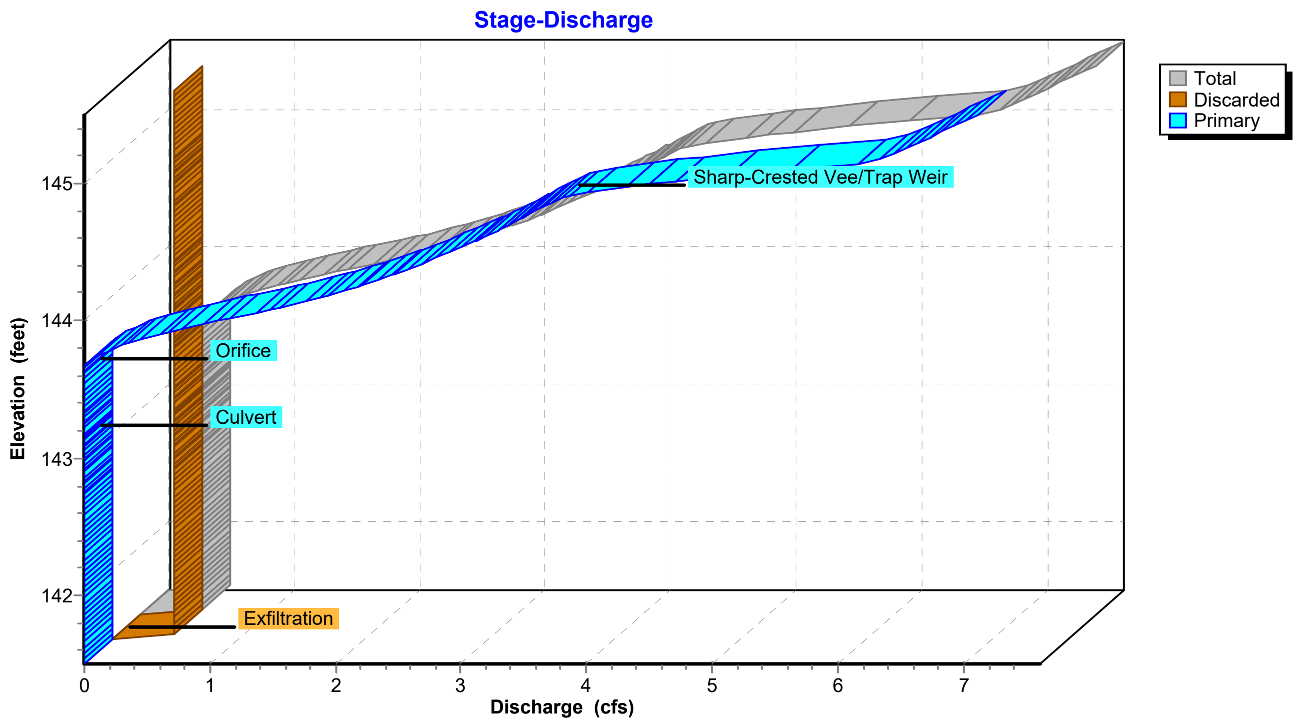




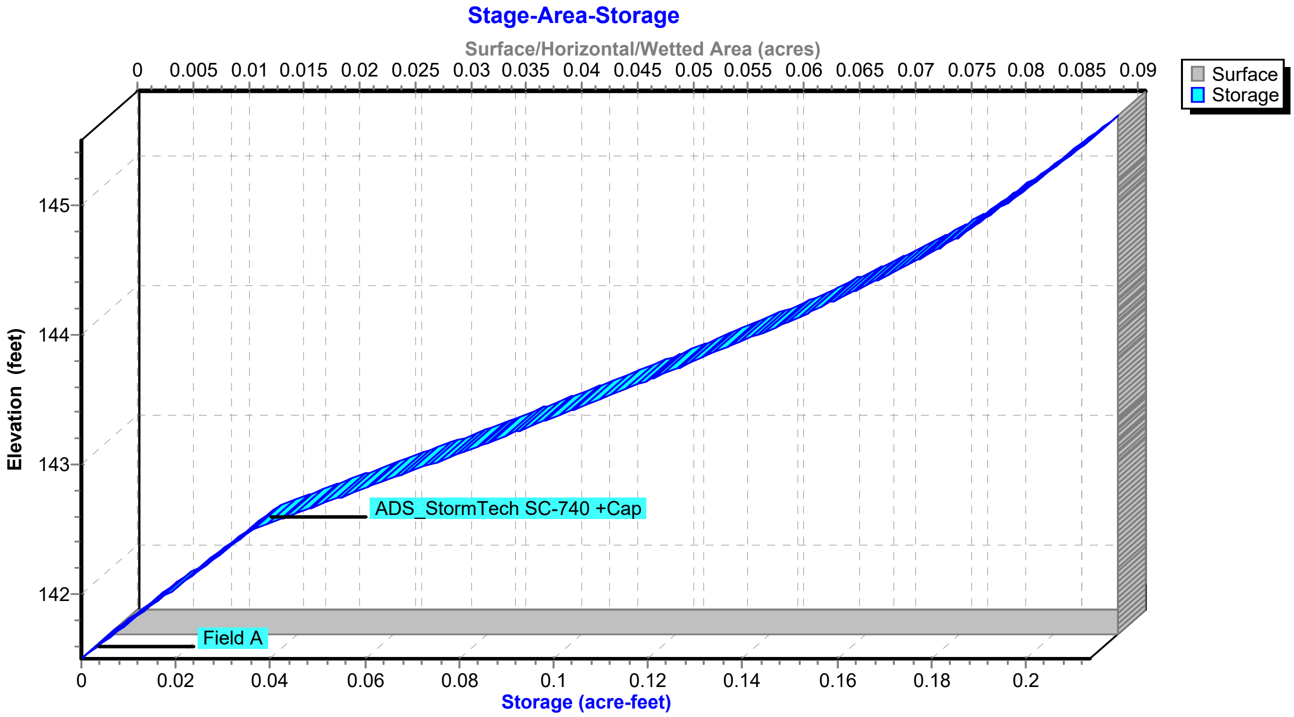
Pond S-2: Subsurface Infiltration System



Pond S-2: Subsurface Infiltration System



Pond S-2: Subsurface Infiltration System



Summary for Pond S-3: Subsurface Infiltration System

Inflow Area =	1.020 ac, 47.60% Impervious, Inflow Depth = 1.52" for 2-yr event			
Inflow =	1.79 cfs @	12.13 hrs, Volume=	0.129 af	
Outflow =	0.13 cfs @	13.34 hrs, Volume=	0.112 af,	Atten= 93%, Lag= 72.5 min
Discarded =	0.05 cfs @	9.90 hrs, Volume=	0.102 af	
Primary =	0.08 cfs @	13.34 hrs, Volume=	0.010 af	

Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 142.21' @ 13.34 hrs Surf.Area= 0.052 ac Storage= 0.063 af

Plug-Flow detention time= 370.9 min calculated for 0.112 af (87% of inflow)
Center-of-Mass det. time= 306.3 min (1,092.8 - 786.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	140.40'	0.047 af	**30.00'W x 74.82'L x 3.50'H Field A** 0.180 af Overall - 0.063 af Embedded = 0.117 af x 40.0% Voids
#2A	140.90'	0.063 af	**ADS_StormTech SC-740 +Cap** x 60 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 60 Chambers in 6 Rows
		0.110 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	141.84'	**12.0" Round Culvert** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 141.84' / 141.19' S= 0.0087 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	142.10'	**7.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	143.30'	**5.0' long Weir Wall** Cv= 2.62 (C= 3.28)
#4	Discarded	140.40'	**1.050 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.05 cfs @ 9.90 hrs HW=140.44' (Free Discharge)
└─**4=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.07 cfs @ 13.34 hrs HW=142.21' (Free Discharge)
└─**1=Culvert** (Passes 0.07 cfs of 0.53 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 0.07 cfs @ 1.11 fps)
  └─**3=Weir Wall** (Controls 0.00 cfs)

Pond S-3: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

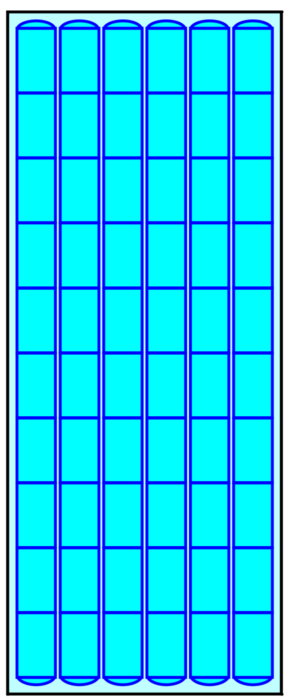
10 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 72.82' Row Length +12.0" End Stone x 2 = 74.82' Base Length
6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

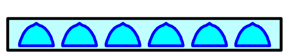
60 Chambers x 45.9 cf = 2,756.4 cf Chamber Storage

7,855.8 cf Field - 2,756.4 cf Chambers = 5,099.3 cf Stone x 40.0% Voids = 2,039.7 cf Stone Storage

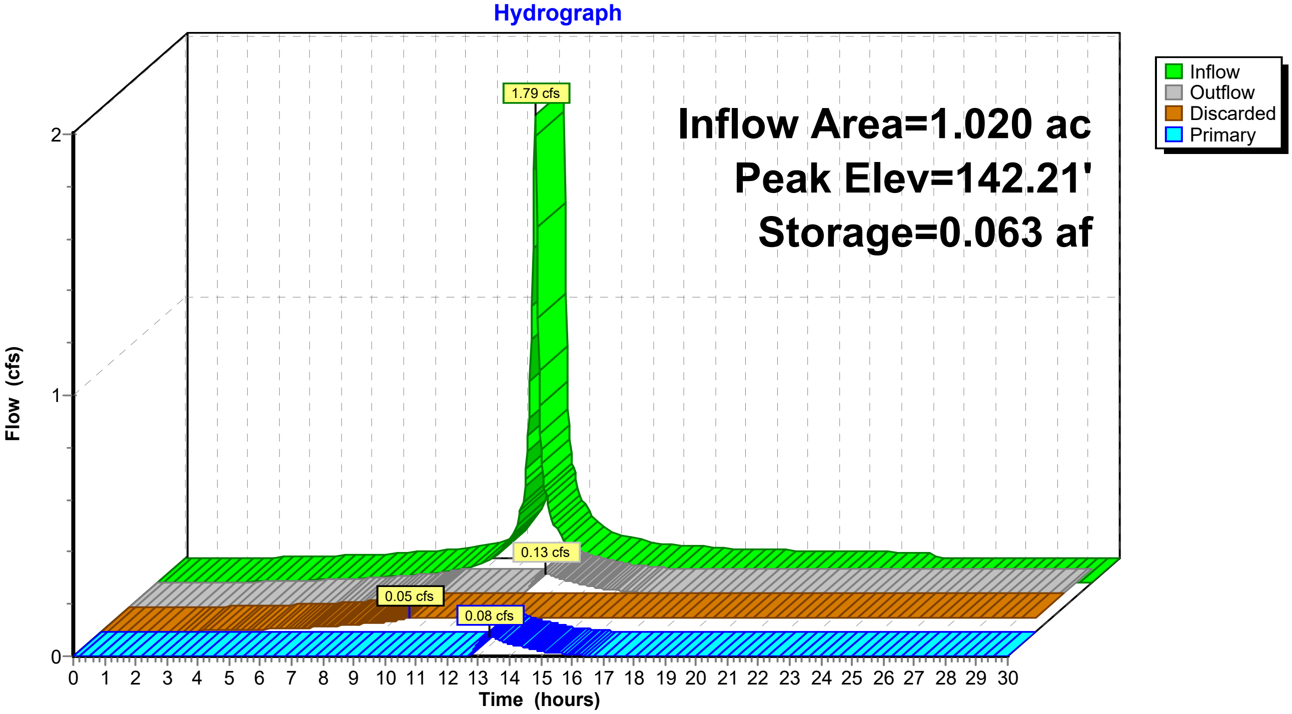
Chamber Storage + Stone Storage = 4,796.1 cf = 0.110 af
Overall Storage Efficiency = 61.1%
Overall System Size = 74.82' x 30.00' x 3.50'

60 Chambers
291.0 cy Field
188.9 cy Stone

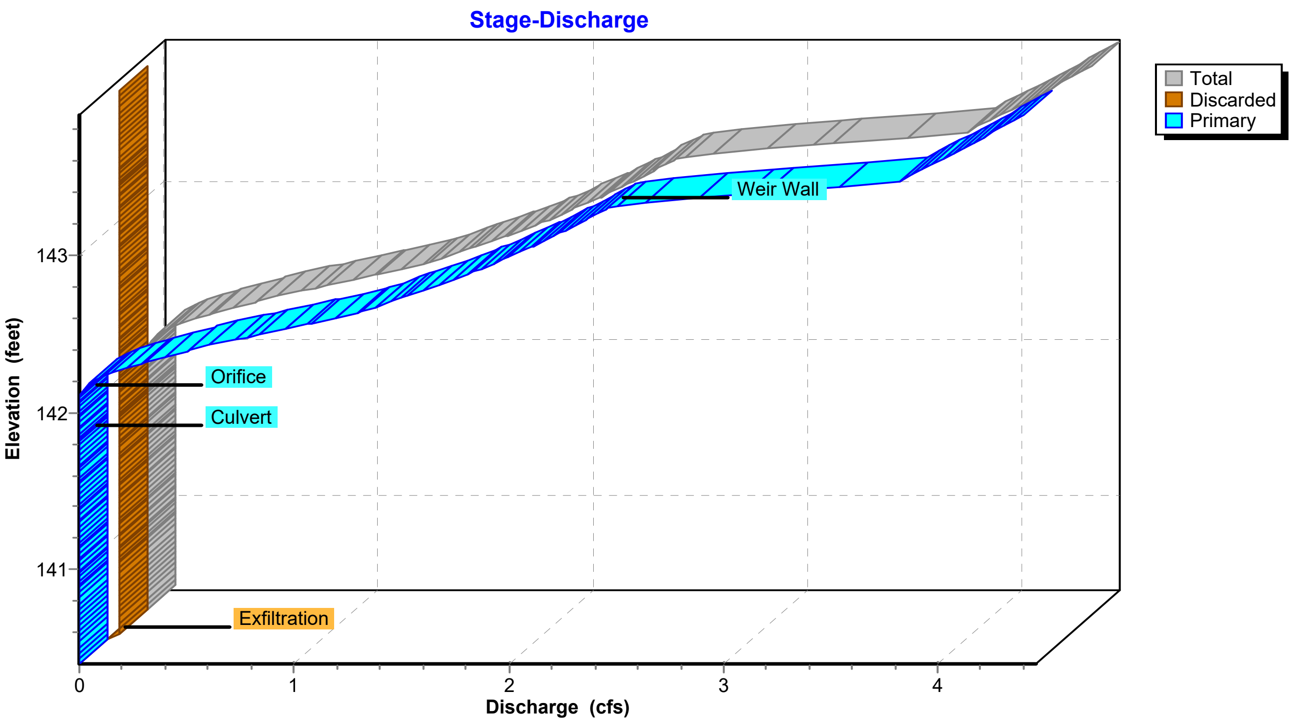




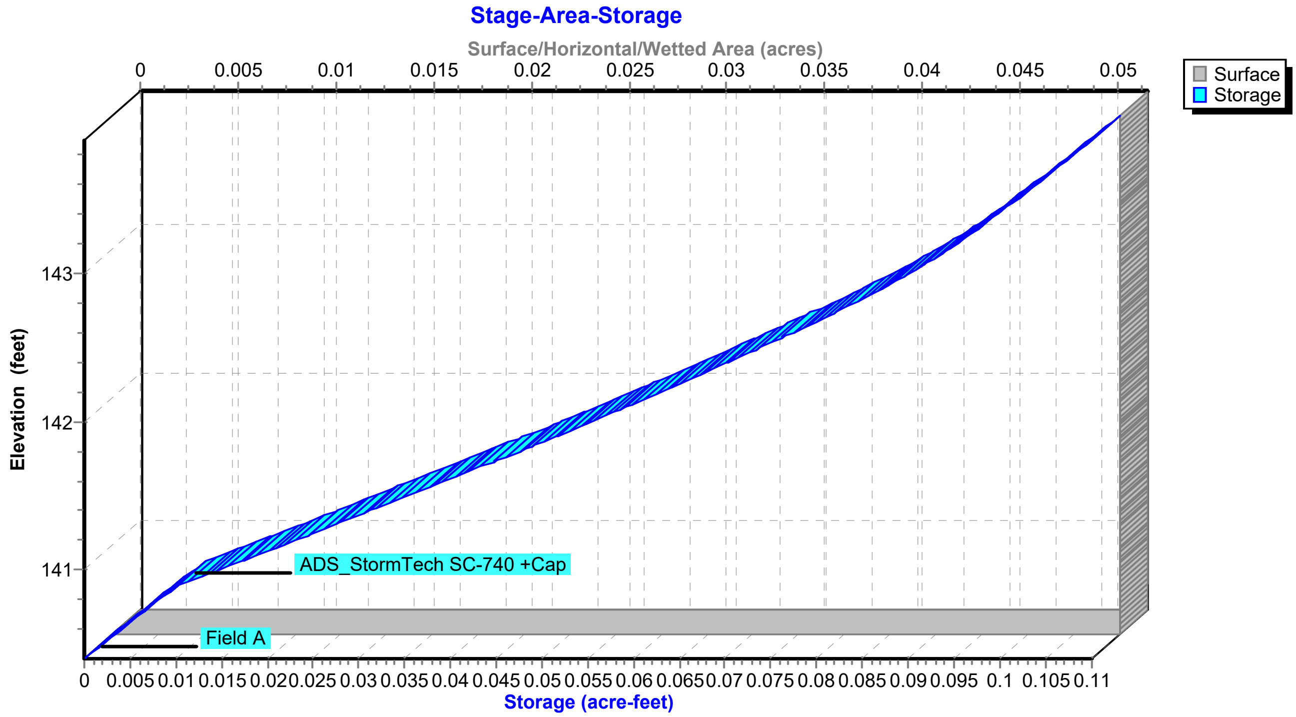
Pond S-3: Subsurface Infiltration System



Pond S-3: Subsurface Infiltration System



Pond S-3: Subsurface Infiltration System



Summary for Subcatchment PR-1: CCB 14

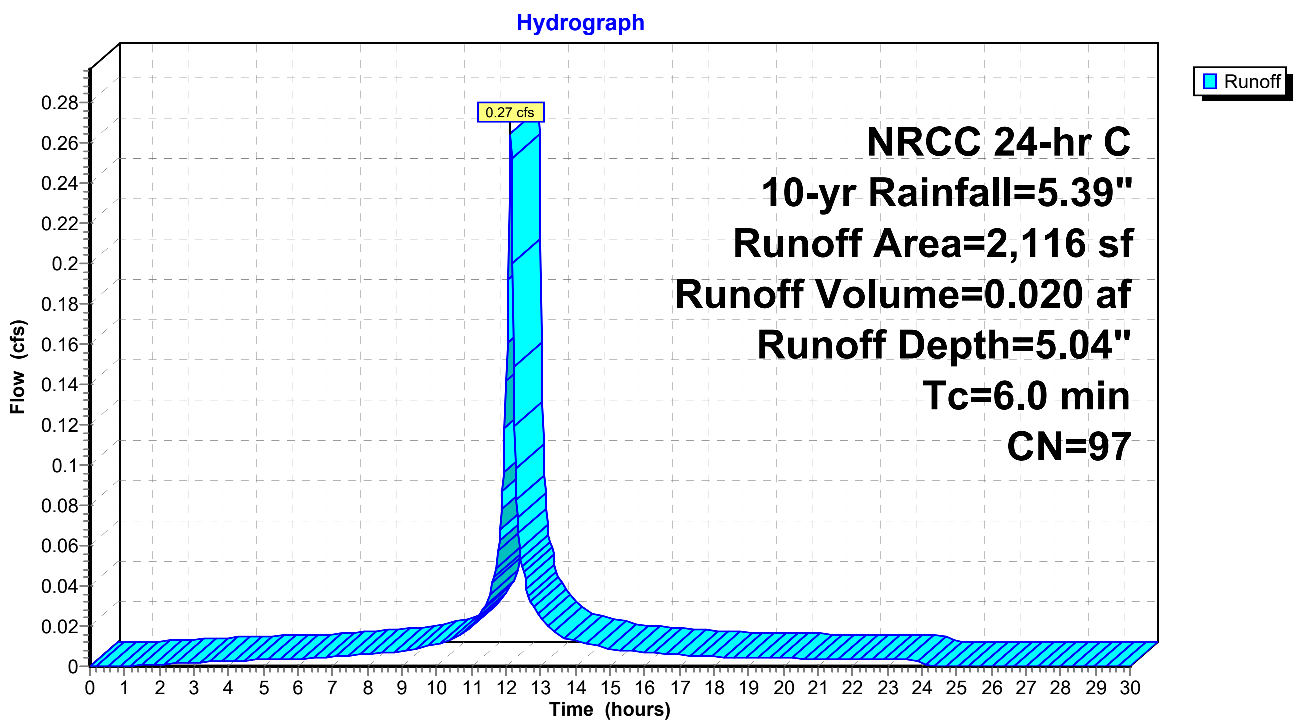
Runoff = 0.27 cfs @ 12.13 hrs, Volume= 0.020 af, Depth= 5.04"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
	2,045	98	Paved parking, HSG D
*	71	79	Landscaping, Good, HSG D
	2,116	97	Weighted Average
	71		3.36% Pervious Area
	2,045		96.64% Impervious Area

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

Subcatchment PR-1: CCB 14



Summary for Subcatchment PR-10: CCB 28

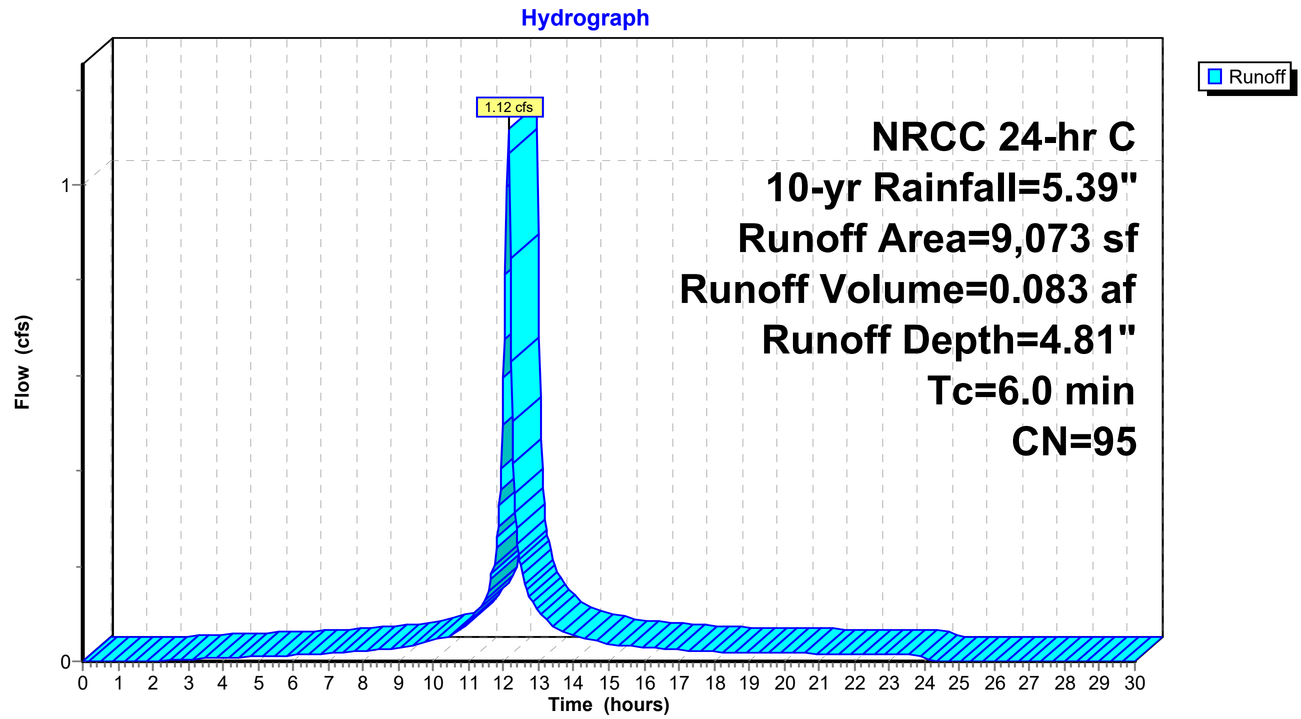
Runoff = 1.12 cfs @ 12.13 hrs, Volume= 0.083 af, Depth= 4.81"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
	7,450	98	Paved parking, HSG D
	440	80	>75% Grass cover, Good, HSG D
*	1,183	79	Landscaping, Good, HSG D
	9,073	95	Weighted Average
	1,623		17.89% Pervious Area
	7,450		82.11% Impervious Area

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

Subcatchment PR-10: CCB 28



Summary for Subcatchment PR-11: Building Roof

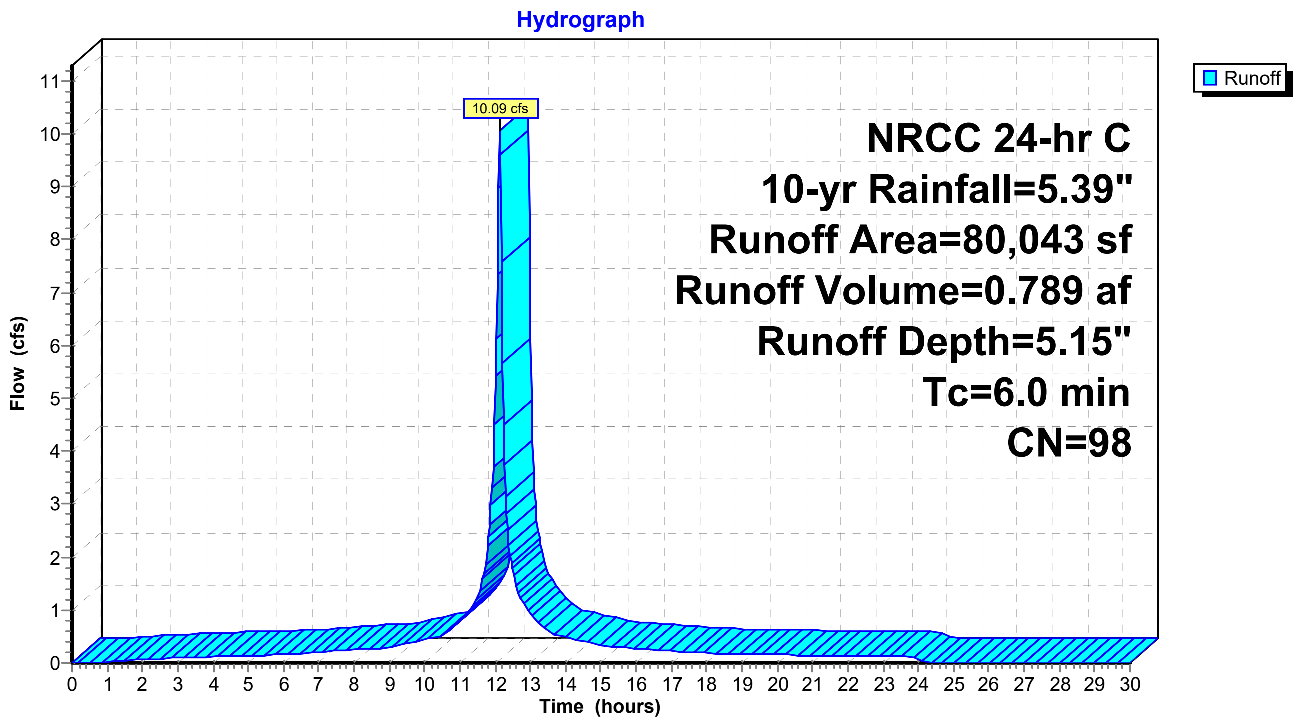
Runoff = 10.09 cfs @ 12.13 hrs, Volume= 0.789 af, Depth= 5.15"
Routed to Reach R1 : Roof Leader

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

Area (sf)	CN	Description
80,043	98	Roofs, HSG D
80,043		100.00% Impervious Area

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

Subcatchment PR-11: Building Roof



Summary for Subcatchment PR-12: CCB 29

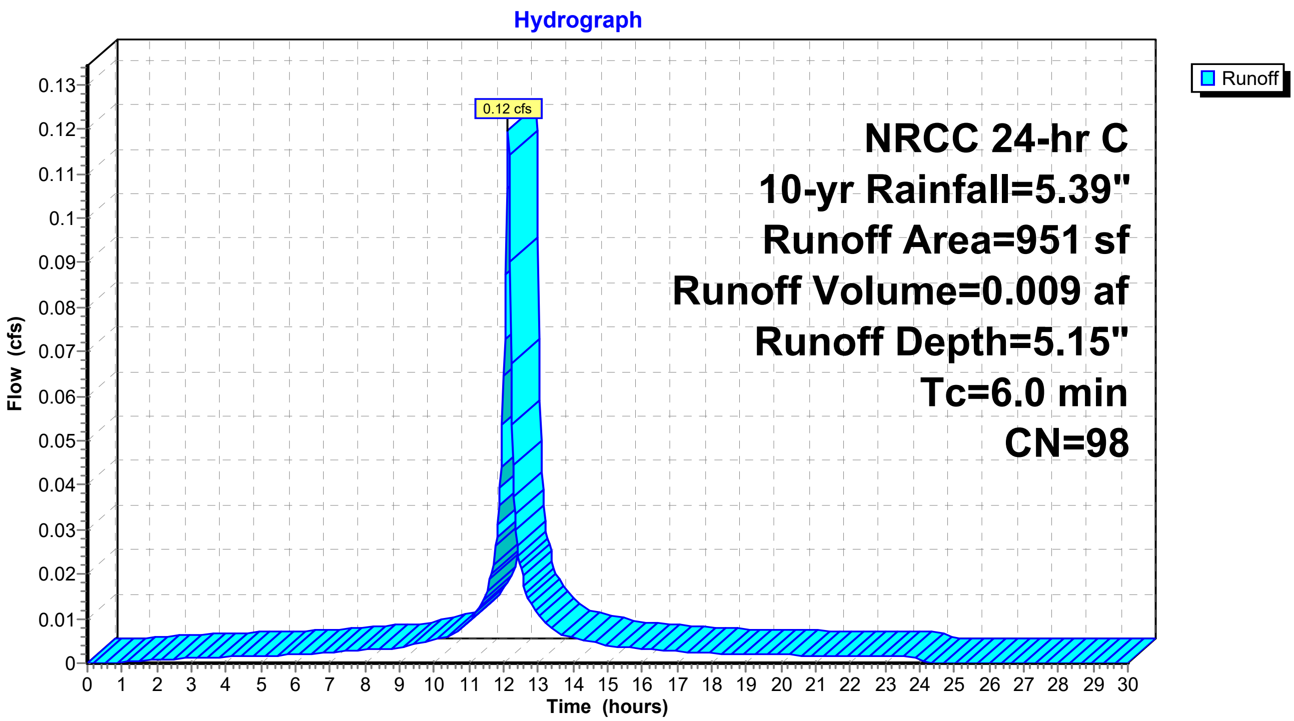
Runoff = 0.12 cfs @ 12.13 hrs, Volume= 0.009 af, Depth= 5.15"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

Area (sf)	CN	Description
951	98	Paved parking, HSG D
951		100.00% Impervious Area

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

Subcatchment PR-12: CCB 29



Summary for Subcatchment PR-13: CCB 30

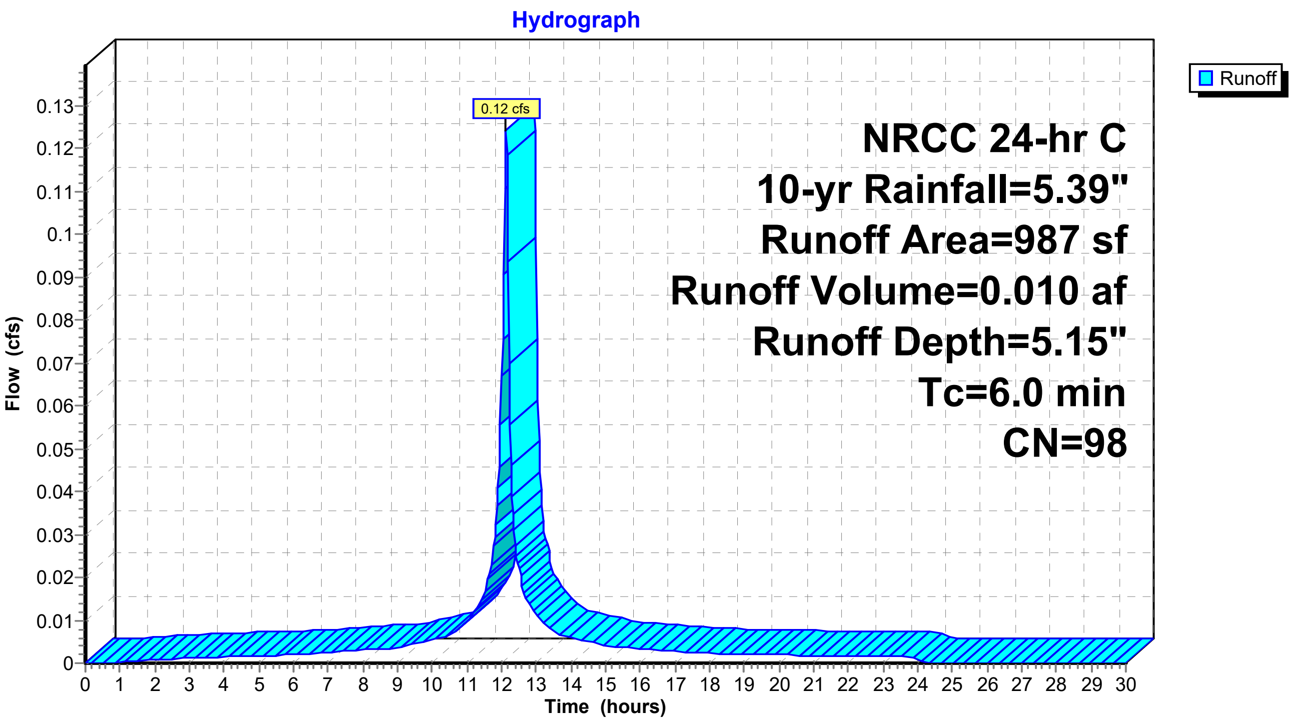
Runoff = 0.12 cfs @ 12.13 hrs, Volume= 0.010 af, Depth= 5.15"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

Area (sf)	CN	Description
987	98	Paved parking, HSG D
987		100.00% Impervious Area

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

Subcatchment PR-13: CCB 30



Summary for Subcatchment PR-14: CLCB-10

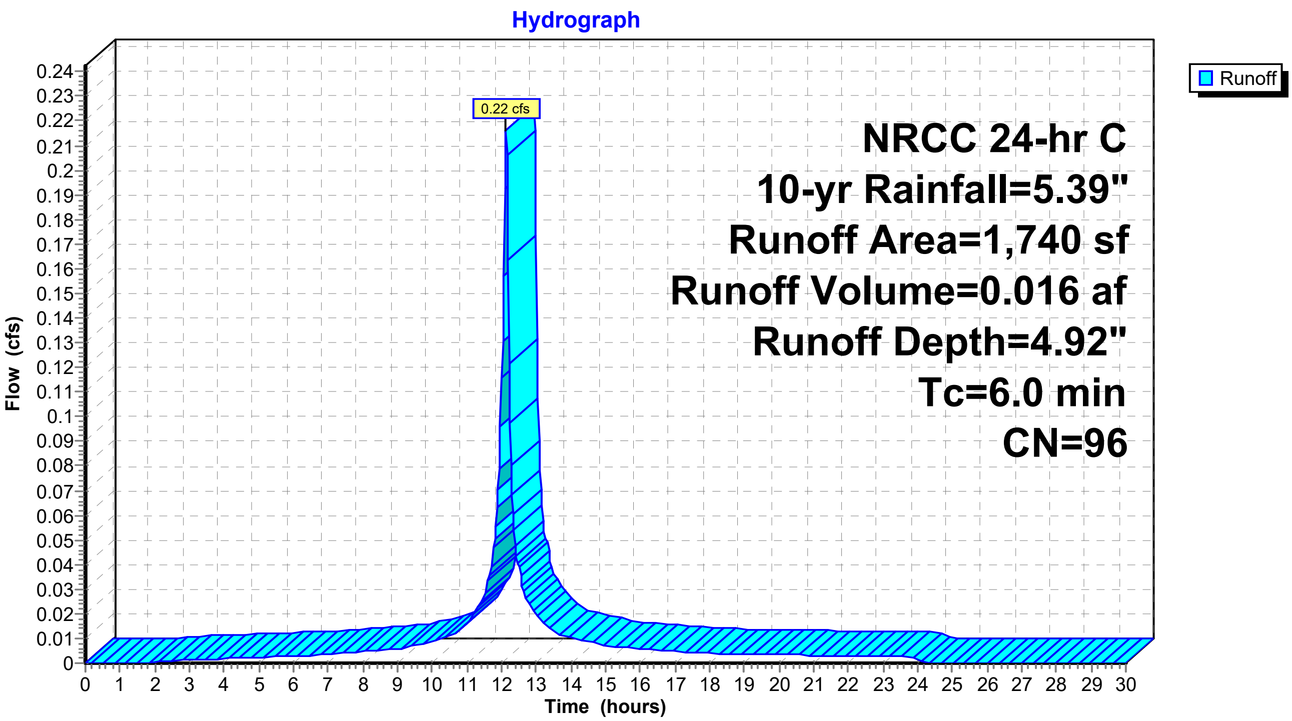
Runoff = 0.22 cfs @ 12.13 hrs, Volume= 0.016 af, Depth= 4.92"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
*	1,740	96	Concrete paver, HSG D
	1,740		100.00% Pervious Area

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

Subcatchment PR-14: CLCB-10



Summary for Subcatchment PR-15: CLCB-09

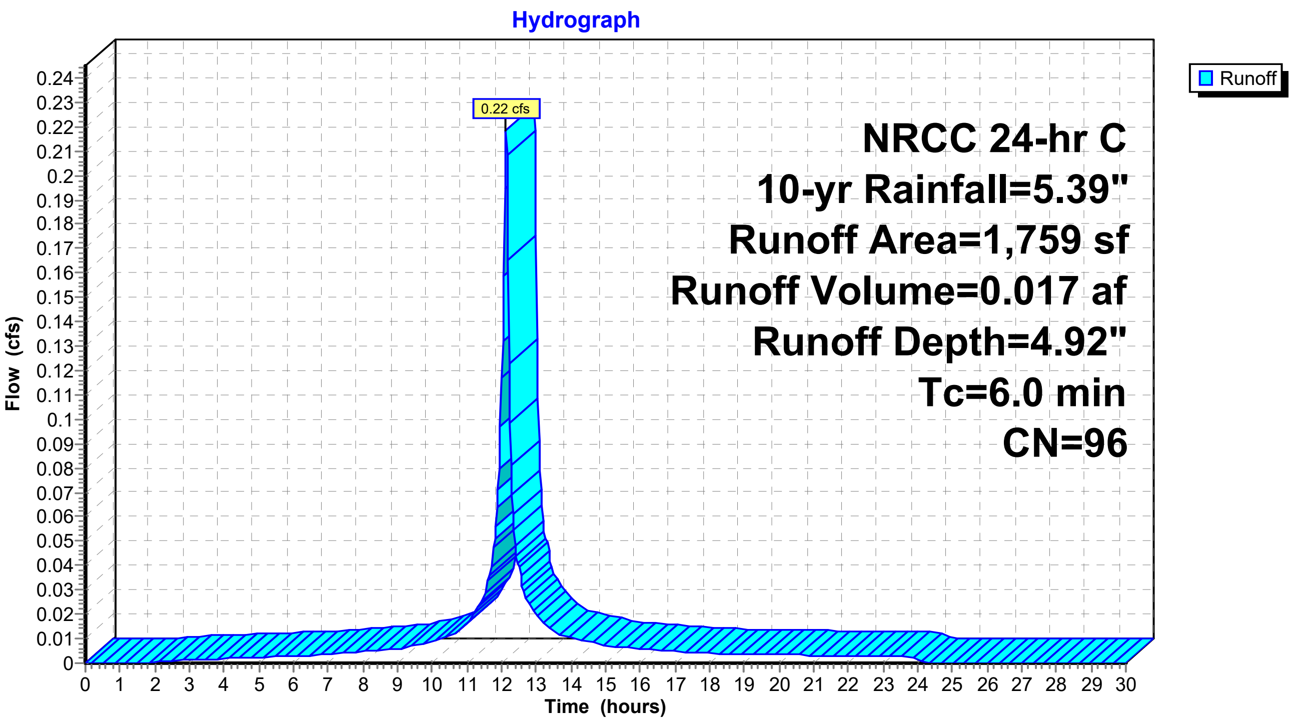
Runoff = 0.22 cfs @ 12.13 hrs, Volume= 0.017 af, Depth= 4.92"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
*	1,759	96	Pevious paver, HSG D
	1,759		100.00% Pervious Area

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

Subcatchment PR-15: CLCB-09



Summary for Subcatchment PR-16: East rooftop to Front Rain Garden

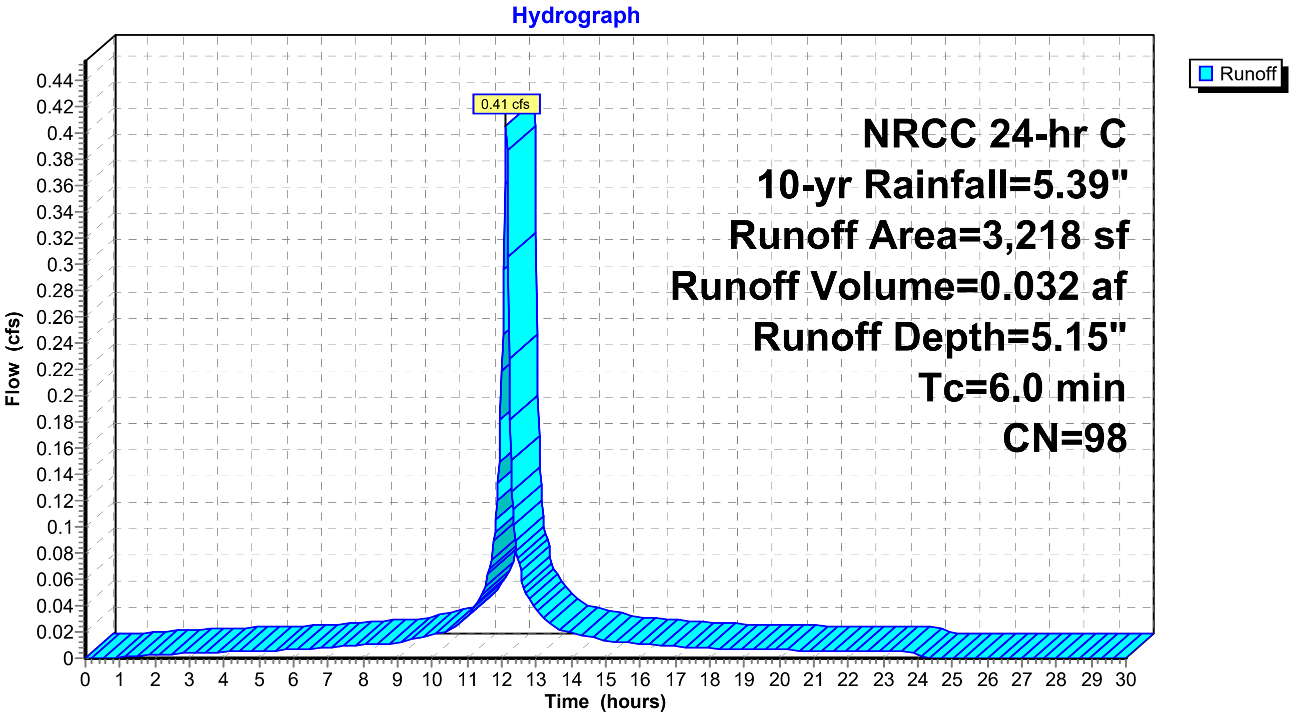
Runoff = 0.41 cfs @ 12.13 hrs, Volume= 0.032 af, Depth= 5.15"
Routed to Pond AP-2 : Front Lawn Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

Area (sf)	CN	Description
3,218	98	Roofs, HSG D
3,218		100.00% Impervious Area

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

Subcatchment PR-16: East rooftop to Front Rain Garden



Summary for Subcatchment PR-17: Front Lawn

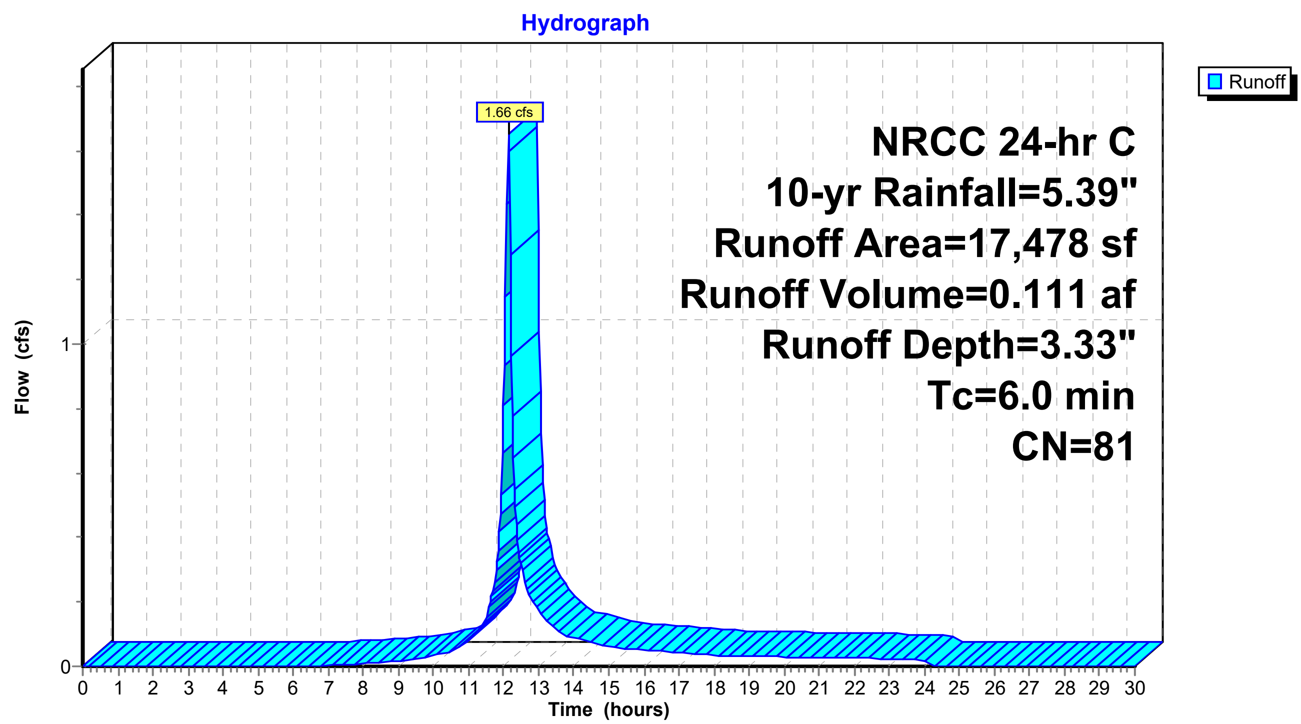
Runoff = 1.66 cfs @ 12.13 hrs, Volume= 0.111 af, Depth= 3.33"
Routed to Pond AP-2 : Front Lawn Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
	1,883	98	Paved parking, HSG D
	6,950	80	>75% Grass cover, Good, HSG D
*	8,645	79	Landscaping, Good, HSG D
	17,478	81	Weighted Average
	15,595		89.23% Pervious Area
	1,883		10.77% Impervious Area

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

Subcatchment PR-17: Front Lawn



Summary for Subcatchment PR-18: CCB-08

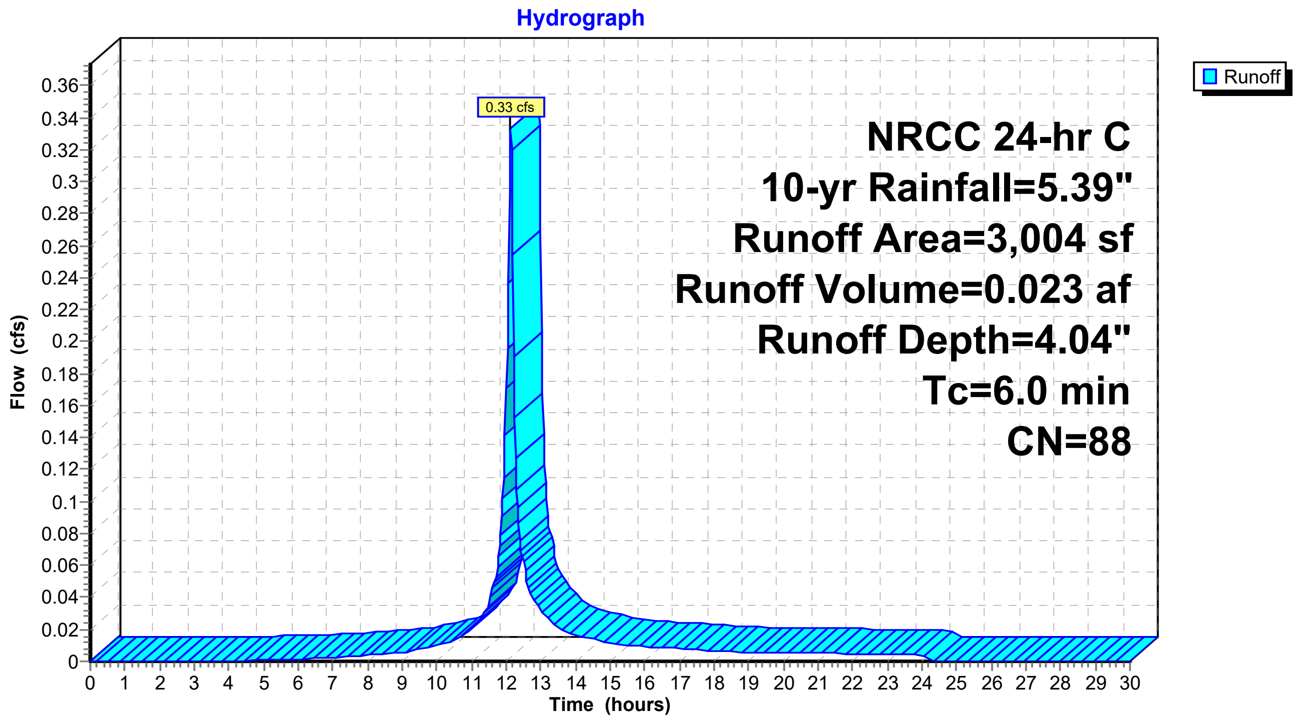
Runoff = 0.33 cfs @ 12.13 hrs, Volume= 0.023 af, Depth= 4.04"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
	1,482	98	Paved parking, HSG D
	192	80	>75% Grass cover, Good, HSG D
*	1,330	79	Landscaping, Good, HSG D
	3,004	88	Weighted Average
	1,522		50.67% Pervious Area
	1,482		49.33% Impervious Area

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

Subcatchment PR-18: CCB-08



Summary for Subcatchment PR-19: CCB-07

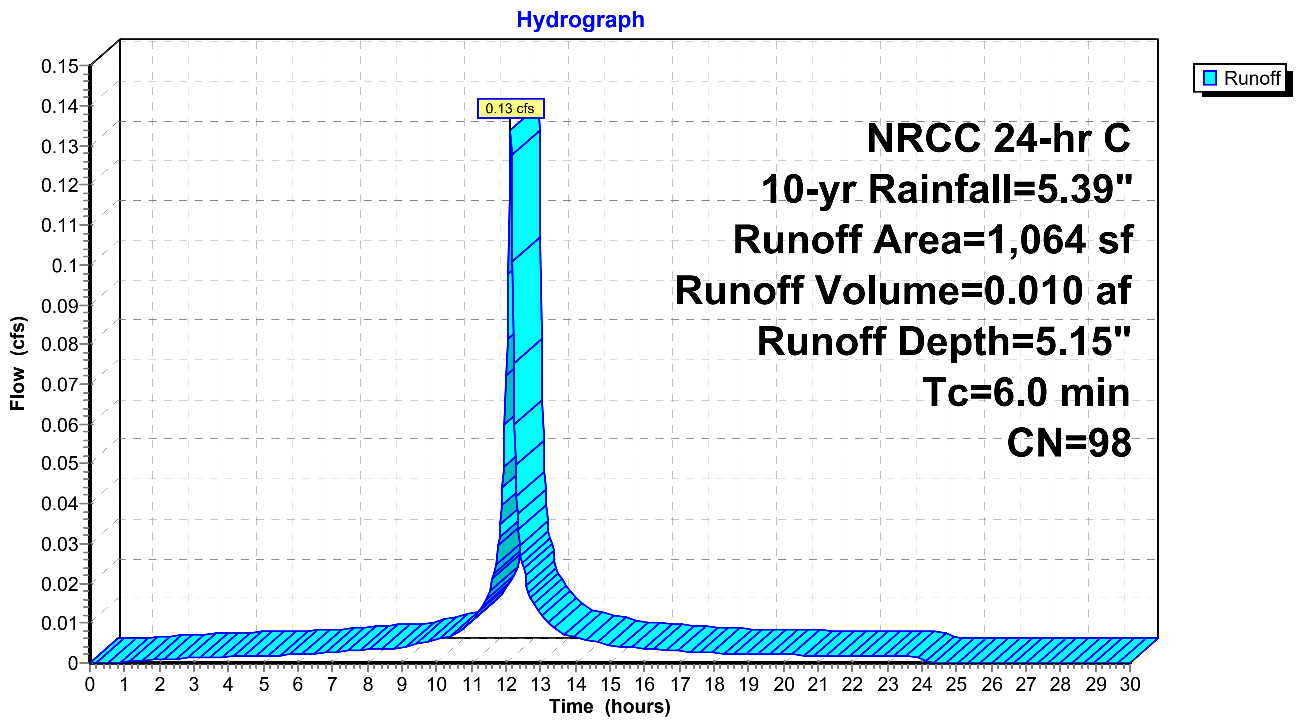
Runoff = 0.13 cfs @ 12.13 hrs, Volume= 0.010 af, Depth= 5.15"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

Area (sf)	CN	Description
1,064	98	Paved parking, HSG D
1,064		100.00% Impervious Area

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

Subcatchment PR-19: CCB-07



Summary for Subcatchment PR-2: CCB 10

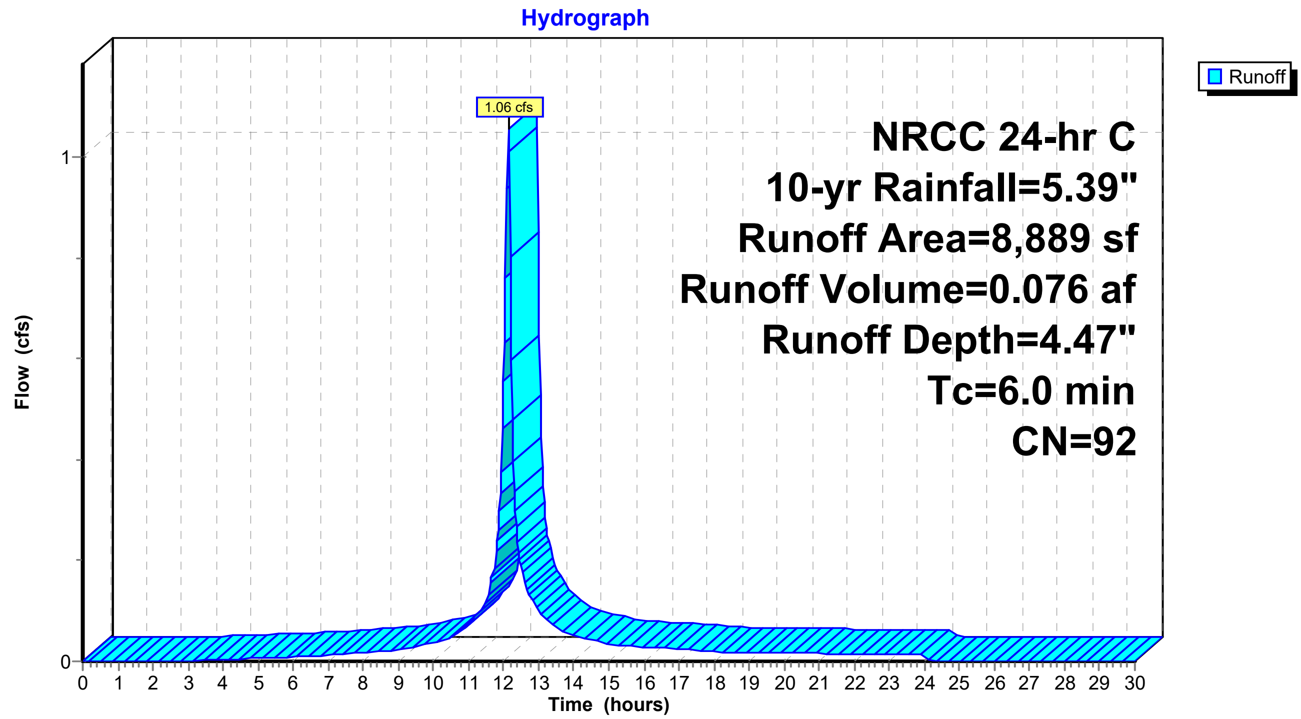
Runoff = 1.06 cfs @ 12.13 hrs, Volume= 0.076 af, Depth= 4.47"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
*	6,733	98	Paved parking, HSG C
*	1,772	72	Landscaping, Good, HSG C
	384	74	>75% Grass cover, Good, HSG C
	8,889	92	Weighted Average
	2,156		24.25% Pervious Area
	6,733		75.75% Impervious Area

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

Subcatchment PR-2: CCB 10



Summary for Subcatchment PR-20: South of entrance drive

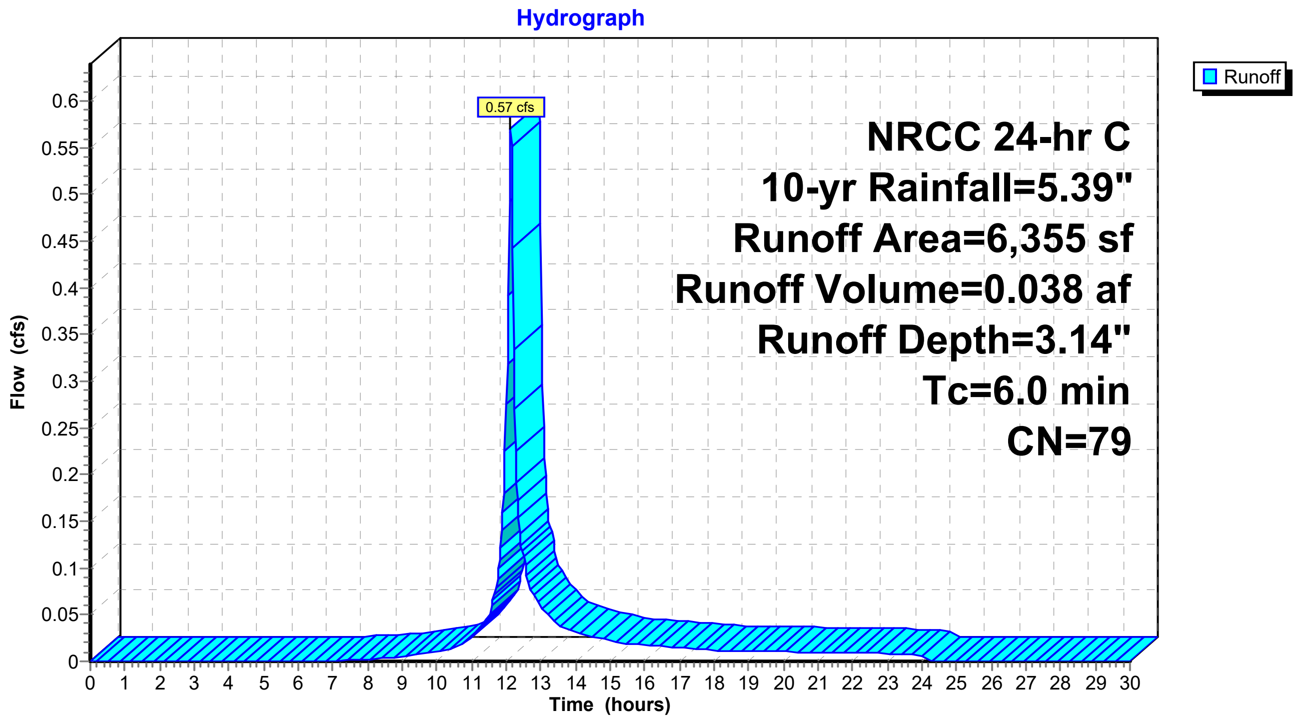
Runoff = 0.57 cfs @ 12.13 hrs, Volume= 0.038 af, Depth= 3.14"
Routed to Pond AP-4 : Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
	93	98	Paved parking, HSG D
	755	80	>75% Grass cover, Good, HSG D
*	5,507	79	Landscaping, Good, HSG D
	6,355	79	Weighted Average
	6,262		98.54% Pervious Area
	93		1.46% Impervious Area

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

Subcatchment PR-20: South of entrance drive



Summary for Subcatchment PR-21: Danbury Rd

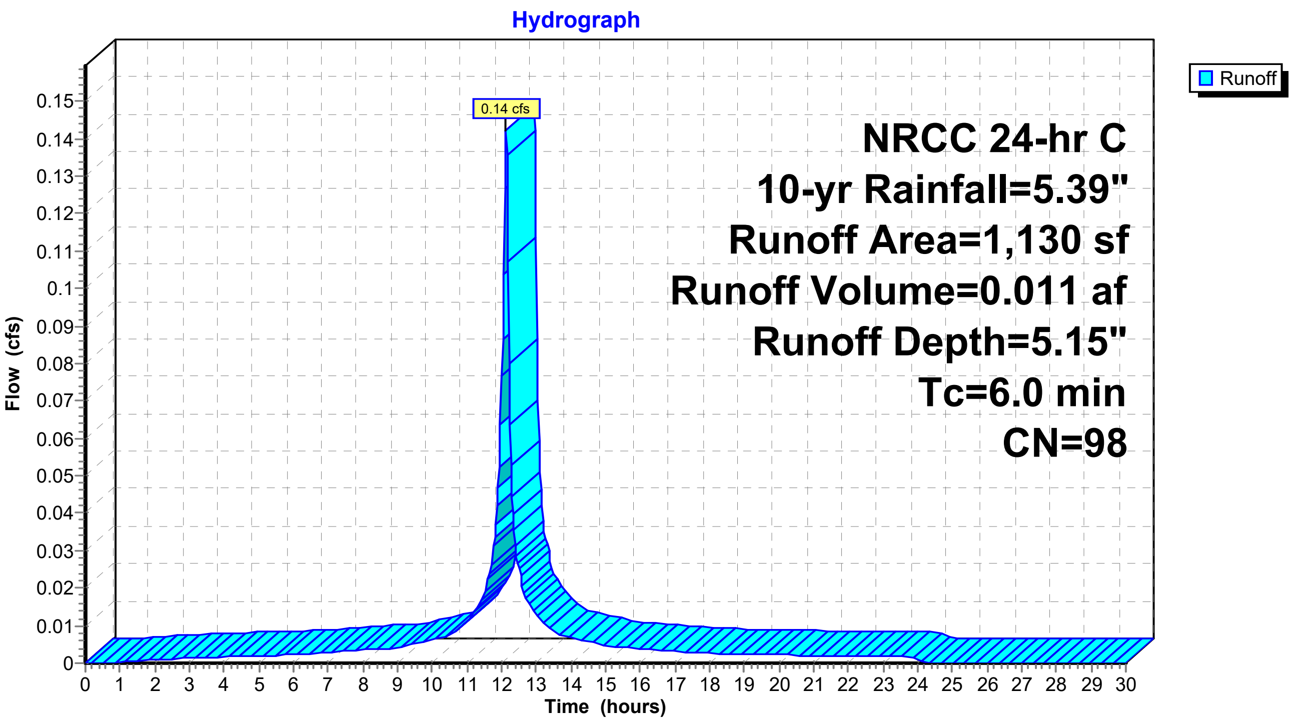
Runoff = 0.14 cfs @ 12.13 hrs, Volume= 0.011 af, Depth= 5.15"
Routed to Pond AP-3 : Danbury Road

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

Area (sf)	CN	Description
1,130	98	Paved parking, HSG D
1,130		100.00% Impervious Area

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

Subcatchment PR-21: Danbury Rd



Summary for Subcatchment PR-3: CCB 07

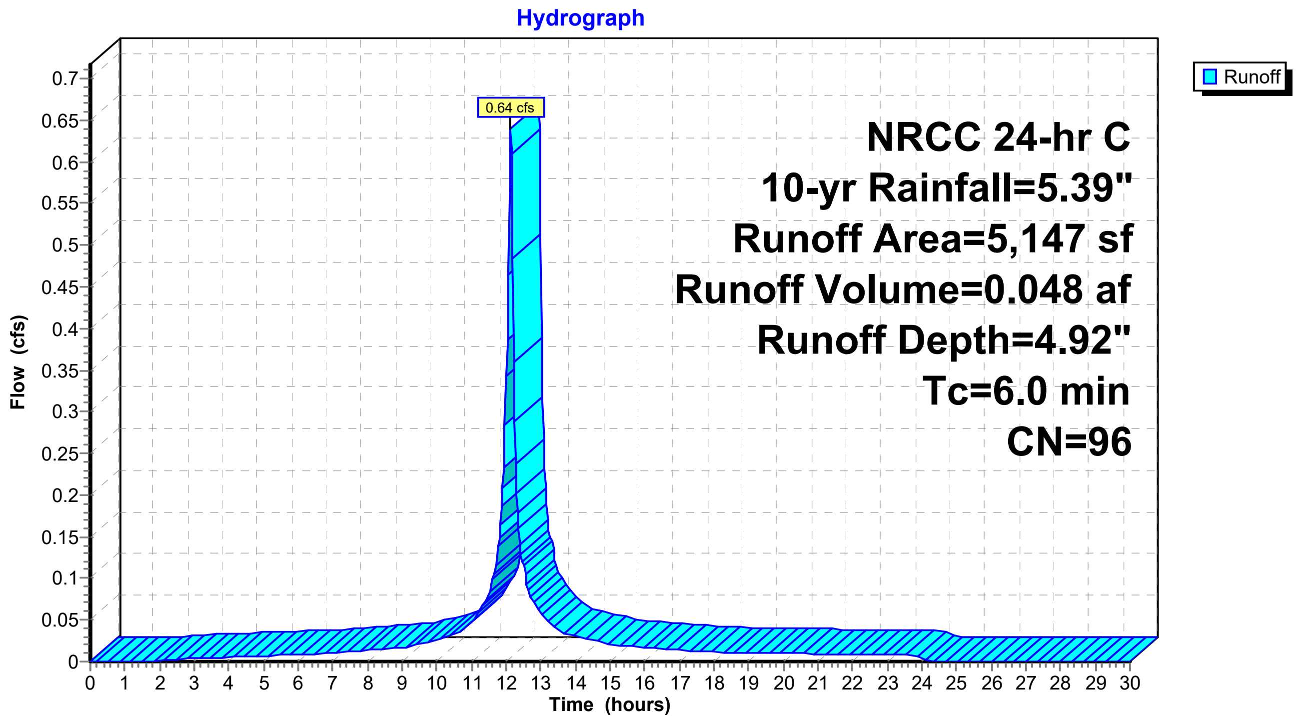
Runoff = 0.64 cfs @ 12.13 hrs, Volume= 0.048 af, Depth= 4.92"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
*	4,715	98	Paved parking, HSG C
*	432	72	Landscaping, Good, HSG C
	5,147	96	Weighted Average
	432		8.39% Pervious Area
	4,715		91.61% Impervious Area

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

Subcatchment PR-3: CCB 07



Summary for Subcatchment PR-4: CCB 06

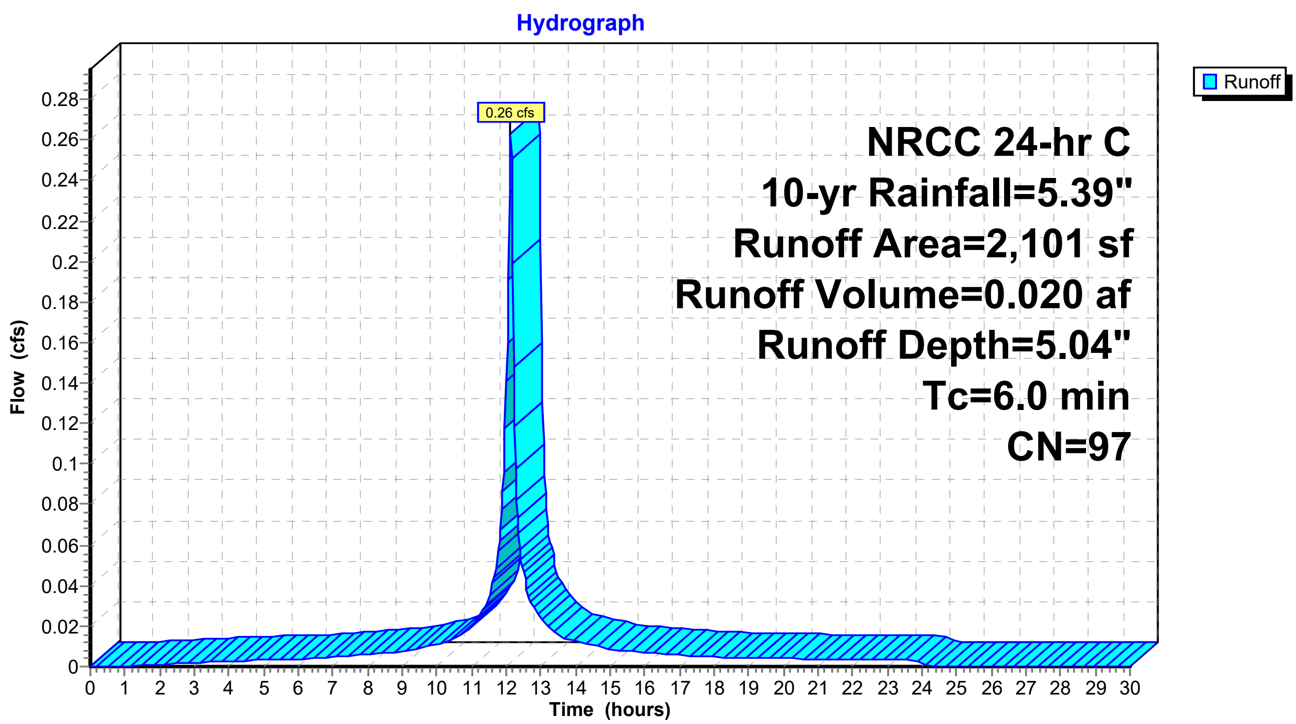
Runoff = 0.26 cfs @ 12.13 hrs, Volume= 0.020 af, Depth= 5.04"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
	2,026	98	Paved parking, HSG D
*	75	79	Landscaping, Good, HSG D
	2,101	97	Weighted Average
	75		3.57% Pervious Area
	2,026		96.43% Impervious Area

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

Subcatchment PR-4: CCB 06



Summary for Subcatchment PR-5: South Basin

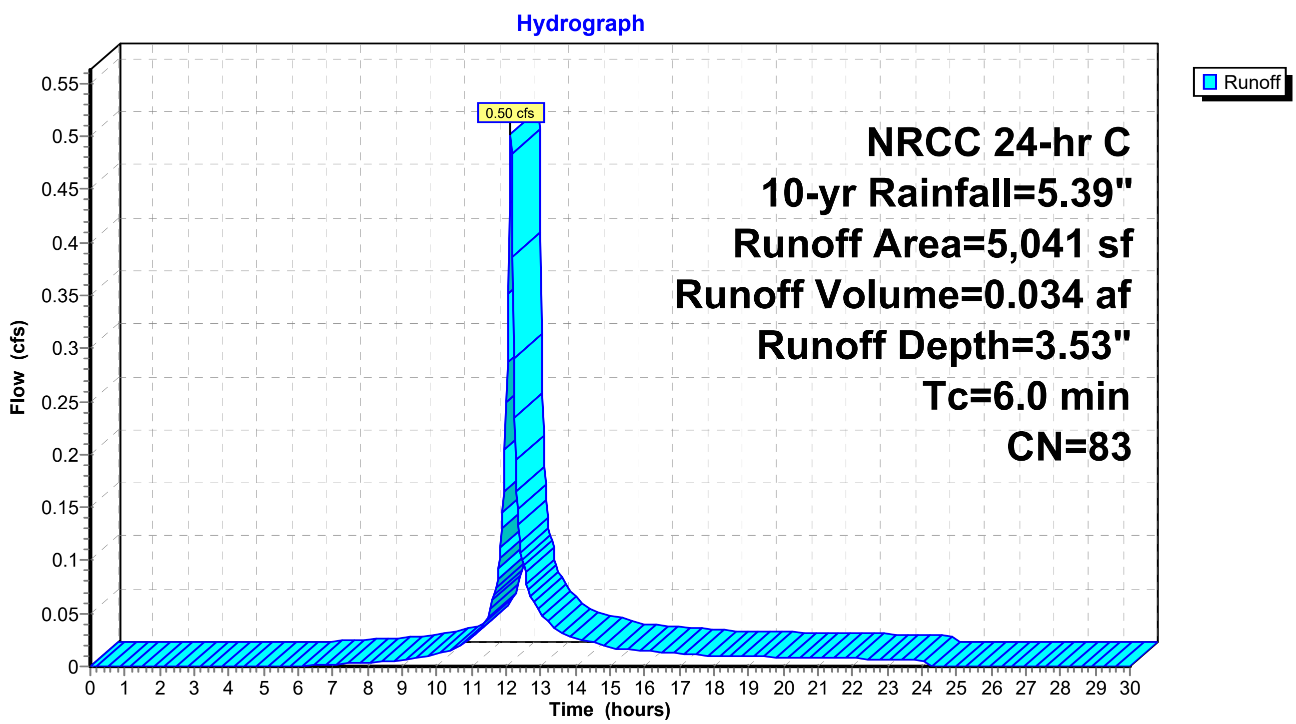
Runoff = 0.50 cfs @ 12.13 hrs, Volume= 0.034 af, Depth= 3.53"
Routed to Pond B-1 : South Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
*	595	96	Permable Paver, HSG C
*	366	96	Gravel surface, HSG C
*	2,205	72	Landscaping, Good, HSG C
*	890	98	Paved parking, HSG C
	985	80	>75% Grass cover, Good, HSG D
	5,041	83	Weighted Average
	4,151		82.34% Pervious Area
	890		17.66% Impervious Area

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

Subcatchment PR-5: South Basin



Summary for Subcatchment PR-6: West along river

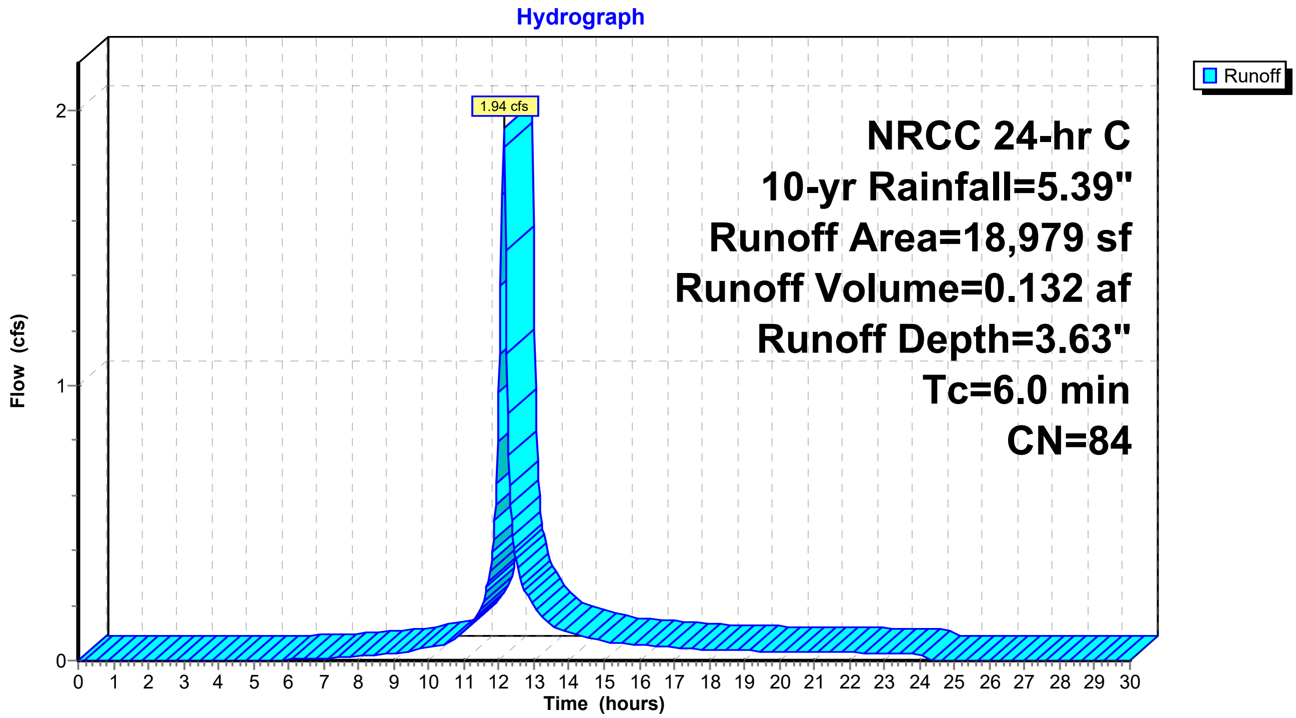
Runoff = 1.94 cfs @ 12.13 hrs, Volume= 0.132 af, Depth= 3.63"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
*	4,195	96	Permeable paver, HSG D
	461	96	Gravel surface, HSG D
	911	98	Paved parking, HSG D
	2,775	80	>75% Grass cover, Good, HSG D
*	6,489	79	Landscaping, Good, HSG D
	4,148	77	Woods, Good, HSG D
	18,979	84	Weighted Average
	18,068		95.20% Pervious Area
	911		4.80% Impervious Area

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

Subcatchment PR-6: West along river



Summary for Subcatchment PR-7: North basin

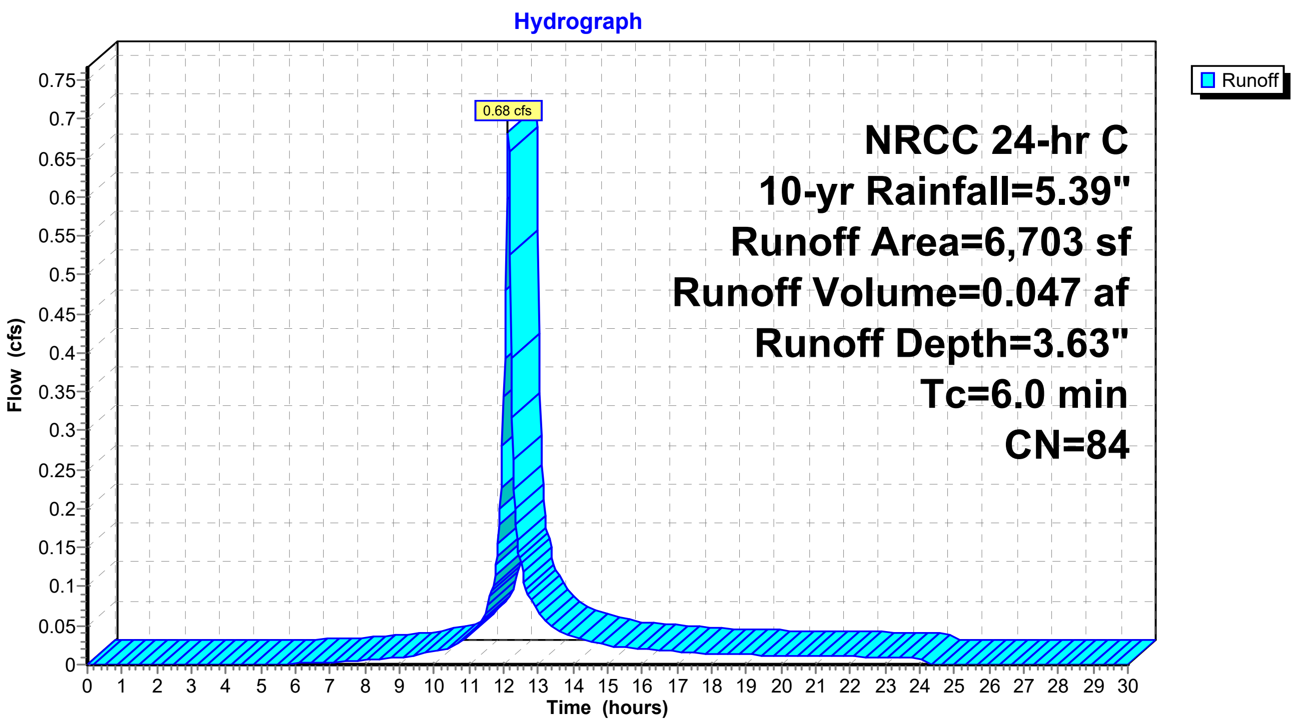
Runoff = 0.68 cfs @ 12.13 hrs, Volume= 0.047 af, Depth= 3.63"
Routed to Pond B-2 : North Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
	453	96	Gravel surface, HSG D
*	1,031	96	Permeable paver, HSG D
	445	80	>75% Grass cover, Good, HSG D
*	3,601	79	Landscaping, Good, HSG D
	692	77	Woods, Good, HSG D
	481	98	Paved parking, HSG D
	6,703	84	Weighted Average
	6,222		92.82% Pervious Area
	481		7.18% Impervious Area

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

Subcatchment PR-7: North basin



Summary for Subcatchment PR-7B: CCB 26

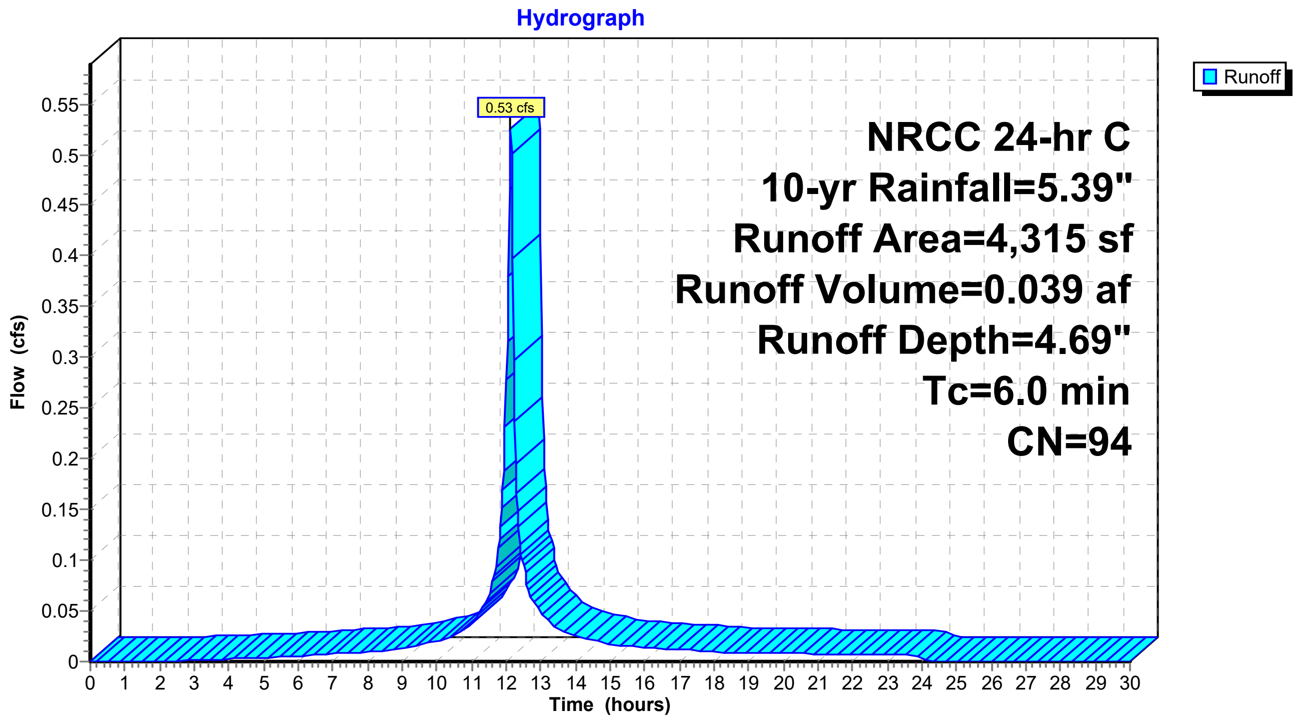
Runoff = 0.53 cfs @ 12.13 hrs, Volume= 0.039 af, Depth= 4.69"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
	3,518	98	Paved parking, HSG D
*	797	79	Landscaping, Good, HSG D
	4,315	94	Weighted Average
	797		18.47% Pervious Area
	3,518		81.53% Impervious Area

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

Subcatchment PR-7B: CCB 26



Summary for Subcatchment PR-8: CCB 26A

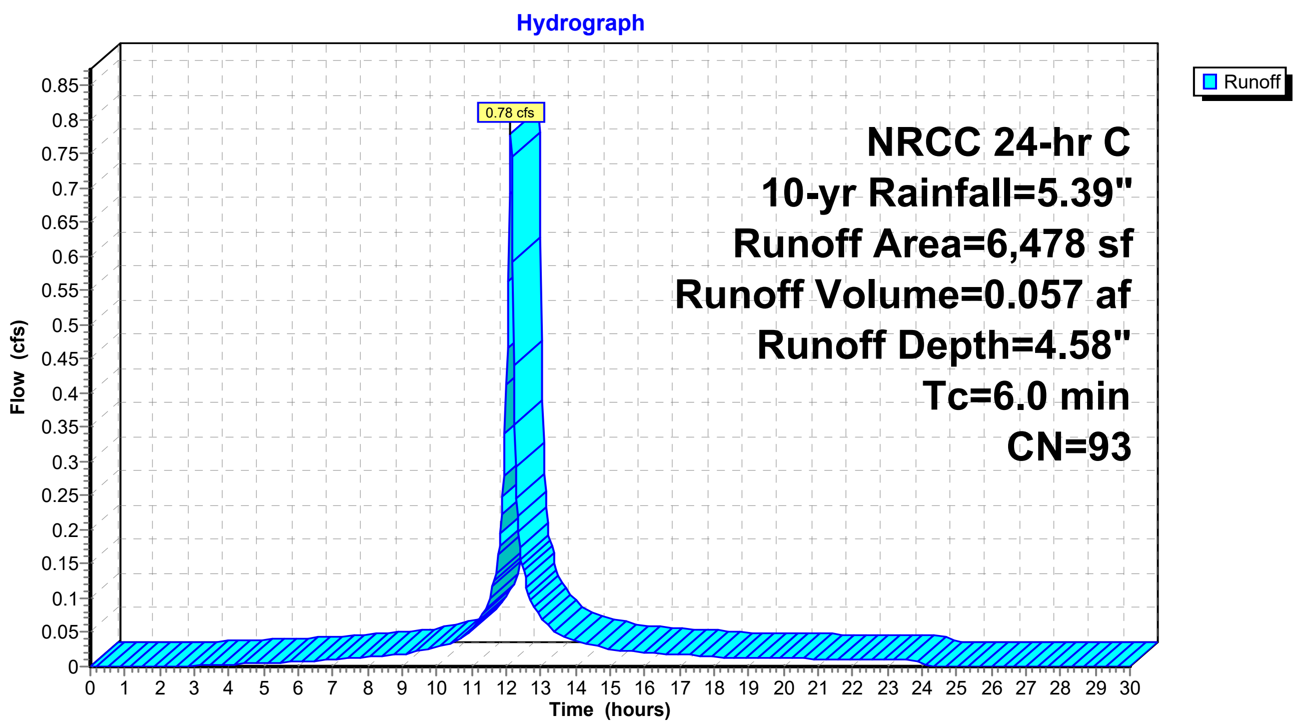
Runoff = 0.78 cfs @ 12.13 hrs, Volume= 0.057 af, Depth= 4.58"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
	4,737	98	Paved parking, HSG D
*	1,741	79	Landscaping, Good, HSG D
	6,478	93	Weighted Average
	1,741		26.88% Pervious Area
	4,737		73.12% Impervious Area

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

Subcatchment PR-8: CCB 26A



Summary for Subcatchment PR-9: CCB 27

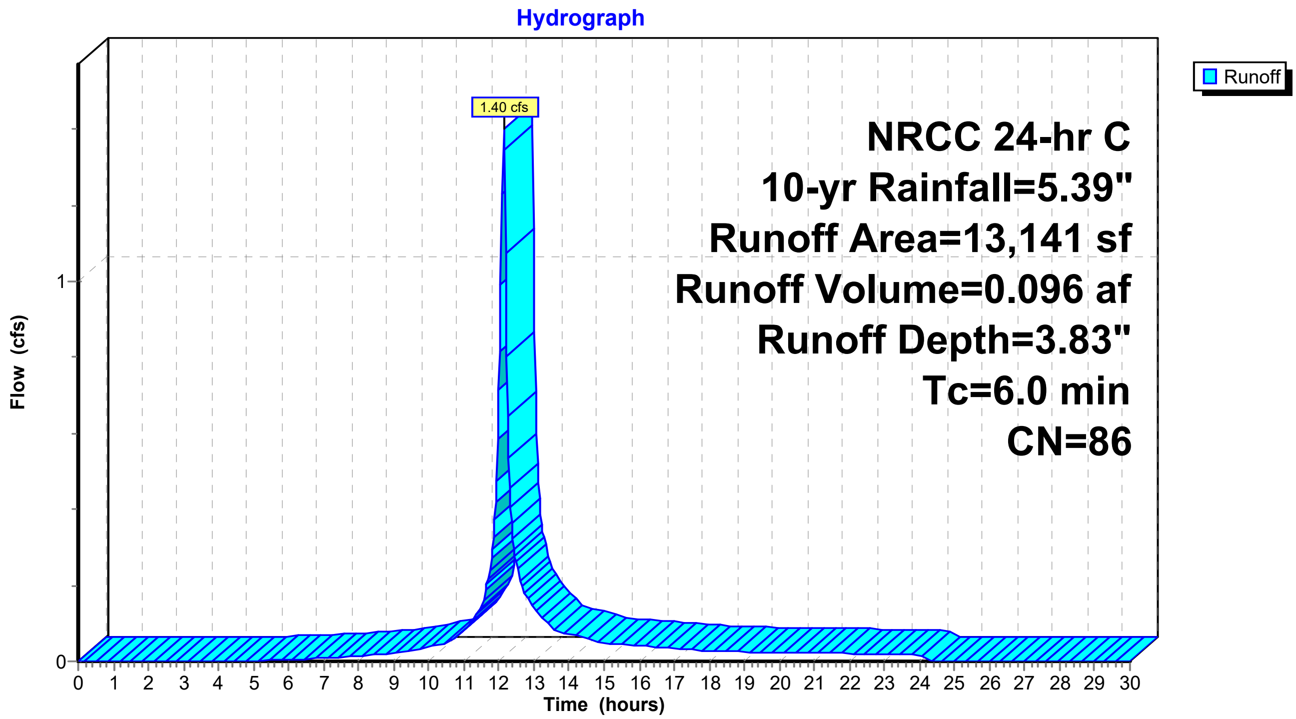
Runoff = 1.40 cfs @ 12.13 hrs, Volume= 0.096 af, Depth= 3.83"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 10-yr Rainfall=5.39"

	Area (sf)	CN	Description
	4,730	98	Paved parking, HSG D
	817	80	>75% Grass cover, Good, HSG D
*	7,594	79	Landscaping, Good, HSG D
	13,141	86	Weighted Average
	8,411		64.01% Pervious Area
	4,730		35.99% Impervious Area

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

Subcatchment PR-9: CCB 27



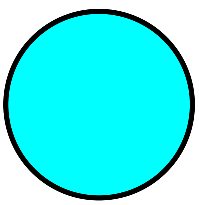
Summary for Reach R1: Roof Leader

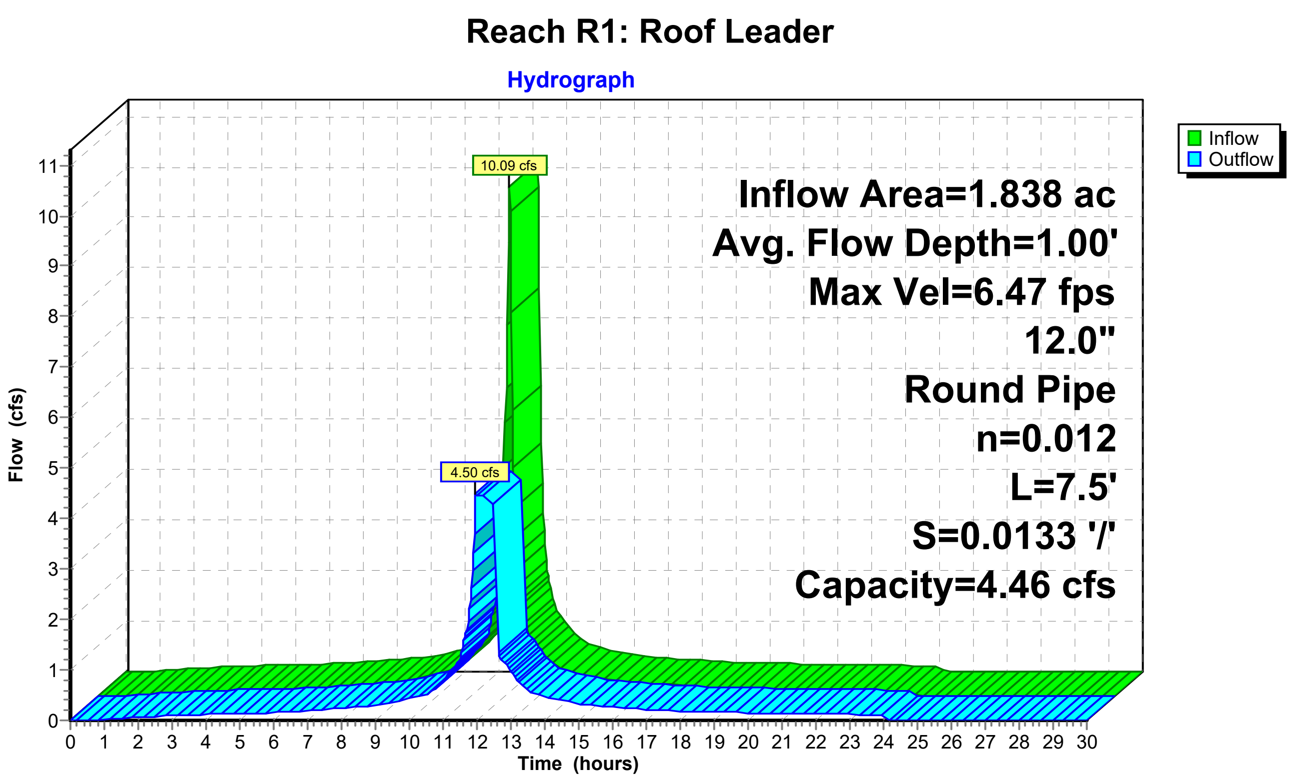
Inflow Area = 1.838 ac,100.00% Impervious, Inflow Depth = 5.15" for 10-yr event
Inflow = 10.09 cfs @ 12.13 hrs, Volume= 0.789 af
Outflow = 4.50 cfs @ 11.97 hrs, Volume= 0.789 af, Atten= 55%, Lag= 0.0 min
Routed to Pond S-2 : Subsurface Infiltration System

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Max. Velocity= 6.47 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.00 fps, Avg. Travel Time= 0.0 min

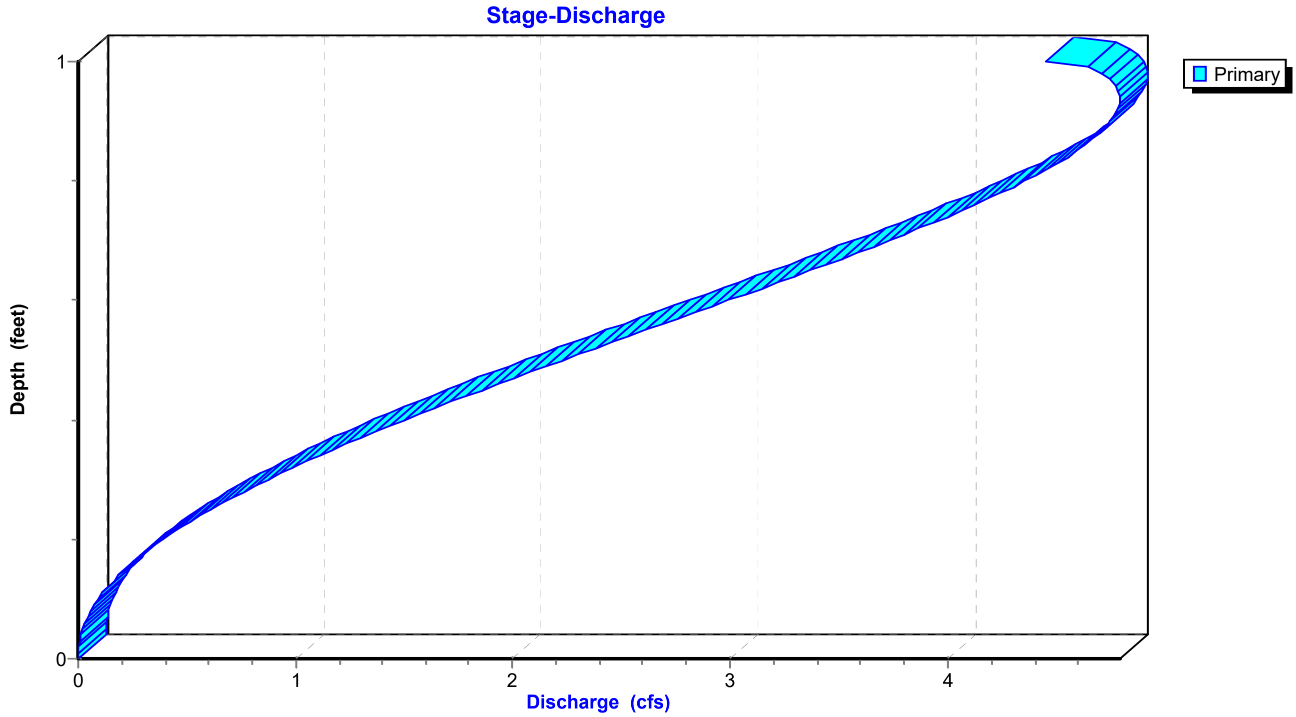
Peak Storage= 6 cf @ 12.00 hrs
Average Depth at Peak Storage= 1.00'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.46 cfs

12.0" Round Pipe
n= 0.012
Length= 7.5' Slope= 0.0133 '/'
Inlet Invert= 142.20', Outlet Invert= 142.10'

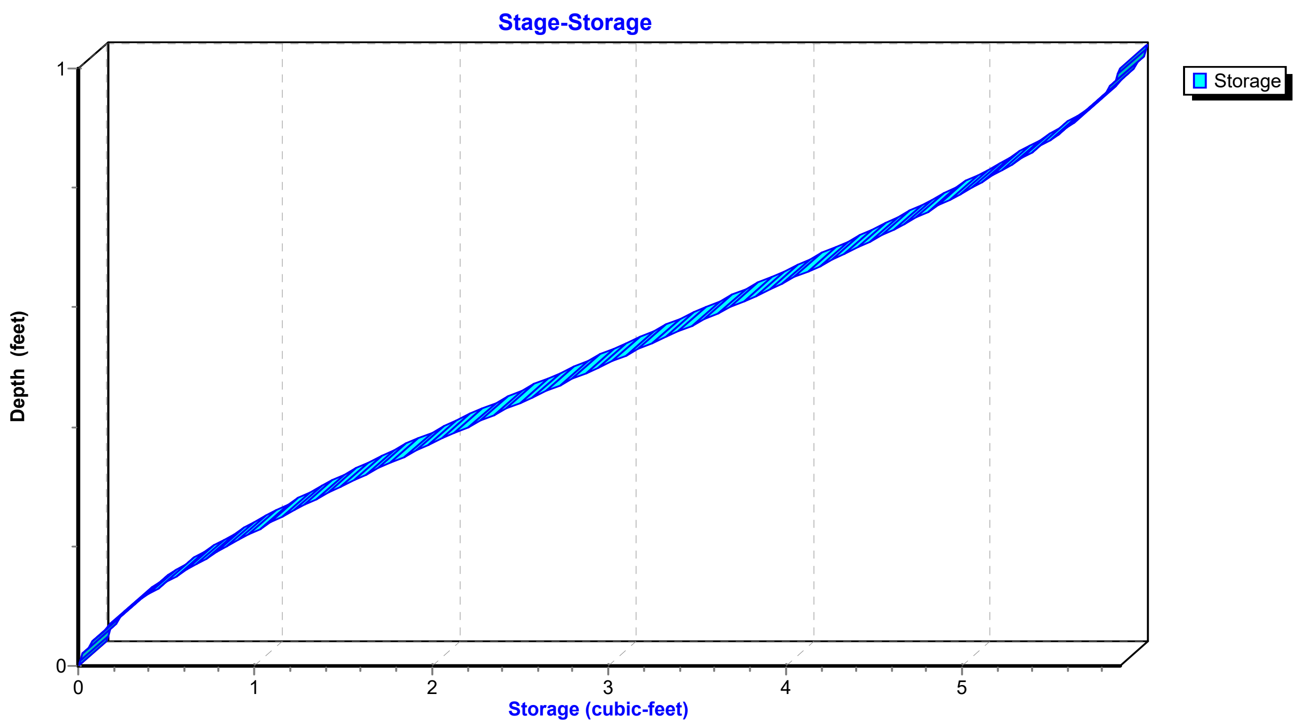




Reach R1: Roof Leader



Reach R1: Roof Leader

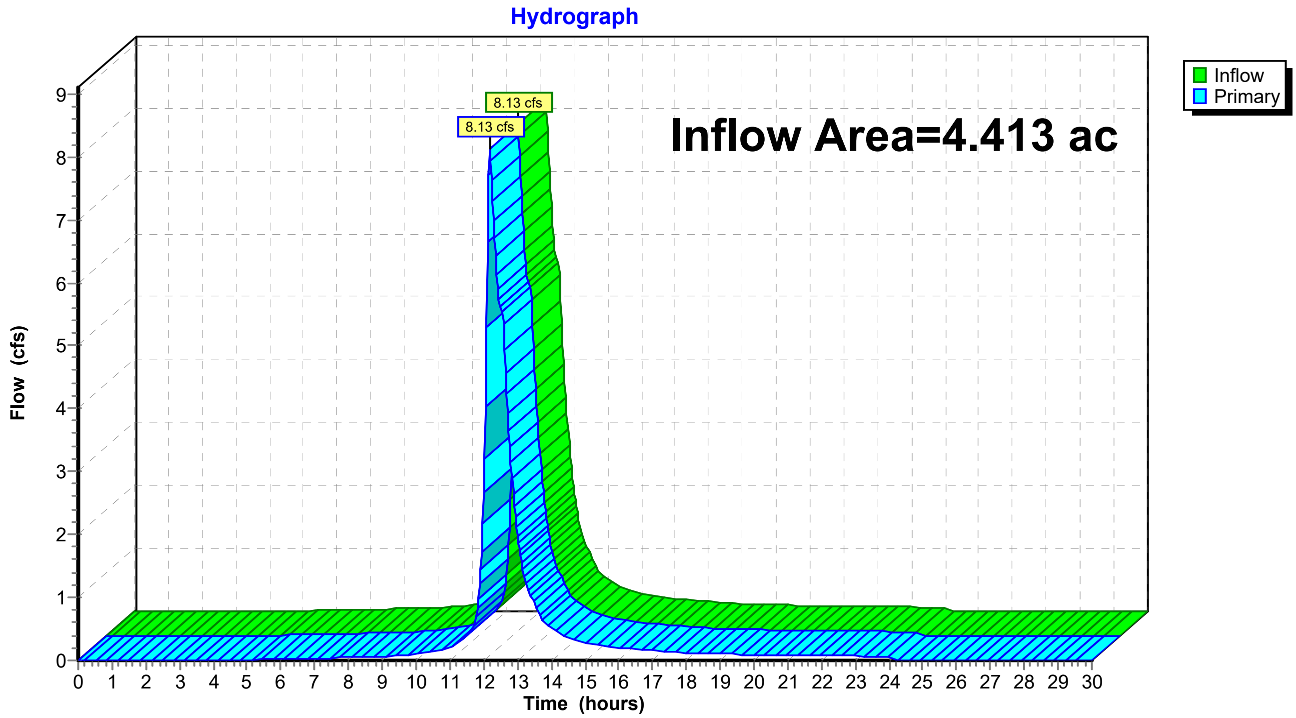


Summary for Pond AP-1: Norwalk River

Inflow Area =	4.413 ac, 66.52% Impervious,	Inflow Depth = 1.90"	for 10-yr event
Inflow =	8.13 cfs @ 12.19 hrs,	Volume= 0.697 af	
Primary =	8.13 cfs @ 12.19 hrs,	Volume= 0.697 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-1: Norwalk River



Summary for Pond AP-2: Front Lawn Rain Garden

Inflow Area = 0.475 ac, 24.65% Impervious, Inflow Depth = 3.62" for 10-yr event
Inflow = 2.06 cfs @ 12.13 hrs, Volume= 0.143 af
Outflow = 0.33 cfs @ 12.59 hrs, Volume= 0.143 af, Atten= 84%, Lag= 28.0 min
Discarded = 0.33 cfs @ 12.59 hrs, Volume= 0.143 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond S-3 : Subsurface Infiltration System

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 148.72' @ 12.59 hrs Surf.Area= 2,595 sf Storage= 1,646 cf

Plug-Flow detention time= 33.7 min calculated for 0.143 af (100% of inflow)
Center-of-Mass det. time= 33.6 min (841.1 - 807.5)

Volume	Invert	Avail.Storage	Storage Description
#1	148.00'	6,536 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

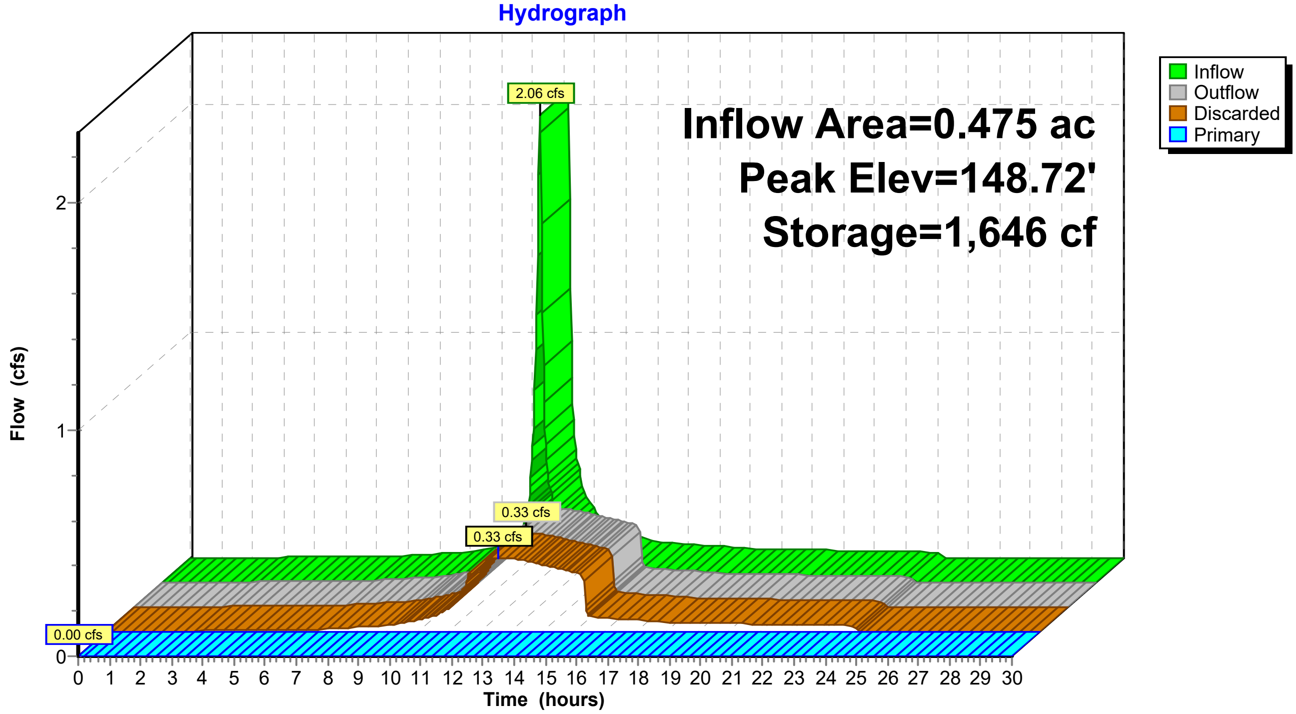
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
148.00	1,985	0	0
149.00	2,833	2,409	2,409
150.00	5,420	4,127	6,536

Device	Routing	Invert	Outlet Devices
#1	Primary	145.90'	**15.0" Round Culvert** L= 34.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 145.90' / 145.55' S= 0.0101 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	149.00'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	148.00'	**5.450 in/hr Exfiltration over Surface area**

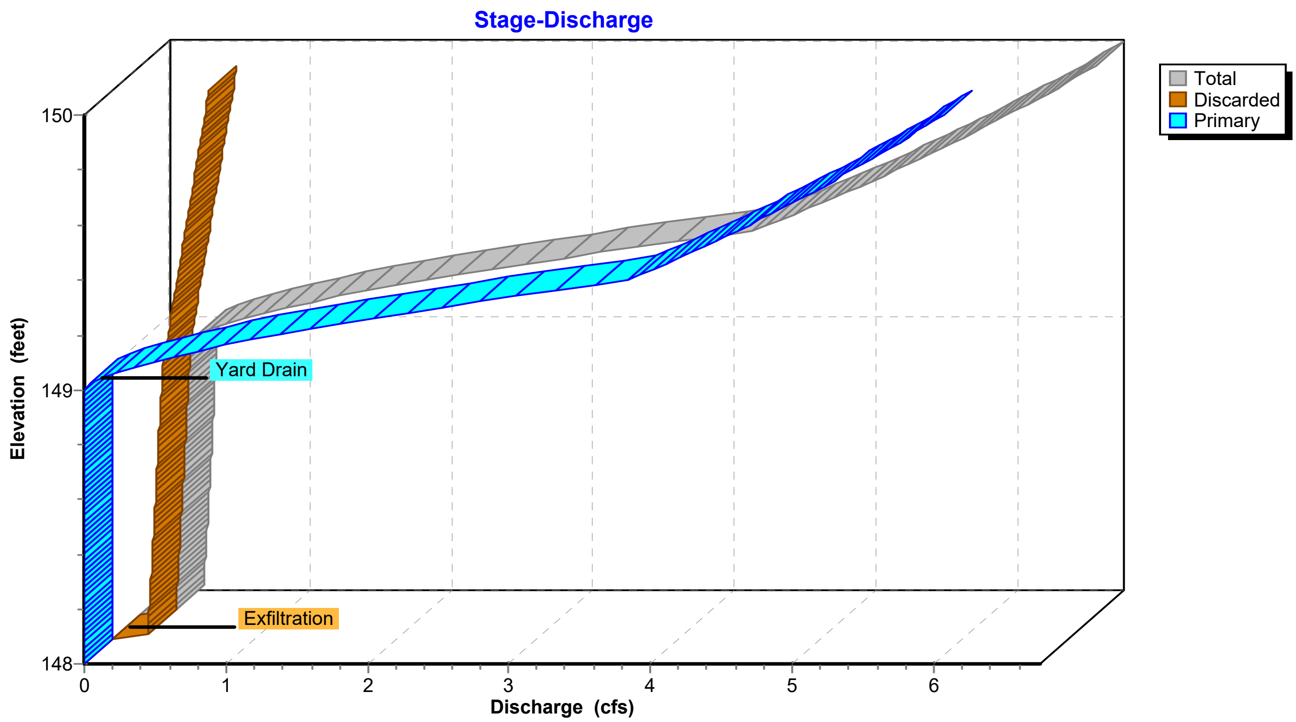
Discarded OutFlow Max=0.33 cfs @ 12.59 hrs HW=148.72' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.33 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=148.00' (Free Discharge)
└─**1=Culvert** (Passes 0.00 cfs of 7.18 cfs potential flow)
  └─**2=Yard Drain** (Controls 0.00 cfs)

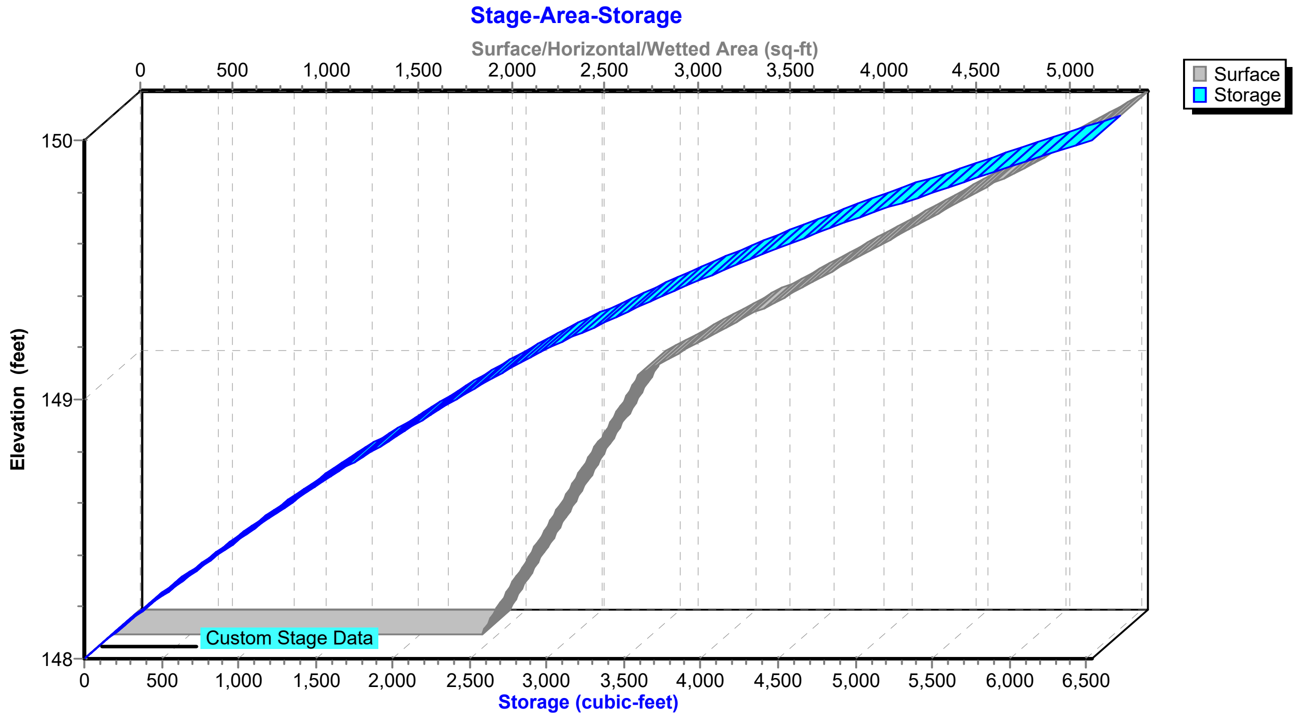
Pond AP-2: Front Lawn Rain Garden



Pond AP-2: Front Lawn Rain Garden



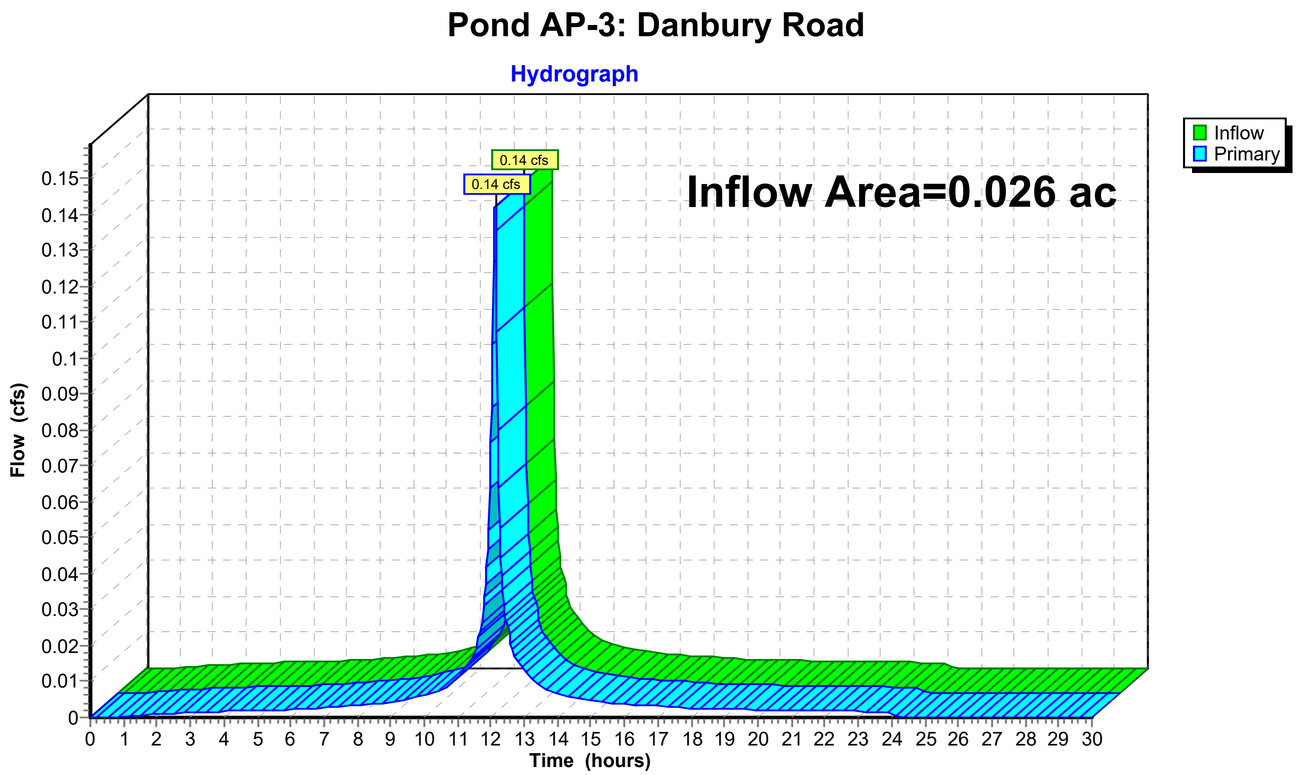
Pond AP-2: Front Lawn Rain Garden



Summary for Pond AP-3: Danbury Road

Inflow Area = 0.026 ac,100.00% Impervious, Inflow Depth = 5.15" for 10-yr event
Inflow = 0.14 cfs @ 12.13 hrs, Volume= 0.011 af
Primary = 0.14 cfs @ 12.13 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

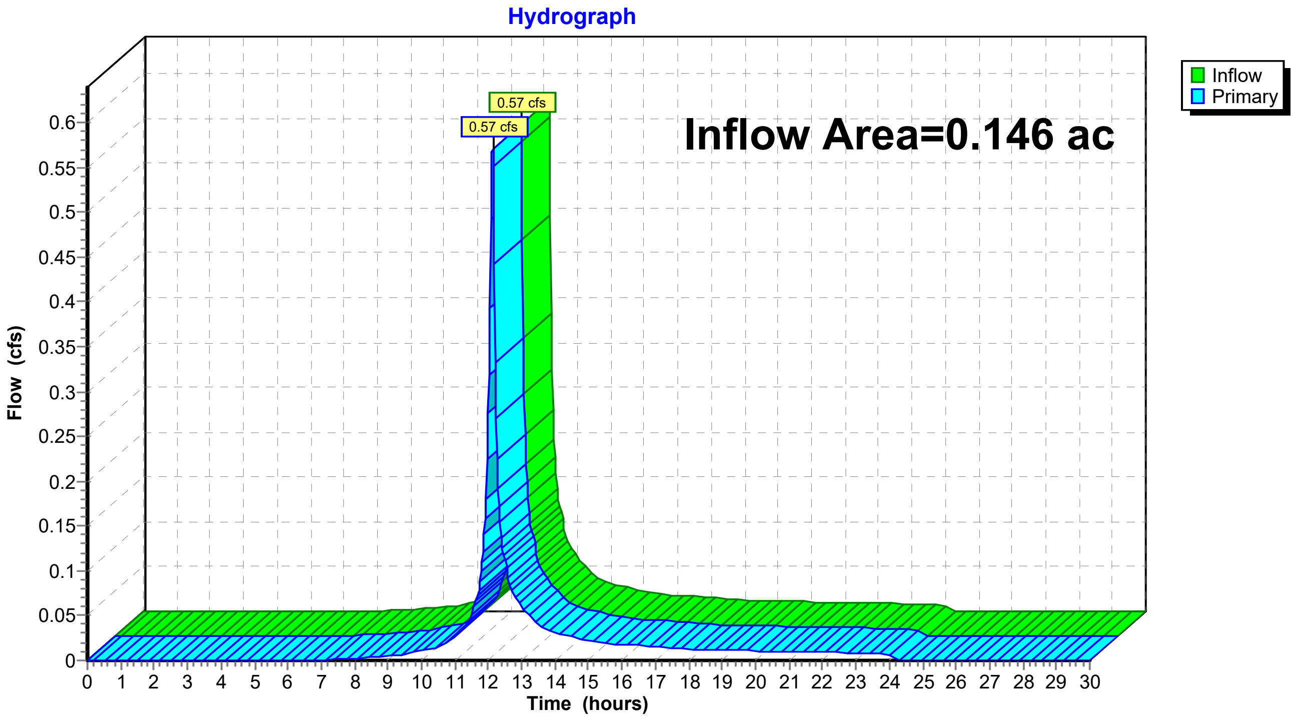


Summary for Pond AP-4: Landscaped Area

Inflow Area =	0.146 ac,	1.46% Impervious, Inflow Depth = 3.14"	for 10-yr event	
Inflow =	0.57 cfs @	12.13 hrs, Volume=	0.038 af	
Primary =	0.57 cfs @	12.13 hrs, Volume=	0.038 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-4: Landscaped Area



Summary for Pond B-1: South Basin

Inflow Area = 0.116 ac, 17.66% Impervious, Inflow Depth = 3.53" for 10-yr event
Inflow = 0.50 cfs @ 12.13 hrs, Volume= 0.034 af
Outflow = 0.48 cfs @ 12.15 hrs, Volume= 0.029 af, Atten= 4%, Lag= 1.2 min
Discarded = 0.00 cfs @ 12.15 hrs, Volume= 0.008 af
Primary = 0.48 cfs @ 12.15 hrs, Volume= 0.021 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 140.00' @ 12.15 hrs Surf.Area= 539 sf Storage= 383 cf

Plug-Flow detention time= 173.8 min calculated for 0.029 af (84% of inflow)
Center-of-Mass det. time= 101.4 min (919.7 - 818.3)

Volume	Invert	Avail.Storage	Storage Description
#1	139.00'	1,118 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

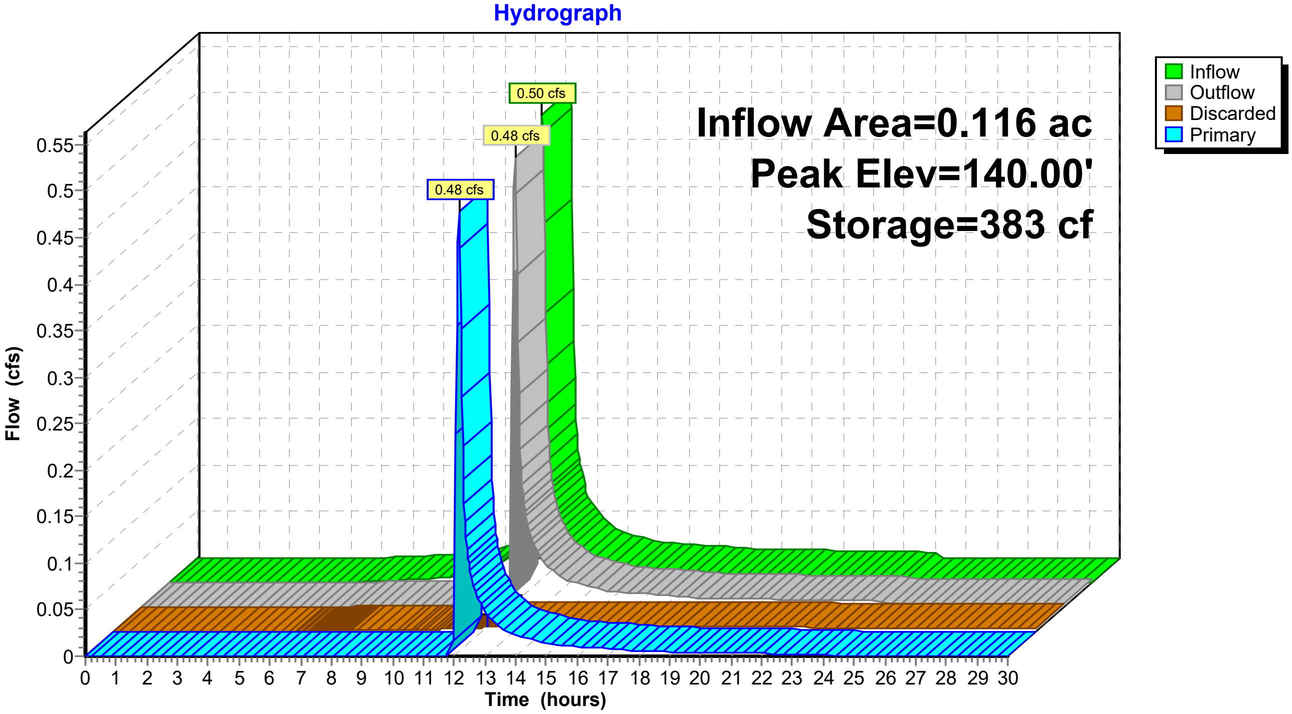
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.00	228	0	0
140.00	539	384	384
141.00	929	734	1,118

Device	Routing	Invert	Outlet Devices
#1	Primary	138.00'	**8.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 138.00' / 137.60' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Device 1	139.90'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	139.00'	**0.400 in/hr Exfiltration over Surface area**

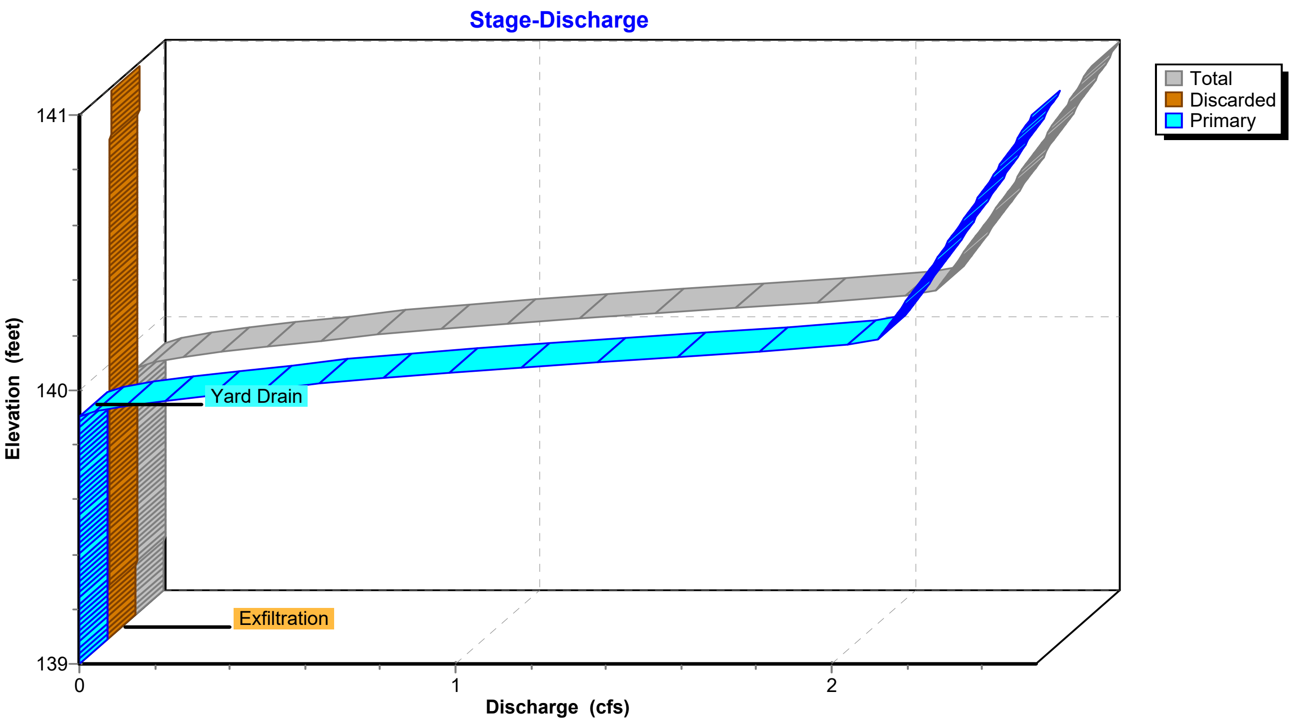
Discarded OutFlow Max=0.00 cfs @ 12.15 hrs HW=140.00' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.48 cfs @ 12.15 hrs HW=140.00' (Free Discharge)
└─**1=Culvert** (Passes 0.48 cfs of 2.02 cfs potential flow)
  └─**2=Yard Drain** (Weir Controls 0.48 cfs @ 1.03 fps)

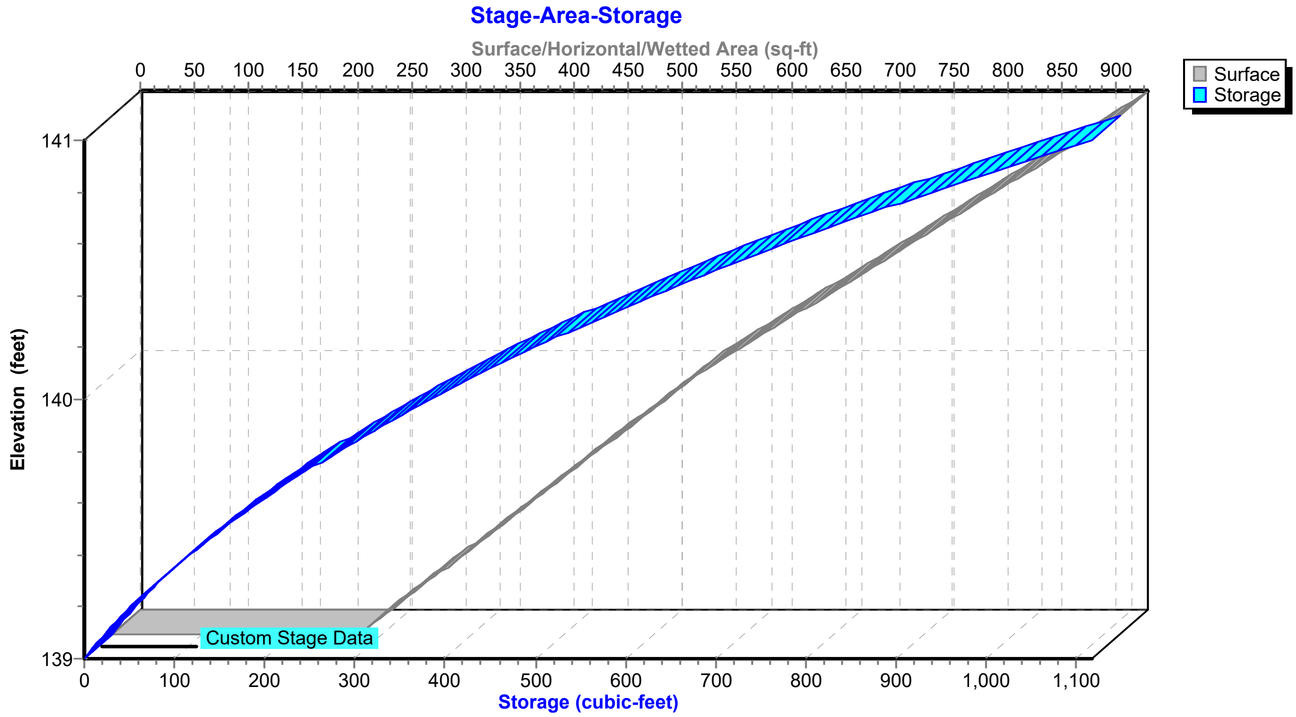
Pond B-1: South Basin



Pond B-1: South Basin



Pond B-1: South Basin



Summary for Pond B-2: North Basin

Inflow Area = 0.154 ac, 7.18% Impervious, Inflow Depth = 3.63" for 10-yr event
Inflow = 0.68 cfs @ 12.13 hrs, Volume= 0.047 af
Outflow = 0.37 cfs @ 12.22 hrs, Volume= 0.047 af, Atten= 45%, Lag= 5.7 min
Discarded = 0.03 cfs @ 12.22 hrs, Volume= 0.035 af
Primary = 0.35 cfs @ 12.22 hrs, Volume= 0.012 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 139.88' @ 12.22 hrs Surf.Area= 889 sf Storage= 650 cf

Plug-Flow detention time= 191.0 min calculated for 0.047 af (100% of inflow)
Center-of-Mass det. time= 191.0 min (1,006.1 - 815.1)

Volume	Invert	Avail.Storage	Storage Description
#1	139.00'	1,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

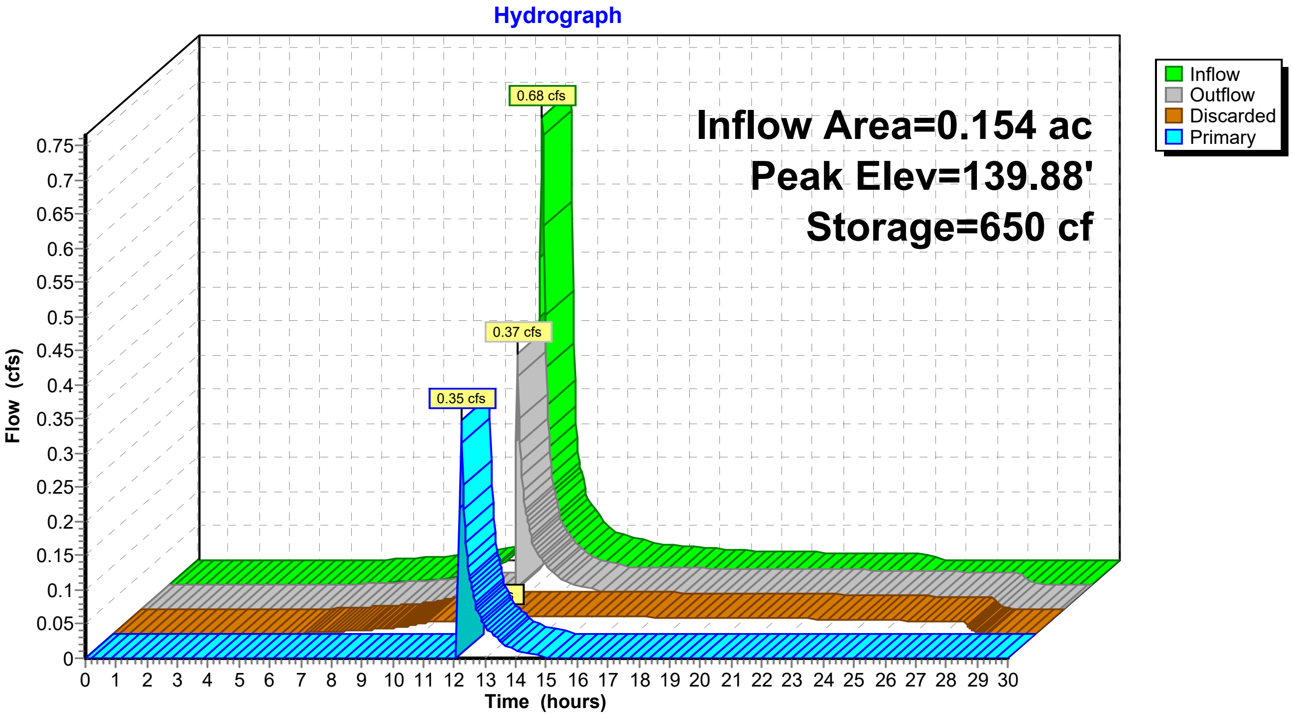
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.00	589	0	0
140.00	930	760	760
141.00	1,327	1,129	1,888

Device	Routing	Invert	Outlet Devices
#1	Primary	138.00'	**10.0" Round Culvert** L= 200.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 138.00' / 137.00' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf
#2	Device 1	139.80'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	139.00'	**1.250 in/hr Exfiltration over Surface area**

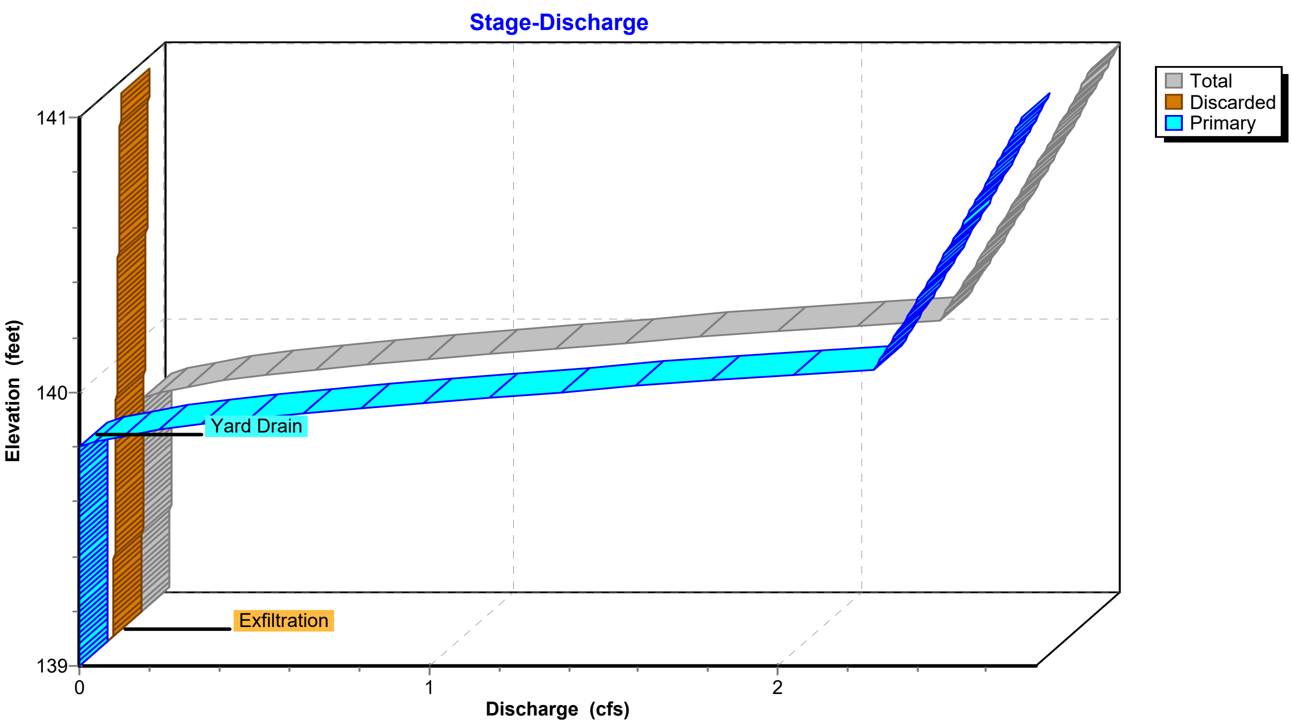
Discarded OutFlow Max=0.03 cfs @ 12.22 hrs HW=139.88' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.33 cfs @ 12.22 hrs HW=139.88' (Free Discharge)
└─**1=Culvert** (Passes 0.33 cfs of 2.17 cfs potential flow)
  └─**2=Yard Drain** (Weir Controls 0.33 cfs @ 0.91 fps)

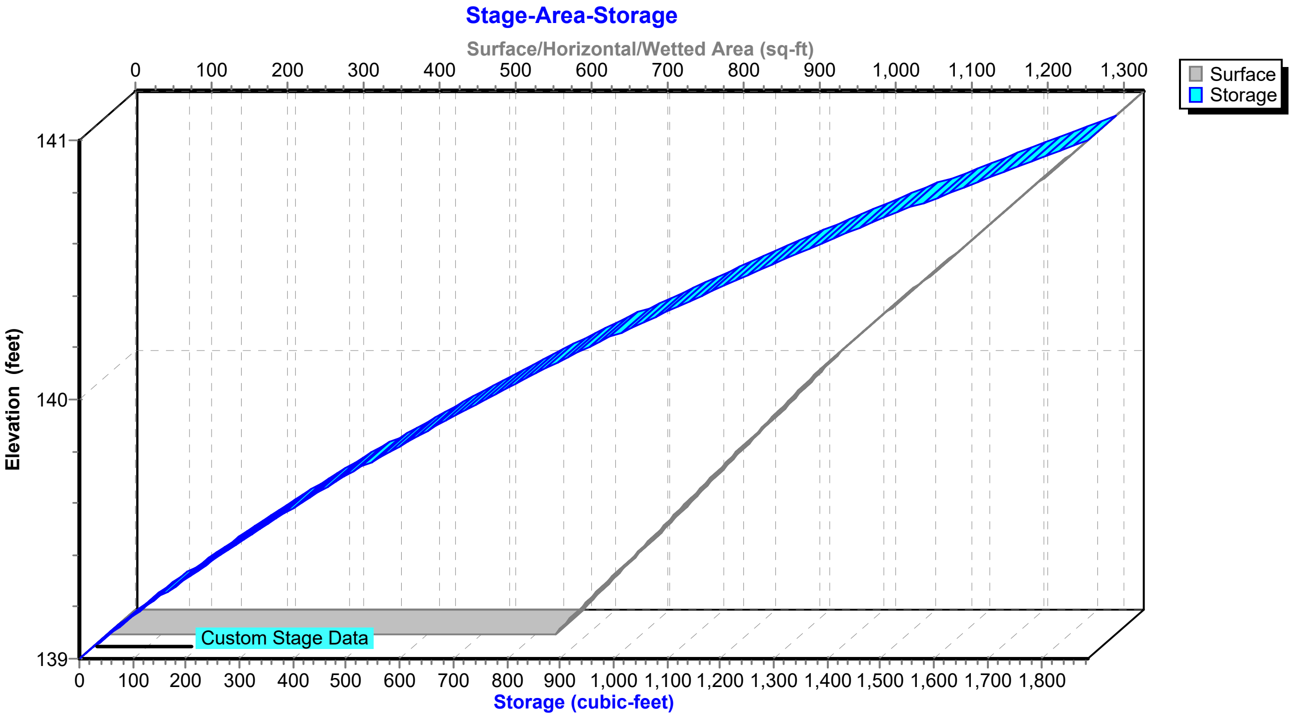
Pond B-2: North Basin



Pond B-2: North Basin



Pond B-2: North Basin



Summary for Pond S-1: Subsurface Infiltration System

Inflow Area = 0.554 ac, 58.45% Impervious, Inflow Depth = 4.30" for 10-yr event
Inflow = 2.76 cfs @ 12.13 hrs, Volume= 0.199 af
Outflow = 2.02 cfs @ 12.19 hrs, Volume= 0.168 af, Atten= 27%, Lag= 3.5 min
Discarded = 0.02 cfs @ 5.58 hrs, Volume= 0.034 af
Primary = 2.00 cfs @ 12.19 hrs, Volume= 0.134 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 144.25' @ 12.19 hrs Surf.Area= 0.039 ac Storage= 0.058 af

Plug-Flow detention time= 155.1 min calculated for 0.168 af (84% of inflow)
Center-of-Mass det. time= 83.7 min (869.9 - 786.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	142.00'	0.036 af	**11.00'W x 153.14'L x 3.50'H Field A** 0.135 af Overall - 0.044 af Embedded = 0.091 af x 40.0% Voids
#2A	142.50'	0.044 af	**ADS_StormTech SC-740 +Cap** x 42 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 42 Chambers in 2 Rows
		0.081 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	143.35'	**12.0" Round Culvert** L= 114.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 143.35' / 142.21' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	143.50'	**6.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	144.90'	**5.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#4	Discarded	142.00'	**0.400 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 5.58 hrs HW=142.04' (Free Discharge)
└─**4=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=1.99 cfs @ 12.19 hrs HW=144.24' (Free Discharge)
└─**1=Culvert** (Passes 1.99 cfs of 2.38 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 1.99 cfs @ 3.38 fps)
  └─**3=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)

Pond S-1: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

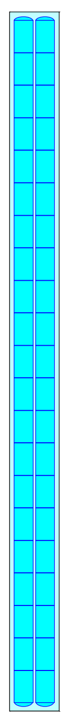
21 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 151.14' Row Length +12.0" End Stone x 2 = 153.14' Base Length
2 Rows x 51.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.00' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

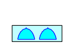
42 Chambers x 45.9 cf = 1,929.5 cf Chamber Storage

5,895.8 cf Field - 1,929.5 cf Chambers = 3,966.3 cf Stone x 40.0% Voids = 1,586.5 cf Stone Storage

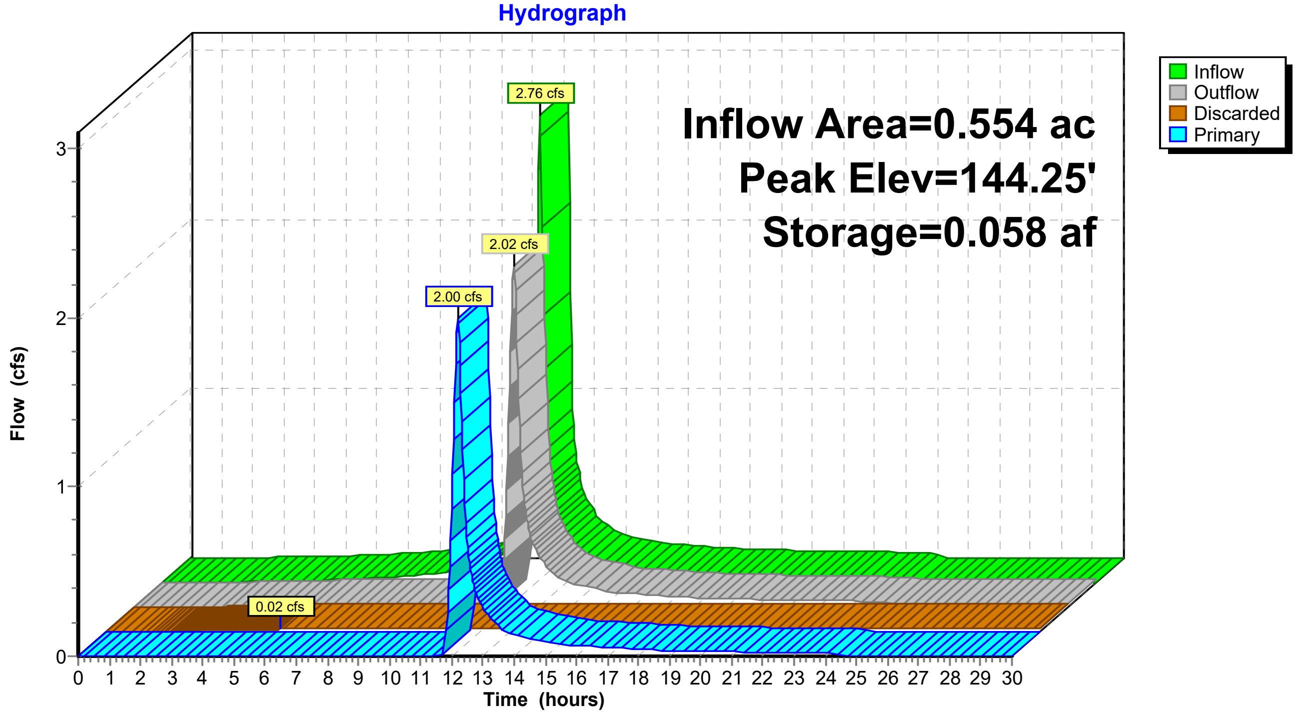
Chamber Storage + Stone Storage = 3,516.0 cf = 0.081 af
Overall Storage Efficiency = 59.6%
Overall System Size = 153.14' x 11.00' x 3.50'

42 Chambers
218.4 cy Field
146.9 cy Stone

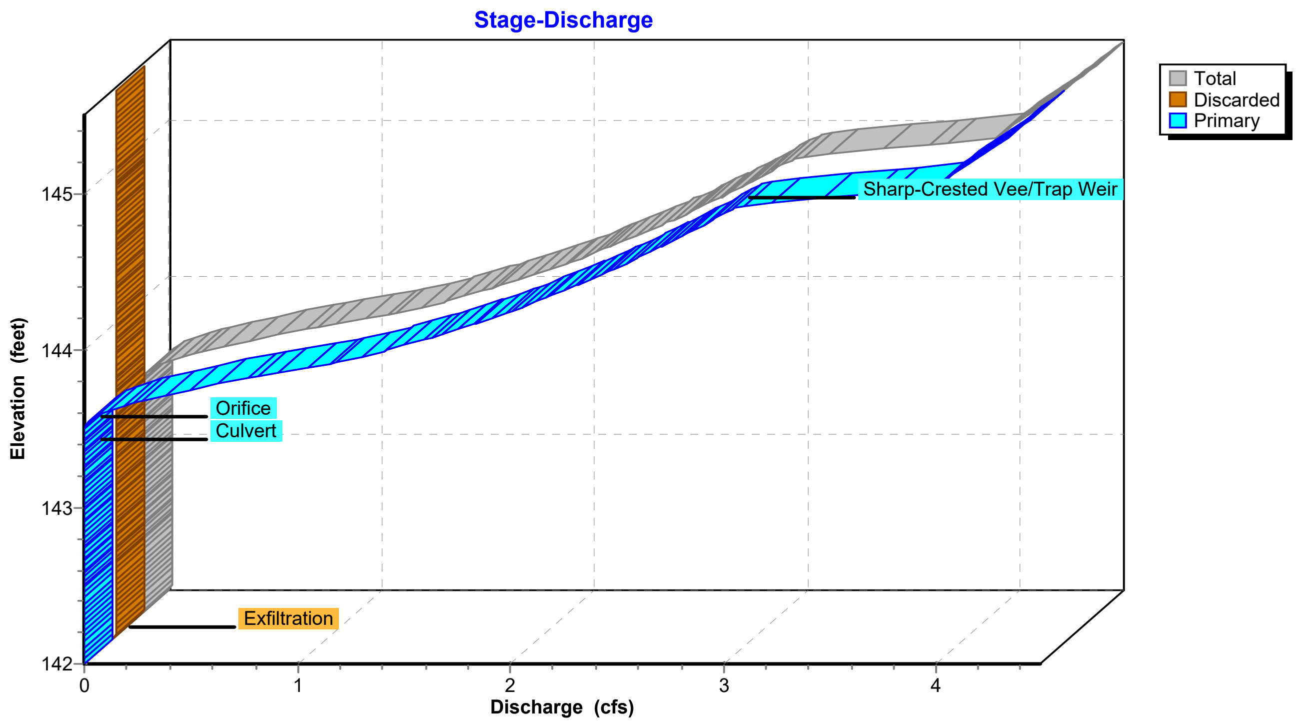




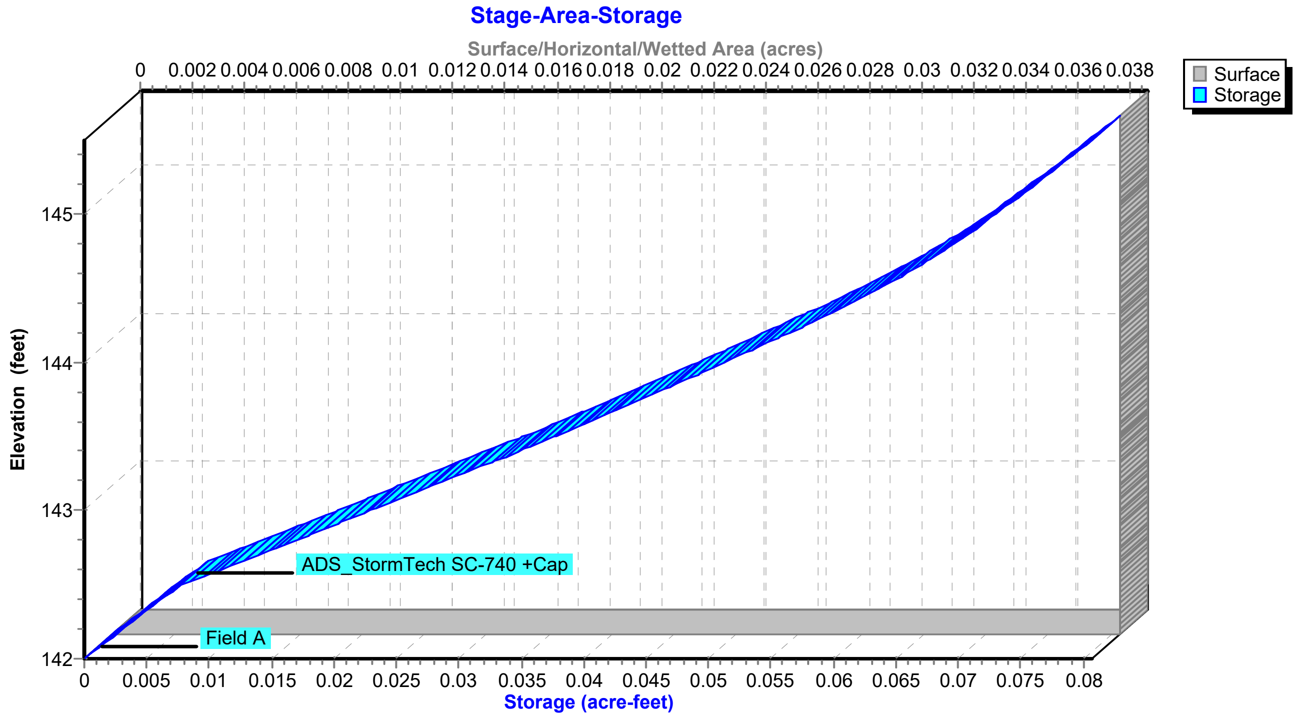
Pond S-1: Subsurface Infiltration System



Pond S-1: Subsurface Infiltration System



Pond S-1: Subsurface Infiltration System



Summary for Pond S-2: Subsurface Infiltration System

Inflow Area = 1.838 ac,100.00% Impervious, Inflow Depth = 5.15" for 10-yr event
Inflow = 4.50 cfs @ 11.97 hrs, Volume= 0.789 af
Outflow = 4.03 cfs @ 12.57 hrs, Volume= 0.789 af, Atten= 11%, Lag= 36.1 min
Discarded = 0.50 cfs @ 10.44 hrs, Volume= 0.580 af
Primary = 3.53 cfs @ 12.57 hrs, Volume= 0.209 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 144.77' @ 12.57 hrs Surf.Area= 0.091 ac Storage= 0.186 af

Plug-Flow detention time= 58.6 min calculated for 0.788 af (100% of inflow)
Center-of-Mass det. time= 58.5 min (808.2 - 749.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	141.50'	0.100 af	**30.00'W x 131.78'L x 4.00'H Field A** 0.363 af Overall - 0.114 af Embedded = 0.249 af x 40.0% Voids
#2A	142.50'	0.114 af	**ADS_StormTech SC-740 +Cap** x 108 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 108 Chambers in 6 Rows
		0.214 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	143.15'	**15.0" Round Culvert** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 143.15' / 142.69' S= 0.0061 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	143.64'	**7.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	144.90'	**5.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#4	Discarded	141.50'	**5.450 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.50 cfs @ 10.44 hrs HW=141.54' (Free Discharge)
└─**4=Exfiltration** (Exfiltration Controls 0.50 cfs)

Primary OutFlow Max=3.52 cfs @ 12.57 hrs HW=144.77' (Free Discharge)
└─**1=Culvert** (Passes 3.52 cfs of 5.43 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 3.52 cfs @ 4.40 fps)
  └─**3=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)

Pond S-2: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

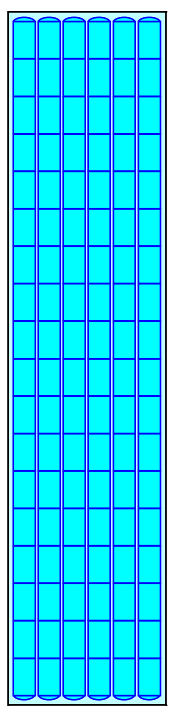
18 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 129.78' Row Length +12.0" End Stone x 2 = 131.78' Base Length
6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width
12.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 4.00' Field Height

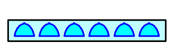
108 Chambers x 45.9 cf = 4,961.5 cf Chamber Storage

15,813.2 cf Field - 4,961.5 cf Chambers = 10,851.7 cf Stone x 40.0% Voids = 4,340.7 cf Stone Storage

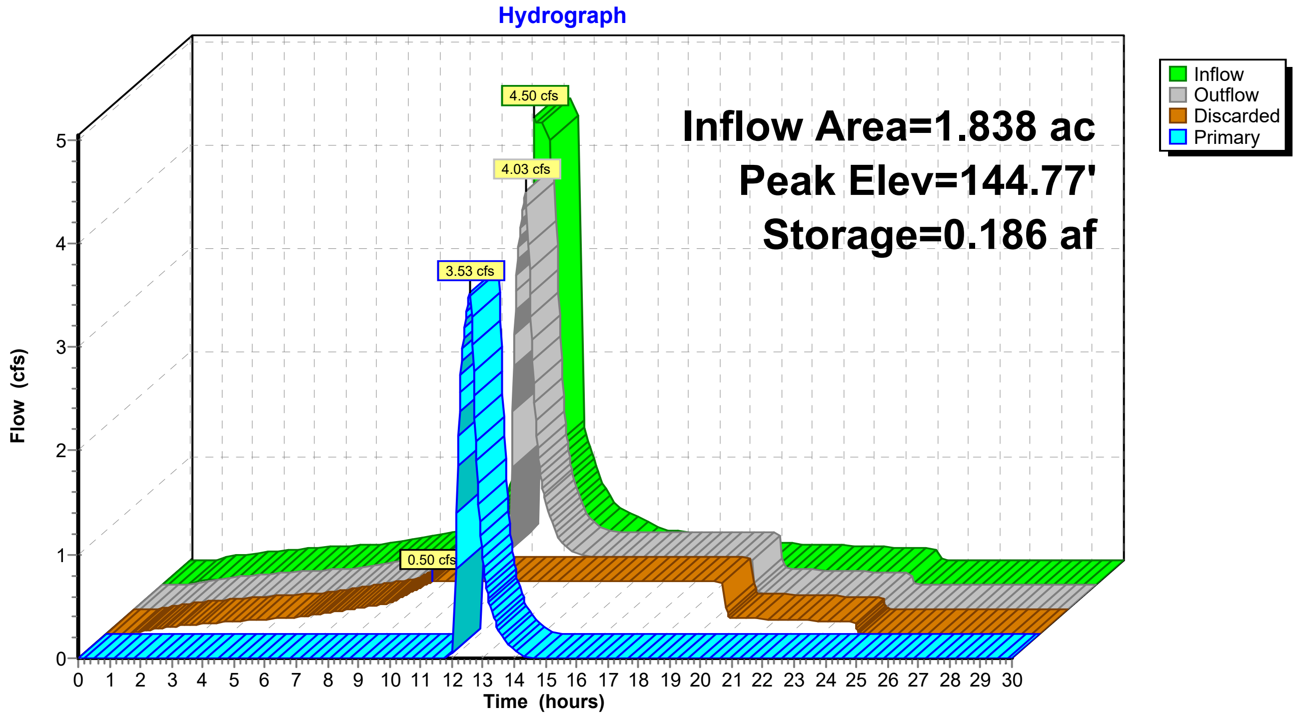
Chamber Storage + Stone Storage = 9,302.2 cf = 0.214 af
Overall Storage Efficiency = 58.8%
Overall System Size = 131.78' x 30.00' x 4.00'

