STORMWATER POLLUTION CONTROL PLAN

PROPOSED LOVERS LANE SOLAR PROJECT

1 LOVERS LANE
TORRINGTON, CONNECTICUT
LITCHFIELD COUNTY

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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 2024 Connecticut Guidelines for Soil Erosion and Sediment Control (Guidelines).

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Introduction

All-Points Technology Corporation, P.C. ("APT") prepared this Storm Water Pollution Control Plan ("SWPCP") on behalf of LSE Sextans LLC ("Permittee" or "Applicant") for the Lovers Lane Solar facility ("Project") located off of Lovers Lane in Torrington, Connecticut (the "Site" or "Project Site"). See Site Location Map, Appendix A.

This SWPCP has been completed to support the Permittee's application for the Connecticut Department of Energy and Environmental Protection's ("CTDEEP") General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities ("General Permit"), effective date: July 30, 2024, expiration date: July 30, 2029.

During construction, the contractor(s) shall be responsible for implementing all elements of the erosion and sedimentation control measures as defined on the drawings, 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 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 two growing seasons (as defined by CTDEEP), all erosion has been repaired, and all temporary erosion and sedimentation control measures have been removed as called for on the design plans ("Plan/s") in Appendix D.

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 Permittee's agent shall amend the SWPCP and/or Plan as necessary. 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. Amendments shall be reviewed and confirmed by the Engineer of Record ("Engineer") on the Plan.

Project Description and Proposed Work

The Project will occupy ±17.19 acres in the southwestern portion of the Site (the "Project Area"). The electrical service interconnection line will extend to Lovers Lane at the western side of the Site. Access will be over a proposed access drive from Lovers Lane.

The Site's existing topography ranges from approximately 1,044 feet above mean sea level ("AMSL") south of the site to 754 feet AMSL north of the site. Grades within the Project Area generally slope downward from the south to the north and west, with ground elevations ranging from approximately 1,024 feet AMSL to 890 feet AMSL.

The surrounding area includes wooded areas, residential developments, and agricultural fields.

Upon its completion, the solar electric energy generating facility (the "Facility") will consist of a total of 7,570 540W photovoltaic tracking modules ("panels") and associated equipment. A ground-mounted racking system will be used to secure the panel arrays. The perimeter of the Facility will be surrounded by a seven (7)-foot tall chain link fence. The Project will also require two (2) electrical service interconnections that will require the installation of seven new utility poles. It will extend underground from the existing Eversource distribution system along Lovers Lane through an easement northwest of the Site to the north side of the Site. Underground connection will extend to proposed utility poles that tie in to pad-mounted electrical equipment. Electrical connections will then extend underground into the Facility. Once complete, the fenced Facility will occupy approximately 13.59 acres of the Site with an additional ±3.6 acres of improvements beyond the fenced limits, for a total Project Area of ±17.19 acres.

Appendix I – Stormwater Management at Solar Array Construction Projects

The Permittee and the Contractor shall be aware that construction of large-scale solar arrays such as this Project are unlike typical development projects due to significant amounts of disturbed area that are at times un-stabilized soils. As such, it is imperative that the Contractor follow the sequence of construction within this SWPCP and on the design plans. Any deviations from the proposed sequence of construction will require approval in writing from the Engineer.

Receiving Waters

Based upon DEEP mapping, the Site is located in Major Drainage Basin 6 (Housatonic River Basin), Regional Drainage Basin 69 (Naugatuck River), Subregional Drainage Basin 6903 (Nickel Mine Brook), and Local Drainage Basin 6903-02 (Lovers Lane Brook at mouth above Nickel Mine Brook). Based upon DEEP mapping, one stream, Lovers Lane Brook, is located on the western side of Lovers Lane. The stream, which is classified as a Class A surface waterbody by the DEEP[1], flows north and northeastward toward the West Branch Naugatuck River.

Wetlands, Watercourses, and Waterbodies

The project avoids direct impact to the delineated wetland resource and is not anticipated to result in any adverse impacts to wetland resources. APT Registered Soil Scientists identified portions of one (1) wetland on or proximate to the Site during a field inspection and wetland delineation completed on February 14, 2023. The results of this investigation are summarized below. The location of these resources is depicted on the Design Plans in Appendix D.

[1] Designated uses for A classified waterbodies include potential drinking water supply, fish and wildlife habitat, recreational use, agricultural and industrial supply and other legitimate uses including navigation.

Wetland 1 consists of a large forested wetland system with three interior intermittent watercourses of varying sizes and extents. This wetland system generally drains in a south to north direction extending off-Property to the south eventually draining into Lovers Lane Brook to the north and Besse Brook to the northeast, both perennial watercourse tributaries to the Naugatuck River. Hillside seeps and areas of seasonal saturation characterize the remainder of this wetland complex as braided flow paths feed the interior watercourses. Base hydrology is influenced by underlying shallow bedrock and compact till deposits creating layers of densic contact resulting in a locally perched seasonal groundwater table. Topographic hummocks have created discrete upland island inclusions within the microtopography of this wetland system.

Vegetative communities consist of mature hardwood forested wetland species dominated by red maple, yellow birch, and swamp white oak. The overstory is marked by numerous deceased green ash trees likely resulting from emerald ash borer damage. Within the shrub layer highbush blueberry, spicebush, winterberry, silky dogwood and invasive species Japanese barberry and multiflora rose were observed. The herbaceous layer was heavily dominated with hydrophytic vegetation that includes tussock sedge, soft rush, sphagnum moss, sensitive fern, skunk cabbage, jewelweed, swamp dewberry, and false hellebore.

Construction Sequence

The following suggested sequence of construction activities is projected based upon engineering judgment and best management practices. The contractor may elect to alter the sequencing to best meet the construction schedule, the existing site activities, and/or weather conditions. Should the contractor alter the construction sequence or any erosion and sedimentation control measure, they shall modify the SWPCP as required by the General Permit. Major changes in sequencing and/or methods may require regulatory approval prior to implementation.

Pre-Construction

1. The contractor shall schedule a pre-construction meeting. Physically flag the limits of disturbance in the field as necessary to facilitate the pre-construction meeting.

2. Conduct a pre-construction meeting to discuss the proposed work and erosion and sedimentation control measures. The meeting should be attended by the owner, the owner's 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 Call Before You Dig at 811, as required, prior to the start of construction.

Erosion & Sediment Control Sequence

4. Remove existing impediments as necessary and provide minimal clearing and grubbing to install the required construction entrance/s.

5. Clear only as needed 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 control.

7. Install gravel access road as shown on EC-5

8. Install temporary sediment trap 1 and associated upstream diversion swale. Upon completion of the installation and stabilization of the basin and swale, upgradient work can proceed.

9. Install temporary sediment basin 2 and associated upstream diversion swale. Upon completion of the installation and stabilization of the basin and swale, upgradient work can proceed.

10. Install compost filter sock upgradient as depicted on the plans. Once installed, the areas identified for regrading can commence.

11. Upon completion of the installation of each of the temporary sediment basins; remove cut wood and stockpile for future use or remove off-site. Remove and dispose of demolition debris off-site in accordance with applicable laws.

12. Temporarily seed disturbed areas not under construction for thirty (30) days or more.

13. Install electrical conduit.

14. Install racking posts for ground mounted solar panels.

15. Install ground mounted solar panels and complete electrical installation.

16. After substantial completion of the installation of the solar panels, complete remaining site work, including any required landscape screening, and stabilize all disturbed areas.

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

18. After the site is stabilized and with the approval of the permittee and CT DEEP agent, remove perimeter erosion and sedimentation controls.

19. Monitor the site for two full growing seasons (April-October) or as determined by DEEP, then issue notice of termination.

Control Measures

The Contractor shall install and maintain silt fence around the Site as perimeter control throughout the duration of construction. A Construction entrance shall be installed at the location where the contractor will be leaving disturbed areas of the site. Material stockpile areas 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 "2024 Connecticut Guidelines for Soil Erosion and Sediment Control" 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 contractor to assess the need for and to 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 Plans, stabilization of open soil surfaces will be implemented within seven (7) days after grading or construction activities have temporarily or permanently ceased, unless weather prohibits seed germination.

- Where necessary, in accordance with the Project Plans, 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 General Permit.

- 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 thirty (30) days shall receive temporary seeding or soil protection within seven (7) days.

- Disturbed areas that do not establish a vegetative cover within thirty (30) days of seeding shall have erosion control blankets installed. Prior to the erosion control blanket installation, the soil will 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 thirty (30) days shall receive temporary seeding or soil protection in accordance with the 2024 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 2024 Guidelines.

Depending on the timing of approval of the Project's permits and construction. the Project will look to seed the Site prior to the start of construction. This would be done if the seeding can be completed at least thirty (30) days prior to the start of construction and within the spring or fall seeding window.

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

Temporary Stabilization Practices

Temporary Soil Protection: Temporary soil protection shall only be used when a disturbed area will be inactive for a period of thirty (30) or more consecutive days, but less than five (5) months. If surfaces will not be reworked within five (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 two (2) years but without substantial

degradation for five (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.

Compost Filter Sock: Compost Filter Socks are constructed of UV stabilized polypropylene tubular netting filled with compost and wood shavings and 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. Compost filter socks 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, compost filter sock materials (i.e., polypropylene netting 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 construction entrance 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.

Temporary Sediment Traps/Basins & Baffles: Temporary sediment traps/basins are constructed utilizing an embankment, excavation of a pit or a combination of the two with controlled outlet structure(s) to create wet and dry storage areas. It is installed to intercept & retain sediment during construction, reduce & abate water pollution and prevent undesirable deposition of sediment downstream. Baffles consisting of sheets of plywood (or equivalent) are installed within the basin to provide adequate flow length and settlement time. Once the Project is complete and soils are stabilized, the sediment must be removed and properly disposed of off-site. In cases that trap and/or basin will be permanent drainage basins, baffles must be removed and disposed of off-site and any outlet/plugs adjusted to permanent design standards.

Permanent Stabilization Practices

All areas disturbed by construction and unpaved areas that are graded or disturbed by construction will receive topsoil from the site and/or turf establishment. The contractor may use other permanent stabilization practices approved by the Engineer and conforming to the 2004 Guidelines.

Structural Measures

The existing slopes will be maintained to capture runoff from the Project Site. The Project Area has been divided into sub-areas that will be controlled by temporary sediment traps.

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 bodies, and conduits 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 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 twenty-four (24) hours of the end of a storm with a rainfall amount of 0.25 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.

Compost Filter Sock: Inspect compost filter sock at least once per week and within twenty-four (24) hours of the end of a storm with a rainfall amount of 0.25 inch or greater. For dewatering operations, inspect frequently before, during, and after pumping operations. Repair/replace when failure or deterioration is observed.

Temporary Soil Protection: Inspect the temporary soil protection at least once a week and within twenty-four (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.

Temporary Sediment Basin/Trap (w/baffles): Inspect temporary sediment basins with baffles for failures at least once a week and within twenty-four (24) hours of the end of a storm with a rainfall amount of 0.5 inch or greater. Remove sediment once it has accumulated to one half of minimum required volume of the wet storage, dewatering as needed. Restore basin to original dimensions. Repair/replace baffles when failure or deterioration is observed.

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.

Topsoil/Borrow Stockpiles: Inspect topsoil/borrow stockpiles daily. Repair/replace sediment barriers as necessary and stabilize stockpiles as needed.

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 shall 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 causing turbidity problems, the Contractor shall halt said operation until a means of controlling the turbidity is established by the Contractor. No discharge of dewatering wastewater shall contain or cause a visible oil sheen, floating solids or foaming in the receiving water

Post-Construction Stormwater Management

Post-construction Guidelines

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

Stormwater Basin & Outlet Control Structure:

- Inspect after major rain events (>1″) in the first few months following construction.
- Remove organic debris and trash in late spring after snowmelt and in late fall after leaf fall.
- Outlet shall be inspected and cleaned after major rain events to ensure orifice/outlets remain open.
- Remove sediment accumulation that exceeds 2 inches or when drawdown time exceeds 48 hours after the end of a storm event.
- Weed basin as necessary. Mow grass to 3-6 inches and maintained healthy grass cover. Reseed as necessary. Mowing shall not be performed when ground is soft to avoid compaction and creation of ruts.

Vegetation Management:

- Mowing and maintenance of the turf and vegetated areas will occur as needed.
- Bare spots will be re-seeded as necessary.

Other Controls

Spill Prevention Control Plan

Certain precautions are necessary to store petroleum materials, refuel and contain and properly clean up any inadvertent fuel or petroleum (i.e., oil, hydraulic fluid, etc.) spill to avoid possible impact to nearby habitats.

