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August 20, 2019

VIA FEDERAL EXPRESS AND
ELECTRONIC MAIL

Melanie.bachman@ct.gov
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Ms. Melanie A. Bachman, Esq., Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Petition 1367

Dear Attorney Bachman:

I have enclosed the following in compliance with condition number 2 of the Connecticut Siting Council's approval of the above-captioned Petition:

1. The approval letter from the Department of Energy and Environmental Protection ("DEEP") concerning the solar photovoltaic electric generating facilities ("Project");

2. The Stormwater Pollution Control Plan for the Project approved by DEEP; and

3. The DEEP General Permit concerning the Project.

Please do not hesitate to contact me with any questions.

Very truly yours,

Jesse A. Langer

Enclosures

STORMWATER POLLUTION CONTROL PLAN

SOLAR FACILITY INSTALLATION
MIDDLETOWN/MIDDLEFIELD SOLAR PROJECT
MERIDEN ROAD
MIDDLEFIELD, CONNECTICUT
MIDDLESEX COUNTY

Prepared for:
Citrine Power LLC and its affiliates
CP Middletown Solar I, LLC
CP Middletown Solar II, LLC

55 Greens Farm Road, Suite 200-78
Westport, CT 06880

Prepared by:
All-Points Technology Corporation, P.C.
3 Saddlebrook Drive
Killingworth, CT 06419

MAY 2019

This Stormwater Pollution Control Plan (SWPCP) is prepared to comply with the requirements for the General Permit for the Discharge and Dewatering Wastewaters from Construction Activities. Also to be considered part of the SWPCP are the proposed construction plans, special provisions, and the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control

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Wetland Delineation Report Provided Upon Request

Introduction

All-Points Technology Corporation, P.C. ("APT") prepared this Storm Water Pollution Control Plan ("SWPCP") on behalf of Citrine Power, LLC for the Middletown/Middlefield Solar Project ("Project") in the City of Middletown, Connecticut and the Town of Middlefield, Connecticut. See site location map, Appendix A.

This SWPCP has been completed to support Citrine Power's application for the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities ("General Permit"), effective date: October 1, 2013.

During construction, the contractor(s) shall be responsible for implementing all elements of the erosion and sedimentation control measures as defined on the drawings, in this plan, and as directed. Erosion and sedimentation controls will be implemented and adjusted as needed throughout construction to minimize soil erosion. Construction activities will be phased to minimize areas of disturbance throughout construction.

Throughout the construction process, the Permittee or Permittee's agent shall periodically inspect all erosion and sedimentation control measures. A monitoring program will be established to observe the effectiveness of these measures and identify corrective actions, where necessary. After construction, the Permittee shall be responsible for maintaining these erosion and sedimentation control measures until the Project is complete. The Project will not be considered complete until all disturbed areas have been satisfactorily stabilized for at least three months, all erosion has been repaired, and all temporary erosion and sedimentation control measures have been removed as called for on the plans.

All contractors and subcontractors who will perform actions on-site that may reasonably be expected to cause or have the potential to cause pollution of waters of the State will be identified prior to construction and must sign the certification included in Appendix B. Any new contractors and subcontractors brought on to the project during construction must sign the certification as well. The certification will be available for inspection prior to and during construction.

The Permittee or Permittee's agent is responsible for keeping the Plan in compliance with the General permit at all times. Should the Plan fail to prevent pollution or fail to otherwise comply with the General Permit at any time the permittee or their agent shall amend the Plan. The plan shall also be amended if there is a change in contractors and/or subcontractors or a change in design, construction, operation or maintenance at the site.

Site Description and Proposed Work

The Site is located off Meriden Road (Route 66) in Middlefield, Connecticut and consists of several undeveloped privately-owned individual lots in both Municipalities totaling ±30 acres ("Site"). Electric transmission lines extend through the western portion of the Site in a north/south direction. The Site vicinity is categorized as a mix of agricultural, residential, open fields, wooded land, and some commercial development along Meriden Road (Route 66). Appendix A, *Site Location Map*, depicts the location of the Site and surrounding area.

The development of the Facility will occupy an area of ±8.7 acres requiring some level of disturbance ("Project Area"). The Facility would be comprised of 6,984 Hanwha Qcell 365-370-watt modules or equivalent, (39) – 50kW and one (1) – 36kW CPS SCAXXKTL-DO/US-480 string inverters, RBI fixed tilt racking system or equivalent, two (2) switchboards and two (2) transformers with associated concrete equipment pads. The Facility would use a ground mounted, pile-driven racking system, and electrical connections would extend overhead and connect to public utilities located on Meriden Road. Approximately 0.9 acres of the site will be cleared and grubbed to allow for the installation of the arrays.The remainder of the project area, ±7.8 acres, will retain existing groundcover to the maximum extent practicable.

Estimated Runoff Coefficient

The drainage on the site was analyzed using the SCS TR-20 method. Soil types were determined from a Natural Resources Conservation Service Soil Survey.

For the existing conditions, the runoff curve numbers are as follows:

- EDA-1 - 2.954 acres, 71, Meadow, non-grazed, HSG C.
- EDA-2 - 0.548 acres, 73, Woods, Fair, HSG C, 5.465 acres, 71, Meadow, non-grazed, HSG C. Composite Curve Number: 6.013 acres, 71.
- EDA-3 - 0.124 acres, 71, Meadow, non-grazed, HSG C.

For the proposed conditions, the runoff curve numbers are as follows:

- PDA-1 - 2.954 acres, 71, Meadow, non-grazed, HSG C.
- PDA-2 - 5.847 acres, 71, Meadow, non-grazed, HSG C, 0.018 acres, 98 Unconnected pavement, HSG C. Composite Curve Number: 5.865 acres, 71.
- PDA-2a – 0.148 acres, 96, Gravel surface, HSG C.
- PDA-3 – 0.034 acres, 71, Meadow, non-grazed, HSG C.
- PDA-3a – 0.90 acres, 96, Gravel surface, HSG C.

Proposed conditions will mimic the existing hydrologic conditions to the maximum extent practicable. There will be no affective impervious areas created however, an access drive will be installed. The access drive will be crushed stone with 40% voids to capture and infiltrate stormwater. As such, the stormwater calculations result in a decrease in peak runoff for the site, thus no structural stormwater peak runoff features or water quality features are proposed.

Receiving Waters

Based upon CTDEEP mapping, the Site is located in Major Drainage Basin 4 (Connecticut River), Regional Basin 46 (Mattabesset River), Sub-Regional Drainage Basin 4607 (Coginchaug River), and Local Drainage Basin 4607-11 (Unnamed tributary to the Coginchaug River).

Wetlands on Site

A total of two (2) wetland areas were identified on the Site and are depicted on the design plans located in Appendix C.

Wetland 1 consists of a large forested wetland located in the east central portion of the Site. This wetland extends to the east off-Site with delineated portions of the wetland representing the headwater wetlands for this system. Wetland 1 is a broad perched wetland system that experiences seasonal saturation with interior areas that seasonally flood. This wetland is characterized by a perched local water table with an interior flooded depression resulting from a stone wall impoundment. The far western extent of the delineated wetland boundary spreads into the maintained open field with evidence of historic disturbance ranging from vegetation removal, stone wall construction, and periodic rutting.

A complex of vegetation classes results from regular mowing of the open hayfield to the east. Transitional areas range from fully mowed wet meadow vegetation to the west, scrub/shrub intermediaries, and core forested areas to the east. Small pockets of emergent vegetation exist along the wetland boundaries.

Wetland 2 consists of a large forested wetland system complex with an interior intermittent watercourse, bordering floodplain wetlands, broad perched wetlands, and two areas of inundation that may represent potential vernal pools. This resource is located along the western Project Area boundary extending from the far north and draining southward. This complex system of wetland resources results in bordering forested areas, depressional areas with temporary flooding, and perched, seasonally saturated areas. The intermittent watercourse extends from the west draining east until it runs up against the eastern wetland boundary where it turns south draining out under Meriden Road via an existing culvert crossing. An existing access road generally parallels the southeastern end of the wetland and forms the boundary with the toe of its fill slope. This large wetland is dominated by a mix of cover types including mature forest, bordering areas of scrub/shrub, and broad emergent wetlands. The interior intermittent watercourse is characterized by a channel ranging in width from four (4) to six (6) feet. The channel bottom is comprised of stone/cobble and areas of sandy/mucky material and is fairly sinuous with several wide meanders through the Site. The stream channel is fairly direct with a lack of braids.

Watercourses and Waterbodies

There are no watercourses or waterbodies located on or proximate to the Site.

Vernal Pools

Site visits were performed in April and May, 2019 by APT and Davison Environmental to confirm if any obligate vernal pool species were utilizing these depressional areas for breeding. Of the three potential vernal pools, only the depressional area located in the central portion of Wetland 2 was confirmed as a vernal pool habitat and characterized as a cryptic as opposed to classic style habitat. The other two potential vernal pools did not exhibit any breeding activity by vernal pool indicator species (i.e., wood frogs, spotted salamander, etc.).

The vernal pool identified consists of a broad depression which slopes gently to the south towards the intermittent stream. Cryptic vernal pools are depressions or impoundments embedded within larger wetlands. Cryptic vernal pools are the most common type of pool in Connecticut, and often occur within seasonally flooded portions of red maple-dominated forested wetlands, such as the southern portion Wetland 2. The maximum pool depth was approximately 10 inches at the time of inspections. Hummocky microtopography is present, with hummock vegetation consisting largely of red maple and tussock sedge. Egg mass attachment sites noted included submerged sedges and downed woody debris. The pool substrate was thick leaf litter coated with fine silt. Moderately thick filamentous algae were present in much of the pool. One facultative species, spring peeper (Pseudacris crucifer), was calling within the wetland and is presumed to also be breeding in the pool. Two other amphibian species were confirmed, green frog (Rana clamitans) and gray treefrog (Hyla versicolor).

Surveys of this pool during the referenced inspection dates documented the presence of both wood frog egg masses (84) and spotted salamander egg masses (18). Inundation of the pool was recorded at approximately 10 inches at the deepest location during each inspection with little variability between inspection dates. The surrounding land use generally consists of maintained open field associated with agriculture activities surrounding Wetland 2, light commercial development associated with Meriden Road (State Highway 66) to the south, and complexes of upland and wetland forest (to the far northwest and northeast).

Flood Zones

The Project area is mapped on FIRM PANEL #09007C0112G, dated August 28, 2008. Based upon the reviewed FIRM Map, the majority of the Site and Project Area are designated as "unshaded" Zone X, which is defined as an area of minimal flooding outside of the 100-year and 500-year flood hazard zones

Construction Sequencing

Suggested Construction Sequence

The following suggested sequence of major construction activities is projected based upon engineering judgement and best management practices. The contractor may elect to alter the

sequencing to best meet the construction schedule, the existing site activities, weather conditions, and unforeseen conditions.

- Contact the applicant to schedule a pre-construction meeting. Physically flag the limits of clearing in the field as necessary to facilitate the pre-construction meeting.

- Conduct a pre-construction meeting to discuss the proposed work and erosion and sedimentation control measures. The meeting should be attended by the applicant, the applicant representative(s), the general contractor, designated sub-contractors and the person, or persons, responsible for the implementation, operation, monitoring, and maintenance of the erosion and sedimentation measures. The construction procedures for the entire project shall be reviewed at this meeting.

- Notify the applicant at least forty-eight (48) hours prior to commencement of any demolition, construction or regulated activity on this project. Notify call before you dig at 1-800-922-4455.

Phase 1

- Remove existing improvements as necessary and provide minimal clearing and grubbing to install the required construction entrances and install entrance.

- Clear and grub limits as required, to install the perimeter erosion and sedimentation control measures and, if applicable, tree protection. All wetland areas shall be protected before major construction begins.

- Install perimeter erosion and sedimentation control measures as shown on the erosion and sedimentation control plans.

- Clear and grub remainder of site.

Phase 2

- Grade area in center of site that was cleared and grubbed if required and provide temporary stabilization.

- Install ground mounted solar panels.

- Install electrical conduit.

- Install access drives.

- Fine grade, rake, seed, and mulch all remaining disturbed areas.

Phase 3

- Install perimeter chain link fence as shown on the plans.
- After the site is deemed stabilized per the 2002 guidelines and with the approval of the applicant, remove perimeter erosion and sedimentation controls.
- Issue Notice of Termination per the General Permit.
- Perform project cleanup.

Control Measures

The Contractor shall install and maintain staked silt fence around the site as perimeter control throughout the duration of construction. Construction entrances shall be installed at the locations where the contractor will be leaving disturbed areas of the site. Material stockpile area with appropriate controls shall be placed as needed throughout the limits of the site.

Erosion and Sedimentation Controls General Notes

- All erosion and sediment control measures shall be constructed in accordance with the standards and specifications of the "2002 Connecticut Guidelines for Soil Erosion and Sediment Control" (CTDEEP Bulletin No. 34), and all amendments and addenda thereto as published by the Connecticut Department of Energy and Environmental Protection.
- Land disturbance shall be kept to the minimum necessary for construction operations.
- Install all control measures as shown on the plans and elsewhere as necessary to prevent soil erosion and sediment transport to resource areas. Additional controls, not depicted on the plans, may be necessary. It is the responsibility of the construction contractor to assess the need for, and install additional controls that are warranted by site conditions.
- Inspect and maintain control measures throughout the construction period. Inspections shall be conducted after each rainstorm and during major storm events to determine if all control measures are adequately in place and effective.

- Sediment removed shall be properly disposed of in an appropriate upland area within the defined limits of disturbance

- Stockpile topsoil in level upland areas and contain using straw bales and/or silt fence around the perimeter.

- In accordance with the project specification, stabilization of open soil surfaces will be implemented within 7 days after grading or construction activities have temporarily or permanently ceased, unless weather prohibits seed germination.

- Where necessary, in accordance with the project specifications, suitable topsoil, seedbed preparation, and water shall be provided for effective establishment of vegetative cover.

- The construction contractor shall keep all paved roadways clean.

- Inspect and maintain temporary erosion and sedimentation controls until restoration has been determined to be effective as defined by conformance to the CTDEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities.

- If construction activities are complete or have been temporarily halted for more than seven (7) days, stabilization activities will be implemented within three (3) days.

- Areas that remain disturbed but inactive for at least 30 days shall receive temporary seeding or soil protection within seven (7) days.

- Disturbed areas that do not establish a vegetative cover within 30 days of seeding shall have erosion control blankets installed. Prior to the erosion control blanket installation, the soil would be prepared with the application of lime, fertilizer, and seed.

- Areas that will be disturbed past the planting season will be covered with a long-term, non-vegetative stabilization method that will provide protection though the winter.

- Stabilization practices will be implemented as quickly as possible in accordance with the Guidelines.

- The contractor shall stabilize disturbed areas with temporary or permanent measures as quickly as possible after the land is disturbed.

Soil Stabilization and Protection

Temporary and permanent stabilization measures are proposed to provide protection against erosion both during and after construction. Land disturbance shall be kept to the minimum necessary for construction operations and existing vegetation shall be preserved to the maximum extent practicable.

The contractor shall maintain temporary erosion and sediment control measures until final stabilization has been achieved. Areas that will remain disturbed but inactive for at least 30 days shall receive temporary seeding or soil protection in accordance with the 2002 Guidelines. Areas that will remain disturbed beyond the seeding season shall receive long term non-vegetative stabilization and protection measures sufficient to protect disturbed areas through the winter. In all cases, stabilization and protection measures shall be implemented as soon as possible in accordance with the 2002 Guidelines.

The stabilization practices to be implemented during the construction of the proposed project are as follows:

Temporary Stabilization Practices

Temporary Vegetative Cover: Temporary vegetative cover shall be established on all exposed areas and areas that have not reached finish grade that will be inactive for more than seven days, or stockpiles not in use for 30 days, during the planting season of March 15 to July 1 and August 1 to October 15. This temporary vegetative cover shall consist of perennial rye grass. The rye grass shall be planted at a rate of 2 lbs./1,000 sq. ft. at a depth of ½ inch.

Temporary Soil Protection: Temporary soil protection shall only be used when a disturbed area will be inactive for a period of 30 or more consecutive days, but less than 5 months. If surfaces will not be reworked within 5 months Temporary Vegetative Cover shall be used. This temporary soil protection shall consist of mulches, tackifiers, and erosion control blankets which shall be biodegradable or photo-degradable within 2 years but without substantial degradation for 5 months. Additionally, they shall be capable of being applied evenly such that it provides 100% initial soil coverage, still adheres to the soil surface, and are free of contaminates and foreign material.

Silt Fence: Silt fence is constructed of a permeable geotextile fabric secured by wooden stakes driven into the ground. It is installed as a temporary barrier to prevent sediment from flowing into an unprotected and/or sensitive area from a disturbed site. Staked silt fence and hay bales or wood chip bags can be used separately or in conjunction as erosion control barriers. A silt fence should be installed downgradient of the work area and placed on contour or as directed by the engineer. Once the Project is complete and soils are stabilized, silt fence materials (i.e., geotextile fabric and wooden stakes) must be removed and properly disposed of off-site. It is important that this measure be installed on contour to reduce erosion along the system.

Construction Entrances: To prevent soil or sediment from being carried off-site by construction equipment, a construction entrance will be installed before construction traffic into and out of the Project area. The width of the anti-tracking pad shall not be less than the width of the ingress or egress. Adjacent roadways shall be swept daily to remove material that may be tracked onto pavement.

Permanent Stabilization Practices

All areas disturbed by construction and unpaved areas that are graded or disturbed by construction will receive topsoil and/or turf establishment. The Contractor may use other permanent stabilization practices approved by the Engineer and conforming to the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

Structural Measures

The existing slopes will be maintained to capture runofffrom the project site so no structural measures are being installed to divert flows. The site has been divided into areas of less than one (1) acre and surface runoff will sheet flow from the site after construction as it does prior to construction.

Maintenance

All construction and related activities shall conform to the requirements of the plans or as directed by the Engineer. In general, all construction activities shall proceed in such a manner so as not to pollute any wetlands, watercourses, water body, and conduit carrying stormwater. The Contractor shall limit, in so far as possible, the surface area of earthen materials exposed by construction activity and immediately provide temporary and permanent stabilization practices to prevent soil erosion and contamination on the site. Water pollution control provisions and best management practices shall be administered during construction in accordance with the 2002 Guidelines and as directed by the Engineer.

The following Maintenance practices will be completed as part of this project:

Silt Fence: Inspect silt fence at least once per week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater. For dewatering operations, inspect frequently before, during, and after pumping operations. Remove the sediment deposits or install a secondary barrier upslope from the existing barrier when sediment deposits reach one half the height of the barrier.

Temporary Soil Protection: Inspect the temporary soil protection 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 for failures. If eroded

or bare areas are found repair them immediately. When repetitive failures are observed at the same location, review conditions and limitations for use and determine if other measures are needed to reduce failure rate.

Construction Entrances: Maintain the entrance in a condition which will prevent tracking and washing sediment onto paved surfaces. Provide periodic top dressing with additional stone of additional length as conditions demand. Repair any measures used to trap sediment as needed. Remove all sediment spilled, dropped, washed or tracked onto paved surfaces. Adjacent roadways shall be left clean at the end of each day. If the construction is properly maintained and the action of a vehicle traveling over the stone pad is not sufficient to remove the majority of the sediment then either (1) increase the length of the construction entrance, (2) modify the construction access road surface, or (3) install washing racks and associated settling area or similar devices before the vehicle enters a paved surface.

Dewatering Wastewaters

Dewatering Wastewaters

The need for dewatering is not anticipated however, if encountered, dewatering wastewaters will be infiltrated into the ground unless otherwise directed by the Engineer. When dewatering is necessary, pumps used shall not be allowed to discharge directly into a wetland or watercourse.

Prior to any dewatering, the Contractor prepare a written proposal for specific methods and devices to be used including, but not limited to, the pumping of water into a temporary sedimentation basin, providing surge protection at the inlet or outlet of pumps, floating the intake of a pump, or any other method for minimizing and retaining the suspended solids. If the Contractor witnesses a pumping operation is causing turbidity problems, the Contractor shall halt said operation until a means of controlling the turbidity is corrected by the Contractor. No discharge of dewatering wastewater shall contain or cause a visible oil sheen, floating solids or foaming in the receiving water

Pumping settling basin will be sized by the contractor in accordance with the 2002 Guidelines.

Post-Construction Stormwater Management

Post-construction Guidelines

After the project is complete the developer will perform the following maintenance and restoration measures:

- Mowing and maintenance of the turf and vegetated areas will occur as needed.

Other Controls

Waste Disposal

Construction site waste shall be properly managed and disposed of during the entire construction period. Additionally;

- A waste collection area will be designated. The selected area will minimize truck travel through the site and will not drain directly to the adjacent wetlands.
- Waste collection shall be scheduled regularly to prevent the containers from overfilling.
- Spills shall be cleaned up immediately.
- Defective containers that may cause leaks or spills will be identified through regular inspection. Any found to be defective will be repaired or replaced immediately.
- Any stockpiling of materials should be confined to the designated area as defined by the engineer.

Washout Areas

Washout of applicators, containers, vehicles and equipment for concrete shall be conducted in a designated washout area. No surface discharge of washout wastewaters from the area will be allowed. All concrete wash water will be directed into a container or pit such that no overflows can occur. Washout shall be conducted in an entirely self-contained system and will be clearly designed and flagged or signed where necessary. The washout area shall be located outside of any buffers and at least 50 feet from any stream, wetland or other sensitive water or natural resources as shown on the plans.

The designated area shall be designed and maintained such that no overflows can occur during rainfall or after snowmelt. Containers or pits shall be inspected at least once a week to ensure structural integrity, adequate holding capacity and will be repaired prior to future use if leaks are present. The contractor shall remove hardened concrete waste when it accumulates to a height of ½ of the container or pit or as necessary to avoid overflows. All concrete waste shall be disposed of in a manner consistent will all applicable laws, regulations and guidelines.

Anti-tracking Pads and Dust Control

Off –site vehicle tracking of sediments and the generation of dust shall be minimized. Temporary anti-tracking pads from the active work site to the existing pavement will be installed and maintained at the locations shown on the plans. The contractor shall:

- Maintain the entrance in a condition which will prevent tracking and washing of sediment onto paved surfaces.
- Provide periodic top dressing with additional stone or additional length as conditions demand.
- Repair any measures used to trap sediment as needed.
- Immediately remove all sediment spilled, dropped, washed or tracked onto paved surfaces.
- Ensure roads adjacent to a construction site are left clean at the end of each day.

If the construction entrance is being properly maintained and the action of a vehicle traveling over the stone pad is not sufficient to remove the majority of the sediment, then the contractor shall either:

- Increase the length of the construction entrance,
- Modify the construction access road surface, or
- Install washing racks and associated settling area or similar devices before the vehicle enters a paved surface.

For construction activities which cause airborne particulates, wet dust suppression shall be utilized. Construction site dust will be controlled by sprinkling the ground surface with water until it is moist on an as-needed basis. The volume of water sprayed shall be such that it suppresses dust yet also prevents the runoff of water.

Post-Construction

Upon completion of construction activities and stabilization of the site, the site shall be cleaned of construction sediment or debris and any remaining silt fence shall be removed prior to acceptance of the project. Sediment shall be properly disposed of in accordance with all applicable laws, regulations and guidelines.

Maintaining and Storing Vehicles and Equipment

The contractor shall take measures to prevent any contamination to wetlands and watercourses while maintaining and storing construction equipment on the site. All chemical and petroleum containers stored on site shall be provided with impermeable containment which will hold at least 110% of the volume of the largest container, or 10% of the total volume of all containers in the area, whichever is larger, without overflow from the containment area. All chemicals and their containers shall be stored under a roofed area except for those stored in containers of 100-gallon capacity or more, in which case double-walled tanks will suffice.

Inspections

Inspection Guidelines

All construction activities shall be inspected initially for Plan implementation and then weekly for Routine Inspections.

Plan Implementation inspections shall occur at least one and no more than three times during the first 90 days of construction to confirm compliance with the general permit. The plan implementation inspection(s) shall be completed by either a qualified soil erosion and sediment control professional or a qualified professional engineer would should be under contract and contacted within 30 days following commencement of the construction activities on site.

Routine inspections shall occur at least once every seven calendar days and within 24 hours of the end of a storm that generates a discharge. These inspections shall be conducted by a qualified inspector (provided by the permittee), as defined in the General Permit, and at a minimum will inspect, all areas disturbed by the construction activity that have not been stabilized, all erosion and sedimentation control measures, all structural control measures, soil stockpile areas, washout areas and locations where vehicles enter or exit the site shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and impacts to receiving waters.

For storms that end on a weekend, holiday or other time in which working hours will not commence within 24 hours, an inspection is required within 24 hours only for storms that equal or exceed 0.5 inches. For lesser storms, inspection shall occur immediately upon the start of subsequent normal working hours.

Where sites have been temporarily or finally stabilized, such inspection shall be conducted at least once every month for three months.

Qualified personnel provided by the Permittee shall conduct Inspections.

Items to be inspected: the following items shall be inspected as described below:

Item	Procedure
Silt Fence/Haybales	Inspected weekly and within 24 hours of rainfall to ensure that the fence line is intact with no breaks or tears. Repair/Replace when failure, or observed deterioration, is observed. Remove silt when it reaches ½ the height of the fence or bale.
Topsoil/Borrow Stockpiles	Inspect daily. Repair sediment barriers as necessary
Temporary Soil Protection	Inspected weekly and within 24 hours of rainfall to ensure that the fence line is intact with no breaks or tears. Repair eroded/bare areas immediately. Reseed and mulch
Construction Entrance	Inspect daily. Place additional stone, extend the length or remove and replace the stone. Clean paved surfaces of tracked sediment.

Corrective Actions

If at any time an inspection determines that the Site is out of compliance with the terms and conditions of this SWPCP and the General Permit, corrective actions shall be taken. Non-engineered corrective actions (as identified in the 2002 Guidelines and 2004 Connecticut Stormwater Quality Manual) shall be implemented on site within 24 hours and incorporated into a revised SWPCP within three calendar days of the date of inspection. Engineered corrective actions shall be implemented on site within seven days and incorporated into a revised SWPCP within ten calendar days of the date of inspection unless another schedule is specified.

Monitoring Requirements

A written report summarizing the scope of the inspection, the name(s) and qualifications of inspection personnel, the date and time of the inspection, major observations relative to the implementation of the Pollution Control Plan, and actions taken shall be completed within 24 hours of the inspection. This report shall be retained as part of the Stormwater Pollution Control Plan for at least five years after the date of the inspection.

Turbidity monitoring shall be conducted at the 2 locations depicted on the Plan utilizing a procedure consistent with 40 CFR Part 136 (http://www.epa.gov/region9/qa/pdfs/40cfr136_03.pdf) and may be taken manually or by an in-situ turbidity probe or other automatic sampling device equipped to take individual turbidity readings. The first sample shall be taken within the first hour of stormwater discharge from the

site and at least three grab samples shall be taken during a storm event and shall be representative of the flow and characteristics of the discharge. Sampling shall be conducted at least monthly when there is a discharge of stormwater from the site while construction activity is ongoing, until final stabilization of the drainage area associated with each outfall is achieved.

Samples shall be taken during normal working hours, which for this project shall be defined as Monday through Friday, 8 am to 6 pm. If a storm continues past working hours, sampling shall resume the following morning or the morning of the next working day following a weekend or Holiday, as long as the discharge continues. Sampling may be temporarily suspended when conditions exist that may reasonably pose a threat to the safety of the person taking the sample.

Within 30 days following the end of each month, the stormwater sampling results shall be submitted on the Stormwater Monitoring Report (SMR) and submit in accordance with Net DMR. If there is no stormwater discharge during a month, sampling is not required, however, SMR's indicating "no discharge" shall still be submitted as required.

Contractors

General

This section shall identify all Contractors and Subcontractors who will perform on site actions which may reasonably be expected to cause or have potential to cause pollution of the waters of the State.

Certification Statement

All contractors and subcontractors must sign the attached statement. All certification will be included in the Stormwater Pollution Control Plan.

Keeping Plans Current

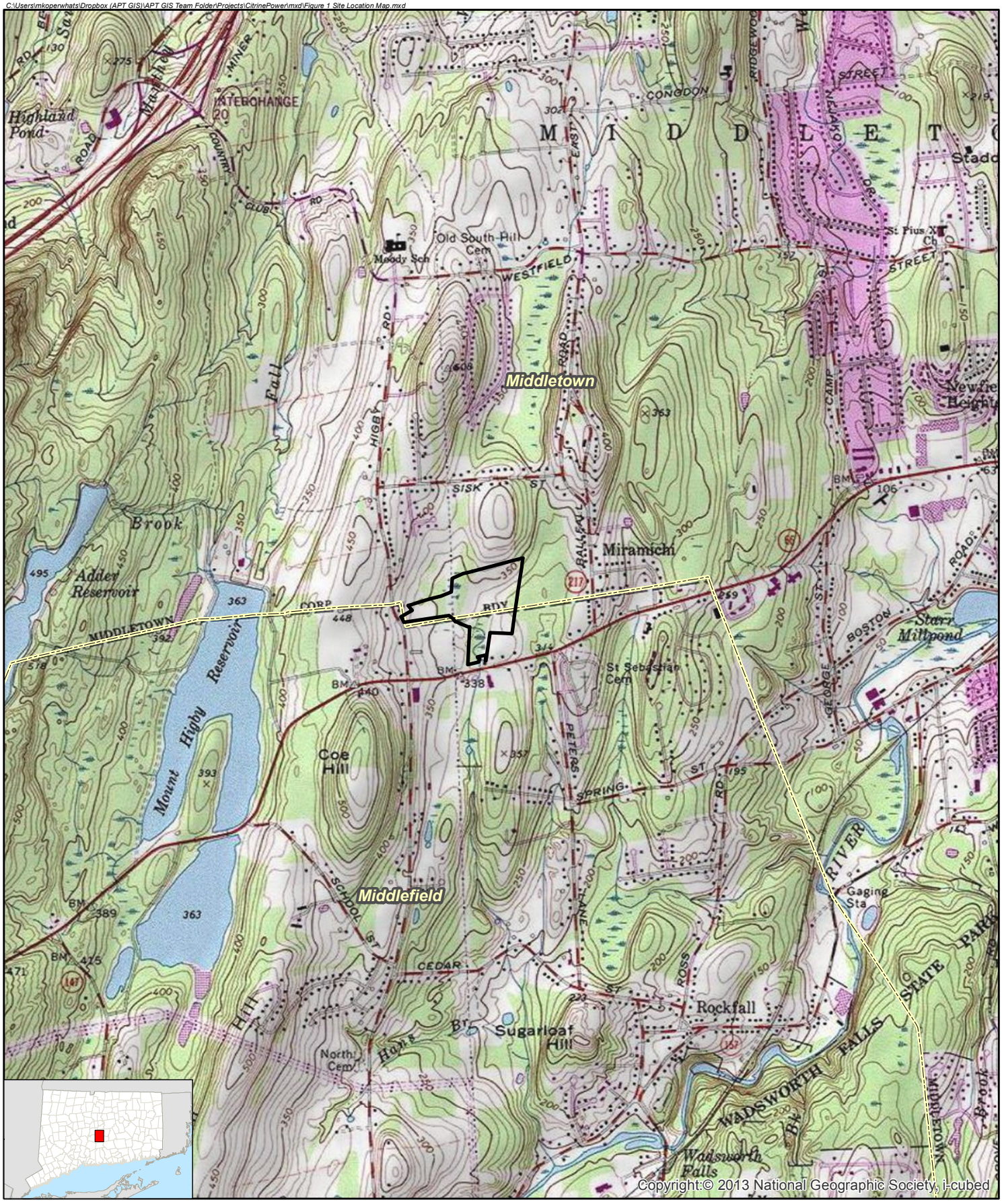
The permittee shall amend the Plan whenever there is a change in contractors or subcontractors at the site, or a change in design, construction, operation, or maintenance at the site which has the potential for the discharge of pollutants to the waters of the state and which has not otherwise been addressed in the Plan or if the actions required by the Plan fail to prevent pollution.

Termination

Once the site has been stabilized and all final inspections have occurred, the registrant shall file a termination notice. Prior to filing for termination, all temporary erosion and sediment control measure shall be removed. A blank copy of the Notice of Termination Form is provided in Appendix F.

APPENDIX A
Site Location Map

C:\Users\mkoperwhats\Dropbox (APT GIS)\APT GIS Team Folder\Projects\CitrinePower\mxd\Figure 1 Site Location Map.mxd



Legend

Site

Town Line

Map Notes:
Base Map Source: USGS 7.5 Minute Topographic Quadrangle Map, Middletown, CT (1992)
Map Scale: 1:24,000
Map Date: April 2019

N
W E
S

1,000 500 0 1,000
Feet

Figure 1
Site Location Map

Proposed Middletown/Middlefield
Solar Project
Meriden Road
Middlefield, Connecticut

ALL-POINTS TECHNOLOGY CORPORATION

APPENDIX B
Identification of Contractors and Certification Statements

MIDDLETOWN/MIDDLEFIELD SOLAR PROJECT
CITY OF MIDDLETOWN AND TOWN OF MIDDLEFIELD, CONNECTICUT

"I certify under penalty of law that I have read and understand the terms and conditions of the general permit for the discharge of stormwater associated with construction activity. I understand that as Contractor on the project, I am covered by this general permit, and must comply with the terms and conditions of this permit, including, but not limited to, the requirements of the Stormwater Pollution Control Plan prepared for this project."

GENERAL CONTRACTOR

Signed:_____ Date:_____

Title:_____

Firm:_____ Telephone:_____

Address:_____

_____

_____

SUBCONTRACTOR

Signed:_____ Date:_____

Title:_____

Firm:_____ Telephone:_____

Address:_____

_____

_____

Provide additional sheets if necessary

APPENDIX C
Stormwater Management Report

April 10, 2019

Cela Sinay-Bernie
Citrine Power, LLC
55 Greens Farms Road
Westport, CT 06880

RE: Middletown/Middlefield Solar Project
Meriden Road
Middlefield, Connecticut

Dear Mrs. Sinay-Bernie:

We are pleased to submit this Stormwater Management Report and supporting documentation for the proposed Middletown/Middlefield Solar Project ("Project"). This proposed Project includes the installation of two (2) solar photovoltaic electric generating facilities ("Solar Array"), one having an output of ±0.986 megawatts ("MW") alternating current ("AC") and the second having an output of ±1.0 MW AC, on a ±30.0-acre subject site located at approximately 144 Meriden Road (CT Route 66) in Middlefield, Connecticut ("Site"). The Site is located within both the Town of Middlefield and City of Middletown, Connecticut (the "Municipalities").

The purpose of this report is to provide an analysis of the potential stormwater drainage impacts associated with the proposed Project. The design is intended to be in full compliance with the State and Municipal regulations while taking prevailing Site conditions and practical needs into account.

The proposed Project area will reside primarily within an area of Open Field habitat with periphery areas of Upland Forest habitat and Developed areas. While the Project area consists of approximately ±9.0 acres, ground disturbance is anticipated to be limited to the clearing of the wind row of trees in the center of the site and the proposed gravel access road, for an area of disturbance of 0.95 acres.

Existing Site Conditions

The Site is a combination of parcels under common ownership consisting of ±30.0 acres that lie in the Municipalities of the Town of Middlefield and City of Middletown. The existing cover type is a primarily open field with periphery Upland Forest. A wind row of trees does bisect the proposed Project area. Wetlands surround the Site to the east, west, and south.

The existing site topography is relatively flat and includes slopes that range from approximately 0 to 20 percent throughout. Drainage typically flows from north to south with an east west break just west of the wind row of trees bisecting the existing field, and ultimately drains to the wetland features. The field can be classified with an existing cover type consisting of short meadow grasses.

Developed Site Conditions

The proposed Project will consist of two separate solar arrays, a west solar array generating approximately ±1.0 MW and an east solar array generating approximately ±0.986 MW. The proposed solar arrays will be installed on a post driven ground mounted racking system and surrounded by chain link fence, within the existing short meadow grasses. These items along with the inverter posts will be installed with no changes to the existing grades and minimal disturbance.

As a result of the Project being located principally in an existing open field, little clearing and/or grubbing is required. The only change to the existing ground cover results from the clearing, grubbing, and minor shaping of the wind row of trees. The proposed electrical trench is anticipated to be installed within this area as a further effort to minimize the disturbance on-site. The use of the post driven racking system and installation in the existing field should result in no change in existing ground cover. The total fenced area for the two solar arrays and proposed gravel access is anticipated to cover ±8.7 acres.

Two (2) concrete equipment pads will be located near the middle of the Project, between the two solar arrays. These pads will contain electrical equipment for the interconnection into the electrical grid. Trenching will be required from each array to the concrete pads as well as to the connection point in the street, and will be kept within the disturbance associated with the clearing of the wind row of trees and the proposed access road.

As a result of maintaining the existing ground cover on the site, the post-development site conditions will mimic the pre-developed site conditions.

Stormwater Management

Analysis Methodology

The hydrologic analysis was performed using the HydroCAD stormwater modeling system computer program developed by HydroCAD Software Solutions, LLC.

Hydrographs for each watershed were developed using the SCS Synthetic Unit Hydrograph Method with a Type III rainfall distribution. Hydrographs were developed for the NOAA Atlas 14 2, 10, 25, and 100-year storm event with rainfall depths of 3.31, 5.15, 6.30, and 8.07 inches respectively, per the Connecticut DOT Engineering Bulletin issued on November 3, 2015.

The existing and proposed drainage areas used in the calculations are illustrated on the Existing and Proposed Drainage Area Plans (EDA-1 & PDA-1). These maps and the corresponding HydroCAD output have been attached for your use.

Existing Drainage Patterns

The proposed work will be conducted in the existing field with three drainage catchment areas. The Project area drains from north to south with an east west break near the middle of the site, resulting in two (2) subcatchments, EDA-1 and EDA-2. A third catchment area, EDA-3, is associated with the access route into the site and drains to the west. (See Existing Drainage Area Map)

The Site soils identified by the United States Department of Agriculture (USDA) Natural Resources Conservation Service consists of Map Unit Symbol 87B, named "Wethersfield loam, 3 to 8 percent slopes", and 87C, names "Wethersfield loam, 8 to 15 percent slopes", and are both classified in the hydrologic soil group rating of "C".

In order to analyze the Site, the existing Site was modeled at two (2) Analysis Points. Peak discharges have been computed at the point of study for the 2-year, 10-year, 25-year, and 100-year storm events.

The pre-developed discharges at each Analysis Point are tabulated in Table 1-1.

Table 1-1

Analysis Point	**Pre-developed Peak Storm Runoff (Q), cubic feet per second (cfs)**			
	2-year Storm Event	**10-year Storm Event**	**25-year Storm Event**	**100-year Storm Event**
AP-1	2.11	5.36	7.64	11.32
AP-2	4.03	10.24	14.59	21.62

Proposed Drainage Patterns

The Site remains unchanged hydrologically from the pre-developed condition as a result of little change to the ground cover.

Since the proposed development mimics, the existing conditions the post-development condition was modeled using the same two (2) Analysis Points. Peak discharges have been computed at the point of study for the 2-year, 10-year, 25-year, and 100-year storm events.

The post-development discharges at each point of study are tabulated in Table 1-2.

Table 1-2

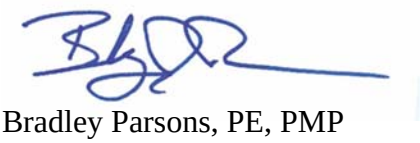
Analysis Point	**Post-development Peak Storm Runoff (Q), cubic feet per second (cfs)**			
	2-year Storm Event	**10-year Storm Event**	**25-year Storm Event**	**100-year Storm Event**
AP-1	2.06	5.25	7.48	11.09
AP-2	3.93	9.99	14.23	21.09

Conclusion

The proposed Project results in no changes to the ground cover on the Site and as shown in the attached stormwater calculations there will not be any increase in the peak discharges to the waters of the State of Connecticut during the 2, 10, 25, and 100-year storm event. As a result, the proposed solar array will not have any adverse conditions to the surrounding areas and properties.

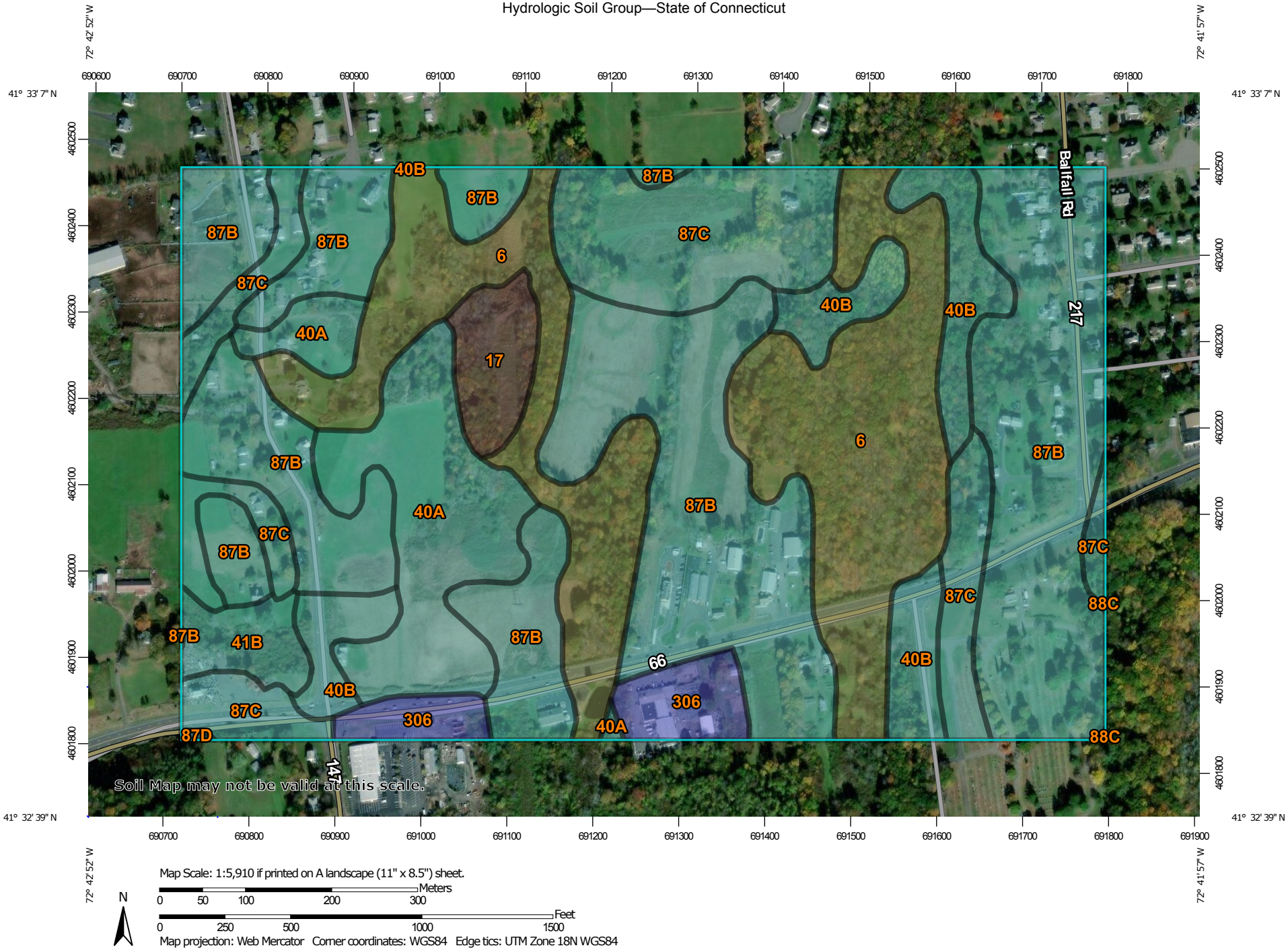
Should you have any questions, please contact me.