108 Chambers
585.7 cy Field
401.9 cy Stone

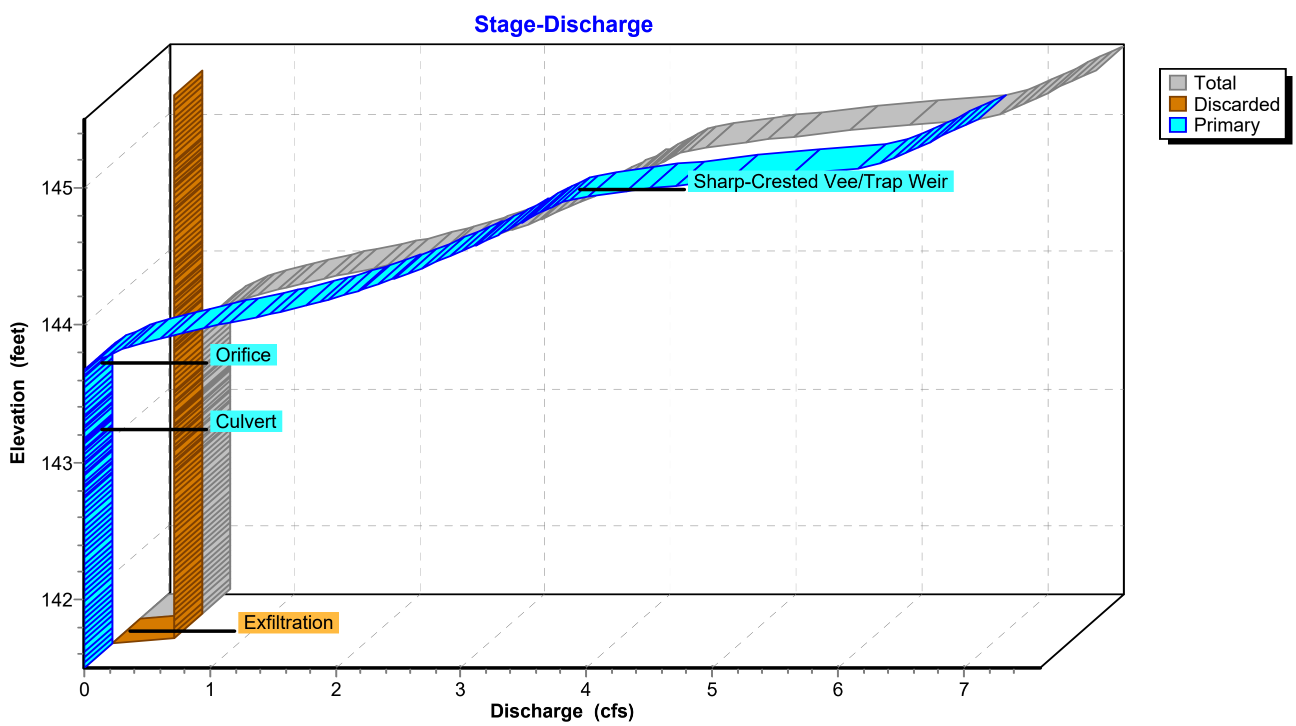




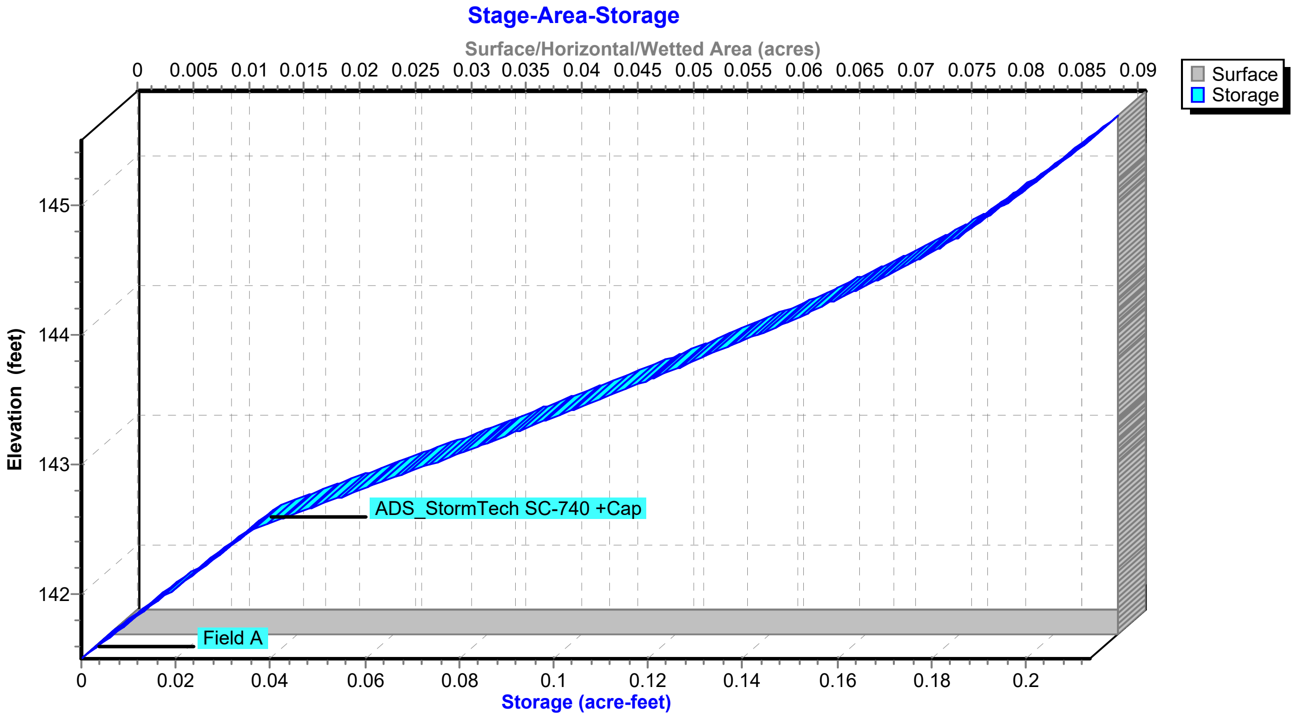
Pond S-2: Subsurface Infiltration System



Pond S-2: Subsurface Infiltration System



Pond S-2: Subsurface Infiltration System



Summary for Pond S-3: Subsurface Infiltration System

Inflow Area = 1.020 ac, 47.60% Impervious, Inflow Depth = 2.49" for 10-yr event
Inflow = 2.86 cfs @ 12.13 hrs, Volume= 0.212 af
Outflow = 1.24 cfs @ 12.25 hrs, Volume= 0.185 af, Atten= 57%, Lag= 7.4 min
Discarded = 0.05 cfs @ 8.19 hrs, Volume= 0.111 af
Primary = 1.19 cfs @ 12.25 hrs, Volume= 0.074 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 142.60' @ 12.25 hrs Surf.Area= 0.052 ac Storage= 0.077 af

Plug-Flow detention time= 239.4 min calculated for 0.184 af (87% of inflow)
Center-of-Mass det. time= 177.3 min (951.0 - 773.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	140.40'	0.047 af	**30.00'W x 74.82'L x 3.50'H Field A** 0.180 af Overall - 0.063 af Embedded = 0.117 af x 40.0% Voids
#2A	140.90'	0.063 af	**ADS_StormTech SC-740 +Cap** x 60 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 60 Chambers in 6 Rows
		0.110 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	141.84'	**12.0" Round Culvert** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 141.84' / 141.19' S= 0.0087 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	142.10'	**7.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	143.30'	**5.0' long Weir Wall** Cv= 2.62 (C= 3.28)
#4	Discarded	140.40'	**1.050 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.05 cfs @ 8.19 hrs HW=140.44' (Free Discharge)
└─**4=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=1.18 cfs @ 12.25 hrs HW=142.60' (Free Discharge)
└─**1=Culvert** (Passes 1.18 cfs of 1.88 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 1.18 cfs @ 2.41 fps)
  └─**3=Weir Wall** (Controls 0.00 cfs)

Pond S-3: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

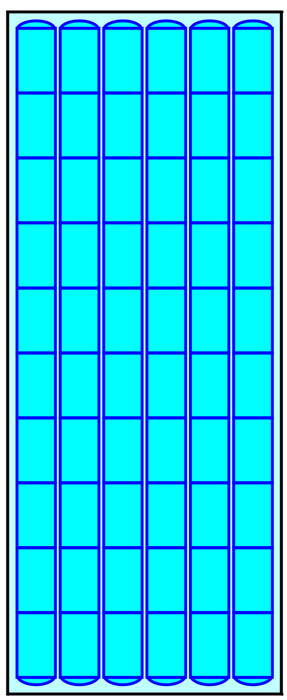
10 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 72.82' Row Length +12.0" End Stone x 2 = 74.82' Base Length
6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

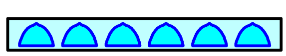
60 Chambers x 45.9 cf = 2,756.4 cf Chamber Storage

7,855.8 cf Field - 2,756.4 cf Chambers = 5,099.3 cf Stone x 40.0% Voids = 2,039.7 cf Stone Storage

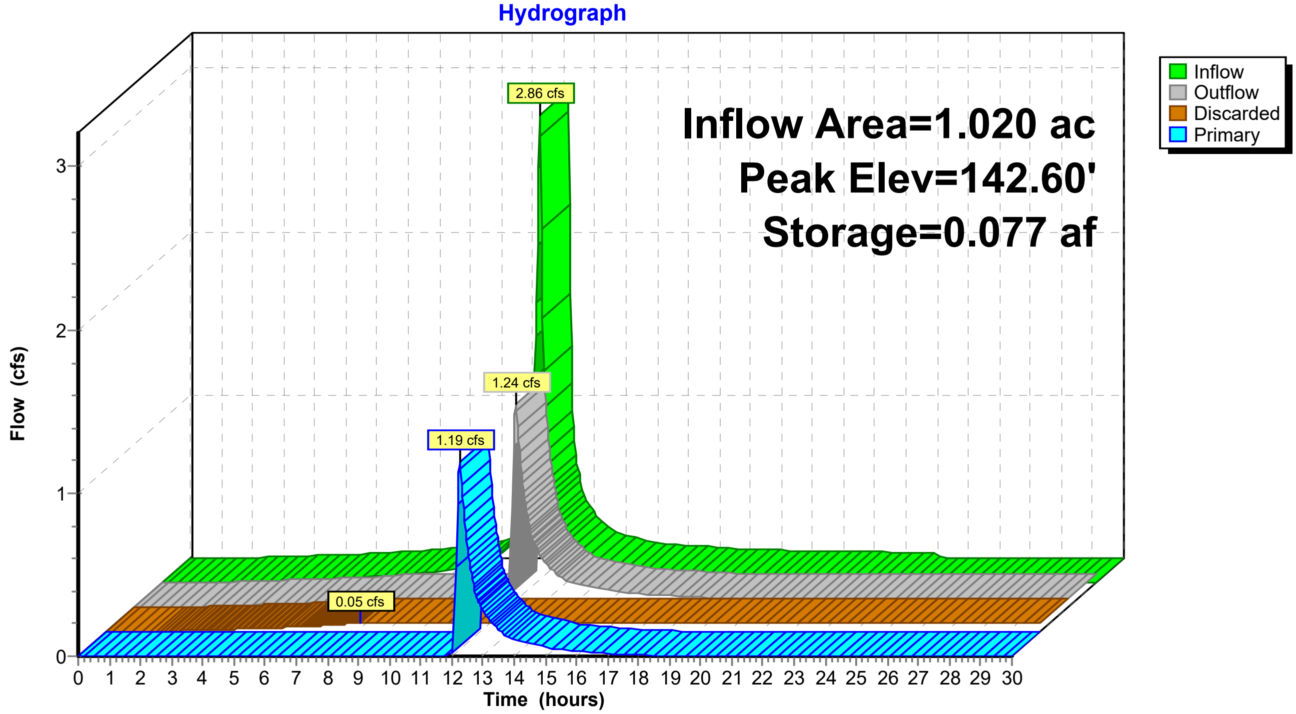
Chamber Storage + Stone Storage = 4,796.1 cf = 0.110 af
Overall Storage Efficiency = 61.1%
Overall System Size = 74.82' x 30.00' x 3.50'

60 Chambers
291.0 cy Field
188.9 cy Stone

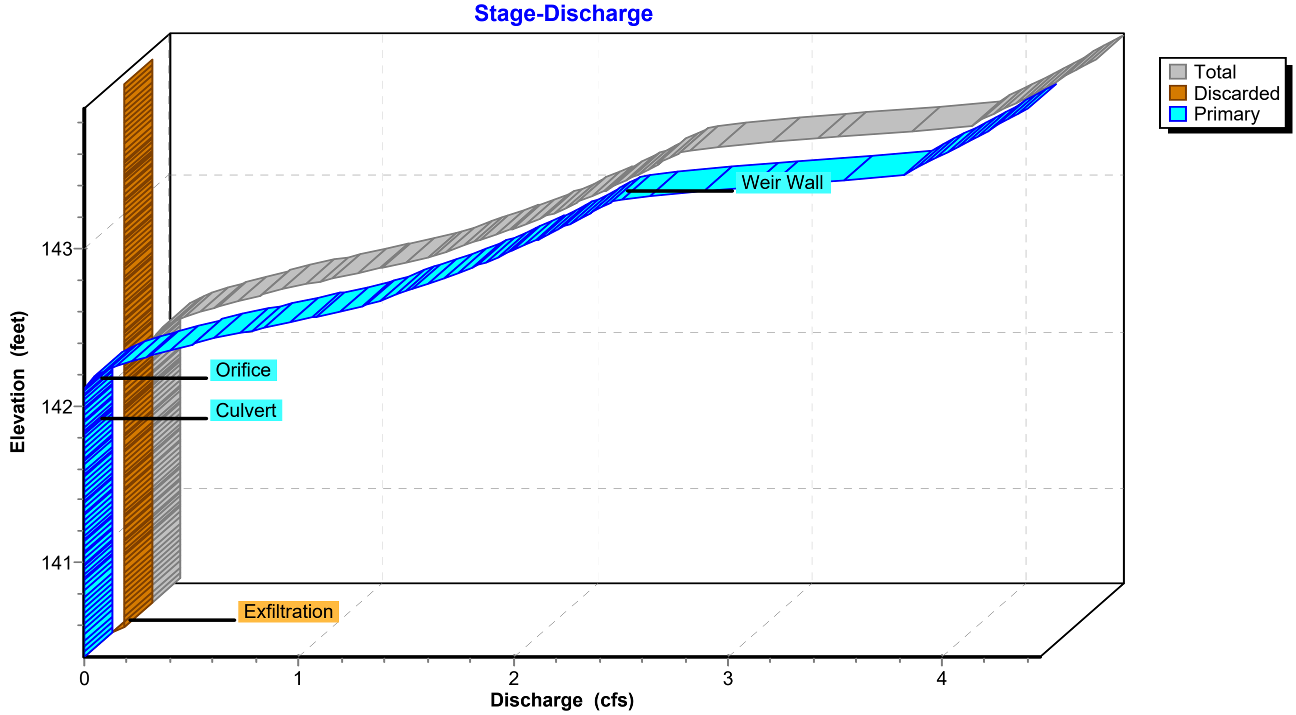




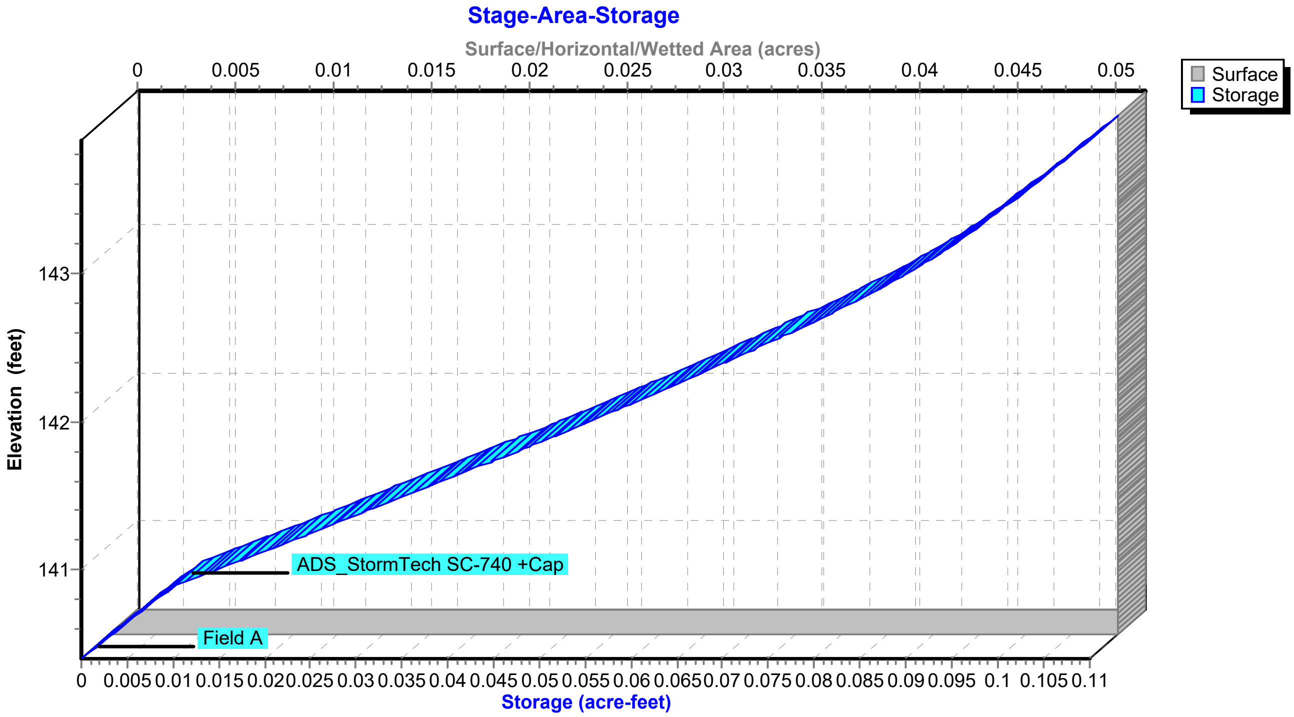
Pond S-3: Subsurface Infiltration System



Pond S-3: Subsurface Infiltration System



Pond S-3: Subsurface Infiltration System



Summary for Subcatchment PR-1: CCB 14

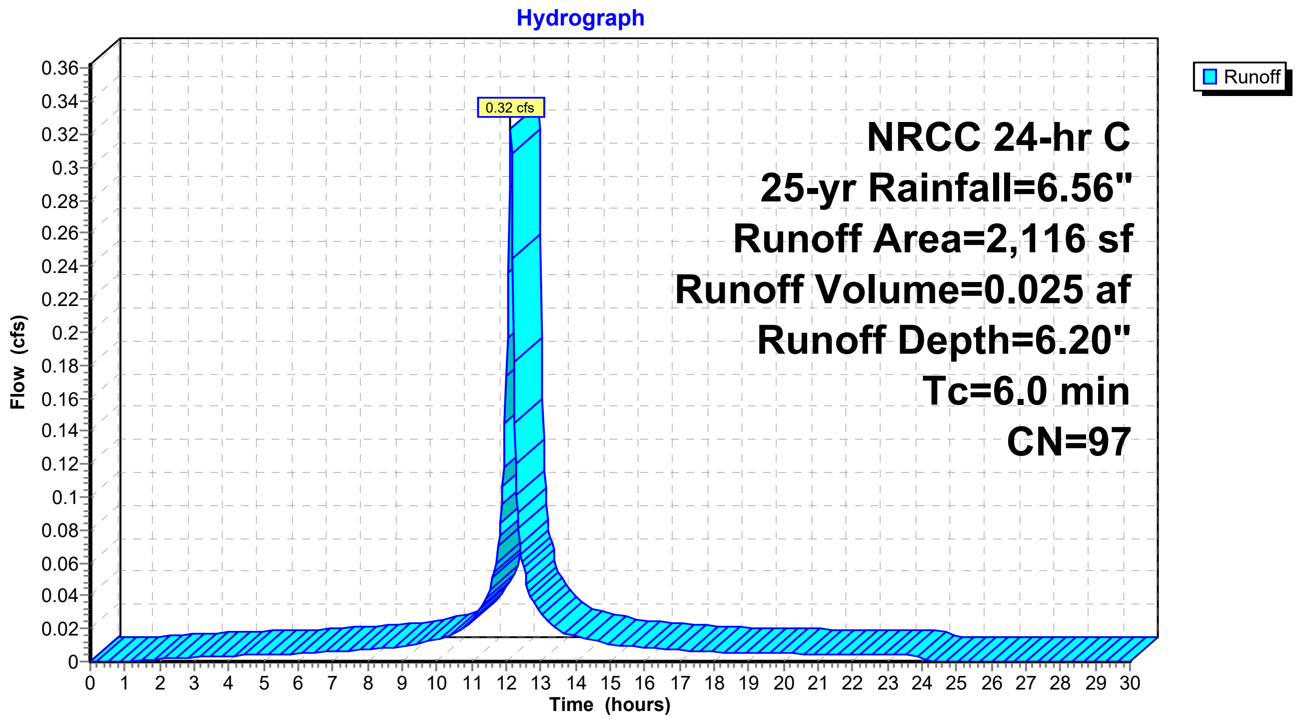
Runoff = 0.32 cfs @ 12.13 hrs, Volume= 0.025 af, Depth= 6.20"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
	2,045	98	Paved parking, HSG D
*	71	79	Landscaping, Good, HSG D
	2,116	97	Weighted Average
	71		3.36% Pervious Area
	2,045		96.64% Impervious Area

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

Subcatchment PR-1: CCB 14



Summary for Subcatchment PR-10: CCB 28

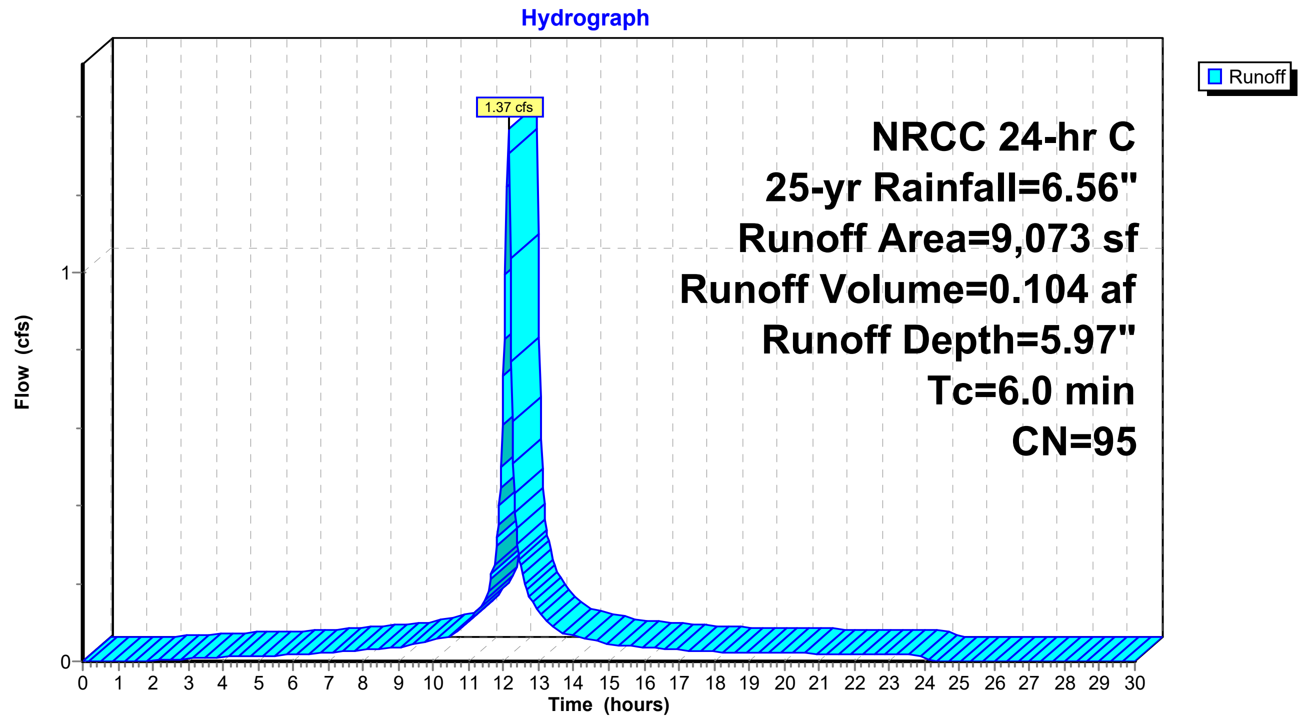
Runoff = 1.37 cfs @ 12.13 hrs, Volume= 0.104 af, Depth= 5.97"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
	7,450	98	Paved parking, HSG D
	440	80	>75% Grass cover, Good, HSG D
*	1,183	79	Landscaping, Good, HSG D
	9,073	95	Weighted Average
	1,623		17.89% Pervious Area
	7,450		82.11% Impervious Area

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

Subcatchment PR-10: CCB 28



Summary for Subcatchment PR-11: Building Roof

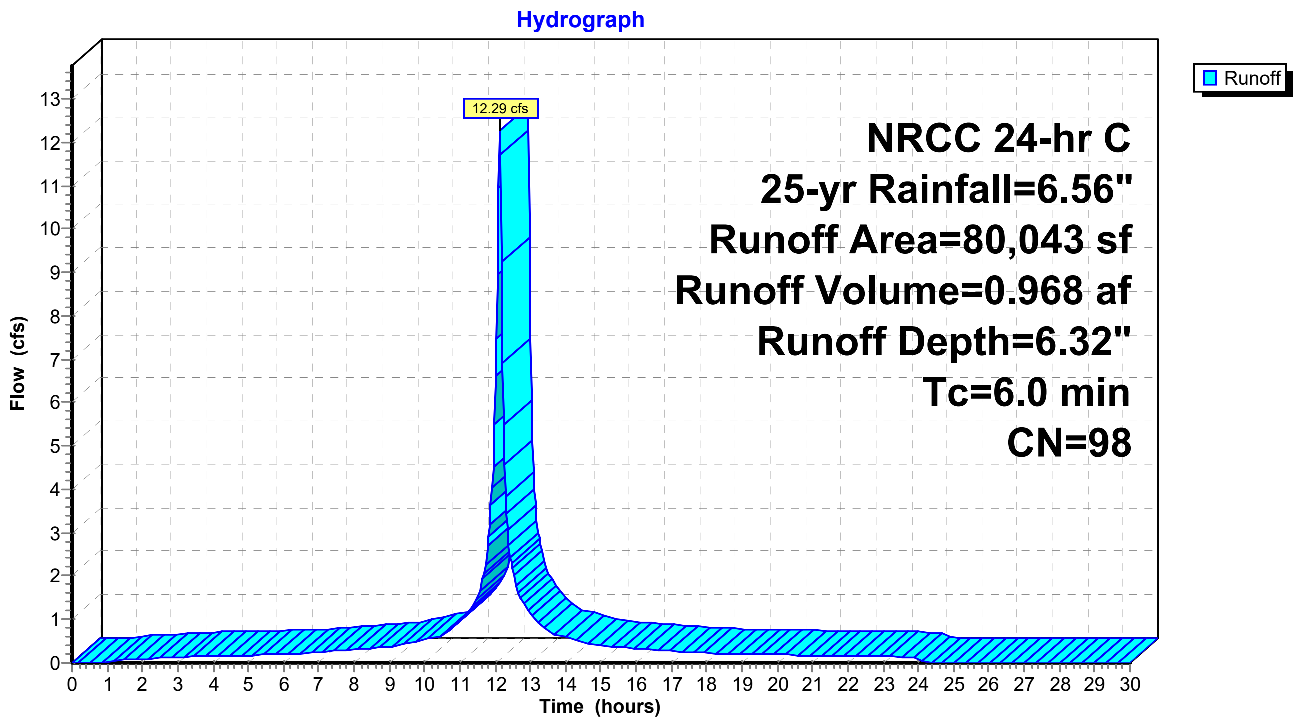
Runoff = 12.29 cfs @ 12.13 hrs, Volume= 0.968 af, Depth= 6.32"
Routed to Reach R1 : Roof Leader

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

Area (sf)	CN	Description
80,043	98	Roofs, HSG D
80,043		100.00% Impervious Area

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

Subcatchment PR-11: Building Roof



Summary for Subcatchment PR-12: CCB 29

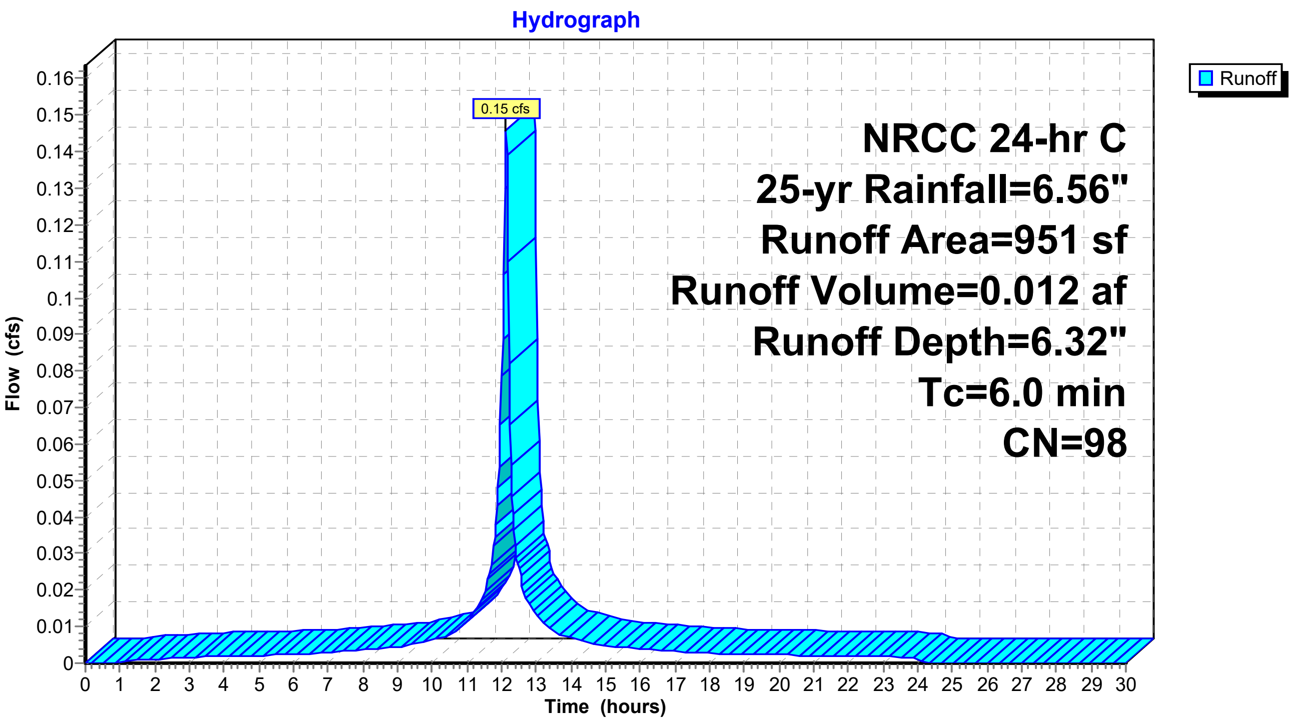
Runoff = 0.15 cfs @ 12.13 hrs, Volume= 0.012 af, Depth= 6.32"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

Area (sf)	CN	Description
951	98	Paved parking, HSG D
951		100.00% Impervious Area

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

Subcatchment PR-12: CCB 29



Summary for Subcatchment PR-13: CCB 30

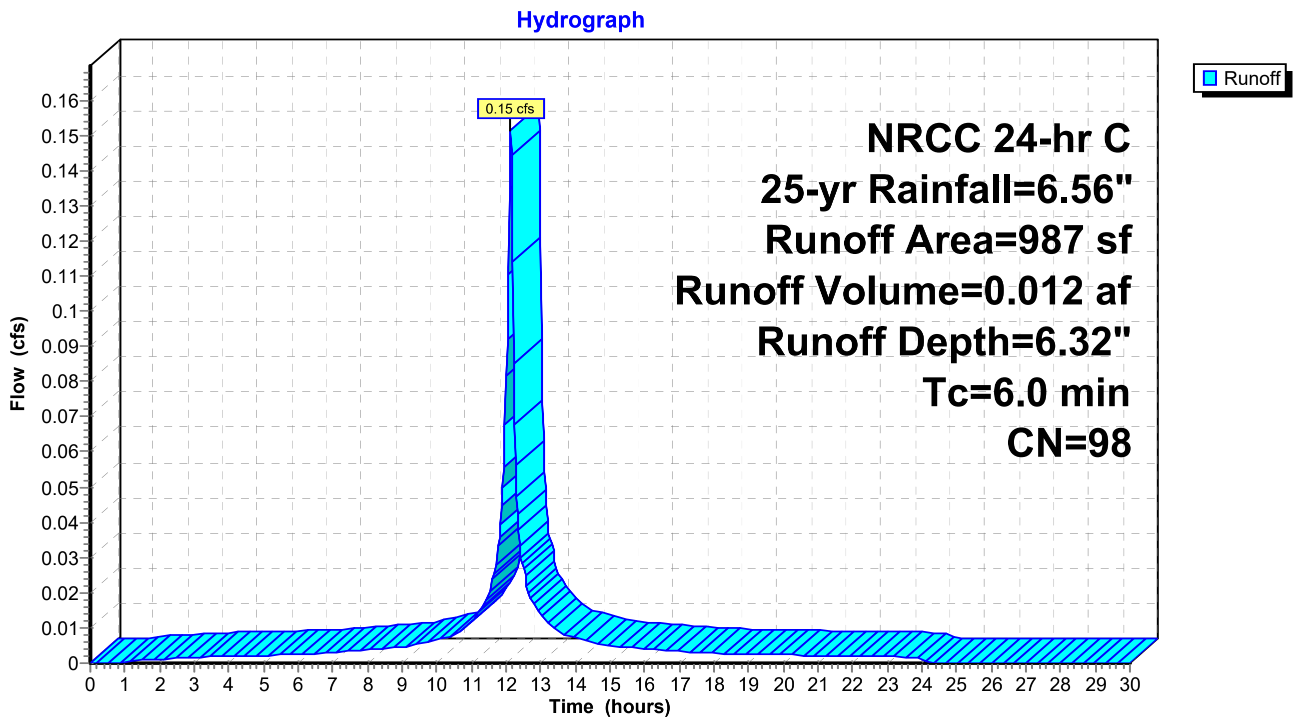
Runoff = 0.15 cfs @ 12.13 hrs, Volume= 0.012 af, Depth= 6.32"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

Area (sf)	CN	Description
987	98	Paved parking, HSG D
987		100.00% Impervious Area

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

Subcatchment PR-13: CCB 30



Summary for Subcatchment PR-14: CLCB-10

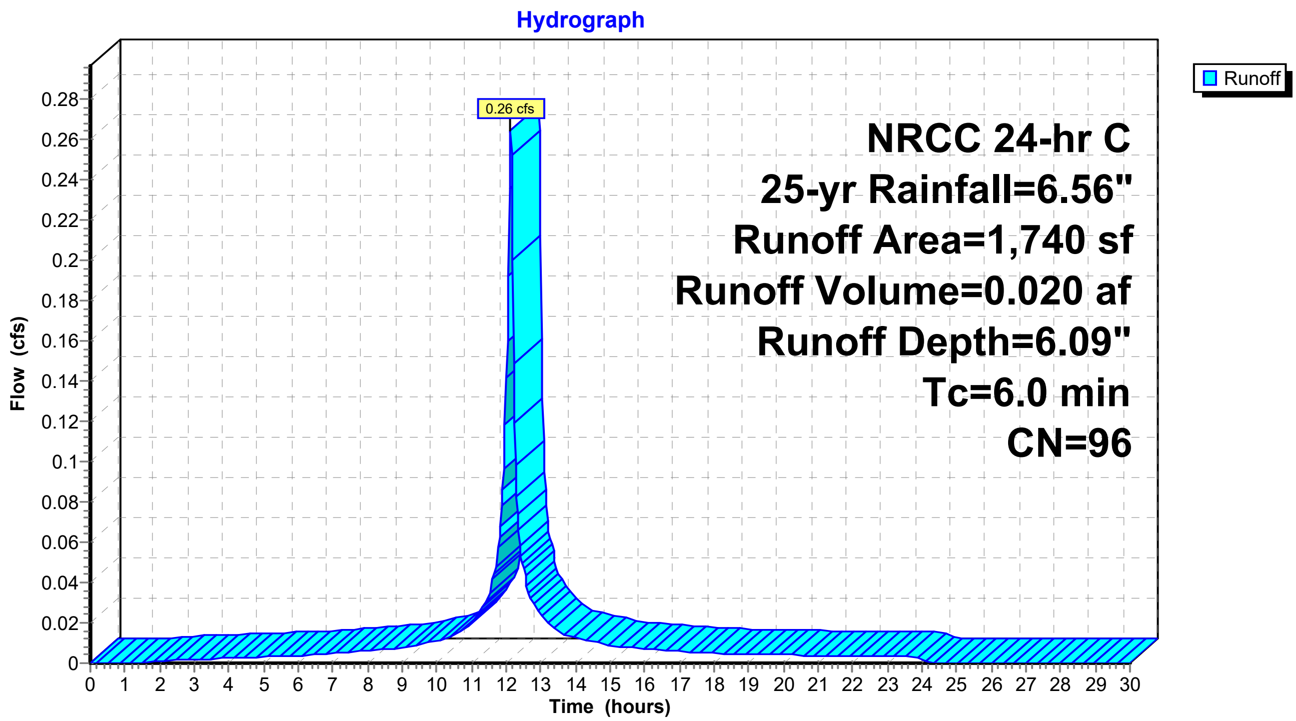
Runoff = 0.26 cfs @ 12.13 hrs, Volume= 0.020 af, Depth= 6.09"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
*	1,740	96	Concrete paver, HSG D
	1,740		100.00% Pervious Area

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

Subcatchment PR-14: CLCB-10



Summary for Subcatchment PR-15: CLCB-09

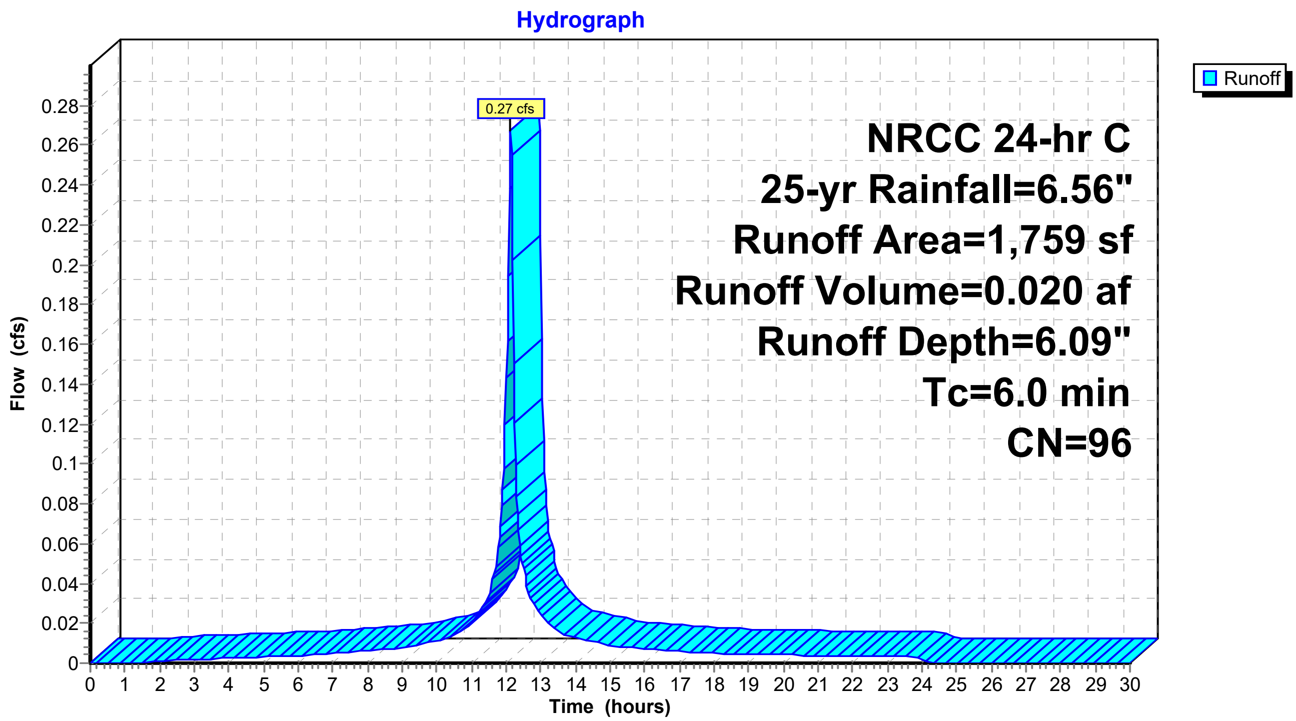
Runoff = 0.27 cfs @ 12.13 hrs, Volume= 0.020 af, Depth= 6.09"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
*	1,759	96	Pevious paver, HSG D
	1,759		100.00% Pervious Area

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

Subcatchment PR-15: CLCB-09



Summary for Subcatchment PR-16: East rooftop to Front Rain Garden

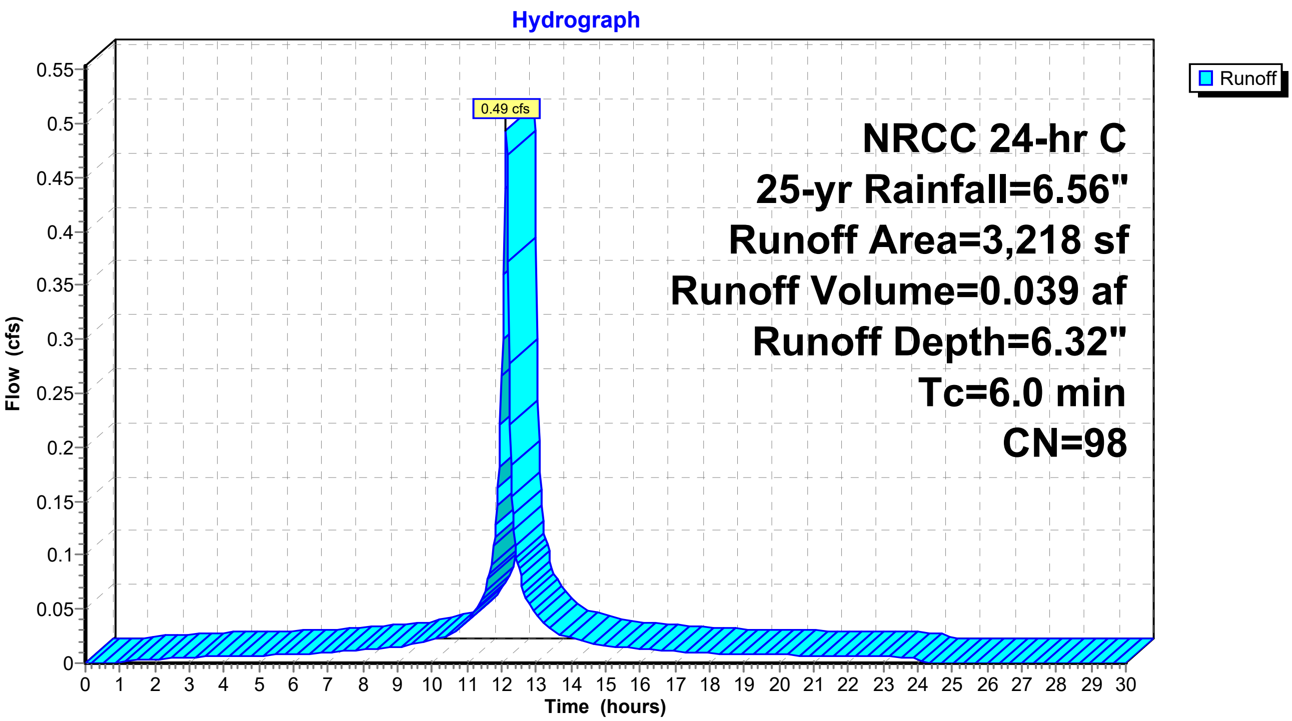
Runoff = 0.49 cfs @ 12.13 hrs, Volume= 0.039 af, Depth= 6.32"
Routed to Pond AP-2 : Front Lawn Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

Area (sf)	CN	Description
3,218	98	Roofs, HSG D
3,218		100.00% Impervious Area

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

Subcatchment PR-16: East rooftop to Front Rain Garden



Summary for Subcatchment PR-17: Front Lawn

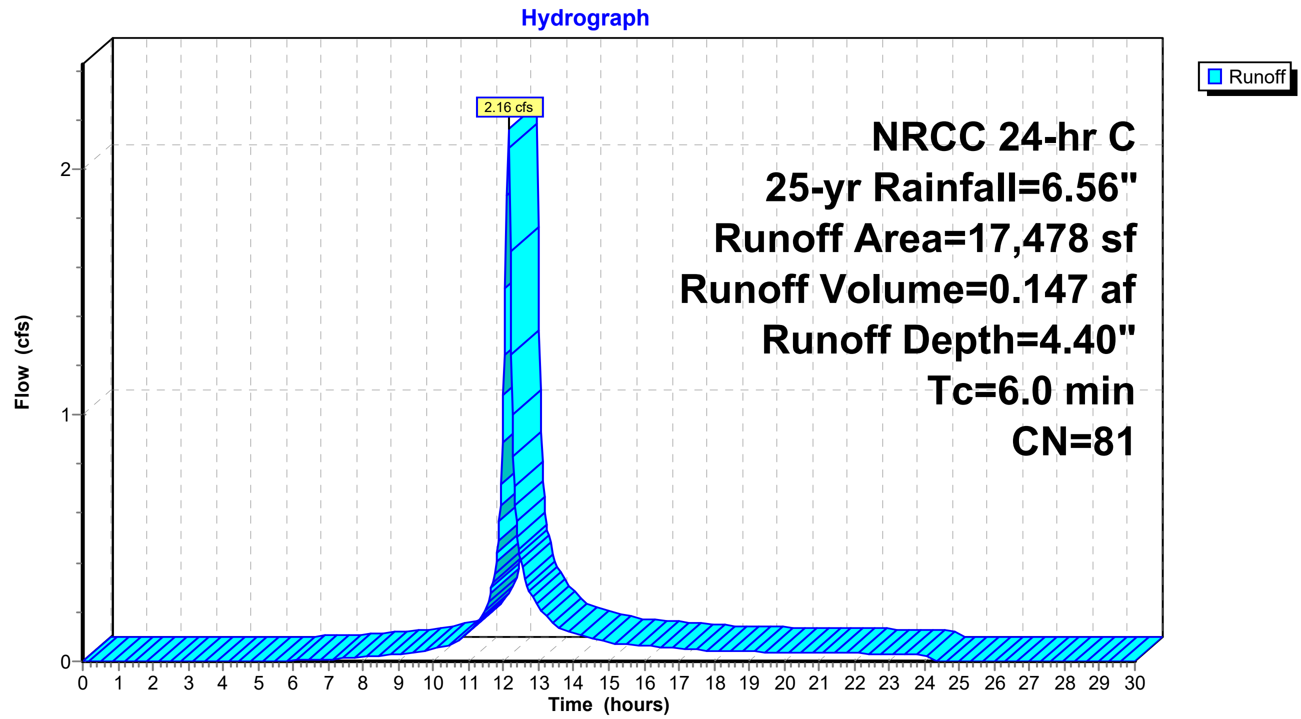
Runoff = 2.16 cfs @ 12.13 hrs, Volume= 0.147 af, Depth= 4.40"
Routed to Pond AP-2 : Front Lawn Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
	1,883	98	Paved parking, HSG D
	6,950	80	>75% Grass cover, Good, HSG D
*	8,645	79	Landscaping, Good, HSG D
	17,478	81	Weighted Average
	15,595		89.23% Pervious Area
	1,883		10.77% Impervious Area

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

Subcatchment PR-17: Front Lawn



Summary for Subcatchment PR-18: CCB-08

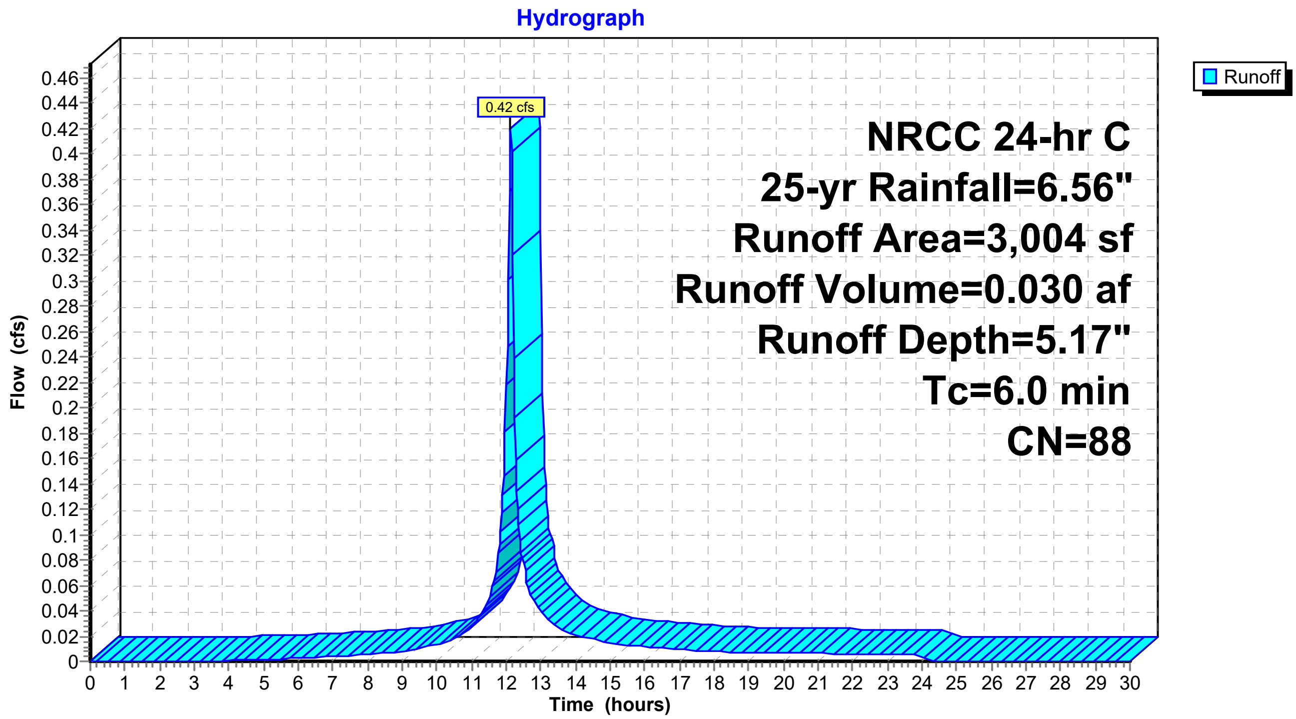
Runoff = 0.42 cfs @ 12.13 hrs, Volume= 0.030 af, Depth= 5.17"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
	1,482	98	Paved parking, HSG D
	192	80	>75% Grass cover, Good, HSG D
*	1,330	79	Landscaping, Good, HSG D
	3,004	88	Weighted Average
	1,522		50.67% Pervious Area
	1,482		49.33% Impervious Area

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

Subcatchment PR-18: CCB-08



Summary for Subcatchment PR-19: CCB-07

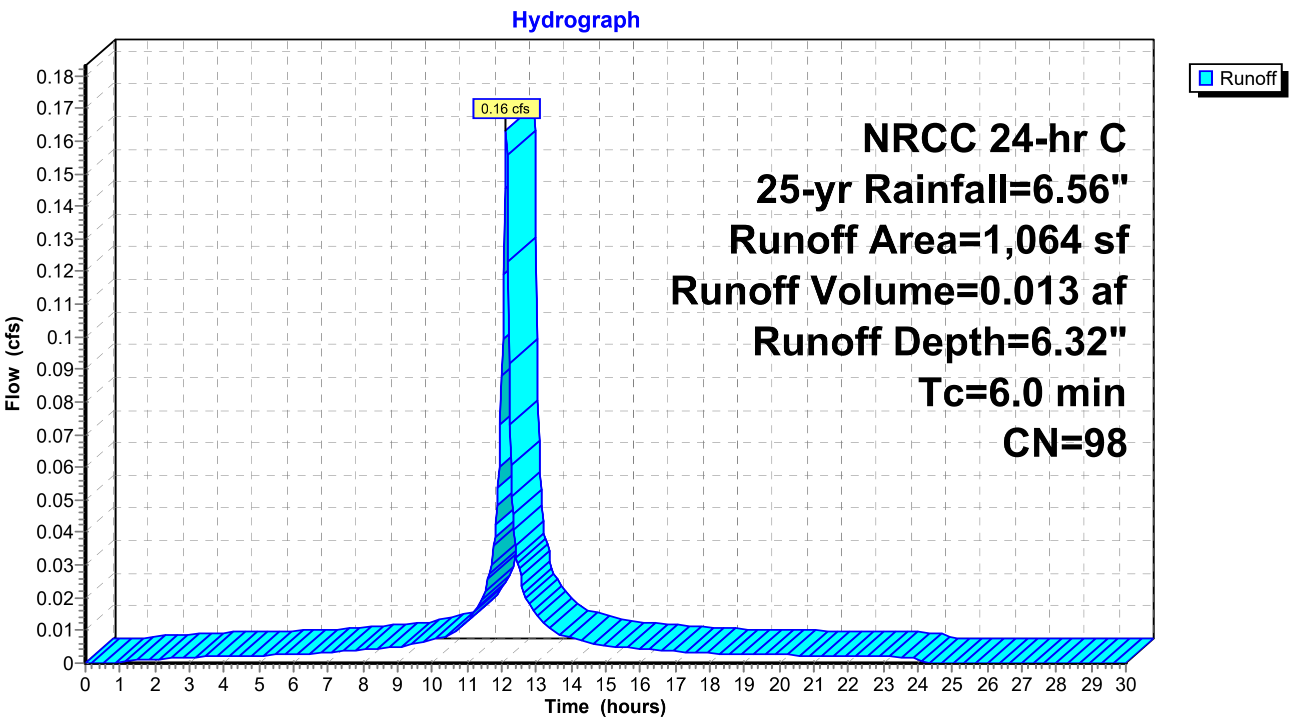
Runoff = 0.16 cfs @ 12.13 hrs, Volume= 0.013 af, Depth= 6.32"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

Area (sf)	CN	Description
1,064	98	Paved parking, HSG D
1,064		100.00% Impervious Area

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

Subcatchment PR-19: CCB-07



Summary for Subcatchment PR-2: CCB 10

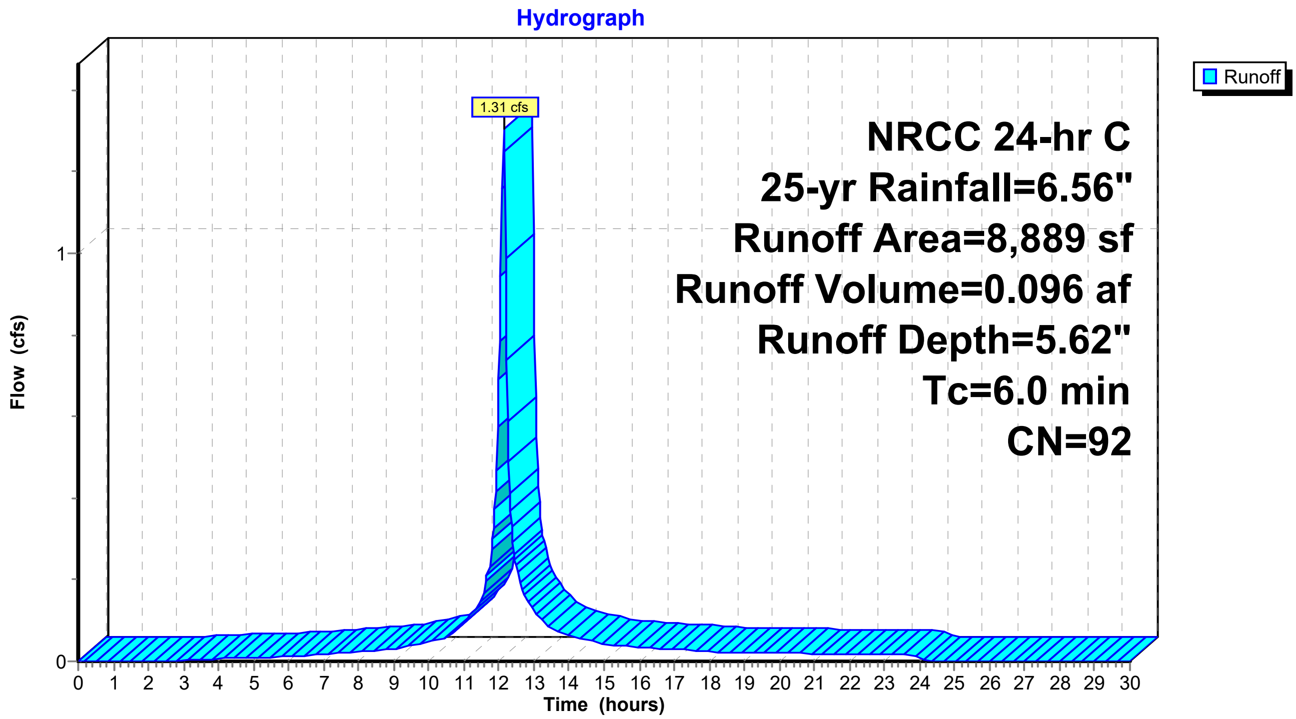
Runoff = 1.31 cfs @ 12.13 hrs, Volume= 0.096 af, Depth= 5.62"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
*	6,733	98	Paved parking, HSG C
*	1,772	72	Landscaping, Good, HSG C
	384	74	>75% Grass cover, Good, HSG C
	8,889	92	Weighted Average
	2,156		24.25% Pervious Area
	6,733		75.75% Impervious Area

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

Subcatchment PR-2: CCB 10



Summary for Subcatchment PR-20: South of entrance drive

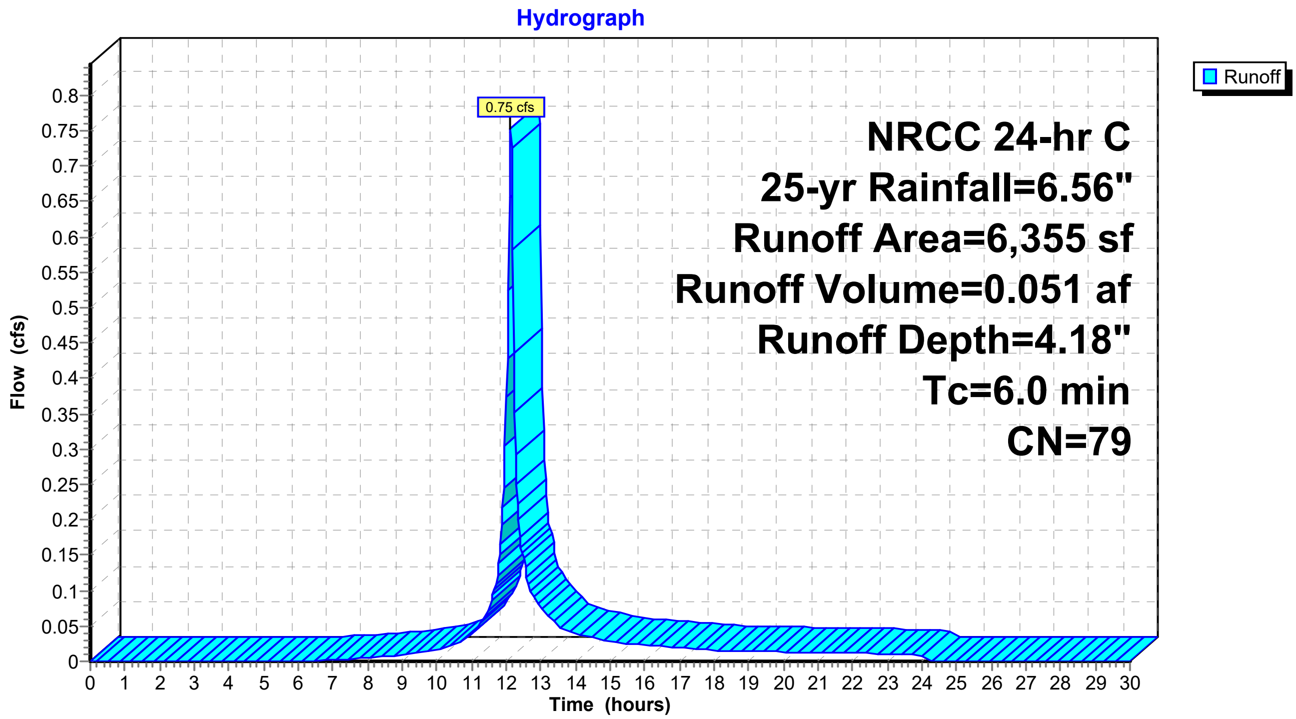
Runoff = 0.75 cfs @ 12.13 hrs, Volume= 0.051 af, Depth= 4.18"
Routed to Pond AP-4 : Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
	93	98	Paved parking, HSG D
	755	80	>75% Grass cover, Good, HSG D
*	5,507	79	Landscaping, Good, HSG D
	6,355	79	Weighted Average
	6,262		98.54% Pervious Area
	93		1.46% Impervious Area

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

Subcatchment PR-20: South of entrance drive



Summary for Subcatchment PR-21: Danbury Rd

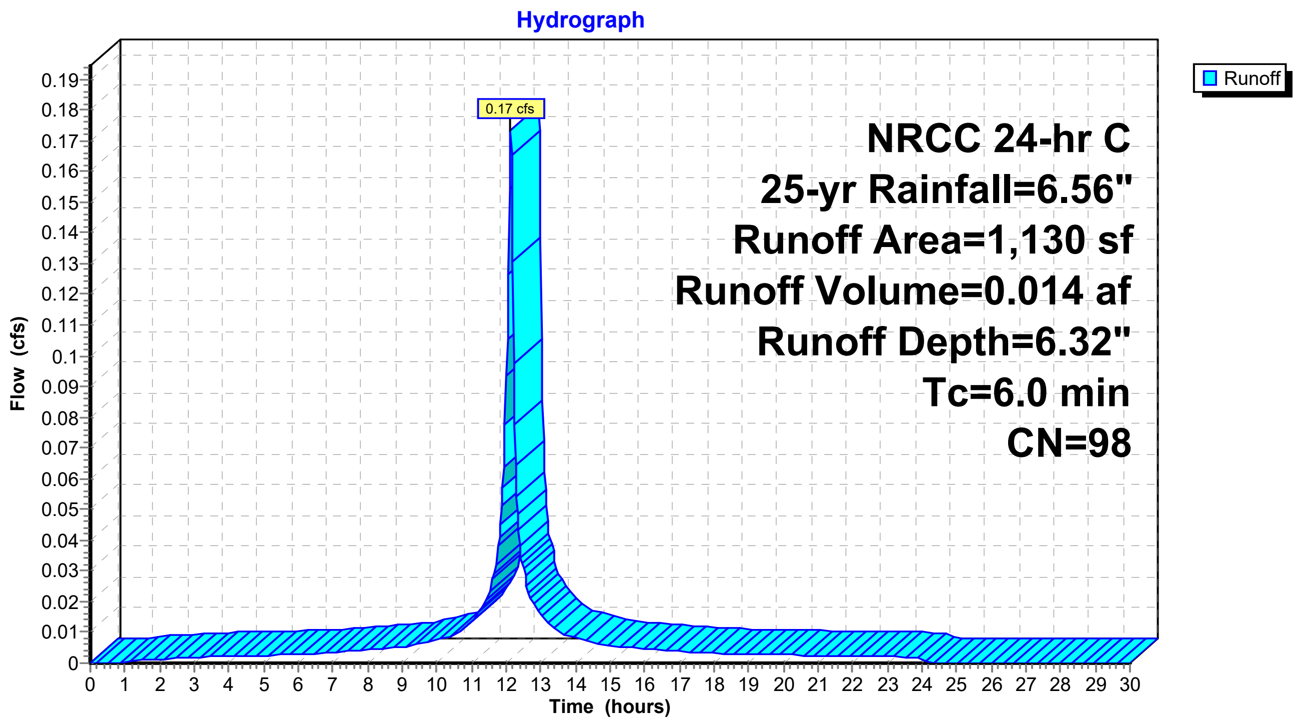
Runoff = 0.17 cfs @ 12.13 hrs, Volume= 0.014 af, Depth= 6.32"
Routed to Pond AP-3 : Danbury Road

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

Area (sf)	CN	Description
1,130	98	Paved parking, HSG D
1,130		100.00% Impervious Area

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

Subcatchment PR-21: Danbury Rd



Summary for Subcatchment PR-3: CCB 07

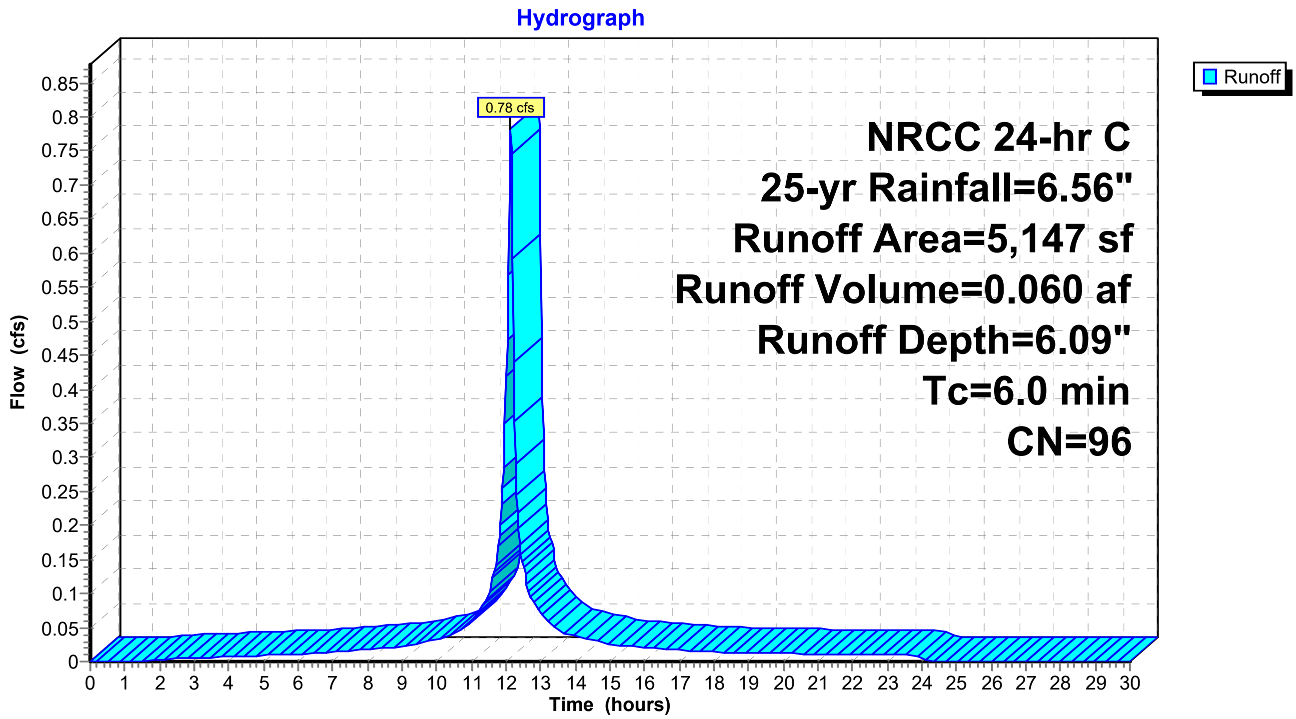
Runoff = 0.78 cfs @ 12.13 hrs, Volume= 0.060 af, Depth= 6.09"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
*	4,715	98	Paved parking, HSG C
*	432	72	Landscaping, Good, HSG C
	5,147	96	Weighted Average
	432		8.39% Pervious Area
	4,715		91.61% Impervious Area

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

Subcatchment PR-3: CCB 07



Summary for Subcatchment PR-4: CCB 06

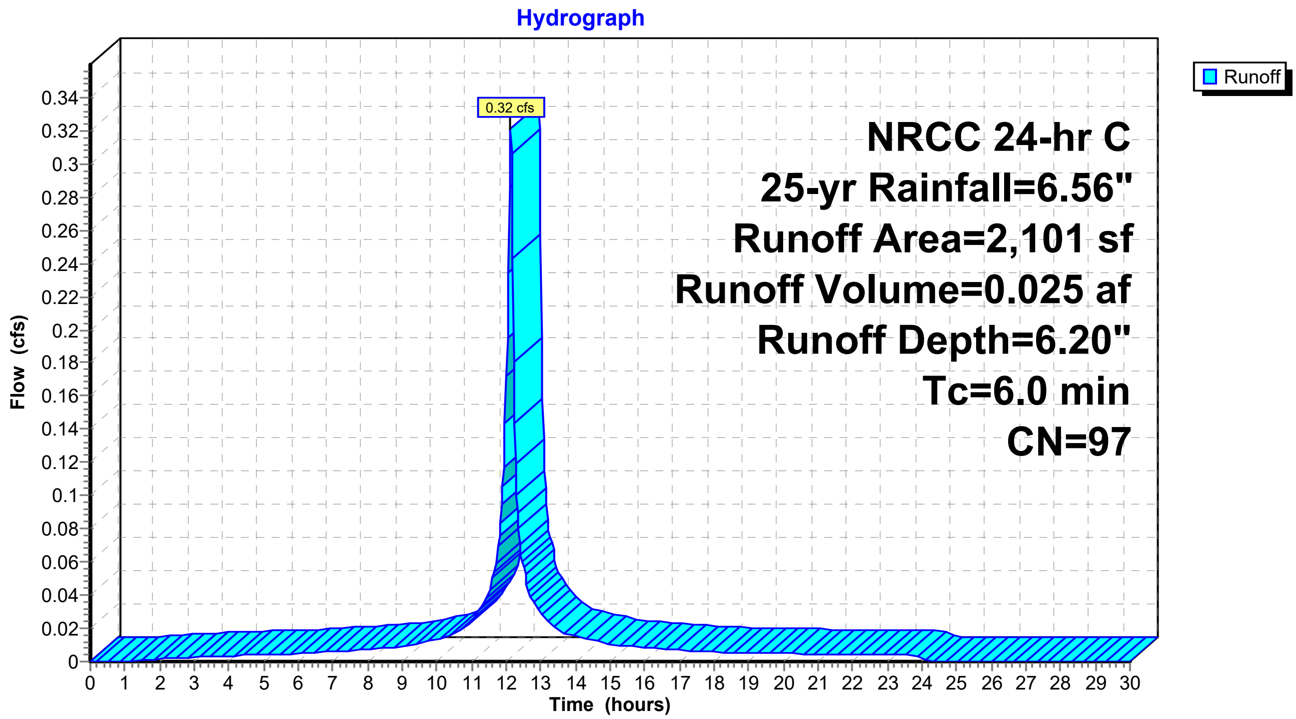
Runoff = 0.32 cfs @ 12.13 hrs, Volume= 0.025 af, Depth= 6.20"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
	2,026	98	Paved parking, HSG D
*	75	79	Landscaping, Good, HSG D
	2,101	97	Weighted Average
	75		3.57% Pervious Area
	2,026		96.43% Impervious Area

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

Subcatchment PR-4: CCB 06



Summary for Subcatchment PR-5: South Basin

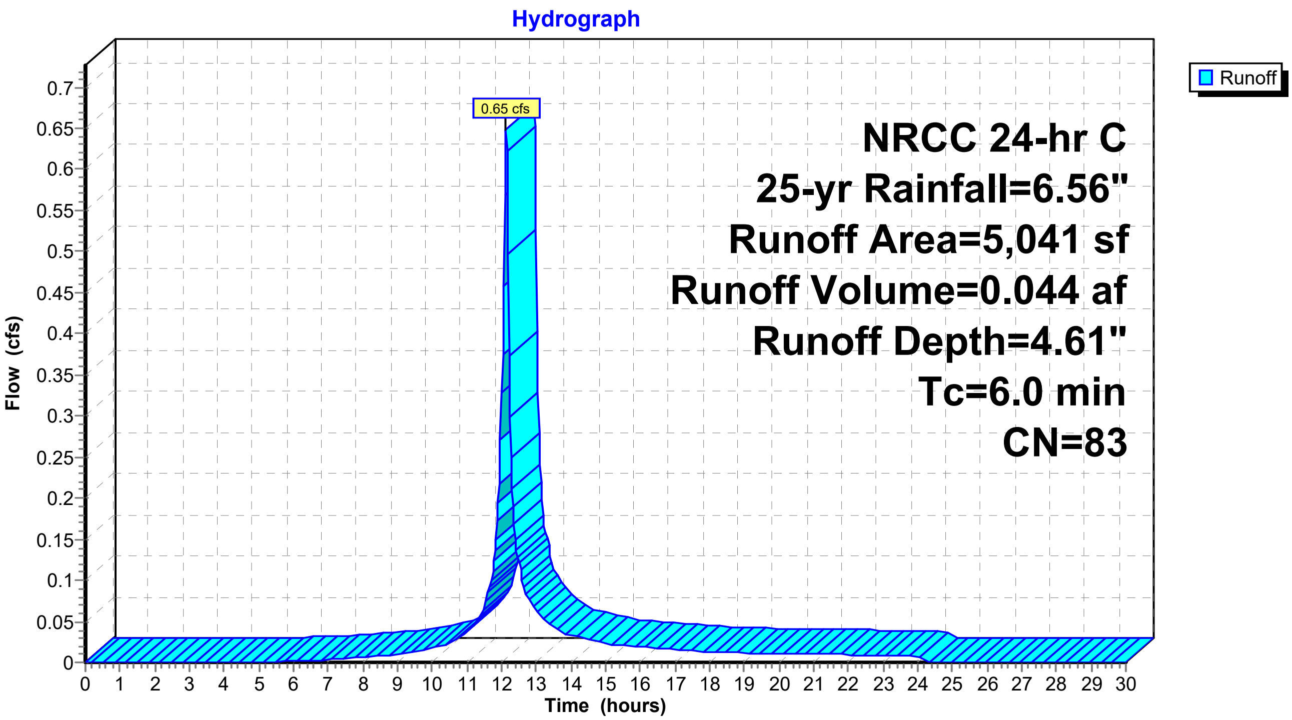
Runoff = 0.65 cfs @ 12.13 hrs, Volume= 0.044 af, Depth= 4.61"
Routed to Pond B-1 : South Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
*	595	96	Permable Paver, HSG C
*	366	96	Gravel surface, HSG C
*	2,205	72	Landscaping, Good, HSG C
*	890	98	Paved parking, HSG C
	985	80	>75% Grass cover, Good, HSG D
	5,041	83	Weighted Average
	4,151		82.34% Pervious Area
	890		17.66% Impervious Area

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

Subcatchment PR-5: South Basin



Summary for Subcatchment PR-6: West along river

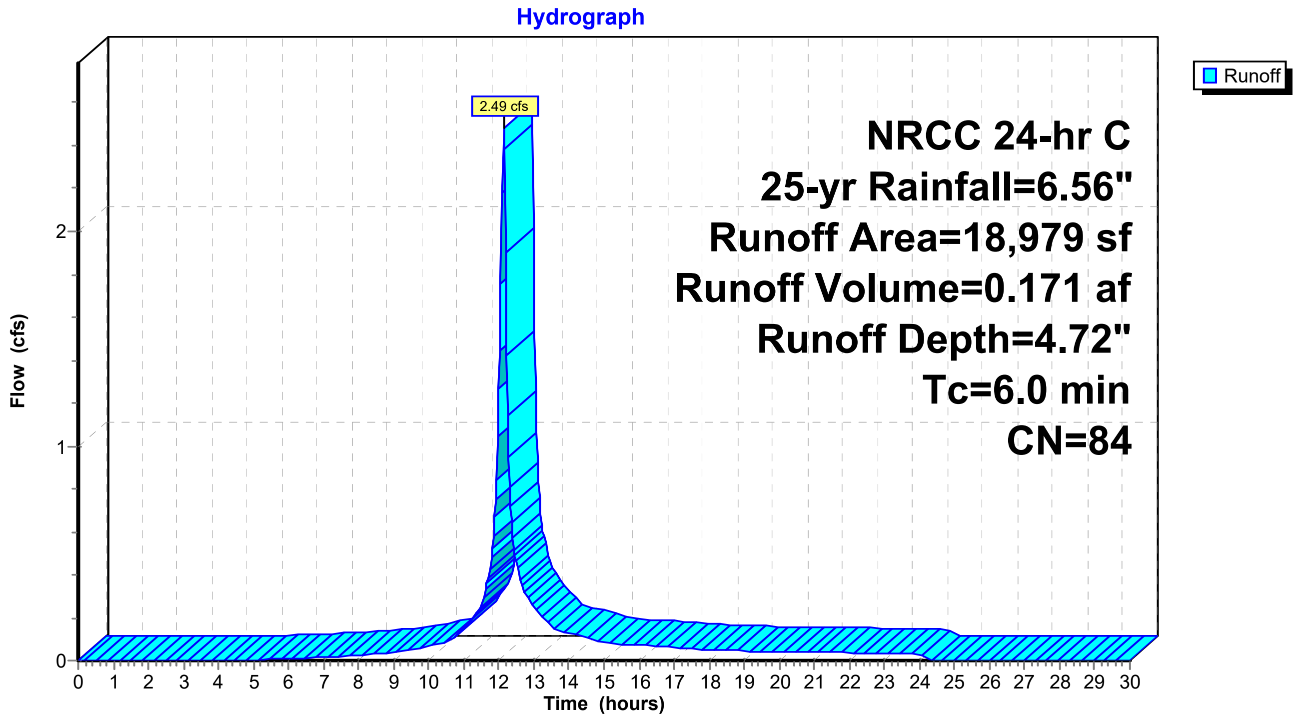
Runoff = 2.49 cfs @ 12.13 hrs, Volume= 0.171 af, Depth= 4.72"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
*	4,195	96	Permeable paver, HSG D
	461	96	Gravel surface, HSG D
	911	98	Paved parking, HSG D
	2,775	80	>75% Grass cover, Good, HSG D
*	6,489	79	Landscaping, Good, HSG D
	4,148	77	Woods, Good, HSG D
	18,979	84	Weighted Average
	18,068		95.20% Pervious Area
	911		4.80% Impervious Area

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

Subcatchment PR-6: West along river



Summary for Subcatchment PR-7: North basin

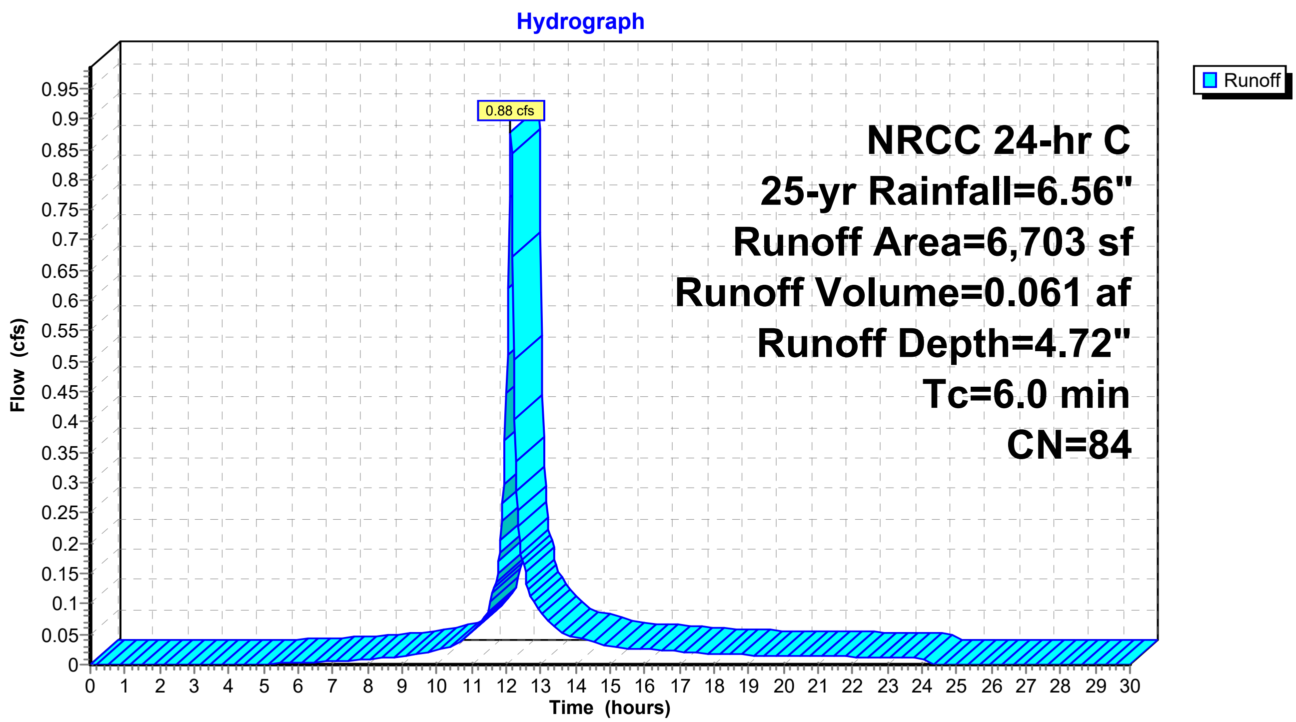
Runoff = 0.88 cfs @ 12.13 hrs, Volume= 0.061 af, Depth= 4.72"
Routed to Pond B-2 : North Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
	453	96	Gravel surface, HSG D
*	1,031	96	Permeable paver, HSG D
	445	80	>75% Grass cover, Good, HSG D
*	3,601	79	Landscaping, Good, HSG D
	692	77	Woods, Good, HSG D
	481	98	Paved parking, HSG D
	6,703	84	Weighted Average
	6,222		92.82% Pervious Area
	481		7.18% Impervious Area

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

Subcatchment PR-7: North basin



Summary for Subcatchment PR-7B: CCB 26

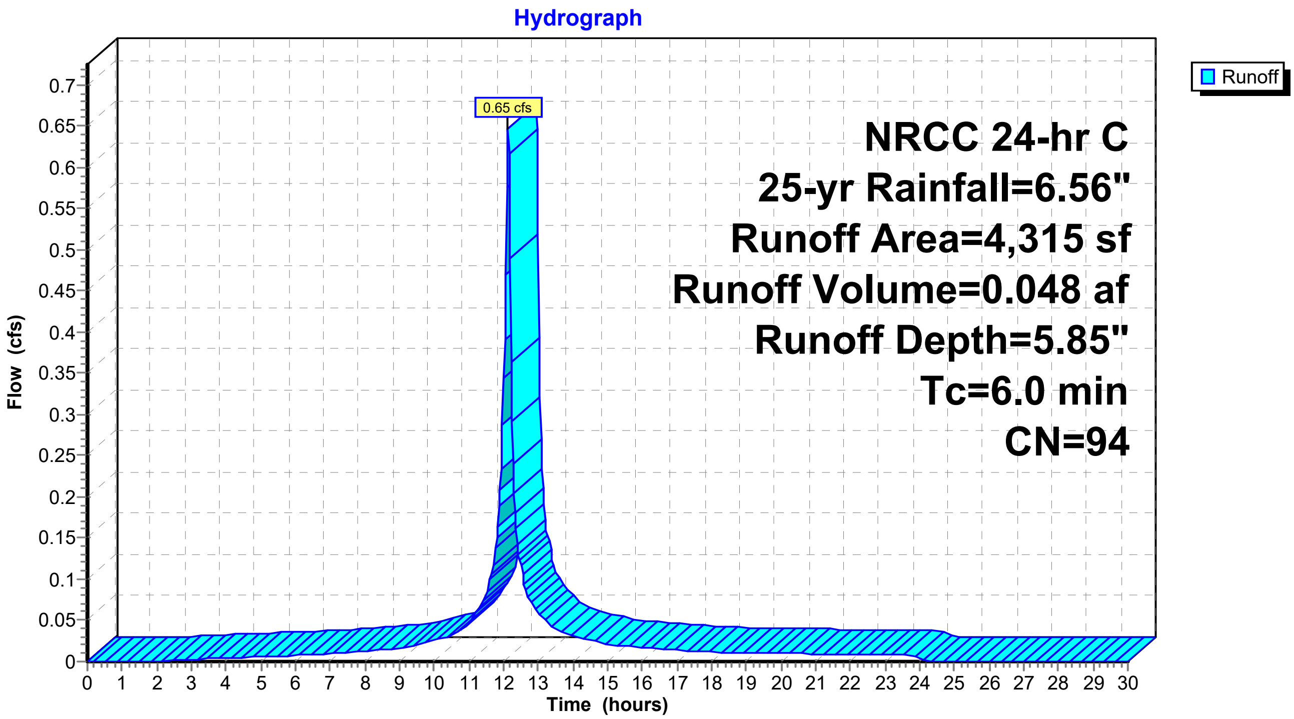
Runoff = 0.65 cfs @ 12.13 hrs, Volume= 0.048 af, Depth= 5.85"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
	3,518	98	Paved parking, HSG D
*	797	79	Landscaping, Good, HSG D
	4,315	94	Weighted Average
	797		18.47% Pervious Area
	3,518		81.53% Impervious Area

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

Subcatchment PR-7B: CCB 26



Summary for Subcatchment PR-8: CCB 26A

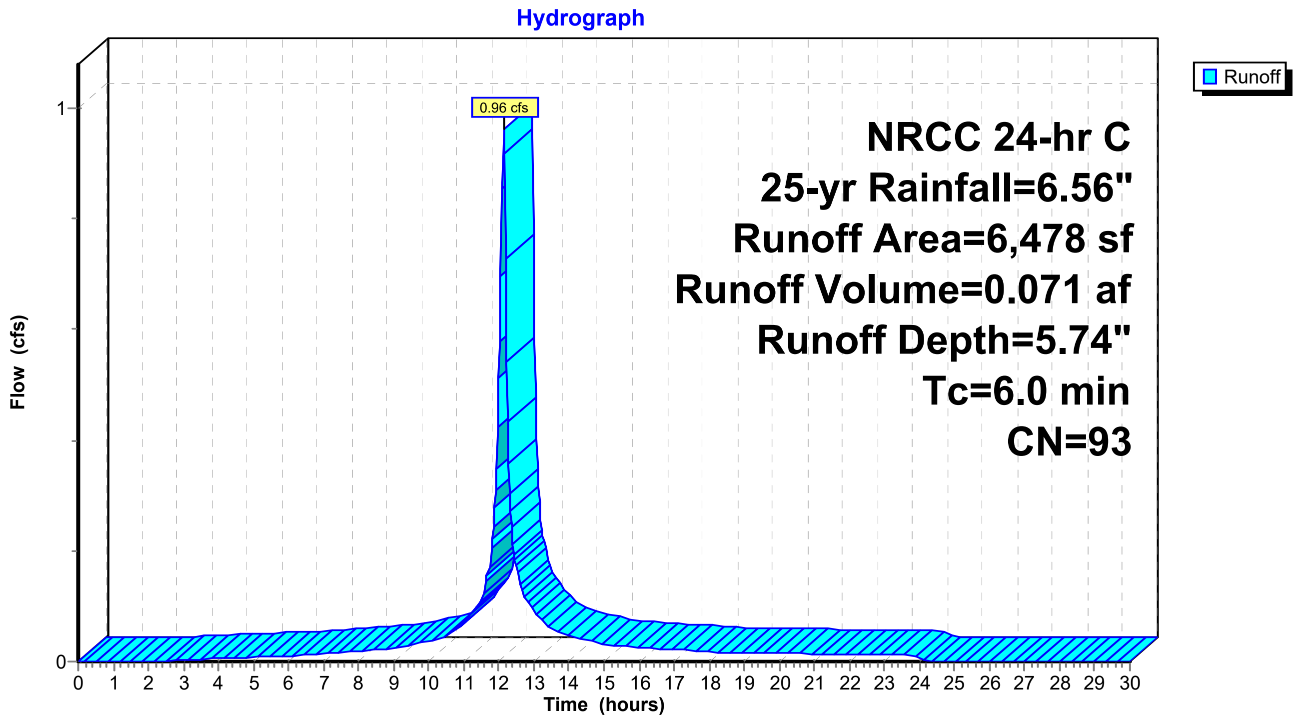
Runoff = 0.96 cfs @ 12.13 hrs, Volume= 0.071 af, Depth= 5.74"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
	4,737	98	Paved parking, HSG D
*	1,741	79	Landscaping, Good, HSG D
	6,478	93	Weighted Average
	1,741		26.88% Pervious Area
	4,737		73.12% Impervious Area

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

Subcatchment PR-8: CCB 26A



Summary for Subcatchment PR-9: CCB 27

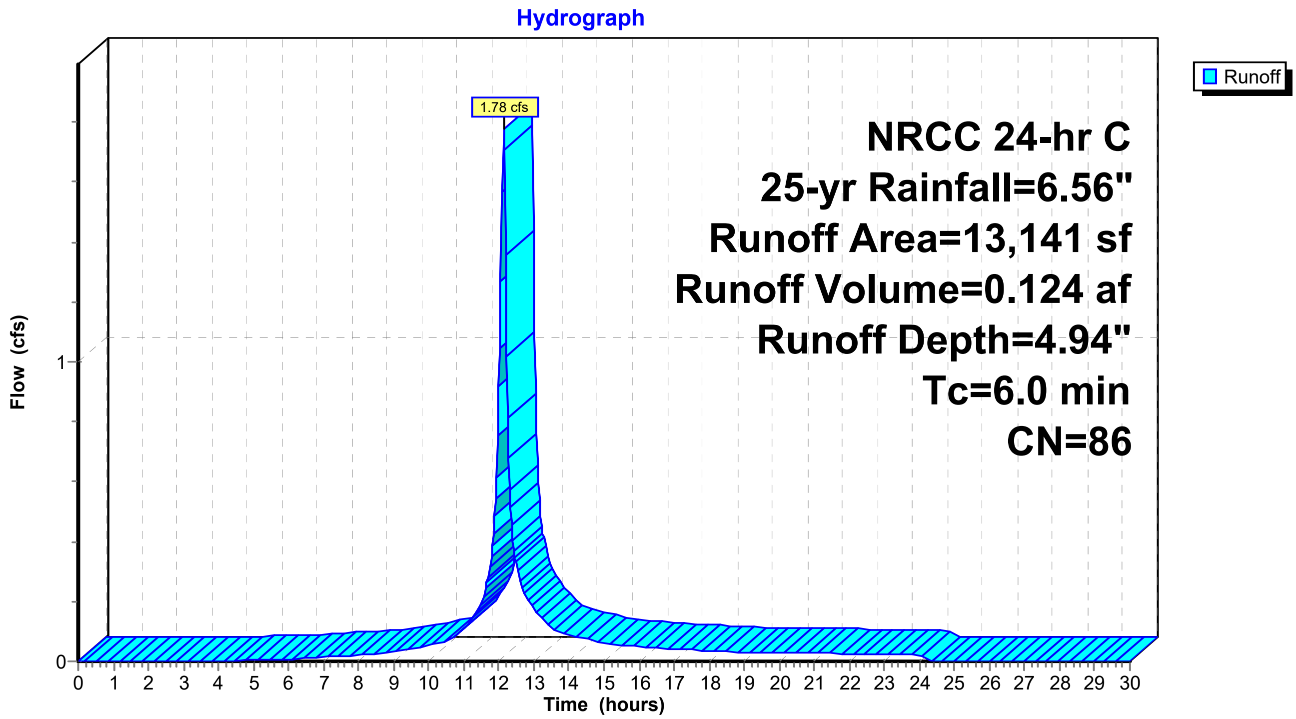
Runoff = 1.78 cfs @ 12.13 hrs, Volume= 0.124 af, Depth= 4.94"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 25-yr Rainfall=6.56"

	Area (sf)	CN	Description
	4,730	98	Paved parking, HSG D
	817	80	>75% Grass cover, Good, HSG D
*	7,594	79	Landscaping, Good, HSG D
	13,141	86	Weighted Average
	8,411		64.01% Pervious Area
	4,730		35.99% Impervious Area

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

Subcatchment PR-9: CCB 27



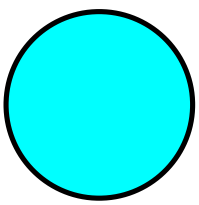
Summary for Reach R1: Roof Leader

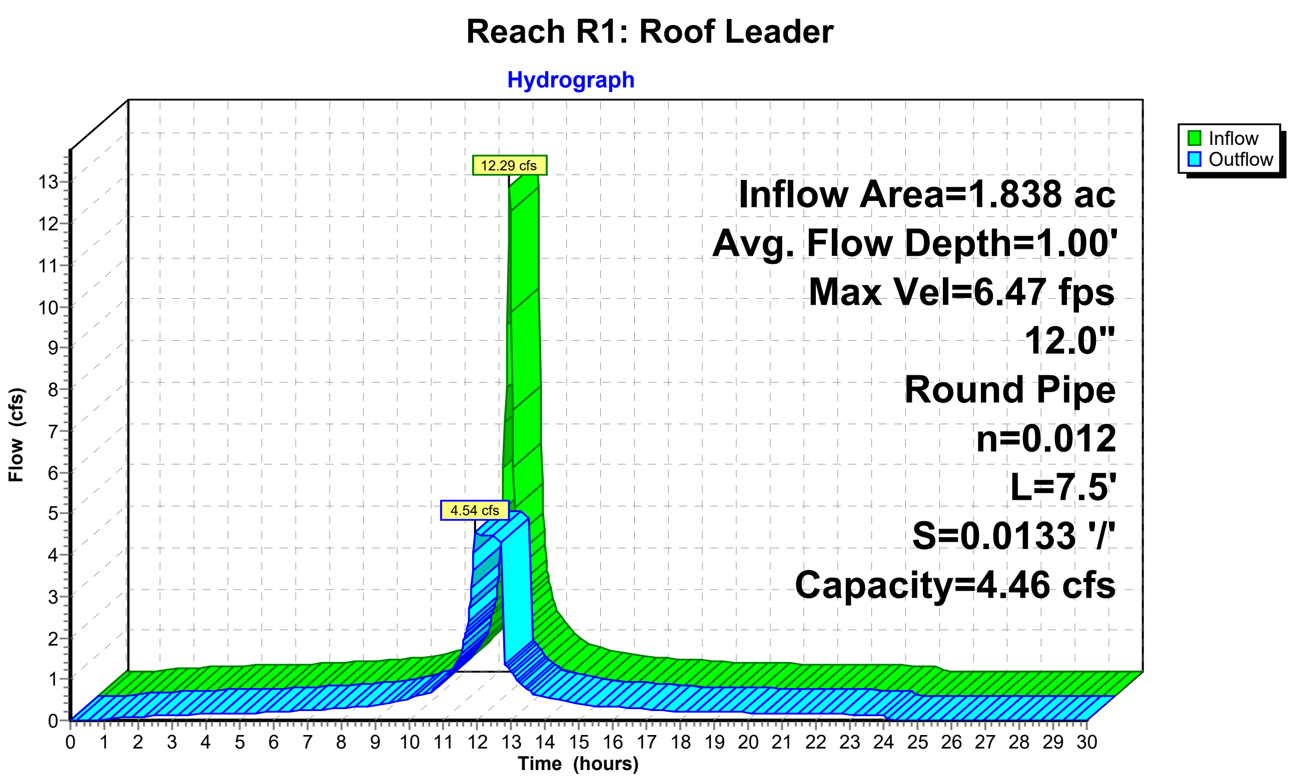
Inflow Area = 1.838 ac,100.00% Impervious, Inflow Depth = 6.32" for 25-yr event
Inflow = 12.29 cfs @ 12.13 hrs, Volume= 0.968 af
Outflow = 4.54 cfs @ 11.95 hrs, Volume= 0.968 af, Atten= 63%, Lag= 0.0 min
Routed to Pond S-2 : Subsurface Infiltration System

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Max. Velocity= 6.47 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.19 fps, Avg. Travel Time= 0.0 min

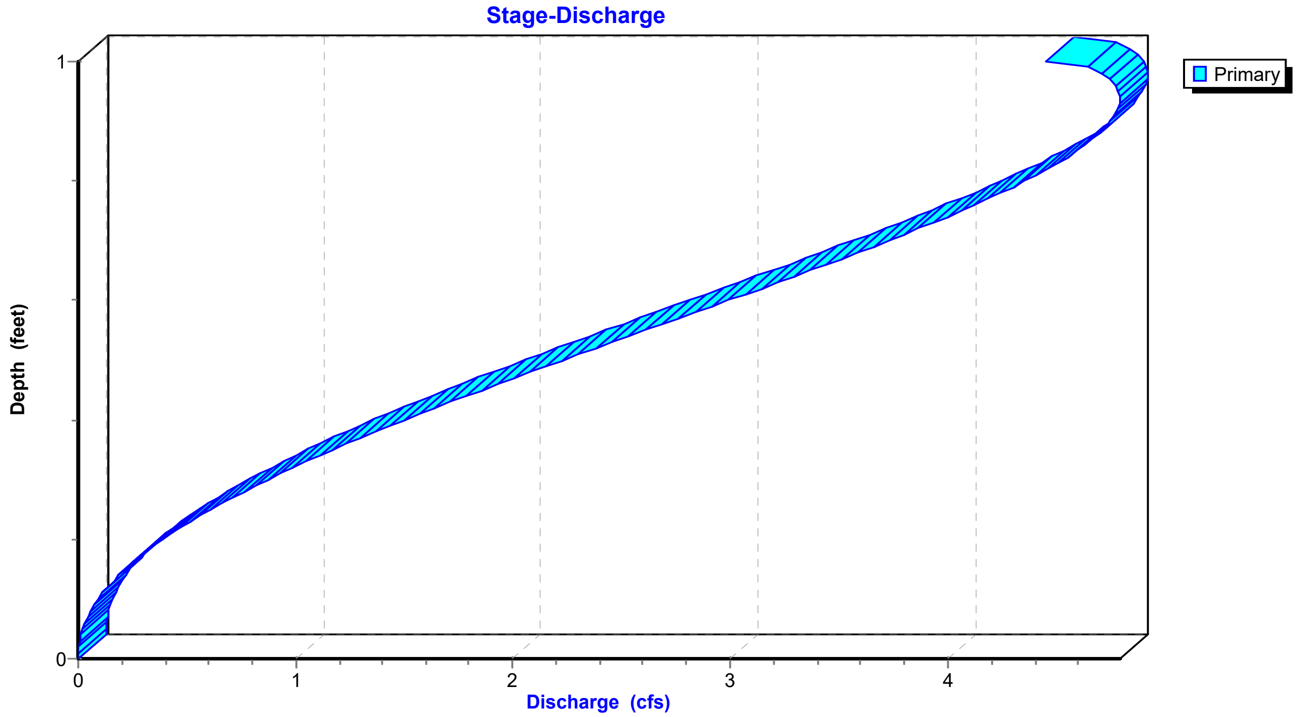
Peak Storage= 6 cf @ 11.97 hrs
Average Depth at Peak Storage= 1.00'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.46 cfs

12.0" Round Pipe
n= 0.012
Length= 7.5' Slope= 0.0133 '/'
Inlet Invert= 142.20', Outlet Invert= 142.10'

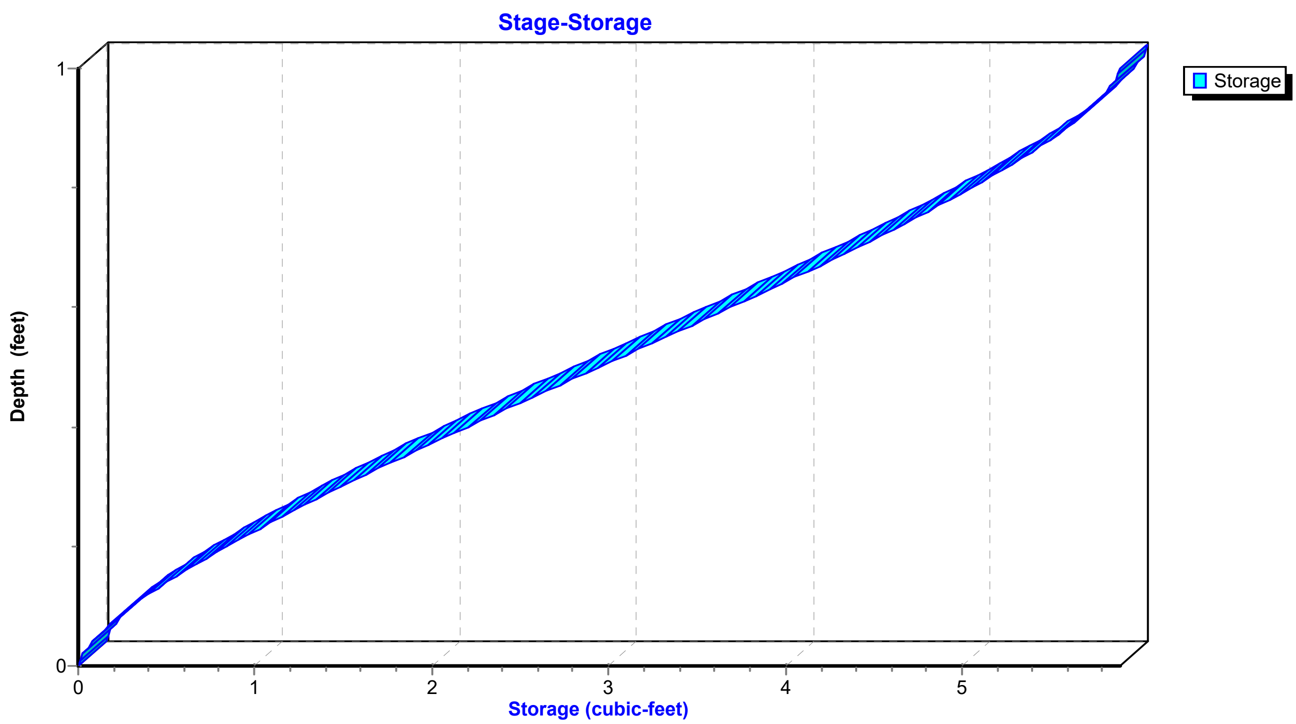




Reach R1: Roof Leader



Reach R1: Roof Leader

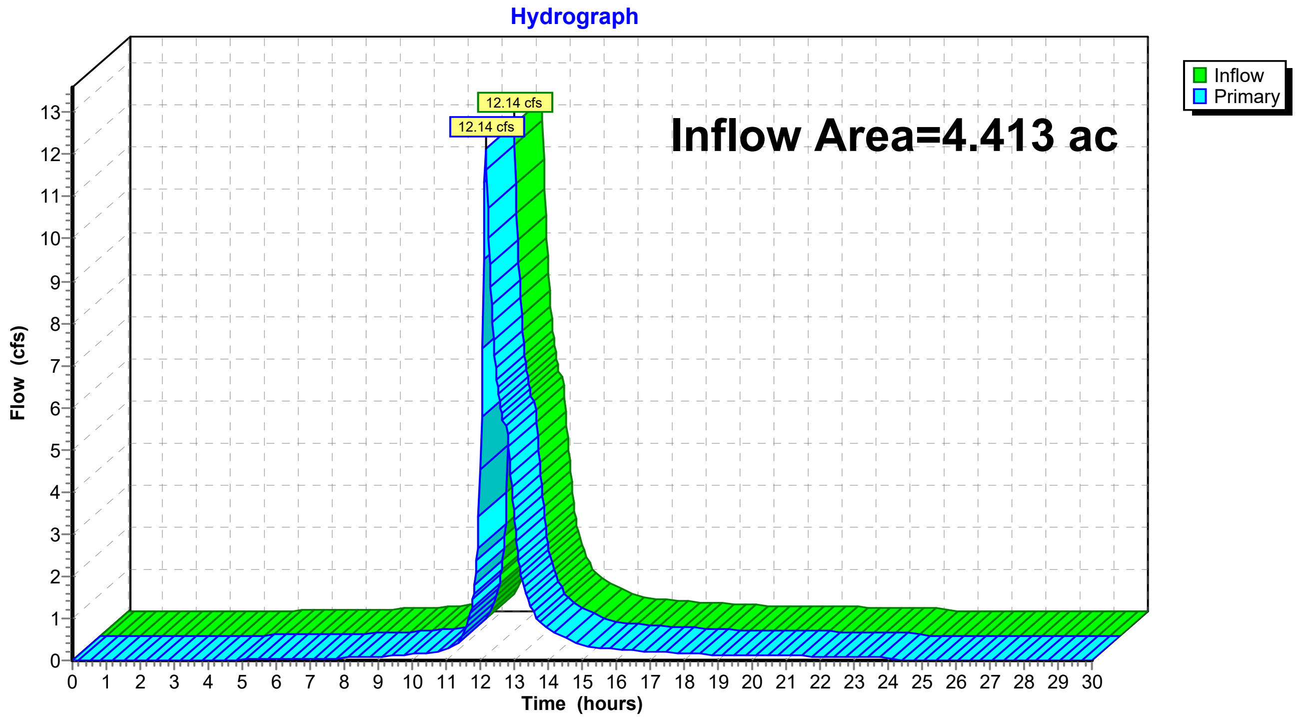


Summary for Pond AP-1: Norwalk River

Inflow Area =	4.413 ac,	66.52% Impervious,	Inflow Depth = 2.70"	for 25-yr event
Inflow =	12.14 cfs @	12.15 hrs, Volume=	0.992 af	
Primary =	12.14 cfs @	12.15 hrs, Volume=	0.992 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-1: Norwalk River



Summary for Pond AP-2: Front Lawn Rain Garden

Inflow Area = 0.475 ac, 24.65% Impervious, Inflow Depth = 4.70" for 25-yr event
Inflow = 2.66 cfs @ 12.13 hrs, Volume= 0.186 af
Outflow = 0.36 cfs @ 12.68 hrs, Volume= 0.186 af, Atten= 87%, Lag= 33.1 min
Discarded = 0.36 cfs @ 12.68 hrs, Volume= 0.186 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond S-3 : Subsurface Infiltration System

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 148.99' @ 12.68 hrs Surf.Area= 2,829 sf Storage= 2,394 cf

Plug-Flow detention time= 48.2 min calculated for 0.186 af (100% of inflow)
Center-of-Mass det. time= 48.2 min (849.0 - 800.8)

Volume	Invert	Avail.Storage	Storage Description
#1	148.00'	6,536 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

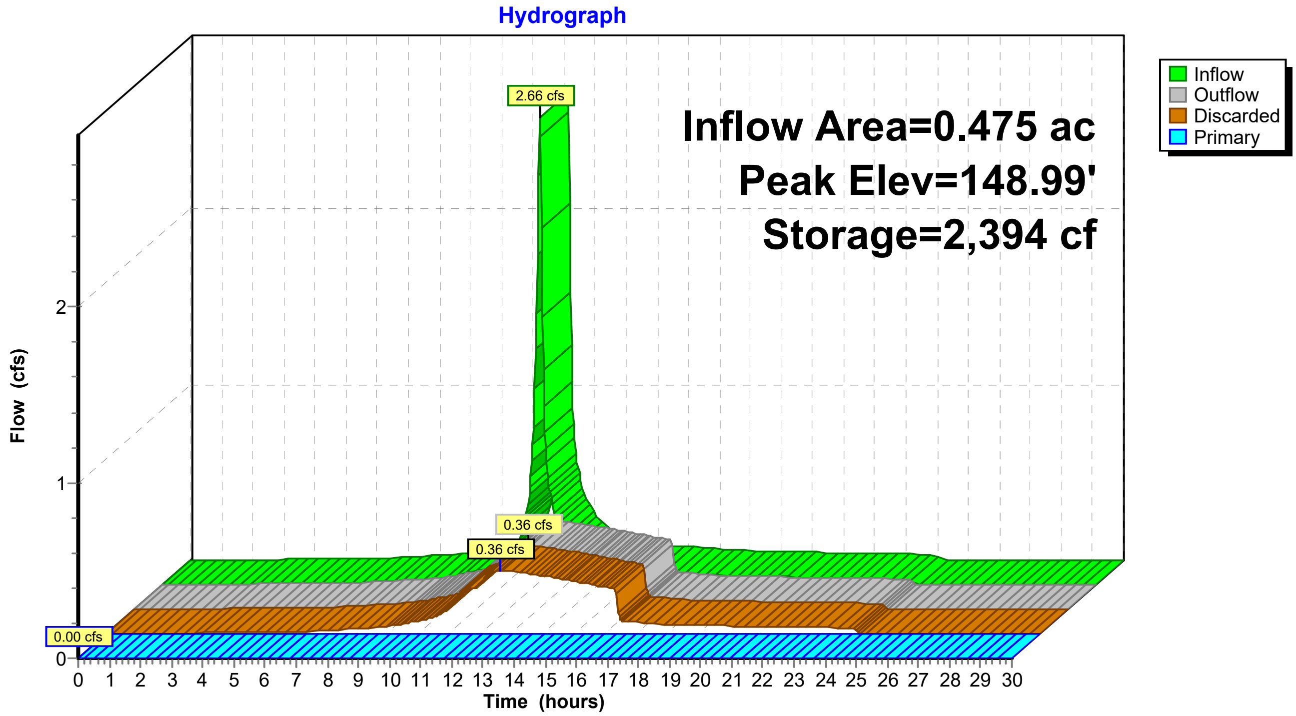
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
148.00	1,985	0	0
149.00	2,833	2,409	2,409
150.00	5,420	4,127	6,536

Device	Routing	Invert	Outlet Devices
#1	Primary	145.90'	**15.0" Round Culvert** L= 34.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 145.90' / 145.55' S= 0.0101 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	149.00'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	148.00'	**5.450 in/hr Exfiltration over Surface area**

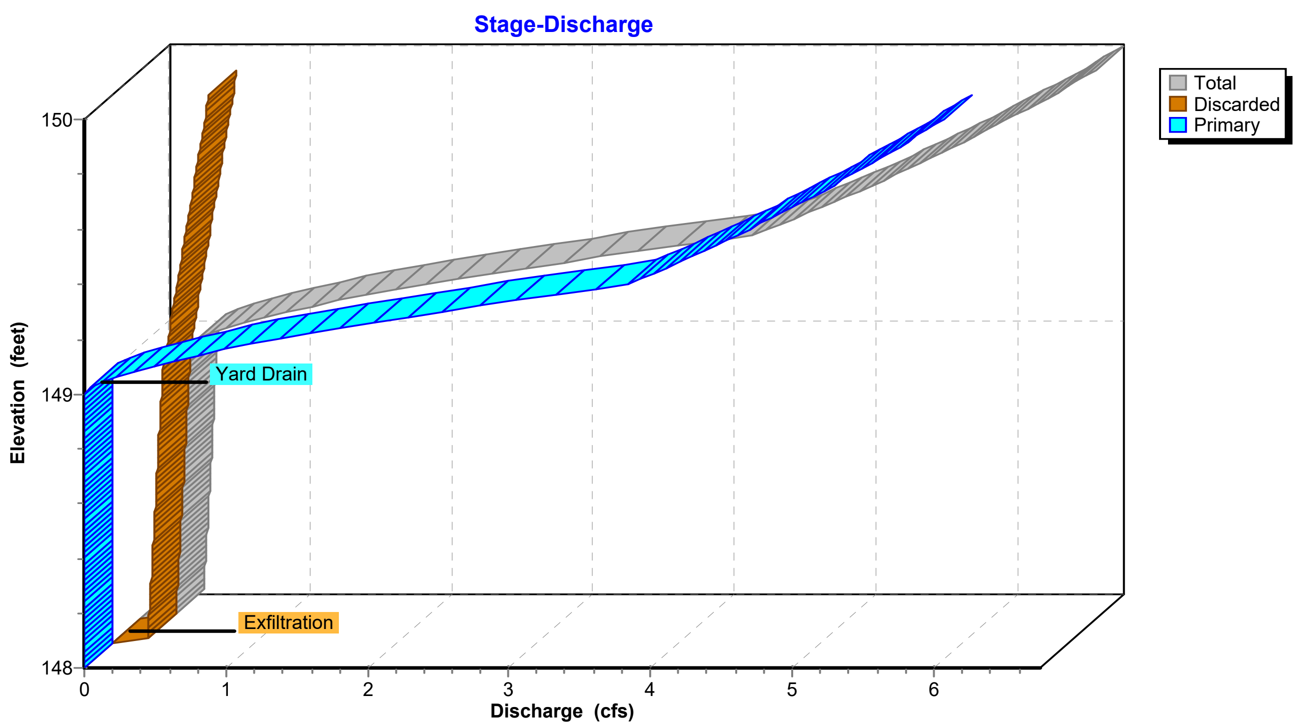
Discarded OutFlow Max=0.36 cfs @ 12.68 hrs HW=148.99' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.36 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=148.00' (Free Discharge)
└─**1=Culvert** (Passes 0.00 cfs of 7.18 cfs potential flow)
  └─**2=Yard Drain** (Controls 0.00 cfs)

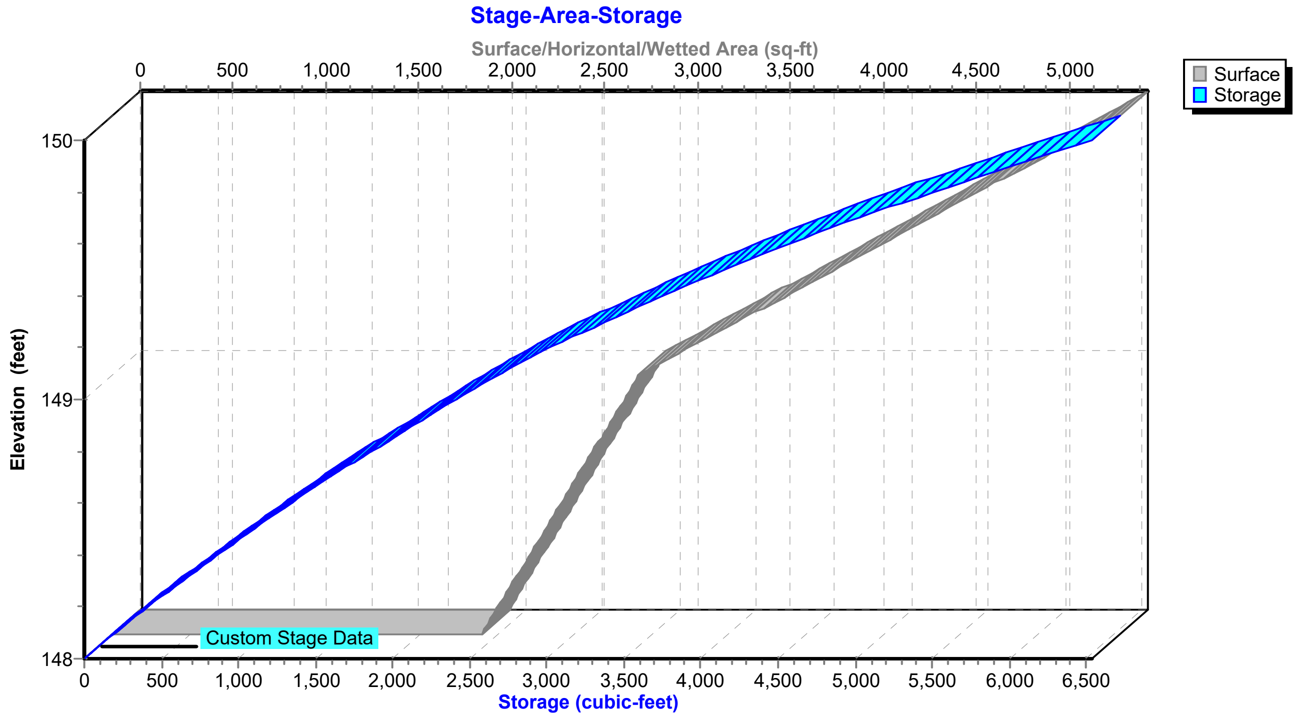
Pond AP-2: Front Lawn Rain Garden



Pond AP-2: Front Lawn Rain Garden



Pond AP-2: Front Lawn Rain Garden

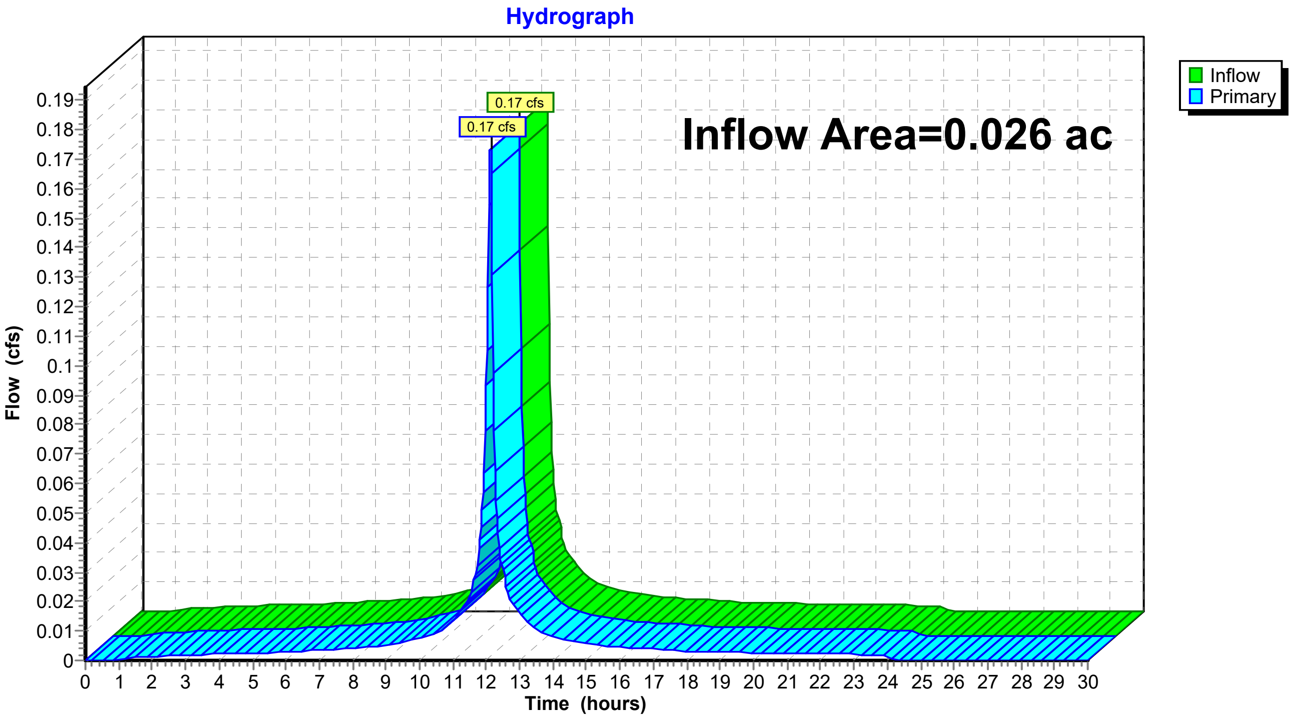


Summary for Pond AP-3: Danbury Road

Inflow Area =	0.026 ac,100.00% Impervious,	Inflow Depth = 6.32"	for 25-yr event
Inflow =	0.17 cfs @ 12.13 hrs,	Volume=	0.014 af
Primary =	0.17 cfs @ 12.13 hrs,	Volume=	0.014 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-3: Danbury Road

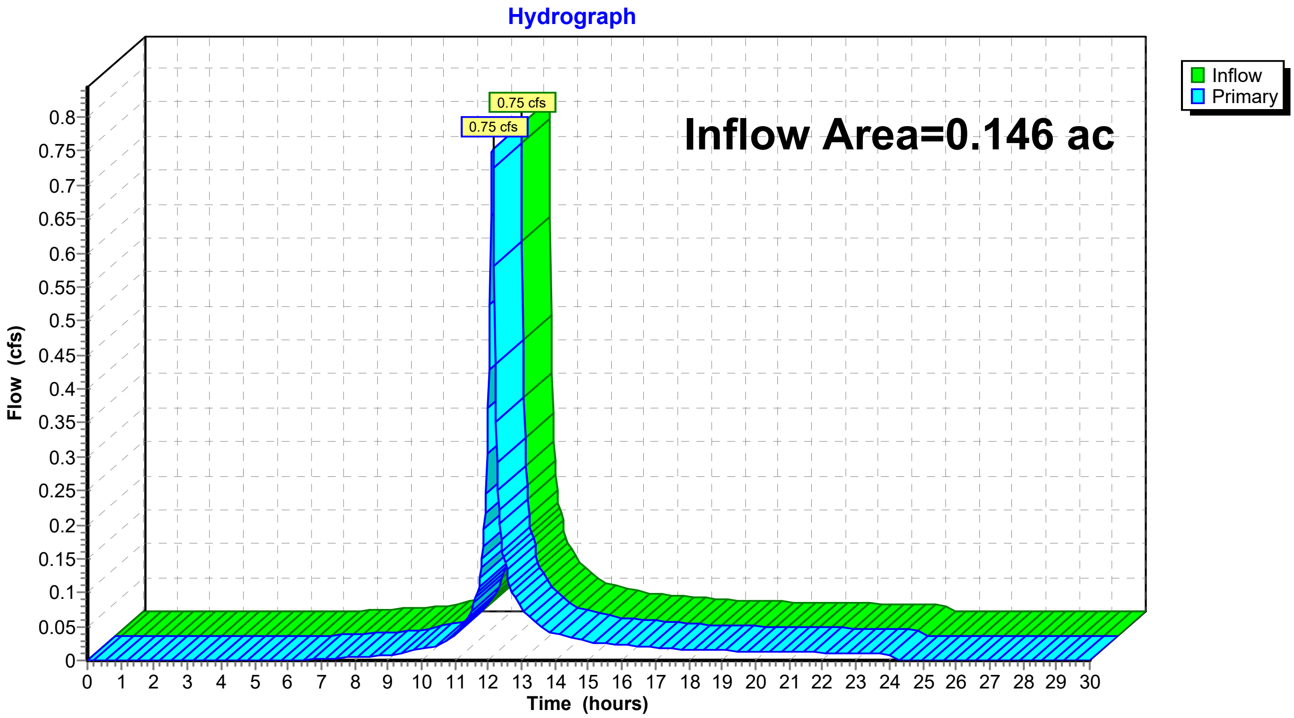


Summary for Pond AP-4: Landscaped Area

Inflow Area =	0.146 ac,	1.46% Impervious, Inflow Depth = 4.18"	for 25-yr event
Inflow =	0.75 cfs @	12.13 hrs, Volume=	0.051 af
Primary =	0.75 cfs @	12.13 hrs, Volume=	0.051 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-4: Landscaped Area



Summary for Pond B-1: South Basin

Inflow Area = 0.116 ac, 17.66% Impervious, Inflow Depth = 4.61" for 25-yr event
Inflow = 0.65 cfs @ 12.13 hrs, Volume= 0.044 af
Outflow = 0.63 cfs @ 12.15 hrs, Volume= 0.039 af, Atten= 3%, Lag= 1.1 min
Discarded = 0.01 cfs @ 12.15 hrs, Volume= 0.008 af
Primary = 0.62 cfs @ 12.15 hrs, Volume= 0.031 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 140.02' @ 12.15 hrs Surf.Area= 546 sf Storage= 393 cf

Plug-Flow detention time= 139.8 min calculated for 0.039 af (88% of inflow)
Center-of-Mass det. time= 79.7 min (889.6 - 809.9)

Volume	Invert	Avail.Storage	Storage Description
#1	139.00'	1,118 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

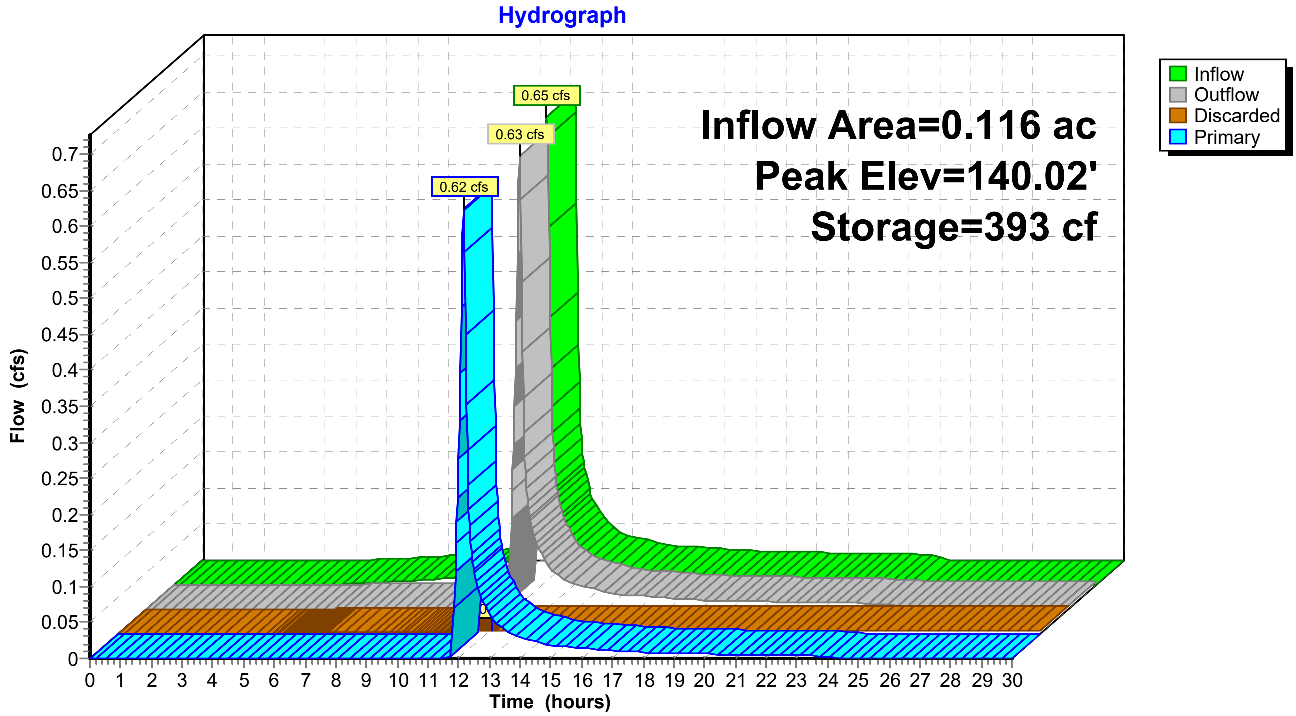
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.00	228	0	0
140.00	539	384	384
141.00	929	734	1,118

Device	Routing	Invert	Outlet Devices
#1	Primary	138.00'	**8.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 138.00' / 137.60' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Device 1	139.90'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	139.00'	**0.400 in/hr Exfiltration over Surface area**

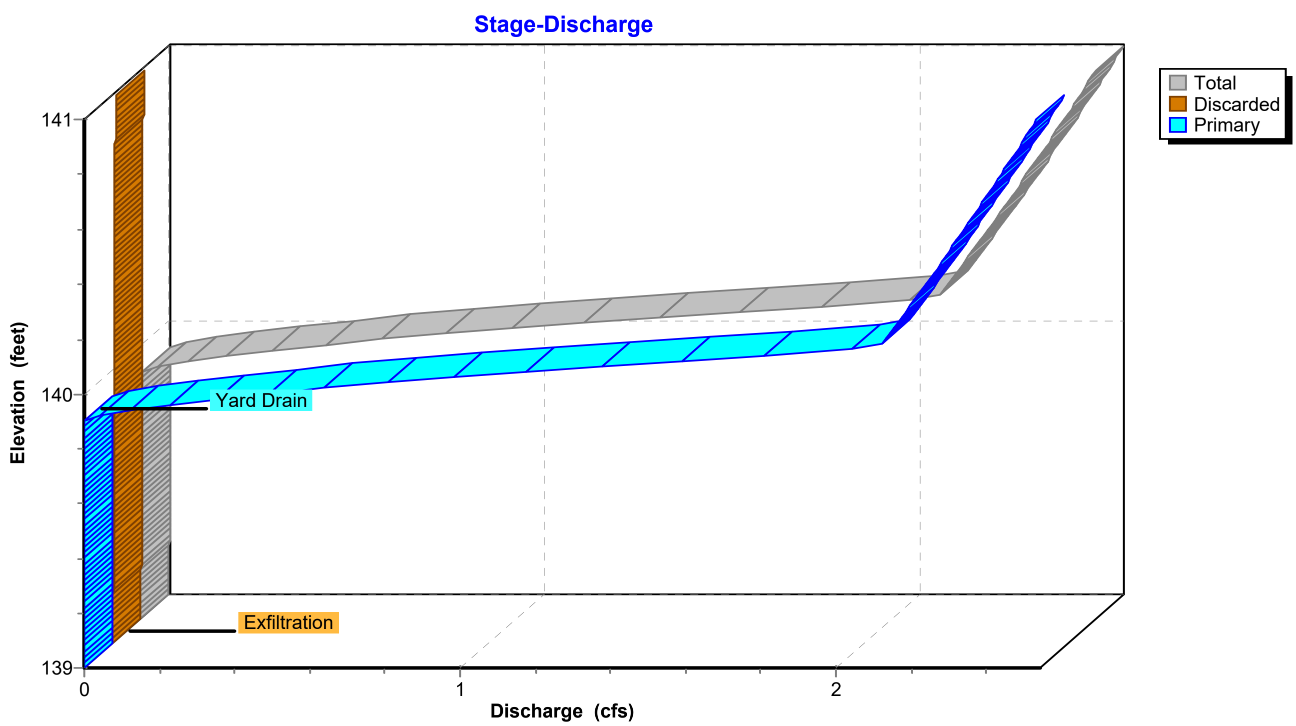
Discarded OutFlow Max=0.01 cfs @ 12.15 hrs HW=140.02' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.62 cfs @ 12.15 hrs HW=140.02' (Free Discharge)
└─**1=Culvert** (Passes 0.62 cfs of 2.03 cfs potential flow)
  └─**2=Yard Drain** (Weir Controls 0.62 cfs @ 1.12 fps)

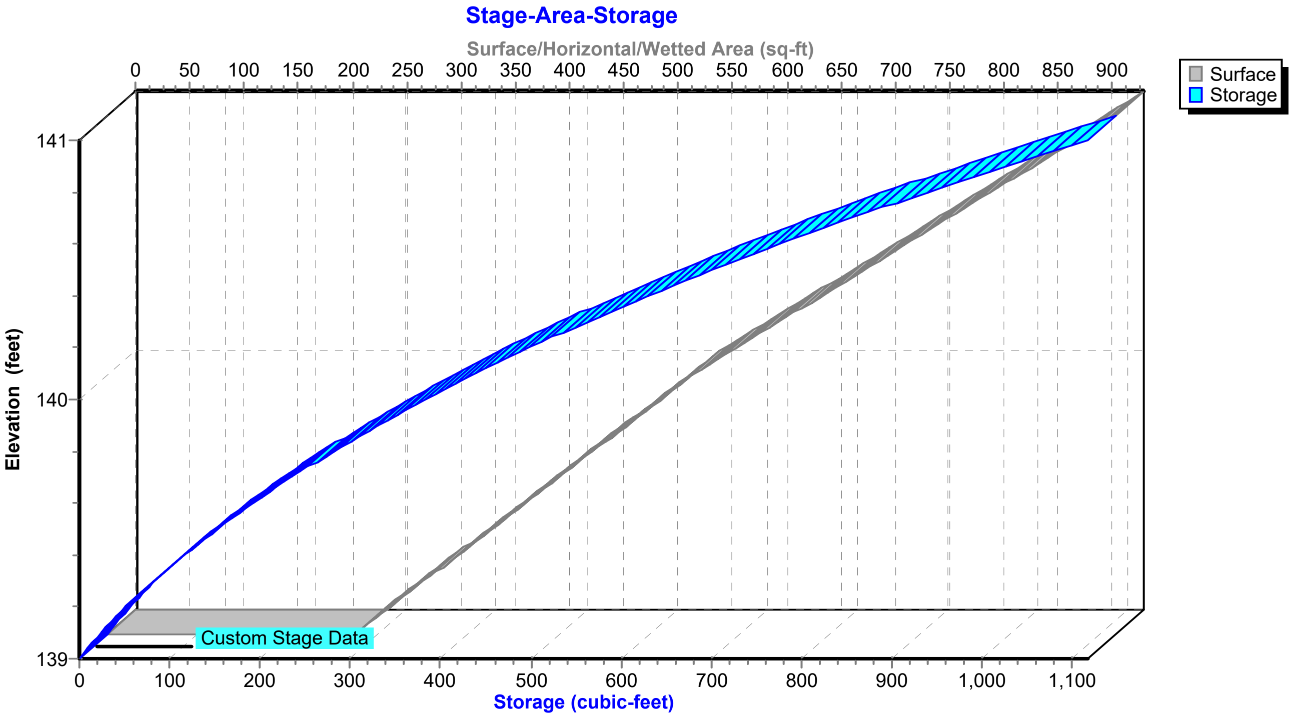
Pond B-1: South Basin



Pond B-1: South Basin



Pond B-1: South Basin



Summary for Pond B-2: North Basin

Inflow Area = 0.154 ac, 7.18% Impervious, Inflow Depth = 4.72" for 25-yr event
Inflow = 0.88 cfs @ 12.13 hrs, Volume= 0.061 af
Outflow = 0.78 cfs @ 12.16 hrs, Volume= 0.061 af, Atten= 11%, Lag= 2.2 min
Discarded = 0.03 cfs @ 12.16 hrs, Volume= 0.038 af
Primary = 0.76 cfs @ 12.16 hrs, Volume= 0.022 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 139.93' @ 12.16 hrs Surf.Area= 907 sf Storage= 699 cf

Plug-Flow detention time= 167.4 min calculated for 0.061 af (100% of inflow)
Center-of-Mass det. time= 167.5 min (974.4 - 806.9)

Volume	Invert	Avail.Storage	Storage Description
#1	139.00'	1,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

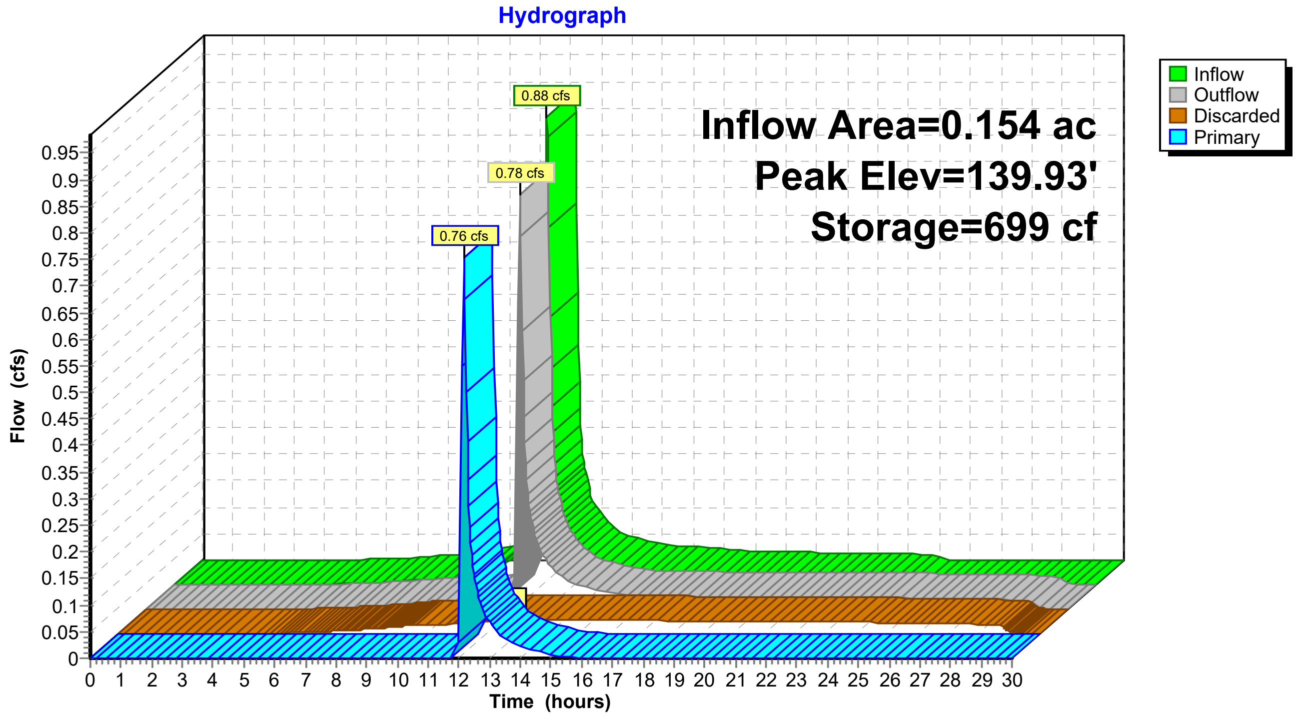
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.00	589	0	0
140.00	930	760	760
141.00	1,327	1,129	1,888

Device	Routing	Invert	Outlet Devices
#1	Primary	138.00'	**10.0" Round Culvert** L= 200.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 138.00' / 137.00' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf
#2	Device 1	139.80'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	139.00'	**1.250 in/hr Exfiltration over Surface area**

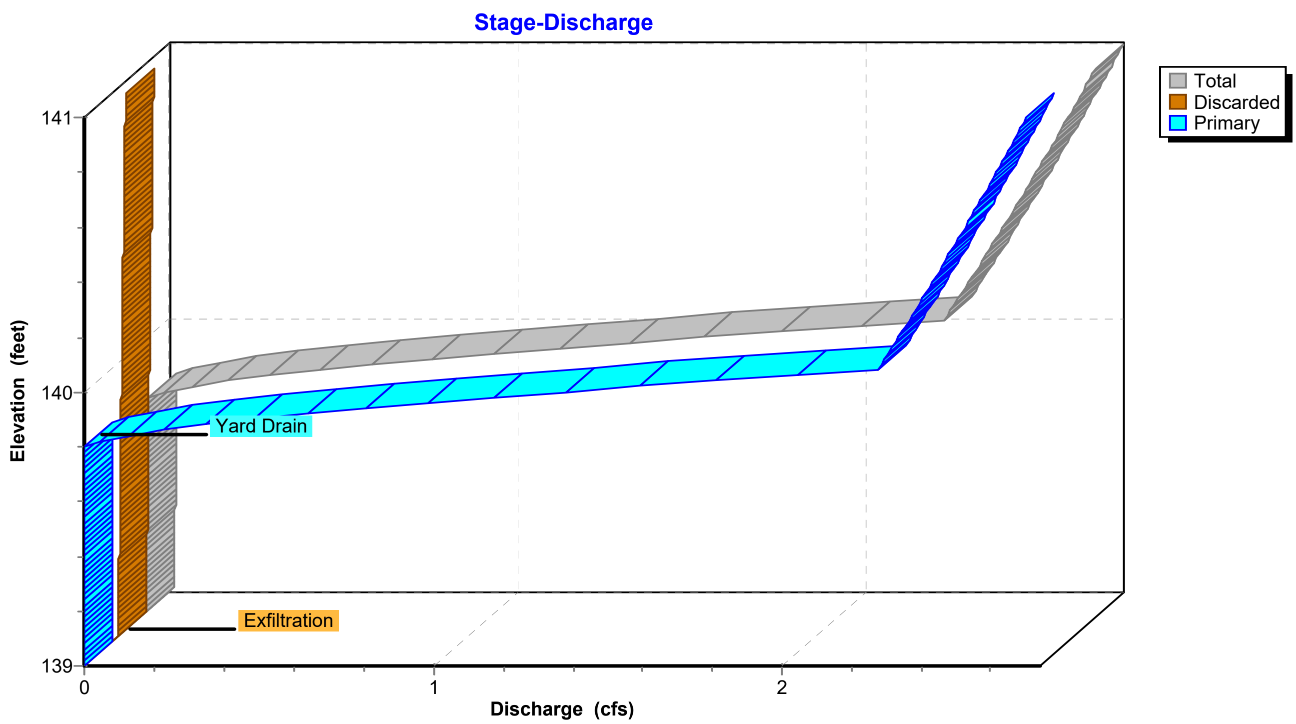
Discarded OutFlow Max=0.03 cfs @ 12.16 hrs HW=139.93' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.73 cfs @ 12.16 hrs HW=139.93' (Free Discharge)
└─**1=Culvert** (Passes 0.73 cfs of 2.20 cfs potential flow)
  └─**2=Yard Drain** (Weir Controls 0.73 cfs @ 1.18 fps)

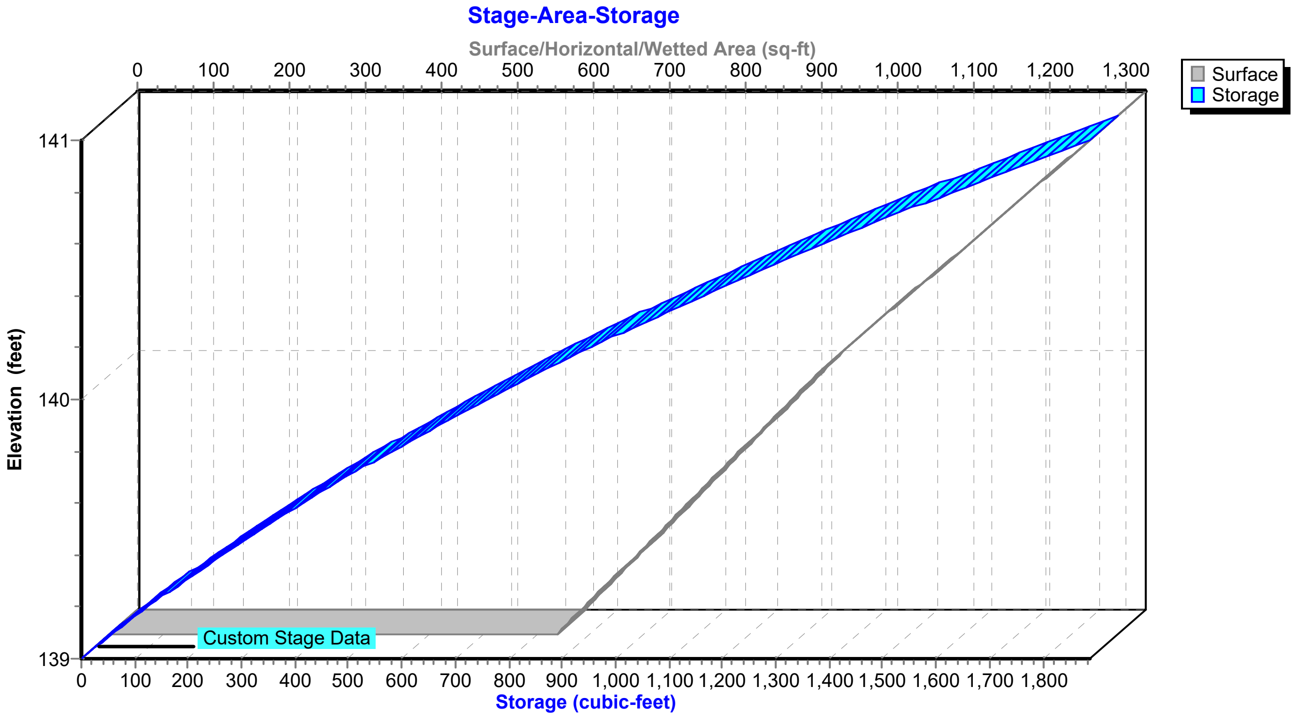
Pond B-2: North Basin



Pond B-2: North Basin



Pond B-2: North Basin



Summary for Pond S-1: Subsurface Infiltration System

Inflow Area = 0.554 ac, 58.45% Impervious, Inflow Depth = 5.44" for 25-yr event
Inflow = 3.45 cfs @ 12.13 hrs, Volume= 0.251 af
Outflow = 2.44 cfs @ 12.19 hrs, Volume= 0.220 af, Atten= 29%, Lag= 3.7 min
Discarded = 0.02 cfs @ 4.44 hrs, Volume= 0.035 af
Primary = 2.42 cfs @ 12.19 hrs, Volume= 0.185 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 144.48' @ 12.19 hrs Surf.Area= 0.039 ac Storage= 0.063 af

Plug-Flow detention time= 133.3 min calculated for 0.220 af (88% of inflow)
Center-of-Mass det. time= 72.7 min (853.0 - 780.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	142.00'	0.036 af	**11.00'W x 153.14'L x 3.50'H Field A**
			0.135 af Overall - 0.044 af Embedded = 0.091 af x 40.0% Voids
#2A	142.50'	0.044 af	**ADS_StormTech SC-740 +Cap** x 42 Inside #1
			Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
			Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
			42 Chambers in 2 Rows
		0.081 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	143.35'	**12.0" Round Culvert**
			L= 114.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 143.35' / 142.21' S= 0.0100 '/' Cc= 0.900
			n= 0.012, Flow Area= 0.79 sf
#2	Device 1	143.50'	**6.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	144.90'	**5.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#4	Discarded	142.00'	**0.400 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 4.44 hrs HW=142.04' (Free Discharge)
└─**4=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=2.41 cfs @ 12.19 hrs HW=144.47' (Free Discharge)
└─**1=Culvert** (Passes 2.41 cfs of 2.98 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 2.41 cfs @ 4.09 fps)
  └─**3=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)

Pond S-1: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

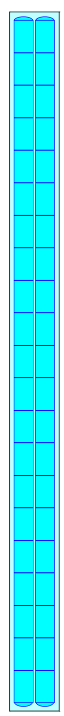
21 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 151.14' Row Length +12.0" End Stone x 2 = 153.14' Base Length
2 Rows x 51.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.00' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

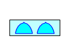
42 Chambers x 45.9 cf = 1,929.5 cf Chamber Storage

5,895.8 cf Field - 1,929.5 cf Chambers = 3,966.3 cf Stone x 40.0% Voids = 1,586.5 cf Stone Storage

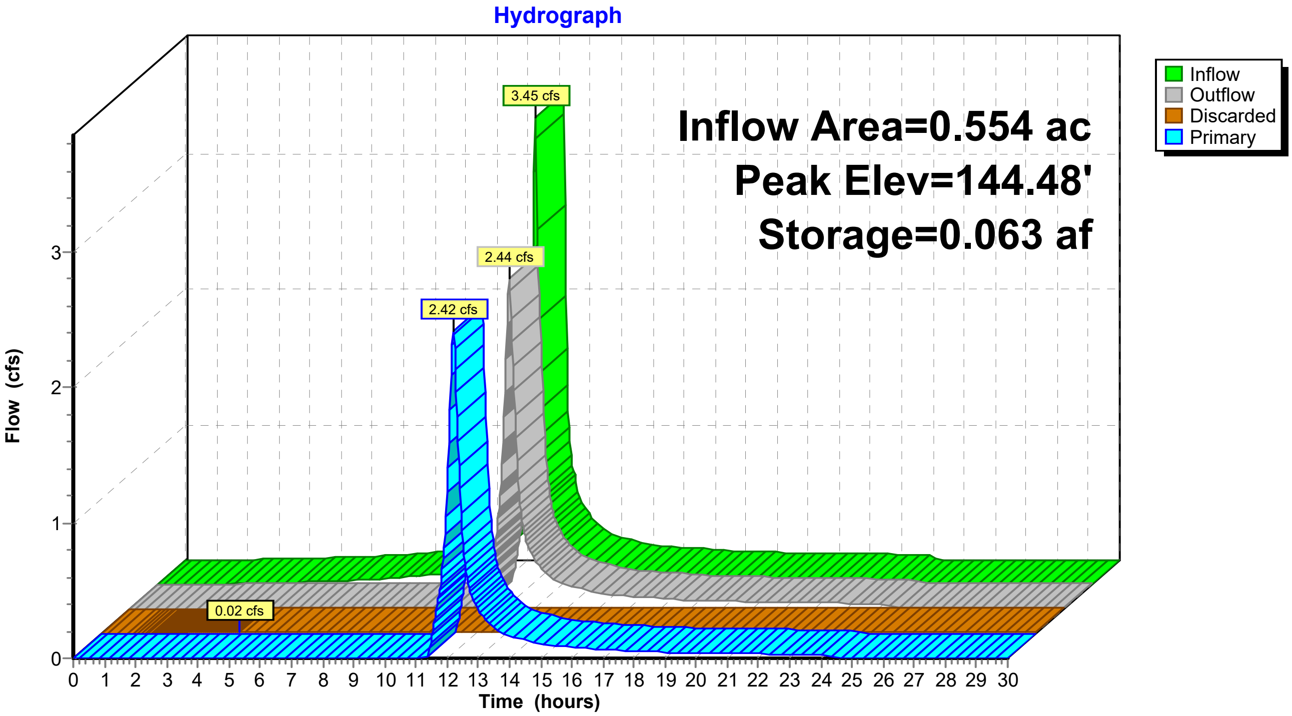
Chamber Storage + Stone Storage = 3,516.0 cf = 0.081 af
Overall Storage Efficiency = 59.6%
Overall System Size = 153.14' x 11.00' x 3.50'

42 Chambers
218.4 cy Field
146.9 cy Stone

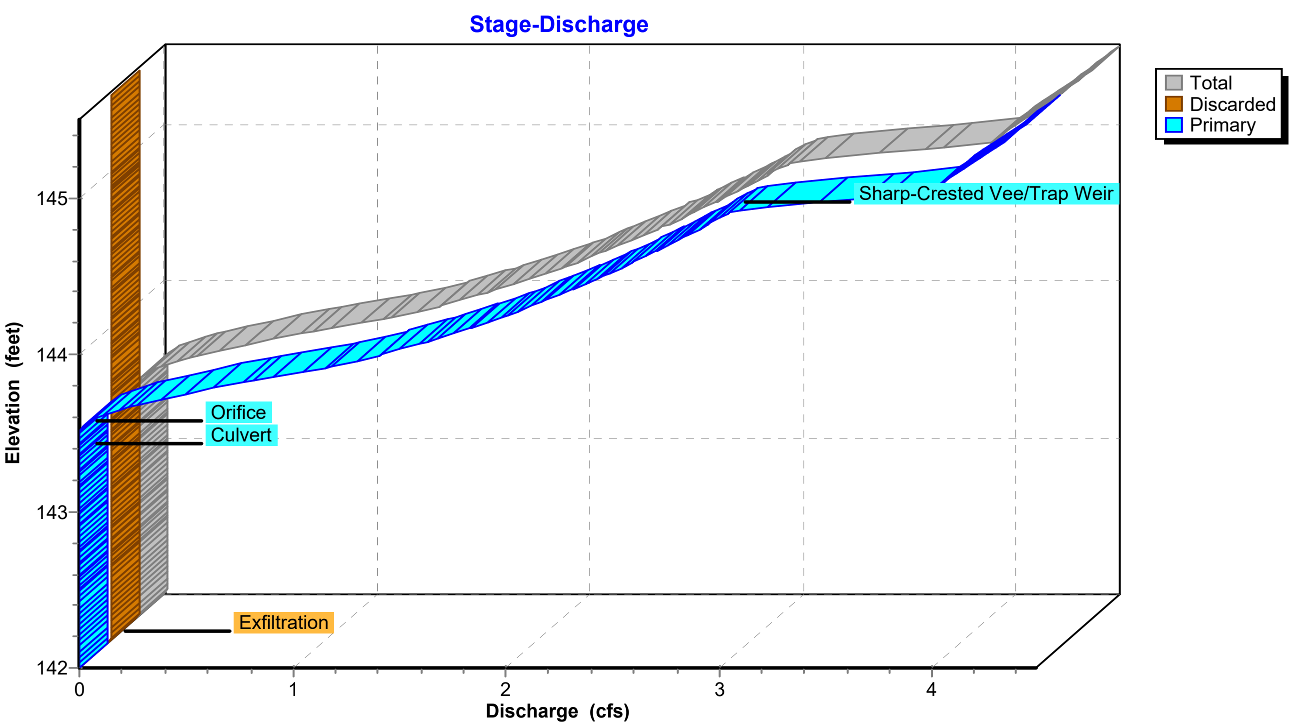




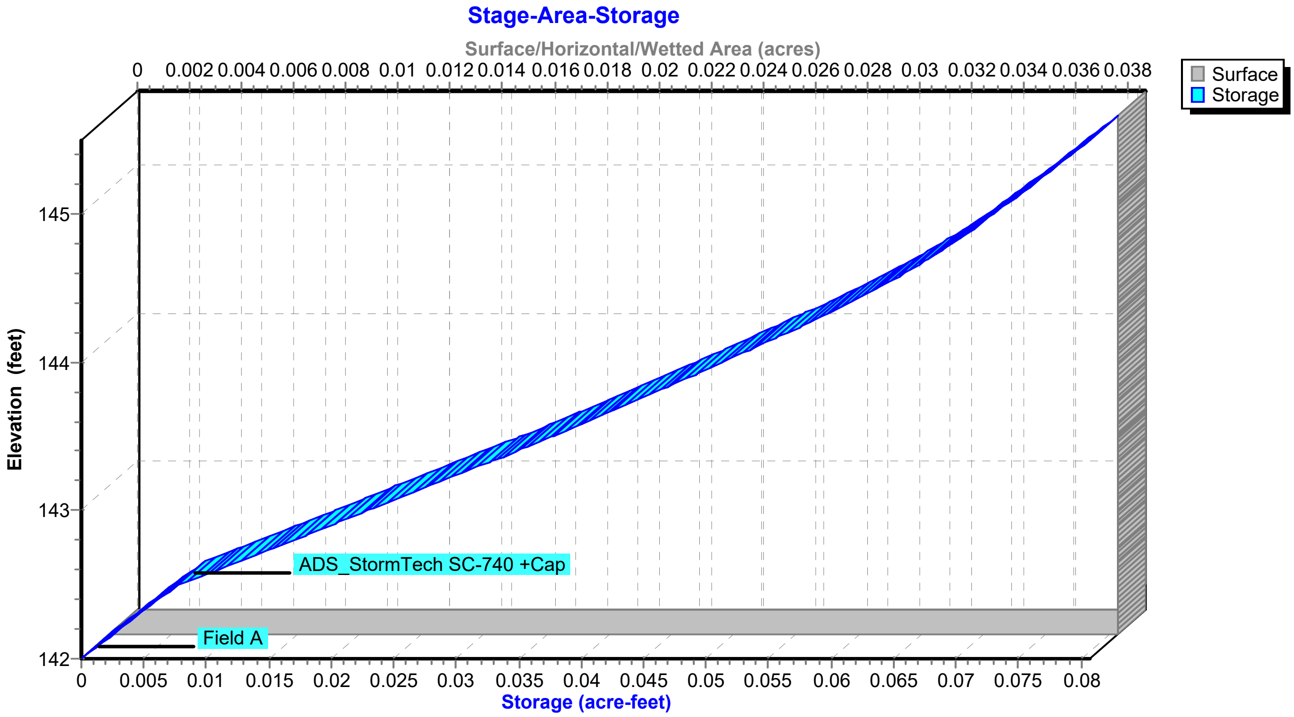
Pond S-1: Subsurface Infiltration System



Pond S-1: Subsurface Infiltration System



Pond S-1: Subsurface Infiltration System



Summary for Pond S-2: Subsurface Infiltration System

Inflow Area = 1.838 ac,100.00% Impervious, Inflow Depth = 6.32" for 25-yr event
Inflow = 4.54 cfs @ 11.95 hrs, Volume= 0.968 af
Outflow = 4.39 cfs @ 12.77 hrs, Volume= 0.968 af, Atten= 3%, Lag= 49.2 min
Discarded = 0.50 cfs @ 9.84 hrs, Volume= 0.649 af
Primary = 3.89 cfs @ 12.77 hrs, Volume= 0.319 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 144.92' @ 12.77 hrs Surf.Area= 0.091 ac Storage= 0.192 af

Plug-Flow detention time= 56.7 min calculated for 0.967 af (100% of inflow)
Center-of-Mass det. time= 56.6 min (804.5 - 747.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	141.50'	0.100 af	**30.00'W x 131.78'L x 4.00'H Field A** 0.363 af Overall - 0.114 af Embedded = 0.249 af x 40.0% Voids
#2A	142.50'	0.114 af	**ADS_StormTech SC-740 +Cap** x 108 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 108 Chambers in 6 Rows
		0.214 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	143.15'	**15.0" Round Culvert** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 143.15' / 142.69' S= 0.0061 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	143.64'	**7.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	144.90'	**5.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#4	Discarded	141.50'	**5.450 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.50 cfs @ 9.84 hrs HW=141.54' (Free Discharge)
└─**4=Exfiltration** (Exfiltration Controls 0.50 cfs)

Primary OutFlow Max=3.87 cfs @ 12.77 hrs HW=144.92' (Free Discharge)
└─**1=Culvert** (Passes 3.87 cfs of 5.63 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 3.83 cfs @ 4.78 fps)
  └─**3=Sharp-Crested Vee/Trap Weir** (Weir Controls 0.04 cfs @ 0.44 fps)

Pond S-2: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

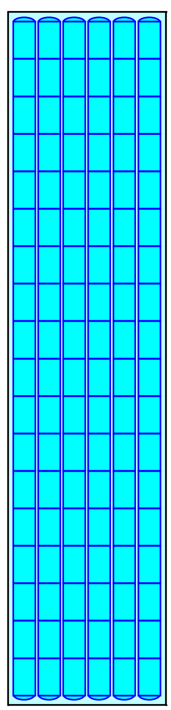
18 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 129.78' Row Length +12.0" End Stone x 2 = 131.78' Base Length
6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width
12.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 4.00' Field Height

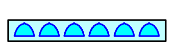
108 Chambers x 45.9 cf = 4,961.5 cf Chamber Storage

15,813.2 cf Field - 4,961.5 cf Chambers = 10,851.7 cf Stone x 40.0% Voids = 4,340.7 cf Stone Storage

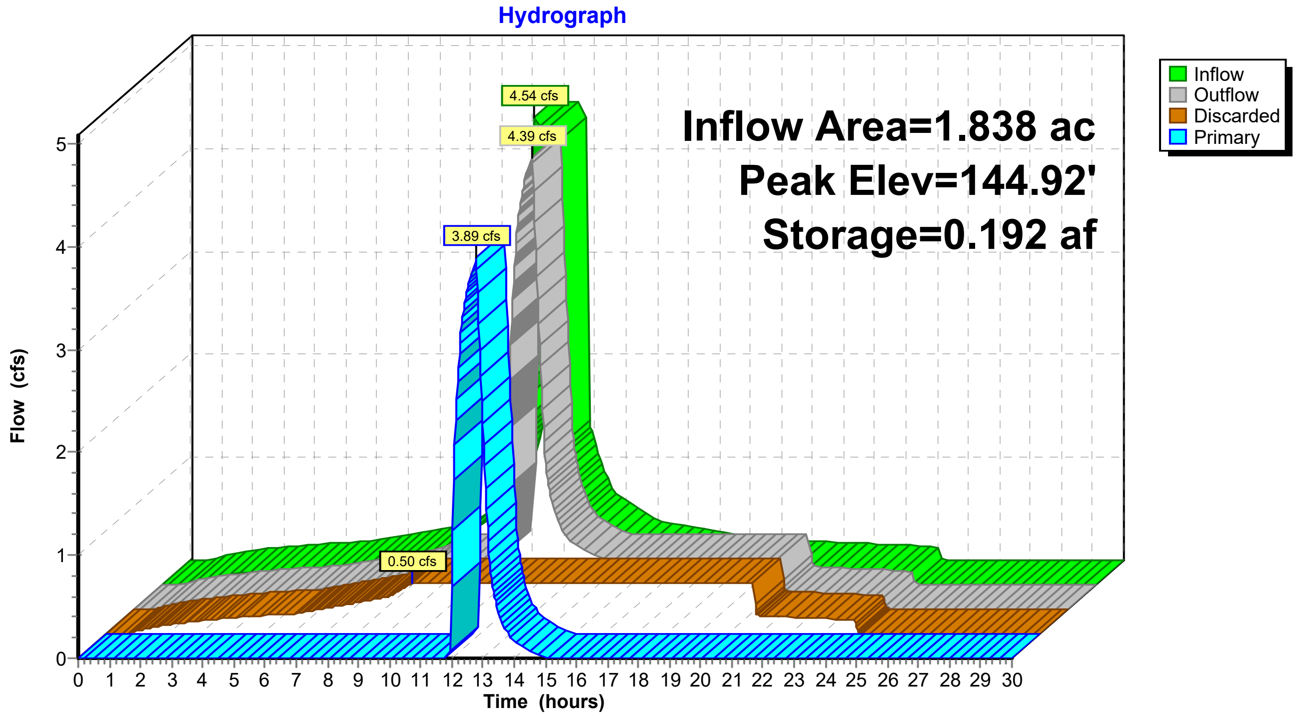
Chamber Storage + Stone Storage = 9,302.2 cf = 0.214 af
Overall Storage Efficiency = 58.8%
Overall System Size = 131.78' x 30.00' x 4.00'

108 Chambers
585.7 cy Field
401.9 cy Stone

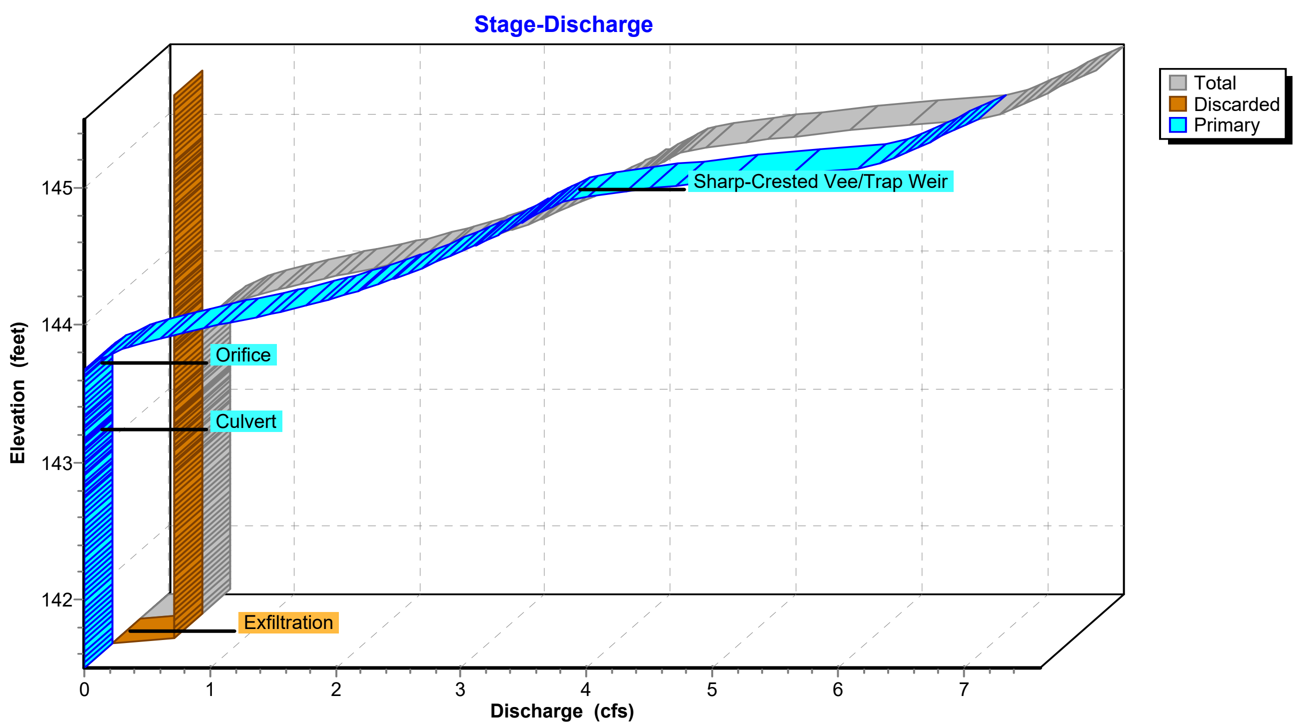




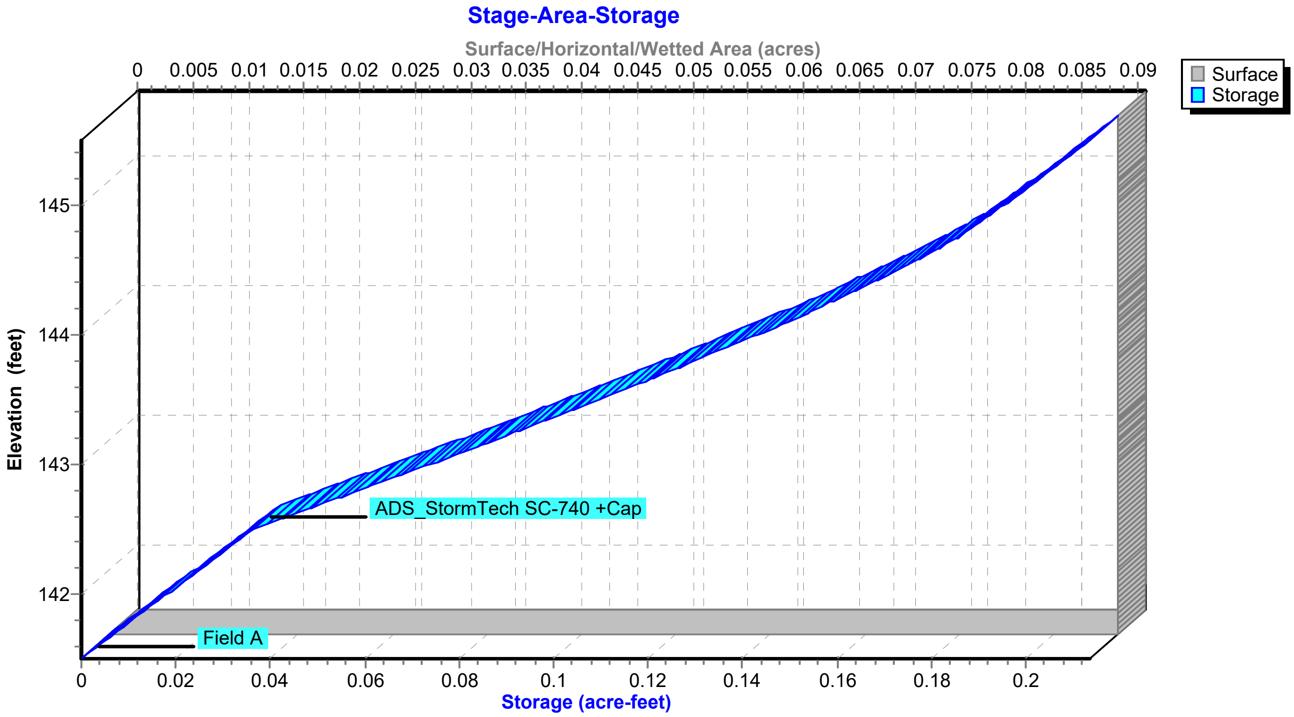
Pond S-2: Subsurface Infiltration System