A spill containment kit consisting of a sufficient supply of absorbent pads and absorbent material will be maintained by the Contractor at the construction site throughout the duration of the project. In addition, a waste drum will be kept on site to contain any used absorbent pads/material for proper and timely disposal off site in accordance with applicable local, state and federal laws.

The following petroleum and hazardous materials storage and refueling restrictions and spill response procedures will be adhered to by the Contractor.

1. Petroleum and Hazardous Materials Storage and Refueling
    a. Refueling of vehicles or machinery shall occur a minimum of 100 feet from wetlands or watercourses and shall take place on an impervious pad (i.e. compacted gravel road or paved area) with secondary containment designed to contain fuels.
    b. Any fuel or hazardous materials that must be kept on site shall be stored on an impervious surface utilizing secondary containment a minimum of 100 feet from wetlands or watercourses.
2. Initial Spill Response Procedures
    a. Stop operations and shut off equipment.
    b. Remove any sources of spark or flame.
    c. Contain the source of the spill.
    d. Determine the approximate volume of the spill.
    e. Identify the location of natural flow paths to prevent the release of the spill to sensitive nearby wetlands and vernal pool.
    f. Ensure that fellow workers are notified of the spill.
3. Spill Clean Up & Containment
    a. Obtain spill response materials from the on-site spill response kit. Place absorbent materials directly on the release area.
    b. Limit the spread of the spill by placing absorbent materials around the perimeter of the spill.
    c. Isolate and eliminate the spill source.
    d. Contact the appropriate local, state and/or federal agencies, as necessary.
    e. Contact a disposal company to properly dispose of contaminated materials.
4. Reporting
    a. Complete an incident report.
    b. Submit a completed incident report to local, state, and federal agencies, as necessary, including the Connecticut Siting Council.

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 fifty (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 with 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 or compost filter socks shall be removed prior to acceptance of the Project. Sediment shall be properly disposed of in accordance with all applicable laws, regulations and guidelines.

Inspections

Inspection Guidelines

The Permittee shall retain the designing qualified professional and a qualified inspector (as those terms are defined in Section (2) of the General Permit) to conduct the Plan Implementation and Routine inspections pursuant to Section 5(b)(4) of the General Permit, provided that any qualified inspector shall be chosen by the designing qualified professional. Unless otherwise approved in writing by the Commissioner, such designing qualified professional and qualified inspector shall be retained for the duration of the construction project until the Notice of Termination has been submitted to the Commissioner and determined to be acceptable.

Plan Implementation Inspections: Notwithstanding the schedule of inspections set forth in Section 5(b)(4) of the General Permit, the Permittee shall ensure that the designing qualified professional and the qualified inspector chosen by such designing qualified professional conduct Plan Implementation Inspections beginning with the commencement of construction activities and through each phase of construction until all perimeter controls, initial erosion and sediment control measures, and construction stormwater traps, basins, swales, and other control measures associated with each phase have been installed and stabilized. In addition, once all of these measures have been installed and stabilized, the Permittee shall ensure that the designing qualified professional certifies in writing to their completion in the applicable inspection report in accordance with the Plan. The Permittee shall ensure that the designing qualified professional conducts a Plan Implementation Inspection of the site at least once a month and the qualified inspector chosen by such designing qualified professional conducts such inspection at least once a week. (The qualified inspector does not need to conduct a weekly inspection during the week the qualified designing professional conducts a monthly inspection).

Routine inspections shall occur at least once every seven (7) calendar days and within twenty-four (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 include inspection of 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 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 twenty-four (24) hours, an inspection is required within twenty-four (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.

The Permittee shall ensure, after completion of a construction project, that a Notice of Termination is filed in compliance with Section 6 of the General Permit, including the requirement that such Notice of Termination be signed by a District representative certifying that such District representative has personally conducted a Post-Construction Inspection and Final Stabilization Inspection in accordance with Section 6(a) of the General Permit and verified compliance with the requirements of that section. The Notice of Termination shall not be submitted until two (2) full growing seasons (April-October) have passed following final stabilization or as determined by DEEP. Monthly post-construction inspections shall be conducted by the qualified inspector following final stabilization until the Notice of Termination is submitted.

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 twenty-four (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 twenty-four (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.
Compost Filter Sock	Inspect weekly and within twenty-four (24) hours of rainfall greater than 0.25”. Repair/replace when failure or deterioration is observed.

Diversion Channels:	Inspect weekly and within twenty-four (24) hours of rainfall greater than 0.10". Maintain channels at their original height. Repair any reduction in height due to erosion or sediment accumulation. Recompact as necessary.
Temporary Sediment Traps/Basins:	Inspect weekly and within twenty-four (24) hours of rainfall greater than 0.5". Basin/Trap (with Baffles) - Remove sediment once it has accumulated to one half of minimum required volume of the wet storage, dewatering as needed. Restore basin to original dimensions. Repair/replace baffles when failure or deterioration is observed.

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 2024 E&S Guidelines and 2004 Connecticut Stormwater Quality Manual) shall be implemented on Site within 24 hours and incorporated into a revised SWPCP within three (3) calendar days of the date of inspection. Engineered corrective actions shall be implemented on Site within seven (7) days and incorporated into a revised SWPCP within ten (10) calendar days of the date of inspection unless another schedule is specified.

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 (See Appendix B). All certification will be included in the SWPCP.

Keeping Plans Current

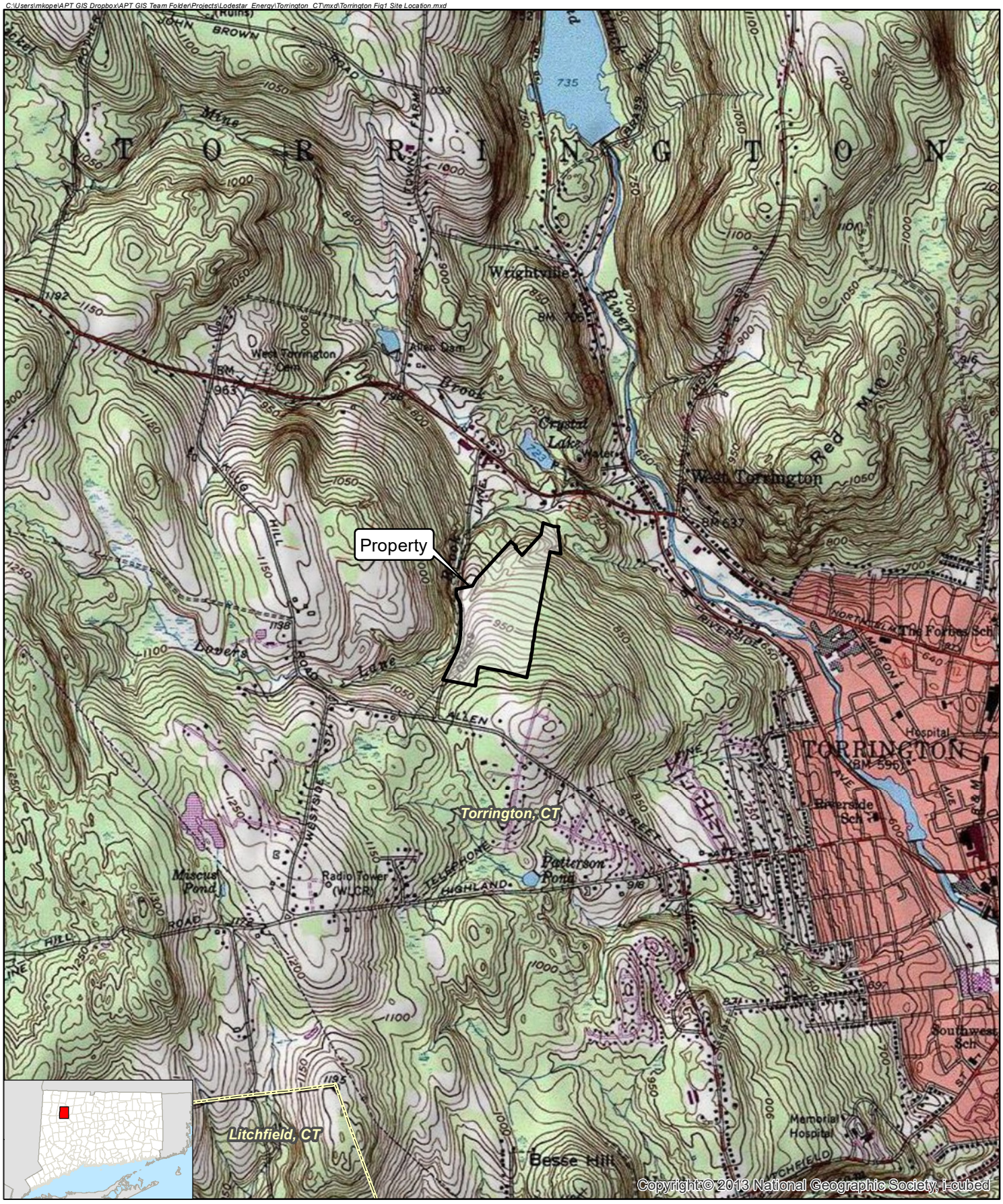
The Permittee shall amend the Plan whenever there is a change in contractors or subcontractors at the site, or a change in design, construction, operation, or maintenance at the Site which has the potential for the discharge of pollutants to the waters of the state and which has not otherwise been addressed 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 Permittee 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\mkope\APT GIS Dropbox\APT GIS Team Folder\Projects\Lodestar_Energy\Torrington_CT\mxd\Torrington Fig1 Site Location.mxd



Legend

- Property
- Municipal Boundary

Figure 1
Location Map

Proposed Solar Facility
Lovers Lane Solar
Lovers Lane
Torrington, Connecticut

N

2,000 1,000 0 2,000 Feet

Map Notes:
Base Map Source: USGS 7.5 Minute Topographic Quadrangle Map, West Torrington, CT (1984)
Map Scale: 1 inch = 2,000 feet
Map Date: February 2024

LODESTAR ENERGY

ALL-POINTS TECHNOLOGY CORPORATION

APPENDIX B
Identification of Contractors and Certification Statements

ATTACHMENT 1

GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATERS ASSOCIATED WITH CONSTRUCTION ACTIVITIES

STORM WATER POLLUTION PREVENTION PLAN
CONTRACTOR CERTIFICATION STATEMENT

Project Number:	
Project Title:	
Project Location:	

CONTRACTOR CERTIFICATION STATEMENT:
"I certify under penalty of the law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that as a contractor or subcontractor at the site, I am authorized 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 site."

Name:	
Signature:	
Title:	
Company Name:	
Address:	
Telephone Number:	
Date:	
Scope of Services:	

APPENDIX C
Stormwater Management Report

STORMWATER MANAGEMENT REPORT

PROPOSED

LOVERS LANE SOLAR

SOLAR PROJECT

LOVERS LANE
TORRINGTON, CONNECTICUT
LITCHFIELD COUNTY

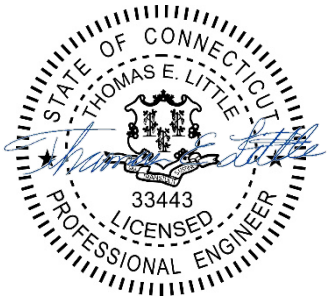
Prepared for:

LSE Sextans LLC
40 Tower Lane, Suite 201
Avon, CT 06001

Prepared by:

All-Points Technology Corporation, P.C.
567 Vauxhall Street Extension, Suite 311
Waterford, CT 06385

April 2024



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APPENDIX B: NRCS SOIL SURVEY
APPENDIX C: EXISTING DRAINAGE AREA MAP (EDA-1) & HYDROLOGIC COMPUTATION (HYDROCAD)
APPENDIX D: PROPOSED DRAINAGE AREA MAP (PDA-1) & HYDROLOGIC COMPUTATION (HYDROCAD)
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APPENDIX F: NOAA ATLAS 14 PRECIPITATION FREQUENCY TABLE

Introduction

At the request of LSE Sextans LLC, All-Points Technology Corporation, P.C. ("APT") has prepared this Stormwater Management Report to outline the potential impacts resulting from the development of a solar electric generating facility, consisting of two arrays with an output of approximately 3.0 megawatts (MW) alternating current (AC) (the "Project") located off of Lovers Lane in Torrington, Connecticut (the "Site").

The design is intended to be in full compliance with all applicable State and Town regulations while taking prevailing site conditions and practical factors into account. This report will describe how the proposed Project adheres to the Connecticut Department of Energy & Environmental Projection ("CT DEEP") Appendix I, Stormwater Management at Solar Array Construction Projects.