Very truly yours,
All-Points Technology



Bradley Parsons, PE, PMP
Project Manager

Attachments
NRCS Soils Report
Existing Drainage Area Map and HydroCAD Report
Proposed Drainage Area Map and HydroCAD Report


72° 42' 52" W
72° 41' 57" W
41° 33' 7" N
41° 32' 39" N
690600
690700
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690900
691000
691100
691200
691300
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691500
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691700
691800
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4602200
4602100
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4601900
4601800
Ballfall Rd
217
147
40B
87B
87C
6
40A
17
41B
66
306
87D
88C
Soil Map may not be valid at this scale.
Map Scale: 1:5,910 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 50 100 200 300
Feet
0 250 500 1000 1500
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 18, Dec 6, 2018

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

Date(s) aerial images were photographed: Aug 27, 2016—Oct 30, 2017

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
6	Wilbraham and Menlo soils, 0 to 8 percent slopes, extremely stony	C/D	39.8	22.5%
17	Timakwa and Natchaug soils, 0 to 2 percent slopes	B/D	4.0	2.3%
40A	Ludlow silt loam, 0 to 3 percent slopes	C	16.4	9.3%
40B	Ludlow silt loam, 3 to 8 percent slopes	C	12.2	6.9%
41B	Ludlow silt loam, 2 to 8 percent slopes, very stony	C	3.2	1.8%
87B	Wethersfield loam, 3 to 8 percent slopes	C	71.9	40.6%
87C	Wethersfield loam, 8 to 15 percent slopes	C	23.9	13.5%
87D	Wethersfield loam, 15 to 25 percent slopes	C	0.1	0.0%
88C	Wethersfield loam, 8 to 15 percent slopes, very stony	C	0.0	0.0%
306	Udorthents-Urban land complex	B	5.3	3.0%
Totals for Area of Interest			**177.0**	**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

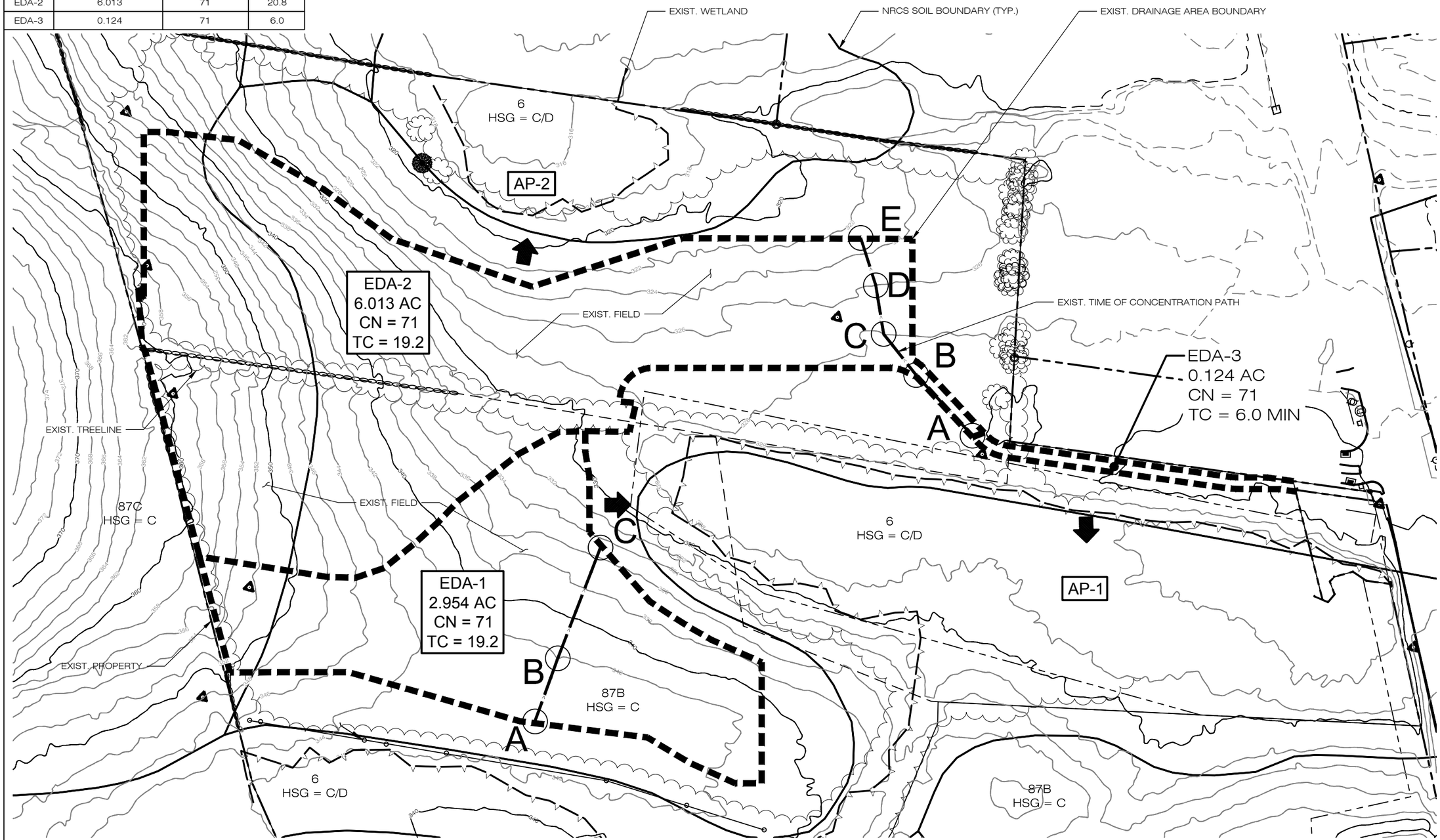
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

EXISTING DRAINAGE AREAS

	TOTAL AREA (ACRES)	COMPOSITE CN	TC (MINS.)
EDA-1	2.954	71	19.2
EDA-2	6.013	71	20.8
EDA-3	0.124	71	6.0



CITRINE
55 GREENS FARMS ROAD
WESTPORT, CT 06880
OFFICE: (203)-557-5554

ALL-POINTS TECHNOLOGY CORPORATION
3 SADDLEBROOK DRIVE PHONE: (860)-663-1697
KILLINGWORTH, CT 06419 FAX: (860)-663-0935
WWW.ALLPOINTSTECH.COM

PERMITTING

NO	DATE	REVISION
0	04/10/19	FOR REVIEW: BJP
1		
2		
3		
4		
5		
6		

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 3 SADDLEBROOK DRIVE KILLINGWORTH, CT 06419

OWNER: BARBARA J. PENNEY ANN L. CHARTON
ADDRESS: 41 CHELSEA DRIVE CROMWELL, CT 06416

MIDDLETOWN/MIDDLEFIELD

SITE ADDRESS: MERIDEN ROAD (ROUTE 66) MIDDLEFIELD, CT 06455

APT FILING NUMBER: CT567100

DRAWN BY: JT

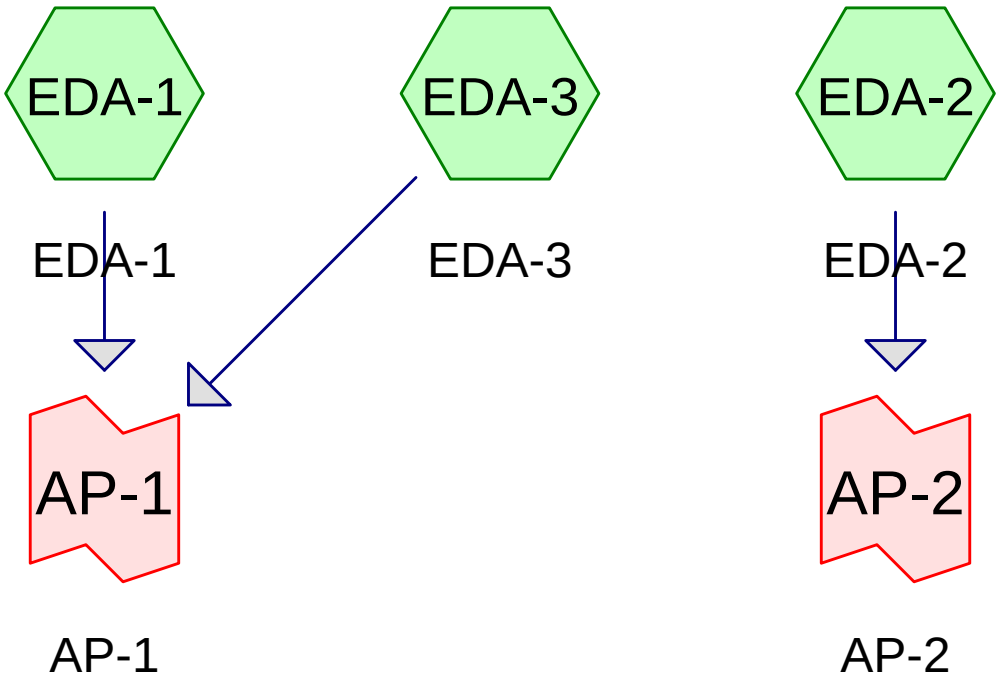
DATE: 04/10/19 CHECKED BY: BJP

SHEET TITLE:

EXISTING DRAINAGE AREA MAP

SHEET NUMBER:

EDA-1



Subcat Reach Pond Link

Routing Diagram for Middletown-Middlefield - EX - Rev0
Prepared by Microsoft, Printed 3/29/2019

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
8.543	71	Meadow, non-grazed, HSG C (EDA-1, EDA-2, EDA-3)
0.548	73	Woods, Fair, HSG C (EDA-2)
9.091	**71**	**TOTAL AREA**

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EDA-1: EDA-1 Runoff Area=2.954 ac 0.00% Impervious Runoff Depth=0.94"
Flow Length=224' Tc=19.2 min CN=71 Runoff=2.04 cfs 0.233 af

Subcatchment EDA-2: EDA-2 Runoff Area=6.013 ac 0.00% Impervious Runoff Depth=0.94"
Flow Length=282' Tc=20.8 min CN=71 Runoff=4.03 cfs 0.474 af

Subcatchment EDA-3: EDA-3 Runoff Area=0.124 ac 0.00% Impervious Runoff Depth=0.94"
Tc=6.0 min CN=71 Runoff=0.12 cfs 0.010 af

Link AP-1: AP-1 Inflow=2.11 cfs 0.242 af
Primary=2.11 cfs 0.242 af

Link AP-2: AP-2 Inflow=4.03 cfs 0.474 af
Primary=4.03 cfs 0.474 af

Total Runoff Area = 9.091 ac Runoff Volume = 0.716 af Average Runoff Depth = 0.94"
100.00% Pervious = 9.091 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EDA-1: EDA-1

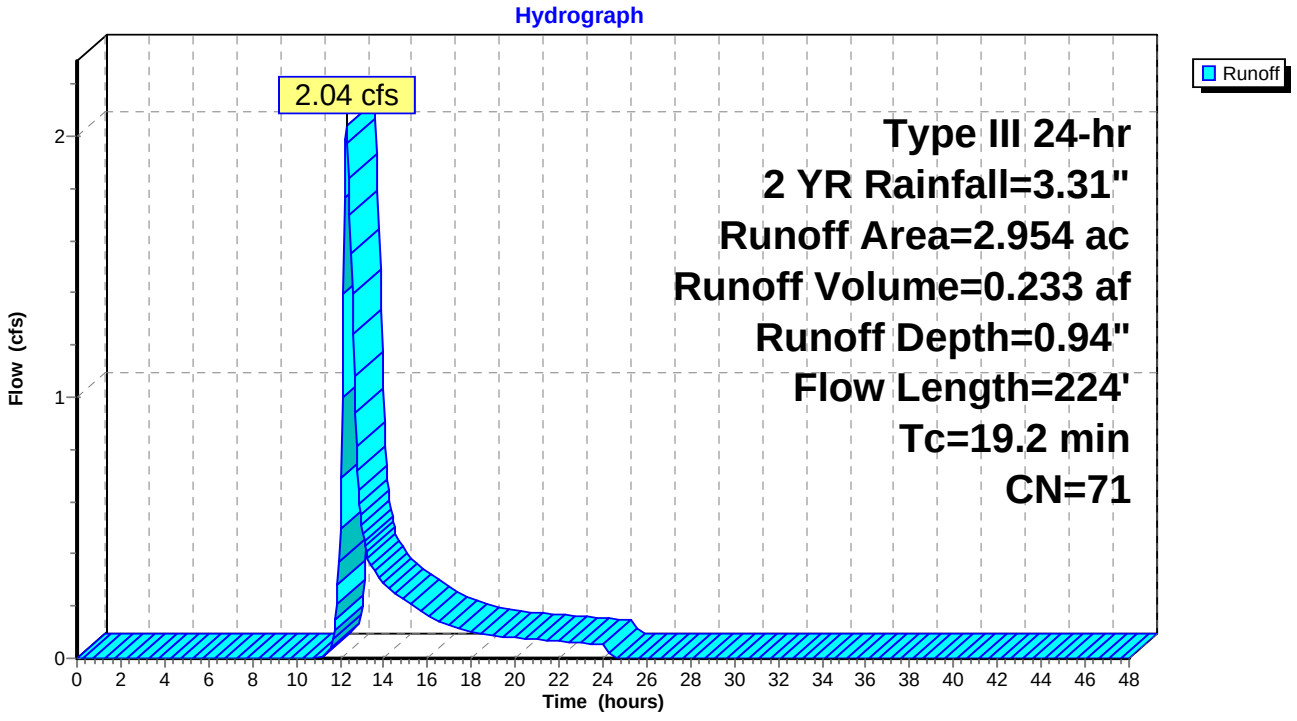
Runoff = 2.04 cfs @ 12.30 hrs, Volume= 0.233 af, Depth= 0.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.31"

Area (ac)	CN	Description
2.954	71	Meadow, non-grazed, HSG C
2.954		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	81	0.0073	0.08		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.5	143	0.0485	1.54		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
19.2	224	Total			

Subcatchment EDA-1: EDA-1



Summary for Subcatchment EDA-2: EDA-2

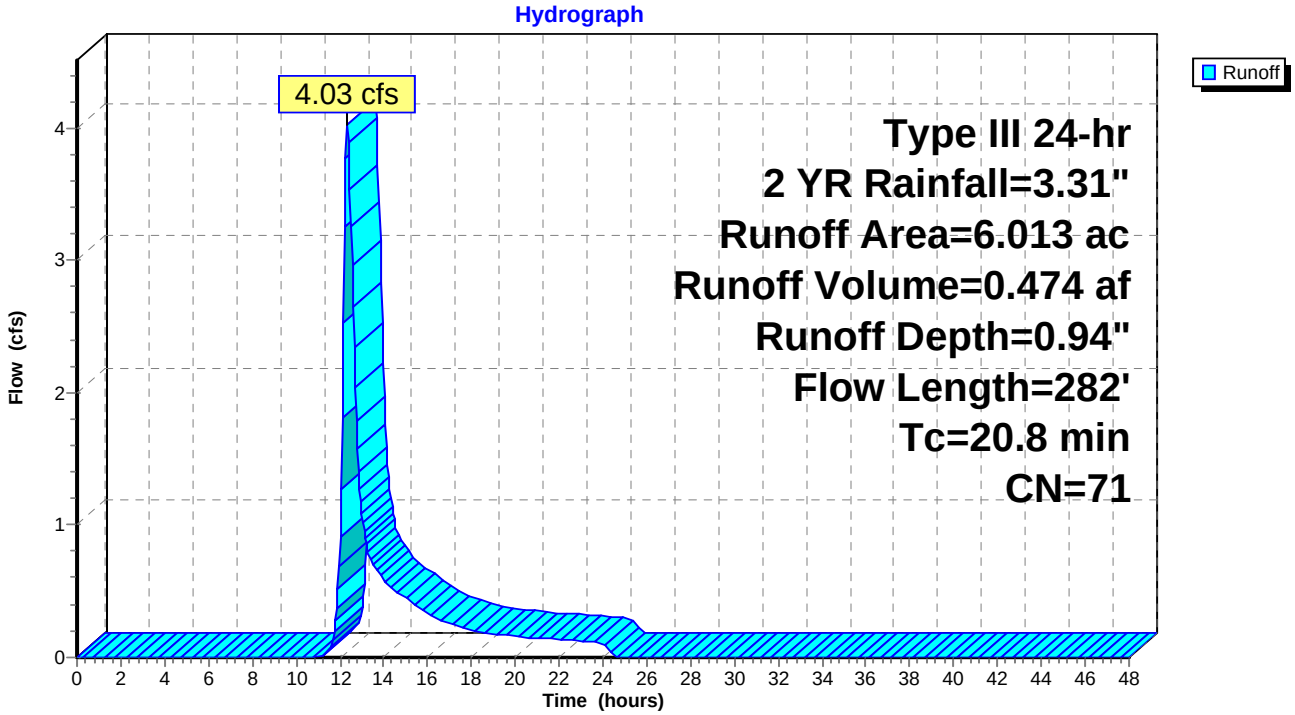
Runoff = 4.03 cfs @ 12.32 hrs, Volume= 0.474 af, Depth= 0.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.31"

Area (ac)	CN	Description
0.548	73	Woods, Fair, HSG C
5.465	71	Meadow, non-grazed, HSG C
6.013	71	Weighted Average
6.013		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.8	100	0.0110	0.09		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.6	63	0.0083	0.64		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.8	59	0.0336	1.28		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	60	0.0521	1.60		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
20.8	282	Total			

Subcatchment EDA-2: EDA-2



Summary for Subcatchment EDA-3: EDA-3

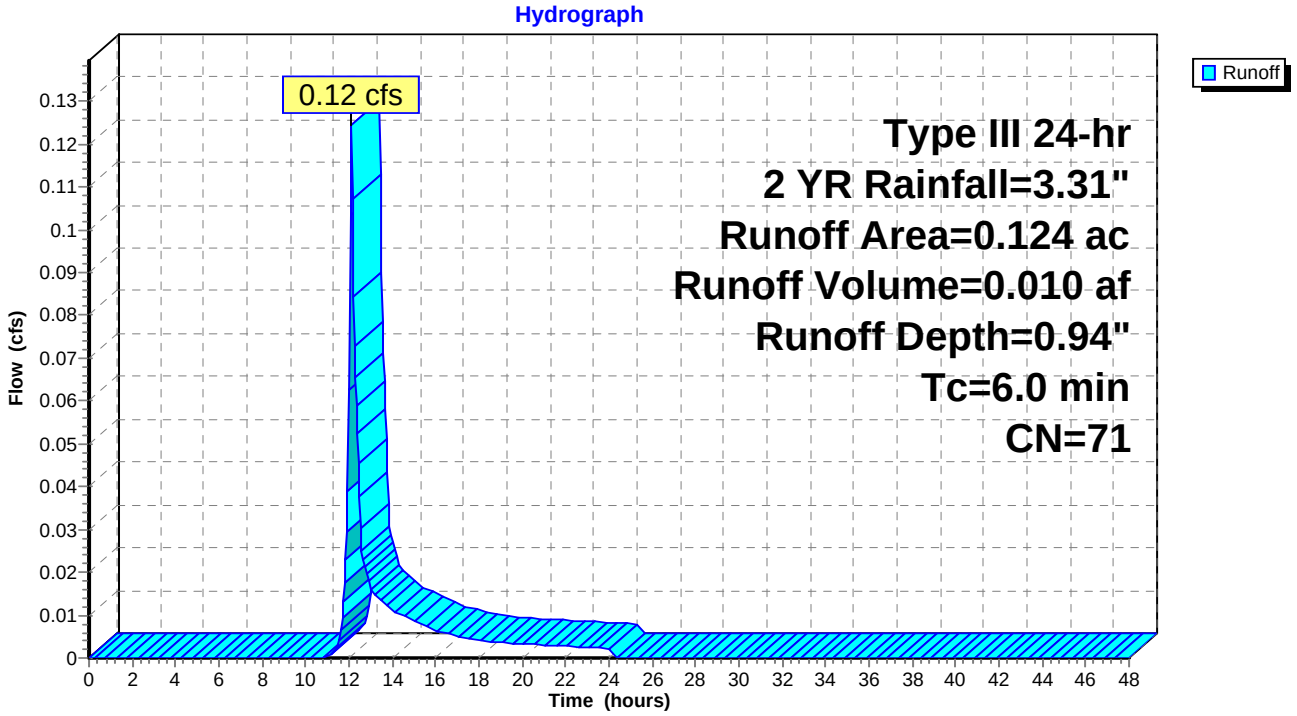
Runoff = 0.12 cfs @ 12.10 hrs, Volume= 0.010 af, Depth= 0.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.31"

Area (ac)	CN	Description
0.124	71	Meadow, non-grazed, HSG C
0.124		100.00% Pervious Area

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

Subcatchment EDA-3: EDA-3

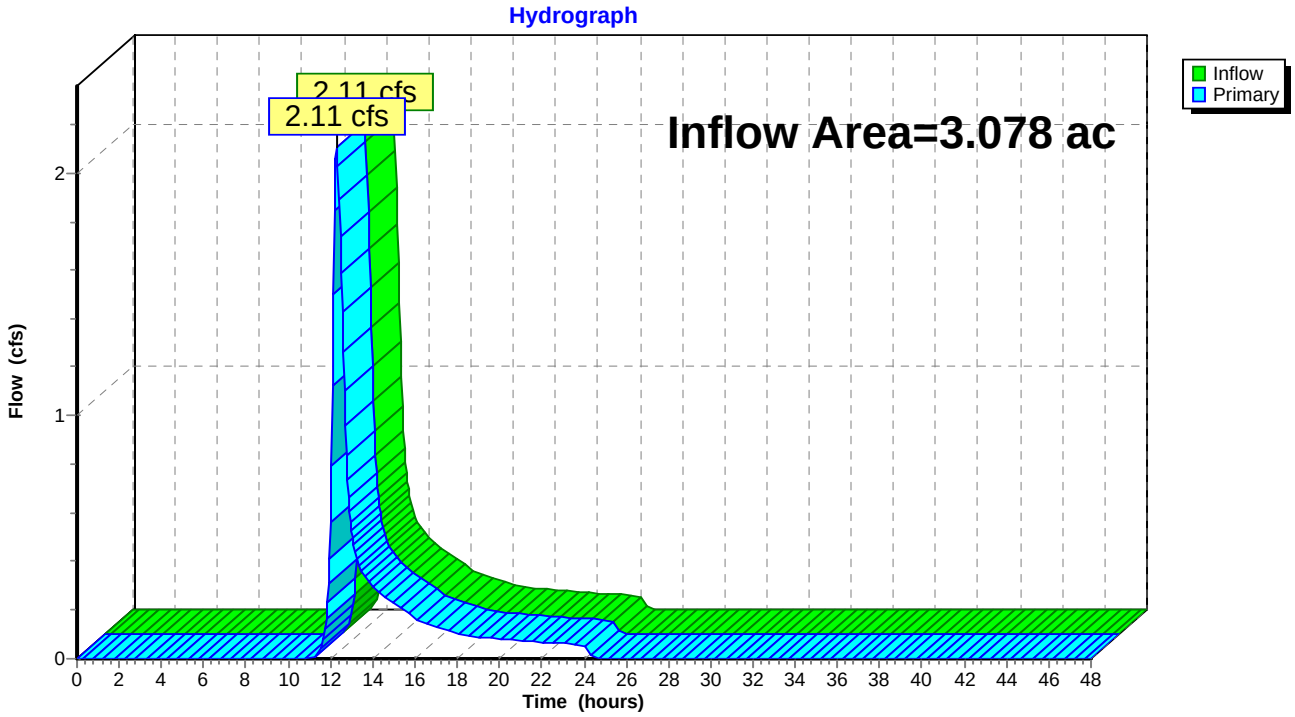


Summary for Link AP-1: AP-1

Inflow Area = 3.078 ac, 0.00% Impervious, Inflow Depth = 0.94" for 2 YR event
Inflow = 2.11 cfs @ 12.29 hrs, Volume= 0.242 af
Primary = 2.11 cfs @ 12.29 hrs, Volume= 0.242 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-1: AP-1

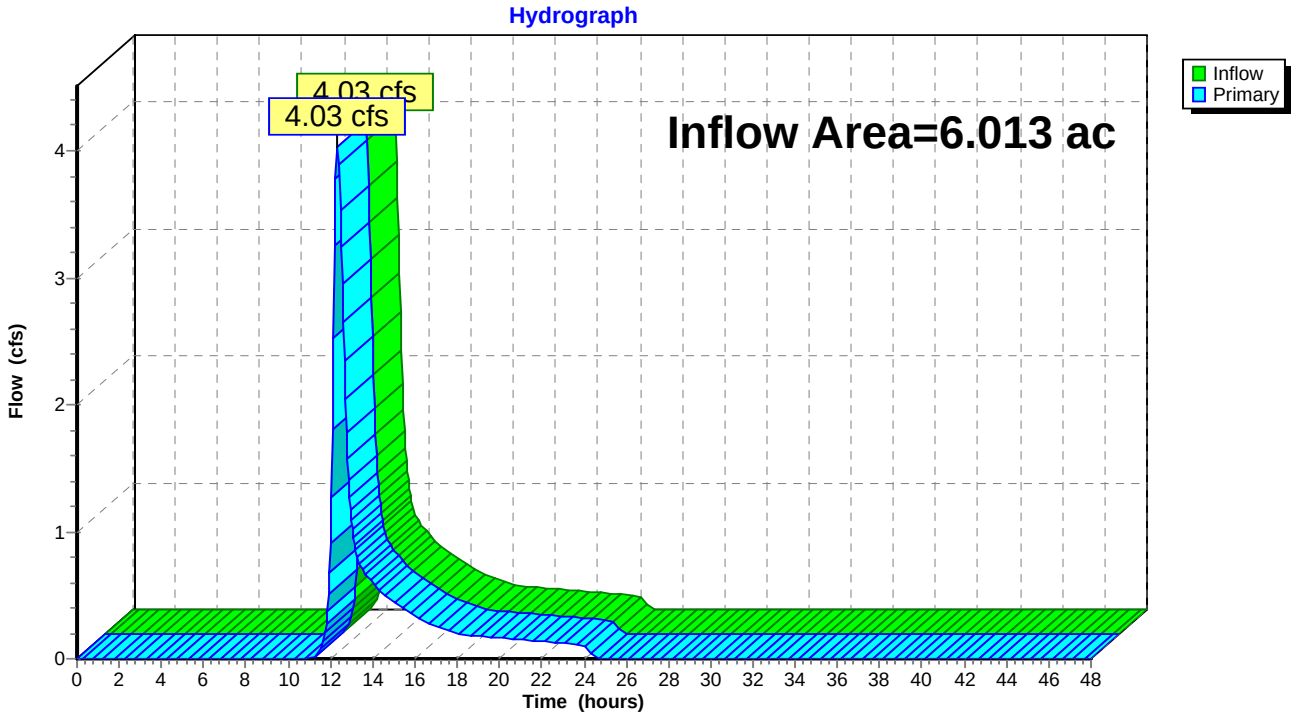


Summary for Link AP-2: AP-2

Inflow Area = 6.013 ac, 0.00% Impervious, Inflow Depth = 0.94" for 2 YR event
Inflow = 4.03 cfs @ 12.32 hrs, Volume= 0.474 af
Primary = 4.03 cfs @ 12.32 hrs, Volume= 0.474 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-2: AP-2



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EDA-1: EDA-1 Runoff Area=2.954 ac 0.00% Impervious Runoff Depth=2.23"
Flow Length=224' Tc=19.2 min CN=71 Runoff=5.21 cfs 0.549 af

Subcatchment EDA-2: EDA-2 Runoff Area=6.013 ac 0.00% Impervious Runoff Depth=2.23"
Flow Length=282' Tc=20.8 min CN=71 Runoff=10.24 cfs 1.118 af

Subcatchment EDA-3: EDA-3 Runoff Area=0.124 ac 0.00% Impervious Runoff Depth=2.23"
Tc=6.0 min CN=71 Runoff=0.31 cfs 0.023 af

Link AP-1: AP-1 Inflow=5.36 cfs 0.572 af
Primary=5.36 cfs 0.572 af

Link AP-2: AP-2 Inflow=10.24 cfs 1.118 af
Primary=10.24 cfs 1.118 af

Total Runoff Area = 9.091 ac Runoff Volume = 1.690 af Average Runoff Depth = 2.23"
100.00% Pervious = 9.091 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EDA-1: EDA-1

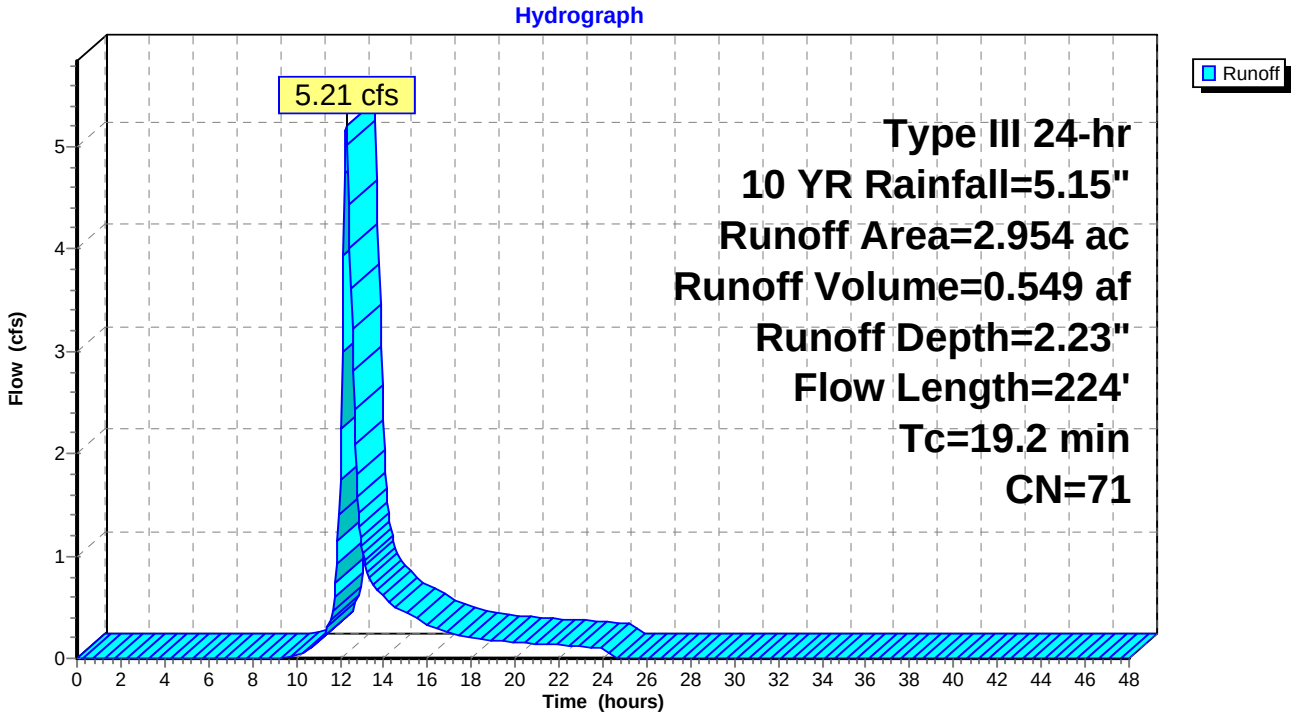
Runoff = 5.21 cfs @ 12.27 hrs, Volume= 0.549 af, Depth= 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=5.15"

Area (ac)	CN	Description
2.954	71	Meadow, non-grazed, HSG C
2.954		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	81	0.0073	0.08		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.5	143	0.0485	1.54		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
19.2	224	Total			

Subcatchment EDA-1: EDA-1



Summary for Subcatchment EDA-2: EDA-2

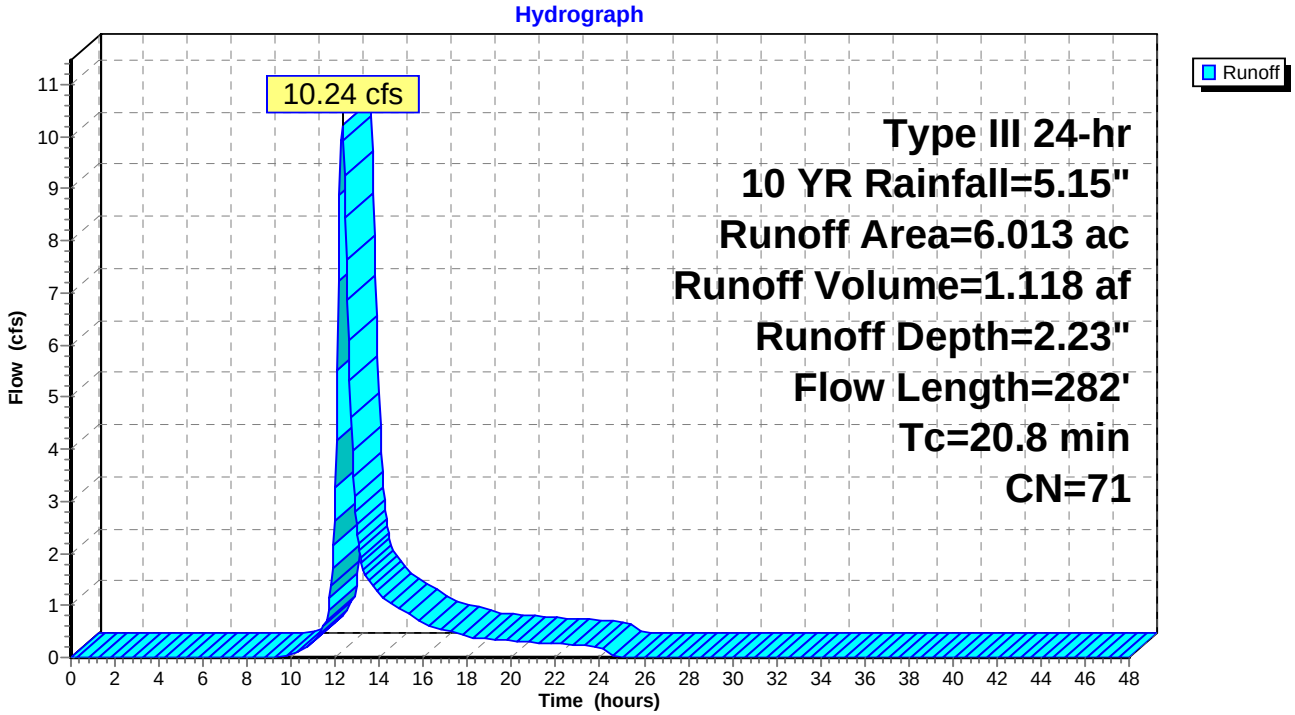
Runoff = 10.24 cfs @ 12.30 hrs, Volume= 1.118 af, Depth= 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=5.15"

Area (ac)	CN	Description
0.548	73	Woods, Fair, HSG C
5.465	71	Meadow, non-grazed, HSG C
6.013	71	Weighted Average
6.013		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.8	100	0.0110	0.09		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.6	63	0.0083	0.64		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.8	59	0.0336	1.28		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	60	0.0521	1.60		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
20.8	282	Total			

Subcatchment EDA-2: EDA-2



Summary for Subcatchment EDA-3: EDA-3

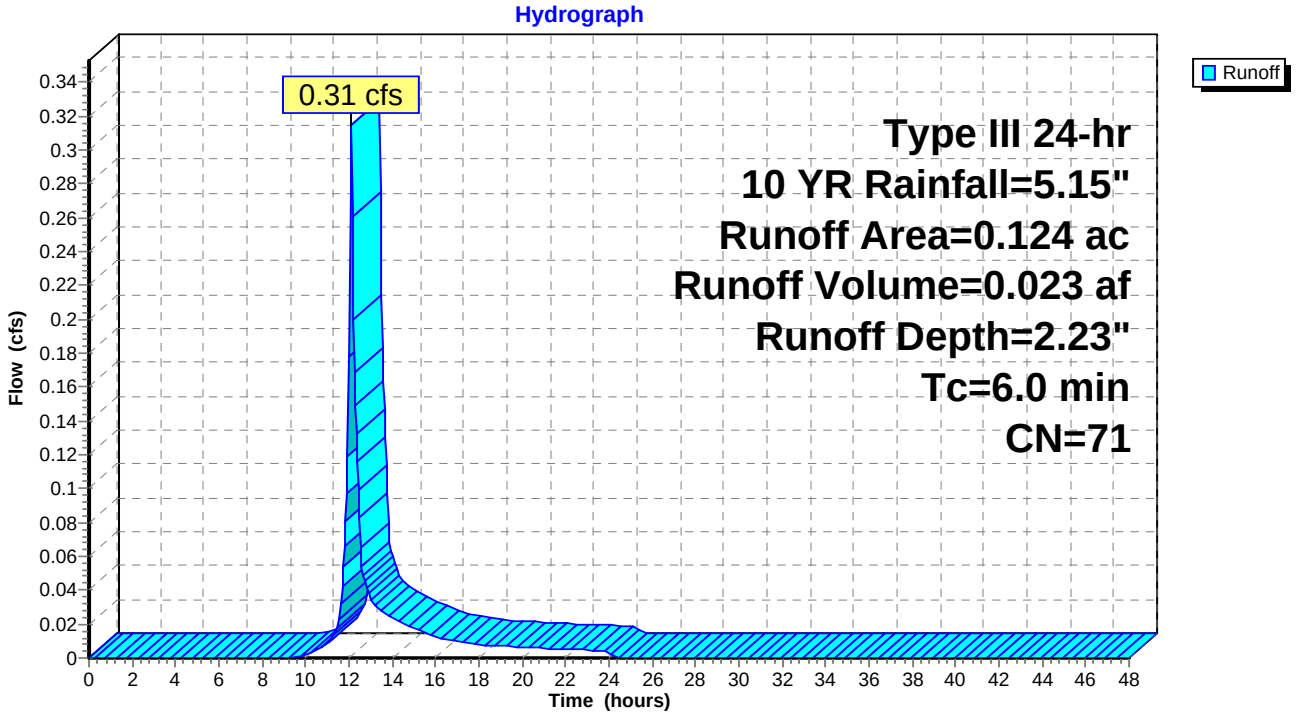
Runoff = 0.31 cfs @ 12.10 hrs, Volume= 0.023 af, Depth= 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=5.15"

Area (ac)	CN	Description
0.124	71	Meadow, non-grazed, HSG C
0.124		100.00% Pervious Area

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

Subcatchment EDA-3: EDA-3

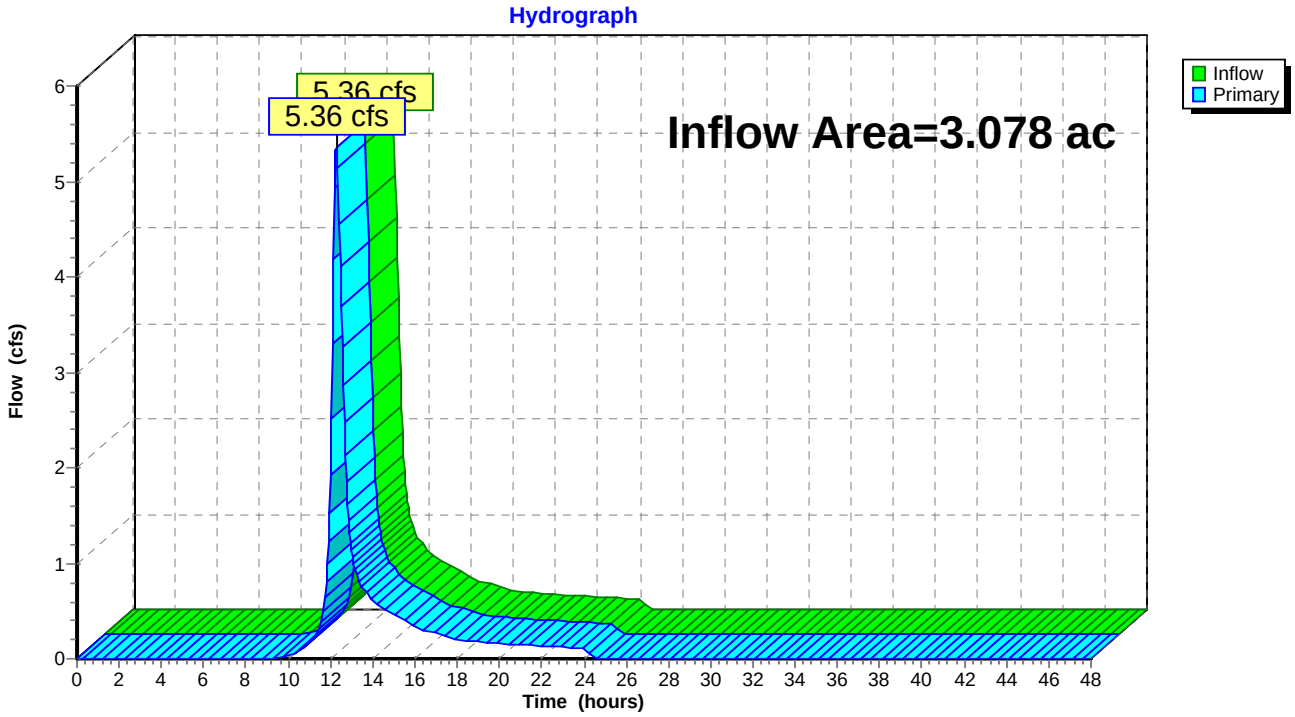


Summary for Link AP-1: AP-1

Inflow Area = 3.078 ac, 0.00% Impervious, Inflow Depth = 2.23" for 10 YR event
Inflow = 5.36 cfs @ 12.27 hrs, Volume= 0.572 af
Primary = 5.36 cfs @ 12.27 hrs, Volume= 0.572 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-1: AP-1