Pond S-2: Subsurface Infiltration System



Pond S-2: Subsurface Infiltration System



Summary for Pond S-3: Subsurface Infiltration System

Inflow Area = 1.020 ac, 47.60% Impervious, Inflow Depth = 3.11" for 25-yr event
Inflow = 3.53 cfs @ 12.13 hrs, Volume= 0.264 af
Outflow = 2.00 cfs @ 12.21 hrs, Volume= 0.233 af, Atten= 43%, Lag= 5.3 min
Discarded = 0.05 cfs @ 7.17 hrs, Volume= 0.115 af
Primary = 1.94 cfs @ 12.21 hrs, Volume= 0.118 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 142.96' @ 12.21 hrs Surf.Area= 0.052 ac Storage= 0.089 af

Plug-Flow detention time= 198.5 min calculated for 0.233 af (88% of inflow)
Center-of-Mass det. time= 140.1 min (908.4 - 768.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	140.40'	0.047 af	**30.00'W x 74.82'L x 3.50'H Field A**
			0.180 af Overall - 0.063 af Embedded = 0.117 af x 40.0% Voids
#2A	140.90'	0.063 af	**ADS_StormTech SC-740 +Cap** x 60 Inside #1
			Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
			Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
			60 Chambers in 6 Rows
		0.110 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	141.84'	**12.0" Round Culvert**
			L= 75.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 141.84' / 141.19' S= 0.0087 '/' Cc= 0.900
			n= 0.012, Flow Area= 0.79 sf
#2	Device 1	142.10'	**7.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	143.30'	**5.0' long Weir Wall** Cv= 2.62 (C= 3.28)
#4	Discarded	140.40'	**1.050 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.05 cfs @ 7.17 hrs HW=140.44' (Free Discharge)
└─**4=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=1.94 cfs @ 12.21 hrs HW=142.96' (Free Discharge)
└─**1=Culvert** (Passes 1.94 cfs of 2.97 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 1.94 cfs @ 3.62 fps)
  └─**3=Weir Wall** (Controls 0.00 cfs)

Pond S-3: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

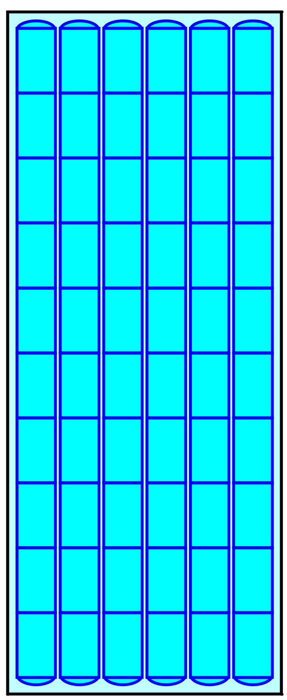
10 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 72.82' Row Length +12.0" End Stone x 2 = 74.82' Base Length
6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

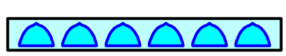
60 Chambers x 45.9 cf = 2,756.4 cf Chamber Storage

7,855.8 cf Field - 2,756.4 cf Chambers = 5,099.3 cf Stone x 40.0% Voids = 2,039.7 cf Stone Storage

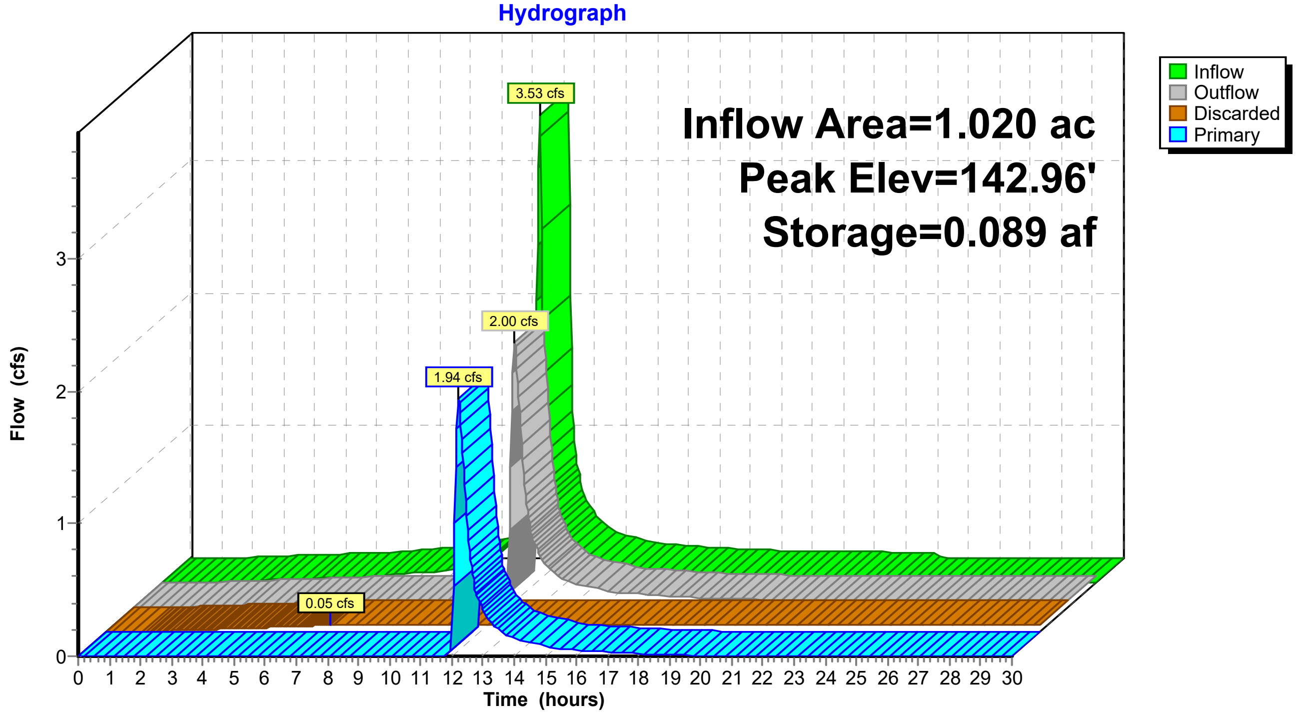
Chamber Storage + Stone Storage = 4,796.1 cf = 0.110 af
Overall Storage Efficiency = 61.1%
Overall System Size = 74.82' x 30.00' x 3.50'

60 Chambers
291.0 cy Field
188.9 cy Stone

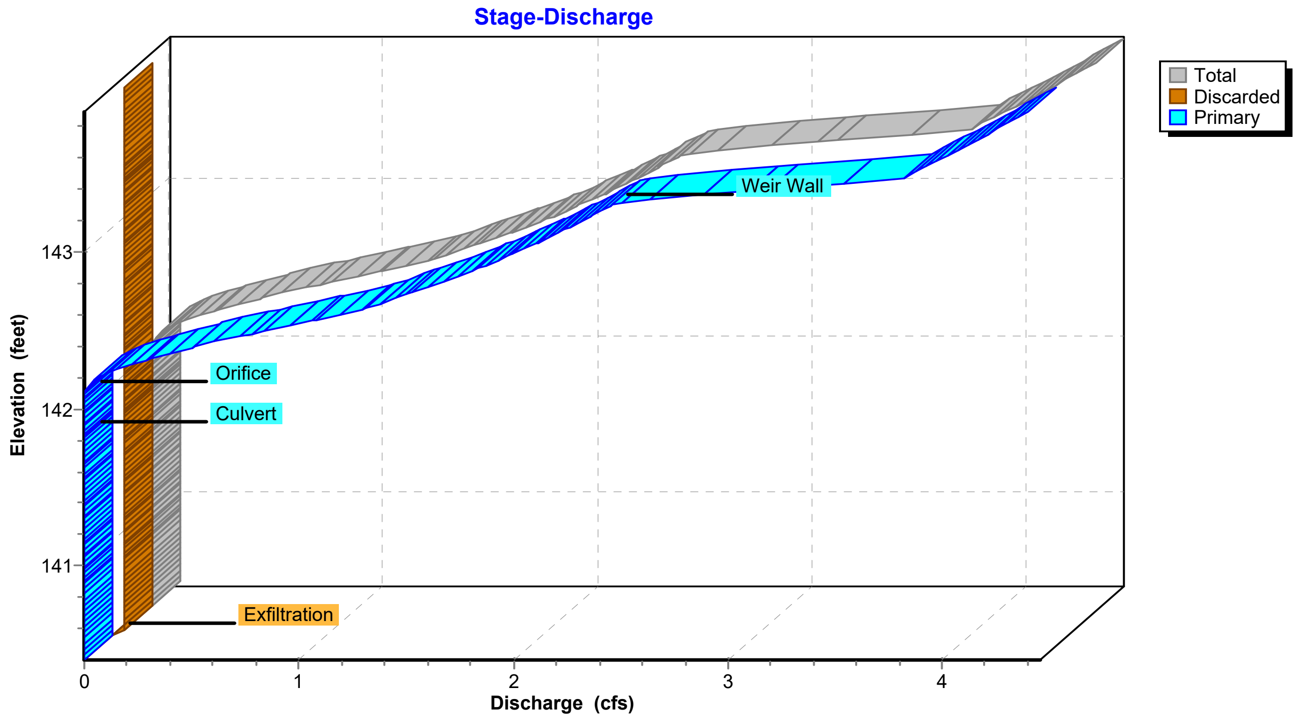




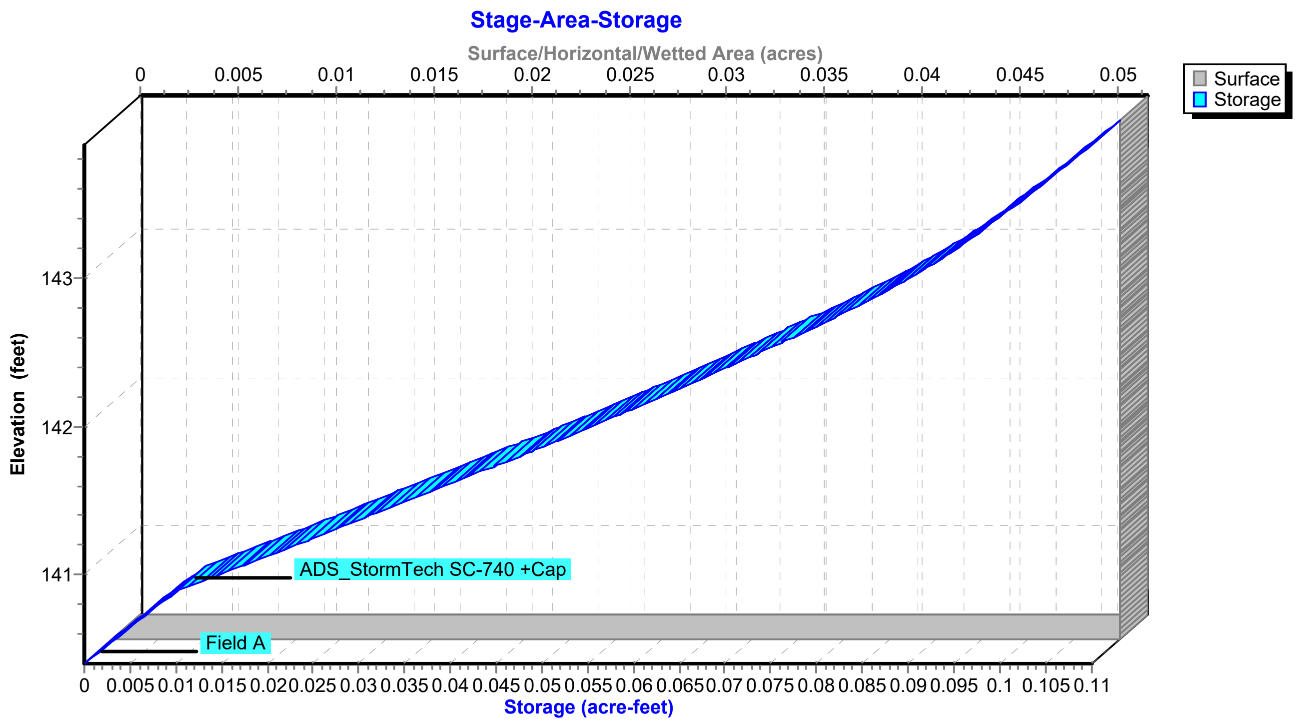
Pond S-3: Subsurface Infiltration System



Pond S-3: Subsurface Infiltration System



Pond S-3: Subsurface Infiltration System



Summary for Subcatchment PR-1: CCB 14

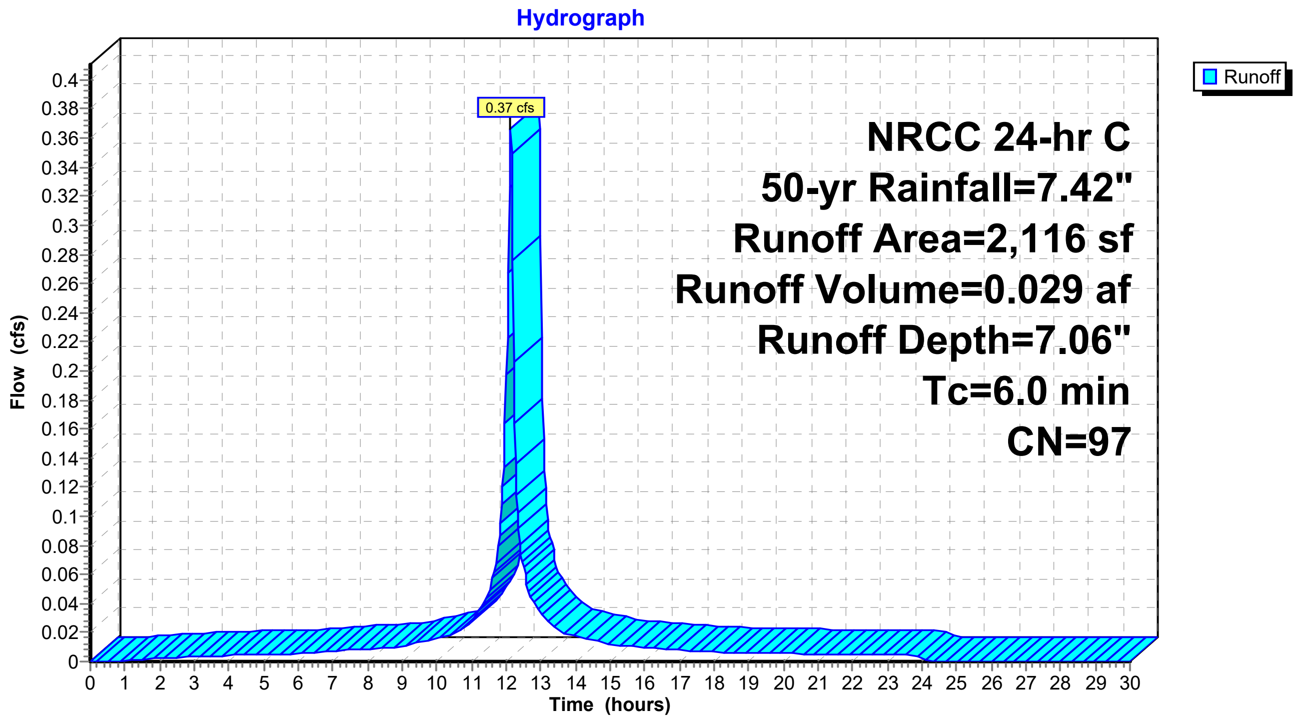
Runoff = 0.37 cfs @ 12.13 hrs, Volume= 0.029 af, Depth= 7.06"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
	2,045	98	Paved parking, HSG D
*	71	79	Landscaping, Good, HSG D
	2,116	97	Weighted Average
	71		3.36% Pervious Area
	2,045		96.64% Impervious Area

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

Subcatchment PR-1: CCB 14



Summary for Subcatchment PR-10: CCB 28

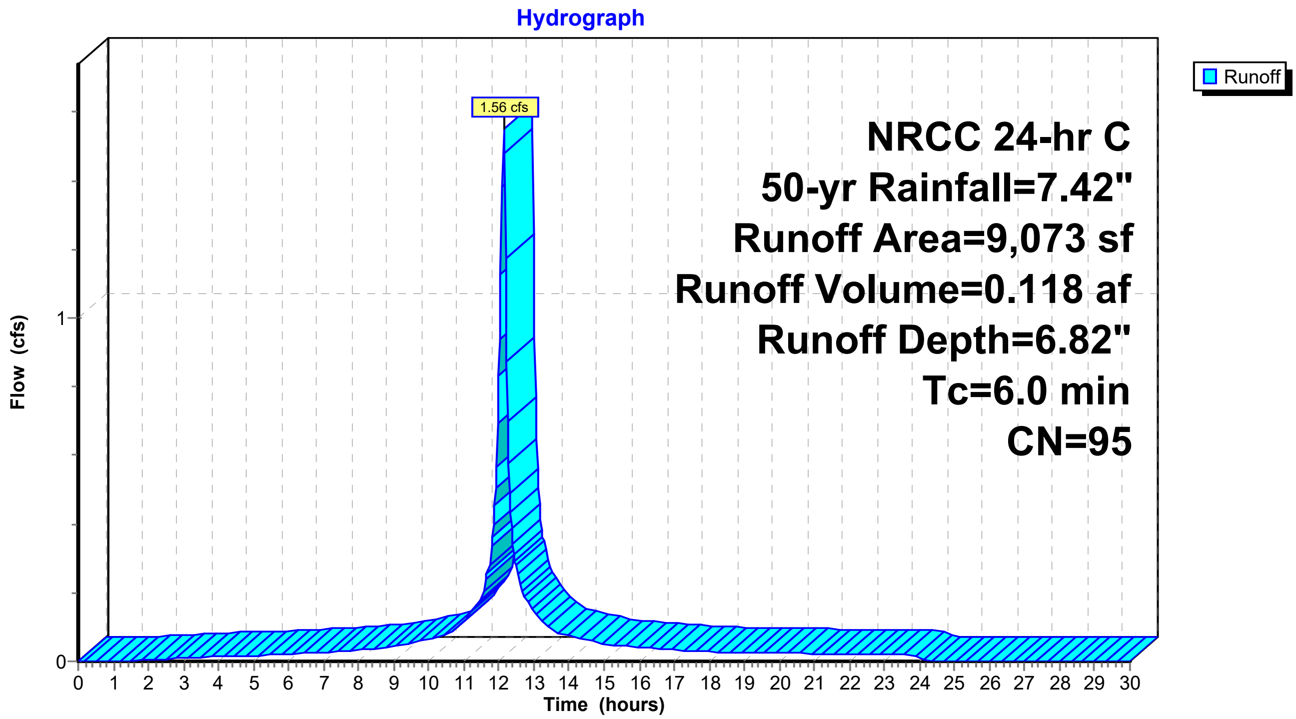
Runoff = 1.56 cfs @ 12.13 hrs, Volume= 0.118 af, Depth= 6.82"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
	7,450	98	Paved parking, HSG D
	440	80	>75% Grass cover, Good, HSG D
*	1,183	79	Landscaping, Good, HSG D
	9,073	95	Weighted Average
	1,623		17.89% Pervious Area
	7,450		82.11% Impervious Area

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

Subcatchment PR-10: CCB 28



Summary for Subcatchment PR-11: Building Roof

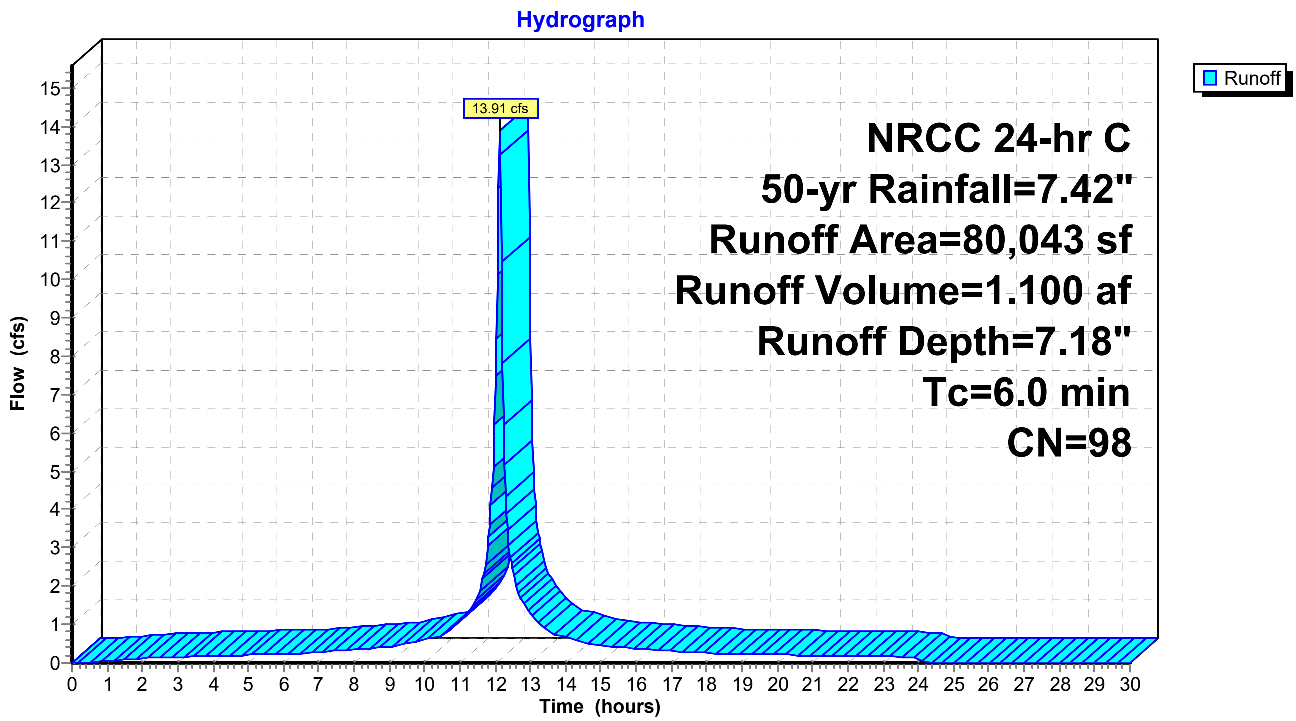
Runoff = 13.91 cfs @ 12.13 hrs, Volume= 1.100 af, Depth= 7.18"
Routed to Reach R1 : Roof Leader

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

Area (sf)	CN	Description
80,043	98	Roofs, HSG D
80,043		100.00% Impervious Area

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

Subcatchment PR-11: Building Roof



Summary for Subcatchment PR-12: CCB 29

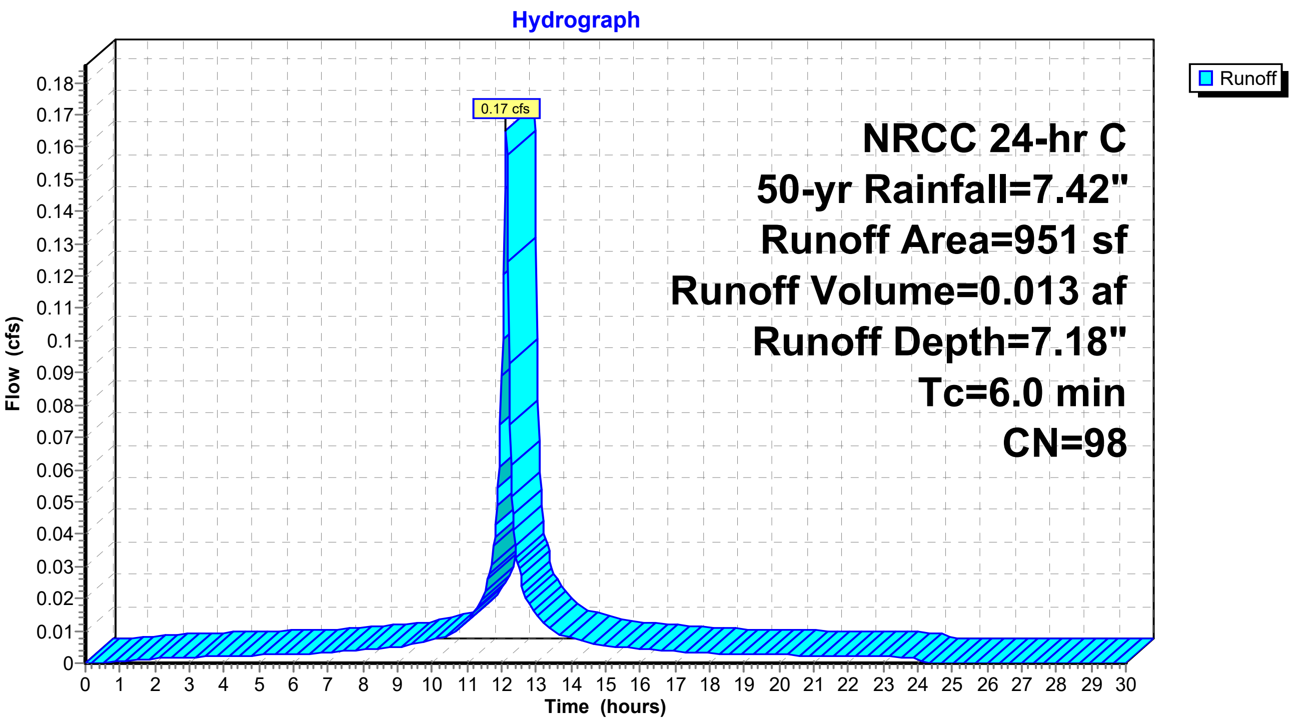
Runoff = 0.17 cfs @ 12.13 hrs, Volume= 0.013 af, Depth= 7.18"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

Area (sf)	CN	Description
951	98	Paved parking, HSG D
951		100.00% Impervious Area

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

Subcatchment PR-12: CCB 29



Summary for Subcatchment PR-13: CCB 30

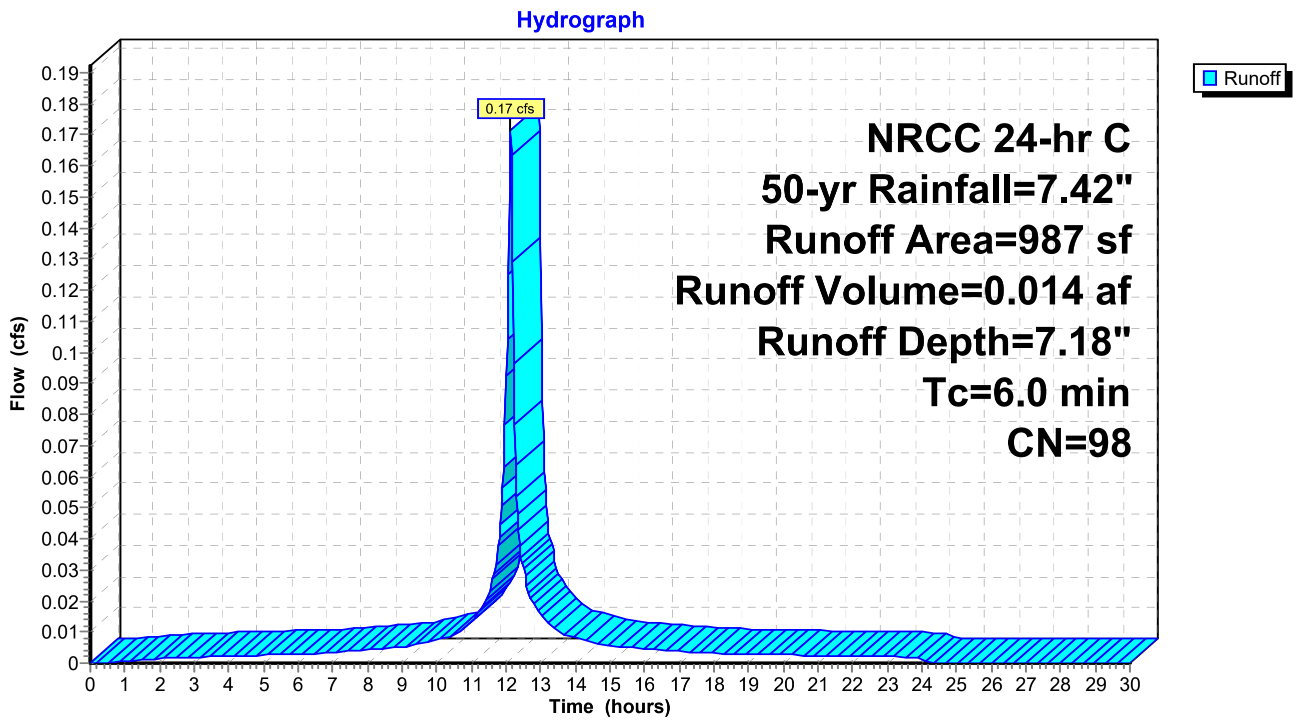
Runoff = 0.17 cfs @ 12.13 hrs, Volume= 0.014 af, Depth= 7.18"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

Area (sf)	CN	Description
987	98	Paved parking, HSG D
987		100.00% Impervious Area

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

Subcatchment PR-13: CCB 30



Summary for Subcatchment PR-14: CLCB-10

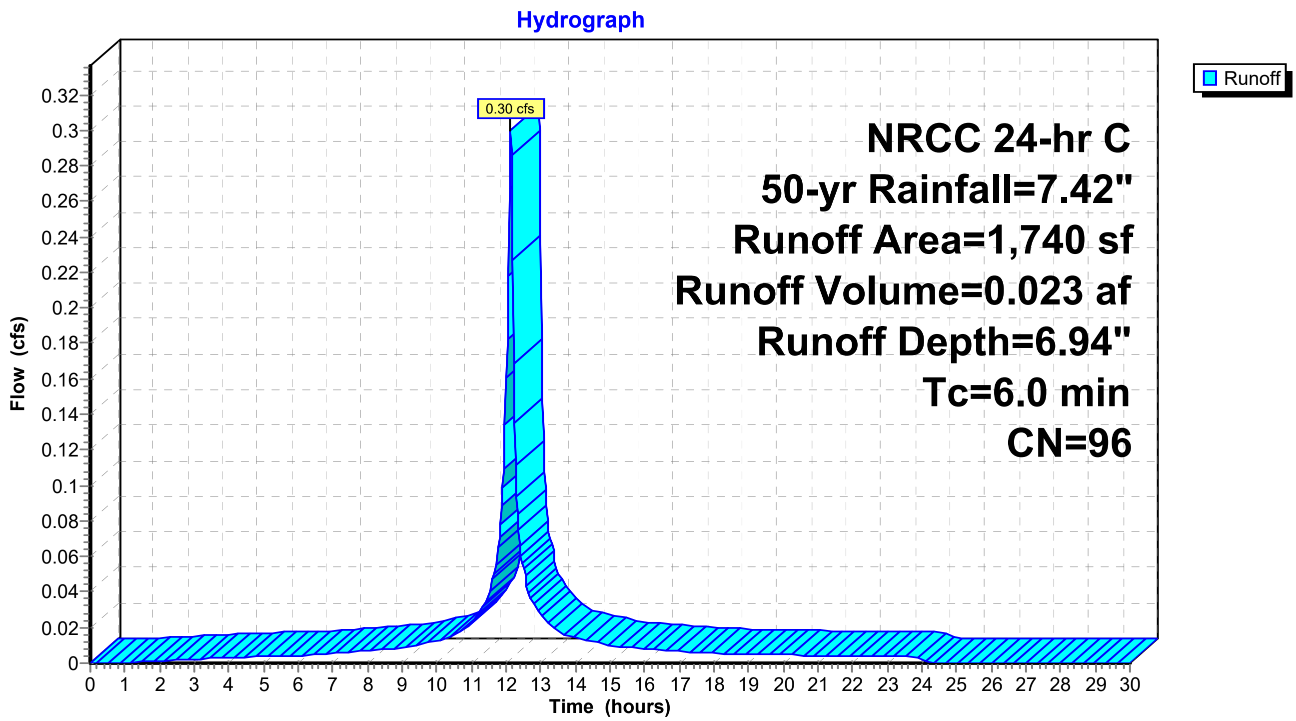
Runoff = 0.30 cfs @ 12.13 hrs, Volume= 0.023 af, Depth= 6.94"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
*	1,740	96	Concrete paver, HSG D
	1,740		100.00% Pervious Area

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

Subcatchment PR-14: CLCB-10



Summary for Subcatchment PR-15: CLCB-09

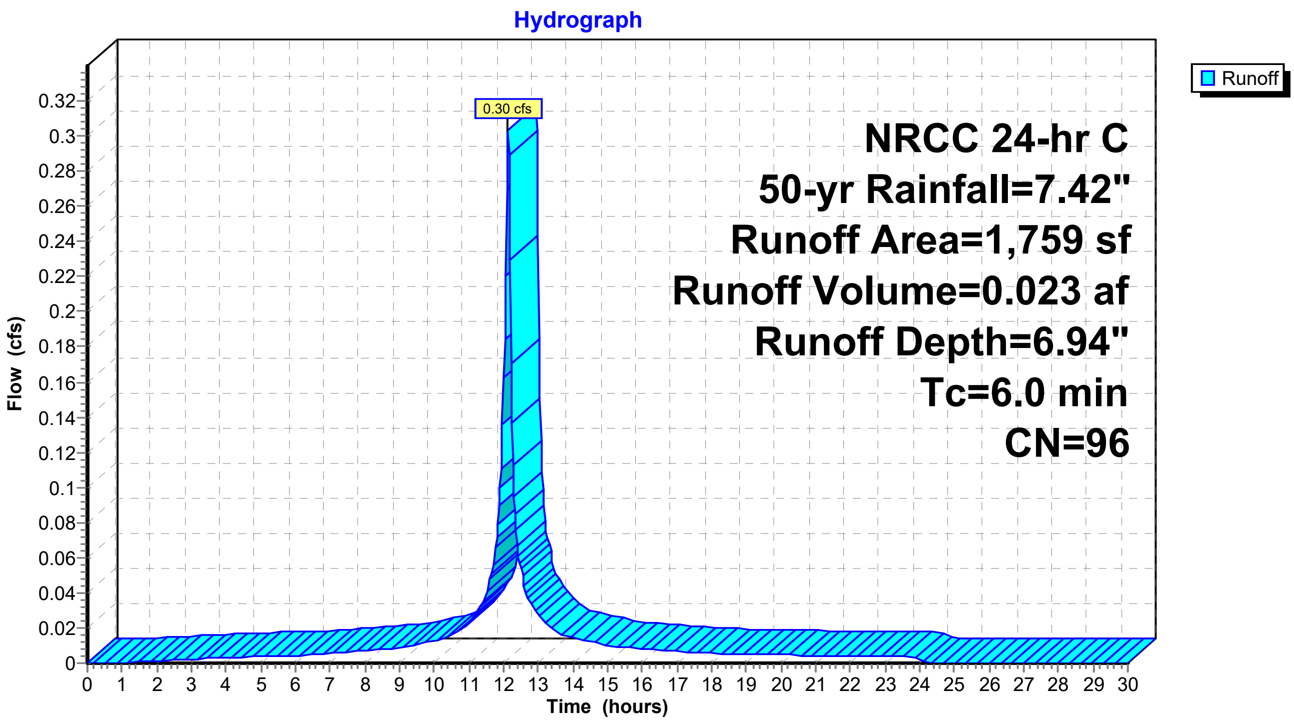
Runoff = 0.30 cfs @ 12.13 hrs, Volume= 0.023 af, Depth= 6.94"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
*	1,759	96	Pevious paver, HSG D
	1,759		100.00% Pervious Area

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

Subcatchment PR-15: CLCB-09



Summary for Subcatchment PR-16: East rooftop to Front Rain Garden

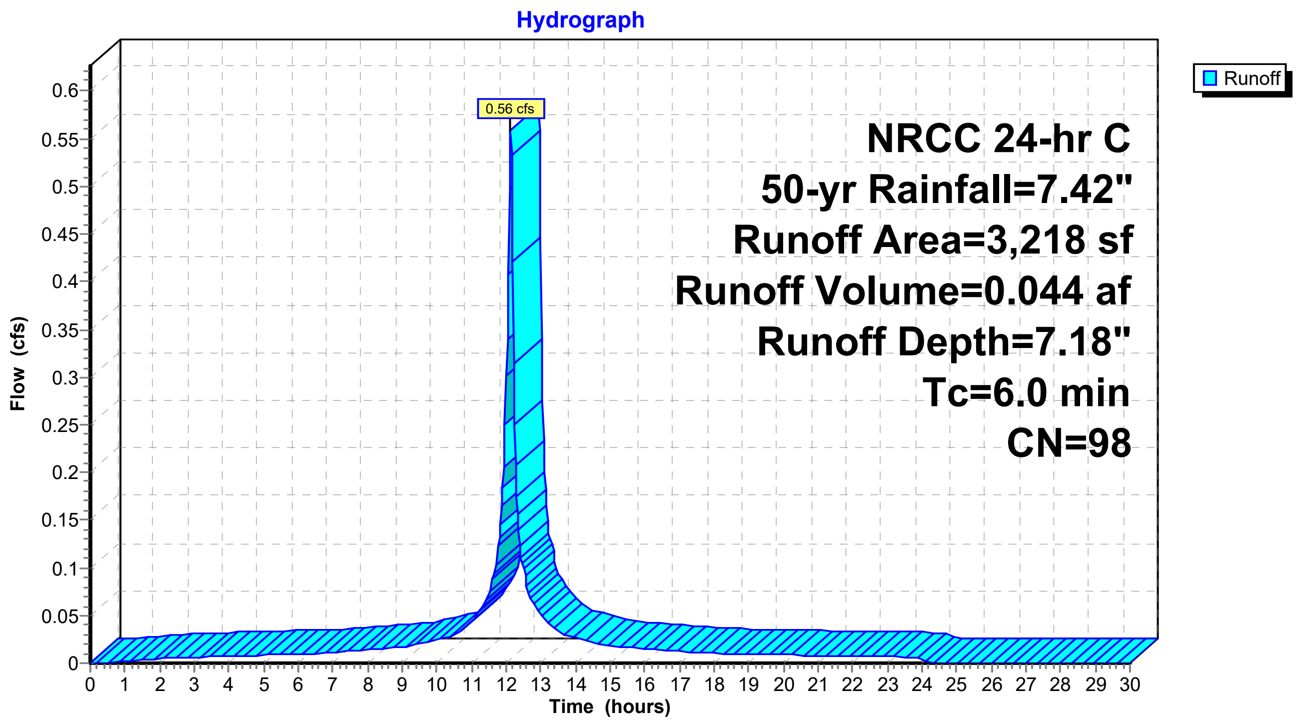
Runoff = 0.56 cfs @ 12.13 hrs, Volume= 0.044 af, Depth= 7.18"
Routed to Pond AP-2 : Front Lawn Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

Area (sf)	CN	Description
3,218	98	Roofs, HSG D
3,218		100.00% Impervious Area

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

Subcatchment PR-16: East rooftop to Front Rain Garden



Summary for Subcatchment PR-17: Front Lawn

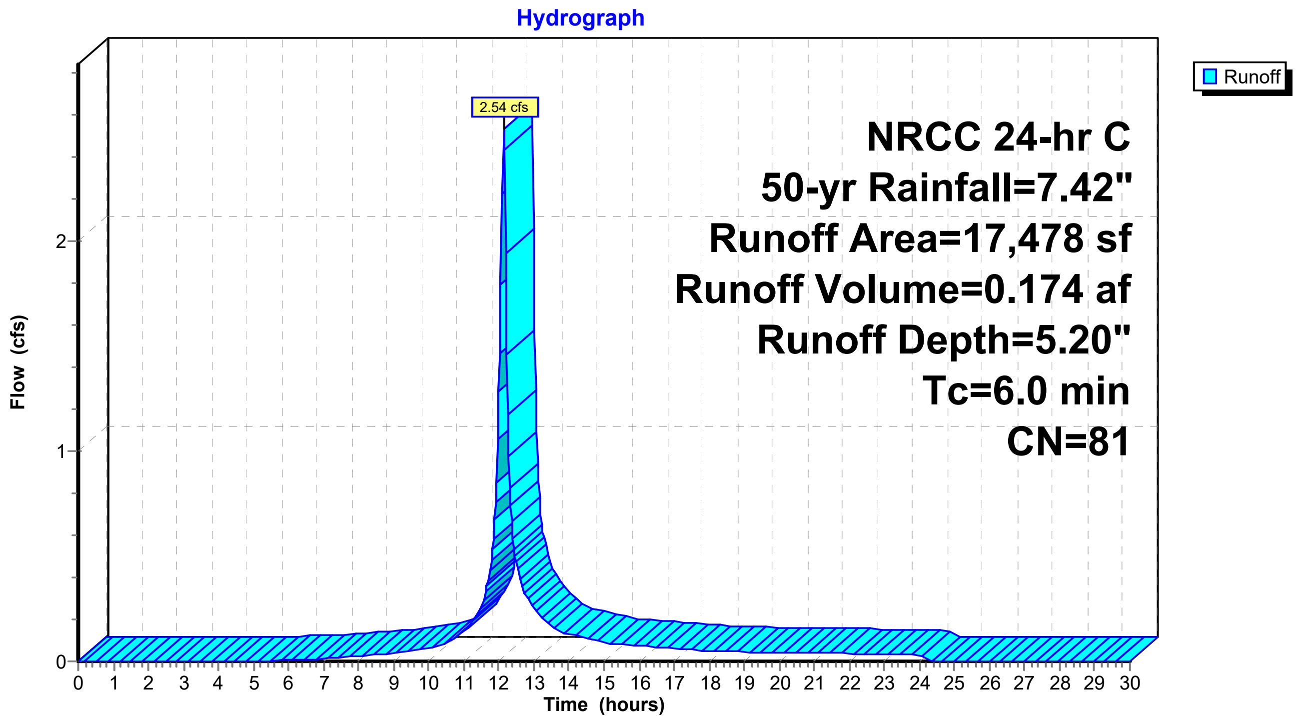
Runoff = 2.54 cfs @ 12.13 hrs, Volume= 0.174 af, Depth= 5.20"
Routed to Pond AP-2 : Front Lawn Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
	1,883	98	Paved parking, HSG D
	6,950	80	>75% Grass cover, Good, HSG D
*	8,645	79	Landscaping, Good, HSG D
	17,478	81	Weighted Average
	15,595		89.23% Pervious Area
	1,883		10.77% Impervious Area

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

Subcatchment PR-17: Front Lawn



Summary for Subcatchment PR-18: CCB-08

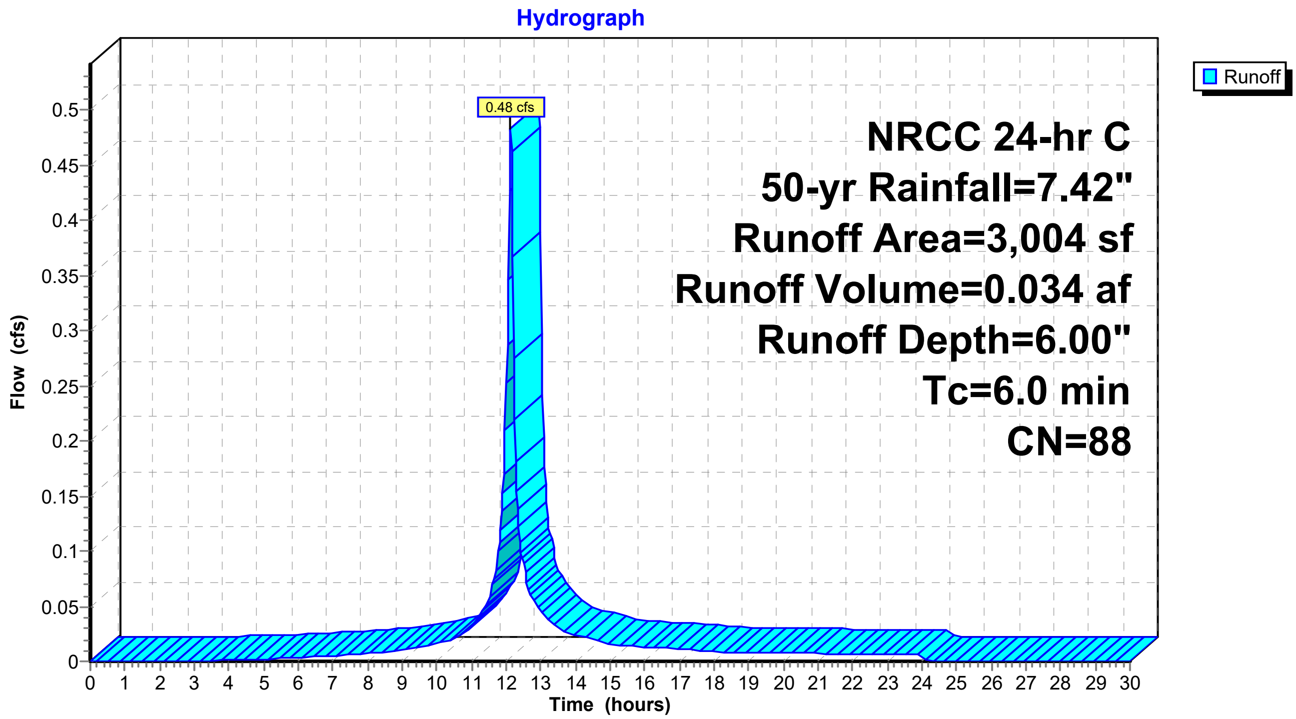
Runoff = 0.48 cfs @ 12.13 hrs, Volume= 0.034 af, Depth= 6.00"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
	1,482	98	Paved parking, HSG D
	192	80	>75% Grass cover, Good, HSG D
*	1,330	79	Landscaping, Good, HSG D
	3,004	88	Weighted Average
	1,522		50.67% Pervious Area
	1,482		49.33% Impervious Area

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

Subcatchment PR-18: CCB-08



Summary for Subcatchment PR-19: CCB-07

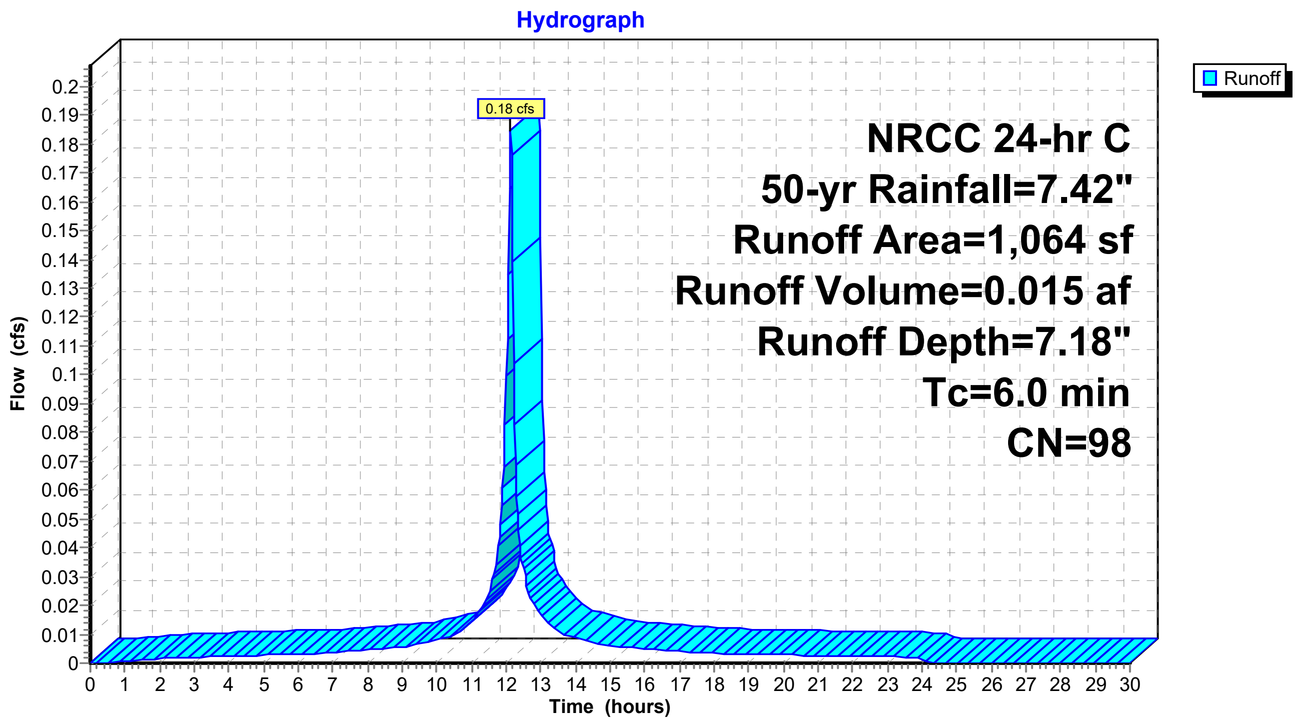
Runoff = 0.18 cfs @ 12.13 hrs, Volume= 0.015 af, Depth= 7.18"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

Area (sf)	CN	Description
1,064	98	Paved parking, HSG D
1,064		100.00% Impervious Area

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

Subcatchment PR-19: CCB-07



Summary for Subcatchment PR-2: CCB 10

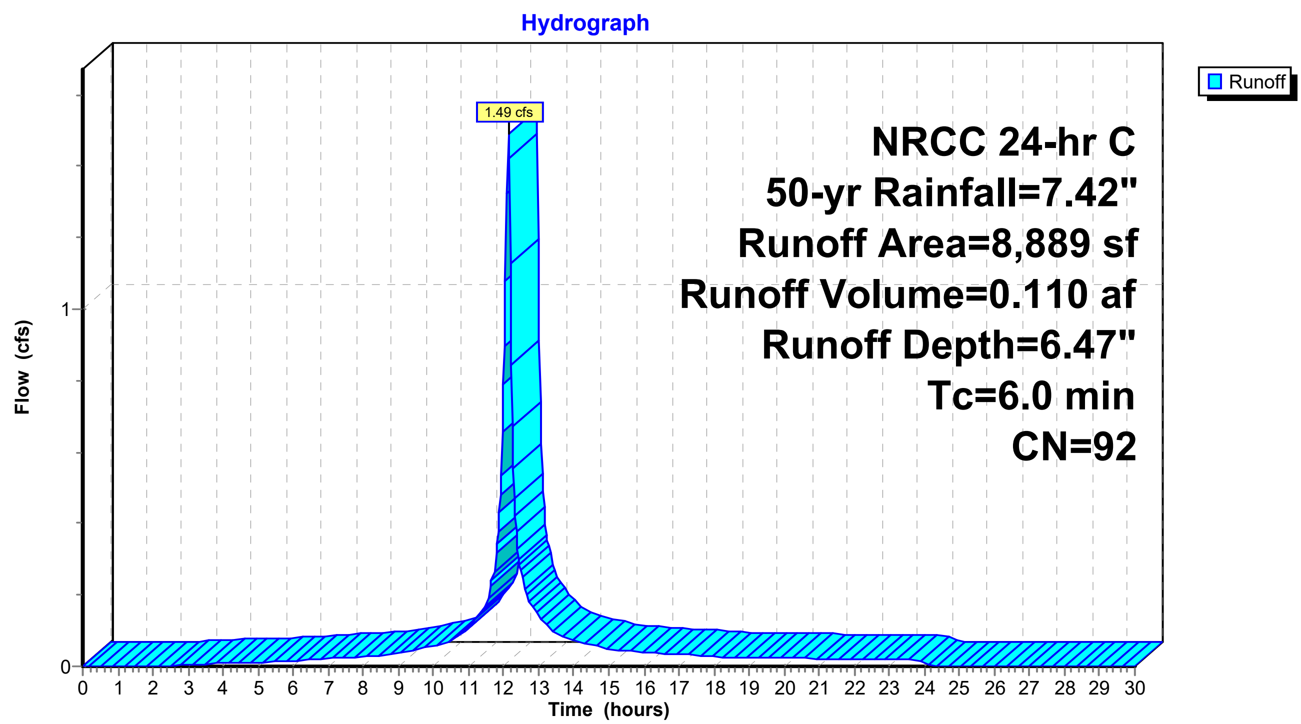
Runoff = 1.49 cfs @ 12.13 hrs, Volume= 0.110 af, Depth= 6.47"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
*	6,733	98	Paved parking, HSG C
*	1,772	72	Landscaping, Good, HSG C
	384	74	>75% Grass cover, Good, HSG C
	8,889	92	Weighted Average
	2,156		24.25% Pervious Area
	6,733		75.75% Impervious Area

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

Subcatchment PR-2: CCB 10



Summary for Subcatchment PR-20: South of entrance drive

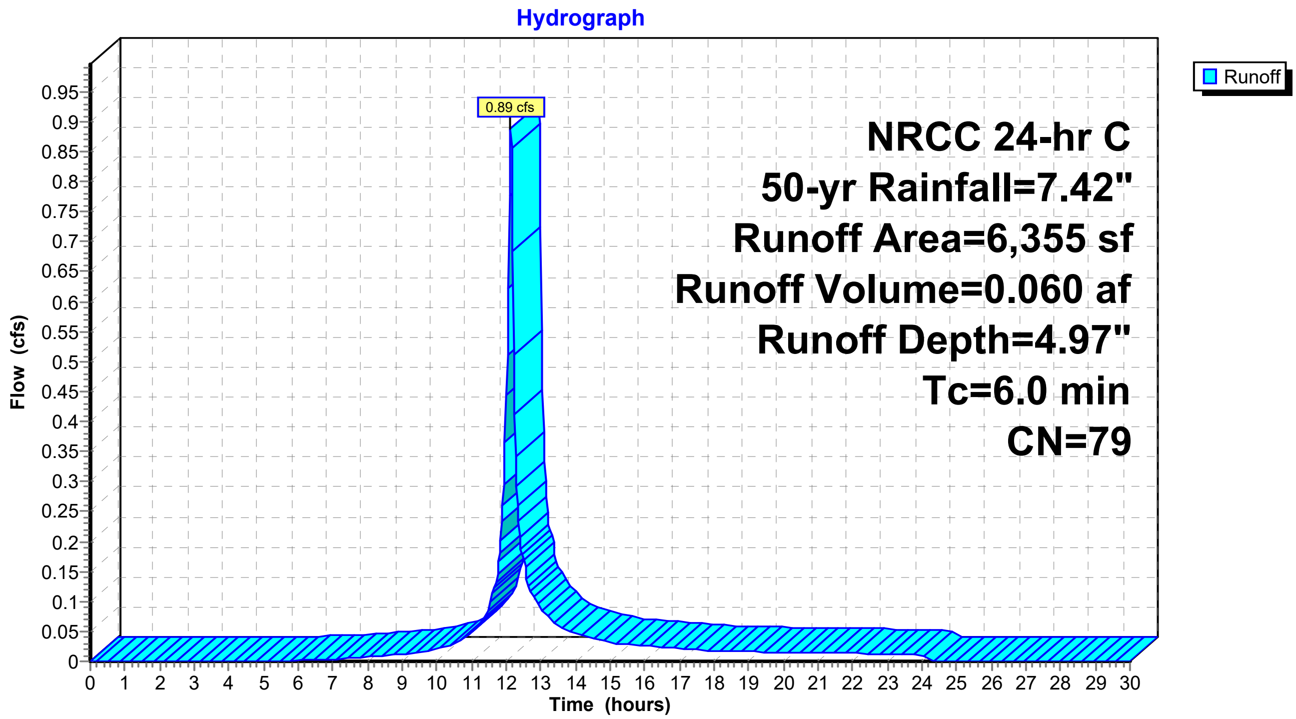
Runoff = 0.89 cfs @ 12.13 hrs, Volume= 0.060 af, Depth= 4.97"
Routed to Pond AP-4 : Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
	93	98	Paved parking, HSG D
	755	80	>75% Grass cover, Good, HSG D
*	5,507	79	Landscaping, Good, HSG D
	6,355	79	Weighted Average
	6,262		98.54% Pervious Area
	93		1.46% Impervious Area

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

Subcatchment PR-20: South of entrance drive



Summary for Subcatchment PR-21: Danbury Rd

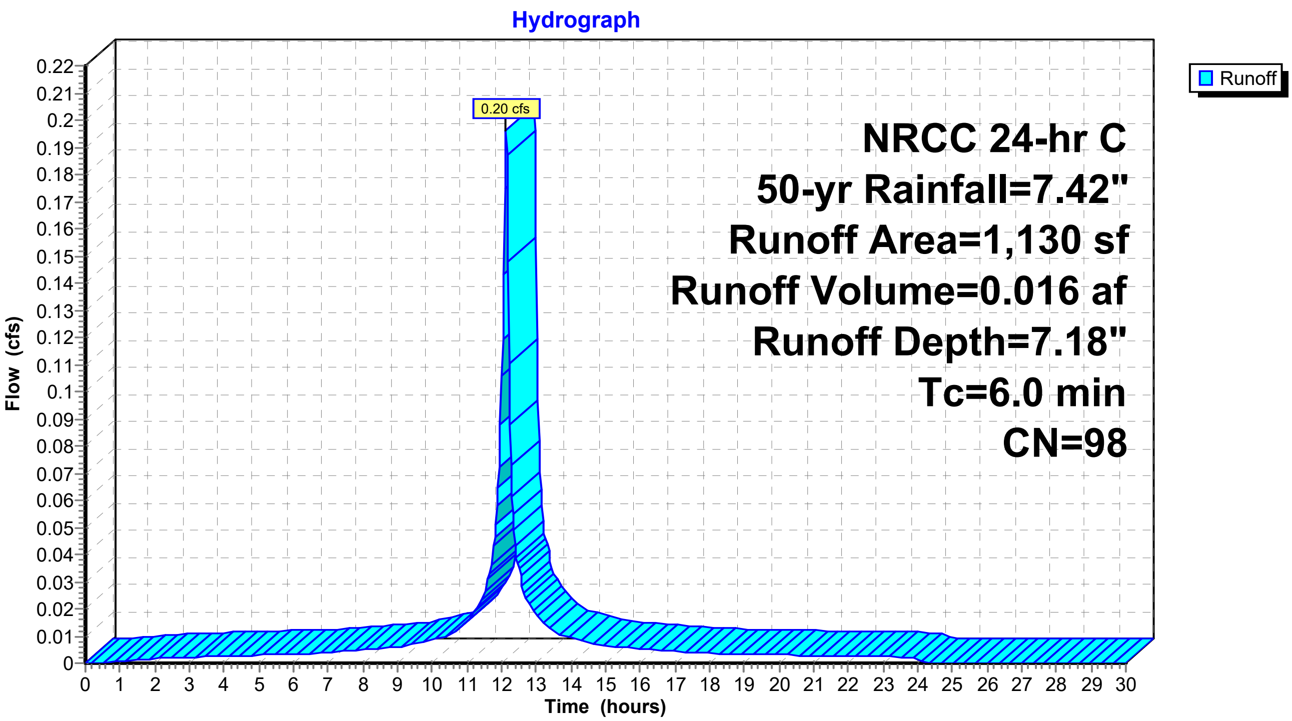
Runoff = 0.20 cfs @ 12.13 hrs, Volume= 0.016 af, Depth= 7.18"
Routed to Pond AP-3 : Danbury Road

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

Area (sf)	CN	Description
1,130	98	Paved parking, HSG D
1,130		100.00% Impervious Area

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

Subcatchment PR-21: Danbury Rd



Summary for Subcatchment PR-3: CCB 07

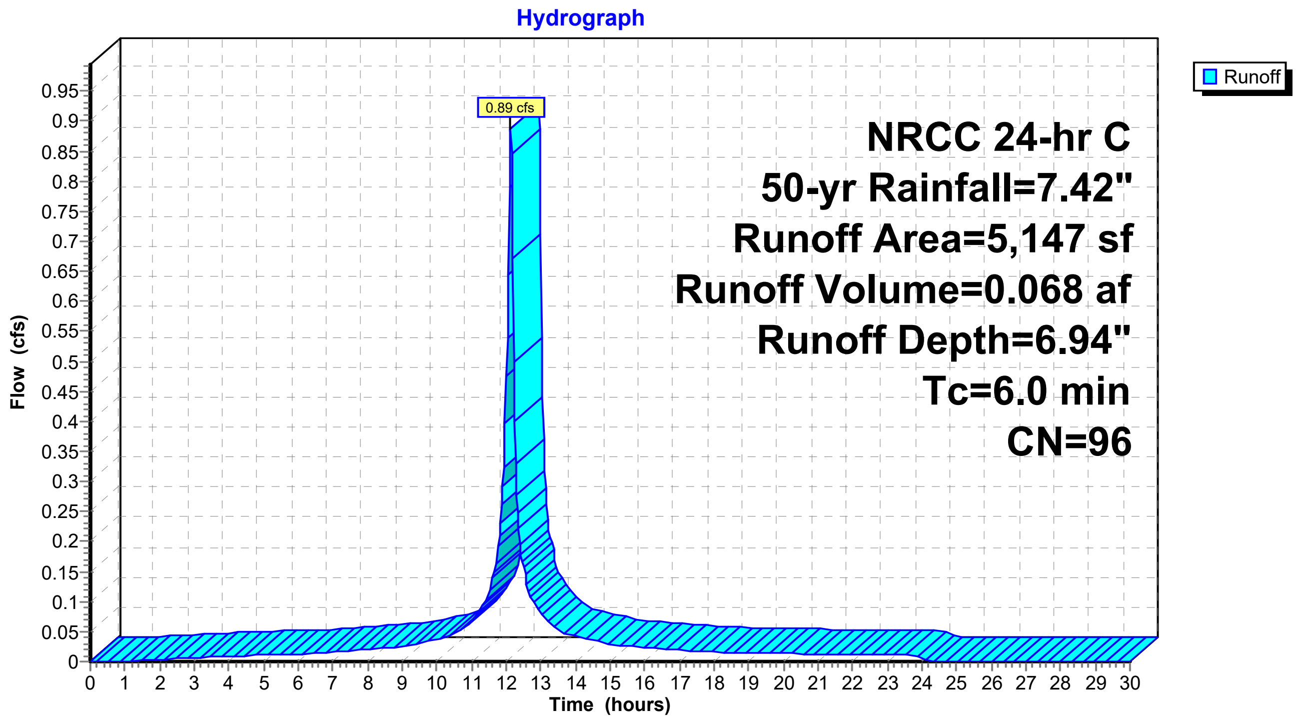
Runoff = 0.89 cfs @ 12.13 hrs, Volume= 0.068 af, Depth= 6.94"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
*	4,715	98	Paved parking, HSG C
*	432	72	Landscaping, Good, HSG C
	5,147	96	Weighted Average
	432		8.39% Pervious Area
	4,715		91.61% Impervious Area

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

Subcatchment PR-3: CCB 07



Summary for Subcatchment PR-4: CCB 06

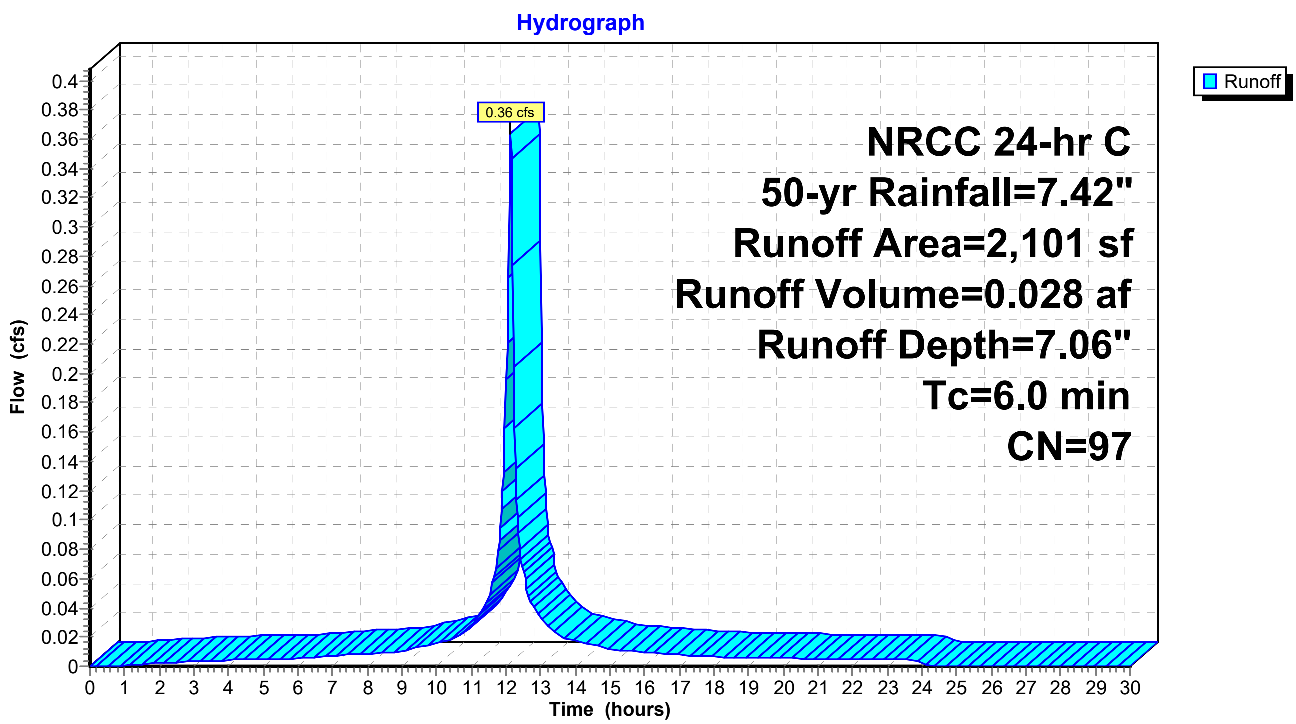
Runoff = 0.36 cfs @ 12.13 hrs, Volume= 0.028 af, Depth= 7.06"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
	2,026	98	Paved parking, HSG D
*	75	79	Landscaping, Good, HSG D
	2,101	97	Weighted Average
	75		3.57% Pervious Area
	2,026		96.43% Impervious Area

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

Subcatchment PR-4: CCB 06



Summary for Subcatchment PR-5: South Basin

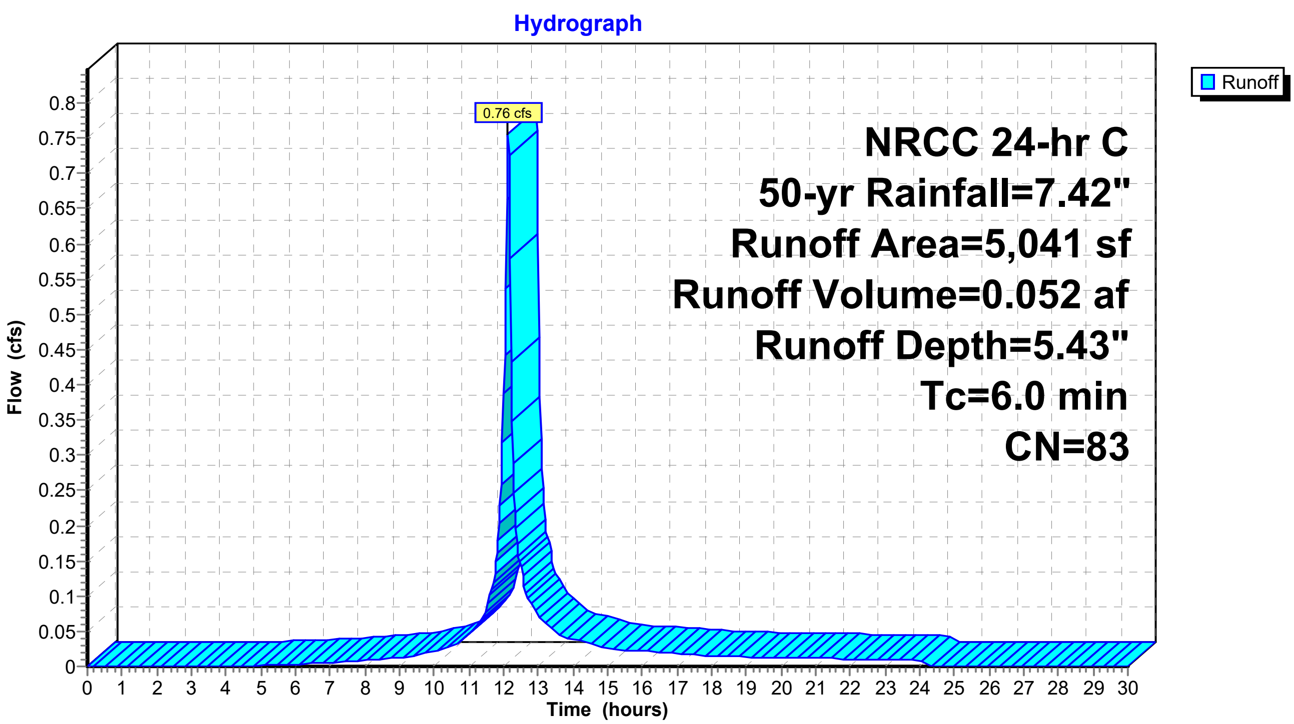
Runoff = 0.76 cfs @ 12.13 hrs, Volume= 0.052 af, Depth= 5.43"
Routed to Pond B-1 : South Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
*	595	96	Permable Paver, HSG C
*	366	96	Gravel surface, HSG C
*	2,205	72	Landscaping, Good, HSG C
*	890	98	Paved parking, HSG C
	985	80	>75% Grass cover, Good, HSG D
	5,041	83	Weighted Average
	4,151		82.34% Pervious Area
	890		17.66% Impervious Area

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

Subcatchment PR-5: South Basin



Summary for Subcatchment PR-6: West along river

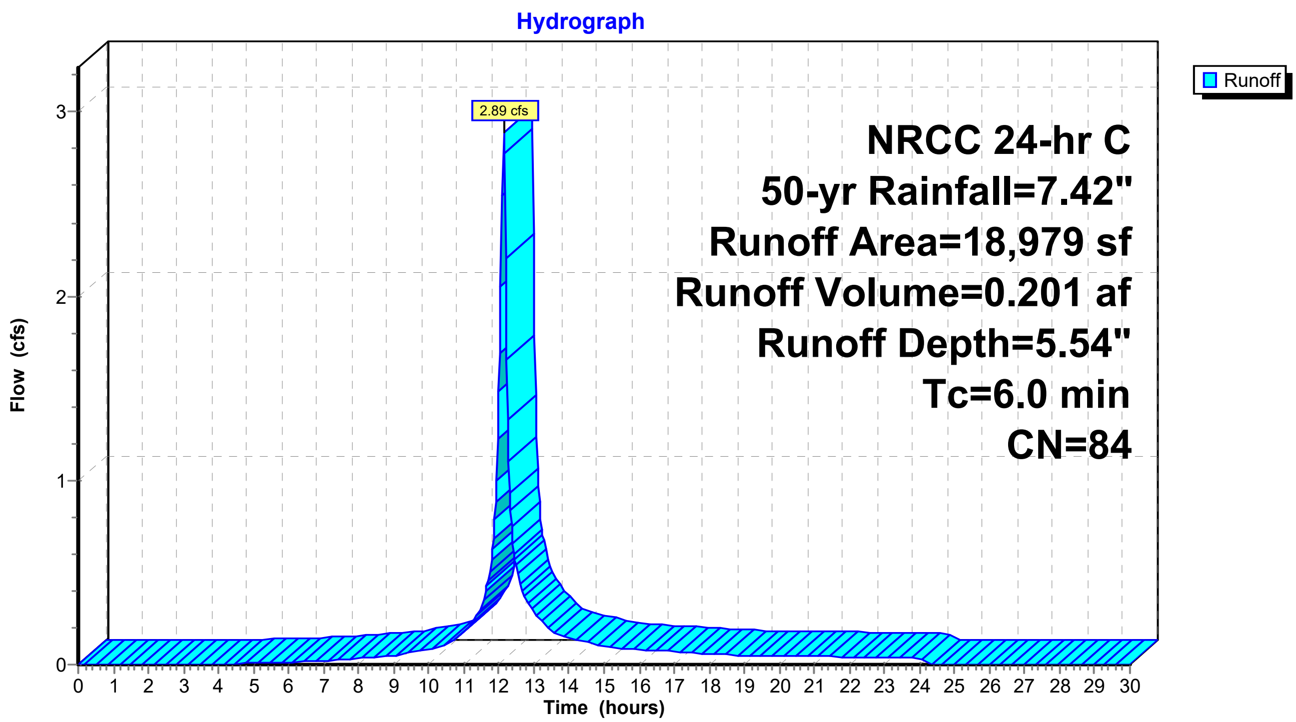
Runoff = 2.89 cfs @ 12.13 hrs, Volume= 0.201 af, Depth= 5.54"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
*	4,195	96	Permeable paver, HSG D
	461	96	Gravel surface, HSG D
	911	98	Paved parking, HSG D
	2,775	80	>75% Grass cover, Good, HSG D
*	6,489	79	Landscaping, Good, HSG D
	4,148	77	Woods, Good, HSG D
	18,979	84	Weighted Average
	18,068		95.20% Pervious Area
	911		4.80% Impervious Area

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

Subcatchment PR-6: West along river



Summary for Subcatchment PR-7: North basin

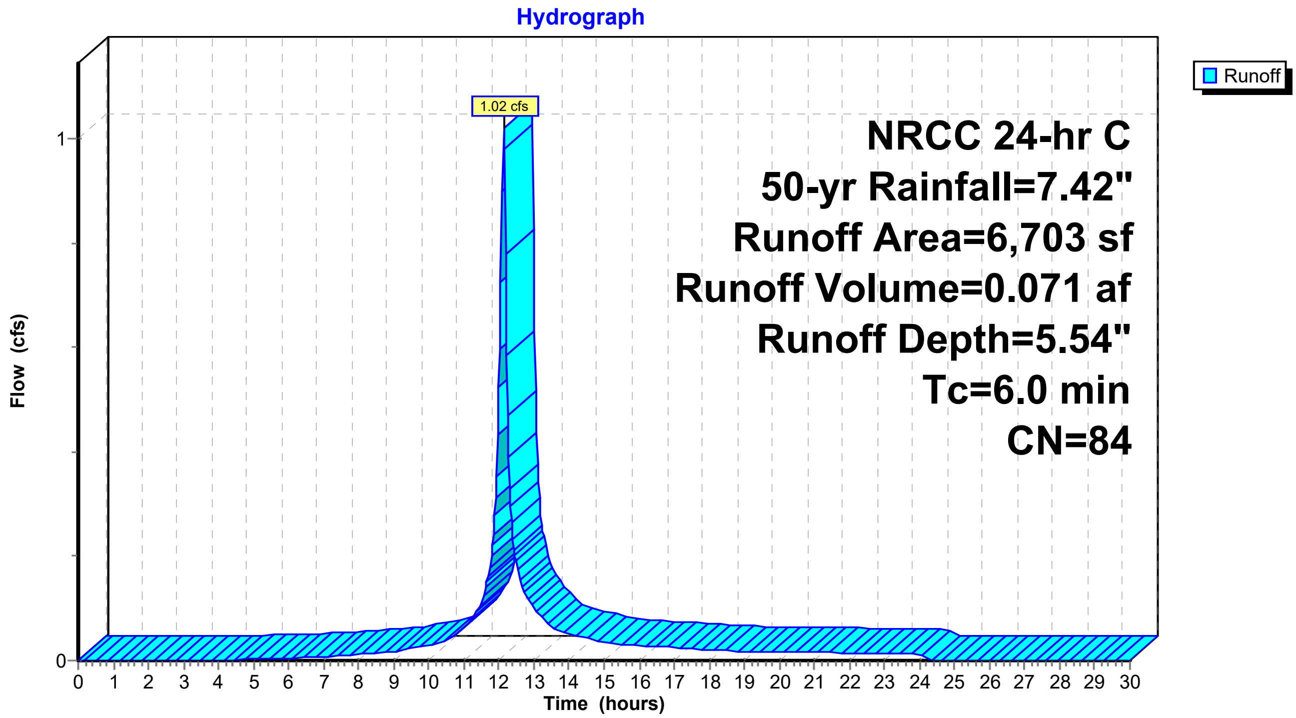
Runoff = 1.02 cfs @ 12.13 hrs, Volume= 0.071 af, Depth= 5.54"
Routed to Pond B-2 : North Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
	453	96	Gravel surface, HSG D
*	1,031	96	Permeable paver, HSG D
	445	80	>75% Grass cover, Good, HSG D
*	3,601	79	Landscaping, Good, HSG D
	692	77	Woods, Good, HSG D
	481	98	Paved parking, HSG D
	6,703	84	Weighted Average
	6,222		92.82% Pervious Area
	481		7.18% Impervious Area

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

Subcatchment PR-7: North basin



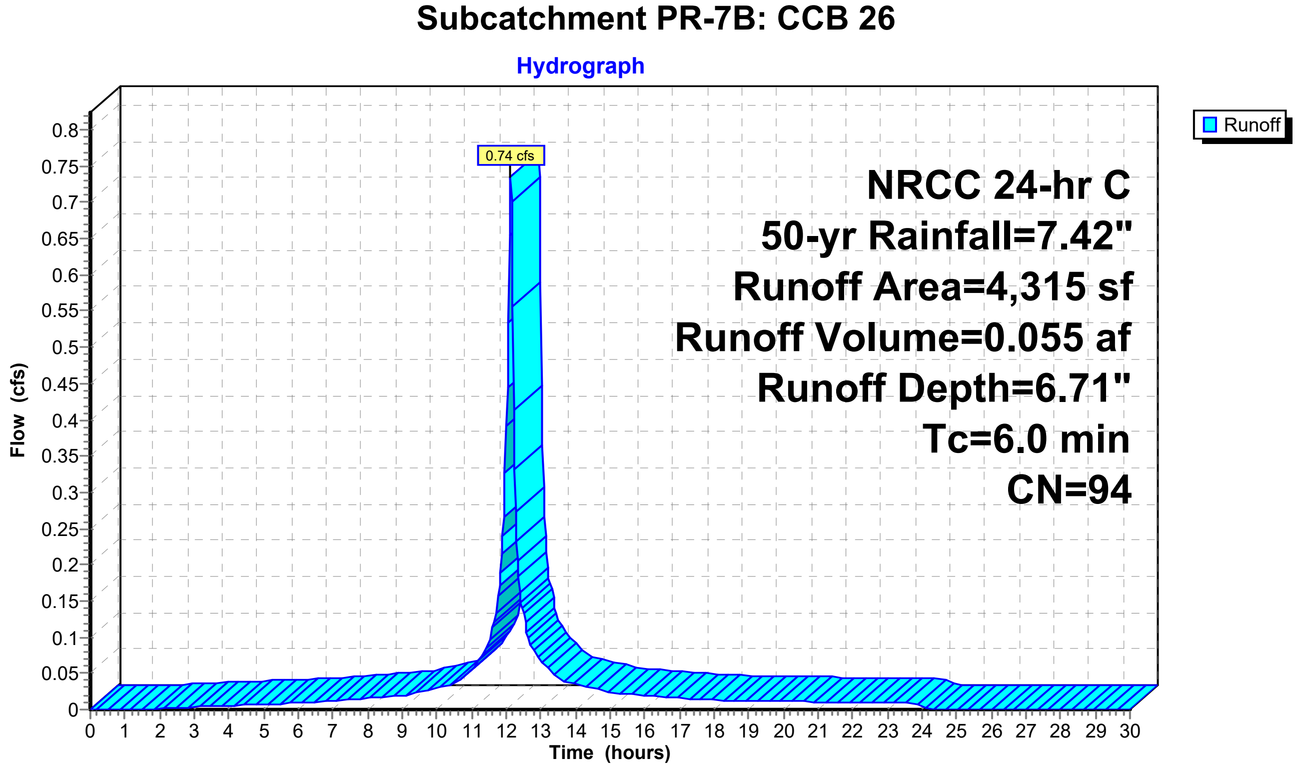
Summary for Subcatchment PR-7B: CCB 26

Runoff = 0.74 cfs @ 12.13 hrs, Volume= 0.055 af, Depth= 6.71"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
	3,518	98	Paved parking, HSG D
*	797	79	Landscaping, Good, HSG D
	4,315	94	Weighted Average
	797		18.47% Pervious Area
	3,518		81.53% Impervious Area

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



Summary for Subcatchment PR-8: CCB 26A

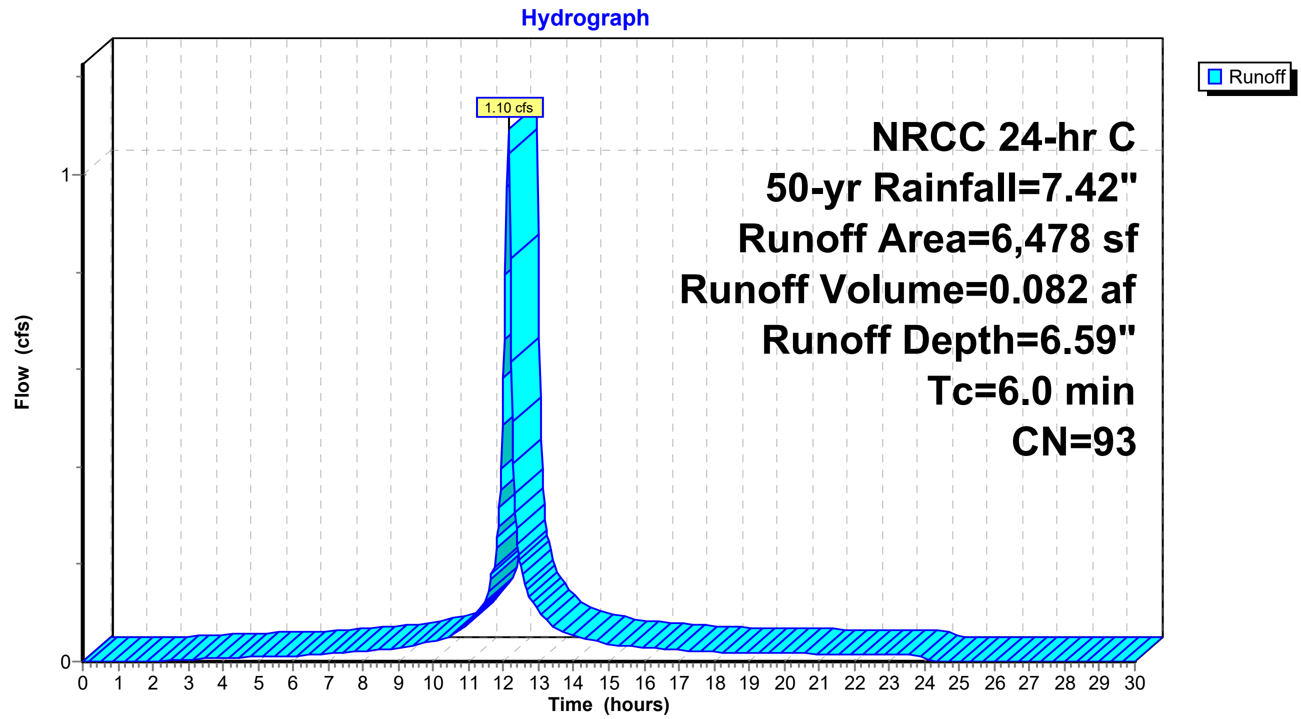
Runoff = 1.10 cfs @ 12.13 hrs, Volume= 0.082 af, Depth= 6.59"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
	4,737	98	Paved parking, HSG D
*	1,741	79	Landscaping, Good, HSG D
	6,478	93	Weighted Average
	1,741		26.88% Pervious Area
	4,737		73.12% Impervious Area

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

Subcatchment PR-8: CCB 26A



Summary for Subcatchment PR-9: CCB 27

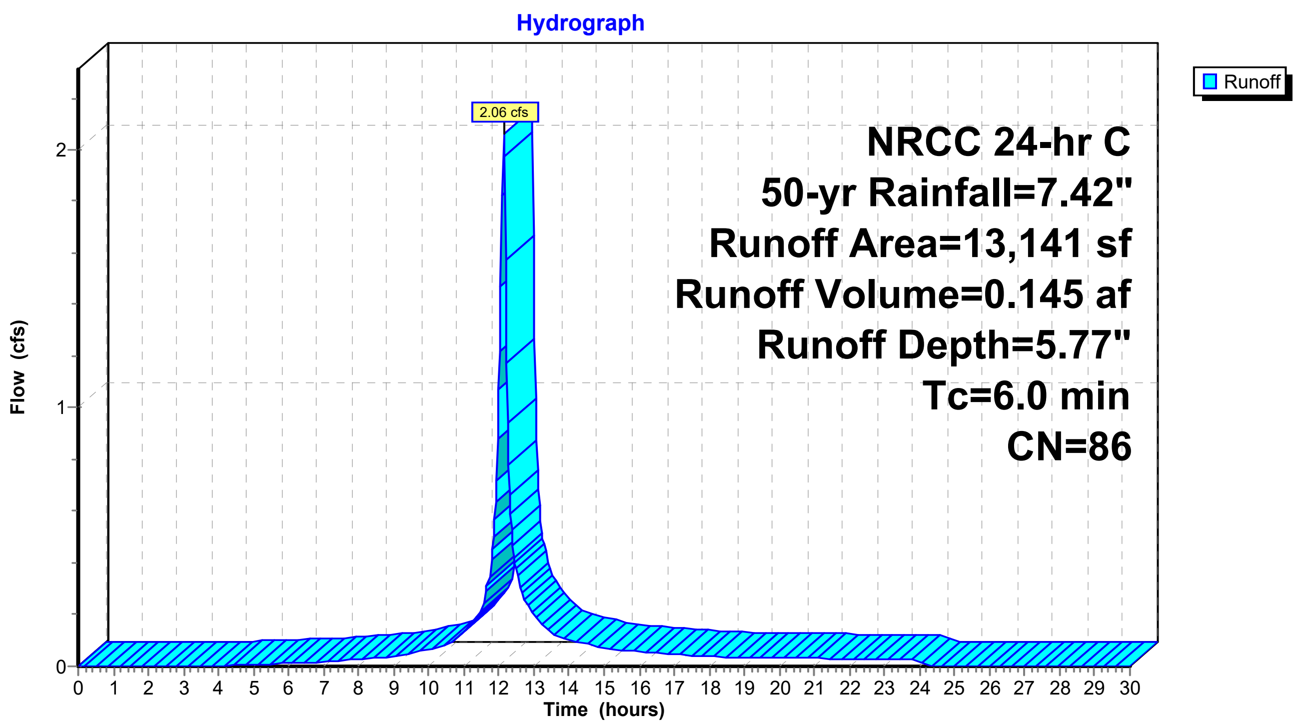
Runoff = 2.06 cfs @ 12.13 hrs, Volume= 0.145 af, Depth= 5.77"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 50-yr Rainfall=7.42"

	Area (sf)	CN	Description
	4,730	98	Paved parking, HSG D
	817	80	>75% Grass cover, Good, HSG D
*	7,594	79	Landscaping, Good, HSG D
	13,141	86	Weighted Average
	8,411		64.01% Pervious Area
	4,730		35.99% Impervious Area

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

Subcatchment PR-9: CCB 27



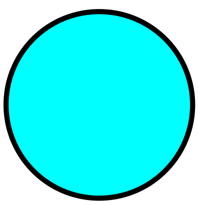
Summary for Reach R1: Roof Leader

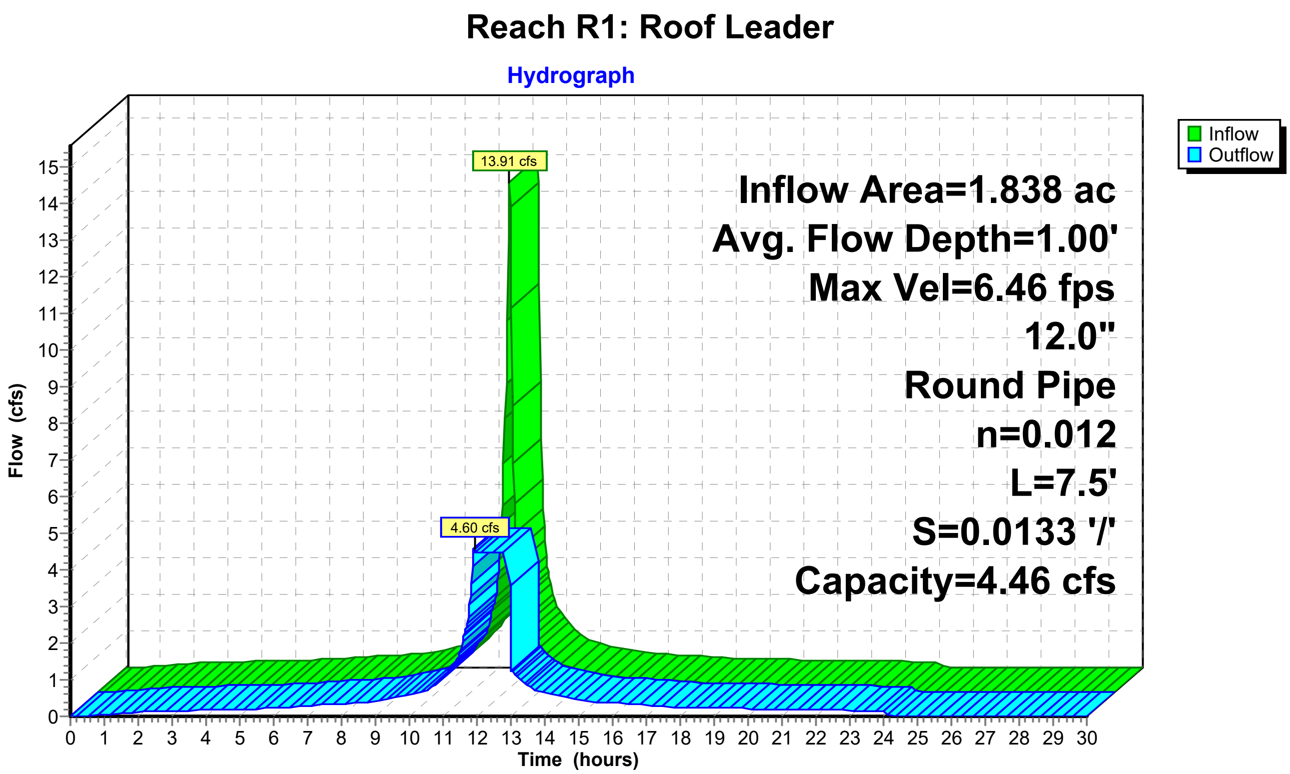
Inflow Area = 1.838 ac,100.00% Impervious, Inflow Depth = 7.18" for 50-yr event
Inflow = 13.91 cfs @ 12.13 hrs, Volume= 1.100 af
Outflow = 4.60 cfs @ 11.92 hrs, Volume= 1.100 af, Atten= 67%, Lag= 0.0 min
Routed to Pond S-2 : Subsurface Infiltration System

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Max. Velocity= 6.46 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.30 fps, Avg. Travel Time= 0.0 min

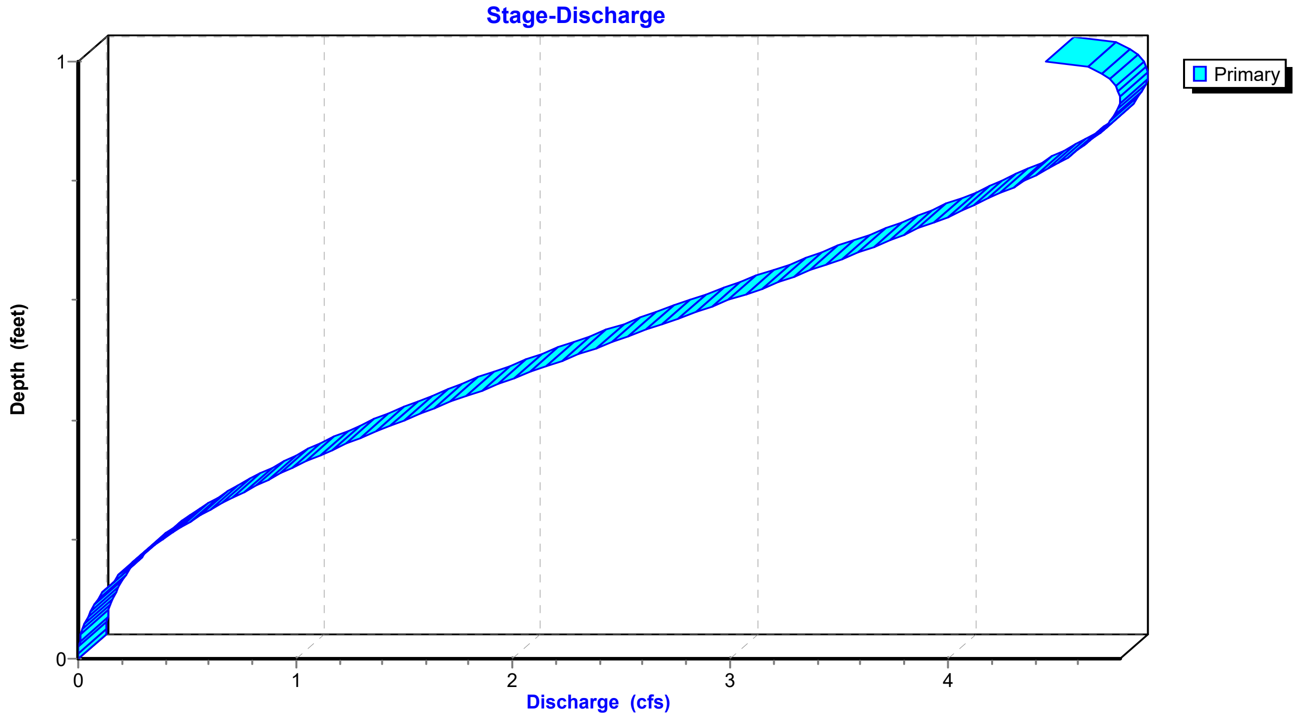
Peak Storage= 6 cf @ 11.94 hrs
Average Depth at Peak Storage= 1.00'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.46 cfs

12.0" Round Pipe
n= 0.012
Length= 7.5' Slope= 0.0133 '/'
Inlet Invert= 142.20', Outlet Invert= 142.10'

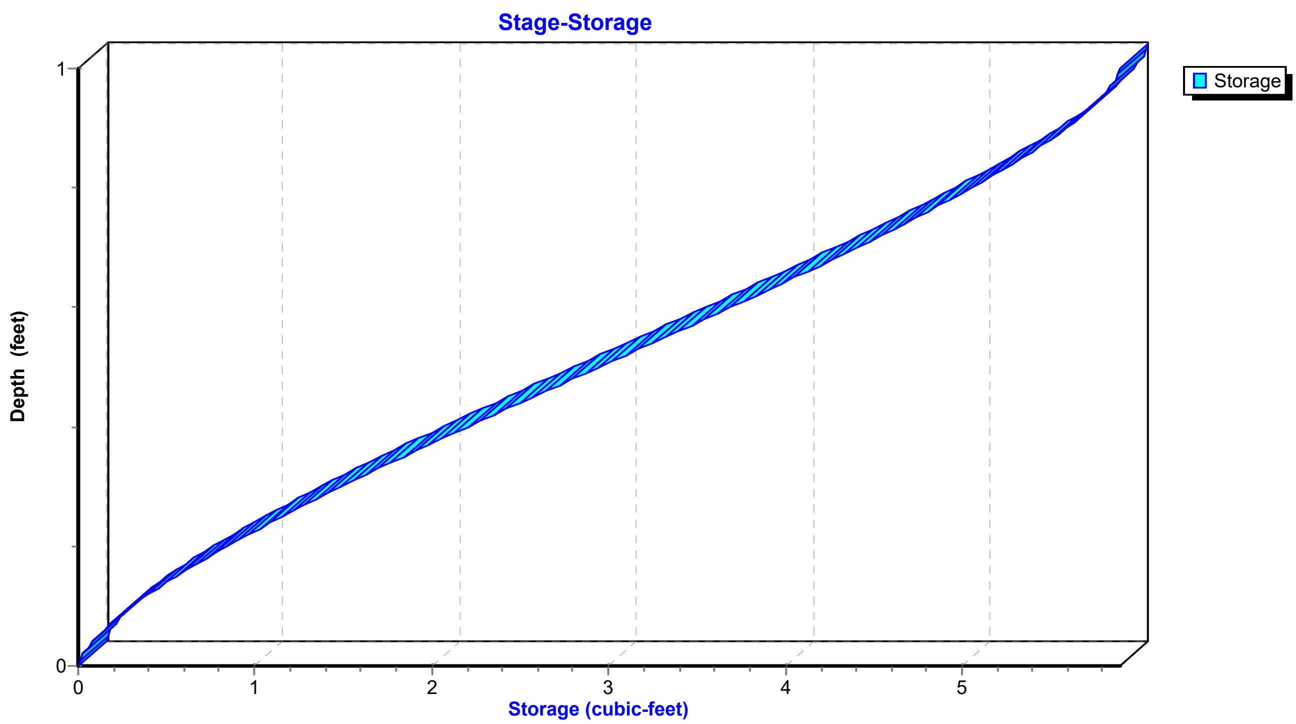




Reach R1: Roof Leader



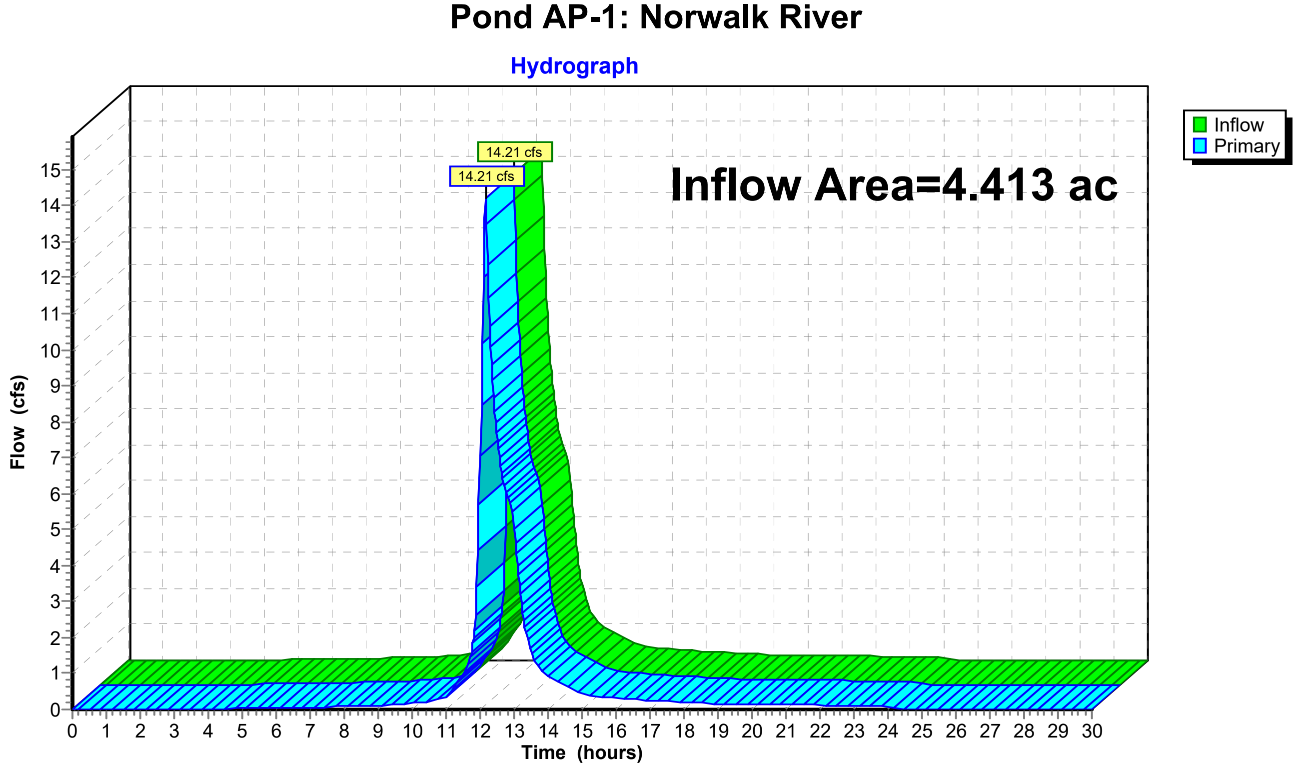
Reach R1: Roof Leader



Summary for Pond AP-1: Norwalk River

Inflow Area =	4.413 ac,	66.52% Impervious,	Inflow Depth = 3.34"	for 50-yr event
Inflow =	14.21 cfs @	12.15 hrs, Volume=	1.228 af	
Primary =	14.21 cfs @	12.15 hrs, Volume=	1.228 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs



Summary for Pond AP-2: Front Lawn Rain Garden

Inflow Area = 0.475 ac, 24.65% Impervious, Inflow Depth = 5.51" for 50-yr event
Inflow = 3.10 cfs @ 12.13 hrs, Volume= 0.218 af
Outflow = 0.75 cfs @ 12.38 hrs, Volume= 0.218 af, Atten= 76%, Lag= 14.9 min
Discarded = 0.38 cfs @ 12.38 hrs, Volume= 0.206 af
Primary = 0.37 cfs @ 12.38 hrs, Volume= 0.012 af
Routed to Pond S-3 : Subsurface Infiltration System

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 149.08' @ 12.38 hrs Surf.Area= 3,048 sf Storage= 2,653 cf

Plug-Flow detention time= 47.5 min calculated for 0.218 af (100% of inflow)
Center-of-Mass det. time= 47.5 min (844.2 - 796.7)

Volume	Invert	Avail.Storage	Storage Description
#1	148.00'	6,536 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

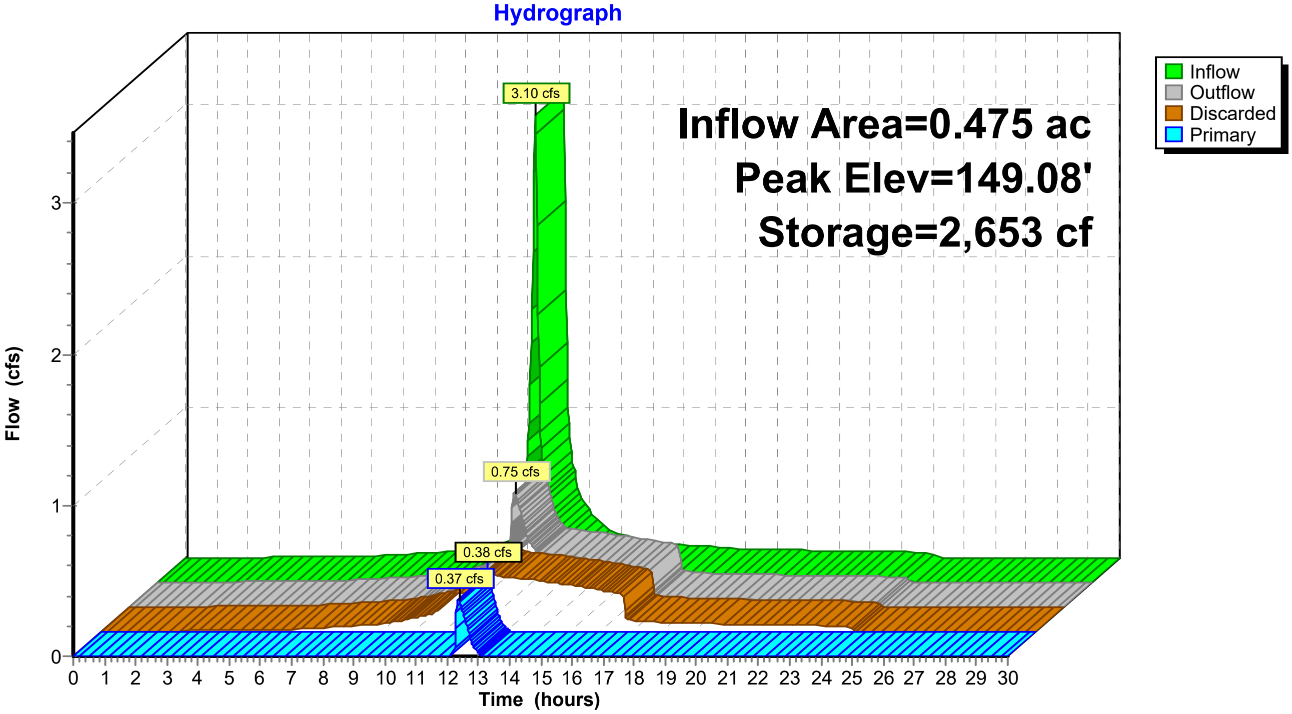
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
148.00	1,985	0	0
149.00	2,833	2,409	2,409
150.00	5,420	4,127	6,536

Device	Routing	Invert	Outlet Devices
#1	Primary	145.90'	**15.0" Round Culvert** L= 34.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 145.90' / 145.55' S= 0.0101 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	149.00'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	148.00'	**5.450 in/hr Exfiltration over Surface area**

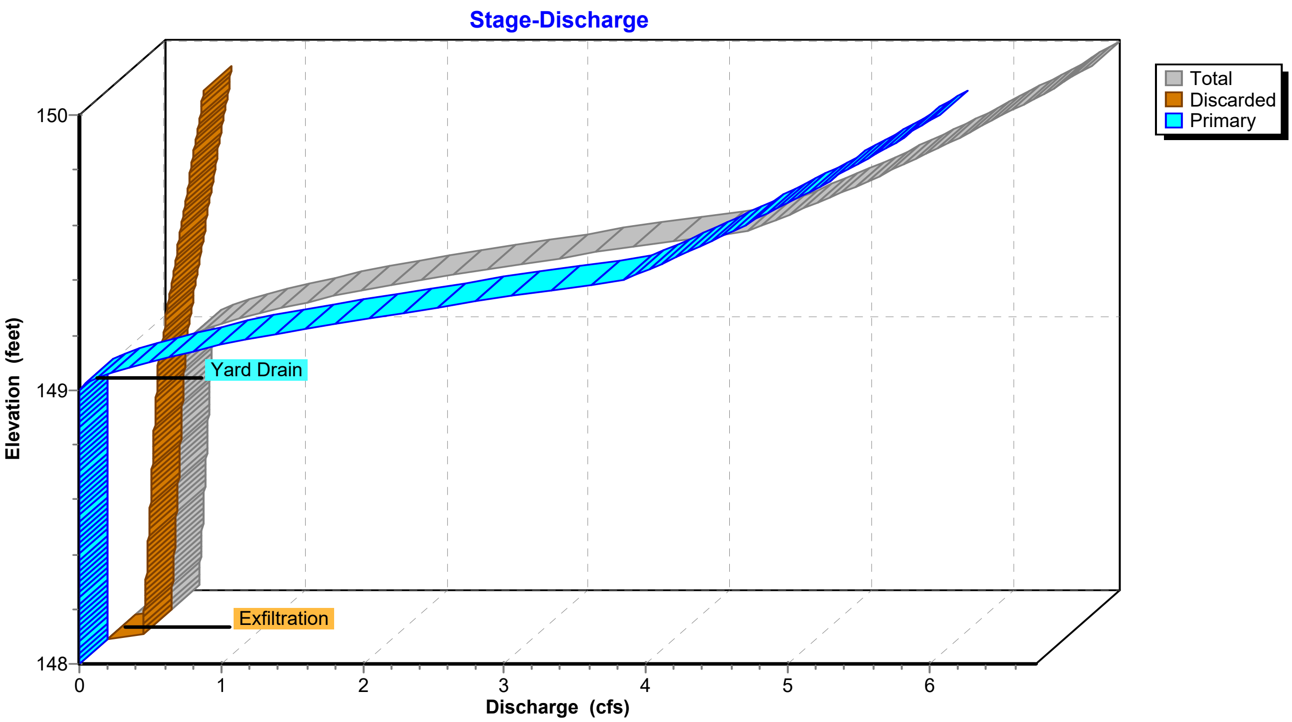
Discarded OutFlow Max=0.38 cfs @ 12.38 hrs HW=149.08' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.38 cfs)

Primary OutFlow Max=0.37 cfs @ 12.38 hrs HW=149.08' (Free Discharge)
└─**1=Culvert** (Passes 0.37 cfs of 9.45 cfs potential flow)
  └─**2=Yard Drain** (Weir Controls 0.37 cfs @ 0.94 fps)

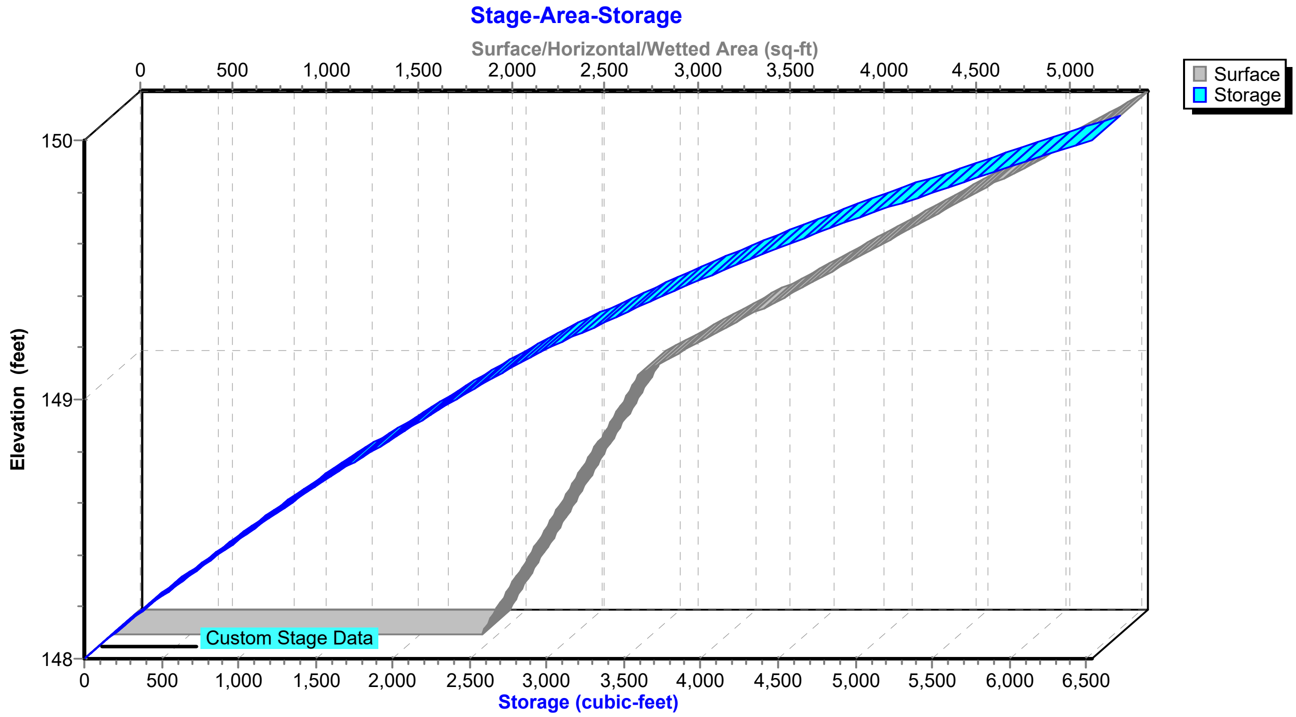
Pond AP-2: Front Lawn Rain Garden



Pond AP-2: Front Lawn Rain Garden



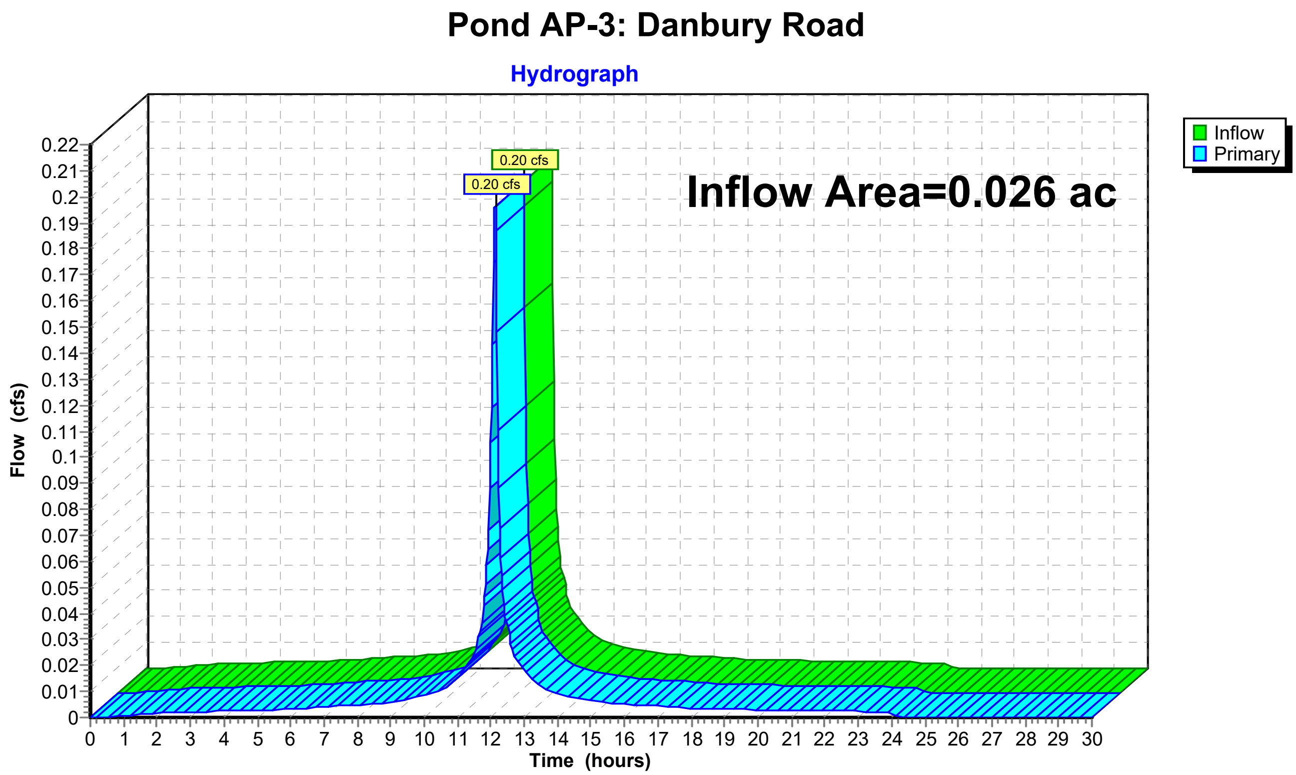
Pond AP-2: Front Lawn Rain Garden



Summary for Pond AP-3: Danbury Road

Inflow Area =	0.026 ac,100.00% Impervious,	Inflow Depth = 7.18"	for 50-yr event	
Inflow =	0.20 cfs @	12.13 hrs, Volume=	0.016 af	
Primary =	0.20 cfs @	12.13 hrs, Volume=	0.016 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

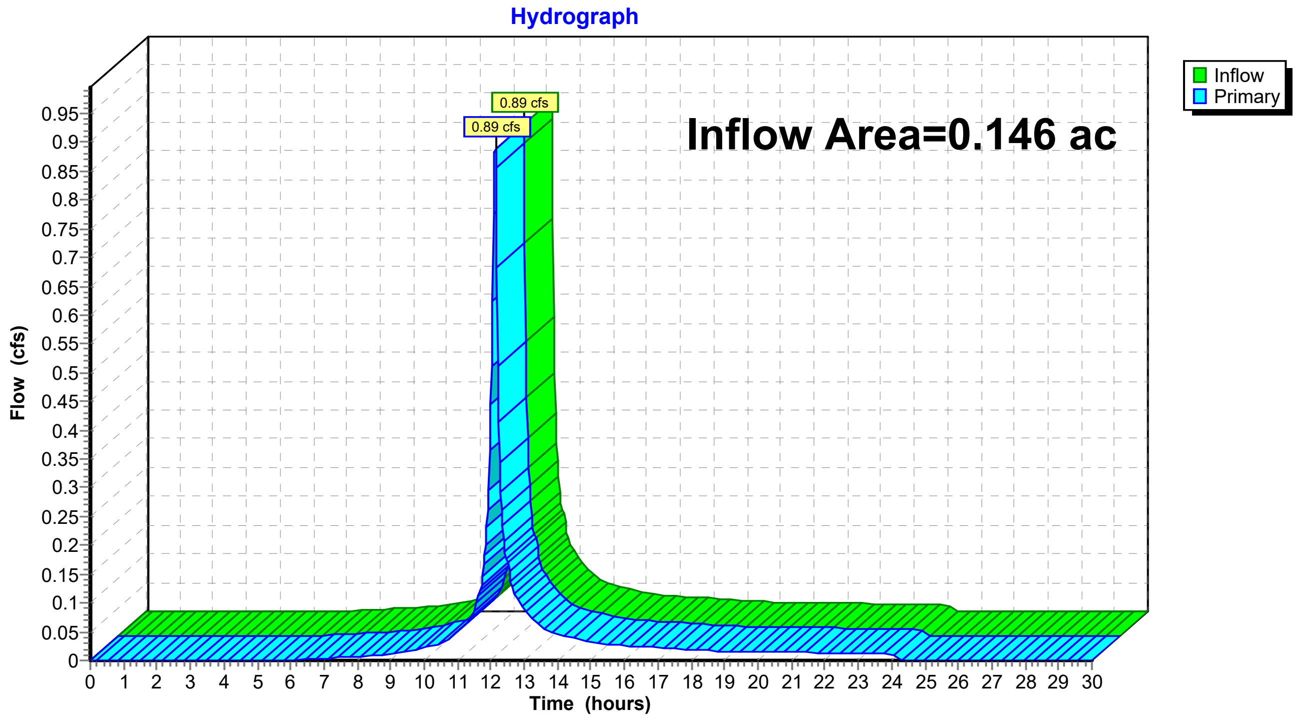


Summary for Pond AP-4: Landscaped Area

Inflow Area =	0.146 ac,	1.46% Impervious,	Inflow Depth = 4.97"	for 50-yr event	
Inflow =	0.89 cfs @	12.13 hrs,	Volume=	0.060 af	
Primary =	0.89 cfs @	12.13 hrs,	Volume=	0.060 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-4: Landscaped Area



Summary for Pond B-1: South Basin

Inflow Area = 0.116 ac, 17.66% Impervious, Inflow Depth = 5.43" for 50-yr event
Inflow = 0.76 cfs @ 12.13 hrs, Volume= 0.052 af
Outflow = 0.74 cfs @ 12.15 hrs, Volume= 0.047 af, Atten= 3%, Lag= 1.1 min
Discarded = 0.01 cfs @ 12.15 hrs, Volume= 0.008 af
Primary = 0.73 cfs @ 12.15 hrs, Volume= 0.038 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 140.03' @ 12.15 hrs Surf.Area= 551 sf Storage= 400 cf

Plug-Flow detention time= 123.4 min calculated for 0.047 af (90% of inflow)
Center-of-Mass det. time= 70.2 min (875.0 - 804.8)

Volume	Invert	Avail.Storage	Storage Description
#1	139.00'	1,118 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

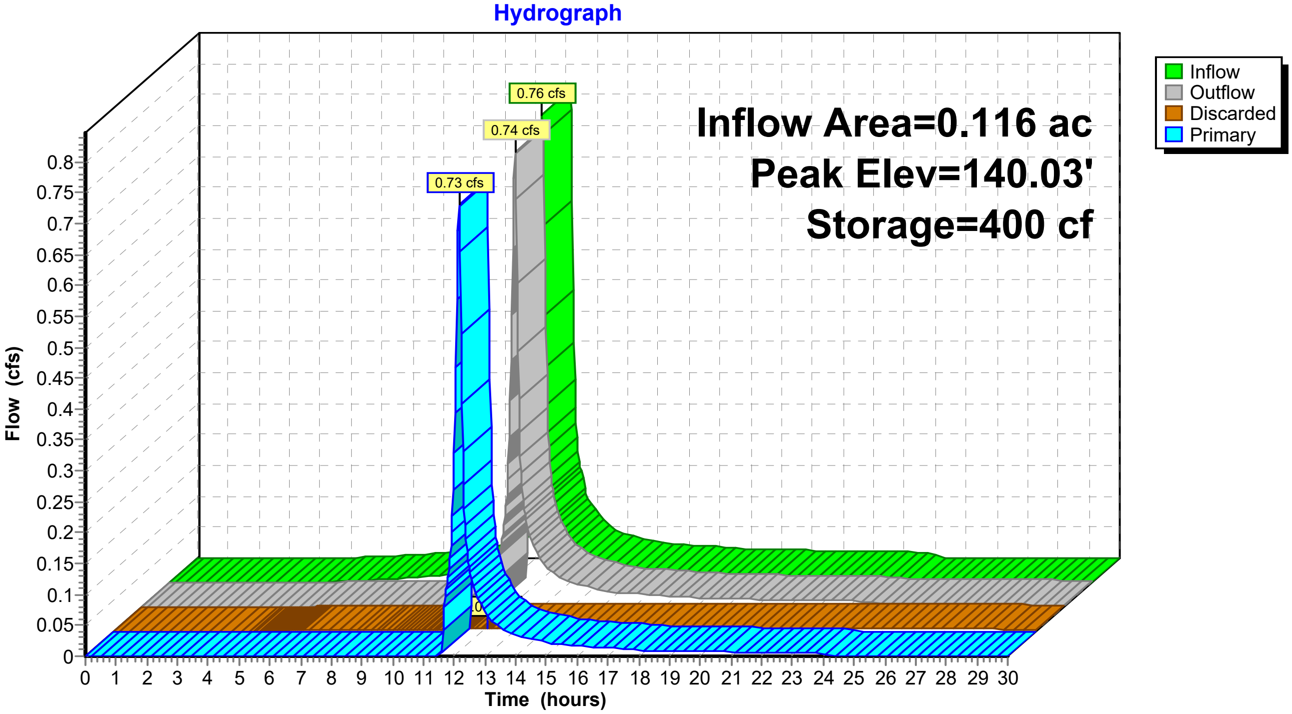
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.00	228	0	0
140.00	539	384	384
141.00	929	734	1,118

Device	Routing	Invert	Outlet Devices
#1	Primary	138.00'	**8.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 138.00' / 137.60' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Device 1	139.90'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	139.00'	**0.400 in/hr Exfiltration over Surface area**

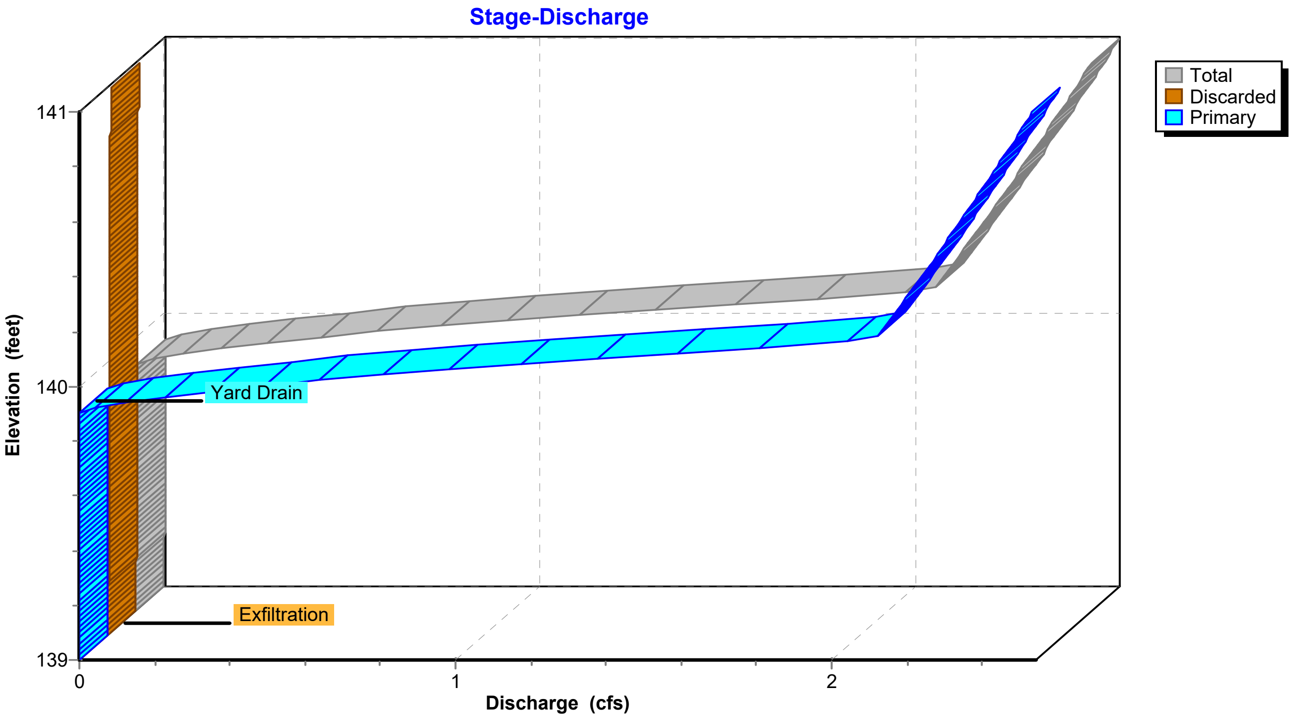
Discarded OutFlow Max=0.01 cfs @ 12.15 hrs HW=140.03' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.72 cfs @ 12.15 hrs HW=140.03' (Free Discharge)
└─**1=Culvert** (Passes 0.72 cfs of 2.04 cfs potential flow)
  └─**2=Yard Drain** (Weir Controls 0.72 cfs @ 1.18 fps)

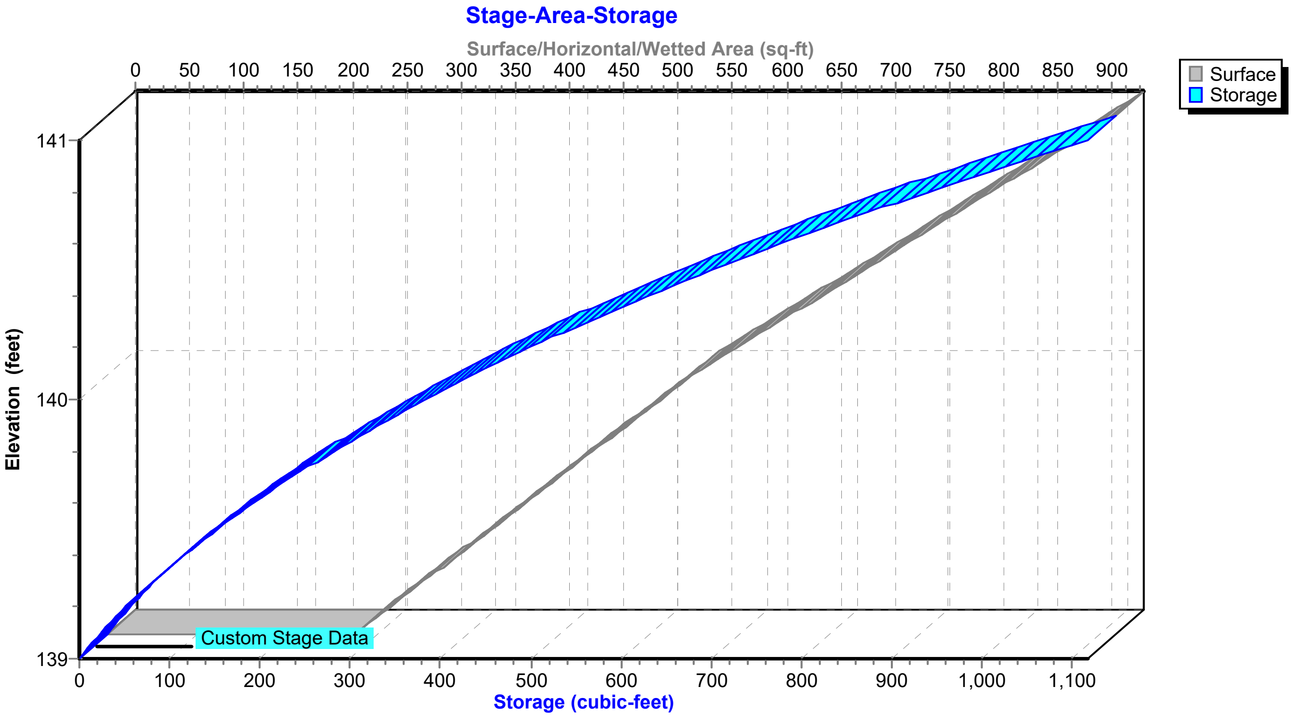
Pond B-1: South Basin



Pond B-1: South Basin



Pond B-1: South Basin



Summary for Pond B-2: North Basin

Inflow Area = 0.154 ac, 7.18% Impervious, Inflow Depth = 5.54" for 50-yr event
Inflow = 1.02 cfs @ 12.13 hrs, Volume= 0.071 af
Outflow = 0.96 cfs @ 12.15 hrs, Volume= 0.071 af, Atten= 6%, Lag= 1.6 min
Discarded = 0.03 cfs @ 12.15 hrs, Volume= 0.041 af
Primary = 0.93 cfs @ 12.15 hrs, Volume= 0.030 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 139.95' @ 12.15 hrs Surf.Area= 914 sf Storage= 717 cf

Plug-Flow detention time= 153.9 min calculated for 0.071 af (100% of inflow)
Center-of-Mass det. time= 154.0 min (955.9 - 801.9)

Volume	Invert	Avail.Storage	Storage Description
#1	139.00'	1,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

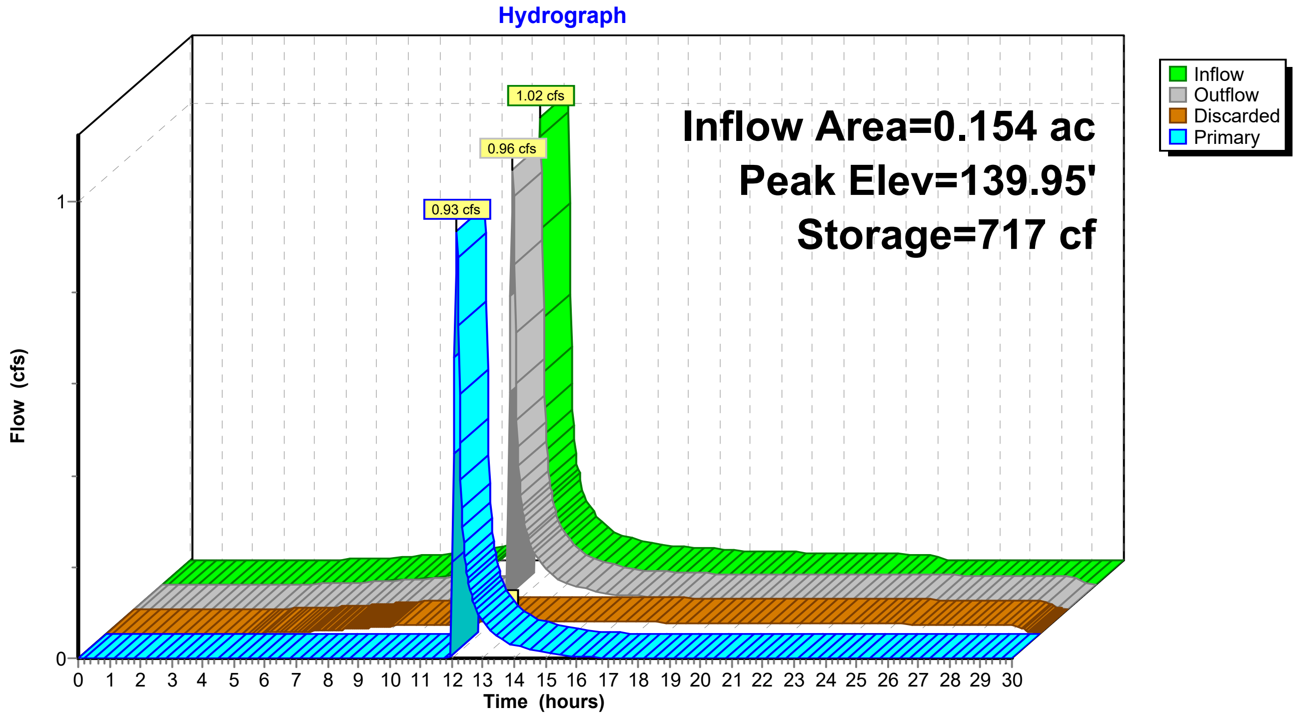
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.00	589	0	0
140.00	930	760	760
141.00	1,327	1,129	1,888

Device	Routing	Invert	Outlet Devices
#1	Primary	138.00'	**10.0" Round Culvert** L= 200.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 138.00' / 137.00' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf
#2	Device 1	139.80'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	139.00'	**1.250 in/hr Exfiltration over Surface area**

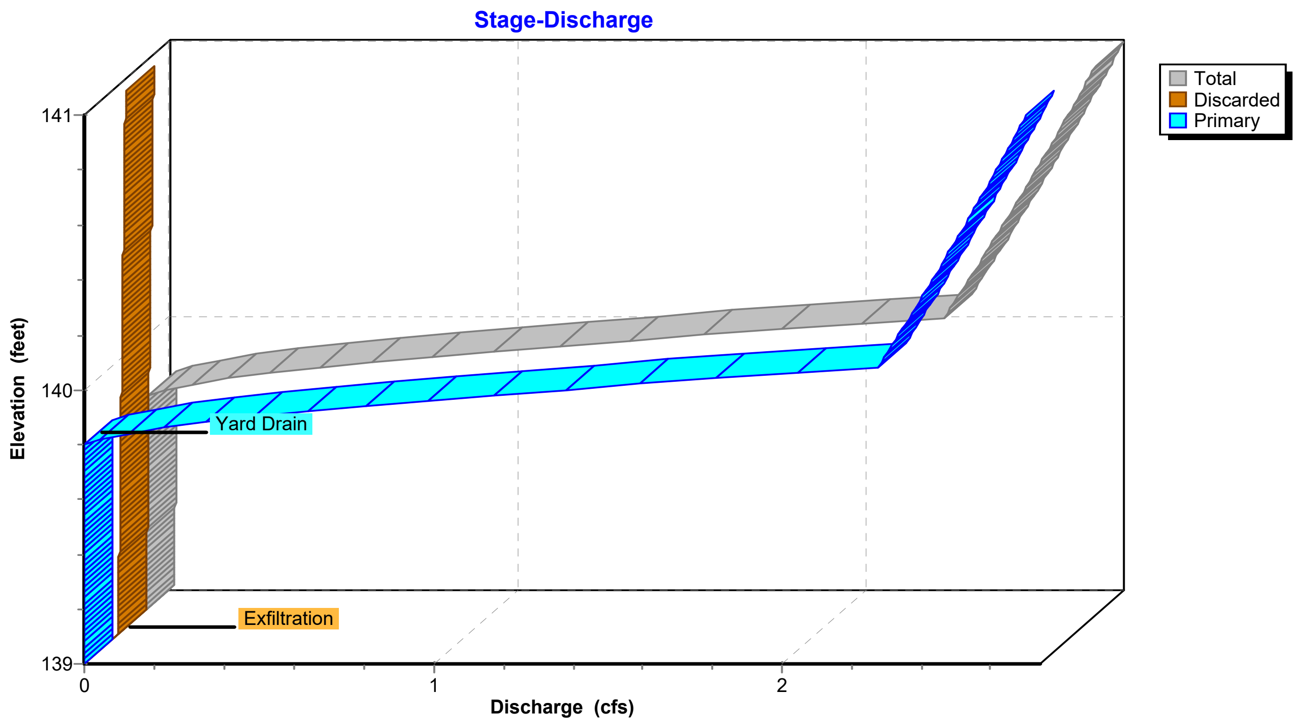
Discarded OutFlow Max=0.03 cfs @ 12.15 hrs HW=139.95' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.92 cfs @ 12.15 hrs HW=139.95' (Free Discharge)
└─**1=Culvert** (Passes 0.92 cfs of 2.21 cfs potential flow)
  └─**2=Yard Drain** (Weir Controls 0.92 cfs @ 1.28 fps)

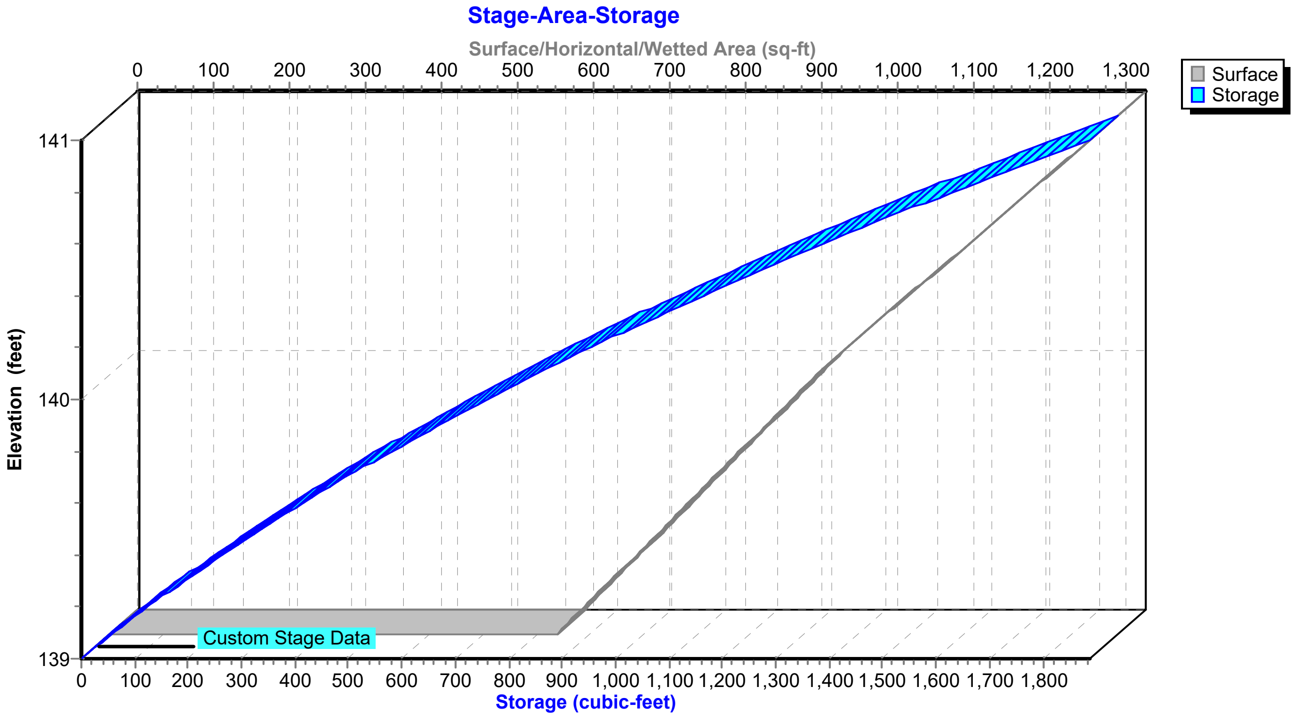
Pond B-2: North Basin



Pond B-2: North Basin



Pond B-2: North Basin



Summary for Pond S-1: Subsurface Infiltration System

Inflow Area = 0.554 ac, 58.45% Impervious, Inflow Depth = 6.28" for 50-yr event
Inflow = 3.96 cfs @ 12.13 hrs, Volume= 0.290 af
Outflow = 2.74 cfs @ 12.19 hrs, Volume= 0.259 af, Atten= 31%, Lag= 3.9 min
Discarded = 0.02 cfs @ 3.84 hrs, Volume= 0.035 af
Primary = 2.72 cfs @ 12.19 hrs, Volume= 0.224 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 144.67' @ 12.19 hrs Surf.Area= 0.039 ac Storage= 0.067 af

Plug-Flow detention time= 122.2 min calculated for 0.259 af (89% of inflow)
Center-of-Mass det. time= 67.6 min (844.3 - 776.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	142.00'	0.036 af	**11.00'W x 153.14'L x 3.50'H Field A**
			0.135 af Overall - 0.044 af Embedded = 0.091 af x 40.0% Voids
#2A	142.50'	0.044 af	**ADS_StormTech SC-740 +Cap** x 42 Inside #1
			Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
			Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
			42 Chambers in 2 Rows
		0.081 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	143.35'	**12.0" Round Culvert**
			L= 114.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 143.35' / 142.21' S= 0.0100 '/' Cc= 0.900
			n= 0.012, Flow Area= 0.79 sf
#2	Device 1	143.50'	**6.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	144.90'	**5.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#4	Discarded	142.00'	**0.400 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 3.84 hrs HW=142.04' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=2.71 cfs @ 12.19 hrs HW=144.66' (Free Discharge)
└**1=Culvert** (Passes 2.71 cfs of 3.41 cfs potential flow)
  ├**2=Orifice** (Orifice Controls 2.71 cfs @ 4.60 fps)
  └**3=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)

Pond S-1: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

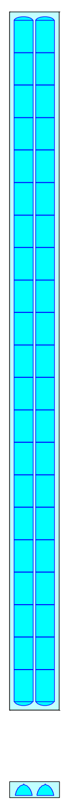
21 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 151.14' Row Length +12.0" End Stone x 2 = 153.14' Base Length
2 Rows x 51.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.00' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

42 Chambers x 45.9 cf = 1,929.5 cf Chamber Storage

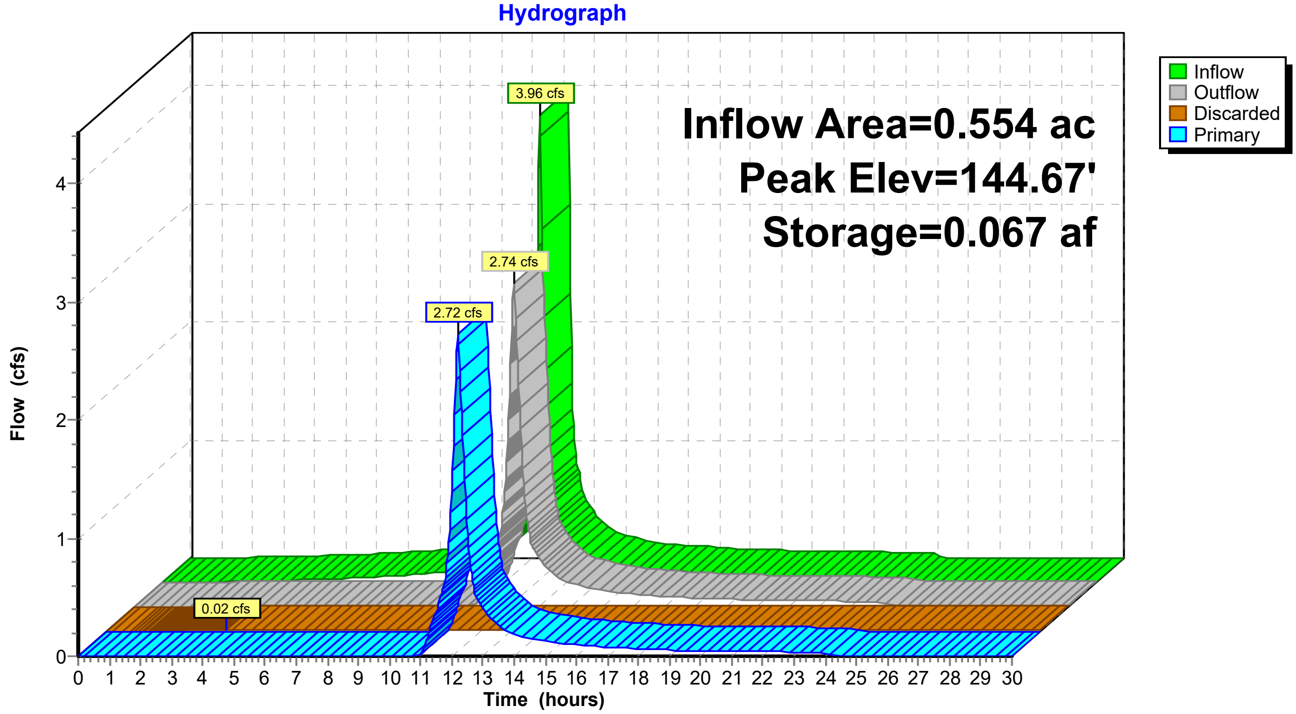
5,895.8 cf Field - 1,929.5 cf Chambers = 3,966.3 cf Stone x 40.0% Voids = 1,586.5 cf Stone Storage

Chamber Storage + Stone Storage = 3,516.0 cf = 0.081 af
Overall Storage Efficiency = 59.6%
Overall System Size = 153.14' x 11.00' x 3.50'

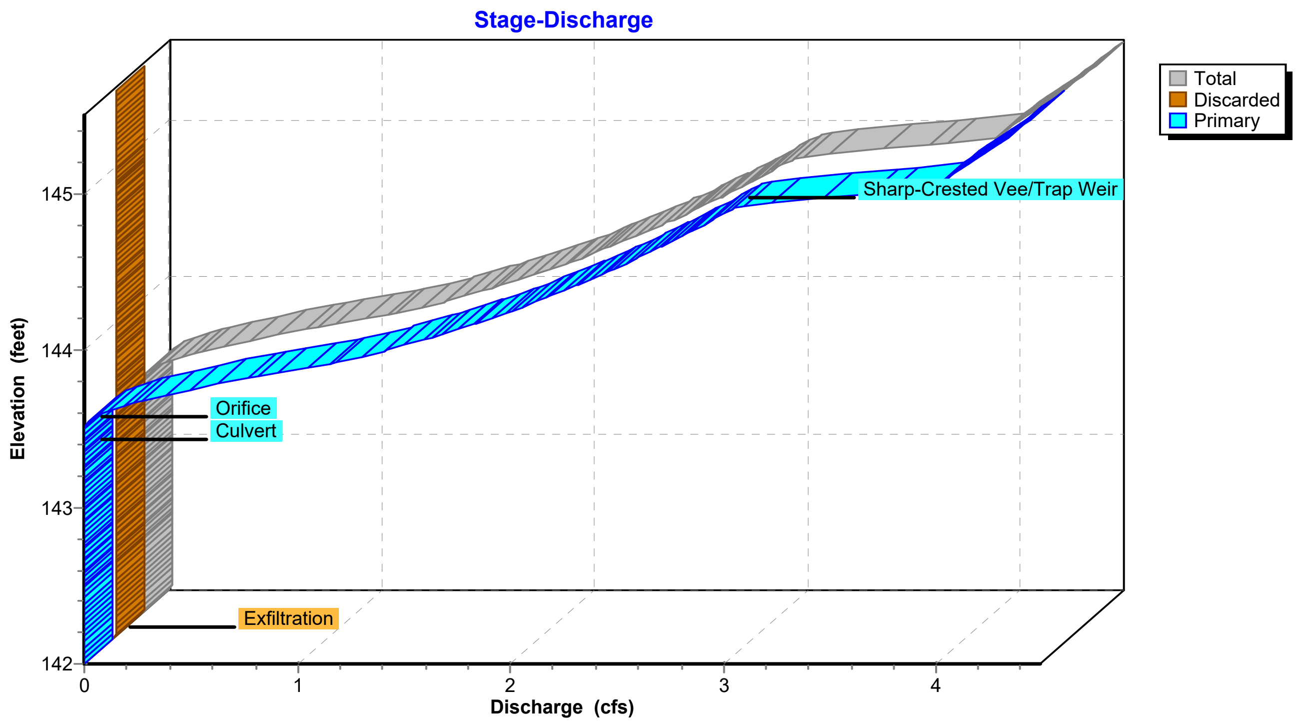
42 Chambers
218.4 cy Field
146.9 cy Stone



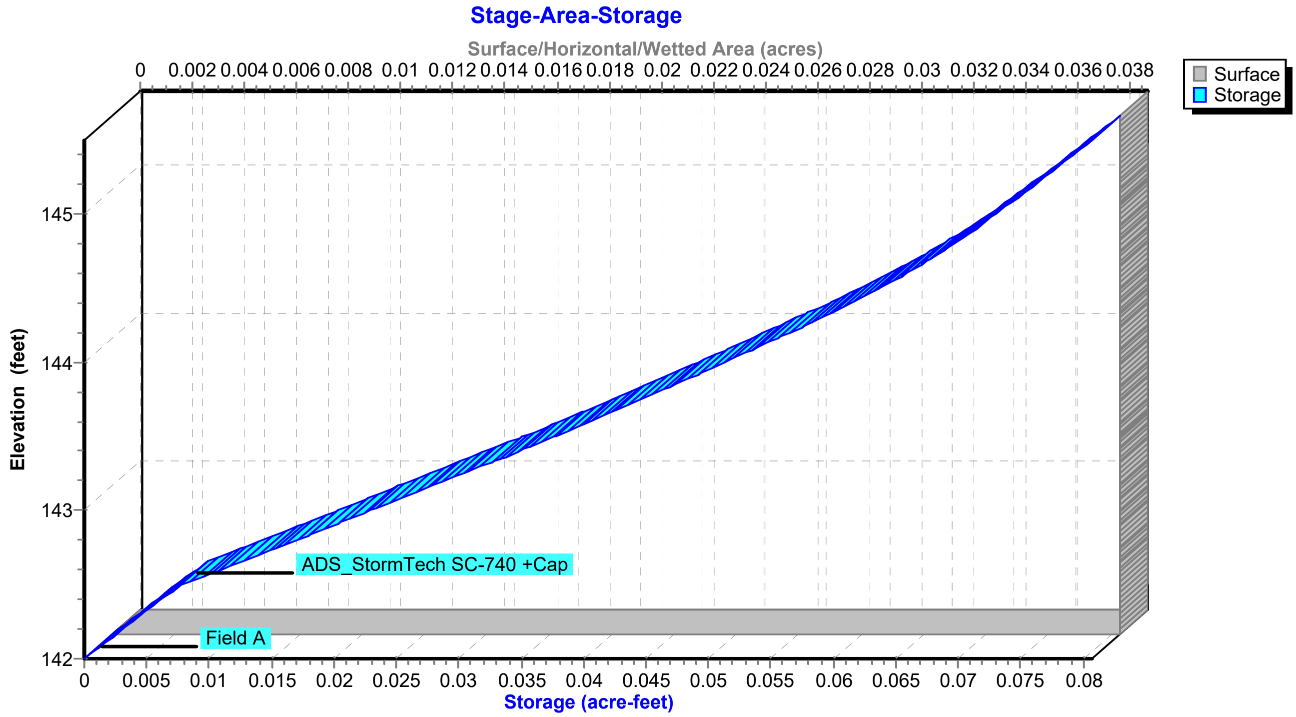
Pond S-1: Subsurface Infiltration System



Pond S-1: Subsurface Infiltration System



Pond S-1: Subsurface Infiltration System



Summary for Pond S-2: Subsurface Infiltration System

Inflow Area = 1.838 ac,100.00% Impervious, Inflow Depth = 7.18" for 50-yr event
Inflow = 4.60 cfs @ 11.92 hrs, Volume= 1.100 af
Outflow = 4.45 cfs @ 12.96 hrs, Volume= 1.100 af, Atten= 3%, Lag= 62.5 min
Discarded = 0.50 cfs @ 9.51 hrs, Volume= 0.695 af
Primary = 3.96 cfs @ 12.96 hrs, Volume= 0.405 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 144.93' @ 12.96 hrs Surf.Area= 0.091 ac Storage= 0.193 af

Plug-Flow detention time= 55.9 min calculated for 1.100 af (100% of inflow)
Center-of-Mass det. time= 55.9 min (803.3 - 747.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	141.50'	0.100 af	**30.00'W x 131.78'L x 4.00'H Field A** 0.363 af Overall - 0.114 af Embedded = 0.249 af x 40.0% Voids
#2A	142.50'	0.114 af	**ADS_StormTech SC-740 +Cap** x 108 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 108 Chambers in 6 Rows
		0.214 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	143.15'	**15.0" Round Culvert** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 143.15' / 142.69' S= 0.0061 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	143.64'	**7.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	144.90'	**5.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#4	Discarded	141.50'	**5.450 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.50 cfs @ 9.51 hrs HW=141.54' (Free Discharge)
└─**4=Exfiltration** (Exfiltration Controls 0.50 cfs)

Primary OutFlow Max=3.95 cfs @ 12.96 hrs HW=144.93' (Free Discharge)
└─**1=Culvert** (Passes 3.95 cfs of 5.67 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 3.86 cfs @ 4.81 fps)
  └─**3=Sharp-Crested Vee/Trap Weir** (Weir Controls 0.09 cfs @ 0.58 fps)

Pond S-2: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

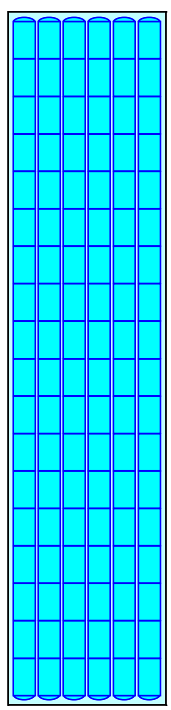
18 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 129.78' Row Length +12.0" End Stone x 2 = 131.78' Base Length
6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width
12.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 4.00' Field Height

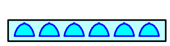
108 Chambers x 45.9 cf = 4,961.5 cf Chamber Storage

15,813.2 cf Field - 4,961.5 cf Chambers = 10,851.7 cf Stone x 40.0% Voids = 4,340.7 cf Stone Storage

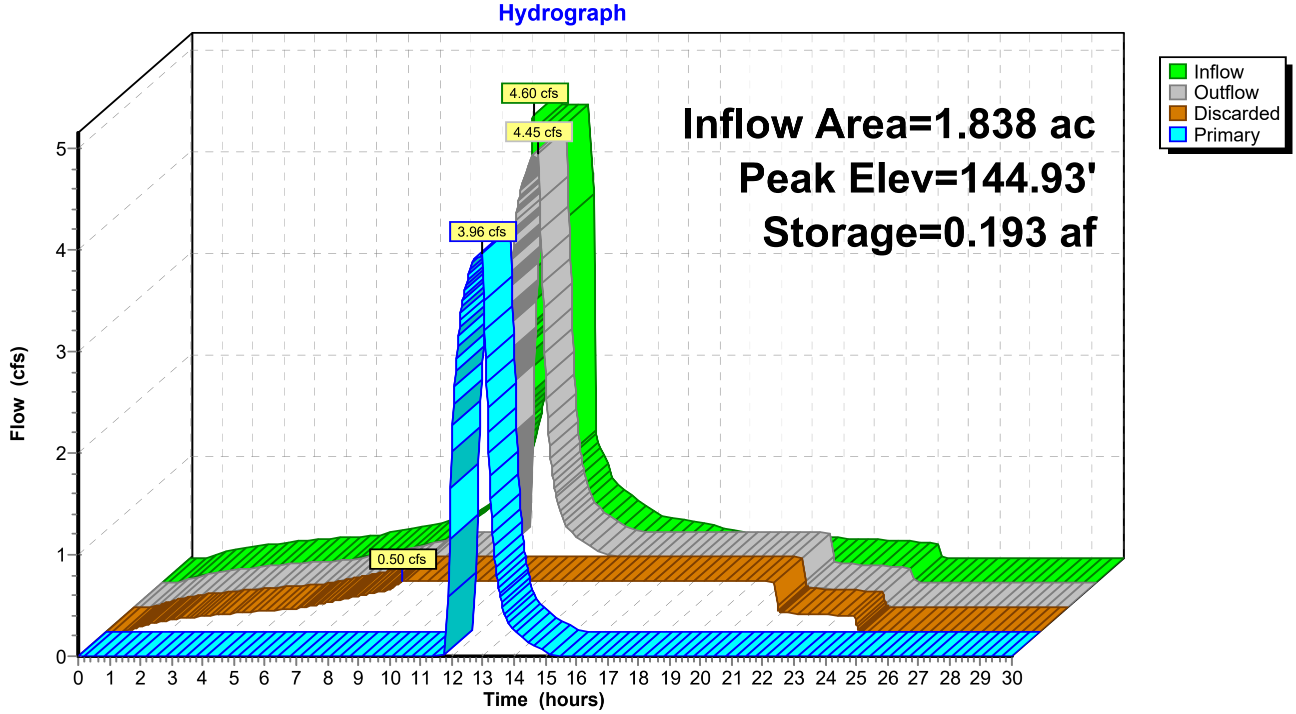
Chamber Storage + Stone Storage = 9,302.2 cf = 0.214 af
Overall Storage Efficiency = 58.8%
Overall System Size = 131.78' x 30.00' x 4.00'

108 Chambers
585.7 cy Field
401.9 cy Stone

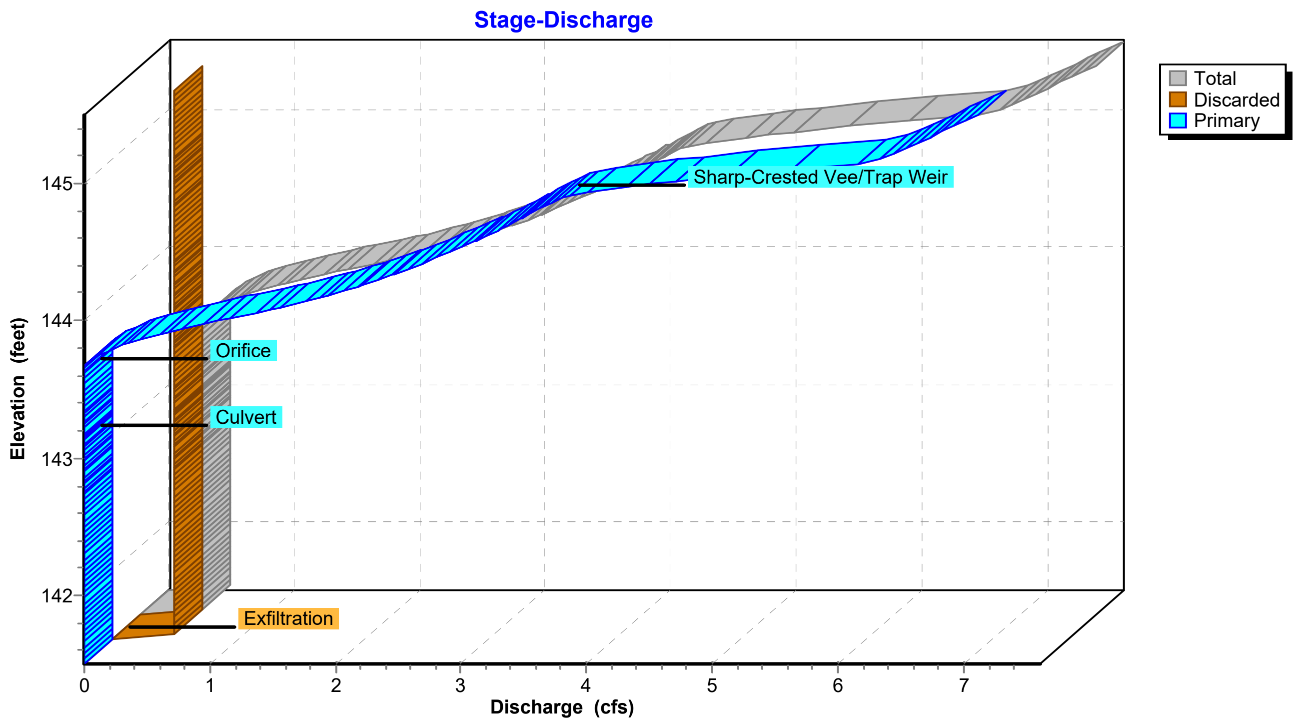




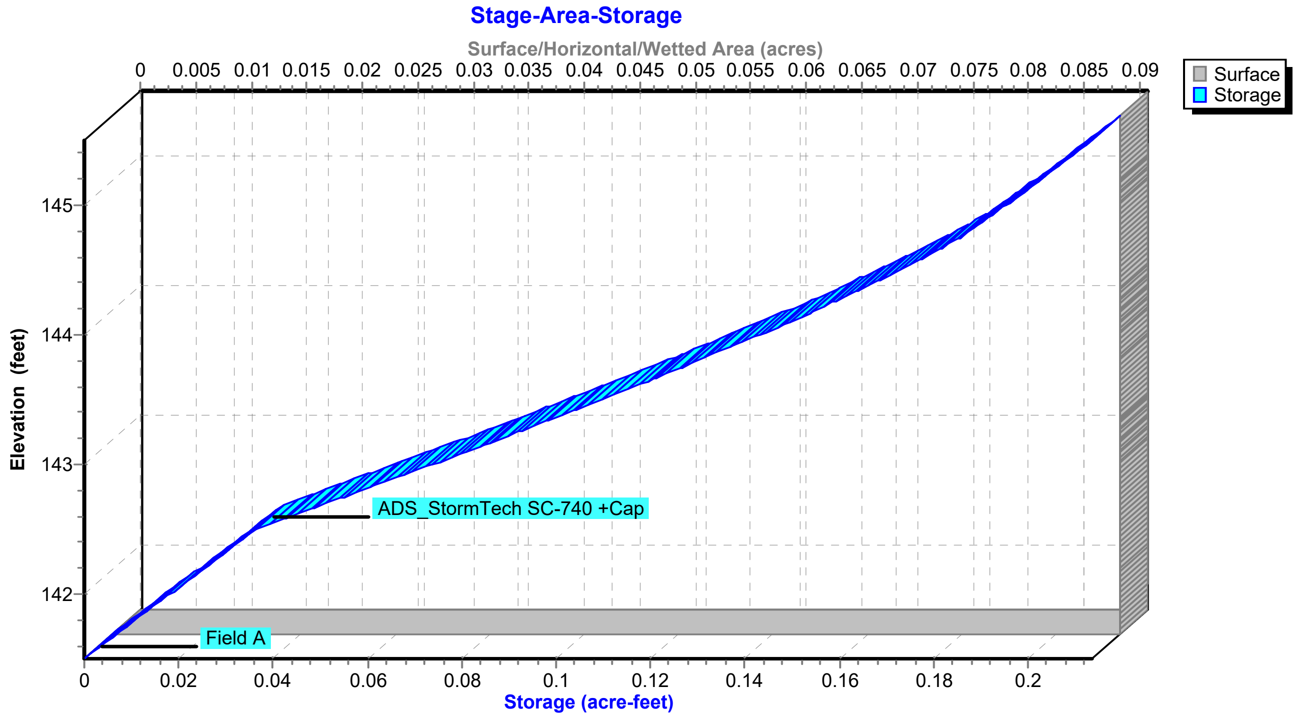
Pond S-2: Subsurface Infiltration System



Pond S-2: Subsurface Infiltration System



Pond S-2: Subsurface Infiltration System



Summary for Pond S-3: Subsurface Infiltration System

Inflow Area = 1.020 ac, 47.60% Impervious, Inflow Depth = 3.70" for 50-yr event
Inflow = 4.02 cfs @ 12.13 hrs, Volume= 0.315 af
Outflow = 2.42 cfs @ 12.21 hrs, Volume= 0.282 af, Atten= 40%, Lag= 4.9 min
Discarded = 0.05 cfs @ 6.57 hrs, Volume= 0.118 af
Primary = 2.36 cfs @ 12.21 hrs, Volume= 0.165 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 143.24' @ 12.21 hrs Surf.Area= 0.052 ac Storage= 0.096 af

Plug-Flow detention time= 171.5 min calculated for 0.282 af (90% of inflow)
Center-of-Mass det. time= 118.3 min (883.0 - 764.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	140.40'	0.047 af	**30.00'W x 74.82'L x 3.50'H Field A**
			0.180 af Overall - 0.063 af Embedded = 0.117 af x 40.0% Voids
#2A	140.90'	0.063 af	**ADS_StormTech SC-740 +Cap** x 60 Inside #1
			Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
			Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
			60 Chambers in 6 Rows
		0.110 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	141.84'	**12.0" Round Culvert**
			L= 75.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 141.84' / 141.19' S= 0.0087 '/' Cc= 0.900
			n= 0.012, Flow Area= 0.79 sf
#2	Device 1	142.10'	**7.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	143.30'	**5.0' long Weir Wall** Cv= 2.62 (C= 3.28)
#4	Discarded	140.40'	**1.050 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.05 cfs @ 6.57 hrs HW=140.44' (Free Discharge)
└─**4=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=2.36 cfs @ 12.21 hrs HW=143.23' (Free Discharge)
└─**1=Culvert** (Passes 2.36 cfs of 3.44 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 2.36 cfs @ 4.42 fps)
  └─**3=Weir Wall** (Controls 0.00 cfs)