Existing Site Conditions

The Site consists of two (2) privately-owned parcels totaling 54.08-acres. The Project will be located within a farm field and wooded area in the southwestern portion of the Site. Project limit of disturbance is approximately 17.19± acres of the overall site area. See Appendix A for an Overall Locus Map.

The Project area's topography generally slopes at 10%-12% from the south of the site down to the north and west, with ground elevations ranging from approximately 1013 feet above mean sea level ("AMSL") in the south of the Site to approximately 817 feet AMSL in the north of the Site.

Developed Site Conditions

The Project will be constructed in the southwestern portion of the Site, within an existing farm field with crop rows and wooded area. Access to the Project will be provided at the western edge of the Site via one (1) existing gravel drive off of Lovers Lane. The Project includes the installation of 7,570540W tracking modules and associated fencing, access drive and utilities, within 16.59± acres of the Site. Approximately 10.86± acres of woods will require clearing and grubbing for the development of the Project, with another 0.97± acres of tree cutting only for shading purposes.

The proposed solar panels will be installed on a post driven ground mounted racking system, with minimal changes to the existing grades. As a result, the post-development site conditions will mimic the pre-developed site conditions. Areas of clearing and grubbing and any existing ground cover that is disturbed during construction will be reseeded with a Fuzz & Buzz Mix – ERNMX-147 or approved equal. In order to account for the change in ground cover and time of concentration, grass-lined stormwater management basins are proposed along the northern side of the proposed Project area.

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, Volume 10,

Version 2 Precipitation 2-, 25-, 50-, and 100-year storm event with rainfall depths of 3.49, 7.06, 8.06, and 9.17 inches respectively.

The drainage areas used in the calculations are illustrated on the Existing and Proposed Drainage Area Maps (EDA-1 & PDA-1). These maps and the corresponding HydroCAD output are attached in Appendices C & D.

Utilizing CT DEEP Appendix I, this hydrologic analysis reflects a reduction of the Hydrologic Soil Group ("HSG") present on-site by a half (1/2) step (i.e., half the difference between the runoff curve number for HSG A versus HSG B). This reduction, as indicated by CT DEEP, is intended to account for the compaction of soils that results from extensive machinery traffic during construction of the array. The Water Quality Volume ("WQV") for the site will be calculated assuming that the gravel surfaces and concrete equipment pads are effectively impervious cover.

Existing Drainage Patterns

The proposed Project area drains generally from the south to the north and west. The area that drains to the west, Analysis Point One ("AP-1"), drains to the existing municipal storm drain system in Lovers Lane. The area that drains to the north, Analysis Point Two ("AP-2") and Analysis Point Three ("AP-3"), drains to an existing wetland system. Peak discharges have been computed at the analysis points for the 2-, 25-, 50-, and 100-year storm events as shown in Table 1.

The Project area soils identified by the United States Department of Agriculture (USDA) Natural Resources Conservation Service consist of map unit symbols 84C, 86C, 52C and 47C. 84C is classified as "Paxton and Montauk fine sandy loams, 8 to 15 percent slopes" and has a HSG rating of "C". 86C is classified as "Paxton and Montauk fine sandy loams, 3 to 45 percent slopes, extremely stony" and has a HSG rating of "C". 52C is classified as "Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony" and has a HSG rating of "B/D". 47C is classified as "Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony" and has a HSG rating of "C/D". Specific details for each soil Map Unit Symbol are provided in Appendix B.

Table 1

Analysis Point	**Pre-developed Peak Storm Runoff (Q), cubic feet per second (cfs)**			
	2-year	**25-year**	**50-year**	**100-year**
AP-1	6.47	21.01	25.34	30.19
AP-2	7.41	22.26	26.60	31.41
AP-3	6.51	21.83	26.39	31.53

Proposed Drainage Patterns

The Project will require clearing and grubbing in the immediate area for the proposed solar installation, including the necessary utilities, access road, and stormwater management features, resulting in approximately 17.189± acres of disturbance. Overall, hydrologically, through the addition of catchment areas associated with the individual drainage areas of each proposed basin, the post-developed condition is designed to mimic the pre-developed condition.

To manage the increase in post-development runoff due to the change in cover type associated with converting woods to meadow and the increase in a half step of HSG within the proposed limit of disturbance, two (2) grass-lined stormwater management basins are proposed; both located on the north side of the facility. Using outlet control structure/s with a grate top in each basin, as needed, the basins are designed to provide the necessary water quality treatment volume for the additional impervious area, as required by CT DEEP Appendix I. See calculations attached. Additional flow and volume control is provided via a 4" low flow orifice and a rip-rap overflow weir discharging to level spreaders at the flared end sections.

Since the proposed development mimics the existing conditions, the post-development condition was modeled using the same Analysis Points. Peak discharges have been computed at AP-1, AP-2 and AP-3 for the 2-year, 25-year, 50-year, and 100-year storm events.

Table 2

Analysis Point	**Post-developed Peak Storm Runoff (Q), cubic feet per second (cfs)**			
	2-year	**25-year**	**50-year**	**100-year**
AP-1	5.96	20.63	25.06	30.03
AP-2	3.93	16.87	22.88	30.94
AP-3	1.76	13.70	22.12	30.02

The reductions in runoff achieved by the post-development discharges in comparison with the pre-development discharges are tabulated in Table 3.

Table 3

Analysis Point	**Pre vs. Post Peak Storm Runoff (Q) Percent Reduction**			
	2-year	**25-year**	**50-year**	**100-year**
AP-1	7.9%	1.8%	1.1%	0.5%
AP-2	47.0%	8.3%	9.7%	10.1%
AP-3	73.0%	37.2%	16.2%	4.8%

CT DEEP Appendix I Design Regulations/Compliance

The following identifies and details the regulations and proposed compliance measures within CT DEEP Appendix I that pertain specifically to civil, stormwater, and erosion control designs. Additionally, a checklist of the same is available herein in Appendix F.

(I) Design and construction requirements:

1. Roadways, gravel surfaces, transformer pads are considered effective impervious cover for the purposes of calculating the WQV. The proposed solar panels that are proposed within existing and post-construction slopes that are less than 15% are not considered impervious cover for the purposes of calculating the WQV because the following have been met:
    a. Vegetative areas between the rows of solar panels have a width of 14.7 feet which is greater than the solar panel width of 14.1 feet.

   b. The post-development stormwater runoff is designed to drain to proposed stormwater management controls.
   c. The Project meets (iv) this requirement as the plan includes specific engineered phased construction plans and detailed erosion control measures.
   d. The panels are spaced and provide a minimum height of 2 feet from the ground to provide growth of native vegetation.
2. Setback and buffer requirements have been met following the subsections identified below:
   a. See Subsection requirements below:
      i. Solar panels are located within the 100-foot wetland setback (see subsection(b)) but not within the 50-foot setback of any property boundary.
      ii. An undisturbed buffer of at least fifty (50) feet between any wetland or waters will be maintained during construction activities at the site.
      iii. Other than a single perpendicular crossing, a 10-foot buffer is maintained between the proposed access road and electrical interconnection path.
   b. Under Section (2)(b)(i) the Project would then be eligible for a 50% reduction if Section (2)(b)(i)(A-C) are met, resulting in both the LOD and panel buffers being reduced to 50'.
   c. The existing wetlands and waters were delineated by Ian T. Cole, LLC in November of 2022 and verified by All-Points Technology Corporation in February of 2023. The location of delineated resources, as well as buffers, are present on the development plans.

   Under Section (2)(b)(i) the Project would then be eligible for a 50% reduction if Section (2)(b)(i)(A-C) are met, resulting in both the LOD and panel buffers being reduced to 50'

3. The lowest vertical clearance of the solar panels above the ground is proposed to be 2 feet.

II. Design requirements for post-construction stormwater management measures.

1. Post-construction stormwater control measures have been designed and will be constructed to provide permanent stabilization and non-erosive conveyance of runoff from the site.
2. The orientation of the panels follows the existing slopes on the site to the extent practicable.
3. The hydrologic analysis has been completed, as described above, with the following details:
   a. The Project evaluates and controls the 2, 25, 50, and 100-year 24-hour rainfall events in accordance with the 2004 CT Stormwater Quality Manual. Maximum sheet flow was kept to 100 feet and shallow concentrated flows are calculated using values for grassed waterways within HydroCAD.
   b. NRCS soil mapping was used for the stormwater/erosion control design.
   c. The required half-drop (1/2) and full drop in HSG for the facility area has been included in the stormwater calculations and design for the proposed stormwater management BMPs to provide a decrease in post-development runoff in comparison to pre-development runoff.
   d. Pre-and post-development drainage area maps & computations are provided in Appendices B and C.
   e. The analysis above demonstrates that the Project will have no net increase in peak flows, erosive velocities or volumes, or adverse impacts to downstream properties.

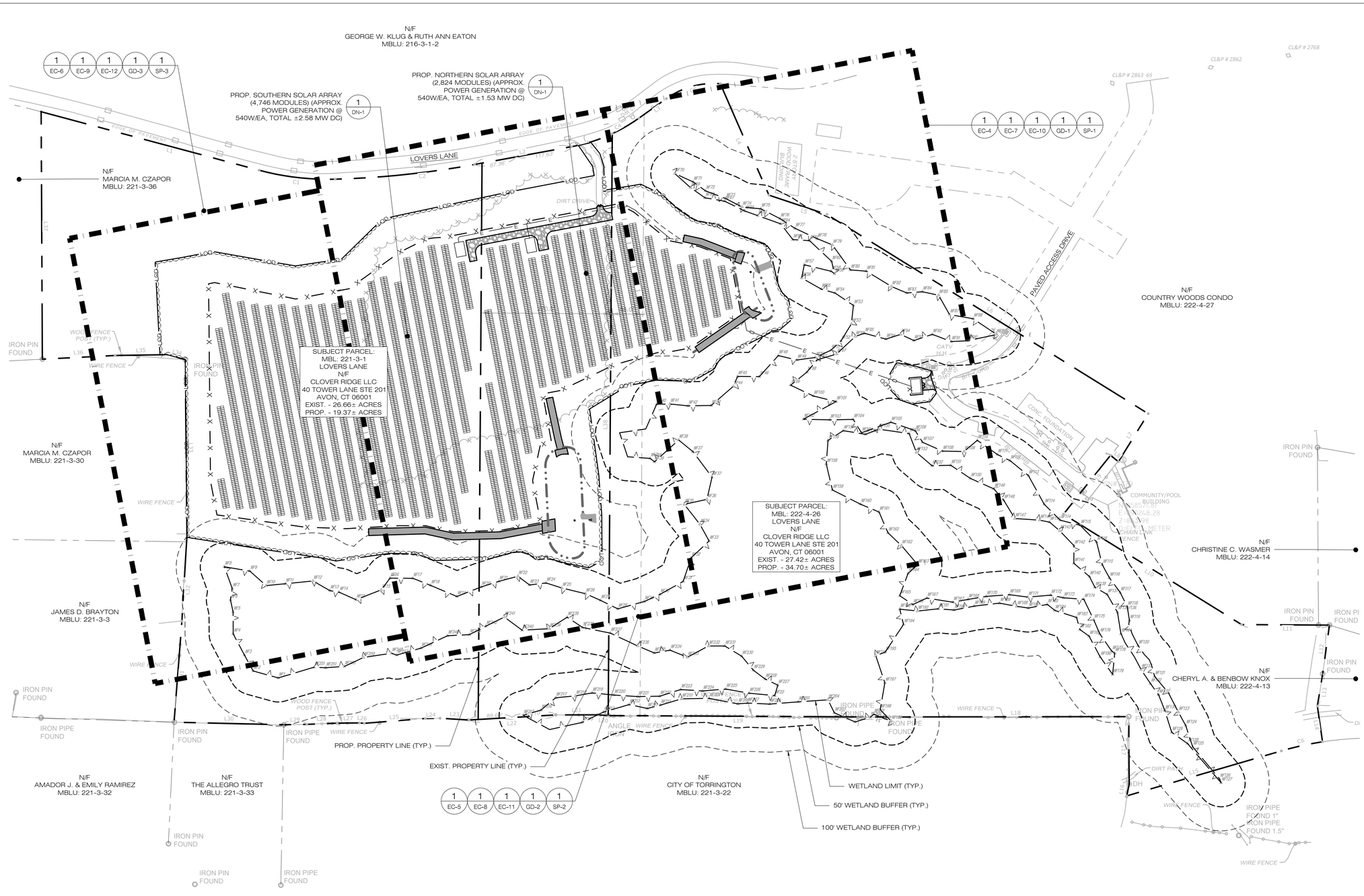
Sediment and Erosion Control During Construction

For drainage areas that are under 1.0-acre, sediment and erosion control will be provided by perimeter compost filter sock/silt fence with wings, as needed. For drainage areas that are between 1.0 and 5.0 acres, sediment and erosion control will be provided by a temporary sediment trap. For the one (1) drainage area that is larger than 5.0 acres, sediment and erosion control will be provided by a temporary sediment basin. The temporary sediment trap and basin provide the requisite sediment treatment volumes, based on 134 cubic yards per acre of disturbance.