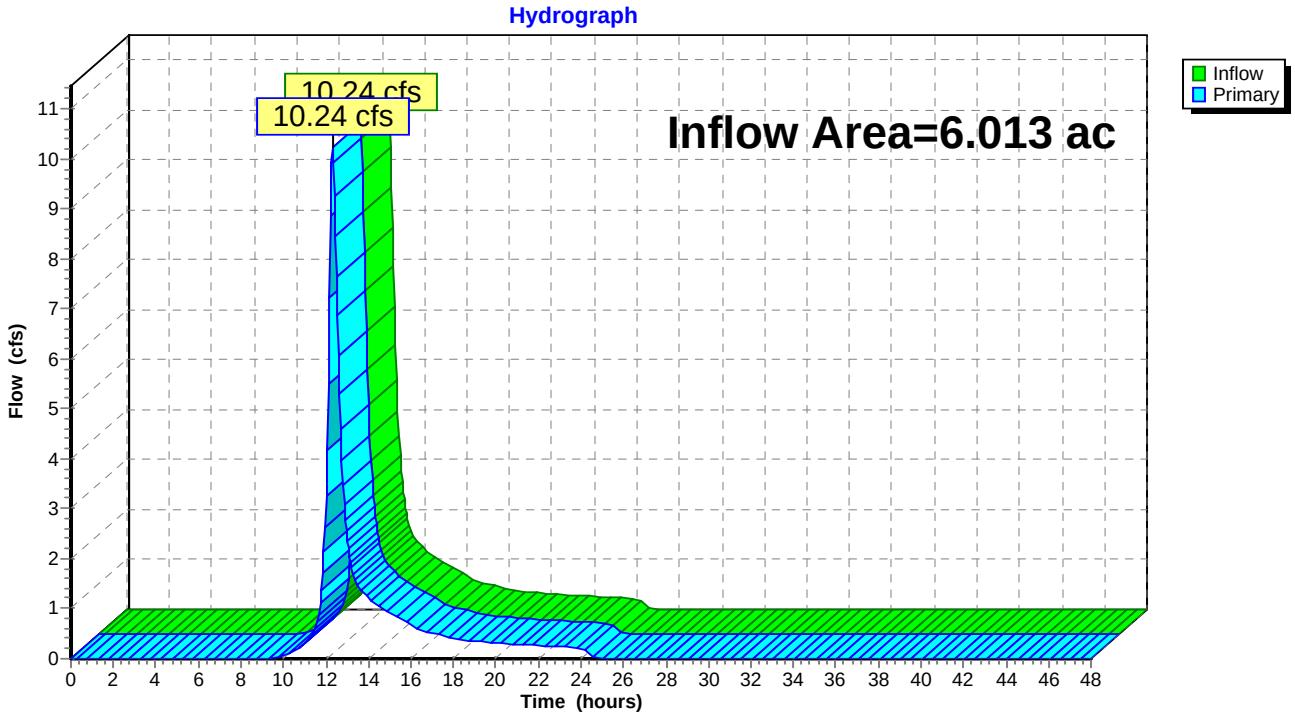


Summary for Link AP-2: AP-2

Inflow Area = 6.013 ac, 0.00% Impervious, Inflow Depth = 2.23" for 10 YR event
Inflow = 10.24 cfs @ 12.30 hrs, Volume= 1.118 af
Primary = 10.24 cfs @ 12.30 hrs, Volume= 1.118 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-2: AP-2



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EDA-1: EDA-1 Runoff Area=2.954 ac 0.00% Impervious Runoff Depth=3.14"
Flow Length=224' Tc=19.2 min CN=71 Runoff=7.42 cfs 0.774 af

Subcatchment EDA-2: EDA-2 Runoff Area=6.013 ac 0.00% Impervious Runoff Depth=3.14"
Flow Length=282' Tc=20.8 min CN=71 Runoff=14.59 cfs 1.575 af

Subcatchment EDA-3: EDA-3 Runoff Area=0.124 ac 0.00% Impervious Runoff Depth=3.14"
Tc=6.0 min CN=71 Runoff=0.45 cfs 0.032 af

Link AP-1: AP-1 Inflow=7.64 cfs 0.806 af
Primary=7.64 cfs 0.806 af

Link AP-2: AP-2 Inflow=14.59 cfs 1.575 af
Primary=14.59 cfs 1.575 af

Total Runoff Area = 9.091 ac Runoff Volume = 2.381 af Average Runoff Depth = 3.14"
100.00% Pervious = 9.091 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EDA-1: EDA-1

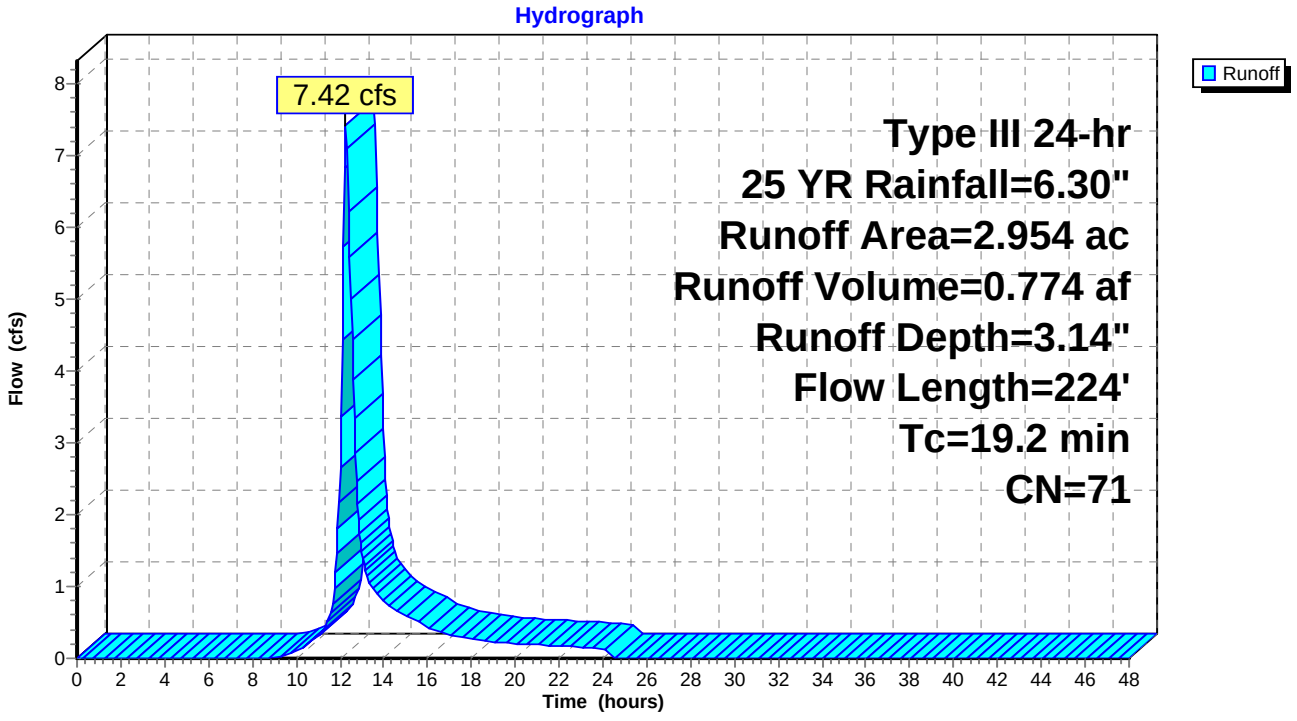
Runoff = 7.42 cfs @ 12.27 hrs, Volume= 0.774 af, Depth= 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=6.30"

Area (ac)	CN	Description
2.954	71	Meadow, non-grazed, HSG C
2.954		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	81	0.0073	0.08		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.5	143	0.0485	1.54		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
19.2	224	Total			

Subcatchment EDA-1: EDA-1



Summary for Subcatchment EDA-2: EDA-2

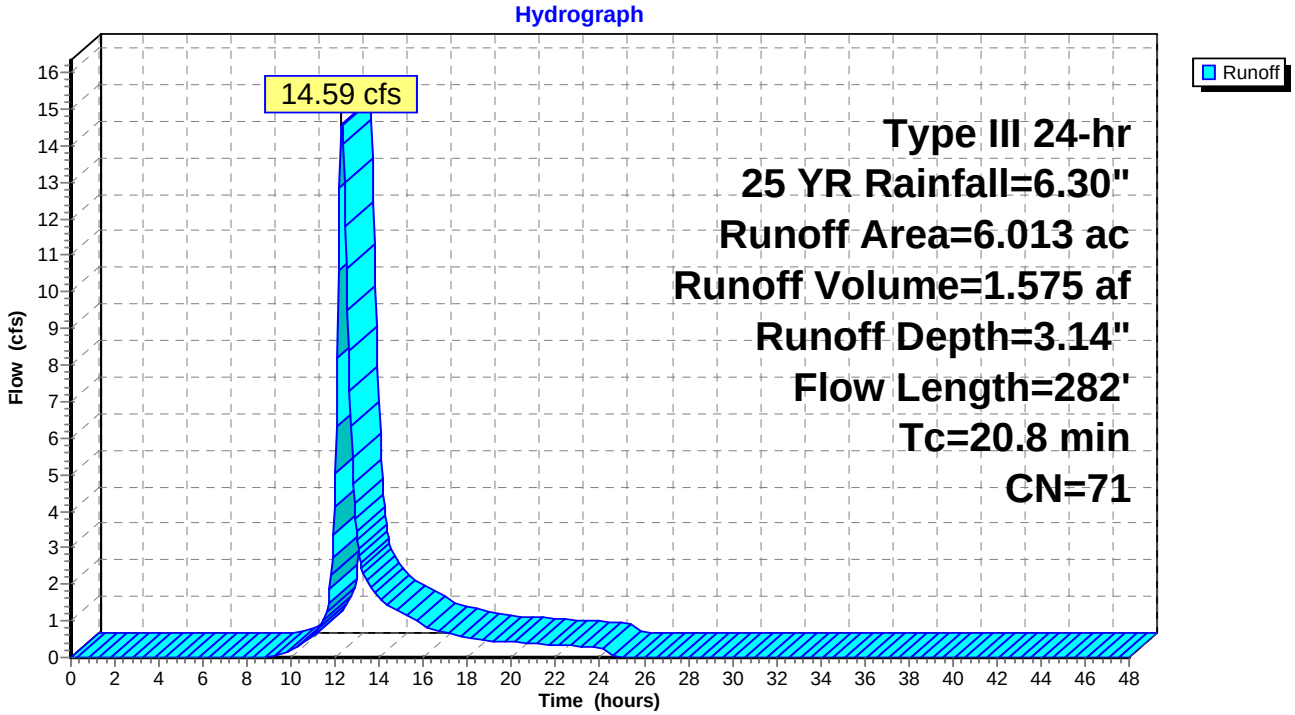
Runoff = 14.59 cfs @ 12.29 hrs, Volume= 1.575 af, Depth= 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=6.30"

Area (ac)	CN	Description
0.548	73	Woods, Fair, HSG C
5.465	71	Meadow, non-grazed, HSG C
6.013	71	Weighted Average
6.013		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.8	100	0.0110	0.09		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.6	63	0.0083	0.64		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.8	59	0.0336	1.28		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	60	0.0521	1.60		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
20.8	282	Total			

Subcatchment EDA-2: EDA-2



Summary for Subcatchment EDA-3: EDA-3

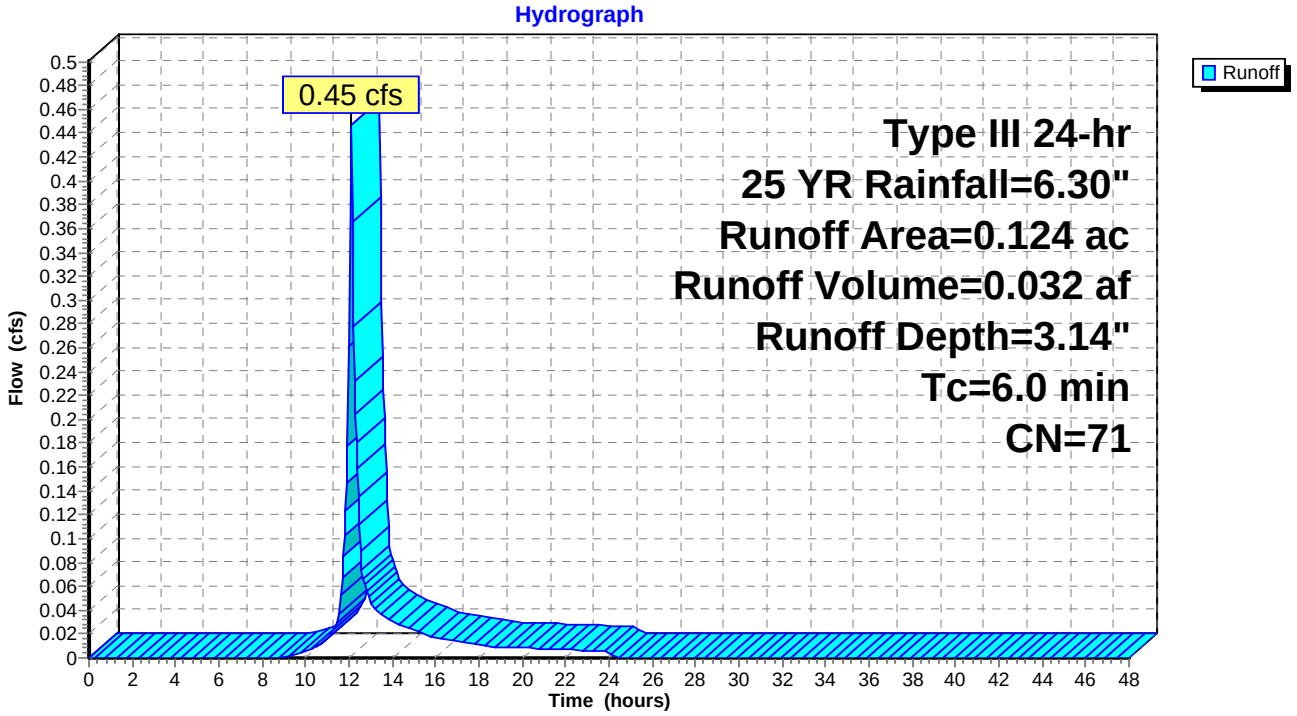
Runoff = 0.45 cfs @ 12.09 hrs, Volume= 0.032 af, Depth= 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=6.30"

Area (ac)	CN	Description
0.124	71	Meadow, non-grazed, HSG C
0.124		100.00% Pervious Area

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

Subcatchment EDA-3: EDA-3

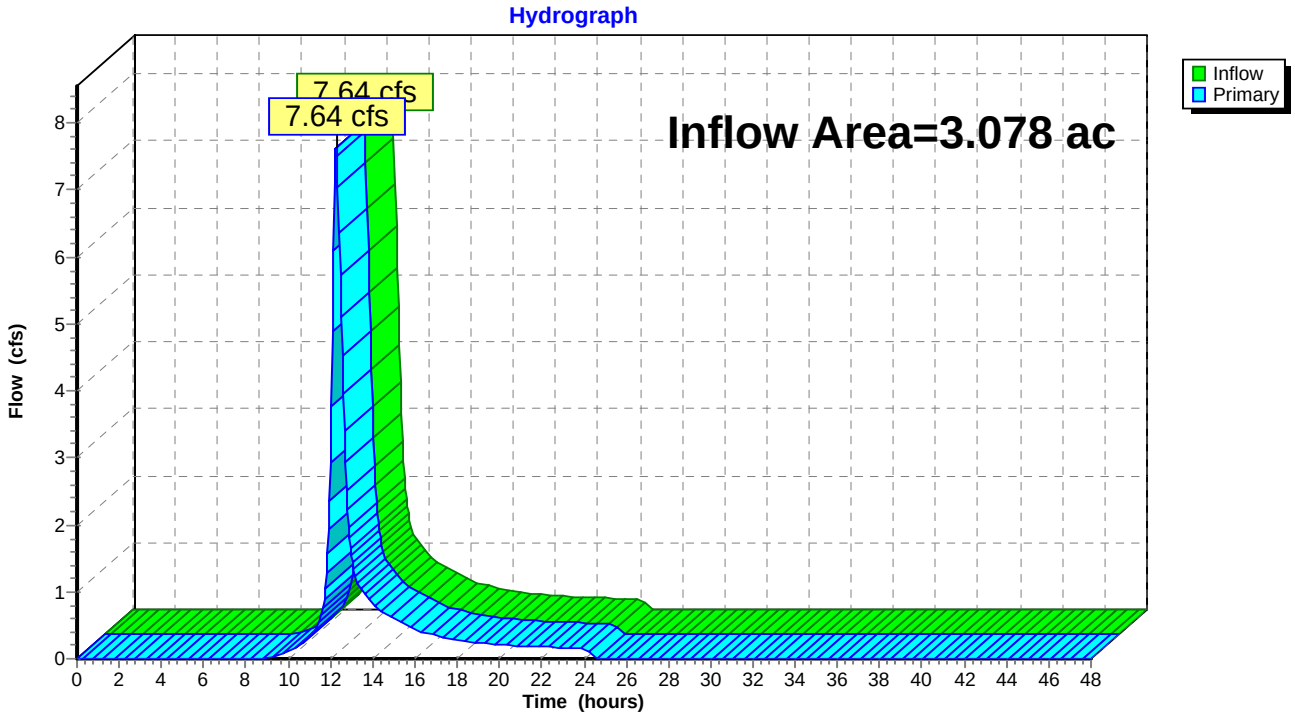


Summary for Link AP-1: AP-1

Inflow Area = 3.078 ac, 0.00% Impervious, Inflow Depth = 3.14" for 25 YR event
Inflow = 7.64 cfs @ 12.27 hrs, Volume= 0.806 af
Primary = 7.64 cfs @ 12.27 hrs, Volume= 0.806 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-1: AP-1

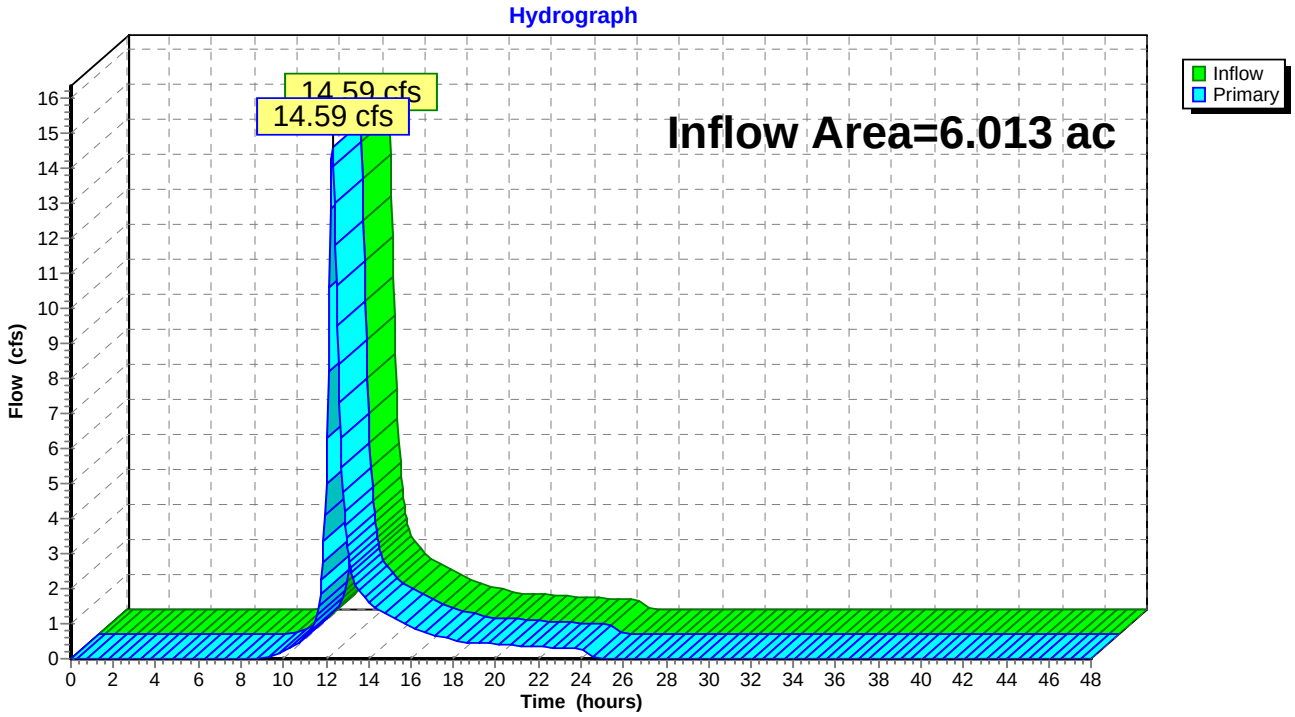


Summary for Link AP-2: AP-2

Inflow Area = 6.013 ac, 0.00% Impervious, Inflow Depth = 3.14" for 25 YR event
Inflow = 14.59 cfs @ 12.29 hrs, Volume= 1.575 af
Primary = 14.59 cfs @ 12.29 hrs, Volume= 1.575 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-2: AP-2



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EDA-1: EDA-1 Runoff Area=2.954 ac 0.00% Impervious Runoff Depth=4.64"
Flow Length=224' Tc=19.2 min CN=71 Runoff=11.00 cfs 1.142 af

Subcatchment EDA-2: EDA-2 Runoff Area=6.013 ac 0.00% Impervious Runoff Depth=4.64"
Flow Length=282' Tc=20.8 min CN=71 Runoff=21.62 cfs 2.325 af

Subcatchment EDA-3: EDA-3 Runoff Area=0.124 ac 0.00% Impervious Runoff Depth=4.64"
Tc=6.0 min CN=71 Runoff=0.66 cfs 0.048 af

Link AP-1: AP-1 Inflow=11.32 cfs 1.190 af
Primary=11.32 cfs 1.190 af

Link AP-2: AP-2 Inflow=21.62 cfs 2.325 af
Primary=21.62 cfs 2.325 af

Total Runoff Area = 9.091 ac Runoff Volume = 3.515 af Average Runoff Depth = 4.64"
100.00% Pervious = 9.091 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EDA-1: EDA-1

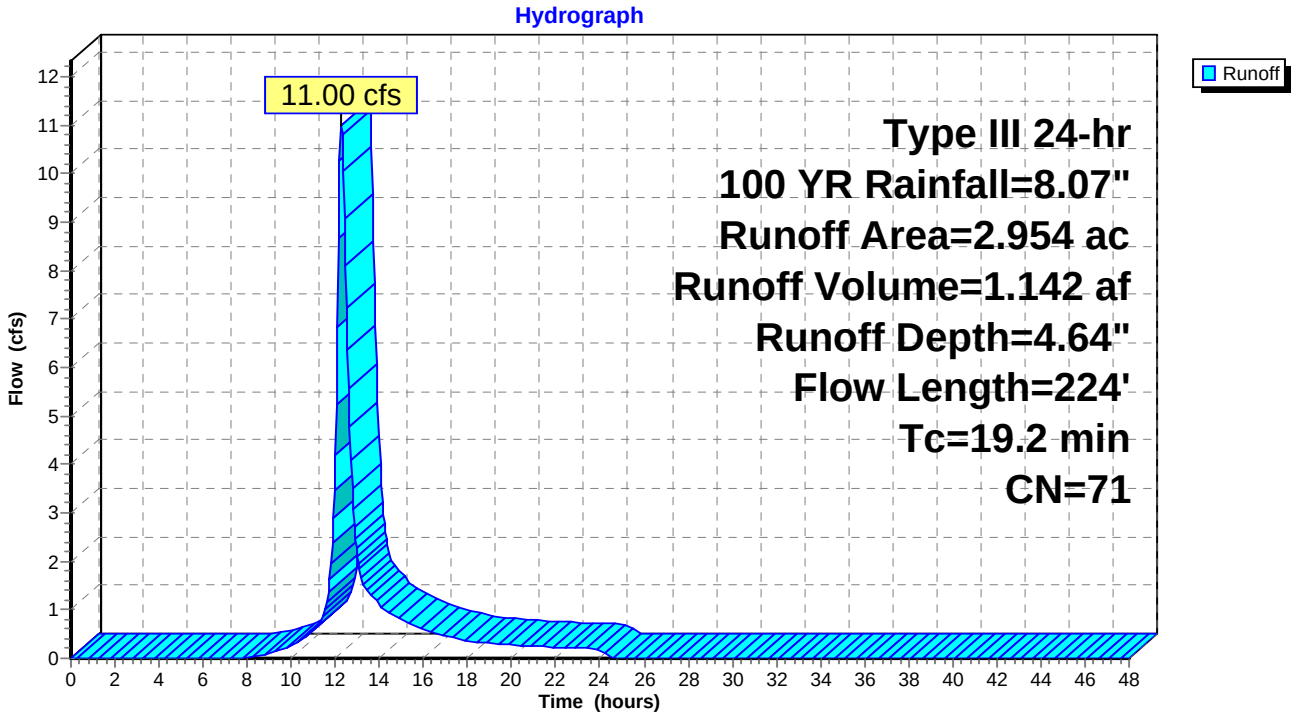
Runoff = 11.00 cfs @ 12.27 hrs, Volume= 1.142 af, Depth= 4.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.07"

Area (ac)	CN	Description
2.954	71	Meadow, non-grazed, HSG C
2.954		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	81	0.0073	0.08		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.5	143	0.0485	1.54		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
19.2	224	Total			

Subcatchment EDA-1: EDA-1



Summary for Subcatchment EDA-2: EDA-2

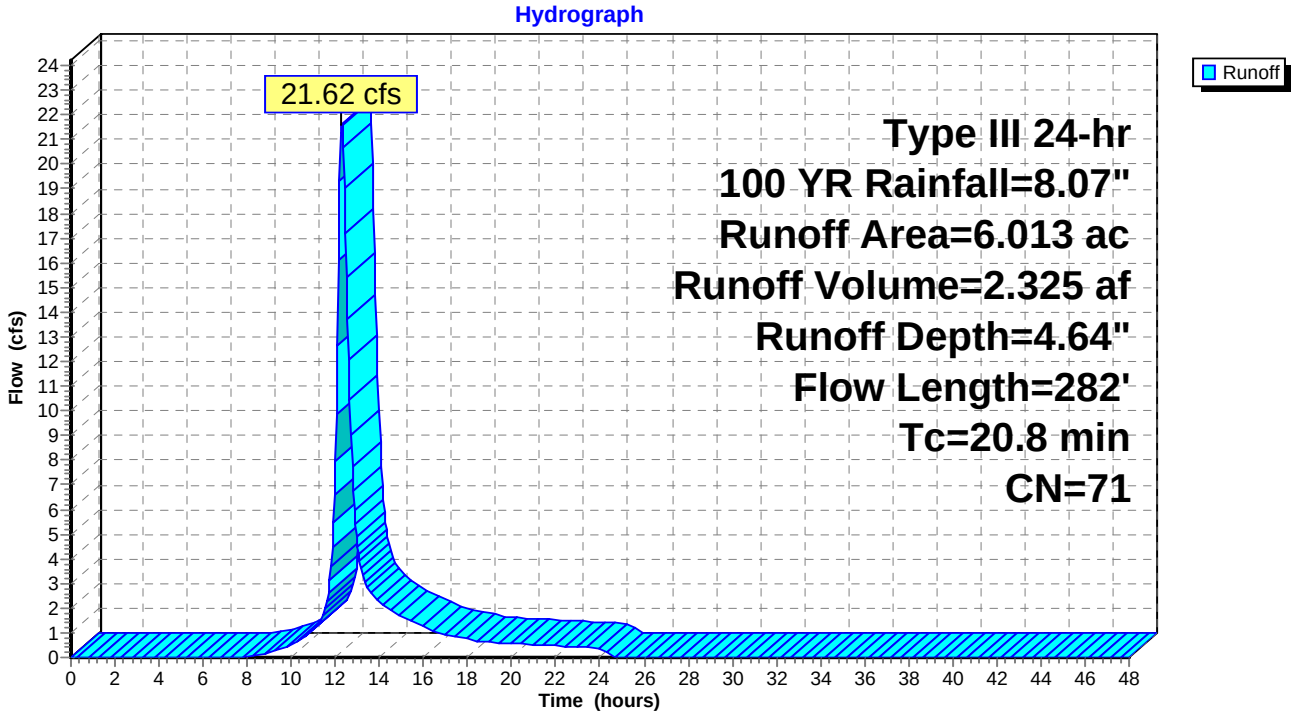
Runoff = 21.62 cfs @ 12.29 hrs, Volume= 2.325 af, Depth= 4.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.07"

Area (ac)	CN	Description
0.548	73	Woods, Fair, HSG C
5.465	71	Meadow, non-grazed, HSG C
6.013	71	Weighted Average
6.013		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.8	100	0.0110	0.09		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.6	63	0.0083	0.64		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.8	59	0.0336	1.28		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	60	0.0521	1.60		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
20.8	282	Total			

Subcatchment EDA-2: EDA-2



Summary for Subcatchment EDA-3: EDA-3

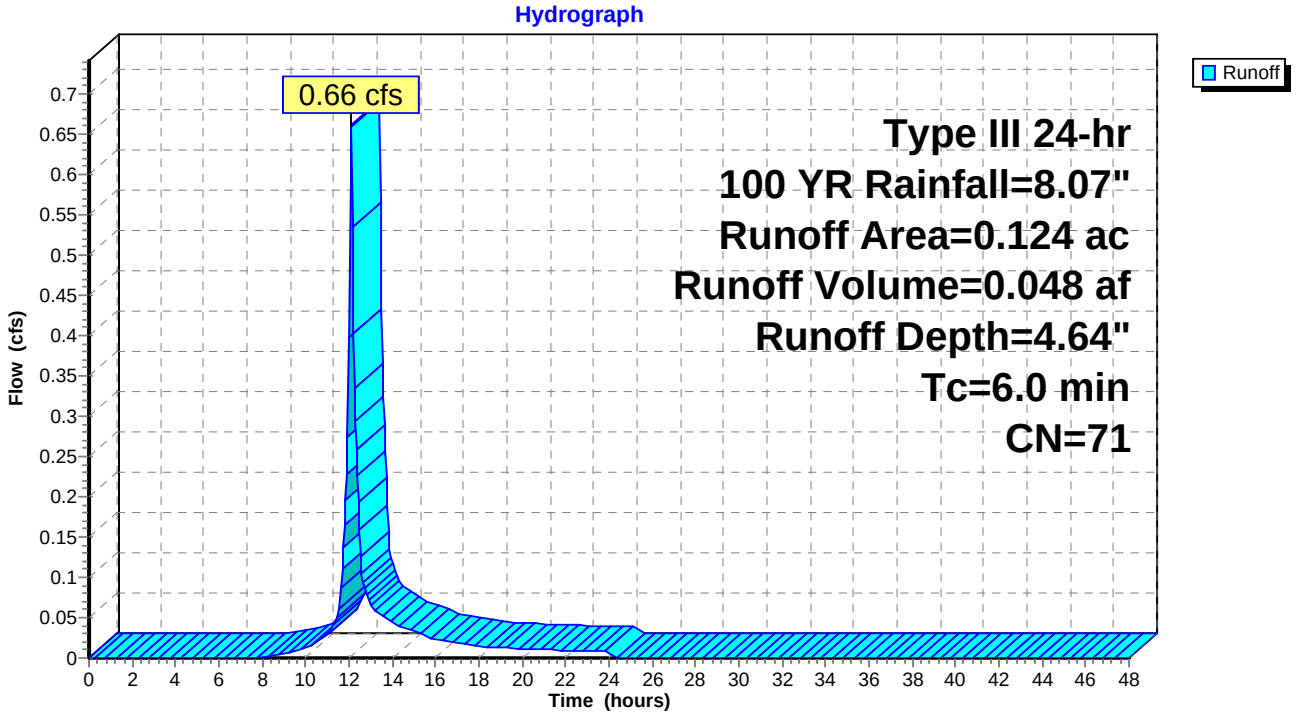
Runoff = 0.66 cfs @ 12.09 hrs, Volume= 0.048 af, Depth= 4.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.07"

Area (ac)	CN	Description
0.124	71	Meadow, non-grazed, HSG C
0.124		100.00% Pervious Area

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

Subcatchment EDA-3: EDA-3

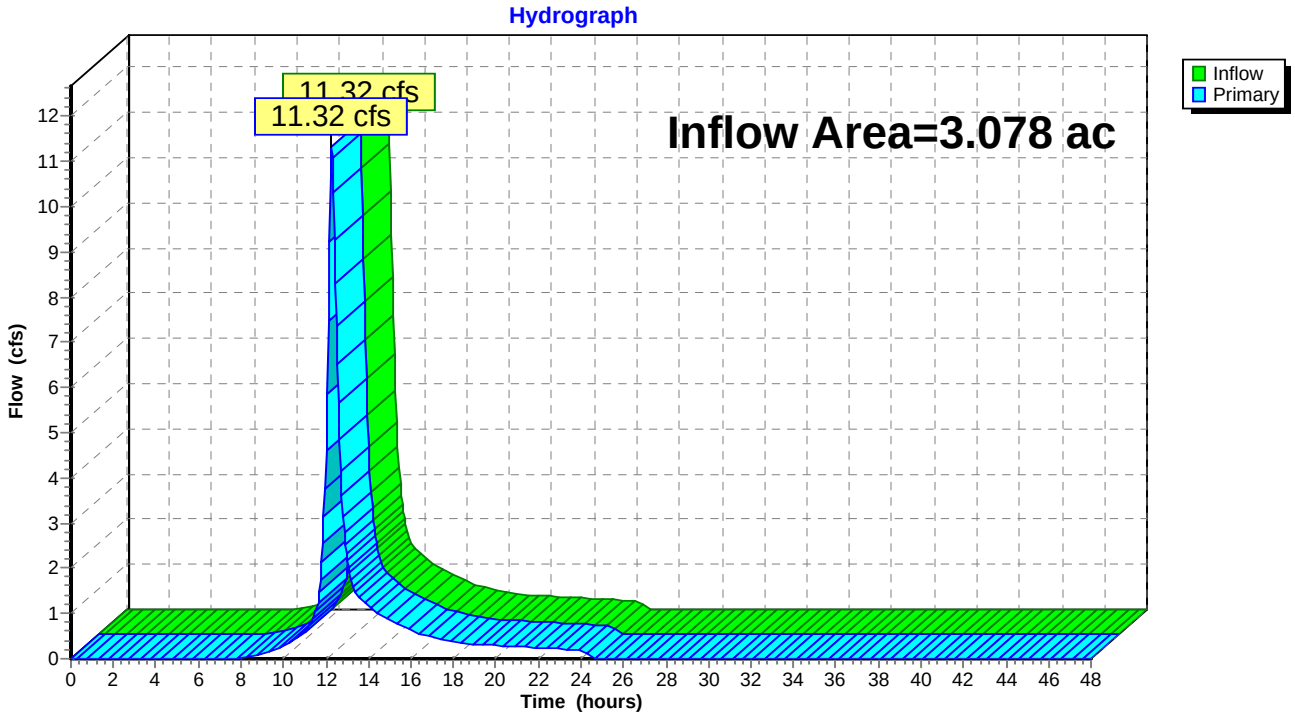


Summary for Link AP-1: AP-1

Inflow Area = 3.078 ac, 0.00% Impervious, Inflow Depth = 4.64" for 100 YR event
Inflow = 11.32 cfs @ 12.26 hrs, Volume= 1.190 af
Primary = 11.32 cfs @ 12.26 hrs, Volume= 1.190 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-1: AP-1

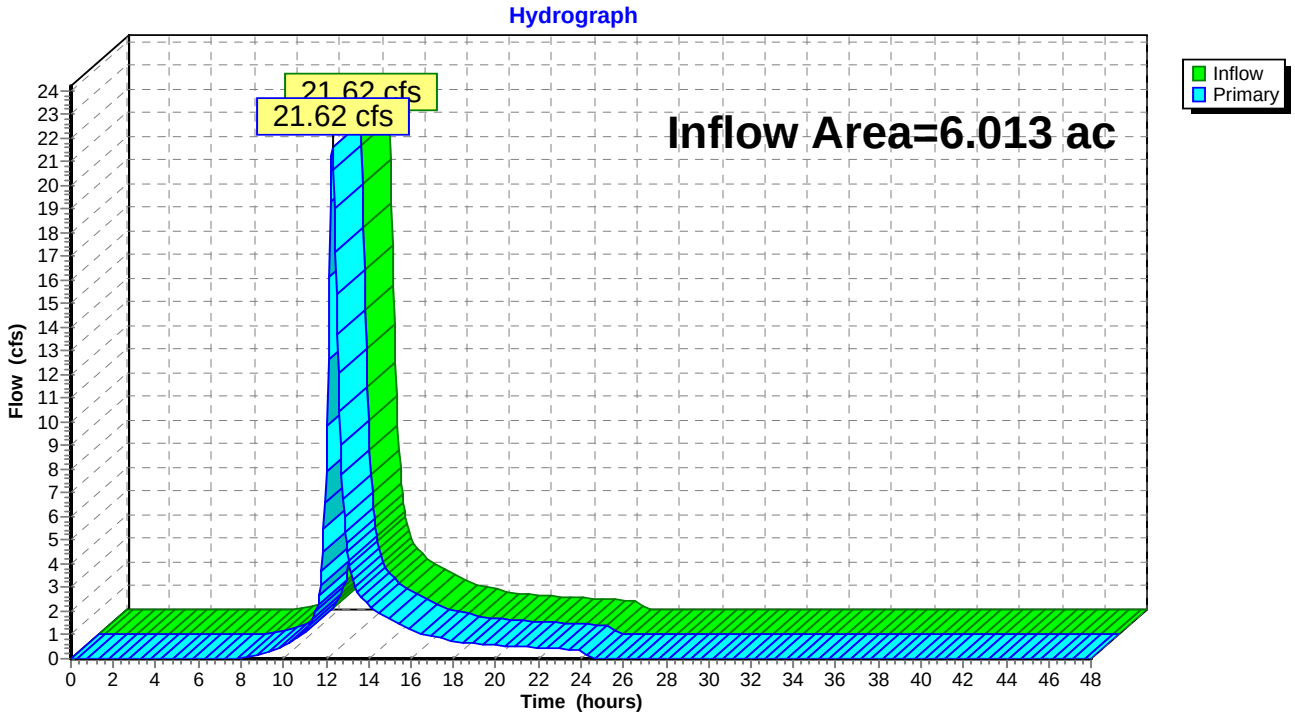


Summary for Link AP-2: AP-2

Inflow Area = 6.013 ac, 0.00% Impervious, Inflow Depth = 4.64" for 100 YR event
Inflow = 21.62 cfs @ 12.29 hrs, Volume= 2.325 af
Primary = 21.62 cfs @ 12.29 hrs, Volume= 2.325 af, Atten= 0%, Lag= 0.0 min

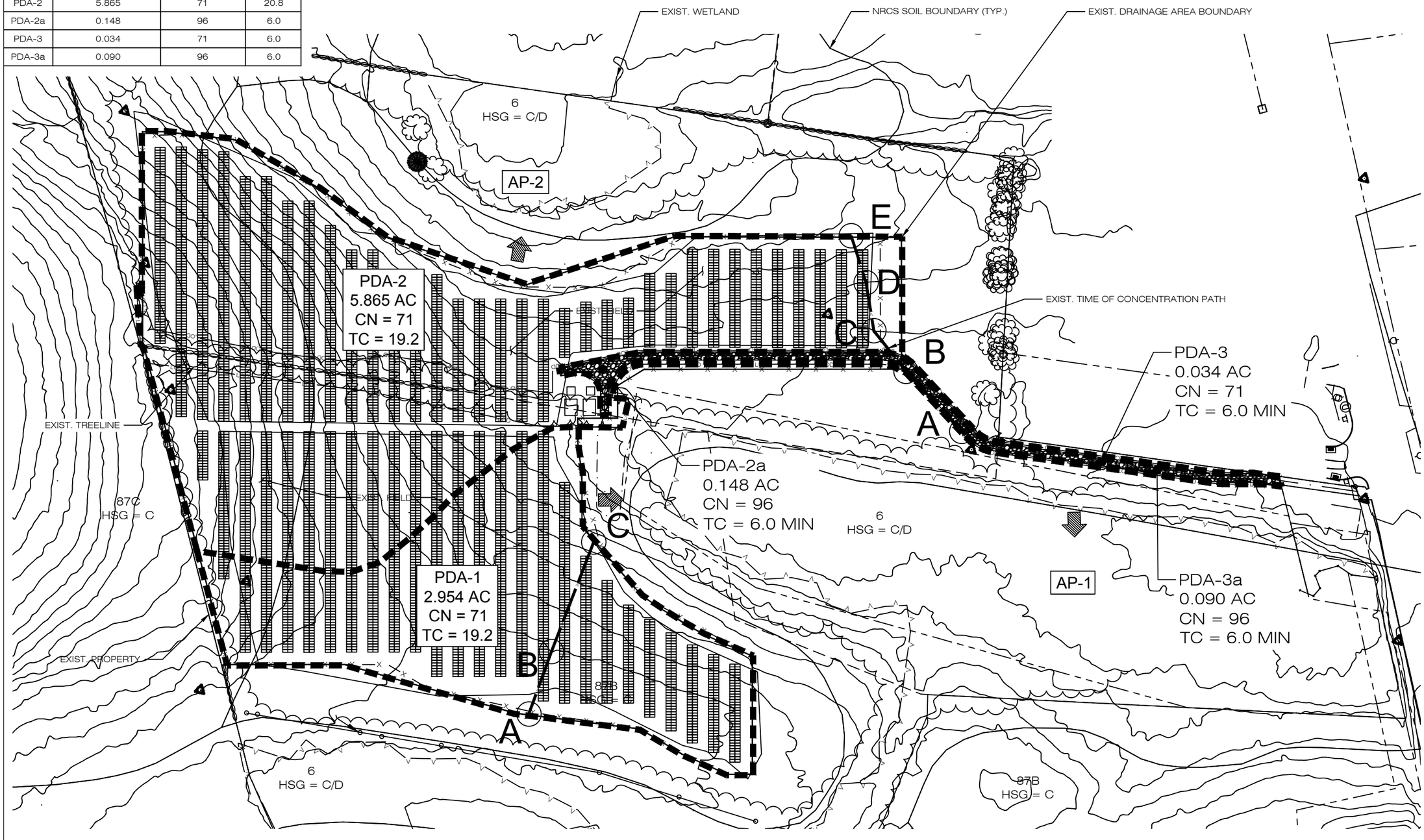
Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-2: AP-2



PROPOSED DRAINAGE AREAS

	TOTAL AREA (ACRES)	COMPOSITE CN	TC (MINS.)
PDA-1	2.954	71	19.2
PDA-2	5.865	71	20.8
PDA-2a	0.148	96	6.0
PDA-3	0.034	71	6.0
PDA-3a	0.090	96	6.0



CITRINE
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ALL-POINTS TECHNOLOGY CORPORATION
3 SADDLEBROOK DRIVE PHONE: (860)-663-1697
KILLINGWORTH, CT 06419 FAX: (860)-663-0935
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PERMITTING

NO	DATE	REVISION
0	04/10/19	FOR REVIEW: BJP
1	05/29/19	SWPCP SUBMISSION: BJP
2		
3		
4		
5		
6		

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 3 SADDLEBROOK DRIVE KILLINGWORTH, CT 06419