Pond S-3: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

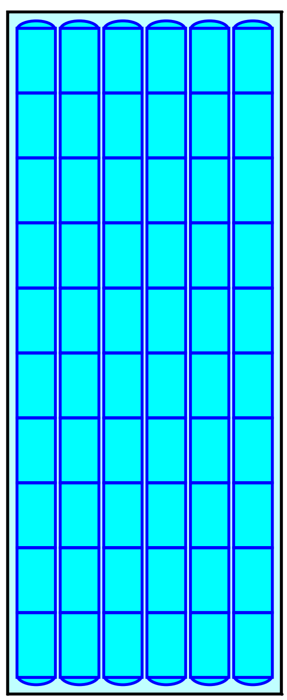
10 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 72.82' Row Length +12.0" End Stone x 2 = 74.82' Base Length
6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

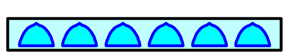
60 Chambers x 45.9 cf = 2,756.4 cf Chamber Storage

7,855.8 cf Field - 2,756.4 cf Chambers = 5,099.3 cf Stone x 40.0% Voids = 2,039.7 cf Stone Storage

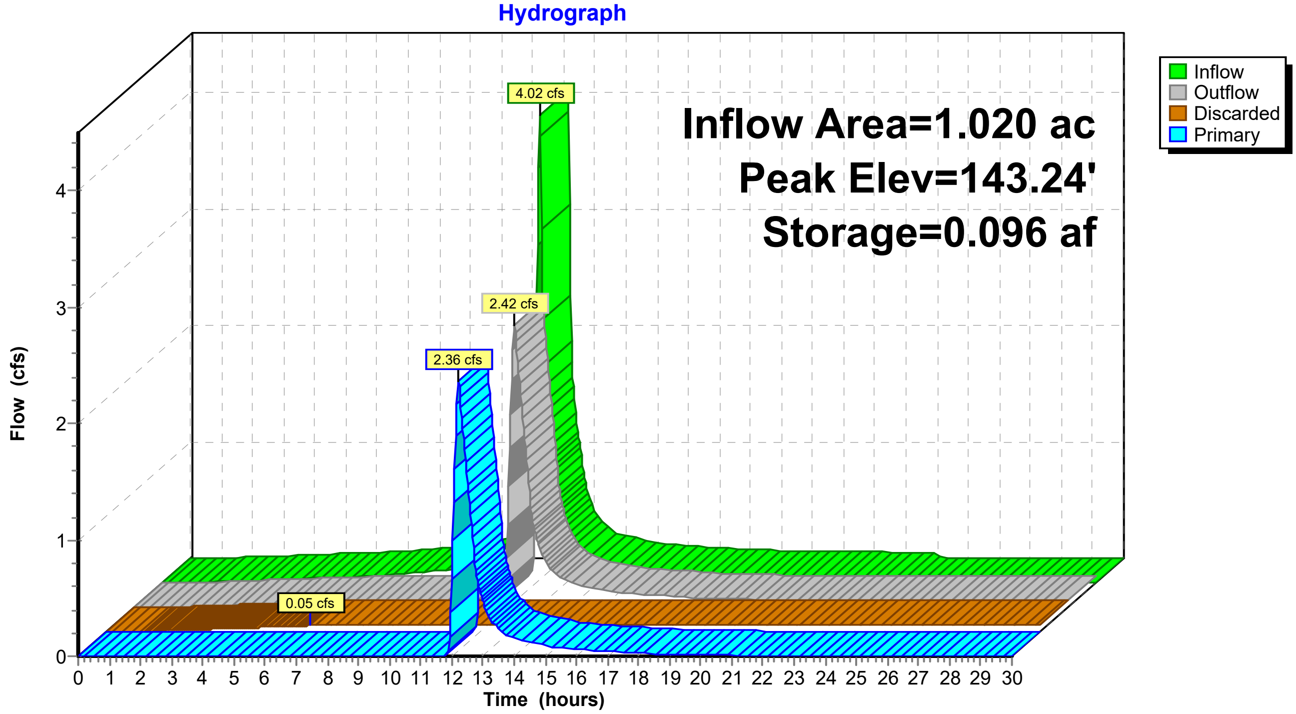
Chamber Storage + Stone Storage = 4,796.1 cf = 0.110 af
Overall Storage Efficiency = 61.1%
Overall System Size = 74.82' x 30.00' x 3.50'

60 Chambers
291.0 cy Field
188.9 cy Stone

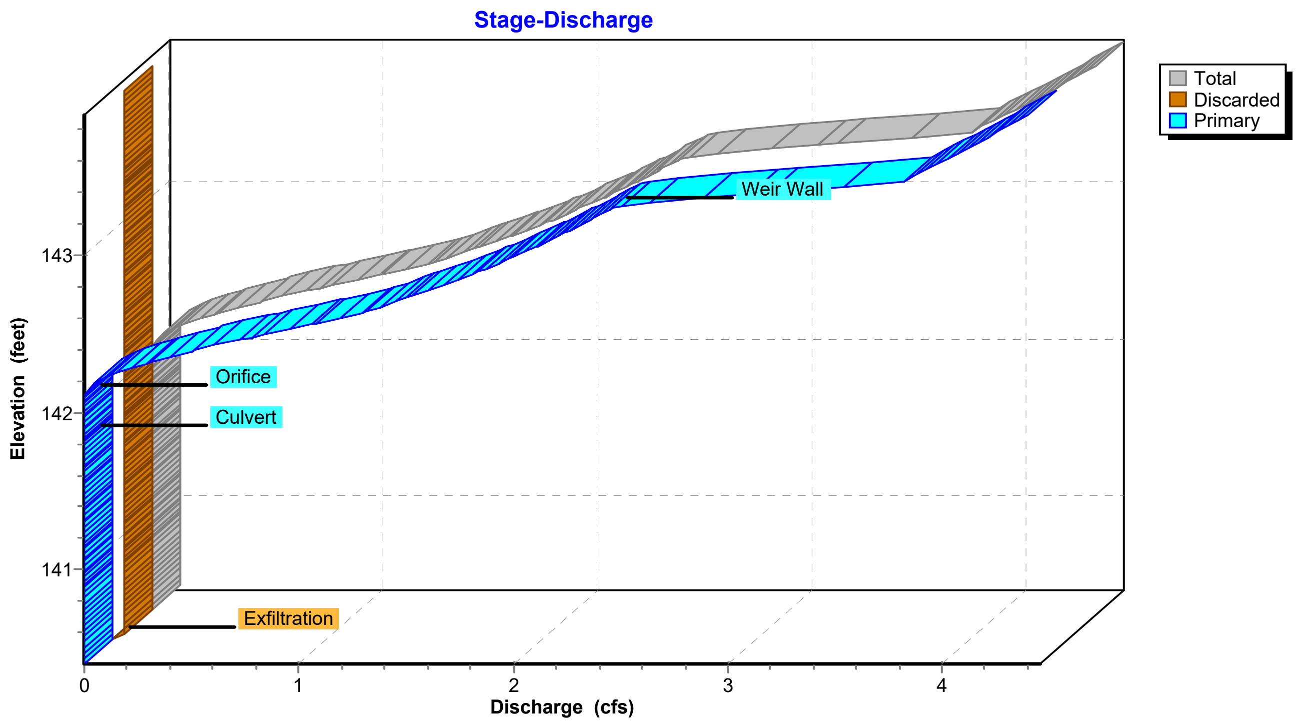




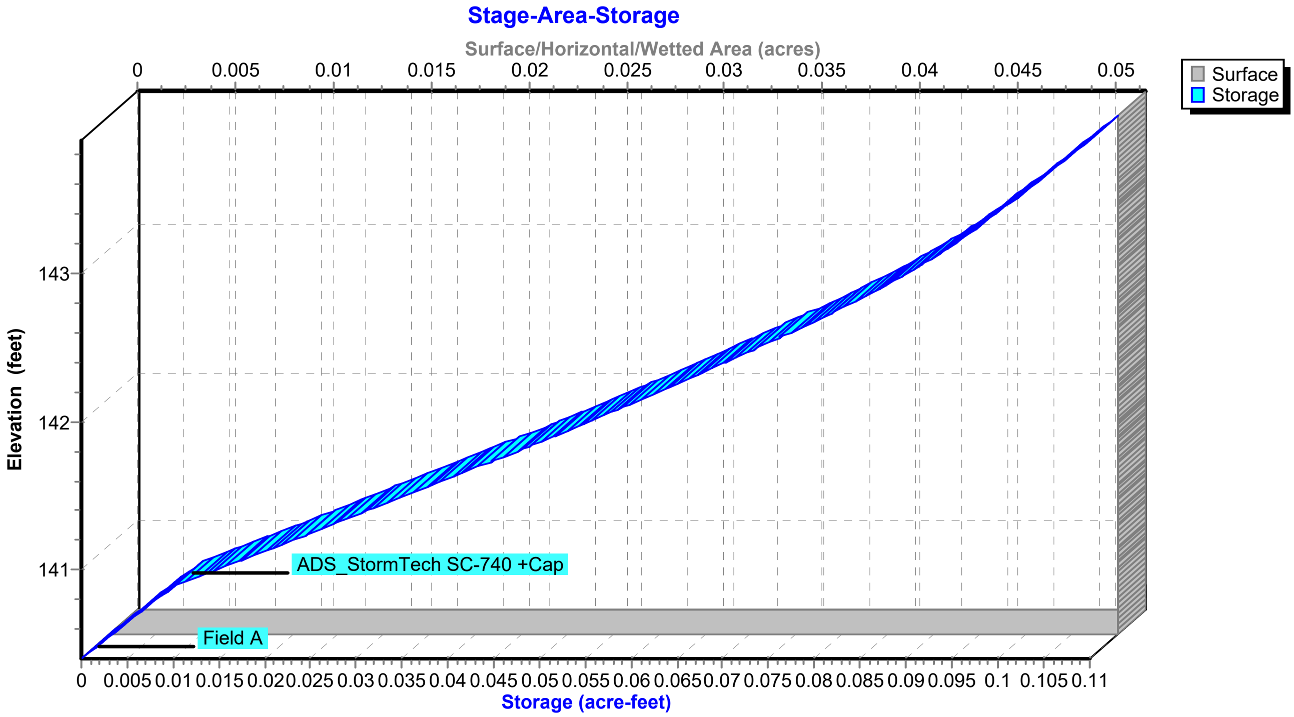
Pond S-3: Subsurface Infiltration System



Pond S-3: Subsurface Infiltration System



Pond S-3: Subsurface Infiltration System



Summary for Subcatchment PR-1: CCB 14

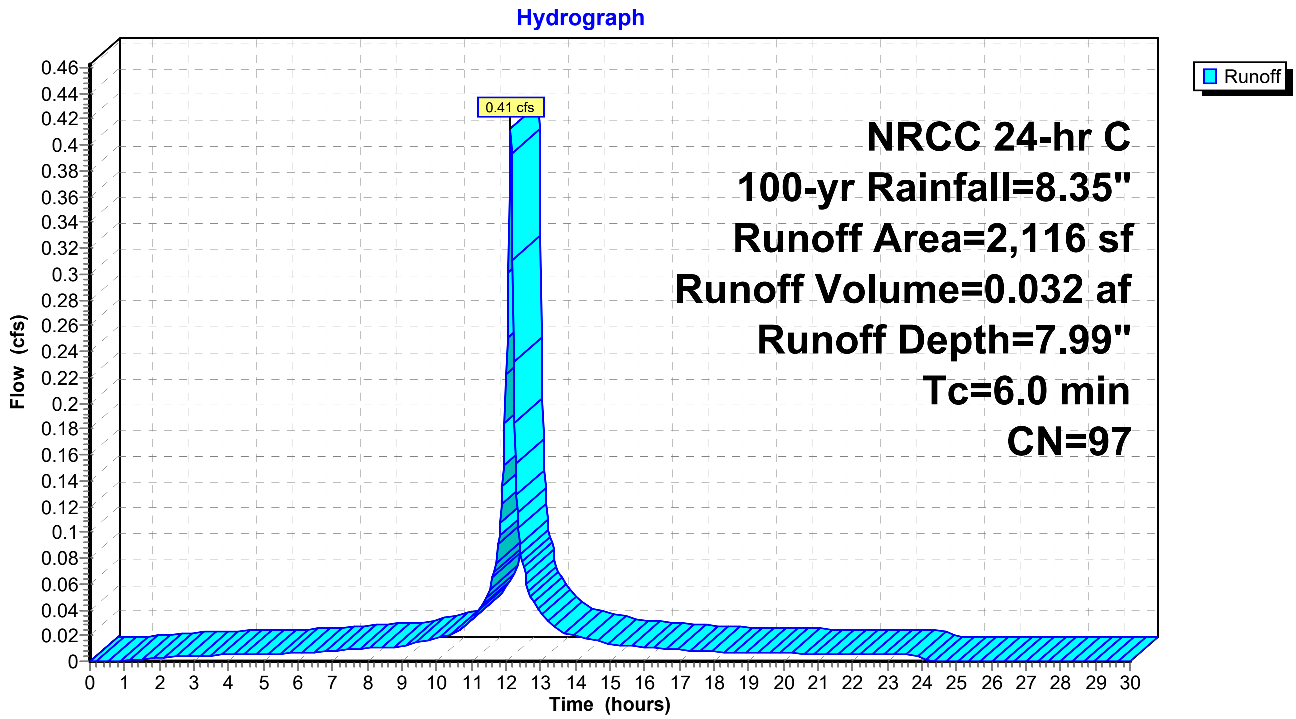
Runoff = 0.41 cfs @ 12.13 hrs, Volume= 0.032 af, Depth= 7.99"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
	2,045	98	Paved parking, HSG D
*	71	79	Landscaping, Good, HSG D
	2,116	97	Weighted Average
	71		3.36% Pervious Area
	2,045		96.64% Impervious Area

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

Subcatchment PR-1: CCB 14



Summary for Subcatchment PR-10: CCB 28

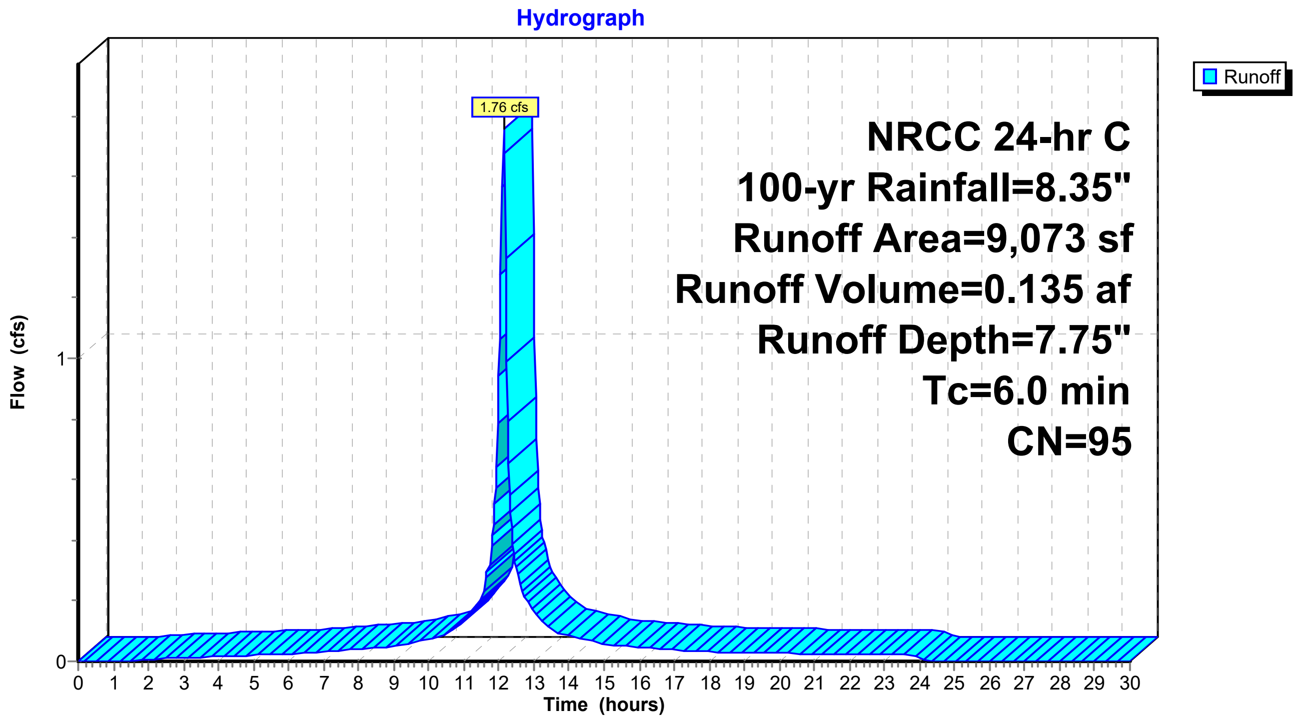
Runoff = 1.76 cfs @ 12.13 hrs, Volume= 0.135 af, Depth= 7.75"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
	7,450	98	Paved parking, HSG D
	440	80	>75% Grass cover, Good, HSG D
*	1,183	79	Landscaping, Good, HSG D
	9,073	95	Weighted Average
	1,623		17.89% Pervious Area
	7,450		82.11% Impervious Area

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

Subcatchment PR-10: CCB 28



Summary for Subcatchment PR-11: Building Roof

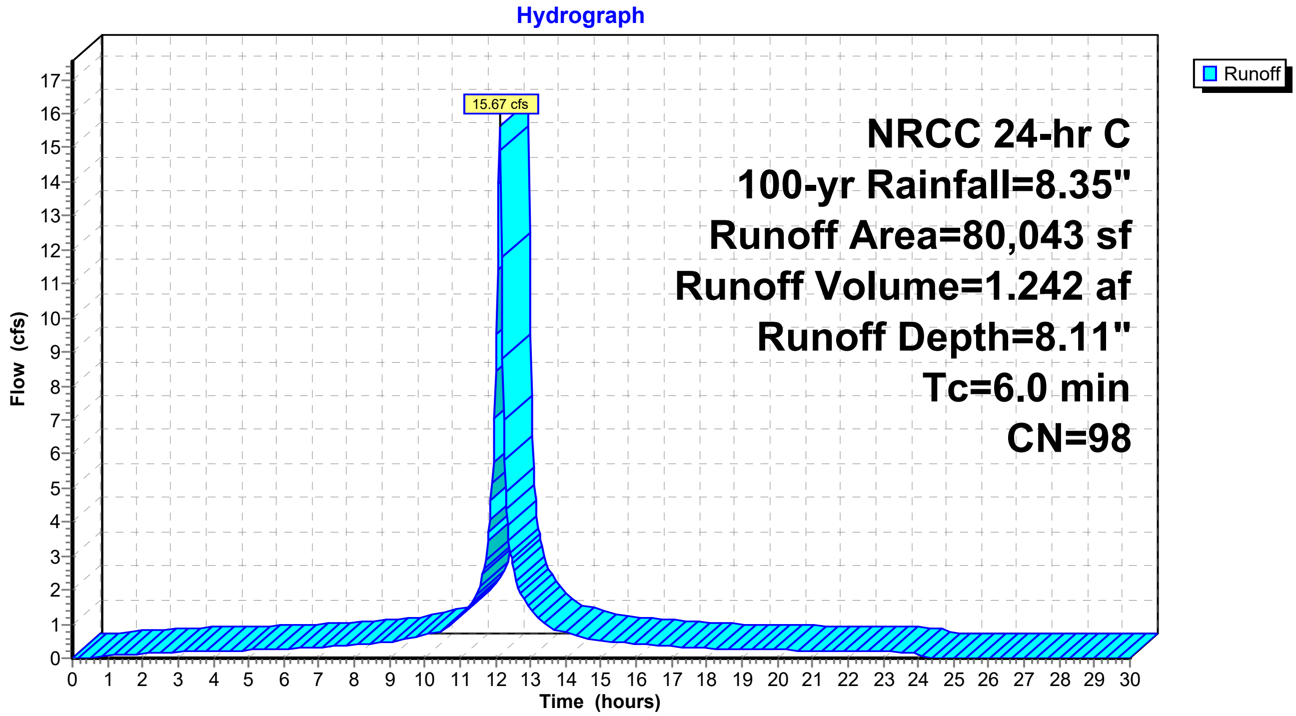
Runoff = 15.67 cfs @ 12.13 hrs, Volume= 1.242 af, Depth= 8.11"
Routed to Reach R1 : Roof Leader

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

Area (sf)	CN	Description
80,043	98	Roofs, HSG D
80,043		100.00% Impervious Area

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

Subcatchment PR-11: Building Roof



Summary for Subcatchment PR-12: CCB 29

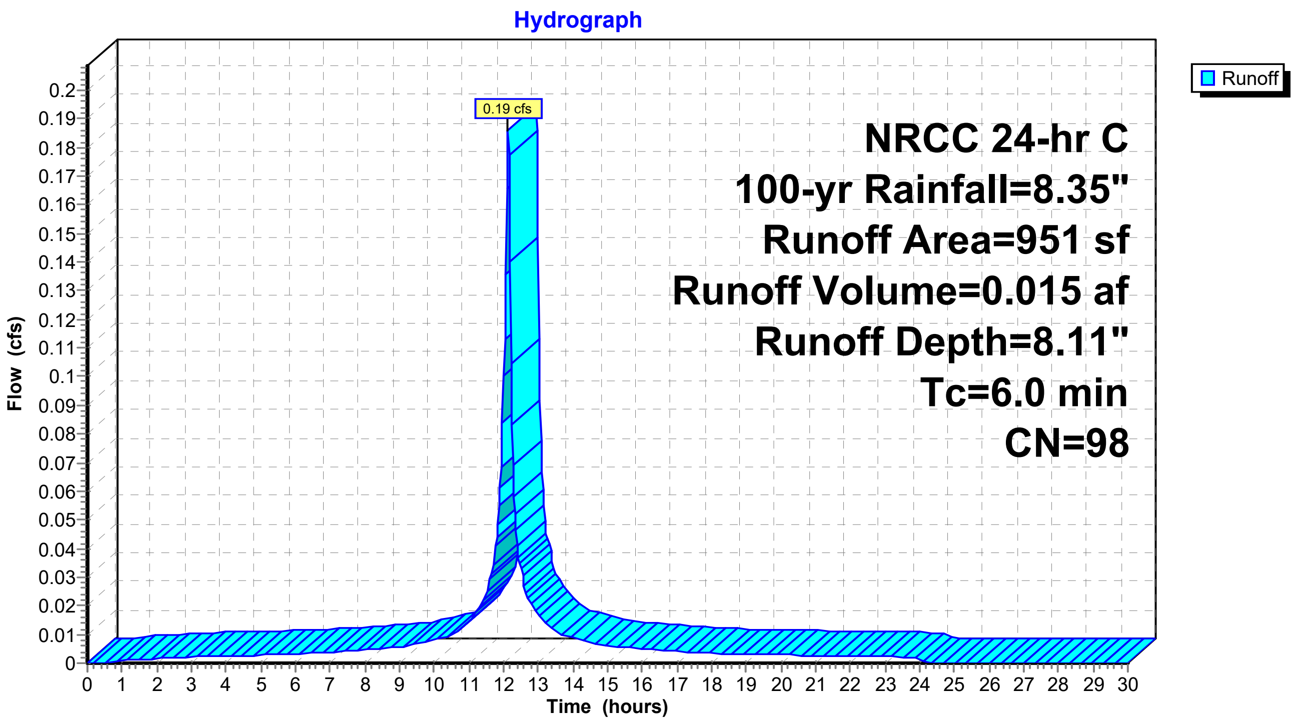
Runoff = 0.19 cfs @ 12.13 hrs, Volume= 0.015 af, Depth= 8.11"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

Area (sf)	CN	Description
951	98	Paved parking, HSG D
951		100.00% Impervious Area

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

Subcatchment PR-12: CCB 29



Summary for Subcatchment PR-13: CCB 30

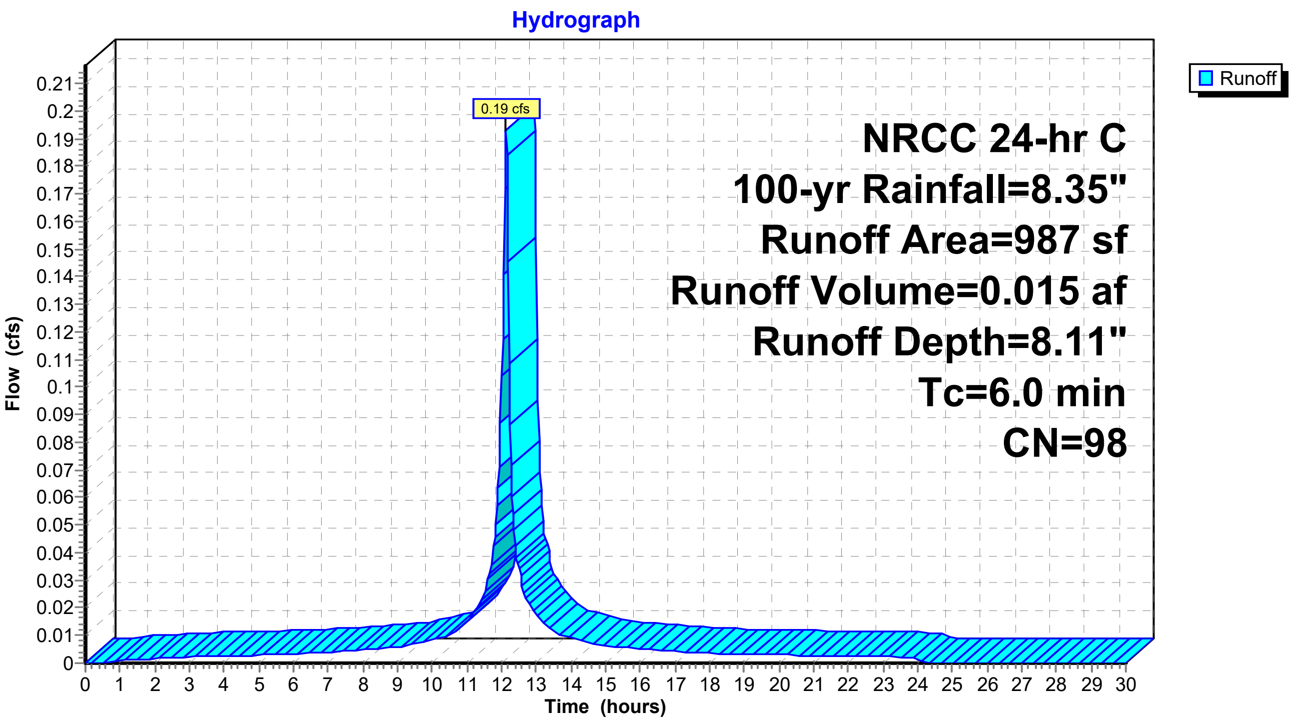
Runoff = 0.19 cfs @ 12.13 hrs, Volume= 0.015 af, Depth= 8.11"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

Area (sf)	CN	Description
987	98	Paved parking, HSG D
987		100.00% Impervious Area

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

Subcatchment PR-13: CCB 30



Summary for Subcatchment PR-14: CLCB-10

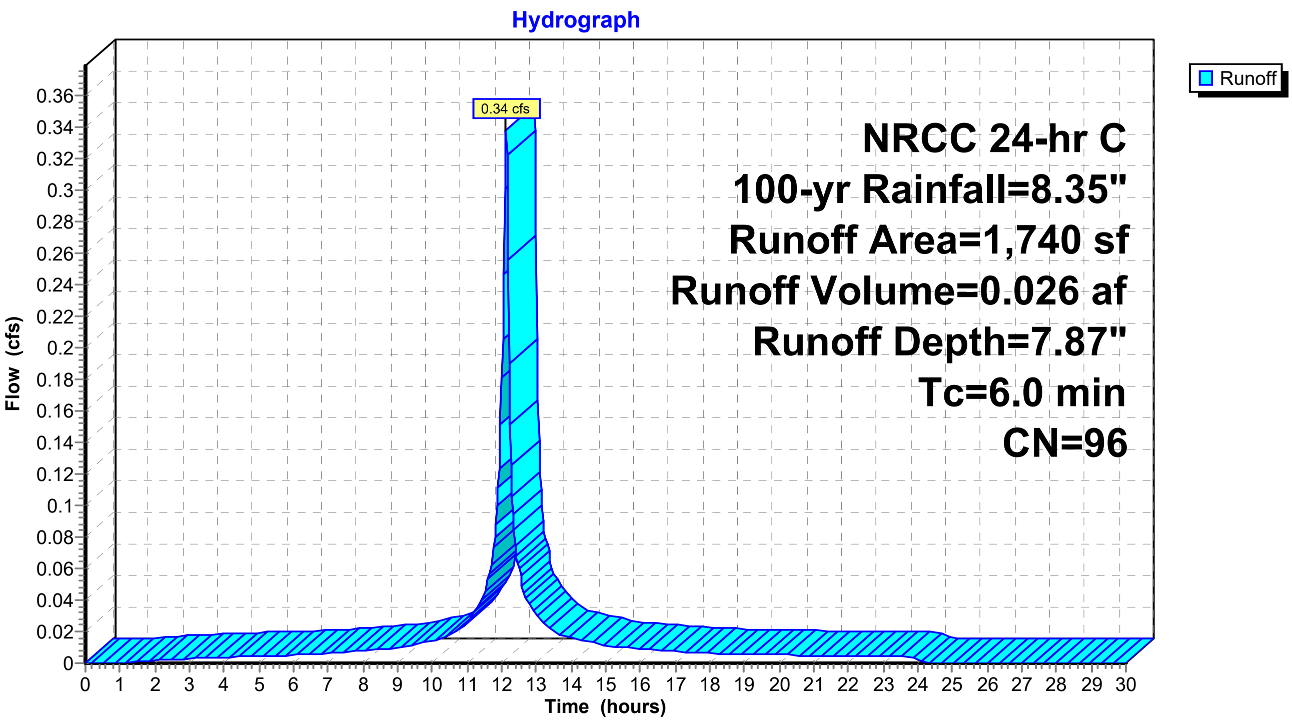
Runoff = 0.34 cfs @ 12.13 hrs, Volume= 0.026 af, Depth= 7.87"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
*	1,740	96	Concrete paver, HSG D
	1,740		100.00% Pervious Area

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

Subcatchment PR-14: CLCB-10



Summary for Subcatchment PR-15: CLCB-09

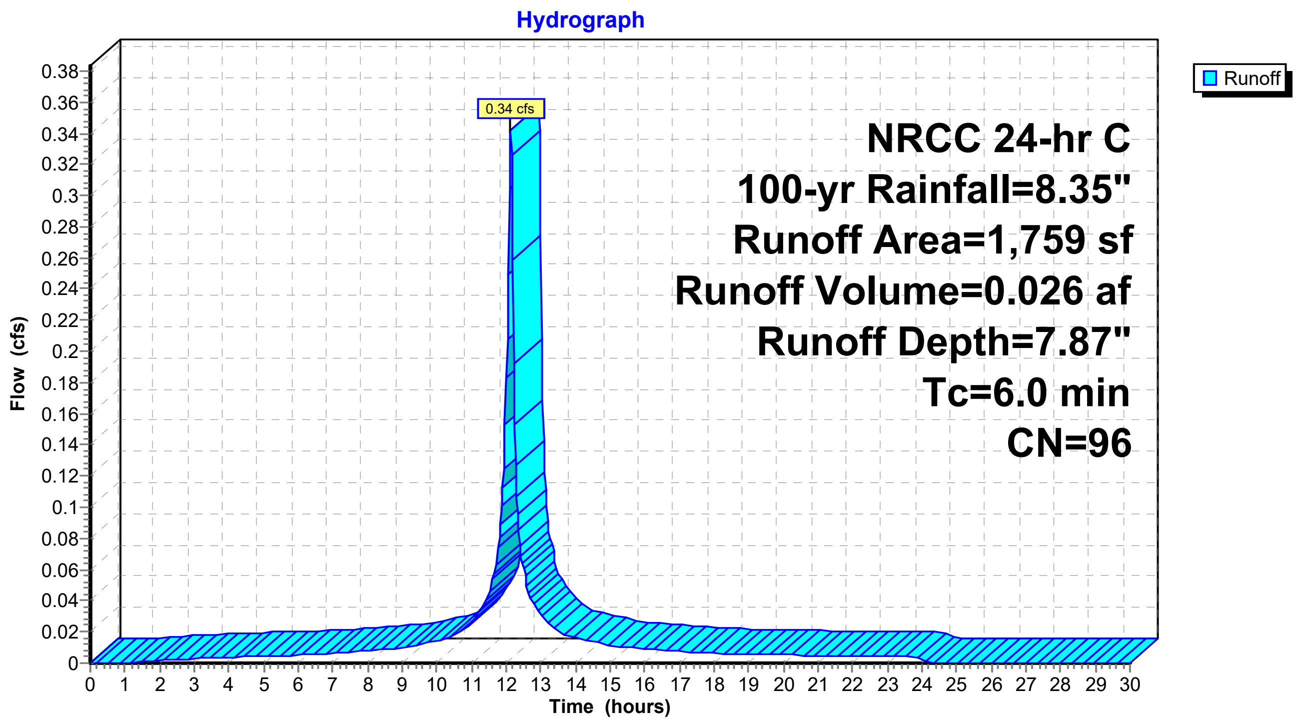
Runoff = 0.34 cfs @ 12.13 hrs, Volume= 0.026 af, Depth= 7.87"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
*	1,759	96	Pevious paver, HSG D
	1,759		100.00% Pervious Area

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

Subcatchment PR-15: CLCB-09



Summary for Subcatchment PR-16: East rooftop to Front Rain Garden

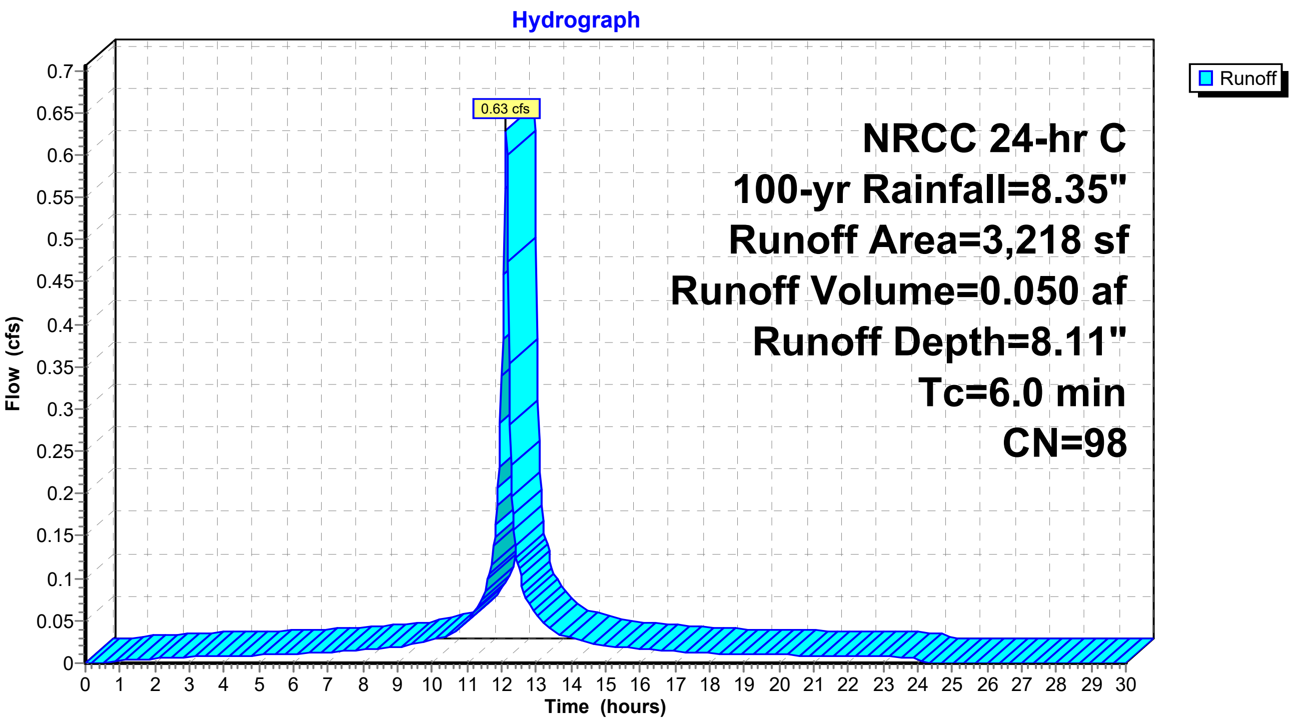
Runoff = 0.63 cfs @ 12.13 hrs, Volume= 0.050 af, Depth= 8.11"
Routed to Pond AP-2 : Front Lawn Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

Area (sf)	CN	Description
3,218	98	Roofs, HSG D
3,218		100.00% Impervious Area

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

Subcatchment PR-16: East rooftop to Front Rain Garden



Summary for Subcatchment PR-17: Front Lawn

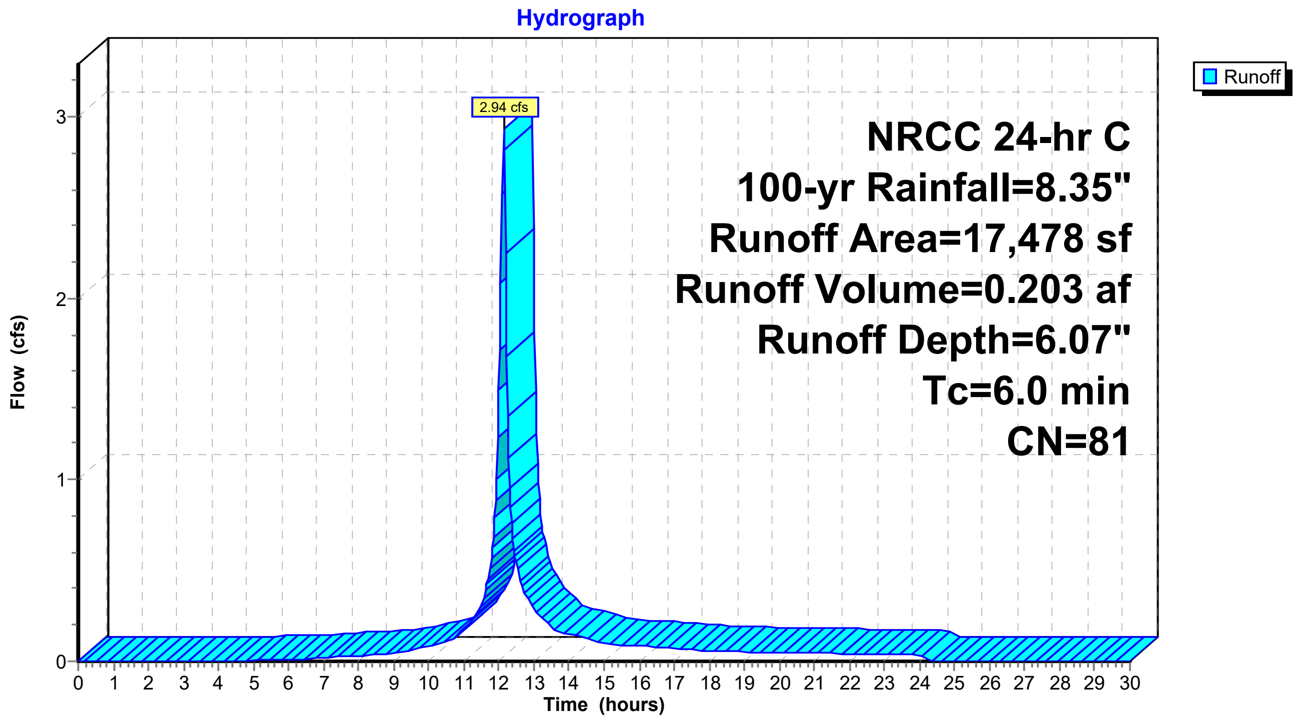
Runoff = 2.94 cfs @ 12.13 hrs, Volume= 0.203 af, Depth= 6.07"
Routed to Pond AP-2 : Front Lawn Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
	1,883	98	Paved parking, HSG D
	6,950	80	>75% Grass cover, Good, HSG D
*	8,645	79	Landscaping, Good, HSG D
	17,478	81	Weighted Average
	15,595		89.23% Pervious Area
	1,883		10.77% Impervious Area

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

Subcatchment PR-17: Front Lawn



Summary for Subcatchment PR-18: CCB-08

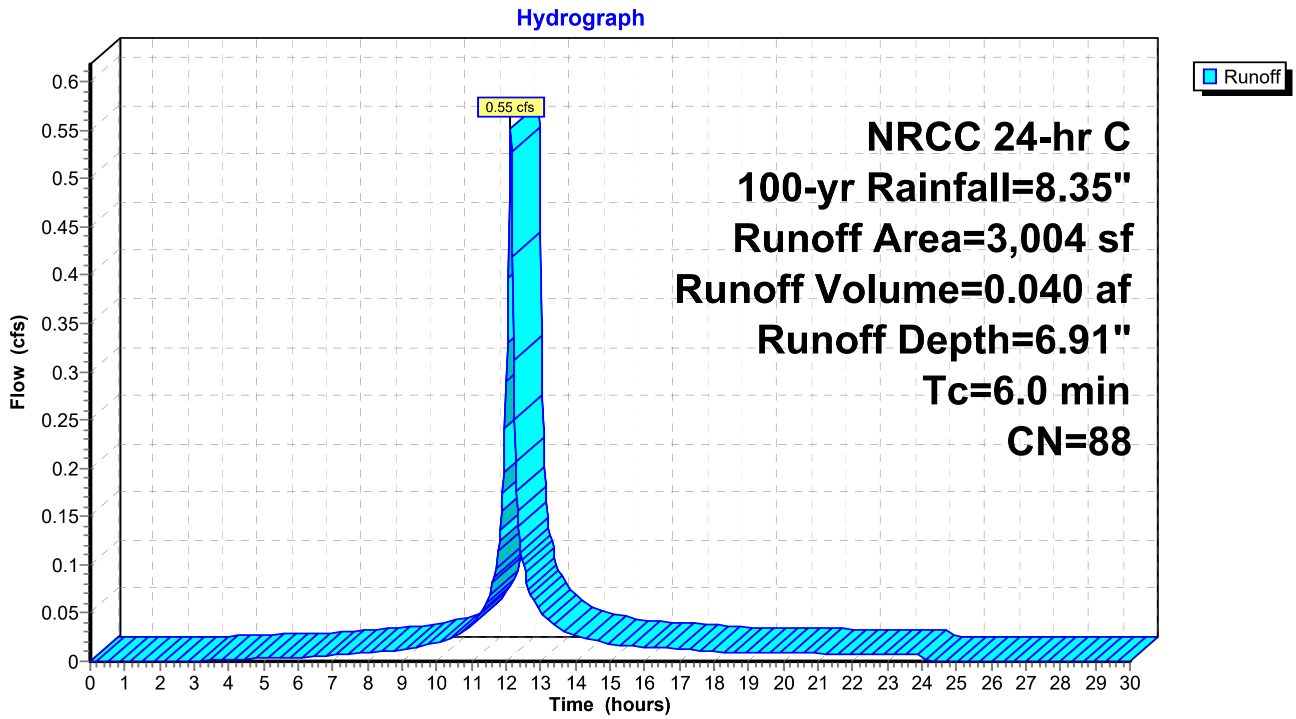
Runoff = 0.55 cfs @ 12.13 hrs, Volume= 0.040 af, Depth= 6.91"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
	1,482	98	Paved parking, HSG D
	192	80	>75% Grass cover, Good, HSG D
*	1,330	79	Landscaping, Good, HSG D
	3,004	88	Weighted Average
	1,522		50.67% Pervious Area
	1,482		49.33% Impervious Area

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

Subcatchment PR-18: CCB-08



Summary for Subcatchment PR-19: CCB-07

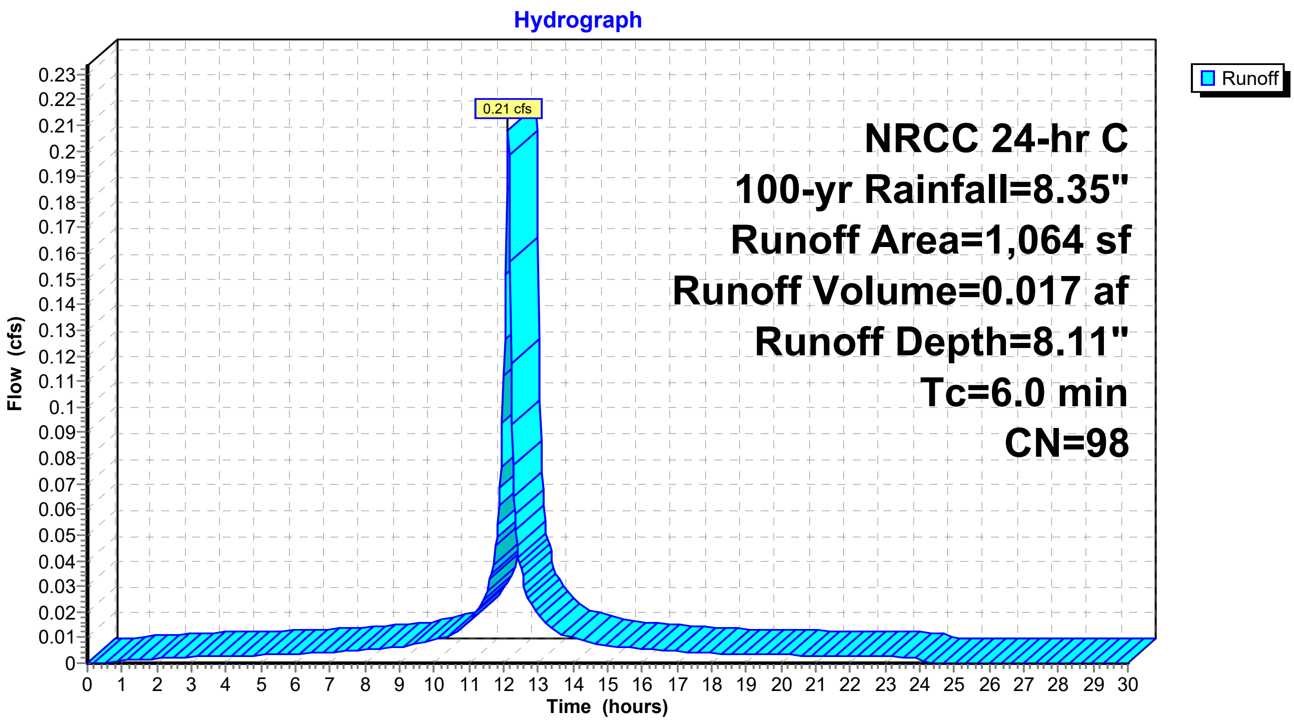
Runoff = 0.21 cfs @ 12.13 hrs, Volume= 0.017 af, Depth= 8.11"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

Area (sf)	CN	Description
1,064	98	Paved parking, HSG D
1,064		100.00% Impervious Area

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

Subcatchment PR-19: CCB-07



Summary for Subcatchment PR-2: CCB 10

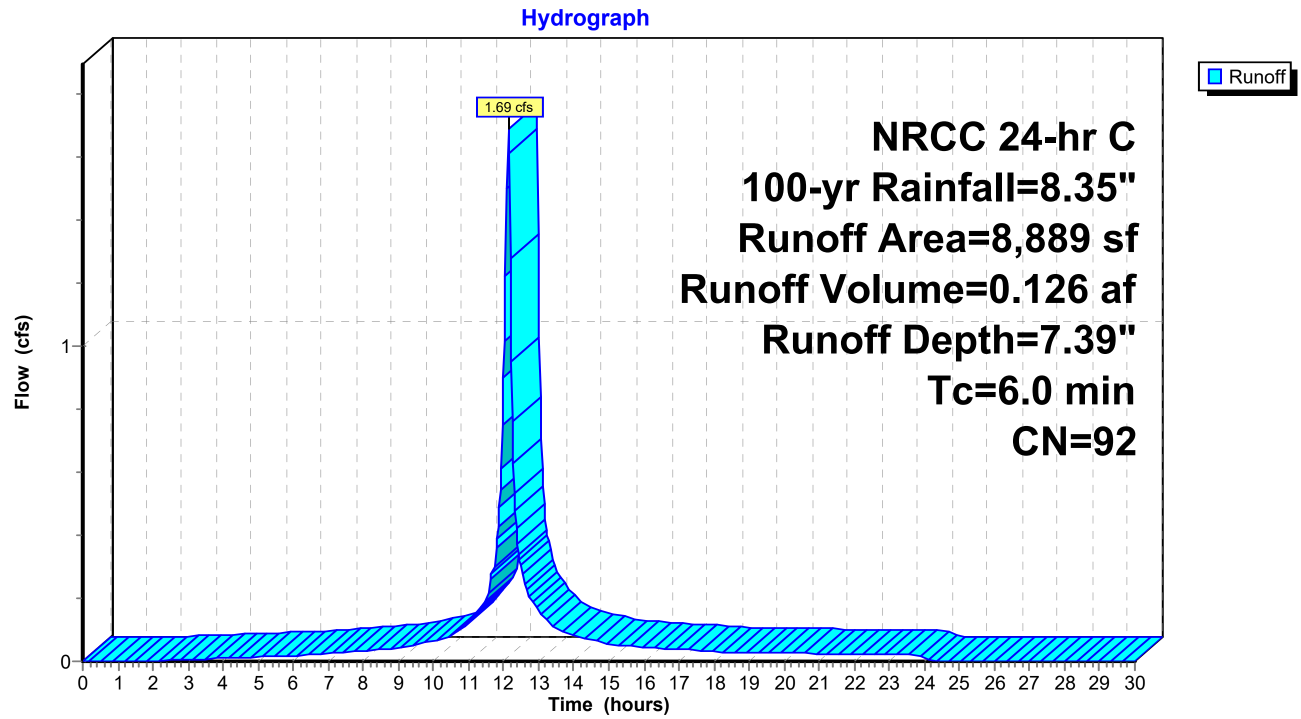
Runoff = 1.69 cfs @ 12.13 hrs, Volume= 0.126 af, Depth= 7.39"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
*	6,733	98	Paved parking, HSG C
*	1,772	72	Landscaping, Good, HSG C
	384	74	>75% Grass cover, Good, HSG C
	8,889	92	Weighted Average
	2,156		24.25% Pervious Area
	6,733		75.75% Impervious Area

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

Subcatchment PR-2: CCB 10



Summary for Subcatchment PR-20: South of entrance drive

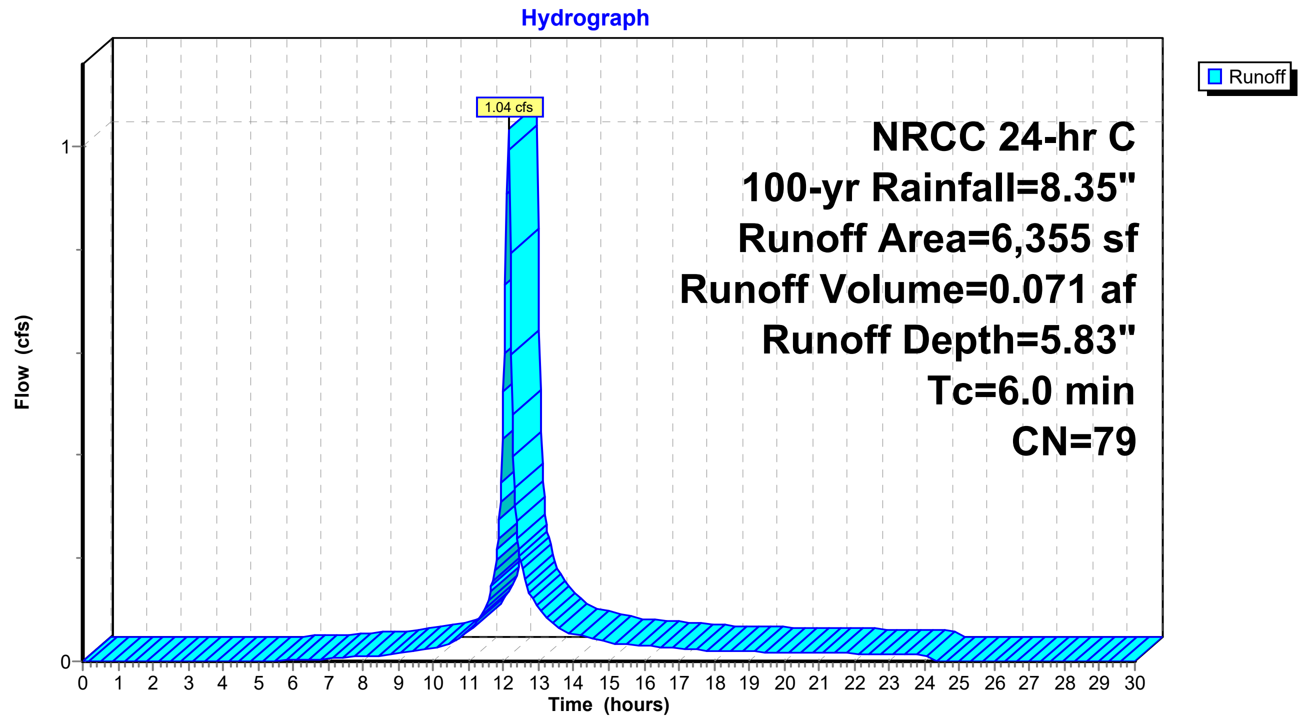
Runoff = 1.04 cfs @ 12.13 hrs, Volume= 0.071 af, Depth= 5.83"
Routed to Pond AP-4 : Landscaped Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
	93	98	Paved parking, HSG D
	755	80	>75% Grass cover, Good, HSG D
*	5,507	79	Landscaping, Good, HSG D
	6,355	79	Weighted Average
	6,262		98.54% Pervious Area
	93		1.46% Impervious Area

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

Subcatchment PR-20: South of entrance drive



Summary for Subcatchment PR-21: Danbury Rd

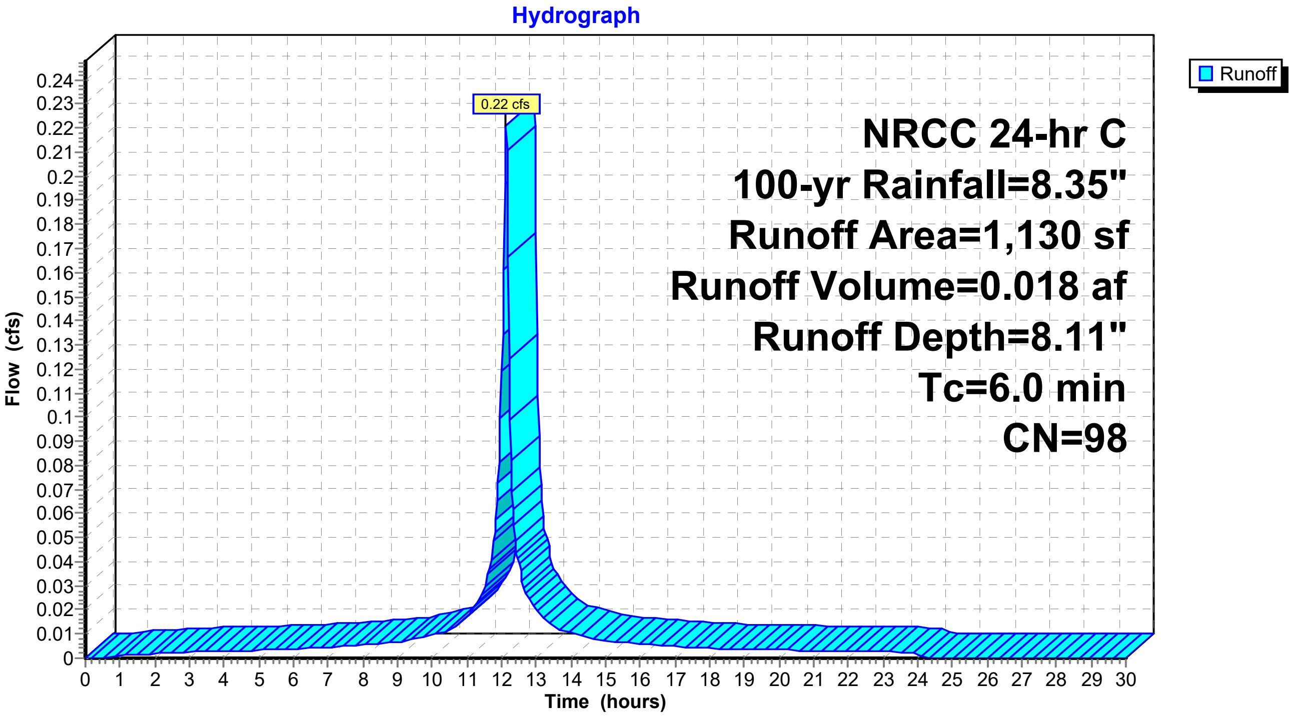
Runoff = 0.22 cfs @ 12.13 hrs, Volume= 0.018 af, Depth= 8.11"
Routed to Pond AP-3 : Danbury Road

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

Area (sf)	CN	Description
1,130	98	Paved parking, HSG D
1,130		100.00% Impervious Area

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

Subcatchment PR-21: Danbury Rd



Summary for Subcatchment PR-3: CCB 07

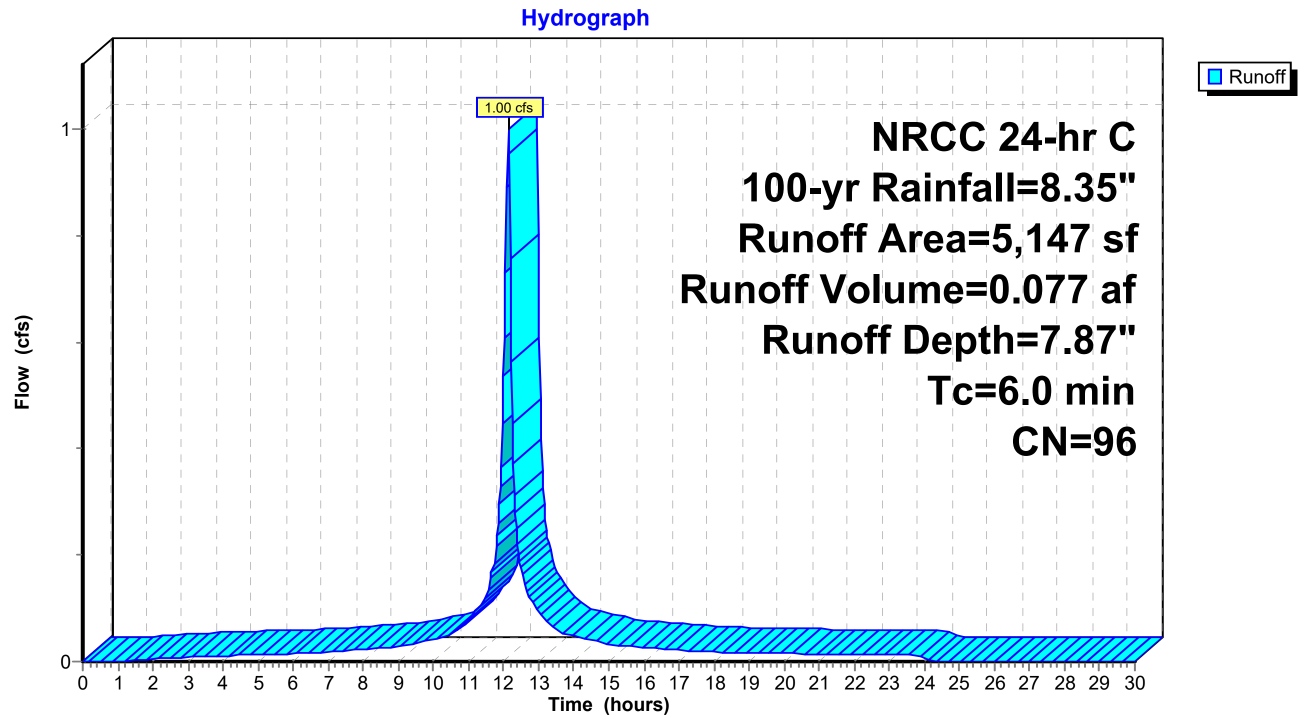
Runoff = 1.00 cfs @ 12.13 hrs, Volume= 0.077 af, Depth= 7.87"
Routed to Pond S-3 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
*	4,715	98	Paved parking, HSG C
*	432	72	Landscaping, Good, HSG C
	5,147	96	Weighted Average
	432		8.39% Pervious Area
	4,715		91.61% Impervious Area

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

Subcatchment PR-3: CCB 07



Summary for Subcatchment PR-4: CCB 06

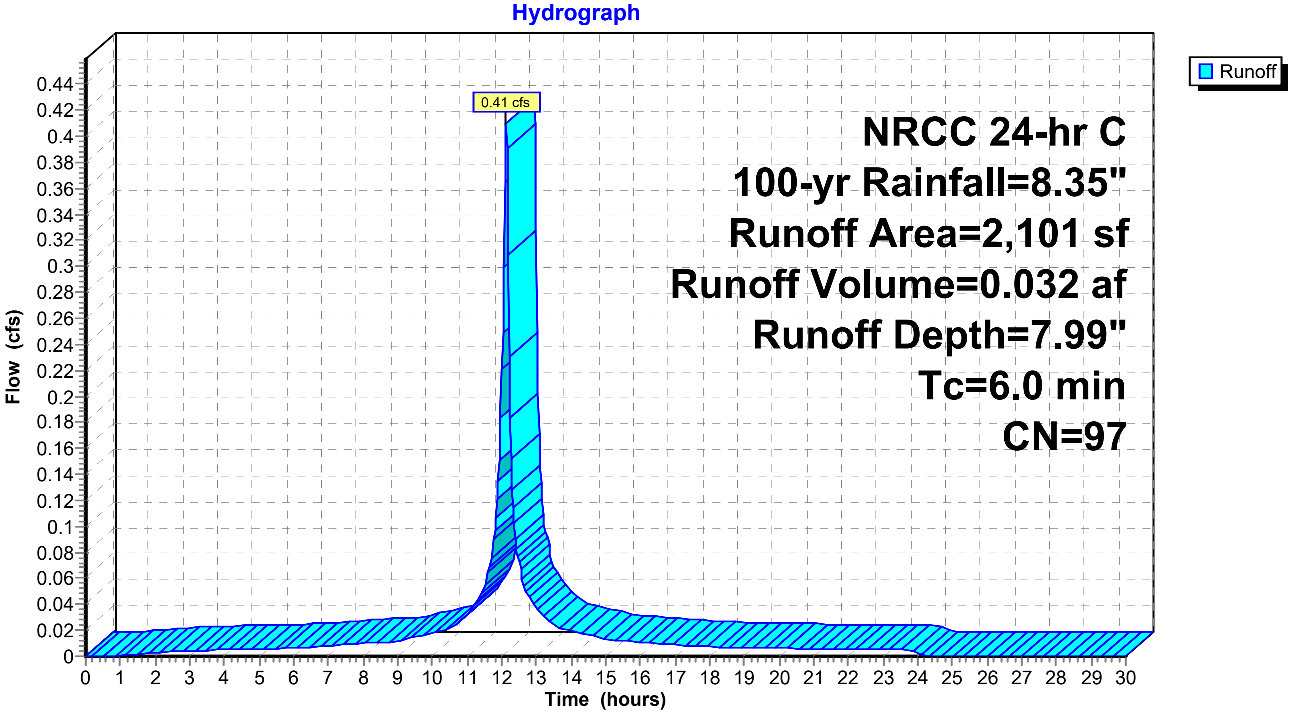
Runoff = 0.41 cfs @ 12.13 hrs, Volume= 0.032 af, Depth= 7.99"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
	2,026	98	Paved parking, HSG D
*	75	79	Landscaping, Good, HSG D
	2,101	97	Weighted Average
	75		3.57% Pervious Area
	2,026		96.43% Impervious Area

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

Subcatchment PR-4: CCB 06



Summary for Subcatchment PR-5: South Basin

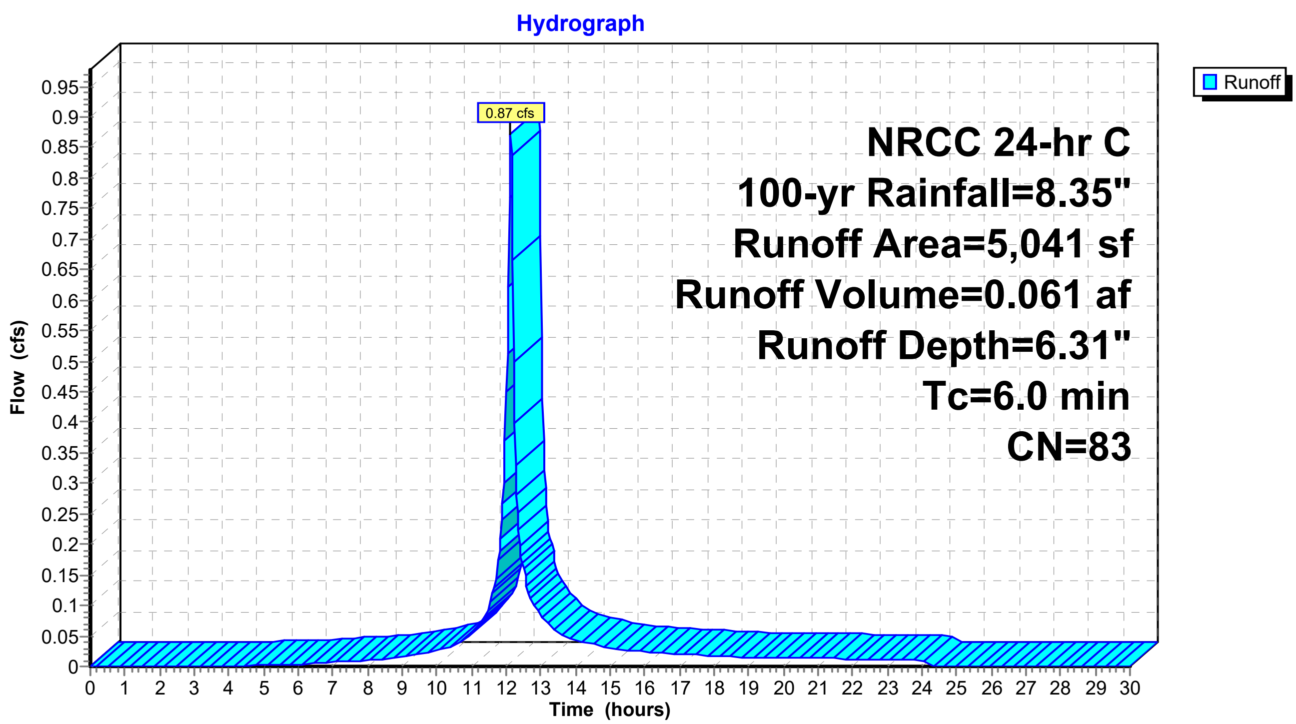
Runoff = 0.87 cfs @ 12.13 hrs, Volume= 0.061 af, Depth= 6.31"
Routed to Pond B-1 : South Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
*	595	96	Permable Paver, HSG C
*	366	96	Gravel surface, HSG C
*	2,205	72	Landscaping, Good, HSG C
*	890	98	Paved parking, HSG C
	985	80	>75% Grass cover, Good, HSG D
	5,041	83	Weighted Average
	4,151		82.34% Pervious Area
	890		17.66% Impervious Area

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

Subcatchment PR-5: South Basin



Summary for Subcatchment PR-6: West along river

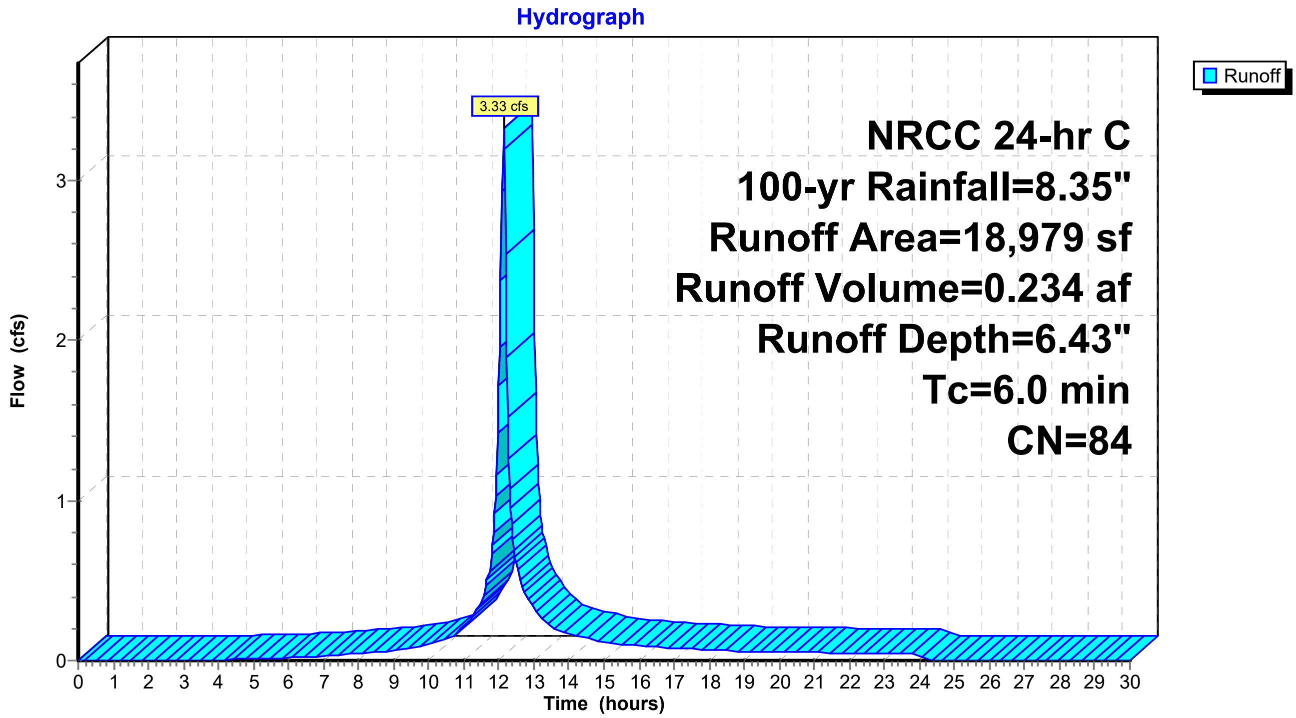
Runoff = 3.33 cfs @ 12.13 hrs, Volume= 0.234 af, Depth= 6.43"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
*	4,195	96	Permeable paver, HSG D
	461	96	Gravel surface, HSG D
	911	98	Paved parking, HSG D
	2,775	80	>75% Grass cover, Good, HSG D
*	6,489	79	Landscaping, Good, HSG D
	4,148	77	Woods, Good, HSG D
	18,979	84	Weighted Average
	18,068		95.20% Pervious Area
	911		4.80% Impervious Area

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

Subcatchment PR-6: West along river



Summary for Subcatchment PR-7: North basin

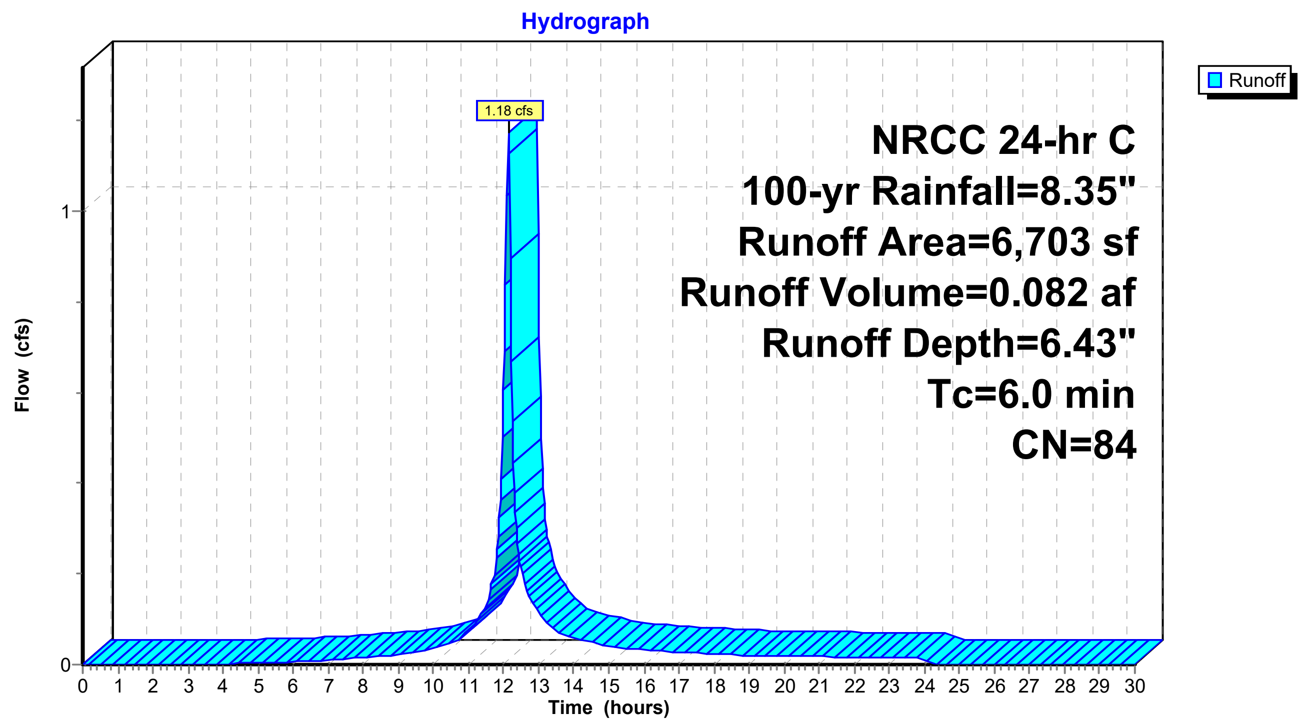
Runoff = 1.18 cfs @ 12.13 hrs, Volume= 0.082 af, Depth= 6.43"
Routed to Pond B-2 : North Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
	453	96	Gravel surface, HSG D
*	1,031	96	Permeable paver, HSG D
	445	80	>75% Grass cover, Good, HSG D
*	3,601	79	Landscaping, Good, HSG D
	692	77	Woods, Good, HSG D
	481	98	Paved parking, HSG D
	6,703	84	Weighted Average
	6,222		92.82% Pervious Area
	481		7.18% Impervious Area

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

Subcatchment PR-7: North basin



Summary for Subcatchment PR-7B: CCB 26

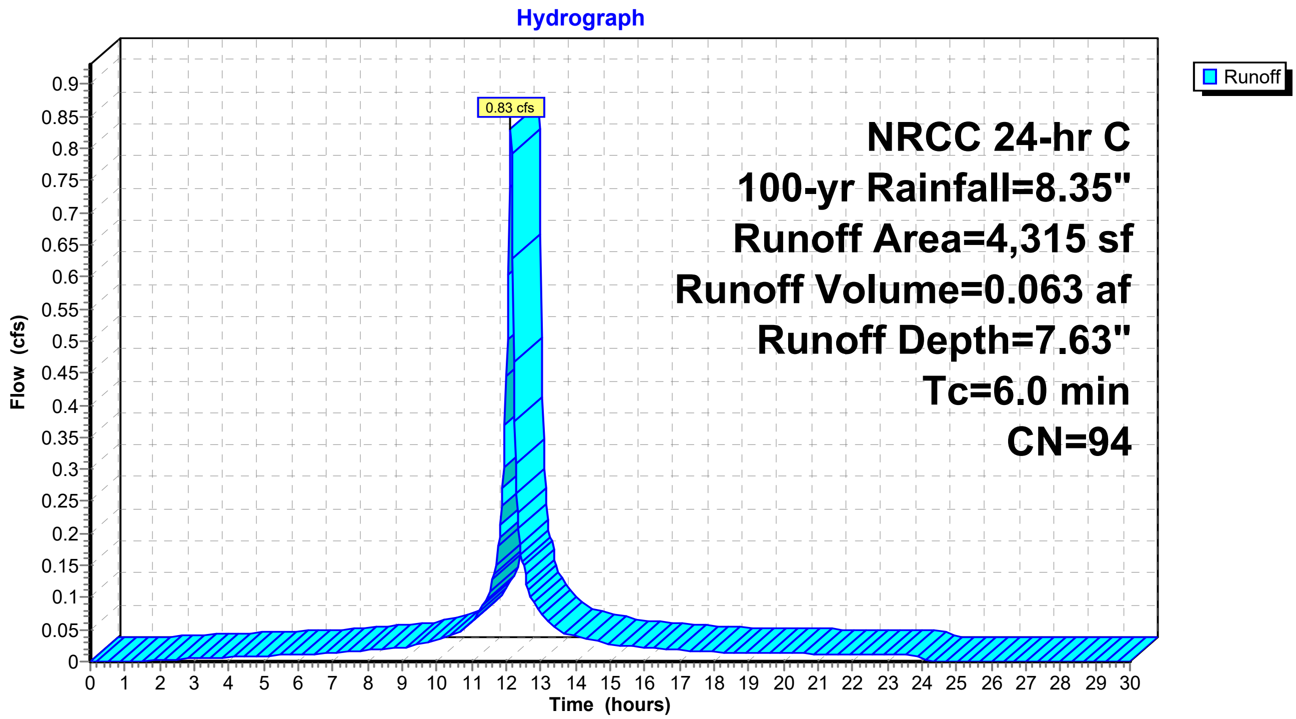
Runoff = 0.83 cfs @ 12.13 hrs, Volume= 0.063 af, Depth= 7.63"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
	3,518	98	Paved parking, HSG D
*	797	79	Landscaping, Good, HSG D
	4,315	94	Weighted Average
	797		18.47% Pervious Area
	3,518		81.53% Impervious Area

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

Subcatchment PR-7B: CCB 26



Summary for Subcatchment PR-8: CCB 26A

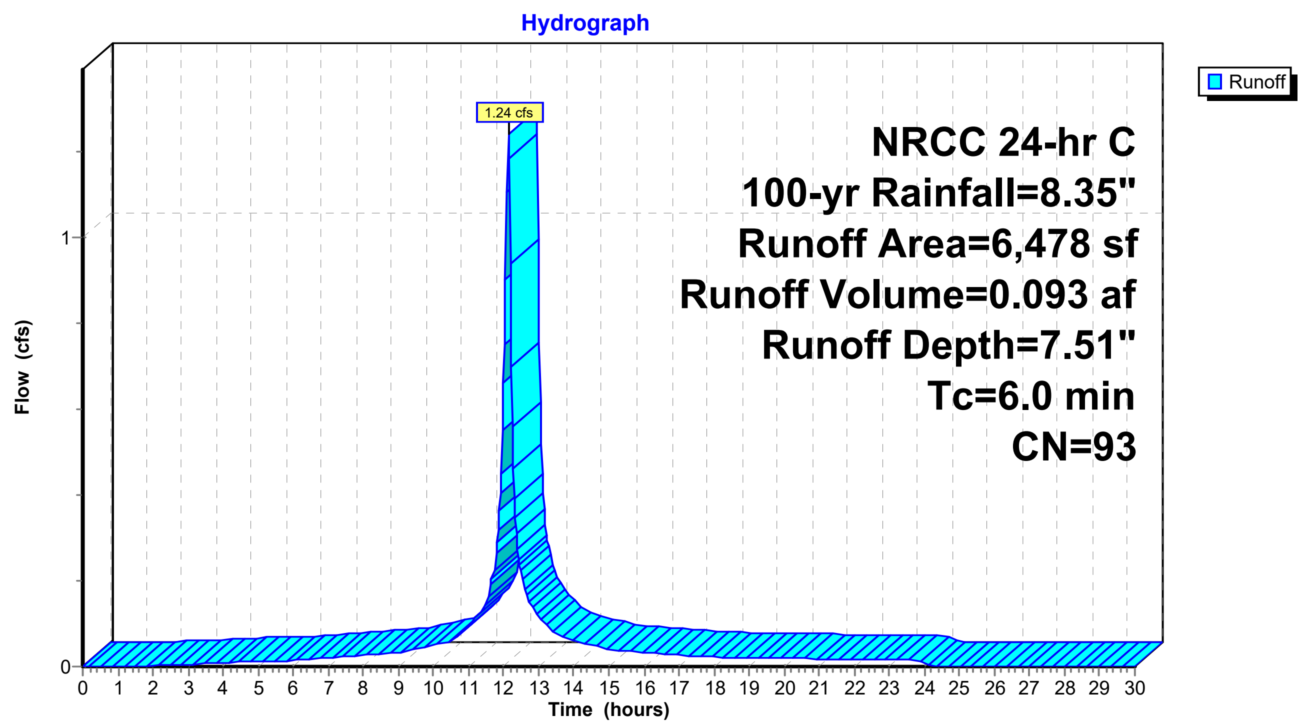
Runoff = 1.24 cfs @ 12.13 hrs, Volume= 0.093 af, Depth= 7.51"
Routed to Pond AP-1 : Norwalk River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
	4,737	98	Paved parking, HSG D
*	1,741	79	Landscaping, Good, HSG D
	6,478	93	Weighted Average
	1,741		26.88% Pervious Area
	4,737		73.12% Impervious Area

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

Subcatchment PR-8: CCB 26A



Summary for Subcatchment PR-9: CCB 27

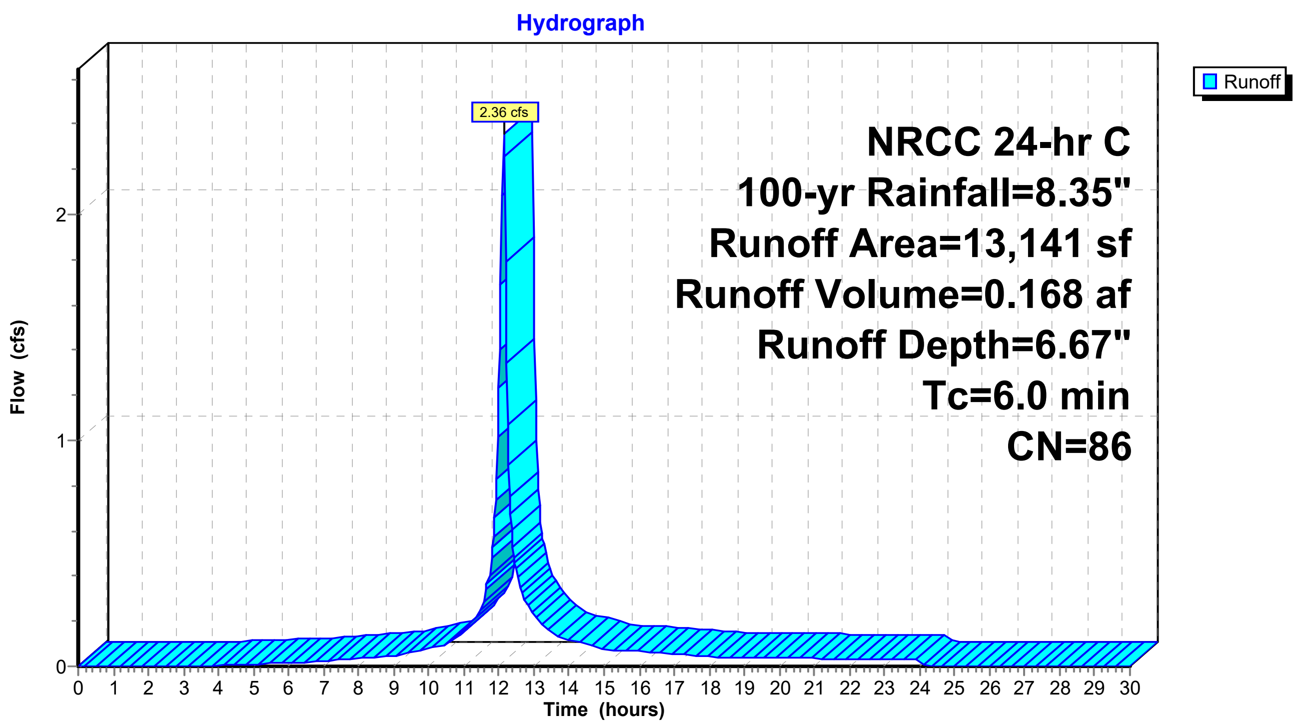
Runoff = 2.36 cfs @ 12.13 hrs, Volume= 0.168 af, Depth= 6.67"
Routed to Pond S-1 : Subsurface Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
NRCC 24-hr C 100-yr Rainfall=8.35"

	Area (sf)	CN	Description
	4,730	98	Paved parking, HSG D
	817	80	>75% Grass cover, Good, HSG D
*	7,594	79	Landscaping, Good, HSG D
	13,141	86	Weighted Average
	8,411		64.01% Pervious Area
	4,730		35.99% Impervious Area

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

Subcatchment PR-9: CCB 27



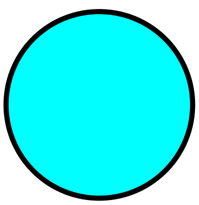
Summary for Reach R1: Roof Leader

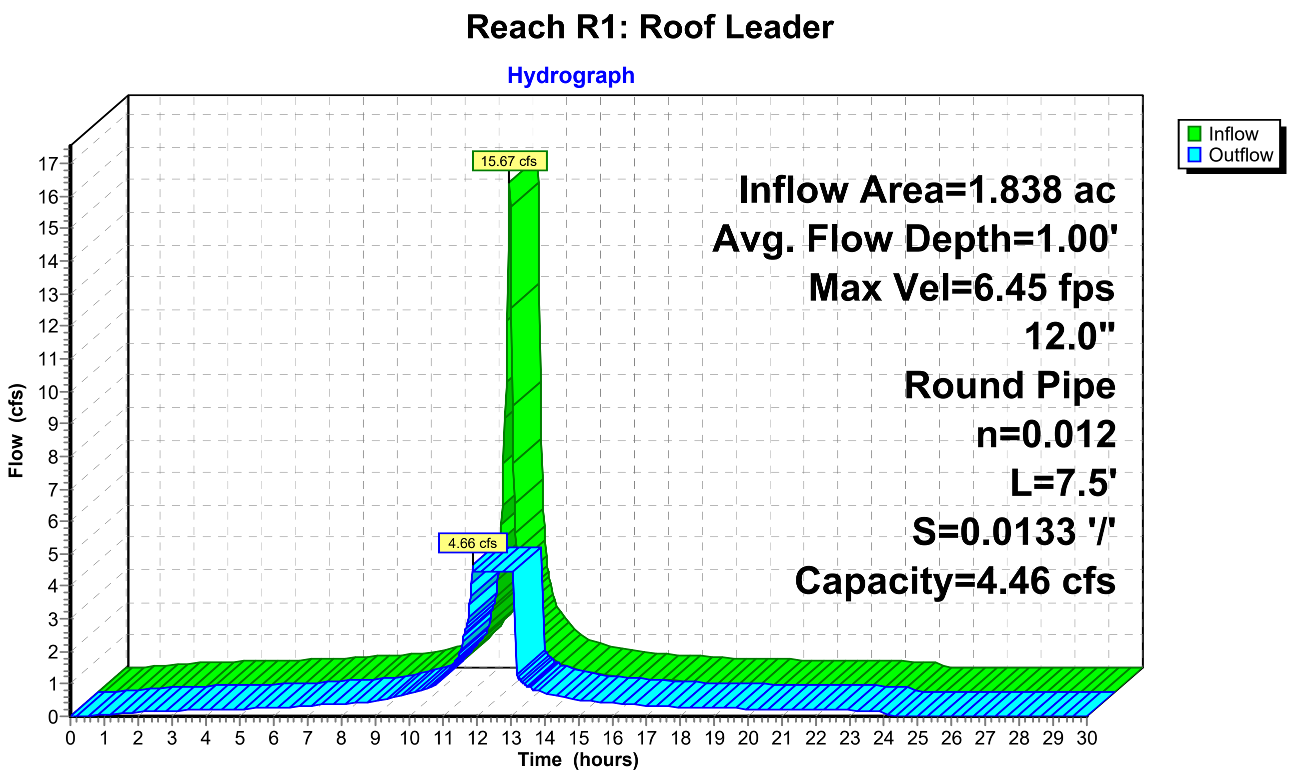
Inflow Area = 1.838 ac,100.00% Impervious, Inflow Depth = 8.11" for 100-yr event
Inflow = 15.67 cfs @ 12.13 hrs, Volume= 1.242 af
Outflow = 4.66 cfs @ 11.89 hrs, Volume= 1.242 af, Atten= 70%, Lag= 0.0 min
Routed to Pond S-2 : Subsurface Infiltration System

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Max. Velocity= 6.45 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.42 fps, Avg. Travel Time= 0.0 min

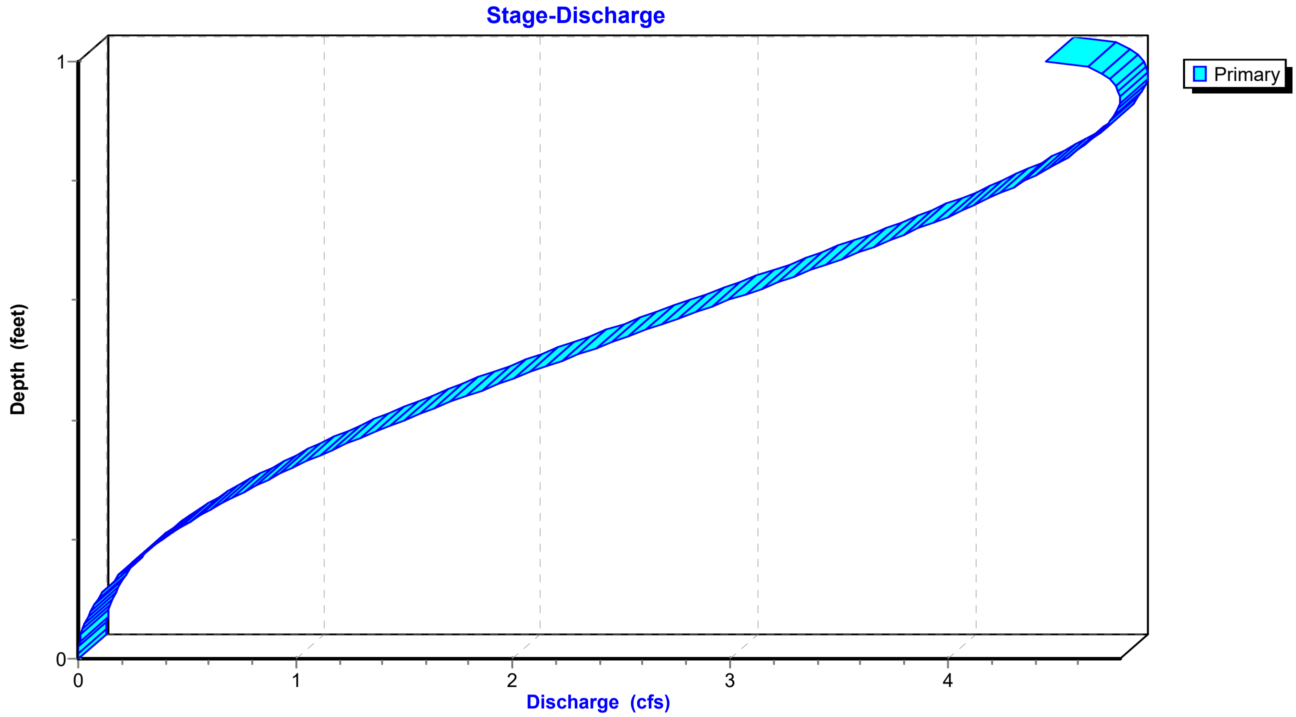
Peak Storage= 6 cf @ 11.91 hrs
Average Depth at Peak Storage= 1.00'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.46 cfs

12.0" Round Pipe
n= 0.012
Length= 7.5' Slope= 0.0133 '/'
Inlet Invert= 142.20', Outlet Invert= 142.10'

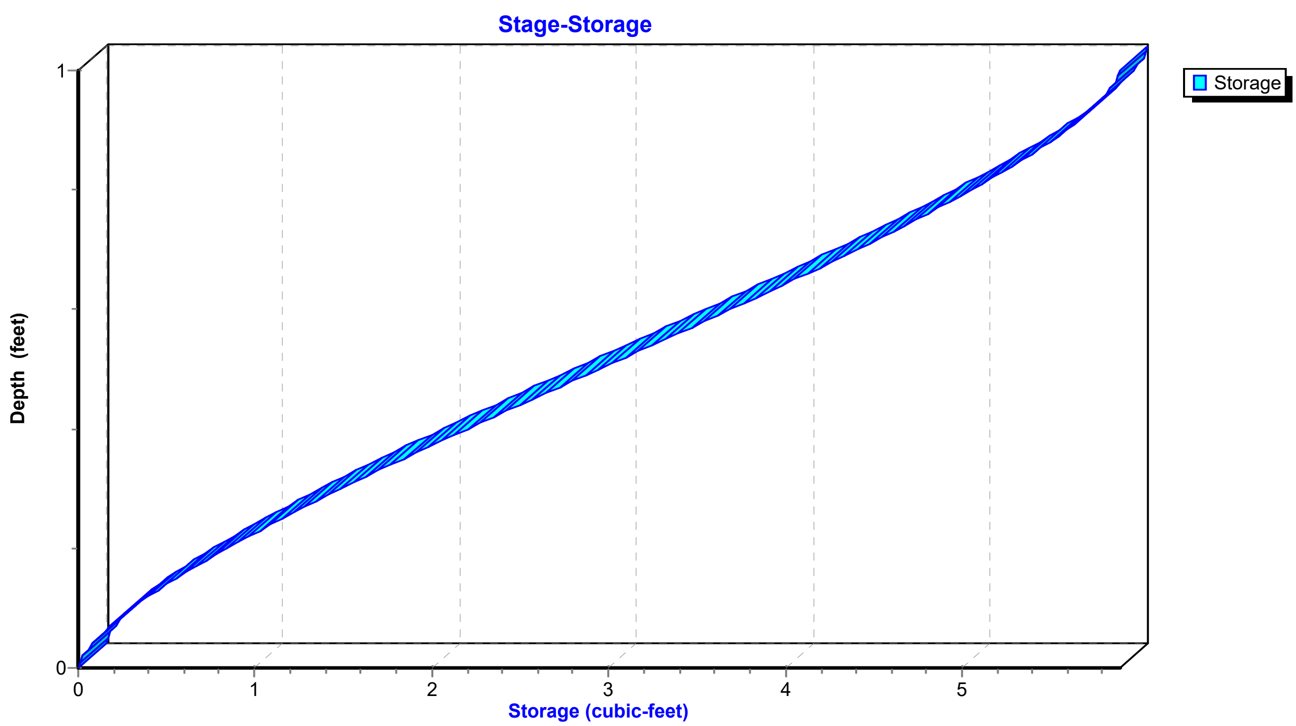




Reach R1: Roof Leader



Reach R1: Roof Leader

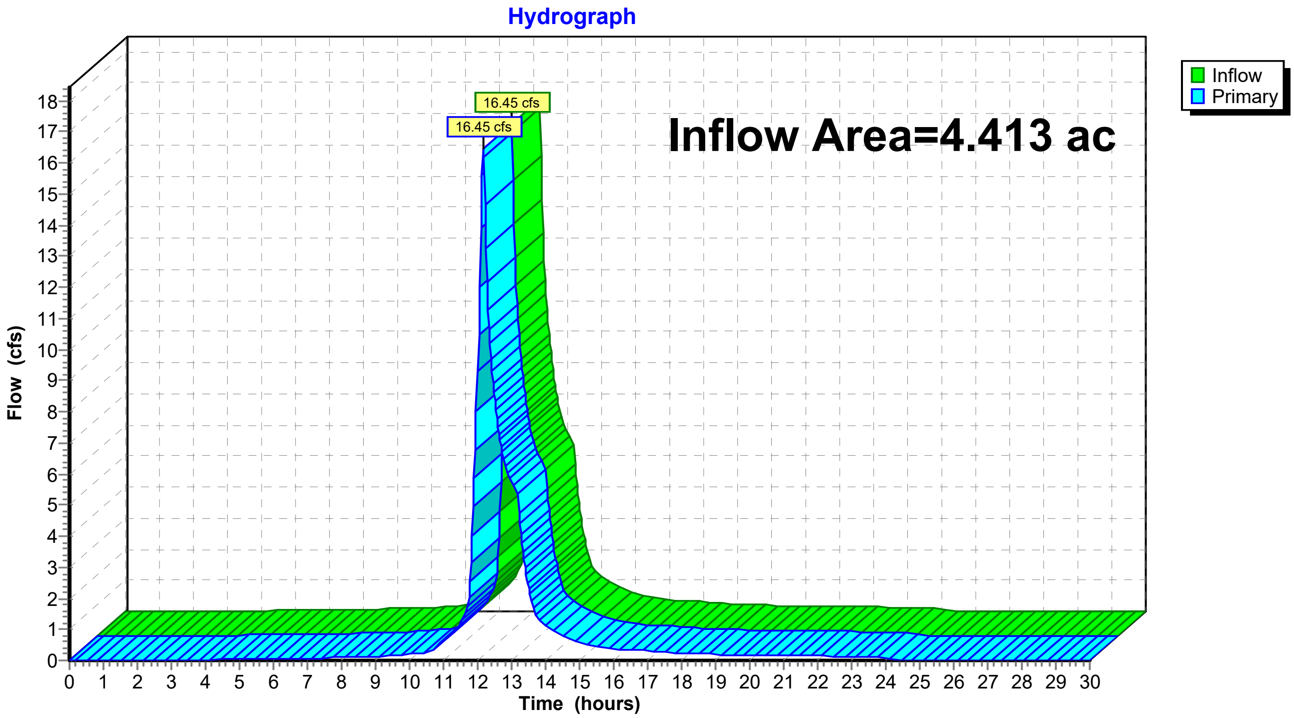


Summary for Pond AP-1: Norwalk River

Inflow Area =	4.413 ac,	66.52% Impervious,	Inflow Depth = 4.06"	for 100-yr event
Inflow =	16.45 cfs @	12.16 hrs, Volume=	1.493 af	
Primary =	16.45 cfs @	12.16 hrs, Volume=	1.493 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Pond AP-1: Norwalk River



Summary for Pond AP-2: Front Lawn Rain Garden

Inflow Area = 0.475 ac, 24.65% Impervious, Inflow Depth = 6.39" for 100-yr event
Inflow = 3.57 cfs @ 12.13 hrs, Volume= 0.253 af
Outflow = 1.34 cfs @ 12.28 hrs, Volume= 0.253 af, Atten= 63%, Lag= 8.9 min
Discarded = 0.41 cfs @ 12.28 hrs, Volume= 0.225 af
Primary = 0.93 cfs @ 12.28 hrs, Volume= 0.028 af
Routed to Pond S-3 : Subsurface Infiltration System

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 149.15' @ 12.28 hrs Surf.Area= 3,230 sf Storage= 2,875 cf

Plug-Flow detention time= 45.3 min calculated for 0.253 af (100% of inflow)
Center-of-Mass det. time= 45.3 min (838.2 - 792.9)

Volume	Invert	Avail.Storage	Storage Description
#1	148.00'	6,536 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

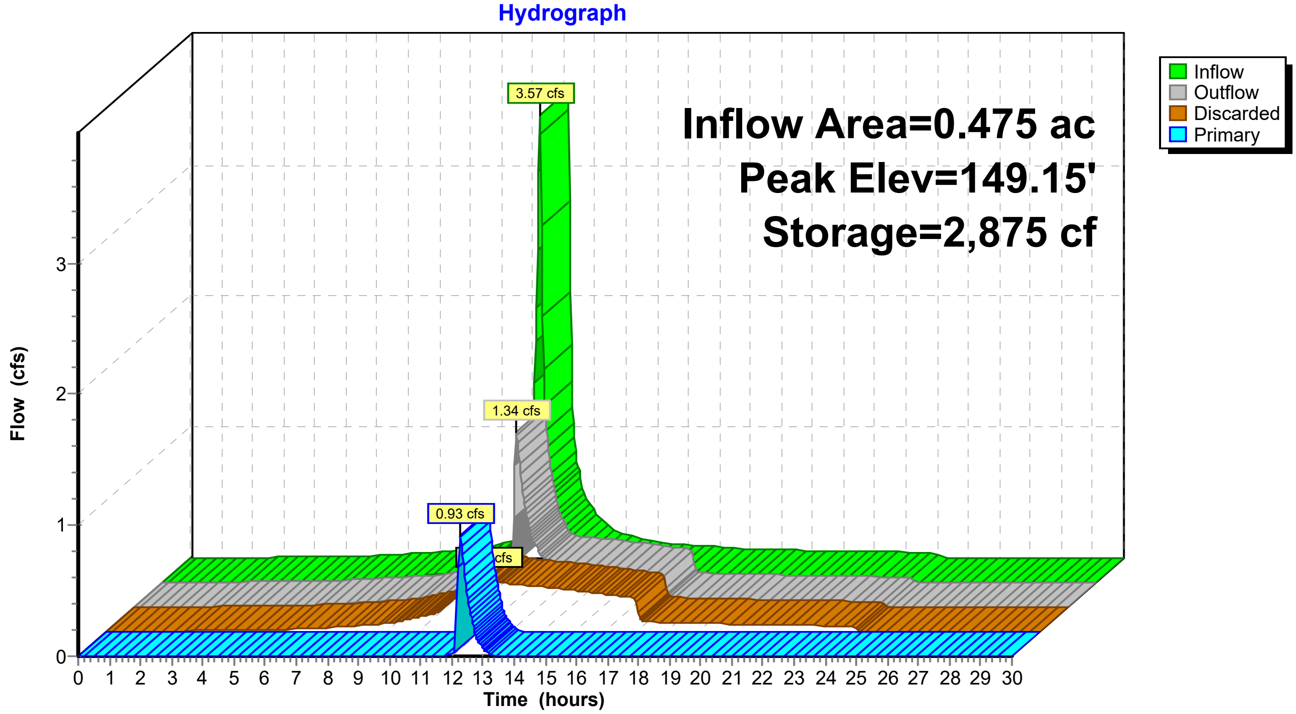
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
148.00	1,985	0	0
149.00	2,833	2,409	2,409
150.00	5,420	4,127	6,536

Device	Routing	Invert	Outlet Devices
#1	Primary	145.90'	**15.0" Round Culvert** L= 34.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 145.90' / 145.55' S= 0.0101 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	149.00'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	148.00'	**5.450 in/hr Exfiltration over Surface area**

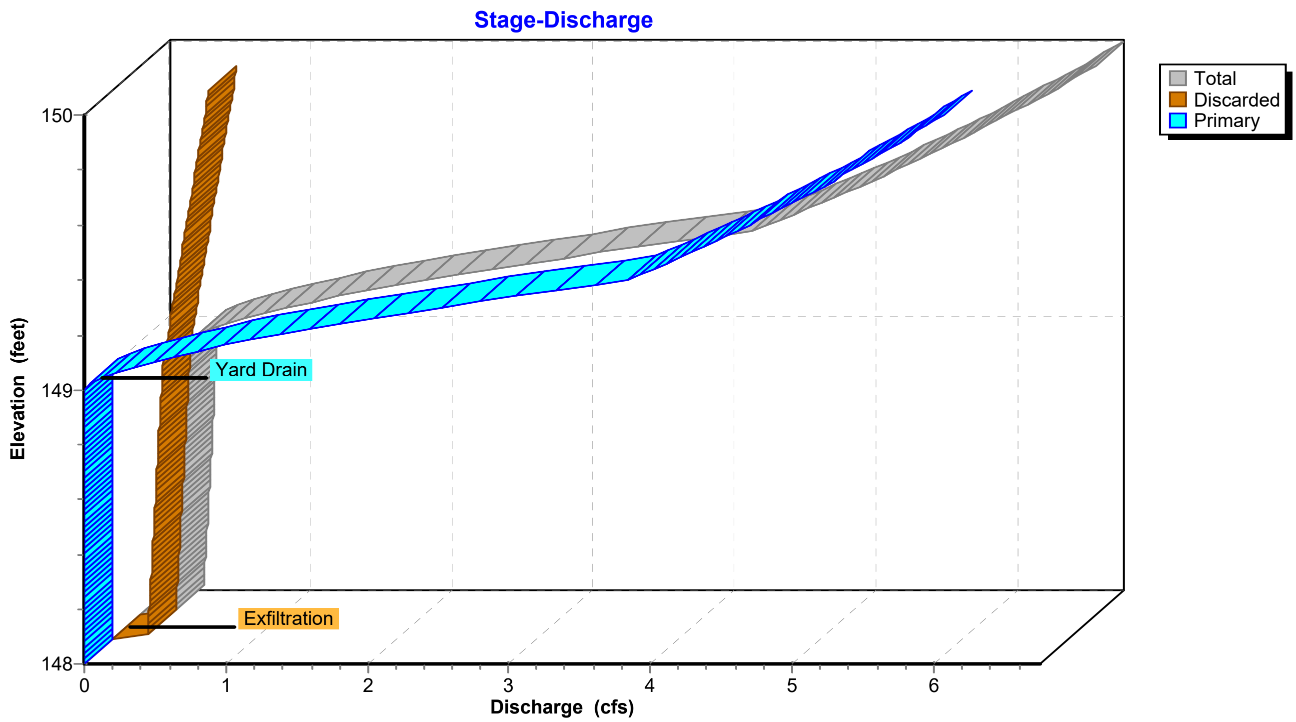
Discarded OutFlow Max=0.41 cfs @ 12.28 hrs HW=149.15' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.41 cfs)

Primary OutFlow Max=0.92 cfs @ 12.28 hrs HW=149.15' (Free Discharge)
└─**1=Culvert** (Passes 0.92 cfs of 9.58 cfs potential flow)
  └─**2=Yard Drain** (Weir Controls 0.92 cfs @ 1.28 fps)

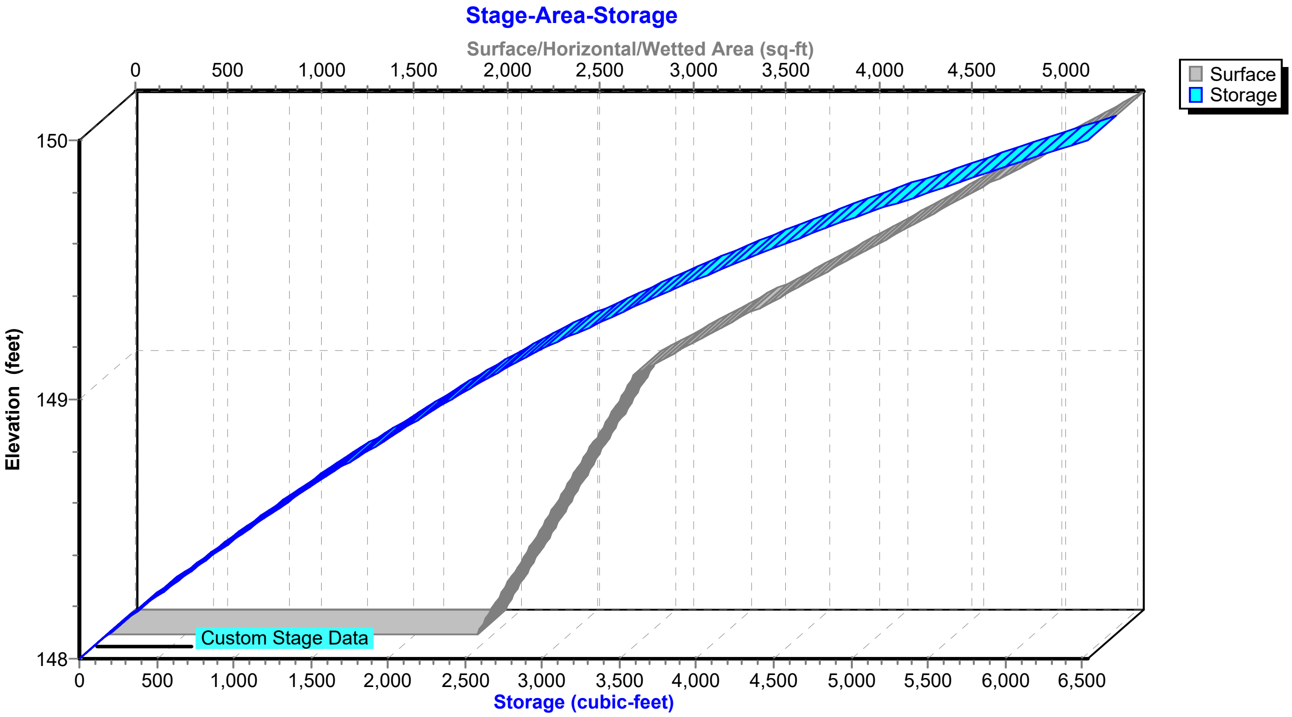
Pond AP-2: Front Lawn Rain Garden



Pond AP-2: Front Lawn Rain Garden



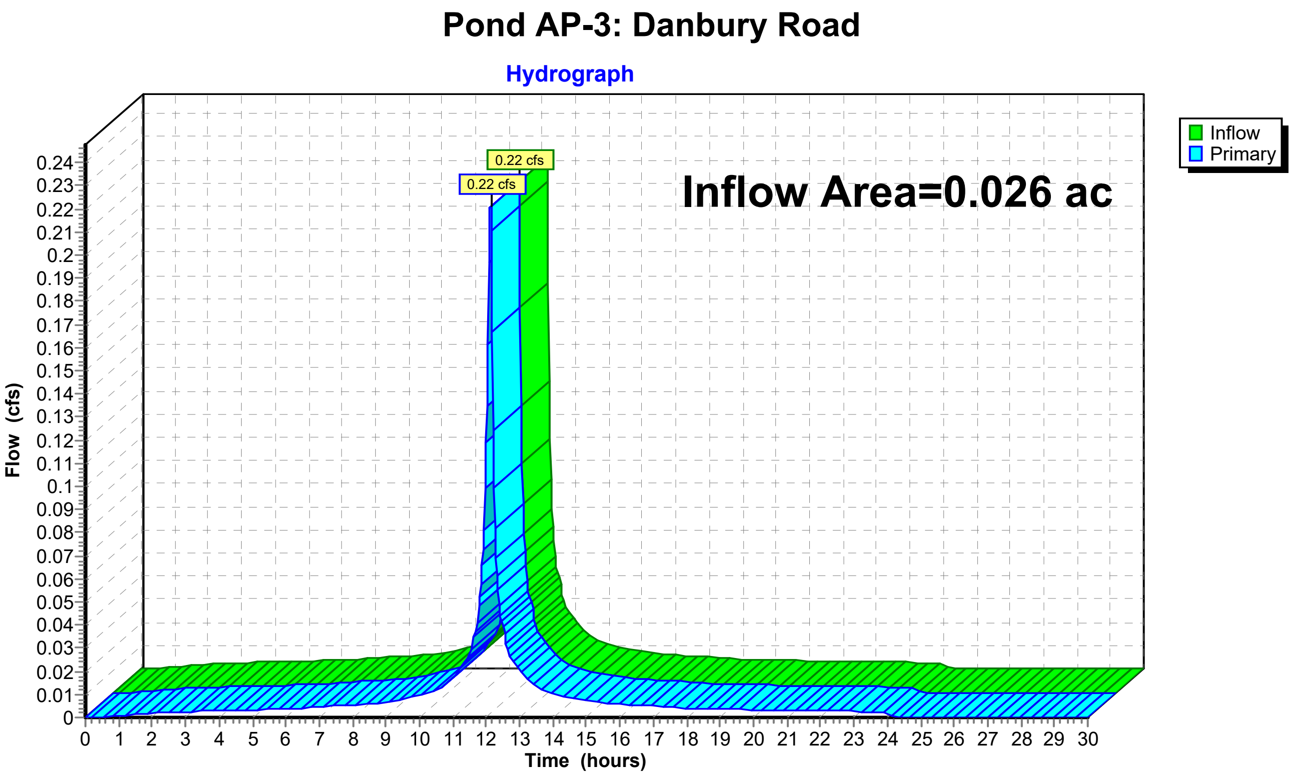
Pond AP-2: Front Lawn Rain Garden



Summary for Pond AP-3: Danbury Road

Inflow Area =	0.026 ac,100.00% Impervious,	Inflow Depth = 8.11"	for 100-yr event	
Inflow =	0.22 cfs @	12.13 hrs, Volume=	0.018 af	
Primary =	0.22 cfs @	12.13 hrs, Volume=	0.018 af,	Atten= 0%, Lag= 0.0 min

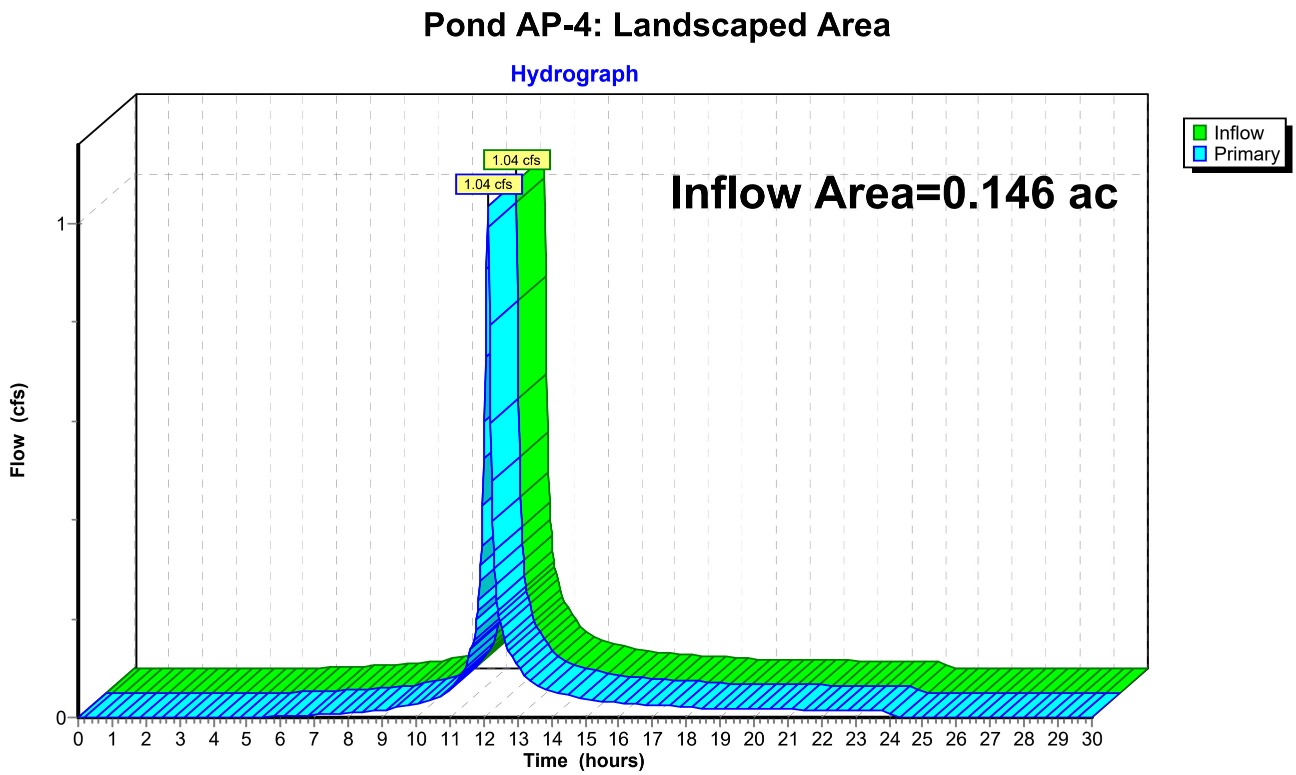
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs



Summary for Pond AP-4: Landscaped Area

Inflow Area =	0.146 ac,	1.46% Impervious, Inflow Depth = 5.83"	for 100-yr event	
Inflow =	1.04 cfs @	12.13 hrs, Volume=	0.071 af	
Primary =	1.04 cfs @	12.13 hrs, Volume=	0.071 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs



Summary for Pond B-1: South Basin

Inflow Area = 0.116 ac, 17.66% Impervious, Inflow Depth = 6.31" for 100-yr event
Inflow = 0.87 cfs @ 12.13 hrs, Volume= 0.061 af
Outflow = 0.85 cfs @ 12.14 hrs, Volume= 0.055 af, Atten= 3%, Lag= 1.0 min
Discarded = 0.01 cfs @ 12.14 hrs, Volume= 0.009 af
Primary = 0.85 cfs @ 12.14 hrs, Volume= 0.047 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 140.04' @ 12.14 hrs Surf.Area= 556 sf Storage= 408 cf

Plug-Flow detention time= 110.3 min calculated for 0.055 af (91% of inflow)
Center-of-Mass det. time= 62.9 min (863.0 - 800.1)

Volume	Invert	Avail.Storage	Storage Description
#1	139.00'	1,118 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

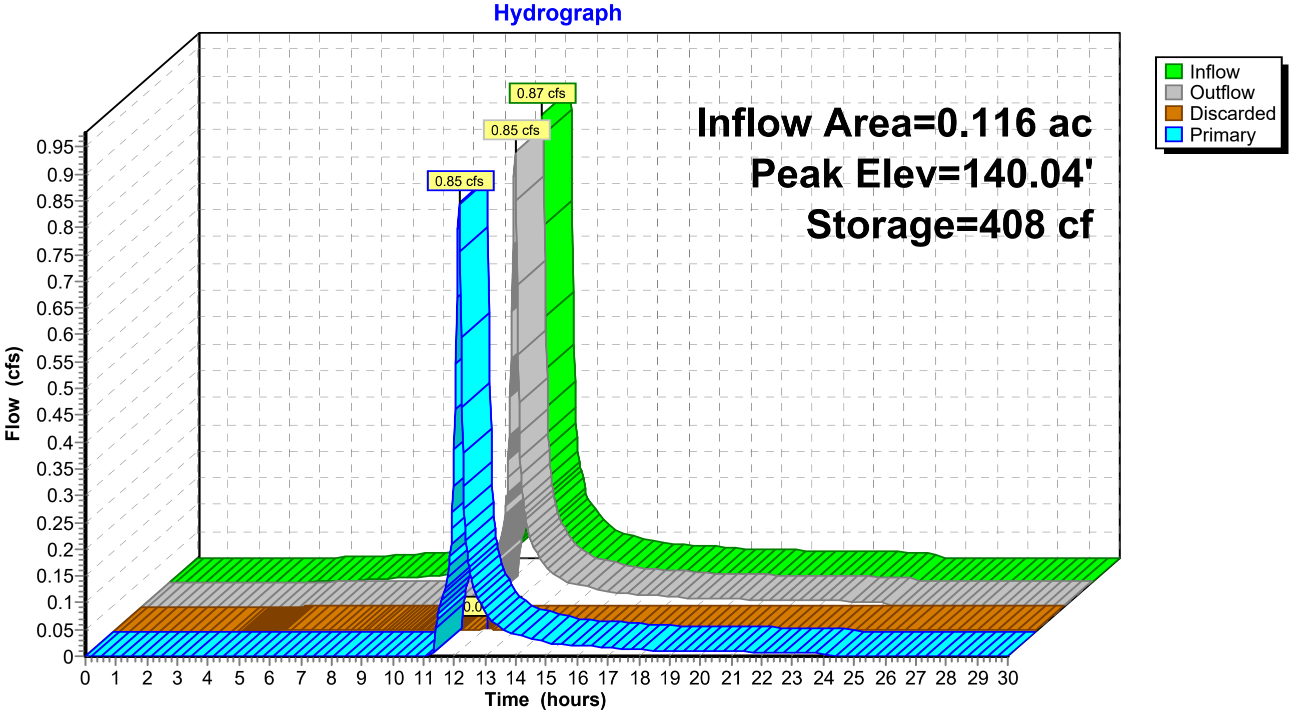
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.00	228	0	0
140.00	539	384	384
141.00	929	734	1,118

Device	Routing	Invert	Outlet Devices
#1	Primary	138.00'	**8.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 138.00' / 137.60' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Device 1	139.90'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	139.00'	**0.400 in/hr Exfiltration over Surface area**

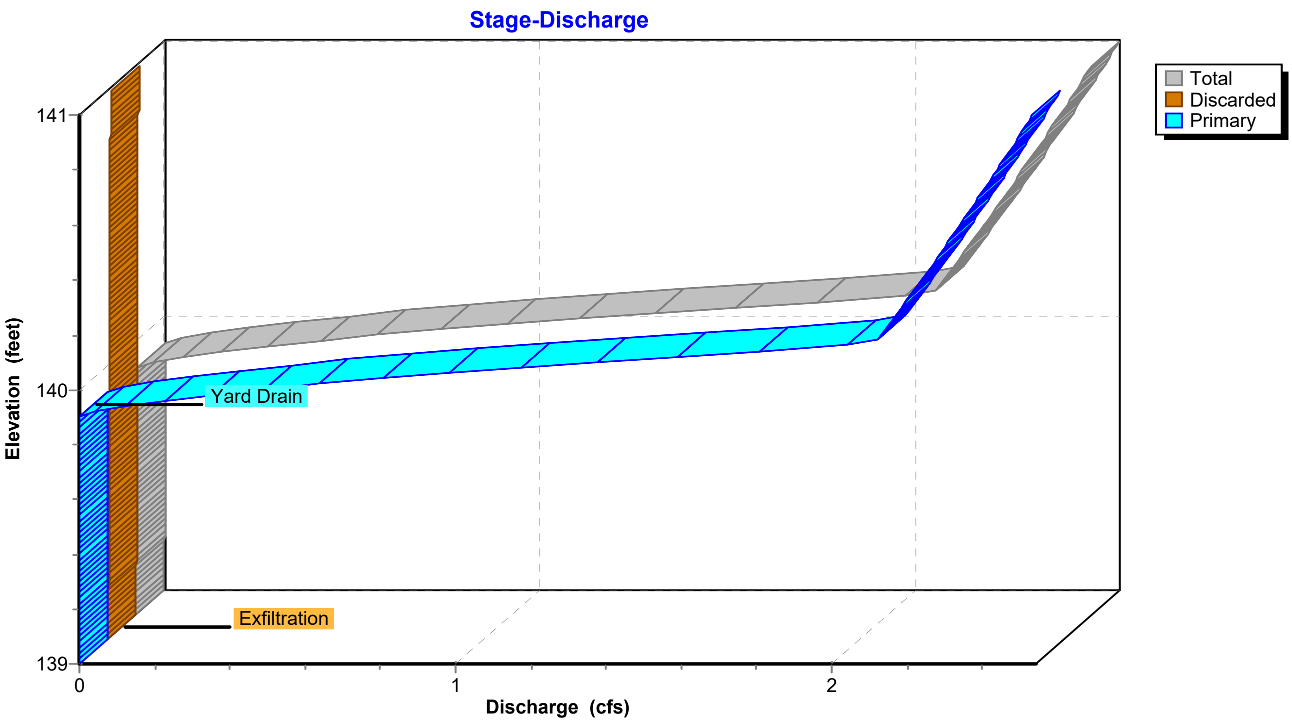
Discarded OutFlow Max=0.01 cfs @ 12.14 hrs HW=140.04' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.83 cfs @ 12.14 hrs HW=140.04' (Free Discharge)
└─**1=Culvert** (Passes 0.83 cfs of 2.04 cfs potential flow)
  └─**2=Yard Drain** (Weir Controls 0.83 cfs @ 1.24 fps)

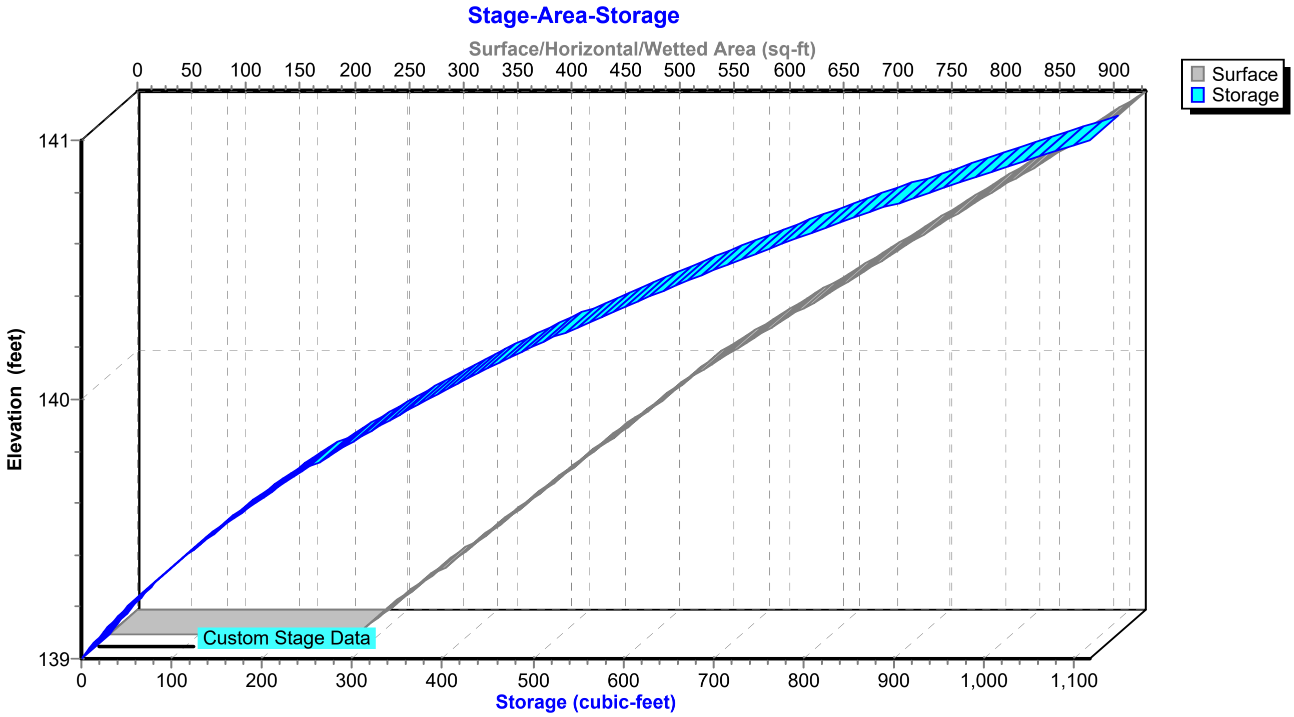
Pond B-1: South Basin



Pond B-1: South Basin



Pond B-1: South Basin



Summary for Pond B-2: North Basin

Inflow Area = 0.154 ac, 7.18% Impervious, Inflow Depth = 6.43" for 100-yr event
Inflow = 1.18 cfs @ 12.13 hrs, Volume= 0.082 af
Outflow = 1.11 cfs @ 12.15 hrs, Volume= 0.082 af, Atten= 5%, Lag= 1.4 min
Discarded = 0.03 cfs @ 12.15 hrs, Volume= 0.043 af
Primary = 1.09 cfs @ 12.15 hrs, Volume= 0.039 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 139.97' @ 12.15 hrs Surf.Area= 920 sf Storage= 732 cf

Plug-Flow detention time= 141.6 min calculated for 0.082 af (100% of inflow)
Center-of-Mass det. time= 140.4 min (937.7 - 797.3)

Volume	Invert	Avail.Storage	Storage Description
#1	139.00'	1,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

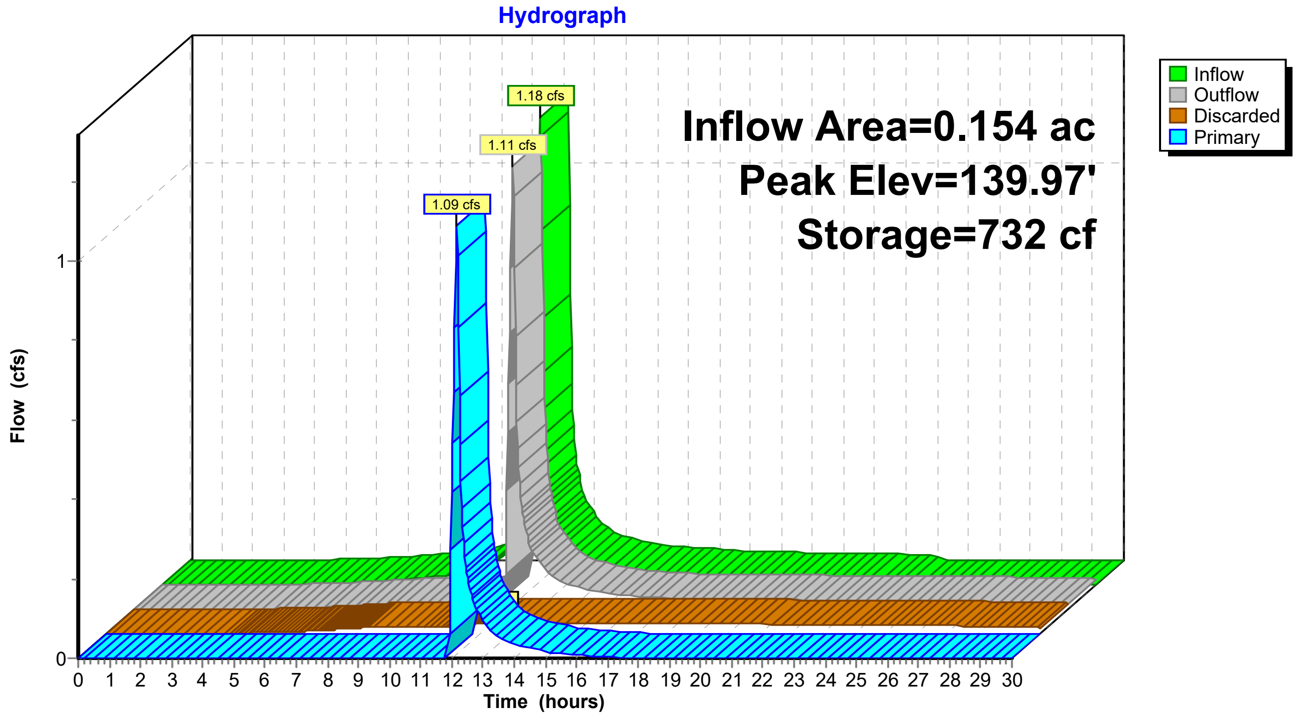
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.00	589	0	0
140.00	930	760	760
141.00	1,327	1,129	1,888

Device	Routing	Invert	Outlet Devices
#1	Primary	138.00'	**10.0" Round Culvert** L= 200.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 138.00' / 137.00' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf
#2	Device 1	139.80'	**3.6" x 0.9" Horiz. Yard Drain X 4.00 columns** X 14 rows C= 0.600 in 18.0" Grate (71% open area) Limited to weir flow at low heads
#3	Discarded	139.00'	**1.250 in/hr Exfiltration over Surface area**

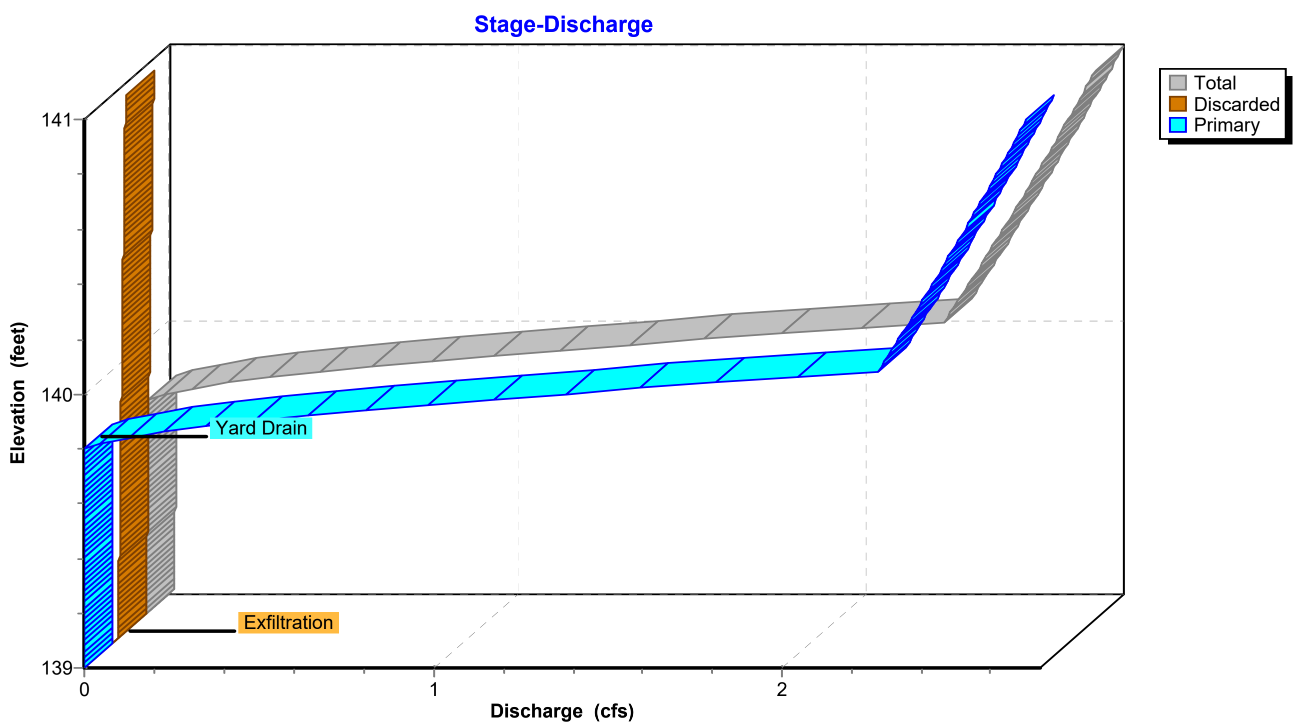
Discarded OutFlow Max=0.03 cfs @ 12.15 hrs HW=139.97' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=1.08 cfs @ 12.15 hrs HW=139.97' (Free Discharge)
└─**1=Culvert** (Passes 1.08 cfs of 2.22 cfs potential flow)
  └─**2=Yard Drain** (Weir Controls 1.08 cfs @ 1.35 fps)

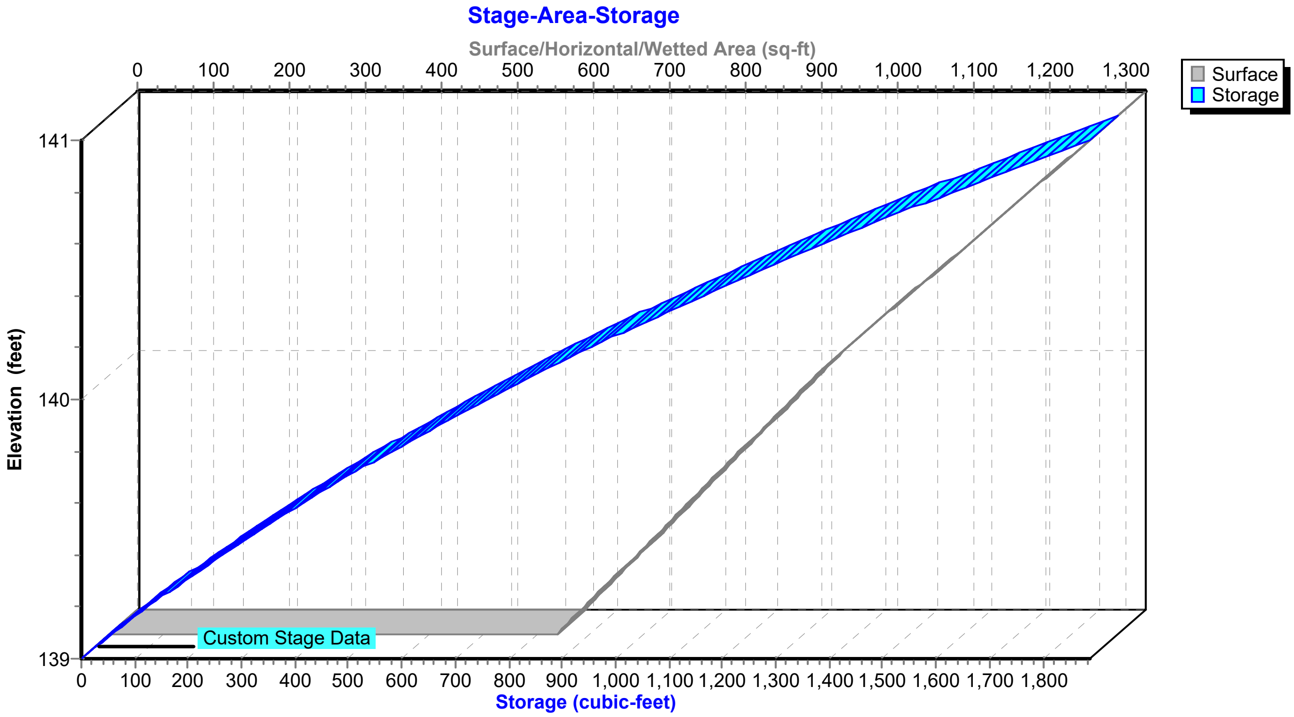
Pond B-2: North Basin



Pond B-2: North Basin



Pond B-2: North Basin



Summary for Pond S-1: Subsurface Infiltration System

Inflow Area = 0.554 ac, 58.45% Impervious, Inflow Depth = 7.19" for 100-yr event
Inflow = 4.50 cfs @ 12.13 hrs, Volume= 0.332 af
Outflow = 3.12 cfs @ 12.19 hrs, Volume= 0.301 af, Atten= 31%, Lag= 3.7 min
Discarded = 0.02 cfs @ 3.33 hrs, Volume= 0.036 af
Primary = 3.10 cfs @ 12.19 hrs, Volume= 0.265 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 144.93' @ 12.19 hrs Surf.Area= 0.039 ac Storage= 0.072 af

Plug-Flow detention time= 113.4 min calculated for 0.301 af (91% of inflow)
Center-of-Mass det. time= 63.3 min (836.8 - 773.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	142.00'	0.036 af	**11.00'W x 153.14'L x 3.50'H Field A**
			0.135 af Overall - 0.044 af Embedded = 0.091 af x 40.0% Voids
#2A	142.50'	0.044 af	**ADS_StormTech SC-740 +Cap** x 42 Inside #1
			Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
			Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
			42 Chambers in 2 Rows
		0.081 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	143.35'	**12.0" Round Culvert**
			L= 114.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 143.35' / 142.21' S= 0.0100 '/' Cc= 0.900
			n= 0.012, Flow Area= 0.79 sf
#2	Device 1	143.50'	**6.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	144.90'	**5.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#4	Discarded	142.00'	**0.400 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 3.33 hrs HW=142.04' (Free Discharge)
└─**4=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=3.07 cfs @ 12.19 hrs HW=144.91' (Free Discharge)
└─**1=Culvert** (Passes 3.07 cfs of 3.85 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 3.05 cfs @ 5.19 fps)
  └─**3=Sharp-Crested Vee/Trap Weir** (Weir Controls 0.02 cfs @ 0.33 fps)

Pond S-1: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

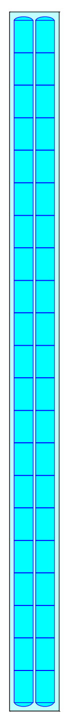
21 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 151.14' Row Length +12.0" End Stone x 2 = 153.14' Base Length
2 Rows x 51.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.00' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

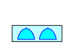
42 Chambers x 45.9 cf = 1,929.5 cf Chamber Storage

5,895.8 cf Field - 1,929.5 cf Chambers = 3,966.3 cf Stone x 40.0% Voids = 1,586.5 cf Stone Storage

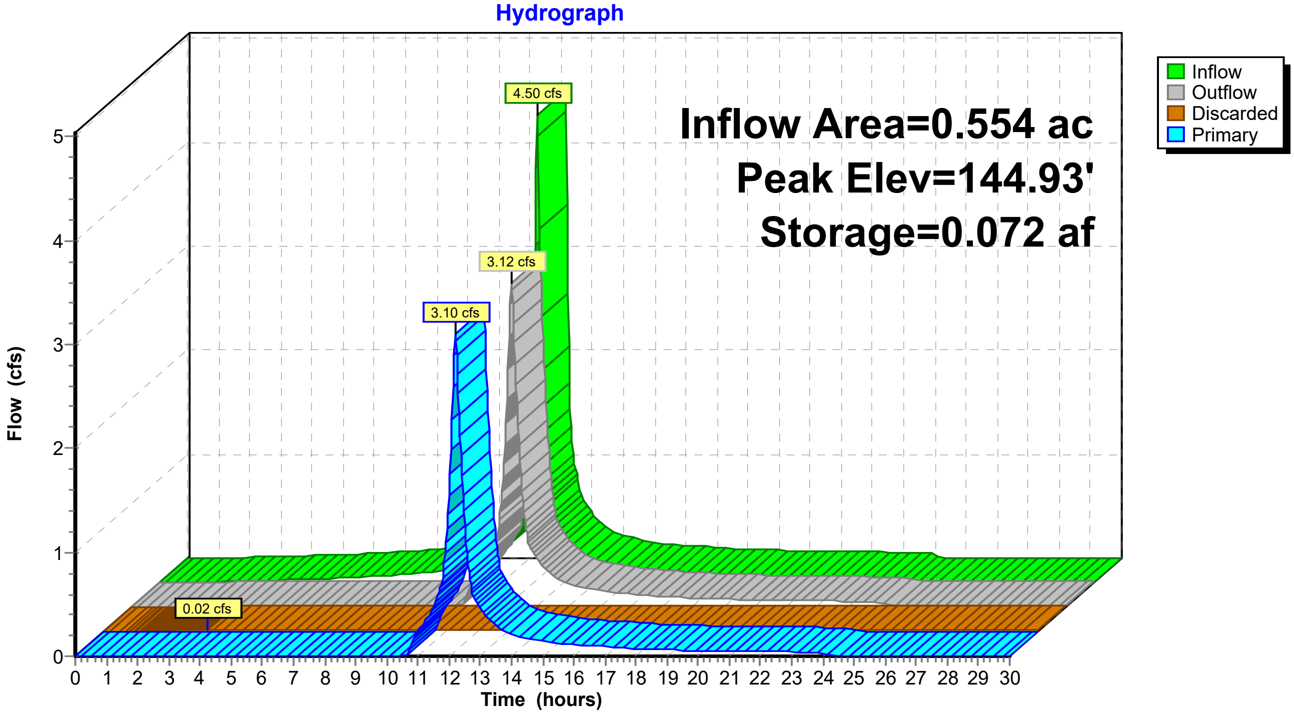
Chamber Storage + Stone Storage = 3,516.0 cf = 0.081 af
Overall Storage Efficiency = 59.6%
Overall System Size = 153.14' x 11.00' x 3.50'

42 Chambers
218.4 cy Field
146.9 cy Stone

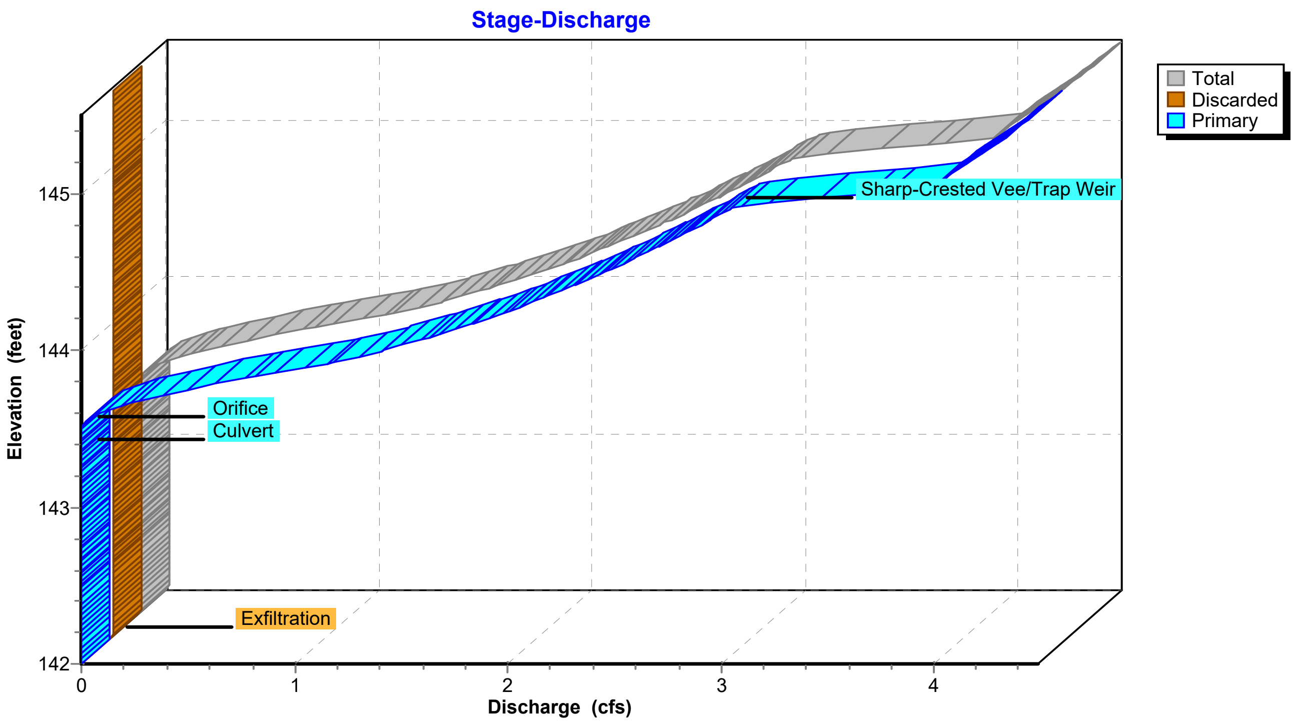




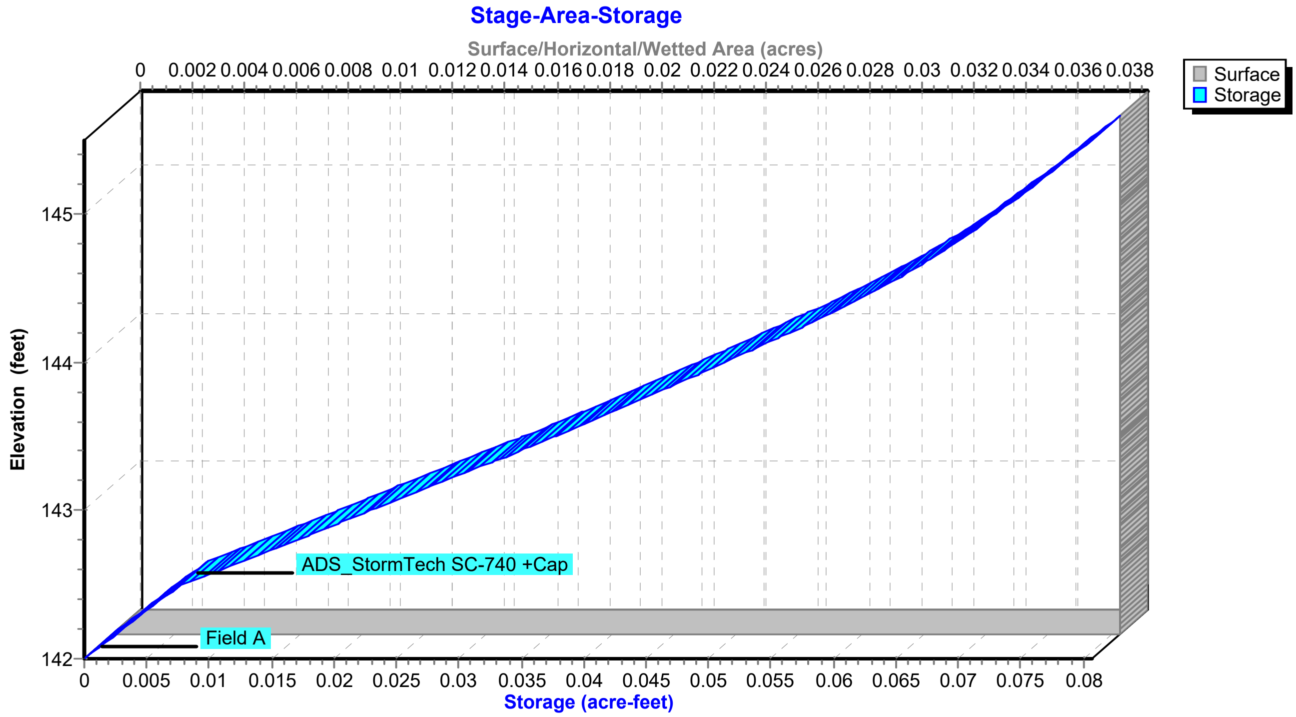
Pond S-1: Subsurface Infiltration System



Pond S-1: Subsurface Infiltration System



Pond S-1: Subsurface Infiltration System



Summary for Pond S-2: Subsurface Infiltration System

Inflow Area = 1.838 ac,100.00% Impervious, Inflow Depth = 8.11" for 100-yr event
Inflow = 4.66 cfs @ 11.89 hrs, Volume= 1.242 af
Outflow = 4.48 cfs @ 13.17 hrs, Volume= 1.242 af, Atten= 4%, Lag= 76.9 min
Discarded = 0.50 cfs @ 9.24 hrs, Volume= 0.741 af
Primary = 3.98 cfs @ 13.17 hrs, Volume= 0.501 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 144.94' @ 13.17 hrs Surf.Area= 0.091 ac Storage= 0.193 af

Plug-Flow detention time= 55.5 min calculated for 1.241 af (100% of inflow)
Center-of-Mass det. time= 55.5 min (802.9 - 747.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	141.50'	0.100 af	**30.00'W x 131.78'L x 4.00'H Field A** 0.363 af Overall - 0.114 af Embedded = 0.249 af x 40.0% Voids
#2A	142.50'	0.114 af	**ADS_StormTech SC-740 +Cap** x 108 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 108 Chambers in 6 Rows
		0.214 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	143.15'	**15.0" Round Culvert** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 143.15' / 142.69' S= 0.0061 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	143.64'	**7.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	144.90'	**5.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#4	Discarded	141.50'	**5.450 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.50 cfs @ 9.24 hrs HW=141.54' (Free Discharge)
└─**4=Exfiltration** (Exfiltration Controls 0.50 cfs)

Primary OutFlow Max=3.98 cfs @ 13.17 hrs HW=144.94' (Free Discharge)
└─**1=Culvert** (Passes 3.98 cfs of 5.68 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 3.87 cfs @ 4.83 fps)
  └─**3=Sharp-Crested Vee/Trap Weir** (Weir Controls 0.11 cfs @ 0.62 fps)

Pond S-2: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

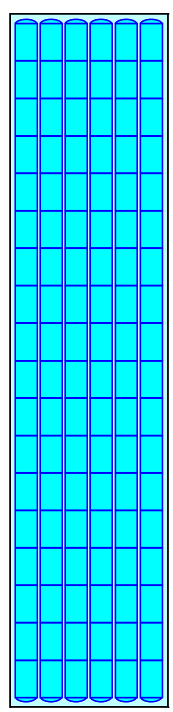
18 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 129.78' Row Length +12.0" End Stone x 2 = 131.78' Base Length
6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width
12.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 4.00' Field Height

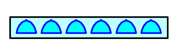
108 Chambers x 45.9 cf = 4,961.5 cf Chamber Storage

15,813.2 cf Field - 4,961.5 cf Chambers = 10,851.7 cf Stone x 40.0% Voids = 4,340.7 cf Stone Storage

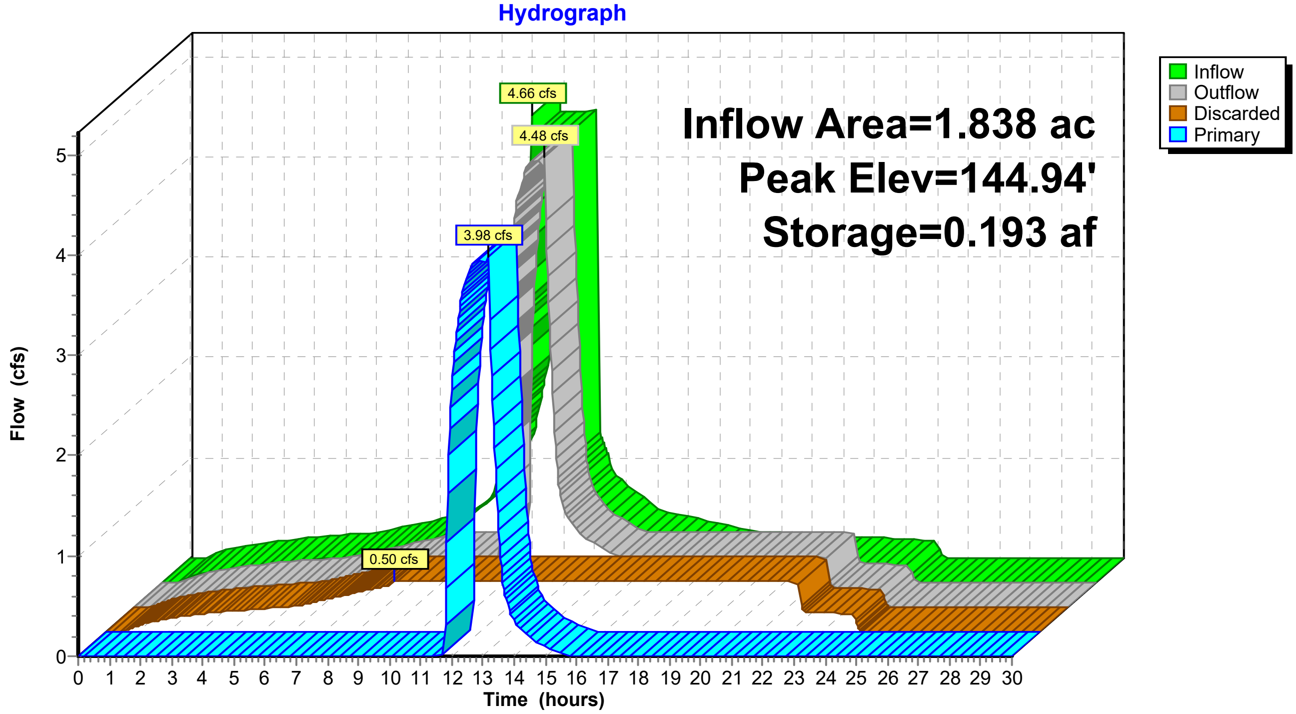
Chamber Storage + Stone Storage = 9,302.2 cf = 0.214 af
Overall Storage Efficiency = 58.8%
Overall System Size = 131.78' x 30.00' x 4.00'

108 Chambers
585.7 cy Field
401.9 cy Stone

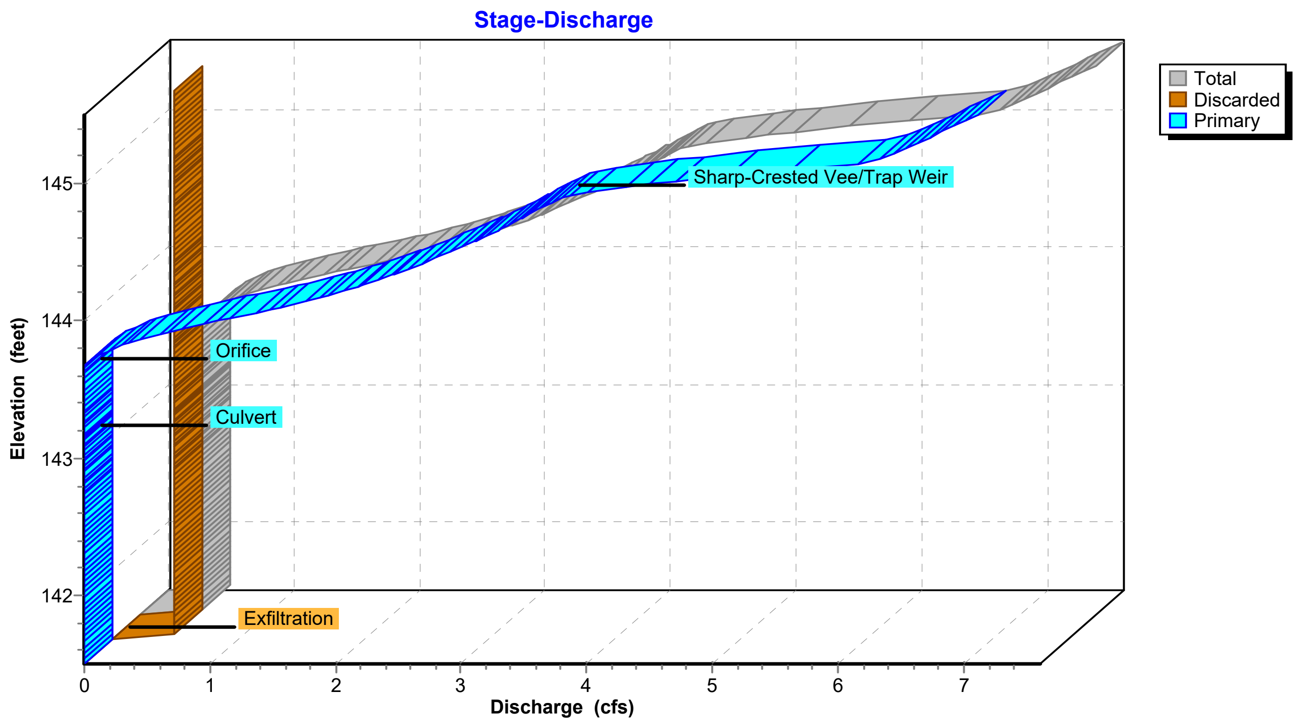




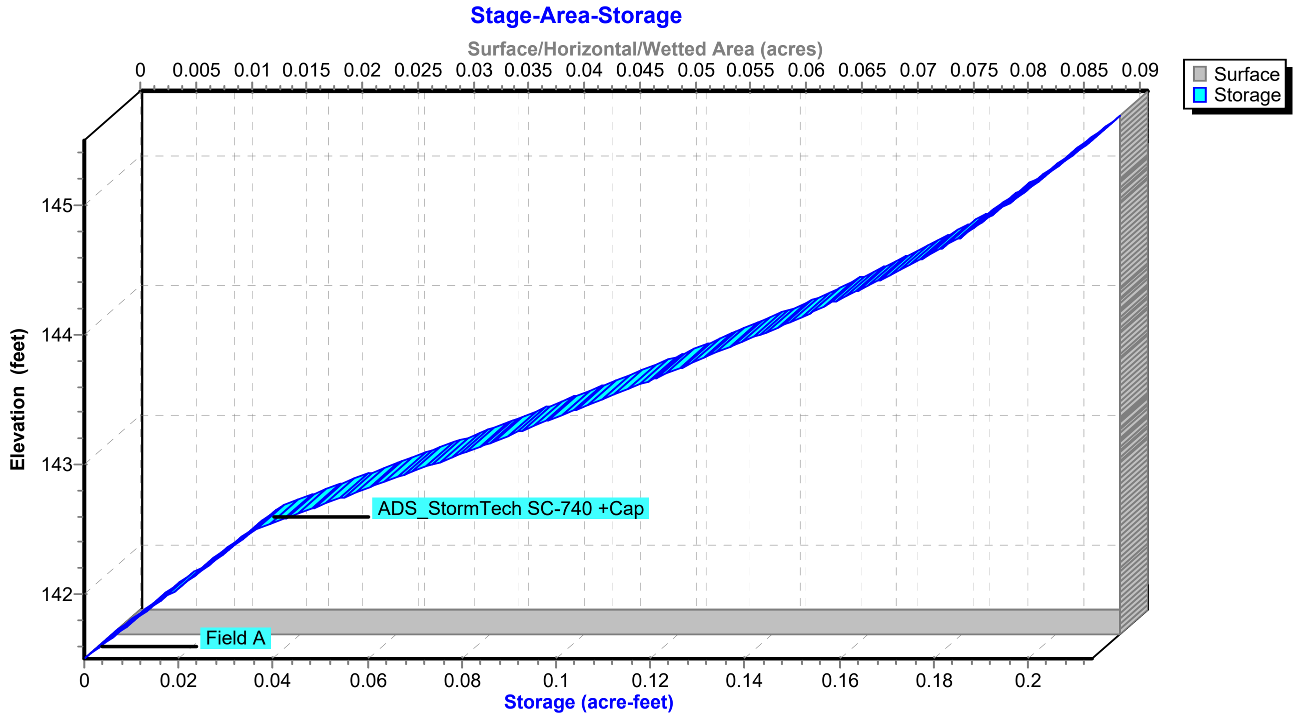
Pond S-2: Subsurface Infiltration System



Pond S-2: Subsurface Infiltration System



Pond S-2: Subsurface Infiltration System



Summary for Pond S-3: Subsurface Infiltration System

Inflow Area = 1.020 ac, 47.60% Impervious, Inflow Depth = 4.39" for 100-yr event
Inflow = 4.55 cfs @ 12.13 hrs, Volume= 0.373 af
Outflow = 3.74 cfs @ 12.19 hrs, Volume= 0.340 af, Atten= 18%, Lag= 3.9 min
Discarded = 0.05 cfs @ 5.91 hrs, Volume= 0.120 af
Primary = 3.68 cfs @ 12.19 hrs, Volume= 0.219 af
Routed to Pond AP-1 : Norwalk River

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Peak Elev= 143.46' @ 12.19 hrs Surf.Area= 0.052 ac Storage= 0.101 af

Plug-Flow detention time= 149.0 min calculated for 0.339 af (91% of inflow)
Center-of-Mass det. time= 102.3 min (863.4 - 761.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	140.40'	0.047 af	**30.00'W x 74.82'L x 3.50'H Field A** 0.180 af Overall - 0.063 af Embedded = 0.117 af x 40.0% Voids
#2A	140.90'	0.063 af	**ADS_StormTech SC-740 +Cap** x 60 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 60 Chambers in 6 Rows
		0.110 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	141.84'	**12.0" Round Culvert** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 141.84' / 141.19' S= 0.0087 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	142.10'	**7.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	143.30'	**5.0' long Weir Wall** Cv= 2.62 (C= 3.28)
#4	Discarded	140.40'	**1.050 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.05 cfs @ 5.91 hrs HW=140.44' (Free Discharge)
└—**4=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=3.59 cfs @ 12.19 hrs HW=143.45' (Free Discharge)
└—**1=Culvert** (Passes 3.59 cfs of 3.78 cfs potential flow)
  ├—**2=Orifice** (Orifice Controls 2.65 cfs @ 4.95 fps)
  └—**3=Weir Wall** (Weir Controls 0.94 cfs @ 1.26 fps)

Pond S-3: Subsurface Infiltration System - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

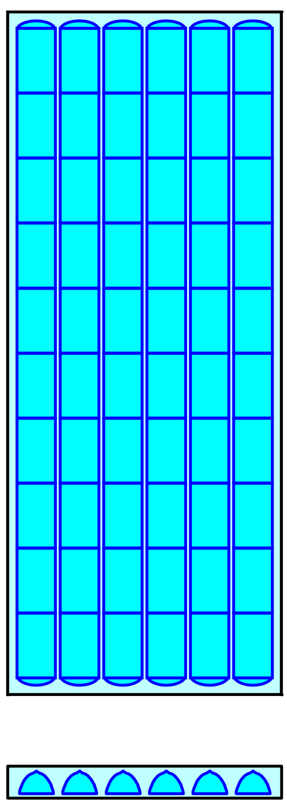
10 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 72.82' Row Length +12.0" End Stone x 2 = 74.82' Base Length
6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

60 Chambers x 45.9 cf = 2,756.4 cf Chamber Storage

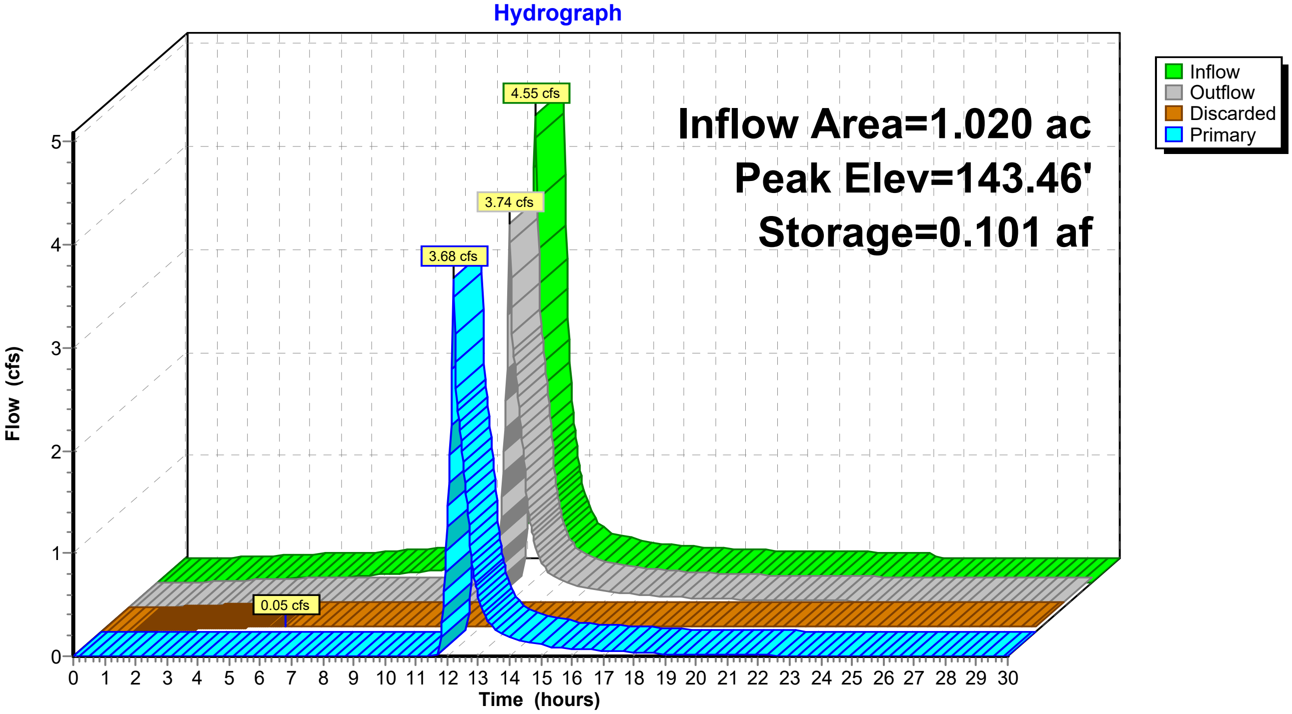
7,855.8 cf Field - 2,756.4 cf Chambers = 5,099.3 cf Stone x 40.0% Voids = 2,039.7 cf Stone Storage

Chamber Storage + Stone Storage = 4,796.1 cf = 0.110 af
Overall Storage Efficiency = 61.1%
Overall System Size = 74.82' x 30.00' x 3.50'

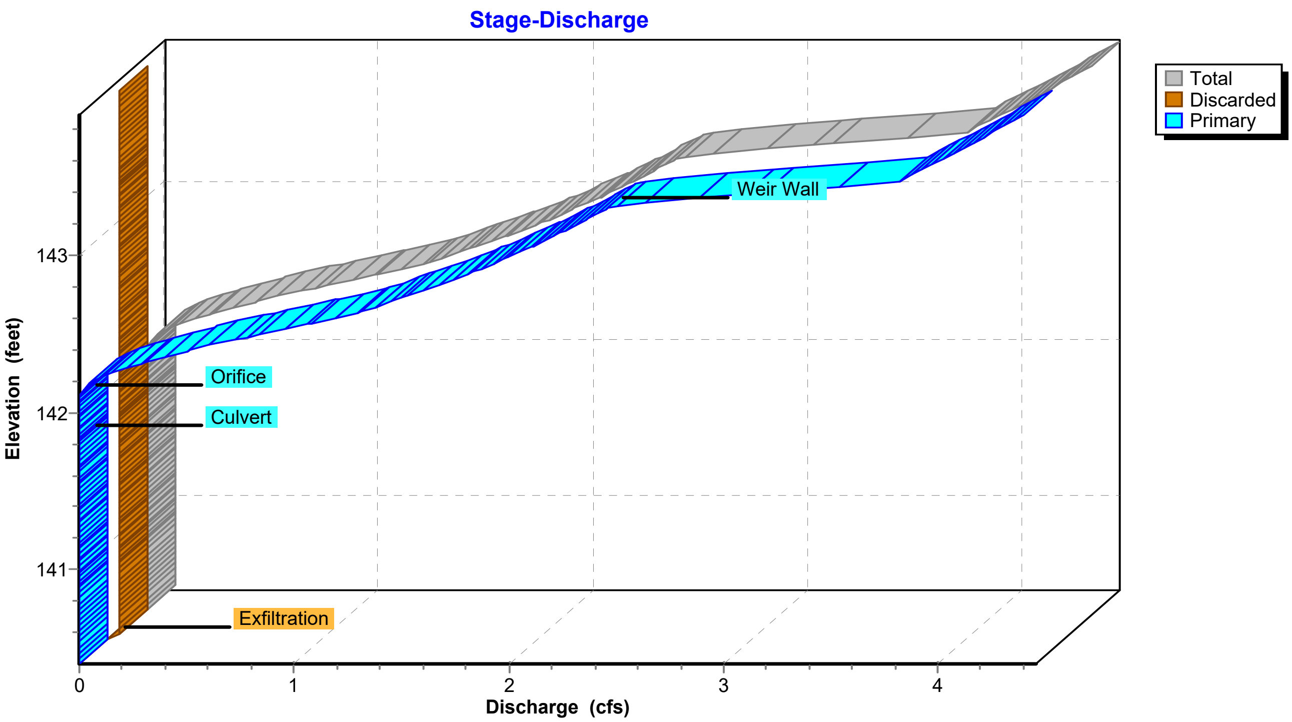
60 Chambers
291.0 cy Field
188.9 cy Stone



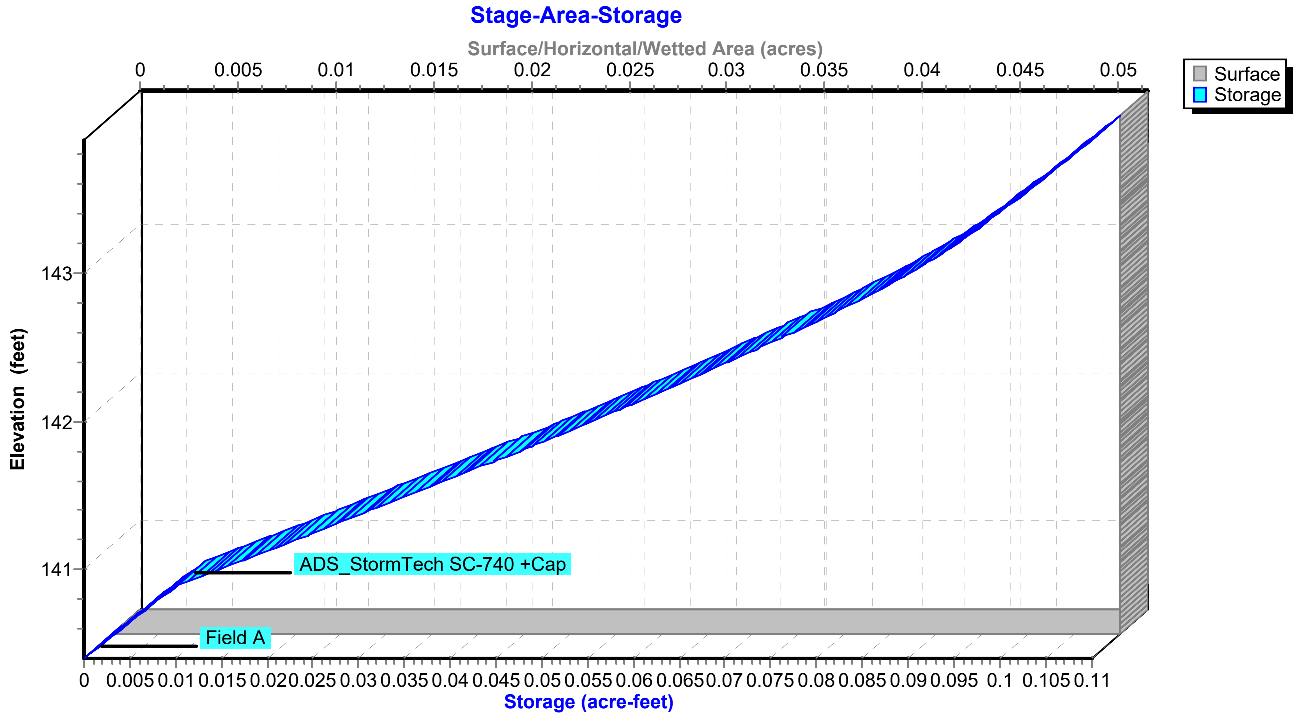
Pond S-3: Subsurface Infiltration System



Pond S-3: Subsurface Infiltration System



Pond S-3: Subsurface Infiltration System



Appendix H
Watershed Maps

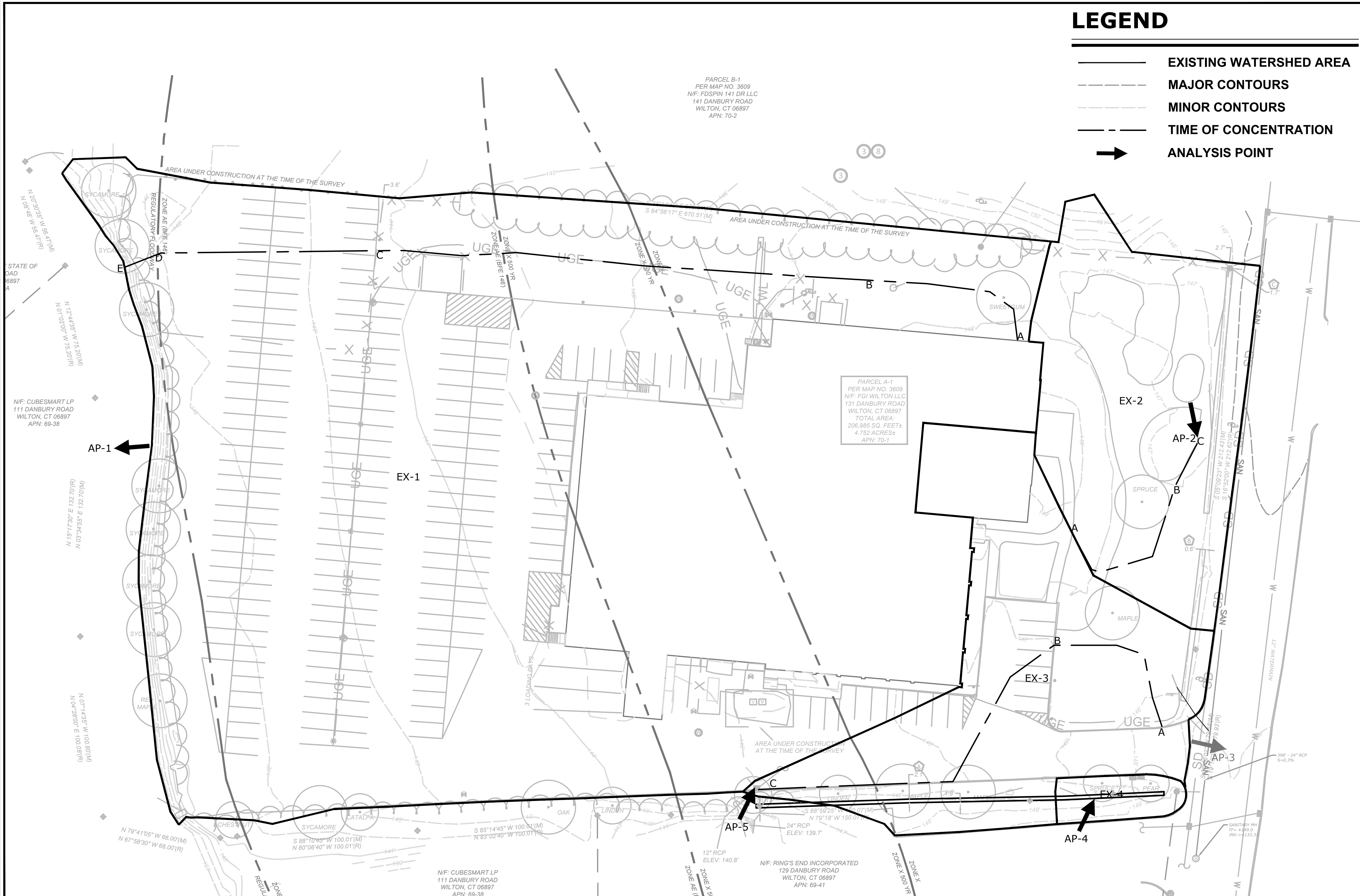
Proposed Multifamily Development

131 Danbury Road, Wilton, Connecticut
Drainage Report

Ryan Sutherland, AMS Acquisitions Management Corporation

SLR Project No.: 141.21543.0000171

October 23, 2023



WATERSHED MAP - EXISTING CONDITIONS

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

REVISIONS

DESIGNED	DRAWN	CHECKED
HM	HM	MG

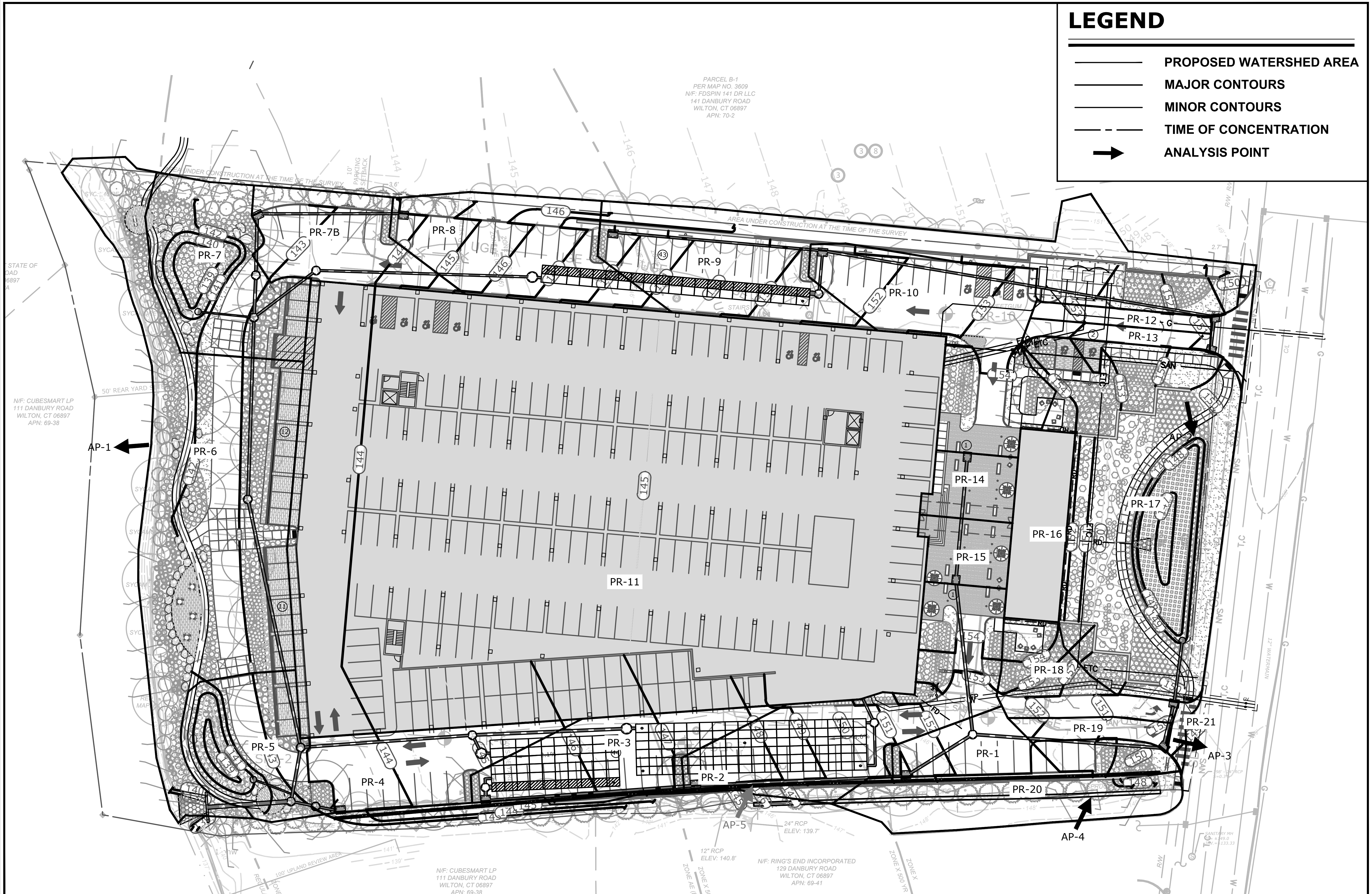
SCALE: 1"=50'

DATE: OCTOBER 12, 2023

PROJECT NO.: 21543.00001

SHEET NO.: EX-WS

Plotted by: HMINOTT On this date: Wed, 2023 October 18 - 4:32pm



LEGEND

PROPOSED WATERSHED AREA

MAJOR CONTOURS

MINOR CONTOURS

TIME OF CONCENTRATION

ANALYSIS POINT

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

REVISIONS

WATERSHED MAP - PROPOSED CONDITIONS
PROPOSED MULTI-FAMILY DEVELOPMENT
131 DANBURY ROAD
WILTON, CONNECTICUT

DESIGNED	DRAWN	CHECKED
HM	HM	MG

SCALE: 1"=50'

DATE: DECEMBER 18, 2023

PROJECT NO.: 21543.00001

SHEET NO.: PR-WS

Appendix I
NRCS Web Soil Survey

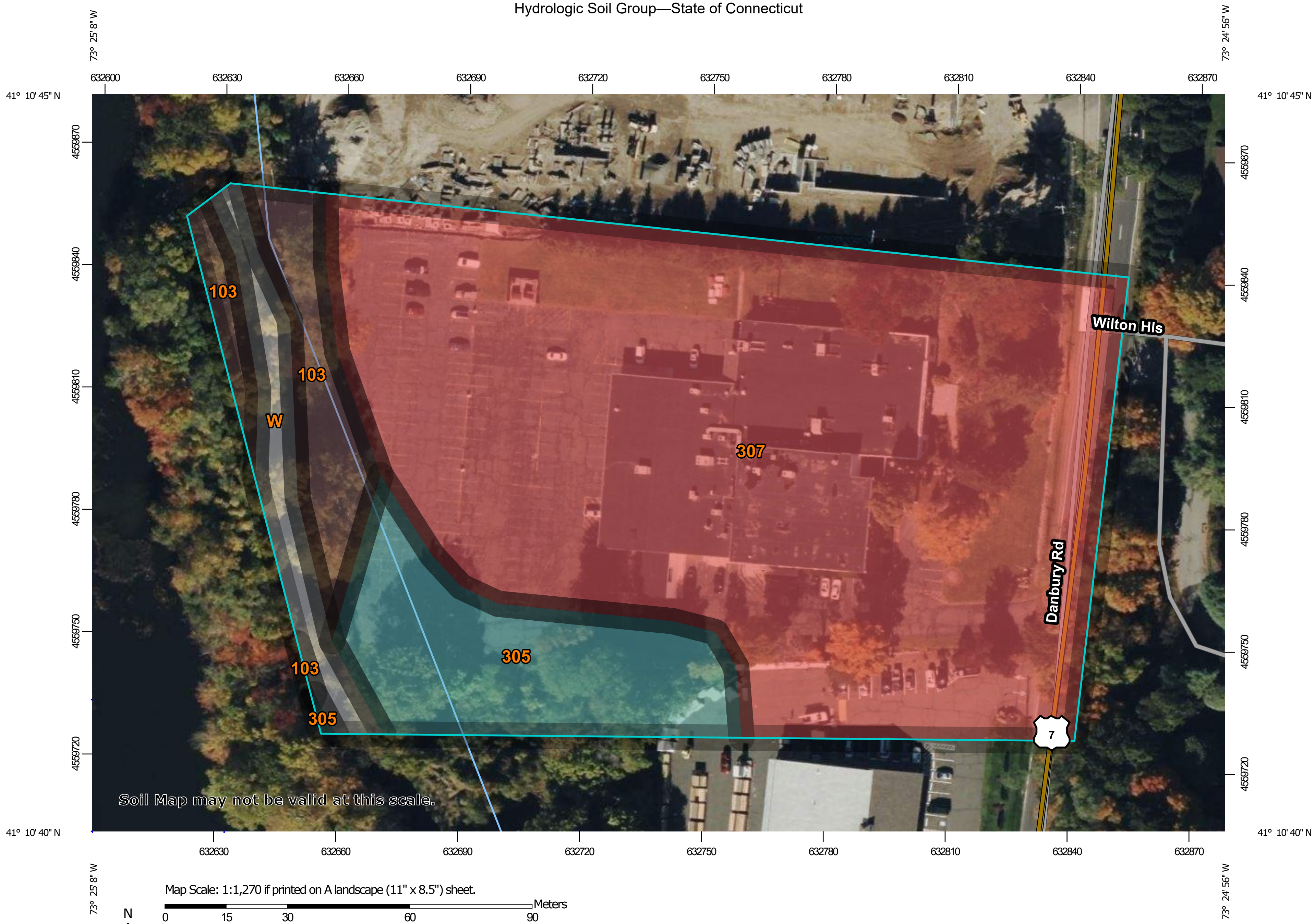
Proposed Multifamily Development

131 Danbury Road, Wilton, Connecticut
Drainage Report

Ryan Sutherland, AMS Acquisitions Management Corporation

SLR Project No.: 141.21543.0000171

October 23, 2023



Map Scale: 1:1,270 if printed on A landscape (11" x 8.5") sheet.