Conclusion

The stormwater management for the proposed project has been designed such that the post-development peak discharges to the waters of the State of Connecticut for the 2-, 25-, 50-, and 100-year storm events are less than the pre-development peak discharges. In addition, the Project adheres to the regulations and guidelines presented by CT DEEP's Appendix I as described above. As a result, the proposed solar array will not result in any adverse conditions to the surrounding areas.

APPENDIX A: OVERALL LOCUS MAP



1 OP-1 **OVERALL LOCUS MAP**
SCALE : 1" = 100'-0"

100 0 50 100 200
(IN FEET) 1 inch = 100 ft.

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC PERMIT SET

NO	DATE	REVISION
0	XX/XX/23	FOR REVIEW: RCB
1		
2		
3		
4		
5		
6		

DESIGN PROFESSIONAL OF RECORD

PROF: ROBERT C. BURNS, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CLOVER RIDGE LLC
ADDRESS: 40 TOWER LANE STE 201 AVON, CT 06001

LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE TORRINGTON, CT

APT FILING NUMBER: CT606190

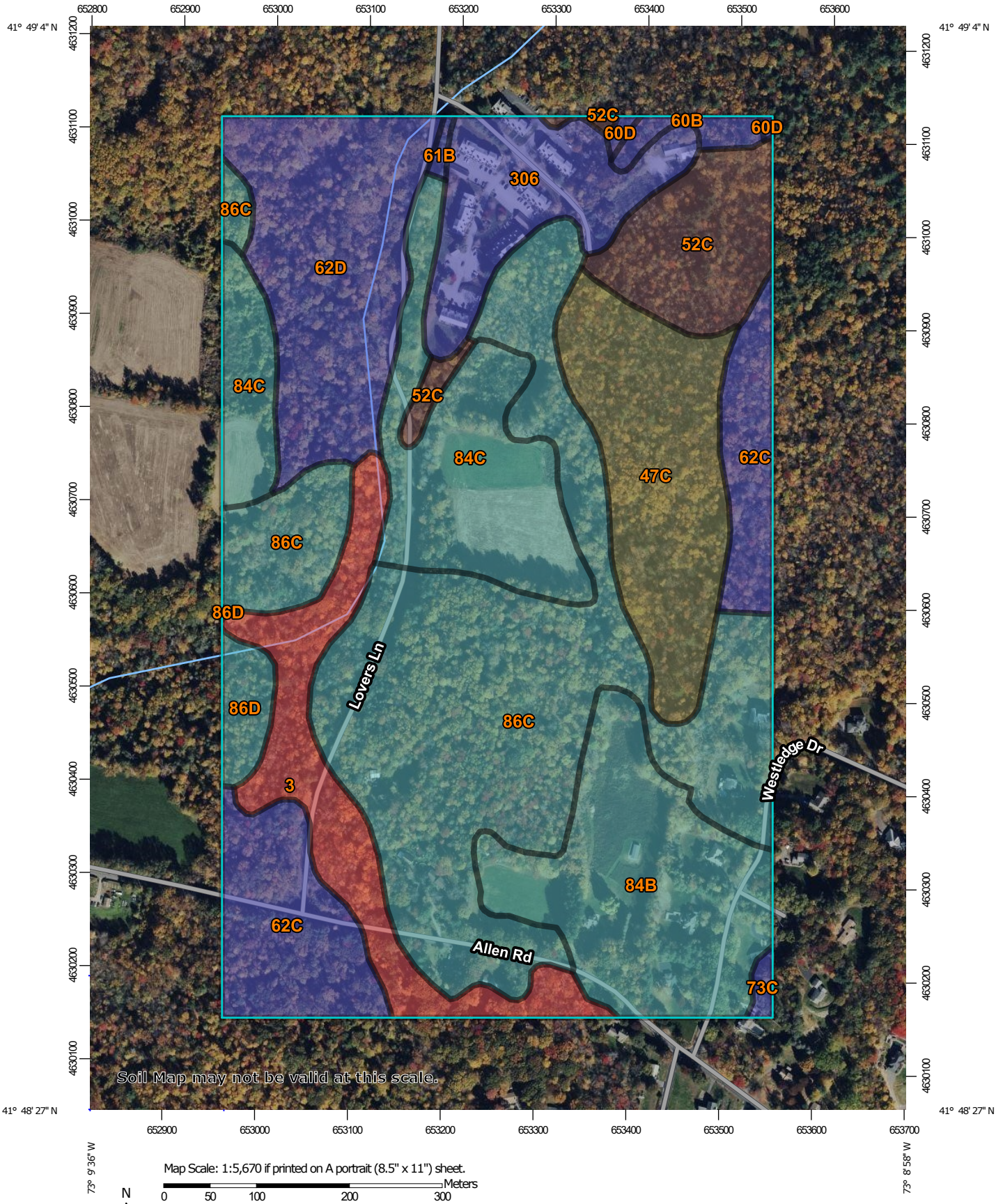
DRAWN BY: CSH
DATE: XX/XX/23 CHECKED BY: RCB

SHEET TITLE:
OVERALL LOCUS MAP

SHEET NUMBER:
OP-1

APPENDIX B: NRCS SOIL SURVEY

Hydrologic Soil Group—State of Connecticut
(TORRINGTON SOLAR)



Map Scale: 1:5,670 if printed on A portrait (8.5" x 11") 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 22, Sep 12, 2022

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

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

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	D	10.0	7.1%
47C	Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony	C/D	13.4	9.4%
52C	Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony	B/D	7.8	5.5%
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	B	1.1	0.8%
60D	Canton and Charlton soils, 15 to 25 percent slopes	B	0.3	0.2%
61B	Canton and Charlton fine sandy loams, 0 to 8 percent slopes, very stony	B	0.2	0.2%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	B	11.8	8.3%
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	B	14.7	10.3%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	B	0.4	0.3%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	C	15.4	10.8%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	C	15.3	10.7%
86C	Paxton and Montauk fine sandy loams, 3 to 15 percent slopes, extremely stony	C	41.4	29.0%
86D	Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony	C	1.9	1.3%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
306	Udorthents-Urban land complex	B	8.7	6.1%
Totals for Area of Interest			**142.4**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

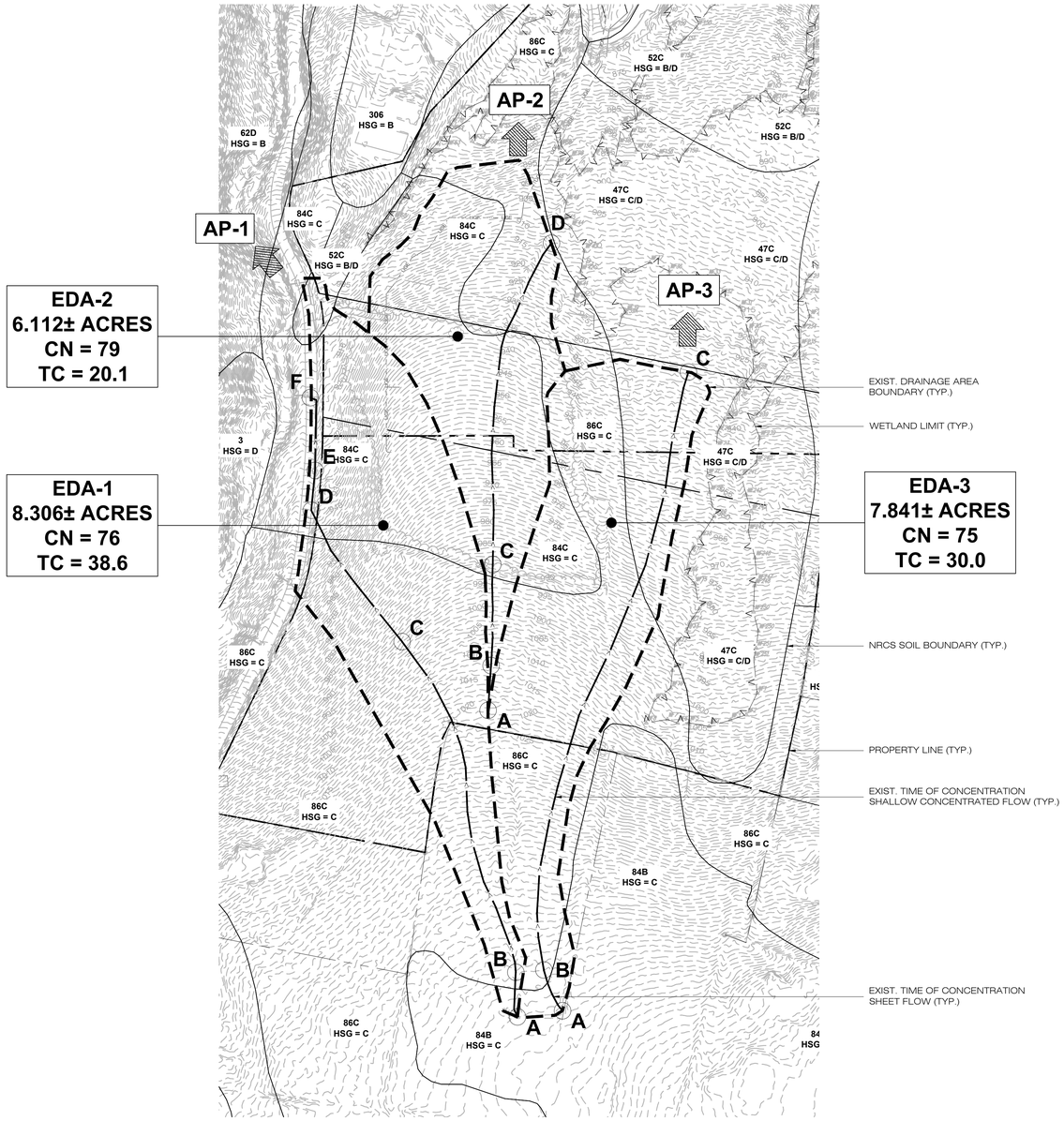
APPENDIX C: EXISTING DRAINAGE AREA MAP (EDA-1) & HYDROLOGIC COMPUTATION (HYDROCAD)

EXISTING DRAINAGE AREAS

	TOTAL AREA (ACRES)	COMPOSITE CN	TC (MINS.)
EDA-1	8.306	76	38.6
EDA-2	6.112	79	20.1
EDA-3	7.841	75	30.0

EXISTING CONDITION PEAK FLOWS

ANALYSIS POINT	2-YEAR (CFS)	25-YEAR (CFS)	50-YEAR (CFS)	100-YEAR (CFS)
AP-1	6.47	21.01	25.34	30.19
AP-2	7.41	22.26	26.60	31.41
AP-3	6.51	21.83	26.39	31.53



1 EDA-1 **EXISTING DRAINAGE AREA MAP**
SCALE : 1" = 150'-0"

150 0 75 150 300
(IN FEET) 1 inch = 150 ft.