OWNER: BARBARA J. PENNEY ANN L. CHARTON
ADDRESS: 41 CHELSEA DRIVE CROMWELL, CT 06416

MIDDLETOWN/MIDDLEFIELD

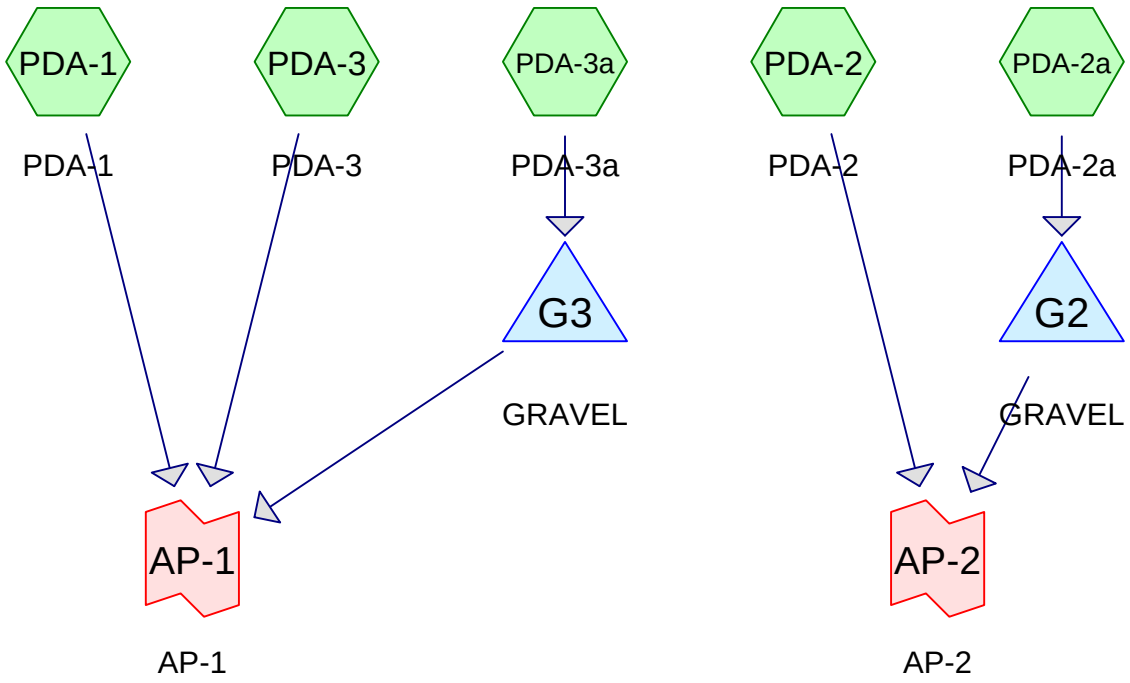
SITE ADDRESS: MERIDEN ROAD (ROUTE 66) MIDDLEFIELD, CT 06455

APT FILING NUMBER: CT567100

DRAWN BY: JT
DATE: 04/10/19
CHECKED BY: BJP

SHEET TITLE:
PROPOSED DRAINAGE AREA MAP

SHEET NUMBER:
PDA-1



Subcat Reach Pond Link

Routing Diagram for Middletown-Middlefield - PR - Rev0
Prepared by Microsoft, Printed 3/29/2019

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.238	96	Gravel surface, HSG C (PDA-2a, PDA-3a)
8.835	71	Meadow, non-grazed, HSG C (PDA-1, PDA-2, PDA-3)
0.018	98	Unconnected pavement, HSG C (PDA-2)
9.091	**72**	**TOTAL AREA**

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA-1: PDA-1 Runoff Area=2.954 ac 0.00% Impervious Runoff Depth=0.94"
Flow Length=224' Tc=19.2 min CN=71 Runoff=2.04 cfs 0.233 af

Subcatchment PDA-2: PDA-2 Runoff Area=5.865 ac 0.31% Impervious Runoff Depth=0.94"
Flow Length=282' Tc=20.8 min CN=71 Runoff=3.93 cfs 0.462 af

Subcatchment PDA-2a: PDA-2a Runoff Area=0.148 ac 0.00% Impervious Runoff Depth=2.86"
Tc=6.0 min CN=96 Runoff=0.45 cfs 0.035 af

Subcatchment PDA-3: PDA-3 Runoff Area=0.034 ac 0.00% Impervious Runoff Depth=0.94"
Tc=6.0 min CN=71 Runoff=0.03 cfs 0.003 af

Subcatchment PDA-3a: PDA-3a Runoff Area=0.090 ac 0.00% Impervious Runoff Depth=2.86"
Tc=6.0 min CN=96 Runoff=0.27 cfs 0.021 af

Pond G2: GRAVEL Peak Elev=0.26' Storage=680 cf Inflow=0.45 cfs 0.035 af
Discarded=0.03 cfs 0.035 af Primary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.035 af

Pond G3: GRAVEL Peak Elev=0.26' Storage=413 cf Inflow=0.27 cfs 0.021 af
Discarded=0.02 cfs 0.021 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.021 af

Link AP-1: AP-1 Inflow=2.06 cfs 0.235 af
Primary=2.06 cfs 0.235 af

Link AP-2: AP-2 Inflow=3.93 cfs 0.462 af
Primary=3.93 cfs 0.462 af

Total Runoff Area = 9.091 ac Runoff Volume = 0.754 af Average Runoff Depth = 1.00"
99.80% Pervious = 9.073 ac 0.20% Impervious = 0.018 ac

Summary for Subcatchment PDA-1: PDA-1

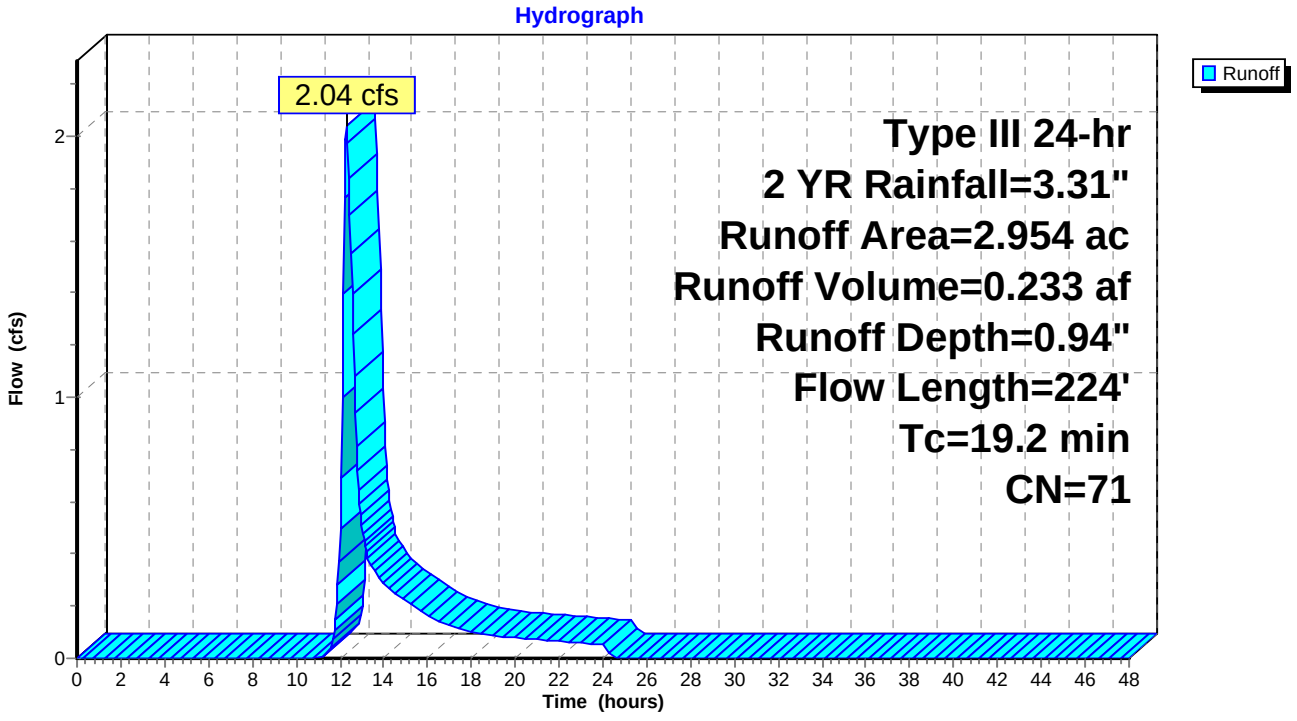
Runoff = 2.04 cfs @ 12.30 hrs, Volume= 0.233 af, Depth= 0.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.31"

Area (ac)	CN	Description
2.954	71	Meadow, non-grazed, HSG C
2.954		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	81	0.0073	0.08		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.5	143	0.0485	1.54		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
19.2	224	Total			

Subcatchment PDA-1: PDA-1



Summary for Subcatchment PDA-2: PDA-2

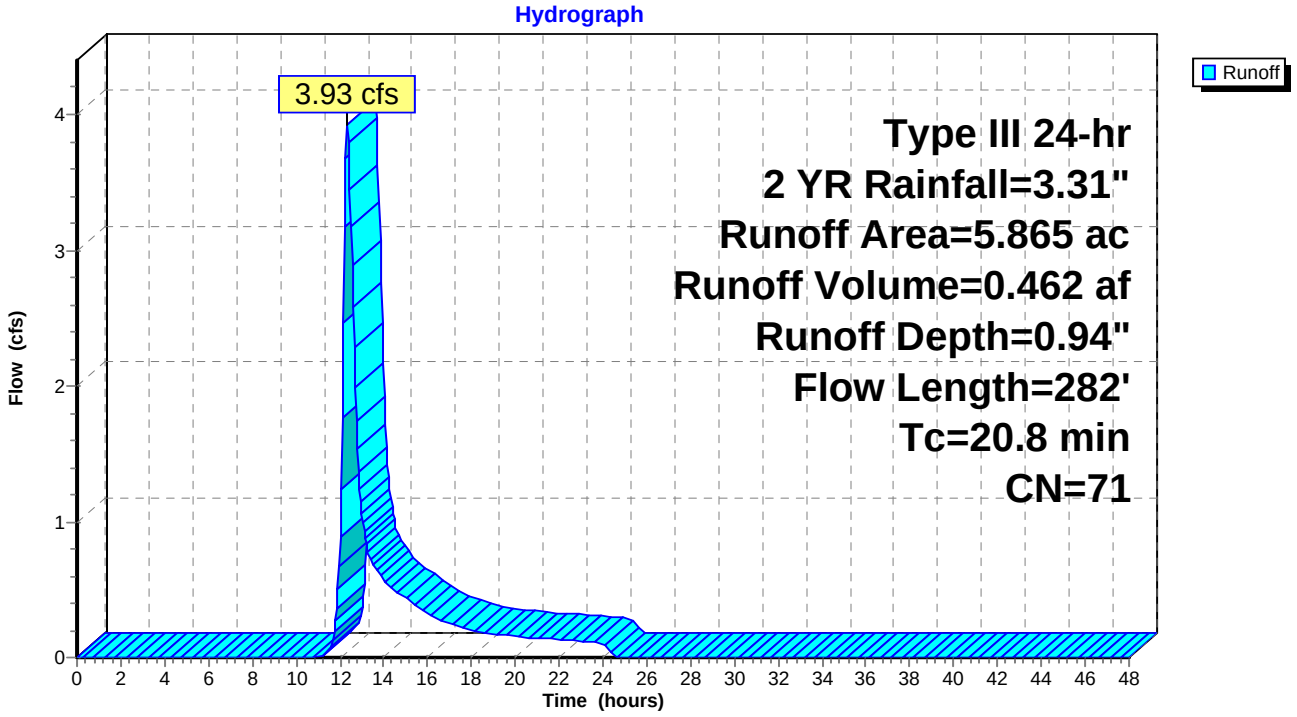
Runoff = 3.93 cfs @ 12.32 hrs, Volume= 0.462 af, Depth= 0.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.31"

Area (ac)	CN	Description
5.847	71	Meadow, non-grazed, HSG C
0.018	98	Unconnected pavement, HSG C
5.865	71	Weighted Average
5.847		99.69% Pervious Area
0.018		0.31% Impervious Area
0.018		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.8	100	0.0110	0.09		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.6	63	0.0083	0.64		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.8	59	0.0336	1.28		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	60	0.0521	1.60		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
20.8	282	Total			

Subcatchment PDA-2: PDA-2



Summary for Subcatchment PDA-2a: PDA-2a

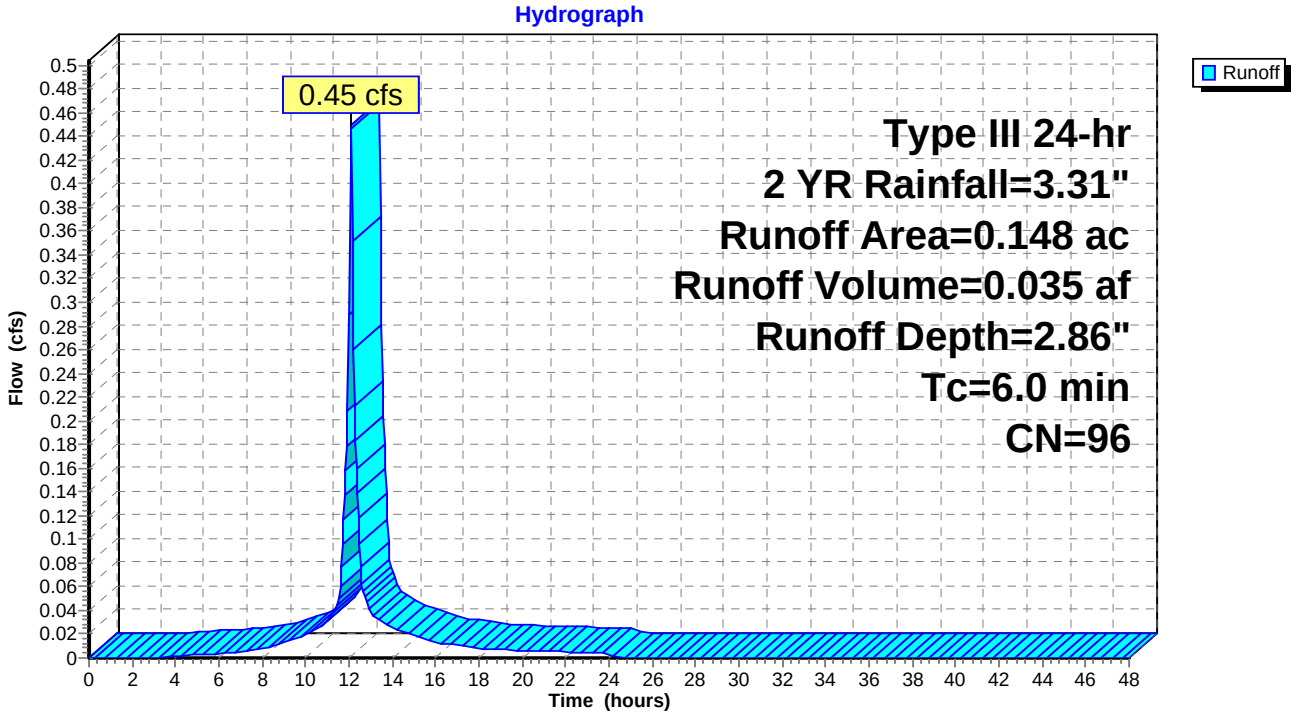
Runoff = 0.45 cfs @ 12.09 hrs, Volume= 0.035 af, Depth= 2.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.31"

Area (ac)	CN	Description
0.148	96	Gravel surface, HSG C
0.148		100.00% Pervious Area

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

Subcatchment PDA-2a: PDA-2a



Summary for Subcatchment PDA-3: PDA-3

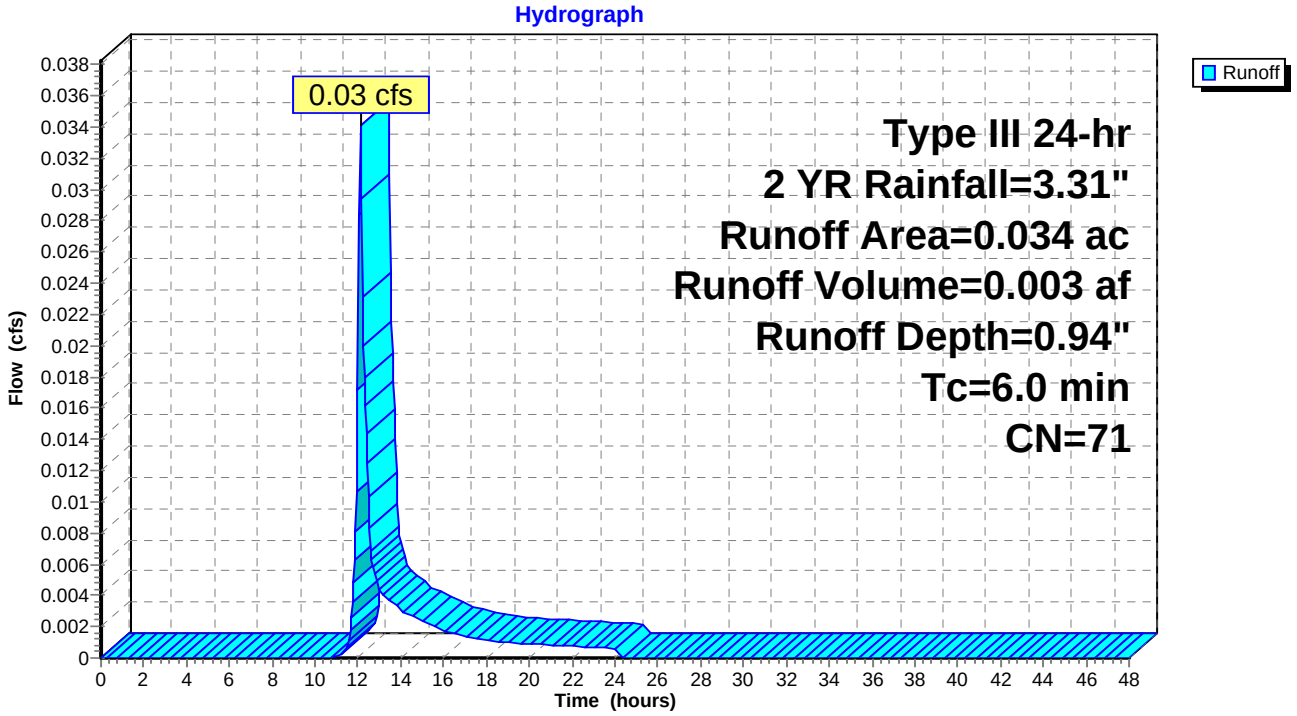
Runoff = 0.03 cfs @ 12.10 hrs, Volume= 0.003 af, Depth= 0.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.31"

Area (ac)	CN	Description
0.034	71	Meadow, non-grazed, HSG C
0.034		100.00% Pervious Area

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

Subcatchment PDA-3: PDA-3



Summary for Subcatchment PDA-3a: PDA-3a

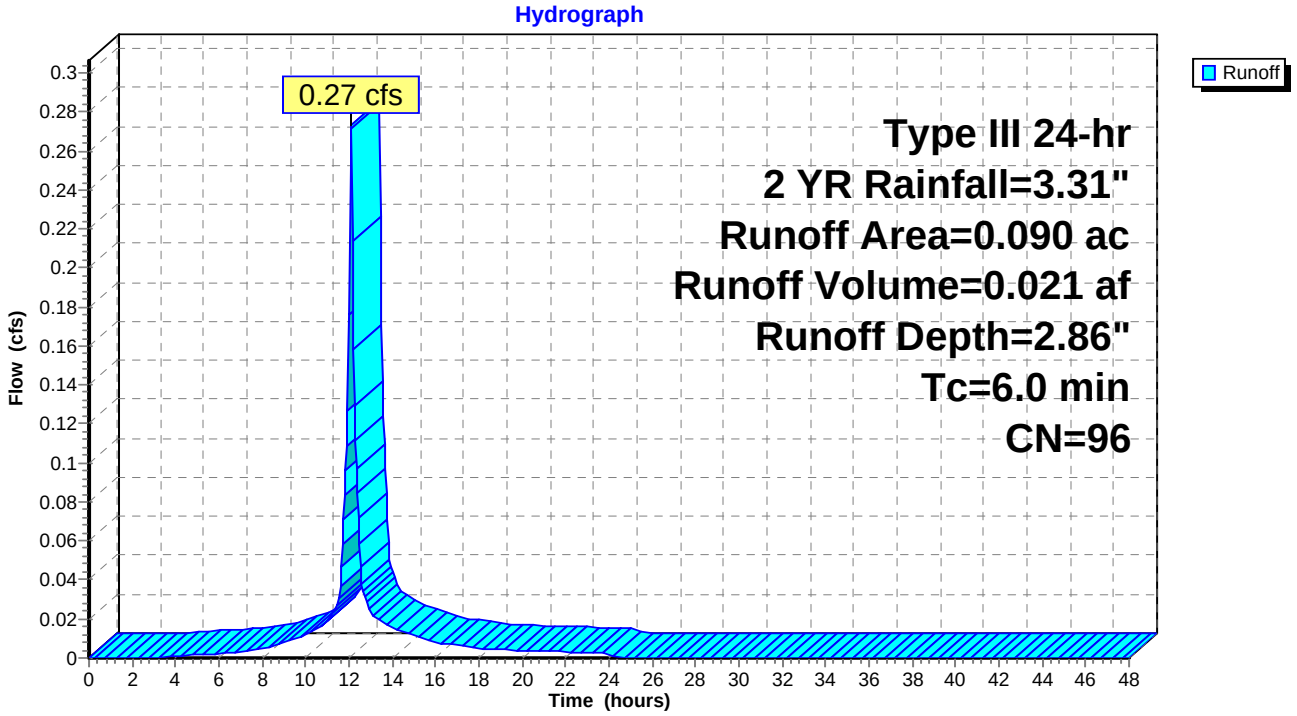
Runoff = 0.27 cfs @ 12.09 hrs, Volume= 0.021 af, Depth= 2.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.31"

Area (ac)	CN	Description
0.090	96	Gravel surface, HSG C
0.090		100.00% Pervious Area

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

Subcatchment PDA-3a: PDA-3a



Summary for Pond G2: GRAVEL

Inflow Area = 0.148 ac, 0.00% Impervious, Inflow Depth = 2.86" for 2 YR event
Inflow = 0.45 cfs @ 12.09 hrs, Volume= 0.035 af
Outflow = 0.03 cfs @ 11.50 hrs, Volume= 0.035 af, Atten= 94%, Lag= 0.0 min
Discarded = 0.03 cfs @ 11.50 hrs, Volume= 0.035 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 0.26' @ 13.95 hrs Surf.Area= 6,446 sf Storage= 680 cf

Plug-Flow detention time= 224.8 min calculated for 0.035 af (100% of inflow)
Center-of-Mass det. time= 225.3 min (998.4 - 773.1)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	2,578 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 6,446 cf Overall x 40.0% Voids

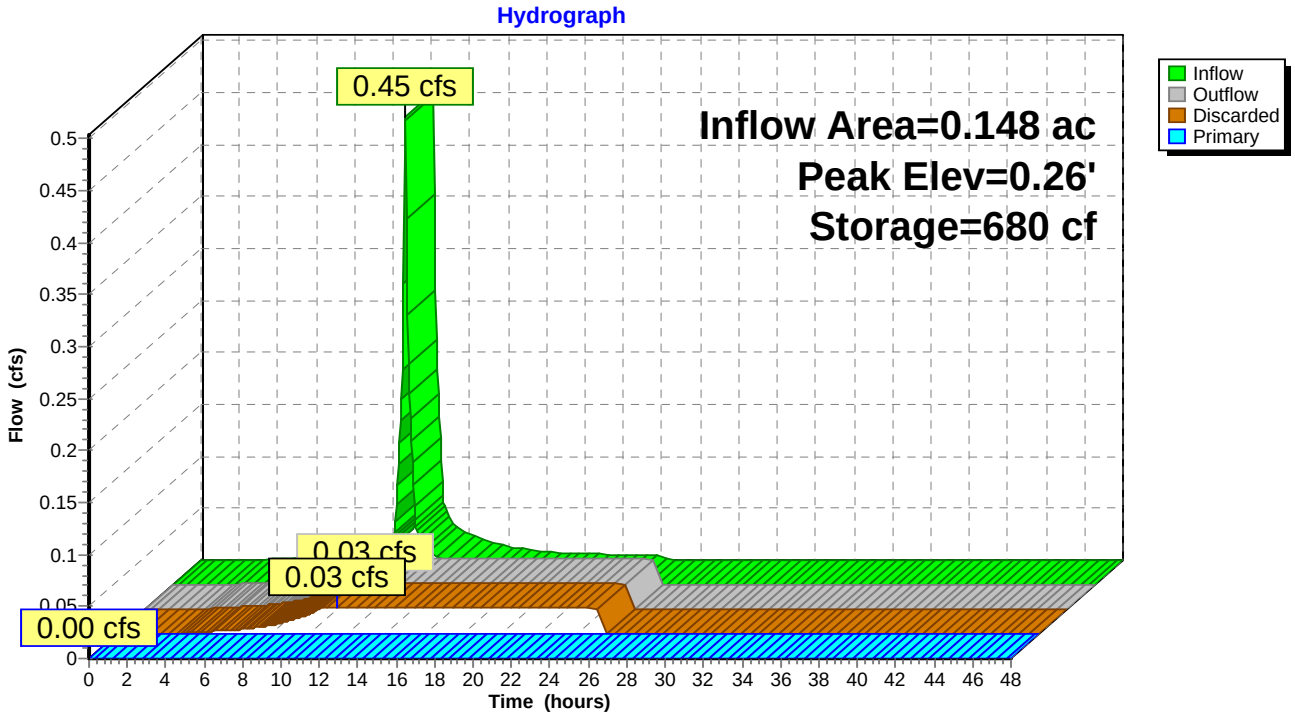
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	6,446	0	0
1.00	6,446	6,446	6,446

Device	Routing	Invert	Outlet Devices
#1	Primary	0.99'	**150.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#2	Discarded	0.00'	**0.170 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.03 cfs @ 11.50 hrs HW=0.01' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' TW=0.00' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond G2: GRAVEL



Summary for Pond G3: GRAVEL

Inflow Area = 0.090 ac, 0.00% Impervious, Inflow Depth = 2.86" for 2 YR event
Inflow = 0.27 cfs @ 12.09 hrs, Volume= 0.021 af
Outflow = 0.02 cfs @ 11.50 hrs, Volume= 0.021 af, Atten= 94%, Lag= 0.0 min
Discarded = 0.02 cfs @ 11.50 hrs, Volume= 0.021 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 0.26' @ 13.95 hrs Surf.Area= 3,931 sf Storage= 413 cf

Plug-Flow detention time= 223.8 min calculated for 0.021 af (100% of inflow)
Center-of-Mass det. time= 224.0 min (997.0 - 773.1)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,572 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 3,931 cf Overall x 40.0% Voids

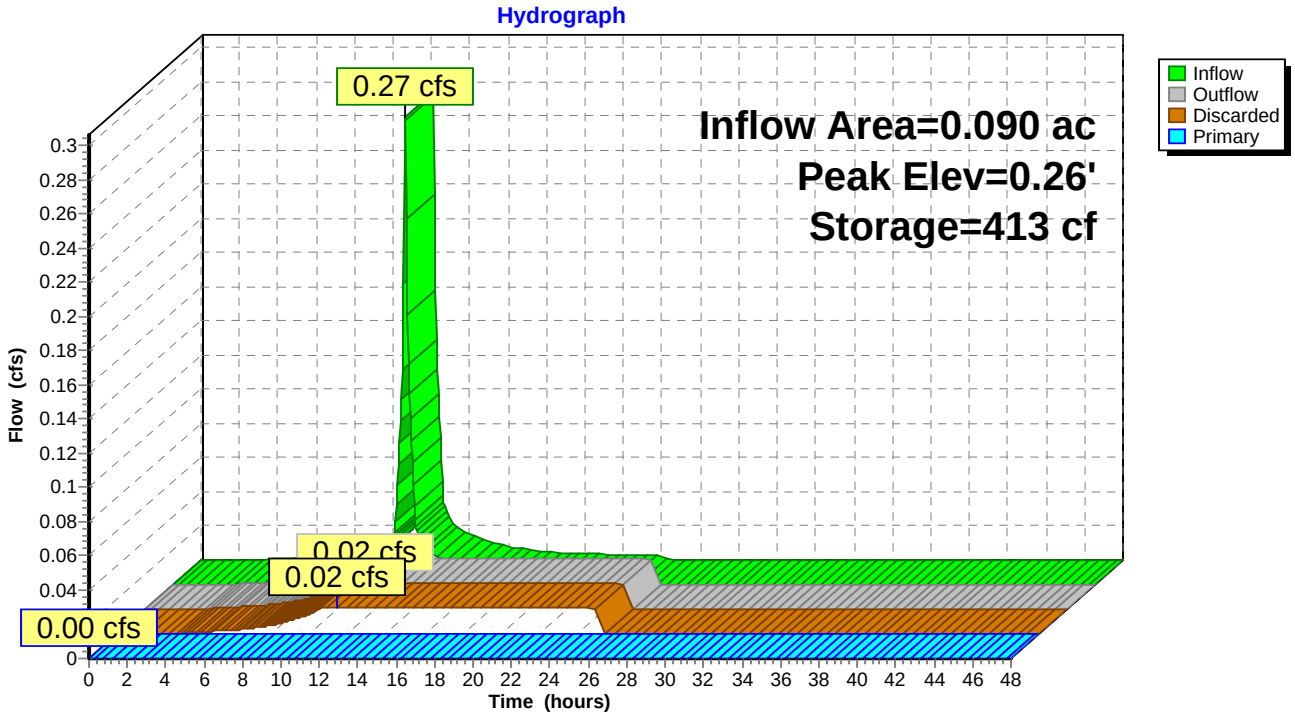
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	3,931	0	0
1.00	3,931	3,931	3,931

Device	Routing	Invert	Outlet Devices
#1	Primary	0.99'	**150.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#2	Discarded	0.00'	**0.170 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 11.50 hrs HW=0.01' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' TW=0.00' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond G3: GRAVEL

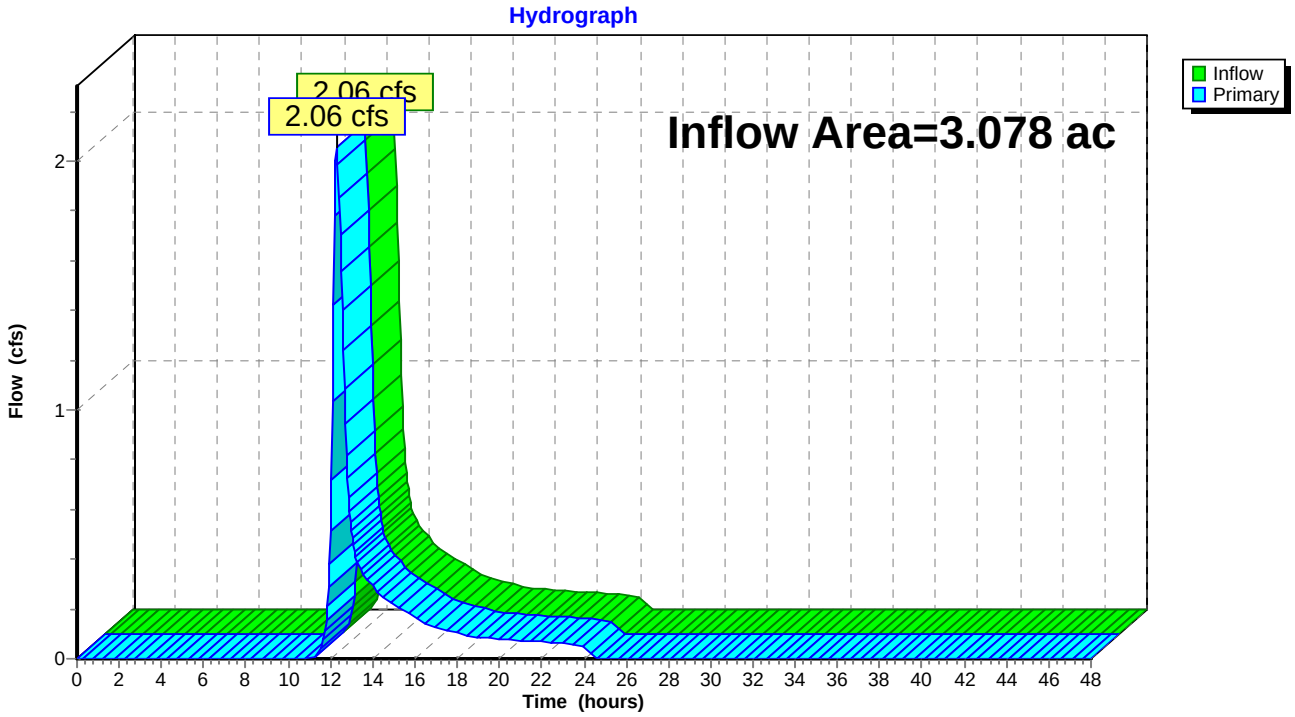


Summary for Link AP-1: AP-1

Inflow Area = 3.078 ac, 0.00% Impervious, Inflow Depth = 0.92" for 2 YR event
Inflow = 2.06 cfs @ 12.30 hrs, Volume= 0.235 af
Primary = 2.06 cfs @ 12.30 hrs, Volume= 0.235 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-1: AP-1

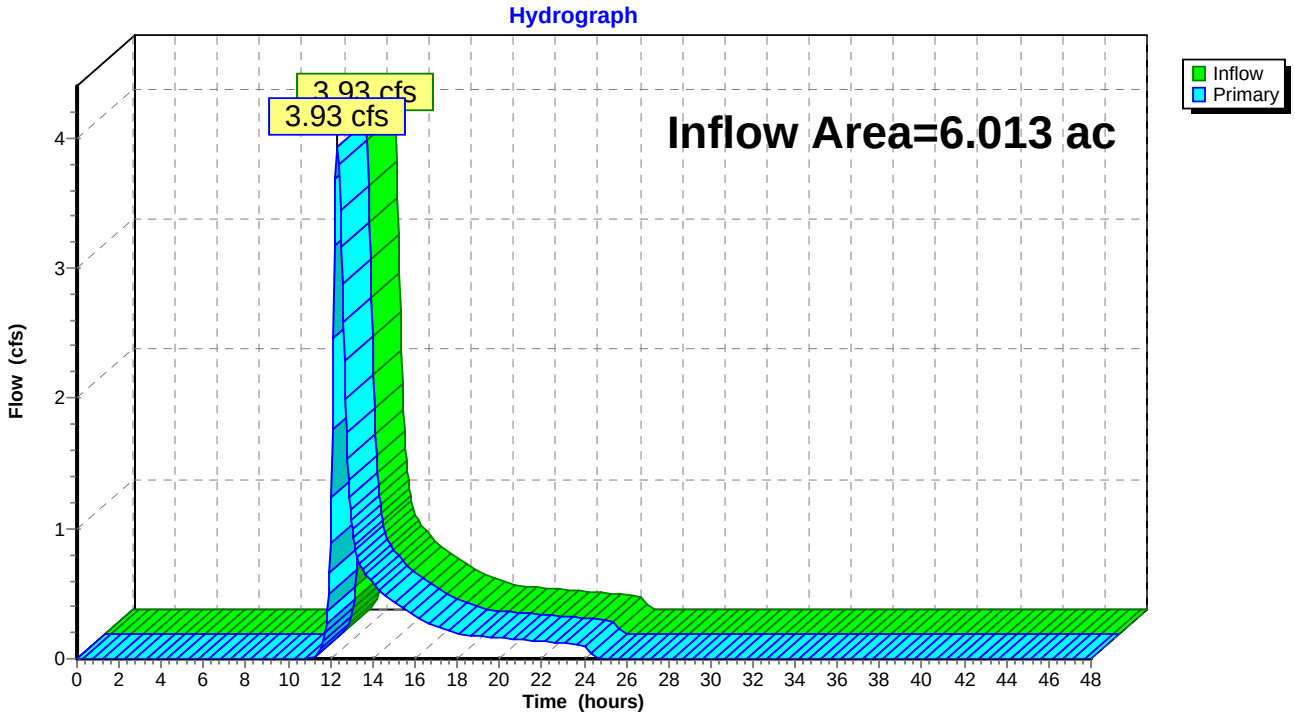


Summary for Link AP-2: AP-2

Inflow Area = 6.013 ac, 0.30% Impervious, Inflow Depth = 0.92" for 2 YR event
Inflow = 3.93 cfs @ 12.32 hrs, Volume= 0.462 af
Primary = 3.93 cfs @ 12.32 hrs, Volume= 0.462 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-2: AP-2



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA-1: PDA-1 Runoff Area=2.954 ac 0.00% Impervious Runoff Depth=2.23"
Flow Length=224' Tc=19.2 min CN=71 Runoff=5.21 cfs 0.549 af

Subcatchment PDA-2: PDA-2 Runoff Area=5.865 ac 0.31% Impervious Runoff Depth=2.23"
Flow Length=282' Tc=20.8 min CN=71 Runoff=9.99 cfs 1.090 af

Subcatchment PDA-2a: PDA-2a Runoff Area=0.148 ac 0.00% Impervious Runoff Depth=4.68"
Tc=6.0 min CN=96 Runoff=0.72 cfs 0.058 af

Subcatchment PDA-3: PDA-3 Runoff Area=0.034 ac 0.00% Impervious Runoff Depth=2.23"
Tc=6.0 min CN=71 Runoff=0.09 cfs 0.006 af

Subcatchment PDA-3a: PDA-3a Runoff Area=0.090 ac 0.00% Impervious Runoff Depth=4.68"
Tc=6.0 min CN=96 Runoff=0.44 cfs 0.035 af

Pond G2: GRAVEL Peak Elev=0.52' Storage=1,348 cf Inflow=0.72 cfs 0.058 af
Discarded=0.03 cfs 0.058 af Primary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.058 af

Pond G3: GRAVEL Peak Elev=0.52' Storage=819 cf Inflow=0.44 cfs 0.035 af
Discarded=0.02 cfs 0.035 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.035 af

Link AP-1: AP-1 Inflow=5.25 cfs 0.555 af
Primary=5.25 cfs 0.555 af

Link AP-2: AP-2 Inflow=9.99 cfs 1.090 af
Primary=9.99 cfs 1.090 af

Total Runoff Area = 9.091 ac Runoff Volume = 1.738 af Average Runoff Depth = 2.29"
99.80% Pervious = 9.073 ac 0.20% Impervious = 0.018 ac

Summary for Subcatchment PDA-1: PDA-1

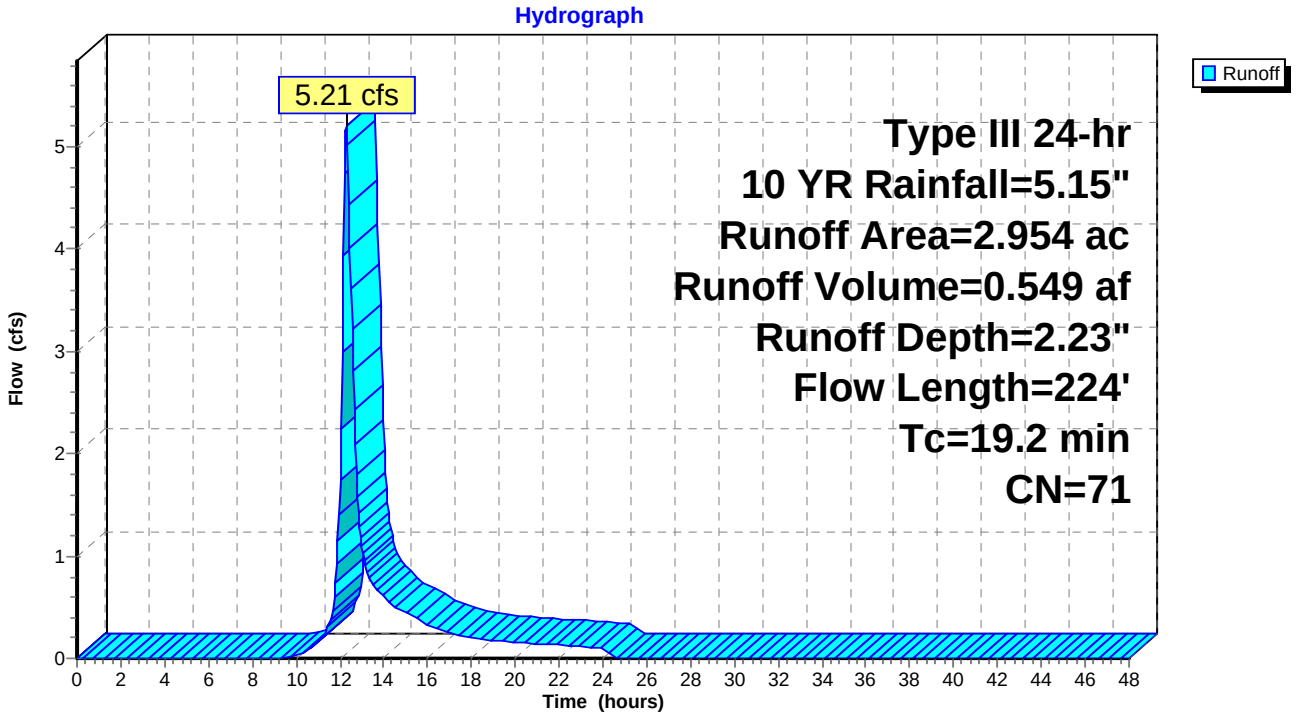
Runoff = 5.21 cfs @ 12.27 hrs, Volume= 0.549 af, Depth= 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=5.15"

Area (ac)	CN	Description
2.954	71	Meadow, non-grazed, HSG C
2.954		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	81	0.0073	0.08		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.5	143	0.0485	1.54		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
19.2	224	Total			