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: State of Connecticut
Survey Area Data: Version 22, Sep 12, 2022

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

Date(s) aerial images were photographed: Oct 21, 2022—Oct 27, 2022

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
103	Rippowam fine sandy loam	B/D	0.5	7.5%
305	Udorthents-Pits complex, gravelly	C	0.8	13.0%
307	Urban land	D	4.8	74.7%
W	Water		0.3	4.7%
Totals for Area of Interest			**6.5**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix J
Permeability Test Results

Proposed Multifamily Development

131 Danbury Road, Wilton, Connecticut
Drainage Report

Ryan Sutherland, AMS Acquisitions Management Corporation

SLR Project No.: 141.21543.0000171

October 23, 2023

LEGEND:

SLR-1 — BORING BY SLR INTERNATIONAL CORPORATION (SLR)

0' 25' 50'
0 1/2" 1"

NOTES:

1. BASE MAP DEVELOPED FROM AN ELECTRONIC FILE BY SLR TITLED "AMSW - EXISTING CONDITIONS.DWG" AND DATED NOVEMBER, 2023.
2. BORINGS BY SLR WERE PERFORMED BY SITE, LLC ON DECEMBER 12 & 13, 20232.
3. THE BORINGS WERE LOCATED USING A HANDHELD GPS. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

REVISIONS

SUBSURFACE EXPLORATION LOCATION PLAN
PROPOSED MULTI-FAMILY DEVELOPMENT
131 DANBURY ROAD
WILTON, CONNECTICUT

DESIGNED	DRAWN	CHECKED
RDG	RDG	MGB

SCALE: 1"=50'

DATE: DECEMBER 14, 2023

PROJECT NO. 141.21543.00001

SHEET NO. FIG. 2

GRAIN SIZE DISTRIBUTION TEST DATA

12/29/2023

Client: : SLR Internation Corporation Date: 12/29/2023
Project: : Proposed Multi-Family Development Wilton, CT
Location: Onsite
Depth: 3'-5' Top **Sample Number:** 1120-23
Material Description: Lt. brown silty sand
Liquid Limit: N/A **Plastic Limit:** N/A
USCS Classification: N/A **AASHTO Classification:** N/A
Test Date: 12/29/2023
Testing Remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-2, Depth 3'-5' Top)
Tested by: SC **Checked by:** IC
Test Date: 12/29/2023 **Technician:** SC
Test remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-2, Depth 3'-5' Top)

Sieve Test Data (ASTM C117 & C136)

Post #200 Wash Test Weights (grams): Dry Specimen+Tare = 177.40
Tare Wt. = 0.00

Minus #200 from wash = 32.3%

Specimen Weights
Dry specimen+tare (gms.) = 262.00
Tare (gms.) = 0.00

Cumulative pan tare (gms.) = 0.00

Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Passing	Percent Retained
3/4"	0.00	100.0	0.0
1/4"	2.70	99.0	1.0
#4	4.20	98.4	1.6
#10	7.50	97.1	2.9
#40	86.60	66.9	33.1
#100	158.70	39.4	60.6
#200	176.80	32.5	67.5

Pan + tare = 0 Tare = 0 Loss during sieving = 0.2%
Total loss (wash+pan/specimen) = 32.3%

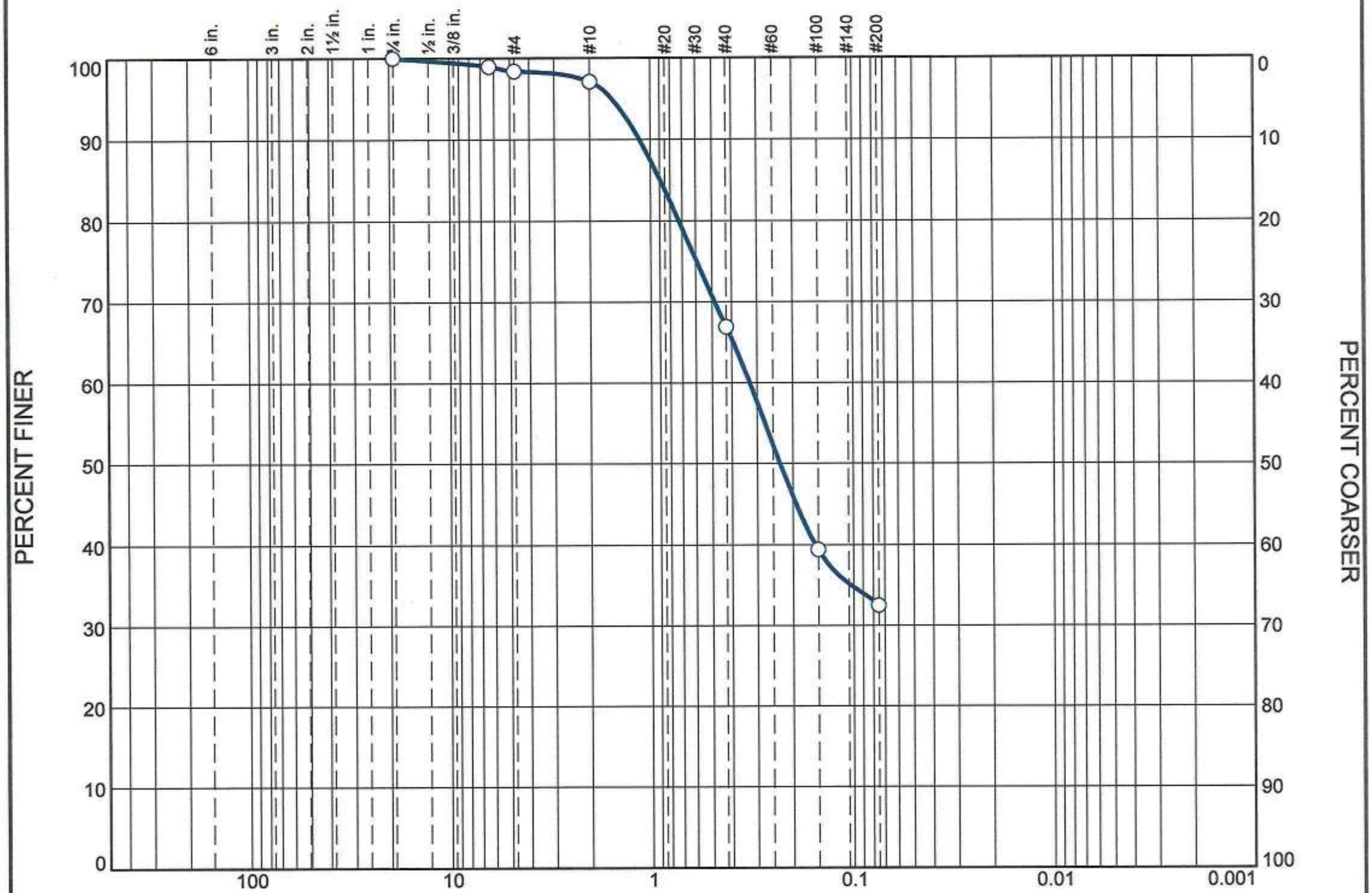
Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.6	1.6	1.3	30.2	34.4	65.9			32.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
					0.1546	0.2311	0.3256	0.7255	0.8957	1.1344	1.5511

Fineness Modulus
1.41

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	1.6	1.3	30.2	34.4	32.5	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	N/A	N/A	0.8957	0.3256	0.2311					

MATERIAL DESCRIPTION	TEST DATE	USCS	NM
○ Lt. brown silty sand	12/29/2023	N/A	

Project No. **Client:** : SLR Internation Corporation Date: 12/29/2023

Project: : Proposed Multi-Family Development Wilton, CT

○ **Source of Sample:** Onsite **Depth:** 3'-5' Top **Sample Number:** 1120-23

Remarks:
○ ASTM C 117, ASTM C 136 (Sample ID= SLR-2, Depth 3'-5' Top)

Tri State Materials Testing Lab

Berlin, Connecticut

Figure

Tested By: SC **Checked By:** IC

TRI STATE MATERIALS TESTING LAB LLC.
New England Regional Office
60 Woodlawn Road, Berlin CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:**	001
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12-29-2023
Contractor:	N/A	**LAB #:**	1120-23
Technician:	IC		

LABORATORY PERMEABILITY TEST

Sample Description: Lt. brown silty sand

Source: Onsite

Sample ID: SLR-2

Method: ASTM D2434 (Constant Head)

$k = QL/Ath$

Where k = Coefficient of permeability

Q = quantity of water discharged,	Q = 1000 cm^3
L = length of the sample in centimeters	L = 5.08 cm
A = cross-sectional area of the specimen,	A = 31.93 cm^2
t = total time for discharge, in seconds	t = 10800 sec
h = difference in head manometers,	h = 60 cm

K = 0.000245522 cm/sec = 2.5×10^{-4} cm/sec or 0.8 inch/hour

The permeability (k) of the sample was tested at approx. 92% of the maximum dry density.

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC

Paul J. Hessel, P.E.

TRI STATE MATERIALS TESTING LAB, LLC.

New England Regional Office

60 Woodlawn Road • Berlin, CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:** **Unit Weight**	001-23 001-23
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12/29/2023
Contractor:	SLR International Corporation	**Sample #**	1120-23
Technician:	I.C	**Sample ID**	SLR-2

SOIL UNIT WEIGHT

Formula: M=(G-t)/V
M=bulk density of the aggregate, kg/m3 [lb./ft3]
G=mass of the aggregate plus the measure, kg [lb.]
T=mass of the measure, kg [lb.]
V=volume of the measure, m3 [ft3]
$V = \pi r^2 h$

Sample #	Material	Volume	Mass of Soil	Density
1120-23	Lt. brown silty sand	0.005451389 [ft3]	0.57611 lbs.	106.0 lb./ft3

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC.

Paul J. Hessel, P.E.

GRAIN SIZE DISTRIBUTION TEST DATA

12/29/2023

Client: : SLR Internation Corporation
Date: 12/29/2023

Project: : Proposed Multi-Family Development Wilton, CT

Location: Onsite

Depth: 5'-7'
Sample Number: 1121-23

Material Description: Lt. brown silty sand with gravel

Liquid Limit: N/A
Plastic Limit: N/A

USCS Classification: N/A
AASHTO Classification: N/A

Test Date: 12/29/2023

Testing Remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-5, Depth 5'-7')

Tested by: SC
Checked by: IC

Test Date: 12/29/2023 **Technician:** SC

Test remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-5, Depth 5'-7')

Sieve Test Data (ASTM C117 & C136)

Post #200 Wash Test Weights (grams): Dry Specimen+Tare = 320.60
Tare Wt. = 0.00

Minus #200 from wash = 23.2%

Specimen Weights
Dry specimen+tare (gms.) = 417.40
Tare (gms.) = 0.00

Cumulative pan tare (gms.) = 0.00

Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Passing	Percent Retained
1 1/4"	0.00	100.0	0.0
3/4"	25.60	93.9	6.1
1/4"	127.20	69.5	30.5
#4	145.60	65.1	34.9
#10	198.50	52.4	47.6
#40	275.60	34.0	66.0
#100	310.10	25.7	74.3
#200	319.70	23.4	76.6

Pan + tare = 0 Tare = 0 Loss during sieving = 0.2%

Total loss (wash+pan/specimen) = 23.2%

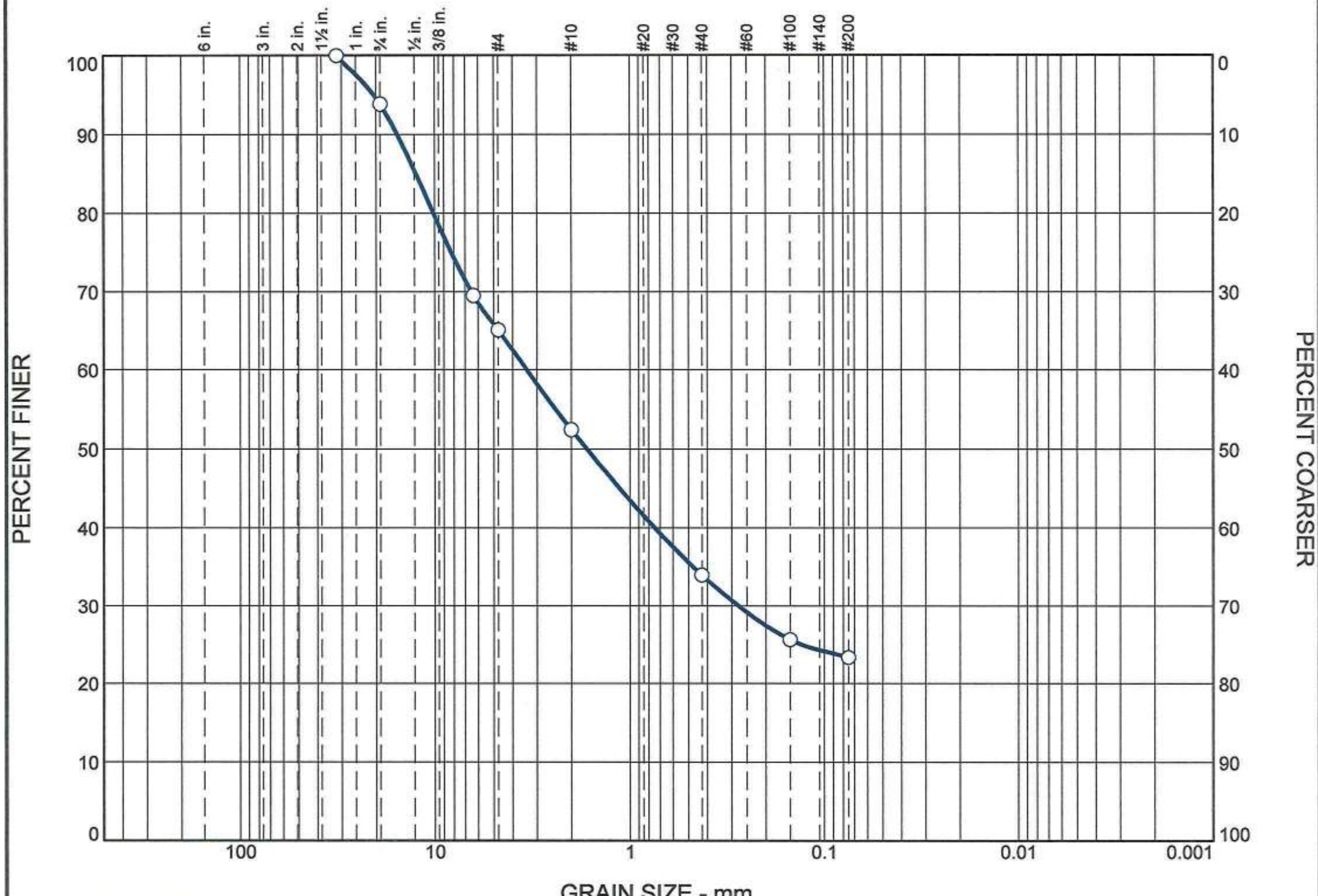
Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	6.1	28.8	34.9	12.7	18.4	10.6	41.7			23.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.2757	0.7428	1.6618	3.3827	10.1656	12.5016	15.5889	20.4709

Fineness Modulus
3.68

Particle Size Distribution Report



	% +3"	% Gravel Coarse	% Gravel Fine	% Sand Coarse	% Sand Medium	% Sand Fine	% Fines Silt	% Fines Clay
○	0.0	6.1	28.8	12.7	18.4	10.6	23.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	N/A	N/A	12.5016	3.3827	1.6618	0.2757				

MATERIAL DESCRIPTION	TEST DATE	USCS	NM
○ Lt. brown silty sand with gravel	12/29/2023	N/A	

Project No. **Client:** : SLR Internation Corporation Date: 12/29/2023

Project: : Proposed Multi-Family Development Wilton, CT

○ **Source of Sample:** Onsite **Depth:** 5'-7' **Sample Number:** 1121-23

Remarks:

○ ASTM C 117, ASTM C 136 (Sample ID= SLR-5, Depth 5'-7')

Tri State Materials Testing Lab

Berlin, Connecticut

Figure

Tested By: SC **Checked By:** IC

TRI STATE MATERIALS TESTING LAB LLC.
New England Regional Office
60 Woodlawn Road, Berlin CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Tri–State Materials Testing

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:**	002
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12-29-2023
Contractor:	N/A	**LAB #:**	1121-23
Technician:	IC		

LABORATORY PERMEABILITY TEST

Sample Description: Lt. brown silty sand with gravel

Source: Onsite

Sample ID: SLR-5

Method: ASTM D2434 (Constant Head)

$k = QL/Ath$

Where k = Coefficient of permeability

Q = quantity of water discharged,	$Q = 1000\ cm^3$
L = length of the sample in centimeters	$L = 6.985$ cm
A = cross-sectional area of the specimen,	$A = 31.93\ cm^2$
t = total time for discharge, in seconds	$t = 5100$ sec
h = difference in head manometers,	$h = 60$ cm

$K = 0.000714901$ cm/sec $= 7.1\times10^{-4}$ or 2.5 inch/hour

The permeability (k) of the sample was tested at approx. 92% of the maximum dry density.

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC

Paul J. Hessel, P.E.

TRI STATE MATERIALS TESTING LAB, LLC.
New England Regional Office
60 Woodlawn Road • Berlin, CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:** **Unit Weight**	02-23 002-23
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12/29/2023
Contractor:	SLR International Corporation	**Sample#:**	1121-23
Technician:	I.C	**Sample ID**	SLR-5

SOIL UNIT WEIGHT

Formula: M=(G-t)/V
M=bulk density of the aggregate, kg/m3 [lb./ft3]
G=mass of the aggregate plus the measure, kg [lb.]
T=mass of the measure, kg [lb.]
V=volume of the measure, m3 [ft3]
$V= \pi r^2 h$

Sample #	Material	Volume	Mass of Soil	Density
1121-23	Lt. brown silty sand with gravel	0.007494213 [ft3]	0.92020948 lbs.	122.7 lb./ft3

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC.

Paul J. Hessel, P.E.

GRAIN SIZE DISTRIBUTION TEST DATA

12/29/2023

Client: : SLR Internation Corporation Date: 12/29/2023
Project: : Proposed Multi-Family Development Wilton, CT
Location: Onsite
Depth: 5'-7' **Sample Number:** 1122-23
Material Description: 1 1/4" Minus gravel with sand, little fines
Liquid Limit: N/A **Plastic Limit:** N/A
USCS Classification: N/A **AASHTO Classification:** N/A
Test Date: 12/29/2023
Testing Remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-6, Depth 5'-7')
Tested by: SC **Checked by:** IC
Test Date: 12/29/2023 **Technician:** SC
Test remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-6, Depth 5'-7')

Sieve Test Data (ASTM C117 & C136)

Post #200 Wash Test Weights (grams): Dry Specimen+Tare = 262.30
Tare Wt. = 0.00

Minus #200 from wash = 11.9%

Specimen Weights
Dry specimen+tare (gms.) = 297.60
Tare (gms.) = 0.00

Cumulative pan tare (gms.) = 0.00

Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Passing	Percent Retained
1 1/4"	0.00	100.0	0.0
3/4"	33.30	88.8	11.2
1/4"	125.20	57.9	42.1
#4	138.60	53.4	46.6
#10	177.50	40.4	59.6
#40	237.80	20.1	79.9
#100	259.00	13.0	87.0
#200	261.80	12.0	88.0

Pan + tare = 0 Tare = 0 Loss during sieving = 0.2%
Total loss (wash+pan/specimen) = 11.9%

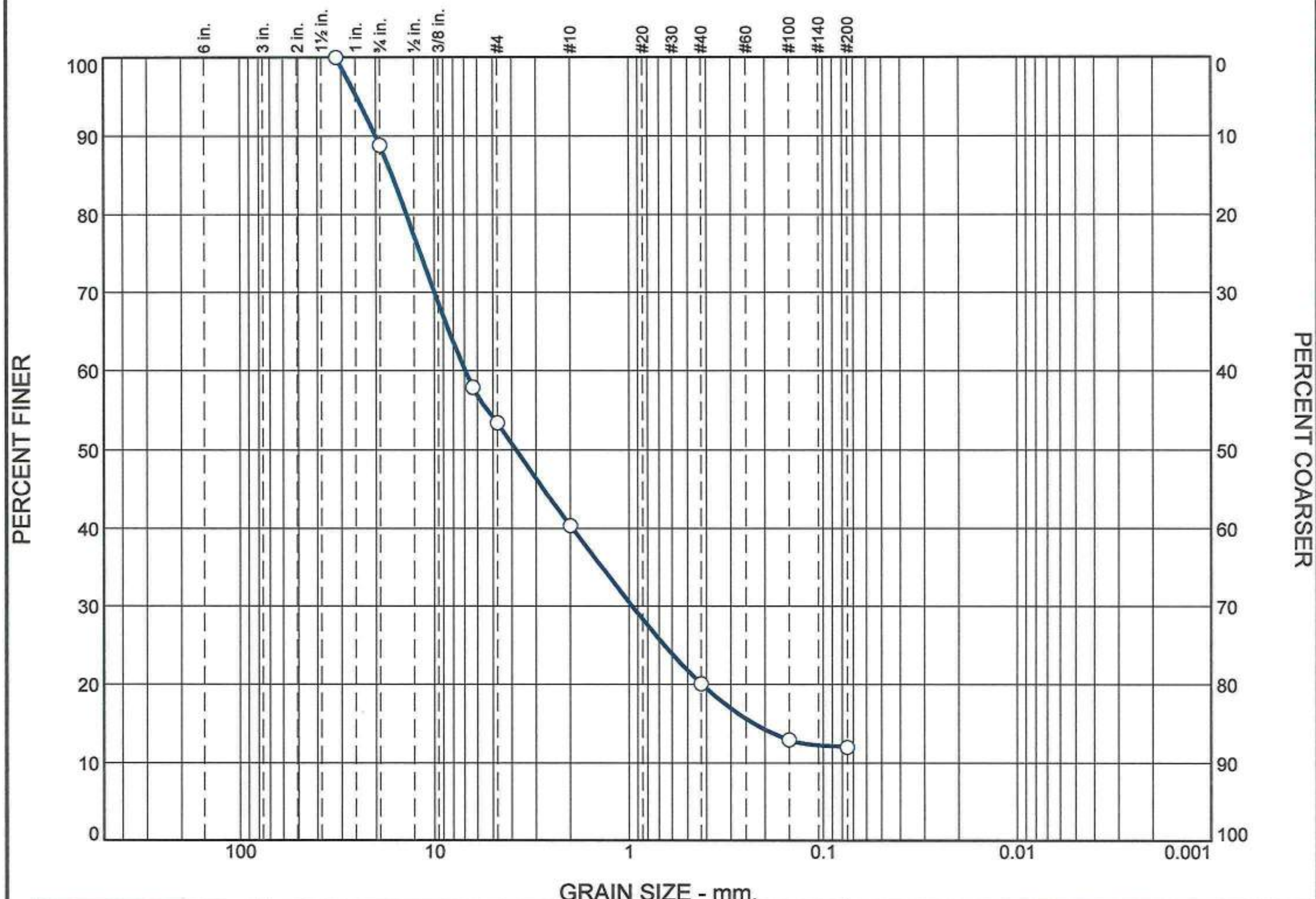
Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	11.2	35.4	46.6	13.0	20.3	8.1	41.4			12.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.2252	0.4210	0.9616	1.9502	3.8030	6.9471	13.8803	16.4971	20.0000	25.0607

Fineness Modulus
4.60

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	11.2	35.4	13.0	20.3	8.1	12.0	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	N/A	N/A	16.4971	6.9471	3.8030	0.9616	0.2252			

MATERIAL DESCRIPTION	TEST DATE	USCS	NM
○ 1 1/4" Minus gravel with sand, little fines	12/29/2023	N/A	

Project No. **Client:** : SLR Internation Corporation Date: 12/29/2023

Project: : Proposed Multi-Family Development Wilton, CT

○ **Source of Sample:** Onsite **Depth:** 5'-7' **Sample Number:** 1122-23

Remarks:

○ ASTM C 117, ASTM C 136 (Sample ID= SLR-6, Depth 5'-7')

Tri State Materials Testing Lab

Berlin, Connecticut

Figure

Tested By: SC **Checked By:** IC

TRI STATE MATERIALS TESTING LAB LLC.
New England Regional Office
60 Woodlawn Road, Berlin CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:**	003
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12-29-2023
Contractor:	N/A	**LAB #:**	1122-23
Technician:	IC		

LABORATORY PERMEABILITY TEST

Sample Description: 1 ¼" Minus gravel with sand, little fines

Source: Onsite

Sample ID: SLR-6

Method: ASTM D2434 (Constant Head)

$k = QL/Ath$

Where k = Coefficient of permeability

Q = quantity of water discharged,	Q = 1000 cm^3
L = length of the sample in centimeters	L = 5.08 cm
A = cross-sectional area of the specimen,	A = 31.93 cm^2
t = total time for discharge, in seconds	t = 900 sec
h = difference in head manometers,	h = 60 cm

K = 0.00294626 cm/sec = 2.9×10^{-3} or 10.6 inch/hour

The permeability (k) of the sample was tested at approx. 92% of the maximum dry density.

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC

Paul J. Hessel, P.E.

TRI STATE MATERIALS TESTING LAB, LLC.
New England Regional Office
60 Woodlawn Road • Berlin, CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:** **Unit Weight**	03-23 003-23
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12/29/2023
Contractor:	SLR International Corporation	**Sample #:**	1122-23
Technician:	I.C	**Sample ID**	SLR-6

SOIL UNIT WEIGHT

Formula: M=(G-t)/V
M=bulk density of the aggregate, kg/m3 [lb./ft3]
G=mass of the aggregate plus the measure, kg [lb.]
T=mass of the measure, kg [lb.]
V=volume of the measure, m3 [ft3]
$V = \pi r^2 h$

Sample #	Material	Volume	Mass of Soil	Density
1122-23	1 ¼" Minus gravel with sand, little fines	0.005451389 [ft3]	0.65609569 lbs.	120.3 lb./ft3

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC.

Paul J. Hessel, P.E.

GRAIN SIZE DISTRIBUTION TEST DATA **12/29/2023**

Client: : SLR Internation Corporation Date: 12/29/2023
Project: : Proposed Multi-Family Development Wilton, CT
Location: Onsite
Depth: 3'-5' **Sample Number:** 1123-23
Material Description: 1 1/4" Minus gravel with silty sand
Liquid Limit: N/A **Plastic Limit:** N/A
USCS Classification: N/A **AASHTO Classification:** N/A
Test Date: 12/29/2023
Testing Remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-7, Depth 3'-5')
Tested by: SC **Checked by:** IC
Test Date: 12/29/2023 **Technician:** SC
Test remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-7, Depth 3'-5')

Sieve Test Data (ASTM C117 & C136)

Post #200 Wash Test Weights (grams): Dry Specimen+Tare = 239.20
Tare Wt. = 0.00

Minus #200 from wash = 21.2%

Specimen Weights
Dry specimen+tare (gms.) = 303.50
Tare (gms.) = 0.00

Cumulative pan tare (gms.) = 0.00

Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Passing	Percent Retained
1 1/4"	0.00	100.0	0.0
3/4"	37.40	87.7	12.3
1/4"	115.80	61.8	38.2
#4	129.90	57.2	42.8
#10	165.50	45.5	54.5
#40	216.60	28.6	71.4
#100	236.00	22.2	77.8
#200	238.30	21.5	78.5

Pan + tare = 0 Tare = 0 Loss during sieving = 0.3%
Total loss (wash+pan/specimen) = 21.2%

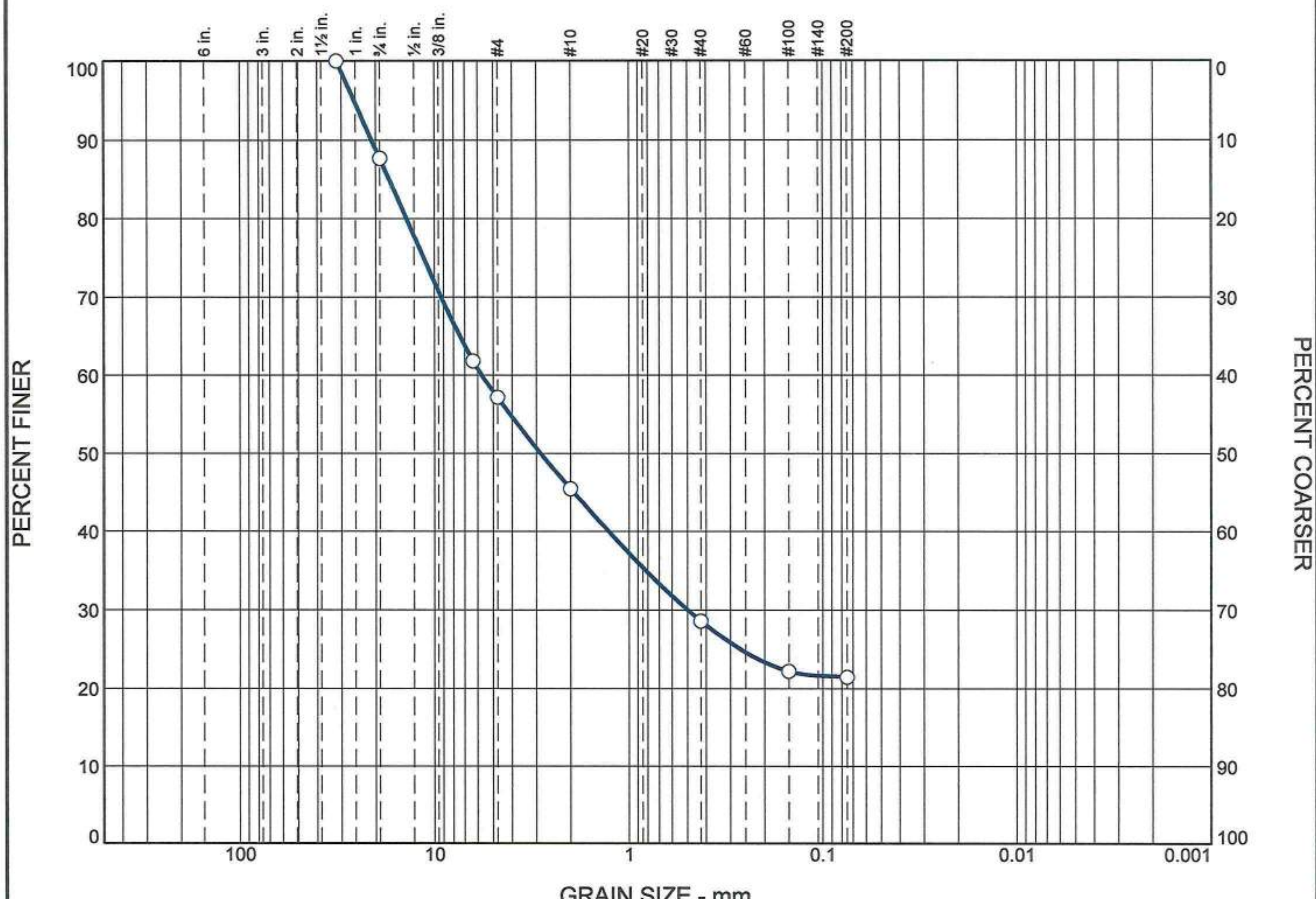
Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	12.3	30.5	42.8	11.7	16.9	7.1	35.7			21.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.4962	1.2695	2.8497	5.7260	13.9139	17.0473	20.9925	25.8227

Fineness Modulus
4.18

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	12.3	30.5	11.7	16.9	7.1	21.5	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	N/A	N/A	17.0473	5.7260	2.8497	0.4962				

MATERIAL DESCRIPTION	TEST DATE	USCS	NM
○ 1 1/4" Minus gravel with silty sand	12/29/2023	N/A	

Project No. **Client:** : SLR Internation Corporation Date: 12/29/2023

Project: : Proposed Multi-Family Development Wilton, CT

○ **Source of Sample:** Onsite **Depth:** 3'-5' **Sample Number:** 1123-23

Remarks:
○ ASTM C 117, ASTM C 136 (Sample ID= SLR-7, Depth 3'-5')

Tri State Materials Testing Lab

Berlin, Connecticut

Figure

Tested By: SC **Checked By:** IC

TRI STATE MATERIALS TESTING LAB LLC.
New England Regional Office
60 Woodlawn Road, Berlin CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:**	004
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12-29-2023
Contractor:	N/A	**LAB #:**	1123-23
Technician:	IC		

LABORATORY PERMEABILITY TEST

Sample Description: 1 ¼" Minus gravel with silty sand

Source: Onsite

Sample ID: SLR-7

Method: ASTM D2434 (Constant Head)

k = QL/Ath

Where k = Coefficient of permeability

Q = quantity of water discharged,	Q = 1000 cm^3
L = length of the sample in centimeters	L = 5.08 cm
A = cross-sectional area of the specimen,	A = 31.93 cm^2
t = total time for discharge, in seconds	t = 4500 sec
h = difference in head manometers,	h = 60 cm

K = 0.000589252 cm/sec = 5.8 x10^{-4} or 2.1 inch/hour

The permeability (k) of the sample was tested at approx. 92% of the maximum dry density.

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC

Paul J. Hessel, P.E.

TRI STATE MATERIALS TESTING LAB, LLC.
New England Regional Office
60 Woodlawn Road • Berlin, CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:** **Unit Weight**	04-23 004-23
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12/29/2023
Contractor:	SLR International Corporation	**Sample #:**	1123-23
Technician:	I.C	**Sample ID**	SLR-7

SOIL UNIT WEIGHT

Formula: M=(G-t)/V
M=bulk density of the aggregate, kg/m3 [lb./ft3]
G=mass of the aggregate plus the measure, kg [lb.]
T=mass of the measure, kg [lb.]
V=volume of the measure, m3 [ft3]
$V= \pi r^2 h$

Sample #	Material	Volume of measure	Mass of Soil	Density
1123-23	1 ¼" Minus gravel with silty sand	0.005451389 [ft3]	0.66844158 lbs.	122.6 lb./ft3

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC.

Paul J. Hessel, P.E.

GRAIN SIZE DISTRIBUTION TEST DATA **12/29/2023**

Client: : SLR Internation Corporation Date: 12/29/2023
Project: : Proposed Multi-Family Development Wilton, CT
Location: Onsite
Depth: 5'-7' **Sample Number:** 1124-23
Material Description: 1 1/4" Minus gravel with sand, little fines
Liquid Limit: N/A **Plastic Limit:** N/A
USCS Classification: N/A **AASHTO Classification:** N/A
Test Date: 12/29/2023
Testing Remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-8, Depth 5'-7')
Tested by: SC **Checked by:** IC
Test Date: 12/29/2023 **Technician:** SC
Test remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-8, Depth 5'-7')

Sieve Test Data (ASTM C117 & C136)

Post #200 Wash Test Weights (grams): Dry Specimen+Tare = 355.80
Tare Wt. = 0.00

Minus #200 from wash = 13.1%

Specimen Weights
Dry specimen+tare (gms.) = 409.40
Tare (gms.) = 0.00

Cumulative pan tare (gms.) = 0.00

Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Passing	Percent Retained
1 1/4"	0.00	100.0	0.0
3/4"	52.60	87.2	12.8
1/4"	172.40	57.9	42.1
#4	189.50	53.7	46.3
#10	238.90	41.6	58.4
#40	319.30	22.0	78.0
#100	348.90	14.8	85.2
#200	355.20	13.2	86.8

Pan + tare = 0 Tare = 0 Loss during sieving = 0.1%
Total loss (wash+pan/specimen) = 13.1%

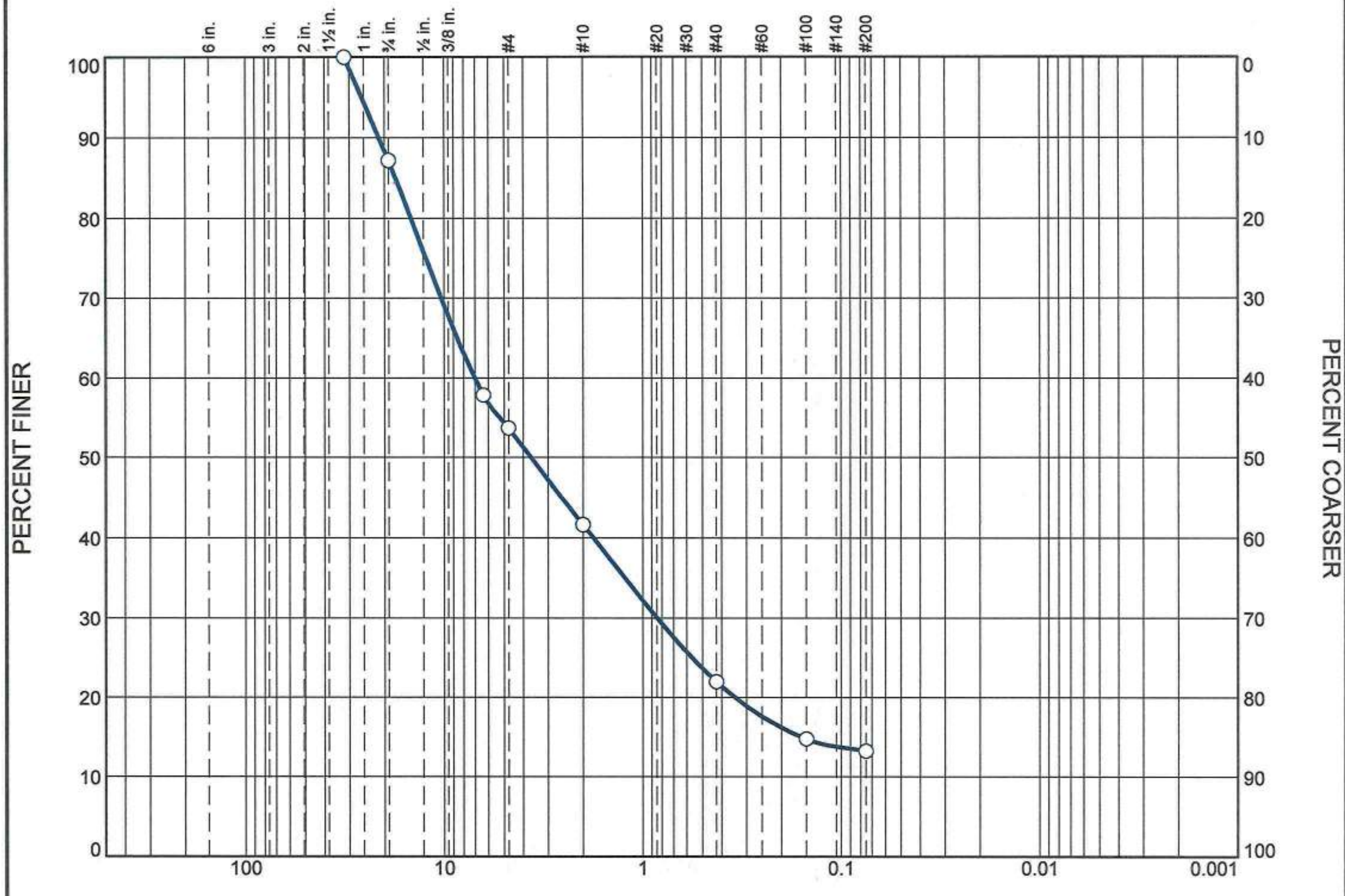
Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	12.8	33.5	46.3	12.1	19.6	8.8	40.5			13.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.1573	0.3410	0.8447	1.7692	3.6565	7.0014	14.6619	17.5599	21.2912	25.9894

Fineness Modulus
4.54

Particle Size Distribution Report



	% +3"	% Gravel Coarse	% Gravel Fine	% Sand Coarse	% Sand Medium	% Sand Fine	% Fines Silt	% Fines Clay
○	0.0	12.8	33.5	12.1	19.6	8.8	13.2	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	N/A	N/A	17.5599	7.0014	3.6565	0.8447	0.1573			

MATERIAL DESCRIPTION	TEST DATE	USCS	NM
○ 1 1/4" Minus gravel with sand, little fines	12/29/2023	N/A	

Project No. **Client:** : SLR Internation Corporation Date: 12/29/2023

Project: : Proposed Multi-Family Development Wilton, CT

○ **Source of Sample:** Onsite **Depth:** 5'-7' **Sample Number:** 1124-23

Remarks:
○ ASTM C 117, ASTM C 136 (Sample ID= SLR-8, Depth 5'-7')

Tri State Materials Testing Lab

Berlin, Connecticut

Figure

Tested By: SC **Checked By:** IC

TRI STATE MATERIALS TESTING LAB LLC.
New England Regional Office
60 Woodlawn Road, Berlin CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:**	005
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12-29-2023
Contractor:	N/A	**LAB #:**	1124-23
Technician:	IC		

LABORATORY PERMEABILITY TEST

Sample Description: 1 ¼" Minus gravel with sand, little fines

Source: Onsite

Sample ID: SLR-8

Method: ASTM D2434 (Constant Head)

$k = QL/Ath$

Where k = Coefficient of permeability

Q = quantity of water discharged,	Q = 1000 cm^3
L = length of the sample in centimeters	L = 6.985 cm
A = cross-sectional area of the specimen,	A = 31.93 cm^2
t = total time for discharge, in seconds	t = 1200 sec
h = difference in head manometers,	h = 60 cm

K = 0.00303833 cm/sec = 3.0×10^{-3} or 10.9 inch/hour

The permeability (k) of the sample was tested at approx. 92% of the maximum dry density.

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC

Paul J. Hessel, P.E.

TRI STATE MATERIALS TESTING LAB, LLC.
New England Regional Office
60 Woodlawn Road • Berlin, CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:** **Unit Weight**	05-23 005-23
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12/29/2023
Contractor:	SLR International Corporation	**Sample #:**	1124-23
Technician:	I.C	**Sample ID**	SLR-8

SOIL UNIT WEIGHT

Formula: M=(G-t)/V
M=bulk density of the aggregate, kg/m3 [lb./ft3]
G=mass of the aggregate plus the measure, kg [lb.]
T=mass of the measure, kg [lb.]
V=volume of the measure, m3 [ft3]
$V = \pi r^2 h$

Sample #	Material	Volume	Mass of Soil	Density
1124-23	1 ¼" Minus gravel with sand, little fines	0.007495659 [ft3]	0.9025725 lbs.	120.4 lb./ft3

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC.

Paul J. Hessel, P.E.

Making Sustainability Happen

Engineering Report - Floodplain Analysis

131 Danbury Road, Wilton, Connecticut

AMS Acquisitions

Prepared by:

SLR International Corporation

1 South Main Street, Waterbury, Vermont, 05676

SLR Project No.: 141.21543.00001

Client Reference No: 0001

November 27, 2023

1.0 Floodplain Management Background

The project site (131 Danbury Rd, Wilton, CT) is located along the Norwalk River. A Flood Insurance Study (FIS) was completed for the Norwalk River (Town of Wilton) in 1982. This hydraulic modeling was updated June 18, 2010 and revised October 16, 2013, though the river system was not restudied.

2.0 Modeling

Copies of the input and output for the effective hydraulic model for the Norwalk River were obtained from the FEMA Engineering Library. The effective model was originally developed using HEC-2, the predecessor of the current modeling software known as HEC-RAS. The effective model obtained from FEMA was transferred into HEC-RAS to create a duplicate of the effective model for the floodplain analysis of the project. It should be noted that the vertical datum used in the effective model is the National Geodetic Vertical Datum of 1929 (NGVD29), therefore the data was converted to the North American Vertical Datum of 1988 (NAVD88) in the duplicate model. The conversion factor is 1.0 foot, as used in the FIS. The effective HEC-2 modeling used NGVD29 to calculate flood profiles, however the water surface elevations from the effective model have been converted to NAVD88 in the most-recent FIS.

2.1 Calibrated Model

The duplicate effective model was created to replicate the results published in the FIS. A portion of the original model, encompassing cross sections 15 through 30, and FEMA sections N and O, was used to create the duplicate effective model in HEC-RAS. The project site at 131 Danbury Rd falls between FEMA sections N and O, and more specifically between cross sections 27 and 28 from the effective HEC-2 model. This duplicate effective model was created with a datum of NAVD88. The 100-year computed water surface elevation computed by the duplicate effective model was compared to the effective HEC-2 output and the data provided in the FIS Floodway Table (Table 2-1).

Table 2-1 Calibrated Model Output (100-Year)

FIS CROSS SECTION IDENTIFIER	CALIBRATED MODEL CROSS SECTION NUMBER	WATER SURFACE ELEVATION (NAVD88)		
		HEC-2 Output	Floodway Data Table	Calibrated Model
N	17	141.76	141.3	140.23
	18	141.18		140.26
	19	141.73		140.87
	20	142.06		141.29
	21	142.08		141.32
	22	142.22		141.08
	23	142.61		142.17
	24	142.76		142.22
	25	144.13		144.63
	26	144.93		145.21
	27	146.77		146.61
	28	146.56		146.84
	29	151.83		151.38
O	30	153.11	153.1	153.17

The peak discharge rates used for this analysis were obtained from Volume 1 of the FIS and match those used in the effective model. The flow rates are as follows:

Table 2-2 FIS Norwalk River Flow Rates at Site

RETURN FREQUENCY (YEARS)	ANNUAL CHANCE PROBABILITY	FLOW RATE (CFS)
10	10%	2,980
50	2%	5,840
100	1%	7,455
500	0.2%	12,505

2.2 Corrected Model

After calibrating the duplicate effective model using data from the FIS, a corrected effective model was developed. This corrected model includes editing any erroneous errors in the duplicate effective model. For the corrected effective model, the following corrections were made:

1. Bridge bottom chord elevations were edited to achieve accurate no flow areas.
2. Effective flow zones were edited to better replicate site limitations due to buildings and bridges.

Table 2-2 Summary of HEC-RAS Model Output
Duplicate Effective vs. Corrected Effective (100-Year)

FIS CROSS SECTION IDENTIFIER	MODEL CROSS SECTION NUMBER	WATER SURFACE ELEVATION (NAVD88)	
		Duplicate Effective Model	Corrected Effective Model
N	17	140.23	140.32
	18	140.26	140.84
	19	140.87	141.34
	20	141.29	141.71
	21	141.32	141.62
	22	141.08	140.88
	23	142.17	142.35
	24	142.22	142.40
	25	144.63	144.63
	26	145.21	145.21
	27	146.61	146.61
	28	146.84	146.84
	29	151.38	151.38
O	30	153.17	153.17

2.3 Existing Conditions Model

To evaluate the impact of the proposed redevelopment, a cross section was added to the corrected effective model at the approximate location of 131 Danbury Rd, identified as river station 27.5 in the model. A cross section was added because one did not exist in the effective model at the pojrect site. Topography for the new cross section inserted into the existing conditions model was developed using the best-available LiDAR contour date as well as existing site survey data. Wet channel geometry (i.e. – below the water surface) was interpolated from the data at the bounding upstream and downstream cross sections.

2.4 Proposed Conditions Model

The added cross section was updated to reflect the proposed changes at 131 Danbury Rd. Modifications made to create the proposed conditions model included proposed grading changes, removal of existing building, and addition of obstructions reflecting the ground floor parking area pillars, elevator shaft, and trash receptacle area. The proposed model reflects a conservative condition, projecting all obstructions in close proximity to the cross section. The first floor of the proposed building was not included in the model because flood levels do not approach this elevation.

3.0 Results

Results of water surface elevation for the 100-Year and 10-Year storms were compared between existing and proposed conditions. These results are summarized in Tables 3-1 and 3-2:

Table 3-1 Comparison of Existing vs. Proposed Conditions (100-Year Storm)

FIS CROSS SECTION IDENTIFIER	MODEL CROSS SECTION NUMBER	WATER SURFACE ELEVATION (NAVD88)		
		Existing Conditions	Proposed Conditions	Difference
O	30	153.17	153.17	0.00
	29	151.38	151.38	0.00
	28	146.84	146.84	0.00
	27.5 *	146.70	146.70	0.00
	27	146.61	146.61	0.00
	26	145.21	145.21	0.00
	25	144.63	144.63	0.00
	24	142.40	142.40	0.00
	23	142.35	142.35	0.00
	22	140.88	140.88	0.00
	21	141.62	141.62	0.00
	20	141.71	141.71	0.00
	19	141.34	141.34	0.00
	18	140.84	140.84	0.00
N	17	140.32	140.32	0.00
* Denotes cross section that passes through the project site at 131 Danbury Rd				

Table 3-2 Comparison of Existing vs. Proposed Conditions (10-Year Storm)

FIS CROSS SECTION IDENTIFIER	MODEL CROSS SECTION NUMBER	WATER SURFACE ELEVATION (NAVD88)		
		Existing Conditions	Proposed Conditions	Difference
O	30	151.57	151.57	0.00
	29	147.74	147.74	0.00
	28	143.39	143.39	0.00
	27.5 *	144.27	144.27	0.00
	27	144.21	144.21	0.00
	26	142.54	142.54	0.00
	25	140.68	140.68	0.00
	24	139.83	139.83	0.00
	23	139.84	139.84	0.00
	22	138.1	138.1	0.00
	21	137.2	137.2	0.00
	20	137.55	137.55	0.00
	19	136.99	136.99	0.00
	18	136.5	136.5	0.00
N	17	136.15	136.15	0.00
* Denotes cross section that passes through the project site at 131 Danbury Rd				

As shown in Tables 3-1 and 3-2, there is no change in flood elevation for the 100-year storm or the 10-year storm between the existing and proposed conditions.

4.0 Compliance with Local Floodplain Regulations

Section 29-9.F.7 of the Wilton Zoning Regulations requires the following:

k. Equal Conveyance: Within the floodplain, except those areas which are tidally influenced, as designated on the Flood Insurance Rate Map (FIRM) for the community, encroachments resulting from filling, new construction or substantial improvements involving an increase in footprint of the structure, are prohibited unless the applicant provides certification by a registered professional engineer demonstrating, with supporting hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that such encroachments shall not result in any (0.00 feet) increase in flood levels (base flood elevation). Work within the floodplain and the land adjacent to the floodplain, including work to provide compensatory storage shall not be constructed in such a way so as to cause an increase in flood stage or flood velocity.

I. Compensatory Storage: The water holding capacity of the floodplain, except those areas which are tidally influenced, shall not be reduced. Any reduction caused by filling, new construction or substantial improvements involving an increase in footprint to the structure, shall be compensated for by deepening and/or widening of the floodplain, storage shall be provided on-site, unless easements have been gained from adjacent property owners; it shall be provided within the same hydraulic reach and a volume not previously used for flood storage; it shall be hydraulically comparable and incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Compensatory storage can be provided off-site if approved by the municipality.

4.1 Equal Conveyance

There are no increases in the base flood elevation between the Existing and Proposed conditions (Tables 3-1 and 3-2), therefore the Equal Conveyance requirement has been met. In addition, the modeling results indicate that the proposed conditions Base Flood Elevation (BFE) will not exceed the effective BFE as published in the current FIS.

4.2 Compensatory Storage

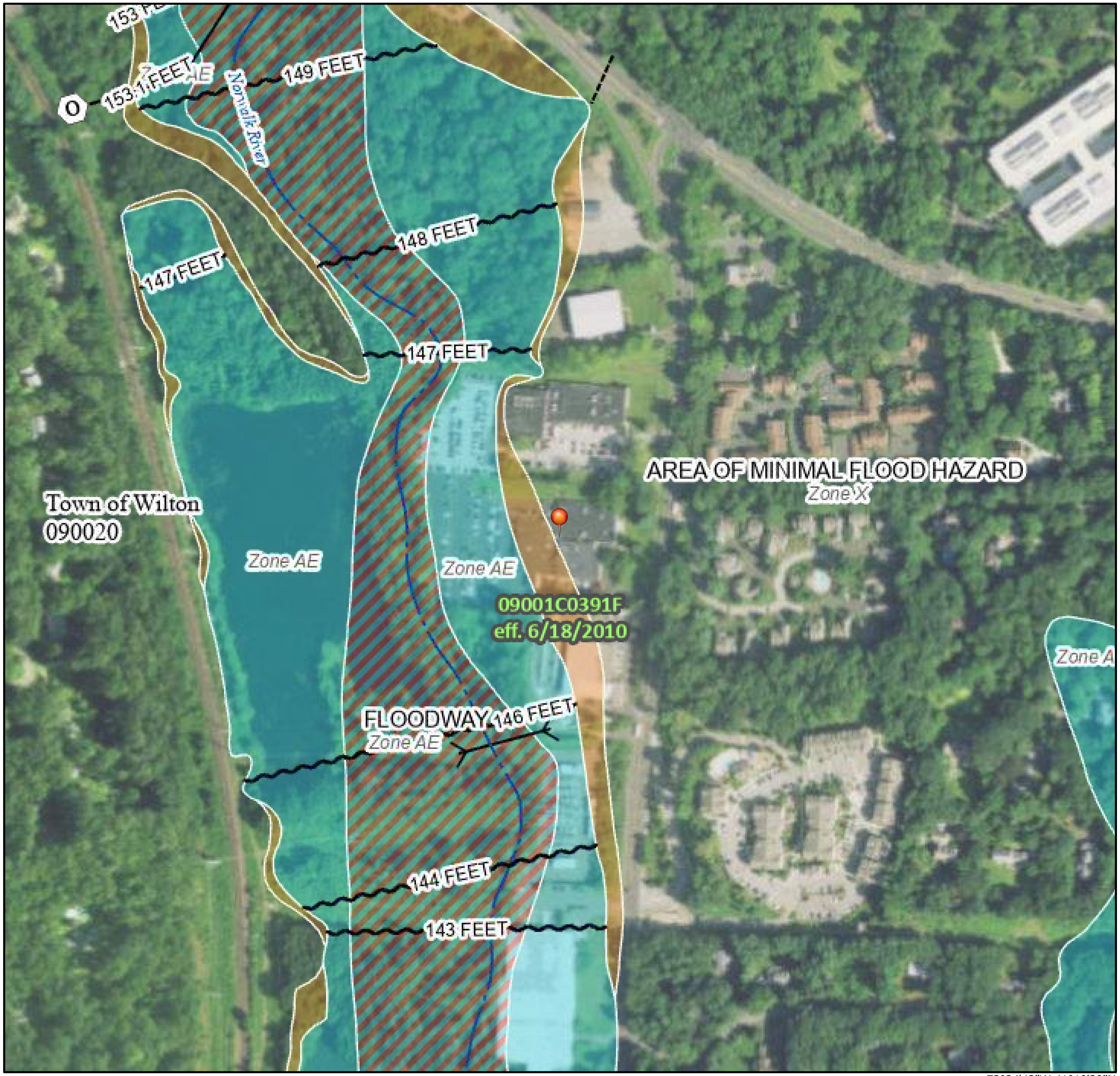
Revised grading has been proposed as part of the redevelopment of 131 Danbury Rd. This proposed earthwork results in a net cut of approximately 72 CY. Removal of the existing building and replacement with a ground level parking garage and raised building also results in a net increase of floodplain storage. Therefore, the proposed condition would not decrease floodplain storage.

Appendix A Figures

National Flood Hazard Layer FIRMette

FEMA

73°25'21"W 41°10'57"N



73°24'43"W 41°10'30"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- B 20.2 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

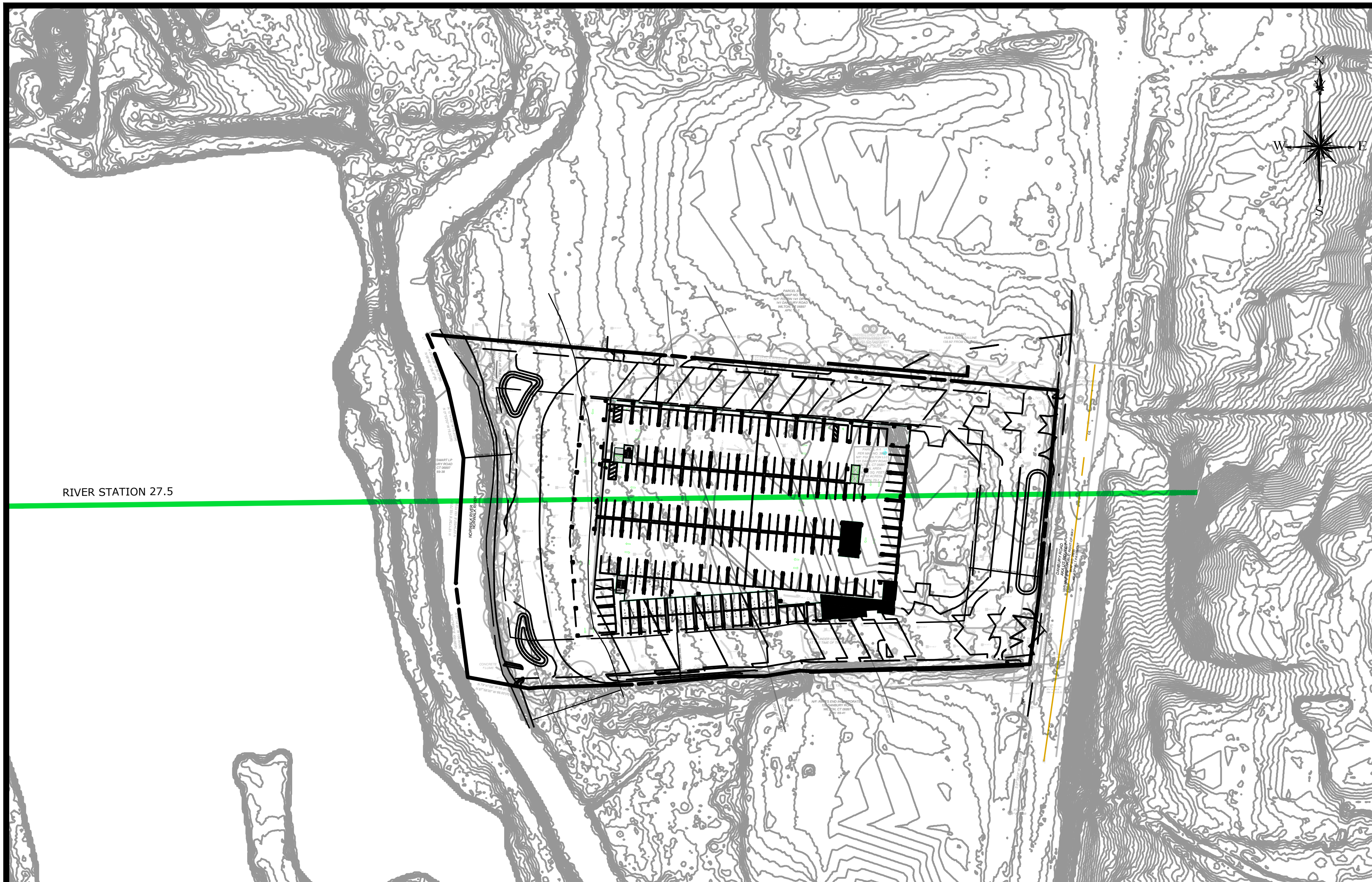
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/14/2023 at 11:10 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Drawing: W:\CADDESIGN\21543.00001-DE\CAD\EMR\FEMA_EXISTING.DWG Layout Tab:8.5X11H



SLR

1 SOUTH MAIN STREET
WATERBURY, VT 05676
802.882.8335
SLRCONSULTING.COM

DATE	Nov 27, 2023
SCALE	1"=20'
PROJ. NO.	21543.00001
DESIGNED	---
DRAWN	EMR
CHECKED	---

FLOODPLAIN CROSS SECTION MAP

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY RD
WILTON, CT

REVISED: ---

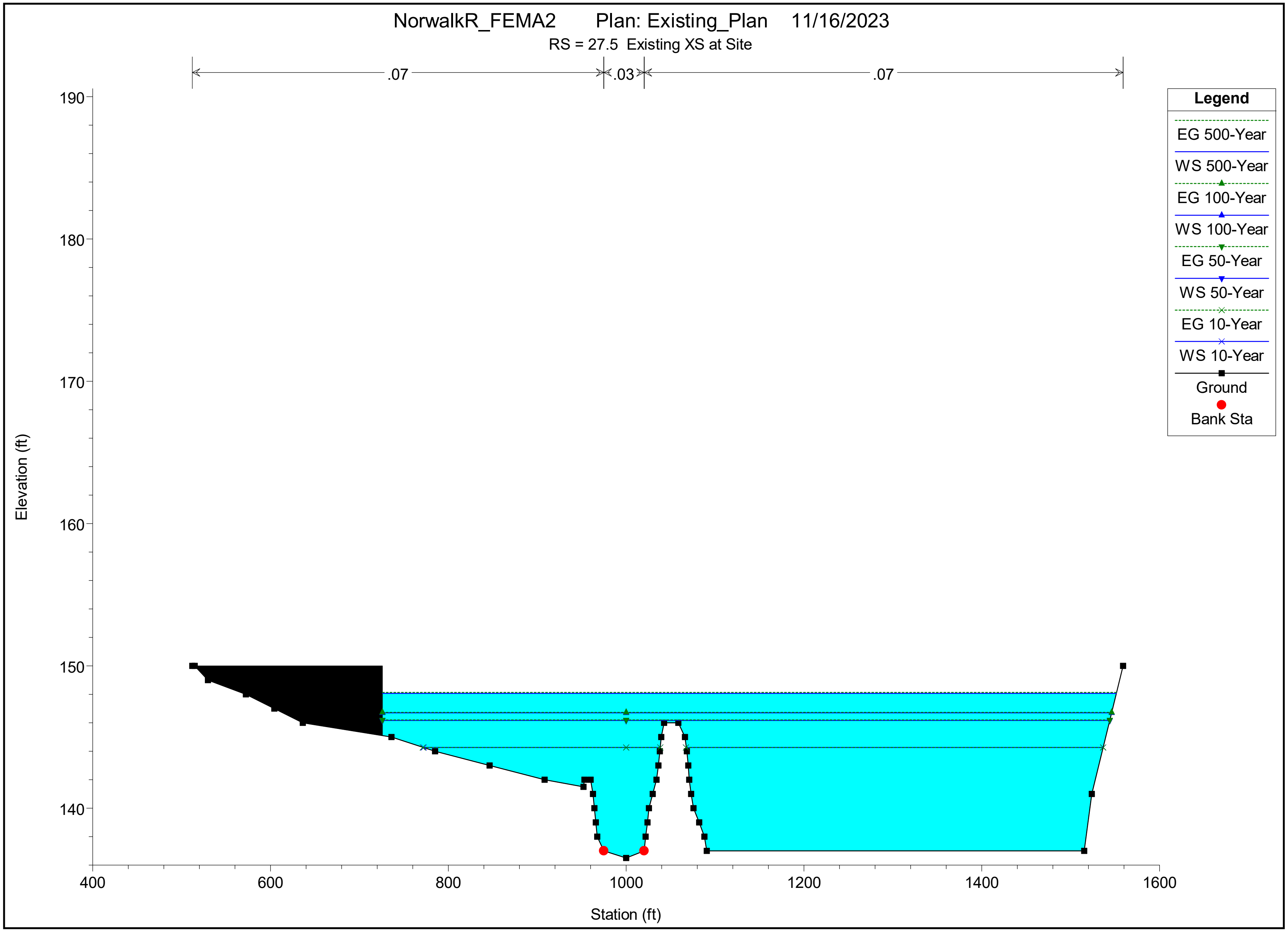
0' 30' 60'
0 1/2" 1"

SCALE 1" = 60'H
1" = 6'V

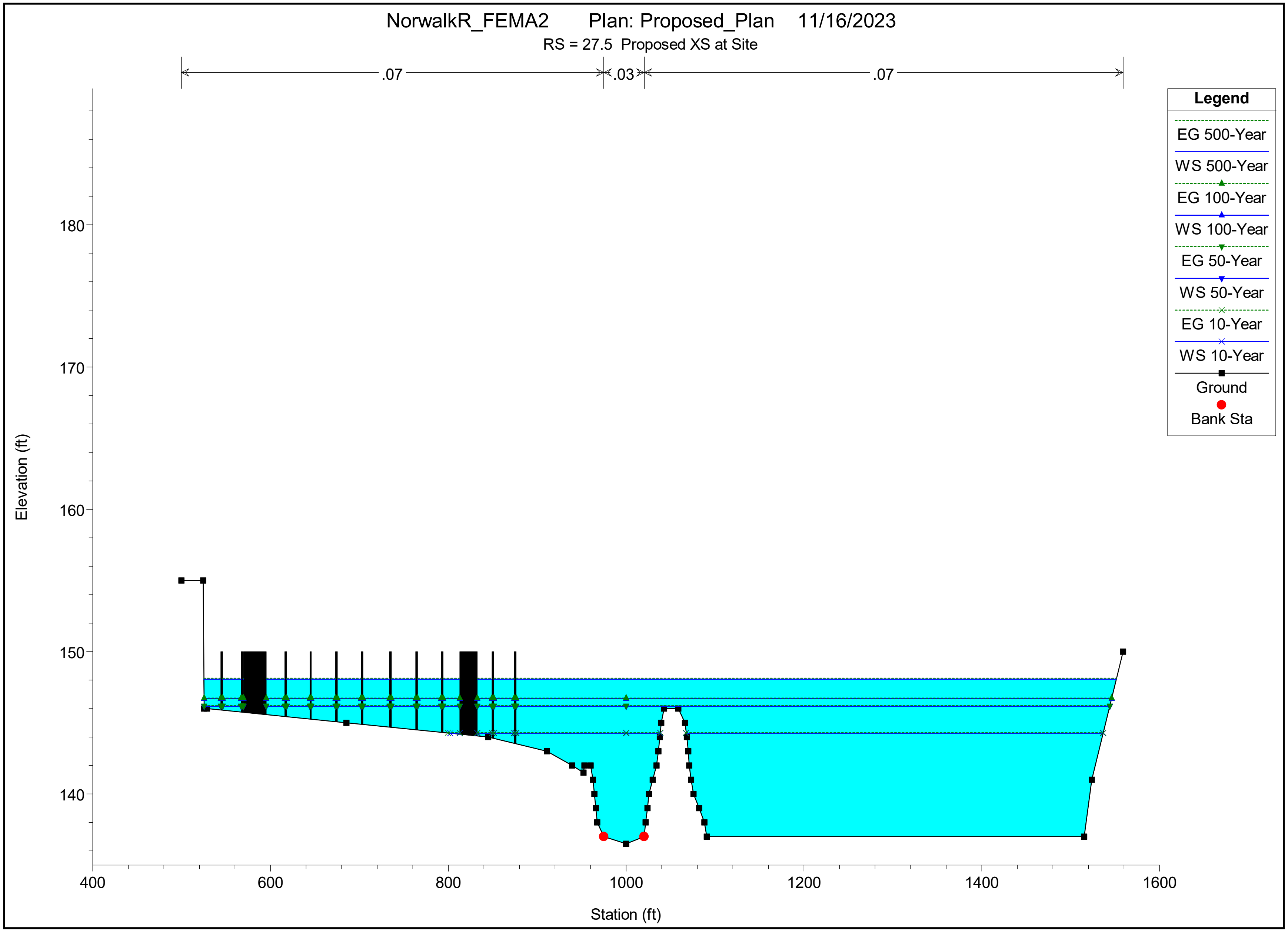
FIG. 2

Plotted by: ERICHARDS On this date: Tue, 2023 November 14 – 1:11pm

Appendix B HEC-RAS Results



1 in Horiz. = 160 ft 1 in Vert. = 10 ft



1 in Horiz. = 160 ft 1 in Vert. = 10 ft

Duplicate Effective HEC-RAS Output Table
November 27, 2023

HEC-RAS Plan: DupEff_NAVD88 River: RIVER-1 Reach: Reach-1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	30	500-Year	12505.00	146.00	154.12	154.12	155.58	0.005709	14.29	2497.82	745.78	0.92
Reach-1	30	100-Year	7455.00	146.00	153.17	153.17	154.29	0.004549	11.65	1808.29	702.76	0.80
Reach-1	30	50-Year	5840.00	146.00	152.76	152.76	153.78	0.004191	10.70	1520.61	683.06	0.76
Reach-1	30	10-Year	2980.00	146.00	151.57	151.57	152.45	0.003765	8.78	776.03	506.92	0.70
Reach-1	29	500-Year	12505.00	141.20	153.54		154.75	0.001505	9.48	1880.78	260.28	0.50
Reach-1	29	100-Year	7455.00	141.20	151.38		152.12	0.001190	7.29	1359.56	224.08	0.43
Reach-1	29	50-Year	5840.00	141.20	150.48		151.08	0.001083	6.48	1162.65	213.79	0.40
Reach-1	29	10-Year	2980.00	141.20	147.71		148.16	0.001323	5.41	616.14	181.80	0.42
Reach-1	28	500-Year	12505.00	137.00	148.97	148.97	151.17	0.003269	14.22	2082.30	574.34	0.75
Reach-1	28	100-Year	7455.00	137.00	146.84	146.84	148.93	0.003409	12.63	1096.50	371.77	0.74
Reach-1	28	50-Year	5840.00	137.00	145.55	145.55	147.82	0.004157	12.61	700.65	255.39	0.79
Reach-1	28	10-Year	2980.00	137.00	143.59		144.87	0.003225	9.17	356.06	74.07	0.67
Reach-1	27	500-Year	12505.00	135.60	147.90		147.99	0.000312	4.62	7682.48	1010.00	0.23
Reach-1	27	100-Year	7455.00	135.60	146.61		146.66	0.000198	3.42	6378.56	1006.02	0.18
Reach-1	27	50-Year	5840.00	135.60	146.09		146.12	0.000157	2.95	5856.68	995.96	0.16
Reach-1	27	10-Year	2980.00	135.60	144.21		144.24	0.000119	2.25	4041.07	939.59	0.14
Reach-1	26	500-Year	12505.00	134.50	146.20	146.20	147.54	0.003091	13.72	3184.65	930.44	0.72
Reach-1	26	100-Year	7455.00	134.50	145.21	145.21	146.30	0.002327	11.19	2278.71	898.74	0.62
Reach-1	26	50-Year	5840.00	134.50	144.75	144.75	145.79	0.002115	10.34	1865.89	883.92	0.59
Reach-1	26	10-Year	2980.00	134.50	142.54	140.84	143.83	0.002627	9.70	495.16	267.44	0.62
Reach-1	25.5		Bridge									
Reach-1	25	500-Year	12505.00	134.50	145.49	145.49	146.65	0.002755	12.39	2527.74	907.56	0.68
Reach-1	25	100-Year	7455.00	134.50	144.63	144.63	145.57	0.002165	10.37	1758.64	880.03	0.59
Reach-1	25	50-Year	5840.00	134.50	144.10	144.10	145.09	0.002220	10.11	1298.71	859.59	0.59
Reach-1	25	10-Year	2980.00	134.50	140.68	140.68	143.02	0.006673	12.78	268.04	62.09	0.95
Reach-1	24	500-Year	12505.00	133.00	144.05		144.41	0.001123	7.86	3631.41	757.79	0.43
Reach-1	24	100-Year	7455.00	133.00	142.22		142.62	0.001455	7.86	2267.51	695.44	0.47
Reach-1	24	50-Year	5840.00	133.00	141.55		141.94	0.001496	7.54	1862.09	576.15	0.47
Reach-1	24	10-Year	2980.00	133.00	139.50		140.04	0.002499	7.97	834.71	386.35	0.58
Reach-1	23	500-Year	12505.00	132.40	143.94		144.04	0.000386	4.75	6999.22	963.89	0.25
Reach-1	23	100-Year	7455.00	132.40	142.17		142.24	0.000321	3.87	5302.98	950.37	0.22
Reach-1	23	50-Year	5840.00	132.40	141.52		141.59	0.000284	3.48	4694.10	945.47	0.20
Reach-1	23	10-Year	2980.00	132.40	139.52		139.58	0.000305	3.05	2841.36	895.29	0.20
Reach-1	22	500-Year	12505.00	129.20	143.05	141.75	143.80	0.001494	10.61	3774.64	757.97	0.52
Reach-1	22	100-Year	7455.00	129.20	141.08	140.47	141.95	0.001663	10.05	2328.25	702.66	0.53
Reach-1	22	50-Year	5840.00	129.20	139.89	139.89	141.17	0.002313	11.00	1528.89	635.75	0.61
Reach-1	22	10-Year	2980.00	129.20	137.56	135.89	139.09	0.002835	10.20	386.51	206.59	0.65
Reach-1	21.5		Bridge									
Reach-1	21	500-Year	12505.00	130.30	143.54	139.09	143.73	0.000554	5.89	5504.64	778.00	0.29
Reach-1	21	100-Year	7455.00	130.30	141.32	137.90	141.49	0.000537	5.09	3820.54	737.45	0.28
Reach-1	21	50-Year	5840.00	130.30	140.28	137.61	140.45	0.000586	4.95	3066.49	711.48	0.29
Reach-1	21	10-Year	2980.00	130.30	137.65	135.88	137.90	0.001011	5.19	1376.83	545.77	0.36
Reach-1	20	500-Year	12505.00	130.30	143.50		143.70	0.000563	5.92	5475.28	778.00	0.30
Reach-1	20	100-Year	7455.00	130.30	141.29		141.45	0.000547	5.12	3793.65	736.70	0.28
Reach-1	20	50-Year	5840.00	130.30	140.24		140.41	0.000600	4.99	3037.84	709.49	0.29
Reach-1	20	10-Year	2980.00	130.30	137.56		137.83	0.001092	5.35	1328.99	535.65	0.37
Reach-1	19	500-Year	12505.00	130.00	142.94		143.22	0.000807	7.65	4622.20	631.46	0.38
Reach-1	19	100-Year	7455.00	130.00	140.87		141.05	0.000611	5.91	3380.14	504.77	0.32
Reach-1	19	50-Year	5840.00	130.00	139.85		140.00	0.000562	5.31	2889.23	469.14	0.30
Reach-1	19	10-Year	2980.00	130.00	137.01		137.16	0.000773	4.92	1602.29	437.14	0.33
Reach-1	18	500-Year	12505.00	126.90	142.05		142.58	0.000845	7.33	2766.56	570.59	0.34
Reach-1	18	100-Year	7455.00	126.90	140.26		140.59	0.000564	5.48	1780.40	486.56	0.27
Reach-1	18	50-Year	5840.00	126.90	139.32		139.60	0.000483	4.82	1474.08	280.57	0.25
Reach-1	18	10-Year	2980.00	126.90	136.53		136.72	0.000448	3.88	906.58	167.01	0.23
Reach-1	17	500-Year	12505.00	126.90	142.01	138.30	142.55	0.000855	7.36	2746.68	570.46	0.34
Reach-1	17	100-Year	7455.00	126.90	140.23	135.38	140.57	0.000568	5.50	1768.91	484.17	0.27
Reach-1	17	50-Year	5840.00	126.90	139.27	134.20	139.58	0.000536	5.07	1374.05	272.97	0.26
Reach-1	17	10-Year	2980.00	126.90	136.15	131.79	136.67	0.001052	5.78	515.88	160.44	0.35
Reach-1	16.5		Bridge									

HEC-RAS Plan: DupEff_NAVD88 River: RIVER-1 Reach: Reach-1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	16	500-Year	12505.00	126.20	139.11	138.84	142.04	0.005480	16.40	2269.95	459.28	0.84
Reach-1	16	100-Year	7455.00	126.20	136.75	136.75	139.40	0.005766	14.53	1321.38	293.15	0.83
Reach-1	16	50-Year	5840.00	126.20	136.50	135.82	138.29	0.003980	11.86	1250.76	291.94	0.68
Reach-1	16	10-Year	2980.00	126.20	134.91	132.41	135.83	0.002376	8.09	805.93	284.49	0.51
Reach-1	15	500-Year	12505.00	126.20	140.71	136.84	141.19	0.000833	8.11	3132.29	719.39	0.39
Reach-1	15	100-Year	7455.00	126.20	137.54	135.67	138.17	0.001280	8.41	1608.70	350.30	0.46
Reach-1	15	50-Year	5840.00	126.20	137.35	135.11	137.77	0.000861	6.82	1543.13	339.95	0.38
Reach-1	15	10-Year	2980.00	126.20	135.23	132.65	135.57	0.000792	5.60	917.71	285.84	0.35

Corrected Effective HEC-RAS Output Table
November 27, 2023

HEC-RAS Plan: Corr_Plan River: RIVER-1 Reach: Reach-1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	30	500-Year	12505.00	146.00	154.12	154.12	155.58	0.005709	14.29	2497.82	745.78	0.92
Reach-1	30	100-Year	7455.00	146.00	153.17	153.17	154.29	0.004549	11.65	1808.29	702.76	0.80
Reach-1	30	50-Year	5840.00	146.00	152.76	152.76	153.78	0.004191	10.70	1520.61	683.06	0.76
Reach-1	30	10-Year	2980.00	146.00	151.57	151.57	152.45	0.003765	8.78	776.03	506.92	0.70
Reach-1	29	500-Year	12505.00	141.20	153.54		154.75	0.001505	9.48	1880.78	260.28	0.50
Reach-1	29	100-Year	7455.00	141.20	151.38		152.12	0.001190	7.29	1359.56	224.08	0.43
Reach-1	29	50-Year	5840.00	141.20	150.48		151.08	0.001083	6.48	1162.65	213.79	0.40
Reach-1	29	10-Year	2980.00	141.20	147.71		148.16	0.001323	5.41	616.14	181.80	0.42
Reach-1	28	500-Year	12505.00	137.00	148.97	148.97	151.17	0.003269	14.22	2082.30	574.34	0.75
Reach-1	28	100-Year	7455.00	137.00	146.84	146.84	148.93	0.003409	12.63	1096.50	371.77	0.74
Reach-1	28	50-Year	5840.00	137.00	145.55	145.55	147.82	0.004157	12.61	700.65	255.39	0.79
Reach-1	28	10-Year	2980.00	137.00	143.59		144.87	0.003225	9.17	356.06	74.07	0.67
Reach-1	27	500-Year	12505.00	135.60	147.90		147.99	0.000312	4.62	7682.48	1010.00	0.23
Reach-1	27	100-Year	7455.00	135.60	146.61		146.66	0.000198	3.42	6378.56	1006.02	0.18
Reach-1	27	50-Year	5840.00	135.60	146.09		146.12	0.000157	2.95	5856.68	995.96	0.16
Reach-1	27	10-Year	2980.00	135.60	144.21		144.24	0.000119	2.25	4041.07	939.59	0.14
Reach-1	26	500-Year	12505.00	134.50	146.20	146.20	147.54	0.003091	13.72	3184.65	930.44	0.72
Reach-1	26	100-Year	7455.00	134.50	145.21	145.21	146.30	0.002327	11.19	2278.71	898.74	0.62
Reach-1	26	50-Year	5840.00	134.50	144.75	144.75	145.79	0.002115	10.34	1865.89	883.92	0.59
Reach-1	26	10-Year	2980.00	134.50	142.54	140.84	143.83	0.002627	9.70	495.16	267.44	0.62
Reach-1	25.5		Bridge									
Reach-1	25	500-Year	12505.00	134.50	145.49	145.49	146.65	0.002755	12.39	2527.74	907.56	0.68
Reach-1	25	100-Year	7455.00	134.50	144.63	144.63	145.57	0.002165	10.37	1758.64	880.03	0.59
Reach-1	25	50-Year	5840.00	134.50	144.10	144.10	145.09	0.002220	10.11	1298.71	859.59	0.59
Reach-1	25	10-Year	2980.00	134.50	140.68	140.68	143.02	0.006673	12.78	268.04	62.09	0.95
Reach-1	24	500-Year	12505.00	133.00	144.67		144.94	0.000754	6.70	4103.64	760.59	0.36
Reach-1	24	100-Year	7455.00	133.00	142.40		142.77	0.001439	7.92	2399.79	729.71	0.47
Reach-1	24	50-Year	5840.00	133.00	141.79		142.13	0.001229	6.98	2005.08	586.03	0.43
Reach-1	24	10-Year	2980.00	133.00	139.83		140.23	0.001781	6.98	966.99	421.43	0.50
Reach-1	23	500-Year	12505.00	132.40	144.59		144.67	0.000296	4.31	7627.96	968.86	0.22
Reach-1	23	100-Year	7455.00	132.40	142.35		142.42	0.000291	3.73	5477.60	951.77	0.21
Reach-1	23	50-Year	5840.00	132.40	141.77		141.82	0.000246	3.30	4925.46	947.33	0.19
Reach-1	23	10-Year	2980.00	132.40	139.84		139.88	0.000236	2.76	3123.74	908.05	0.18
Reach-1	22	500-Year	12505.00	129.20	143.99	141.95	144.51	0.001000	9.10	4361.20	760.00	0.43
Reach-1	22	100-Year	7455.00	129.20	140.88	140.67	142.05	0.002091	11.14	2060.70	692.59	0.59
Reach-1	22	50-Year	5840.00	129.20	140.87	140.09	141.59	0.001299	8.77	2048.25	691.67	0.47
Reach-1	22	10-Year	2980.00	129.20	138.10	135.81	139.45	0.002291	9.59	467.85	281.30	0.59
Reach-1	21.5		Bridge									
Reach-1	21	500-Year	12505.00	130.30	143.92		144.24	0.000949	7.32	4623.07	778.00	0.38
Reach-1	21	100-Year	7455.00	130.30	141.62		142.01	0.001241	7.22	2866.85	743.63	0.42
Reach-1	21	50-Year	5840.00	130.30	140.72		141.18	0.001468	7.34	2205.44	726.80	0.45
Reach-1	21	10-Year	2980.00	130.30	137.20	137.20	139.45	0.006849	12.06	268.27	493.77	0.91
Reach-1	20	500-Year	12505.00	130.30	143.96		144.13	0.000467	5.52	5830.14	778.00	0.27
Reach-1	20	100-Year	7455.00	130.30	141.71		141.84	0.000443	4.73	4105.63	745.33	0.26
Reach-1	20	50-Year	5840.00	130.30	140.84		140.97	0.000425	4.38	3471.13	728.17	0.25
Reach-1	20	10-Year	2980.00	130.30	137.55		137.82	0.001105	5.37	1321.45	534.04	0.37
Reach-1	19	500-Year	12505.00	130.00	143.50		143.74	0.000651	7.08	4976.38	635.44	0.34
Reach-1	19	100-Year	7455.00	130.00	141.34		141.50	0.000536	5.70	3630.67	564.35	0.30
Reach-1	19	50-Year	5840.00	130.00	140.55		140.67	0.000422	4.82	3225.07	489.52	0.26
Reach-1	19	10-Year	2980.00	130.00	136.99		137.14	0.000786	4.95	1592.22	436.89	0.34
Reach-1	18	500-Year	12505.00	126.90	142.80		143.23	0.000659	6.70	3198.13	575.61	0.30
Reach-1	18	100-Year	7455.00	126.90	140.84		141.12	0.000463	5.12	2078.61	561.39	0.25
Reach-1	18	50-Year	5840.00	126.90	140.16		140.37	0.000358	4.35	1738.41	383.94	0.22
Reach-1	18	10-Year	2980.00	126.90	136.50		136.70	0.000456	3.90	901.50	166.40	0.23
Reach-1	17	500-Year	12505.00	126.90	142.04	139.59	143.13	0.001538	9.89	2374.53	570.55	0.46
Reach-1	17	100-Year	7455.00	126.90	140.32	135.24	141.05	0.001085	7.63	1425.08	492.69	0.38
Reach-1	17	50-Year	5840.00	126.90	139.77	134.08	140.32	0.000832	6.50	1222.16	307.24	0.33
Reach-1	17	10-Year	2980.00	126.90	136.15	131.72	136.64	0.000989	5.60	531.45	160.52	0.34
Reach-1	16.5		Bridge									

HEC-RAS Plan: Corr_Plan River: RIVER-1 Reach: Reach-1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	16	500-Year	12505.00	126.20	138.98	138.98	142.49	0.006377	17.55	2141.04	455.20	0.90
Reach-1	16	100-Year	7455.00	126.20	136.65	136.65	139.34	0.005886	14.57	1298.73	292.64	0.83
Reach-1	16	50-Year	5840.00	126.20	136.55	135.73	138.27	0.003775	11.59	1272.18	292.19	0.67
Reach-1	16	10-Year	2980.00	126.20	134.93		135.82	0.002276	7.93	817.72	284.55	0.50
Reach-1	15	500-Year	12505.00	126.20	140.71	136.84	141.19	0.000833	8.11	3132.29	719.39	0.39
Reach-1	15	100-Year	7455.00	126.20	137.54	135.67	138.17	0.001280	8.41	1608.70	350.30	0.46
Reach-1	15	50-Year	5840.00	126.20	137.35	135.11	137.77	0.000861	6.82	1543.13	339.95	0.38
Reach-1	15	10-Year	2980.00	126.20	135.23	132.65	135.57	0.000792	5.60	917.71	285.84	0.35

Existing Conditions HEC-RAS Output Table
November 27, 2023

HEC-RAS Plan: EX_Plan River: RIVER-1 Reach: Reach-1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	30	500-Year	12505.00	146.00	154.12	154.12	155.58	0.005709	14.29	2497.82	745.78	0.92
Reach-1	30	100-Year	7455.00	146.00	153.17	153.17	154.29	0.004549	11.65	1808.29	702.76	0.80
Reach-1	30	50-Year	5840.00	146.00	152.76	152.76	153.78	0.004191	10.70	1520.61	683.06	0.76
Reach-1	30	10-Year	2980.00	146.00	151.57	151.57	152.45	0.003765	8.78	776.03	506.92	0.70
Reach-1	29	500-Year	12505.00	141.20	153.54		154.75	0.001505	9.48	1880.78	260.28	0.50
Reach-1	29	100-Year	7455.00	141.20	151.38		152.12	0.001190	7.29	1359.56	224.08	0.43
Reach-1	29	50-Year	5840.00	141.20	150.48		151.08	0.001083	6.48	1162.65	213.79	0.40
Reach-1	29	10-Year	2980.00	141.20	147.74		148.18	0.001304	5.38	620.16	182.05	0.41
Reach-1	28	500-Year	12505.00	137.00	148.97	148.97	151.17	0.003269	14.22	2082.30	574.34	0.75
Reach-1	28	100-Year	7455.00	137.00	146.84	146.84	148.93	0.003409	12.63	1096.50	371.77	0.74
Reach-1	28	50-Year	5840.00	137.00	145.55	145.55	147.82	0.004157	12.61	700.65	255.39	0.79
Reach-1	28	10-Year	2980.00	137.00	143.39		144.76	0.003632	9.50	341.27	71.23	0.70
Reach-1	27.5	500-Year	12505.00	136.50	148.05		148.14	0.000303	4.34	7056.34	825.22	0.23
Reach-1	27.5	100-Year	7455.00	136.50	146.70		146.75	0.000180	3.07	5948.96	819.98	0.17
Reach-1	27.5	50-Year	5840.00	136.50	146.16		146.20	0.000139	2.60	5506.57	817.88	0.15
Reach-1	27.5	10-Year	2980.00	136.50	144.27		144.28	0.000082	1.72	4025.38	735.54	0.11
Reach-1	27	500-Year	12505.00	135.60	147.90		147.99	0.000312	4.62	7682.48	1010.00	0.23
Reach-1	27	100-Year	7455.00	135.60	146.61		146.66	0.000198	3.42	6378.56	1006.02	0.18
Reach-1	27	50-Year	5840.00	135.60	146.09		146.12	0.000157	2.95	5856.68	995.96	0.16
Reach-1	27	10-Year	2980.00	135.60	144.21		144.24	0.000119	2.25	4041.07	939.59	0.14
Reach-1	26	500-Year	12505.00	134.50	146.20	146.20	147.54	0.003091	13.72	3184.65	930.44	0.72
Reach-1	26	100-Year	7455.00	134.50	145.21	145.21	146.30	0.002327	11.19	2278.71	898.74	0.62
Reach-1	26	50-Year	5840.00	134.50	144.75	144.75	145.79	0.002115	10.34	1865.89	883.92	0.59
Reach-1	26	10-Year	2980.00	134.50	142.54	140.84	143.83	0.002627	9.70	495.16	267.44	0.62
Reach-1	25.5		Bridge									
Reach-1	25	500-Year	12505.00	134.50	145.49	145.49	146.65	0.002755	12.39	2527.74	907.56	0.68
Reach-1	25	100-Year	7455.00	134.50	144.63	144.63	145.57	0.002165	10.37	1758.64	880.03	0.59
Reach-1	25	50-Year	5840.00	134.50	144.10	144.10	145.09	0.002220	10.11	1298.71	859.59	0.59
Reach-1	25	10-Year	2980.00	134.50	140.68	140.68	143.02	0.006673	12.78	268.04	62.09	0.95
Reach-1	24	500-Year	12505.00	133.00	144.67		144.94	0.000754	6.70	4103.64	760.59	0.36
Reach-1	24	100-Year	7455.00	133.00	142.40		142.77	0.001439	7.92	2399.79	729.71	0.47
Reach-1	24	50-Year	5840.00	133.00	141.79		142.13	0.001229	6.98	2005.08	586.03	0.43
Reach-1	24	10-Year	2980.00	133.00	139.83		140.23	0.001781	6.98	966.99	421.43	0.50
Reach-1	23	500-Year	12505.00	132.40	144.59		144.67	0.000296	4.31	7627.96	968.86	0.22
Reach-1	23	100-Year	7455.00	132.40	142.35		142.42	0.000291	3.73	5477.60	951.77	0.21
Reach-1	23	50-Year	5840.00	132.40	141.77		141.82	0.000246	3.30	4925.46	947.33	0.19
Reach-1	23	10-Year	2980.00	132.40	139.84		139.88	0.000236	2.76	3123.74	908.05	0.18
Reach-1	22	500-Year	12505.00	129.20	143.99	141.95	144.51	0.001000	9.10	4361.20	760.00	0.43
Reach-1	22	100-Year	7455.00	129.20	140.88	140.67	142.05	0.002091	11.14	2060.70	692.59	0.59
Reach-1	22	50-Year	5840.00	129.20	140.87	140.09	141.59	0.001299	8.77	2048.25	691.67	0.47
Reach-1	22	10-Year	2980.00	129.20	138.10	135.81	139.45	0.002291	9.59	467.85	281.30	0.59
Reach-1	21.5		Bridge									
Reach-1	21	500-Year	12505.00	130.30	143.92		144.24	0.000949	7.32	4623.07	778.00	0.38
Reach-1	21	100-Year	7455.00	130.30	141.62		142.01	0.001241	7.22	2866.85	743.63	0.42
Reach-1	21	50-Year	5840.00	130.30	140.72		141.18	0.001468	7.34	2205.44	726.80	0.45
Reach-1	21	10-Year	2980.00	130.30	137.20	137.20	139.45	0.006849	12.06	268.27	493.77	0.91
Reach-1	20	500-Year	12505.00	130.30	143.96		144.13	0.000467	5.52	5830.14	778.00	0.27
Reach-1	20	100-Year	7455.00	130.30	141.71		141.84	0.000443	4.73	4105.63	745.33	0.26
Reach-1	20	50-Year	5840.00	130.30	140.84		140.97	0.000425	4.38	3471.13	728.17	0.25
Reach-1	20	10-Year	2980.00	130.30	137.55		137.82	0.001105	5.37	1321.45	534.04	0.37
Reach-1	19	500-Year	12505.00	130.00	143.50		143.74	0.000651	7.08	4976.38	635.44	0.34
Reach-1	19	100-Year	7455.00	130.00	141.34		141.50	0.000536	5.70	3630.67	564.35	0.30
Reach-1	19	50-Year	5840.00	130.00	140.55		140.67	0.000422	4.82	3225.07	489.52	0.26
Reach-1	19	10-Year	2980.00	130.00	136.99		137.14	0.000786	4.95	1592.22	436.89	0.34
Reach-1	18	500-Year	12505.00	126.90	142.80		143.23	0.000659	6.70	3198.13	575.61	0.30
Reach-1	18	100-Year	7455.00	126.90	140.84		141.12	0.000463	5.12	2078.61	561.39	0.25
Reach-1	18	50-Year	5840.00	126.90	140.16		140.37	0.000358	4.35	1738.41	383.94	0.22
Reach-1	18	10-Year	2980.00	126.90	136.50		136.70	0.000456	3.90	901.50	166.40	0.23
Reach-1	17	500-Year	12505.00	126.90	142.04	139.59	143.13	0.001538	9.89	2374.53	570.55	0.46
Reach-1	17	100-Year	7455.00	126.90	140.32	135.24	141.05	0.001085	7.63	1425.08	492.69	0.38

HEC-RAS Plan: EX_Plan River: RIVER-1 Reach: Reach-1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	17	50-Year	5840.00	126.90	139.77	134.08	140.32	0.000832	6.50	1222.16	307.24	0.33
Reach-1	17	10-Year	2980.00	126.90	136.15	131.72	136.64	0.000989	5.60	531.45	160.52	0.34
Reach-1	16.5		Bridge									
Reach-1	16	500-Year	12505.00	126.20	138.98	138.98	142.49	0.006377	17.55	2141.04	455.20	0.90
Reach-1	16	100-Year	7455.00	126.20	136.65	136.65	139.34	0.005886	14.57	1298.73	292.64	0.83
Reach-1	16	50-Year	5840.00	126.20	136.55	135.73	138.27	0.003775	11.59	1272.18	292.19	0.67
Reach-1	16	10-Year	2980.00	126.20	134.93		135.82	0.002276	7.93	817.72	284.55	0.50
Reach-1	15	500-Year	12505.00	126.20	140.71	136.84	141.19	0.000833	8.11	3132.29	719.39	0.39
Reach-1	15	100-Year	7455.00	126.20	137.54	135.67	138.17	0.001280	8.41	1608.70	350.30	0.46
Reach-1	15	50-Year	5840.00	126.20	137.35	135.11	137.77	0.000861	6.82	1543.13	339.95	0.38
Reach-1	15	10-Year	2980.00	126.20	135.23	132.65	135.57	0.000792	5.60	917.71	285.84	0.35

Proposed Conditions HEC-RAS Output Table
November 27, 2023

HEC-RAS Plan: PR_Plan River: RIVER-1 Reach: Reach-1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	30	500-Year	12505.00	146.00	154.12	154.12	155.58	0.005709	14.29	2497.82	745.78	0.92
Reach-1	30	100-Year	7455.00	146.00	153.17	153.17	154.29	0.004549	11.65	1808.29	702.76	0.80
Reach-1	30	50-Year	5840.00	146.00	152.76	152.76	153.78	0.004191	10.70	1520.61	683.06	0.76
Reach-1	30	10-Year	2980.00	146.00	151.57	151.57	152.45	0.003765	8.78	776.03	506.92	0.70
Reach-1	29	500-Year	12505.00	141.20	153.54		154.75	0.001505	9.48	1880.78	260.28	0.50
Reach-1	29	100-Year	7455.00	141.20	151.38		152.12	0.001190	7.29	1359.56	224.08	0.43
Reach-1	29	50-Year	5840.00	141.20	150.48		151.08	0.001083	6.48	1162.65	213.79	0.40
Reach-1	29	10-Year	2980.00	141.20	147.74		148.18	0.001304	5.38	620.10	182.05	0.41
Reach-1	28	500-Year	12505.00	137.00	148.97	148.97	151.17	0.003269	14.22	2082.30	574.34	0.75
Reach-1	28	100-Year	7455.00	137.00	146.84	146.84	148.93	0.003409	12.63	1096.50	371.77	0.74
Reach-1	28	50-Year	5840.00	137.00	145.55	145.55	147.82	0.004157	12.61	700.65	255.39	0.79
Reach-1	28	10-Year	2980.00	137.00	143.39		144.77	0.003626	9.50	341.47	71.25	0.70
Reach-1	27.5	500-Year	12505.00	136.50	148.05		148.14	0.000307	4.37	7256.81	958.95	0.23
Reach-1	27.5	100-Year	7455.00	136.50	146.70		146.75	0.000185	3.12	5969.23	953.56	0.17
Reach-1	27.5	50-Year	5840.00	136.50	146.16		146.20	0.000143	2.64	5454.77	951.40	0.15
Reach-1	27.5	10-Year	2980.00	136.50	144.27		144.28	0.000084	1.74	3891.34	681.62	0.11
Reach-1	27	500-Year	12505.00	135.60	147.90		147.99	0.000312	4.62	7682.48	1010.00	0.23
Reach-1	27	100-Year	7455.00	135.60	146.61		146.66	0.000198	3.42	6378.56	1006.02	0.18
Reach-1	27	50-Year	5840.00	135.60	146.09		146.12	0.000157	2.95	5856.68	995.96	0.16
Reach-1	27	10-Year	2980.00	135.60	144.21		144.24	0.000119	2.25	4041.07	939.59	0.14
Reach-1	26	500-Year	12505.00	134.50	146.20	146.20	147.54	0.003091	13.72	3184.65	930.44	0.72
Reach-1	26	100-Year	7455.00	134.50	145.21	145.21	146.30	0.002327	11.19	2278.71	898.74	0.62
Reach-1	26	50-Year	5840.00	134.50	144.75	144.75	145.79	0.002115	10.34	1865.89	883.92	0.59
Reach-1	26	10-Year	2980.00	134.50	142.54	140.84	143.83	0.002627	9.70	495.16	267.44	0.62
Reach-1	25.5		Bridge									
Reach-1	25	500-Year	12505.00	134.50	145.49	145.49	146.65	0.002755	12.39	2527.74	907.56	0.68
Reach-1	25	100-Year	7455.00	134.50	144.63	144.63	145.57	0.002165	10.37	1758.64	880.03	0.59
Reach-1	25	50-Year	5840.00	134.50	144.10	144.10	145.09	0.002220	10.11	1298.71	859.59	0.59
Reach-1	25	10-Year	2980.00	134.50	140.68	140.68	143.02	0.006673	12.78	268.04	62.09	0.95
Reach-1	24	500-Year	12505.00	133.00	144.67		144.94	0.000754	6.70	4103.64	760.59	0.36
Reach-1	24	100-Year	7455.00	133.00	142.40		142.77	0.001439	7.92	2399.79	729.71	0.47
Reach-1	24	50-Year	5840.00	133.00	141.79		142.13	0.001229	6.98	2005.08	586.03	0.43
Reach-1	24	10-Year	2980.00	133.00	139.83		140.23	0.001781	6.98	966.99	421.43	0.50
Reach-1	23	500-Year	12505.00	132.40	144.59		144.67	0.000296	4.31	7627.96	968.86	0.22
Reach-1	23	100-Year	7455.00	132.40	142.35		142.42	0.000291	3.73	5477.60	951.77	0.21
Reach-1	23	50-Year	5840.00	132.40	141.77		141.82	0.000246	3.30	4925.46	947.33	0.19
Reach-1	23	10-Year	2980.00	132.40	139.84		139.88	0.000236	2.76	3123.74	908.05	0.18
Reach-1	22	500-Year	12505.00	129.20	143.99	141.95	144.51	0.001000	9.10	4361.20	760.00	0.43
Reach-1	22	100-Year	7455.00	129.20	140.88	140.67	142.05	0.002091	11.14	2060.70	692.59	0.59
Reach-1	22	50-Year	5840.00	129.20	140.87	140.09	141.59	0.001299	8.77	2048.25	691.67	0.47
Reach-1	22	10-Year	2980.00	129.20	138.10	135.81	139.45	0.002291	9.59	467.85	281.30	0.59
Reach-1	21.5		Bridge									
Reach-1	21	500-Year	12505.00	130.30	143.92		144.24	0.000949	7.32	4623.07	778.00	0.38
Reach-1	21	100-Year	7455.00	130.30	141.62		142.01	0.001241	7.22	2866.85	743.63	0.42
Reach-1	21	50-Year	5840.00	130.30	140.72		141.18	0.001468	7.34	2205.44	726.80	0.45
Reach-1	21	10-Year	2980.00	130.30	137.20	137.20	139.45	0.006849	12.06	268.27	493.77	0.91
Reach-1	20	500-Year	12505.00	130.30	143.96		144.13	0.000467	5.52	5830.14	778.00	0.27
Reach-1	20	100-Year	7455.00	130.30	141.71		141.84	0.000443	4.73	4105.63	745.33	0.26
Reach-1	20	50-Year	5840.00	130.30	140.84		140.97	0.000425	4.38	3471.13	728.17	0.25
Reach-1	20	10-Year	2980.00	130.30	137.55		137.82	0.001105	5.37	1321.45	534.04	0.37
Reach-1	19	500-Year	12505.00	130.00	143.50		143.74	0.000651	7.08	4976.38	635.44	0.34
Reach-1	19	100-Year	7455.00	130.00	141.34		141.50	0.000536	5.70	3630.67	564.35	0.30
Reach-1	19	50-Year	5840.00	130.00	140.55		140.67	0.000422	4.82	3225.07	489.52	0.26
Reach-1	19	10-Year	2980.00	130.00	136.99		137.14	0.000786	4.95	1592.22	436.89	0.34
Reach-1	18	500-Year	12505.00	126.90	142.80		143.23	0.000659	6.70	3198.13	575.61	0.30
Reach-1	18	100-Year	7455.00	126.90	140.84		141.12	0.000463	5.12	2078.61	561.39	0.25
Reach-1	18	50-Year	5840.00	126.90	140.16		140.37	0.000358	4.35	1738.41	383.94	0.22
Reach-1	18	10-Year	2980.00	126.90	136.50		136.70	0.000456	3.90	901.50	166.40	0.23
Reach-1	17	500-Year	12505.00	126.90	142.04	139.59	143.13	0.001538	9.89	2374.53	570.55	0.46
Reach-1	17	100-Year	7455.00	126.90	140.32	135.24	141.05	0.001085	7.63	1425.08	492.69	0.38

HEC-RAS Plan: PR_Plan River: RIVER-1 Reach: Reach-1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	17	50-Year	5840.00	126.90	139.77	134.08	140.32	0.000832	6.50	1222.16	307.24	0.33
Reach-1	17	10-Year	2980.00	126.90	136.15	131.72	136.64	0.000989	5.60	531.45	160.52	0.34
Reach-1	16.5		Bridge									
Reach-1	16	500-Year	12505.00	126.20	138.98	138.98	142.49	0.006377	17.55	2141.04	455.20	0.90
Reach-1	16	100-Year	7455.00	126.20	136.65	136.65	139.34	0.005886	14.57	1298.73	292.64	0.83
Reach-1	16	50-Year	5840.00	126.20	136.55	135.73	138.27	0.003775	11.59	1272.18	292.19	0.67
Reach-1	16	10-Year	2980.00	126.20	134.93		135.82	0.002276	7.93	817.72	284.55	0.50
Reach-1	15	500-Year	12505.00	126.20	140.71	136.84	141.19	0.000833	8.11	3132.29	719.39	0.39
Reach-1	15	100-Year	7455.00	126.20	137.54	135.67	138.17	0.001280	8.41	1608.70	350.30	0.46
Reach-1	15	50-Year	5840.00	126.20	137.35	135.11	137.77	0.000861	6.82	1543.13	339.95	0.38
Reach-1	15	10-Year	2980.00	126.20	135.23	132.65	135.57	0.000792	5.60	917.71	285.84	0.35

Making Sustainability Happen

Wetland and Watercourse Delineation and Impact Assessment

131 Danbury Road, Wilton, Connecticut

AMS Acquisitions

Prepared by:

SLR International Corporation

195 Church Street, 7th Floor, New Haven, Connecticut, 06510

SLR Project No.: 141.21543.00001

Client Reference No: 0001

October 23, 2023 **(Revised January 5, 2023)**

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Appendices

Acronyms and Abbreviations

BFE	Base Flood Elevation
CGS	Connecticut General Statutes
CT DEEP	Connecticut Department of Energy & Environmental Protection
FEMA	Federal Emergency Management Agency
LF	Linear feet
NDDB	Natural Diversity Database
NRCS	Natural Resources Conservation Service
OHW	Ordinary High Water
RCP	Reinforced concrete pipe
S&E	Sediment and Erosion
SF	Square feet
SFHA	Special flood hazard area
SLR	SLR International Corporation

1.0 Introduction

On behalf of AMS Acquisitions, SLR International Corporation (SLR) has prepared the following report to describe the existing conditions of regulated wetland and watercourse resources, and potential impacts to identified regulated resources, resulting from a proposed multi-family building and associated appurtenances at 131 Danbury Road, a 4.75-acre site in southern Wilton (**Figure 1**) with frontage on the Norwalk River. The proposed project involves the redevelopment of a site that contains a two-story masonry office building and paved surface parking lot across the entirety of the parcel. Proposed site activities are depicted on site plans prepared by SLR entitled *Proposed Multi-Family Development* dated October 23, 2023, revised January 5, 2024.

On August 3, 2023, Megan B. Raymond, Registered Soil scientist, Professional Wetland Scientist and certified floodplain manager, and Mike Armstrong, Environmental Scientist visited the property to determine the presence or absence of wetlands and/or watercourses, and to assess existing conditions relative to the proposed site work. A wetland and watercourse were identified in the western portion of the site that is comprised of a 385-foot reach of the Norwalk River and a narrow palustrine forested wetland underlain by alluvial soils (**Figure 2**).

In summary, though portions of the proposed activities will take place within the upland review area (URA) to the Norwalk River, the proposed redevelopment does not present a high potential to adversely affect regulated wetland resources. This conclusion is based on five primary elements of the proposed site design. Specifically, 1) no significant direct impacts to wetland/watercourse systems will occur, 2) short-term potential impacts to the resource are managed through redundant sediment and erosion control and best management practices, 3) potential long-term impacts will be avoided through a comprehensive stormwater management system where none currently exist, 4) the overall site impervious and impervious within the regulated area will decrease and 5) a native planting plan is proposed between the Norwalk River and the proposed apartment building and parking area to begin to restore a greenbelt riparian area adjacent to the Norwalk River.

2.0 Regulatory Definitions

Inland wetlands and watercourses within the project area were evaluated in accordance with the regulations of the Town of Wilton and the State of Connecticut Inland Wetlands and Watercourses Act, Connecticut General Statutes (CGS) 22a-36 through 45 and the Federal Clean Water Act (Section 404). The wetland resources identified on the property are protected under local, state, and federal statutes.

The <u>Inland Wetlands and Watercourses Act</u> (CGS §22a-38) defines <u>inland wetlands</u> as, "land, including submerged land...which consists of any soil types designated as poorly drained, very poorly drained, alluvial, and floodplain." <u>Watercourses</u> are defined in the Act as, "rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon the state or any portion thereof." The Act defines <u>intermittent watercourses</u> as having a defined permanent channel and bank and the occurrence of two or more of the following characteristics: A) evidence of scour or deposits of recent alluvium or detritus, B) the presence of standing or flowing water for a duration longer than a particular storm incident, and C) the presence of hydrophytic vegetation.

<u>Upland Review Area</u>, per the Town of Wilton Inland Wetlands and Watercourses Regulations, includes any land adjacent to and within 100 feet of the wetland or watercourse.

Federal Wetlands and Watercourses were considered using the U.S. Army Corps of Engineers *Wetlands Delineation Manual* (USACE, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual for the Northcentral and Northeast Region* (USACE, 2012), and the classification system of the National Cooperative Soil Survey and Field Indicators of Hydric Soils in the United States (USDA, 2017).

3.0 Methodology

A second-order soil survey in accordance with the principles and practices noted in the United States Department of Agriculture (USDA) publication *Soil Survey Manual* (1993) was completed at the subject site. The classification system of the National Cooperative Soil Survey was used in this investigation. Soil map units identified at the project site generally correspond to those included in the *Soil Survey of the State of Connecticut* (USDA 2005).

<u>Wetland</u> determinations were completed based on the presence of poorly drained, very poorly drained, alluvial, or floodplain soils and submerged land (e.g., a pond). Soil types were identified by observation of soil morphology (soil texture, color, structure, etc.). To observe the morphology of the property's soils, test pits and/or borings (maximum depth of 2 feet) were completed at the site.

<u>Intermittent watercourse</u> determinations were made based on the presence of a defined permanent channel and bank and the occurrence of two or more of the following characteristics: A) evidence of scour or deposits of recent alluvium or detritus, B) the presence of standing or flowing water for a duration longer than a particular storm incident, and C) the presence of hydrophytic vegetation.

Ordinary high water (OHW) boundaries were demarcated (flagged) with blue surveyor's tape (hung from vegetation) labeled with consecutive flag numbers that were generally spaced a maximum of every 50 feet. The wetland boundary is located along the lines that connect these sequentially numbered flags. Flag numbers 1-OHW through 13-OHW demarcate the intermittent watercourse boundary. <u>The resource boundaries are subject to change until adopted by local, state, or federal regulatory agencies</u>.

On the day of the review, weather conditions were sunny and dry, with an air temperature of approximately 75º Fahrenheit. Site conditions were suitable for wetland delineation work.

4.0 General Site Description and Existing Conditions

The 4.75-acre subject parcel is in a moderately settled mixed-use residential and commercial area in the southern portion of Wilton. The site is situated on the west side of Danbury Road roughly 1,250 feet south of its intersection with Westport Road. Accessed to the east from Danbury Road (State Route 7), the site displays 280 linear feet (LF) of frontage on Danbury Road. The topography of this area is a gentle gradient sloping to the west, 138 feet to 149 feet (NAVD 88). The property is primarily underlain by human transported material, or fill, with a small area of coarse-loamy alluvium adjacent to the Norwalk River.

The site is presently developed. Existing structures consist of a multi-story office building and asphalt parking area that extends to within ten feet of the delineated OHW. The existing commercial building is approximately 44,200 square feet (SF). Onsite impervious surface totals approximately 3.22 acres, or roughly 68 percent, of the total lot area. Approximately 25 percent of the 3.22-acres impervious area is paved surface parking within the 100-foot URA to the Norwalk River. Approximately 90 percent of the URA is impervious. No stormwater management practices exist on the site presently. In addition to the building and parking area, the site is manicured and occupied by lawn area and landscaping trees, including eastern cottonwood (*Populus deltoides*), Norway spruce (*Picea abies*), and Arborvitae (*Thuja* sp.).

The abutting sites to the north and south display variable land uses. A multi-family residential building is under construction north of the property and Ring's End Lumber abuts the site to the south. The Norwalk River comprises the western property line. The abutting northern property displays a similar amount of previous development, extending within 10 feet of the river, while the abutting property to the south includes a narrow woodland between the river and the built environment. Offsite to the south, a headwall with a 24-inch pipe carries stormwater drainage to the rear of the Ring's End surface lot. A depositional outlet fan and scour hole were noted during the site investigation.

Biological and Biodiversity Conditions

Primary ecologies on the site are pavement and urban structure, mowed lawn with trees, and a small area of the Norwalk River and forested palustrine wetland, that occupies 0.25-acre or 5 percent of the site. Beyond the roughly quarter acre wetland resource, the current upland is largely comprised of pavement and urban structure with narrow areas of woodland edge or manicured lawn with trees to the north, south and east. These conditions provide very limited habitat supportive of wildlife other than those generalist species tolerant of human activity and adapted to developed landscapes, limited tree canopy, and shrub density.

The aquatic, and persistently flooded, palustrine habitats associated with the Norwalk River provide the potential for finfish and shellfish habitat. Several non-native Asiatic clam (*Corbicula fluminea*) shells were observed during the delineation. There appears to be at least one dam on the Norwalk River between the subject parcel and Long Island Sound – at Kellogg Pond – which impedes direct mobility for anadromous and catadromous fish species. The narrow overhanging canopy vegetation on the river may provide roosting and perching sites for angling waterfowl.

As noted by the Connecticut Department of Energy & Environmental Protection (CT DEEP) in a letter dated August 21, 2023 (**Appendix C**): "Based on current data maintained by the Natural Diversity Database (NDDB) and housed in the CT DEEP *ezFile Portal*, "no extant populations of Federal or State Endangered, Threatened or Special Concern species (RCSA Sec. 26-306) are known to occur within the project area delineated for the Building and Infrastructure Development".

Watershed Location

The site is located within the lower Norwalk River subregional watershed (Basin #7300), a 10.39-square mile basin in Georgetown, Cannondale, and Wilton. The confluence with the main tributary to the Norwalk River, the Silvermine River, which runs to the west is approximately three miles downstream. The Norwalk River flows approximately three miles from the confluence with the Silvermine River and drains to Long Island Sound in Norwalk.

FEMA Mapping

According to the most recent Federal Emergency Management Agency (FEMA) mapping, effective September 26, 2008, special flood hazard areas (SFHA) including the regulatory floodway, 100-year, and 500-year floodplains occur on the subject site. The base flood elevation (BFE) of these flood hazard zones occurs between 146.3 and 146.6 feet NAVD.

5.0 Wetland and Watercourse Delineation Results

Regulated wetland resources onsite consist of the OHW to Norwalk River that includes a narrow palustrine forested wetland at the western property line. The OHW was delineated and flagged with blue surveyor's tape and depicted by flags (W-1 to W-13) (**Figure 2**). In total, 385 LF of watercourse/wetland were delineated on the site occupying approximately 0.25-acres.

5.1 Soils

Geospatial data were accessed via the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) web soil survey mapping. The soil survey mapping is appended (**Figure 3**). The survey identifies the following soil mapping units with associated NRCS map number in the project area (**Table 1**):

Table 1: NRCS Soil Units

Map Unit		Parent Material	Slope (%)	Drainage Class	High Water Table			Depth To Bedrock (in)
Sym	Name				Depth (in)	Kind	Mos.	
Wetland Soil								
103	Rippowam fine sandy loam	Coarse-loamy alluvium	0 to 3	Poorly drained	0 to 18	-	-	>80
Upland Soil								
305	Udorthents-Pits complex, gravelly	Gravelly outwash	0 to 35	Moderately well drained	>80	-	-	>80

Soils were examined using a Dutch auger. Field investigations confirmed NRCS mapping.

5.2 Wetland and Watercourse Delineation

SLR Registered Soil Scientist and Professional Wetland Scientist Megan B. Raymond, and Environmental Scientist Mike Armstrong delineated the OHW line to the Norwalk River in August 2023. The regulated resource consisted of a steeply earthen vegetated bank, varying between 4 and 15 feet in width, underlain by coarse silty alluvium that commences adjacent to the edge of the asphalt parking lot. A concrete flume, approximately 24-inches wide, carries stormwater runoff from the parking lot directly to the river adjacent to the southern property line. Vegetation on the bank consists of a canopy of American elm (*Ulmus americana*), red maple (*Acer rubrum*), American sycamore (*Platanus occidentalis*), and hickory (*Carya sp.*). These species shade the eastern portion of the river channel. A dense liana layer is composed of poison ivy (*Toxicodendron radicans*) grape vine (*Vitis* sp.) and Oriental bittersweet (*Celastrus orbiculatus*). The understory consists of a combination of native and non-native shrubs such as silky dogwood (*Swida amonum*), Japanese knotweed (*Fallopia japonica*), multiflora rose (*rosa multiflora*), common wormwood (*Artemisia vulgaris*), stinging nettle (*Urtica diocia*), Asian bittersweet (*Celastrus orbiculatus*), winged burning-bush (*Euonymus alatus*), and deer-tongue rosette grass (*Dichanthelium clandestinium*).

At the toe of the bank, the Norwalk River is approximately 35- to 40-feet wide and displayed water levels around 2- to 5-feet deep during the site investigation. The bed material consists mainly of cobbles and sand. No stormwater outlets were observed on or adjacent to the bank.

The OHW line was delineated based on the first observable break in slope at the top of the bank. Near wetland flag W-3, a man-made riffle grade control was observed in the river. The site lies on a relatively straight reach of the river, but meander bends exist upstream and downstream of the site. Though not observable, an excavated pond exists at the top of the western bank immediately across the river from the subject parcel.

A narrow upland edge exists between OHW and asphalt parking lot. Measuring between 5 to 15 feet in width, vegetation in this edge consists of a canopy of black cherry (*Prunus serotina*), boxelder (*Acer negundo*), black willow (*Salix nigra*), and northern catalpa (*Catalpa speciosa*), and shrub layer of Japanese honeysuckle (*Lonicera japonica*), Morrow's honeysuckle (*Lonicera morrowii*), and crab apple (*Malus* sp.).

5.3 Wetland Resource Functions and Values

A functional evaluation using the USACE *Highway Methodology Workbook Supplement* and based on SLR's field observations is provided (**Table 2**). The first column lists the functions and values generally ascribed to wetlands, while the second column summarizes the rationale used to determine whether these functions and values are being performed within the Norwalk River. Given its perennial nature and regional significance, the river is a high value resource that contributes to many recognized wetland functions.

Table 2: Wetland Functions and Values Assessment

	Functions and Values	Comment
	Groundwater Recharge/Discharge	Yes – Groundwater discharge is associated with a perennial watercourse
	Flood Flow Alteration (Storage and Desynchronization)	Yes – The Norwalk River contains a mapped FEMA floodway and floodplain
	Fish and Shellfish Habitat	Yes – The perennial hydrologic regime supports finfish or shellfish habitat
	Sediment/Toxicant Retention	No – The lack of residence time on the subject parcel limits contribution to this function
	Nutrient Removal/Retention/ Transformation	No – The lack of residence time on the subject parcel limits contribution to this function
	Production Export (Nutrient)	Yes – The vegetative structural heterogeneity allows for trophic level exchange
	Sediment/Shoreline/Watercourse Bank Stabilization	Yes - Banks are vegetated
	Wildlife Habitat	Yes – The watercourse may provide habitat for finfish, shellfish and wading birds
	Recreation (Consumptive and Non-Consumptive)	No – The small area does not allow for recreation
	Educational Scientific Value	No – There is no educational use adjacent to the site
	Uniqueness/Heritage	No – This area does not present unique habitats
	Visual Quality/Aesthetics	Yes – The river provides visual quality and aesthetics
ES	Endangered Species	No – According to the most recent CT DEEP NDDB polygons occur onsite

The principal functions of the wetlands include the following:

- Groundwater recharge
- Floodflow alteration
- Fish and shellfish habitat
- Wildlife Habitat
- Visual Quality

6.0 Proposed Project

The proposed project involves the demolition of an existing building and the construction of a multi-family residential building with a separate structure (Jewel Box) proposed to house the development's amenities at the front of the property. The development proposes one, four and one half-story building with a central courtyard containing a total of 208 residential units. A parking lot is proposed at grade that will accommodate 321 spaces. The site will be accessed from the east by Danbury Road (Route 7) and will be serviced by town water and sewer.

The State of Connecticut regulates activities in, and adjacent to, wetlands and watercourses, as land development may result in short- and long-term direct and indirect impacts to wetlands and watercourses. The project has been designed to have minimal impacts to wetlands from short- and long-term perspectives. Work within the URA has been designed to avoid indirect wetland and watercourse impacts. Sedimentation and erosion control will minimize the potential for short-term impacts, while stormwater management will provide long-term water quality protection.

Much of the proposed building is outside of the URA standing a minimum of 80 feet from the Norwalk (**Figure 4**). Most of the improvements proposed at the rear of the building and in the URA are pervious, including a reinforced turf emergency access drive, permeable paver parking spaces, gathering spaces for residents also constructed from permeable pavers, and two connected, four-foot wide, stone dust walkways. The exceptions are a 4,134-SF portion of the building and a five-foot wide, roughly 50-foot-long walkway which will be constructed of concrete. This area will also include two stormwater infiltration areas (rain gardens) and dense seeding/plantings of native vegetative species. These proposed improvements will replace the existing impervious parking lot. The proposed project design would reduce the overall site impervious surface area by just over 0.25 acres from 3.22 acres to 2.97 acres. The existing impervious surface coverage is comprised of 41,481 SF of building and 98,923 SF of pavement in the upland area, with an additional 34,016 SF of pavement in the URA. Under the proposed condition, the building would cover 84,483 SF and the pavement 44,729 SF. The existing impervious surface in the URA area is 34,016 SF, while proposed is 6,473 SF, for a reduction of approximately 80 percent. Earthwork in the URA will be a net fill of 508 cubic yards (CY) [1] comprised of imported clean granular material suitable for construction or consist of in situ material from adjacent site regrading.

A native riparian planting buffer is proposed to enhance the riparian zone in the long-term. The restoration plan includes protecting the existing sycamore trees, invasive plant removal, and replanting with a variety of native species. Upland trees will be planted around the perimeter of the development to aid in long-term site stability, increase shading, and improve aesthetic appeal.

No significant direct impacts to the wetland area are proposed[2]. Proposed activities necessitate grading, covered and surface parking spaces, installation of an overlook plaza gathering space, two stormwater infiltration basins, and basin features within the URA to the wetland boundary. Disturbance within the URA 33,094 SF, of which 0.16 acres will be impervious area. Impervious surface within the URA would be reduced by 0.62 acres (from 0.78 acres to 0.16 acres) under the proposed condition. Details of the proposed disturbance within the URA follow:

---

[1] Earthwork in URA is 237 CY of cut and 745 CY of fill for net 508 CY fill.

[2] See stormwater management (Section 6.2) for proposed work for stormwater outlet.

- Temporary installation of sediment and erosion controls
- Removal of asphalt, concrete, and underlying base (34,016 SF)
- Installation of reinforced turf for fire access (6,672 SF)
- Construction of building in URA (4,876 SF)
- Installation of stormwater piping to discharge from the site
- Landscape areas with native trees/shrubs/perennials (± 17,919 SF)
- Pervious walking paths/seating areas/pervious paver parking (6,396 SF)
- Removal and management of invasive species along the river's edge

A front yard setback will be established along the subject boundary's eastern access point on Danbury Road. The front yard setback will extend 75 feet to the west from Danbury Road. The site's watershed will continue to drain west toward the Norwalk River on the western property boundary. A restored native riparian planting buffer is proposed in disturbed and pervious portion of the URA to enhance the riparian zone to wetland boundary in the long-term including keeping existing sycamore trees, new stormwater infiltration area installation, and invasive plant removal. Additional upland tree plantings will be installed around the perimeter of the development to aid in long-term site stability, shade, and aesthetic appeal.

6.1 Sediment and Erosion Control Measures

A Sediment and Erosion (S&E) Control Plan has been developed to minimize potential short-term impacts during construction. The S&E Control Plan includes descriptive specifications concerning land grading, topsoiling, temporary and permanent vegetative cover, and erosion checks. Details have been provided for all erosion controls with corresponding labels on the S&E Control Plan. All S&E controls provided are in accordance with the 2002 *Connecticut Guidelines for Soil Erosion and Sediment Control*.

The site will be accessed via Danbury Road in two locations at the southeastern and northeastern parts of the property which will become the entrances for all vehicles following construction. Construction entrance pads will be installed and maintained during operations which will generate vehicular tracking of mud. During construction, the limits of disturbance will be bordered on all sides by sediment filter fence and straw wattles. Temporary soil stockpile areas will be enclosed by a secondary set of silt fencing, within the larger perimeter of silt fence. An erosion control blanket will be placed along the western sediment filter fence to further protect the perennial watercourse during construction. The use of redundant sedimentation and erosion control measures will minimize the potential for short-term impacts to the perennial watercourse, and stockpiles will both be protected by two sediment control measures. Inlet protection and sediment traps will be installed to contain construction runoff during construction. Sediment and erosion control measures will remain in place until the site is stabilized.

6.2 Stormwater Management

A comprehensive stormwater management system has been designed to provide water quality management while attenuating proposed peak flow that will be designed, installed and maintained, in accordance with town and state standards, including the 2004 *Connecticut Stormwater Quality Manual*. The system design and components employ standard engineering practices that are regularly used throughout the town and the northeast to prevent stormwater pollution. The stormwater management system includes water quantity and water quality protections. An underground detention system comprised of three series of Stormtech infiltration chambers, two of which will be equipped with isolator rows to allow maintenance, will mitigate peak flows. The infiltration chambers are positioned to accommodate runoff from either the building roof or the parking areas, not a combination of the sources. A hydrodynamic separator will be used for water quality at the end of the treatment train, prior to discharge via a rip-rap splash pad to the Norwalk River. The rip-rap splash pad will be located at the existing concrete flume – that will be removed - and require approximately 85 SF of work below the OHW to remove the flume and install the stormwater outlet. Two rain gardens are proposed within the riparian enhancement area that will be planted with native species and outlet via evaporation or infiltration, or to the stormwater system with a significant precipitation event.

6.3 Mitigation

A planting plan of native trees, shrubs, and grasses has been developed to restore and enhance the riparian corridor between the perennial watercourse and the proposed development. Native vegetation, including Serviceberry (*Amelanchier alinifolia*), Blue Wild Indigo (*Baptista australis*), Fox Sedge (*Carex vulpinoidea*), Bayley's Red Twig Dogwood (*Cornus sericea*), Hay-scented Fern (*Dennstaedtia punctilobula*), Joe Pye Weed (*Eupatorium maculatum*), Winterberry (*Ilex verticillata*), Heavy Metal Switch Grass (*Panicum virgatum*), The Blues Little Bluestem (*Schizachyrium scoparium*), Steeplebush (*Spiraea tormentosa*), Lowbush Blueberry (*Vaccinium angustifolium*), and Nannyberry (*Viburnum lentago*), will enhance water quality by slowing down runoff, increasing residence time, and filtering sediment and pollutants from the stormwater before it reaches the river. The addition of these native species will also attract local pollinators and provide enhanced wildlife habitat in addition to a buffer between the proposed site improvements and adjacent regulated resource areas. In addition to the planting plan, other mitigating features include the reduction in impervious area in the URA and on the site overall, and providing water quality renovation of stormwater prior to discharge in the Norwalk River.

6.4 Alternatives

The site was studied to determine the feasible and prudent alternatives that would achieve the project purpose with the fewest land-use impacts. These analyses resulted in a site plan that proposes less impervious overall and an approximately 80 percent reduction in impervious area in the URA. In looking granularly at the design layout, modifications to the building layout and access were considered. Alternatives to the building layout were constrained by the required setbacks from Danbury Road and the Norwalk River. Therefore, no alternative designs were realized with the building. However, of considerable importance was the interface between proposed work and the Norwalk River. In this area, two primary alternatives were considered. One, was a bituminous concrete surface for an emergency access route, and the other is a reinforced turf alternative. After consideration, SLR determined that a the most prudent and feasible alternative was possible and proposes a reinforced turf for the emergency access way. This reinforced turf will allow a "green return" to the riparian area and avoid an underutilized impervious surface adjacent to the ecologically important component of the site.

7.0 Conclusion

SLR delineated wetlands within a 4.75-acre site at 131 Danbury Road in Wilton to assess the potential impact of a proposed multi-family development to on-site wetland resources. Wetland resources consist of the OHW and a narrow forested palustrine wetland to the Norwalk River, and a perennial watercourse that exists on the western site boundary. The property contains approximately 385 LF of frontage on the Norwalk River.

The proposed redevelopment project will not result in an adverse effect on the Norwalk River. The proposed project avoids significant direct wetland impacts, includes comprehensive stormwater management and sediment and erosion control, includes a riparian enhancement plan, and reduces overall impervious area on the site as well as a significant reduction in the URA. Sedimentation and erosion control will minimize the potential for short-term impacts during construction while stormwater management will prevent long-term impacts. There is no anticipated diminishment of existing wetland function. The proposed project will not result in adverse modification to the existing physical characteristics of existing wetland system.

If you have any questions regarding this report, please do not hesitate to contact Megan B. Raymond at the email addresses below.

Sincerely,

SLR International Corporation

Megan B. Raymond, MS, PWS, RSS, CFM
Principal Scientist, Wetlands & Waterways Lead
mraymond@slrconsulting.com

Chris Robbins
Principal Scientist
crobbins@slrconsulting.com

Mike Armstrong, MS
Environmental Scientist
marmstrong@slrconsulting.com

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Appendix A Site Maps

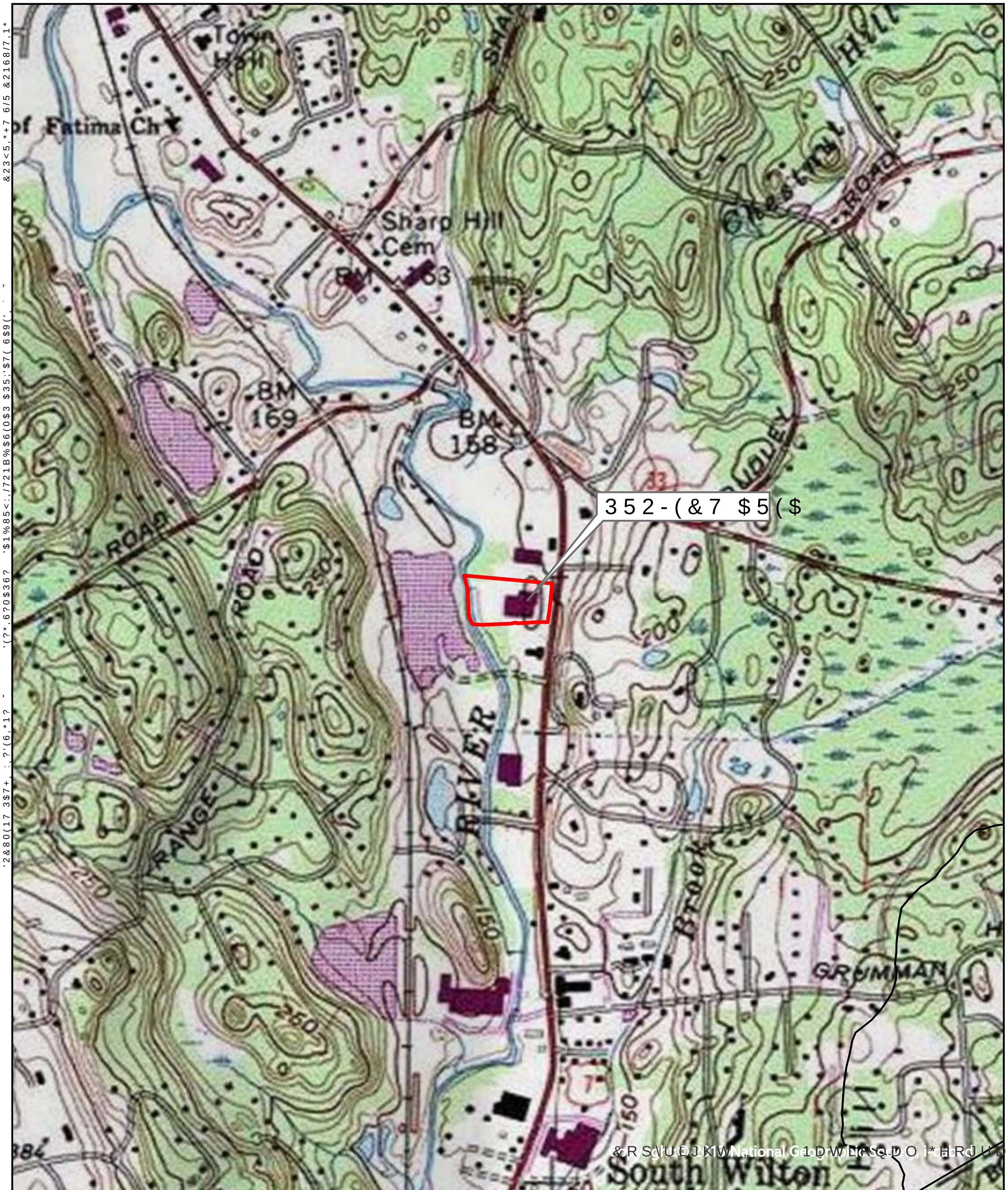
Wetland and Watercourse Delineation and Impact Assessment

131 Danbury Road, Wilton, Connecticut

AMS Acquisitions

SLR Project No.: 141.21543.00001

October 23, 2023 **(Revised January 5, 2023)**



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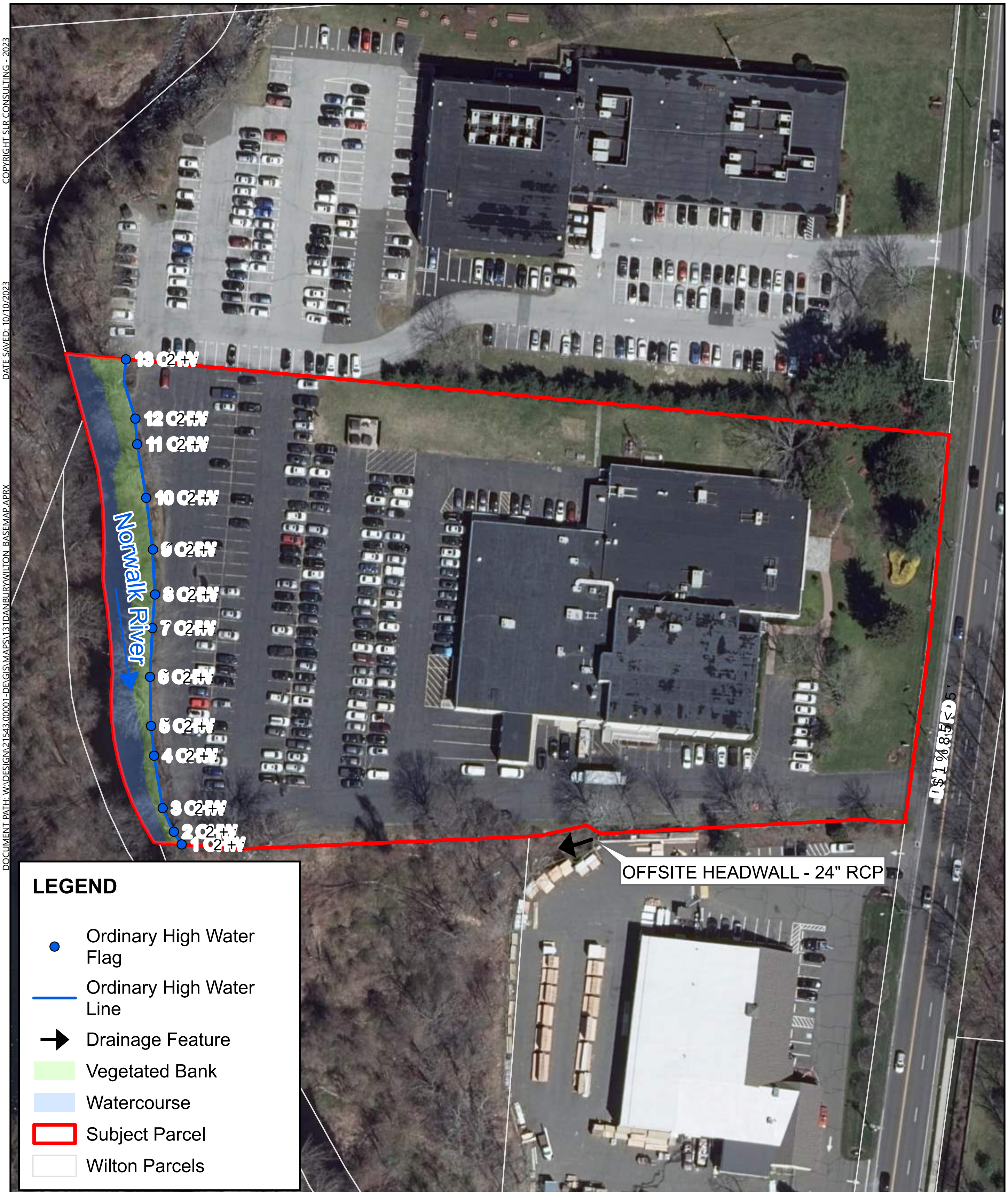

SLR
195 CHURCH STREET
7TH FLOOR
NEW HAVEN, CT 06511
203.344.7887

WETLAND AND WATERCOURSE DELINEATION

PROPOSAL FOR MULTIFAMILY RESIDENTIAL DEVELOPMENT
AMS ACQUISITIONS
131 DANBURY ROAD
WILTON, CONNECTICUT

0 100
Feet

SCALE	1" = 100'
DATE	10/10/2023
PROJ. NO.	141.21543.00001

FIG. 2

Figure 3: Soil Map—State of Connecticut

Map Scale: 1:1,180 if printed on A landscape (11" x 8.5") sheet.

Meters: 0, 15, 30, 60, 90

Feet: 0, 50, 100, 200, 300

N

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: State of Connecticut
Survey Area Data: Version 22, Sep 12, 2022

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

Date(s) aerial images were photographed: Oct 21, 2022—Oct 27, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
103	Rippowam fine sandy loam	0.5	6.6%
305	Udorthents-Pits complex, gravelly	0.9	13.2%
307	Urban land	5.3	77.0%
W	Water	0.2	3.3%
Totals for Area of Interest		**6.9**	**100.0%**

SLR

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Appendix B Photographic Log

Wetland and Watercourse Delineation and Impact Assessment

131 Danbury Road, Wilton, Connecticut

AMS Acquisitions

SLR Project No.: 141.21543.00001

October 23, 2023 **(Revised January 5, 2023)**

Client Name:	Site Location:	Project No.
AMS Acquisitions	131 Danbury Rd, Wilton, Connecticut	141.21543.00001

Photo No.	Date:
1	8/3/23

Direction Photo Taken:
South

Description:
Looking downstream on Norwalk River near flag W-3.

Photo No.	Date:
2	8/3/23

Direction Photo Taken:
West

Description:
Looking upstream at the constructed riffle structure.

PHOTOGRAPHIC LOG

Client Name: AMS Acquisitions	**Site Location:** 131 Danbury Rd, Wilton, Connecticut	**Project No.** 141.21543.00001

Photo No.	**Date:**
3	8/3/23

Direction Photo Taken:
North

Description:
Looking upstream at riffle structure and pool complex in Norwalk River.

Photo No.	**Date:**
4	8/3/23

Direction Photo Taken:
West

Description:
Upland vegetation

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
AMS Acquisitions	131 Danbury Rd, Wilton, Connecticut	141.21543.00001

Photo No.	Date:
5	8/3/23

Direction Photo Taken:
South

Description:
Vegetated earthen bank from eastern bank of the Norwalk River

Photo No.	Date:
6	8/3/23

Direction Photo Taken:
North

Description:
Parking lot to narrow upland edge and Norwalk River

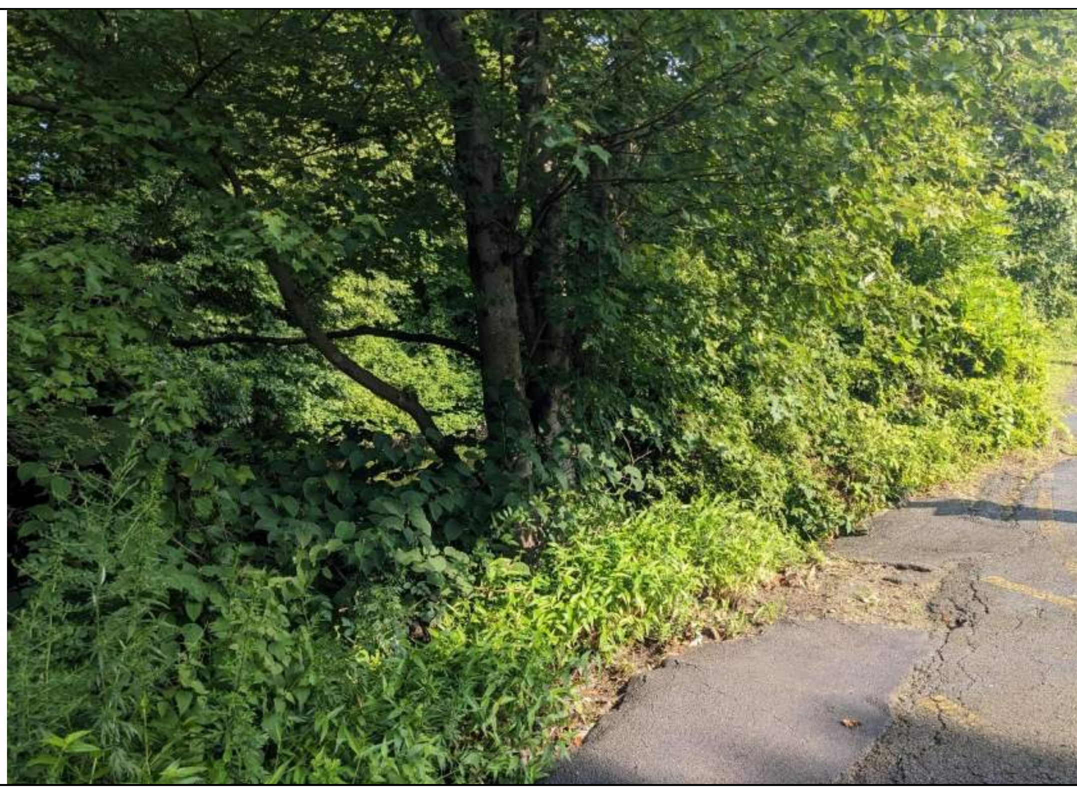

Photo No. 7	Date: 8/3/23	
Direction Photo Taken: N/A		
Description: Invasive Asian Freshwater Clam (*Corbicula fluminea*) in Norwalk River		

Appendix C NBBD Correspondence

Wetland and Watercourse Delineation and Impact Assessment

131 Danbury Road, Wilton, Connecticut

AMS Acquisitions

SLR Project No.: 141.21543.00001

October 23, 2023 **(Revised January 5, 2023)**

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

Generated by eNDDB on:
8/21/2023

Mike Armstrong
SLR CONSULTING US LLC
195 Church St - 7TH FL
NEW HAVEN, CT 06510
marmstrong@slrconsulting.com

Subject: 131 Danbury Rd
Filing # 100080
NDDB – New Determination Number: 202306018

Expiration Date: 8/21/2025

Based on current data maintained by the Natural Diversity Database (NDDB) and housed in the DEEP ezFile portal, no extant populations of Federal or State Endangered, Threatened or Special Concern species (RCSA Sec. 26-306) are known to occur within the project area delineated for the Building and Infrastructure Development (including stormwater discharge associate with construction) / New Residential - single lot, 131 Danbury Rd .