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC PERMIT SET

NO	DATE	REVISION
0		
1		
2		
3		
4		
5		
6		

DESIGN PROFESSIONAL OF RECORD

PROF: THOMAS E. LITTLE, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CLOVER RIDGE LLC
ADDRESS: 40 TOWER LANE STE 201 AVON, CT 06001

TORRINGTON SOLAR

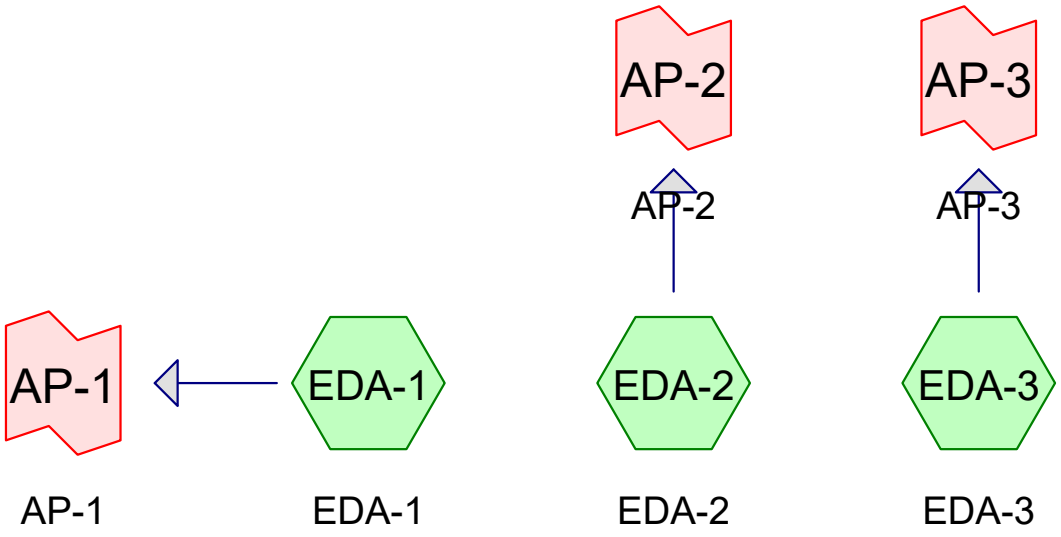
SITE ADDRESS: LOVERS LANE TORRINGTON, CT

APT FILING NUMBER: CT606190

DRAWN BY: CSH
DATE: 08/23
CHECKED BY: TEL

SHEET TITLE:
EXISTING DRAINAGE AREA MAP

SHEET NUMBER:
EDA-1



Subcat Reach Pond Link

Routing Diagram for CT606190_Torrington - EX - Rev0
Prepared by All-Points Tech Corp, PC, Printed 3/18/2024

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.020	96	Gravel surface, HSG C (EDA-1, EDA-2)
0.015	96	Gravel surface, HSG D (EDA-1)
0.163	98	Paved roads w/curbs & sewers, HSG C (EDA-1)
0.044	98	Paved roads w/curbs & sewers, HSG D (EDA-1)
5.691	85	Row crops, straight row, Good, HSG C (EDA-1, EDA-2, EDA-3)
14.685	73	Woods, Fair, HSG C (EDA-1, EDA-2, EDA-3)
1.641	79	Woods, Fair, HSG D (EDA-1, EDA-3)
22.259	**77**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
20.559	HSG C	EDA-1, EDA-2, EDA-3
1.700	HSG D	EDA-1, EDA-3
0.000	Other	
22.259		**TOTAL AREA**

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	EDA-1	0.00	0.00	172.0	0.0644	0.011	0.0	18.0	0.0	

Summary for Subcatchment EDA-1: EDA-1

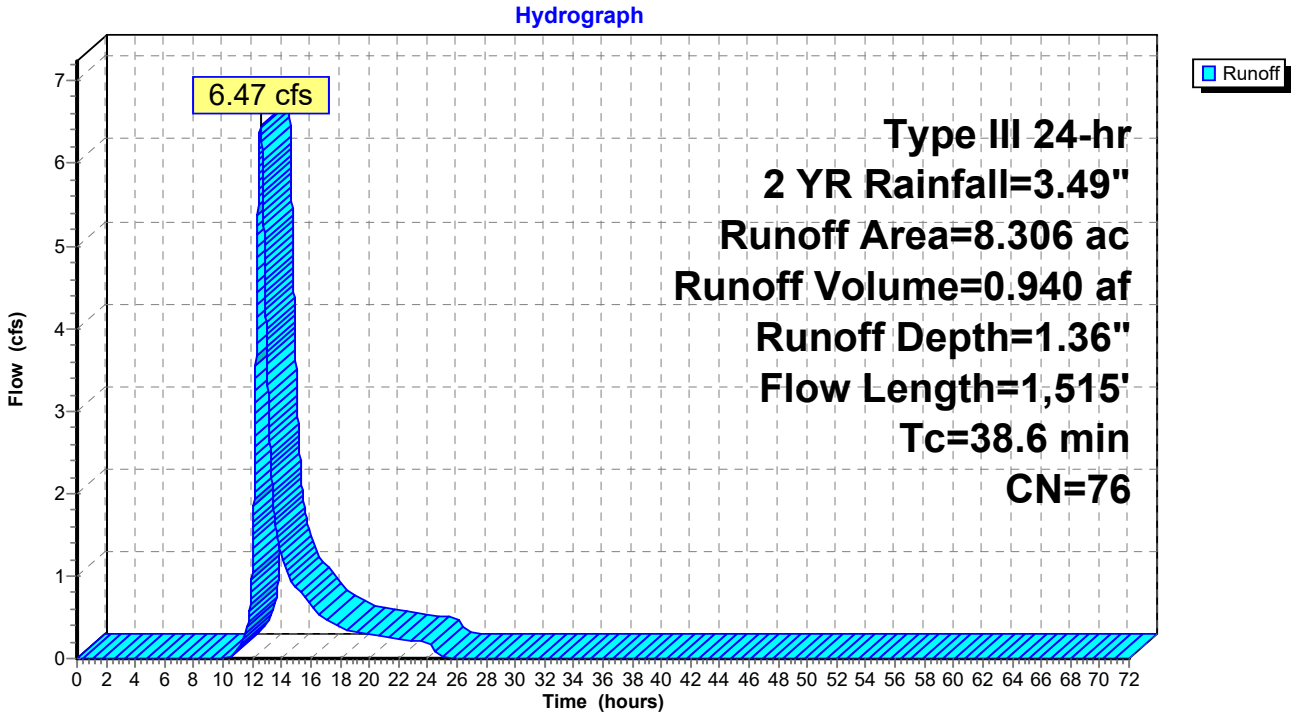
Runoff = 6.47 cfs @ 12.57 hrs, Volume= 0.940 af, Depth= 1.36"
Routed to Link AP-1 : AP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 YR Rainfall=3.49"

Area (ac)	CN	Description
6.258	73	Woods, Fair, HSG C
1.738	85	Row crops, straight row, Good, HSG C
0.163	98	Paved roads w/curbs & sewers, HSG C
0.007	96	Gravel surface, HSG C
0.081	79	Woods, Fair, HSG D
0.015	96	Gravel surface, HSG D
0.044	98	Paved roads w/curbs & sewers, HSG D
8.306	76	Weighted Average
8.099		97.51% Pervious Area
0.207		2.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	100	0.0600	0.12		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
18.5	795	0.0817	0.71		**Shallow Concentrated Flow, B-C** Forest w/Heavy Litter Kv= 2.5 fps
5.7	359	0.1783	1.06		**Shallow Concentrated Flow, C-D** Forest w/Heavy Litter Kv= 2.5 fps
0.3	89	0.0674	5.27		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
0.2	172	0.0644	17.83	31.50	**Pipe Channel, E-F** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.011 Concrete pipe, straight & clean
38.6	1,515	Total			

Subcatchment EDA-1: EDA-1



Summary for Subcatchment EDA-2: EDA-2

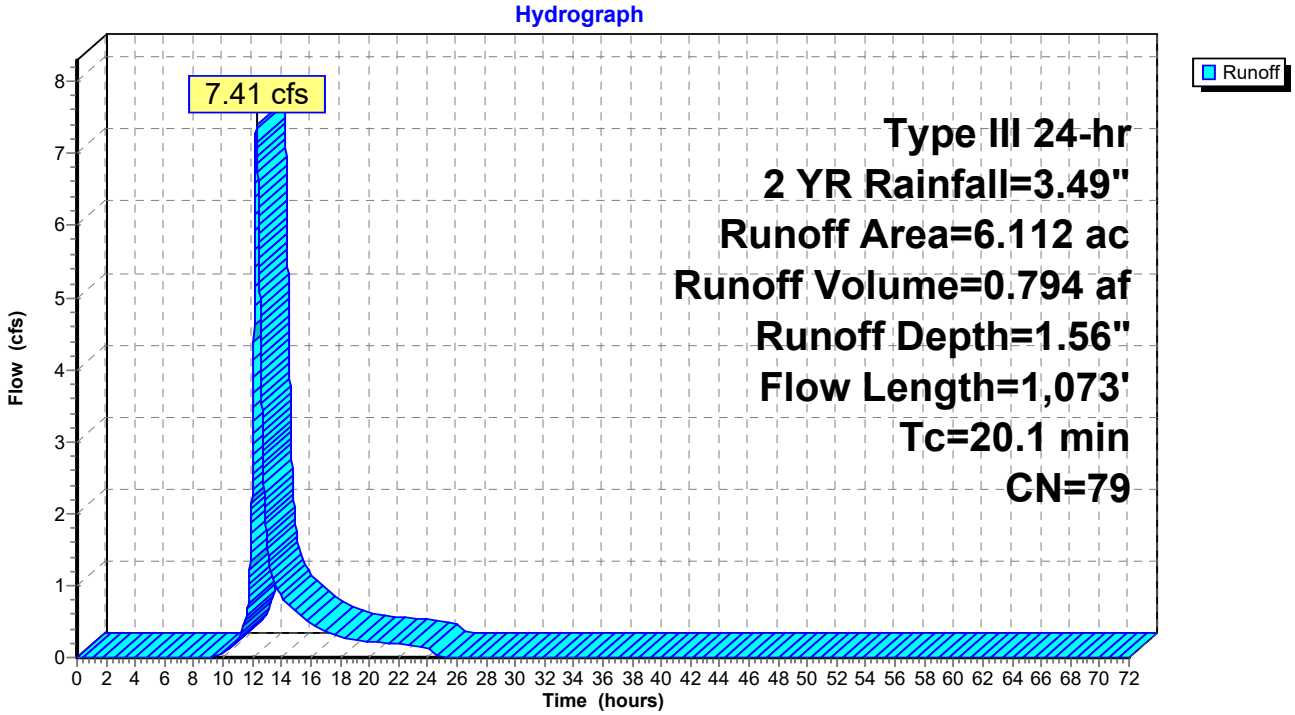
Runoff = 7.41 cfs @ 12.29 hrs, Volume= 0.794 af, Depth= 1.56"
Routed to Link AP-2 : AP-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 YR Rainfall=3.49"

Area (ac)	CN	Description
2.925	73	Woods, Fair, HSG C
3.174	85	Row crops, straight row, Good, HSG C
0.013	96	Gravel surface, HSG C
6.112	79	Weighted Average
6.112		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0800	0.13		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
2.4	227	0.0969	1.56		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
3.0	519	0.1021	2.88		**Shallow Concentrated Flow, C-D** Cultivated Straight Rows Kv= 9.0 fps
2.3	227	0.1101	1.66		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
20.1	1,073	Total			

Subcatchment EDA-2: EDA-2



Summary for Subcatchment EDA-3: EDA-3

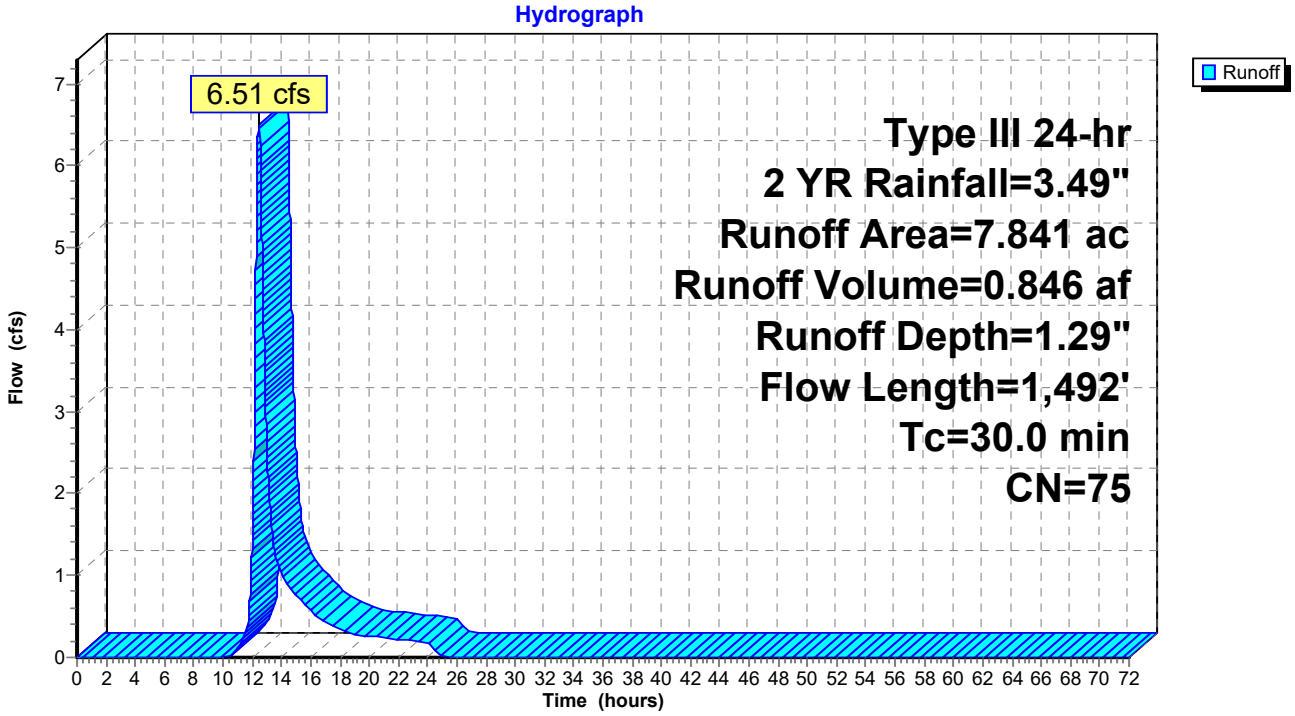
Runoff = 6.51 cfs @ 12.44 hrs, Volume= 0.846 af, Depth= 1.29"
Routed to Link AP-3 : AP-3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 YR Rainfall=3.49"