Subcatchment PDA-1: PDA-1



Summary for Subcatchment PDA-2: PDA-2

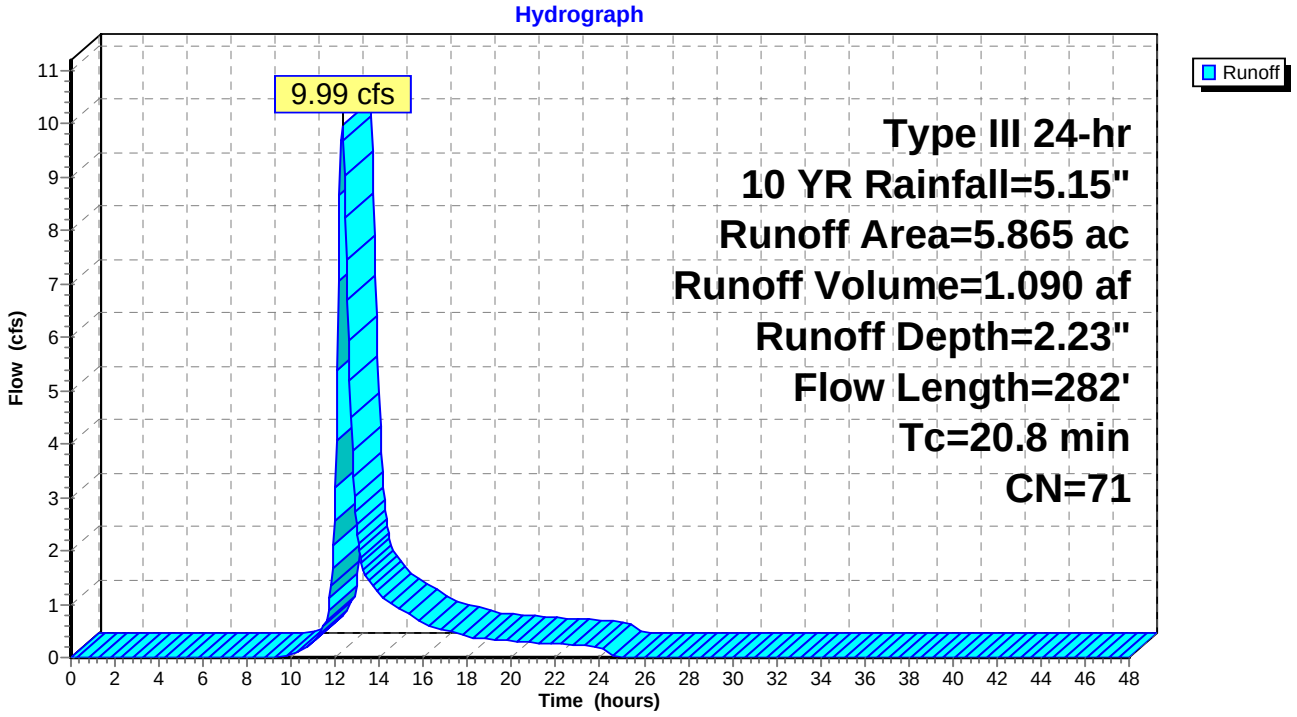
Runoff = 9.99 cfs @ 12.30 hrs, Volume= 1.090 af, Depth= 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=5.15"

Area (ac)	CN	Description
5.847	71	Meadow, non-grazed, HSG C
0.018	98	Unconnected pavement, HSG C
5.865	71	Weighted Average
5.847		99.69% Pervious Area
0.018		0.31% Impervious Area
0.018		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.8	100	0.0110	0.09		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.6	63	0.0083	0.64		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.8	59	0.0336	1.28		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	60	0.0521	1.60		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
20.8	282	Total			

Subcatchment PDA-2: PDA-2



Summary for Subcatchment PDA-2a: PDA-2a

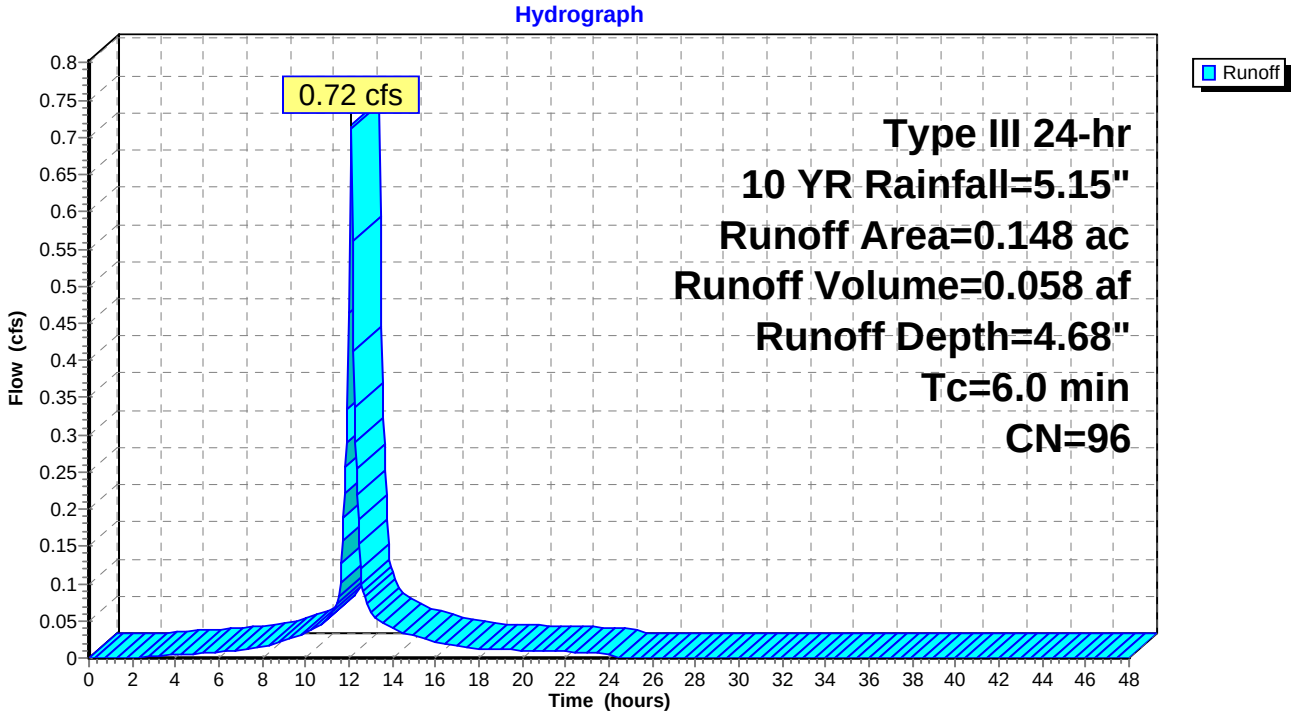
Runoff = 0.72 cfs @ 12.09 hrs, Volume= 0.058 af, Depth= 4.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=5.15"

Area (ac)	CN	Description
0.148	96	Gravel surface, HSG C
0.148		100.00% Pervious Area

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

Subcatchment PDA-2a: PDA-2a



Summary for Subcatchment PDA-3: PDA-3

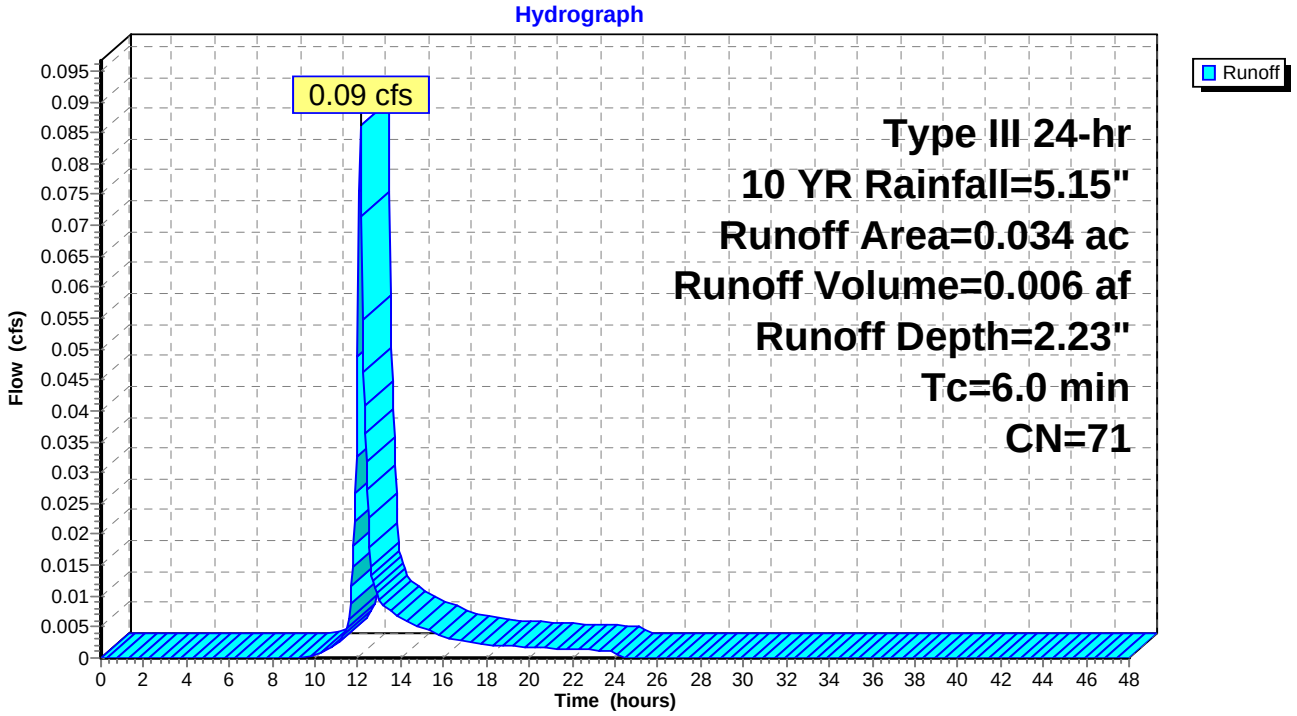
Runoff = 0.09 cfs @ 12.10 hrs, Volume= 0.006 af, Depth= 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=5.15"

Area (ac)	CN	Description
0.034	71	Meadow, non-grazed, HSG C
0.034		100.00% Pervious Area

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

Subcatchment PDA-3: PDA-3



Summary for Subcatchment PDA-3a: PDA-3a

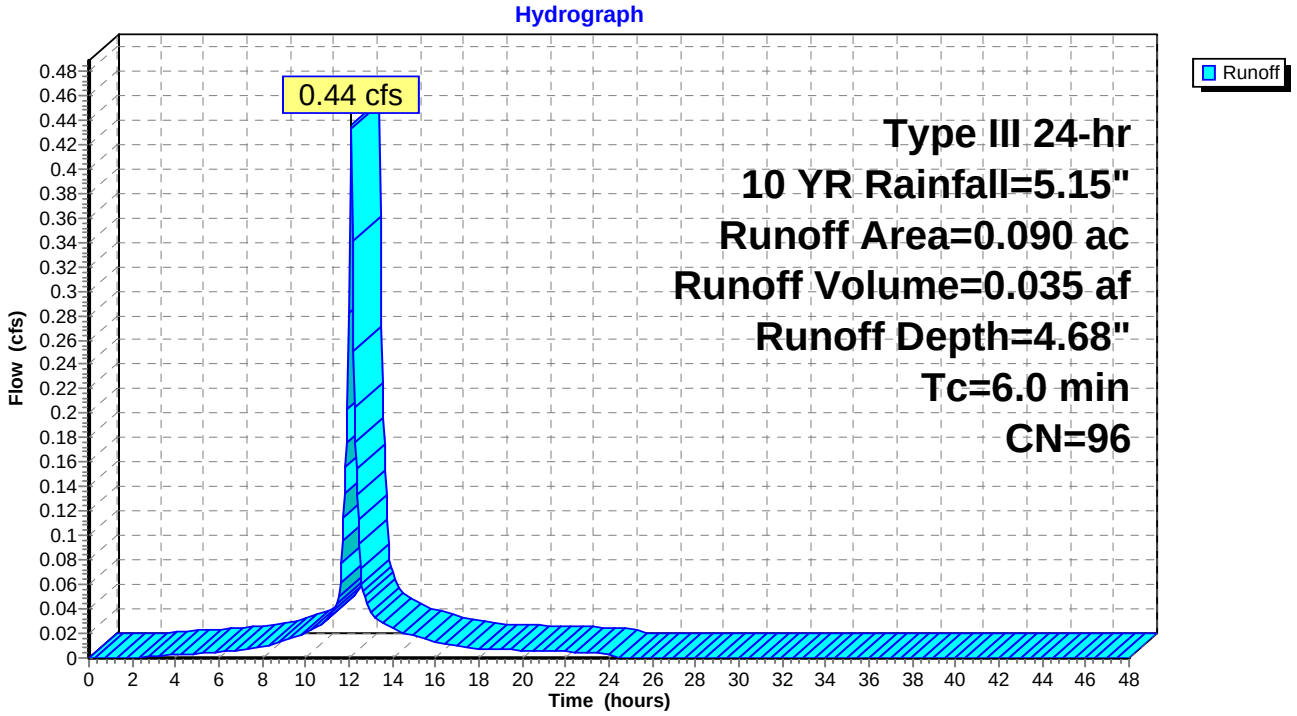
Runoff = 0.44 cfs @ 12.09 hrs, Volume= 0.035 af, Depth= 4.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=5.15"

Area (ac)	CN	Description
0.090	96	Gravel surface, HSG C
0.090		100.00% Pervious Area

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

Subcatchment PDA-3a: PDA-3a



Summary for Pond G2: GRAVEL

Inflow Area = 0.148 ac, 0.00% Impervious, Inflow Depth = 4.68" for 10 YR event
Inflow = 0.72 cfs @ 12.09 hrs, Volume= 0.058 af
Outflow = 0.03 cfs @ 10.40 hrs, Volume= 0.058 af, Atten= 96%, Lag= 0.0 min
Discarded = 0.03 cfs @ 10.40 hrs, Volume= 0.058 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 0.52' @ 15.46 hrs Surf.Area= 6,446 sf Storage= 1,348 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 460.4 min (1,222.1 - 761.7)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	2,578 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 6,446 cf Overall x 40.0% Voids

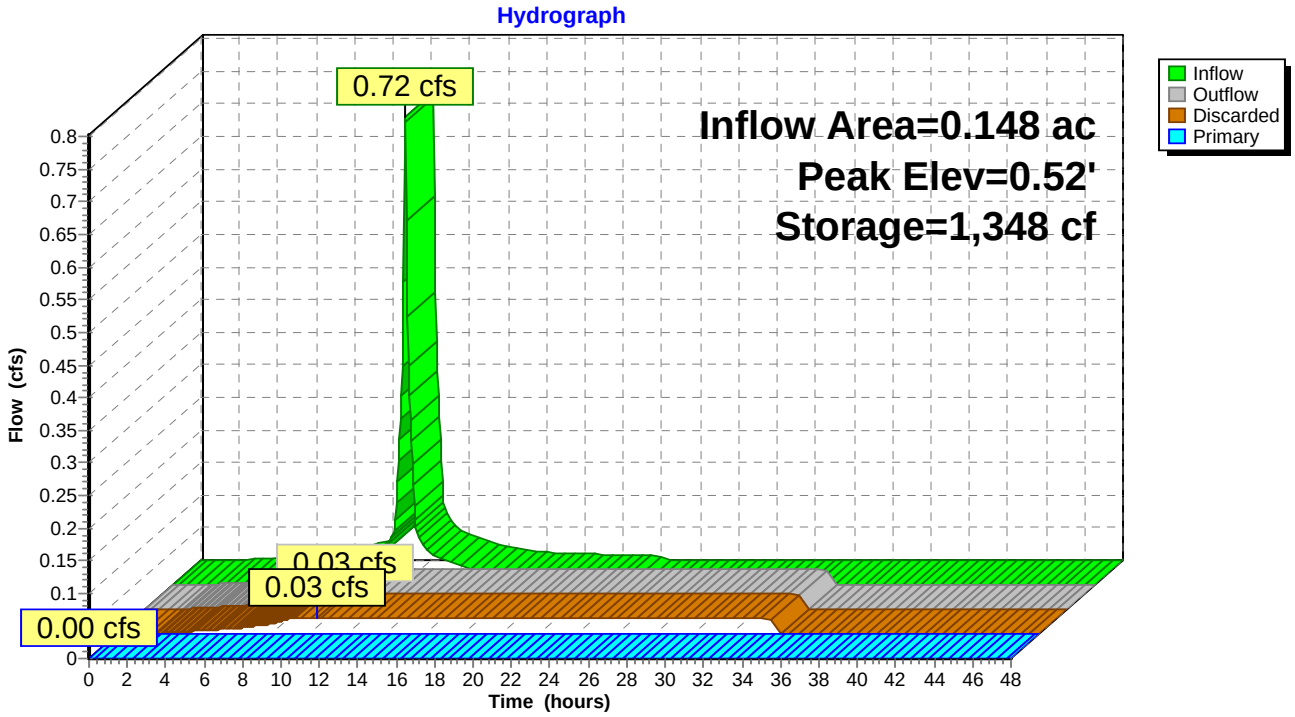
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	6,446	0	0
1.00	6,446	6,446	6,446

Device	Routing	Invert	Outlet Devices
#1	Primary	0.99'	**150.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#2	Discarded	0.00'	**0.170 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.03 cfs @ 10.40 hrs HW=0.01' (Free Discharge)
↑**2=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' TW=0.00' (Dynamic Tailwater)
↑**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond G2: GRAVEL



Summary for Pond G3: GRAVEL

Inflow Area = 0.090 ac, 0.00% Impervious, Inflow Depth = 4.68" for 10 YR event
Inflow = 0.44 cfs @ 12.09 hrs, Volume= 0.035 af
Outflow = 0.02 cfs @ 10.40 hrs, Volume= 0.035 af, Atten= 96%, Lag= 0.0 min
Discarded = 0.02 cfs @ 10.40 hrs, Volume= 0.035 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 0.52' @ 15.45 hrs Surf.Area= 3,931 sf Storage= 819 cf

Plug-Flow detention time= 458.4 min calculated for 0.035 af (100% of inflow)
Center-of-Mass det. time= 459.1 min (1,220.8 - 761.7)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,572 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 3,931 cf Overall x 40.0% Voids

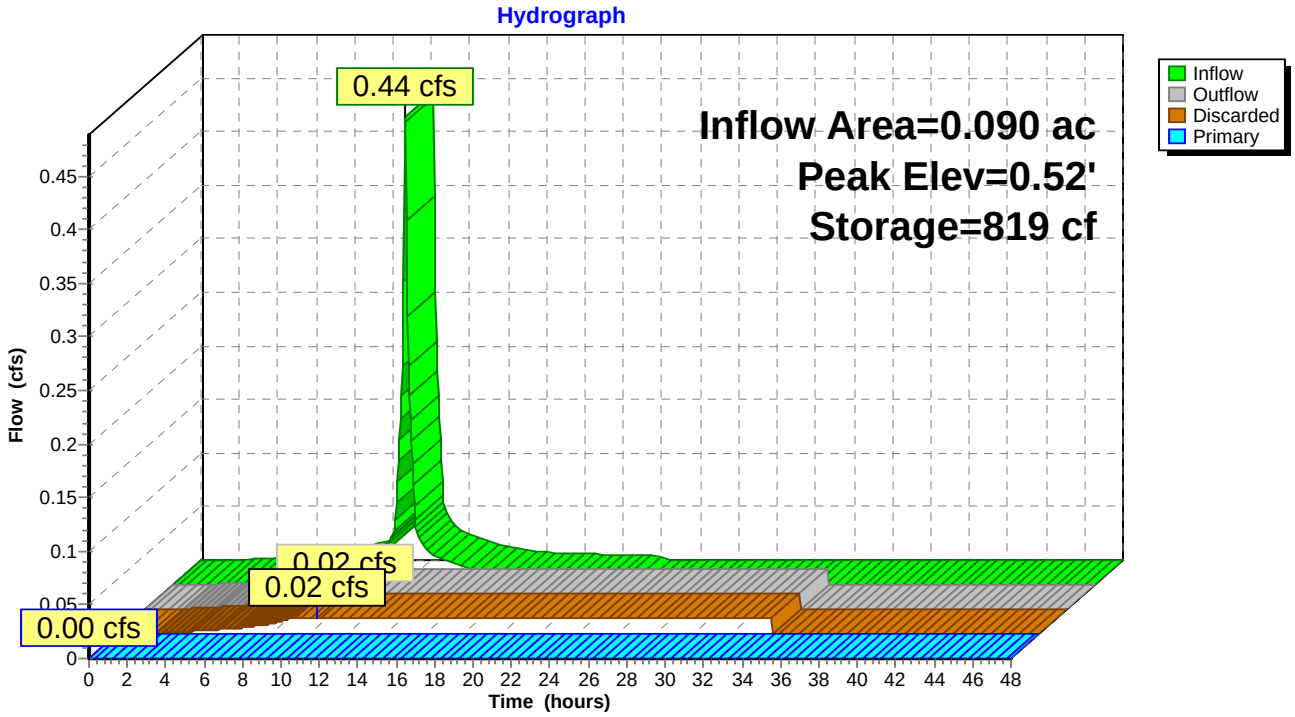
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	3,931	0	0
1.00	3,931	3,931	3,931

Device	Routing	Invert	Outlet Devices
#1	Primary	0.99'	**150.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#2	Discarded	0.00'	**0.170 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 10.40 hrs HW=0.01' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' TW=0.00' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond G3: GRAVEL

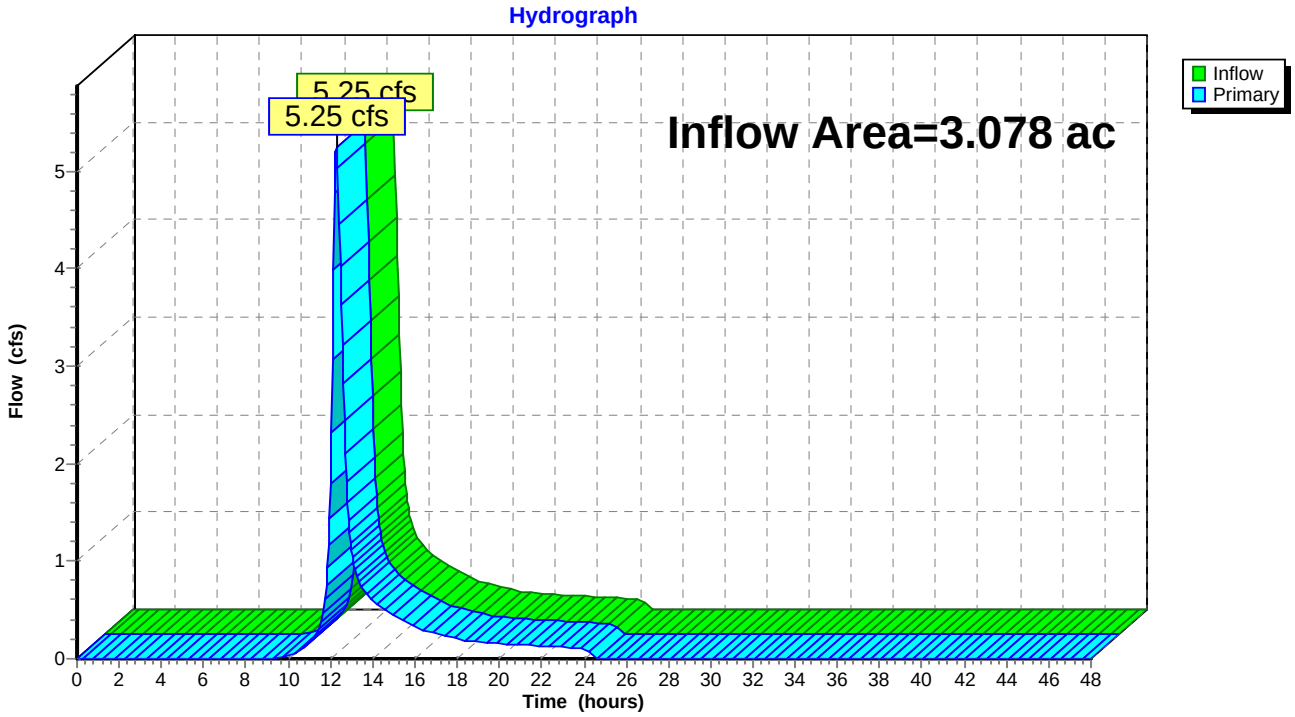


Summary for Link AP-1: AP-1

Inflow Area = 3.078 ac, 0.00% Impervious, Inflow Depth = 2.17" for 10 YR event
Inflow = 5.25 cfs @ 12.27 hrs, Volume= 0.555 af
Primary = 5.25 cfs @ 12.27 hrs, Volume= 0.555 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-1: AP-1

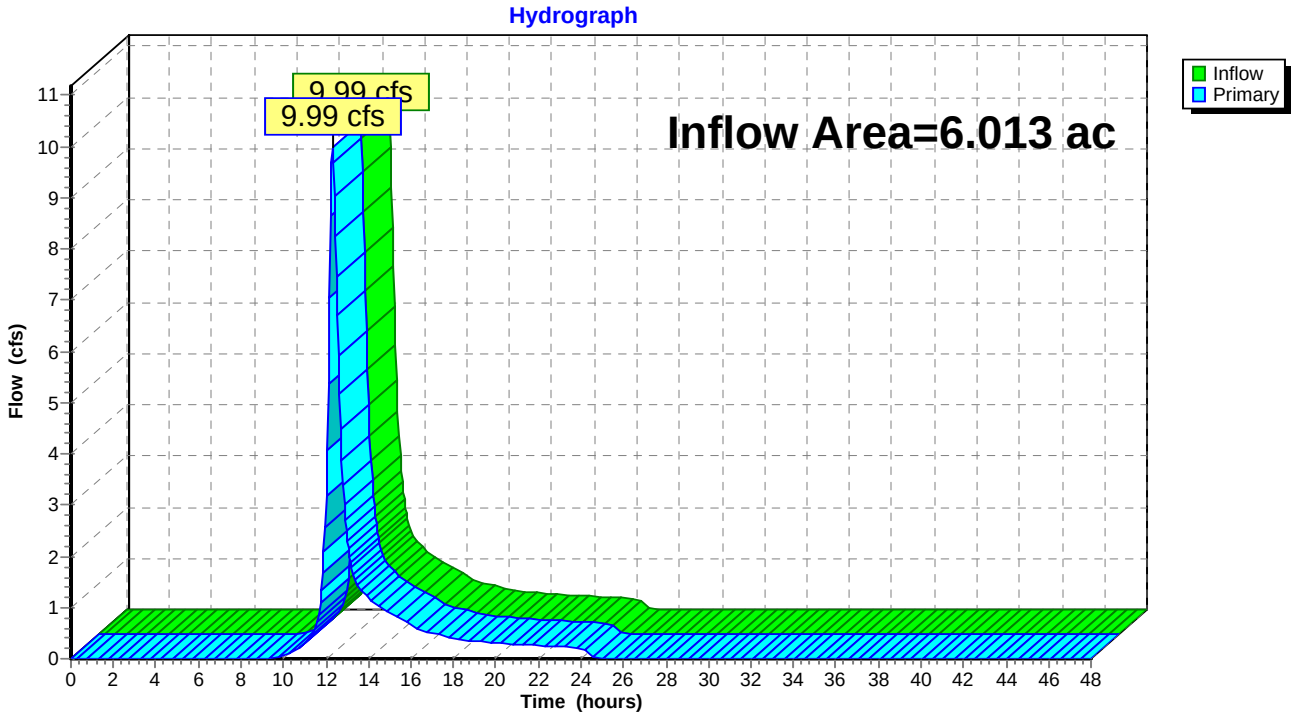


Summary for Link AP-2: AP-2

Inflow Area = 6.013 ac, 0.30% Impervious, Inflow Depth = 2.18" for 10 YR event
Inflow = 9.99 cfs @ 12.30 hrs, Volume= 1.090 af
Primary = 9.99 cfs @ 12.30 hrs, Volume= 1.090 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-2: AP-2



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA-1: PDA-1 Runoff Area=2.954 ac 0.00% Impervious Runoff Depth=3.14"
Flow Length=224' Tc=19.2 min CN=71 Runoff=7.42 cfs 0.774 af

Subcatchment PDA-2: PDA-2 Runoff Area=5.865 ac 0.31% Impervious Runoff Depth=3.14"
Flow Length=282' Tc=20.8 min CN=71 Runoff=14.23 cfs 1.536 af

Subcatchment PDA-2a: PDA-2a Runoff Area=0.148 ac 0.00% Impervious Runoff Depth=5.83"
Tc=6.0 min CN=96 Runoff=0.88 cfs 0.072 af

Subcatchment PDA-3: PDA-3 Runoff Area=0.034 ac 0.00% Impervious Runoff Depth=3.14"
Tc=6.0 min CN=71 Runoff=0.12 cfs 0.009 af

Subcatchment PDA-3a: PDA-3a Runoff Area=0.090 ac 0.00% Impervious Runoff Depth=5.83"
Tc=6.0 min CN=96 Runoff=0.54 cfs 0.044 af

Pond G2: GRAVEL Peak Elev=0.70' Storage=1,814 cf Inflow=0.88 cfs 0.072 af
Discarded=0.03 cfs 0.072 af Primary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.072 af

Pond G3: GRAVEL Peak Elev=0.70' Storage=1,102 cf Inflow=0.54 cfs 0.044 af
Discarded=0.02 cfs 0.044 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.044 af

Link AP-1: AP-1 Inflow=7.48 cfs 0.782 af
Primary=7.48 cfs 0.782 af

Link AP-2: AP-2 Inflow=14.23 cfs 1.536 af
Primary=14.23 cfs 1.536 af

Total Runoff Area = 9.091 ac Runoff Volume = 2.434 af Average Runoff Depth = 3.21"
99.80% Pervious = 9.073 ac 0.20% Impervious = 0.018 ac

Summary for Subcatchment PDA-1: PDA-1

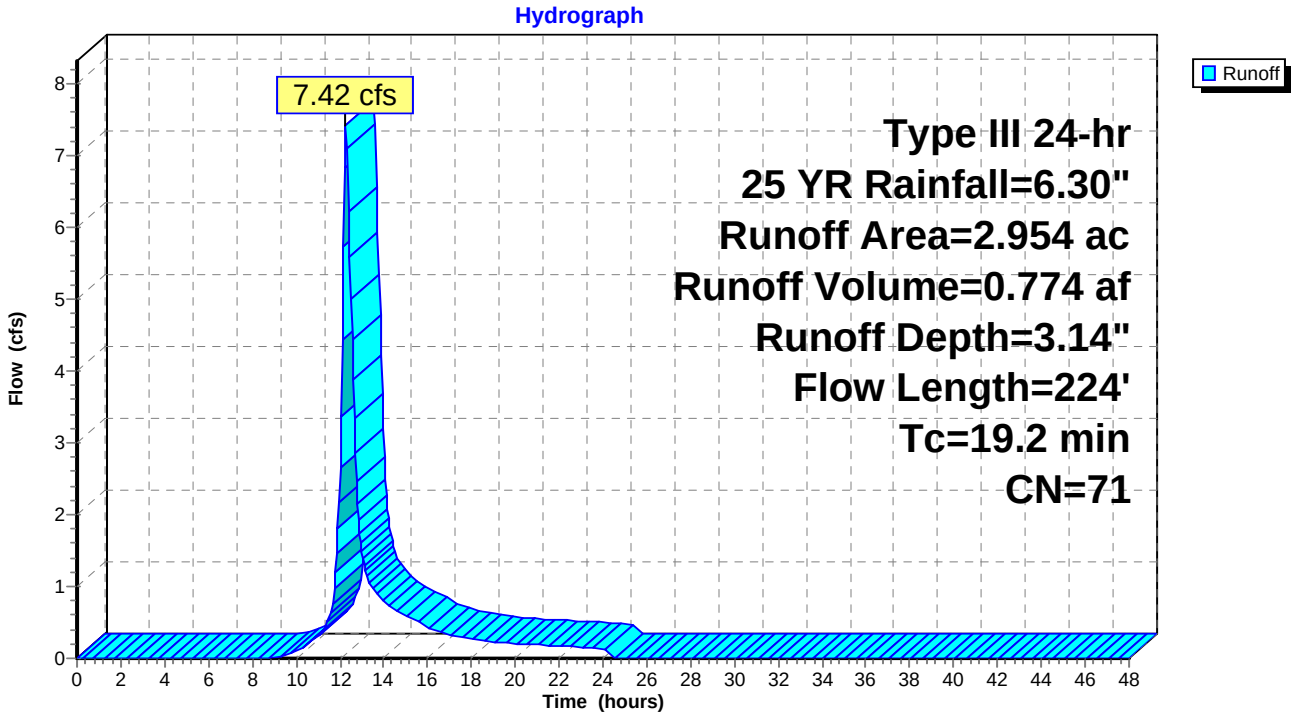
Runoff = 7.42 cfs @ 12.27 hrs, Volume= 0.774 af, Depth= 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=6.30"

Area (ac)	CN	Description
2.954	71	Meadow, non-grazed, HSG C
2.954		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	81	0.0073	0.08		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.5	143	0.0485	1.54		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
19.2	224	Total			

Subcatchment PDA-1: PDA-1



Summary for Subcatchment PDA-2: PDA-2

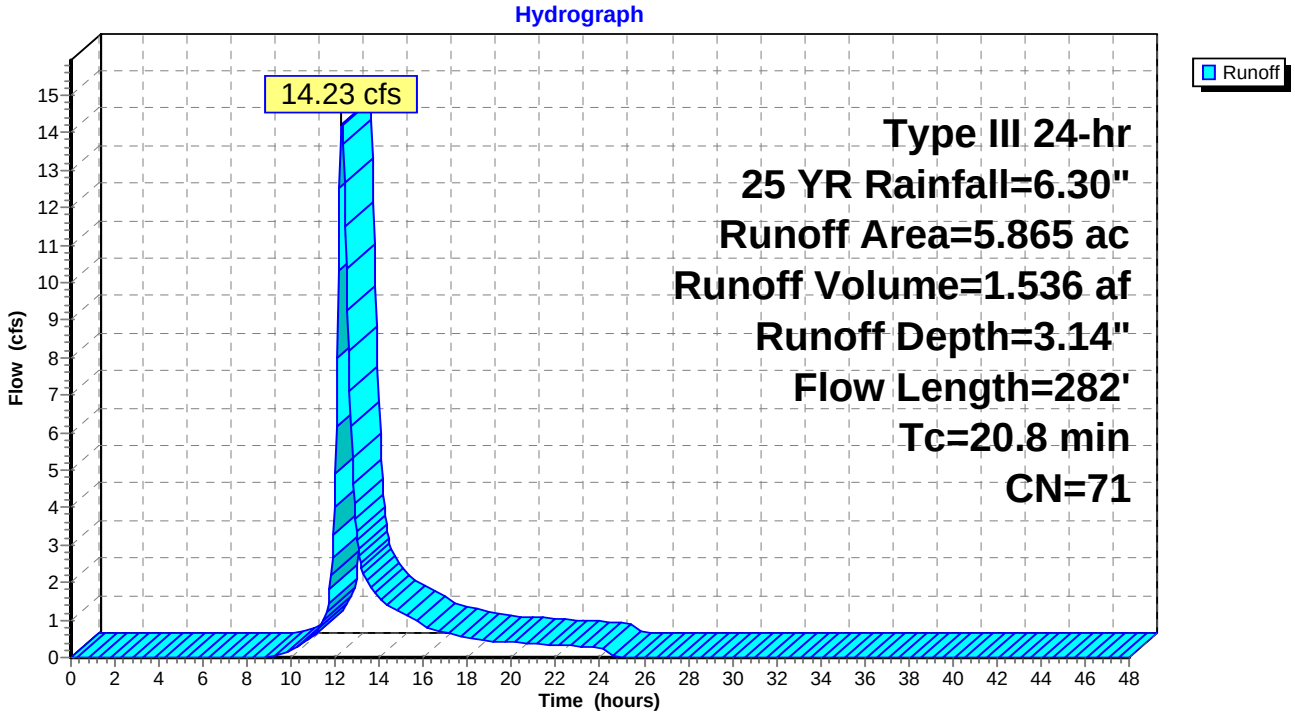
Runoff = 14.23 cfs @ 12.29 hrs, Volume= 1.536 af, Depth= 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=6.30"

Area (ac)	CN	Description
5.847	71	Meadow, non-grazed, HSG C
0.018	98	Unconnected pavement, HSG C
5.865	71	Weighted Average
5.847		99.69% Pervious Area
0.018		0.31% Impervious Area
0.018		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.8	100	0.0110	0.09		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.6	63	0.0083	0.64		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.8	59	0.0336	1.28		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	60	0.0521	1.60		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
20.8	282	Total			

Subcatchment PDA-2: PDA-2



Summary for Subcatchment PDA-2a: PDA-2a

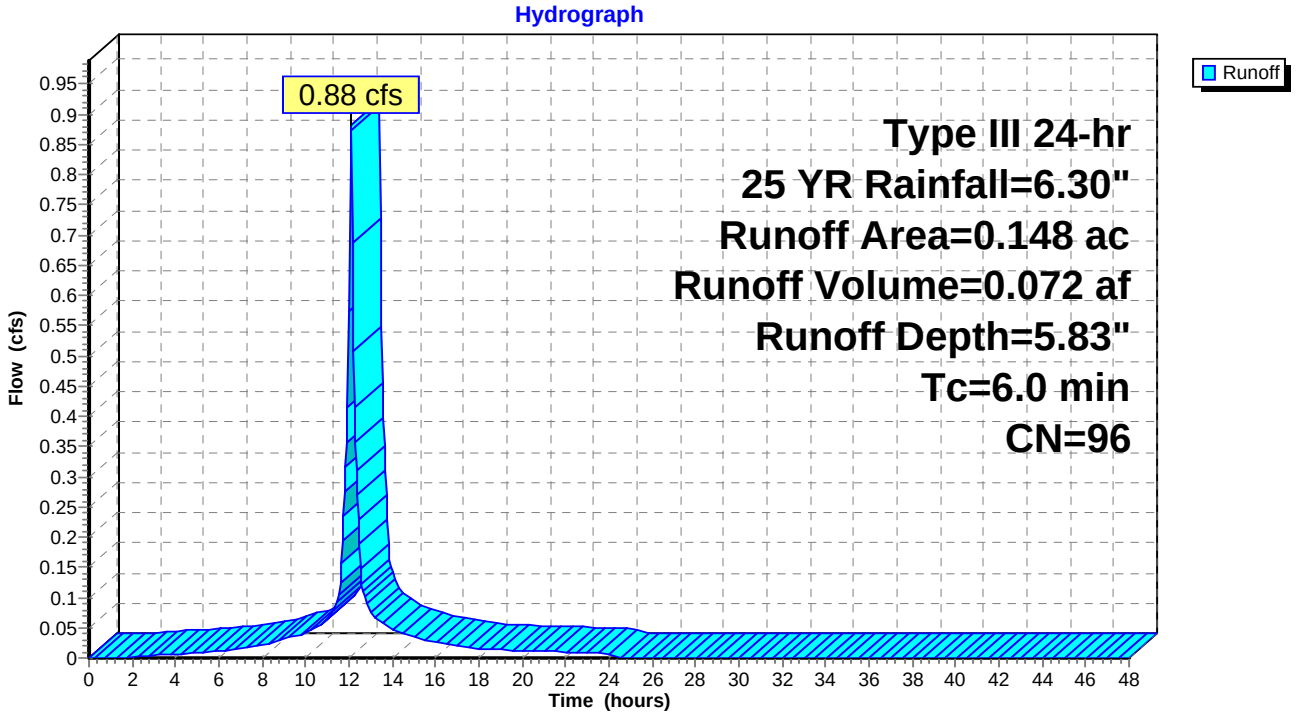
Runoff = 0.88 cfs @ 12.09 hrs, Volume= 0.072 af, Depth= 5.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=6.30"

Area (ac)	CN	Description
0.148	96	Gravel surface, HSG C
0.148		100.00% Pervious Area

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

Subcatchment PDA-2a: PDA-2a



Summary for Subcatchment PDA-3: PDA-3

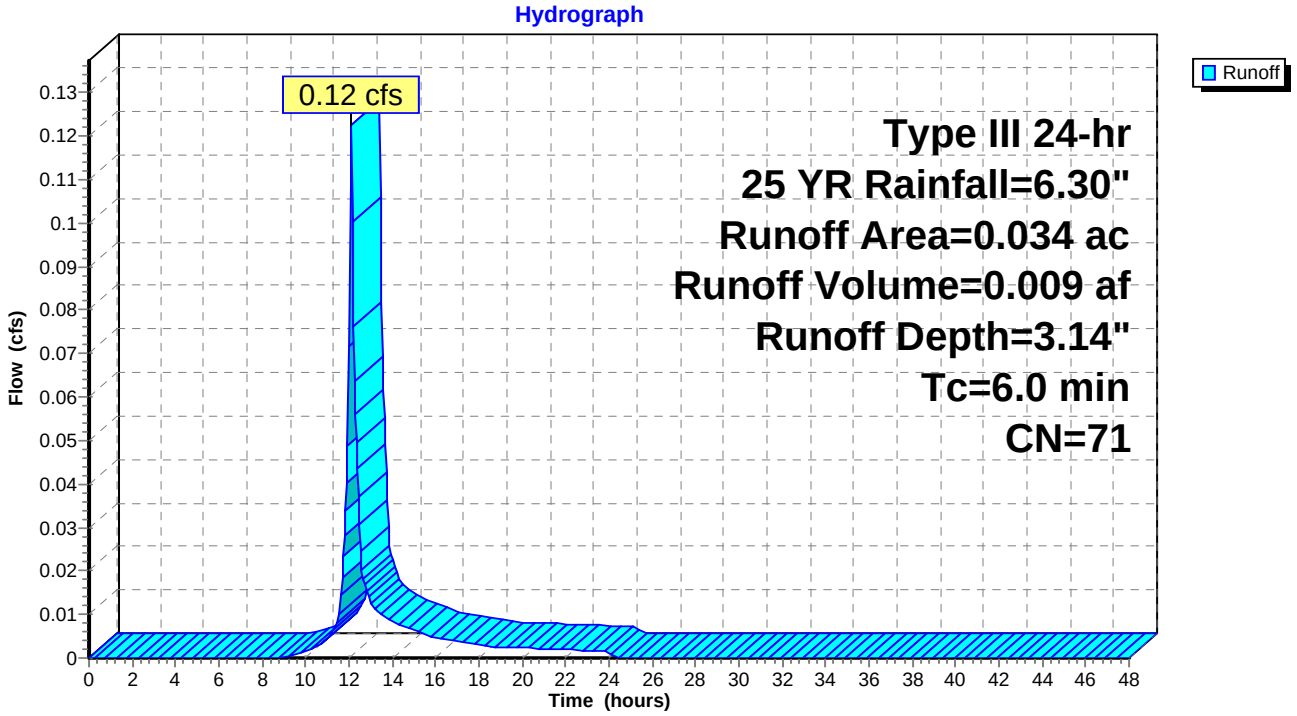
Runoff = 0.12 cfs @ 12.09 hrs, Volume= 0.009 af, Depth= 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=6.30"

Area (ac)	CN	Description
0.034	71	Meadow, non-grazed, HSG C
0.034		100.00% Pervious Area