This NDDB – New determination may be utilized to fulfill the Endangered and Threatened Species requirements for state-issued permit applications, licenses, registration submissions, and authorizations. However, please be aware of the following limitations and conditions:

- This determination does not preclude the possibility that listed species may be encountered on site. Should this occur, a report must be submitted to the Natural Diversity Database promptly and additional action may be necessary to remain in compliance with certain state permits. Please fill out the appropriate survey form and follow the instructions for submittal.
- If your project involves preparing an Environmental Impact Assessment, this NDDB consultation and determination should not be substituted for conducting biological field surveys assessing on-site habitat and species presence.
- This determination applies only to the project as described in the submission and summarized at the end of this letter. Please re-submit an updated Request for Review if the project's scope of work and/or timeframe changes, including if work has not begun by 8/21/2025.

The NDDB – New determination for the 131 Danbury Rd at , as described in the submitted information and summarized at the end of this document is valid for two years from the date on this letter.

Natural Diversity Database information includes all information regarding listed species available to us at the time of the request. This information is a compilation of data collected over the years by the

Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, land owners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Database and accessed through the ezFile portal as it becomes available.

This letter is computer generated and carries no signature. If however, any clarification is needed, or if you have further questions, please contact the following:

CT DEEP Bureau of Natural Resources
Wildlife Division
Natural Diversity Database
79 Elm Street, 6th floor
Hartford, CT 06106-5127
(860) 424-3011
deep.nddbrequest@ct.gov

Please reference the Determination Number provided in this letter when you e-mail or write. Thank you for submitting your project through DEEP's ezFile portal for Natural Diversity Database reviews.

Application Details:

Project involves federal funds or federal permit:	No
Project involves state funds, state agency action, or relates to CEPA request:	No
Project requires state permit, license, registration, or authorization:	No
DEEP enforcement action related to project:	
Project Type:	Building and Infrastructure Development (including stormwater discharge associate with construction)
Project Sub-type:	New Residential - single lot
Project Name:	131 Danbury Rd
Project Description:	

131 Danbury Rd Map

August 21, 2023

1:9,597

0 0.075 0.15 0.3 mi

0 0.125 0.25 0.5 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Making Sustainability Happen

SLR International Corporation
99 Realty Drive, Cheshire, Connecticut, 06410

January 5, 2024

Mr. Ryan Sutherland, AIA LEED AP BD&C
Director of Design and Development
AMS Acquisitions
One Bridge Plaza North, Suite 840
Fort Lee, NJ 07024

SLR Project No.: 141.21543.00001

RE: Preliminary Geotechnical Engineering Report
Proposed Multifamily Development
131 Danbury Road
Wilton, Connecticut

Dear Mr. Sutherland,

SLR International Corporation (SLR) is pleased to submit our preliminary geotechnical engineering report for the proposed multifamily development located at 131 Danbury Road in Wilton, Connecticut. Refer to Figure 1 – Locus Plan in Appendix 1 for the general location of the project.

We understand the project is in the early stages of development, and as such, we have performed a limited geotechnical study to preliminarily characterize the subsurface conditions at the site, identify key geotechnical constraints, and provide preliminarily geotechnical design and construction consideration and recommendations for the project.

Our recommendations are based in part on guidance from the 2022 Connecticut State Building Code, which includes the 2021 International Building Code (IBC) and the 2022 Connecticut Amendments. Design recommendations are based on Allowable Stress Design (ASD) Methods.

Site Description and Proposed Construction

The proposed multifamily development will be constructed on a 4.75-acre parcel, with an apartment complex to the north, Danbury Road to the east, a private business to the south, and the Norwalk River to the west. Site grades slope slightly upward from elevation (El.) 140± along the western property line to El. 149± along the eastern property line. The site currently consists of an approximate 41,500±-square-foot building on the eastern side of the parcel and a large parking lot at the rear of the building. Both the existing building and parking lot will be demolished as part of this project.

We understand that the proposed multifamily project will involve the construction of single, approximately 82,700-square-foot, four-story, rectangularly shaped building with a finished floor at El. 157.5. Associated parking will be at grade and located beneath the first floor and around the perimeter of the proposed building. Finished grades of the parking area beneath the proposed building range from El. 146 to El. 144. The project will also include three retaining walls that vary in length and height.

Regional Geology

According to published surficial geology data (1:24,000 scale, Surficial Geologic Map of the Norwalk North Quadrangle, Connecticut, Elizabeth H. London, 1984), the subsurface material at the site is mapped as Norwalk River area deposits, which is described as "chiefly beds of sand and gravel, which locally overlie sand in the bedrock basin."

According to published bedrock geology data (1:24,000 scale, Bedrock Geology of the Norwalk North Quadrangle, Connecticut, Richard L. Kroll, 1967-1969), the bedrock at the site is mapped as felsic gneiss. The felsic gneiss is described as "medium- to coarse-grained, poorly- to well-foliated, gray-to-buff gneiss, composed of plagioclase, quartz, microline, muscovite, and biotite, with accessory opaques, chlorite, apatite, garnet, zircon and sillimanite."

Subsurface Explorations

On December 12 and 13, 2023, SLR observed ten borings (SLR-1 through SLR-10) to explore the subsurface conditions around the proposed development and various infiltration systems and stormwater basins. The borings were performed by SITE, LLC and were located by SLR using a handheld Global Positioning System (GPS) and line of sight from existing site features. The approximate boring locations are shown on Figure 2 – Subsurface Exploration Location Plan Existing Conditions and Figure 3 – Subsurface Exploration Location Plan Proposed Conditions in Appendix 1.

Hollow-stem auger drilling methods were used to advance the borings to depths ranging between approximately 11.3± and 32.0± feet below existing grades. Representative samples were obtained from the borings by split-barrel sampling procedures in general accordance with American Society for Testing and Materials (ASTM) Specification D-1586. Logs of the borings are included in Appendix 2. Soil samples were classified in accordance with the Burmister Soil Classification System, which is included at the end of Appendix 2.

The split-barrel sampling procedure uses a standard 2-inch-outside-diameter (O.D.) split-barrel sampler that is driven into the bottom of the boring with a 140-pound hammer falling 30 inches. The number of blows required to advance the sampler the middle 12 inches of a normal 24-inch penetration is recorded as the Standard Penetration Resistance Value (N). The blows are indicated on the boring logs at their depth of occurrence and provide an indication of the consistency or relative density of the material.

Subsurface Conditions

The generalized subsurface profile at the site as interpreted from the subsurface exploration data generally consists of asphalt or topsoil/subsoil over fill (where encountered), over organic sand and silt (where encountered), over sand (where encountered), over sand and gravel to the depths explored. More detailed descriptions of the subsurface materials encountered are provided below:

Asphalt was encountered at the surface of Borings SLR-1 through SLR-3 and SLR-5 through SLR-8 and is approximately 3 to 4 inches thick.

Topsoil was encountered at the surface in Borings SLR-4, SLR-9, and SLR-10 and is approximately 0.5 to 2.5 feet thick. The topsoil generally consists of loose to medium dense, dark brown, fine to medium sand, some silt, trace organic matter. A stratum of subsoil was encountered below the topsoil in Boring SLR-9 and extends to approximately 3.5± feet below existing grades. The subsoil generally consists of loose, light brown, fine to medium sand and silt, trace organic matter.

Fill was encountered below the asphalt in Borings SLR-1 through SLR-3 and SLR-5 through SLR-8 and extends to approximately 1.0± to 5.0± feet below existing grades. The fill generally consists of loose to dense, brown to gray-brown, fine to coarse sand, some to and fine to coarse gravel, trace silt.

Organic Sand and Silt was encountered below the fill in Borings SLR-1 through SLR-3, SLR-6, and SLR-7 and below the topsoil in Boring SLR-4. The organic sand and silt layer extends to approximately 3.5± to 8.5± feet below existing grades and generally consists of very loose to medium dense, brown to black, fine to medium sand, little to and organic silt, trace to little fine gravel, trace organic matter.

Sand was encountered below the fill or organic sand and silt in Borings SLR-1 and SLR-5 through SLR-7 and extends to approximately 3.0± to 7.0± feet below existing grades. The sand generally consists of loose to medium dense, gray-brown, fine to medium sand, little silt, trace fine gravel.

Sand and Gravel was encountered below the sand or organic sand and silt in each boring and is at least 5.0± to 31.5± feet thick. The sand and gravel generally consists of medium dense to very dense, gray to brown, fine to coarse sand, little to and fine to coarse gravel, trace to little silt.

Groundwater was encountered in each boring during drilling at depths ranging from 3.5± to 9.0± feet below existing grades, or between approximately El. 137.7± to El. 139.5±. Groundwater levels may vary depending on factors such as season, precipitation, drought, construction activity, and other conditions, which may be different from those at the time of these observations.

Implications of Subsurface Conditions

The existing surficial materials, fill, and organic sand and silt are not suitable for support of the proposed structure as it was likely placed in an uncontrolled manner and contains constituents that would result in unacceptable postconstruction settlements. We recommend that the proposed structure be supported by foundations that develop their capacity in the natural soils or compacted granular fill (CGF) over this material.

Foundation loads were not available for the preparation of this report, but the foundation (e.g., type and size) for the structure should be based on its respective geometry and the loads that must be supported. For proposed low-rise structures, we anticipate that shallow foundations bearing on the natural soils will be sufficient. However, for mid- to high-rise structures with larger foundation loads, shallow foundations bearing on improved natural soils or deep foundations that develop their capacity in the dense to very dense natural sand and gravel soils may be required.

The scope of this preliminary geotechnical study is limited, and a final design geotechnical study should be performed. The final design study should include additional explorations in the area of SLR-4 and within the existing building footprint following demolition to further define the limits of the thick organic sand and silt deposit and to confirm encountered subsurface conditions, respectively. Below are our initial geotechnical recommendations based on this limited study.

Initial Geotechnical Analyses and Recommendations

Shallow Foundations

If appropriate, the proposed structure can be supported by conventional shallow spread footing foundations over a prepared subgrade of undisturbed natural soils or CGF over this material. Where CGF is used beneath the proposed footings, we recommend that it be placed 1 foot beyond the edge of the footings and at a one horizontal to one vertical (1H:1V) slope down and away from the footings to the top of the recommended bearing stratum.

At this point, we preliminarily recommend a net allowable bearing pressure of 4 kips per square foot (2.0 tsf) for spread footings bearing on the natural granular soils or CGF over this material. We anticipate this bearing pressure will limit total and differential postconstruction settlements to 1 inch and ½ inch, respectively. Settlements should occur as the loads are applied and be complete at the end of construction. We recommend a maximum coefficient of friction of 0.55 between footings and the recommended bearing stratum.

For higher foundation loads, ground improvement may be used to improve the relative stiffness and load-carrying capacity of the natural soils, and thus, a higher net allowable bearing capacity may be realized. Ground improvement might be achieved by either installing rammed aggregate piers or a rigid inclusion system. The method of ground improvement should be selected and designed based on the foundation loads that need to be supported and other project considerations.

Exterior footings should be constructed at a minimum depth of 42 inches below final grades to protect against frost. For interior footings, a minimum depth of 12 inches should be maintained below the proposed bottom of the concrete floor slab and the top of footings. The minimum and maximum isolated footing size should be 2.5 and 12 feet, respectively. The minimum and maximum wall footing width should be 1.5 to 6 feet, respectively.

Deep Foundations

If foundation loads dictate, the proposed building can be supported by deep foundations such as driven piles (e.g., concrete, steel pipe) or drilled micropiles. The deep foundations should be sized appropriately for the anticipated loading and spaced a minimum of three diameters apart center to center. Deep foundations should be designed to have enough geotechnical and structural capacity to resist the applied compressive, tension, and lateral loads while limiting total and differential postconstruction settlements to 1 inch and ½ inch, respectively. We recommend horizontal deflections be limited to ½ inch.

Lateral Earth Pressures

Foundation or site retaining walls with unbalanced loading should be designed to resist lateral earth pressures. Based on the anticipated finish floor elevation and underneath parking lot elevations, we anticipate foundation walls with unbalanced loading up to approximately 11.5 feet. For walls that are braced at the top (e.g., foundation walls), we recommend they be designed to resist an equivalent at-rest static horizontal fluid pressure equal to 54 pounds per square foot (psf) (based on $\Phi = 35°$, c = 0 psf, $K_0 = 0.43$, and $\gamma = 125$ pounds per cubic foot [pcf]). For walls that are allowed to rotate (e.g., site retaining walls), we recommend they be designed to resist an equivalent active horizontal pressure equal to 34 psf (based on $\Phi = 35°$, c = 0 psf, $K_a = 0.27$, and $\gamma = 125$ pcf).

These values assume no unbalanced hydrostatic pressures (i.e., free-draining backfill and/or weep holes for drainage), sloped backfill, seismic forces, or traffic surcharge loads. We recommend using a traffic surcharge load of 250 psf and a pedestrian surcharge load of 75 psf. We do not recommend the use of passive pressure against the base of the walls.

Where calculated earth pressure is less than 200 psf, the minimum earth pressure value should be increased to 200 psf to account for stress created by compaction near the walls. Walls subject to other live or dead loads must also be designed for an additional uniform lateral pressure over the entire height of the wall equal to use at least 0.33 times the surcharge.

Seismic Site Class and Liquefaction Potential

The average Standard Penetration Test “N” value extrapolated over a 100-foot depth in the area of the proposed building is 21 blows per foot, which results in a Site Class D (Stiff Soil) per the IBC.

According to the 2022 Connecticut State Building Code for Wilton, Connecticut, S_s is 0.241g and S_1 is 0.057g.

Based on the standard penetration test results, estimated depth to groundwater, soil classifications, and expected peak ground acceleration at this locale, it is our opinion that the site soils are not prone to liquefaction.

Laboratory Testing

Laboratory testing was performed by Tri-State Materials Testing Lab, LLC of Berlin, Connecticut, on representative soil samples collected from the subsurface explorations. The test results will be used to classify and define the hydraulic conductivity of the in-situ soils that are planned to remain for the infiltration systems and the stormwater basins.

The testing performed included gradation analyses, soil unit weight, and permeability. Soil unit weight was completed on the samples to establish approximate in-situ parameters to complete the permeability tests. The results of the laboratory testing are summarized below and included in Appendix 3.

Boring	Depth, ft	Approximate Elevation	Soil Type	Unit Weight, pcf	Permeability, cm/sec (in/hr)
SLR-2	3 – 4	138.5 – 137.5	Organic Sand & Silt	106.0	2.5×10^{-4} (0.8)
SLR-5	5 – 7	137.3 – 135.3	Sand & Gravel	122.7	7.1×10^{-4} (2.5)
SLR-6	5 – 7	138.2 – 136.2	Sand & Gravel	120.3	2.9×10^{-3} (10.6)
SLR-7	3 – 5	141.5 – 139.5	Fill	122.6	5.8×10^{-4} (2.1)
SLR-8	5 – 7	141.2 – 139.2	Sand & Gravel	120.4	3.0×10^{-3} (10.9)

pcf = pounds per cubic foot

Materials and Compaction Requirements

Existing fill that does not contain deleterious material may be potentially suitable for reuse as CGF or as ordinary fill in nonload-bearing areas. Materials proposed for reuse should be free of ice or frost, weak compressible soils should be acceptable to the geotechnical engineer and satisfy project requirements, and laboratory testing should be performed to establish gradation and moisture-density requirements that should be confirmed by field testing.

CGF for use as structural fill should consist of inorganic soil that is free of clay, loam, ice and snow, tree stumps, roots, and other organic matter and graded within the following limits:

Sieve Size	Percent Finer by Weight
5 inches	100
3 ½ inches	90 – 100
1 ½ inches	55 – 100
¼ inch	25 – 60
No. 10	15 – 45
No. 40	5 – 25
No. 200	0 – 12

Crushed stone for use below foundation should consist of sound, durable rock that is graded within the following limits:

Sieve Size	Percent Finer by Weight
1 inch	100
¾ inch	90 – 100
½ inch	20 – 55
3/8 inch	0 – 15
No. 4	0 – 5

We recommend a minimum in-place dry density of 95 percent as per ASTM D1557 for material placed below concrete slabs and 92 percent for material placed behind foundation walls and earth retaining structures. Materials should be placed within 2 percent of their optimum moisture content. We recommend a maximum loose lift thickness of 12 inches.

Construction Considerations

Site Preparation

Asphalt, topsoil/subsoil, fill, organic sand and silt, and any other deleterious surficial materials must be stripped or excavated during site preparation within the footprint of the proposed building. Asphalt, topsoil/subsoil, and other deleterious surficial materials must be stripped or excavated during site preparation in the areas of the perimeter parking. Excavated existing fill and natural soils should be stockpiled for reuse as backfill or ordinary fill. Where existing soils is present at final subgrade levels, the exposed subgrades should be proof rolled with a large double-drum roller. Materials disturbed during excavation should be undercut to undisturbed material and backfilled with CGF.

Subgrade Preparation

Final subgrades should be free of water, ice, frozen soil, and loose soils prior to placement of additional fill mater. We recommend excavations in soil be conducted using a smooth-edged excavator bucket for final excavations to help protect the subgrade, followed by proof compaction of the exposed subgrade.

Fill and construction materials should be placed as soon as possible after preparation so that disturbance of bearing materials does not occur. Should the materials at bearing level become disturbed, the affected materials should be removed and replaced with CGF or crushed stone. A 4-inch-thick layer of crushed stone may be used to protect subgrades that are expected to be open for an extended period.

Deep Foundations

If deep foundations are considered, they should be installed using adequately sized construction equipment and be installed within approximately 2 percent of vertical and within 3 inches of plan locations. For concrete or steel piles, hammer blows should be recorded at 1-foot intervals for each pile. For micropiles, the reinforcing steel shall not be more than ¾ inches from the indicated center of the pile. Pile depths, grout volume for micropiles, and other applicable information should also be recorded during installation.

We recommend a load test be performed on a sacrificial deep foundation element in general accordance with ASTM D1143-07 “Standard Test Methods for Deep Foundations Under Static Axial Compressive Load” to confirm that the allowable design capacities and predicted settlements meet the project specifications.

Demolition

The existing building will be demolished as part of site preparation. All existing substructures (i.e., existing building foundations, utilities, etc.) must be removed from beneath the proposed building footprint. Spread footings should be removed in their entirety, and driven piles, if present, should be cut down at least 4 feet below grade so they do not conflict with the new foundations. Where previous foundations conflict with proposed foundations, the previous foundations must be removed. All traces of demolition debris should be removed in a legal manner off site from within 10 feet beyond the proposed building footprint.

Foundations may potentially be left in place below proposed pavements, provided they are at least 4 feet below pavement grades and do not conflict with utilities. Utilities should be rerouted as necessary to prevent conflicts. If underground utilities are to be abandoned in place below pavements, they should be grouted to prevent future collapse.

Temporary Excavations

Temporary excavations may be required for foundation construction. All excavations should be sloped or shored in accordance with local, state, and federal regulations, including Occupational Safety and Health Administration (OSHA) (29 CFR Part 1926) excavation trench safety standards.

Where excavations can be sloped, they should be sloped in accordance with OSHA requirements for a Class “C” soil, which can be cut at a maximum of one vertical to one horizontal (1V:1H), up to a maximum excavation depth of 20 feet. These recommendations assume no surcharge load (i.e., stockpiles, construction equipment, etc.) at the top of the excavations or seepage (e.g., cuts below the groundwater table).

We expect that all excavations will be able to be sloped in accordance with OSHA requirements, but in the case it is not possible, a temporary earth retaining system (TERS) will be required. The TERS should be selected by the contractor and designed by a professional engineer registered in the State of Connecticut.

Dewatering

Based on the proposed construction, groundwater may be encountered near foundation elevations. We expect that control of the groundwater and surface water runoff can be accomplished with sumps and/or grading to low points. A crushed stone drainage blanket over the bottom of the excavation will facilitate dewatering. The contractor is ultimately responsible for selecting dewatering means and methods for maintaining subgrades in an undisturbed condition.

Construction Documents and Quality Control

If changes are made to the location or type of structure, the recommendations in this report will need to be reviewed and may be subject to revision. We recommend that SLR make field observations of excavations and foundation preparation to monitor actual conditions and compliance with our recommendations and project specifications. Specifically, we recommend field observation of footing subgrade, fill placement and compaction, and deep foundation installation if chosen. We can also assist in classifying material on site for segregation and/or mixing for reuse on site.

Limitations

This report is subject to the limitations included in Appendix 4.

Thank you for the opportunity to be of service. Please feel free to call either of the undersigned if you have questions.

Regards,

SLR International Corporation

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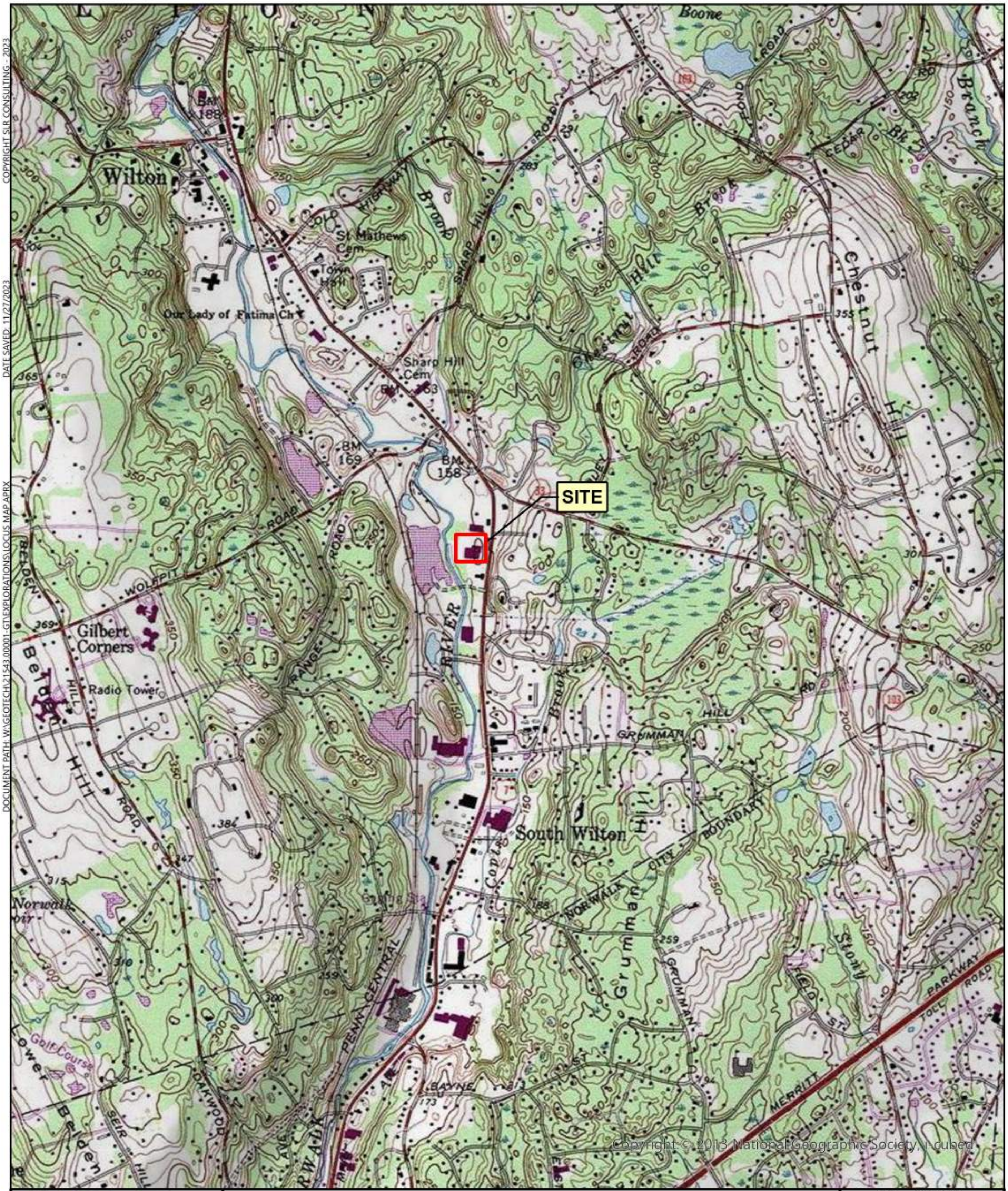
Associate Geotechnical Engineer
rgowisnock@slrconsulting.com

Carl W. Thunberg, PE
Principal Geotechnical Engineer
cthunberg@slrconsulting.com

Attachments: Appendix 1 – Figures
Appendix 2 – Boring Logs
Appendix 3 – Laboratory Test Results
Appendic 4 – Limitations

21543.00001.j424.ltr.docx

APPENDIX 1
FIGURES



SLR

99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773

LOCUS PLAN

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

N

0 2,000
Feet

1" = 2000'	SCALE
11/27/2023	DATE
141.21543.00001	PROJ. NO.

FIG. 1

DATE SAVED: 11/27/2023
DOCUMENT PATH: W:\GEOTECH\21543.00001-GT\EXPLORATIONS\LOCUS MAP.APRX

LEGEND:

SLR-1 — BORING BY SLR INTERNATIONAL CORPORATION (SLR)

Scale bar: 0' 25' 50' / 0 1/2" 1"

NOTES:
1. BASE MAP DEVELOPED FROM AN ELECTRONIC FILE BY SLR TITLED "AMSW - EXISTING CONDITIONS.DWG" AND DATED NOVEMBER, 2023.
2. BORINGS BY SLR WERE PERFORMED BY SITE, LLC ON DECEMBER 12 & 13, 20232.
3. THE BORINGS WERE LOCATED USING A HANDHELD GPS. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

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REVISIONS

SUBSURFACE EXPLORATION LOCATION PLAN

PROPOSED MULTI-FAMILY DEVELOPMENT
EXISTING CONDITIONS

131 DANBURY ROAD
WILTON, CONNECTICUT

DESIGNED	DRAWN	CHECKED
RDG	RDG	MGB

SCALE: 1"=50'

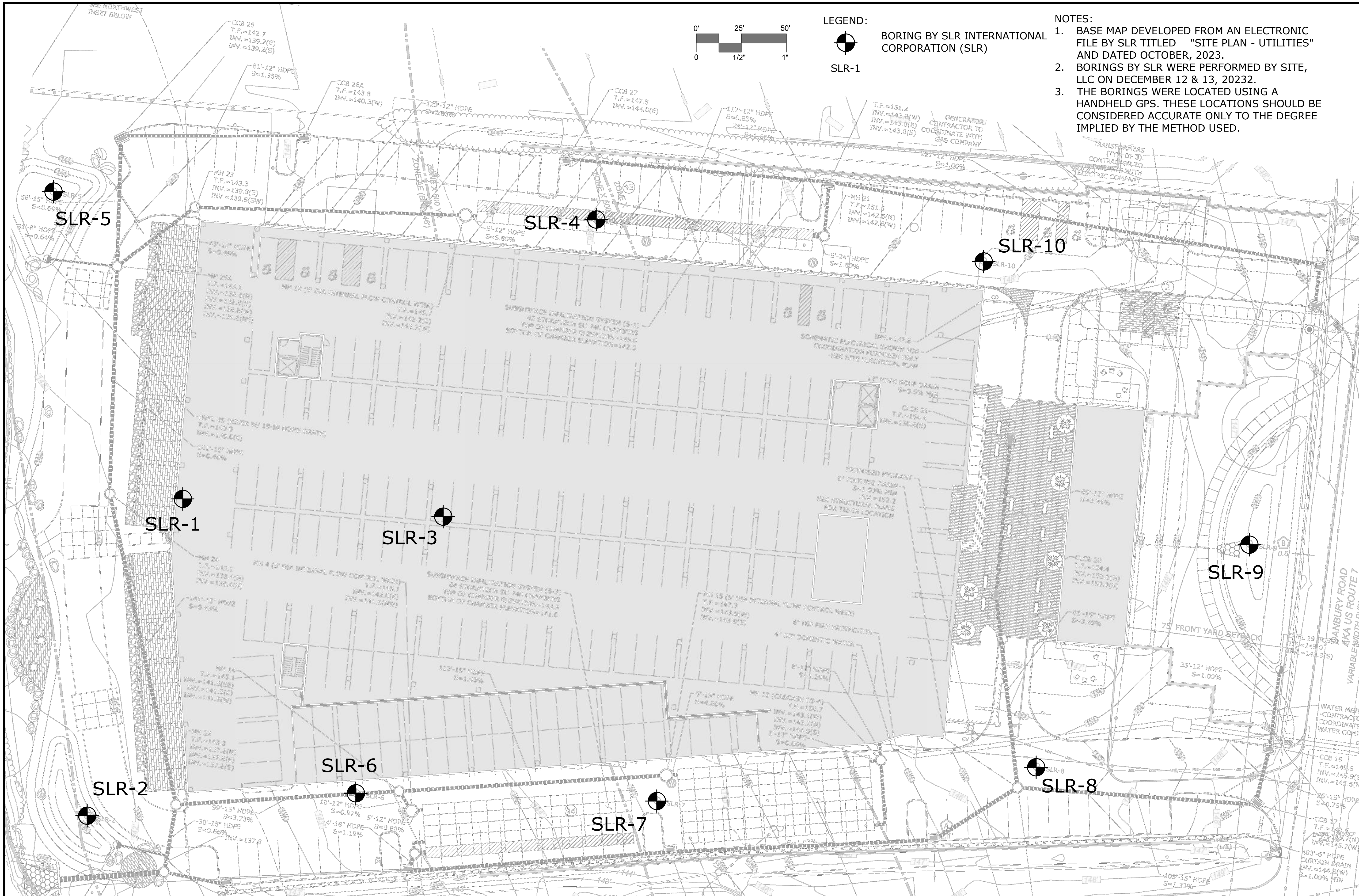
DATE: DECEMBER 14, 2023

PROJECT NO.: 141.21543.00001

SHEET NO.: FIG. 2

Drawing: W:\GEOTECH\21543.00001-GT\EXPLORATIONS\SUBSURFACEEXPLORATIONPLAN.DWG Layout Tab:FIG. 2

Plotted by: RGOMSNICK On this date: Fri, 2024 January 5 – 2:16pm



0' 25' 50'
0 1/2" 1"

LEGEND:

BORING BY SLR INTERNATIONAL CORPORATION (SLR)

SLR-1

NOTES:

1. BASE MAP DEVELOPED FROM AN ELECTRONIC FILE BY SLR TITLED "SITE PLAN - UTILITIES" AND DATED OCTOBER, 2023.
2. BORINGS BY SLR WERE PERFORMED BY SITE, LLC ON DECEMBER 12 & 13, 20232.
3. THE BORINGS WERE LOCATED USING A HANDHELD GPS. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

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REVISIONS

SUBSURFACE EXPLORATION LOCATION PLAN

PROPOSED MULTI-FAMILY DEVELOPMENT
PROPOSED CONDITIONS

131 DANBURY ROAD
WILTON, CONNECTICUT

RDG	RDG	MGB
DESIGNED	DRAWN	CHECKED

SCALE: 1"=50'

DATE: DECEMBER 14, 2023

PROJECT NO.: 141.21543.00001

SHEET NO.: FIG. 3

APPENDIX 2
BORING LOGS

BORING LOG

SLR
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99 Reality Drive, Cheshire, CT 06410
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PROJECT: PROPOSED MULTI-FAMILY DEVELOPMENT	**BORING NO.:** SLR-1	**SHEET:** 1 OF 2	
LOCATION: 131 DANBURY ROAD, WILTON, CONNECTICUT	**CONTRACTOR:** SITE, LLC		
PROJ. NO: 141.21543.00001	**FOREMAN:** J. DEANGELIS		
CLIENT: AMS ACQUISITIONS	**INSPECTOR:** R. GOWISNOCK		
DATE: DECEMBER 12, 2023	**GROUND SURFACE ELEVATION:** ±142.5'		

EQUIPMENT:	AUGER	CASING	SAMPLER	COREBRL.	GROUNDWATER DEPTH (FT.)			TYPE OF RIG:
TYPE	HSA	-	SS	-	DATE	TIME	WATER DEPTH	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	2023-12-12	7:00 AM	±4.8'	RIG MODEL:
HMR. WT (LB.)	-	-	140	-				CME-55 LCX
HMR. FALL (IN.)	-	-	30	-				

Depth (FT)	SAMPLE NUMBER	RECOVERY (IN)	BLOWS PER 6"	SOIL AND ROCK CLASSIFICATION-DESCRIPTION BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)	DEPTH (FT.)	STRATUM DESCRIPTION	ELEV. (FT.)	Remark
0-1				Top 3": ASPHALT. Bottom 9": Gray-brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt.	0.3'	ASPHALT	142.2'	1
1-3	S-1	8	4 2 3 2	S-1: Loose, Top 5": Gray-brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt. Bottom 3": Dark brown, fine to medium SAND, little Silt, little fine Gravel, trace Organic Matter.	2.0'	FILL	140.5'	
3-5	S-2	15	3 2 4 17	S-2: Loose, Top 5": Dark brown-black, fine to medium SAND and Organic SILT. Bottom 10": Gray-brown, fine to medium SAND, little Silt.	3.5' 4.5' 4.8'	ORGANIC SAND & SILT SAND G.W.T. ▼	139.0' 138.0' 137.7'	
5-7	S-3	14	15 19 17 25	S-3: Dense, brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt.				
7-10								
10-12	S-4	16	13 23 31 29	S-4: Very dense, gray, fine to coarse SAND, some fine to coarse Gravel, little Silt.				
12-15						SAND & GRAVEL		
15-17	S-5	10	10 15 45 22	S-5: Very dense, gray, fine to coarse SAND, some fine to coarse Gravel, little Silt.				
17-20								
20-22	S-6	8	6 10 42 19	S-6: Very dense, gray, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.				

Remarks: 1. Soil classified from auger cuttings.

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

BORING LOG

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PROJECT:	PROPOSED MULTI-FAMILY DEVELOPMENT	**BORING NO.:** SLR-1	**SHEET:** 2 OF 2
LOCATION:	131 DANBURY ROAD, WILTON, CONNECTICUT	**CONTRACTOR:** SITE, LLC	
PROJ. NO:	141.21543.00001	**FOREMAN:** J. DEANGELIS	
CLIENT:	AMS ACQUISITIONS	**INSPECTOR:** R. GOWISNOCK	
DATE:	DECEMBER 12, 2023	**GROUND SURFACE ELEVATION:** ±142.5'	

EQUIPMENT:	**AUGER**	**CASING**	**SAMPLER**	**COREBRL.**	**GROUNDWATER DEPTH (FT.)**			**TYPE OF RIG:**
TYPE	HSA	-	SS	-	**DATE**	**TIME**	**WATER DEPTH**	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	2023-12-12	7:00 AM	±4.8'	**RIG MODEL:**
HMR. WT (LB.)	-	-	140	-				CME-55 LCX
HMR. FALL (IN.)	-	-	30	-				

Depth (FT)	SAMPLE NUMBER	RECOVERY (IN)	BLOWS PER 6"	SOIL AND ROCK CLASSIFICATION-DESCRIPTION BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)	DEPTH (FT.)	STRATUM DESCRIPTION	ELEV. (FT.)	Remark
24								
25								
26	S-7	14	12 30 23 13	S-7: Very dense, gray, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.		SAND & GRAVEL		
27								
28								
29								
30								
31	S-8	12	7 8 15 15	S-8: Medium dense, brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.	32.0'		110.5'	
32				Bottom of Exploration ±32.0'				
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								

Remarks:

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

BORING LOG

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PROJECT:	PROPOSED MULTI-FAMILY DEVELOPMENT	**BORING NO.:** SLR-2	**SHEET:** 1 OF 1
LOCATION:	131 DANBURY ROAD, WILTON, CONNECTICUT	**CONTRACTOR:** SITE, LLC	
PROJ. NO:	141.21543.00001	**FOREMAN:** J. DEANGELIS	
CLIENT:	AMS ACQUISITIONS	**INSPECTOR:** R. GOWISNOCK	
DATE:	DECEMBER 12, 2023	**GROUND SURFACE ELEVATION:** ±141.5'	

EQUIPMENT:	**AUGER**	**CASING**	**SAMPLER**	**COREBRL.**	**GROUNDWATER DEPTH (FT.)**			**TYPE OF RIG:**
TYPE	HSA	-	SS	-	**DATE**	**TIME**	**WATER DEPTH**	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	2023-12-12	8:30 AM	±3.7'	**RIG MODEL:**
HMR. WT (LB.)	-	-	140	-				
HMR. FALL (IN.)	-	-	30	-				CME-55 LCX

Depth (FT)	SAMPLE NUMBER	RECOVERY (IN)	BLOWS PER 6"	SOIL AND ROCK CLASSIFICATION-DESCRIPTION BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)	DEPTH (FT.)	STRATUM DESCRIPTION	ELEV. (FT.)	Remark
				Top 4": ASPHALT.	0.3'	**ASPHALT**	141.2'	
				Bottom 8": Gray, fine to coarse SAND, some fine to coarse Gravel, trace Silt.	1.0'	**FILL**	140.0'	1
1	S-1	16	3	S-1: Loose, black, fine to medium SAND, some Organic Silt, little fine Gravel.				
2			2					
			6			**ORGANIC SAND & SILT**		
3			3					
	S-2	14	2	S-2: Medium dense, Top 10": Black, fine to medium SAND, some Organic Silt, trace fine Gravel	3.7'	**G.W.T.**	137.8'	
4			2	Bottom 4": Gray, fine to coarse SAND, some fine to coarse Gravel, trace Silt.	4.0'		137.5'	
			8					
5			16					
	S-3	15	9	S-3: Dense, gray, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.				
6			19					
			23					
7			14					
	S-4	12	10	S-4: Medium dense, gray, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.				
8			19			**SAND & GRAVEL**		
			10					
9			7					
10								
	S-5	16	11	S-5: Dense, gray, fine to coarse SAND and fine to coarse GRAVEL, little Silt.				
11			20					
			15					
12			20		12.0'		129.5'	
				Bottom of Exploration ±12.0'				
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

Remarks: 1. Soil classified from auger cuttings.

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

BORING LOG

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PROJECT: PROPOSED MULTI-FAMILY DEVELOPMENT	**BORING NO.:** SLR-3	**SHEET:** 1 OF 2	
LOCATION: 131 DANBURY ROAD, WILTON, CONNECTICUT	**CONTRACTOR:** SITE, LLC		
PROJ. NO: 141.21543.00001	**FOREMAN:** J. DEANGELIS		
CLIENT: AMS ACQUISITIONS	**INSPECTOR:** R. GOWISNOCK		
DATE: DECEMBER 12, 2023	**GROUND SURFACE ELEVATION:** ±144.3'		

EQUIPMENT:	AUGER	CASING	SAMPLER	COREBRL.	GROUNDWATER DEPTH (FT.)			TYPE OF RIG:
TYPE	HSA	-	SS	-	DATE	TIME	WATER DEPTH	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	2023-12-12	11:00 AM	±6.3'	RIG MODEL:
HMR. WT (LB.)	-	-	140	-				CME-55 LCX
HMR. FALL (IN.)	-	-	30	-				

Depth (FT)	SAMPLE NUMBER	RECOVERY (IN)	BLOWS PER 6"	SOIL AND ROCK CLASSIFICATION-DESCRIPTION BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)	DEPTH (FT.)	STRATUM DESCRIPTION	ELEV. (FT.)	Remark
0-2	S-1	20	5, 11, 9, 4	Top 3": ASPHALT. Bottom 9": Brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt. S-1: Medium dense, Top 17": Brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt. Bottom 3": Dark brown, fine to coarse SAND, some Organic Silt.	0.3' 2.5'	ASPHALT FILL	144.0' 141.8'	1
3-4	S-2	8	15, 8, 4, 4	S-2: Medium dense, dark brown-black, fine to coarse SAND and Organic SILT, little fine Gravel.	4.8'	ORGANIC SAND & SILT	139.5'	
5-6	S-3	20	3, 7, 14, 12	S-3: Medium dense, Top 10": Light brown, fine to coarse SAND, some Silt. Bottom 10": Brown, fine to coarse SAND, some fine to coarse Gravel, little Silt.	6.0' 6.3'	 G.W.T. ▼	138.3 138.0'	
10-11	S-4	15	10, 16, 17, 11	S-4: Dense, gray-brown, fine to coarse SAND, some fine to coarse Gravel, little Silt.				
15-16	S-5	20	3, 6, 8, 16	S-5: Medium dense, gray, fine to coarse SAND, little fine Gravel, trace Silt.		SAND & GRAVEL		
20-21	S-6	10	7, 10, 5, 7	S-6: Medium dense, gray, fine to coarse SAND, some fine to coarse Gravel, little Silt.				

Remarks: 1. Soil classified from auger cuttings.

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

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PROJECT: PROPOSED MULTI-FAMILY DEVELOPMENT	**BORING NO.:** SLR-3	**SHEET:** 2 OF 2	
LOCATION: 131 DANBURY ROAD, WILTON, CONNECTICUT	**CONTRACTOR:** SITE, LLC		
PROJ. NO: 141.21543.00001	**FOREMAN:** J. DEANGELIS		
CLIENT: AMS ACQUISITIONS	**INSPECTOR:** R. GOWISNOCK		
DATE: DECEMBER 12, 2023	**GROUND SURFACE ELEVATION:** ±144.3'		

EQUIPMENT:	AUGER	CASING	SAMPLER	COREBRL.	GROUNDWATER DEPTH (FT.)			TYPE OF RIG:
TYPE	HSA	-	SS	-	DATE	TIME	WATER DEPTH	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	2023-12-12	11:00 AM	±6.3'	RIG MODEL:
HMR. WT (LB.)	-	-	140	-				CME-55 LCX
HMR. FALL (IN.)	-	-	30	-				

Depth (FT)	SAMPLE NUMBER	RECOVERY (IN)	BLOWS PER 6"	SOIL AND ROCK CLASSIFICATION-DESCRIPTION BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)	DEPTH (FT.)	STRATUM DESCRIPTION	ELEV. (FT.)	Remark
24								
25	S-7	6	16	S-7: Medium dense, gray, fine to coarse SAND and fine to coarse GRAVEL, little Silt.		SAND & GRAVEL		
26			11					
			10					
			11		27.0'		117.3'	
27				Bottom of Exploration ±27.0'				
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								

Remarks:

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

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PROJECT: PROPOSED MULTI-FAMILY DEVELOPMENT	**BORING NO.:** SLR-4	**SHEET:** 1 OF 1
LOCATION: 131 DANBURY ROAD, WILTON, CONNECTICUT	**CONTRACTOR:** SITE, LLC	
PROJ. NO: 141.21543.00001	**FOREMAN:** J. DEANGELIS	
CLIENT: AMS ACQUISITIONS	**INSPECTOR:** R. GOWISNOCK	
DATE: DECEMBER 12, 2023	**GROUND SURFACE ELEVATION:** ±146.0'	

EQUIPMENT:	AUGER	CASING	SAMPLER	COREBRL.	GROUNDWATER DEPTH (FT.)			TYPE OF RIG:
TYPE	HSA	-	SS	-	DATE	TIME	WATER DEPTH	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	2023-12-12	12:45 PM	±6.8'	RIG MODEL:
HMR. WT (LB.)	-	-	140	-				
HMR. FALL (IN.)	-	-	30	-				CME-55 LCX

Depth (FT)	SAMPLE NUMBER	RECOVERY (IN)	BLOWS PER 6"	SOIL AND ROCK CLASSIFICATION-DESCRIPTION BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)	DEPTH (FT.)	STRATUM DESCRIPTION	ELEV. (FT.)	Remark
0-2	S-1	20	2 / 9 / 8 / 9	S-1: Medium dense, Top 8": Dark brown, fine to medium SAND, some Silt, trace Organic Matter. Bottom 12": Brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt.	0.8'	TOPSOIL	145.2'	
2-4	S-2	12	5 / 3 / 2 / 2	S-2: Loose, dark brown-black, fine to medium SAND, some Organic Silt, trace fine Gravel.		ORGANIC SAND & SILT		
5-7	S-3	24	1 / 1 / 2 / 1	S-3: Very loose, black, fine to medium SAND, some Organic Silt.	7.0'	G.W.T.	139.0'	
7-9	S-4	20	3 / 2 / 2 / 7	S-4: Loose, black, fine to medium SAND, some Organic Silt.	8.5'		137.5'	
10-12	S-5	10	8 / 12 / 12 / 16	S-5: Medium dense, gray, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.		SAND & GRAVEL		
15-17	S-6	18	4 / 9 / 11 / 11	S-6: Medium dense, gray, fine to coarse SAND, trace fine Gravel, little Silt.	17.0'		129.0'	
17				Bottom of Exploration ±17.0'				

Remarks:

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

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PROJECT: PROPOSED MULTI-FAMILY DEVELOPMENT		**BORING NO.:** SLR-5	**SHEET:** 1 OF 1
LOCATION: 131 DANBURY ROAD, WILTON, CONNECTICUT		**CONTRACTOR:** SITE, LLC	
PROJ. NO: 141.21543.00001		**FOREMAN:** J. DEANGELIS	
CLIENT: AMS ACQUISITIONS		**INSPECTOR:** R. GOWISNOCK	
DATE: DECEMBER 12, 2023		**GROUND SURFACE ELEVATION:** ±142.3'	

EQUIPMENT:	**AUGER**	**CASING**	**SAMPLER**	**COREBRL.**	**GROUNDWATER DEPTH (FT.)**			**TYPE OF RIG:**
TYPE	HSA	-	SS	-	**DATE**	**TIME**	**WATER DEPTH**	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	12/122023	1:30 PM	±3.5'	**RIG MODEL:**
HMR. WT (LB.)	-	-	140	-				
HMR. FALL (IN.)	-	-	30	-				CME-55 LCX

Depth (FT)	SAMPLE NUMBER	RECOVERY (IN)	BLOWS PER 6"	SOIL AND ROCK CLASSIFICATION-DESCRIPTION BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)	DEPTH (FT.)	STRATUM DESCRIPTION	ELEV. (FT.)	Remark
				Top 3": ASPHALT.	0.3'	**ASPHALT**	142.0'	
				Bottom 9": Brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt.	1.0'	**FILL**	141.3'	1
1	S-1	20	4	S-1: Loose, brown, fine to coarse SAND, little Silt.				
2			3			**SAND**		
			4					
			6		3.0'		139.3'	
3	S-2	16	8	S-2: Medium dense, brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.	3.5'	**G.W.T.**	138.8'	
4			10					
			9					
			13					
5	S-3	15	14	S-3: Very dense, gray-brown, fine to coarse SAND, some fine to coarse GRAVEL, some Silt.				
6			37					
			18					
			17					
7	S-4	17	15	S-4: Dense, gray, fine to coarse SAND and fine to coarse GRAVEL, little Silt.				
8			15			**SAND & GRAVEL**		
			20					
			27					
9								
10	S-5	24	15	S-5: Dense, gray, fine to coarse SAND and fine to coarse GRAVEL, little Silt.				
11			16					
			15					
			11		12.0'		130.3'	
12				Bottom of Exploration ±12.0'				
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

Remarks: 1. Soil classified from auger cuttings.

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

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PROJECT: PROPOSED MULTI-FAMILY DEVELOPMENT		**BORING NO.:** SLR-6	**SHEET:** 1 OF 1
LOCATION: 131 DANBURY ROAD, WILTON, CONNECTICUT		**CONTRACTOR:** SITE, LLC	
PROJ. NO: 141.21543.00001		**FOREMAN:** J. DEANGELIS	
CLIENT: AMS ACQUISITIONS		**INSPECTOR:** R. GOWISNOCK	
DATE: DECEMBER 13, 2023		**GROUND SURFACE ELEVATION:** ±143.2'	

EQUIPMENT:	**AUGER**	**CASING**	**SAMPLER**	**COREBRL.**	**GROUNDWATER DEPTH (FT.)**			**TYPE OF RIG:**
TYPE	HSA	-	SS	-	**DATE**	**TIME**	**WATER DEPTH**	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	2023-12-13	6:45 AM	±5.1'	**RIG MODEL:**
HMR. WT (LB.)	-	-	140	-				CME-55 LCX
HMR. FALL (IN.)	-	-	30	-				

Depth (FT)	SAMPLE NUMBER	RECOVERY (IN)	BLOWS PER 6"	SOIL AND ROCK CLASSIFICATION-DESCRIPTION BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)	DEPTH (FT.)	STRATUM DESCRIPTION	ELEV. (FT.)	Remark
				Top 3": ASPHALT.	0.3'	ASPHALT	142.9'	
1				Bottom 9": Brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.		FILL		1
2	S-1	5	6 5 7 7	S-1: Medium dense, brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.	3.0'		140.2'	
3 4	S-2	20	11 6 7 13	S-2: Medium dense, Top 6": Dark brown, fine to medium SAND, some Organic SILT. Bottom 14": Brown, fine to coarse SAND, little Silt, trace fine Gravel.	4.0'	ORGANIC SAND & SILT	139.2'	
					5.0'	SAND G.W.T.	138.2'	
5 6	S-3	12	9 8 10 15	S-3: Medium dense, brown, fine to coarse GRAVEL and fine to coarse SAND, little Silt.				
7 8	S-4	17	20 17 19 16	S-4: Dense, brown-gray, fine to coarse GRAVEL and fine to coarse SAND, little Silt.				
9 10								
11	S-5	15	12 20 19 22	S-5: Dense, brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.		SAND & GRAVEL		
12 13 14 15								
16	S-6	14	24 34 17 19	S-6: Very dense, brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt.	17.0'		126.2'	
17				Bottom of Exploration ±17.0'				
18								
19								
20								
21								
22								

Remarks: 1. Soil classified from auger cuttings.

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

BORING LOG

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PROJECT: PROPOSED MULTI-FAMILY DEVELOPMENT	**BORING NO.:** SLR-7	**SHEET:** 1 OF 1	
LOCATION: 131 DANBURY ROAD, WILTON, CONNECTICUT	**CONTRACTOR:** SITE, LLC		
PROJ. NO: 141.21543.00001	**FOREMAN:** J. DEANGELIS		
CLIENT: AMS ACQUISITIONS	**INSPECTOR:** R. GOWISNOCK		
DATE: DECEMBER 13, 2023	**GROUND SURFACE ELEVATION:** ±144.5'		

EQUIPMENT:	**AUGER**	**CASING**	**SAMPLER**	**COREBRL.**	**GROUNDWATER DEPTH (FT.)**			**TYPE OF RIG:**
TYPE	HSA	-	SS	-	**DATE**	**TIME**	**WATER DEPTH**	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	2023-12-13	8:00 AM	±5.0'	**RIG MODEL:**
HMR. WT (LB.)	-	-	140	-				CME-55 LCX
HMR. FALL (IN.)	-	-	30	-				

Depth (FT)	**SAMPLE NUMBER**	**RECOVERY (IN)**	**BLOWS PER 6"**	**SOIL AND ROCK CLASSIFICATION-DESCRIPTION** **BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)**	**DEPTH (FT.)**	**STRATUM DESCRIPTION**	**ELEV. (FT.)**	**Remark**
				Top 3.5": ASPHALT.	0.3'	**ASPHALT**	144.2	
1				Bottom 8.5": Brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt.				1
2	S-1	20	13 18 15 13	S-1: Dense, brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt.		**FILL**		
3								
4	S-2	15	8 7 9 6	S-2: Medium dense, brown, fine to coarse GRAVEL, and fine to coarse SAND, some Silt.	5.0'	**G.W.T.**	139.5'	
5								
6	S-3	6	1 1 2 11	S-3: Very loose, brown, fine to medium SAND, little fine Gravel.	6.0'	**ORGANIC SAND & SIILT**	138.5'	1
					7.0'	**SAND**	137.5'	
7								
8	S-4	10	15 22 16 9	S-4: Dense, brown, fine to coarse GRAVEL and fine to coarse SAND, little Silt.		**SAND & GRAVEL**		
9								
10								
11	S-5	10	7 13 9 5	S-5: Medium dense, brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.	12.0'		132.5'	
12				Bottom of Exploration ±12.0'				
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

Remarks: 1. Soil classified from auger cuttings.

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

BORING LOG

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PROJECT: PROPOSED MULTI-FAMILY DEVELOPMENT	**BORING NO.:** SLR-8	**SHEET:** 1 OF 2
LOCATION: 131 DANBURY ROAD, WILTON, CONNECTICUT	**CONTRACTOR:** SITE, LLC	
PROJ. NO: 141.21543.00001	**FOREMAN:** J. DEANGELIS	
CLIENT: AMS ACQUISITIONS	**INSPECTOR:** R. GOWISNOCK	
DATE: DECEMBER 13, 2023	**GROUND SURFACE ELEVATION:** ±146.2'	

EQUIPMENT:	**AUGER**	**CASING**	**SAMPLER**	**COREBRL.**	**GROUNDWATER DEPTH (FT.)**			**TYPE OF RIG:**
TYPE	HSA	-	SS	-	**DATE**	**TIME**	**WATER DEPTH**	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	2023-12-13	10:00 AM	±8.3'	**RIG MODEL:**
HMR. WT (LB.)	-	-	140	-				CME-55 LCX
HMR. FALL (IN.)	-	-	30	-				

Depth (FT)	SAMPLE NUMBER	RECOVERY (IN)	BLOWS PER 6"	SOIL AND ROCK CLASSIFICATION-DESCRIPTION BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)	DEPTH (FT.)	STRATUM DESCRIPTION	ELEV. (FT.)	Remark
				Top 4": ASPHALT.	0.3'	ASPHALT	145.9'	
1				Bottom 8": Brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt.	1.0'	FILL	145.2'	1
2	S-1	14	4 8 9 11	S-1: Medium dense, brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.				
3	S-2	8	62 50/4"	S-2: Very dense, brown, fine to coarse GRAVEL and fine to coarse SAND, trace Silt.				
4								
5								
6	S-3	18	18 20 28 26	S-3: Dense, brown, fine to coarse GRAVEL and fine to coarse SAND, little Silt.				
7						SAND & GRAVEL		
8					8.3'	G.W.T. ▼	137.9'	
9								
10								
11	S-4	13	20 24 35 17	S-4: Very dense, brown, fine to coarse GRAVEL and fine to coarse SAND, little Silt.				
12								
13					13.5'		132.7'	
14						SAND		
15								
16	S-5	20	9 9 8 8	S-5: Medium dense, Top 10": Brown, fine to coarse SAND, some Silt. Bottom 10": Brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt.	16.0'		130.2'	
17								
18								
19						SAND & GRAVEL		
20								
21	S-6	10	18 23 9 10	S-6: Dense, brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt.				
22								

Remarks: 1. Soil classified from auger cuttings.

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

BORING LOG

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	LOCATION: 131 DANBURY ROAD, WILTON, CONNECTICUT		**CONTRACTOR:** SITE, LLC	
	PROJ. NO: 141.21543.00001		**FOREMAN:** J. DEANGELIS	
	CLIENT: AMS ACQUISITIONS		**INSPECTOR:** R. GOWISNOCK	
	DATE: DECEMBER 13, 2023		**GROUND SURFACE ELEVATION:** ±146.2'	

EQUIPMENT:	AUGER	CASING	SAMPLER	COREBRL.	GROUNDWATER DEPTH (FT.)			TYPE OF RIG:
TYPE	HSA	-	SS	-	DATE	TIME	WATER DEPTH	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	2023-12-13	10:00 AM	±8.3'	RIG MODEL:
HMR. WT (LB.)	-	-	140	-				CME-55 LCX
HMR. FALL (IN.)	-	-	30	-				

Depth (FT)	SAMPLE NUMBER	RECOVERY (IN)	BLOWS PER 6"	SOIL AND ROCK CLASSIFICATION-DESCRIPTION BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)	DEPTH (FT.)	STRATUM DESCRIPTION	ELEV. (FT.)	Remark
24								
25			6	S-7: Medium dense, brown, fine to coarse SAND, some fine to coarse GRAVEL, little Silt.		SAND & GRAVEL		
26	S-7	11	10					
			16					
			10		27.0'		119.2'	
27				Bottom of Exploration ±27.0'				
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								

Remarks:

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

BORING LOG

SLR International Corporation
99 Reality Drive, Cheshire, CT 06410
203.271.1773 | ww.slrconsulting.com

PROJECT: PROPOSED MULTI-FAMILY DEVELOPMENT	**BORING NO.:** SLR-9	**SHEET:** 1 OF 1
LOCATION: 131 DANBURY ROAD, WILTON, CONNECTICUT	**CONTRACTOR:** SITE, LLC	
PROJ. NO: 141.21543.00001	**FOREMAN:** J. DEANGELIS	
CLIENT: AMS ACQUISITIONS	**INSPECTOR:** R. GOWISNOCK	
DATE: DECEMBER 13, 2023	**GROUND SURFACE ELEVATION:** ±147.5'	

EQUIPMENT:	AUGER	CASING	SAMPLER	COREBRL.	GROUNDWATER DEPTH (FT.)			TYPE OF RIG:
TYPE	HSA	-	SS	-	DATE	TIME	WATER DEPTH	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	2023-12-13	12:00 PM	±8.8'	RIG MODEL:
HMR. WT (LB.)	-	-	140	-				CME-55 LCX
HMR. FALL (IN.)	-	-	30	-				

Depth (FT)	SAMPLE NUMBER	RECOVERY (IN)	BLOWS PER 6"	SOIL AND ROCK CLASSIFICATION-DESCRIPTION BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)	DEPTH (FT.)	STRATUM DESCRIPTION	ELEV. (FT.)	Remark
1	S-1	15	1, 2, 2, 2	S-1: Loose, dark brown, fine to medium SAND, some Silt, trace Organic Matter.		TOPSOIL		
2	S-2	14	3, 3, 4, 20	S-2: Loose, Top 6": Dark brown, fine to medium SAND, some Silt, trace Organic Matter. Middle 6": Light brown, fine to medium SAND and SILT, trace Organic Matter. Bottom 2": Brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.	2.5'		145.0'	
3					3.5'	SUBSOIL	144.0'	
4								
5	S-3	16	121, 18, 24, 22	S-3: Dense, brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt.				
6								
7	S-4	14	22, 24, 31, 27	S-4: Very dense, brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.		SAND & GRAVEL		
8					8.8'	G.W.T.	138.7'	
9								
10	S-5	15	34, 59, 50/4"	S-5: Very dense, brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt.				
11					11.3'		136.2'	
12				Bottom of Exploration ±11.3'				
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

Remarks:

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

BORING LOG

SLR International Corporation
99 Reality Drive, Cheshire, CT 06410
203.271.1773 | www.slrconsulting.com

PROJECT:	PROPOSED MULTI-FAMILY DEVELOPMENT	**BORING NO.:** SLR-10	**SHEET:** 1 OF 2
LOCATION:	131 DANBURY ROAD, WILTON, CONNECTICUT	**CONTRACTOR:** SITE, LLC	
PROJ. NO:	141.21543.00001	**FOREMAN:** J. DEANGELIS	
CLIENT:	AMS ACQUISITIONS	**INSPECTOR:** R. GOWISNOCK	
DATE:	DECEMBER 13, 2023	**GROUND SURFACE ELEVATION:** ±148.0'	

EQUIPMENT:	**AUGER**	**CASING**	**SAMPLER**	**COREBRL.**	**GROUNDWATER DEPTH (FT.)**			**TYPE OF RIG:**
TYPE	HSA	-	SS	-	**DATE**	**TIME**	**WATER DEPTH**	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	2023-12-13	1:30 PM	±9.0'	**RIG MODEL:**
HMR. WT (LB.)	-	-	140	-				
HMR. FALL (IN.)	-	-	30	-				CME-55 LCX

Depth (FT)	SAMPLE NUMBER	RECOVERY (IN)	BLOWS PER 6"	SOIL AND ROCK CLASSIFICATION-DESCRIPTION BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)	DEPTH (FT.)	STRATUM DESCRIPTION	ELEV. (FT.)	Remark
1	S-1	15	1 11 14 17	S-1: Medium dense, Top 6": Dark brown, fine to medium SAND, some Silt, trace Organic Matter, trace fine Gravel. Bottom 9": Brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt.	0.5'	TOPSOIL	147.5'	
2								
3	S-2	14	29 23 23 30	S-2: Dense, brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.				
4								
5								
6	S-3	16	15 17 19 20	S-3: Dense, brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.				
7								
8								
9					9.0'	G.W.T. ▼	139.0'	
10								
11	S-4	16	12 17 15 14	S-4: Medium dense, brown, fine to coarse GRAVEL and fine to coarse SAND, little Silt.		SAND & GRAVEL		
12								
13								
14								
15								
16	S-5	24	10 10 7 5	S-5: Medium dense, brown, fine to coarse SAND, some fine to coarse Gravel, little Silt.				
17								
18								
19								
20								
21	S-6	15	10 16 13 5	S-6: Medium dense, brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt.				
22								

Remarks:

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

BORING LOG

SLR International Corporation
99 Reality Drive, Cheshire, CT 06410
203.271.1773 | ww.slrconsulting.com

PROJECT: PROPOSED MULTI-FAMILY DEVELOPMENT		**BORING NO.:** SLR-10	**SHEET:** 2 OF 2
LOCATION: 131 DANBURY ROAD, WILTON, CONNECTICUT		**CONTRACTOR:** SITE, LLC	
PROJ. NO: 141.21543.00001		**FOREMAN:** J. DEANGELIS	
CLIENT: AMS ACQUISITIONS		**INSPECTOR:** R. GOWISNOCK	
DATE: DECEMBER 13, 2023		**GROUND SURFACE ELEVATION:** ±148.0'	

EQUIPMENT:	AUGER	CASING	SAMPLER	COREBRL.	GROUNDWATER DEPTH (FT.)			TYPE OF RIG:
TYPE	HSA	-	SS	-	DATE	TIME	WATER DEPTH	TRACK W/ AUTOHAMMER
SIZE ID (IN.)	2 1/4	-	1 3/8	-	2023-12-13	1:30 PM	±9.0'	RIG MODEL:
HMR. WT (LB.)	-	-	140	-				CME-55 LCX
HMR. FALL (IN.)	-	-	30	-				

Depth (FT)	SAMPLE NUMBER	RECOVERY (IN)	BLOWS PER 6"	SOIL AND ROCK CLASSIFICATION-DESCRIPTION BURMISTER SYSTEM (SOIL) U.S. CORPS OF ENGINEERS SYSTEM (ROCK)	DEPTH (FT.)	STRATUM DESCRIPTION	ELEV. (FT.)	Remark
24								
25								
26	S-7	15	2 4 5 10	S-7: Loose, brown, fine to coarse SAND, little fine to coarse Gravel, little Silt.				
27								
28						SAND & GRAVEL		
29								
30								
31	S-8	14	4 6 7 6	S-8: Medium dense, brown, fine to coarse SAND, little fine to coarse Gravel, little Silt.	32.0'		116.0'	
32				Bottom of Exploration ±32.0'				
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								

Remarks:

NON-PLASTIC (SPT-N)	PLASTIC (SPT-N)	SAMPLE TYPE	PROPORTIONS
0-4 = VERY LOOSE	0-2 = VERY SOFT	C = ROCK CORE	trace = <10%
4-10 = LOOSE	2-4 = SOFT	S = SPLIT SPOON	little = 10% - 20%
10-30 = MEDIUM DENSE	4-8 = MEDIUM	UP = UNDISTURBED PISTON	some = 20% - 35%
30-50 = DENSE	8-15 = STIFF	UT = UNDISTURBED THINWALL	and = 35% - 50%
50+ = VERY DENSE	15-30 = VERY STIFF		
	30 + = HARD		

BURMISTER SOIL CLASSIFICATION SYSTEM

A. CLASSIFICATION OF SOIL COMPONENTS

PRINCIPAL COMPONENT	DESCRIPTIVE PARTICLE SIZE	SMALLEST DIAMETER OF ROLLED THREAD (IN.)	SIEVE SIZE	OVERALL PLASTICITY AND PLASTICITY INDEX
GRAVEL	Coarse Fine	---- ----	3/4" to 3" No. 4 to 3/4"	---- ----
SAND	Coarse Medium Fine	---- ---- ----	No. 10 to No. 4 No. 40 to No. 10 No. 200 to No. 40	---- ---- ----
SILT	----	----	Passing No. 200	Non-Plastic 0
Clayey Silt	----	1/4	Passing No. 200	Slight 1 to 5
SILT and CLAY	----	1/8	Passing No. 200	Low 5 to 10
CLAY and SILT	----	1/16	Passing No. 200	Medium 10 to 20
Silty Clay	----	1/32	Passing No. 200	High 20 to 40
CLAY	----	1/64	Passing No. 200	Very High 40 and greater
PEAT	Partially decomposed fibrous organic matter without living fibers			

B. INDENTIFICATION OF DESCRIPTION TERMS

DESCRIPTION OF SOIL COMPONENTS	PERCENTAGE OF SAMPLE BY WEIGHT
PRINCIPAL COMPONENT	
GRAVEL, SAND, SILT CLAY, etc.	50 or more
MINOR COMPONENTS	
and fine to coarse SAND, and GRAVEL, etc.	35 to 50
some some Gravel, some Silt, etc.	20 to 35
little little Gravel, little Silt, etc.	10 to 20
trace trace Gravel, trace Silt, etc.	1 to 10

C. DEFINITION OF TERMS IDENTIFYING THE GRADATION OF THE GRANULAR COMPONENT

GRADATION DESIGNATIONS FOR IDENTIFICATION	DEFINING PROPORTIONS
fine to coarse	all fractions greater than 10 percent
medium to coarse	less than 10 percent fine
fine to medium	less than 10 percent coarse
medium	less than 10 percent coarse and fine
fine	less than 10 percent coarse and medium

D. DENSITY OR CONSISTENCY

GRANULAR SOILS

Standard Penetration Resistance (N value) blows/foot	Relative Density
0 - 4	Very loose
4 - 10	Loose
10 - 30	Medium dense
30 - 50	Dense
50+	Very dense

PLASTIC SOILS

Standard Penetration Resistance (N value) Blows/foot	Consistency
0 - 2	Very soft
2 - 4	Soft
4 - 8	Medium
8 - 15	Stiff
15 - 30	Very stiff
30+	Hard

E. GLOSSARY OF MISCELLANEOUS TERMS

PLUS (+) NEARER THE UPPER LIMIT OF THE PROPORTION OR OVERALL PLASTICITY
MINUS (-) NEARER THE LOWER LIMIT OF THE PROPORTION OR OVERALL PLASTICITY
NO SIGN - MIDDLE RANGE OF THE PROPORTION OR OVERALL PLASTICITY
COBBLES - ROUNDED PIECES OR ROCK BETWEEN 3 TO 6 INCHES
BOULDERS - ROUNDED PIECES OF ROCK LARGER THAN 6 INCHES
ROCK FRAGMENTS - ANGULAR PIECES OF ROCK WHICH HAVE SEPARATED FROM PARENT ROCK AND ARE PRESENT IN A SOIL MATRIX
QUARTZ - A HARD SILICA MINERAL OFTEN FOUND IN SOME GLACIAL LAYERS
IRONITE - CEMENTED DEPOSITS OF IRON OXIDE WITHIN A SOIL LAYER
CEMENTED SAND - VARIOUS SIZED AND GRAINS CEMENTED BY CALCIUM CARBONATE OR OTHER MINERALS WITHIN THE SOIL DEPOSIT
VARVED DEPOSITS - ALTERNATING LIGHT AND DARK LAYERS OF COHESIVE CLAYS AND SILTS DEPOSITED AS GLACIAL LAKE SEDIMENTATION
FISSURED CLAYS - COHESIVE SOILS AND EXHIBITING A JOINT STRUCTURE, GENERALLY SLIGHTLY TO HIGHLY OVER CONSOLIDATED

ORGAINIC MATTER (EXCLUDING PEAT):
TOPSOIL - SURFICIAL SOILS THAT SUPPORT PLANT LIFE AND WHICH CONTAIN CONSIDERABLE AMOUNTS OF ORGANIC MATTER
DECOMPOSED VEGETATION - PARTIALLY DECOMPOSED ORGANIC MATTER WHICH RETAINS ITS ORIGIANAL CHARACTER;
LIGNITE - IMMATURE COALS WITH LOW FIXED CARBON CONTENT GENERALLY EXHIBITING DISTINCT TEXTURE OF WOOD;
HUMUS - COMPLETELY DECOMPOSED ORGANICMATTER
FILL - MAN MADE DEPOSIT CONTAINING SOIL, ROCK OR FOREIGN MATTER
PROBABLE FILL - SOILS WHICH CONTAIN NO VISUALLY DETECTABLE FOREIGN MATTER BUT WHICH ARE SUSPECT WITH RESPECT TO ORIGIN
LENSES - LAYER LESS THAN 1/2 INCH **LAYERS** - 1/2 TO 12 INCH THICK LAYER
POCKET - DISCONTINUOUS LAYERS LESS THAN 12 INCHES
STRATUM - CONTINUOUS LAYERS GREATER THAN 12 INCHES
COLOR SHADING - LIGHT OR DARK TO INIDCATE SUBSTANTIAL DIFFERENCE IN COLOR
MOISTURE CONDITIONS - WET, MOIST, OR DRY PER VISUAL OBSERVATION

APPENDIX 3
LABORATORY TEST RESULTS

GRAIN SIZE DISTRIBUTION TEST DATA

12/29/2023

Client: : SLR Internation Corporation
Date: 12/29/2023
Project: : Proposed Multi-Family Development Wilton, CT
Location: Onsite
Depth: 3'-5' Top
Sample Number: 1120-23
Material Description: Lt. brown silty sand
Liquid Limit: N/A
Plastic Limit: N/A
USCS Classification: N/A
AASHTO Classification: N/A
Test Date: 12/29/2023
Testing Remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-2, Depth 3'-5' Top)
Tested by: SC
Checked by: IC
Test Date: 12/29/2023 **Technician:** SC
Test remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-2, Depth 3'-5' Top)

Sieve Test Data (ASTM C117 & C136)

Post #200 Wash Test Weights (grams): Dry Specimen+Tare = 177.40
Tare Wt. = 0.00

Minus #200 from wash = 32.3%

Specimen Weights
Dry specimen+tare (gms.) = 262.00
Tare (gms.) = 0.00

Cumulative pan tare (gms.) = 0.00

Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Passing	Percent Retained
3/4"	0.00	100.0	0.0
1/4"	2.70	99.0	1.0
#4	4.20	98.4	1.6
#10	7.50	97.1	2.9
#40	86.60	66.9	33.1
#100	158.70	39.4	60.6
#200	176.80	32.5	67.5

Pan + tare = 0 Tare = 0 Loss during sieving = 0.2%
Total loss (wash+pan/specimen) = 32.3%

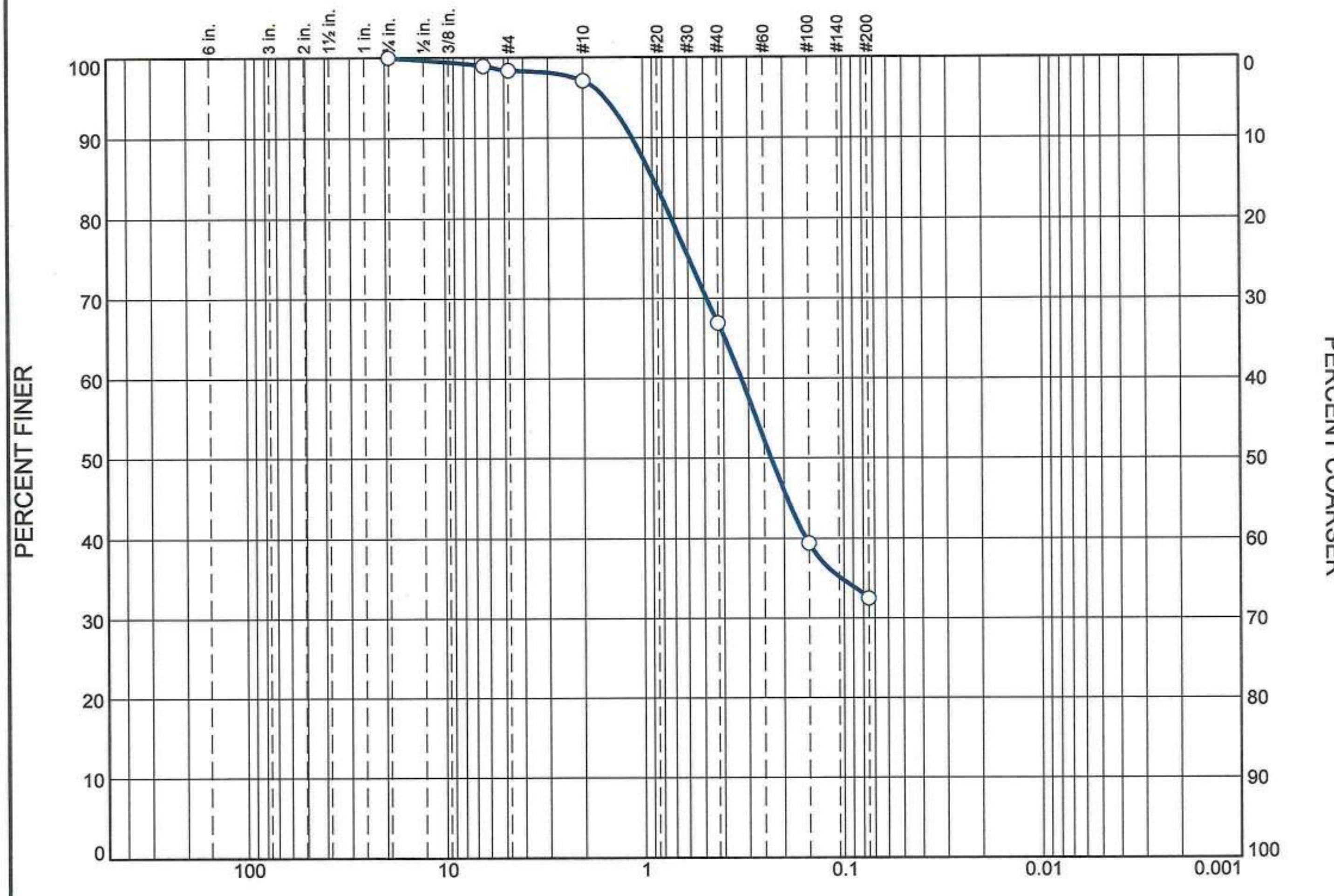
Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.6	1.6	1.3	30.2	34.4	65.9			32.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
					0.1546	0.2311	0.3256	0.7255	0.8957	1.1344	1.5511

Fineness Modulus
1.41

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	1.6	1.3	30.2	34.4	32.5	

╳	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	N/A	N/A	0.8957	0.3256	0.2311					

MATERIAL DESCRIPTION	TEST DATE	USCS	NM
○ Lt. brown silty sand	12/29/2023	N/A	

Project No. **Client:** : SLR Internation Corporation Date: 12/29/2023

Project: : Proposed Multi-Family Development Wilton, CT

○ **Source of Sample:** Onsite **Depth:** 3'-5' Top **Sample Number:** 1120-23

Remarks:

○ ASTM C 117, ASTM C 136 (Sample ID= SLR-2, Depth 3'-5' Top)

Tri State Materials Testing Lab

Berlin, Connecticut

Figure

Tested By: SC **Checked By:** IC

TRI STATE MATERIALS TESTING LAB LLC.
New England Regional Office
60 Woodlawn Road, Berlin CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:**	001
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12-29-2023
Contractor:	N/A	**LAB #:**	1120-23
Technician:	IC		

LABORATORY PERMEABILITY TEST

Sample Description: Lt. brown silty sand

Source: Onsite

Sample ID: SLR-2

Method: ASTM D2434 (Constant Head)

$k = QL/Ath$

Where k = Coefficient of permeability

Q = quantity of water discharged,	Q = 1000 cm^3
L = length of the sample in centimeters	L = 5.08 cm
A = cross-sectional area of the specimen,	A = 31.93 cm^2
t = total time for discharge, in seconds	t = 10800 sec
h = difference in head manometers,	h = 60 cm

K = 0.000245522 cm/sec = 2.5×10^{-4} cm/sec or 0.8 inch/hour

The permeability (k) of the sample was tested at approx. 92% of the maximum dry density.

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC

Paul J. Hessel, P.E.

TRI STATE MATERIALS TESTING LAB, LLC.
New England Regional Office
60 Woodlawn Road • Berlin, CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:** **Unit Weight**	001-23 001-23
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12/29/2023
Contractor:	SLR International Corporation	**Sample #**	1120-23
Technician:	I.C	**Sample ID**	SLR-2

SOIL UNIT WEIGHT

Formula: M=(G-t)/V
M=bulk density of the aggregate, kg/m3 [lb./ft3]
G=mass of the aggregate plus the measure, kg [lb.]
T=mass of the measure, kg [lb.]
V=volume of the measure, m3 [ft3]
$V = \pi r^2 h$

Sample #	Material	Volume	Mass of Soil	Density
1120-23	Lt. brown silty sand	0.005451389 [ft3]	0.57611 lbs.	106.0 lb./ft3

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC.

Paul J. Hessel, P.E.

GRAIN SIZE DISTRIBUTION TEST DATA

12/29/2023

Client: : SLR Internation Corporation
Date: 12/29/2023

Project: : Proposed Multi-Family Development Wilton, CT

Location: Onsite

Depth: 5'-7'
Sample Number: 1121-23

Material Description: Lt. brown silty sand with gravel

Liquid Limit: N/A
Plastic Limit: N/A

USCS Classification: N/A
AASHTO Classification: N/A

Test Date: 12/29/2023

Testing Remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-5, Depth 5'-7')

Tested by: SC
Checked by: IC

Test Date: 12/29/2023 **Technician:** SC

Test remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-5, Depth 5'-7')

Sieve Test Data (ASTM C117 & C136)

Post #200 Wash Test Weights (grams): Dry Specimen+Tare = 320.60
Tare Wt. = 0.00

Minus #200 from wash = 23.2%

Specimen Weights
Dry specimen+tare (gms.) = 417.40
Tare (gms.) = 0.00

Cumulative pan tare (gms.) = 0.00

Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Passing	Percent Retained
1 1/4"	0.00	100.0	0.0
3/4"	25.60	93.9	6.1
1/4"	127.20	69.5	30.5
#4	145.60	65.1	34.9
#10	198.50	52.4	47.6
#40	275.60	34.0	66.0
#100	310.10	25.7	74.3
#200	319.70	23.4	76.6

Pan + tare = 0 Tare = 0 Loss during sieving = 0.2%

Total loss (wash+pan/specimen) = 23.2%

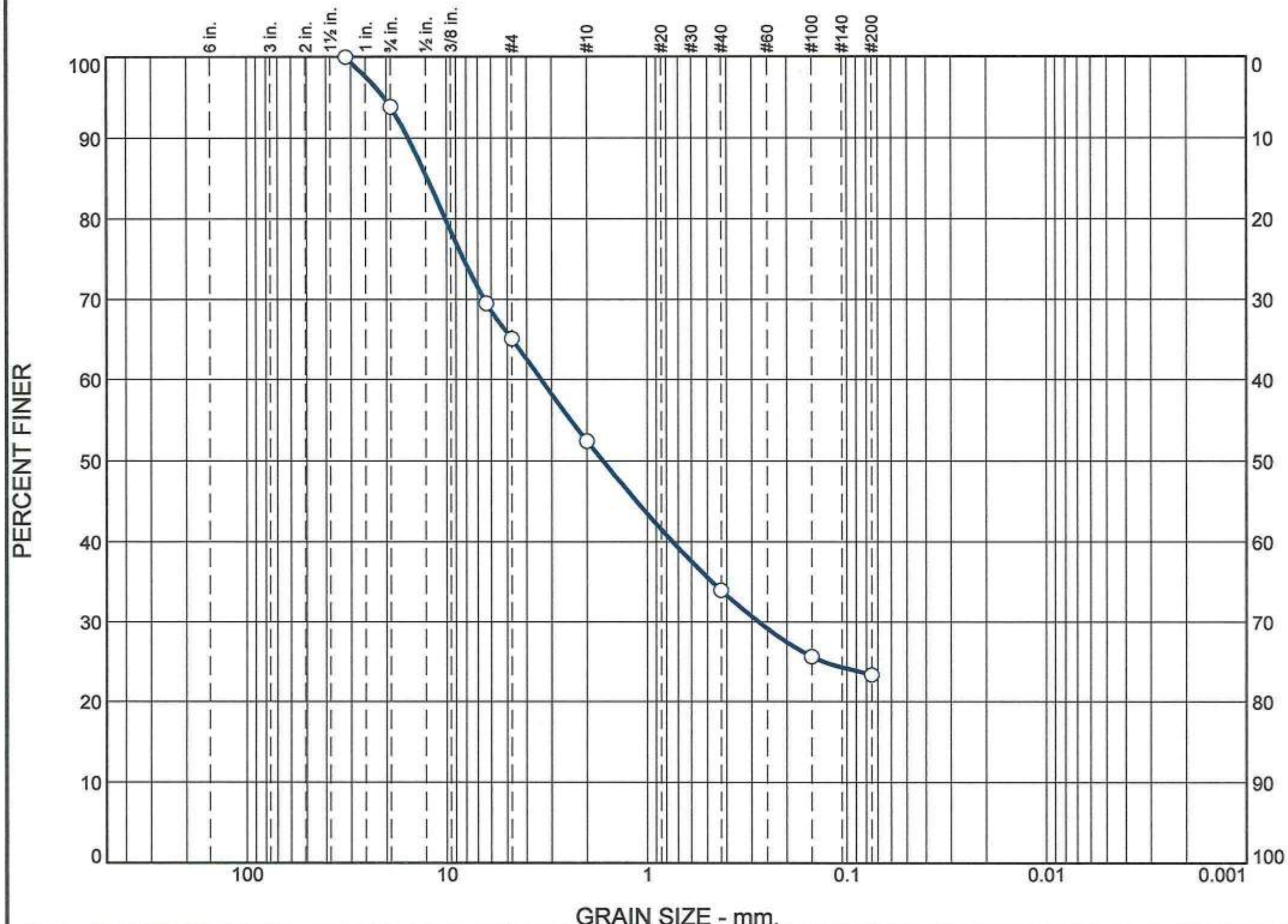
Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	6.1	28.8	34.9	12.7	18.4	10.6	41.7			23.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.2757	0.7428	1.6618	3.3827	10.1656	12.5016	15.5889	20.4709

Fineness Modulus
3.68

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	6.1	28.8	12.7	18.4	10.6	23.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	N/A	N/A	12.5016	3.3827	1.6618	0.2757				

MATERIAL DESCRIPTION	TEST DATE	USCS	NM
○ Lt. brown silty sand with gravel	12/29/2023	N/A	

Project No. **Client:** : SLR Internation Corporation Date: 12/29/2023

Project: : Proposed Multi-Family Development Wilton, CT

○ **Source of Sample:** Onsite **Depth:** 5'-7' **Sample Number:** 1121-23

Remarks:
○ ASTM C 117, ASTM C 136 (Sample ID= SLR-5, Depth 5'-7')

Tri State Materials Testing Lab

Berlin, Connecticut

Figure

Tested By: SC **Checked By:** IC

TRI STATE MATERIALS TESTING LAB LLC.
New England Regional Office
60 Woodlawn Road, Berlin CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:**	002
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12-29-2023
Contractor:	N/A	**LAB #:**	1121-23
Technician:	IC		

LABORATORY PERMEABILITY TEST

Sample Description: Lt. brown silty sand with gravel

Source: Onsite

Sample ID: SLR-5

Method: ASTM D2434 (Constant Head)

$k = QL/Ath$

Where k = Coefficient of permeability

Q = quantity of water discharged,	$Q = 1000\ cm^3$
L = length of the sample in centimeters	$L = 6.985$ cm
A = cross-sectional area of the specimen,	$A = 31.93\ cm^2$
t = total time for discharge, in seconds	$t = 5100$ sec
h = difference in head manometers,	$h = 60$ cm

K = 0.000714901 cm/sec = 7.1×10^{-4} or 2.5 inch/hour

The permeability (k) of the sample was tested at approx. 92% of the maximum dry density.

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC

Paul J. Hessel, P.E.

TRI STATE MATERIALS TESTING LAB, LLC.
New England Regional Office
60 Woodlawn Road • Berlin, CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:** **Unit Weight**	02-23 002-23
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12/29/2023
Contractor:	SLR International Corporation	**Sample#:**	1121-23
Technician:	I.C	**Sample ID**	SLR-5

SOIL UNIT WEIGHT

Formula: M=(G-t)/V
M=bulk density of the aggregate, kg/m3 [lb./ft3]
G=mass of the aggregate plus the measure, kg [lb.]
T=mass of the measure, kg [lb.]
V=volume of the measure, m3 [ft3]
$V = \pi r^2 h$

Sample #	Material	Volume	Mass of Soil	Density
1121-23	Lt. brown silty sand with gravel	0.007494213 [ft3]	0.92020948 lbs.	122.7 lb./ft3

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC.

Paul J. Hessel, P.E.

GRAIN SIZE DISTRIBUTION TEST DATA

12/29/2023

Client: : SLR Internation Corporation
Date: 12/29/2023
Project: : Proposed Multi-Family Development Wilton, CT
Location: Onsite
Depth: 5'-7'
Sample Number: 1122-23
Material Description: 1 1/4" Minus gravel with sand, little fines
Liquid Limit: N/A
Plastic Limit: N/A
USCS Classification: N/A
AASHTO Classification: N/A
Test Date: 12/29/2023
Testing Remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-6, Depth 5'-7')
Tested by: SC
Checked by: IC
Test Date: 12/29/2023 **Technician:** SC
Test remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-6, Depth 5'-7')

Sieve Test Data (ASTM C117 & C136)

Post #200 Wash Test Weights (grams): Dry Specimen+Tare = 262.30
Tare Wt. = 0.00

Minus #200 from wash = 11.9%

Specimen Weights
Dry specimen+tare (gms.) = 297.60
Tare (gms.) = 0.00

Cumulative pan tare (gms.) = 0.00

Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Passing	Percent Retained
1 1/4"	0.00	100.0	0.0
3/4"	33.30	88.8	11.2
1/4"	125.20	57.9	42.1
#4	138.60	53.4	46.6
#10	177.50	40.4	59.6
#40	237.80	20.1	79.9
#100	259.00	13.0	87.0
#200	261.80	12.0	88.0

Pan + tare = 0 Tare = 0 Loss during sieving = 0.2%
Total loss (wash+pan/specimen) = 11.9%

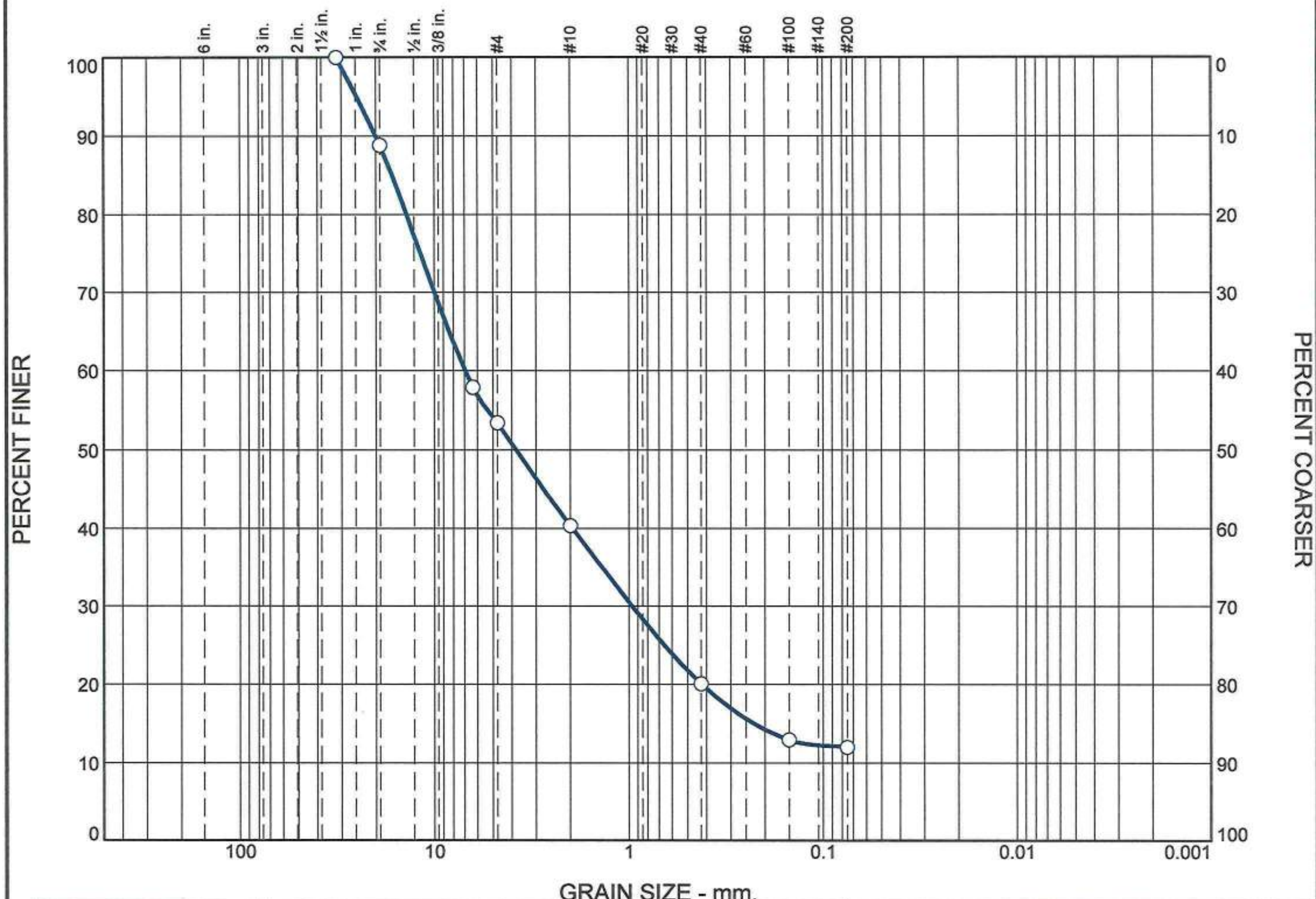
Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	11.2	35.4	46.6	13.0	20.3	8.1	41.4			12.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.2252	0.4210	0.9616	1.9502	3.8030	6.9471	13.8803	16.4971	20.0000	25.0607

Fineness Modulus
4.60

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
o	0.0	11.2	35.4	13.0	20.3	8.1	12.0	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
o	N/A	N/A	16.4971	6.9471	3.8030	0.9616	0.2252			

MATERIAL DESCRIPTION	TEST DATE	USCS	NM
o 1 1/4" Minus gravel with sand, little fines	12/29/2023	N/A	

Project No. **Client:** : SLR Internation Corporation Date: 12/29/2023

Project: : Proposed Multi-Family Development Wilton, CT

o **Source of Sample:** Onsite **Depth:** 5'-7' **Sample Number:** 1122-23

Remarks:

o ASTM C 117, ASTM C 136 (Sample ID= SLR-6, Depth 5'-7')

Tri State Materials Testing Lab

Berlin, Connecticut

Figure

Tested By: SC **Checked By:** IC

TRI STATE MATERIALS TESTING LAB LLC.
New England Regional Office
60 Woodlawn Road, Berlin CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:**	003
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12-29-2023
Contractor:	N/A	**LAB #:**	1122-23
Technician:	IC		

LABORATORY PERMEABILITY TEST

Sample Description: 1 ¼" Minus gravel with sand, little fines

Source: Onsite

Sample ID: SLR-6

Method: ASTM D2434 (Constant Head)

$k = QL/Ath$

Where k = Coefficient of permeability

Q = quantity of water discharged,	$Q = 1000 \ cm^3$
L = length of the sample in centimeters	$L = 5.08$ cm
A = cross-sectional area of the specimen,	$A = 31.93 \ cm^2$
t = total time for discharge, in seconds	$t = 900$ sec
h = difference in head manometers,	$h = 60$ cm

$K = 0.00294626$ cm/sec $= 2.9 \times 10^{-3}$ or 10.6 inch/hour

The permeability (k) of the sample was tested at approx. 92% of the maximum dry density.

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC

Paul J. Hessel, P.E.

TRI STATE MATERIALS TESTING LAB, LLC.
New England Regional Office
60 Woodlawn Road • Berlin, CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:** **Unit Weight**	03-23 003-23
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12/29/2023
Contractor:	SLR International Corporation	**Sample #:**	1122-23
Technician:	I.C	**Sample ID**	SLR-6

SOIL UNIT WEIGHT

Formula: M=(G-t)/V
M=bulk density of the aggregate, kg/m3 [lb./ft3]
G=mass of the aggregate plus the measure, kg [lb.]
T=mass of the measure, kg [lb.]
V=volume of the measure, m3 [ft3]
$V= \pi r^2 h$

Sample #	Material	Volume	Mass of Soil	Density
1122-23	1 ¼" Minus gravel with sand, little fines	0.005451389 [ft3]	0.65609569 lbs.	120.3 lb./ft3

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC.

Paul J. Hessel, P.E.

GRAIN SIZE DISTRIBUTION TEST DATA

12/29/2023

Client: : SLR Internation Corporation

Date: 12/29/2023

Project: : Proposed Multi-Family Development Wilton, CT

Location: Onsite

Depth: 3'-5'

Sample Number: 1123-23

Material Description: 1 1/4" Minus gravel with silty sand

Liquid Limit: N/A

Plastic Limit: N/A

USCS Classification: N/A

AASHTO Classification: N/A

Test Date: 12/29/2023

Testing Remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-7, Depth 3'-5')

Tested by: SC

Checked by: IC

Test Date: 12/29/2023 **Technician:** SC

Test remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-7, Depth 3'-5')

Sieve Test Data (ASTM C117 & C136)

Post #200 Wash Test Weights (grams): Dry Specimen+Tare = 239.20
Tare Wt. = 0.00

Minus #200 from wash = 21.2%

Specimen Weights
Dry specimen+tare (gms.) = 303.50
Tare (gms.) = 0.00

Cumulative pan tare (gms.) = 0.00

Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Passing	Percent Retained
1 1/4"	0.00	100.0	0.0
3/4"	37.40	87.7	12.3
1/4"	115.80	61.8	38.2
#4	129.90	57.2	42.8
#10	165.50	45.5	54.5
#40	216.60	28.6	71.4
#100	236.00	22.2	77.8
#200	238.30	21.5	78.5

Pan + tare = 0 Tare = 0 Loss during sieving = 0.3%

Total loss (wash+pan/specimen) = 21.2%

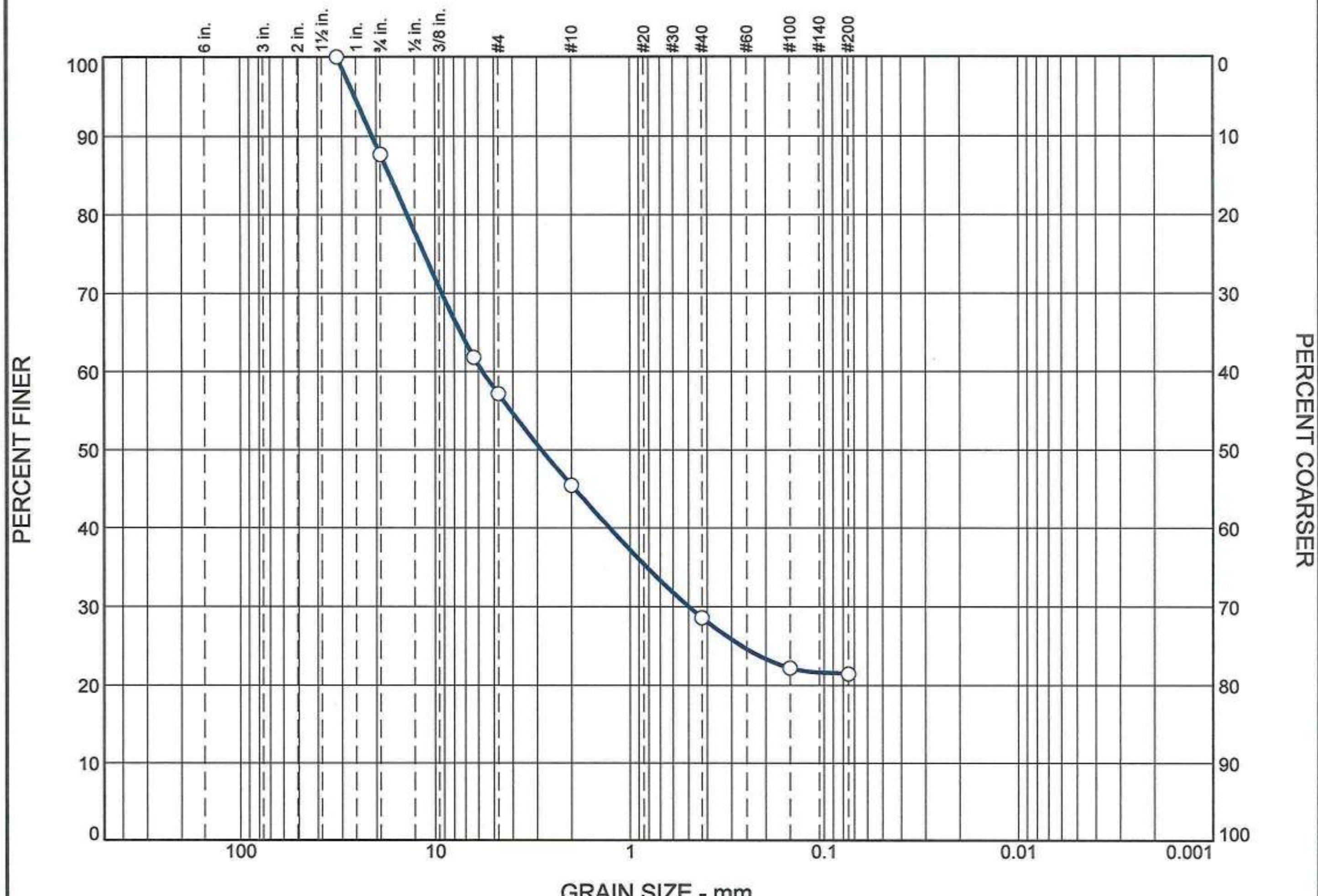
Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	12.3	30.5	42.8	11.7	16.9	7.1	35.7			21.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.4962	1.2695	2.8497	5.7260	13.9139	17.0473	20.9925	25.8227

Fineness Modulus
4.18

Particle Size Distribution Report



	% +3"	% Gravel Coarse	% Gravel Fine	% Sand Coarse	% Sand Medium	% Sand Fine	% Fines Silt	% Fines Clay
○	0.0	12.3	30.5	11.7	16.9	7.1	21.5	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	N/A	N/A	17.0473	5.7260	2.8497	0.4962				

MATERIAL DESCRIPTION	TEST DATE	USCS	NM
○ 1 1/4" Minus gravel with silty sand	12/29/2023	N/A	

Project No. **Client:** : SLR Internation Corporation Date: 12/29/2023

Project: : Proposed Multi-Family Development Wilton, CT

○ **Source of Sample:** Onsite **Depth:** 3'-5' **Sample Number:** 1123-23

Remarks:

○ASTM C 117, ASTM C 136 (Sample ID= SLR-7, Depth 3'-5')

Tri State Materials Testing Lab

Berlin, Connecticut

Figure

Tested By: SC **Checked By:** IC

TRI STATE MATERIALS TESTING LAB LLC.
New England Regional Office
60 Woodlawn Road, Berlin CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:**	004
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12-29-2023
Contractor:	N/A	**LAB #:**	1123-23
Technician:	IC		

LABORATORY PERMEABILITY TEST

Sample Description: 1 ¼" Minus gravel with silty sand

Source: Onsite

Sample ID: SLR-7

Method: ASTM D2434 (Constant Head)

k = QL/Ath

Where k = Coefficient of permeability

Q = quantity of water discharged,	Q = 1000 cm^3
L = length of the sample in centimeters	L = 5.08 cm
A = cross-sectional area of the specimen,	A = 31.93 cm^2
t = total time for discharge, in seconds	t = 4500 sec
h = difference in head manometers,	h = 60 cm

K = 0.000589252 cm/sec = 5.8 $\times 10^{-4}$ or 2.1 inch/hour

The permeability (k) of the sample was tested at approx. 92% of the maximum dry density.

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC

Paul J. Hessel, P.E.

TRI STATE MATERIALS TESTING LAB, LLC.
New England Regional Office
60 Woodlawn Road • Berlin, CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:** **Unit Weight**	04-23 004-23
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12/29/2023
Contractor:	SLR International Corporation	**Sample #:**	1123-23
Technician:	I.C	**Sample ID**	SLR-7

SOIL UNIT WEIGHT

Formula: M=(G-t)/V
M=bulk density of the aggregate, kg/m3 [lb./ft3]
G=mass of the aggregate plus the measure, kg [lb.]
T=mass of the measure, kg [lb.]
V=volume of the measure, m3 [ft3]
$V = \pi r^2 h$

Sample #	Material	Volume of measure	Mass of Soil	Density
1123-23	1 ¼" Minus gravel with silty sand	0.005451389 [ft3]	0.66844158 lbs.	122.6 lb./ft3

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC.

Paul J. Hessel, P.E.

GRAIN SIZE DISTRIBUTION TEST DATA

12/29/2023

Client: : SLR Internation Corporation
Date: 12/29/2023
Project: : Proposed Multi-Family Development Wilton, CT
Location: Onsite
Depth: 5'-7'
Sample Number: 1124-23
Material Description: 1 1/4" Minus gravel with sand, little fines
Liquid Limit: N/A
Plastic Limit: N/A
USCS Classification: N/A
AASHTO Classification: N/A
Test Date: 12/29/2023
Testing Remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-8, Depth 5'-7')
Tested by: SC
Checked by: IC
Test Date: 12/29/2023 **Technician:** SC
Test remarks: ASTM C 117, ASTM C 136 (Sample ID= SLR-8, Depth 5'-7')

Sieve Test Data (ASTM C117 & C136)

Post #200 Wash Test Weights (grams): Dry Specimen+Tare = 355.80
Tare Wt. = 0.00

Minus #200 from wash = 13.1%

Specimen Weights
Dry specimen+tare (gms.) = 409.40
Tare (gms.) = 0.00

Cumulative pan tare (gms.) = 0.00

Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Passing	Percent Retained
1 1/4"	0.00	100.0	0.0
3/4"	52.60	87.2	12.8
1/4"	172.40	57.9	42.1
#4	189.50	53.7	46.3
#10	238.90	41.6	58.4
#40	319.30	22.0	78.0
#100	348.90	14.8	85.2
#200	355.20	13.2	86.8

Pan + tare = 0 Tare = 0 Loss during sieving = 0.1%
Total loss (wash+pan/specimen) = 13.1%

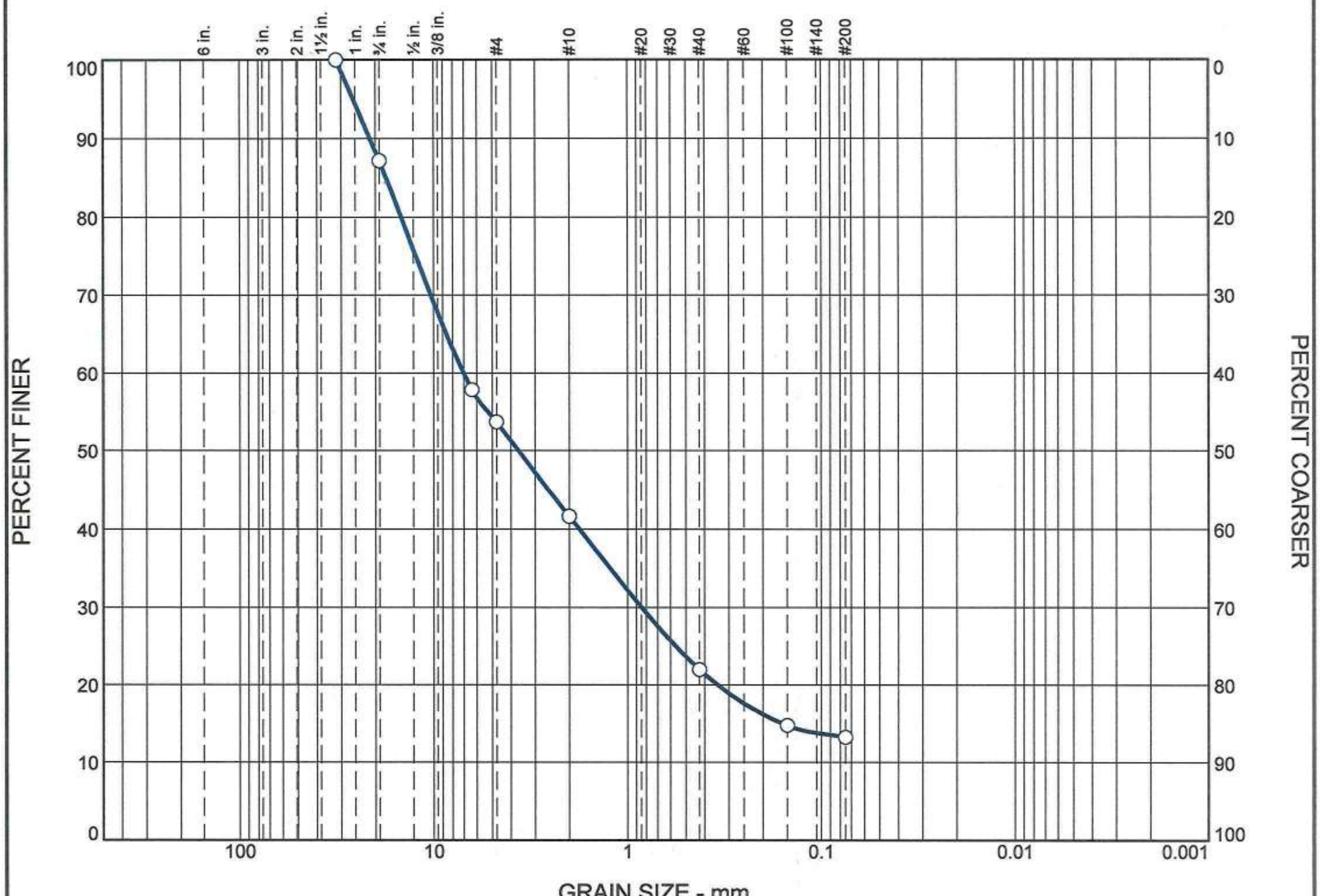
Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	12.8	33.5	46.3	12.1	19.6	8.8	40.5			13.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.1573	0.3410	0.8447	1.7692	3.6565	7.0014	14.6619	17.5599	21.2912	25.9894

Fineness Modulus
4.54

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	12.8	33.5	12.1	19.6	8.8	13.2	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	N/A	N/A	17.5599	7.0014	3.6565	0.8447	0.1573			

MATERIAL DESCRIPTION	TEST DATE	USCS	NM
○ 1 1/4" Minus gravel with sand, little fines	12/29/2023	N/A	

Project No. **Client:** : SLR Internation Corporation Date: 12/29/2023

Project: : Proposed Multi-Family Development Wilton, CT

○ **Source of Sample:** Onsite **Depth:** 5'-7' **Sample Number:** 1124-23

Remarks:
○ ASTM C 117, ASTM C 136 (Sample ID= SLR-8, Depth 5'-7')

Tri State Materials Testing Lab

Berlin, Connecticut

Figure

Tested By: SC **Checked By:** IC

TRI STATE MATERIALS TESTING LAB LLC.
New England Regional Office
60 Woodlawn Road, Berlin CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:**	005
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12-29-2023
Contractor:	N/A	**LAB #:**	1124-23
Technician:	IC		

LABORATORY PERMEABILITY TEST

Sample Description: 1 ¼" Minus gravel with sand, little fines

Source: Onsite

Sample ID: SLR-8

Method: ASTM D2434 (Constant Head)

$k = QL/Ath$

Where k = Coefficient of permeability

Q = quantity of water discharged,	Q = 1000 cm^3
L = length of the sample in centimeters	L = 6.985 cm
A = cross-sectional area of the specimen,	A = 31.93 cm^2
t = total time for discharge, in seconds	t = 1200 sec
h = difference in head manometers,	h = 60 cm

$K = 0.00303833$ cm/sec $= 3.0 \times 10^{-3}$ or 10.9 inch/hour

The permeability (k) of the sample was tested at approx. 92% of the maximum dry density.

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC

Paul J. Hessel, P.E.

TRI STATE MATERIALS TESTING LAB, LLC.
New England Regional Office
60 Woodlawn Road • Berlin, CT 06037 • Tel: 203-949-7733 • Fax: 203-949-7735

Client:	SLR International Corporation 99 Realty Drive Cheshire, CT 06410	**Report:** **Unit Weight**	05-23 005-23
Project:	Proposed Multi-Family Development Wilton, CT	**Date:**	12/29/2023
Contractor:	SLR International Corporation	**Sample #:**	1124-23
Technician:	I.C	**Sample ID**	SLR-8

SOIL UNIT WEIGHT

Formula: M=(G-t)/V
M=bulk density of the aggregate, kg/m3 [lb./ft3]
G=mass of the aggregate plus the measure, kg [lb.]
T=mass of the measure, kg [lb.]
V=volume of the measure, m3 [ft3]
$V= \pi r^2 h$

Sample #	Material	Volume	Mass of Soil	Density
1124-23	1 ¼" Minus gravel with sand, little fines	0.007495659 [ft3]	0.9025725 lbs.	120.4 lb./ft3

Reported To: SLR International Corporation

Submitted By: Tri State Materials Testing Lab, LLC.

Paul J. Hessel, P.E.

APPENDIX 4
LIMITATIONS

Limitations

This report has been prepared for the exclusive use of AMS Acquisitions in a manner consistent with generally accepted professional consulting principles and practices for the same locality under similar conditions. No other representations or warranties, expressed or implied, are made. These services were performed consistent with our agreement with our client. This work product is intended solely for the use and information of our client unless otherwise noted. Any reliance on this work product by a third party is at such party's sole risk.

Opinions and recommendations contained in this work product are based on conditions that existed at the time the services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. The data reported and the findings, observations, and conclusions expressed are limited by the scope of work. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this work product.

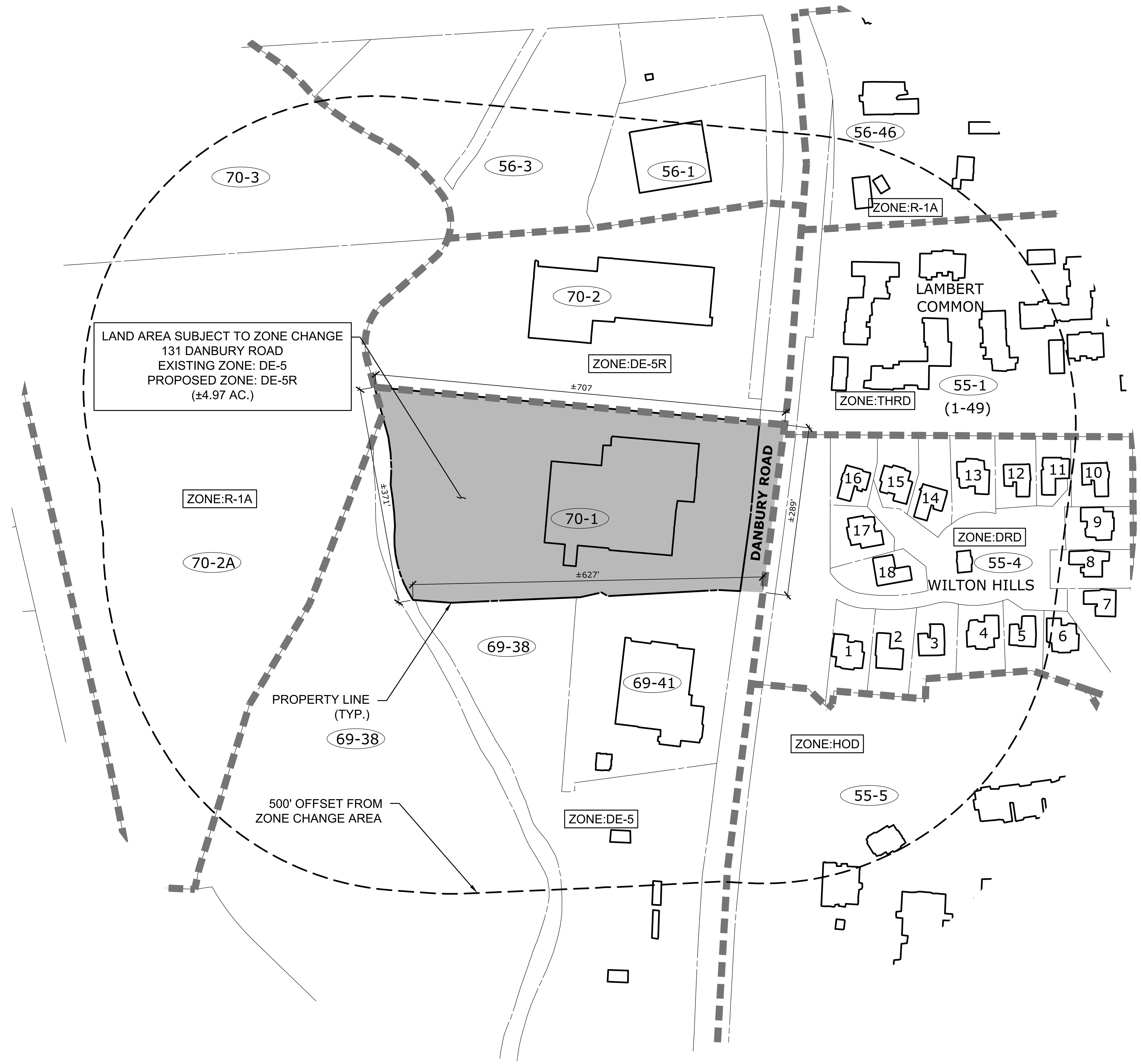
The services described in this report were performed consistent with generally accepted geotechnical engineering principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third Party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames and project parameters indicated. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

The conclusions and recommendations in this report are invalid if:

- The assumed design loads change;
- The structures are relocated;
- The report is used for adjacent or other property or buildings;
- If grades, ground water levels, or both, change between the issuance of this report and construction; or
- Any other change is implemented that materially alters the project from that proposed when this report was prepared.

The exploration logs do not provide a warranty of the conditions that may exist at the entire site. The extent and nature of subsurface soil and groundwater variations may not become evident until construction begins. Variations in soil conditions between borings could possibly exist between or beyond the points of exploration or groundwater elevations may change, both of which may require additional studies, consultation, and possible design revisions. **Any person associated with this project who observes conditions or features of the site or surrounding areas that are different from those described in this report should report them immediately to the company for consideration and evaluation. This report was prepared solely for the use of our client and should be reviewed in its entirety.**



LEGEND

	SUBJECT PROPERTY PROPERTY LINE
	PROPERTY LINE
	EXISTING ZONE LINE
	500' OFFSET FROM ZONE CHANGE AREA
	AREA OF ZONE CHANGE
56-46	ASSESSOR'S MAP AND LOT NUMBER

N S E W

0' 50' 100'

0 1/2" 1"

SLR

99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY

ZONE CHANGE MAP

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

RH	RH	TD
DESIGNED	DRAWN	CHECKED

SCALE: 1"=100'

DATE: NOVEMBER 27, 2023

PROJECT NO.: 21543.00001

SHEET NO.: 1 OF 1

SHEET NAME: ZC

LIST OF NEIGHBORING PROPERTY OWNERS WITHIN 500'

131 Danbury Road (11/15/23)

	MBLU	Site Address	Owner Name	Mailing Address	Mailing City	Mailing State	Mailing Zip
1	55-1-1	1 LAMBERT COMMON	PEREIRA NORBERTO NARCIZO & PEREIRA MARIA REGINA	1 LAMBERT COMMON	WILTON	CT	06897- 0000
2	55-1-2	2 LAMBERT COMMON	KELEPECZ SONYA	2 LAMBERT COMMON	WILTON	CT	06897- 0000
3	55-1-3	3 LAMBERT COMMON	AVGERINOS MICHAEL AND LINDA LIVING TRUST	3 LAMBERT COMMON	WILTON	CT	06897- 0000
4	55-1-4	4 LAMBERT COMMON	RHODES OLGA L	4 LAMBERT COMMON	WILTON	CT	06897- 0000
5	55-1-5	5 LAMBERT COMMON	BRILL ROBERTA SODEN	5 LAMBERT COMMON	WILTON	CT	06897- 0000
6	55-1-6	6 LAMBERT COMMON	MELATO DENISE	6 LAMBERT COMMON	WILTON	CT	06897- 0000
7	55-1-7	7 LAMBERT COMMON	FARLEY IRENE R	7 LAMBERT COMMON	WILTON	CT	06897- 0000
8	55-1-8	8 LAMBERT COMMON	LUPINSKY ANNA	8 LAMBERT COMMON	WILTON	CT	06897- 0000
9	55-1-9	9 LAMBERT COMMON	BELLOVIN BENJAMIN &	9 LAMBERT COMMON	WILTON	CT	06897- 0000
10	55-1-10	10 LAMBERT COMMON	GUNDERSON BARRY	10 LAMBERT COMMON	WILTON	CT	06897- 0000
11	55-1-11	11 LAMBERT COMMON	GIBBON CAROL	11 LAMBERT COMMON	WILTON	CT	06897- 0000
12	55-1-12	12 LAMBERT COMMON	DA CONCEICAO MIRYAM D & LOPES MELANIE MARIE	12 LAMBERT COMMON	WILTON	CT	06897- 0000
13	55-1-13	13 LAMBERT COMMON	RITCH MARIE TRUSTEE	13 LAMBERT COMMON	WILTON	CT	06897- 0000
14	55-1-14	14 LAMBERT COMMON	WERBLOOD SHERRILL L	14 LAMBERT COMMON	WILTON	CT	06897- 0000
15	55-1-15	15 LAMBERT COMMON	DEVINE CAROL A	224 HOMELAND ST	FAIRFIELD	CT	06825- 0000
16	55-1-16	16 LAMBERT COMMON	QIAN WEIDONG	16 LAMBERT COMMON	WILTON	CT	06897- 0000
17	55-1-17	17 LAMBERT COMMON	TZANOS REBECCA	17 LAMBERT COMMON	WILTON	CT	06897- 0000
18	55-1-18	18 LAMBERT COMMON	DEMPSEY ELIZABETH KIMBALL TR	18 LAMBERT COMMON	WILTON	CT	06897- 0000
19	55-1-19	19 LAMBERT COMMON	MACLAINE MEREDITH ANNE MUNRO	19 LAMBERT COMMON	WILTON	CT	06897- 0000
20	55-1-20	20 LAMBERT COMMON	ZAPPALA PHYLLIS F TRUSTEE	18 BUTTONBALL LA	WESTON	CT	06883- 0000
21	55-1-21	21 LAMBERT COMMON	CHO MIYOUNG	21 LAMBERT COMMON	WILTON	CT	06897- 0000
22	55-1-22	22 LAMBERT COMMON	CANZONETTI RICHARD & EDITH	22 LAMBERT COMMON	WILTON	CT	06897- 0000
23	55-1-23	23 LAMBERT COMMON	SHRAGO MARSHA	23 LAMBERT COMMON	WILTON	CT	06897- 0000
24	55-1-24	24 LAMBERT COMMON	HAUSDORFF RITA H	24 LAMBERT COMMOM	WILTON	CT	06897- 0000
25	55-1-25	25 LAMBERT COMMON	KASMAN CHRISTINA MARIE & ROSENBERG SAMUEL CHARLES	25 LAMBERT COMMON	WILTON	CT	06897- 0000
26	55-1-26	26 LAMBERT COMMON	KIM GUMSOOK & HWI TAE	26 LAMBERT COMMON	WILTON	CT	06897- 0000
27	55-1-27	27 LAMBERT COMMON	BURROUGHS NANCY	27 LAMBERT COMMON	WILTON	CT	06897- 0000
28	55-1-28	28 LAMBERT COMMON	KELLEY MARGARET M	28 LAMBERT COMMON	WILTON	CT	06897- 0000
29	55-1-29	29 LAMBERT COMMON	MANNIX CATHERINE J	32 DOROTHY RD	REDDING	CT	06896- 0000
30	55-1-30	30 LAMBERT COMMON	MCSWEENEY MADY E	30 LAMBERT COMMON	WILTON	CT	06897- 0000
31	55-1-31	31 LAMBERT COMMON	KEARNEY PETER A TRUSTEE	31 LAMBERT COMMON	WILTON	CT	06897- 0000
32	55-1-32	32 LAMBERT COMMON	ALIANIELLO ROCCO	32 LAMBERT COMMON	WILTON	CT	06897- 0000
33	55-1-33	33 LAMBERT COMMON	OLSON KURT & CHRISTINE	33 LAMBERT COMMON	WILTON	CT	06897- 0000

LIST OF NEIGHBORING PROPERTY OWNERS WITHIN 500'

131 Danbury Road (11/15/23)

	MBLU	Site Address	Owner Name	Mailing Address	Mailing City	Mailing State	Mailing Zip
34	55-1-34	34 LAMBERT COMMON	SIMPSON MARJORIE & SIMPSON SAMUEL & SV	34 LAMBERT COMMON	WILTON	CT	06897- 0000
35	55-1-35	35 LAMBERT COMMON	BUFANO LORI A	35 LAMBERT COMMON	WILTON	CT	06897- 0000
36	55-1-36	36 LAMBERT COMMON	LEHMAN DAVID	36 LAMBERT COMMON	WILTON	CT	06897- 0000
37	55-1-37	37 LAMBERT COMMON	EDGAR RICHARD A & EDGAR LORRAINE JEAN & SV	37 LAMBERT COMMON UNIT #347	WILTON	CT	06897- 0000
38	55-1-38	38 LAMBERT COMMON	PASCARELLI JEANNETTE R	38 LAMBERT COMMOM	WILTON	CT	06897- 0000
39	55-1-39	39 LAMBERT COMMON	CIOFFI GAIL M	39 LAMBERT COMMON	WILTON	CT	06897- 0000
40	55-1-40	40 LAMBERT COMMON	DOBEY ROSLYN	40 LAMBERT COMMON	WILTON	CT	06897- 0000
41	55-1-41	41 LAMBERT COMMON	PRESTON MARY B	41 LAMBERT COMMON	WILTON	CT	06897- 0000
42	55-1-42	42 LAMBERT COMMON	ROBERTSON DENISE	42 LAMBERT COMMON	WILTON	CT	06897- 0000
43	55-1-43	43 LAMBERT COMMON	COCOZZA JOHN	43 LAMBERT COMMON	WILTON	CT	06897- 0000
44	55-1-44	44 LAMBERT COMMON	PICONE ELIZABETH TRUSTEE	44 LAMBERT COMMON	WILTON	CT	06897- 0000
45	55-1-45	45 LAMBERT COMMON	PIEDMONT KARENA	45 LAMBERT COMMON	WILTON	CT	06897- 0000
46	55-1-46	46 LAMBERT COMMON	LIN XIN YU	46 LAMBERT COMMON	WILTON	CT	06897- 0000
47	55-1-47	47 LAMBERT COMMON	SAYANTAN SARKER & MAYURI MANDLEKAR JT/S	47 LAMBERT COMMON	WILTON	CT	06897- 0000
48	55-1-48	48 LAMBERT COMMON	BONDESON JANET M ESTATE OF	1034 WEST RIVER ST	MILFORD	CT	06461- 0000
49	55-1-49	49 LAMBERT COMMON	JAIPRAKASH AGARWAL & DIPKA K BEHERA	49 LAMBERT COMMON	WILTON	CT	06897- 0000
50	55-4-1	1 WILTON HILLS	KAYLOR JAMES A & KAYLOR LINDA	1 WILTON HILLS	WILTON	CT	06897- 0000
51	55-4-2	2 WILTON HILLS	SHERVIN SHAHAB	2 WILTON HILLS	WILTON	CT	06897- 0000
52	55-4-3	3 WILTON HILLS	BLOCK JOSEPH & LOIS	3 WILTON HILLS	WILTON	CT	06897- 0000
53	55-4-4	4 WILTON HILLS	PICCHIONE FRANK L	4 WILTON HILLS	WILTON	CT	06897- 0000
54	55-4-5	5 WILTON HILLS	RAMAMOORTHY KAUSHIK & MUTHUKRISHNAN AARTHIE	5 WILTON HILLS	WILTON	CT	06897- 0000
55	55-4-6	6 WILTON HILLS	DHAYAFULE MITHUN	6 WILTON HILLS	WILTON	CT	06897- 0000
56	55-4-7	7 WILTON HILLS	PARK JOO HYOUNG	7 WILTON HILLS	WILTON	CT	06897- 0000
57	55-4-8	8 WILTON HILLS	WRIGHT-WARREN HOLLIS E	8 WILTON HILLS	WILTON	CT	06897- 0000
58	55-4-9	9 WILTON HILLS	RAMSEY DARYL	9 WILTON HILLS	WILTON	CT	06897- 0000
59	55-4-10	10 WILTON HILLS	BILOKIN FEDIR & GANNA	10 WILTON HILLS	WILTON	CT	06897- 0000
60	55-4-11	11 WILTON HILLS	RZEPKA FRED	25250 ROCKSIDE RD	BEDFORD HEIGHTS	OH	44146- 0000
61	55-4-12	12 WILTON HILLS	GJURAJ LUSHE	12 WILTON HILLS	WILTON	CT	06897- 0000
62	55-4-13	13 WILTON HILLS	THOMAS, CHARLES CALVIN & THOMAS BETTY WELLS	13 WILTON HILLS	WILTON	CT	06897- 0000
63	55-4-14	14 WILTON HILLS	GANDHI TIMSY & VINAY	14 WILTON HILLS	WILTON	CT	06897- 0000
64	55-4-15	15 WILTON HILLS	SCHOPICK ANDREW M	15 WILTON HILLS	WILTON	CT	06897- 0000

LIST OF NEIGHBORING PROPERTY OWNERS WITHIN 500'

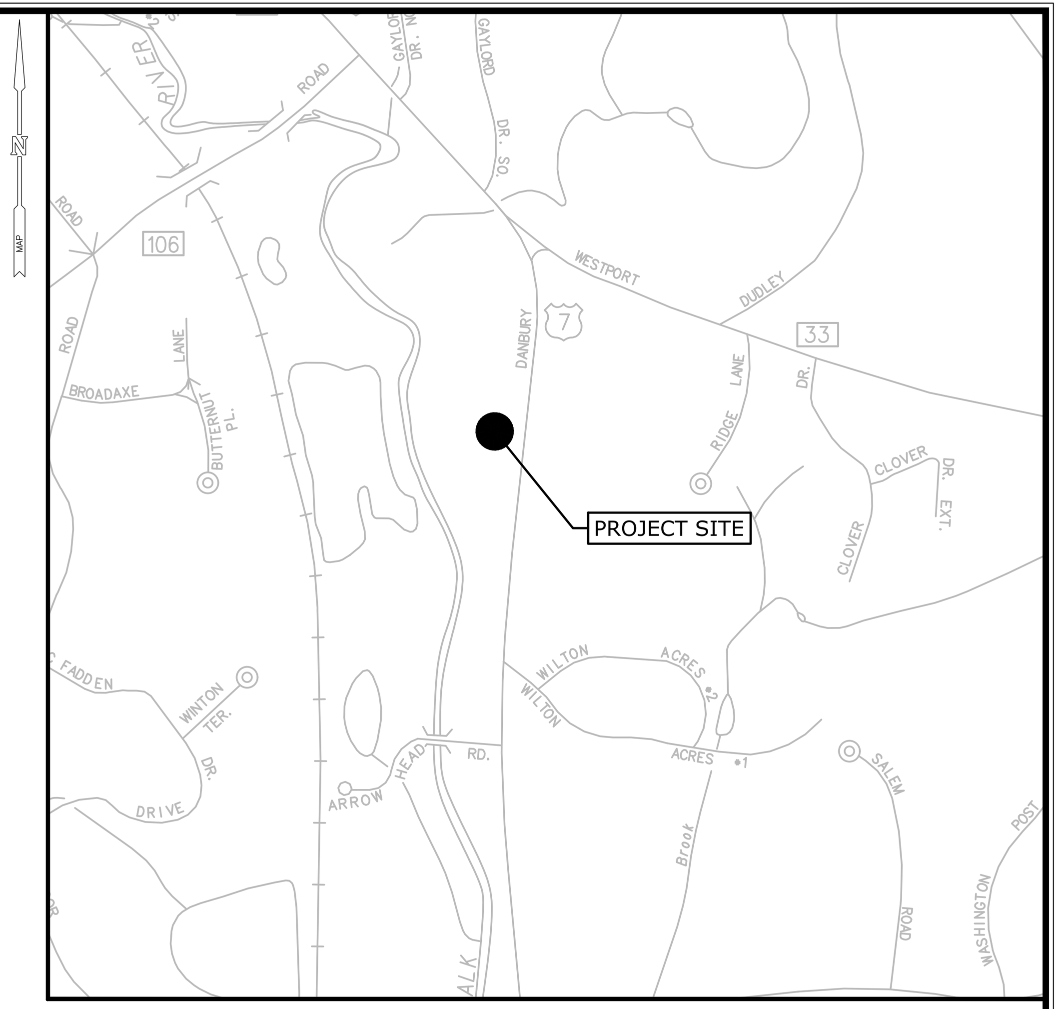
131 Danbury Road (11/15/23)

	MBLU	Site Address	Owner Name	Mailing Address	Mailing City	Mailing State	Mailing Zip
65	55-4-16	16 WILTON HILLS	TSUI TAK KWAN	16 WILTON HILLS	WILTON	CT	06897- 0000
66	55-4-17	17 WILTON HILLS	STOLPEN ADAM D	17 WILTON HILLS	WILTON	CT	06897- 0000
67	55-4-18	18 WILTON HILLS	RUDNICKI MICHELE A	18 WILTON HILLS	WILTON	CT	06897- 0000
68	55-5	116 DANBURY RD	REIF III DANBURY ROAD LLC	230 PARK AVE	NEW YORK	NY	10169- 0000
69	56-1	149 DANBURY RD	RING'S END INC	160 AVON ST	STRATFORD	CT	06615- 0000
70	56-2	153 DANBURY RD	CONNECTICUT STATE OF	2800 BERLIN TPKE	NEWINGTON	CT	06131- 0000
71	56-3	159 DANBURY RD	CONNECTICUT STATE OF	2800 BERLIN TPKE	NEWINGTON	CT	06131- 0000
72	56-45	156 DANBURY RD	CONNECTICUT STATE OF	2800 BERLIN TPKE	NEWINGTON	CT	06131- 0000
73	56-46A-BC	DANBURY RD	CONNECTICUT STATE OF	2800 BERLIN TPKE	NEWINGTON	CT	06131- 0000
74	69-38	111 DANBURY RD	CUBESMART LP C/O PTA-CS#831	PO BOX 320099	ALEXANDRIA	VA	22320- 0000
75	69-41	129 DANBURY RD	RING'S END INCORPORATED	160 AVON ST	STRATFORD	CT	06615- 0000
76	70-1	131 DANBURY RD	AMS ACQUISITIONS	ATTN: RYAN SUTHERLAND, 1 BRIDGE PLAZA NORTH, SUITE 840	FORT LEE	NJ	07024
77	70-2	141 DANBURY RD	FDSPIN 141 DR LLC	1 NORTH WATER ST SUITE 100	NORWALK	CT	06854- 0000
78	70-3	17 WOLFPIT RD	CONNECTICUT STATE OF	2800 BERLIN TPKE	NEWINGTON	CT	06131- 0000
79	70-2A	DANBURY RD	CONNECTICUT STATE OF	2800 BERLIN TPKE	NEWINGTON	CT	06131- 0000
80	55-1	1-49 LAMBERT COMMON	THE PROPERTY GROUP OF CT, INC.	25 CRESCENT STREET	STAMFORD	CT	06906
81	55-4	1-18 WILTON HILLS	4 WILTON HILLS	4 WILTON HILLS	WILTON	CT	06897
82	AGENT		REDNISS & MEAD, INC.	22 FIRST STREET	STAMFORD	CT	06905

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

21543.00001
OCTOBER 23, 2023
REVISED: NOVEMBER 27. 2023
REVISED: JANUARY 9, 2024

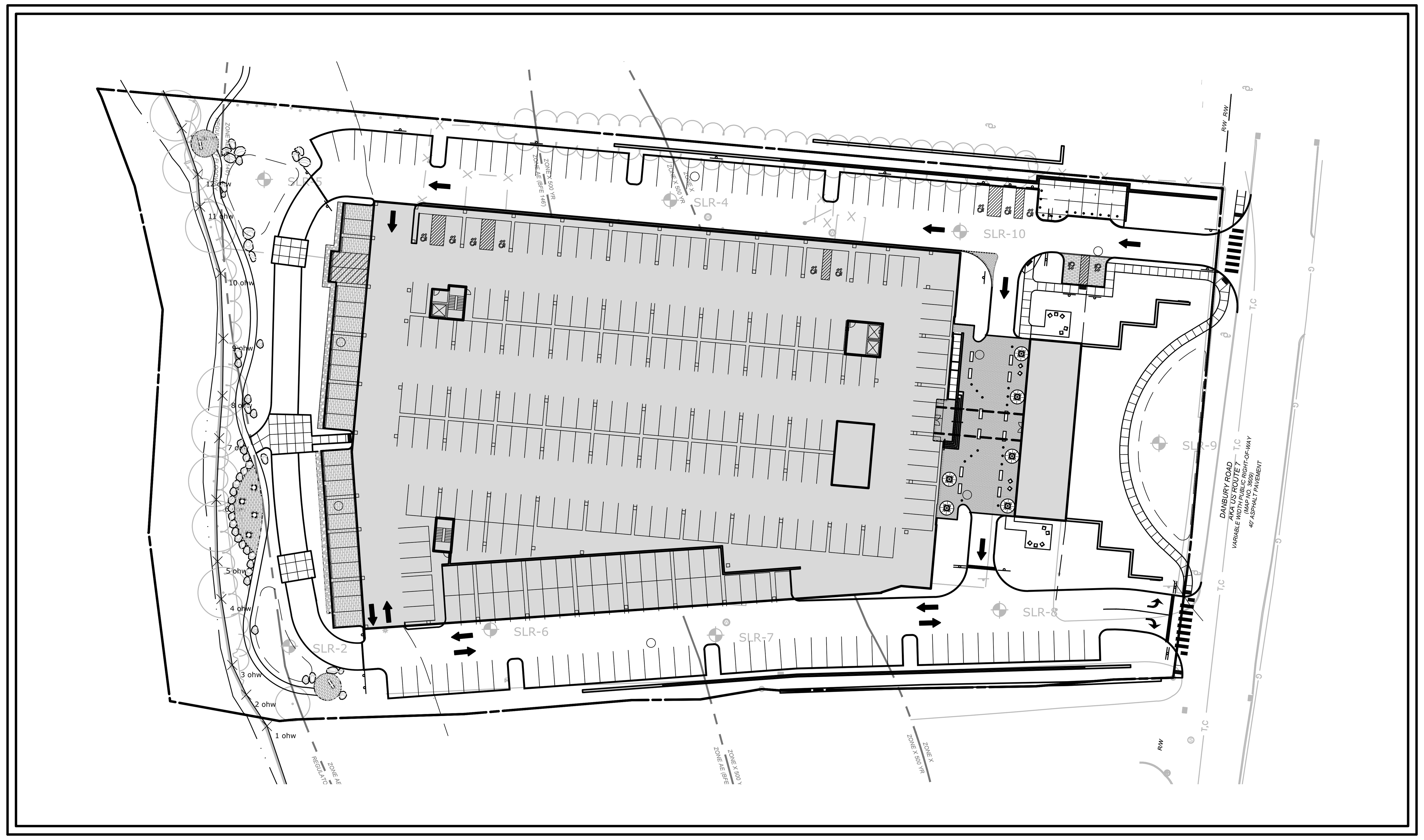


LOCATION MAP:

SCALE 1" = 800'

GENERAL NOTES

1. PROPERTY AND TOPOGRAPHIC INFORMATION COMPILED FROM A MAP ENTITLED, "ALTA/NSPS LAND TITLE SURVEY, 131 DANBURY ROAD, FAIRFIELD COUNTY, WILTON, CONNECTICUT 06897", PREPARED BY: BLEW & ASSOCIATES, P.A., SCALE: 1"=30'.
2. NORTH ARROW, BEARINGS AND COORDINATES ARE BASED UPON THE CONNECTICUT COORDINATE SYSTEM (NAD 1983). ELEVATIONS, CONTOURS AND BENCH MARK ARE BASED UPON (NAVD 1988).
3. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. CALL "CALL BEFORE YOU DIG", 1-800-922-4455. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
4. SLR INTERNATIONAL CORPORATION ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA WHICH HAVE BEEN SUPPLIED BY OTHERS.
5. ALL UTILITY SERVICES ARE TO BE UNDERGROUND. THE EXACT LOCATION, MEANS OF CONSTRUCTION, AND SIZE OF ELECTRIC, TELEPHONE, AND CABLE TELEVISION ARE TO BE DETERMINED BY THE RESPECTIVE UTILITY COMPANIES.
6. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
7. SEDIMENT AND EROSION CONTROL MEASURES AS DEPICTED ON THESE PLANS AND DESCRIBED WITHIN THE SEDIMENT AND EROSION CONTROL NARRATIVE SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT COVER AND STABILIZATION IS ESTABLISHED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL CONFORM TO THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, CONNECTICUT - 2002". AND IN ALL CASES BEST MANAGEMENT PRACTICES SHALL PREVAIL
8. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 6" TOPSOIL, AND BE SEEDED WITH GRASS, AS SHOWN ON THE PLANS.
9. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATE FINISHED GRADE.
10. ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO THE TOWN OF WILTON REQUIREMENTS AND TO THE APPLICABLE SECTIONS OF THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION, FORM 819 AND ADDENDUMS.
11. THE PLANS REQUIRE A CONTRACTOR'S WORKING KNOWLEDGE OF LOCAL, MUNICIPAL, WATER AUTHORITY, AND STATE CODES FOR UTILITY SYSTEMS. ANY CONFLICTS BETWEEN MATERIALS AND LOCATIONS SHOWN, AND LOCAL REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE EXECUTION OF WORK. THE ENGINEER WILL NOT BE HELD LIABLE FOR COSTS INCURRED TO IMPLEMENT OR CORRECT WORK WHICH DOES N0T CONFORM TO LOCAL CODE.
12. ALL FUEL, OIL, PAINT, OR OTHER HAZARDOUS MATERIALS USED DURING CONSTRUCTION SHOULD BE STORED IN A SECONDARY CONTAINER ABOVE THE FLOOD LIMITS OF THE NORWALK RIVER AND REMOVED TO A LOCKED INDOOR AREA WITH AN IMPERVIOUS FLOOR DURING NON-WORK HOURS.
13. COMPLIANCE WITH THE PERMIT CONDITIONS IS THE RESPONSIBILITY OF BOTH THE CONTRACTOR AND THE PERMITTEE.
14. ANY PROPOSED STRUCTURES AND LANDSCAPE FEATURES WITHIN THE FLOODWAY SHALL BE CERTIFIED BY AN ENGINEER TO WITHSTAND CALCULATED BASE FLOOD VELOCITIES.
15. THE PROJECT SITE SHALL REMAIN CLEAN OF TRASH AND DEBRIS AT ALL TIMES. ADEQUATE TRASH STORAGE FACILITIES SHALL BE PROVIDED AND EMPTIED ON A ROUTINE BASIS AND AS NEEDED. TRASH SHALL NOT BE STORED WITHIN THE LIMITS OF THE 100-YEAR FLOOD.
16. A CTDOT ENCROACHMENT PERMIT IS REQUIRED FOR ALL WORK WITHIN THE ROUTE 7 RIGHT OF WAY.
17. ANY FILL MATERIAL NEEDED IN THE REGULATED AREAS WILL BE CLEAN, NATIVE TOPSOIL AND GRANULAR MATERIALS.



PROJECT SITE VICINITY MAP:

SCALE 1" = 50'

ZONING DATA TABLE

EXISTING ZONE: DE-5R DESIGN ENTERPRISE RESIDENTIAL

	DE-5R REQUIRED	PROPOSED
LOT AREA	3 ACRES MINIMUM	4.75 ACRES
FRONTAGE	150 FT. MINIMUM	292 FT.
FRONT YARD	75 FT. MINIMUM	75 FT.
SIDE YARD	50 FT. MINIMUM (EACH)	51.9 FT.
REAR YARD	100 FT. MINIMUM	114.2 FT.
SITE COVERAGE	75% MAXIMUM	70%
BUILDING HEIGHT	55 FT. (4 STORIES) MAXIMUM* 65 FT. (4.5 STORIES) MAXIMUM	55 FT. (4 STORIES) 65 FT. (4.5 STORIES)
BUILDING COVERAGE	40% MAXIMUM (82,794 SF)	40% (82,684 SF)
PARKING SETBACK	10 FT. MINIMUM	10 FT.
NORWALK RIVER PARKING SETBACK	60 FT. MINIMUM	66.5 FT.
NORWALK RIVER BUILDING SETBACK	80 FT. MINIMUM	85.5 FT.
PARKING	1 SPACE/ONE-BEDROOM UNIT, 2 SPACES FOR 2+ BEDROOM UNIT (321 SPACES)	321***

*AN ADDITIONAL 10' MAY BE PERMITTED TO ACCOMODATE AN ADDITIONAL ONE-HALF STORY

**UNIT MIX CONSISTS OF 95 ONE-BEDROOM, 105 TWO-BEDROOM, AND 8 THREE-BEDROOM UNITS

***NOT INCLUDING 22 TANDEM SPACES. PARKING TOTAL CONSISTS OF 310 STANDARD SPACES, 8 HANDICAP ACCESSIBLE SPACES, AND 3 VAN SPACES.

811
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99 REALTY DRIVE
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SLRCONSULTING.COM

PREPARED FOR:

AMS ACQUISITIONS
ONE BRIDGE PLAZA NORTH, SUITE 840
FORT LEE, NJ 07024

LIST OF DRAWINGS

LAYOUT NOTES

1. LAYOUT CRITERIA AND DIMENSIONS FOR BUILDINGS ARE NOT SHOWN ON THIS PLAN. ALL BUILDINGS SHALL BE LOCATED BY A CONNECTICUT LICENSED SURVEYOR AND COORDINATED WITH THE FOUNDATION PLANS SUPPLIED BY THE ARCHITECT OR THEIR CONSULTANT.
2. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. FOR DETAILED INFORMATION PERTAINING TO PROPOSED BUILDINGS REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS.
4. IN ALL CASES IN WHICH PROPOSED ROADS, SIDEWALKS AND CURBING WILL BE TIED INTO EXISTING ROAD/SIDEWALK AND/OR CURBS THE CONTRACTOR SHALL MATCH THE LINE AND GRADE OF THE EXISTING CONDITIONS.

PLANTING NOTES

1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATING PLANT PITS.
2. THE LANDSCAPE CONTRACTOR SHALL PROVIDE A 6" MINIMUM DEPTH OF TOPSOIL FOR ALL LAWN AREAS. WATER AS NECESSARY TO ESTABLISH TURF.
3. ALL PLANTING BEDS SHALL HAVE 12" MINIMUM DEPTH OF TOPSOIL.
4. THE LANDSCAPE CONTRACTOR SHALL PROVIDE A 4" MIN. DEPTH OF SHREDDED MULCH OVER ALL PLANTING BEDS AND TREE PLANTINGS. NO DYED MULCH.
5. ALL PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO AND AFTER PLANTING.
6. PLANT SPECIES MAY BE SUBSTITUTED BASED ON AVAILABILITY AT TIME OF PLANTING. ALL PLANT MATERIAL SUBSTITUTIONS ARE SUBJECT TO REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND TOWN STAFF.
7. ALL PLANT MATERIALS SHALL CARRY A FULL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE, TO INCLUDE PROMPT TREATMENT OR REMOVAL AND REPLACEMENT OF ANY PLANTS FOUND TO BE IN AN UNHEALTHY CONDITION BY THE LANDSCAPE ARCHITECT. ALL REPLACEMENTS SHALL BE OF THE SAME KIND AND SIZE OF PLANTS SPECIFIED IN THE PLANT LIST.
8. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND SHALL CONTINUE UNTIL ACCEPTANCE BY THE LANDSCAPE ARCHITECT. MAINTENANCE SHALL INCLUDE WATERING, MULCHING, TIGHTENING & REPLACING OF GUYS, REPLACEMENT OF SICK OR DEAD PLANTS, RESETTING PLANTS TO PROPER GRADE OR UPRIGHT (PLUMB) POSITION, RESTORATION OF SAUCERS, AND ALL OTHER CARE NEEDED FOR PROPER GROWTH OF THE PLANTS.
9. WHERE A SIZE RANGE IS SPECIFIED AT LEAST 50% OF PLANTS PROVIDED SHALL BE OF THE LARGER SIZE.
10. CONTRACTOR TO REMOVE TREE STAKES AFTER ONE GROWING SEASON.
11. PLACEMENT OF PLANTS ARE APPROXIMATE AND MAY REQUIRE ADJUSTMENT IN THE FIELD BY THE OWNER.
12. TREES CALLED TO REMAIN TO BE EVALUATED BY AN ARBORIST TO CONFIRM THEY ARE HEALTHY.

UTILITY NOTES

1. LOCATIONS OF ALL EXISTING UTILITIES ARE APPROXIMATE.
2. MAINTAIN 10' HORIZONTAL OR 18" VERTICAL SEPARATION BETWEEN SANITARY SEWER AND WATER SERVICE LATERALS.
3. INSTALLATION OF WATER AND SANITARY SEWER SHALL CONFORM TO THE TOWN OF WILTON WATER POLLUTION CONTROL AUTHORITY RULES AND REGULATIONS.
4. INSTALL CLEANOUT 5' FROM FACE OF BUILDING
5. COORDINATE WITH RESPECTIVE UTILITY COMPANIES AND COMPLY WITH THEIR RESPECTIVE REQUIREMENTS.
6. ALL CATCH BASINS SHALL HAVE A 4 FOOT SUMP.
7. ALL EXISTING UTILITIES ON SITE TO BE REMOVED.
8. AFTER A FLOOD EVENT, THE BASINS AND STORM STRUCTURES SHALL BE INSPECTED AND ANY ACCUMULATED DEBRIS SHALL BE REMOVED.
9. ALL HDPE PIPE SHALL BE ADS N-12 HDPE.
10. CONTRACTOR SHALL COORDINATE WITH EVERSOURCE AND EVERSOURCE PERSONNEL SHALL BE PRESENT FOR ANY WORK NEAR THE EXISTING EVERSOURCE TRANSMISSION LINE IN DANBURY ROAD.

EROSION CONTROL NOTES, CONTRACTOR RESPONSIBILITIES

1. SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER. A LOG OF SUCH INSPECTIONS SHALL BE MAINTAINED AT THE SITE.
2. THE SEDIMENT AND EROSION CONTROL PLAN SHALL BE MODIFIED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER AND THE TOWN'S DESIGNATED REPRESENTATIVE AS NECESSITATED BY CHANGING SITE CONDITIONS
3. INSPECTION OF THE SITE FOR EROSION SHALL CONTINUE FOR A PERIOD OF THREE MONTHS AFTER COMPLETION WHEN RAINFALLS OF ONE INCH OR MORE OCCUR.
4. ALL DEWATERING WASTE WATERS SHALL BE DISCHARGED IN A MANNER WHICH MINIMIZES THE DISCOLORATION OF THE RECEIVING WATERS.
5. THE SITE SHOULD BE KEPT CLEAN OF LOOSE DEBRIS, LITTER, AND BUILDING MATERIALS SUCH THAT NONE OF THE ABOVE ENTER WATERS OR WETLANDS.
6. A COPY OF ALL PLANS AND REVISIONS, AND THE SEDIMENT AND EROSION CONTROL PLAN SHALL BE MAINTAINED ON-SITE AT ALL TIMES DURING CONSTRUCTION.
7. ALL CATCH BASIN SUMPS SHOULD BE INSPECTED AFTER CONSTRUCTION COMPLETION AND SEDIMENT REMOVED. THE SEDIMENT SHALL BE DISPOSED OF IN AN APPROVED LOCATION.

CONSTRUCTION SEQUENCE

SEE CONSTRUCTION MANAGEMENT PLAN PREPARED BY AMS CONSTRUCTION MANAGEMENT LLC.

STORMWATER MAINTENANCE PROGRAM

UPON SITE DEVELOPMENT, THERE WILL BE A NEED TO PERIODICALLY MAINTAIN STORMWATER SYSTEMS ON THE PROPERTY.

IN ORDER TO ENSURE OPTIMAL PERFORMANCE OF THE SYSTEM, THE FOLLOWING STORMWATER MAINTENANCE PROGRAM HAS BEEN ESTABLISHED. THE PROPERTY OWNER WILL BE RESPONSIBLE FOR IMPLEMENTATION OF THIS PROGRAM. A LOG OF ALL INSPECTIONS, CLEANING AND REPAIRS SHALL BE MAINTAINED BY THE PROPERTY OWNER AND BE AVAILABLE FOR REVIEW.

A. CATCH BASINS/YARD DRAINS

CATCH BASINS ARE DESIGNED WITH 4-FOOT MINIMUM DEPTH SUMPS FOR THE PURPOSE OF COLLECTING COARSE SEDIMENT. ALL CATCH BASINS SHOULD BE INSPECTED TWO TIMES PER YEAR, TYPICALLY WHEN THE SITE IS SWEPT IN THE SPRING AFTER WINTER SANDING AND IN THE FALL AFTER ALL THE LEAVES HAVE FALLEN. SITE SWEEPING SHALL BE PROVIDED BETWEEN APRIL 15 AND MAY 15 EACH SPRING.

SEDIMENT SHOULD BE REMOVED WHEN IT EXTENDS TO WITHIN 6 INCHES OF THE OUTLET PIPE INVERT OR NOT LESS THAN ONCE PER YEAR. CLEANOUT WITH A VACUUM TRUCK IS GENERALLY THE BEST AND MOST CONVENIENT METHOD. THE SEDIMENT SHALL BE DISPOSED OF IN AN APPROVED OFF-SITE LOCATION IN ACCORDANCE WITH TOWN AND STATE REQUIREMENTS.

PAVEMENT SWEEPING

THE PARKING AREA AND ROADWAY SHALL BE SWEPT ANNUALLY. SWEEPING SHOULD OCCUR IN THE SPRING AFTER WINTER SANDING, BETWEEN APRIL 15 AND MAY 15. SALT ALTERNATIVES SHALL BE USED DURING WINTER MONTHS FOR DEICING.

B. PROPRIETARY HYDRODYNAMIC SEPARATOR

BEFORE BEING DISCHARGED TO THE NORWALK RIVER, STORMWATER RUNOFF FROM THE ROADWAY AND BUILDING WILL BE DIRECTED TO A HYDRODYNAMIC SEPARATOR. THIS STRUCTURE WILL REMOVE SUSPENDED SOLIDS, DEBRIS AND FLOATABLES CONSTITUENTS FROM STORMWATER. OIL, SCUM, AND SEDIMENT WILL EVENTUALLY ACCUMULATE AND CAN BE REMOVED THROUGH A MANHOLE LOCATED AT THE TOP OF THE SEPARATOR. THIS STRUCTURE WILL BE MAINTAINED YEARLY, OR MORE FREQUENTLY AS REQUIRED. THE UNIT SHOULD BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. WASTE MATERIAL WILL BE PROPERLY DISPOSED OF OFF THE SITE.

C. UNDERGROUND DETENTION SYSTEMS

UNDERGROUND DETENTION SYSTEMS SHALL BE INSPECTED QUARTERLY AND SEDIMENT SHALL BE REMOVED AS NEEDED TO ENSURE PROPER FUNCTIONING OF STRUCTURES. AREAS OF DISTURBANCE THAT MAY BE AS A RESULT OF CLEANING SHALL BE SEEDED AND PLANTED IN ACCORDANCE WITH THE ORIGINAL PLANTING PLAN. THESE STRUCTURES WILL BE MAINTAINED YEARLY, OR MORE FREQUENTLY AS REQUIRED. WASTE MATERIAL WILL BE PROPERLY DISPOSED OF OFF-SITE.

ISOLATOR ROW

THE ISOLATOR ROWS INTEGRATED TO THE STORMWATER CHAMBERS SYSTEMS SHOULD BE MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. A COPY OF THE STORMTECH "ISOLATOR ROW O&M MANUAL" IS INCLUDED IN THE ENGINEERING REPORT. AT A MINIMUM, THE MAINTENANCE SCHEDULE SHOULD INCLUDE THE FOLLOWING:

1) THE ISOLATOR ROW UNIT SHALL BE COMPLETELY CLEANED OF ACCUMULATED DEBRIS AND SEDIMENTS AT THE COMPLETION OF CONSTRUCTION.
2) THE ISOLATOR ROW SHALL BE INSPECTED EVERY 6 MONTHS FOR THE FIRST YEAR OF OPERATION.
3) FOR SUBSEQUENT YEARS, THE INSPECTION SHOULD BE ADJUSTED BASED UPON PREVIOUS OBSERVATION OF SEDIMENT DEPOSITION. AT A MINIMUM, THE ISOLATOR ROW SHALL BE INSPECTED ANNUALLY.
4) IF UPON VISUAL INSPECTION THE SEDIMENT DEPOSIT ALONG THE LENGTH OF THE ISOLATOR ROW EXCEEDS 3 INCHES, CLEANOUT SHALL BE PERFORMED.
5) MAINTENANCE IS ACCOMPLISHED WITH THE JETVAC PROCESS.

E. LAWN AND VEGETATED AREAS

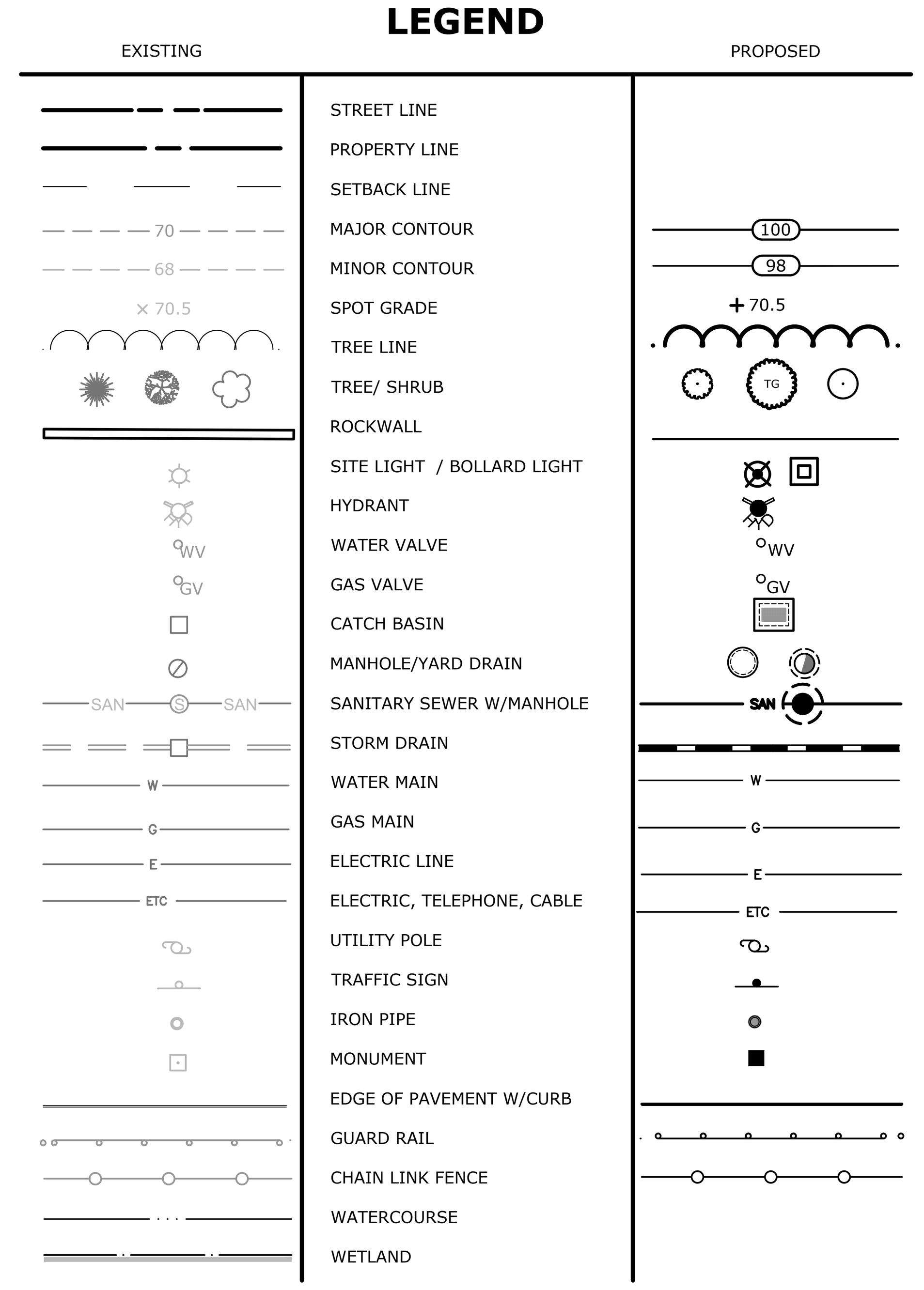
VEGETATED COVER SHALL BE MAINTAINED ON ALL EARTH SURFACES TO MINIMIZE SOIL EROSION. USE IF FERTILIZER SHOULD BE MINIMIZED AND APPLIED USING PRUDENT APPLICATION PROCESSES.

F. ROOF GUTTERS

REMOVE ACCUMULATED DEBRIS AND INSPECT FOR CLOGGING AND/OR DAMAGE AT LEAST ONCE A YEAR, TYPICALLY IN THE FALL AFTER THE LEAVES HAVE FALLEN. ANY DAMAGE SHOULD BE REPAIRED AS REQUIRED.

G. AFTER A FLOOD EVENT, THE BASINS AND STORM STRUCTURES SHALL BE INSPECTED AND ANY ACCUMULATED DEBRIS SHALL BE REMOVED.

LEGEND



BORING LOGS

BORINGS WERE PERFORMED ON DECEMBER 12, 2023, OBSERVED BY SLR CONSULTING.