Area (ac)	CN	Description
5.502	73	Woods, Fair, HSG C
0.779	85	Row crops, straight row, Good, HSG C
1.560	79	Woods, Fair, HSG D
7.841	75	Weighted Average
7.841		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0500	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
15.1	1,392	0.0942	1.53		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
30.0	1,492	Total			

Subcatchment EDA-3: EDA-3

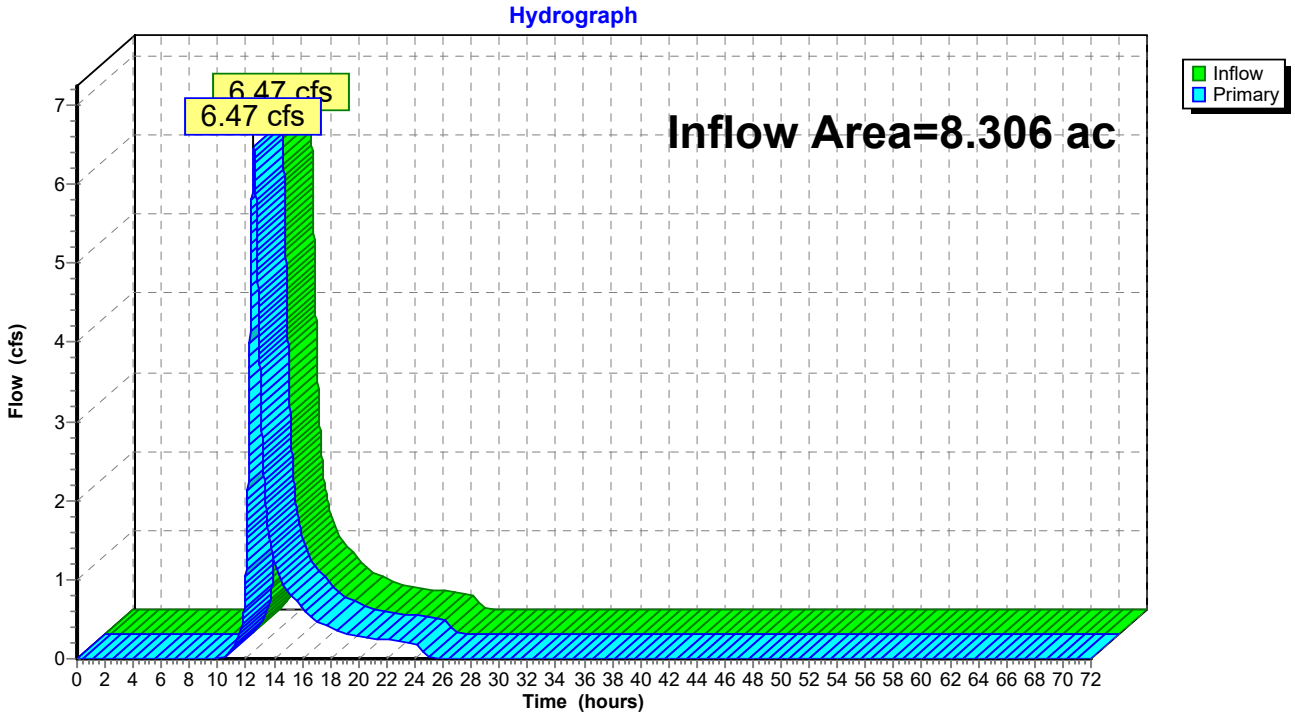


Summary for Link AP-1: AP-1

Inflow Area = 8.306 ac, 2.49% Impervious, Inflow Depth = 1.36" for 2 YR event
Inflow = 6.47 cfs @ 12.57 hrs, Volume= 0.940 af
Primary = 6.47 cfs @ 12.57 hrs, Volume= 0.940 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link AP-1: AP-1

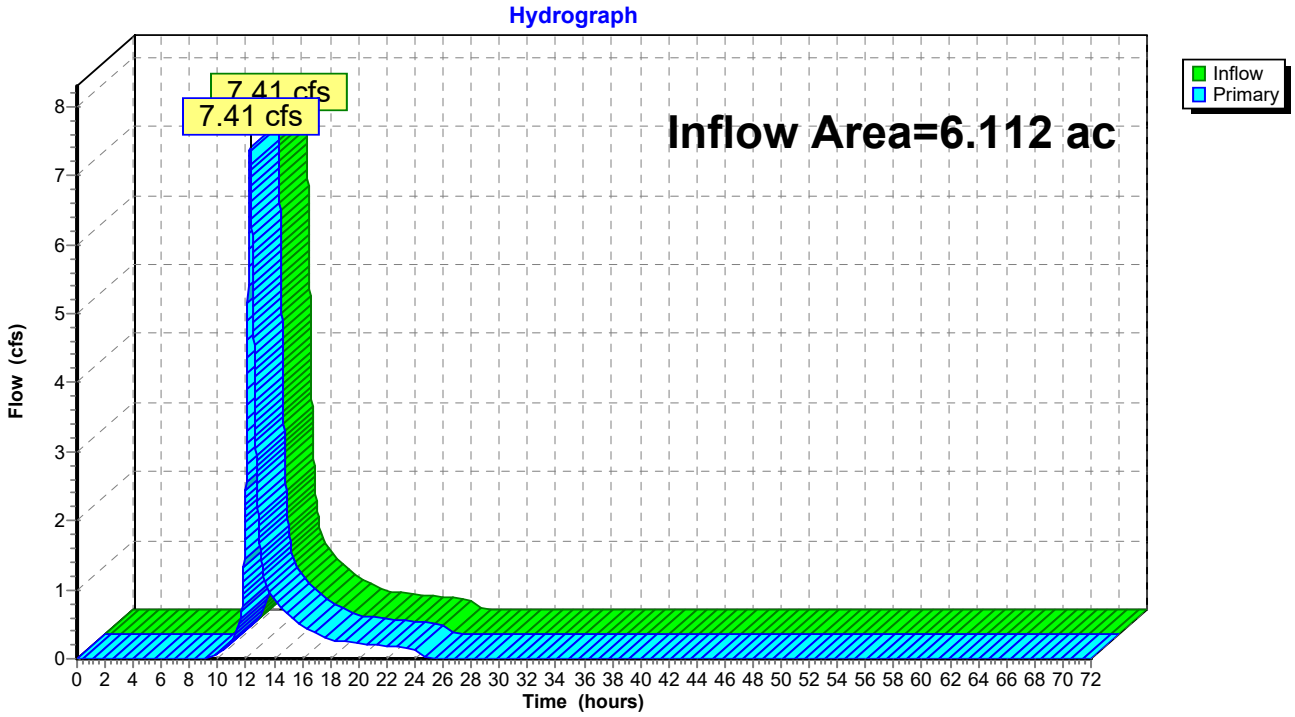


Summary for Link AP-2: AP-2

Inflow Area = 6.112 ac, 0.00% Impervious, Inflow Depth = 1.56" for 2 YR event
Inflow = 7.41 cfs @ 12.29 hrs, Volume= 0.794 af
Primary = 7.41 cfs @ 12.29 hrs, Volume= 0.794 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link AP-2: AP-2

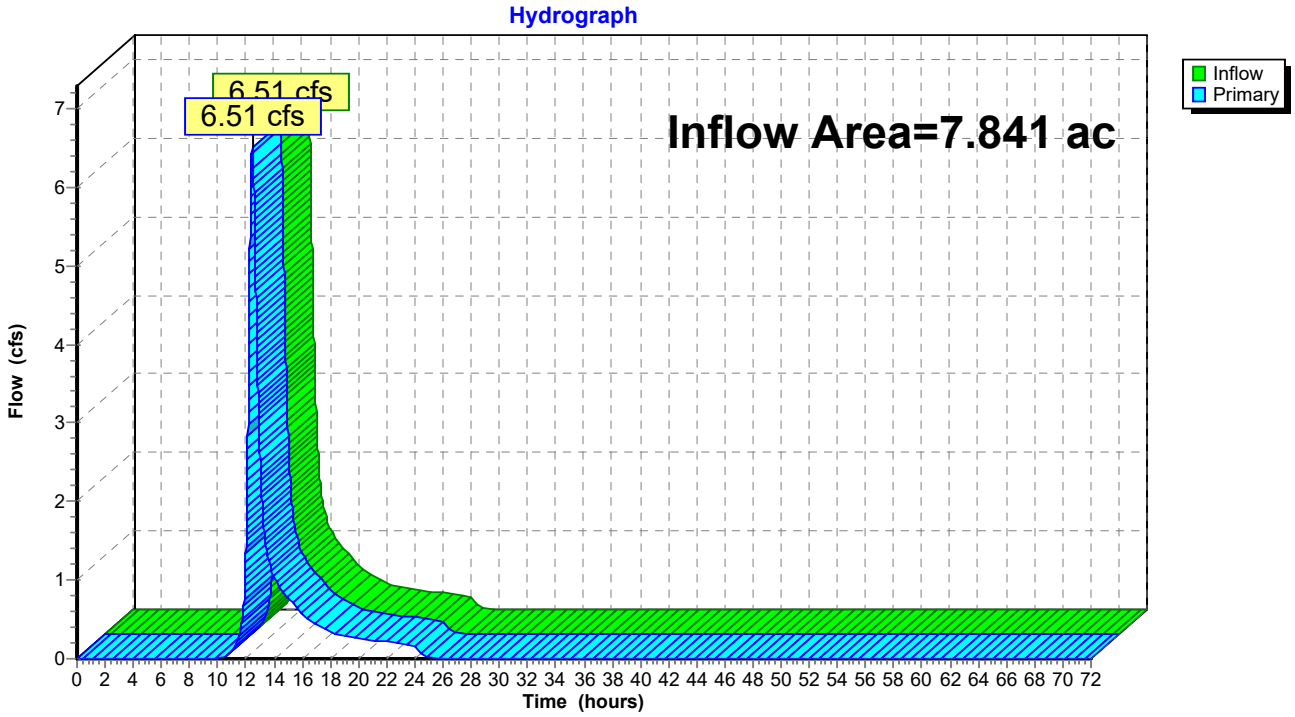


Summary for Link AP-3: AP-3

Inflow Area = 7.841 ac, 0.00% Impervious, Inflow Depth = 1.29" for 2 YR event
Inflow = 6.51 cfs @ 12.44 hrs, Volume= 0.846 af
Primary = 6.51 cfs @ 12.44 hrs, Volume= 0.846 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link AP-3: AP-3