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

Subcatchment PDA-3: PDA-3



Summary for Subcatchment PDA-3a: PDA-3a

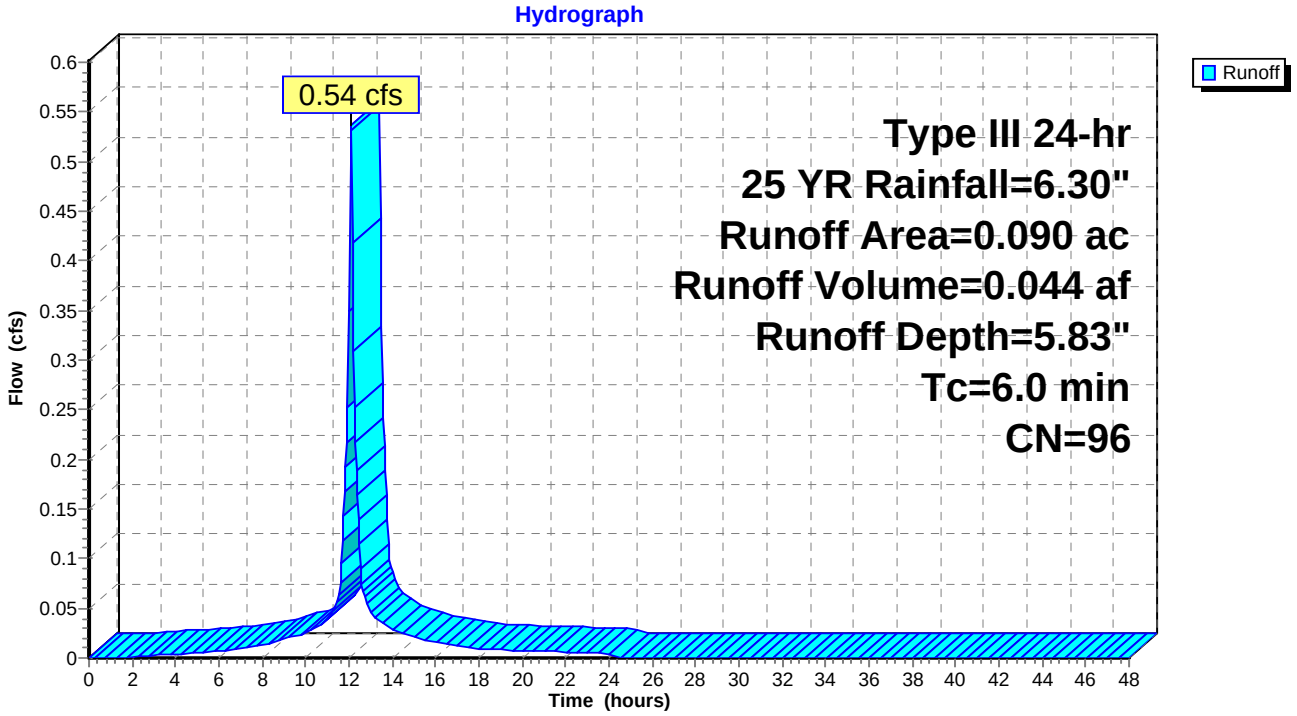
Runoff = 0.54 cfs @ 12.09 hrs, Volume= 0.044 af, Depth= 5.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=6.30"

Area (ac)	CN	Description
0.090	96	Gravel surface, HSG C
0.090		100.00% Pervious Area

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

Subcatchment PDA-3a: PDA-3a



Summary for Pond G2: GRAVEL

Inflow Area = 0.148 ac, 0.00% Impervious, Inflow Depth = 5.83" for 25 YR event
Inflow = 0.88 cfs @ 12.09 hrs, Volume= 0.072 af
Outflow = 0.03 cfs @ 9.70 hrs, Volume= 0.072 af, Atten= 97%, Lag= 0.0 min
Discarded = 0.03 cfs @ 9.70 hrs, Volume= 0.072 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 0.70' @ 16.00 hrs Surf.Area= 6,446 sf Storage= 1,814 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 620.5 min (1,377.6 - 757.2)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	2,578 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 6,446 cf Overall x 40.0% Voids

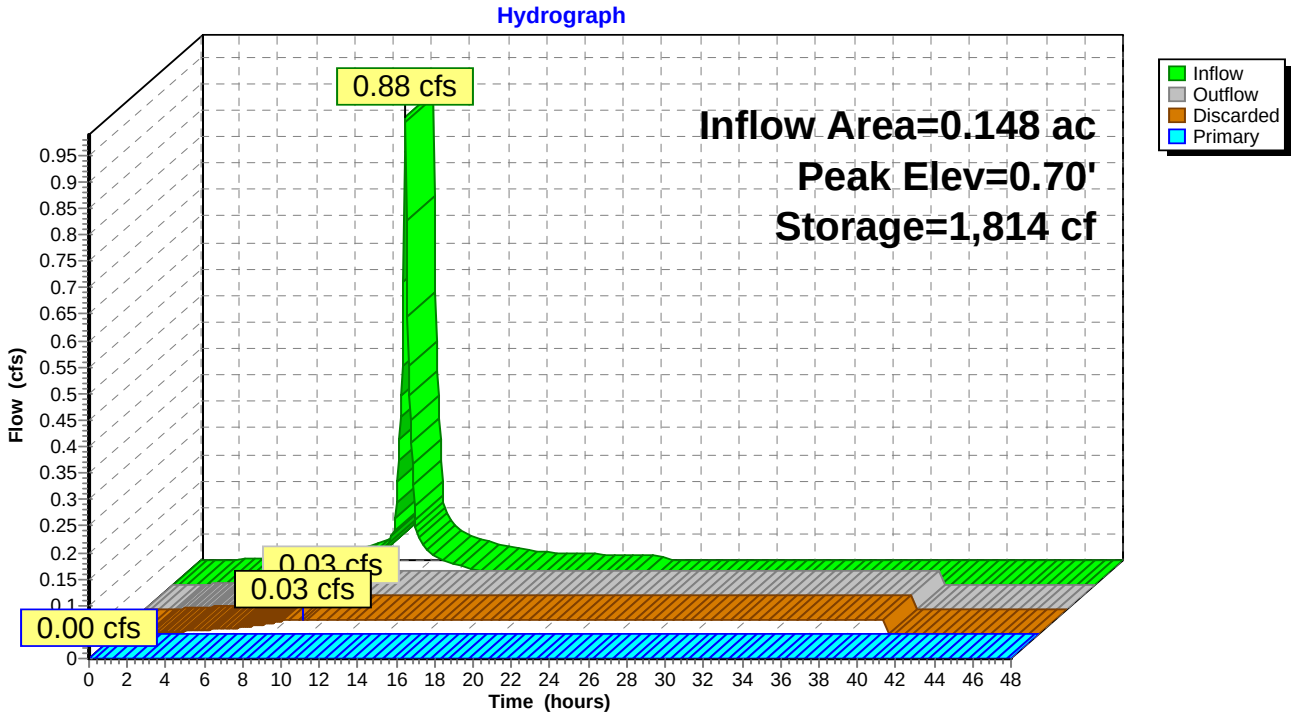
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	6,446	0	0
1.00	6,446	6,446	6,446

Device	Routing	Invert	Outlet Devices
#1	Primary	0.99'	**150.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#2	Discarded	0.00'	**0.170 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.03 cfs @ 9.70 hrs HW=0.01' (Free Discharge)
↑**2=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' TW=0.00' (Dynamic Tailwater)
↑**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond G2: GRAVEL



Summary for Pond G3: GRAVEL

Inflow Area = 0.090 ac, 0.00% Impervious, Inflow Depth = 5.83" for 25 YR event
Inflow = 0.54 cfs @ 12.09 hrs, Volume= 0.044 af
Outflow = 0.02 cfs @ 9.70 hrs, Volume= 0.044 af, Atten= 97%, Lag= 0.0 min
Discarded = 0.02 cfs @ 9.70 hrs, Volume= 0.044 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 0.70' @ 15.99 hrs Surf.Area= 3,931 sf Storage= 1,102 cf

Plug-Flow detention time= 617.2 min calculated for 0.044 af (100% of inflow)
Center-of-Mass det. time= 617.7 min (1,374.8 - 757.2)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,572 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 3,931 cf Overall x 40.0% Voids

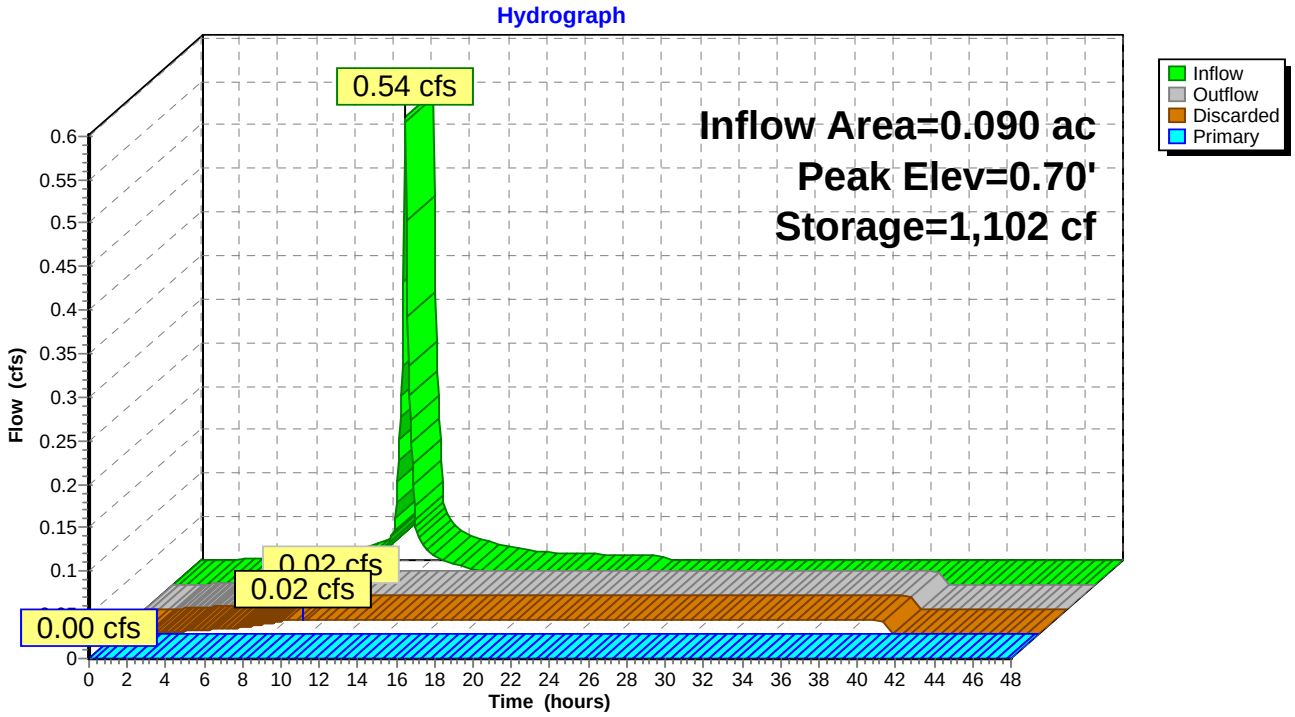
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	3,931	0	0
1.00	3,931	3,931	3,931

Device	Routing	Invert	Outlet Devices
#1	Primary	0.99'	**150.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#2	Discarded	0.00'	**0.170 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 9.70 hrs HW=0.01' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' TW=0.00' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond G3: GRAVEL

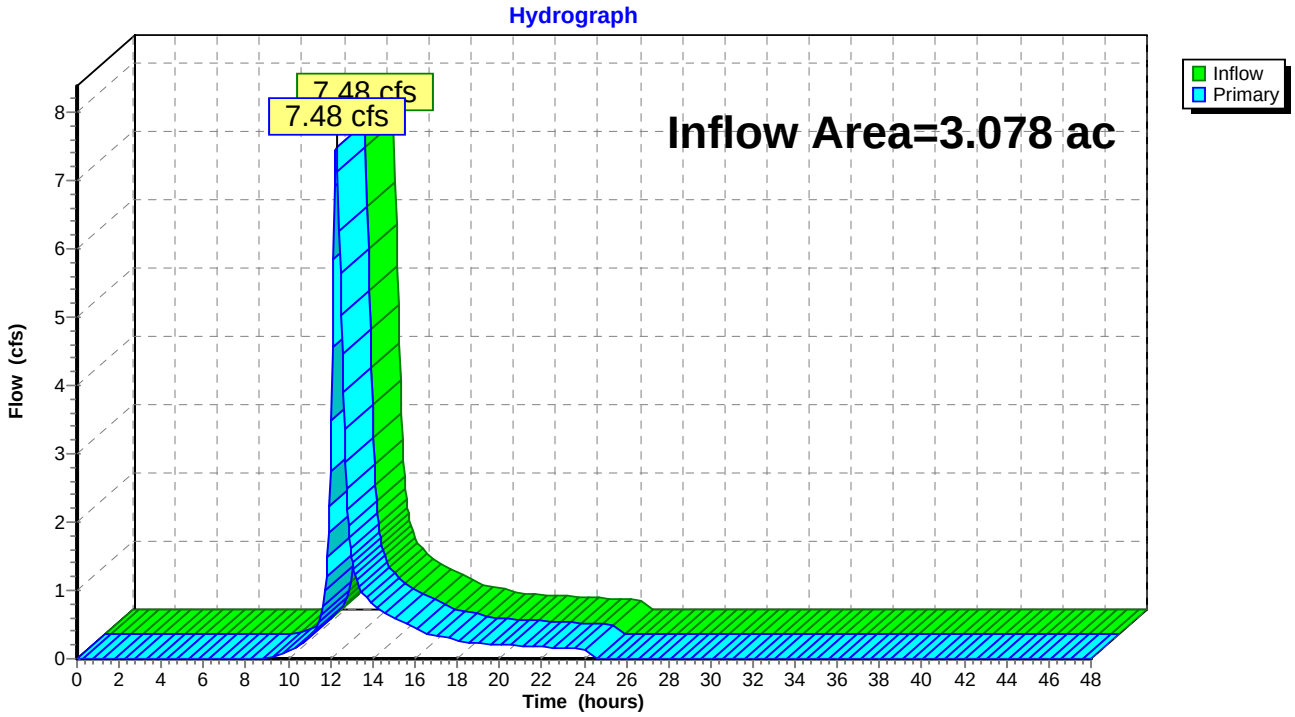


Summary for Link AP-1: AP-1

Inflow Area = 3.078 ac, 0.00% Impervious, Inflow Depth = 3.05" for 25 YR event
Inflow = 7.48 cfs @ 12.27 hrs, Volume= 0.782 af
Primary = 7.48 cfs @ 12.27 hrs, Volume= 0.782 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-1: AP-1

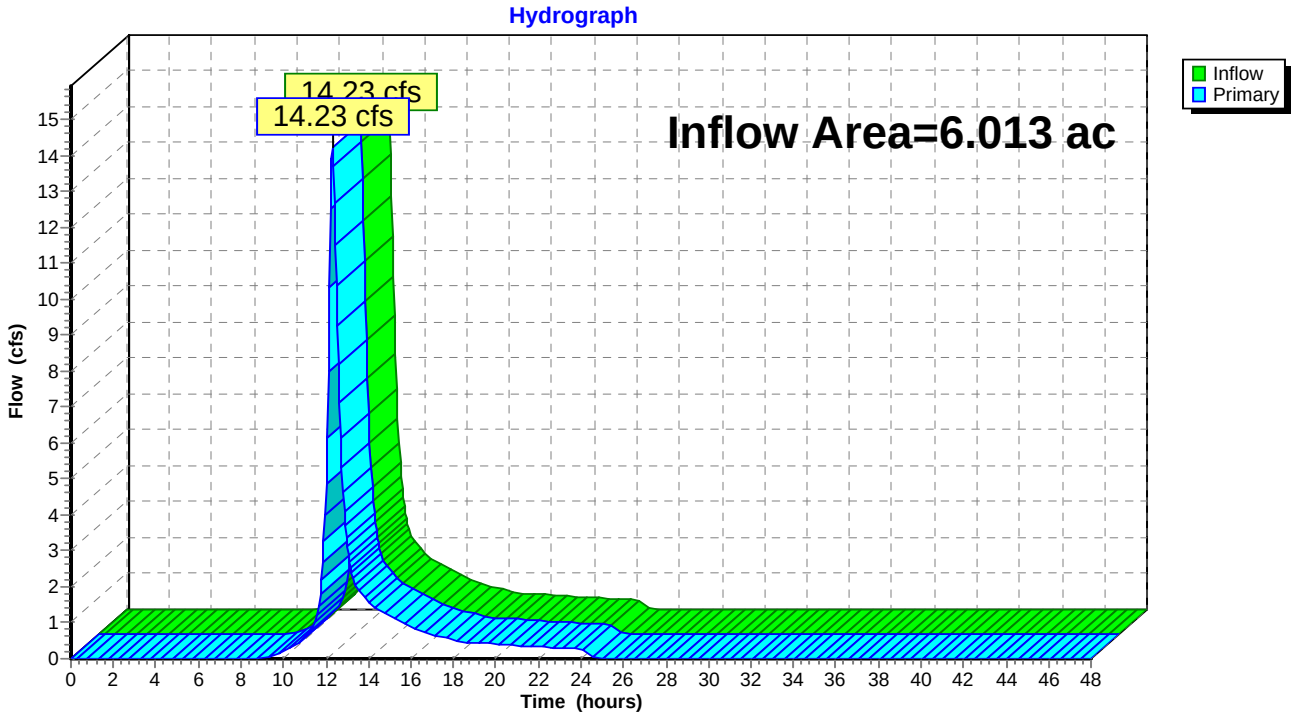


Summary for Link AP-2: AP-2

Inflow Area = 6.013 ac, 0.30% Impervious, Inflow Depth = 3.06" for 25 YR event
Inflow = 14.23 cfs @ 12.29 hrs, Volume= 1.536 af
Primary = 14.23 cfs @ 12.29 hrs, Volume= 1.536 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-2: AP-2



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA-1: PDA-1 Runoff Area=2.954 ac 0.00% Impervious Runoff Depth=4.64"
Flow Length=224' Tc=19.2 min CN=71 Runoff=11.00 cfs 1.142 af

Subcatchment PDA-2: PDA-2 Runoff Area=5.865 ac 0.31% Impervious Runoff Depth=4.64"
Flow Length=282' Tc=20.8 min CN=71 Runoff=21.09 cfs 2.268 af

Subcatchment PDA-2a: PDA-2a Runoff Area=0.148 ac 0.00% Impervious Runoff Depth=7.59"
Tc=6.0 min CN=96 Runoff=1.14 cfs 0.094 af

Subcatchment PDA-3: PDA-3 Runoff Area=0.034 ac 0.00% Impervious Runoff Depth=4.64"
Tc=6.0 min CN=71 Runoff=0.18 cfs 0.013 af

Subcatchment PDA-3a: PDA-3a Runoff Area=0.090 ac 0.00% Impervious Runoff Depth=7.59"
Tc=6.0 min CN=96 Runoff=0.69 cfs 0.057 af

Pond G2: GRAVEL Peak Elev=0.99' Storage=2,554 cf Inflow=1.14 cfs 0.094 af
Discarded=0.03 cfs 0.091 af Primary=0.01 cfs 0.000 af Outflow=0.03 cfs 0.091 af

Pond G3: GRAVEL Peak Elev=0.99' Storage=1,557 cf Inflow=0.69 cfs 0.057 af
Discarded=0.02 cfs 0.055 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.055 af

Link AP-1: AP-1 Inflow=11.09 cfs 1.155 af
Primary=11.09 cfs 1.155 af

Link AP-2: AP-2 Inflow=21.09 cfs 2.268 af
Primary=21.09 cfs 2.268 af

Total Runoff Area = 9.091 ac Runoff Volume = 3.574 af Average Runoff Depth = 4.72"
99.80% Pervious = 9.073 ac 0.20% Impervious = 0.018 ac

Summary for Subcatchment PDA-1: PDA-1

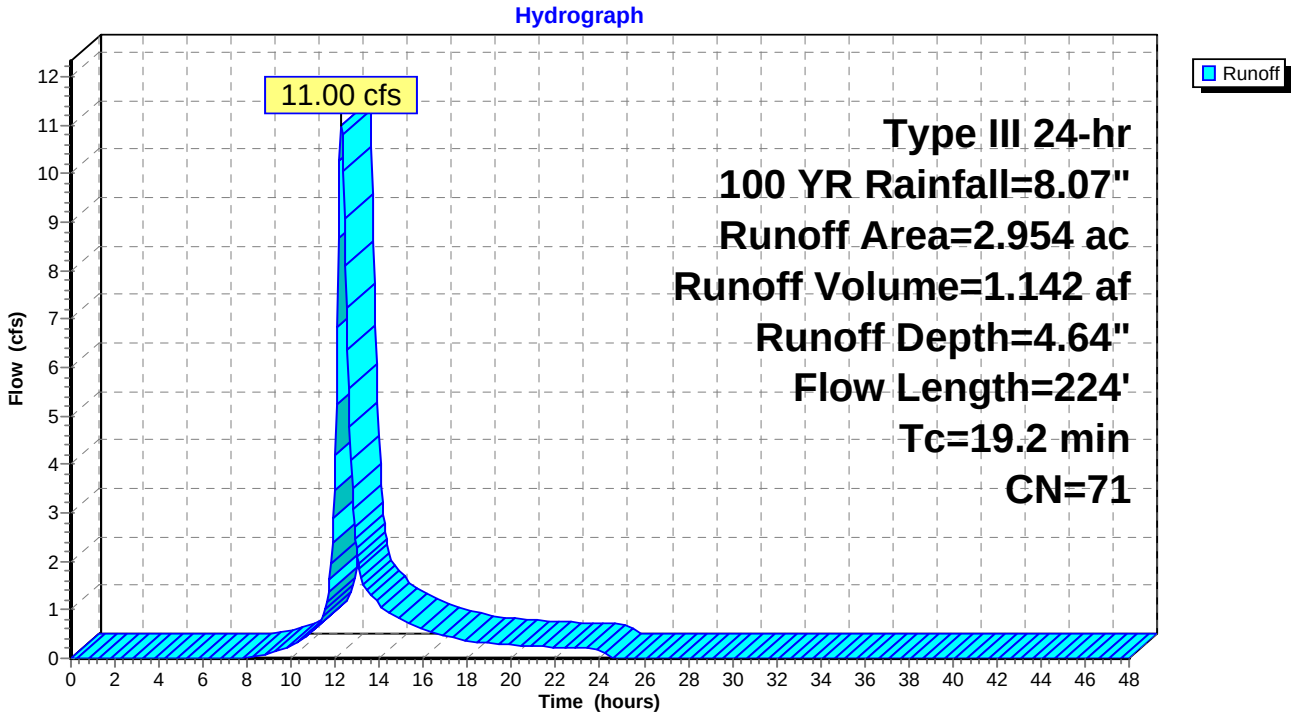
Runoff = 11.00 cfs @ 12.27 hrs, Volume= 1.142 af, Depth= 4.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.07"

Area (ac)	CN	Description
2.954	71	Meadow, non-grazed, HSG C
2.954		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	81	0.0073	0.08		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.5	143	0.0485	1.54		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
19.2	224	Total			

Subcatchment PDA-1: PDA-1



Summary for Subcatchment PDA-2: PDA-2

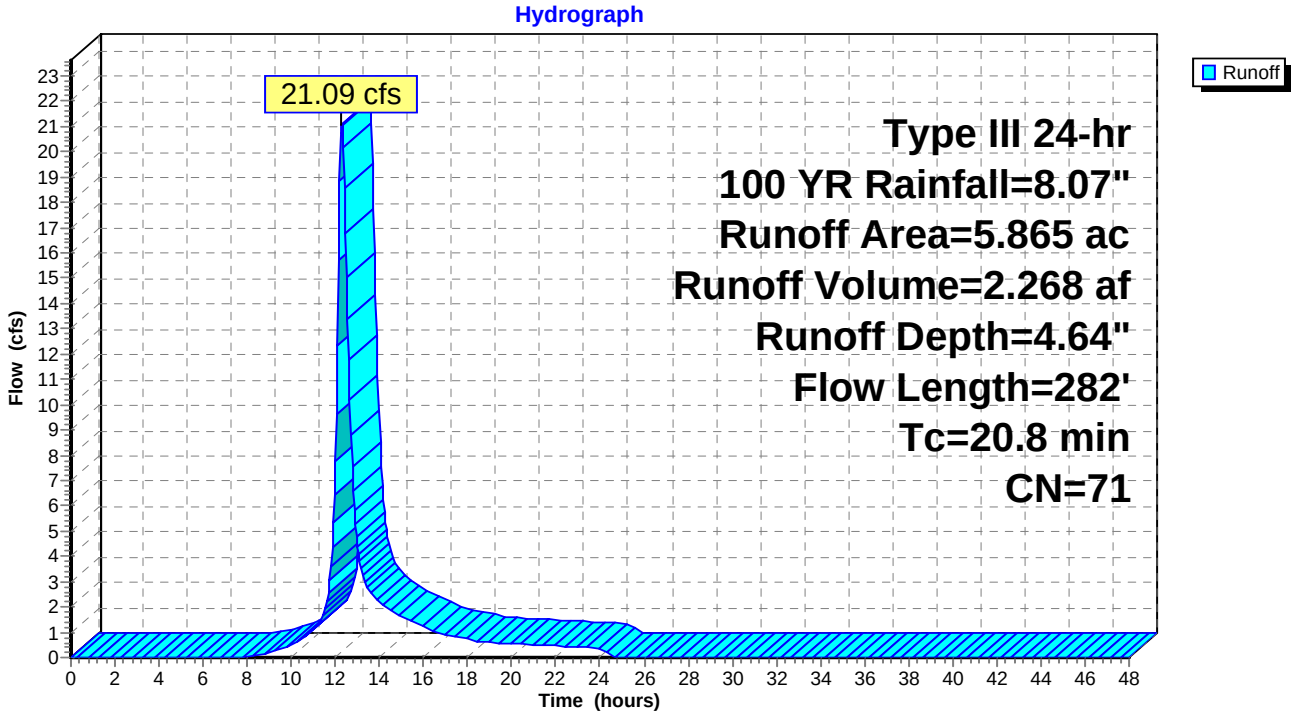
Runoff = 21.09 cfs @ 12.29 hrs, Volume= 2.268 af, Depth= 4.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.07"

Area (ac)	CN	Description
5.847	71	Meadow, non-grazed, HSG C
0.018	98	Unconnected pavement, HSG C
5.865	71	Weighted Average
5.847		99.69% Pervious Area
0.018		0.31% Impervious Area
0.018		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.8	100	0.0110	0.09		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.31"
1.6	63	0.0083	0.64		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.8	59	0.0336	1.28		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
0.6	60	0.0521	1.60		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
20.8	282	Total			

Subcatchment PDA-2: PDA-2



Summary for Subcatchment PDA-2a: PDA-2a

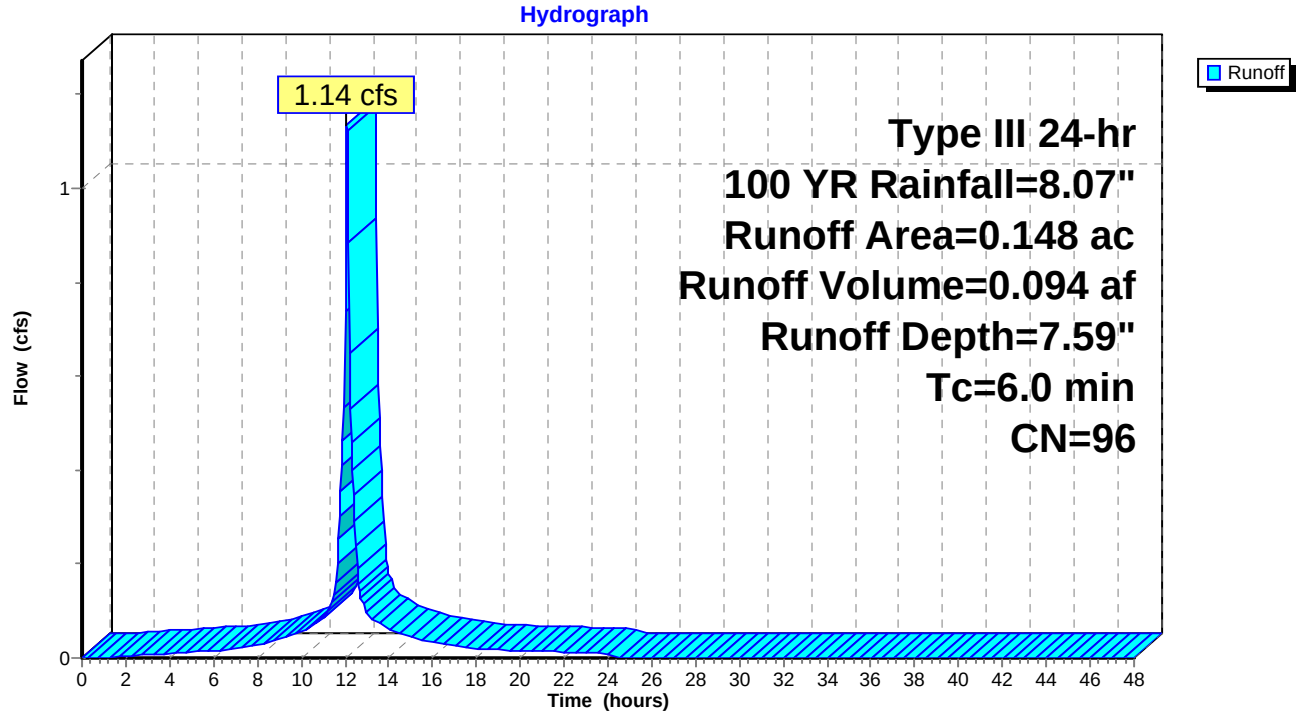
Runoff = 1.14 cfs @ 12.09 hrs, Volume= 0.094 af, Depth= 7.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.07"

Area (ac)	CN	Description
0.148	96	Gravel surface, HSG C
0.148		100.00% Pervious Area

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

Subcatchment PDA-2a: PDA-2a



Summary for Subcatchment PDA-3: PDA-3

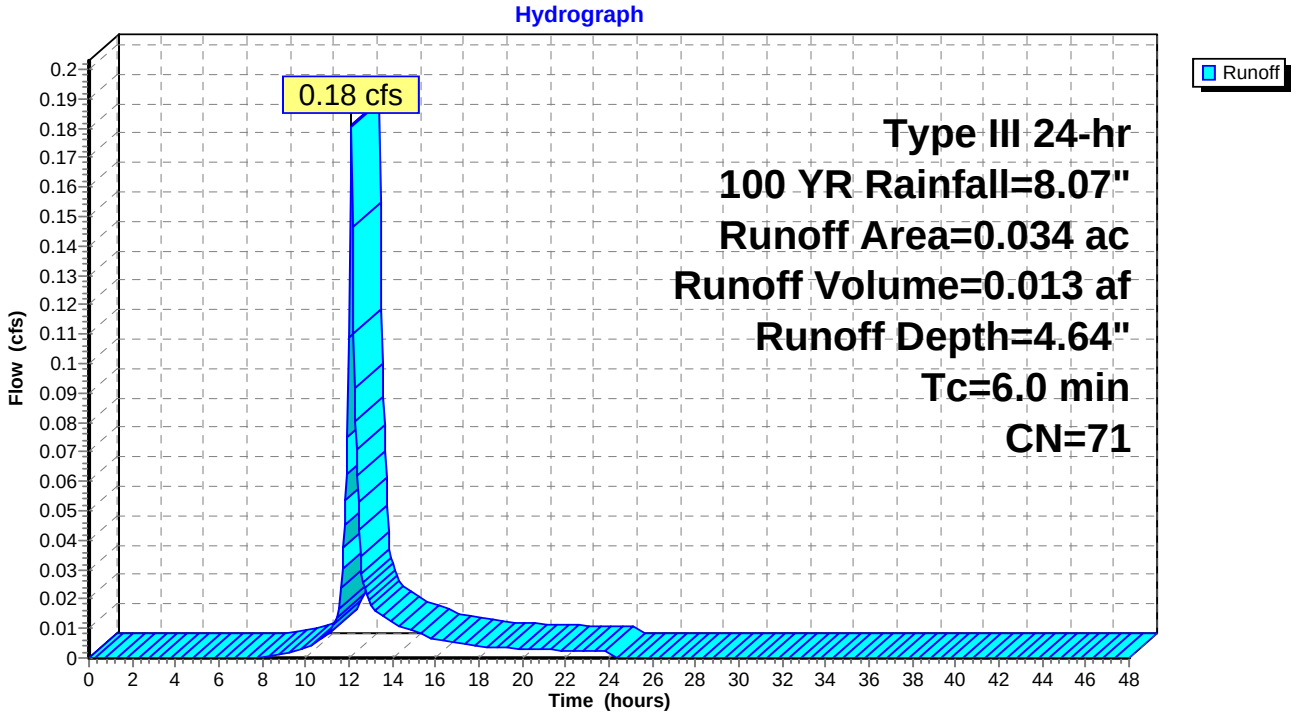
Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af, Depth= 4.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.07"

Area (ac)	CN	Description
0.034	71	Meadow, non-grazed, HSG C
0.034		100.00% Pervious Area

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

Subcatchment PDA-3: PDA-3



Summary for Subcatchment PDA-3a: PDA-3a

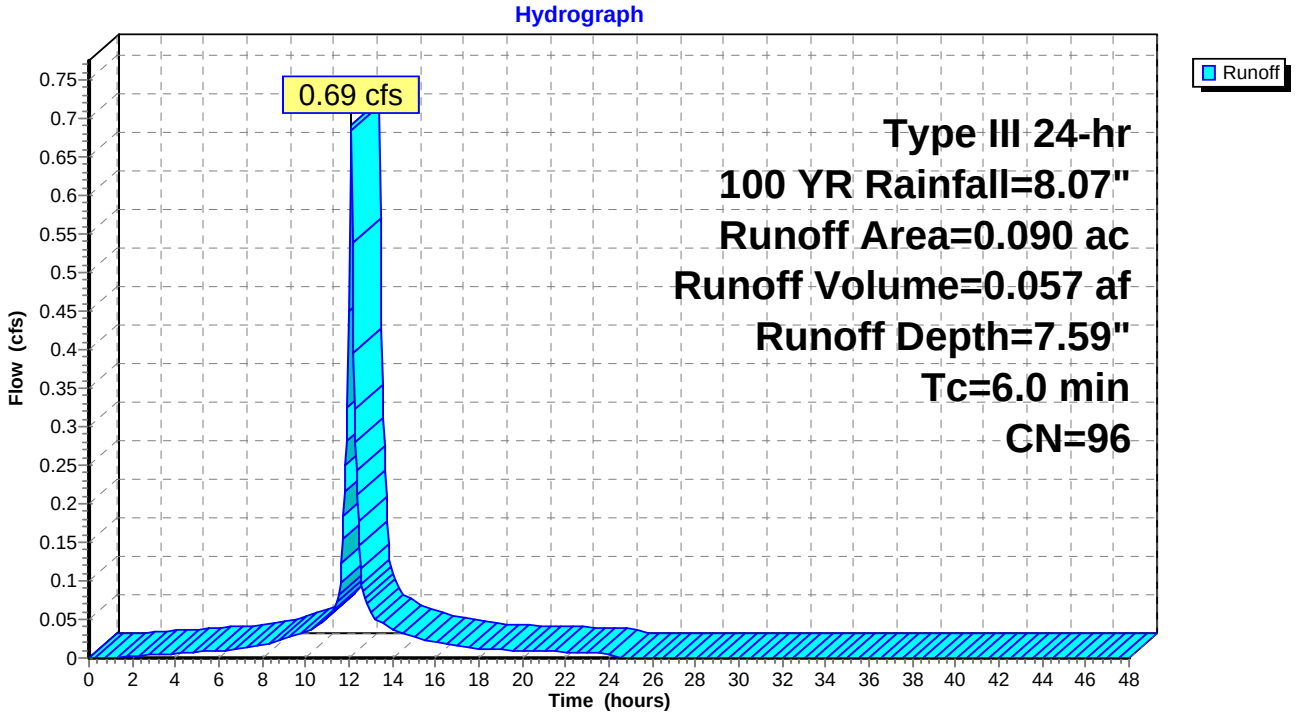
Runoff = 0.69 cfs @ 12.09 hrs, Volume= 0.057 af, Depth= 7.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.07"

Area (ac)	CN	Description
0.090	96	Gravel surface, HSG C
0.090		100.00% Pervious Area

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

Subcatchment PDA-3a: PDA-3a



Summary for Pond G2: GRAVEL

Inflow Area = 0.148 ac, 0.00% Impervious, Inflow Depth = 7.59" for 100 YR event
Inflow = 1.14 cfs @ 12.09 hrs, Volume= 0.094 af
Outflow = 0.03 cfs @ 16.11 hrs, Volume= 0.091 af, Atten= 97%, Lag= 241.4 min
Discarded = 0.03 cfs @ 8.95 hrs, Volume= 0.091 af
Primary = 0.01 cfs @ 16.11 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 0.99' @ 16.11 hrs Surf.Area= 6,446 sf Storage= 2,554 cf

Plug-Flow detention time= 845.9 min calculated for 0.091 af (97% of inflow)
Center-of-Mass det. time= 828.4 min (1,580.5 - 752.2)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	2,578 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 6,446 cf Overall x 40.0% Voids

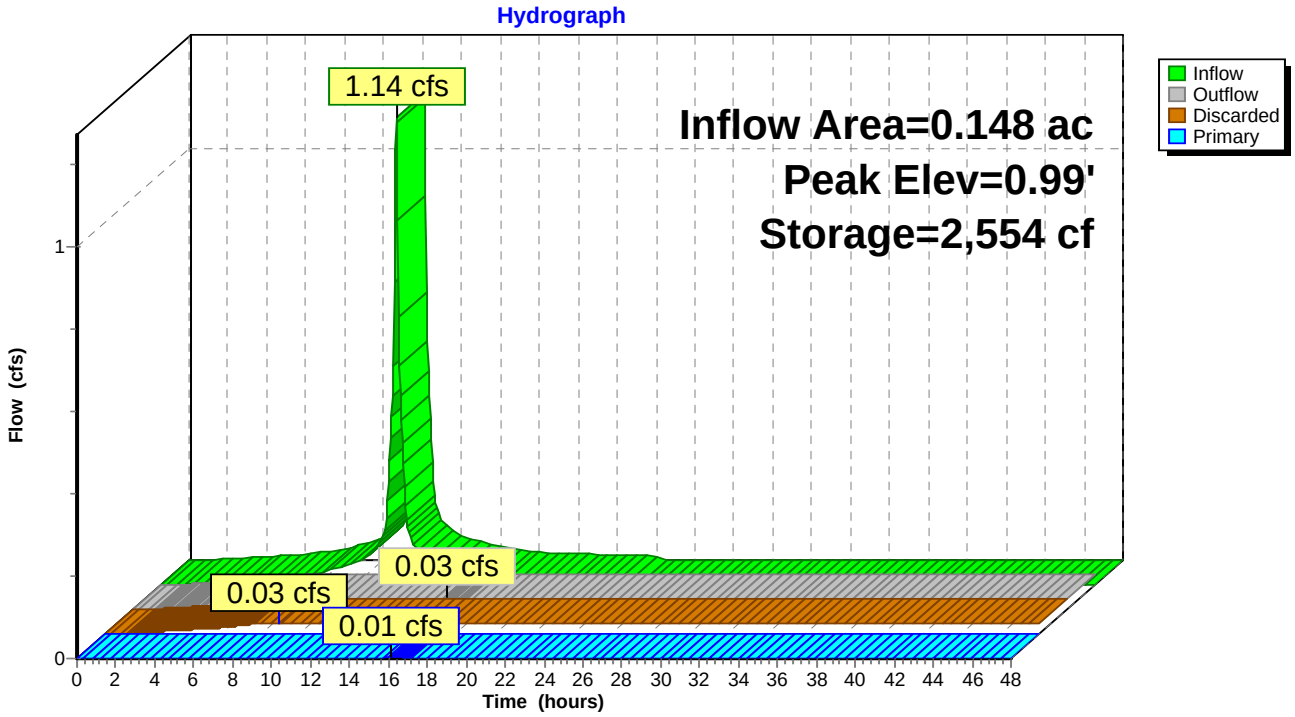
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	6,446	0	0
1.00	6,446	6,446	6,446

Device	Routing	Invert	Outlet Devices
#1	Primary	0.99'	**150.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#2	Discarded	0.00'	**0.170 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.03 cfs @ 8.95 hrs HW=0.01' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.01 cfs @ 16.11 hrs HW=0.99' TW=0.00' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 0.01 cfs @ 0.06 fps)

Pond G2: GRAVEL



Summary for Pond G3: GRAVEL

Inflow Area = 0.090 ac, 0.00% Impervious, Inflow Depth = 7.59" for 100 YR event
Inflow = 0.69 cfs @ 12.09 hrs, Volume= 0.057 af
Outflow = 0.02 cfs @ 16.57 hrs, Volume= 0.055 af, Atten= 97%, Lag= 269.1 min
Discarded = 0.02 cfs @ 8.95 hrs, Volume= 0.055 af
Primary = 0.00 cfs @ 16.57 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 0.99' @ 16.57 hrs Surf.Area= 3,931 sf Storage= 1,557 cf

Plug-Flow detention time= 848.3 min calculated for 0.055 af (97% of inflow)
Center-of-Mass det. time= 830.1 min (1,582.3 - 752.2)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,572 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 3,931 cf Overall x 40.0% Voids

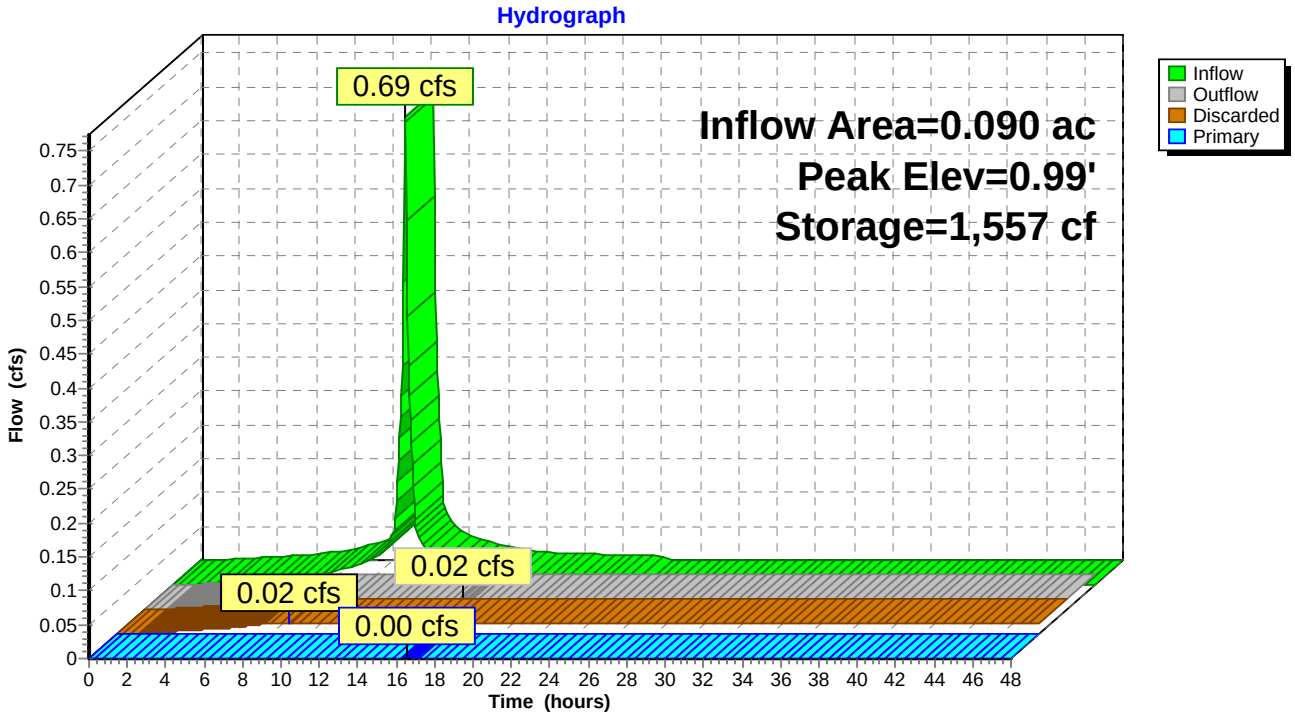
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	3,931	0	0
1.00	3,931	3,931	3,931