SLR-1
DEPTH=32'
0'-0.25' ASPHALT
0.25'-1.4' GRAY-BROWN, FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, TRACE SILT
1.4'-3.4' DARK BROWN, FINE TO MEDIUM SAND, LITTLE SILT, LITTLE FINE GRAVEL, TRACE ORGANIC MATTER
3.4'-5' GRAY-BROWN, FINE TO MEDIUM SAND, LITTLE SILT
5'-10' BROWN, FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, TRACE SILT
10'-20' GRAY, FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, LITTLE SILT
20'-30' GRAY, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
30'-32' BROWN, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
GROUNDWATER AT 4.8'

SLR-2
DEPTH=12'
0'-0.33' ASPHALT
0.33'-1' GRAY, FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, TRACE SILT
1'-3.8' BLACK, FINE TO MEDIUM SAND, LITTLE SILT, SOME ORGANIC SILT, LITTLE FINE GRAVEL
3.8'-12' GRAY, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
GROUNDWATER AT 3.7'
PERMEABILITY=0.8 INCHES/HOUR

SLR-3
DEPTH=27'
0'-0.25' ASPHALT
0.25'-2.4' BROWN, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
2.4'-3' DARK BROWN, FINE TO COARSE SAND, SOME ORGANIC SILT
3'-5' DARK BROWN-BLACK, FINE TO COARSE SAND AND ORGANIC SILT, LITTLE FINE GRAVEL
5'-6' LIGHT BROWN, FINE TO COARSE SAND, SOME SILT
6'-10' BROWN, FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, LITTLE SILT
10'-15' GRAY-BROWN, FINE TO COARSE SAND, LITTLE FINE GRAVEL, TRACE SILT
15'-20' GRAY, FINE TO COARSE SAND, LITTLE FINE GRAVEL, TRACE SILT
20'-25' GRAY, FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, TRACE SILT
25'-27' GRAY, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
GROUNDWATER AT 6.3'

SLR-4
DEPTH=17'
0'-0.75' DARK BROWN, FINE TO MEDIUM SAND, SOME SILT, TRACE ORGANIC
0.75'-2' BROWN, FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, TRACE SILT
2'-5' DARK BROWN-BLACK, FINE TO MEDIUM SAND, SOME ORGANIC SILT, TRACE FINE GRAVEL
5'-10' BLACK, FINE TO MEDIUM SAND, SOME ORGANIC SILT
10'-15' GRAY, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
15'-17' GRAY, FINE TO COARSE SAND, TRACE FINE GRAVEL, TRACE SILT
GROUNDWATER AT 10'

SLR-5
DEPTH=12'
0'-0.25" ASPHALT
0.25'-1' BROWN, FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, TRACE SILT
1'-3' BROWN, FINE TO COARSE SAND, LITTLE SILT
3'-12' GRAY-BROWN, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
GROUNDWATER AT 3.5'
PERMEABILITY=2.5 INCHES/HOUR

SLR-6
DEPTH=17'
0'-0.25" ASPHALT
0.25'-3' BROWN, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
3'-3.5' DARK BROWN, FINE TO MEDIUM SAND, SOME ORGANIC SILT
3.5'-5' BROWN, FINE TO COARSE SAND, LITTLE SILT, TRACE FINE GRAVEL
5'-7' BROWN, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
7'-10' BROWN-GRAY, FINE TO COARSE GRAVEL AND FINE TO COARSE SAND, TRACE SILT
10'-17' BROWN, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
GROUNDWATER AT 5'
PERMEABILITY=10.6 INCHES/HOUR

SLR-7
DEPTH=12'
0'-0.3' ASPHALT
0.3'-5' BROWN, FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, TRACE SILT
5'-7' BROWN, FINE TO MEDIUM SAND, LITTLE FINE GRAVEL
7'-10' BROWN, FINE TO COARSE GRAVEL AND FINE TO COARSE SAND, TRACE SILT
10'-12' BROWN, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
GROUNDWATER AT 5'
PERMEABILITY=2.1 INCHES/HOUR

SLR-8
DEPTH=27'
0'-0.33' ASPHALT
0.33'-1' BROWN, FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, TRACE SILT
1'-3' BROWN, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
3'-5' BROWN, FINE TO COARSE GRAVEL AND FINE TO COARSE SAND, TRACE SILT
5'-10' BROWN, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
10'-15' BROWN, FINE TO COARSE GRAVEL AND FINE TO COARSE SAND, TRACE SILT
15'-16' BROWN, FINE TO COARSE SAND, SOME SILT
16'-25' BROWN, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
25'-27' BROWN, FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, TRACE SILT
GROUNDWATER AT 8.3'
PERMEABILITY=10.9 INCHES/HOUR

SLR-9
DEPTH=11.3'
0'-2.5' DARK BROWN, FINE TO MEDIUM SAND, SOME SILT, TRACE ORGANIC MATTER
2.5'-3' BROWN, FINE TO MEDIUM SAND AND SILT, TRACE ORGANIC MATTER
3'-11.3' BROWN, FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, TRACE SILT
GROUNDWATER AT 8.8'

SLR-10
DEPTH=32'
0'-0.5' DARK BROWN, FINE TO MEDIUM SAND, SOME SILT, TRACE ORGANIC MATTER, TRACE FINE L
0.5'-10' BROWN, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
10'-15' BROWN, FINE TO COARSE GRAVEL AND FINE TO COARSE SAND, TRACE SILT
15'-25' BROWN, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, TRACE SILT
25'-32' BROWN, FINE TO COARSE SAND, LITTLE FINE TO COARSE GRAVEL, TRACE SILT
GROUNDWATER AT 9'

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203.271.1773
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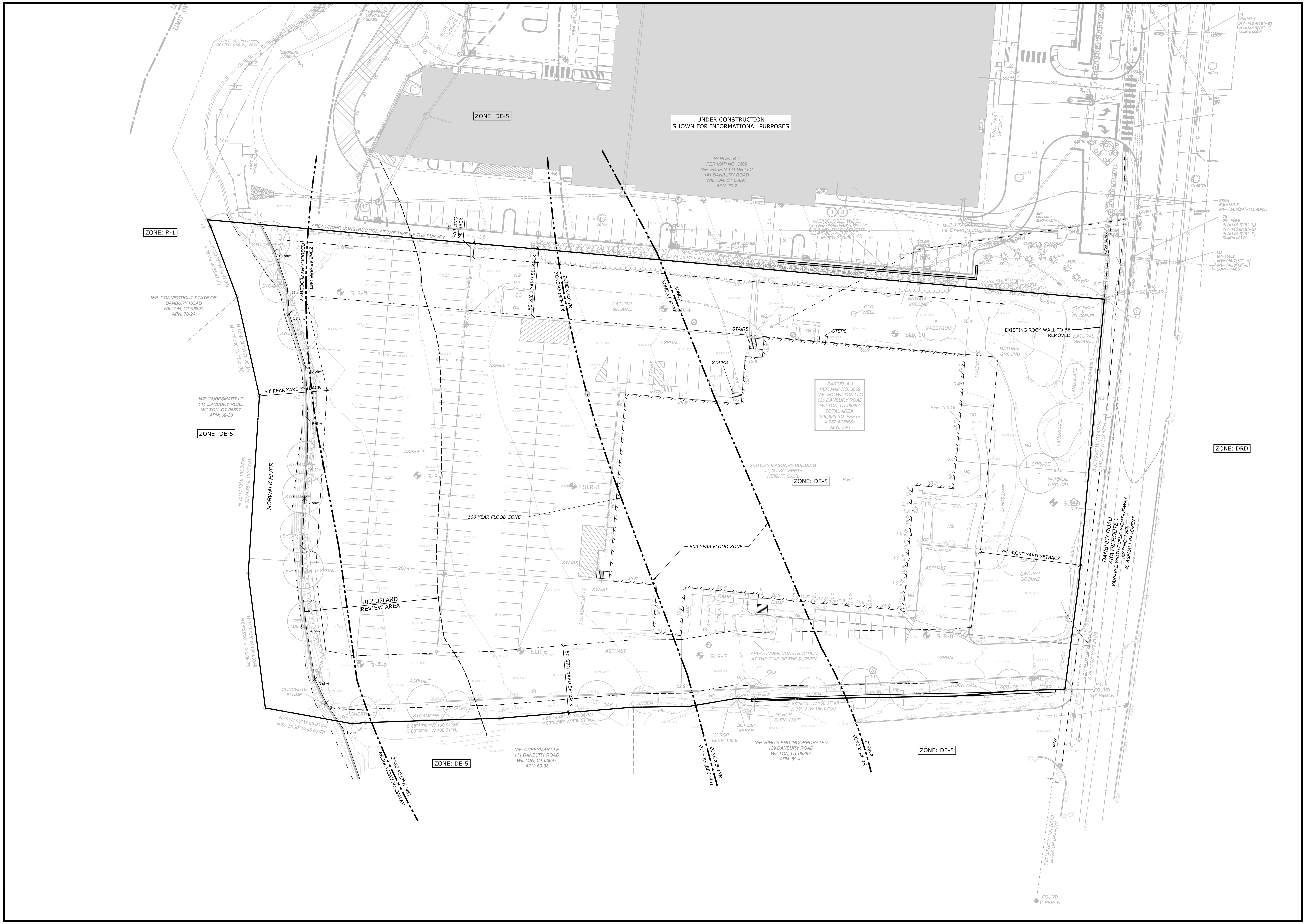
DESCRIPTION	DATE	BY
PEER REVIEW COMMENTS	1/09/2024	AWG

NOTES AND LEGEND
PROPOSED MULTI-FAMILY DEVELOPMENT
131 DANBURY ROAD
WILTON, CONNECTICUT

AWG DESIGNED | AWG DRAWN | TD CHECKED
NOT TO SCALE
SCALE
OCTOBER 23, 2023
DATE
21543.00001
PROJECT NO.
03 OF 23
SHEET NO.
NL
SHEET NAME



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DESCRIPTION	DATE	BY

EXISTING CONDITIONS

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

AWG	AWG	TD
DESIGNED	DRAWN	CHECKED

1"=30'
SCALE

OCTOBER 23, 2023
DATE

21543.00001
PROJECT NO.

03 OF 23
SHEET NO.

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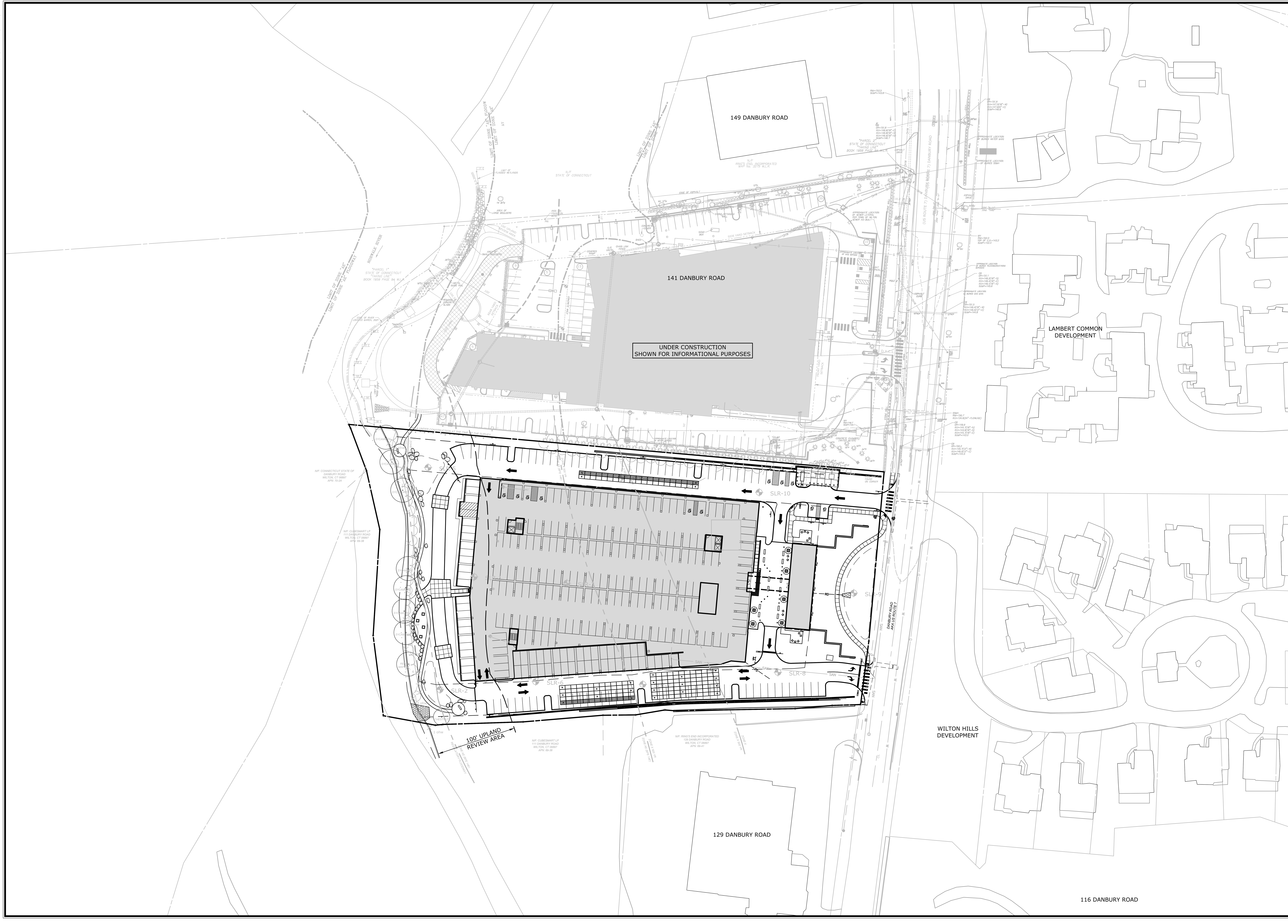
SHEET NAME



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DESCRIPTION	DATE	BY
P&Z SUBMISSION	11/27/2023	AWG
PEER REVIEW COMMENTS	1/09/2024	AWG

SITE VICINITY PLAN

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

AWG	AWG	TD
DESIGNED	DRAWN	CHECKED

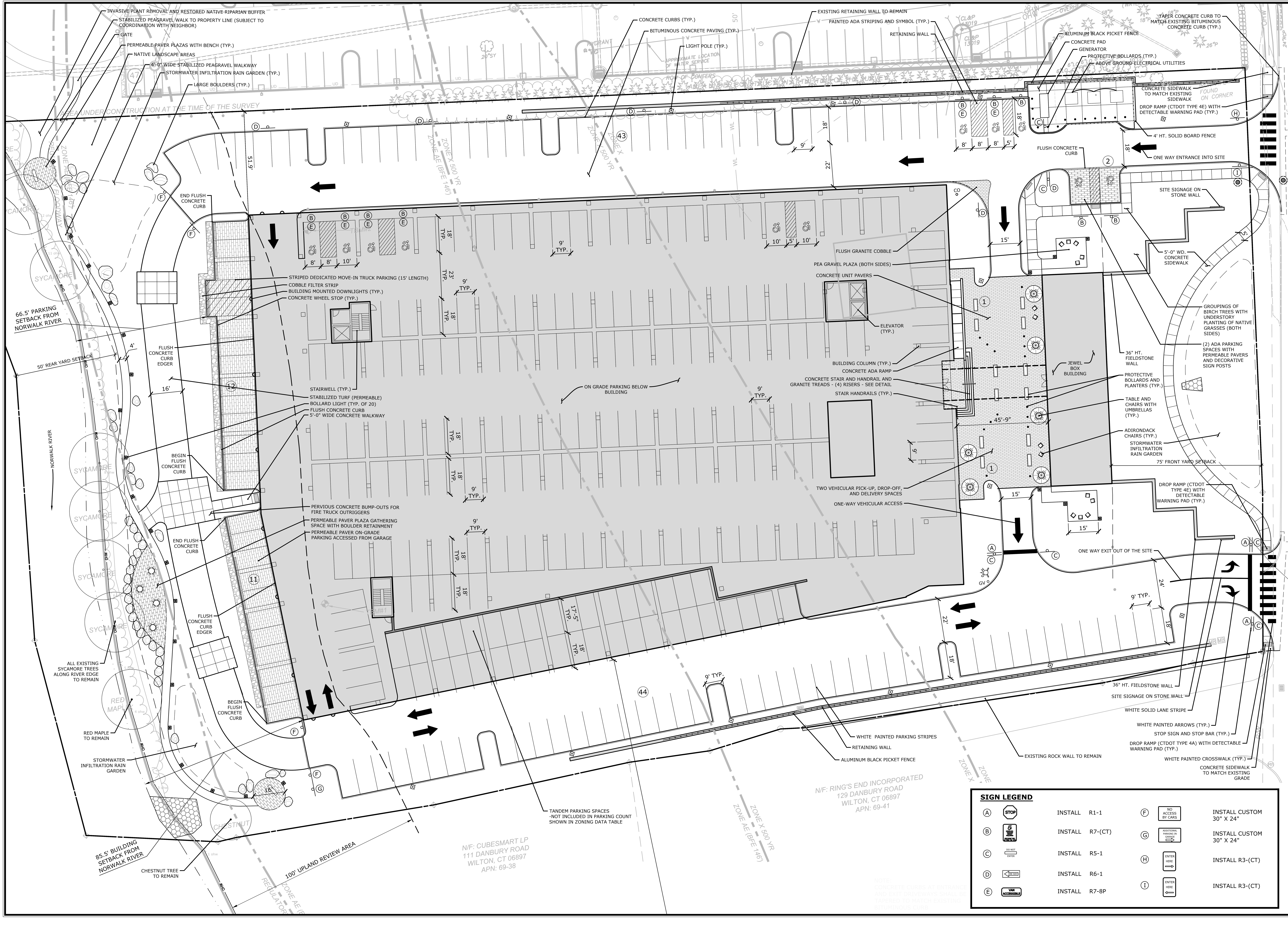
SCALE: 1"=50'

DATE: OCTOBER 23, 2023

PROJECT NO.: 21543.00001

SHEET NO.: 04 OF 23

SHEET NAME: SP



SIGN LEGEND

Sign	Action	Code	Sign	Action	Code
A	INSTALL	R1-1	F	INSTALL CUSTOM 30" X 24"	
B	INSTALL	R7-(CT)	G	INSTALL CUSTOM 30" X 24"	
C	INSTALL	R5-1	H	INSTALL	R3-(CT)
D	INSTALL	R6-1	I	INSTALL	R3-(CT)
E	INSTALL	R7-8P			

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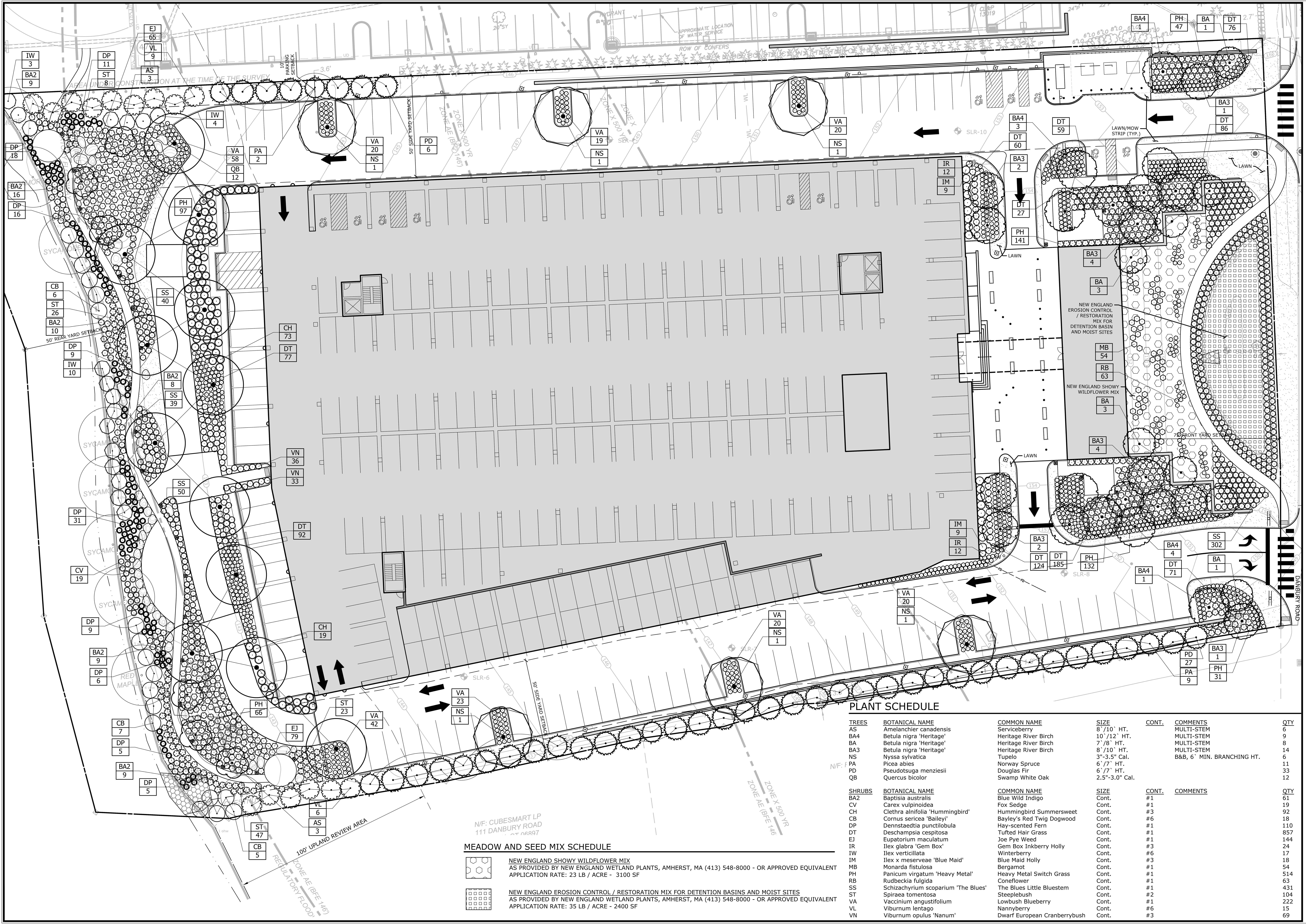
DESCRIPTION	DATE	BY
P&Z SUBMISSION	11/27/2023	AWG
PEER REVIEW COMMENTS	1/09/2024	AWG

SITE PLAN - LAYOUT
PROPOSED MULTI-FAMILY DEVELOPMENT
131 DANBURY ROAD
WILTON, CONNECTICUT

JCW	SAS	TD
DESIGNED	DRAWN	CHECKED

SCALE: 1"=20'
DATE: OCTOBER 23, 2023
PROJECT NO.: 21543.00001
SHEET NO.: 05 OF 23
SHEET NAME: LA



PLANT SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	SIZE	CONT.	COMMENTS	QTY
AS	Amelanchier canadensis	Serviceberry	8`/10` HT.		MULTI-STEM	6
BA4	Betula nigra 'Heritage'	Heritage River Birch	10`/12` HT.		MULTI-STEM	9
BA	Betula nigra 'Heritage'	Heritage River Birch	7`/8` HT.		MULTI-STEM	8
BA3	Betula nigra 'Heritage'	Heritage River Birch	8`/10` HT.		MULTI-STEM	14
NS	Nyssa sylvatica	Tupelo	3"-3.5" Cal.		B&B, 6` MIN. BRANCHING HT.	6
PA	Picea abies	Norway Spruce	6`/7` HT.			11
PD	Pseudotsuga menziesii	Douglas Fir	6`/7` HT.			33
QB	Quercus bicolor	Swamp White Oak	2.5"-3.0" Cal.			12

SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	CONT.	COMMENTS	QTY
BA2	Baptisia australis	Blue Wild Indigo	Cont.	#1		61
CV	Carex vulpinoidea	Fox Sedge	Cont.	#1		19
CH	Clethra alnifolia 'Hummingbird'	Hummingbird Summersweet	Cont.	#3		92
CB	Cornus sericea 'Baileyi'	Bayley's Red Twig Dogwood	Cont.	#6		18
DP	Dennstaedtia punctilobula	Hay-scented Fern	Cont.	#1		110
DT	Deschampsia cespitosa	Tufted Hair Grass	Cont.	#1		857
EJ	Eupatorium maculatum	Joe Pye Weed	Cont.	#1		144
IR	Ilex glabra 'Gem Box'	Gem Box Inkberry Holly	Cont.	#3		24
IW	Ilex verticillata	Winterberry	Cont.	#6		17
IM	Ilex x meserveae 'Blue Maid'	Blue Maid Holly	Cont.	#3		18
MB	Monarda fistulosa	Bergamot	Cont.	#1		54
PH	Panicum virgatum 'Heavy Metal'	Heavy Metal Switch Grass	Cont.	#1		514
RB	Rudbeckia fulgida	Coneflower	Cont.	#1		63
SS	Schizachyrium scoparium 'The Blues'	The Blues Little Bluestem	Cont.	#1		431
ST	Spiraea tomentosa	Steeplebush	Cont.	#2		104
VA	Vaccinium angustifolium	Lowbush Blueberry	Cont.	#1		222
VL	Viburnum lentago	Nannyberry	Cont.	#6		15
VN	Viburnum opulus 'Nanum'	Dwarf European Cranberrybush	Cont.	#3		69

MEADOW AND SEED MIX SCHEDULE

NEW ENGLAND SHOWY WILDFLOWER MIX
AS PROVIDED BY NEW ENGLAND WETLAND PLANTS, AMHERST, MA (413) 548-8000 - OR APPROVED EQUIVALENT
APPLICATION RATE: 23 LB / ACRE - 3100 SF

NEW ENGLAND EROSION CONTROL / RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES
AS PROVIDED BY NEW ENGLAND WETLAND PLANTS, AMHERST, MA (413) 548-8000 - OR APPROVED EQUIVALENT
APPLICATION RATE: 35 LB / ACRE - 2400 SF

SLR
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DESCRIPTION	DATE	BY
P&Z SUBMISSION	11/27/2023	AWG
PEER REVIEW COMMENTS	1/09/2024	AWG

SITE PLAN - LANDSCAPING

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

DESIGNED	DRAWN	CHECKED
AWG	AWG	TD

SCALE: 1"=20'

DATE: OCTOBER 23, 2023

PROJECT NO.: 21543.00001

SHEET NO.: 06 OF 23

SHEET NAME: LS

SLR
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CHESHIRE, CT 06410
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DESCRIPTION	DATE	BY
P&Z SUBMISSION	11/27/2023	AWG
TOWN COMMENTS	12/1/2023	RH
PEER REVIEW COMMENTS	1/09/2024	AWG

SITE PLAN - GRADING

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

AWG	AWG	TD
DESIGNED	DRAWN	CHECKED

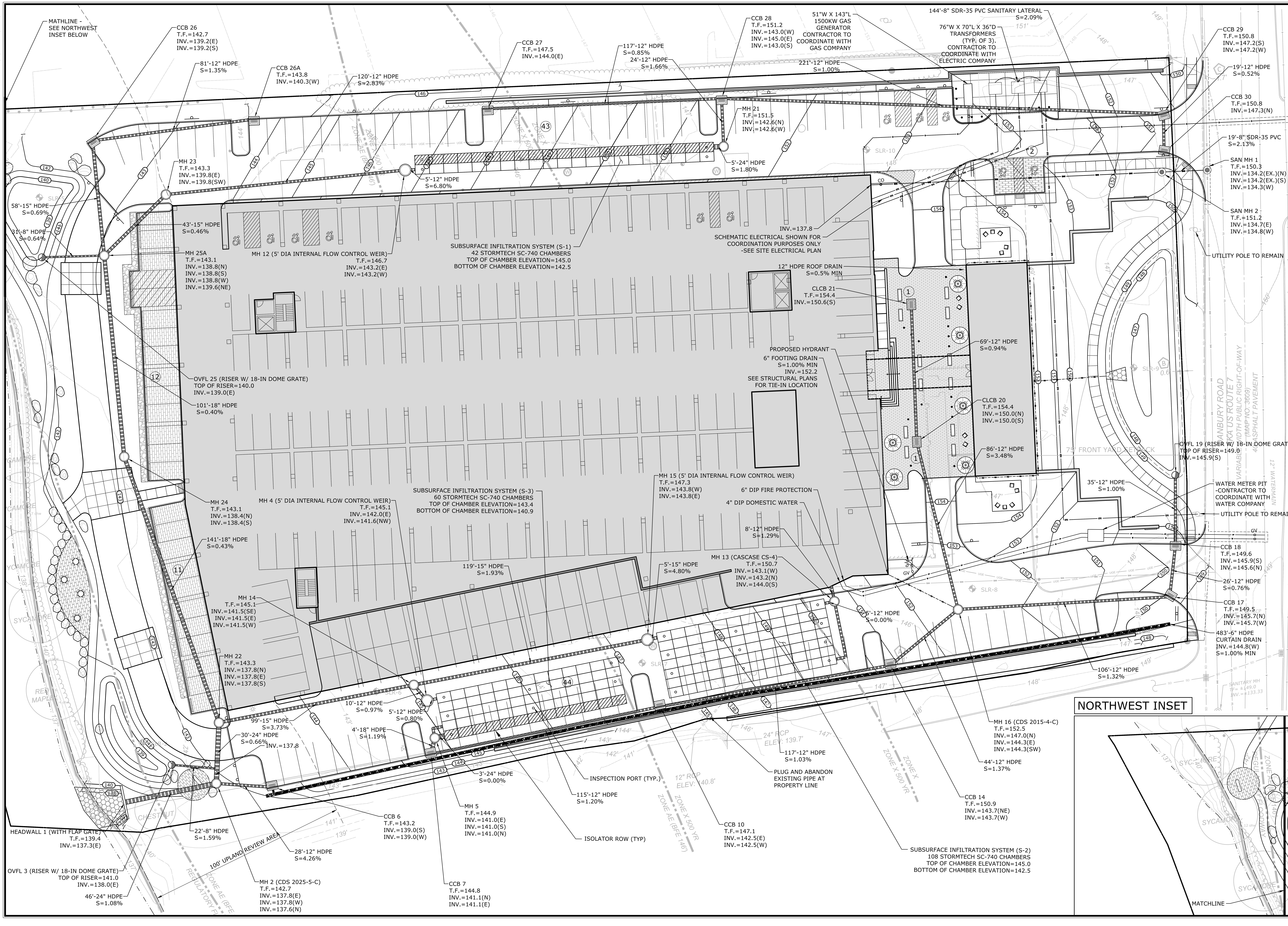
SCALE: 1"=20'

DATE: OCTOBER 23, 2023

PROJECT NO.: 21543.00001

SHEET NO.: 07 OF 23

SHEET NAME: GR



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DESCRIPTION	DATE	BY
WPCA REVISIONS	11/14/2023	AWG
P&Z SUBMISSION	11/27/2023	AWG
PEER REVIEW COMMENTS	1/09/2024	AWG

SITE PLAN - UTILITIES

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

AWG	RH	TD
DESIGNED	DRAWN	CHECKED

1"=20'
SCALE

OCTOBER 23, 2023
DATE

21543.00001
PROJECT NO.

08 OF 23
SHEET NO.

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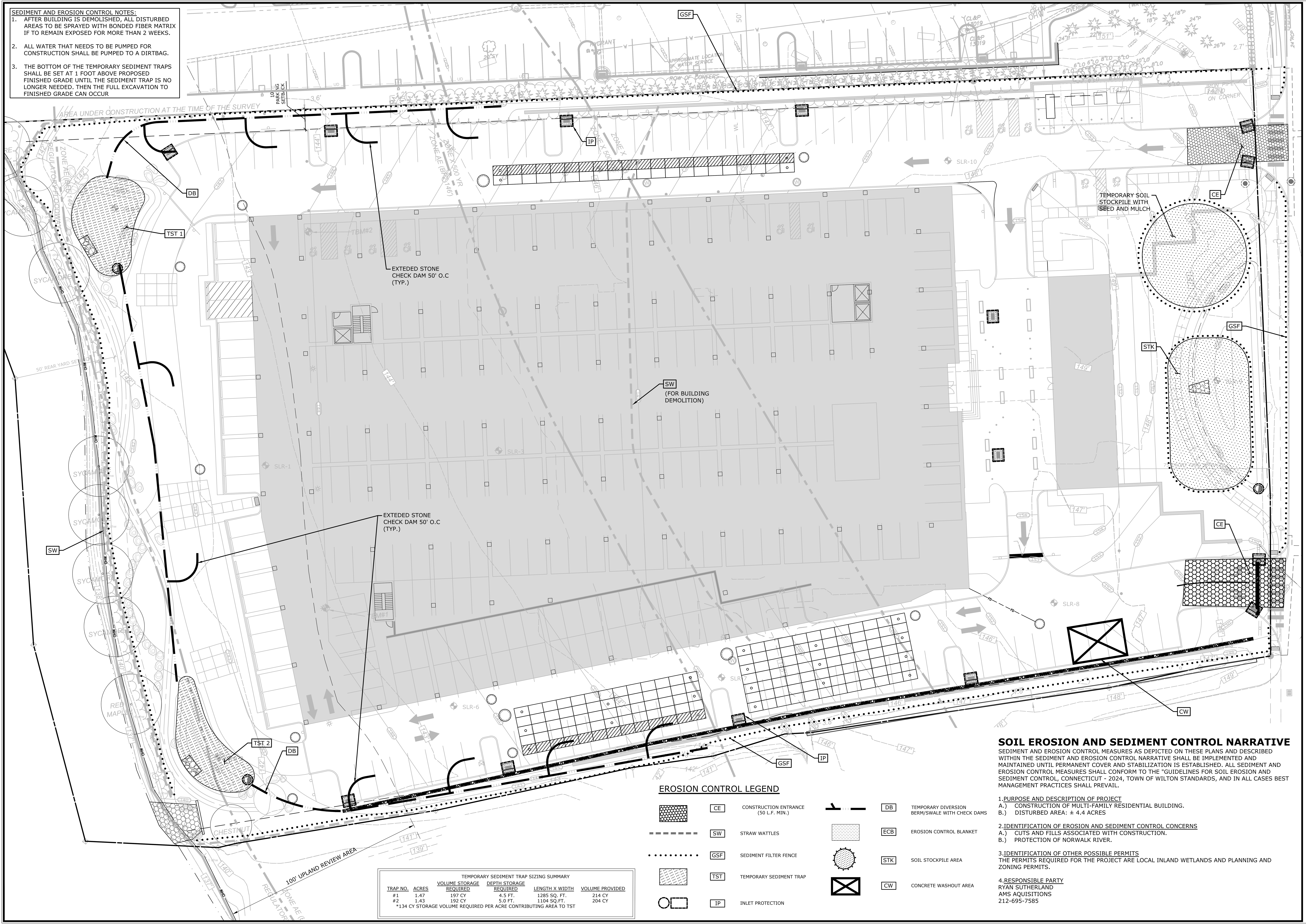
SHEET NAME

SEDIMENT AND EROSION CONTROL NOTES:

1. AFTER BUILDING IS DEMOLISHED, ALL DISTURBED AREAS TO BE SPRAYED WITH BONDED FIBER MATRIX IF TO REMAIN EXPOSED FOR MORE THAN 2 WEEKS.
2. ALL WATER THAT NEEDS TO BE PUMPED FOR CONSTRUCTION SHALL BE PUMPED TO A DIRTBAG.
3. THE BOTTOM OF THE TEMPORARY SEDIMENT TRAPS SHALL BE SET AT 1 FOOT ABOVE PROPOSED FINISHED GRADE UNTIL THE SEDIMENT TRAP IS NO LONGER NEEDED. THEN THE FULL EXCAVATION TO FINISHED GRADE CAN OCCUR



EROSION CONTROL LEGEND

CE	CONSTRUCTION ENTRANCE (50 L.F. MIN.)	
SW	STRAW WATTLES	
GSF	SEDIMENT FILTER FENCE	
TST	TEMPORARY SEDIMENT TRAP	
IP	INLET PROTECTION	
DB	TEMPORARY DIVERSION BERM/SWALE WITH CHECK DAMS	
ECB	EROSION CONTROL BLANKET	
STK	SOIL STOCKPILE AREA	
CW	CONCRETE WASHOUT AREA	

TEMPORARY SEDIMENT TRAP SIZING SUMMARY

TRAP NO.	ACRES	VOLUME STORAGE REQUIRED	DEPTH STORAGE REQUIRED	LENGTH X WIDTH	VOLUME PROVIDED
#1	1.47	197 CY	4.5 FT.	1285 SQ. FT.	214 CY
#2	1.43	192 CY	5.0 FT.	1104 SQ.FT.	204 CY

*134 CY STORAGE VOLUME REQUIRED PER ACRE CONTRIBUTING AREA TO TST

SOIL EROSION AND SEDIMENT CONTROL NARRATIVE

SEDIMENT AND EROSION CONTROL MEASURES AS DEPICTED ON THESE PLANS AND DESCRIBED WITHIN THE SEDIMENT AND EROSION CONTROL NARRATIVE SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT COVER AND STABILIZATION IS ESTABLISHED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL CONFORM TO THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, CONNECTICUT - 2024, TOWN OF WILTON STANDARDS, AND IN ALL CASES BEST MANAGEMENT PRACTICES SHALL PREVAIL.

1. PURPOSE AND DESCRIPTION OF PROJECT
A.) CONSTRUCTION OF MULTI-FAMILY RESIDENTIAL BUILDING.
B.) DISTURBED AREA: ± 4.4 ACRES

2. IDENTIFICATION OF EROSION AND SEDIMENT CONTROL CONCERNS
A.) CUTS AND FILLS ASSOCIATED WITH CONSTRUCTION.
B.) PROTECTION OF NORWALK RIVER.

3. IDENTIFICATION OF OTHER POSSIBLE PERMITS
THE PERMITS REQUIRED FOR THE PROJECT ARE LOCAL INLAND WETLANDS AND PLANNING AND ZONING PERMITS.

4. RESPONSIBLE PARTY
RYAN SUTHERLAND
AMS AQUISITIONS
212-695-7585

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CHESHIRE, CT 06410
203.271.1773
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DESCRIPTION	DATE	BY
P&Z SUBMISSION	11/27/2023	AWG
TOWN COMMENTS	12/1/2023	RH
PEER REVIEW COMMENTS	1/09/2024	AWG

SEDIMENT AND EROSION CONTROL PLAN

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

DESIGNED	DRAWN	CHECKED
AWG	AWG	TD

SCALE: 1"=20'

DATE: OCTOBER 23, 2023

PROJECT NO. 21543.00001

SHEET NO. 09 OF 23

SHEET NAME: SE-1

SEDIMENT AND EROSION CONTROL SPECIFICATIONS

GENERAL:

THESE GUIDELINES SHALL APPLY TO ALL WORK CONSISTING OF ANY AND ALL TEMPORARY AND/OR PERMANENT MEASURES TO CONTROL WATER POLLUTION AND SOIL EROSION, AS MAY BE REQUIRED, DURING THE CONSTRUCTION OF THE PROJECT. IN GENERAL, ALL CONSTRUCTION ACTIVITIES SHALL PROCEED IN SUCH A MANNER SO AS NOT TO POLLUTE ANY WETLANDS, WATERCOURSE, WATERBODY, AND CONDUIT CARRYING WATER, ETC. THE CONTRACTOR SHALL LIMIT, INSOFAR AS POSSIBLE, THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION METHODS AND IMMEDIATELY PROVIDE PERMANENT AND TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT WETLANDS, WATERCOURSES, AND WATERBODIES, AND TO PREVENT, INSOFAR AS POSSIBLE, EROSION ON THE SITE.

LAND GRADING

GENERAL:

1. THE RESHAPING OF THE GROUND SURFACE BY EXCAVATION AND FILLING OR A COMBINATION OF BOTH, TO OBTAIN PLANNED GRADES, SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING CRITERIA:
   a. THE CUT FACE OF EARTH EXCAVATION SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).
   b. THE PERMANENT EXPOSED FACES OF FILLS SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).
   c. THE CUT FACE OF ROCK EXCAVATION SHALL NOT BE STEEPER THAN ONE HORIZONTAL TO FOUR VERTICAL (1:4).
   d. PROVISION SHOULD BE MADE TO CONDUCT SURFACE WATER SAFELY TO STORM DRAINS TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.
   e. EXCAVATIONS SHOULD NOT BE MADE SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTY WITHOUT PROTECTING SUCH PROPERTY FROM EROSION, SLIDING, SETTLING, OR CRACKING.
   f. NO FILL SHOULD BE PLACED WHERE IT WILL SLIDE OR WASH UPON THE PREMISES OF ANOTHER OWNER OR UPON ADJACENT WETLANDS, WATERCOURSES, OR WATERBODIES.
   g. PRIOR TO ANY REGRADING, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE ENTRANCE TO THE WORK AREA IN ORDER TO REDUCE MUD AND OTHER SEDIMENTS FROM LEAVING THE SITE.

TOPSOILING

GENERAL:

1. TOPSOIL SHALL BE SPREAD OVER ALL EXPOSED AREAS IN ORDER TO PROVIDE A SOIL MEDIUM HAVING FAVORABLE CHARACTERISTICS FOR THE ESTABLISHMENT, GROWTH, AND MAINTENANCE OF VEGETATION.
2. UPON ATTAINING FINAL SUBGRADES, SCARIFY SURFACE TO PROVIDE A GOOD BOND WITH TOPSOIL.
3. REMOVE ALL LARGE STONES, TREE LIMBS, ROOTS AND CONSTRUCTION DEBRIS.
4. APPLY SOIL AMENDMENTS AS FOLLOWS:
   LIME: ACCORDING TO SOIL TEST OR AT THE RATE OF 2 TONS PER ACRE.

   ROCK DUST: ACCORDING TO SOIL TEST OR AT THE RATE OF 2 TONS PER ACRE

MATERIAL:

1. TOPSOIL SHOULD HAVE PHYSICAL, CHEMICAL, AND BIOLOGICAL CHARACTERISTICS FAVORABLE TO THE GROWTH OF PLANTS.
2. TOPSOIL SHOULD HAVE A SANDY OR LOAMY TEXTURE.
3. TOPSOIL SHOULD BE RELATIVELY FREE OF SUBSOIL MATERIAL AND MUST BE FREE OF LARGE STONES , LUMPS OF SOIL, ROOTS, TREE LIMBS, TRASH, OR CONSTRUCTION DEBRIS. IT SHOULD BE FREE OF ROOTS OR RHIZOMES SUCH AS THISTLE, NUTGRASS, AND QUACKGRASS.
4. AN ORGANIC MATTER CONTENT OF SIX PERCENT (6%) IS REQUIRED. AVOID LIGHT COLORED SUBSOIL MATERIAL.
5. SOLUBLE SALT CONTENT OF LESS THAN 400 PPM IS REQUIRED.
6. THE TOPSOIL SHALL BE WARRANTED BY SELLER TO BE FREE OF DETECTABLE RESIDUES OF CHEMICAL PESTICIDES, HERBICIDES, PETROLEUM PRODUCTS, OR OTHER UNSUITABLE TOXINS.

APPLICATION:

1. AVOID SPREADING WHEN TOPSOIL IS WET OR FROZEN.
2. SPREAD TOPSOIL UNIFORMLY TO A DEPTH OF AT LEAST FOUR INCHES (4"), OR TO THE DEPTH SHOWN ON THE LANDSCAPING PLANS.

TEMPORARY VEGETATIVE COVER

TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED ON ALL UNPROTECTED AREAS THAT PRODUCE SEDIMENT, AREAS WHERE FINAL GRADING HAS BEEN COMPLETED, AND AREAS WHERE THE ESTIMATED PERIOD OF BARE SOIL EXPOSURE IS LESS THAN 12 MONTHS. TEMPORARY VEGETATIVE COVER SHALL BE APPLIED IF AREAS WILL NOT BE PERMANENTLY SEEDED BY SEPTEMBER 1.

GENERAL:

1. INSTALL REQUIRED SURFACE WATER CONTROL MEASURES.
2. REMOVE LOOSE ROCK, STONE, AND CONSTRUCTION DEBRIS FROM AREA.
3. APPLY SOIL AMENDMENTS AS FOLLOWS:
   LIME: ACCORDING TO SOIL TEST OR AT THE RATE OF 1 TONS PER ACRE.
   ROCK DUST: ACCORDING TO SOIL TEST OR AT THE RATE OF 1 TONS PER ACRE
4. UNLESS HYDROSEEDED, WORK IN LIME TO A DEPTH OF 4 INCHES WITH A DISK OR ANY SUITABLE EQUIPMENT. DO NOT WORK FINISHED COMPOST INTO THE SOIL - APPLY IT EVENLY TO SOIL SURFACE AS A SEED BED.
5. TILLAGE SHOULD ACHIEVE A REASONABLY UNIFORM LOOSE SEEDBED. WORK ON CONTOUR IF SITE IS SLOPING.

SITE PREPARATION:

1. SELECT APPROPRIATE SPECIES FOR THE SITUATION. NOTE RATES AND SEEDING DATES (SEE VEGETATIVE COVER SELECTION & MULCHING)
2. APPLY SEED UNIFORMLY ACCORDING TO THE RATE INDICATED BY BROADCASTING, DRILLING, OR HYDRAULIC APPLICATION.
3. UNLESS HYDROSEEDED, COVER RYEGRASS SEEDS WITH NOT MORE THAN 1/4 INCH OF SOIL USING SUITABLE EQUIPMENT.
4. MULCH IMMEDIATELY AFTER SEEDING IF REQUIRED. (SEE VEGETATIVE COVER SELECTION & MULCHING SPECIFICATION BELOW.) APPLY STRAW AND ANCHOR TO SLOPES GREATER THAN 3%%% OR WHERE NEEDED.

PERMANENT VEGETATIVE COVER

GENERAL:

PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED AS VARIOUS SECTIONS OF THE PROJECT ARE COMPLETED IN ORDER TO STABILIZE THE SOIL, REDUCE DOWNSTREAM DAMAGE FROM SEDIMENT AND RUNOFF, AND TO ENHANCE THE AESTHETIC NATURE OF THE SITE. IT WILL BE APPLIED TO ALL CONSTRUCTION AREAS SUBJECT TO EROSION WHERE FINAL GRADING HAS BEEN COMPLETED AND A PERMANENT COVER IS NEEDED.

SITE PREPARATION:

1. INSTALL REQUIRED SURFACE WATER CONTROL MEASURES.
2. REMOVE LOOSE ROCK, STONE, AND CONSTRUCTION DEBRIS FROM AREA.
3. PERFORM ALL PLANTING OPERATIONS PARALLEL TO THE CONTOURS OF THE SLOPE.
4. APPLY TOPSOIL AS INDICATED ELSEWHERE HEREIN.
5. APPLY SOIL AMENDMENTS AS FOLLOWS:
   LIME: ACCORDING TO SOIL TEST OR AT THE RATE OF 1 TONS PER ACRE.
   ROCK DUST: ACCORDING TO SOIL TEST OR AT THE RATE OF 1 TONS PER ACRE
6. UNLESS HYDROSEEDED, WORK IN LIME TO A DEPTH OF 4 INCHES WITH A DISK OR ANY SUITABLE EQUIPMENT. DO NOT WORK FINISHED COMPOST

VEGETATED COVER SELECTION AND MULCHING

TEMPORARY VEGETATIVE COVER:

PERENNIAL RYEGRASS 5 LBS./1,000 SQ.FT. (LOLIUM PERENNE)
DUTCH WHITE CLOVER (TRIFOLIUM REPENS) 1/4 LBS PER 1000 SF. OR 6LBS/AC.

* PERMANENT VEGETATIVE COVER:

DUTCH WHITE CLOVER 30%
BARON KENTUCKY BLUEGRASS 30%
JAMESTOWN II CHEWINGS FESCUE 20%
PALMER PERENNIAL RYEGRASS 20%

NEW ENGLAND EROSION CONTROL/R3ESOTRATION MIX FOR MOIST SITES AT 1/8 LB PER 1000 S.F. FOR 5 LBS/AC.

NEW ENGLAND SHOWY WILD FLOW MIX AT 1/16 LB PER 1000 S.F. OR 2 LBS/AC

* LOFTS - "TRIPLEX GENERAL" MIX OR APPROVED EQUAL. RECOMMENDED RATE/TIME SEEDING.
SPRING SEEDING: 4/1 to 5/31
FALL SEEDING: 8/16 to 10/15

TEMPORARY MULCHING:

STRAY 70-90 LBS./1,000 SQ.FT. (TEMPORARY VEGETATIVE AREAS) WOOD FIBER IN HYDROMULCH SLURRY 25-50 LBS./1,000 SQ. FT.

ESTABLISHMENT:
1. SMOOTH AND FIRM SEEDBED WITH CULTIPACKER OR OTHER SIMILAR EQUIPMENT PRIOR TO SEEDING (EXCEPT WHEN HYDROSEEDING).
2. SELECT ADAPTED SEED MIXTURE FOR THE SPECIFIC SITUATION. NOTE RATES AND THE SEEDING DATES (SEE VEGETATIVE COVER SELECTION & MULCHING SPEC. BELOW).
3. APPLY SEED UNIFORMLY ACCORDING TO RATE INDICATED, BY BROADCASTING, DRILLING, OR HYDRAULIC APPLICATION.
4. COVER GRASS AND LEGUME SEED WITH NOT MORE THAN 1/4 INCH OF SOIL WITH SUITABLE EQUIPMENT (EXCEPT WHEN HYDROSEEDING).
5. MULCH IMMEDIATELY AFTER SEEDING, IF REQUIRED, ACCORDING TO TEMPORARY MULCHING SPECIFICATIONS. (SEE VEGETATIVE COVER SELECTION & MULCHING SPECIFICATION BELOW).
6. USE PROPER INOCULAT ON ALL LEGUME SEEDLINGS, USE FOUR (4) TIMES NORMAL RATES WHEN HYDROSEEDING.
7. USE SOD WHERE THERE IS A HEAVY CONCENTRATION OF WATER AND IN CRITICAL AREAS WHERE IT IS IMPORTANT TO GET A QUICK VEGETATIVE COVER TO PREVENT EROSION.

MAINTENANCE:

1. TEST FOR SOIL ACIDITY EVERY THREE (3) YEARS AND LIME AS REQUIRED.

EROSION CHECKS

GENERAL:

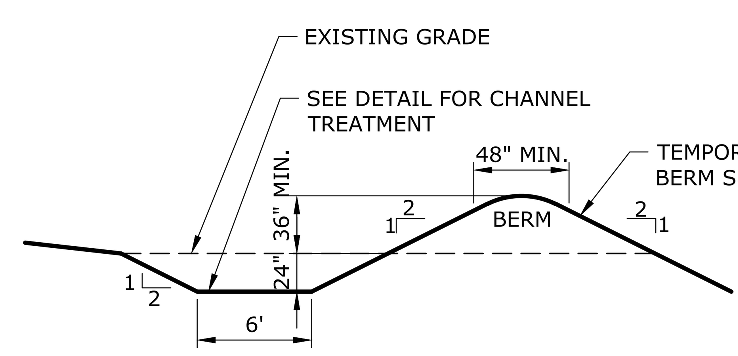
1. TEMPORARY PERVIOUS BARRIERS USING BALES OF HAY OR STRAW, HELD IN PLACE WITH STAKES DRIVEN THROUGH THE BALES AND INTO THE GROUND OR GEOTEXTILE FABRIC FASTENED TO A FENCE POST AND BURIED INTO THE GROUND, SHALL BE INSTALLED AND MAINTAINED AS REQUIRED TO CHECK EROSION AND REDUCE SEDIMENTATION.

CONSTRUCTION:

1. BALES SHOULD BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED INTO THE SOIL A MINIMUM OF FOUR (4") INCHES.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY WOOD STAKES OR REINFORCEMENT BARS DRIVEN THROUGH THE BALES AND INTO THE GROUND. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD THE PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
4. GEOTEXTILE FABRIC SHALL BE SECURELY ANCHORED AT THE TOP OF A THREE FOOT (3') HIGH FENCE AND BURIED A MINIMUM OF FOUR INCHES (4") TO THE SOIL. SEAMS BETWEEN SECTIONS OF FILTER FABRIC SHALL OVERLAP A MINIMUM OF TWO FEET (2').

INSTALLATION AND MAINTENANCE:

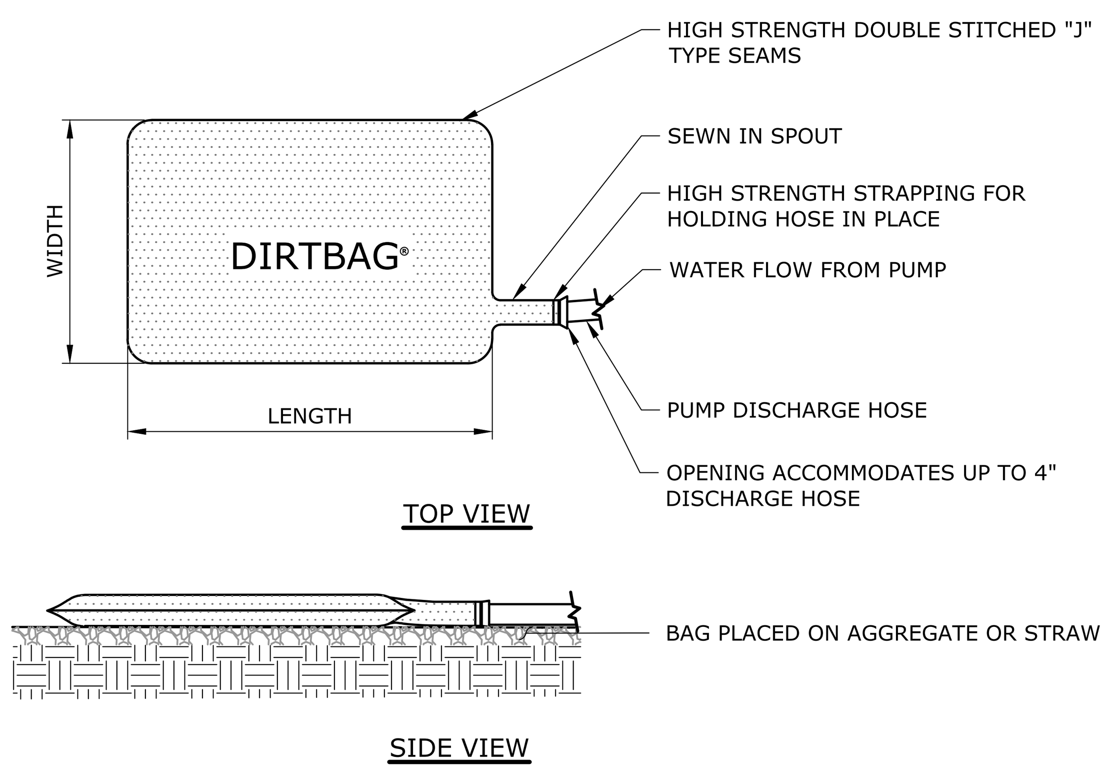
1. BALED HAY EROSION BARRIERS SHALL BE INSTALLED AT ALL STORM SEWER INLETS.
2. BALED HAY EROSION BARRIERS AND GEOTEXTILE FENCE SHALL BE INSTALLED AT THE LOCATION INDICATED ON THE PLAN AND IN ADDITIONAL AREAS AS MAY BE DEEMED APPROPRIATE DURING CONSTRUCTION.
3. ALL EROSION CHECKS SHALL BE MAINTAINED UNTIL ADJACENT AREAS ARE STABILIZED.
4. INSPECTION SHALL BE FREQUENT (AT MINIMUM MONTHLY AND BEFORE AND AFTER HEAVY RAIN) AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. EROSION CHECKS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE.



TEMPORARY DIVERSION BERM AND SWALE
NOT TO SCALE

EROSION CONTROL MAINTENANCE INTERVALS

EROSION CONTROL MEASURE	CONTROL OBJECTIVE	INSPECTION/MAINTENANCE	FAILURE INDICATORS	REMOVAL
SILT FENCE (SF) STRAW WATTLES (SW) (RELATED: IP, STK)	- INTERCEPT, AND REDIRECT/DETAIN SMALL AMOUNTS OF SEDIMENT FROM SMALL DISTURBED AREAS. - DECREASE VELOCITY OF SHEET FLOW. - PROTECT SENSITIVE SLOPES OR SOILS FROM EXCESSIVE WATER FLOW.	INSPECT AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL OF 0.5 INCHES OR MORE. ACCUMULATED SEDIMENT MUST BE REMOVED ONCE ITS DEPTH IS EQUAL TO ½ THE TRENCH HEIGHT. INSPECT FREQUENTLY DURING PUMPING OPERATIONS IF USED FOR DEWATERING OPERATIONS.	- PHYSICAL DAMAGE OR DECOMPOSITION - EVIDENCE OF OVERTOPPED OR UNDERCUT FENCE - EVIDENCE OF SIGNIFICANT FLOWS EVADING CAPTURE - REPETITIVE FAILURE	SILT FENCE/STRAW WATTLES MAY BE REMOVED AFTER UPHILL AND SENSITIVE AREAS HAVE BEEN PERMANENTLY STABILIZED.
CONSTRUCTION ENTRANCE (CE)	- REDUCE THE TRACKING OF SEDIMENT OFF-SITE ONTO PAVED SURFACES.	INSPECT AT THE END OF EACH WORK DAY AND IMMEDIATELY REPAIR DAMAGES. PERIODIC ADDITION OF STONE, OR LENGTHENING OF ENTRANCE MAY BE REQUIRED AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PAVED SURFACES AS A RESULT OF INEFFICIENCY OF CONSTRUCTION ENTRANCE SHALL BE IMMEDIATELY REMOVED.	- SEDIMENT IN ROADWAY ADJACENT TO SITE	CONSTRUCTION ENTRANCE MAY BE REMOVED ONCE THE SITE HAS BEEN PERMANENTLY STABILIZED, AND ALL OTHER SECTIONS OF ROADWAY HAVE BEEN PERMANENTLY PAVED.
INLET PROTECTION (IP)	- PROHIBIT SILT IN CONSTRUCTION-RELATED RUNOFF FROM ENTERING STORM DRAINAGE SYSTEM.	INSPECT AFTER ANY RAIN EVENT. IF FILTER BAG INSIDE CATCH BASIN CONTAINS MORE THAN 6" OF SEDIMENT, REMOVE SEDIMENT FROM BAG. CHECK SURROUNDING SILT FENCE AND HAY BALES PER NOTED ABOVE.	- RIPPED BAG - FAILED HAY BALES / SILT FENCE - SIGNIFICANT SILT PRESENCE IN STORM DRAINAGE SYSTEM OUTFLOW.	INLET PROTECTION MAY BE REMOVED ONCE THE SITE HAS BEEN PERMANENTLY STABILIZED, AND ALL SECTIONS OF ROADWAY HAVE BEEN PERMANENTLY PAVED.
STOCKPILE PROTECTION (STK)	- RETAIN SOIL STOCKPILE IN LOCATIONS SPECIFIED, AND REDUCE WATER-TRANSPORT.	INSPECT SILT FENCE AT THE END OF EACH WORK DAY AND IMMEDIATELY REPAIR DAMAGES. PERIODIC REINFORCEMENT OF SILT FENCE, OR ADDITION OF HAY BALES MAY BE NECESSARY.	- EVIDENCE OF STOCK PILE DIMINISHING DUE TO RAIN EVENTS - FAILURE OF SILT FENCE	STOCKPILE PROTECTION MAY BE REMOVED ONCE THE STOCKPILE IS USED OR REMOVED.
TEMPORARY SEDIMENT TRAP (TST)	- DETAIN SEDIMENT-LADEN RUNOFF FROM SMALL DISTURBED AREAS LONG ENOUGH TO ALLOW A MAJORITY OF THE SEDIMENT TO SETTLE OUT.	INSPECT AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL OF 0.5 INCHES OR MORE. STONE OUTLET SHOULD BE AT LEAST 1 FOOT BELOW CREST OF EMBANKMENT. SEDIMENT MUST BE REMOVED WHEN ACCUMULATION REACHES ½ OF THE REQUIRED WET STORAGE.	- TURBID WATER - EXCESSIVE SEDIMENT ACCUMULATION - OVERTOPPING EVIDENCE	TST MAY BE REMOVED ONCE THE CONTRIBUTING DRAINAGE AREA IS PERMANENTLY STABILIZED.
TEMPORARY DIVERSION BERM/SWALE (DB)	- MINIMIZE VELOCITY AND CONCENTRATION OF SHEET FLOW ACROSS CONSTRUCTION SITE TO A SEDIMENT TRAPPING FACILITY. - DIVERT WATER ORIGINATING FROM UNDISTURBED AREA AWAY FROM CONSTRUCTION.	WHEN LOCATED WITHIN CLOSE PROXIMITY TO ONGOING CONSTRUCTION ACTIVITIES, INSPECT AT THE END OF EACH WORK DAY AND IMMEDIATELY REPAIR DAMAGES. OTHERWISE INSPECT AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL OF 0.5 INCHES OR MORE. REPAIR THE TEMPORARY MEASURE AND ANY OTHER ASSOCIATED MEASURES WITHIN 24 HOURS.	- PHYSICAL DAMAGE - EXCESSIVE SCOURING/EROSION - REPETITIVE FAILURE	TEMPORARY DIVERSIONS MAY BE REMOVED ONCE CONSTRUCTION HAS CEASED AND THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED.
DUST CONTROL (DC)	- TO PREVENT MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, WHICH MAY CAUSE BOTH OFF-SITE AND ON-SITE DAMAGE, BE A HEALTH HAZARD TO HUMANSILDLIFE, AND PLANT LIFE, OR CREATE A HAZARD BY REDUCING TRAFFIC VISIBILITY.	USE MECHANICAL SWEEPING DAILY ON PAVED AREAS WHERE DUST AND FINE MATERIALS ACCUMULATE, IF HEAVILY TRAFFICKED AND SEDIMENT ACCUMULATES QUICKLY. PERIODICALLY MOISTEN UNPAVED TRAVELWAYS TO CONTROL DUST WHEN EVIDENCE OF AIRBORNE DUST.	-AIRBORNE DUST	REPEAT APPLICATION OF DUST CONTROL MEASURES UNTIL ALL AREAS ARE PERMANENTLY STABILIZED, VEGETATED, AND PAVED, OR AS LONG AS THERE IS AIRBORNE DUST.



DIRTBAG PUMPED SILT CONTROL SYSTEM
NOT TO SCALE

NOTES

1. CONCRETE WASHOUT AREA(S) SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. THE CONCRETE WASHOUT AREA SHALL BE ENTIRELY SELF-CONTAINED.

2. THE CONTRACTOR SHALL SUBMIT THE DESIGN, LOCATION AND SIZING OF THE CONCRETE WASHOUT AREA(S) WITH THE PROJECT'S EROSION AND SEDIMENTATION CONTROL PLAN AND SHALL BE APPROVED BY THE ENGINEER.

LOCATION: WASHOUT AREA(S) ARE TO BE LOCATED AT LEAST 50 FEET FROM ANY STREAM, WETLAND, STORM DRAINS, OR OTHER SENSITIVE RESOURCE. THE FLOOD CONTINGENCY PLAN MUST ADDRESS THE CONCRETE WASHOUT IF THE WASHOUT IS TO BE LOCATED WITHIN THE FLOODPLAIN.

SIZE: THE WASHOUT MUST HAVE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS INCLUDING, BUT NOT LIMITED TO, OPERATIONS ASSOCIATED WITH GROUT AND MORTAR.

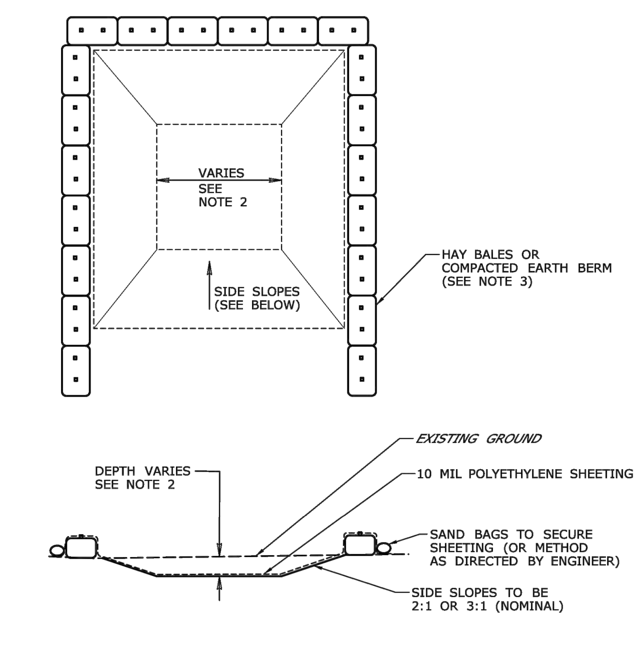
3. SURFACE DISCHARGE IS UNACCEPTABLE. THEREFORE, HAY BALES OR OTHER CONTROL MEASURES, AS APPROVED BY THE ENGINEER, SHOULD BE USED AROUND THE PERIMETER OF THE CONCRETE WASHOUT AREA FOR CONTAINMENT.

4. SIGNS SHOULD BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CONCRETE AREA(S) AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS. WASHOUT AREA(S) SHOULD BE FLAGGED WITH SAFETY FENCING OR OTHER APPROVED METHOD.

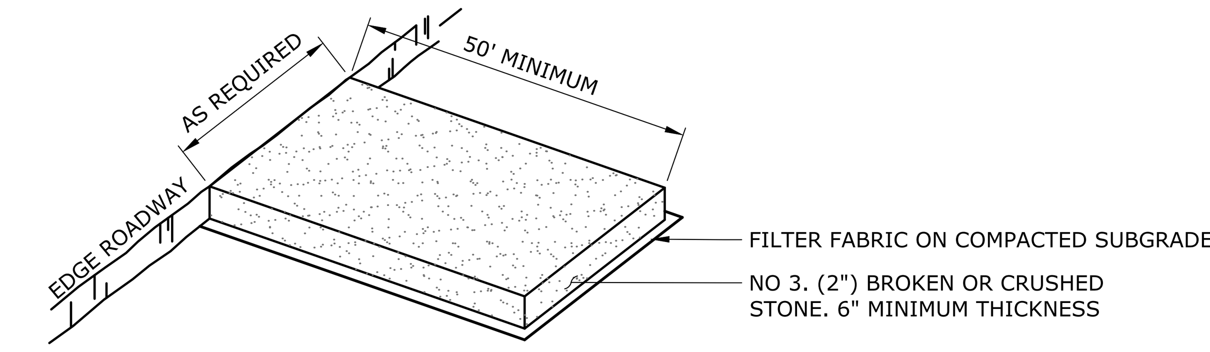
5. WASHOUT AREA(S) ARE TO BE INSPECTED AT LEAST ONCE A WEEK FOR STRUCTURAL INTEGRITY, ADEQUATE HOLDING CAPACITY AND CHECKED FOR LEAKS, TEARS, OR OVERFLOWS. (AS REQUIRED BY THE CONSTRUCTION SITE ENVIRONMENTAL INSPECTION REPORT) WASHOUT AREA(S) SHOULD BE CHECKED AFTER HEAVY RAINS.

6. HARDENED CONCRETE WASTE SHOULD BE REMOVED AND DISPOSED OF WHEN THE WASTE HAS ACCUMULATED TO HALF OF THE CONCRETE WASHOUT'S HEIGHT. THE WASTE CAN BE STORED AT AN UPLAND LOCATION, AS APPROVED BY THE ENGINEER. ALL CONCRETE WASTE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH ALL APPLICABLE LAWS, REGULATIONS, AND GUIDELINES.

7. PAYMENT FOR THIS ITEM IS TO BE INCLUDED UNDER THE GENERAL COST OF THE WORK FOR THE PROJECT, INCLUDING SITE RESTORATION.



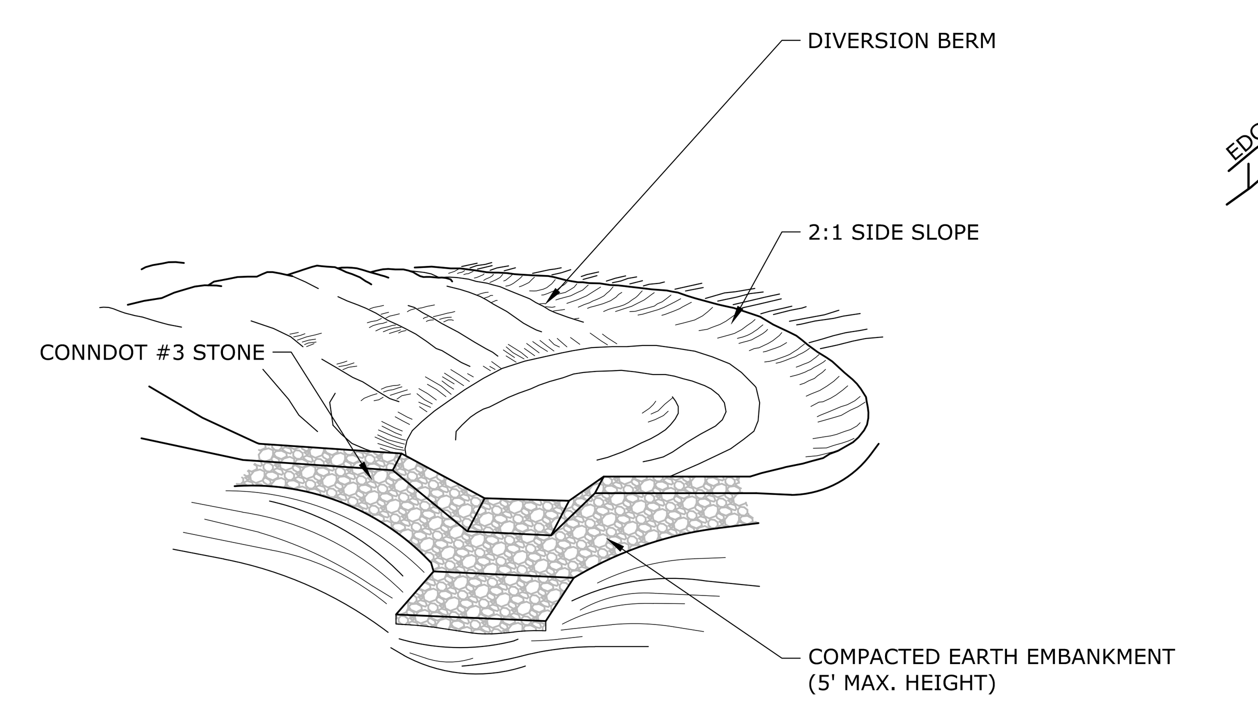
CONCRETE WASHOUT AREA
NOT TO SCALE
(SEE NOTE 2)



NOTES:

1. CONSTRUCTION ENTRANCE PAD SHALL BE INSTALLED AND MAINTAINED DURING OPERATIONS WHICH GENERATE VEHICULAR TRACKING OF MUD.

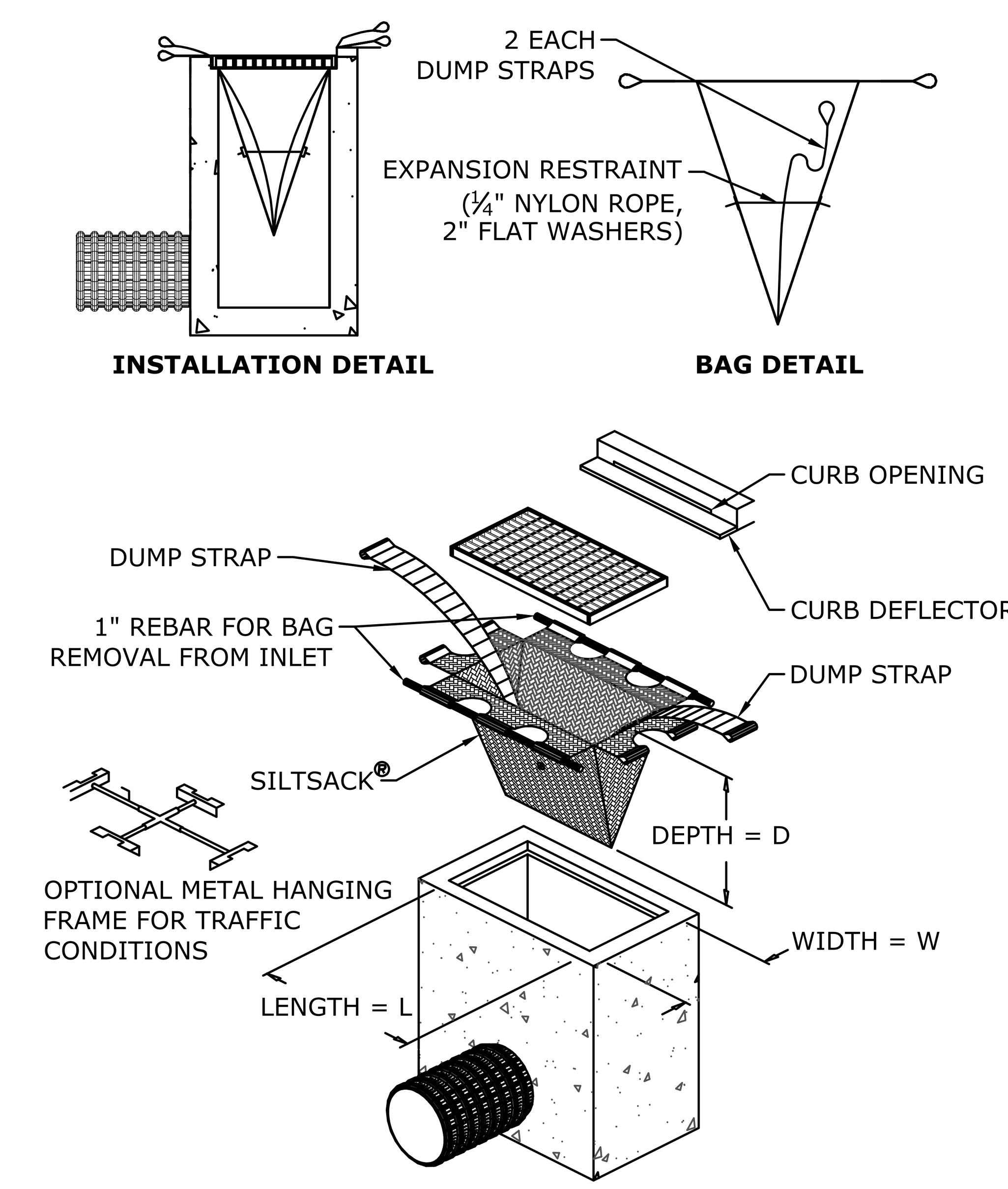
CONSTRUCTION ENTRANCE PAD
NOT TO SCALE



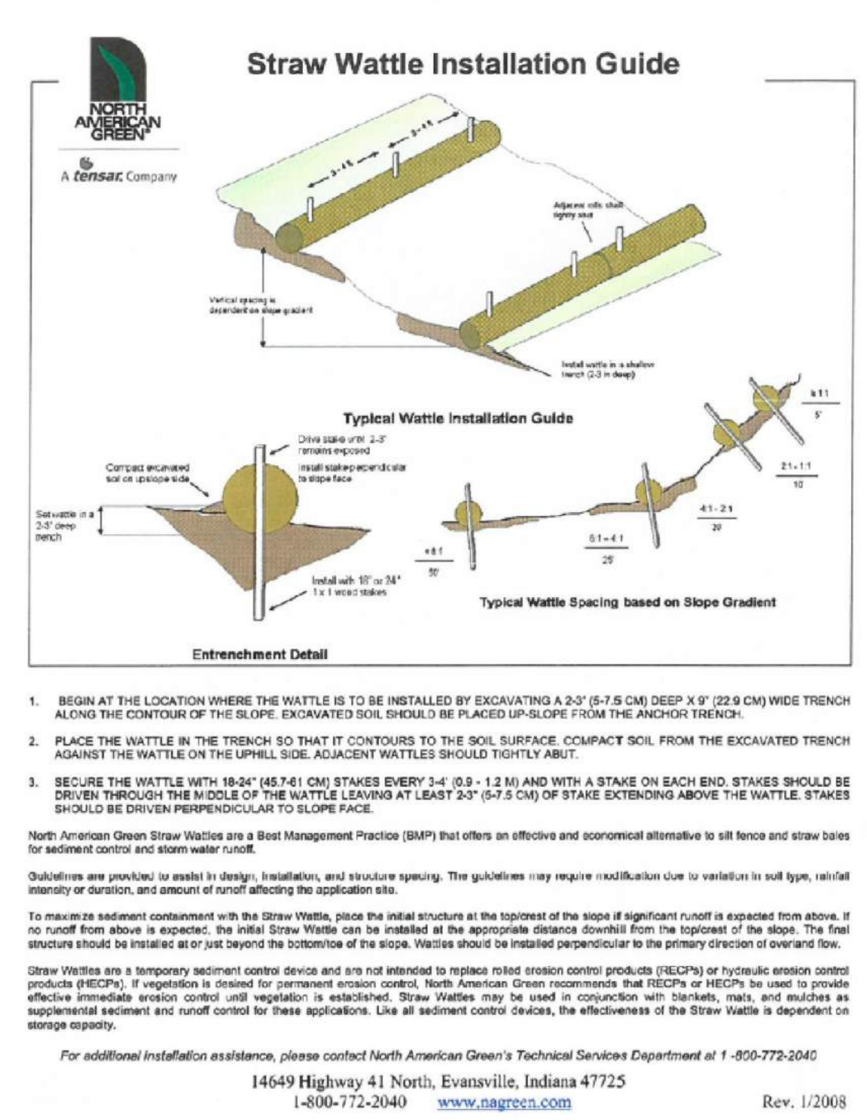
NOTES:

1. REFER TO SEDIMENT & EROSION CONTROL PLAN FOR APPROXIMATE DIMENSIONS AND REQUIRED VOLUME.

TEMPORARY SEDIMENT TRAP
NOT TO SCALE



INLET PROTECTION
NOT TO SCALE


Straw Wattle Installation Guide

NORTH AMERICAN GREEN
A tensar Company

Typical Wattle Installation Guide

Entrenchment Detail

Typical Wattle Spacing based on Slope Gradient

1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3' (5-7.5 CM) DEEP X 9' (22.9 CM) WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UP-SLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
3. SECURE THE WATTLE WITH 18-24" (45.7-61 CM) STAKES EVERY 3-4' (0.9 - 1.2 M) AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2-3" (5-7.5 CM) OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO SLOPE FACE.

North American Green Straw Wattles are a Best Management Practice (BMP) that offers an effective and economical alternative to silt fence and straw bales for sediment control and storm water runoff.

Guidelines are provided to assist in design, installation, and structure spacing. The guidelines may require modification due to variation in soil type, rainfall intensity or duration, and amount of runoff affecting the application site.

To maximize sediment containment with the Straw Wattle, place the initial structure at the top/crest of the slope if significant runoff is expected from above. If no runoff from above is expected, the initial Straw Wattle can be installed at the appropriate distance downhill from the top/crest of the slope. The final structure should be installed at or just beyond the bottom/toe of the slope. Wattles should be installed perpendicular to the primary direction of overland flow.

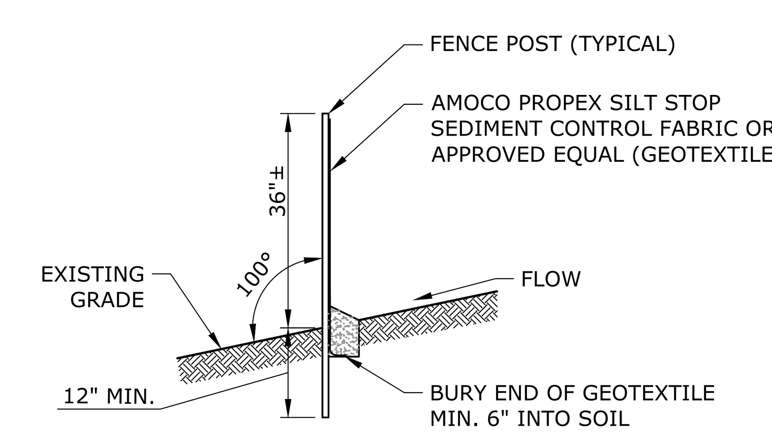
Straw Wattles are a temporary sediment control device and are not intended to replace rolled erosion control products (RECPs) or hydraulic erosion control products (HECPs). If vegetation is desired for permanent erosion control, North American Green recommends that RECPs or HECPs be used to provide effective immediate erosion control until vegetation is established. Straw Wattles may be used in conjunction with blankets, mats, and mulches as supplemental sediment and runoff control for these applications. Like all sediment control devices, the effectiveness of the Straw Wattle is dependent on storage capacity.

For additional installation assistance, please contact North American Green's Technical Services Department at 1-800-772-2040

14649 Highway 41 North, Evansville, Indiana 47725
1-800-772-2040 www.nagreen.com Rev. 1/2008

NOTES:
STRAW WATTLES SHALL HAVE A 12" DIAMETER MIN.

STRAW WATTLE
NOT TO SCALE



SEDIMENT FILTER FENCE
NOT TO SCALE

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
PEER REVIEW COMMENTS	1/09/2024	AWG

SEDIMENT AND EROSION CONTROL SPECIFICATIONS AND DETAILS

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

AWG	AWG	TD
DESIGNED	DRAWN	CHECKED

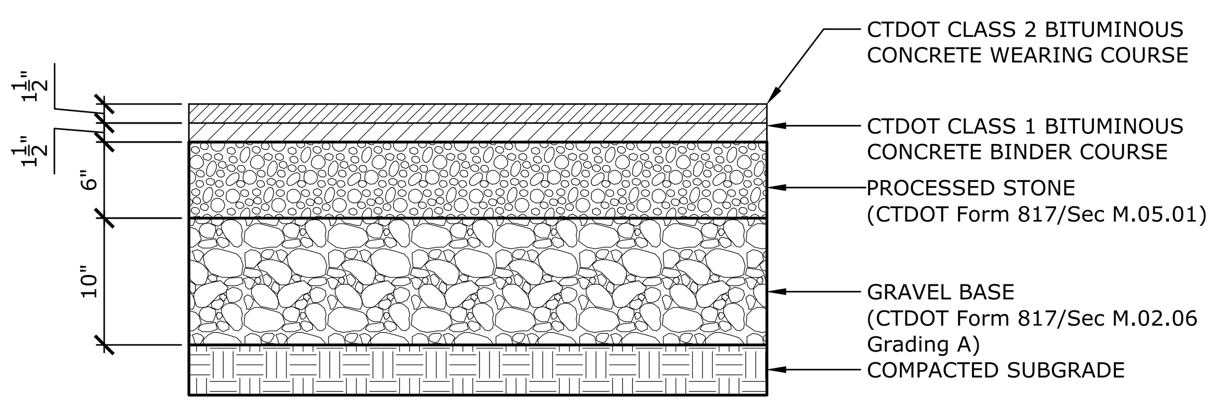
SCALE: AS NOTED

DATE: OCTOBER 23, 2023

PROJECT NO.: 21543.00001

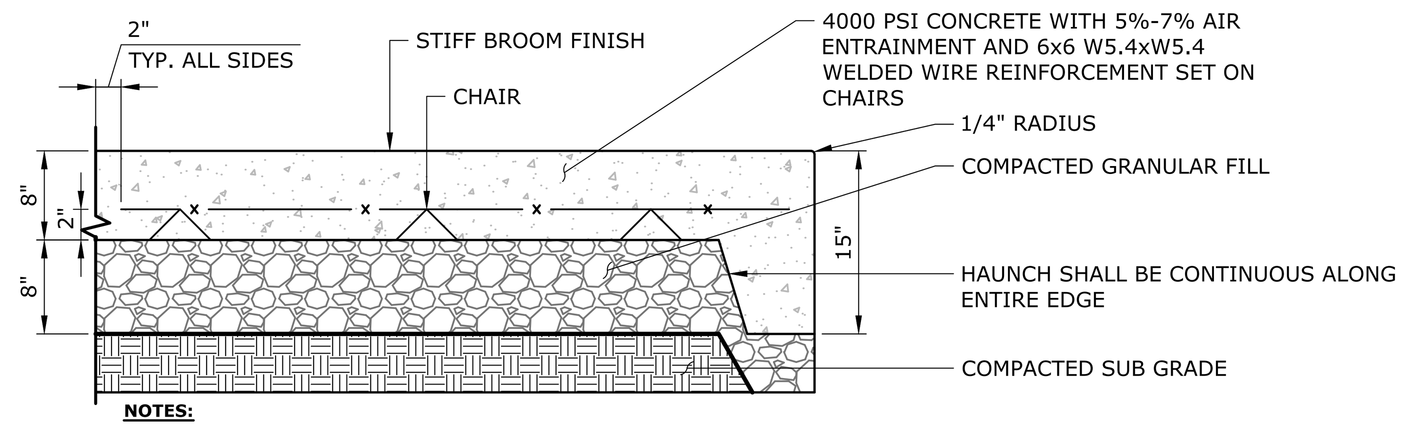
SHEET NO.: 10 OF ##

SHEET NAME: SE-2



STANDARD DUTY BITUMINOUS CONCRETE & STANDARD BASE

NOT TO SCALE

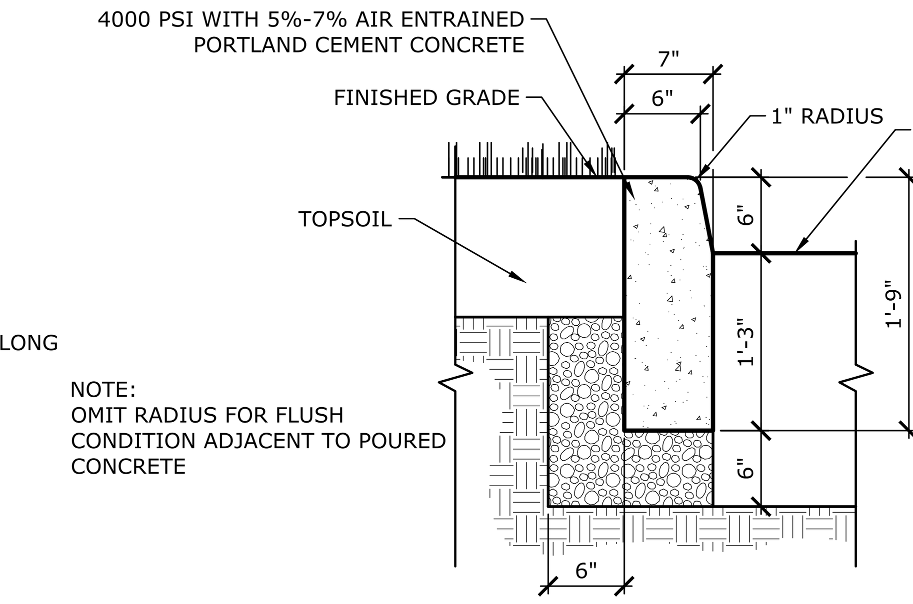


NOTES:

1. EXPANSION JOINTS EVERY 20LF MAXIMUM OR EVERY 144SF UNLESS OTHERWISE INDICATED ON PLANS (SEE JOINT DETAILS)
2. SCORE JOINTS 5' ON CENTER UNLESS OTHERWISE INDICATED ON PLANS.

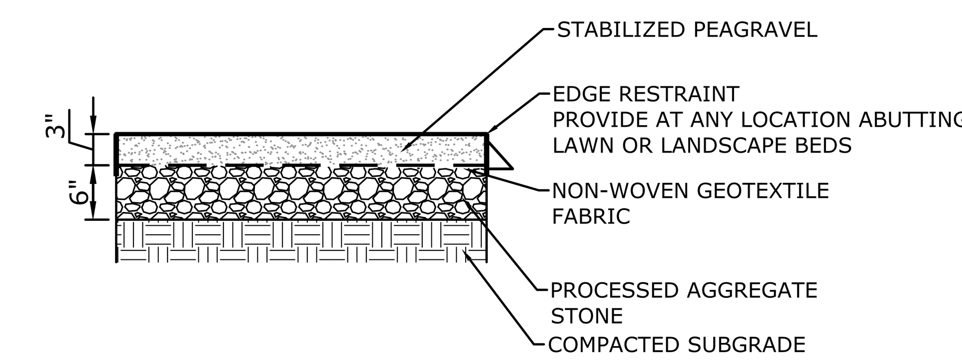
CONCRETE UTILITY PAD

NOT TO SCALE



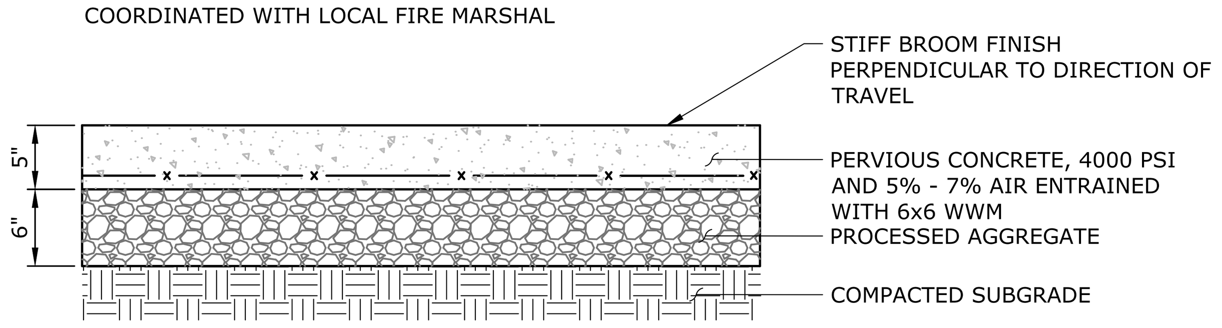
CAST-IN-PLACE CONCRETE CURB

NOT TO SCALE



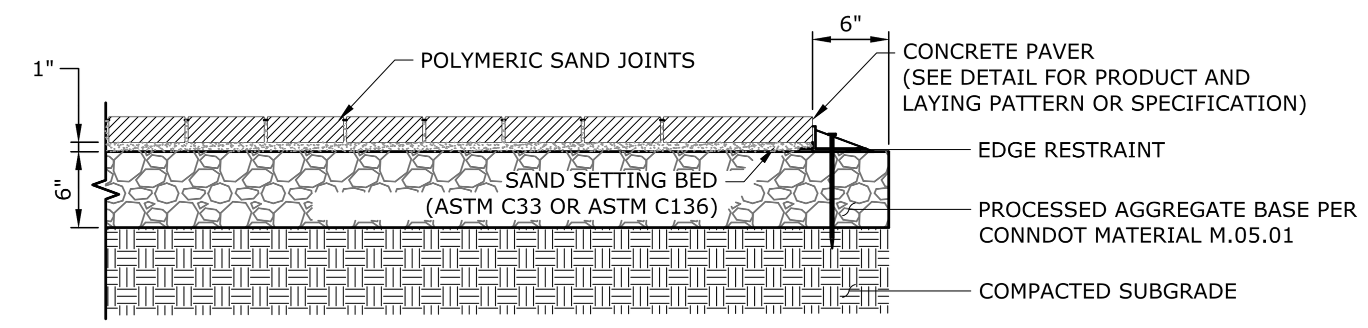
STABILIZED PEAGRAVEL PATHWAY

NOTE: DETAIL IN PROGRESS AND TO BE COORDINATED WITH LOCAL FIRE MARSHAL



CONCRETE PAD FOR FIRE TRUCK OUTRIGGERS

NOT TO SCALE

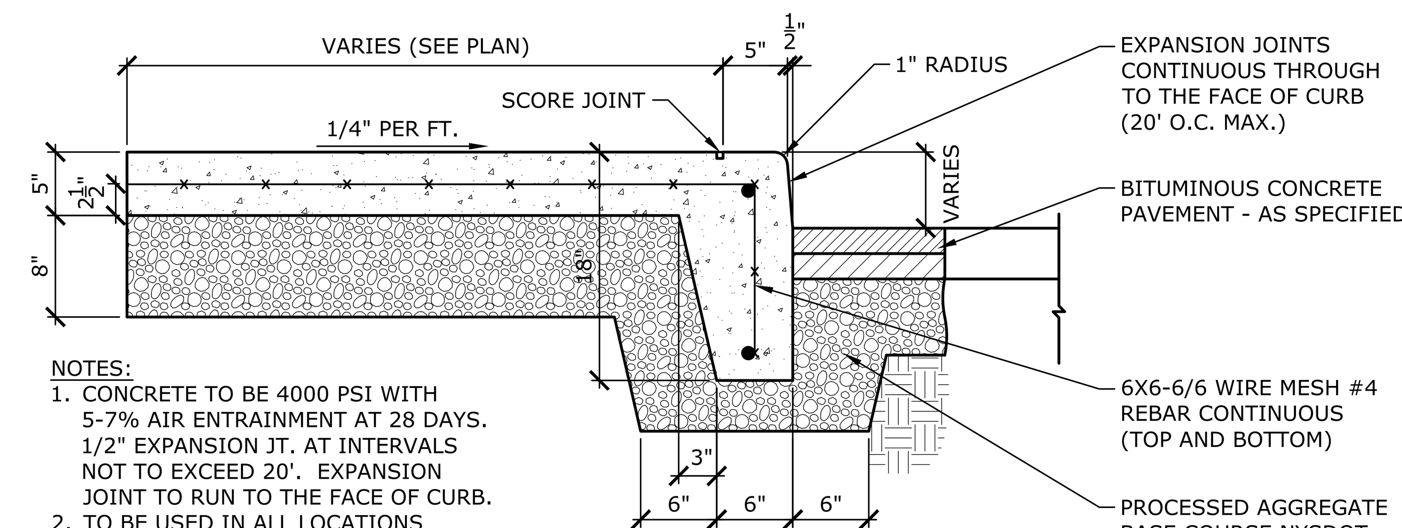


NOTES:

1. PAVERS SHALL BE AS SPECIFIED.
2. TO BE ACCEPTED, PAVERS SHALL BE INSTALLED IN SUCH A MANNER THAT:
   - 2.1. THE PAVER WALKING SURFACES ARE WITHIN 1/8" OF EACH OTHER AND ADJACENT FINISHED SURFACES (I.E. GRANITE CURB AND CONC. WALK)
   - 2.2. THE PAVERS HAVE NO JOINTS GREATER THAN 1/16" AND ARE BUTT-TIGHT TO MANUFACTURER NUBS
   - 2.3. SAND SWEPT BETWEEN JOINTS IS VIBRATED AND WITHIN 3/16" OF THE PAVER WALKING SURFACE
   - 2.4. NO PAVER IS CRACKED OR BROKEN
3. CONTRACTOR SHALL CONSTRUCT A PAVER SAMPLE PATTERN FOR EACH PATTERN AS SPECIFIED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO AUTHORIZATION TO INSTALL PAVERS.

CONCRETE PAVERS ON PROCESSED AGGREGATE

NOT TO SCALE



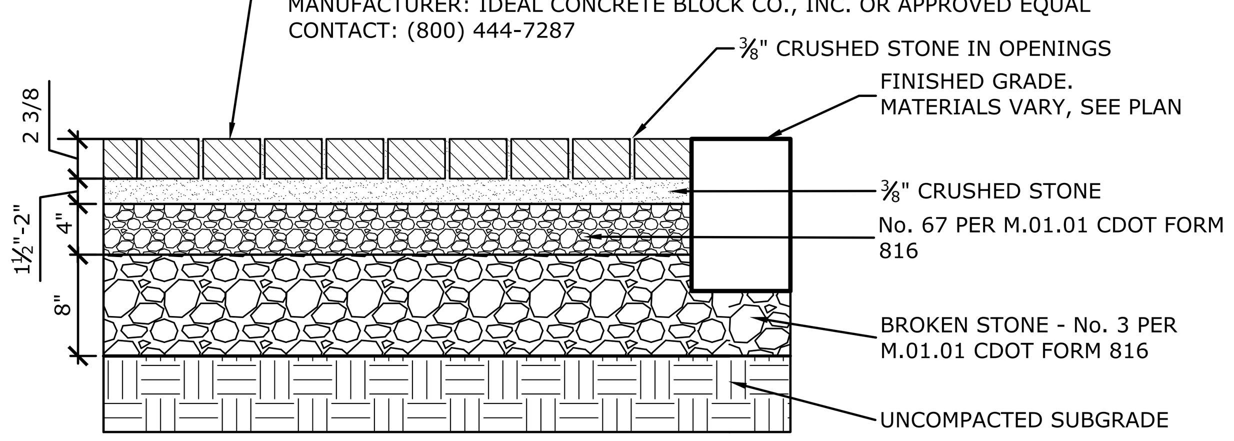
NOTES:

1. CONCRETE TO BE 4000 PSI WITH 5-7% AIR ENTRAINMENT AT 28 DAYS. 1/2" EXPANSION JT. AT INTERVALS NOT TO EXCEED 20'. EXPANSION JOINT TO RUN TO THE FACE OF CURB.
2. TO BE USED IN ALL LOCATIONS WHERE PROPOSED CONCRETE WALKS ABUT PROPOSED CONCRETE CURB
3. BOULDERS AND LEDGE ROCK TO BE REMOVED 6" BELOW SUBGRADE

INTEGRAL CONCRETE WALK & CURB WITH REVEAL

NOT TO SCALE

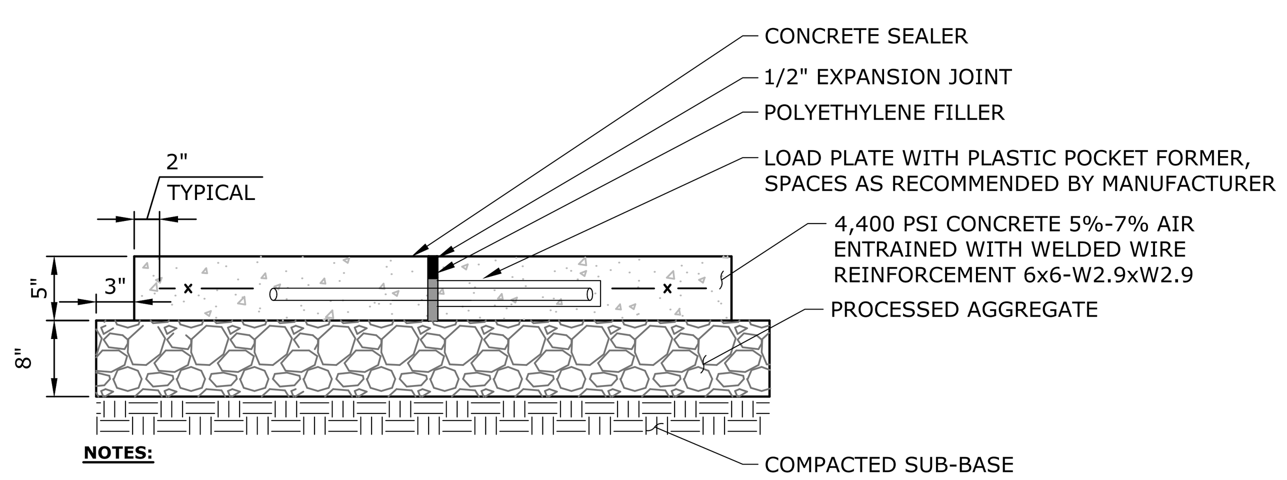
PRECAST CONCRETE UNIT PAVER
STYLE: AQUA-BRIC © PAVER OR APPROVED EQUAL
COLOR: VINEYARD BLEND
PATTERN: HERRINGBONE 45°
MANUFACTURER: IDEAL CONCRETE BLOCK CO., INC. OR APPROVED EQUAL
CONTACT: (800) 444-7287



NOTE: SUBGRADE IS NOT TO BE OVER COMPACTED. ALL STONE MATERIALS ARE TO BE CLEAN AND CAREFULLY PLACED.

PERMEABLE UNIT PAVER

NOT TO SCALE

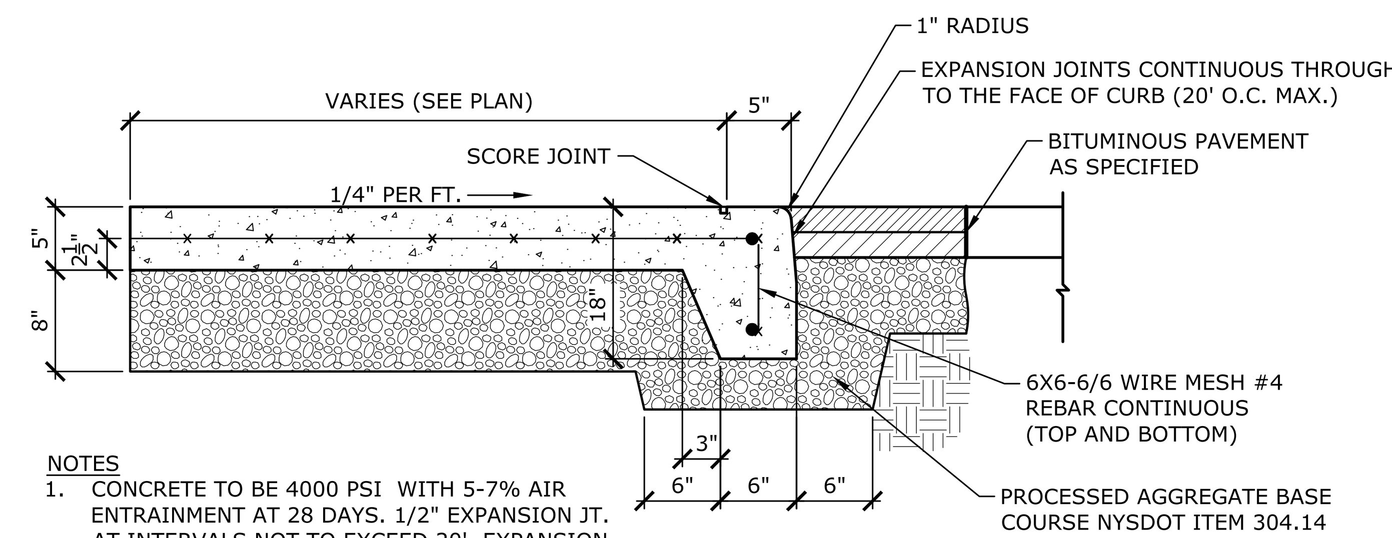


NOTES:

1. CONCRETE PER 32 30 16 - CAST IN PLACE CONCRETE
   - 1.1. PCC04460
   - 1.2. 4,400 PSI AT 28 DAYS
   - 1.3. CEMENT CONTENT OF 658LB MINIMUM
   - 1.4. AGGREGATE No. 6 (3/4") MAX - PER 2.3.D.2.f
   - 1.5. WATER TO CEMENT RATIO 0.44
2. 1/2" EXPANSION JOINT AT INTERVALS NOT TO EXCEED 20'. EXPANSION JOINT TO RUN TO THE FACE OF CURB.

CONCRETE WALK

NOT TO SCALE

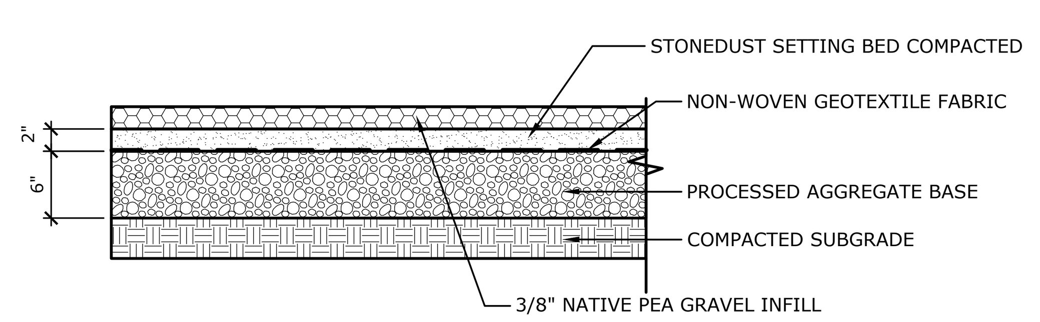


NOTES

1. CONCRETE TO BE 4000 PSI WITH 5-7% AIR ENTRAINMENT AT 28 DAYS. 1/2" EXPANSION JT. AT INTERVALS NOT TO EXCEED 20'. EXPANSION JOINT TO RUN TO THE FACE OF CURB. SEE PLANS FOR SPACING
2. BOULDERS AND LEDGE ROCK TO BE REMOVED 6" BELOW SUBGRADE

FLUSH INTEGRAL CONCRETE SIDEWALK & CURB

NOT TO SCALE

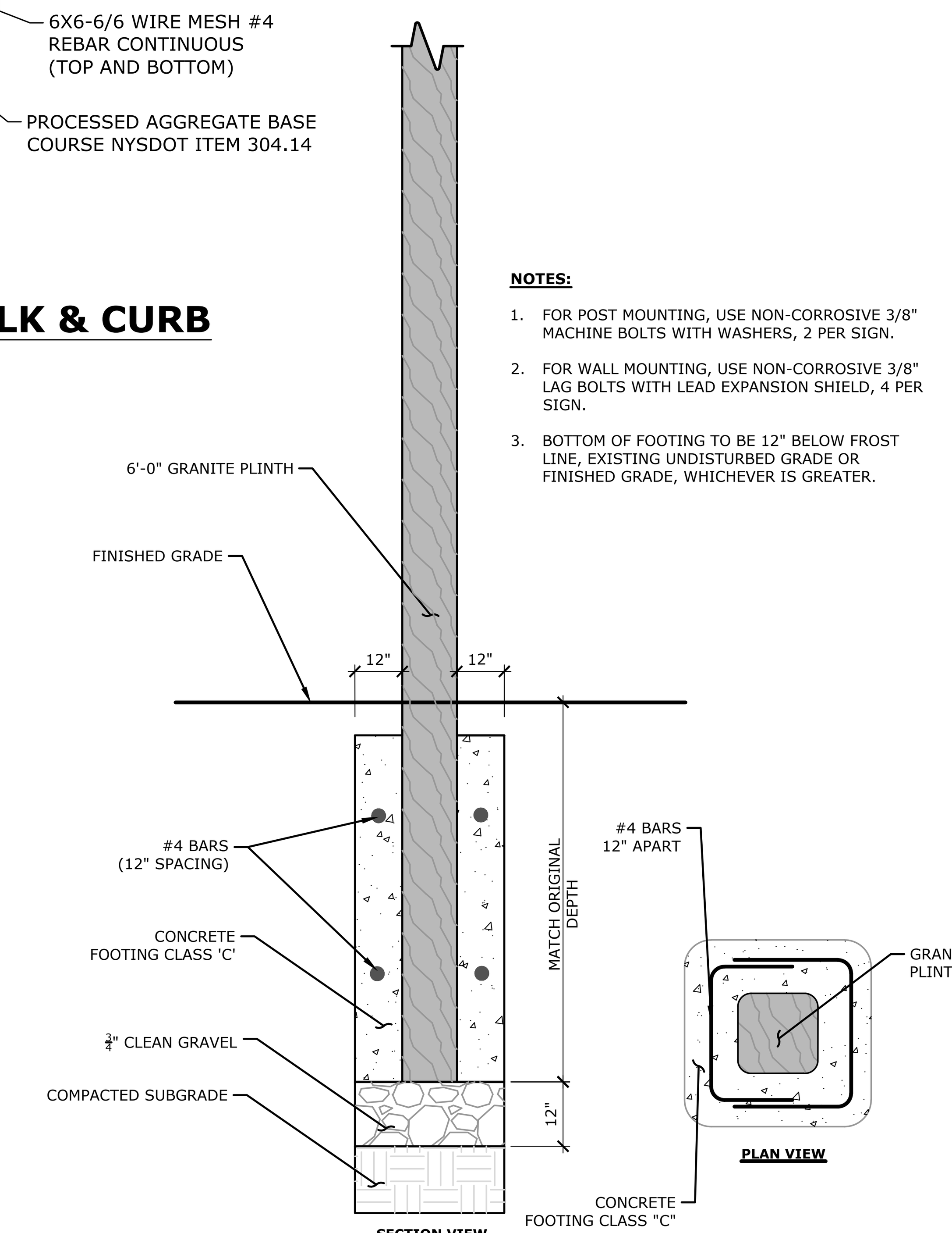


PEA GRAVEL

NOT TO SCALE

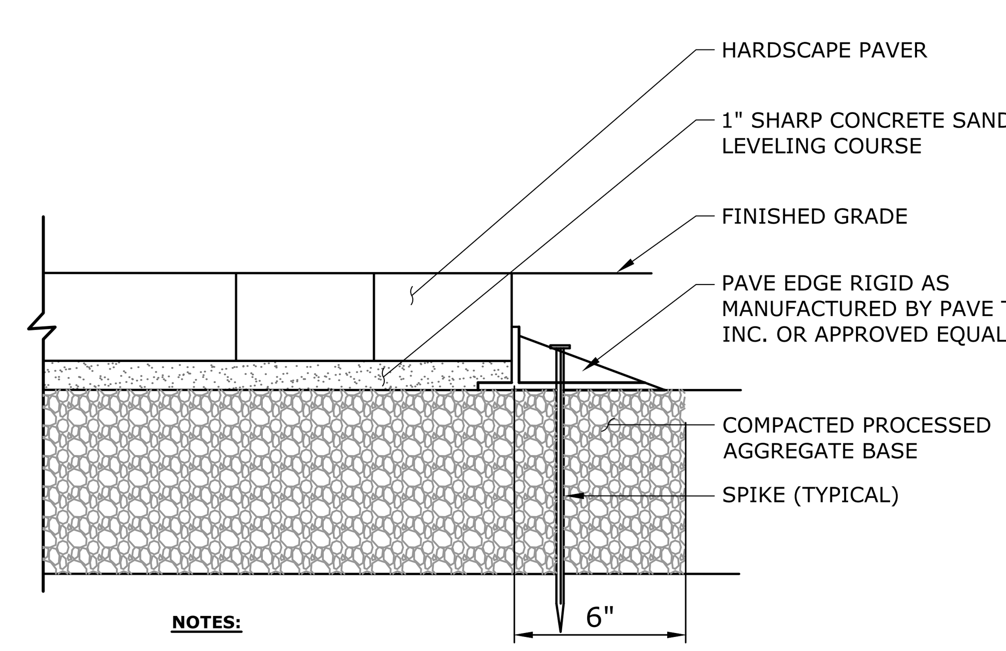
NOTES:

1. FOR POST MOUNTING, USE NON-CORROSIVE 3/8" MACHINE BOLTS WITH WASHERS, 2 PER SIGN.
2. FOR WALL MOUNTING, USE NON-CORROSIVE 3/8" LAG BOLTS WITH LEAD EXPANSION SHIELD, 4 PER SIGN.
3. BOTTOM OF FOOTING TO BE 12" BELOW FROST LINE, EXISTING UNDISTURBED GRADE OR FINISHED GRADE, WHICHEVER IS GREATER.



GRANITE SIGN POST

NOT TO SCALE

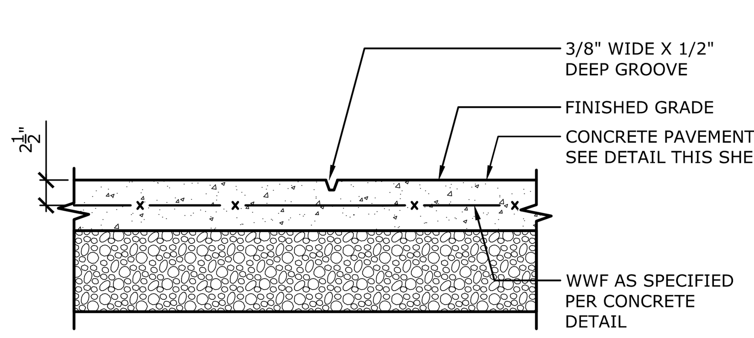


NOTES:

1. INSTALL PAVER EDGE RESTRAINT ON TOP OF COMPACTED BASE
2. PAVER EDGE RESTRAINT SYSTEM TO BE USED ONLY WHERE PAVERS ABUT LANDSCAPED OR TURF AREAS.

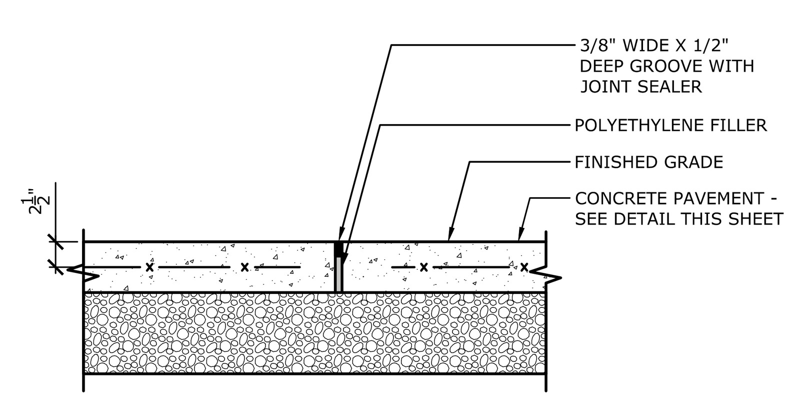
PAVER EDGE RESTRAINT

NOT TO SCALE



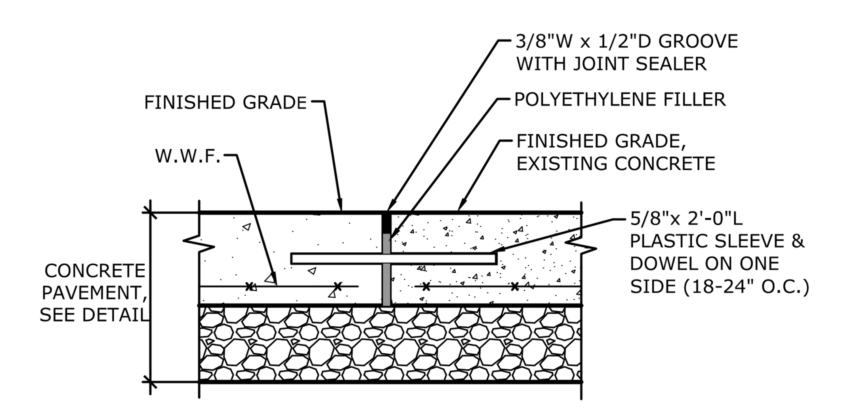
SCORE JOINT

NOT TO SCALE



EXPANSION JOINT

NOT TO SCALE



DOWELLED EXPANSION JOINT

NOT TO SCALE

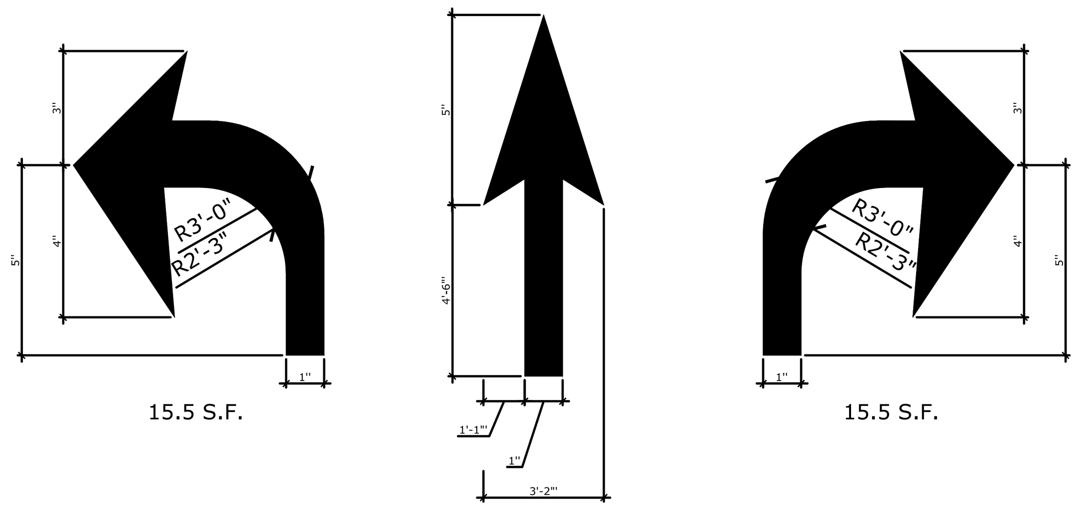
SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
PEER REVIEW COMMENTS	1/09/2024	AWG

SITE DETAILS
PROPOSED MULTI-FAMILY DEVELOPMENT
131 DANBURY ROAD
WILTON, CONNECTICUT

AWG	AWG	TD
DESIGNED	DRAWN	CHECKED

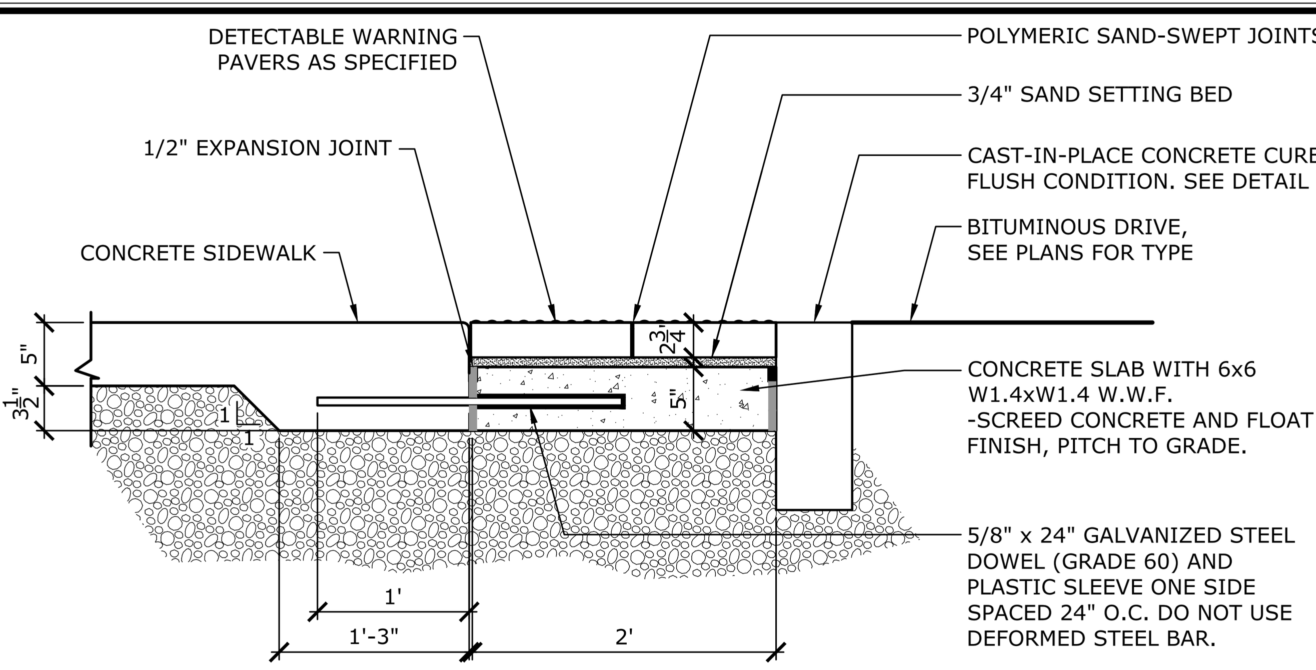
SCALE: AS NOTED
DATE: OCTOBER 23, 2023
PROJECT NO.: 21543.00001
SHEET NO.: 11 OF 23
SHEET NAME: SD-1



REFLECTIVE WHITE EPOXY PAINT PAVEMENT MARKINGS. ARROWS SHALL BE CENTERED IN TRAVEL LANE. RIGHT TURN ARROW IS MIRROR IMAGE OF LEFT TURN ARROW.

PAINTED PAVEMENT MARKINGS

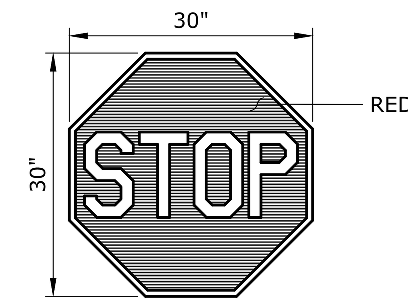
NOT TO SCALE



NOTES:
1. DETECTABLE WARNING PAVERS:
TYPE: ADA-2
COLOR: A-30
SIZE: 24"x24"x2-3/4" * MANUFACTURER: WAUSAU TILE. PO Box 1520 Wausau, WI 54402-1520 OR APPROVED EQUAL
2. PROVIDE SAMPLE TO LANDSCAPE ARCHITECT FOR APPROVAL.
3. *NOTE: USE 12"x12" PAVERS ON CURVES

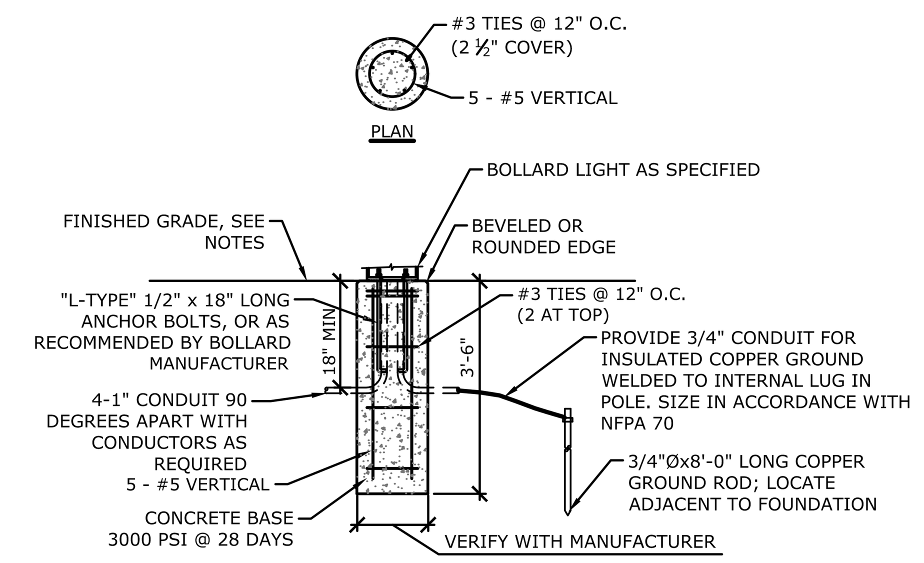
DETECTABLE WARNING PAVERS

NOT TO SCALE



STOP SIGN

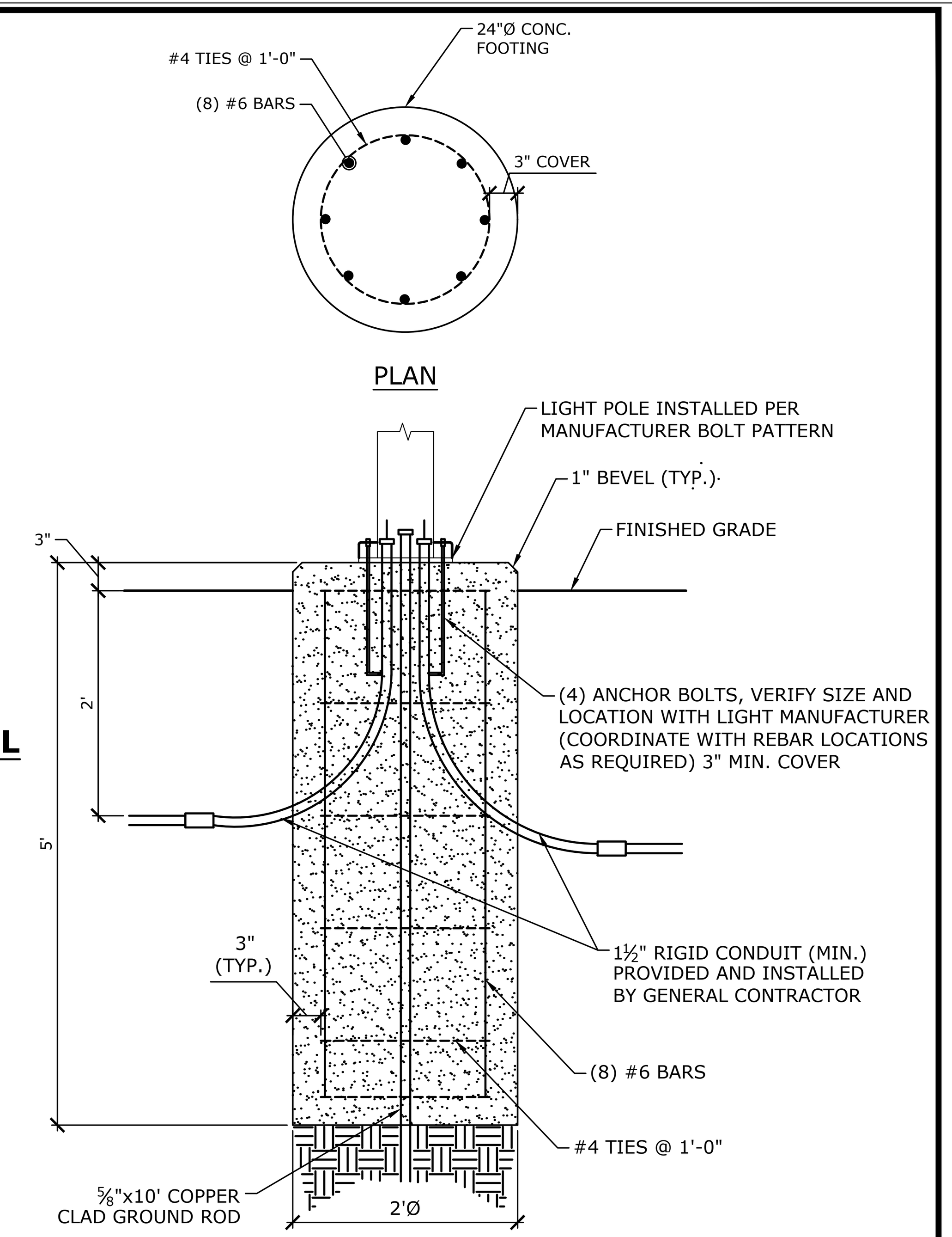
NOT TO SCALE



NOTES:
1. CONTRACTOR TO PROVIDE SHOP DRAWING FOR CONCRETE BASE AND BOLT PATTERN. BOLT PATTERN TO BE COORDINATED WITH BOLLARD LIGHT MANUFACTURER
2. REFER TO LIGHTING PLAN FOR SPECIFIED FIXTURE
3. WHERE FOOTING IS SET IN UNIT PAVERS, FOOTING SHALL BE RECESSED BELOW PAVER AND EPOXY GROUT APPLIED TO THE BASE OF BOLLARD
4. PROVIDE CONDUIT WITH CONDUCTORS

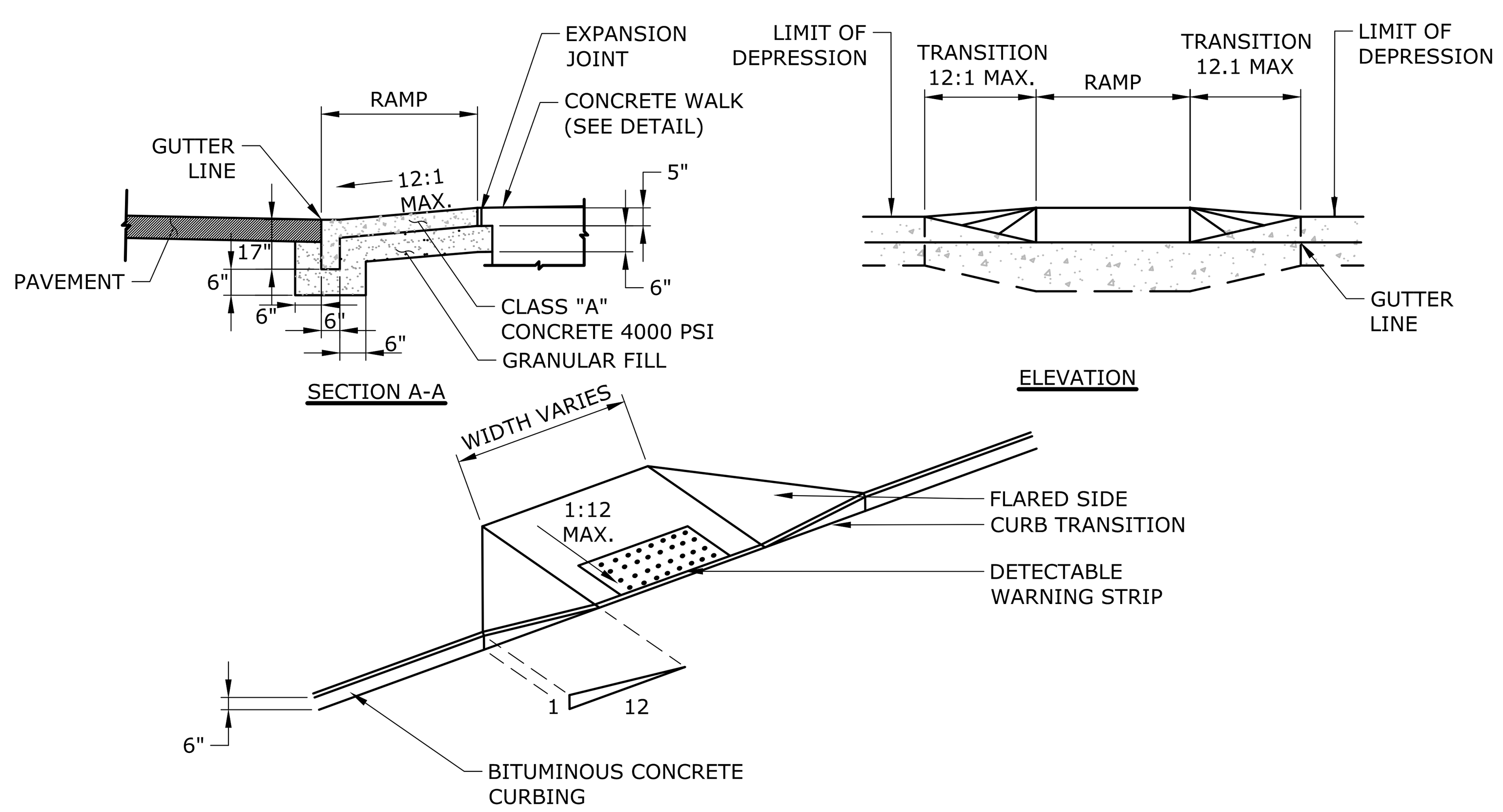
TYPICAL BOLLARD LIGHT FOUNDATION DETAIL

NOT TO SCALE



PEDESTRIAN LIGHT POLE FOUNDATION DETAIL

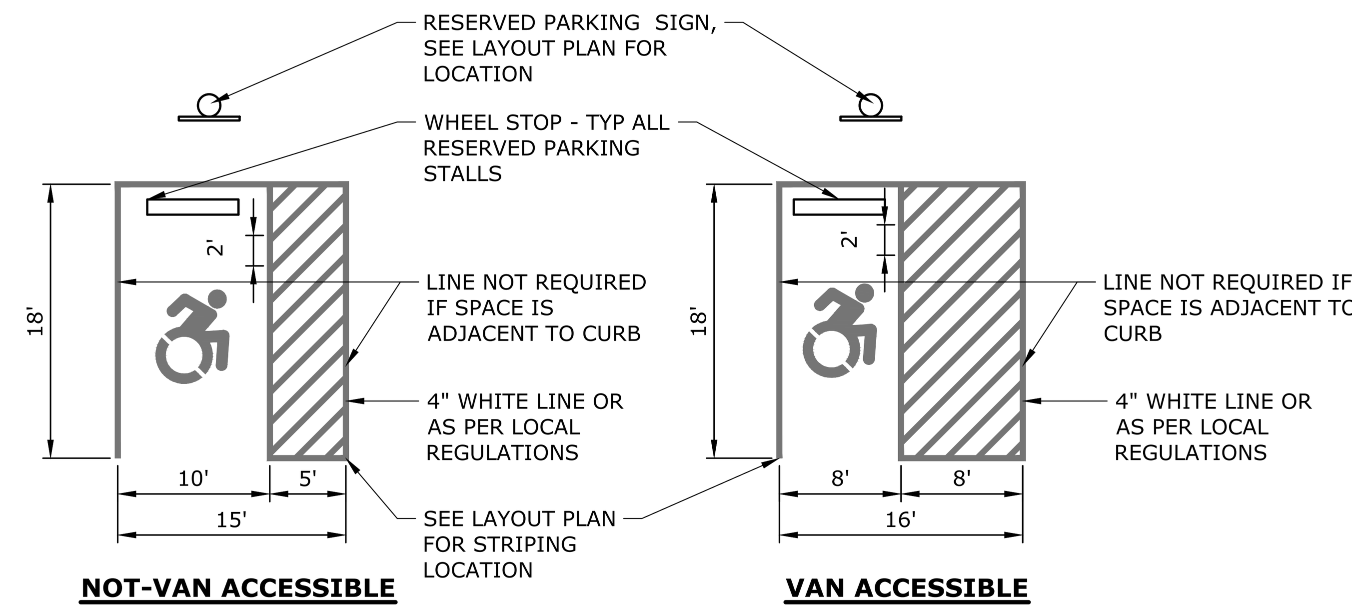
NOT TO SCALE

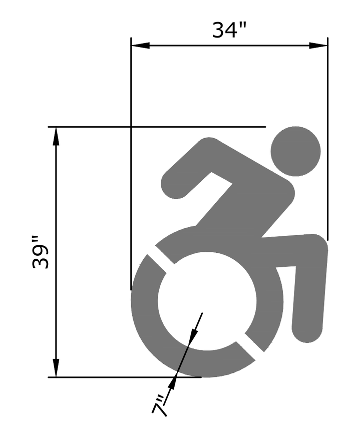


NOTES:
1. ALL INDICATED SLOPES ARE MAXIMUMS

PEDESTRIAN RAMP

NOT TO SCALE

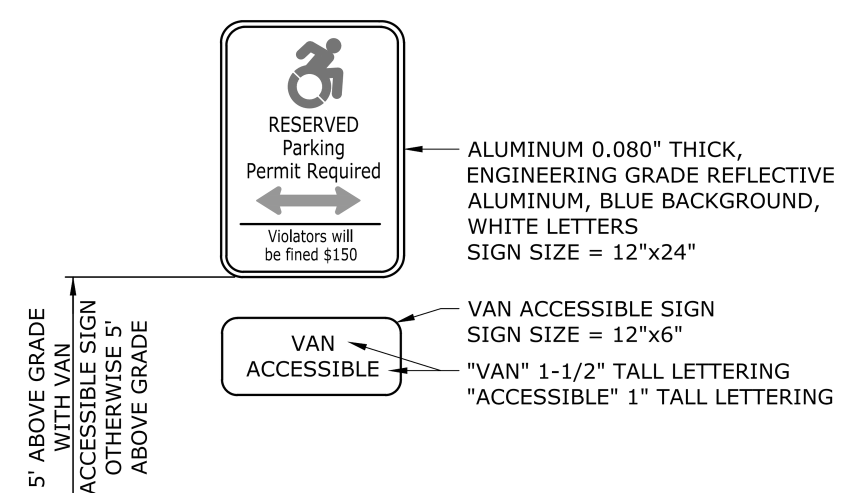




RESERVED PARKING SPACE MARKING

ACCESSIBLE PARKING STALL DETAIL

NOT TO SCALE

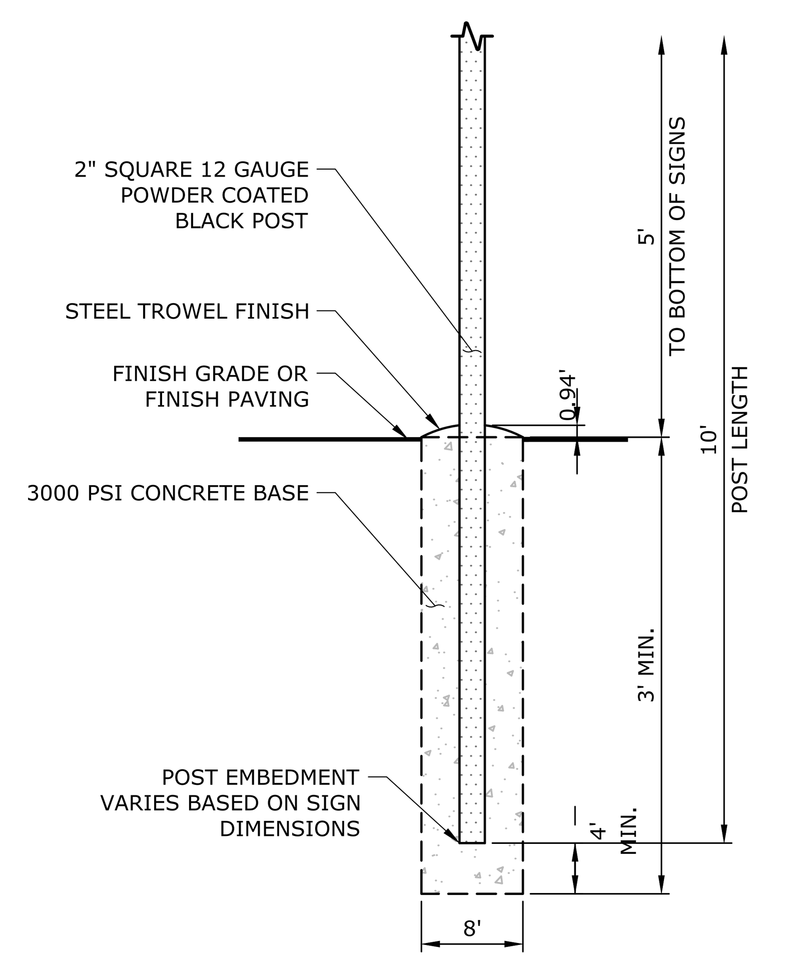


HANDICAPPED PARKING SIGN

NOT TO SCALE

SIDEWALK RAMP NOTES:

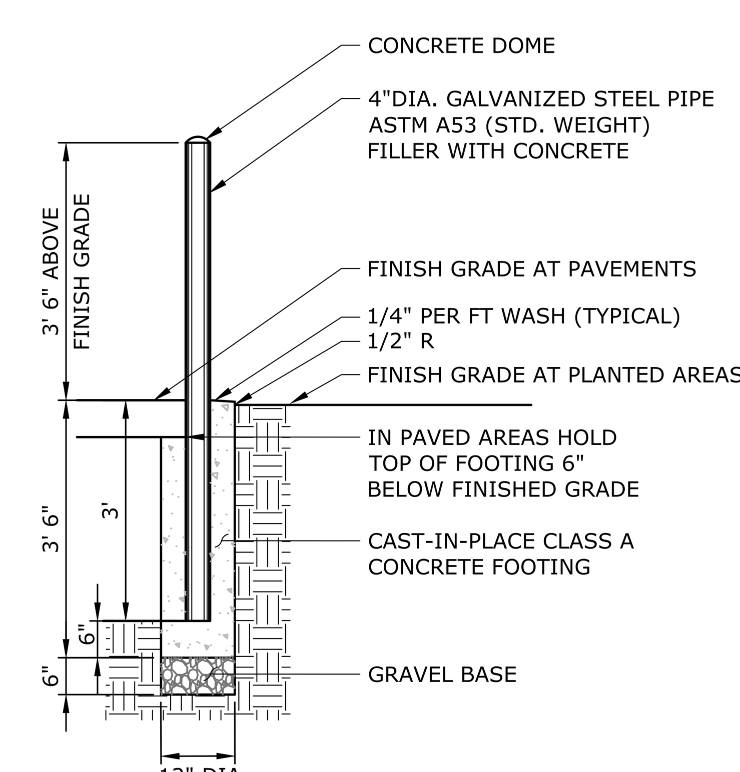
1. MAXIMUM SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE SIDEWALK RAMP OR ACCESSIBLE ROUTE SHOULD NOT EXCEED 20:1.
2. CARE SHALL BE TAKEN TO ASSURE UNIFORM GRADE ON THE RAMP, FREE OF SAGS AND ABRUPT GRADE CHANGES.
3. ALL RAMPS SHALL BE CONSTRUCTED OF CLASS "C" CONCRETE IN ACCORDANCE WITH CONNECTICUT STANDARD SPECIFICATIONS ARTICLE M.03.01.
4. SIDEWALK RAMPS SHALL HAVE A COARSE BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP. THE SURFACE ALONG ACCESSIBLE ROUTES SHALL BE STABLE, FIRM AND SLIP RESISTANT IN COMPLIANCE WITH ADAAG SECTION 4.5.
5. DIAGONAL SIDEWALK RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.
6. REMOVAL OF EXISTING SIDEWALK FOR NEW RAMP INSTALLATIONS SHALL BE TO THE NEAREST EXPANSION/CONTRACTION JOINT OR DUMMY JOINT. 12:1 MAXIMUM SLOPE MAY NOT BE ACHIEVABLE DUE TO SIDEWALK GRADE. IN RECOGNITION OF THIS, A MINIMUM LIMIT OF 15' FOR A PARALLEL RAMP SHALL BE USED. REMOVAL SHALL NOT BE FURTHER THAN 2' FROM THE PROPOSED RAMP UNLESS DIRECTED BY THE ENGINEER. SAW CUT REQUIRED FOR DUMMY JOINTS SHALL BE INCLUDED IN THE COST OF "CONCRETE SIDEWALK".
7. EXPANSION JOINTS IN CONCRETE SHALL MATCH THOSE IN ADJACENT SIDEWALKS BUT IN NO CASE SHALL THE SPACING BETWEEN EXPANSION JOINTS EXCEED 12' UNLESS OTHERWISE NOTED.
8. SIDE WALK RAMPS SHALL BE CONSTRUCTED WITH THE TOE AT THE GUTTER CAST IN PLACE UNLESS DIRECTED OTHERWISE BY THE ENGINEER. FLARES FOR PERPENDICULAR RAMPS UP TO THE GUTTER SHALL ALSO BE CAST IN PLACE. CURBING ADJACENT TO OR TRANSITIONING FROM RAMP OR OR FLARES MAY VARY. SHALL ALSO BE CAST IN PLACE. CURBING WITHIN THE LIMITS OF THE NEW SIDEWALK RAMP SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE REQUIREMENTS OF FORM 816 SECTIONS 8.11 AND 8.13.
9. HANDICAP RAMPS CONFORMING WITH CONNECTICUT GENERAL STATUTES, SEC. 7-118a, SHALL BE INCORPORATED IN ALL PROPOSED SIDEWALKS AT ALL STREET INTERSECTIONS, AND AT ALL OTHER LOCATIONS WHERE THE GRADE OF A DRIVEWAY OR OTHER FACILITY TAKES PRECEDENCE OVER THE GRADE OF THE PROPOSED SIDEWALK.
10. TRANSITION TO FULL HEIGHT CURB. INSTALL STONE CURBING IF ADJACENT CURBING IS STONE. INSTALL CONCRETE CURBING IF ADJACENT CURBING IS CONCRETE OR BITUMINOUS.
11. IN MOST CASES THE EDGE OF THE DETECTABLE WARNING STRIP SHALL BE INSTALLED 6" FROM THE EDGE OF ROAD ALONG THE FULL WIDTH OF THE RAMP. IF LANDING IS MORE THAN 5' DEEP AT ANY POINT THE DETECTABLE WARNING STRIP SHALL BE INSTALLED ON BOTTOM OF LANDING ALONG FULL WIDTH OF RAMP. HOWEVER, WHERE BOTH ENDS OF THE BOTTOM GRADE BREAK ARE LESS THAN OR EQUAL TO 5' FROM BACK OF CURB, THE DETECTABLE WARNING MAY BE INSTALLED ON THE RAMP SURFACE AT THE BOTTOM GRADE BREAK.
12. TO PERMIT WHEELCHAIR WHEELS TO ROLL BETWEEN DOMES, ALIGN DOMES ON A SQUARE GRID IN THE DIRECTION OF PEDESTRIAN TRAVEL. THE TRANSITION FROM RAMP TO GUTTER MUST BE FLUSH WITHOUT A LIP.
13. THE TOP AND BOTTOM SHOULD BE PROVIDED WITH A 4' X4' MINIMUM LEVEL LANDING AREA WITH A CROSS SLOPE LESS THAN OR EQUAL TO 2% MAXIMUM IN ANY DIRECTION.
14. UTILITY POLES, LUMINAIRES, PEDESTRIAN OR SIGNAL POLES, GRATING, ACCESS COVERS, AND OTHER APPURTENANCS SHALL NOT BE LOCATED ON RAMPS, LANDINGS, BLENDED TRANSITIONS, FLARES, AND GUTTERS WITHIN THE PEDESTRIAN ACCESS ROUTE.
15. APPROACH SIDEWALK AND LANDING MUST NOT EXCEED 2%.
16. ARMOR-TILE TACTILE SYSTEMS AS MANUFACTURED BY: ENGINEERED PLASTICS INC. (800) 682-2525
COLOR:COLONIAL RED (FEDERAL COLOR NO. 20109)



NOTES:
1. FOR POST MOUNTING, USE NON-CORROSIVE 3/8" MACHINE BOLTS WITH WASHERS, 2 PER SIGN.
2. FOR WALL MOUNTING, USE NON-CORROSIVE 3/8" LAG BOLTS WITH LEAD EXPANSION SHIELD, 4 PER SIGN.
3. BOTTOM OF FOOTING TO BE 12" BELOW FROST LINE, EXISTING UNDISTURBED GRADE OR FINISHED GRADE, WHICHEVER IS GREATER.

TRAFFIC SIGN POST

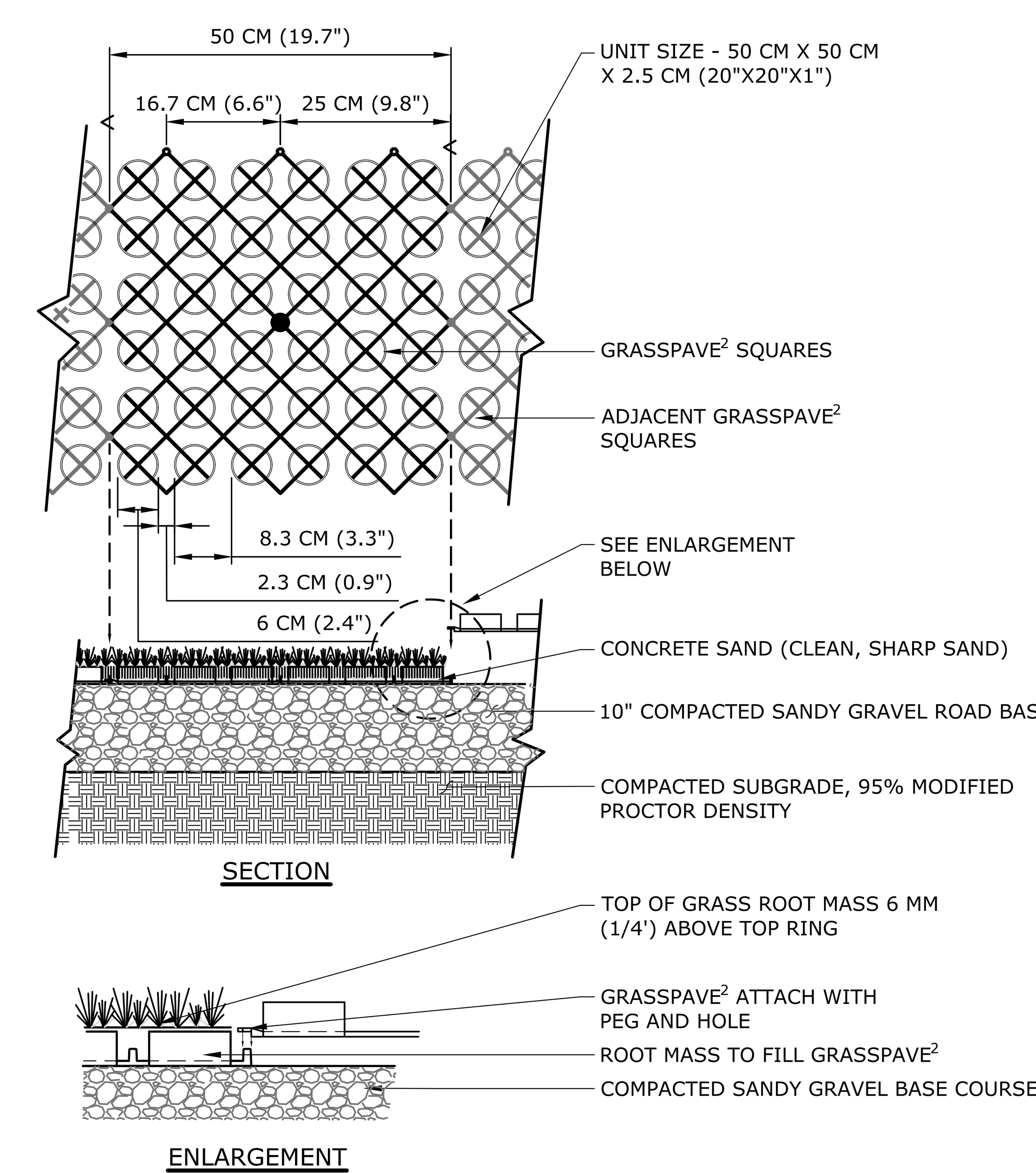
NOT TO SCALE



NOTES:
1. FINISH TO BE COLOR GALVANIZED, TO BE DETERMINED BY ARCHITECT.

STEEL PIPE BOLLARD 4"DIA.

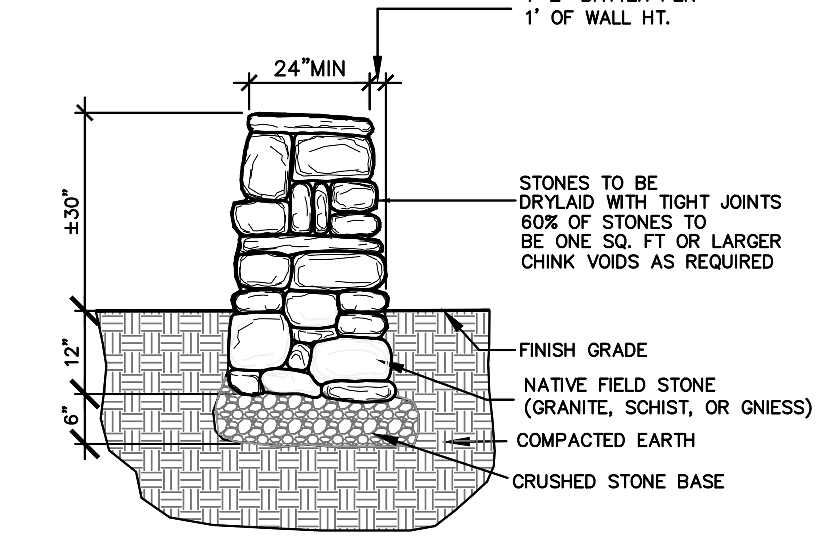
NOT TO SCALE



NOTES:
1. GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECT OR LANDSCAPE DESIGNER.

STABILIZED LAWN - GRASS FILLED PLASTIC RING PAVERS

NOT TO SCALE



DRYLAID FIELD STONE WALL

NOT TO SCALE

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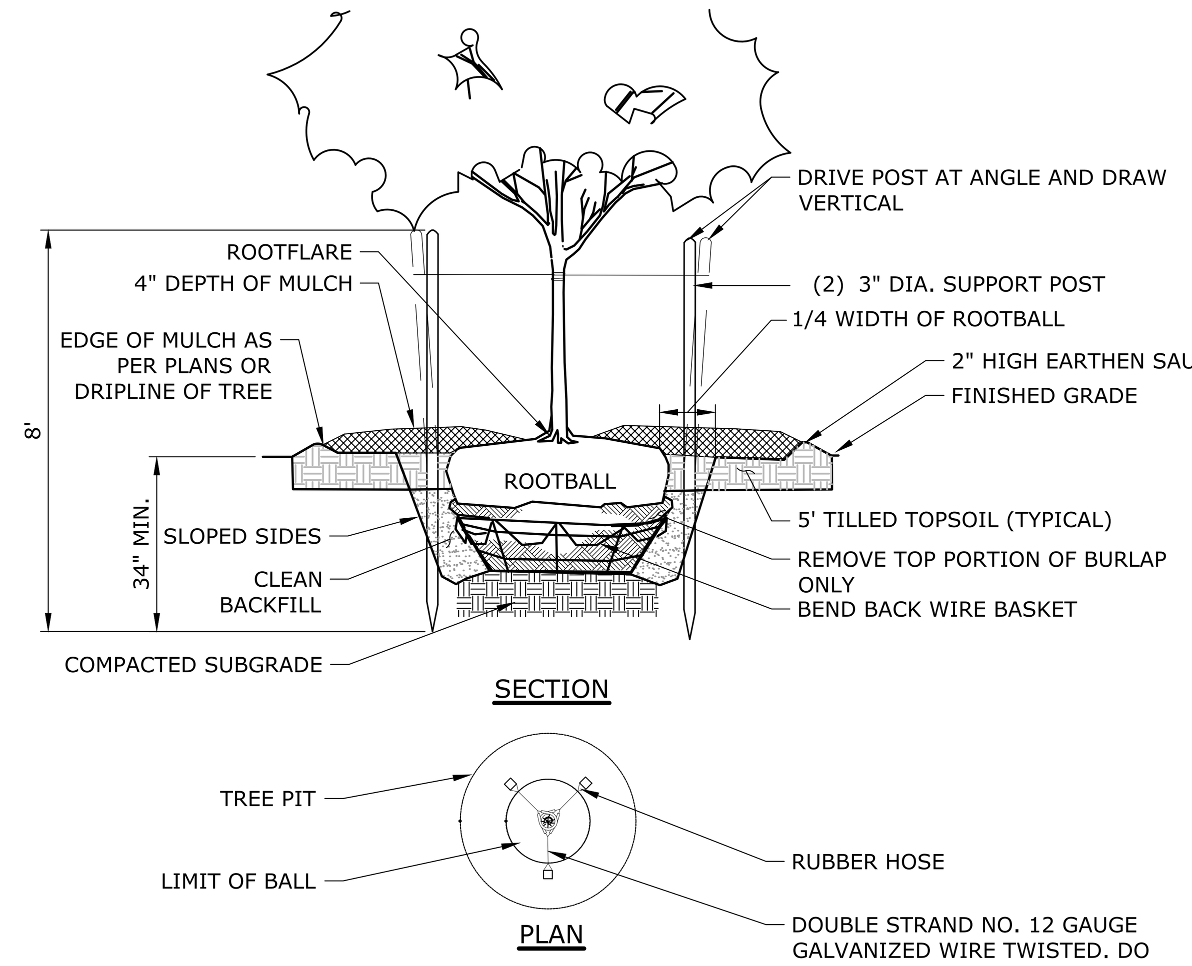
DESCRIPTION	DATE	BY
PEER REVIEW COMMENTS	1/09/2024	AWG

SITE DETAILS
PROPOSED MULTI-FAMILY DEVELOPMENT
131 DANBURY ROAD
WILTON, CONNECTICUT

AWG	AWG	TD
DESIGNED	DRAWN	CHECKED

AS NOTED
SCALE
OCTOBER 23, 2023
DATE
21543.00001
PROJECT NO.
12 OF 23
SHEET NO.
SD-2
SHEET NAME

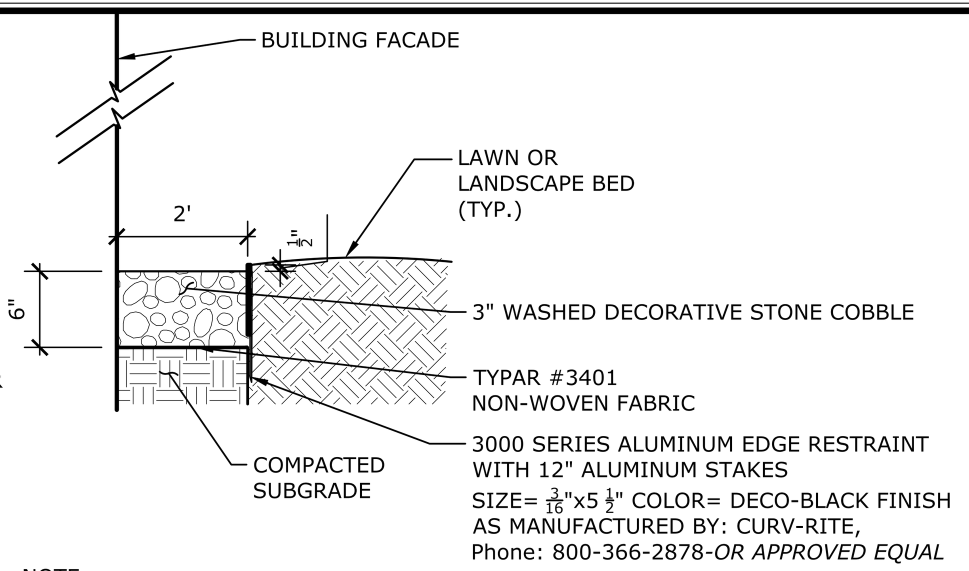


NOTE:

1. SUPPORT STAKES SHALL BE REMOVED BY THE CONTRACTOR ONE YEAR AFTER INSTALLATION.

TREE PLANTING

NOT TO SCALE

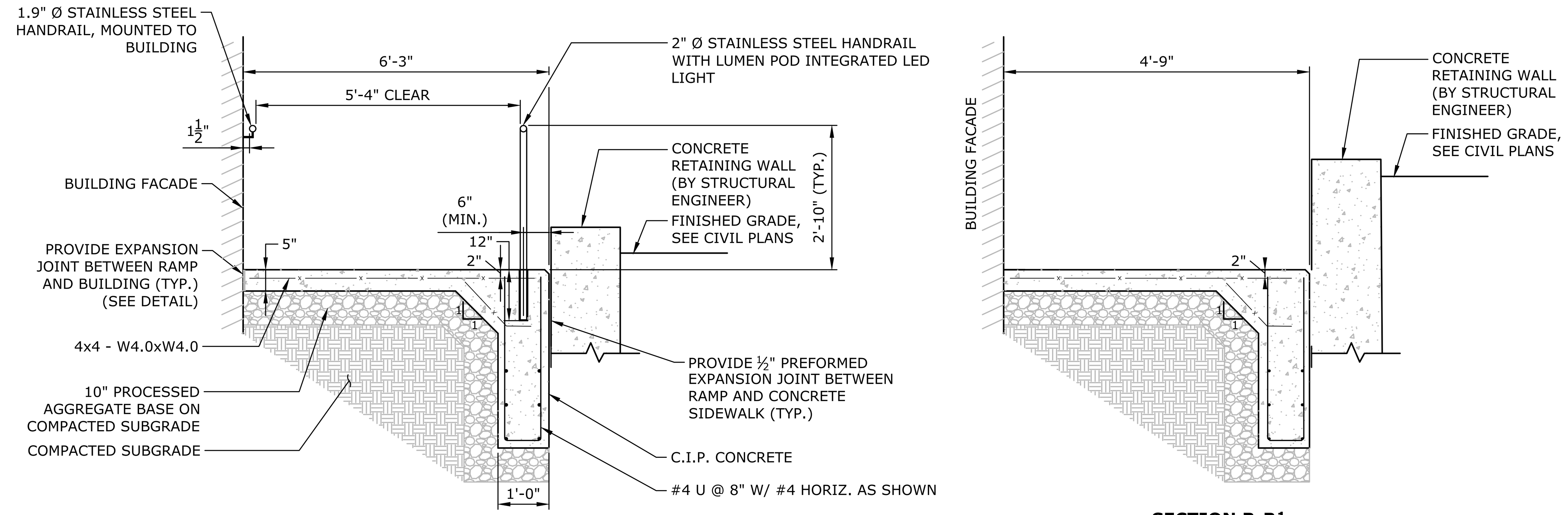


NOTE:

1. CONTRACTOR SHALL PROVIDE PRODUCT STONE AND EDGE SAMPLE FOR APPROVAL BY LANDSCAPE ARCHITECT.

STONE MOW STRIP AT BUILDING FOUNDATION

NOT TO SCALE

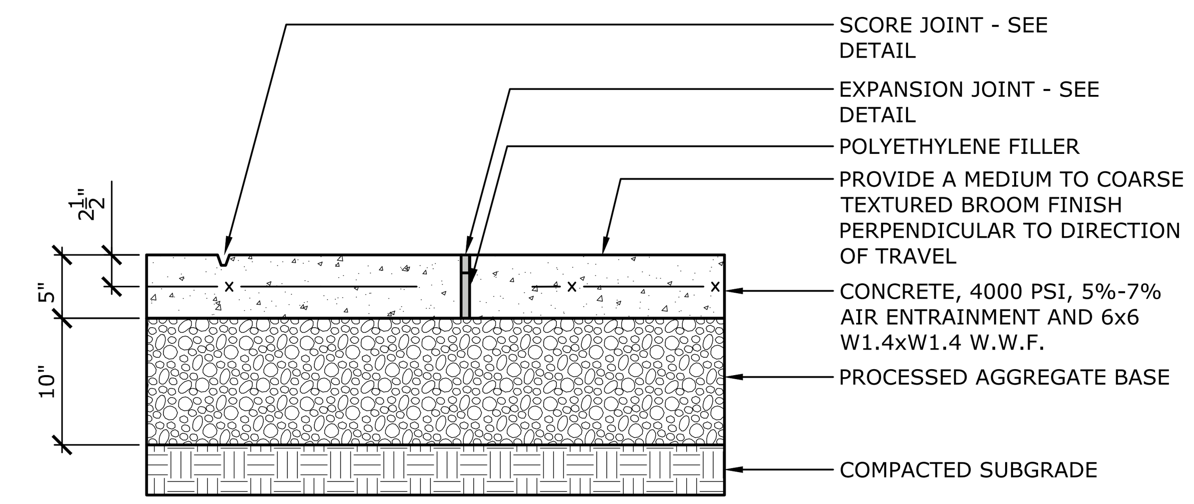


NOTES:

1. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR ALL RAILINGS PROPOSED IN PROJECT.

ACCESSIBLE RAMP SECTION

1/2" = 1'-0"

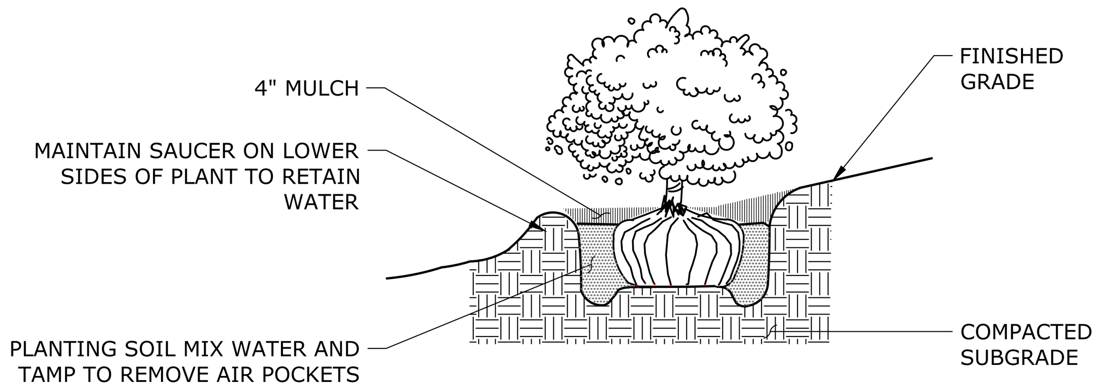


NOTES:

1. EXPANSION JOINTS 24' O.C. MAX. OR AS PER PLAN.
2. SCORE JOINTS 6' O.C. TYP (OR AS SHOWN ON PLANS).
3. PROVIDE PREFORMED EXPANSION JOINT AT ALL CONSTRUCTION JOINTS, WALLS, BUILDINGS, OR WHERE CONCRETE ABUTS EXISTING CONCRETE.
4. PROVIDE COLOR SAMPLES OF EXPANSION JOINT CAULKING TO LANDSCAPE ARCHITECT FOR APPROVAL
5. PROVIDE CLEAR-DRYING CONCRETE SEALER FOR SALT PROTECTION. CONTRACTOR TO SUBMIT PRODUCT INFORMATION FOR APPROVAL.

CONCRETE PAVEMENT - RAMP

N.T.S.

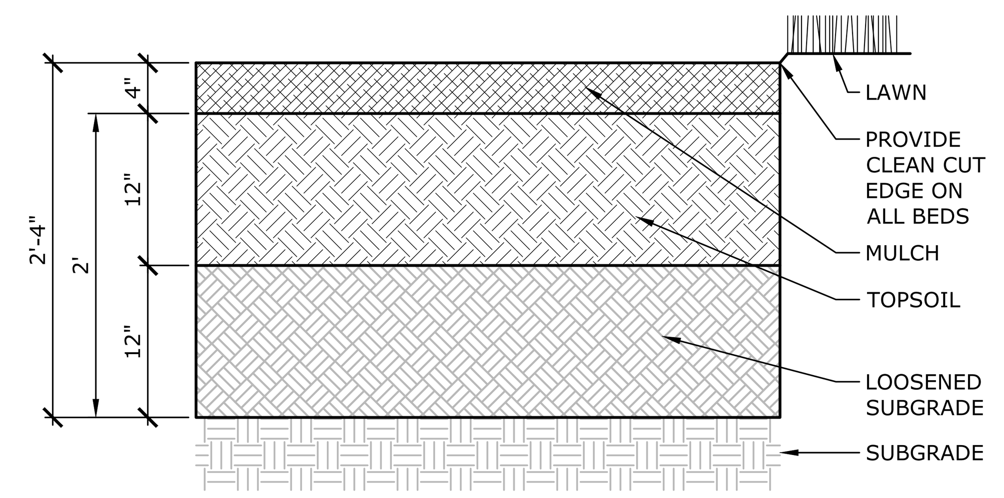


NOTES:

1. UNLESS OTHERWISE DIRECTED SHREDDED MULCH SHALL BE PLACED TO A LIMIT OF ONE FOOT BEYOND THE CENTER OF THE OUTERMOST SHRUBS IN SHRUB BED.

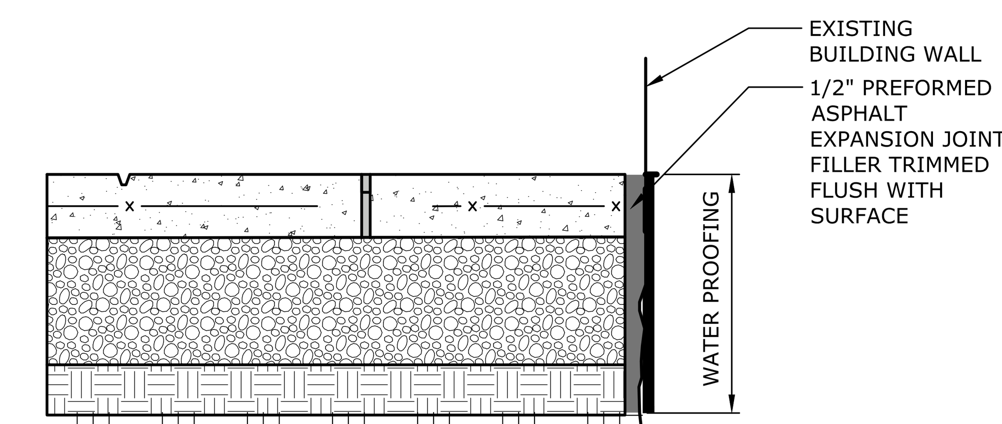
SHRUB PLANTING

NOT TO SCALE



PLANTING BED

NOT TO SCALE

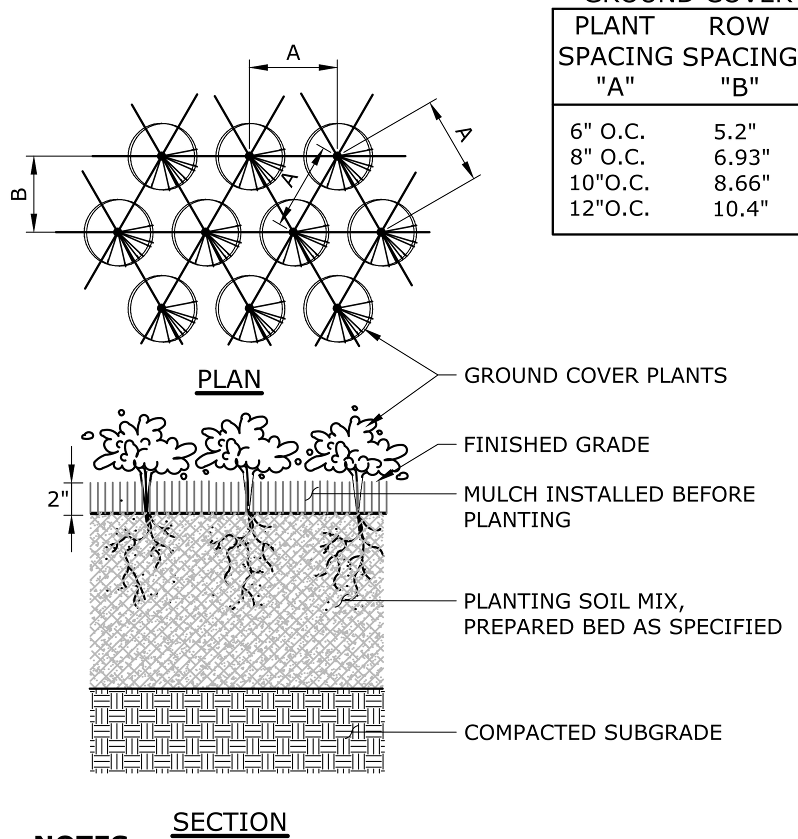


CONCRETE RAMP AT BUILDING FACE

N.T.S.

GROUND COVER SPACING TABLE

PLANT SPACING "A"	ROW SPACING "B"	NO. OF PLANTS	AREA UNIT
6" O.C.	5.2"	4.61	1 SQ. FT.
8" O.C.	6.93"	2.6	1 SQ. FT.
10"O.C.	8.66"	1.66	1 SQ. FT.
12"O.C.	10.4"	1.15	1 SQ. FT.