Summary for Subcatchment EDA-1: EDA-1

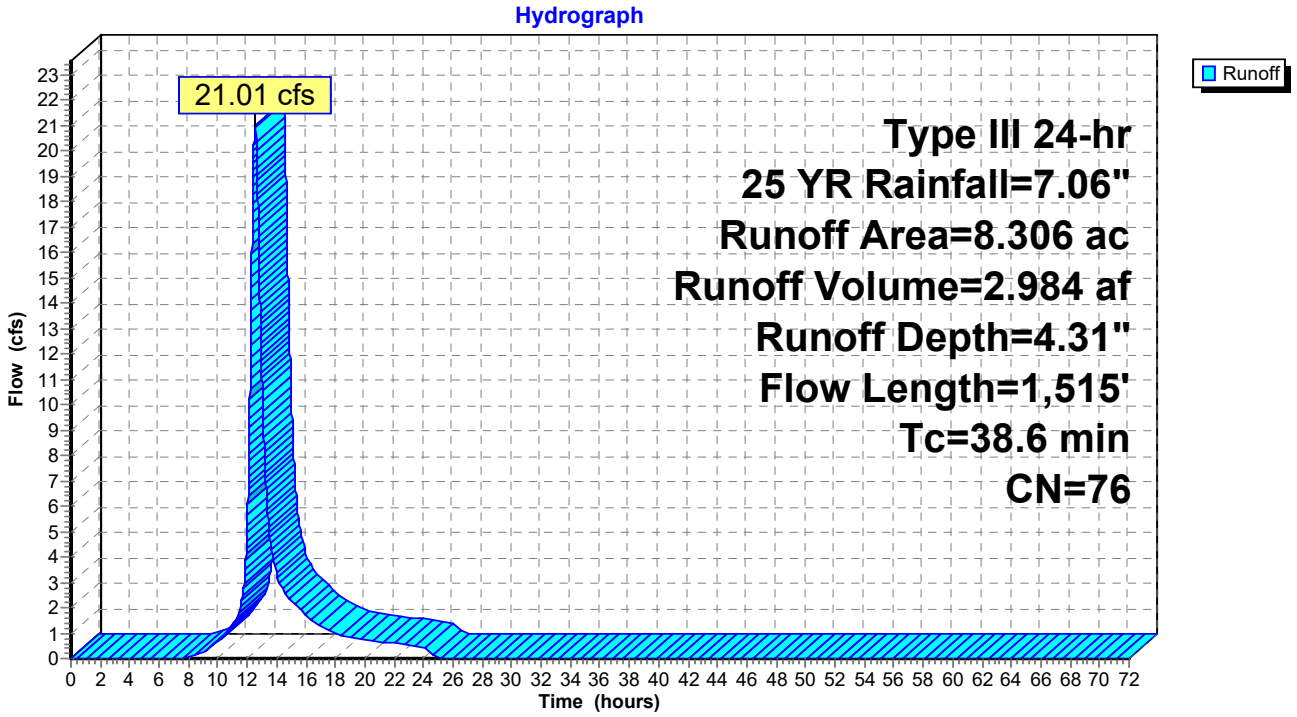
Runoff = 21.01 cfs @ 12.53 hrs, Volume= 2.984 af, Depth= 4.31"
Routed to Link AP-1 : AP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 YR Rainfall=7.06"

Area (ac)	CN	Description
6.258	73	Woods, Fair, HSG C
1.738	85	Row crops, straight row, Good, HSG C
0.163	98	Paved roads w/curbs & sewers, HSG C
0.007	96	Gravel surface, HSG C
0.081	79	Woods, Fair, HSG D
0.015	96	Gravel surface, HSG D
0.044	98	Paved roads w/curbs & sewers, HSG D
8.306	76	Weighted Average
8.099		97.51% Pervious Area
0.207		2.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	100	0.0600	0.12		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
18.5	795	0.0817	0.71		**Shallow Concentrated Flow, B-C** Forest w/Heavy Litter Kv= 2.5 fps
5.7	359	0.1783	1.06		**Shallow Concentrated Flow, C-D** Forest w/Heavy Litter Kv= 2.5 fps
0.3	89	0.0674	5.27		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
0.2	172	0.0644	17.83	31.50	**Pipe Channel, E-F** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.011 Concrete pipe, straight & clean
38.6	1,515	Total			

Subcatchment EDA-1: EDA-1



Summary for Subcatchment EDA-2: EDA-2

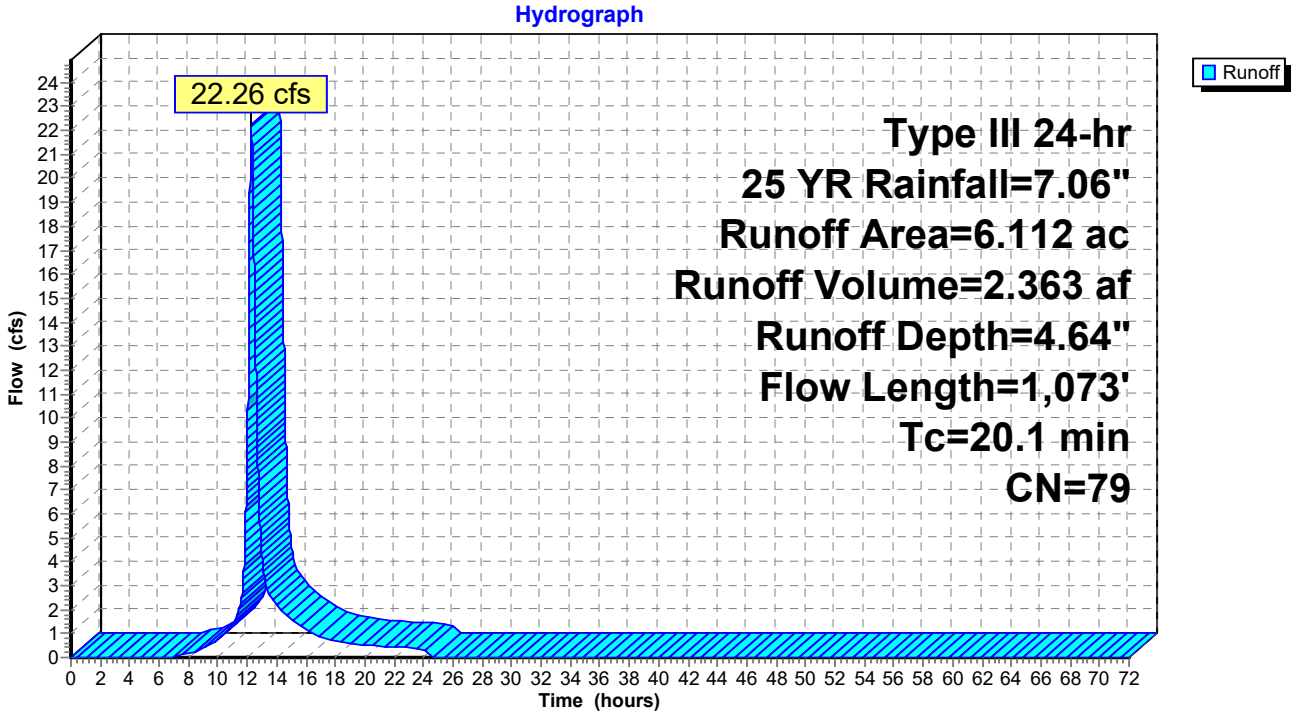
Runoff = 22.26 cfs @ 12.27 hrs, Volume= 2.363 af, Depth= 4.64"
Routed to Link AP-2 : AP-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 YR Rainfall=7.06"

Area (ac)	CN	Description
2.925	73	Woods, Fair, HSG C
3.174	85	Row crops, straight row, Good, HSG C
0.013	96	Gravel surface, HSG C
6.112	79	Weighted Average
6.112		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0800	0.13		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
2.4	227	0.0969	1.56		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
3.0	519	0.1021	2.88		**Shallow Concentrated Flow, C-D** Cultivated Straight Rows Kv= 9.0 fps
2.3	227	0.1101	1.66		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
20.1	1,073	Total			

Subcatchment EDA-2: EDA-2



Summary for Subcatchment EDA-3: EDA-3

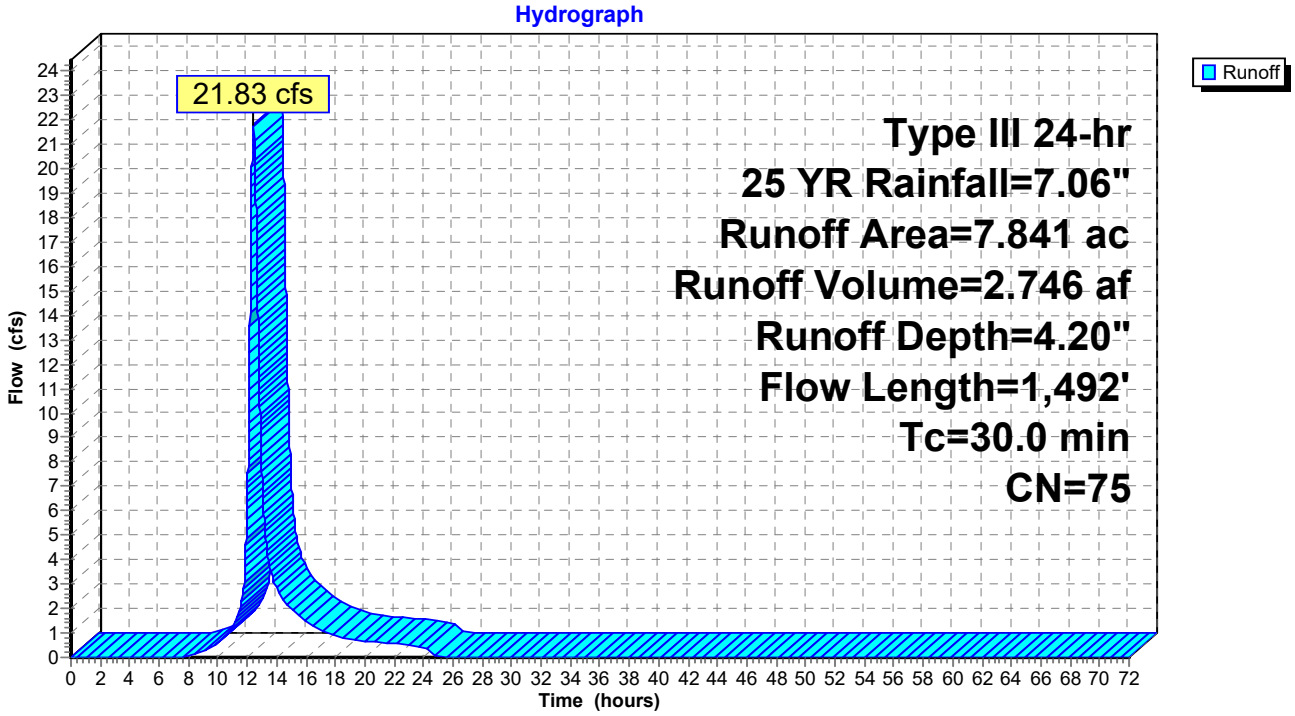
Runoff = 21.83 cfs @ 12.43 hrs, Volume= 2.746 af, Depth= 4.20"
Routed to Link AP-3 : AP-3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 YR Rainfall=7.06"

Area (ac)	CN	Description
5.502	73	Woods, Fair, HSG C
0.779	85	Row crops, straight row, Good, HSG C
1.560	79	Woods, Fair, HSG D
7.841	75	Weighted Average
7.841		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0500	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
15.1	1,392	0.0942	1.53		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
30.0	1,492	Total			

Subcatchment EDA-3: EDA-3

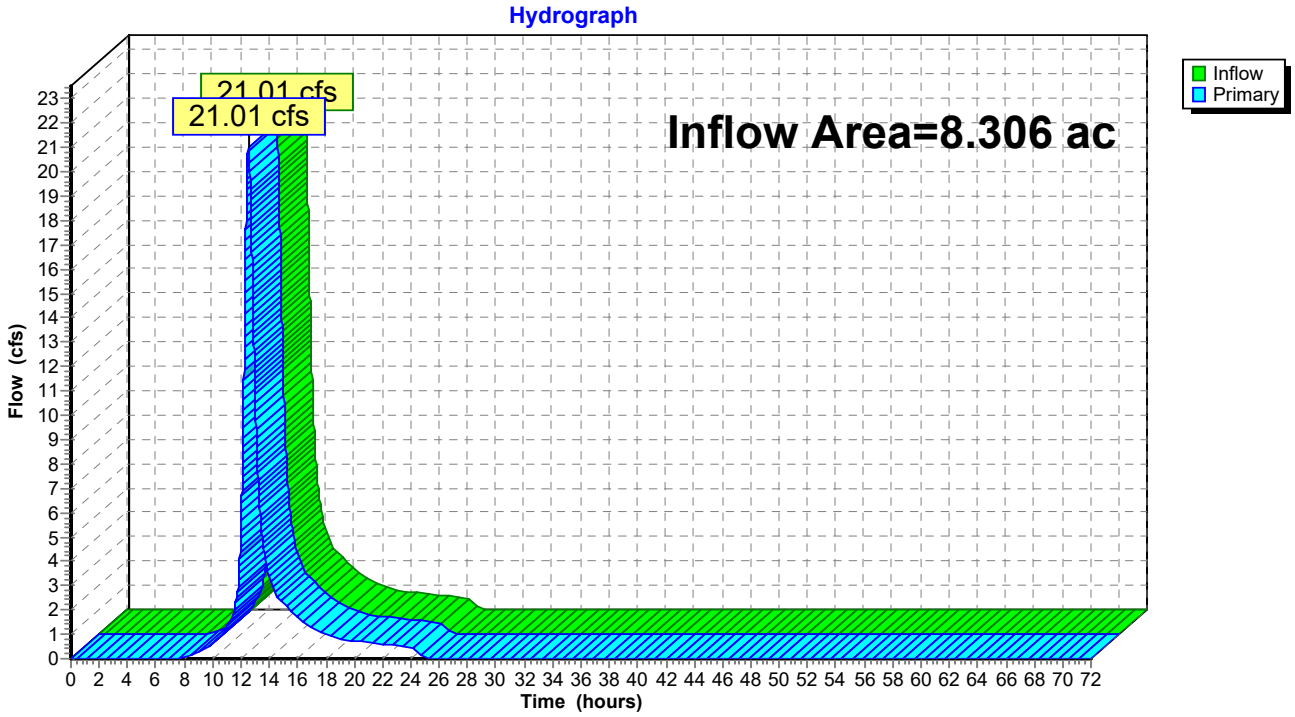


Summary for Link AP-1: AP-1

Inflow Area = 8.306 ac, 2.49% Impervious, Inflow Depth = 4.31" for 25 YR event
Inflow = 21.01 cfs @ 12.53 hrs, Volume= 2.984 af
Primary = 21.01 cfs @ 12.53 hrs, Volume= 2.984 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link AP-1: AP-1