Device	Routing	Invert	Outlet Devices
#1	Primary	0.99'	**150.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#2	Discarded	0.00'	**0.170 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 8.95 hrs HW=0.01' (Free Discharge)
↑**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 16.57 hrs HW=0.99' TW=0.00' (Dynamic Tailwater)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 0.00 cfs @ 0.04 fps)

Pond G3: GRAVEL

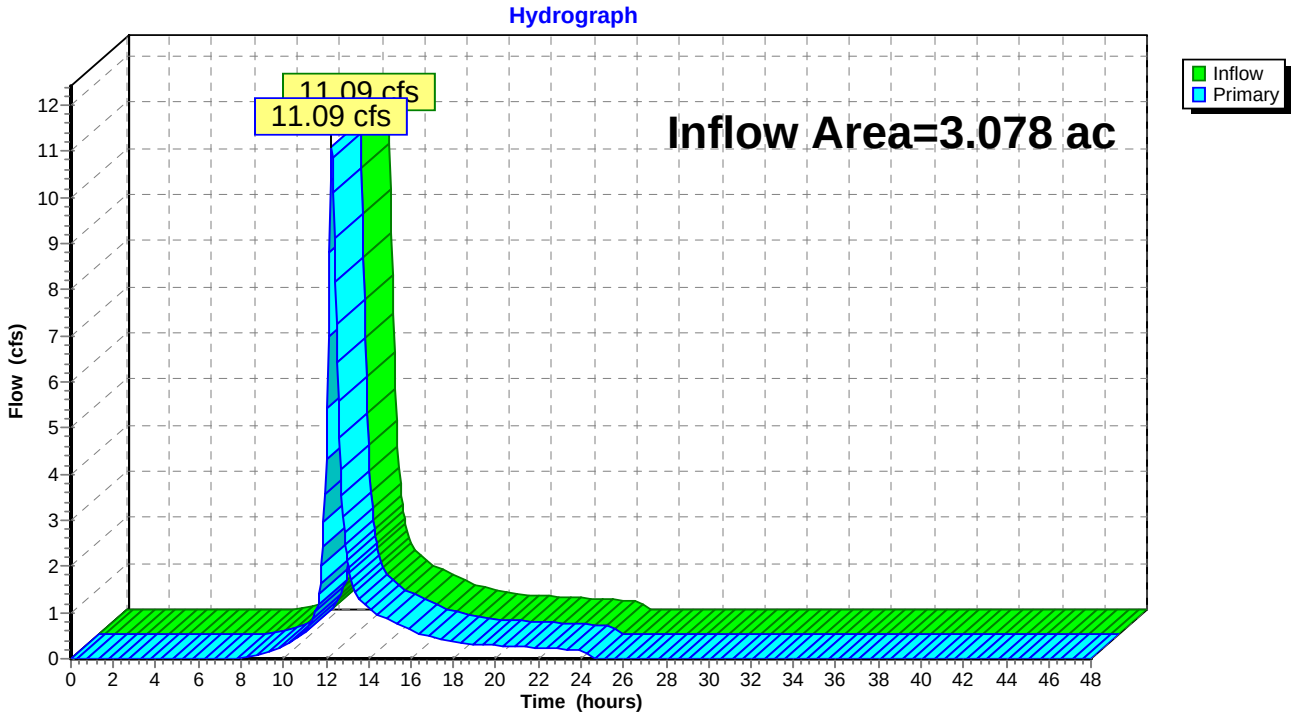


Summary for Link AP-1: AP-1

Inflow Area = 3.078 ac, 0.00% Impervious, Inflow Depth = 4.50" for 100 YR event
Inflow = 11.09 cfs @ 12.26 hrs, Volume= 1.155 af
Primary = 11.09 cfs @ 12.26 hrs, Volume= 1.155 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-1: AP-1

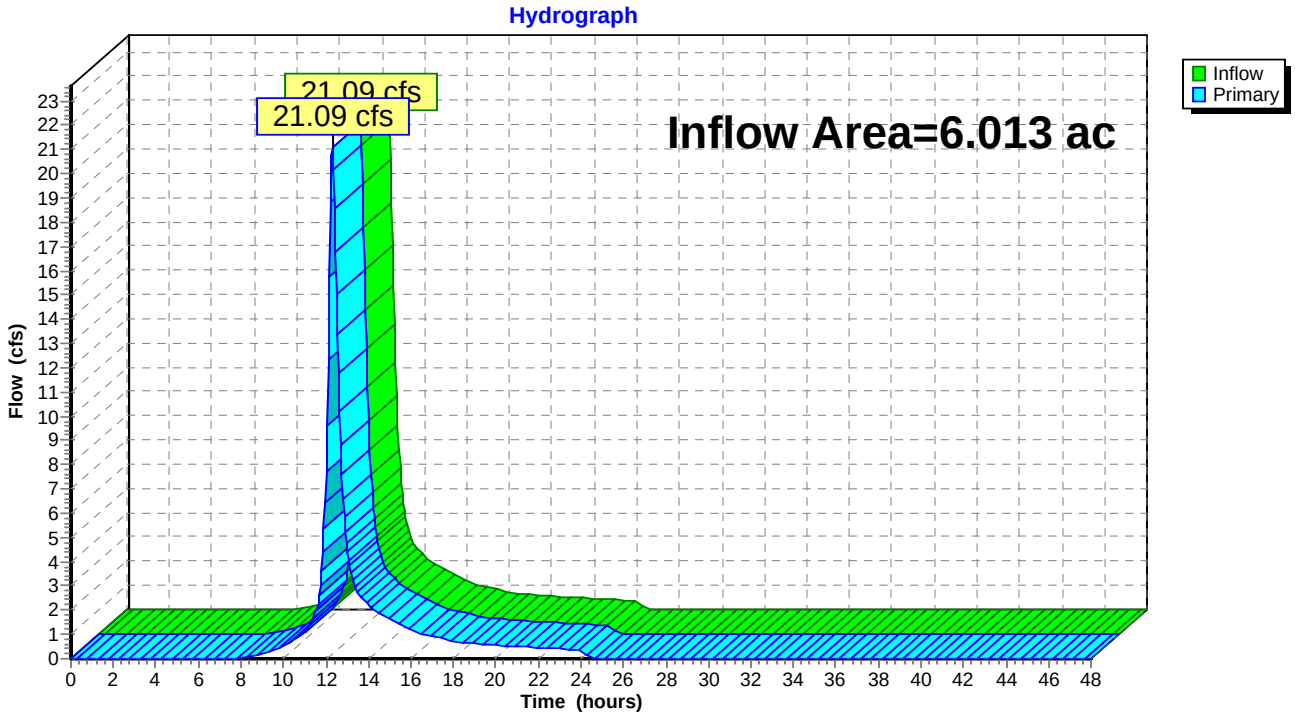


Summary for Link AP-2: AP-2

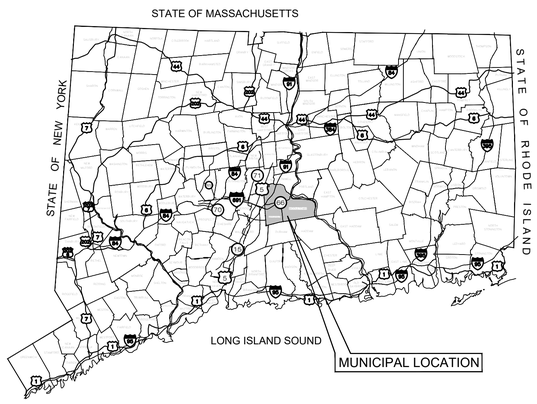
Inflow Area = 6.013 ac, 0.30% Impervious, Inflow Depth = 4.53" for 100 YR event
Inflow = 21.09 cfs @ 12.29 hrs, Volume= 2.268 af
Primary = 21.09 cfs @ 12.29 hrs, Volume= 2.268 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link AP-2: AP-2



APPENDIX D
Design Plans



CITRINE POWER, LLC
"MIDDLETOWN/MIDDLEFIELD"

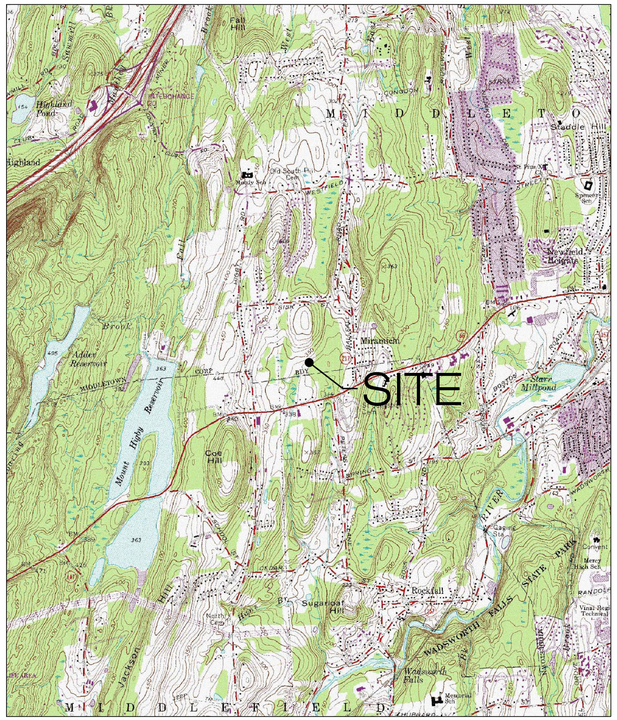
MERIDEN ROAD (ROUTE 66)
MIDDLEFIELD, CT 06455

LIST OF DRAWINGS

SITE INFORMATION

SITE NAME:	"MIDDLETOWN/MIDDLEFIELD" MERIDEN ROAD (ROUTE 66)
LOCATION:	MIDDLEFIELD, CT 06455
SITE TYPE/DESCRIPTION:	ADD (2) GROUND MOUNTED SOLAR PANEL ARRAY W/ ASSOCIATED EQUIPMENT. EAST ARRAY 0.986±MW WEST ARRAY 1.0±MW
PROPERTY OWNER:	BARBARA J. PENNEY and ANN CHARTON 41 CHELSEA DRIVE CROMWELL, CT 06416
APPLICANTS:	CITRINE POWER, LLC, CP MIDDLETOWN I, LLC & CP MIDDLETOWN II, LLC. 55 GREEN FARMS ROAD WESTPORT, CT 06880 PHONE: 203.557.5554
ENGINEER CONTACT:	BRADLEY J. PARSONS, P.E. (860) 663-1697 x208
LATITUDE:	41°32'46.22" N
LONGITUDE:	72°42'23.61" W
ELEVATION:	332'± AMSL
ZONE:	DESIGN DISTRICT #1 (MIDDLEFIELD) RESIDENTIAL 15 (MIDDLETOWN)
EXISTING LAND USE:	SINGLE FAMILY RESIDENTIAL & AGRICULTURAL
PROPOSED LAND USE:	LARGE SCALE GROUND MOUNTED SOLAR PHOTOVOLTAIC INSTALLATIONS
TOTAL PROJECT ACREAGE:	8.7± AC.
TOTAL DISTURBED AREA:	0.95± AC.

USGS TOPOGRAPHIC MAP



SCALE : 1" = 2000'± SOURCE: USGS 7.5 QUADRANGLE: MIDDLETOWN, CT 2015

CITRINE
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WESTPORT, CT 06880
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ALL-POINTS TECHNOLOGY CORPORATION
3 SADDLEBROOK DRIVE PHONE: (860)-663-1697
KILLINGWORTH, CT 06419 FAX: (860)-663-0935
WWW.ALLPOINTSTECH.COM

PERMITTING

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5	5/29/19	SWPPP SUBMISSION: RAG
6		

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 3 SADDLEBROOK DRIVE KILLINGWORTH, CT 06419

OWNER: BARBARA J. PENNEY & ANN CHARLTON
ADDRESS: 41 CHELSEA DRIVE CROMWELL, CT 06416

MIDDLETOWN/MIDDLEFIELD

SITE ADDRESS: MERIDEN ROAD (ROUTE 66) MIDDLEFIELD, CT 06455

APT FILING NUMBER: CT567100

DRAWN BY: RAG
DATE: 03/29/19
CHECKED BY: BJP

SHEET TITLE:
TITLE SHEET & INDEX

SHEET NUMBER:
T-1

MAP NOTES:

1. THIS MAP AND SURVEY HAVE BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND "THE MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" HAVING AN EFFECTIVE DATE OF OCTOBER 26, 2018.
2. THE TYPE OF SURVEY PERFORMED AND THE MAPPED FEATURES DEPICTED HEREON ARE IN ACCORDANCE WITH THE REQUIREMENTS OF A PROPERTY SURVEY.
3. THE PROPERTY/ BOUNDARY DETERMINATION/OPINION IS BASED UPON A FIRST SURVEY OF THE SUBJECT PARCEL.
4. THE HORIZONTAL BASELINE CONFORMS TO A CLASS A-2 ACCURACY.

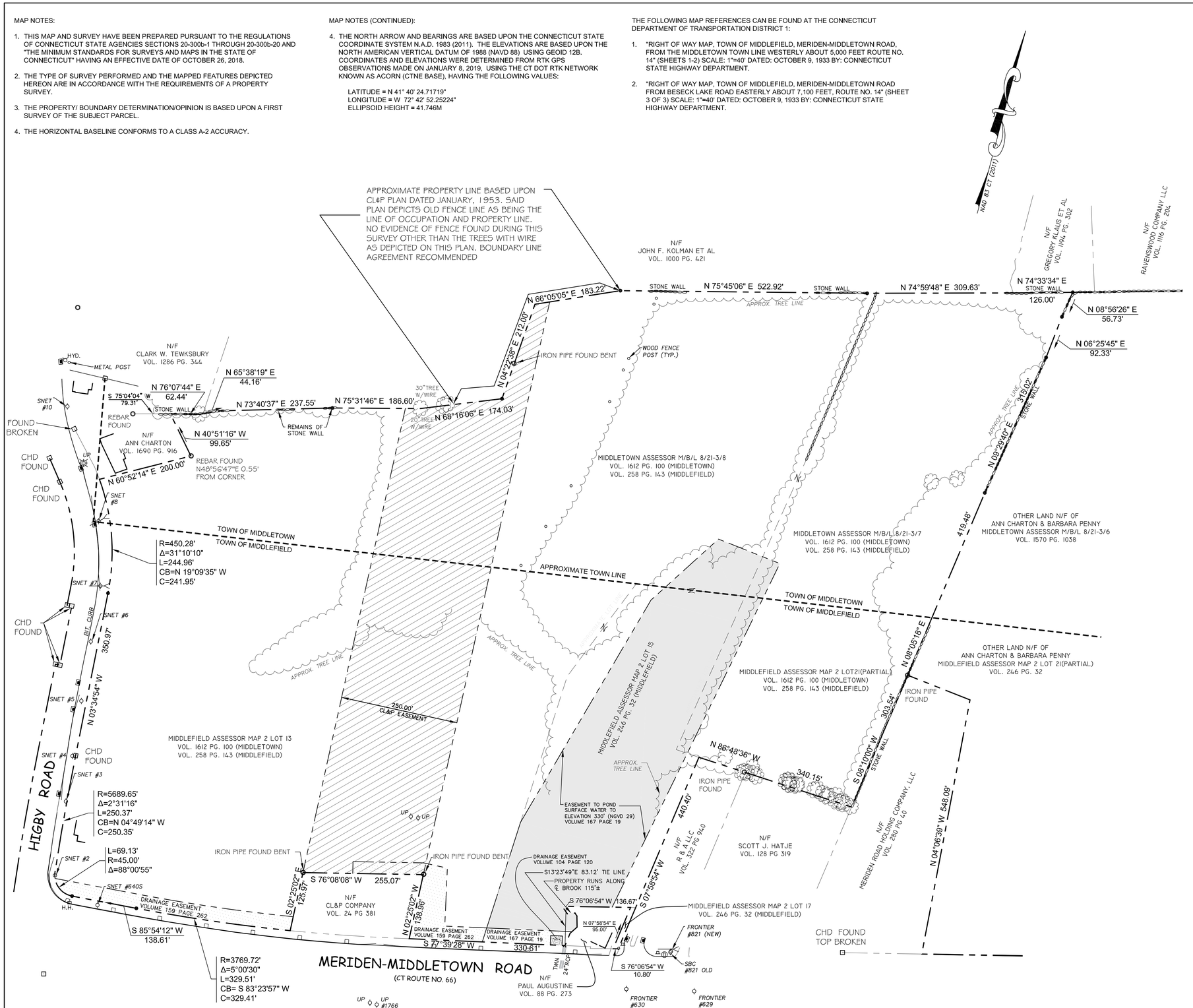
MAP NOTES (CONTINUED):

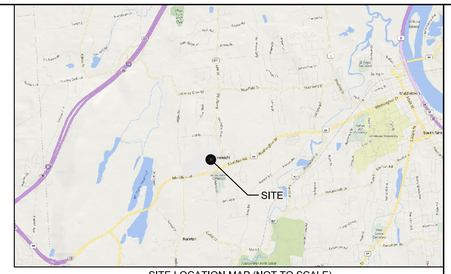
4. THE NORTH ARROW AND BEARINGS ARE BASED UPON THE CONNECTICUT STATE COORDINATE SYSTEM N.A.D. 1983 (2011). THE ELEVATIONS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) USING GEOID 12B. COORDINATES AND ELEVATIONS WERE DETERMINED FROM RTK GPS OBSERVATIONS MADE ON JANUARY 8, 2019, USING THE CT DOT RTK NETWORK KNOWN AS ACORN (CTNE BASE), HAVING THE FOLLOWING VALUES:

LATITUDE = N 41° 40' 24.71719"
LONGITUDE = W 72° 42' 52.25224"
ELLIPSOID HEIGHT = 41.746M

THE FOLLOWING MAP REFERENCES CAN BE FOUND AT THE CONNECTICUT DEPARTMENT OF TRANSPORTATION DISTRICT 1:

1. "RIGHT OF WAY MAP, TOWN OF MIDDLEFIELD, MERIDEN-MIDDLETOWN ROAD, FROM THE MIDDLETOWN TOWN LINE WESTERLY ABOUT 5,000 FEET ROUTE NO. 14" (SHEETS 1-2) SCALE: 1"=40' DATED: OCTOBER 9, 1933 BY: CONNECTICUT STATE HIGHWAY DEPARTMENT.
2. "RIGHT OF WAY MAP, TOWN OF MIDDLEFIELD, MERIDEN-MIDDLETOWN ROAD FROM BESECK LAKE ROAD EASTERLY ABOUT 7,100 FEET, ROUTE NO. 14" (SHEET 3 OF 3) SCALE: 1"=40' DATED: OCTOBER 9, 1933 BY: CONNECTICUT STATE HIGHWAY DEPARTMENT.





SITE LOCATION MAP (NOT TO SCALE)

THE FOLLOWING MAP REFERENCES CAN BE FOUND IN THE TOWN OF MIDDLEFIELD LAND RECORDS:

A. "TOWN OF MIDDLEFIELD, MAP SHOWING LAND ACQUIRED FROM JENNIE MAKUCH, RELOCATION OF ROUTE 66" SCALE: 1"=40' DATED: SEPTEMBER 16, 1997 BY: THE STATE OF CONNECTICUT.

B. "TOWN OF MIDDLEFIELD, MAP SHOWING LAND ACQUIRED FROM S.J. CARTELLI, ESQ. TRUSTEE, RELOCATION OF ROUTE 66" SCALE 1"=40' DATED: SEPTEMBER 16, 1997 BY: THE STATE OF CONNECTICUT.

C. "TOWN OF MIDDLEFIELD AND CITY OF MIDDLETOWN, MAP SHOWING LAND ACQUIRED FROM S.J. CARTELLI, ESQ. TRUSTEE, RELOCATION OF ROUTE 66" SCALE 1"=40' DATED: AUGUST, 2001 BY: THE STATE OF CONNECTICUT.

D. "TOWN OF MIDDLEFIELD =, MAP SHOWING EASEMENT ACQUIRED FROM HEIRS OF ADOLF MAKUCH FOR THE RELOCATION OF CONNECTICUT ROUTE 66" SCALE: 1CM=5CM DATED: AUGUST, 1998 BY: THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION.

E. "TOWN OF MIDDLEFIELD, MAP SHOWING LAND ACQUIRED FROM JENNIE MAKUCH, RELOCATION OF ROUTE 66" SCALE: 1"=40' DATED: JULY, 2001 BY: THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION.

F. "MAP OF A PORTION OF LAND OF FRANK MAKUCH MIDDLETOWN, CONNECTICUT" SCALE: 1"=30' DATED: AUGUST, 1961 BY: L.F. QUIRK.

G. "MAP SHOWING LAND TO BE PURCHASED FROM ADOLF MAKUCH AND JENNIE MAKUCH TOWN OF MIDDLEFIELD, CONNECTICUT" SCALE 1"=100' DATED" JANUARY, 1953 BY: THE CONNECTICUT POWER COMPANY.

H. "MAP SHOWING RIGHT OF WAY ACROSS PROPERTY OF ADOLF MAKUCH AND JENNIE MAKUCH TOWNS OF MIDDLEFIELD AND MIDDLETOWN, CONNECTICUT" SCALE:1"200' DATED: JANUARY, 1953 BY: THE CONNECTICUT POWER COMPANY.

I. "MAP SHOWING PORTION OF PROPERTY OF FRANK & ANNA MAKUCH PROPERTY MIDDLEFIELD, CONNECTICUT" SCALE:1"=40' DATED: AUGUST 29, 1942 BY: L.F. QUIRK.

J. "MAP OF PROPERTY CONVEYED TO ALLEN C. ROBERTS BY FRANK MAKUCH MIDDLEFIELD, CONNECTICUT" SCALE:1"=50 DATED: NOVEMBER 30, 1941 BY: ILLEGIBLE.

K. "MAP FOR CONVEYANCE OF A PORTION OF THE FRANK MAKUCH PROPERTY MIDDLEFIELD, CONNECTICUT" SCALE: 1"=40' DATED: MARCH 1943 BY: THOMAS H. SELLEW JR.

L. "SKETCH SHOWING PORTION OF MARY JARZEBEK PROPERTY MERIDEN-MIDDLETOWN ROAD MIDDLEFIELD, CONNECTICUT" SCALE: 1"=40' DATED: SEPTEMBER 10, 1941 BY: L.F. QUIRK.

M. "MAP OF CONGETTINA S. CARTA PROPERTY MIDDLEFIELD, CONNECTICUT" SCALE: 1"=30' DATED: MARCH, 1947 BY: L.F. QUIRK.

N. "MAP OF GENEVIEVE J. & CHARLES LOCHOWSKI PROPERTY MIDDLETOWN & MIDDLEFIELD, CONNECTICUT" SCALE:1"=50' DATED: MAY, 1955 BY: L.F. QUIRK

O. "SKETCH OF PROPERTY OF EDWARD MAKUCH MIDDLEFIELD, CONNECTICUT" DATED: SEPTEMBER 10, 1941 BY: L. NORMAN GERMAIN.

P. "TOWN OF MIDDLEFIELD, MAP SHOWING EASEMENT TO BE ACQUIRED FROM ADOLPH J. MAKUCH, CLIMBING LANE ON ROUTE U.S. 6A" SCALE:1"=40' DATED: APRIL, 1965 BY: THE STATE OF CONNECTICUT.

Q. PLAT SHOWING THE DIVISION LINE BETWEEN THE TOWNS MIDDLETOWN AND MIDDLEFIELD ON THE NORTH SIDE OF MIDDLEFIELD" SCALE: 1"=300' DATE: ILLEGIBLE BY: ILLEGIBLE.

THE FOLLOWING MAP REFERENCES CAN BE FOUND IN THE CITY OF MIDDLETOWN LAND RECORDS:

AA. "NEW LOCATION OF HIGHWAY LINES FOR PORTION OF BALLFALL ROAD MIDDLETOWN, CONNECTICUT" SCALE:1"=40' DATED: 1933 BY"LOUIS F. QUIRK.

BB. "MAP OF SOPHIE J. & WALTER GAWLAK PROPERTY MIDDLETOWN, CONNECTICUT SCALE: 1"=40' DATED: APRIL, 1956 BY: L.F. QUIRK.

CC. "SURVEY OF PORTION OF PROPERTY OF ADOLF & JENNIE MAKUCH & LEONARD E. & VIRGINIA N. BURR AND OTHERS, EAST SIDE OF HIGBY ROAD (AKA #217) TOWNS OF MIDDLEFIELD AND MIDDLETOWN, CONNECTICUT" SCALE: 1"=20' DATED: MAY, 26 1962 BY: ILLEGIBLE.

DD. "MAP OF A PORTION OF MARY JARZABEK PROPERTY MIDDLETOWN, CONNECTICUT" SCALE: 1"=40' DATED: JUNE, 1947 BY: L.F. QUIRK.

EE. "MAP OF A PORTION OF MARY JARZABEK PROPERTY MIDDLETOWN, CONNECTICUT" SCALE: 1"=40' DATED: JUNE 22, 1977 BY: P.F. JACHOWIAK.

FF. "PROPERTY SURVEY LAND OF DENNA B. GILLS, RICHARD H. BIRDSEY & THOMAS E. BIRDSEY" SCALE: 1"=60' DATED: DECEMBER 18, 1996 BY: CONKLIN & SOROKA INC.

GG. "PROPERTY OF JOHN AND JAMES KOLMAN HIGBY ROAD MIDDLETOWN, CONNECTICUT, SUBDIVISION PLAN & SITE DEVELOPMENT PLAN" SCALE: 1"=40' DATED: JULY, 10, 1992 BY: ILLEGIBLE.

HH. "MAP SHOWING EASEMENT TO BE ACQUIRED FROM JOHN F. KOLMAN, JR. & JAMES KOLMAN, HIGBY ROAD MIDDLETOWN, CONNECTICUT" SCALE: 1"=40' DATED: MARCH, 1996 BY: GREINER INC.

II. "RESUBDIVISION MAP, LAND OF DEANNA B. GILLS, RICHARD H. BIRDSEY & THOMAS E. BIRDSEY" SCALE: 1"=60' DATED:JULY 1, 1996 BY: CONKLIN & SOROKA INC.

AREA
896,845 S.F. , 20.59 ACRES (MIDDLETOWN)
1,246,637 S.F., 25.82 ACRES (MIDDLEFIELD)
2,021,482 S.F. 46.41 ACRES (TOTAL)

50 0 50 100 150
SCALE: 1" = 100'

LEGEND:

- IRON PIN (FOUND)
- Rebar/Drill Hole (To Be Set)
- MONUMENT (FOUND)
- MANHOLE
- DRAINAGE MANHOLE
- SANITARY MANHOLE
- ELEC. MANHOLE
- TELE. MANHOLE
- "C" CATCH BASIN
- "C-L" CATCH BASIN
- DECIDUOUS TREES
- EVERGREEN TREES
- SHRUB/BUSH
- FLAG POLE
- TRAFFIC CONTROL BOX
- SIGN
- POST
- LIGHT POLE
- GUY ANCHOR
- UTILITY POLE
- WATER GATE
- WATER METER
- GAS VALVE
- GAS METER
- TRANSFORMER
- ELEC. METER
- MAIL BOX
- HAND HOLE
- BUTTON BOX
- A.C. UNIT
- TRAFFIC LIGHT POLE
- BOUNDARY LINE
- GUARD RAIL
- UNDERGROUND PIPING (San.,Stm.)
- U/G GAS LINE
- U/G ELEC. LINE
- WATER LINE
- OVERHEAD UTILITIES
- U/G TELE. LINE
- CHAIN LINK FENCE
- TREE LINE

martin
Surveying Associates, LLC
201 CHRISTIAN LANE BERLIN, CT 06037
860-832-9328 860-357-4604 (FAX)

REVISIONS:

PROPERTY SURVEY
LAND OF
ANN CHARTON & BARBARA PENNY
MERIDEN-MIDDLETOWN ROAD (A/K/A CT RT 66)
&
HIGBY ROAD
MIDDLEFIELD & MIDDLETOWN, CONNECTICUT

MSA PROJECT NO: 18-119

SCALE: 1"=100'
DRAWN BY: G.S.D.
DATE: 1/31/2019
CHECKED BY: D.G.M.

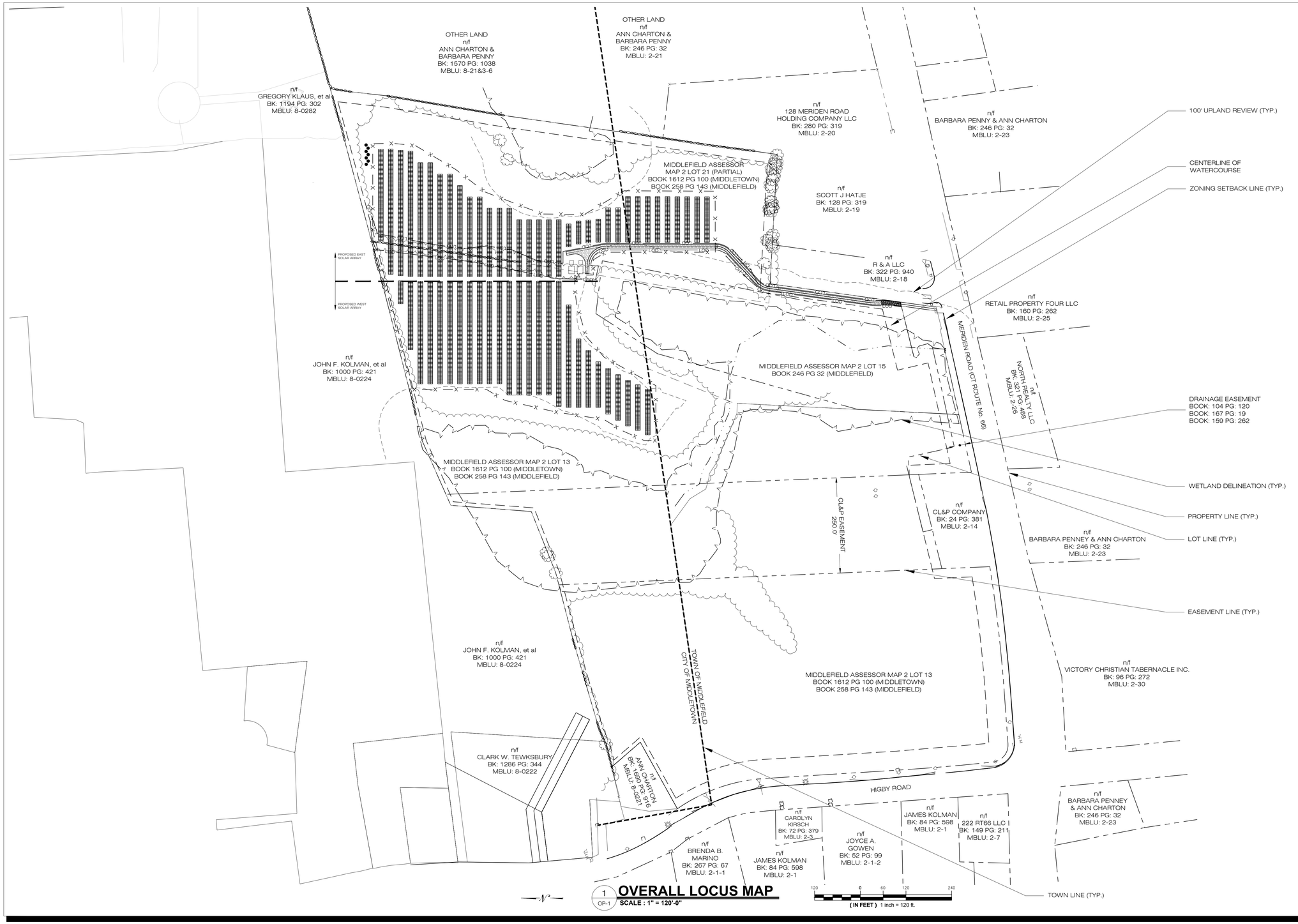
TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

DEAN MARTIN 70147
DEAN MARTIN LICENSE NO.

THIS DOCUMENT AND COPIES THEREOF ARE VALID ONLY IF THEY BEAR THE SIGNATURE AND EMBOSSED SEAL OF THE DESIGNATED LICENSED PROFESSIONAL. UNAUTHORIZED ALTERATIONS TO THIS PLAN RENDER THE DECLARATION HEREON NULL AND VOID.

STATE OF CONNECTICUT DEAN G. MARTIN No.70147 LICENSED LAND SURVEYOR

SHEET: 1 OF 1



CITRINE

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ALL-POINTS TECHNOLOGY CORPORATION

3 SADDLEBROOK DRIVE
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FAX: (860)-663-0935

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5	5/29/19	SWPPP SUBMISSION: RAG
6		

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419

OWNER: BARBARA J. PENNEY & ANN CHARLTON
ADDRESS: 41 CHELSEA DRIVE
CROMWELL, CT 06416

MIDDLETOWN/MIDDLEFIELD

SITE ADDRESS: MERIDEN ROAD (ROUTE 66)
MIDDLEFIELD, CT 06455

APT FILING NUMBER: CT567100

DRAWN BY: RAG

DATE: 03/29/19

CHECKED BY: BJP

SHEET TITLE:

OVERALL LOCUS MAP

SHEET NUMBER:

OP-1

7 DN-1 Thuja plicata 'Green Giant' GREEN GIANT ARBORVITAE 7 COUNT, 10' O.C.

EXIST. TREES AND LARGE STONES TO BE REMOVED

WETLAND DELINEATION BY ALL POINTS TECHNOLOGY CORP. 1/2019

EXISTING TREE TO BE REMOVED STUMP TO REMAIN

100' UPLAND REVIEW (TYP.)

EXISTING TREE LINE (TYP)

ZONING SETBACK LINE

EXIST. PROPERTY

100.0'

EXIST. GRADE TO BE MAINTAINED

13.5' BETWEEN ROWS

PROPOSED EAST SOLAR ARRAY 3,492 MODULES (APPROX. POWER GENERATION @ 370W/EA, TOTAL ±0.986MW) 2 DN-1

PROPOSED WEST SOLAR ARRAY 3,492 MODULES (APPROX. POWER GENERATION @ 370W/EA, TOTAL ±1.0 MW) 2 DN-1

PROPOSED 10' X 10' CONC. TRANSFORMER PAD (TYP. OF 2)

4 DN-1 PROPOSED 15' X 20' CONC. EQUIPMENT PAD (TYP. OF 2)

LIMIT OF CLEARING

5 DN-1 PROPOSED 16' CHAIN LINK GATE WITH SITE IDENTIFICATION SIGN

1 DN-1 PROPOSED UNDERGROUND ELECTRIC CONDUIT, APPROXIMATE

PROP. LIMIT OF DISTURBANCE

5 DN-1 PROPOSED 7' HIGH CHAIN LINK FENCE

5 DN-1 PROPOSED 16' CHAIN LINK GATE WITH SITE IDENTIFICATION SIGN

PROPOSED OVERHEAD ELECTRIC (BY OTHERS)

PROPOSED UTILITY POLE (BY OTHERS) (TYP. OF 7)

EXIST. BIT. CONC. APRON TO REMAIN

EXIST. GRAVEL ACCESS DRIVE TO REMAIN

PROPOSED 925LF 10' WIDE GRAVEL DRIVE WITH TURN AROUND 3 DN-1

WETLAND DELINEATION BY ALL POINTS TECHNOLOGY CORP. 1/2019

100' UPLAND REVIEW (TYP.)

EXISTING TREE LINE (TYP)

15.0' MIN.

100.0'

1 SP-1 **SITE PLAN**
SCALE : 1" = 60'-0"

60 0 30 60 120
(IN FEET) 1 inch = 60 ft.

CITRINE

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ADD: 3 SADDLEBROOK DRIVE KILLINGWORTH, CT 06419

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DRAWN BY: RAG

DATE: 03/29/19 CHECKED BY: BJP

SHEET TITLE:

SITE PLAN

SHEET NUMBER:

SP-1

PROP. GRUBBING OF APPROX. 0.55± ACRES (UPON INSTALLATION OF PERIMETER CONTROLS) - GRUBBING ACTIVITIES INSIDE LOD INCLUDES THE REMOVAL OF ALL BRUSH, REMOVE TREES, & STUMPS. DISTURBED AREAS TO BE LOAMED & SEEDED AT THE COMPLETION OF CONSTRUCTION (TYP.)

SILT FENCE DRAINAGE AREAS

4 EC-2 PROP. SILT FENCE WING (9 LOCATIONS, TYP.)

1 EC-2 PROPOSED SILT FENCE PERIMETER BARRIER

SF AREA 0.87 AC

SF AREA 0.90 AC

SF AREA 0.34 AC

SF AREA 0.89 AC

SF AREA 0.90 AC

SF AREA 0.90 AC

SF AREA 0.90 AC

SF AREA 0.44 AC

SF AREA 0.90 AC

SF AREA 0.50 AC

SF AREA 0.90 AC

PROPOSED EAST SOLAR ARRAY

PROPOSED WEST SOLAR ARRAY

ALL COMPACTED AREAS WITHIN THE PROJECT SITE TO BE AERATED PRIOR TO SEEDING

EXISTING BIT. CONC. APRON TO REMAIN

EXISTING GRAVEL DRIVE TO REMAIN

PROPOSED CONSTRUCTION ENTRANCE (MINIMUM 50' LONG) 2 EC-2

3 EC-2 PROP. STOCK PILE AREA WITH DOUBLE ROW SILT FENCE (TYP.) (IF REQUIRED)

PROPOSED LIMIT OF DISTURBANCE

1 EC-1 **SEDIMENTATION & EROSION CONTROL PLAN**
SCALE : 1" = 60'-0"

60 0 30 60 120
(IN FEET) 1 inch = 60 ft.

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PERMITTING

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4	5/20/19	REVIEW COMMENTS: RAG
5	5/29/19	SWPPP SUBMISSION: RAG
6		

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
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OWNER: BARBARA J. PENNEY & ANN CHARLTON
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MIDDLETOWN/MIDDLEFIELD

SITE ADDRESS: MERIDEN ROAD (ROUTE 66) MIDDLEFIELD, CT 06455

APT FILING NUMBER: CT567100

DRAWN BY: RAG

DATE: 03/29/19

CHECKED BY: BJP

SHEET TITLE:

SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:

EC-1

EROSION CONTROL NOTES

EROSION AND SEDIMENT CONTROL PLAN NOTES

1. THE CONTRACTOR SHALL CONSTRUCT ALL SEDIMENT AND EROSION CONTROLS IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION (CT DEEP). THE CONTRACTOR SHALL KEEP A COPY OF THE CURRENT GUIDELINES ON-SITE FOR REFERENCE DURING CONSTRUCTION. ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CLEARING AND GRUBBING AND DEMOLITION OPERATIONS.

2. THESE DRAWINGS ARE ONLY INTENDED TO DESCRIBE THE SEDIMENT AND EROSION CONTROL MEASURES FOR THIS SITE. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN ARE SHOWN IN A GENERAL SIZE AND LOCATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL EROSION CONTROL MEASURES ARE CONFIGURED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION OF SOILS AND PREVENT THE TRANSPORT OF SEDIMENTS AND OTHER POLLUTANTS TO STORM DRAINAGE SYSTEMS AND/OR WATERCOURSES. ACTUAL SITE CONDITIONS OR SEASONAL AND CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS WHEN DIRECTED BY THE ENGINEER. SEE SEDIMENT AND EROSION CONTROL DETAILS AND SUGGESTED CONSTRUCTION SEQUENCE FOR MORE INFORMATION. REFER TO SITE PLAN FOR GENERAL INFORMATION AND OTHER CONTRACT PLANS FOR APPROPRIATE INFORMATION.

3. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE SEDIMENT AND EROSION CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE PROPER INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED WITH CONSTRUCTION ON THE SITE OF THE REQUIREMENTS AND OBJECTIVES OF THIS PLAN, INFORMING THE GOVERNING AUTHORITY OR INLAND WETLANDS AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY, AND FOR CONVEYING A COPY OF THE SEDIMENT & EROSION CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED. COMPLY WITH REQUIREMENTS OF CGS SECTION 22A, 430B FOR STORM WATER DISCHARGE FROM CONSTRUCTION ACTIVITIES AND WITH CT DEEP RECORD KEEPING AND INSPECTION REQUIREMENTS.

4. THE CONTRACTOR SHALL APPLY THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN IN CONJUNCTION WITH CONSTRUCTION SEQUENCING, SUCH THAT ALL ACTIVE WORK ZONES ARE PROTECTED. ADDITIONAL AND/OR ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, APPLICANT, SITE ENGINEER, MUNICIPAL OFFICIALS, OR ANY GOVERNING AGENCY. THE CONTRACTOR SHALL CONTACT THE APPLICANT AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED BY THE CONTRACTOR.

5. THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CONSTRUCTION SO AS NOT TO DISTURB UNPROTECTED WETLAND AREAS OR SEDIMENTATION AND EROSION CONTROL MEASURES. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS AS NEEDED TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS WHERE NECESSARY.

6. THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIAL (HAY BALES, SILT FENCE, JUTE MESH, ETC.) ON-SITE FOR PERIODIC MAINTENANCE AND EMERGENCY REPAIRS.

7. ALL FILL MATERIAL PLACED ADJACENT TO ANY WETLAND AREA SHALL BE GOOD QUALITY, WITH LESS THAN 5% FINES PASSING THROUGH A #200 SIEVE (BANK RUN). SHALL BE PLACED IN MAXIMUM ONE FOOT LIFTS, AND SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN THE CONTRACT SPECIFICATIONS.

8. ANY TREES IDENTIFIED ON THE SITE PLAN TO BE SAVED SHALL BE PROTECTED BY FENCING AT THE DRIP LINE, OR AS DETAILED, WITH SNOW FENCE, ORANGE SAFETY FENCE, OR EQUIVALENT FENCING. ANY LIMB TRIMMING SHOULD BE DONE AFTER CONSULTATION WITH AN ARBORIST AND BEFORE CONSTRUCTION BEGINS IN THAT AREA; FENCING SHALL BE MAINTAINED AND REPAIRED DURING CONSTRUCTION.

9. ANTI-TRACKING PADS SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR CONSTRUCTION ACTIVITY AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF ALL CONSTRUCTION. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED.

10. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SEDIMENT BARRIER UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNHILL SIDE OF THE BARRIER. STAKED HAY BALES OR SILT FENCES SHALL ALSO BE INSTALLED AT THE DOWNHILL SIDES OF BUILDING EXCAVATIONS, DEWATERING PUMP DISCHARGES, AND MATERIAL STOCKPILES.

11. WASHOUT OF APPLICATORS, CONTAINERS, VEHICLES AND EQUIPMENT FOR CONCRETE SHALL BE CONDUCTED IN A DESIGNATED WASHOUT AREA. NO SURFACE DISCHARGE OF WASHOUT WASTE WATERS FROM THE AREA WILL BE ALLOWED. ALL CONCRETE WASH WATER WILL BE DIRECTED INTO A CONTAINER OR PIT SUCH THAT NO OVERFLOWS CAN OCCUR. WASHOUT SHALL BE CONDUCTED IN AN ENTIRELY SELF-CONTAINED SYSTEM AND WILL BE CLEARLY DESIGNED AND FLAGGED OR SIGNED WHERE NECESSARY. THE WASHOUT AREA SHALL BE LOCATED OUTSIDE OF ANY BUFFERS AND AT LEAST 50 FEET FROM ANY STREAM, WETLAND OR OTHER SENSITIVE WATER OR NATURAL RESOURCES AS DETERMINED OR DESIGNATED BY THE ENGINEER.

12. TOPSOIL THAT IS REMOVED AS THE RESULT OF EXCAVATION SHALL BE STRIPPED AND STOCKPILED FOR USE IN FINAL LANDSCAPING. ALL EARTH STOCKPILES SHALL HAVE HAY BALES OR SILT FENCE AROUND THE LIMIT OF PILE. PILES SHALL BE TEMPORARILY SEEDED IF PILE IS TO REMAIN IN PLACE AND UNDISTURBED FOR MORE THAN 30 DAYS.

13. NO CUT OR FILL SLOPES SHALL EXCEED 2:1 EXCEPT WHERE STABILIZED BY ROCK FACED EMBANKMENTS OR EROSION CONTROL BLANKETS AND VEGETATION. ALL SLOPES SHALL BE SEEDED, AND THE ROAD SHOULDER AND BANKS WILL BE STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING UNTIL TURF IS ESTABLISHED.

14. DIRECT ALL DEWATERING PUMP DISCHARGE TO A SEDIMENT CONTROL DEVICE SUCH AS TEMPORARY SEDIMENT TRAPS OR GRASS FILTERS WITHIN THE APPROVED LIMIT OF DISTURBANCE. DISCHARGE TO STORM DRAINS OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR AND APPROVED BY THE ENGINEER.

15. THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ON-SITE AT ALL TIMES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE/CONTAINMENT.

16. SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY (OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM) DURING CONSTRUCTION. FOR DUST CONTROL, PERIODICALLY MOISTEN EXPOSED SOIL SURFACES WITH WATER ON UNPAVED TRAVELWAYS TO KEEP THE TRAVELED WAYS DAMP. CALCIUM CHLORIDE MAY ALSO BE APPLIED TO ACCESS ROADS. DUMP TRUCK LOADS EXITING THE SITE SHALL BE COVERED.

17. TURF ESTABLISHMENT SHALL BE PERFORMED OVER ALL DISTURBED SOIL, UNLESS THE AREA IS UNDER ACTIVE CONSTRUCTION, IT IS COVERED IN STONE OR SCHEDULED FOR PAVING WITHIN 30 DAYS. TEMPORARY SEEDING OR NON-LIVING SOIL PROTECTION OF ALL EXPOSED SOILS AND SLOPES SHALL BE INITIATED WITHIN THE FIRST 7 DAYS OF SUSPENDING WORK IN AREAS TO BE LEFT LONGER THAN 30 DAYS.

18. IF CONSTRUCTION ACTIVITIES ARE COMPLETE OR HAVE BEEN TEMPORARILY HALTED FOR 7 DAYS, STABILIZATION ACTIVITIES WILL BE IMPLEMENTED WITHIN 3 DAYS.

19. TWO WEEKS BEFORE THE FALL SEEDING SEASON BEGINS (AUGUST 15 TO OCTOBER 15), THE CONTRACTOR SHALL SCHEDULE A MEETING WITH APPLICANT TO DISCUSS STABILIZING THE SITE FOR WINTER MONTHS. MEASURES SUCH AS MULCHING AND/OR SEEDING MAY BE REQUIRED.

20. MAINTAIN ALL PERMANENT AND TEMPORARY SEDIMENT CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP PARKING LOTS, CLEAN THE STORM DRAINAGE SYSTEMS AND REMOVE ALL TEMPORARY SEDIMENT CONTROLS ONCE THE SITE IS FULLY STABILIZED AND APPROVAL HAS BEEN RECEIVED FROM APPLICANT AND/OR ENGINEER.

21. SEEDING MIXTURES:
    A. NEW ENGLAND EROSION CONTROL/ RESTORATION MIX FOR MOIST SITES SPREAD AT A RATE OF 35 LBS PER ACRE:VIRGINIA WILD RYE, (ELYMUS VIRGINICUS), CREEPING RED FESCUE, (FESTUCA RUBRA), LITTLE BLUESTEM,(SCHIZACHYRIUM SCOPARIUM), BIG BLUESTEM, (ANDROPOGON GERARDII), FOX SEDGE, (CAREX VULPINOIDEA), SWITCH GRASS, (PANICUM VIRGATUM), ROUGH BENTGRASS, (AGROSTIS SCABRA), NEW ENGLAND ASTER, (ASTER NOVAE-ANGLIAE), BONESET, (EUPATORIUM PERFOLIATUM), GRASS LEAVED GOLDENROD, (EUTHAMIA GRAMINIFOLIA), GREEN BULRUSH, (SCIRPUS ATROVIRENS), BLUE VERVAIN, (VERBENA HASTATA), SOFT RUSH, (JUNCUS EFFUSUS), WOOL GRASS, (SCIRPUS CYPERINUS), OR APPROVED EQUAL.
    B. NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DRY SITES SPREAD AT A RATE OF 35 LBS PER ACRE: CREEPING RED FESCUE, (FESTUCA RUBRA), CANADA WILD RYE, (ELYMUS CANADENSIS), ANNUAL RYEGRASS, (LOLIUM MULTIFLORUM), PERENNIAL RYEGRASS, (LOLIUM PERENNE), BLUE GRAMA, (BOUTELOUA GRACILIS), LITTLE BLUESTEM, (SCHIZACHYRIUM SCOPARIUM), INDIAN GRASS, (SORGHASTRUM NUTANS), ROUGH BENTGRASS, (AGROSTIS SCABRA), UPLAND BENTGRASS, (AGROSTIS PERENNANS), OR ERNST SOLAR MIX OR OTHER APPROVED EQUAL.

22. PLASTIC NETTING USED IN A VARIETY OF EROSION CONTROL PRODUCTS (I.E., EROSION CONTROL BLANKETS, FIBER ROLLS (WATTLES), REINFORCED SILT FENCE) HAS BEEN FOUND TO ENTANGLE WILDLIFE, INCLUDING REPTILES, AMPHIBIANS, BIRDS AND SMALL MAMMALS. NO PERMANENT EROSION CONTROL PRODUCTS OR REINFORCED SILT FENCE WILL BE USED ON THE PROJECT. TEMPORARY EROSION CONTROL PRODUCTS WILL USE EITHER EROSION CONTROL BLANKETS AND FIBER ROLLS COMPOSED OF PROCESSED FIBERS MECHANICALLY BOUND TOGETHER TO FORM A CONTINUOUS MATRIX (NET LESS) OR NETTING COMPOSED OF PLANAR WOVEN NATURAL BIODEGRADABLE FIBER TO AVOID/MINIMIZE WILDLIFE ENTANGLEMENT.

SEDIMENT & EROSION CONTROL NARRATIVE

1. THE PROJECT INVOLVES THE CONSTRUCTION OF A GROUND MOUNTED SOLAR PANEL FACILITY WITH ASSOCIATED EQUIPMENT, INCLUDING THE CLEARING, GRUBBING AND GRADING OF APPROXIMATELY 0.95 ACRES OF EXISTING LOT.

THE PROPOSED PROJECT INVOLVES THE FOLLOWING CONSTRUCTION:

A. CLEARING, GRUBBING, AND GRADING OF EXISTING LOT.
B. CONSTRUCTION OF 6,098 GROUND MOUNTED SOLAR PANELS AND ASSOCIATED EQUIPMENT.
B. THE STABILIZATION OF DISTURBED AREAS WITH PERMANENT GRASS TREATMENTS.

2. FOR THIS PROJECT, THERE ARE APPROXIMATELY 0.95± ACRE OF THE SITE BEING DISTURBED WITH NEGLIGIBLE INCREASE IN THE IMPERVIOUS AREA OF THE SITE, AS ALL ACCESS THOUGH THE SITE WILL BE GRAVEL. IMPERVIOUS AREAS ARE LIMITED TO THE CONCRETE PADS FOR ELECTRICAL EQUIPMENT.

3. THE PROJECT SITE, AS MAPPED IN THE SOIL SURVEY OF MIDDLESEX COUNTY (SCS, 1976), CONTAINS TYPE C SOILS.

4. A WETLAND DELINEATION REPORT HAS BEEN COMPLETED AND IS AVAILABLE BY REQUEST.

5. IT WILL BE IMPORTANT THAT THE EXISTING WETLAND RESOURCE AREAS BE PROTECTED DURING AND AFTER CONSTRUCTION FROM SEDIMENTATION AND POLLUTANTS TO THE EXTENT POSSIBLE. CUT AND FILL SLOPES WILL NEED TO BE STABILIZED BY VEGETATION, RIPRAP OR EROSION CONTROL GEOTEXTILES AS SOON AS POSSIBLE TO MINIMIZE SLOPE EROSION. ALL CUT AND FILL SLOPES 3:1 OR LESS WILL BE SEEDED, FERTILIZED AND MULCHED FOR TEMPORARY AND PERMANENT STABILIZATION. TOPSOIL AND EXCAVATED MATERIAL STOCKPILE AREAS MUST BE CONTAINED BY SILT FENCE AND HAY BALES AND STABILIZED BY VEGETATION IF LEFT UNDISTURBED FOR MORE THAN 30 DAYS. DEWATERING WASTEWATER FROM TRENCHING OPERATIONS SHALL BE ADDRESSED DURING CONSTRUCTION. ALL WATER FROM DEWATERING OPERATIONS SHALL BE DIRECTED TO DEWATERING PUMP SETTLING BASINS. CONSTRUCTION NEAR WETLANDS SHALL BE ISOLATED BY USE OF CONSTRUCTION FENCING OR A COFFERDAM AND THE TEMPORARY DISTURBED AREA SHALL BE KEPT TO A MINIMUM. WORK IN HIGH GROUNDWATER AREAS SHALL BE SCHEDULED, WHEN POSSIBLE, SO IT CAN BE COMPLETED IN A DRY PERIOD AND IN THE SHORTEST TIME POSSIBLE.

6. IT IS ANTICIPATED THAT CONSTRUCTION WILL BE COMPLETED IN APPROXIMATELY 4 MONTHS.

7. REFER TO THE CONSTRUCTION SEQUENCING AND EROSION AND SEDIMENTATION NOTES FOR INFORMATION REGARDING SEQUENCING OF MAJOR OPERATIONS IN THE ON-SITE CONSTRUCTION PHASES.

8. STORMWATER MANAGEMENT DESIGN CRITERIA UTILIZES THE APPLICABLE SECTIONS OF THE 2004 CONNECTICUT STORMWATER QUALITY MANUAL TO THE EXTENT POSSIBLE AND PRACTICABLE FOR THIS PROJECT ON THIS SITE. EROSION AND SEDIMENTATION MEASURES ARE BASED UPON ENGINEERING PRACTICE, JUDGEMENT AND THE APPLICABLE SECTIONS OF THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

9. DETAILS FOR THE TYPICAL EROSION AND SEDIMENTATION MEASURES ARE SHOWN ON PLAN SHEET EC-2 AND OR PROVIDED AS SEPARATE SUPPORT DOCUMENTATION FOR REVIEW IN THIS PLAN.

10. THE CONTRACTOR SHALL ENSURE THAT THE PERIMETER SILT FENCE IS DIVIDED UP SUCH THAT NO SECTION OF SILT FENCE IS RECEIVING MORE THAN 1 ACRE OF DRAINAGE.

11. CONSERVATION PRACTICES TO BE USED DURING CONSTRUCTION AREA:
    A. STAGED CONSTRUCTION;
    B. MINIMIZE THE DISTURBED AREAS DURING CONSTRUCTION;
    C. STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE WITH TEMPORARY OR PERMANENT MEASURES;
    D. MINIMIZE IMPERVIOUS AREAS;
    E. UTILIZE APPROPRIATE CONSTRUCTION EROSION AND SEDIMENTATION MEASURES.

13. THE FOLLOWING SEPARATE DOCUMENTS ARE TO BE CONSIDERED A PART OF THE EROSION AND SEDIMENTATION PLAN:
    A. STORMWATER MANAGEMENT REPORT FOR EXISTING AND PROP. PEAK FLOWS.

SUGGESTED CONSTRUCTION SEQUENCE

THE FOLLOWING SUGGESTED SEQUENCE OF CONSTRUCTION ACTIVITIES IS PROJECTED BASED UPON ENGINEERING JUDGEMENT AND BEST MANAGEMENT PRACTICES. THE CONTRACTOR MAY ELECT TO ALTER THE SEQUENCING TO BEST MEET THE CONSTRUCTION SCHEDULE, THE EXISTING SITE ACTIVITIES AND WEATHER CONDITIONS, PROVIDED THAT THE CONTRACTOR FOLLOWS THE REQUIREMENTS OF THE 2002 GUIDELINES OF KEEPING THE PLAN CURRENT.

1. CONTACT THE APPLICANT AND REPRESENTATIVES TO SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST 5 DAYS PRIOR TO THE START OF CONSTRUCTION. PHYSICALLY FLAG THE LIMITS OF CLEARING IN THE FIELD AS NECESSARY TO FACILITATE THE PRE-CONSTRUCTION MEETING.
2. CONDUCT A PRE-CONSTRUCTION MEETING TO DISCUSS THE PROP. WORK AND EROSION AND SEDIMENTATION CONTROL MEASURES. THE MEETING SHOULD BE ATTENDED BY THE APPLICANT, THE APPLICANT REPRESENTATIVE(S), THE GENERAL CONTRACTOR, DESIGNATED SUB-CONTRACTORS AND THE PERSON, OR PERSONS, RESPONSIBLE FOR THE IMPLEMENTATION, OPERATION, MONITORING AND MAINTENANCE OF THE EROSION AND SEDIMENTATION MEASURES. THE CONSTRUCTION PROCEDURES FOR THE ENTIRE PROJECT SHALL BE REVIEWED AT THIS MEETING.
3. NOTIFY THE APPLICANT AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF ANY DEMOLITION, CONSTRUCTION OR REGULATED ACTIVITY ON THIS PROJECT. NOTIFY CALL BEFORE YOU DIG AT 1-800-922-4455.

PHASE 1

4. REMOVE EXISTING IMPROVEMENTS AS NECESSARY AND PROVIDE MINIMAL CLEARING AND GRUBBING TO INSTALL THE REQUIRED CONSTRUCTION ENTRANCES AND INSTALL ENTRANCE.
5. CLEAR AND GRUB AS REQUIRED AND PERFORM SELECTIVE CLEARING, TO INSTALL THE PERIMETER EROSION AND SEDIMENTATION CONTROL MEASURES AND, IF APPLICABLE, TREE PROTECTION. ALL WETLAND AREAS SHALL BE PROTECTED BEFORE MAJOR CONSTRUCTION BEGINS.
6. INSTALL PERIMETER EROSION AND SEDIMENTATION CONTROL MEASURES AS SHOWN ON THE EROSION AND SEDIMENTATION CONTROL PLANS.
7. CLEAR AND GRUB REMAINDER OF SITE.

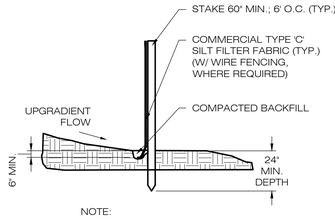
PHASE 2

8. GRADE AREA IN CENTER OF SITE THAT WAS CLEARED AND GRUBBED IF REQUIRED PROVIDE TEMPORARY STABILIZATION.
9. INSTALL GROUND MOUNTED SOLAR PANELS.
10. INSTALL ELECTRICAL CONDUIT.
11. INSTALL ACCESS DRIVES.
12. FINE GRADE, RAKE, SEED AND MULCH ALL REMAINING DISTURBED AREAS.

PHASE 3

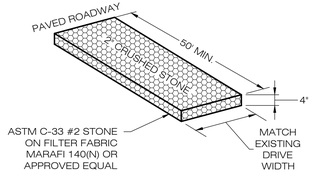
13. INSTALL PERIMETER CHAIN LINK FENCE AS SHOWN ON THE PLANS.
14. AFTER THE SITE IS DEEMED STABILIZED PER THE 2002 GUIDELINES AND WITH THE APPROVAL OF THE APPLICANT, REMOVE PERIMETER EROSION AND SEDIMENTATION CONTROLS.
15. ISSUE NOTICE OF TERMINATION
16. PERFORM PROJECT CLEANUP

CONSTRUCTION OPERATION AND MAINTENANCE PLAN - BY CONTRACTOR		
E&S MEASURE	INSPECTION SCHEDULE	MAINTENANCE REQUIRED
CONSTRUCTION ENTRANCE	DAILY	PLACE ADDITIONAL STONE, EXTEND THE LENGTH OR REMOVE AND REPLACE THE STONE. CLEAN PAVED SURFACES OF TRACKED SEDIMENT.
SILT FENCE	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.5"	REPAIR/REPLACE WHEN FAILURE, OR DETERIORATION IS OBSERVED. REMOVE SILT WHEN IT REACHES 1/2 THE HEIGHT OF THE FENCE.
TOPSOIL/BORROW STOCKPILES	DAILY	REPAIR/REPLACE SEDIMENT BARRIERS AS NECESSARY.
TEMPORARY SOIL PROTECTION	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.5"	REPAIR ERODED OR BARE AREAS IMMEDIATELY. RESEED AND MULCH.

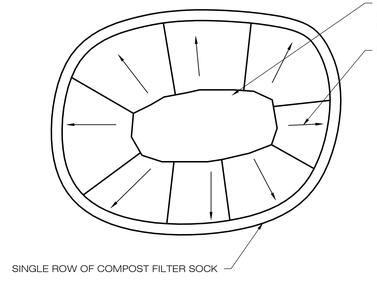


NOTE:
SILT FENCE SHALL BE LAPPED ONLY WHEN NECESSARY PER THE MANUFACTURER RECOMMENDATIONS.

1 EC-2 **SILT FENCE DETAIL**
SCALE : N.T.S.



2 EC-2 **CONSTRUCTION ENTRANCE DETAIL**
SCALE : N.T.S.



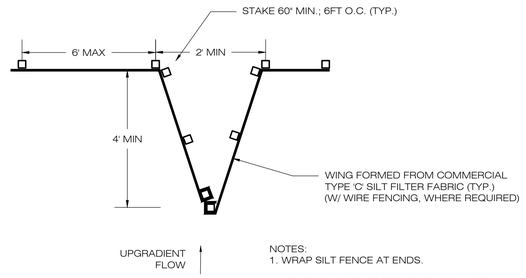
NOTES:
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.

2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.

3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.

4. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

3 EC-2 **MATERIALS STOCKPILE DETAIL**
SCALE : N.T.S.



NOTES:
1. WRAP SILT FENCE AT ENDS.

2. NO JOINING FENCE SECTIONS SHALL BE INSTALLED WITHIN 30 FEET OF WING.

4 EC-2 **SILT FENCE WING DETAIL**
SCALE : N.T.S.

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DESIGN PROFESSIONAL OF RECORD

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COMP: ALL-POINTS TECHNOLOGY CORPORATION
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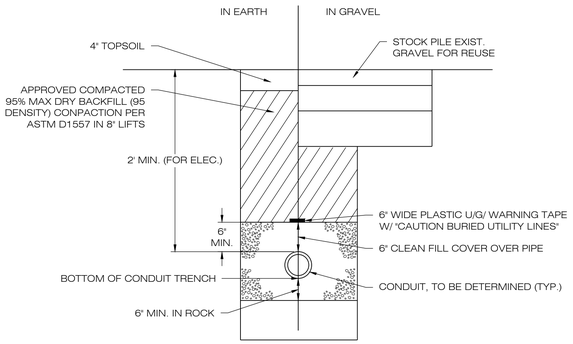
APT FILING NUMBER: CT567100

DRAWN BY: RAG

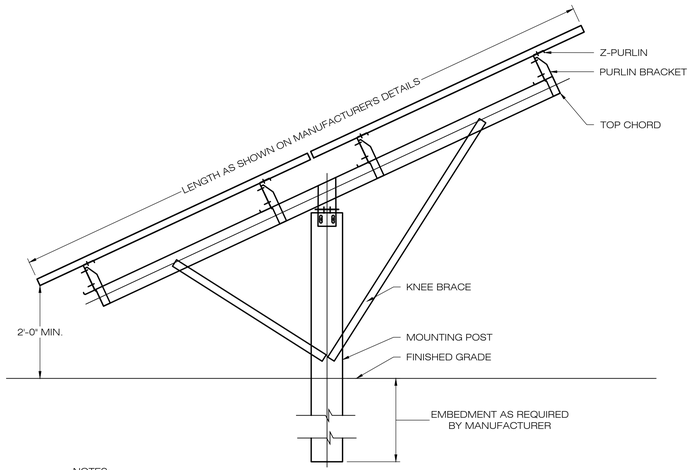
DATE: 03/29/19 CHECKED BY: BJP

SHEET TITLE:
SEDIMENTATION & EROSION CONTROL PLAN NOTES

SHEET NUMBER:
EC-2

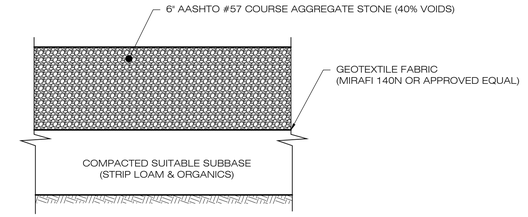


1 DN-1 **ELECTRICAL TRENCH DETAIL**
SCALE : N.T.S.



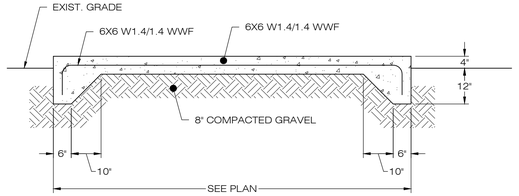
NOTES:
SEE MANUFACTURER'S DETAIL SHEETS FOR ADDITIONAL INFORMATION REGARDING RACKING SYSTEM REQUIREMENTS AND INSTALLATION PROCEDURES. RACKING SYSTEM TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

2 DN-1 **TYPICAL POST MOUNTED RACKING SYSTEM**
SCALE : N.T.S.

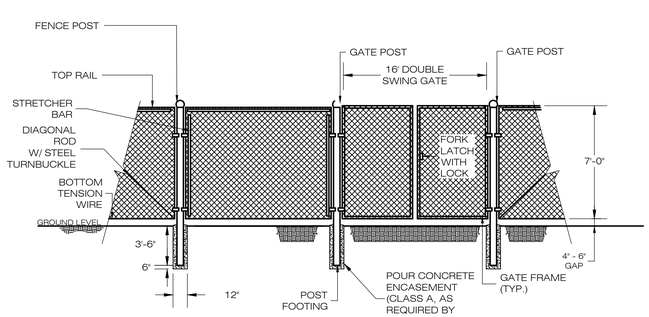


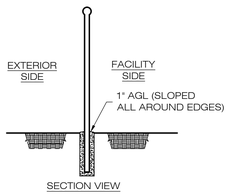
NOTES:
1. SUBBASE MAY CONSIST OF NATIVE MATERIALS IF FOUND ACCEPTABLE BY THE ENGINEER. SUBBASE TO BE COMPACTED TO 95% MAX DRY DENSITY.
2. SUBBASE IS TO BE FREE FROM DEBRIS AND UNSUITABLE MATERIALS.

3 DN-1 **GRAVEL ACCESS DRIVE SECTION**
SCALE : N.T.S.



4 DN-1 **CONCRETE EQUIPMENT PAD**
SCALE : N.T.S.





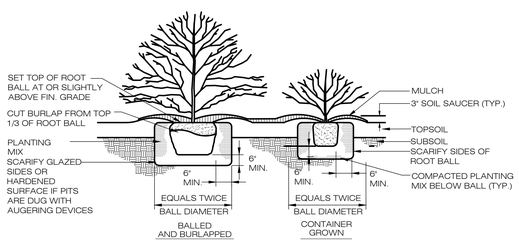
5 DN-1 **CHAIN-LINK FENCING & GATE DETAIL**
SCALE :N.T.S.

CITRINE POWER, LLC

IN CASE OF EMERGENCY
CALL T.B.D.

NOTES:
EMERGENCY CALL NUMBER TO BE PROVIDED ONCE DETERMINED.

6 DN-1 **NOTIFICATION SIGN DETAIL**
SCALE : N.T.S.



NOTE:
* IN AREAS OF MASS PLANTING, CONTINUOUSLY EXCAVATE AND MULCH ENTIRE BED.

7 DN-1 **EVERGREEN TREE PLANTING**
SCALE : N.T.S.

CITRINE
55 GREENS FARMS ROAD
WESTPORT, CT 06880
OFFICE: (203)-557-5554

ALL-POINTS TECHNOLOGY CORPORATION
3 SADDLEBROOK DRIVE PHONE: (860)-663-1697
KILLINGWORTH, CT 06419 FAX: (860)-663-0935
WWW.ALLPOINTSTECH.COM

PERMITTING

NO	DATE	REVISION
0	3/29/19	FOR CSC REVIEW: BJP
1	4/04/19	REVISED PER REVIEW: RAG
2	4/08/19	FOR FINAL REVIEW: BJP
3	4/10/19	FOR CSC SUBMISSION: RAG
4	5/20/19	REVIEW COMMENTS: RAG
5	5/29/19	SWPPP SUBMISSION: RAG
6		

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 3 SADDLEBROOK DRIVE KILLINGWORTH, CT 06419

OWNER: BARBARA J. PENNEY & ANN CHARLTON
ADDRESS: 41 CHELSEA DRIVE CROMWELL, CT 06416

MIDDLETOWN/MIDDLEFIELD

SITE ADDRESS: MERIDEN ROAD (ROUTE 66) MIDDLEFIELD, CT 06455

APT FILING NUMBER: CT567100

DRAWN BY: RAG
DATE: 03/29/19
CHECKED BY: BJP

SHEET TITLE:
SITE DETAILS

SHEET NUMBER:
DN-1

GENERAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH PROJECT DEVELOPER STANDARDS, CITY OF MIDDLETOWN AND THE TOWN OF MIDDLEFIELD STANDARDS, CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS IN THE ABOVE REFERENCED INCREASING HIERARCHY. IF SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL APPLY.
2. IF NO PROJECT CONSTRUCTION SPECIFICATION PACKAGE IS PROVIDED BY THE PROJECT DEVELOPER OR THEIR REPRESENTATIVE, THE CONTRACTOR SHALL COMPLY WITH THE MANUFACTURE, CITY OF MIDDLETOWN, TOWN OF MIDDLEFIELD, OR CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AND BE IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
3. THE PROJECT DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING AND STORMWATER PERMITS REQUIRED BY GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL CITY OF MIDDLETOWN AND TOWN OF MIDDLEFIELD CONSTRUCTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
4. REFER TO PLANS, DETAILS AND REPORTS PREPARED BY ALL-POINTS TECHNOLOGY CORPORATION FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE PROJECT DEVELOPER IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING/CONSTRUCTION. ANY CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS SHALL BE CONFIRMED WITH THE PROJECT DEVELOPERS CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS, MATERIALS PER PLANS AND SPECIFICATIONS TO THE PROJECT DEVELOPER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
6. SHOULD ANY UNKNOWN OR INCORRECTLY LOCATED EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE PROJECT DEVELOPER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
7. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE PROJECT DEVELOPER OR OTHERS DURING OCCUPIED HOURS, EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE PROJECT DEVELOPER AND THE LOCAL MUNICIPALITY. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
8. THE CONTRACT LIMIT IS THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS.
9. THE CONTRACTOR SHALL ABIDE BY ALL OSHA, FEDERAL, STATE AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL COMPLY WITH OSHA CFR 29 PART 1926 FOR EXCAVATION TRENCHING AND TRENCH PROTECTION REQUIREMENTS.
11. THE ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ENGINEER HAS NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OF PERSONNEL OR TO SUPERVISE SAFETY AND DO NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.
12. THE CONTRACTOR SHALL RESTORE ANY DRAINAGE STRUCTURE, PIPE, CONDUIT, PAVEMENT, CURBING, SIDEWALKS, LANDSCAPED AREAS OR SIGNAGE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE PROJECT DEVELOPER OR TOWN.
13. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE PROJECT DEVELOPER AT THE END OF CONSTRUCTION.
14. ALTERNATIVE METHODS AND PRODUCTS, OTHER THAN THOSE SPECIFIED, MAY BE USED IF REVIEWED AND APPROVED BY THE PROJECT DEVELOPER, ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING/CONSTRUCTION PROCESS.
15. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "DIG SAFE" 72 HOURS BEFORE COMMENCEMENT OF WORK AT "811" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
16. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.

SITE PLAN NOTES

1. THE SURVEY WAS PROVIDED BY MARTIN SURVEYIING ASSOC., LLC. DATED JANUARY 31, 2019.
2. THERE ARE WETLANDS LOCATED ON THE SITE AS INDICATED ON THE PLANS. THE WETLANDS WERE FLAGGED AND LOCATED BY ALL POINTS TECHNOLOGY CORP. JANUARY 2019.
3. THERE WILL BE MINIMAL GRADING ON SITE IN THE AREAS OF THE MINOR CLEARING, TO ENSURE THAT PROPER DRAINAGE IS MAINTAINED.
4. THE CONTRACTOR SHALL FOLLOW THE RECOMMENDED SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE EROSION CONTROL PLAN OR SUBMIT AN ALTERNATE PLAN FOR APPROVAL BY THE ENGINEER AND/OR PERMITTING AGENCIES PRIOR TO THE START CONSTRUCTION. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
5. PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATERCOURSE OR WETLANDS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. IN ADDITION, THE CONTRACTOR SHALL ADHERE TO "EROSION CONTROL PLAN" CONTAINED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO POST ALL BONDS AS REQUIRED BY GOVERNMENT AGENCIES WHICH WOULD GUARANTEE THE PROPER IMPLEMENTATION OF THE PLAN.
6. ALL SITE WORK, MATERIALS OF CONSTRUCTION, AND CONSTRUCTION METHODS FOR EARTHWORK AND STORM DRAINAGE WORK, SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS AND APPLICABLE SECTIONS OF THE PROJECT SPECIFICATIONS MANUAL. OTHERWISE THIS WORK SHALL CONFORM TO THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND PROJECT GEOTECHNICAL REPORT IF THERE IS NO PROJECT SPECIFICATIONS MANUAL. ALL FILL MATERIAL UNDER STRUCTURES AND PAVED AREAS SHALL BE PER THE ABOVE STATED APPLICABLE SPECIFICATIONS, AND/OR PROJECT GEOTECHNICAL REPORT, AND SHALL BE PLACED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER. MATERIAL SHALL BE COMPACTED IN 8" LIFTS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557 AT 95% PERCENT OF OPTIMUM MOISTURE CONTENT.
7. ALL DISTURBANCE INCURRED TO PUBLIC, MUNICIPAL, COUNTY, STATE PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE CITY OF MIDDLETOWN, THE TOWN OF MIDDLEFIELD OR THE STATE OF CONNECTICUT.
8. IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL AND NOTIFY THE PROJECT DEVELOPER AND/OR PROJECT DEVELOPER'S ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE PROJECT DEVELOPER AND/OR PROJECT DEVELOPER'S ENVIRONMENTAL CONSULTANT.

UTILITY NOTES

1. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE CITY OF MIDDLETOWN AND THE TOWN OF MIDDLEFIELD TO SECURE CONSTRUCTION PERMITS AND FOR PAYMENT OF FEES, PAID BY OTHERS, FOR STREET CUTS AND CONNECTIONS TO EXISTING UTILITIES.
2. REFER TO DRAWINGS BY PROJECT DEVELOPER FOR THE ONSITE ELECTRICAL DRAWINGS AND INTERCONNECTION TO EXISTING ELECTRICAL GRID. SITE CONTRACTOR SHALL SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY AT BUILDING CONNECTION POINT OR AT EXISTING UTILITY OR PIPE CONNECTION POINT. THESE DETAILS ARE NOT INCLUDED IN THESE PLANS.
3. UTILITY LOCATIONS AND PENETRATIONS ARE SHOWN FOR THE CONTRACTOR'S INFORMATION AND SHALL BE VERIFIED WITH THE ELECTRICAL ENGINEER AND THE PROJECT DEVELOPER'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
4. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE PROP. SANITARY SEWERS AND WHERE PROP. STORM PIPING WILL CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT THE PROJECT DEVELOPER IN THE EVENT OF ANY DISCOVERED OR UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED SANITARY SEWERS, STORM PIPING AND UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
5. UTILITY CONNECTION DESIGN AS REFLECTED ON THE PLAN MAY CHANGE SUBJECT TO UTILITY PROVIDER AND GOVERNING AUTHORITY STAFF REVIEW.
6. THE CONTRACTOR SHALL ENSURE THAT ALL UTILITY PROVIDERS AND GOVERNING AUTHORITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY PROVIDER.
7. THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH THE RESPECTIVE UTILITY PROVIDERS FOR SERVICE INSTALLATIONS AND CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY PROVIDERS, ALL ASSOCIATED FEES TO BE PAID BY OTHERS, FOR CONNECTIONS, DISCONNECTIONS, RELOCATIONS, INSPECTIONS, AND DEMOLITION UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATIONS MANUAL AND/OR GENERAL CONDITIONS OF THE CONTRACT.
8. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT. AFTER UTILITY INSTALLATION IS COMPLETED, THE CONTRACTOR SHALL INSTALL TEMPORARY AND/OR PERMANENT PAVEMENT REPAIR AS DETAILED ON THE DRAWINGS OR AS REQUIRED BY THE TOWN OF MIDDLEFIELD.
9. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
10. RELOCATION OF UTILITY PROVIDER FACILITIES, SUCH AS POLES, SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY PROVIDER.
11. THE CONTRACTOR SHALL COMPACT PIPE BACKFILL IN 8" LIFTS ACCORDING TO THE PIPE BEDDING DETAILS. TRENCH BOTTOM SHALL BE STABLE IN HIGH GROUNDWATER AREAS. A PIPE FOUNDATION SHALL BE USED PER THE TRENCH DETAILS AND IN AREAS OF ROCK EXCAVATION.
12. CONTRACTOR TO PROVIDE STEEL SLEEVES AND ANNULAR SPACE SAND FILL FOR UTILITY PIPE AND CONDUIT CONNECTIONS UNDER FOOTINGS.
13. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION FOR APPROVAL PRIOR TO BACKFILLING, IN ACCORDANCE WITH THE APPROPRIATE UTILITY PROVIDER REQUIREMENTS.
14. A ONE-FOOT MINIMUM VERTICAL CLEARANCE BETWEEN WATER, GAS, ELECTRICAL, AND TELEPHONE LINES AND STORM PIPING SHALL BE PROVIDED. A SIX-INCH MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN STORM PIPING AND SANITARY SEWER. A 6-INCH TO 18-INCH VERTICAL CLEARANCE BETWEEN SANITARY SEWER PIPING AND STORM PIPING SHALL REQUIRE CONCRETE ENCASEMENT OF THE PROP. SANITARY PIPING.
15. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPE, CONDUIT, PAVEMENT, CURBING, SIDEWALKS, DRAINAGE STRUCTURE, SWALE OR LANDSCAPED AREAS DISTURBED DURING CONSTRUCTION, TO THEIR ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE PROJECT DEVELOPER, CITY OF MIDDLETOWN AND TOWN OF MIDDLEFIELD.
16. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY, AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE INCLUDING SERVICES. CONTACT "DIG SAFE" AT 811 72 HOURS PRIOR TO CONSTRUCTION AND VERIFY ALL UNDERGROUND AND OVERHEAD UTILITY AND STORM DRAINAGE LOCATIONS. THE CONTRACTOR SHALL EMPLOY THE USE OF A UTILITY LOCATING COMPANY TO PROVIDE SUBSURFACE UTILITY ENGINEERING CONSISTING OF DESIGNATING UTILITIES AND STORM PIPING ON PRIVATE PROPERTY WITHIN THE CONTRACT LIMIT AND CONSISTING OF DESIGNATING AND LOCATING WHERE PROP. UTILITIES AND STORM PIPING CROSS EXISTING UTILITIES AND STORM PIPING WITHIN THE CONTRACT LIMITS.
17. THE CONTRACTOR SHALL ARRANGE AND COORDINATE WITH UTILITY PROVIDERS FOR WORK TO BE PERFORMED BY UTILITY PROVIDERS. THE CONTRACTOR SHALL PAY ALL UTILITY FEES UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATION MANUAL AND GENERAL CONDITIONS, AND REPAIR PAVEMENTS AS NECESSARY.
18. ELECTRIC DRAWINGS AND REQUIREMENTS ARE NOT INCLUDED AS PART OF THIS DRAWING SET AND SHOULD BE OBTAINED FROM THE PROJECT DEVELOPER.
19. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE PROJECT DEVELOPER, ENGINEER, AND APPROPRIATE REGULATORY AGENCIES PRIOR TO INSTALLATION.
20. THE CONTRACTOR SHALL MAINTAIN ALL FLOWS AND UTILITY CONNECTIONS TO EXISTING BUILDINGS WITHOUT INTERRUPTION UNLESS/UNTIL AUTHORIZED TO DISCONNECT BY THE PROJECT DEVELOPER, TOWN OF MIDDLEFIELD, UTILITY PROVIDERS AND GOVERNING AUTHORITIES.

CITRINE
55 GREENS FARMS ROAD
WESTPORT, CT 06880
OFFICE: (203)-557-5554

ALL-POINTS TECHNOLOGY CORPORATION
3 SADDLEBROOK DRIVE PHONE: (860)-663-1697
KILLINGWORTH, CT 06419 FAX: (860)-663-0935
WWW.ALLPOINTSTECH.COM

PERMITTING

NO	DATE	REVISION
0	3/29/19	FOR CSC REVIEW: BJP
1	4/04/19	REVISED PER REVIEW: RAG
2	4/08/19	FOR FINAL REVIEW: BJP
3	4/10/19	FOR CSC SUBMISSION: RAG
4	5/20/19	REVIEW COMMENTS: RAG
5	5/29/19	SWPPP SUBMISSION: RAG
6		

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 3 SADDLEBROOK DRIVE KILLINGWORTH, CT 06419

OWNER: BARBARA J. PENNEY & ANN CHARLTON
ADDRESS: 41 CHELSEA DRIVE CROMWELL, CT 06416

MIDDLETOWN/MIDDLEFIELD

SITE ADDRESS: MERIDEN ROAD (ROUTE 66) MIDDLEFIELD, CT 06455

APT FILING NUMBER: CT567100

DRAWN BY: RAG

DATE: 03/29/19

CHECKED BY: BJP

SHEET TITLE:

SITE NOTES

SHEET NUMBER:

DN-2

APPENDIX E
Stormwater Monitoring Report Form

Connecticut Department of
Energy & Environmental Protection
Bureau of Materials Management & Compliance Assurance
Water Permitting & Enforcement Division

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, issued 8/21/13, effective 10/1/13
Stormwater Monitoring Report

SITE INFORMATION

Permittee: _____

Mailing Address: _____

Business Phone: _____ ext.: _____ Fax: _____

Contact Person: _____ Title: _____

Site Name: _____

Site Address: _____

Receiving Water (name, basin): _____

Stormwater Permit No. GSN _____

SAMPLING INFORMATION (Submit a separate form for each outfall)

Outfall Designation: _____ Date/Time Collected: _____

Outfall Location(s) (lat/lon or map link): _____

Person Collecting Sample: _____

Storm Magnitude (inches): _____ Storm Duration (hours): _____

Size of Disturbed Area at any time: _____

MONITORING RESULTS

Sample #	Parameter	Method	Results (units)	Laboratory (if applicable)
1	Turbidity			
2	Turbidity			
3	Turbidity			
4	Turbidity			

(provide an attachment if more than 4 samples were taken for this outfall) Avg =

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: _____

Signature: _____ Date: _____

Please send completed form to:

DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE
79 ELM STREET
HARTFORD, CT 06106-5127
ATTN: NEAL WILLIAMS

APPENDIX F
Notice of Termination Form

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

Notice of Termination Form

Please complete and submit this form in accordance with the general permit (DEP-PED-GP-015) in order to ensure the proper handling of your termination. Print or type unless otherwise noted.

Note: Ensure that for commercial and industrial facilities, registrations under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* (DEP-PED-GP-014) or the *General Permit for the Discharge of Stormwater from Commercial Activities* (DEP-PED-GP-004) have been filed where applicable. For questions about the applicability of these general permits, please call the Department at 860-424-3018.

Part I: Registrant Information

1. Permit number: ***GSN***
2. Fill in the name of the registrant(s) as indicated on the registration certificate:

   Registrant:
3. Site Address:

   City/Town: State: Zip Code:
4. Date all storm drainage structures were cleaned of construction sediment:

   Date of Completion of Construction:

   Date of Last Inspection (must be at least three months after final stabilization pursuant to Section 6(b)(6)(D) of the general permit):
5. Check the post-construction activities at the site (check all that apply):

   ☐ Industrial ☐ Residential ☐ Commercial ☐ Capped Landfill

   ☐ Other (describe):

Part II: Certification

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

Signature of Permittee	Date
Name of Permittee (print or type)	Title (if applicable)

Note: Please submit this Notice of Termination Form to:

STORMWATER PERMIT COORDINATOR
BUREAU OF WATER MANAGEMENT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

Bureau of Materials Management and Compliance Assurance

Notice of Permit Authorization

August, 07 2019

Cela Sinay Bernie
CITRINE POWER LLC
55 Greens Farms Rd
Westport, CT 06880-9500

Subject: General Permit Registration for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities
Application NO.: 201906918

Cela Sinay Bernie:

The Department of Energy and Environmental Protection, Water Permitting and Enforcement Division of the Bureau of Materials Management and Compliance Assurance, has completed the review of the Citrine Power Solar Site (located at Meriden Road (Route 66), Middlefield) registration for the **General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, effective 10/1/13 (general permit)** . The project is compliant with the requirements of the general permit and the discharge(s) associated with this project is (are) authorized to commence as of the date of this letter. Permit No. GSN003469 has been assigned to authorize the stormwater discharge(s) from this project.

Questions can be emailed to deep.stormwater@ct.gov.