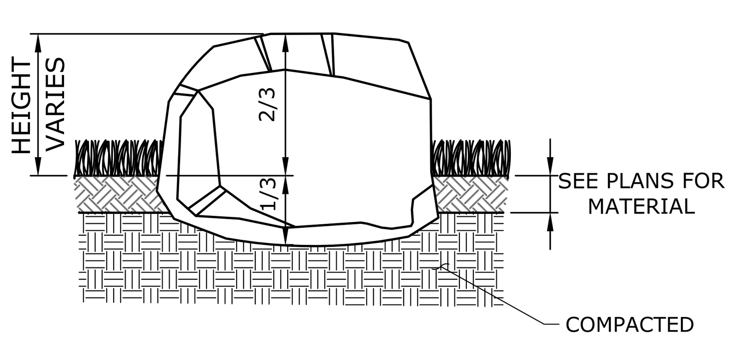


NOTES:

1. ALL GROUND COVER TO BE PLANTED IN TRIANGULAR PATTERN. SEE DETAIL PLAN AND GROUND COVER SPACING TABLE.

GROUND COVER/ PERENNIAL PLANTING

NOT TO SCALE

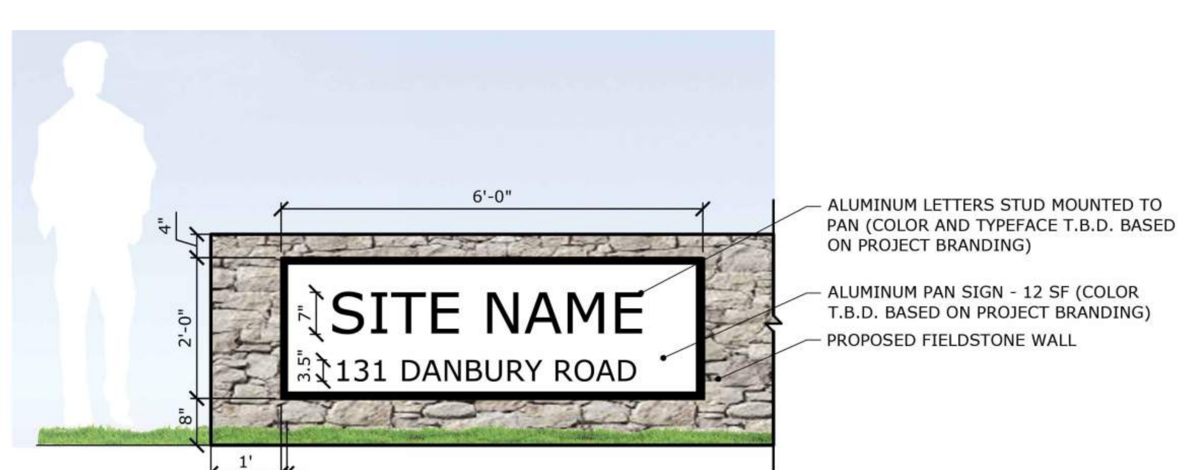


NOTES:

1. ALL LOCATIONS AND ELEVATIONS TO BE APPROVED BY THE ENGINEER.

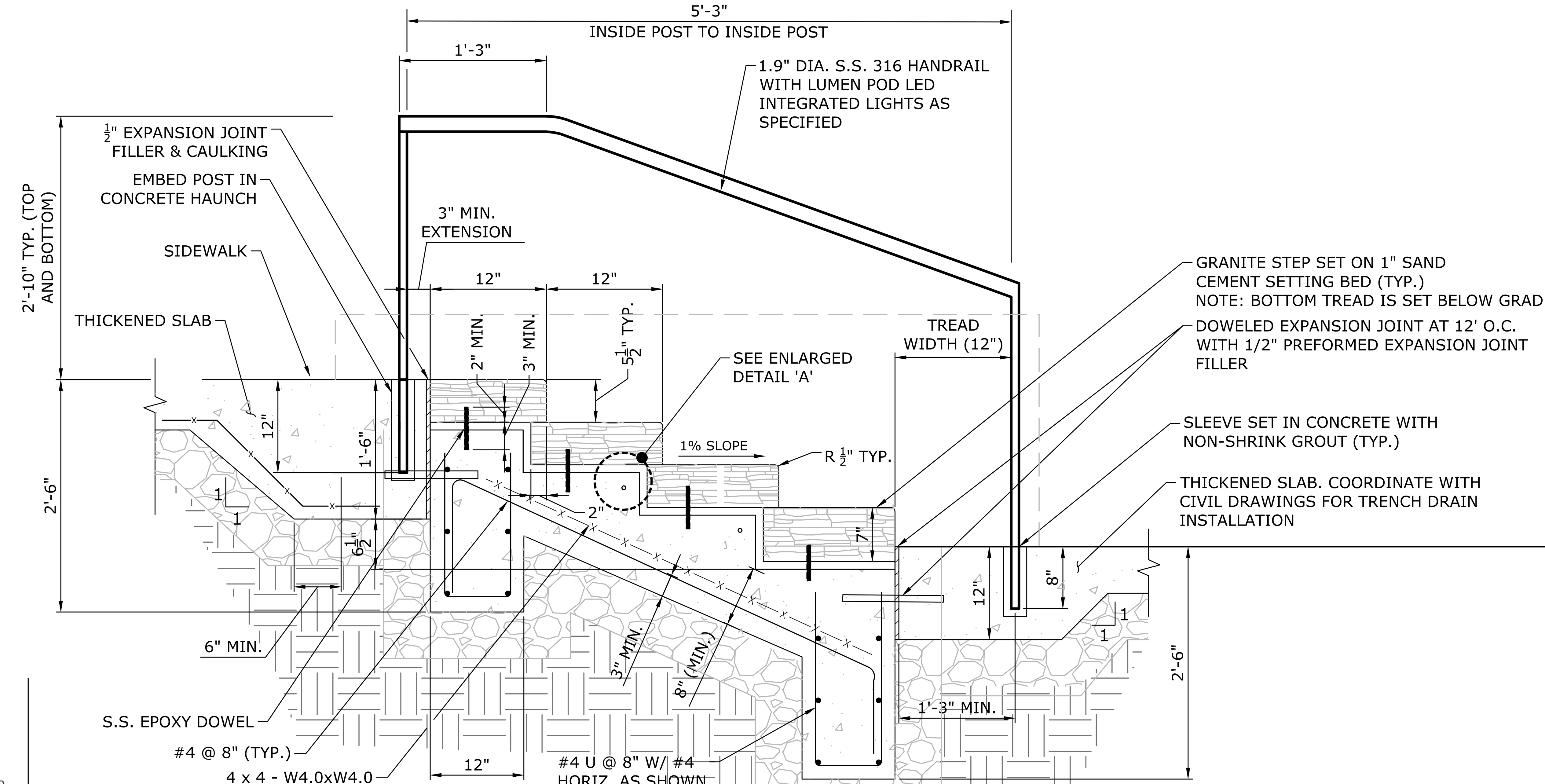
PLACED BOULDER

NOT TO SCALE



SITE SIGN ON STONE WALL (VIEW SOUTH)

NOT TO SCALE

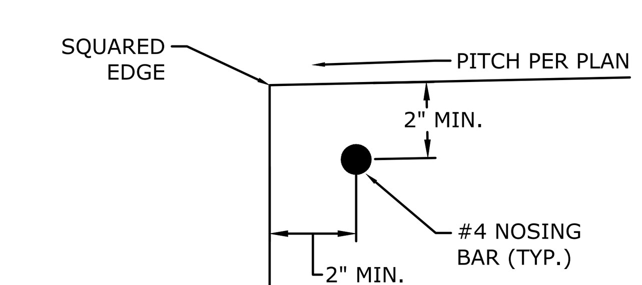


NOTES:

1. 316 STAINLESS STEEL HANDRAIL SHALL BE AS MANUFACTURED BY WAGNER ARCHITECTURAL SYSTEMS, MILWAUKEE, WI, OR APPROVED EQUIVALENT.
2. HANDRAILS SHALL RECEIVE LUMEN POD 28 ASYMETRIC LED INTEGRATED LIGHTS AS SPECIFIED
3. COLOR TEMP: 2700° K
4. PROVIDE SHOP DRAWINGS FOR STAIR AND HANDRAIL FOR APPROVAL

CONCRETE STAIR WITH HANDRAIL AND GRANITE TREAD

SCALE 1" = 1'-0"



ENLARGED DETAIL "A"

NOT TO SCALE

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
PEER REVIEW COMMENTS	1/09/2024	AWG

SITE DETAILS

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

DESIGNED	DRAWN	CHECKED
AWG	AWG	TD

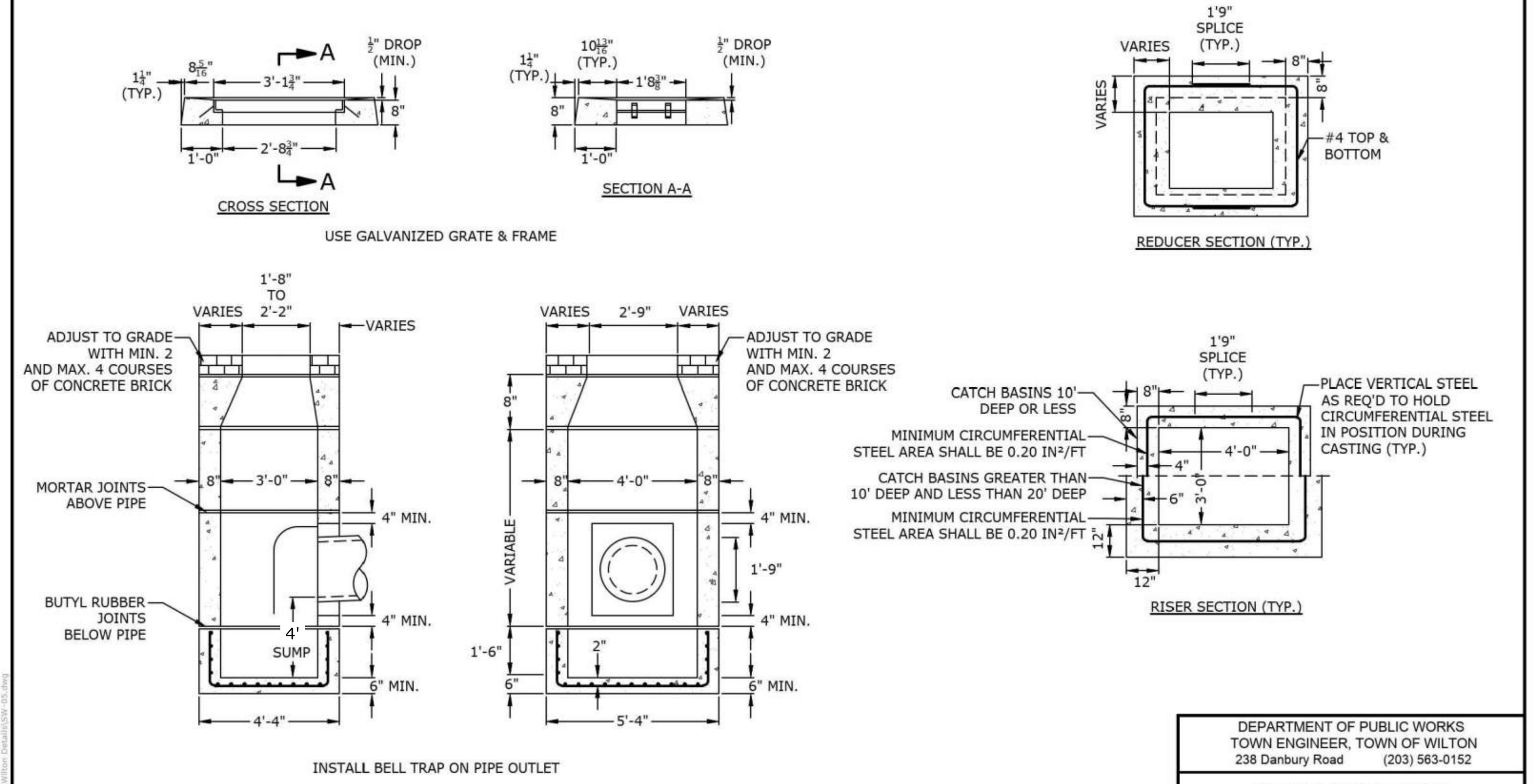
SCALE: AS NOTED

DATE: OCTOBER 23, 2023

PROJECT NO.: 21543.00001

SHEET NO.: 13 OF 23

SHEET NAME: SD-3



CONNECTICUT DEPARTMENT OF TRANSPORTATION

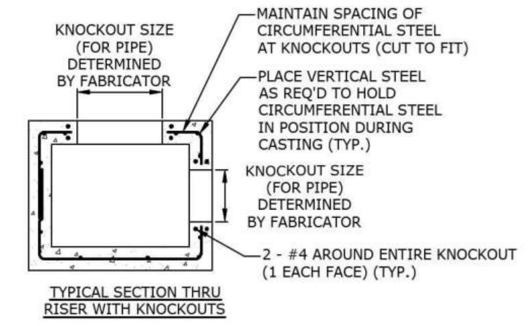
TYPE "C-L" CATCH BASIN

NO SCALE

DEPARTMENT OF PUBLIC WORKS TOWN ENGINEER, TOWN OF WILTON 238 Danbury Road (203) 563-0152	
TYPE "C-L" CATCH BASIN DETAIL WILTON, CONNECTICUT	
Scale: NTS	Date: 02/21/2019
Drawn by:	Grid:
Approved by: F. Smeriglio, PE	Sheet: SW-05A

NOTES:

1. REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60.
2. DETAILS ON THIS SHEET SHOW STANDARD REINFORCEMENT. WELDED WIRE FABRIC WITH AN AREA EQUAL TO OR GREATER THAN THE REINFORCING SHOWN MAY BE SUBSTITUTED.
3. ALL LAP SPLICES, DEVELOPMENT LENGTHS, BENDS FOR REINFORCEMENT, AND WELDED WIRE FABRIC SHALL CONFORM TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
4. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 2", EXCEPT FOR BENEATH BOTTOM REINFORCEMENT IN TOP SLABS, WHERE THE MINIMUM MAY BE 1½"
5. MINIMUM CONCRETE COMPRESSIVE STRENGTH FC'=4,000PSI SHALL BE OBTAINED BEFORE SHIPPING.
6. BASES AND RISERS AT A DEPTH OF 20' AND GREATER SHALL BE DESIGNED BY THE CONTRACTOR AND WORKING DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
7. SEE STANDARD DRAWING 507-K FOR CATCH BASIN FRAMES AND GRATES.
8. FOR DOT MAINTENANCE PERSONNEL, RISERS MAY BE PREFABRICATED WITH PIPE OPENINGS IN ALL FOUR WALLS. ADEQUATE REINFORCING AROUND PIPE OPENINGS TO CONFORMING TO THESE PLANS SHALL BE PROVIDED. ANY RISERS USED WHERE A PIPE OPENING IS TO REMAIN IN PLACE MUST BE FORMED UP WITH BRICK AS DIRECTED BY THE ENGINEER.
9. RISERS SHALL NEVER HAVE CORNER PIPE ENTRIES. WHERE THE ALIGNMENT OF THE PIPE WITH RESPECT TO THE CORNER OF THE CATCH BASIN CANNOT BE CHANGED, A ROUND STRUCTURE CONFORMING TO ASTM C478 SHALL BE USED. REINFORCING FOR THE ROUND TOP SLAB WITH A RECTANGULAR OPENING SHALL CONFORM TO DETAILS SHOWN HERE.
10. ALL PIPE OPENINGS SHALL BE CLOSED USING MATERIALS WHICH CONFORM TO STATE OF CONNECTICUT STANDARD SPECIFICATIONS SECTION M.08.02. IF THE ENGINEER DETERMINES THAT THE CLOSURE OF ANY PIPE OPENING IS UNSATISFACTORY, THE CONTRACTOR SHALL RECLOSE SAID OPENING AT NO ADDITIONAL COST TO THE STATE. KNOCKOUTS FOR PIPE OPENINGS SHALL NOT RESULT IN A REDUCED WALL THICKNESS.
11. THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS AND SUPPLEMENTALS SHALL GOVERN.
12. FOR ADDITIONAL DETAILS, SEE OTHER CATCH BASIN SHEETS.
13. WALL THICKNESS OF ALL CB'S OVER 10' DEEP SHALL BE INCREASED TO 12" THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. (THE 12" THICKNESS SHALL START AFTER THE FIRST 10")
14. BUTYL RUBBER JOINT SEAL SHALL CONFORM TO AASHTO M-198 AND MORTAR SHALL CONFORM TO THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS MATERIAL SECTION M11.04.
15. SHRINKAGE AND TEMPERATURE REINFORCEMENT SHALL BE PROVIDED IN THE TOPS OF SLABS. THE TOTAL AREA OF REINFORCEMENT PROVIDED SHALL BE AT LEAST 0.125 IN²/FT IN EACH DIRECTION. THE MAXIMUM SPACING OF THIS REINFORCEMENT SHALL NOT EXCEED 18 INCHES.
16. THE DETAILS SHOWN IN THE PLAN VIEW FOR THE PRECAST CONCRETE ROUND STRUCTURES SHALL ALSO BE USED FOR CONVERTING MANHOLES TO CATCH BASINS.

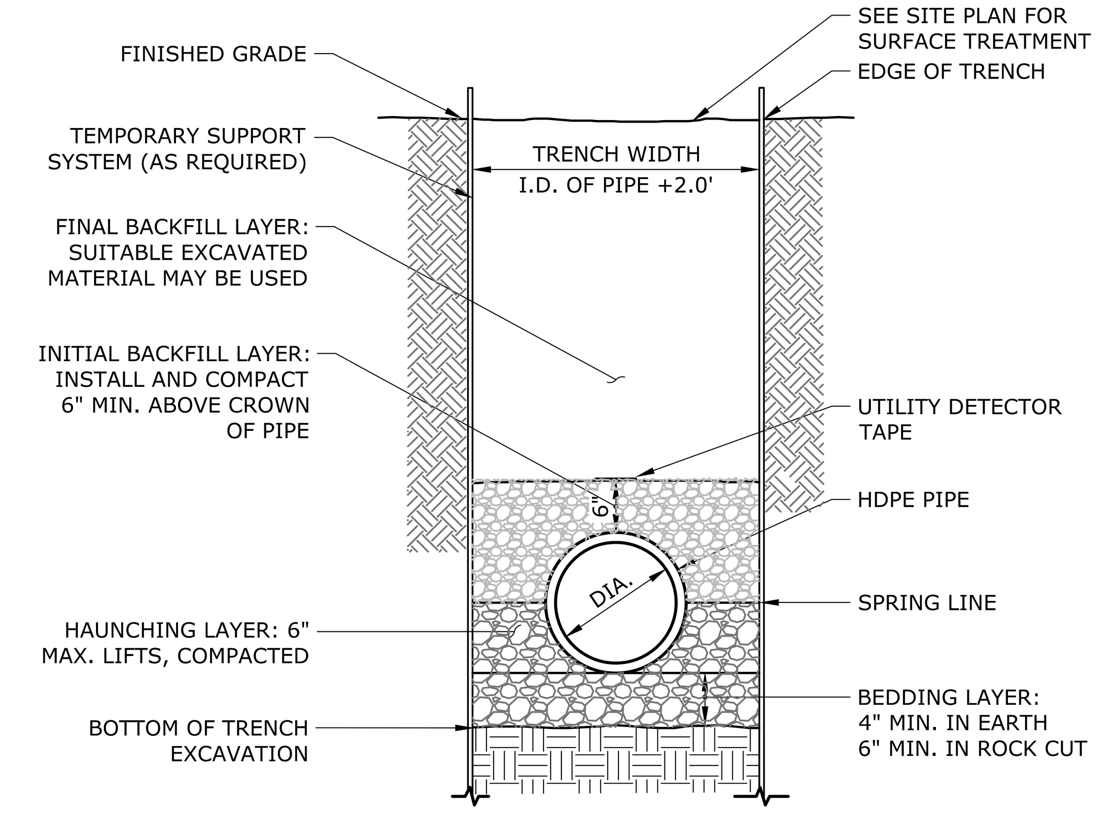


CONNECTICUT DEPARTMENT OF TRANSPORTATION

TYPE "C-L" CATCH BASIN

NO SCALE

DEPARTMENT OF PUBLIC WORKS TOWN ENGINEER, TOWN OF WILTON 238 Danbury Road (203) 563-0152	
TYPE "C-L" CATCH BASIN DETAIL WILTON, CONNECTICUT	
Scale: NTS	Date: 02/21/2019
Drawn by:	Grid:
Approved by: F. Smeriglio, PE	Sheet: SW-05B

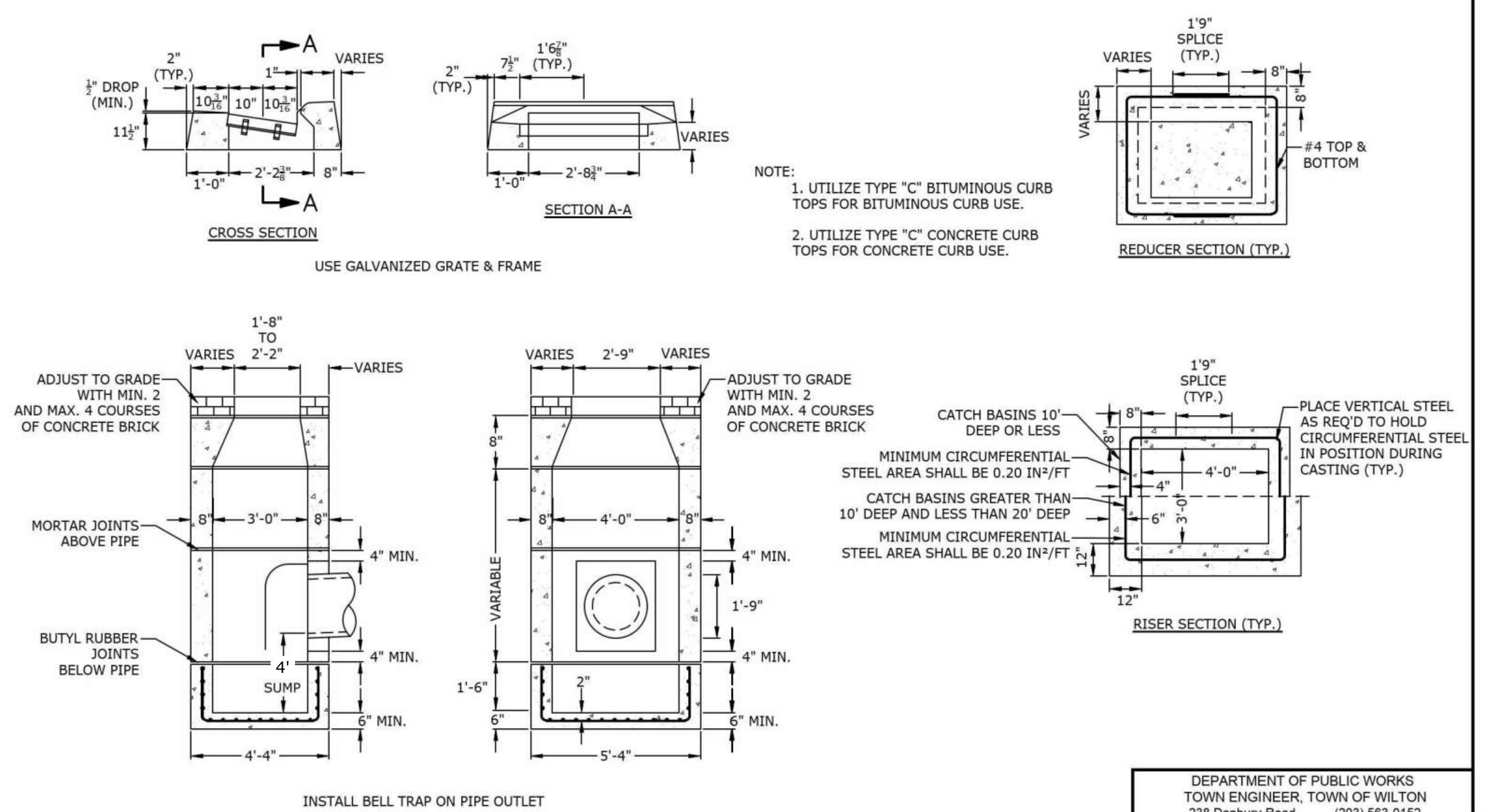


NOTES:

1. BACKFILL MATERIAL USED IN BEDDING, HAUNCHING, AND INITIAL BACKFILL LAYERS SHALL BE 3/4" CRUSHED STONE.
2. BACKFILL MATERIAL IF EXISTING MATERIAL IS DEEMED UNSUITABLE.
3. PAYMENT LIMIT FOR ROCK IN TRENCH TO BE PIPE DIAMETER + 3.0'

STORM DRAINAGE TRENCH

NOT TO SCALE



CONNECTICUT DEPARTMENT OF TRANSPORTATION

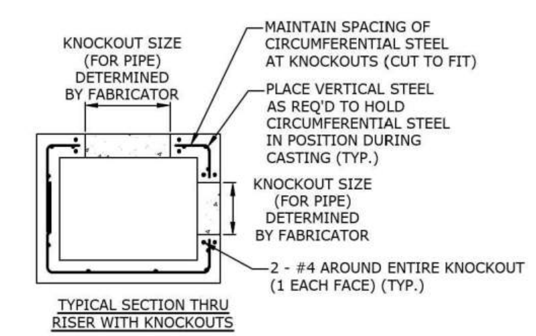
TYPE "C" CATCH BASIN

NO SCALE

DEPARTMENT OF PUBLIC WORKS TOWN ENGINEER, TOWN OF WILTON 238 Danbury Road (203) 563-0152	
TYPE "C" CATCH BASIN DETAIL WILTON, CONNECTICUT	
Scale: NTS	Date: 02/21/2019
Drawn by:	Grid:
Approved by: F. Smeriglio, PE	Sheet: SW-01A

NOTES:

1. REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60.
2. DETAILS ON THIS SHEET SHOW STANDARD REINFORCEMENT. WELDED WIRE FABRIC WITH AN AREA EQUAL TO OR GREATER THAN THE REINFORCING SHOWN MAY BE SUBSTITUTED.
3. ALL LAP SPLICES, DEVELOPMENT LENGTHS, BENDS FOR REINFORCEMENT, AND WELDED WIRE FABRIC SHALL CONFORM TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
4. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 2", EXCEPT FOR BENEATH BOTTOM REINFORCEMENT IN TOP SLABS, WHERE THE MINIMUM MAY BE 1½"
5. MINIMUM CONCRETE COMPRESSIVE STRENGTH FC'=4,000PSI SHALL BE OBTAINED BEFORE SHIPPING.
6. BASES AND RISERS AT A DEPTH OF 20' AND GREATER SHALL BE DESIGNED BY THE CONTRACTOR AND WORKING DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
7. SEE STANDARD CTDOT DRAWING 507-K FOR CATCH BASIN FRAMES AND GRATES.
8. FOR DOT MAINTENANCE PERSONNEL, RISERS MAY BE PREFABRICATED WITH PIPE OPENINGS IN ALL FOUR WALLS. ADEQUATE REINFORCING AROUND PIPE OPENINGS TO CONFORMING TO THESE PLANS SHALL BE PROVIDED. ANY RISERS USED WHERE A PIPE OPENING IS TO REMAIN IN PLACE MUST BE FORMED UP WITH BRICK AS DIRECTED BY THE ENGINEER.
9. RISERS SHALL NEVER HAVE CORNER PIPE ENTRIES. WHERE THE ALIGNMENT OF THE PIPE WITH RESPECT TO THE CORNER OF THE CATCH BASIN CANNOT BE CHANGED, A ROUND STRUCTURE CONFORMING TO ASTM C478 SHALL BE USED. REINFORCING FOR THE ROUND TOP SLAB WITH A RECTANGULAR OPENING SHALL CONFORM TO DETAILS SHOWN HERE.
10. ALL PIPE OPENINGS SHALL BE CLOSED USING MATERIALS WHICH CONFORM TO STATE OF CONNECTICUT STANDARD SPECIFICATIONS SECTION M.08.02. IF THE ENGINEER DETERMINES THAT THE CLOSURE OF ANY PIPE OPENING IS UNSATISFACTORY, THE CONTRACTOR SHALL RECLOSE SAID OPENING AT NO ADDITIONAL COST TO THE STATE. KNOCKOUTS FOR PIPE OPENINGS SHALL NOT RESULT IN A REDUCED WALL THICKNESS.
11. THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS AND SUPPLEMENTAL SHALL GOVERN.
12. FOR ADDITIONAL DETAILS, SEE OTHER CATCH BASIN SHEETS.
13. WALL THICKNESS OF ALL CB'S OVER 10' DEEP SHALL BE INCREASED TO 12" THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. (THE 12" THICKNESS SHALL START AFTER THE FIRST 10")
14. BUTYL RUBBER JOINT SEAL SHALL CONFORM TO AASHTO M-198 AND MORTAR SHALL CONFORM TO THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS MATERIAL SECTION M11.04.
15. SHRINKAGE AND TEMPERATURE REINFORCEMENT SHALL BE PROVIDED IN THE TOPS OF SLABS. THE TOTAL AREA OF REINFORCEMENT PROVIDED SHALL BE AT LEAST 0.125 IN²/FT IN EACH DIRECTION. THE MAXIMUM SPACING OF THIS REINFORCEMENT SHALL NOT EXCEED 18 INCHES.
16. THE DETAILS SHOWN IN THE PLAN VIEW FOR THE PRECAST CONCRETE ROUND STRUCTURES SHALL ALSO BE USED FOR CONVERTING MANHOLES TO CATCH BASINS.
17. SET CATCH BASIN TOPS ON 6" MINIMUM BRICK OR BLOCK LEVELING COURSE.
18. AFFIX PLAQUE TO ALL CATCH BASINS STATING "DUMP NO WASTE - DRAINS TO LONG ISLAND SOUND". COST FOR PLAQUE SHALL BE INCLUDED IN THE CONTRACT UNIT COST FOR CATCH BASINS.

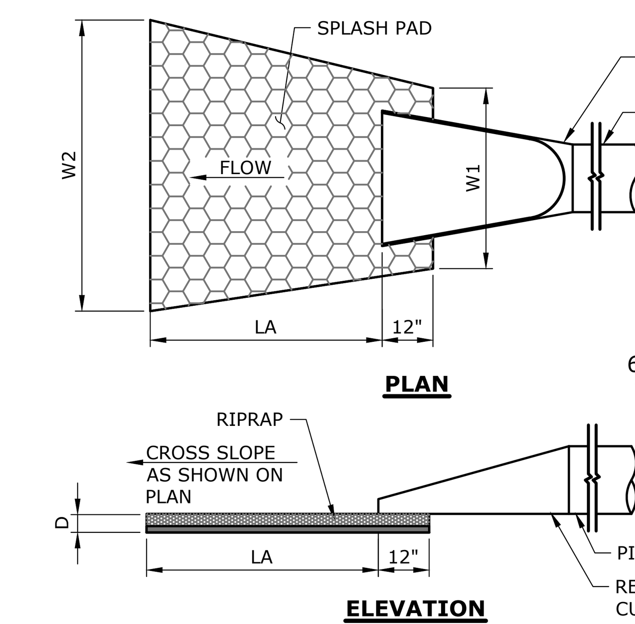


CONNECTICUT DEPARTMENT OF TRANSPORTATION

TYPE "C" CATCH BASIN

NO SCALE

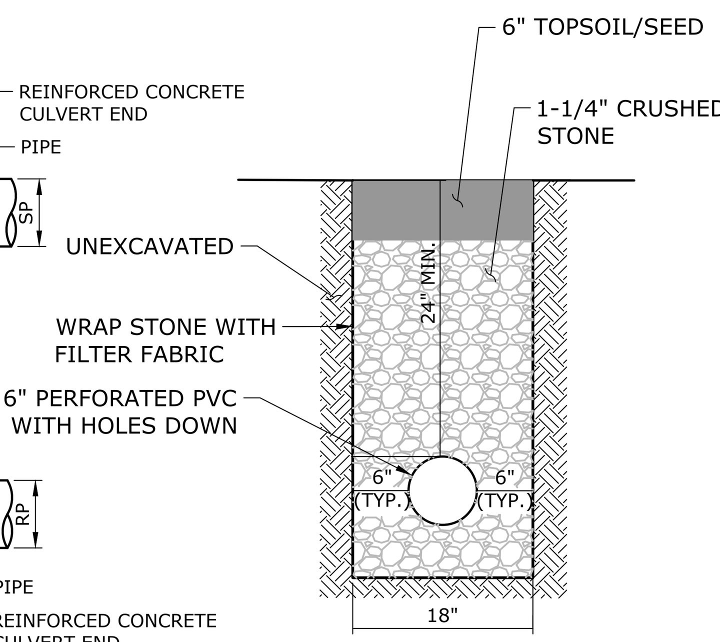
DEPARTMENT OF PUBLIC WORKS TOWN ENGINEER, TOWN OF WILTON 238 Danbury Road (203) 563-0152	
TYPE "C" CATCH BASIN DETAIL WILTON, CONNECTICUT	
Scale: NTS	Date: 02/21/2019
Drawn by:	Grid:
Approved by: F. Smeriglio, PE	Sheet: SW-01B



OUTLET PROTECTION ID	TYPE	SP (FT)	RP (FT)	LA (FT)	W1 (FT)	W2 (FT)	D (IN)
RD- JEWEL BOX	TYPE B	1	1	10	3	7	12
HEADWALL 1	TYPE A	2	2	15	6	17	12

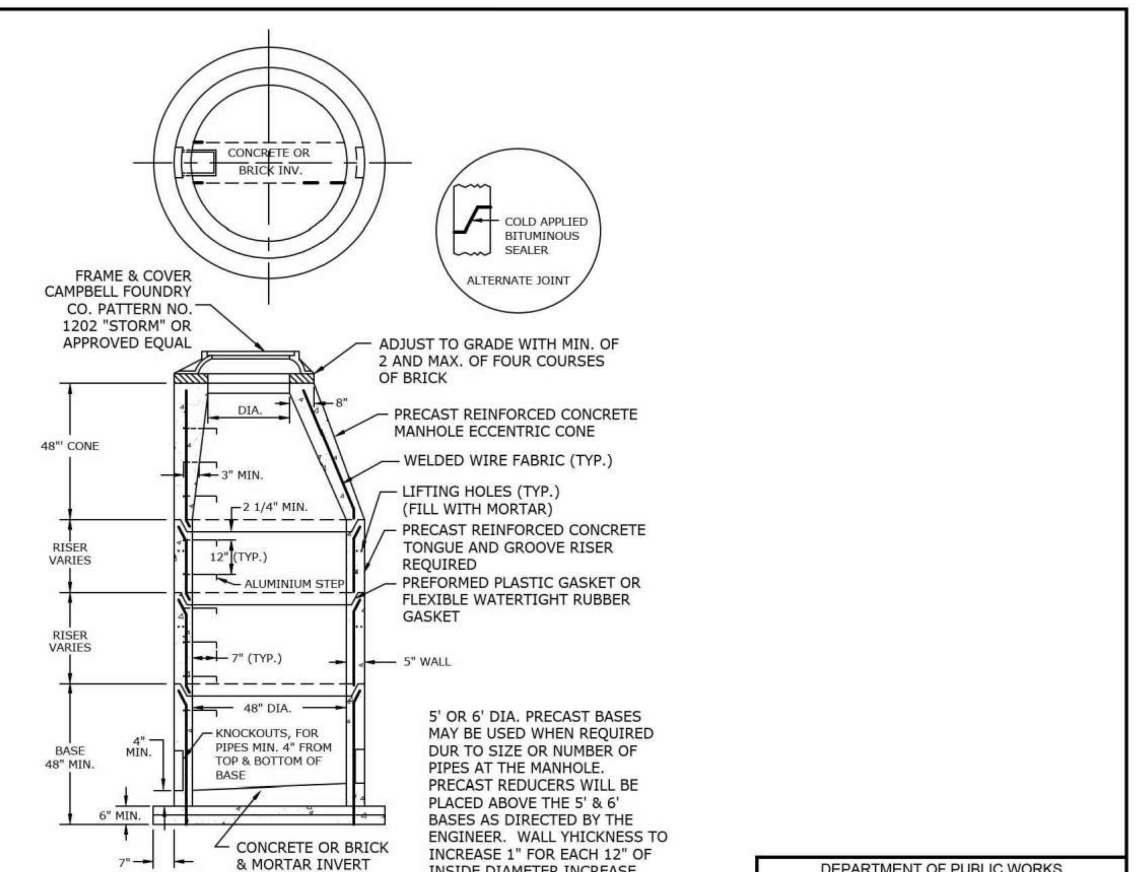
FLARED END WITH RIP RAP SPLASH PAD

NOT TO SCALE



CURTAIN DRAIN

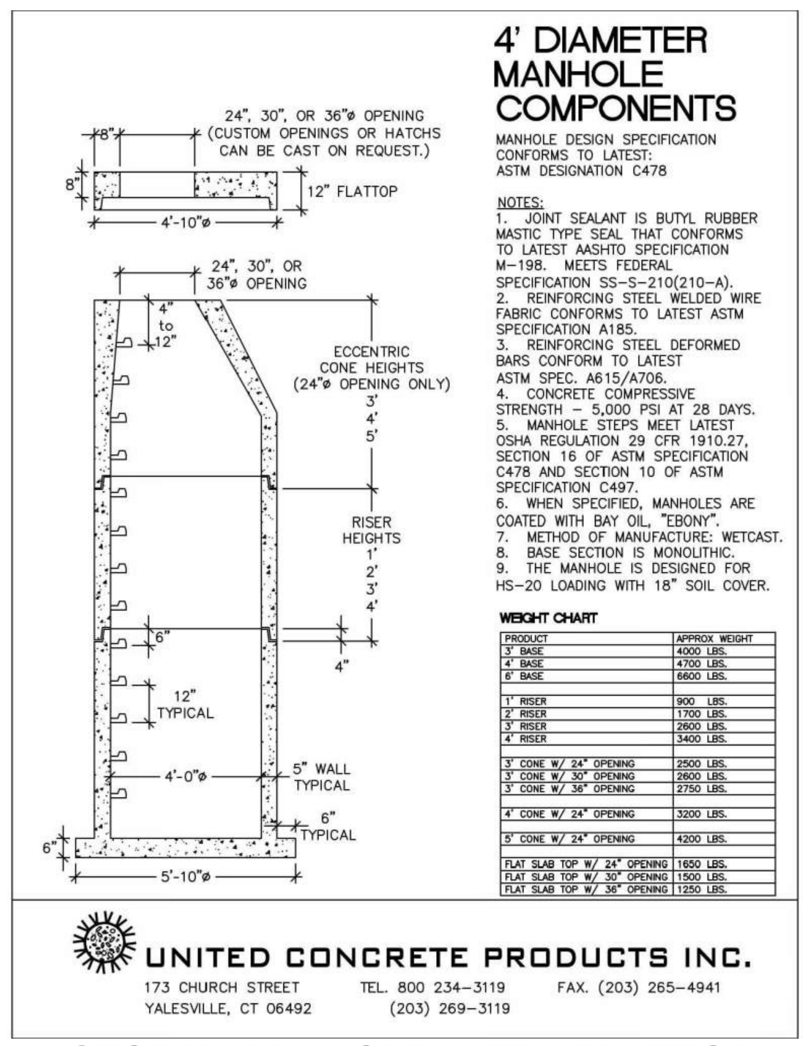
NOT TO SCALE



48" PRECAST MANHOLE

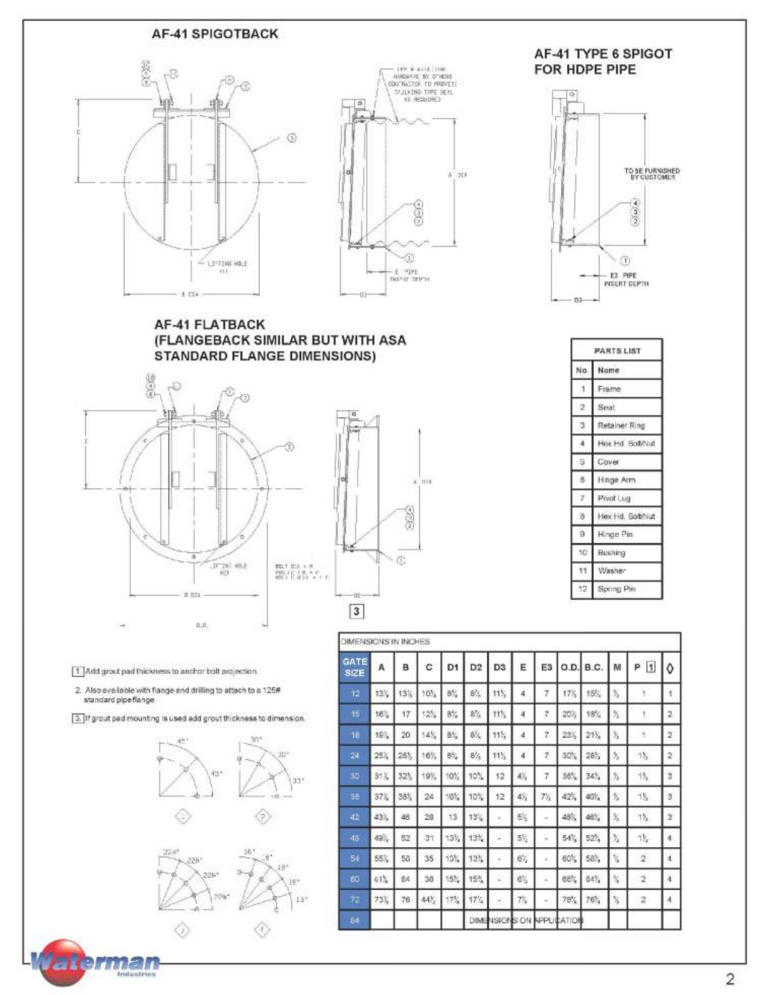
NO SCALE

DEPARTMENT OF PUBLIC WORKS TOWN ENGINEER, TOWN OF WILTON 238 Danbury Road (203) 563-0152	
48" PRECAST MANHOLE WILTON, CONNECTICUT	
Scale: NTS	Date: 02/21/2019
Drawn by:	Grid:
Approved by: F. Smeriglio, PE	Sheet: SW-02



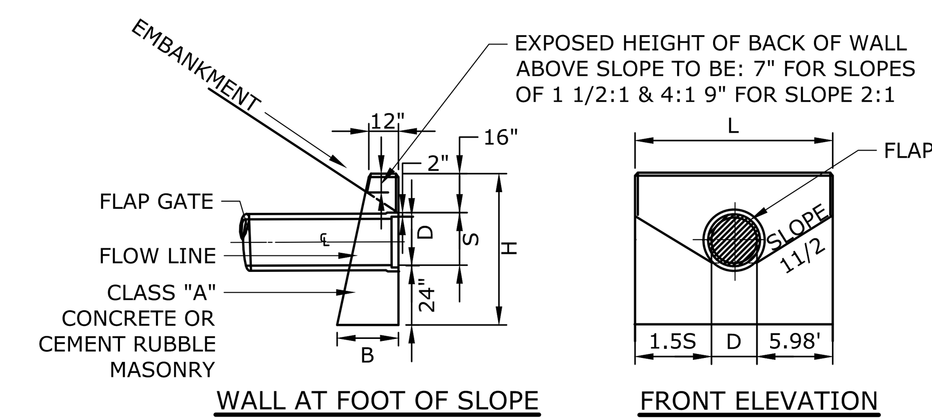
STORM MANHOLE WITH FLATTOP (AS NEEDED FOR SHALLOWER INVERTS)

NOT TO SCALE



WALL MOUNTED FLAP GATE

NOT TO SCALE



H = TOTAL HEIGHT OF ENDWALL
B = BASE
D = INSIDE DIAMETER OF PIPE
S = HEIGHT OF SLOPE ABOVE FLOW LINE AT FACE OF WALL-MINIMUM = D+2
L = LENGTH OF WALL= 3S+D

ALL EDGES OF EXPOSED SURFACES TO BE CHAMFERED APPROXIMATELY 1"

DIMENSIONS AND QUANTITIES FOR ONE ENDWALL BASED ON S = D+2						
D	S	H	L	BATTER	B	VOL.
INS.	FT. & IN.	FT. & IN.	FT. & IN.	IN.	FT. & IN.	C.Y.
12"	1' 2"	4' 6"	4' 6"	2 1/2"	1' 11 1/4"	1.10
15"	1' 5"	4' 9"	5' 6"	2 1/2"	1' 11 7/8"	1.45
18"	1' 8"	5'	6' 6"	2 1/2"	2' 1/2"	1.83
24"	2' 2"	5' 6"	8' 6"	2 1/2"	2' 1 3/4"	2.72
30"	2' 8"	6'	10' 6"	2 1/2"	2' 3"	3.79*
36"	3' 2"	6' 6"	12' 6"	3"	2' 7 1/2"	5.45*
42"	3' 8"	7'	14' 6"	3"	2' 9"	6.40
48"	4' 2"	7' 6"	16' 6"	3"	2' 10 1/2"	8.00

*VOLUME BASED ON "D" AND WALL THICKNESS AT ℄ OF PIPE HAS BEEN DEDUCTED

ENDWALL

NOT TO SCALE

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
PEER REVIEW COMMENTS	1/09/2024	AWG

SITE DETAILS

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

AWG	AWG	TD
DESIGNED	DRAWN	CHECKED

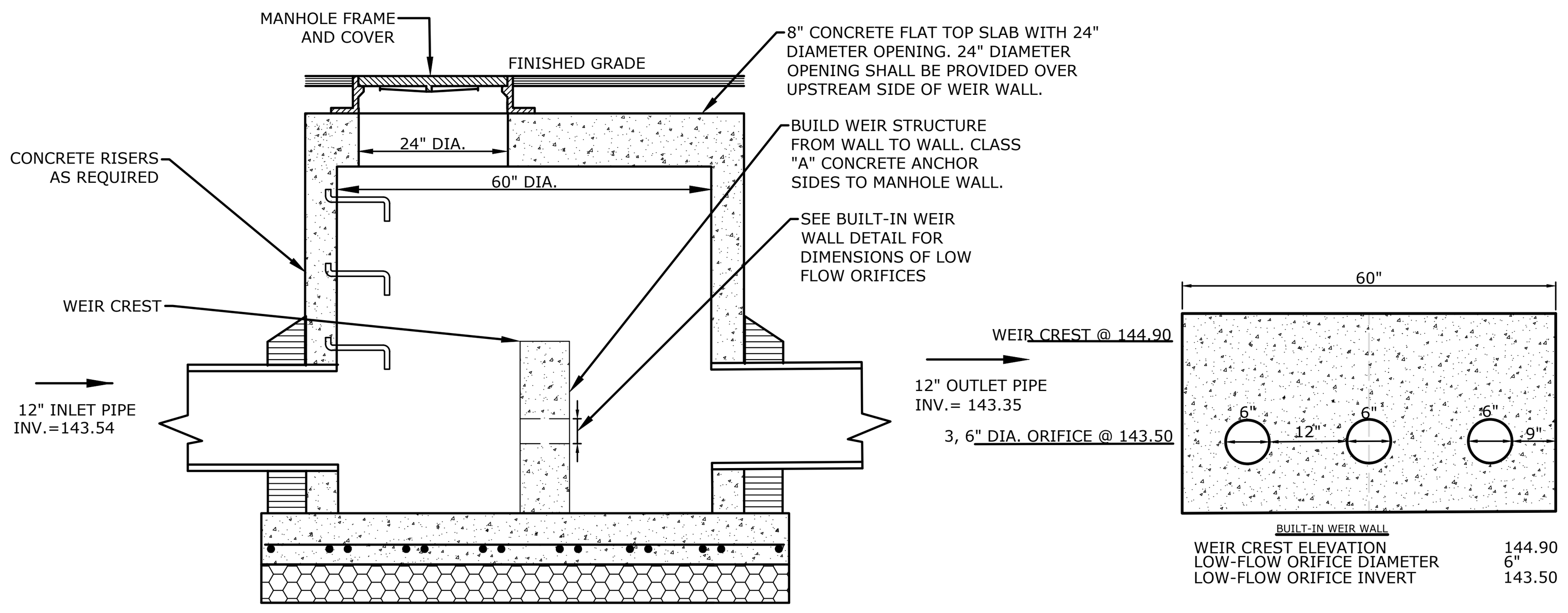
SCALE: AS NOTED

DATE: OCTOBER 23, 2023

PROJECT NO.: 21543.00001

SHEET NO.: 14 OF 23

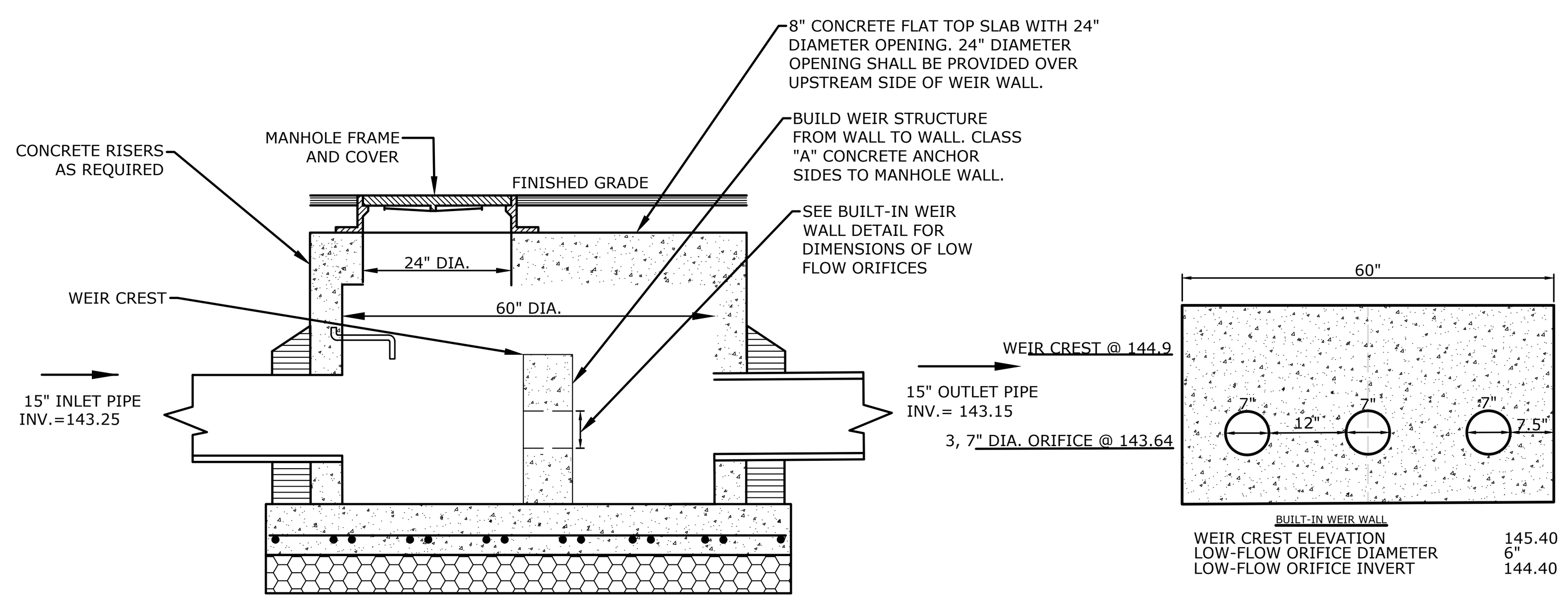
SHEET NAME: SD-4



NOTES:
THIS DETAIL REPRESENTS A MODIFICATION OF A STANDARD STORM MANHOLE FOR USE IN CONTROLLING THE DISCHARGE FROM THE DETENTION AREA. SEE THE MANHOLE DETAIL FOR STANDARD DIMENSIONS AND NOTES.

OUTLET CONTROL STRUCTURE FOR UNDERGROUND DETENTION SYSTEM 1 (MH 12)

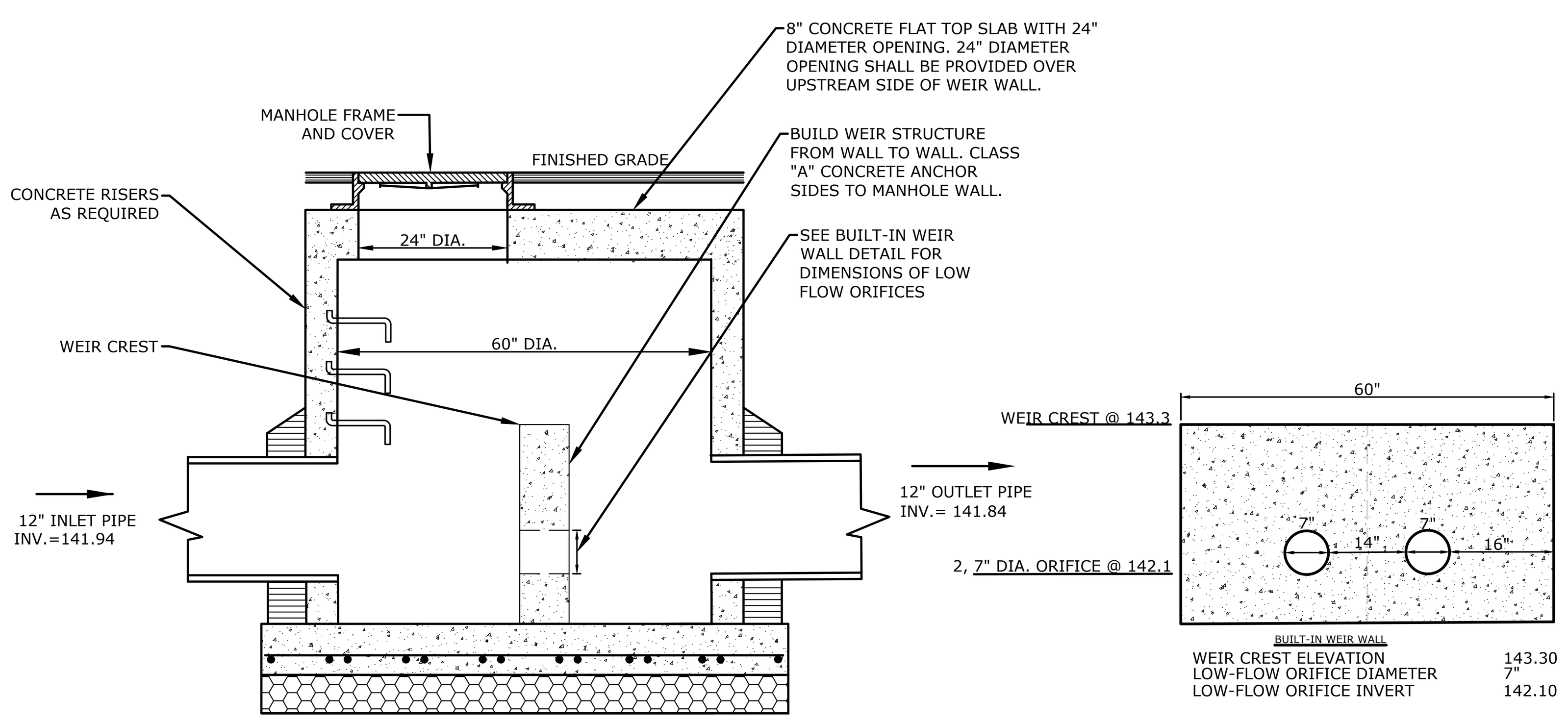
SCALE: ½"=1'



NOTES:
THIS DETAIL REPRESENTS A MODIFICATION OF A STANDARD STORM MANHOLE FOR USE IN CONTROLLING THE DISCHARGE FROM THE DETENTION AREA. SEE THE MANHOLE DETAIL FOR STANDARD DIMENSIONS AND NOTES.

OUTLET CONTROL STRUCTURE FOR UNDERGROUND DETENTION SYSTEM 2 (MH 15)

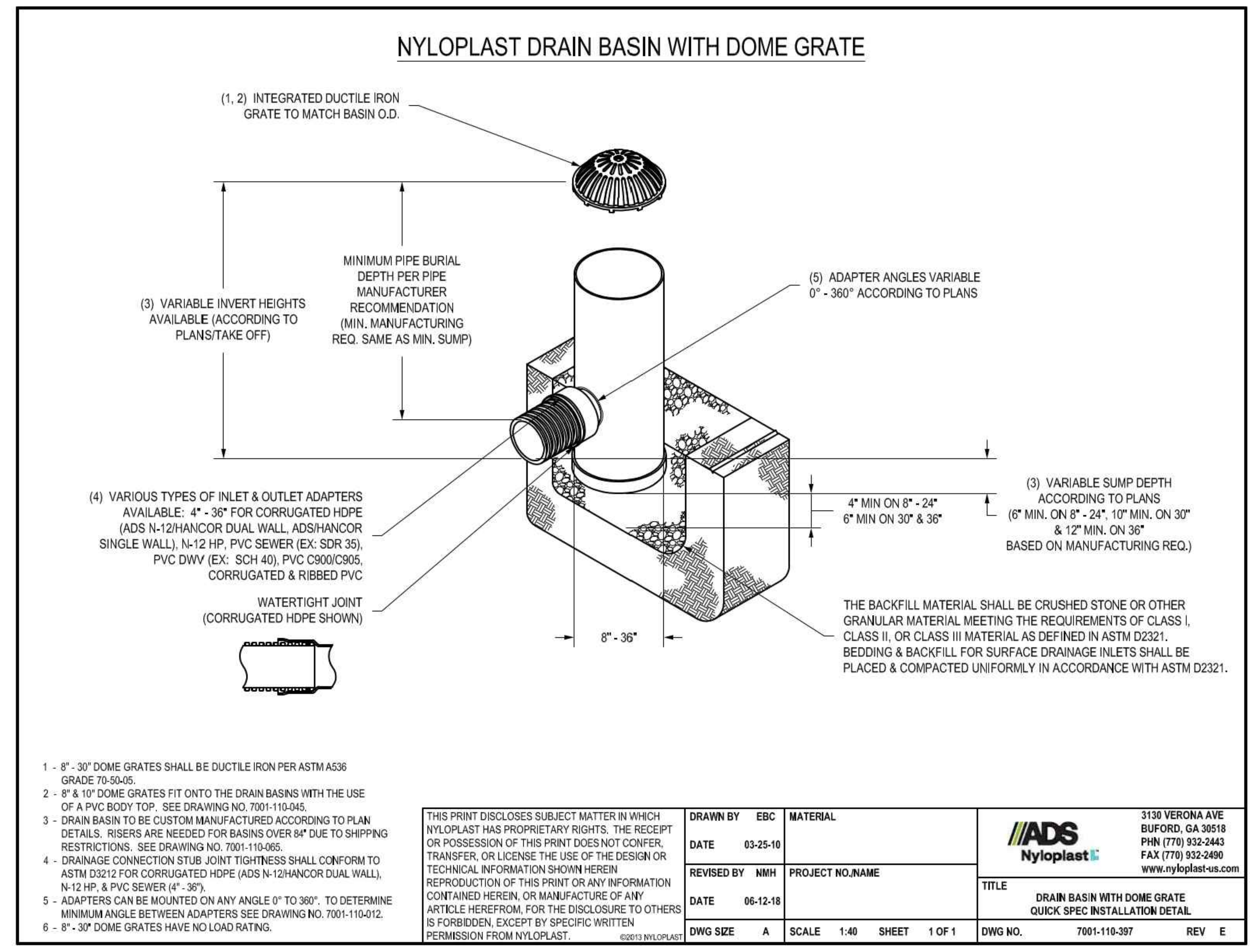
SCALE: ½"=1'

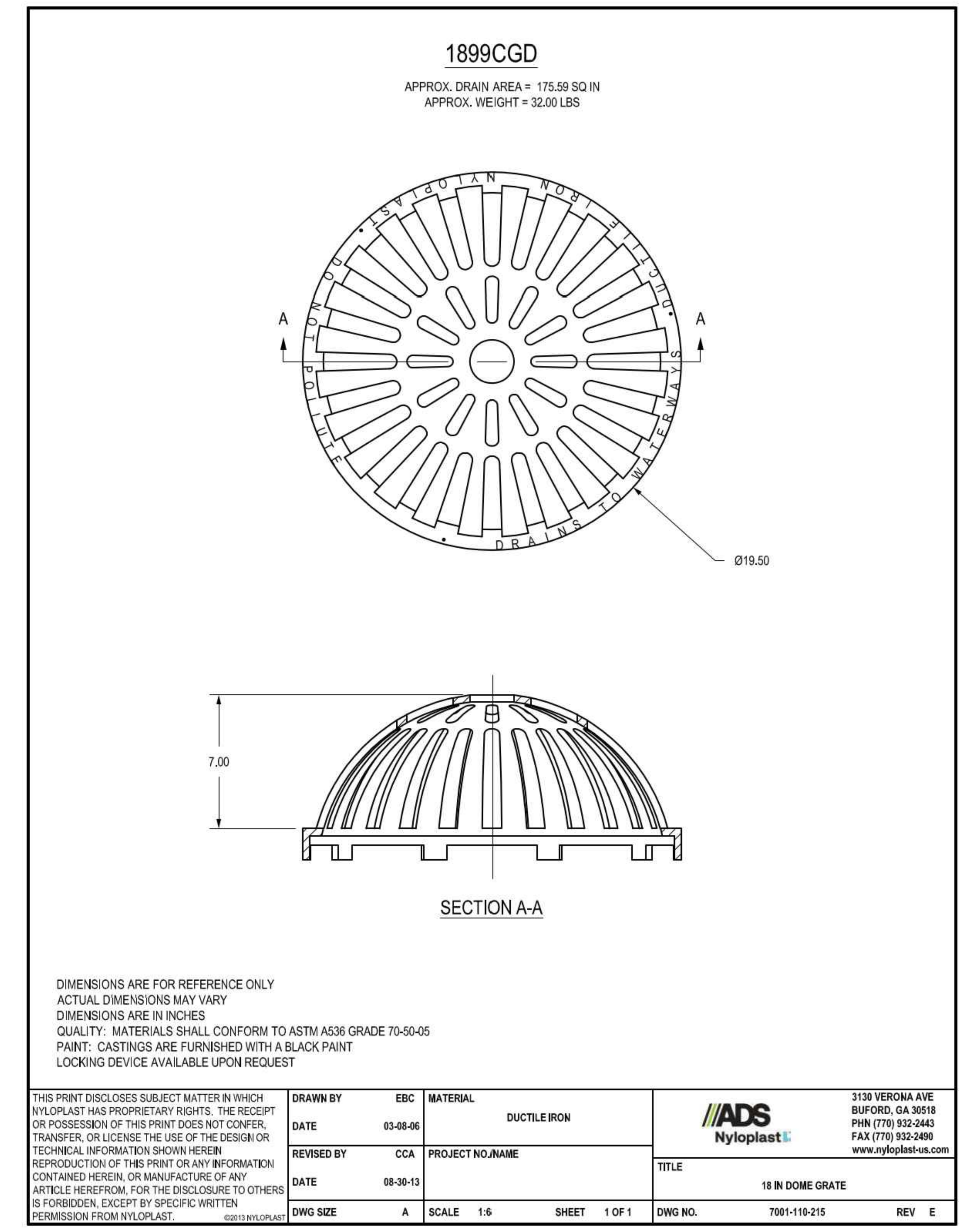


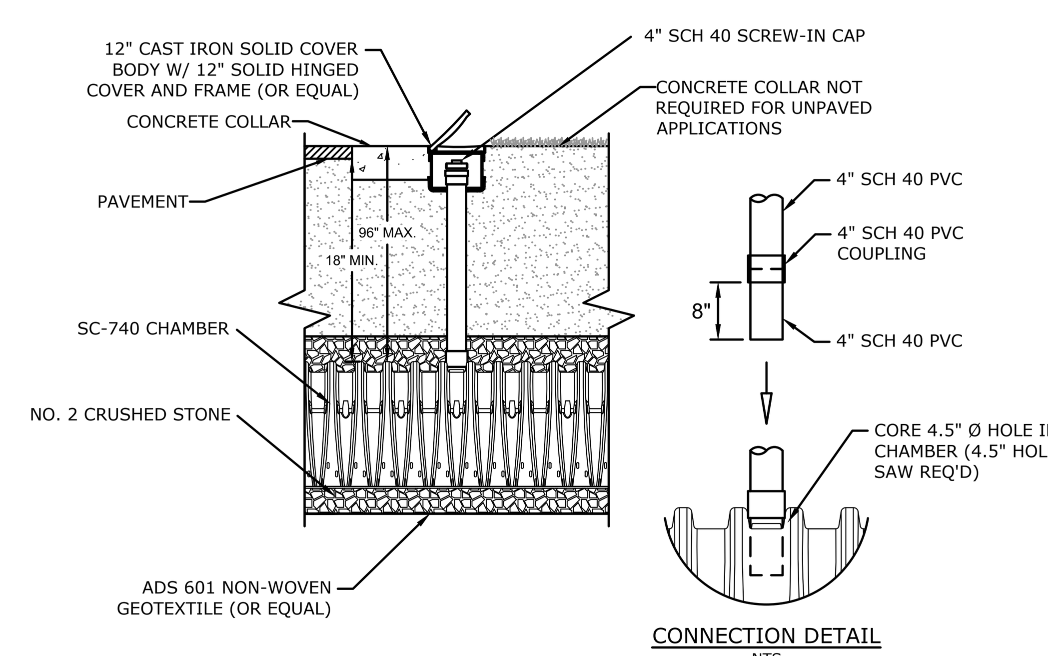
NOTES:
THIS DETAIL REPRESENTS A MODIFICATION OF A STANDARD STORM MANHOLE FOR USE IN CONTROLLING THE DISCHARGE FROM THE DETENTION AREA. SEE THE MANHOLE DETAIL FOR STANDARD DIMENSIONS AND NOTES.

OUTLET CONTROL STRUCTURE FOR UNDERGROUND DETENTION SYSTEM 3 (MH 4)

SCALE: ½"=1'



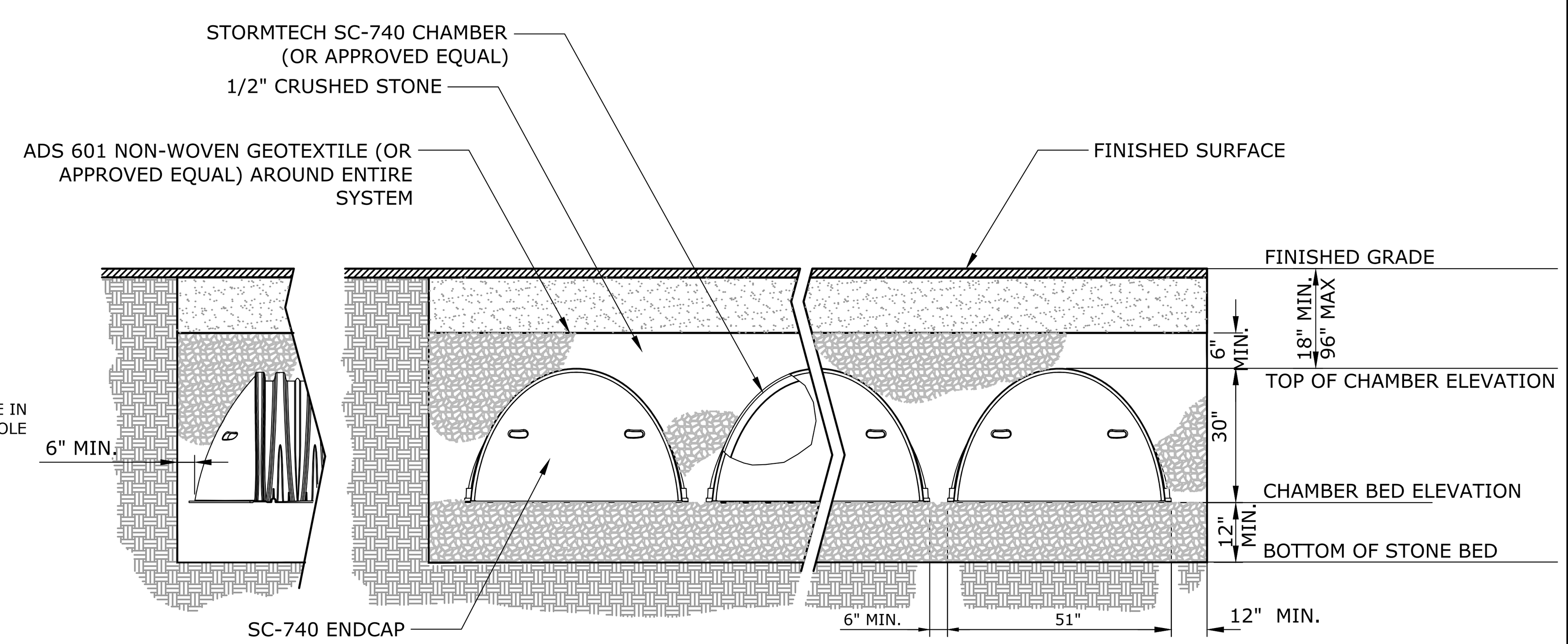




NOTES:
1. INSPECTION PORTS SHALL HAVE H-20 TRAFFIC BEARING FRAMES AND COVERS
2. INSPECTION PORT MUST BE CONNECTED THROUGH KNOCK-OUT LOCATED AT CENTER OF CHAMBER.
3. ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED.

STORMTECH SC-740 TYPICAL INSPECTION PORT DETAIL

NOT TO SCALE



NOTE:
THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

STORMTECH SC-740 TYPICAL CROSS SECTION DETAIL

NOT TO SCALE

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

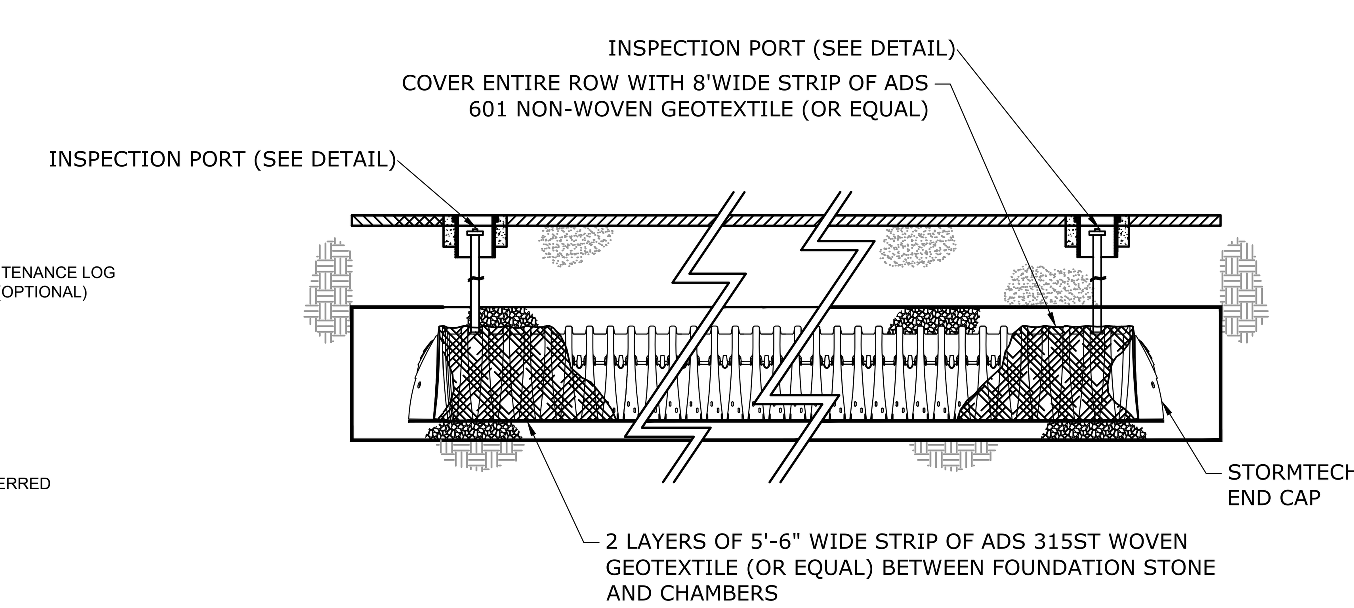
STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



STORMTECH SC-740 ISOLATOR ROW DETAIL

NOT TO SCALE

DESCRIPTION	DATE	BY
PEER REVIEW COMMENTS	1/09/2024	AWG

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

SITE DETAILS

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

AWG	AWG	TD
DESIGNED	DRAWN	CHECKED

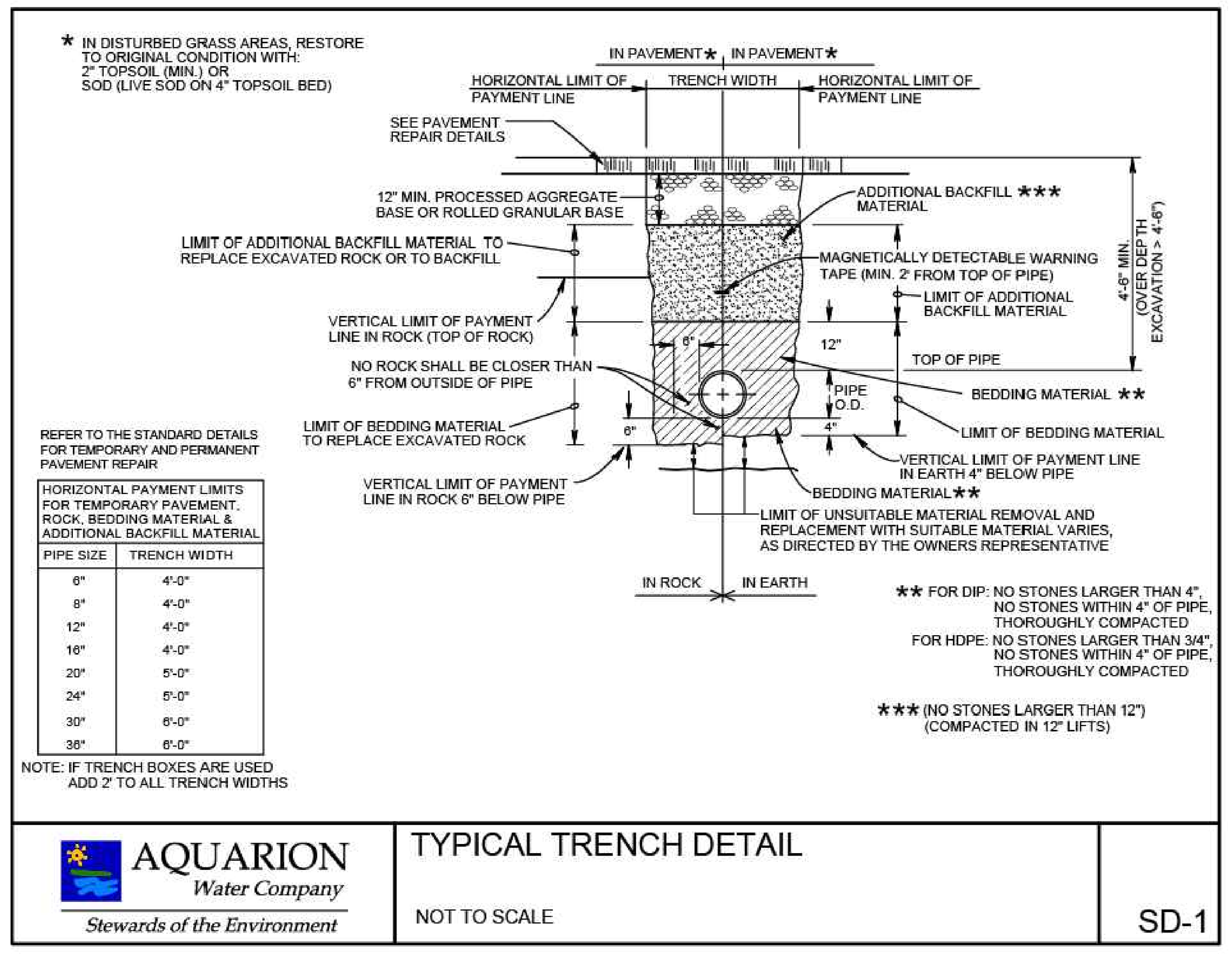
AS NOTED
SCALE

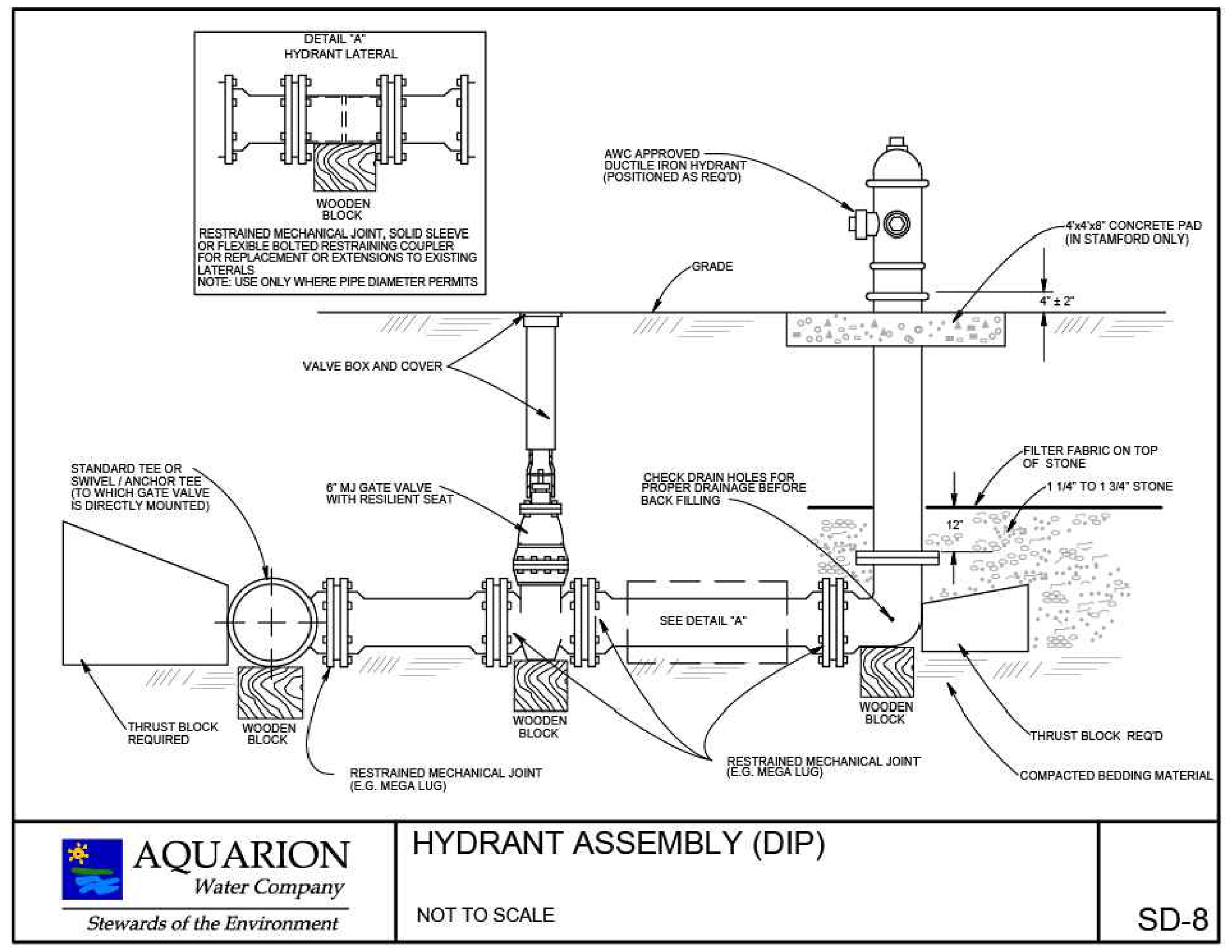
OCTOBER 23, 2023
DATE

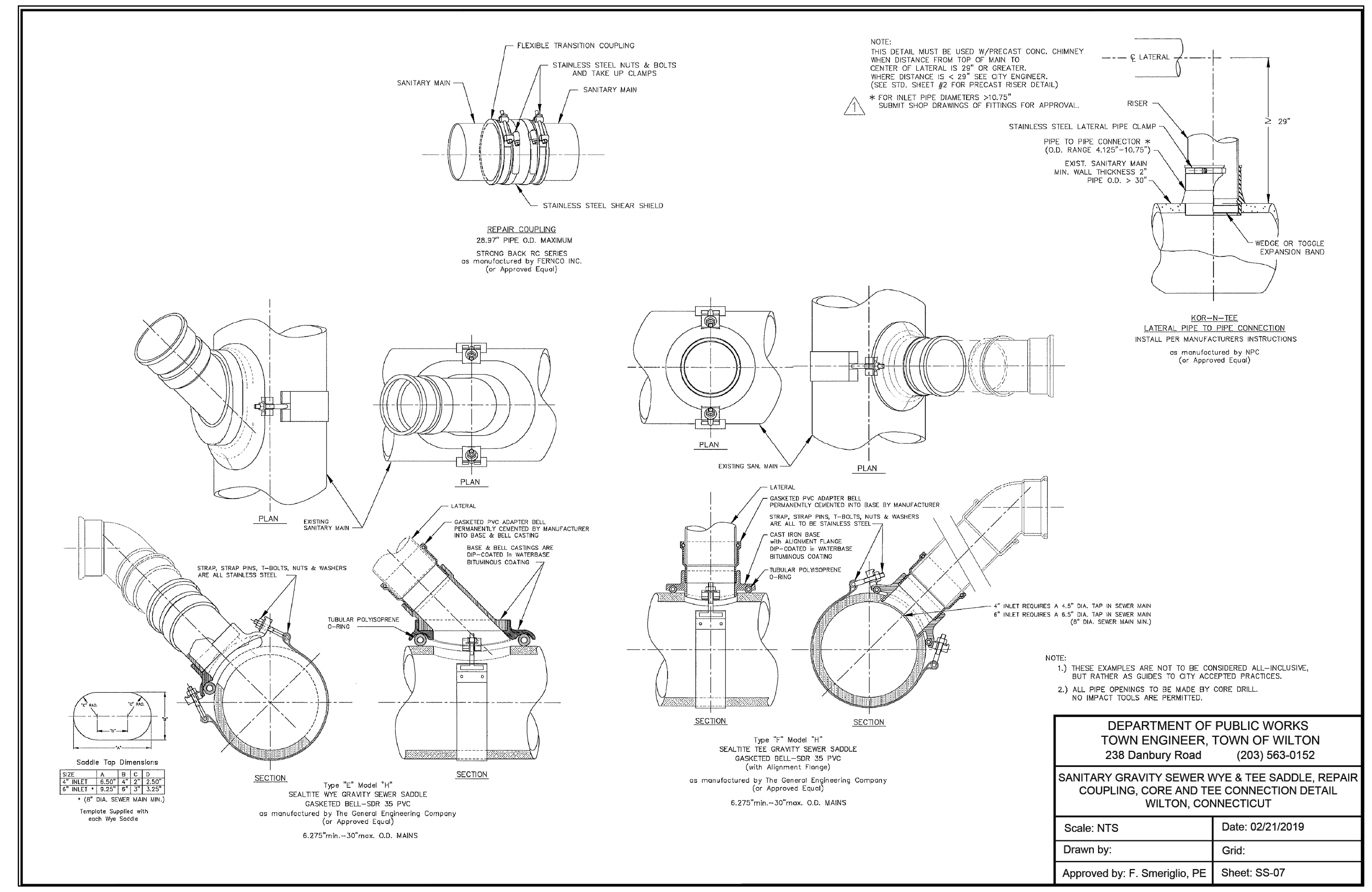
21543.00001
PROJECT NO.

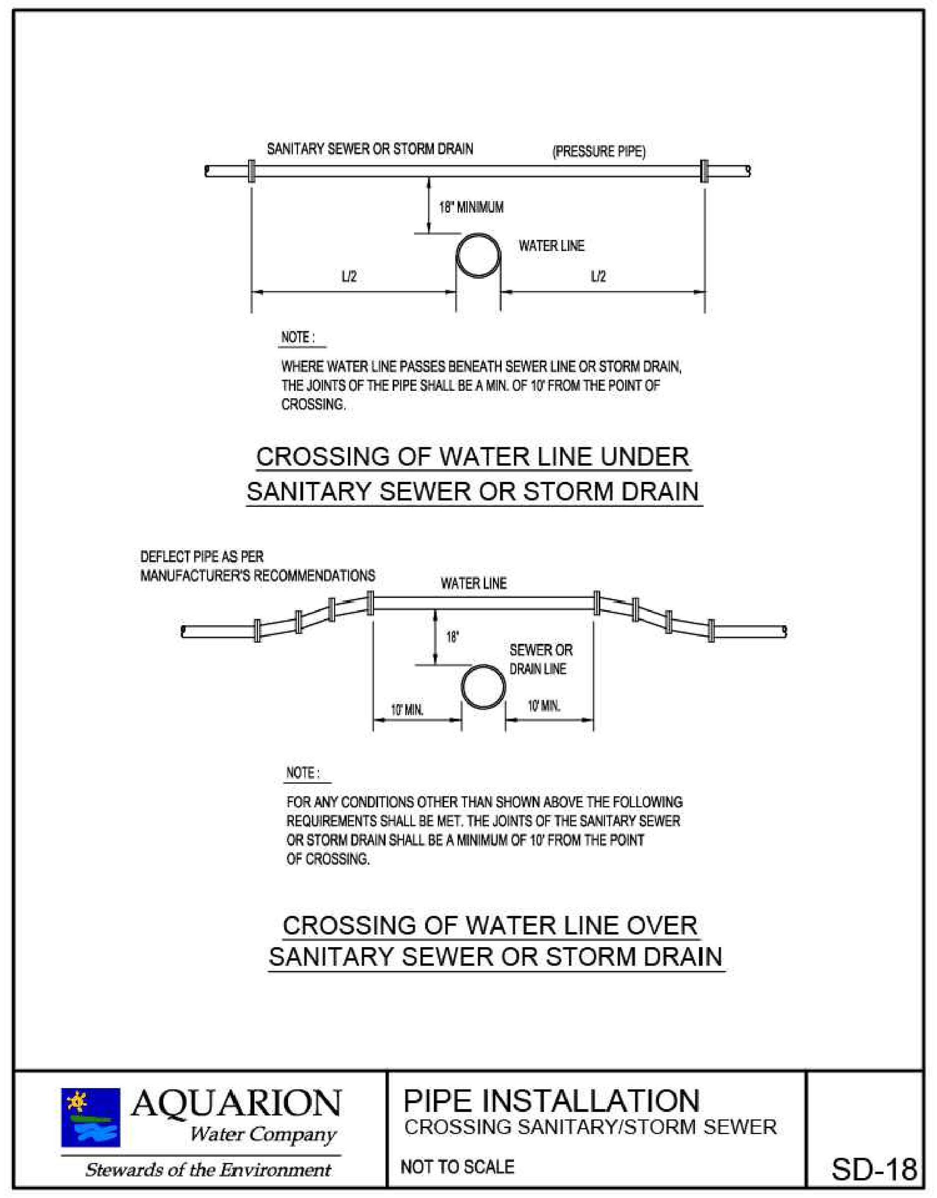
15 OF 23
SHEET NO.

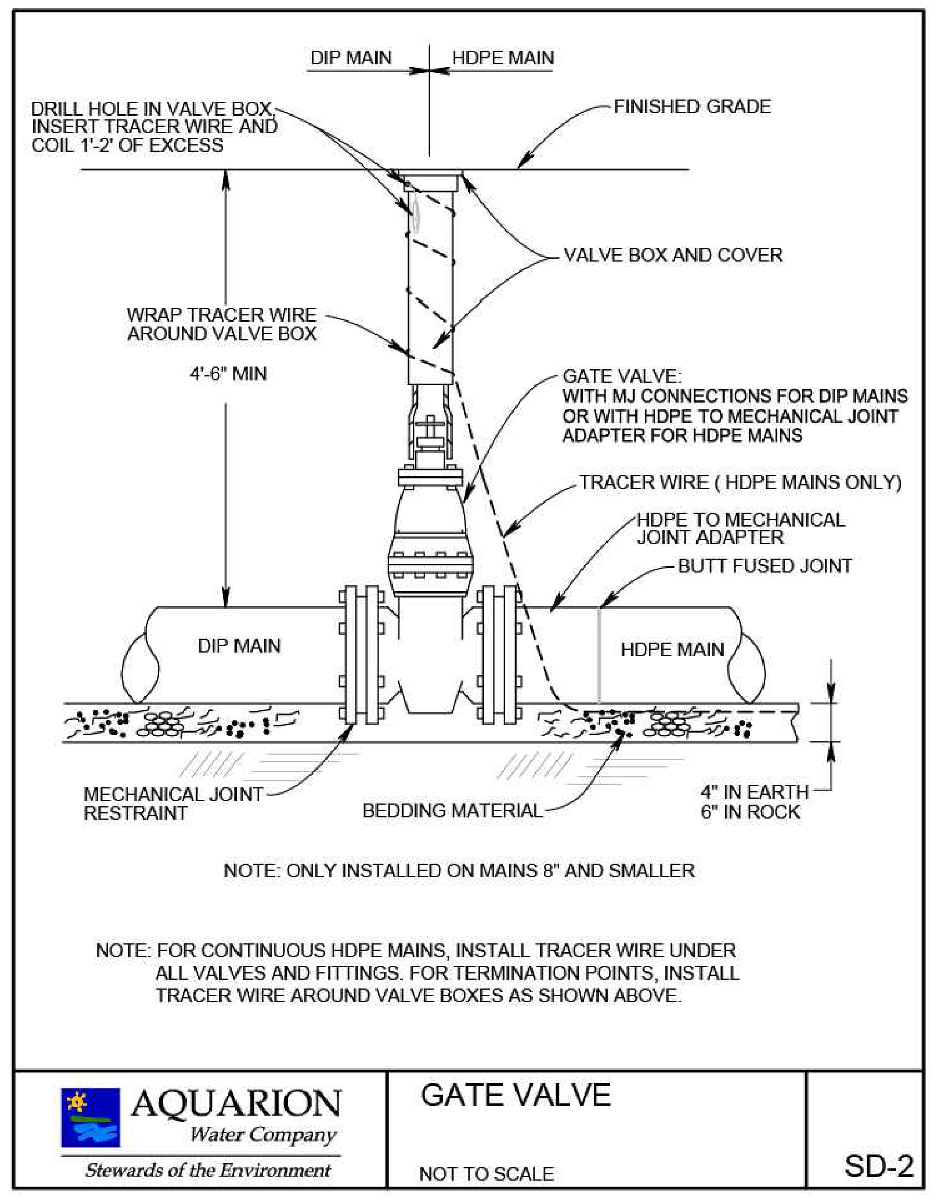
SD-5
SHEET NAME

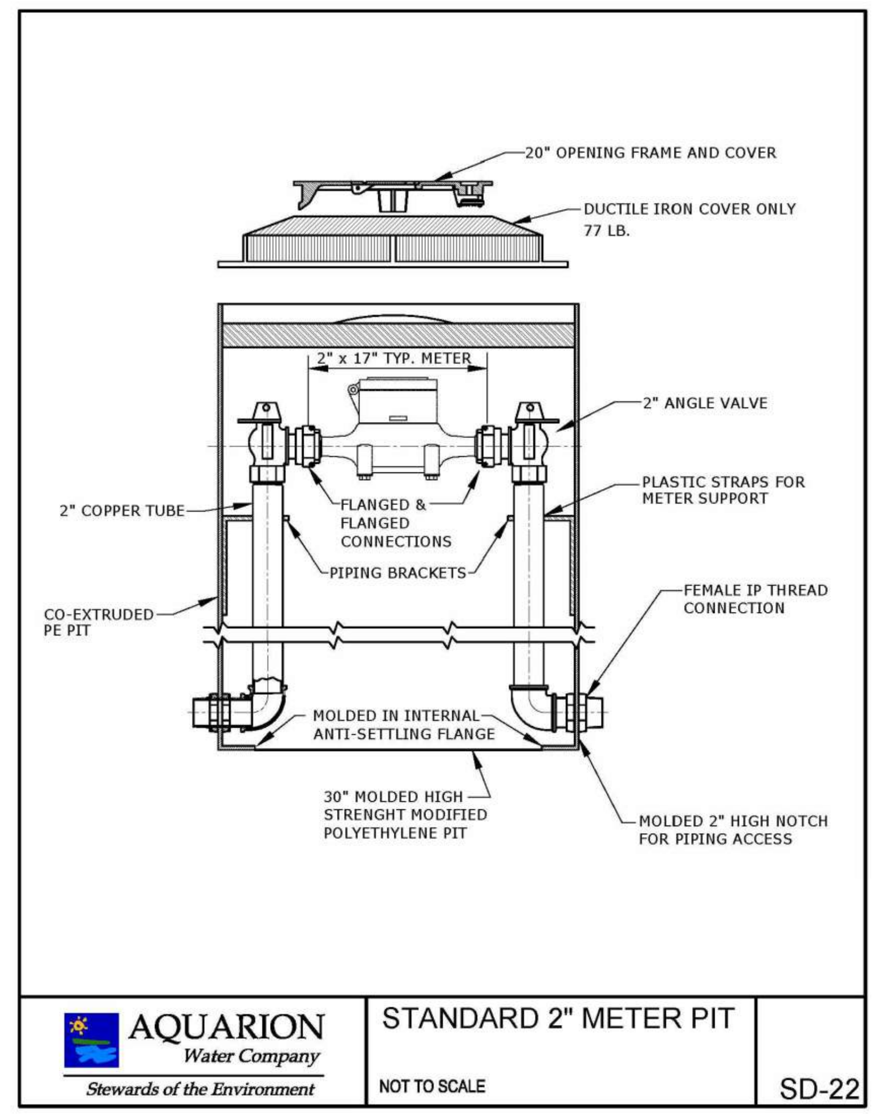


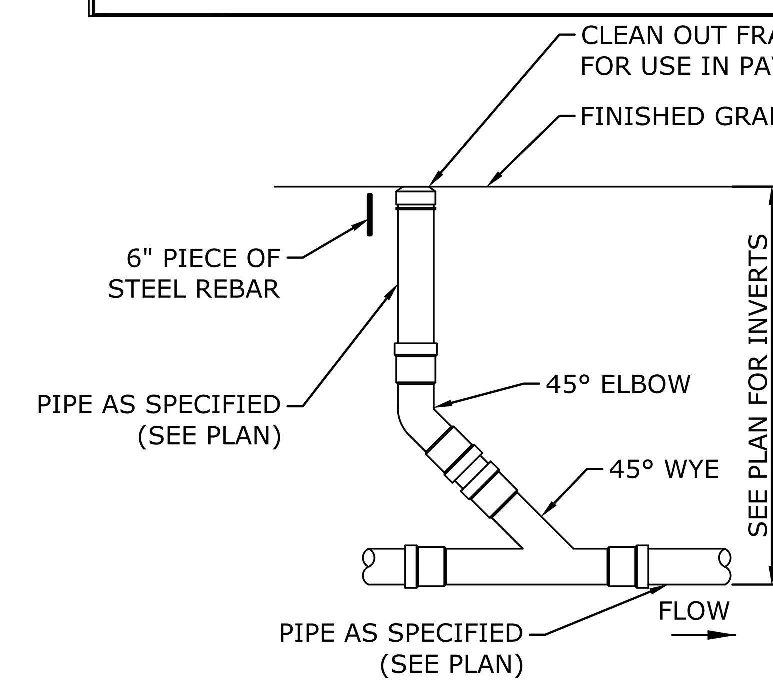




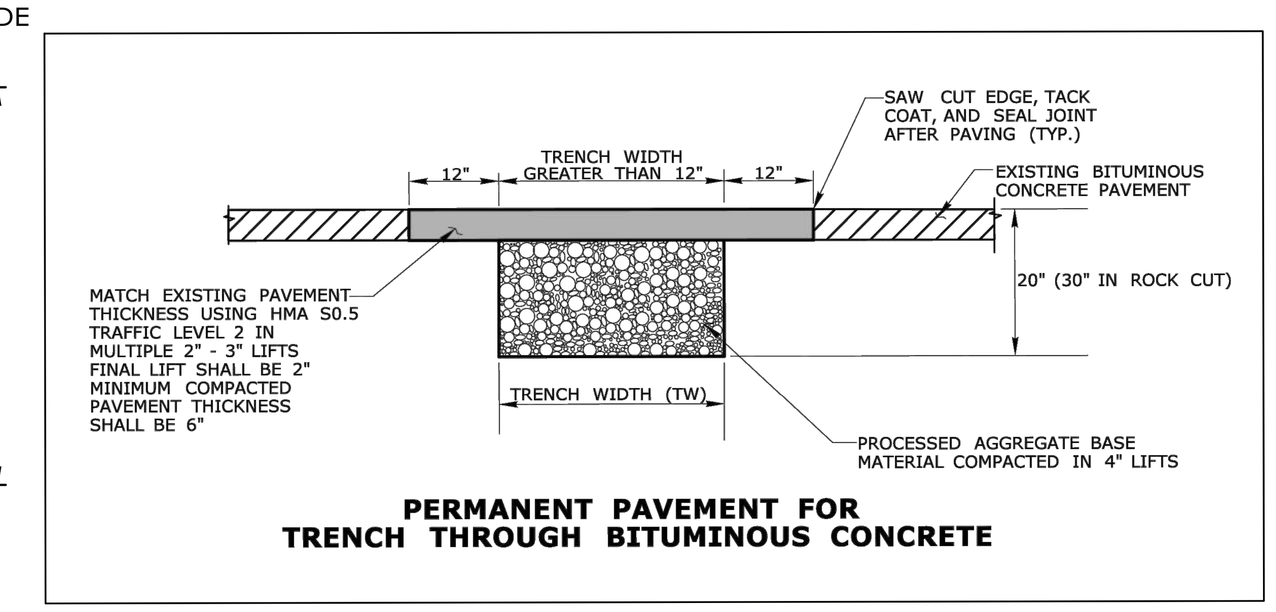




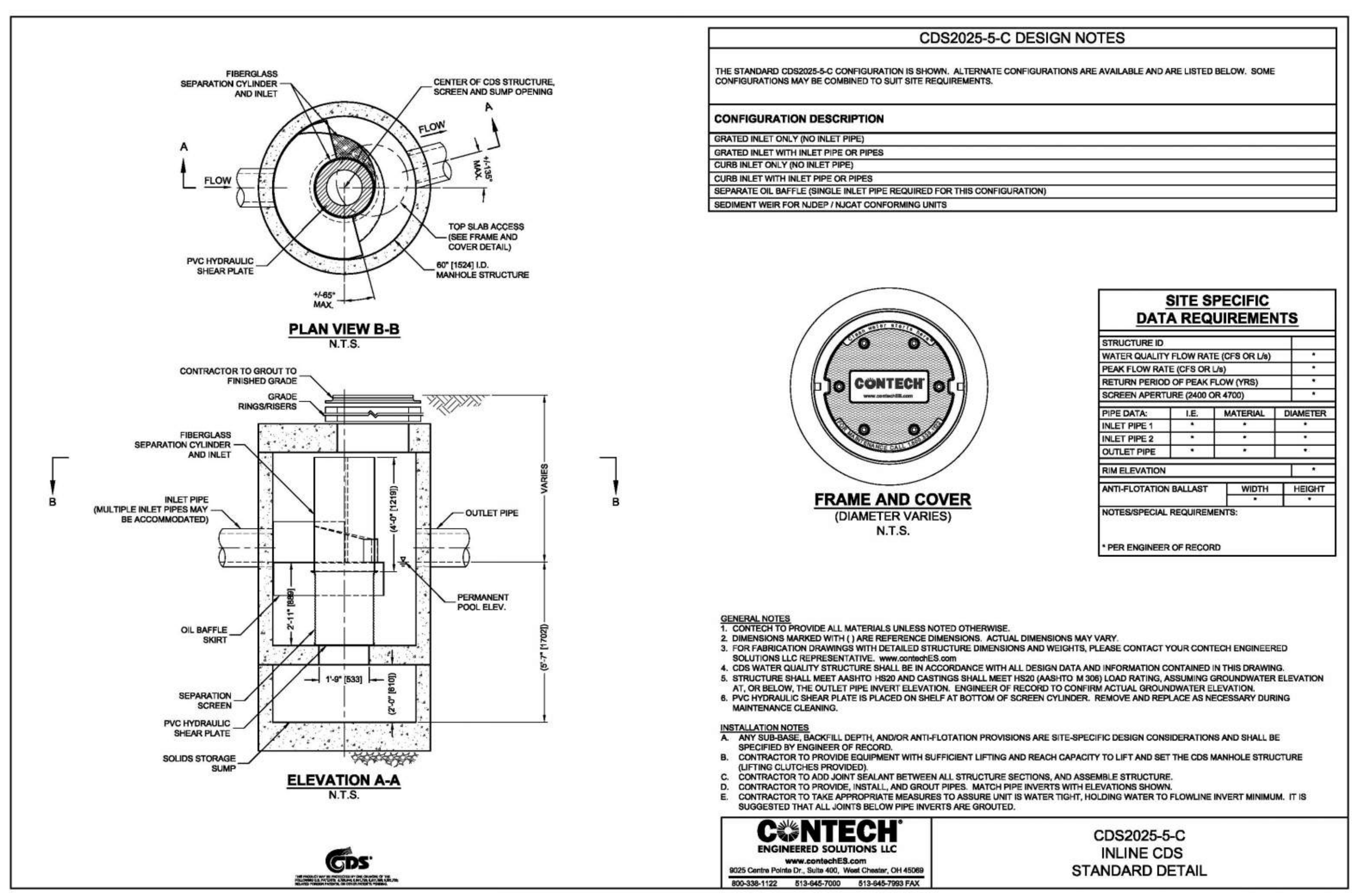




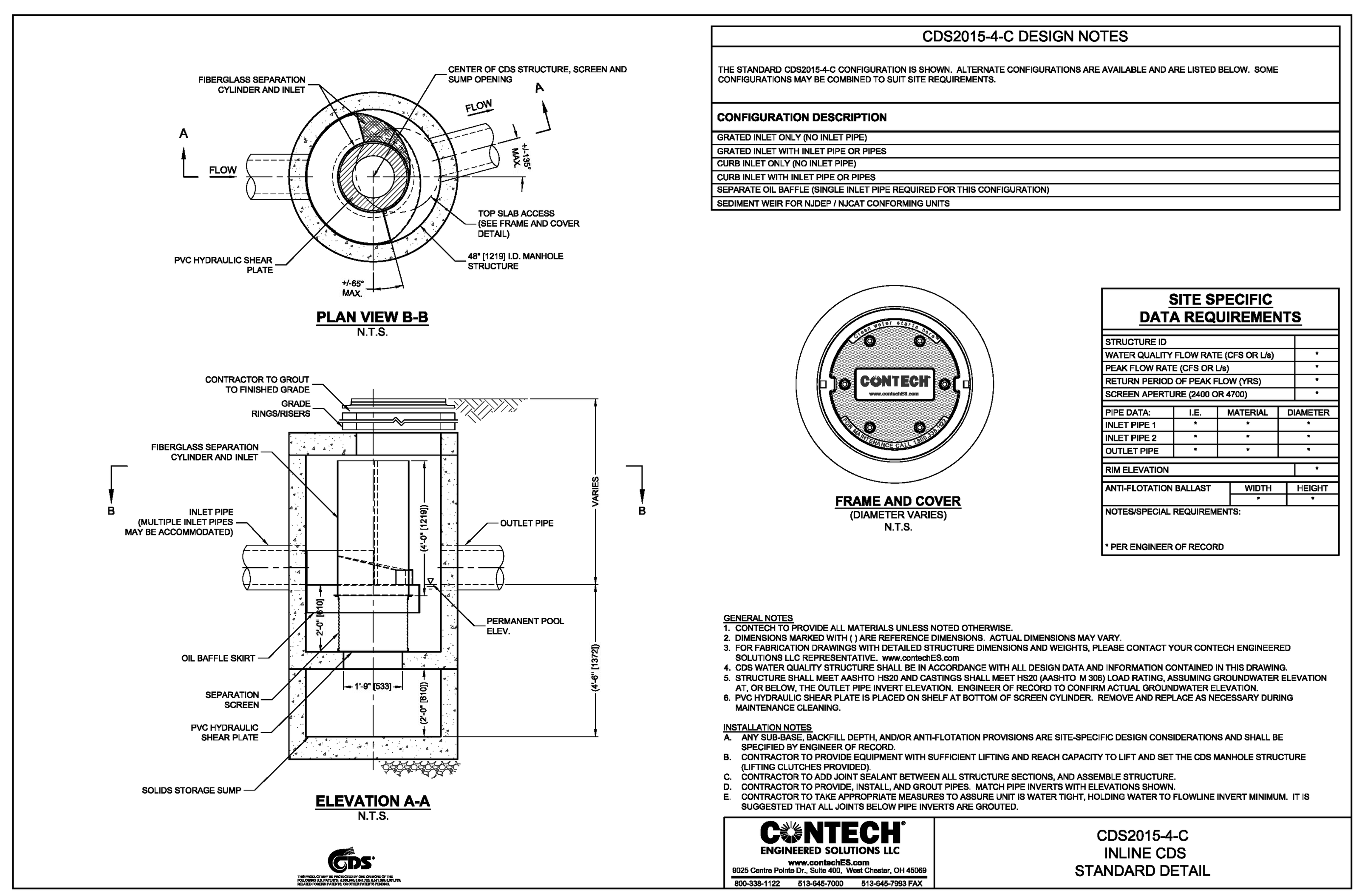
SANITARY CLEANOUT DETAIL
NOT TO SCALE



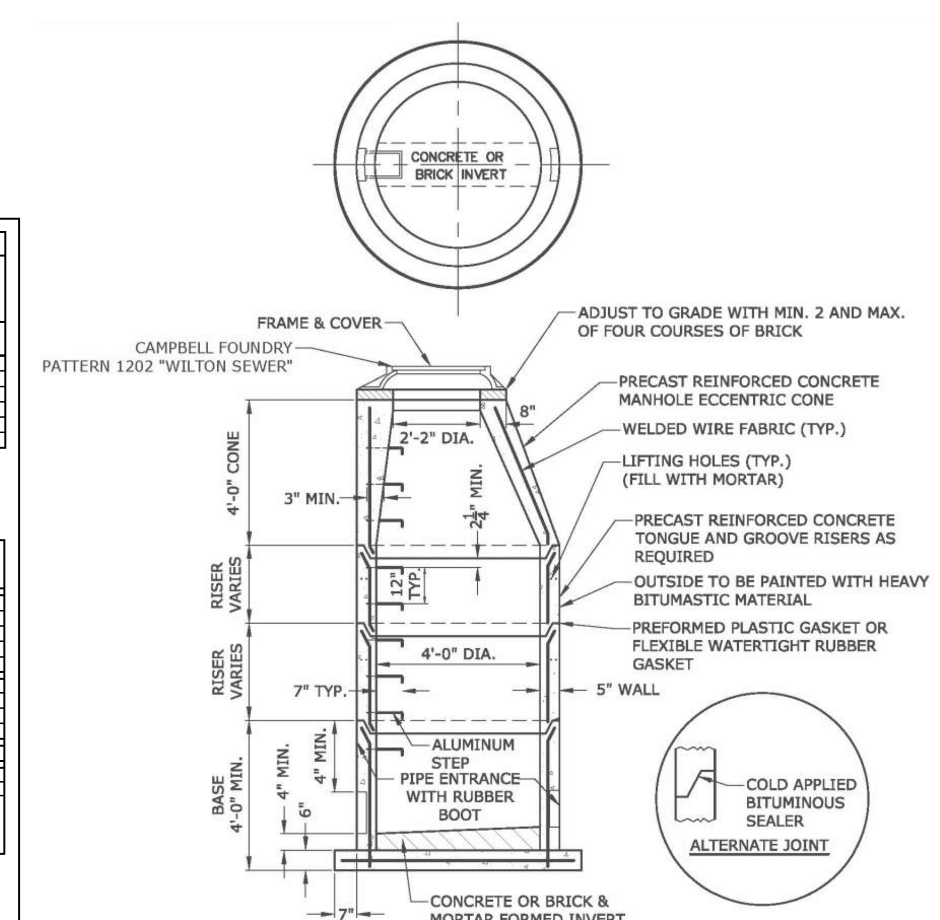
CTDOT TRENCH REPAIR DETAIL
NOT TO SCALE



CONTECHCDS 2025-5-C OR APPROVED EQUAL
NOT TO SCALE



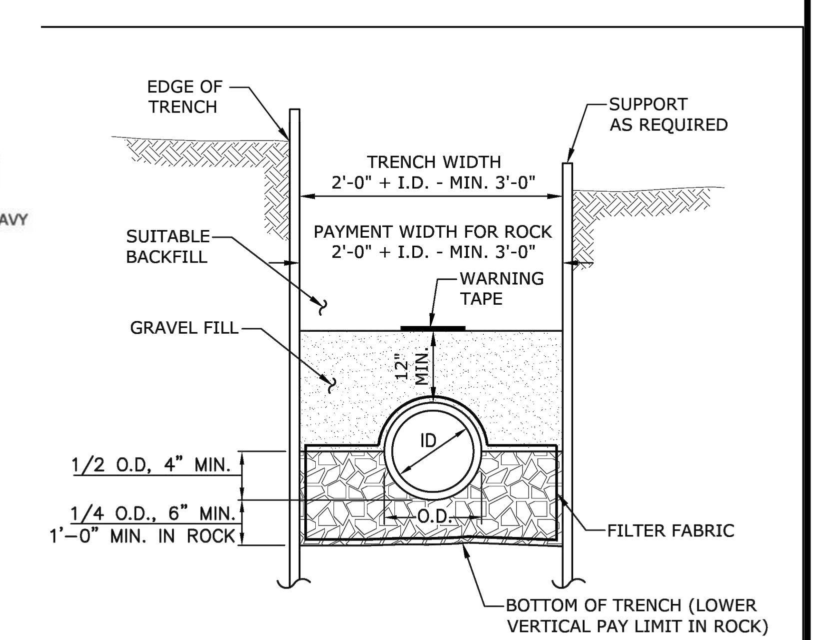
CONTECHCDS 2015-4-C OR APPROVED EQUAL
NOT TO SCALE



5' OR 6' DIA. PRECAST BASES MAY BE USED WHEN REQUIRED DUE TO SIZE OR NUMBER OF PIPES AT THE MANHOLE.
PRECAST REDUCERS WILL BE PLACED ABOVE THE 5' & 6' BASES AS DIRECTED BY THE ENGINEER.
WALL THICKNESS TO INCREASE 1" FOR EACH 1' OF INSIDE DIAMETER INCREASE.

PRECAST SANITARY MANHOLE
NO SCALE

DEPARTMENT OF PUBLIC WORKS TOWN ENGINEER, TOWN OF WILTON 238 Danbury Road (203) 563-0152	
PRECAST SANITARY MANHOLE DETAIL WILTON, CONNECTICUT	
Scale: NTS	Date: 02/21/2019
Drawn by:	Grid:
Approved by: F. Smeriglio, PE	Sheet: SS-05



TYPICAL SANITARY SEWER TRENCH SECTION
NO SCALE

DEPARTMENT OF PUBLIC WORKS TOWN ENGINEER, TOWN OF WILTON 238 Danbury Road (203) 563-0152	
TYPICAL SANITARY SEWER TRENCH SECTION DETAIL WILTON, CONNECTICUT	
Scale: NTS	Date: 02/21/2019
Drawn by:	Grid:
Approved by: F. Smeriglio, PE	Sheet: SS-03

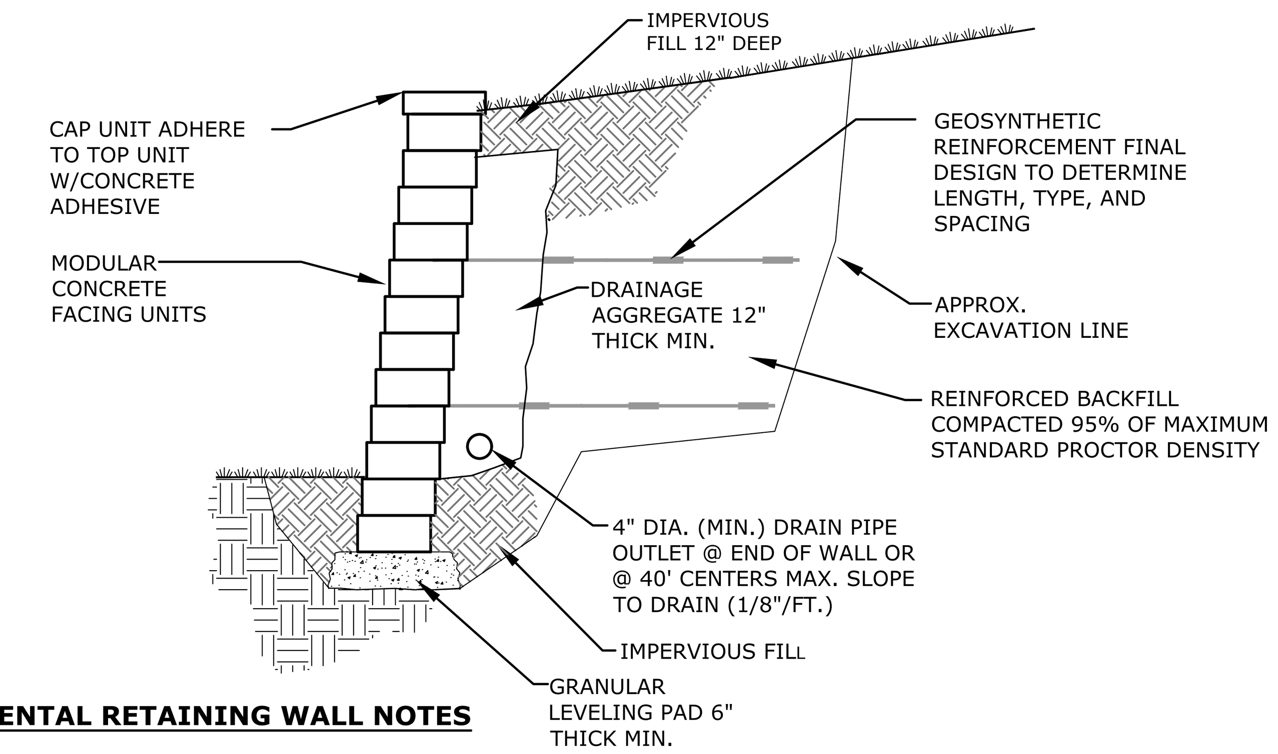
SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
WPCA REVISIONS	11/14/2023	AWG
PEER REVIEW COMMENTS	1/09/2024	AWG

SITE DETAILS
PROPOSED MULTI-FAMILY DEVELOPMENT
131 DANBURY ROAD
WILTON, CONNECTICUT

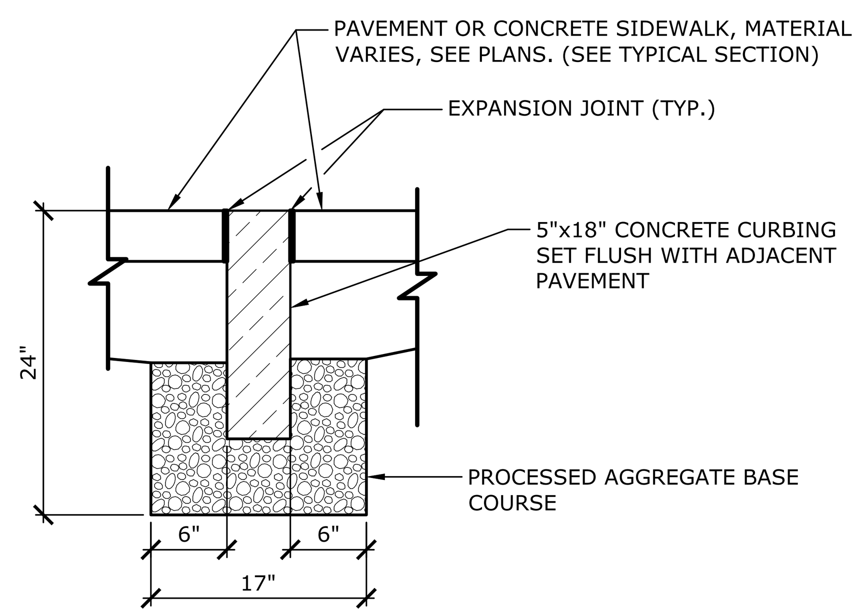
AWG	AWG	TD
DESIGNED	DRAWN	CHECKED

AS NOTED
SCALE
OCTOBER 23, 2023
DATE
21543.00001
PROJECT NO.
16 OF 23
SHEET NO.
SD-6
SHEET NAME



SEGMENTAL RETAINING WALL NOTES

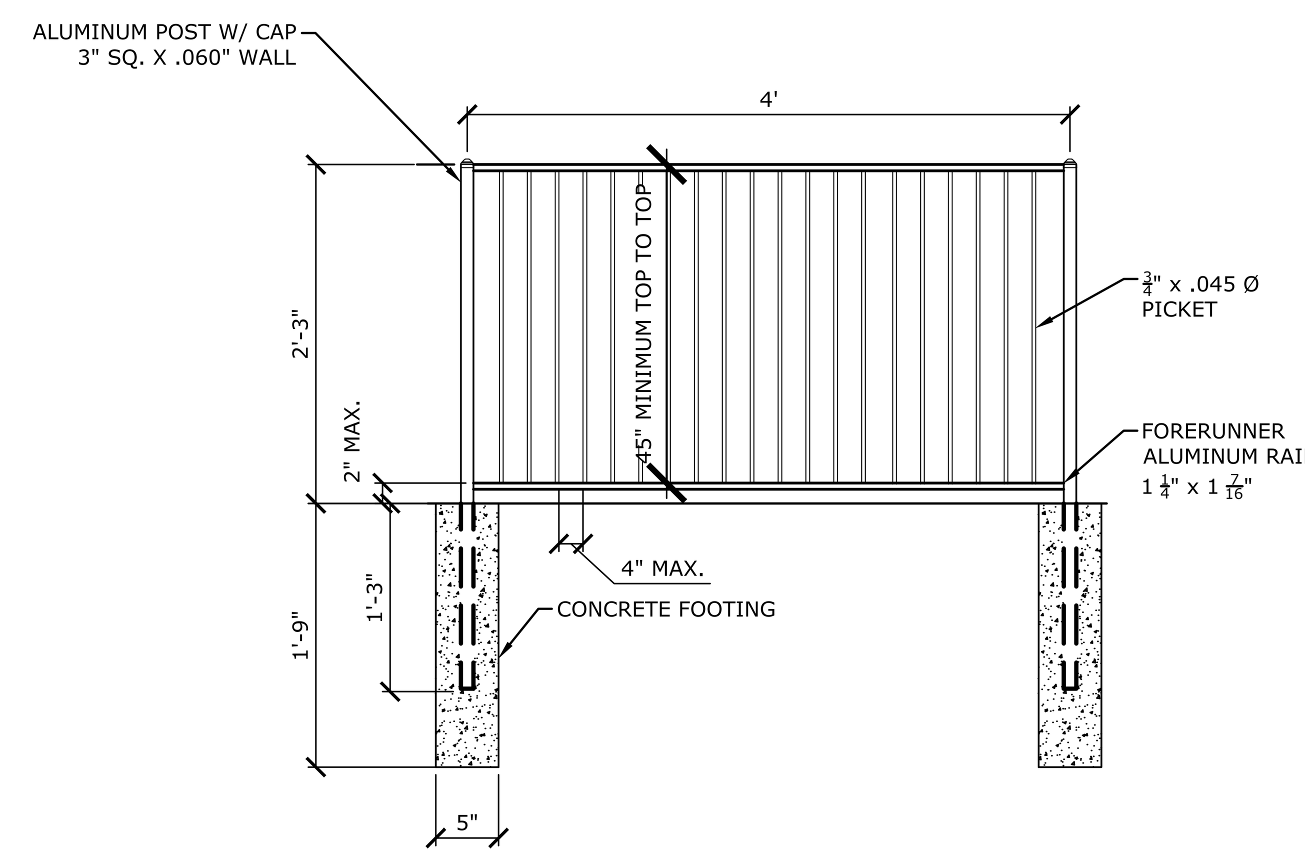
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE EXTERNAL STABILITY OF THE WALL, INCLUDING BEARING CAPACITY AND SLOPE STABILITY, ARE PROPERLY REVIEWED AND EVALUATED BY A LICENSED PROFESSIONAL ENGINEER. THE WALL DESIGN SHOWN IN THESE DETAILS DOES NOT ADDRESS THE SUFFICIENCY OF THE BEARING CAPACITY NOR THE SLOPE STABILITY OF THE WALL SYSTEM AND SURROUNDING SOIL.
2. LEVELING PAD SHALL CONSIST OF WELL GRADED ROAD BASE AGGREGATE, 3/4" CRUSHED, ANGULAR GRAVEL WITH SOME FINES. CONTRACTOR MAY OPT FOR A LEAN CONCRETE LEVELING PAD. PAD SHALL BE UNREINFORCED LEAN CONCRETE, 200-300 PSI, 3" THICK MAXIMUM. DRAINAGE AGGREGATE SHALL CONSIST OF CLEAN ANGULAR GRAVEL, 3/4" DIAMETER WITH LESS THAN 5% FINES.
3. DRAINAGE PIPE SHALL BE PERFORATED OR SLOTTED PVC OR CORRUGATED HDPE PIPE. REINFORCED BACKFILL SHALL BE FREE OF DEBRIS, ORGANIC SOIL, AND EXPANSIVE SOILS. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME FILL BEHIND UNITS IS COMPACTED.
4. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY. (ASTM D-698) COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE CONTRACTOR'S DESIGN ENGINEER.
5. COMPACTION WITHIN 3FT. OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT. CONTRACTOR SHALL SLOPE SITE GRADES TO DIRECT SURFACE RUNOFF AWAY FROM WALL AT END OF EACH DAY TO AVOID WATER DAMAGING THE WALL WHILE UNDER CONSTRUCTION. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.
6. TOP OF WALL TO BE SET 6 INCHES ABOVE PROPOSED GRADE AT BACK OF WALL.



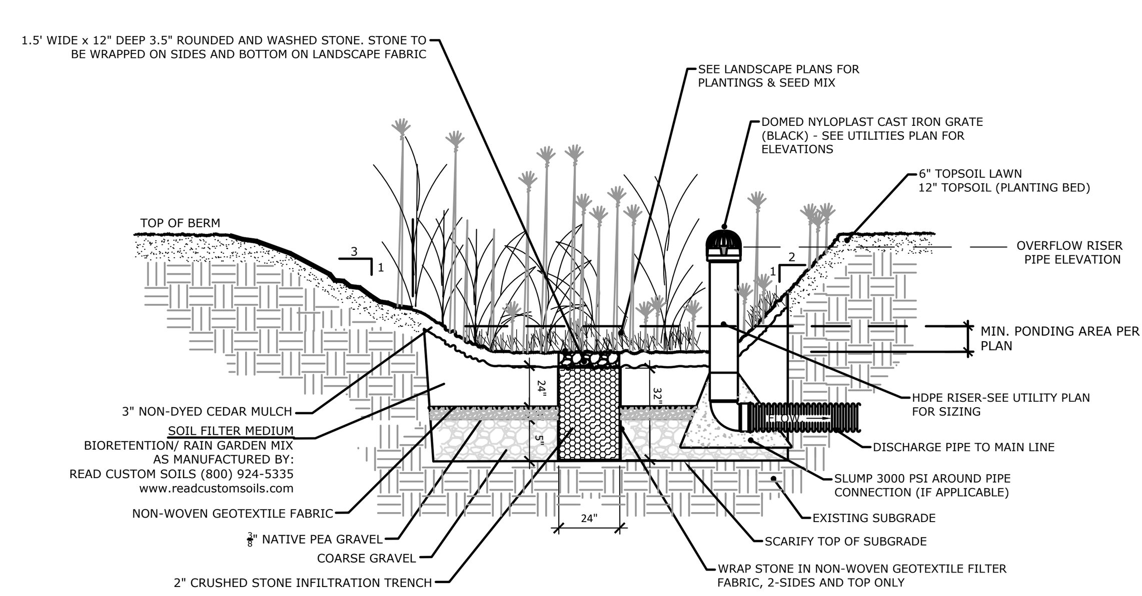
FLUSH CONCRETE CURB EDGER
NOT TO SCALE

NOTES:

1. SUBMIT SHOP DRAWINGS FOR APPROVAL.
2. FENCE TO BE ASSEMBLED AND INSTALLED AS PER MANUFACTURER SPECIFICATIONS.
3. ALL VERTICAL OPENINGS SHALL BE LESS THAN 4".



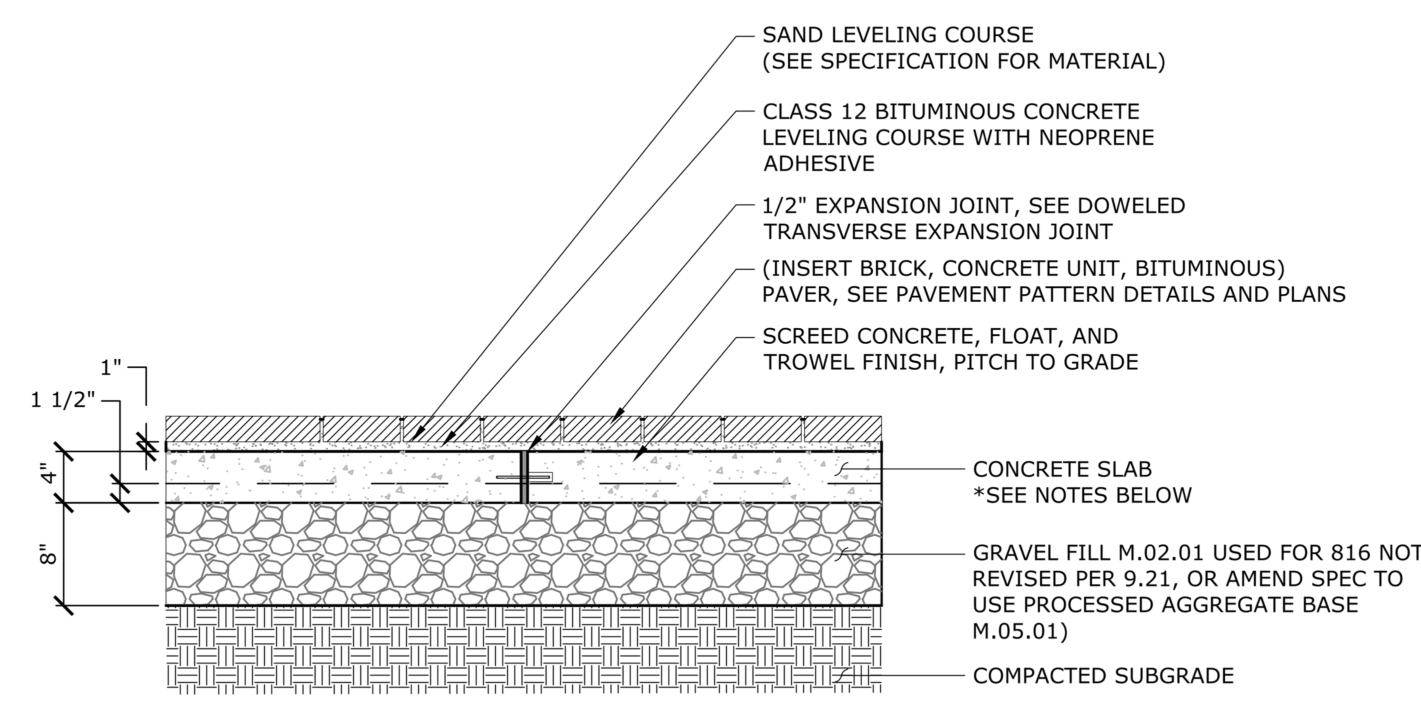
ALUMINUM PICKET FENCE
NOT TO SCALE



NOTES:

1. BEFORE THE DEVELOPMENT SITE IS GRADED, THE AREA OF THE RAIN GARDENS SHOULD BE ROPED OFF AND FLAGGED TO PREVENT SOIL COMPACTION BY HEAVY EQUIPMENT.
2. SMEARING (EXCESSIVE COMPACTION) OF SOIL AT THE INTERFACE OF THE RAIN GARDEN FLOOR AND SIDES SHOULD BE AVOIDED.
3. THE FLOOR OF THE RAIN GARDEN SHOULD BE RAKED OR DEEP TILLED AFTER FINAL GRADING TO RESTORE INFILTRATION RATES.
4. APPROPRIATE EROSION AND SEDIMENT CONTROLS SHOULD BE UTILIZED DURING CONSTRUCTION, AS WELL AS IMMEDIATELY FOLLOWING CONSTRUCTION, TO STABILIZE THE SOILS IN AND AROUND THE RAIN GARDEN.
5. DO NOT PLACE THE BIORETENTION SYSTEM INTO SERVICE UNTIL THE AREA HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED
6. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUN-OFF WATER FROM EXCAVATION) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION
7. PERFORM ALL EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE RAIN GARDEN.
8. LIGHT EARTH-MOVING EQUIPMENT (BACKHOES OR WHEEL AND LADDER TYPE TRENCHES) SHOULD BE USED TO EXCAVATE RAIN GARDENS. HEAVY EQUIPMENT CAN CAUSE SOIL COMPACTION AND REDUCE INFILTRATION CAPACITY. COMPACTION OF THE INFILTRATION AREA AND SURROUNDING SOILS DURING CONSTRUCTION SHOULD BE AVOIDED.

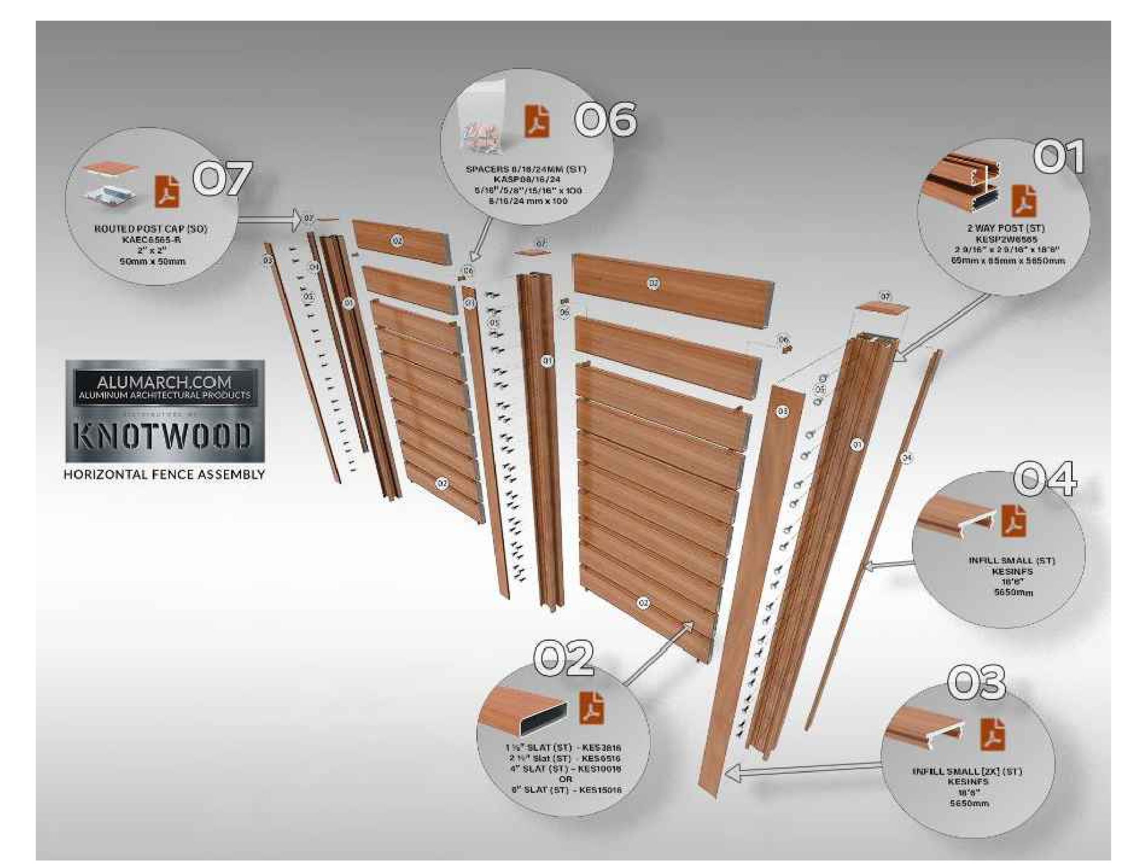
STORMWATER INFILTRATION RAIN GARDEN
NOT TO SCALE

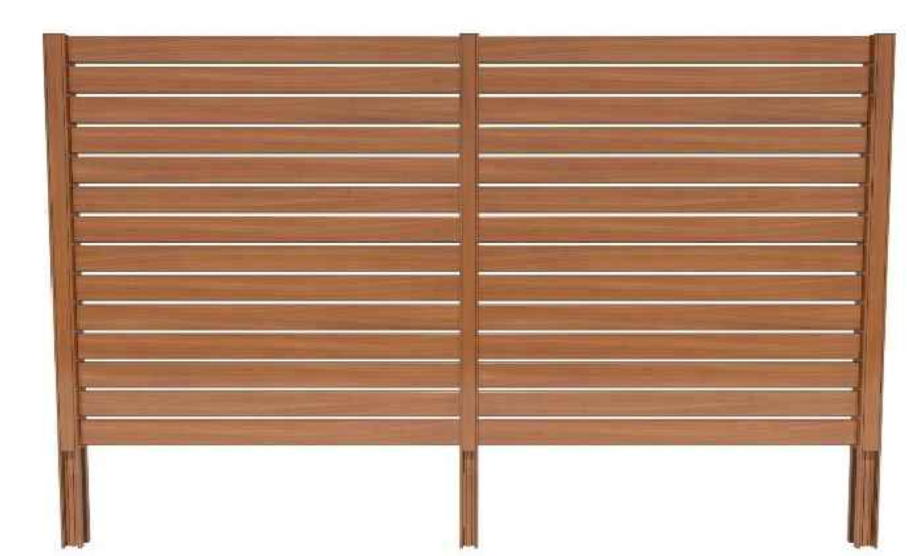


NOTES:

1. PAVERS SHALL BE AS SPECIFIED.
2. EXPANSION JOINTS IN CONCRETE BASE SHALL BE 20' O.C. OR 144 S.F. MAX.
3. CONCRETE BASE SHALL BE SCREEDED WITH A FLOAT FINISH, TROWELED, AND PITCHED TO GRADE.
4. TO BE ACCEPTED, PAVERS SHALL BE INSTALLED IN SUCH A MANNER THAT:
   - 4.1. THE PAVER WALKING SURFACES ARE WITHIN 1/8" OF EACH OTHER AND ADJACENT FINISHED SURFACES (I.E. GRANITE CURB AND CONC. WALK)
   - 4.2. THE PAVERS HAVE NO JOINTS GREATER THAN 1/16"
   - 4.3. SAND SWEPT BETWEEN JOINTS IS VIBRATED AND WITHIN 3/16" OF THE PAVER WALKING SURFACE
   - 4.4. NO PAVER IS CRACKED OR BROKEN
   - 4.5. MASTIC IS NOT VISIBLE BETWEEN PAVERS OR ON ANY PAVER SURFACE
   - 4.6. PAVERS ARE VIBRATED IN PLACE, SECURED AND ADHERED TO THE MASTIC.
5. CONTRACTOR SHALL CONSTRUCT A PAVER SAMPLE PATTERN FOR EACH PATTERN AS SPECIFIED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO AUTHORIZATION TO INSTALL PAVERS.

CONCRETE PAVERS ON 4" CONCRETE SLAB
NOT TO SCALE





SOLID BOARD PRIVACY FENCE
NOT TO SCALE

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
WPCA REVISIONS	11/14/2023	AWG
PEER REVIEW COMMENTS	1/09/2024	AWG

SITE DETAILS
PROPOSED MULTI-FAMILY DEVELOPMENT
131 DANBURY ROAD
WILTON, CONNECTICUT

DESIGNED	DRAWN	CHECKED
AWG	AWG	TD

SCALE: AS NOTED
DATE: OCTOBER 23, 2023
PROJECT NO.: 21543.00001
SHEET NO.: 17 OF 23
SHEET NAME: SD-7

MULTI-FAMILY RESIDENTIAL BUILDING AND JEWEL BOX

POINT 1	POINT 2	DISTANCE	WEIGHTED
157.5	154.4	60.6	9445.9
154.4	153.5	45.4	6993.9
153.5	143.3	349.3	51828.7
143.3	143.8	77.9	11185.4
143.8	143.7	71.5	10281.0
143.7	143.5	105.3	15126.8
143.5	151.2	307.5	45310.1
151.2	152.5	30.1	4563.1
152.5	157.5	106.0	16430.0
155.5	155	52.9	8209.6
155	154	30.5	4706.1
154	154	105.7	16273.2
154	155	30.5	4706.1
155	155.5	52.8	8194.1
TOTAL:		1425.8	213254.0
WEIGHTED AVERAGE GRADE:			**149.6**

GRADING LEGEND

× 70.5	EXISTING SPOT ELEVATION
+ 70.5	PROPOSED SPOT ELEVATION
——70——	EXISTING CONTOUR
(124)	PROPOSED CONTOUR

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
P&Z SUBMISSION	11/27/2023	AWG

COMBINED AVERAGE BUILDING GRADE

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

DESIGNED	DRAWN	CHECKED
AWG	AWG	TD

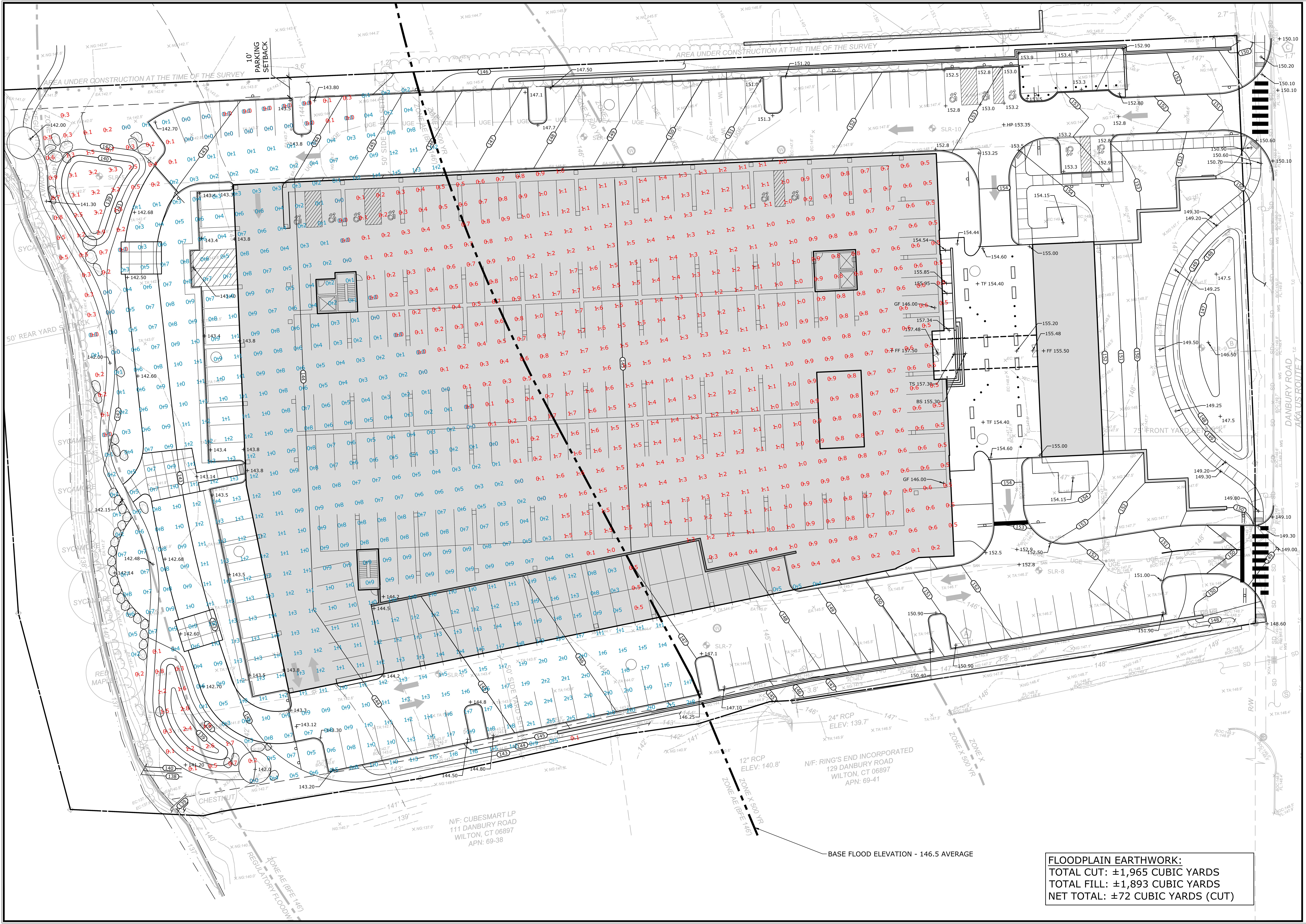
SCALE: 1"=20'

DATE: OCTOBER 23, 2023

PROJECT NO.: 21543.00001

SHEET NO.: 18 OF 23

SHEET NAME: **ABG**



FLOODPLAIN EARTHWORK:
TOTAL CUT: ±1,965 CUBIC YARDS
TOTAL FILL: ±1,893 CUBIC YARDS
NET TOTAL: ±72 CUBIC YARDS (CUT)

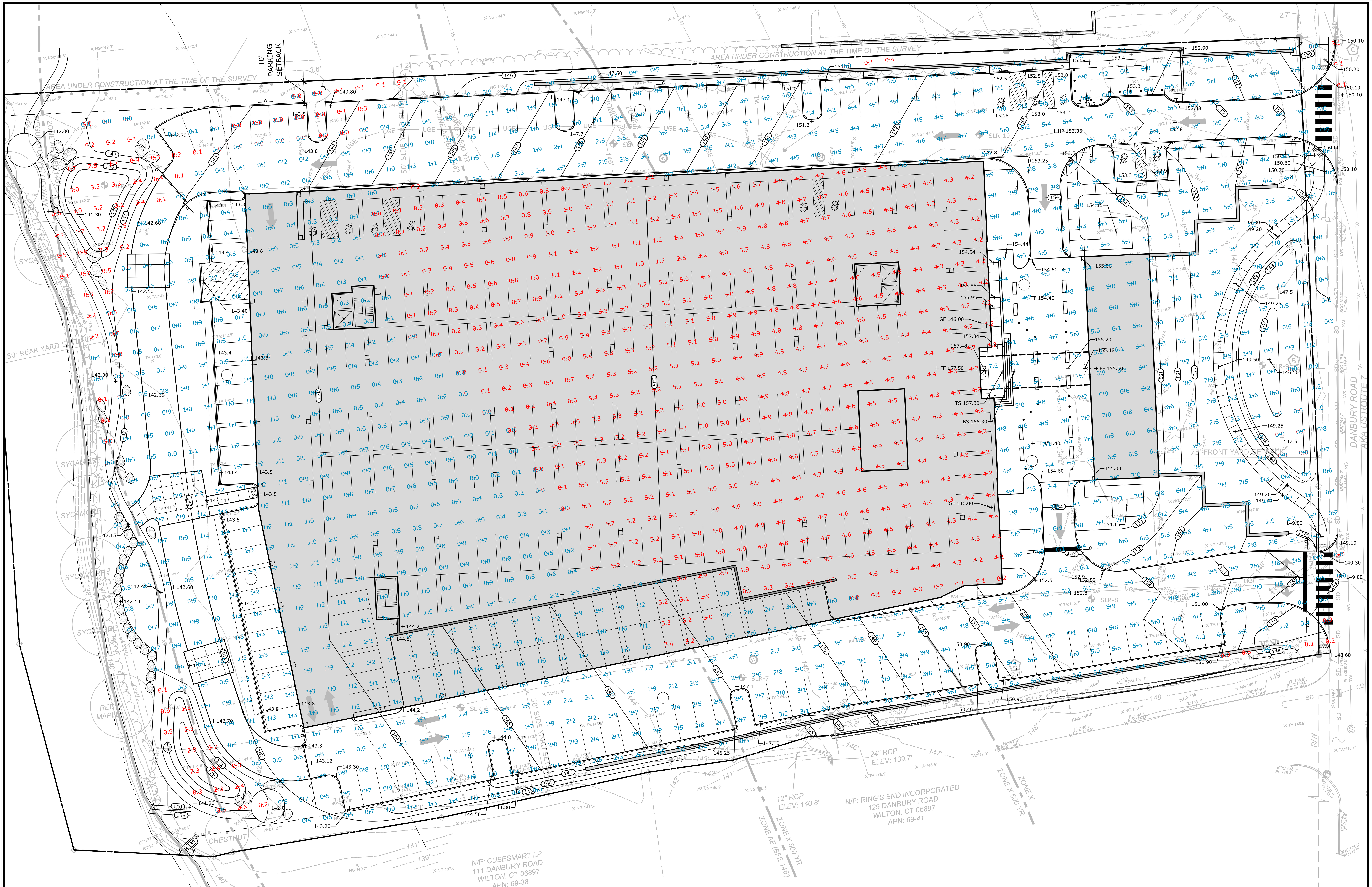
SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
P&Z SUBMISSION	11/27/2023	AWG

FLOODPLAIN EARTHWORK
PROPOSED MULTI-FAMILY DEVELOPMENT
131 DANBURY ROAD
WILTON, CONNECTICUT

DESIGNED	DRAWN	CHECKED
AWG	AWG	TD

SCALE: 1"=20'
DATE: OCTOBER 23, 2023
PROJECT NO.: 21543.00001
SHEET NO.: 19 OF 23
SHEET NAME: FP



SITE EARTHWORK:
TOTAL CUT: ±6,610 CUBIC YARDS
TOTAL FILL: ±11,491 CUBIC YARDS
NET TOTAL: ±4,881 CUBIC YARDS (FILL)

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
P&Z SUBMISSION	11/27/2023	AWG

PROPOSED SITE EARTHWORK

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

DESIGNED	DRAWN	CHECKED
AWG	AWG	TD

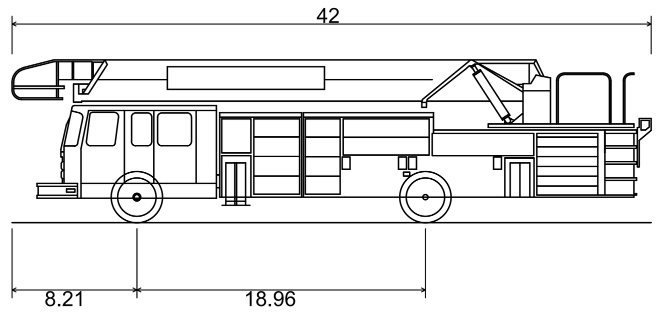
SCALE: 1"=20'

DATE: OCTOBER 23, 2023

PROJECT NO.: 21543.00001

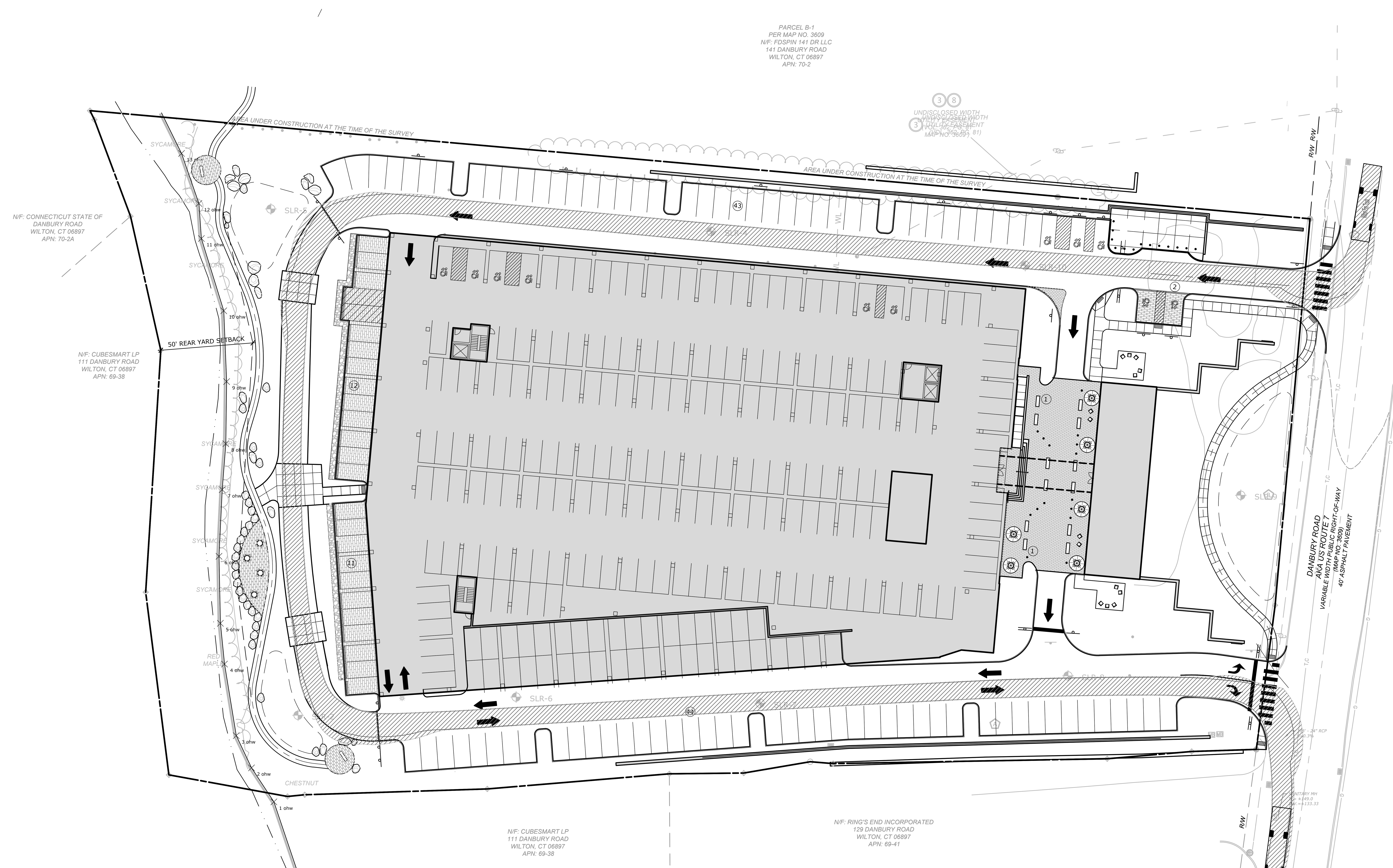
SHEET NO.: 20 OF 23

SHEET NAME: EW



Wilton Fire Truck

Overall Length	42.000ft
Overall Width	10.000ft
Overall Body Height	10.715ft
Min Body Ground Clearance	1.146ft
Track Width	9.620ft
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	33.167ft



VEHICLE TURNING MOVEMENT - FIRE TRUCK

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
P&Z SUBMISSION	11/27/2023	AWG
PEER REVIEW COMMENTS	1/09/2024	AWG

DESIGNED	DRAWN	CHECKED
AWG	RH	TD

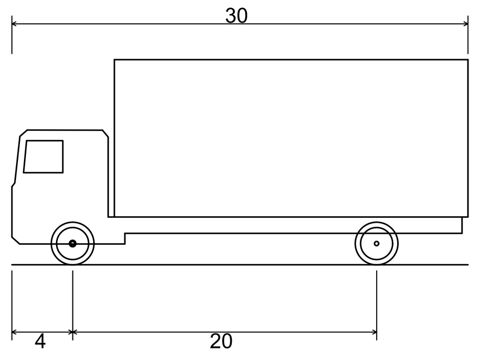
SCALE: 1"=30'

DATE: OCTOBER 23, 2023

PROJECT NO.: 21543.00001

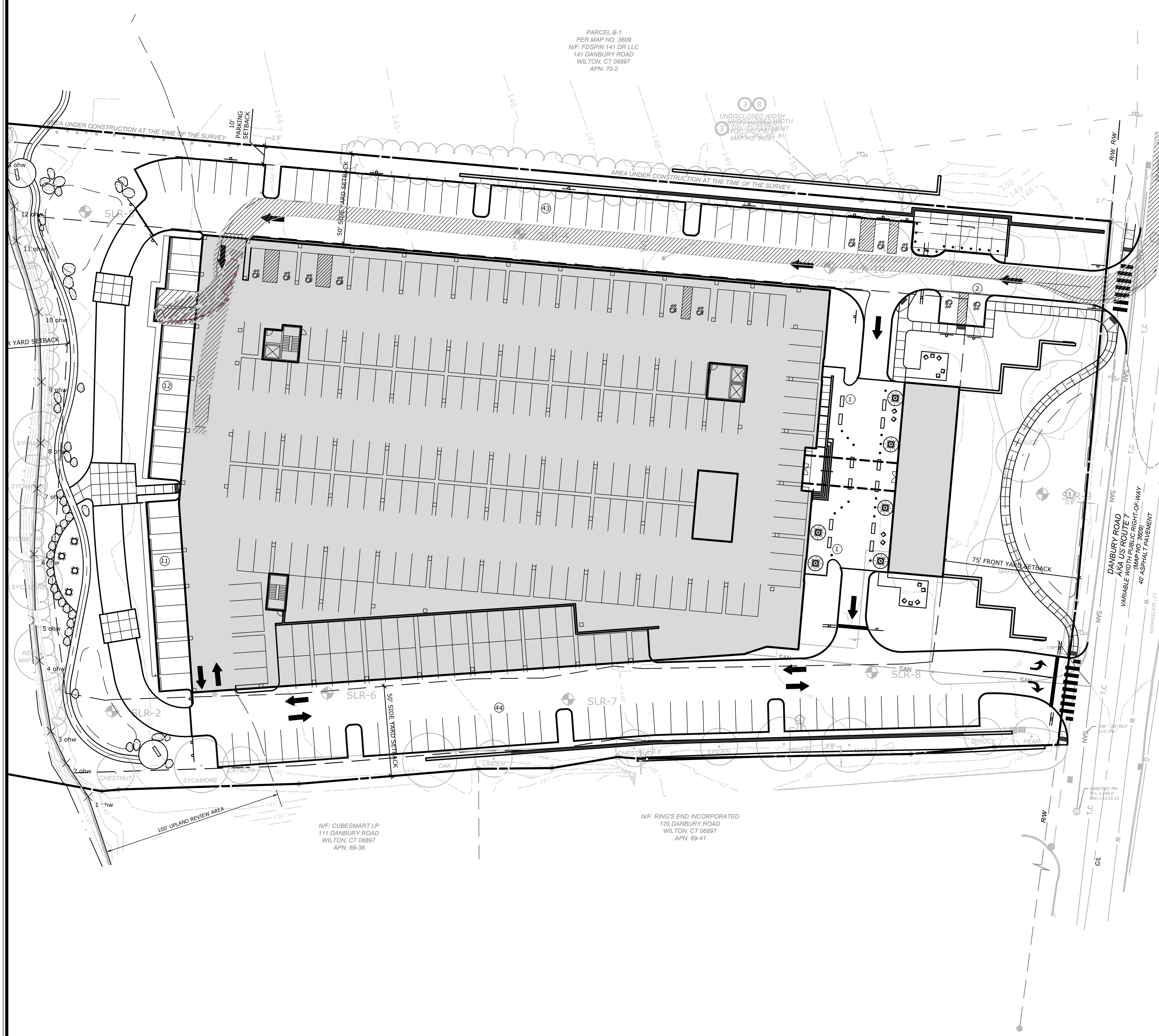
SHEET NO.: 21 OF 23

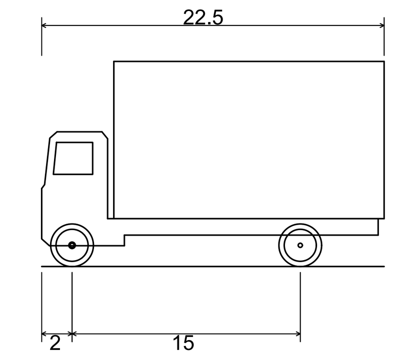
SHEET NAME: VH-1



SU-30 - Single Unit Truck

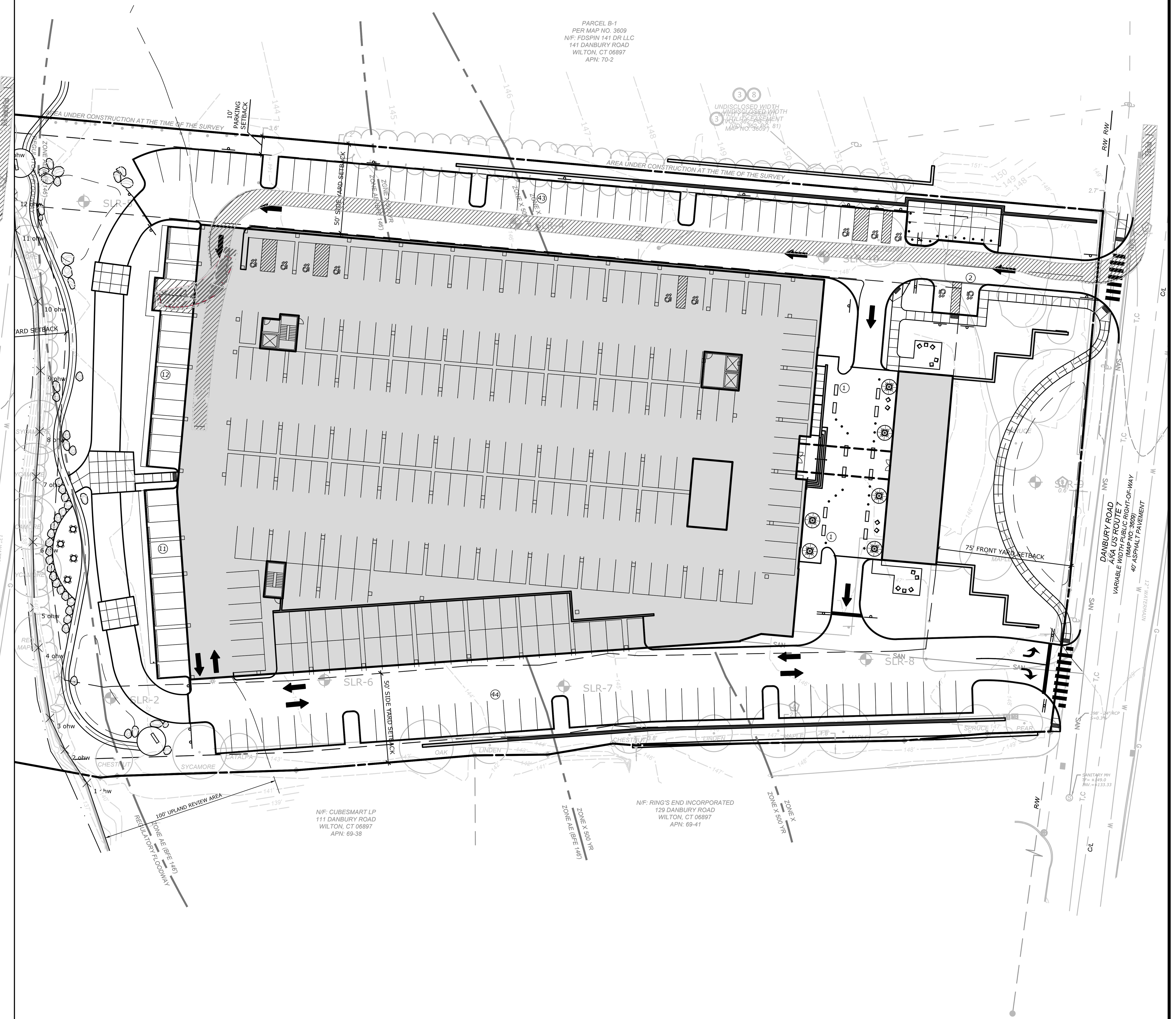
Overall Length	30.000ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.367ft
Track Width	8.000ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	31.80°





15' Box Truck

Overall Length	22.500ft
Overall Width	7.670ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.367ft
Track Width	8.000ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	31.80°



SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
P&Z SUBMISSION	11/27/2023	AWG

VEHICLE TURNING MOVEMENT - SU-30 AND 15' BOX TRUCK

PROPOSED MULTI-FAMILY DEVELOPMENT

131 DANBURY ROAD
WILTON, CONNECTICUT

AWG	RH	TD
DESIGNED	DRAWN	CHECKED

SCALE 1"=40'

DATE OCTOBER 23, 2023

PROJECT NO. 21543.00001

SHEET NO. 22 OF 23

SHEET NAME VH-2

JOB NAME: AMS WILTON - 131 DANBURY RD - WILTON, CT
APEX LIGHTING SOLUTIONS
WORKPLANE/CALC PLANE: AT FINISH GRADE
MOUNTING HEIGHT: SEE LUMINAIRE SCHEDULE
APPS: LED/PD
SALES: SP
SPECIFIER: SLR CONSULTING

Luminaire Schedule

Symbol	Qty	Label	Arrangement	Lum. Lumens	Lum. Watts	LLF	Description	[MANUFAC]	Filename
	22	B3	Single	492	6.1	0.748	PBL-42-14L-100-WW-G2-3-UNV-BK	PHILIPS GARDCO	PBL-14L-100-NW-G2-3-UNV.ies
	1	B5	Single	538	6.1	0.748	PBL-42-14L-100-WW-G2-5-UNV-BK	PHILIPS GARDCO	PBL-14L-100-NW-G2-5-UNV.ies
	2	SA3	Single	9120	73	0.850	HER-48-3-500-T3-VOLT-LT-BLK / DS210-590A200-18-TBD-SUBLIMATION-DT-AB	RAGNI	EVO2-ASY10-48L(2x8)G4-3000K500mA.IES
	2	SA3H	Single	8084	73.1	0.850	HER-48-3-500-T3-VOLT-LT-BLK-HS / DS210-590A200-18-TBD-SUBLIMATION-DT-AB	RAGNI	EVO2-C13301-C17677BLK-48LED-3000K-500 mA.IES
	10	SA4H	Single	7359	73.1	0.850	HER-48-3-500-T4-VOLT-LT-BLK-HS / DS210-590A200-18-TBD-SUBLIMATION-DT-AB	RAGNI	EVO2-C13805-C17677BLK-48LED-3000K-500 mA.IES
	86	TL	Single	669	10	0.850	BL9-D-W-A-S7	PHILIPS HADCO	BL9_10W_WW_med.ies
	10	WP3	Single	3254	30	0.850	PWS-196L-650-WW-G3-3-UNV / Wall Mounted 12ft	GARDCO	PWS-196L-650-WW-G2-3-UNV.ies

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Description
Parking Lot	Illuminance	Fc	1.70	5.4	0.4	4.25	13.50	10ft Grid
Site	Illuminance	Fc	0.23	6.6	0.0	N.A.	N.A.	10ft Grid
Walkway	Illuminance	Fc	2.08	5.8	0.4	5.20	14.50	5ft Grid

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.

APEX
LIGHTING SOLUTIONS
20-30 BEAVER ROAD, WETHERSFIELD, CT 06109
TELEPHONE 860.632.8766 / WWW.APEXLTG.COM

PROJECT TITLE:

AMS WILTON
131 DANBURY RD
WILTON, CT

DRAWING TITLE:

SITE LIGHTING
PHOTOMETRIC CALCULATION

SCALE : 1"=20'-0"
DATE: 11/2/23
DRAWN BY: LED/PD
SHEET:
SL-1B

FILE NAME: 2023-11-02 SL-1B AMS WILTON - 131 DANBURY RD - WILTON, CT.dwg