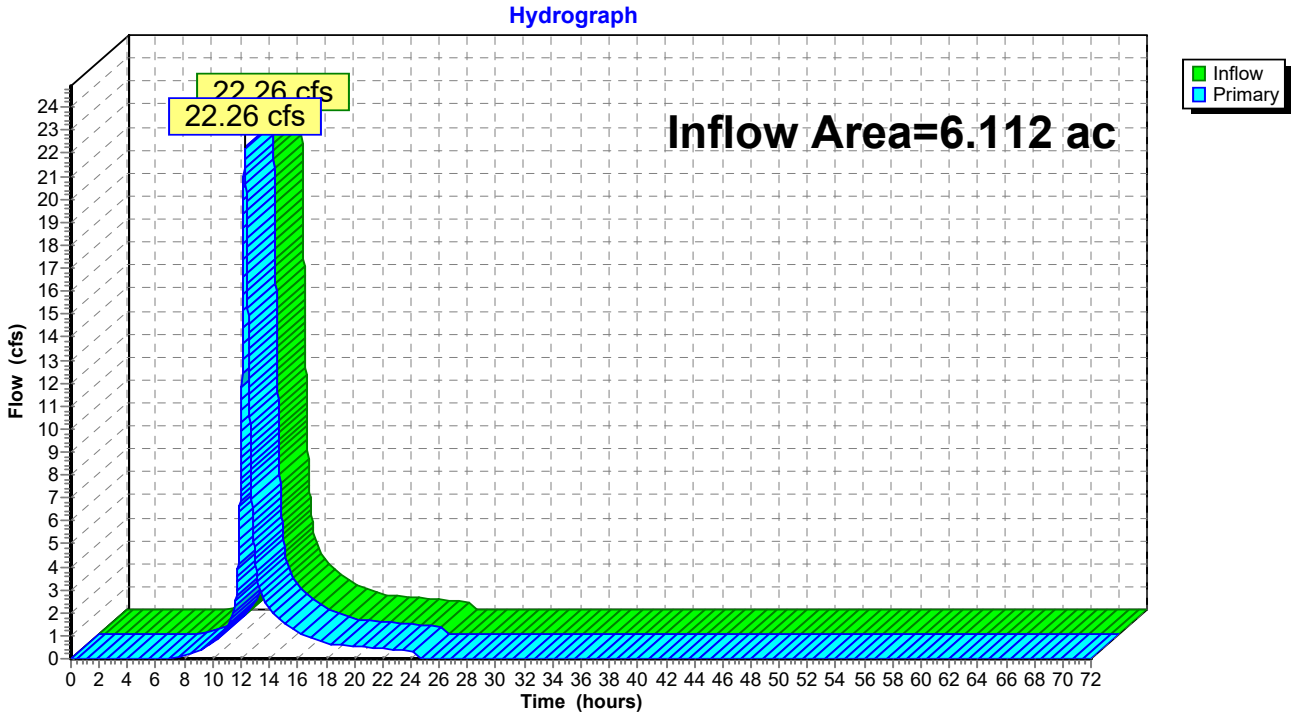


Summary for Link AP-2: AP-2

Inflow Area = 6.112 ac, 0.00% Impervious, Inflow Depth = 4.64" for 25 YR event
Inflow = 22.26 cfs @ 12.27 hrs, Volume= 2.363 af
Primary = 22.26 cfs @ 12.27 hrs, Volume= 2.363 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link AP-2: AP-2

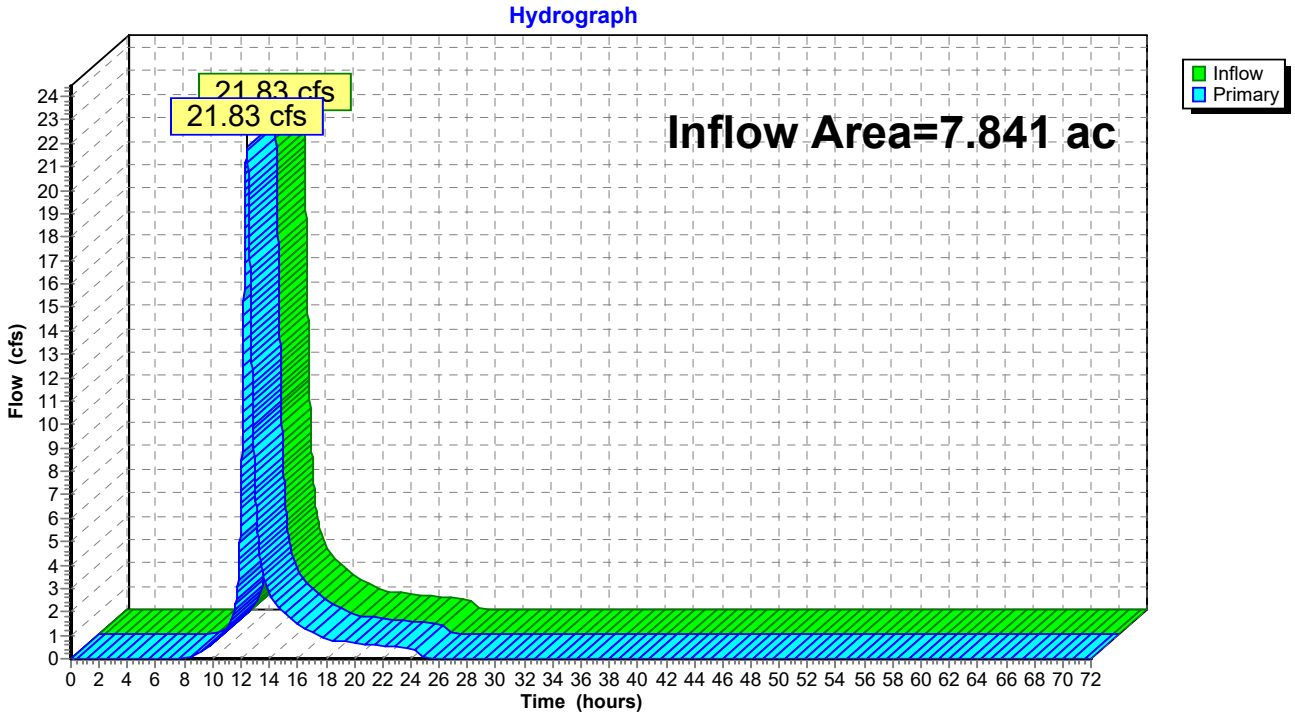


Summary for Link AP-3: AP-3

Inflow Area = 7.841 ac, 0.00% Impervious, Inflow Depth = 4.20" for 25 YR event
Inflow = 21.83 cfs @ 12.43 hrs, Volume= 2.746 af
Primary = 21.83 cfs @ 12.43 hrs, Volume= 2.746 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link AP-3: AP-3



Summary for Subcatchment EDA-1: EDA-1

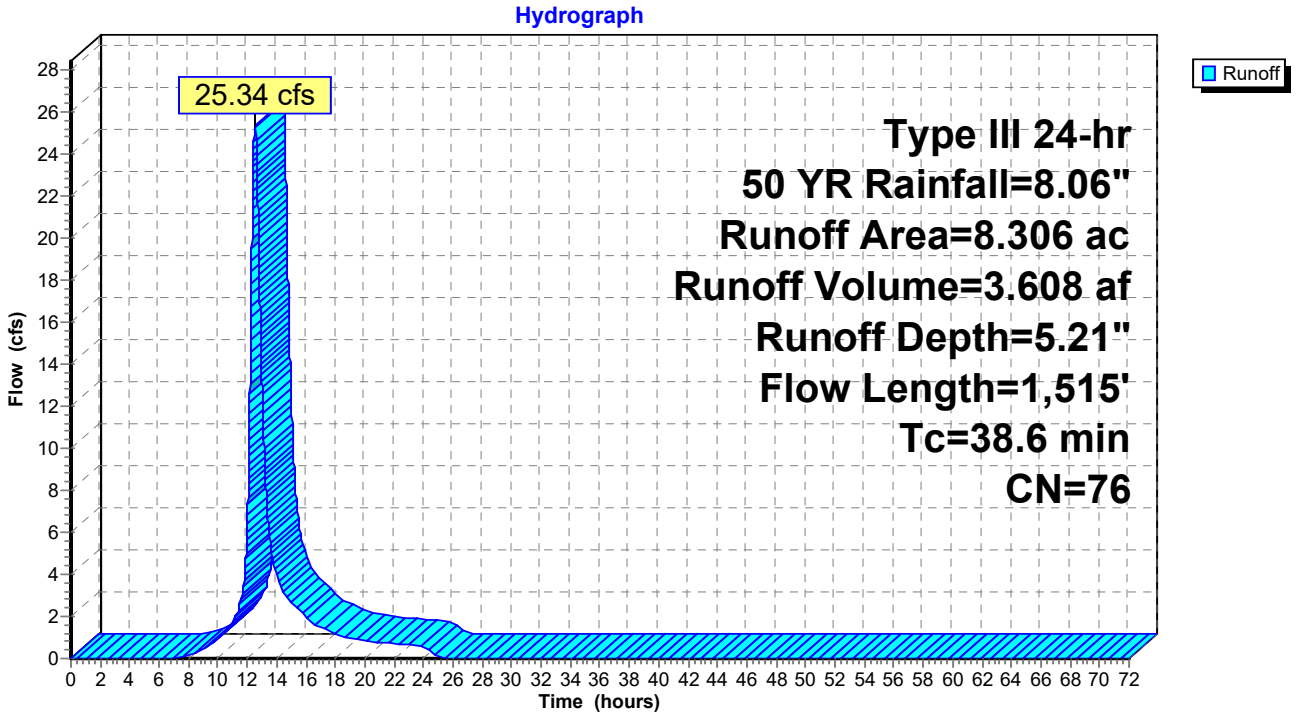
Runoff = 25.34 cfs @ 12.52 hrs, Volume= 3.608 af, Depth= 5.21"
Routed to Link AP-1 : AP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50 YR Rainfall=8.06"

Area (ac)	CN	Description
6.258	73	Woods, Fair, HSG C
1.738	85	Row crops, straight row, Good, HSG C
0.163	98	Paved roads w/curbs & sewers, HSG C
0.007	96	Gravel surface, HSG C
0.081	79	Woods, Fair, HSG D
0.015	96	Gravel surface, HSG D
0.044	98	Paved roads w/curbs & sewers, HSG D
8.306	76	Weighted Average
8.099		97.51% Pervious Area
0.207		2.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	100	0.0600	0.12		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
18.5	795	0.0817	0.71		**Shallow Concentrated Flow, B-C** Forest w/Heavy Litter Kv= 2.5 fps
5.7	359	0.1783	1.06		**Shallow Concentrated Flow, C-D** Forest w/Heavy Litter Kv= 2.5 fps
0.3	89	0.0674	5.27		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
0.2	172	0.0644	17.83	31.50	**Pipe Channel, E-F** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.011 Concrete pipe, straight & clean
38.6	1,515	Total			

Subcatchment EDA-1: EDA-1



Summary for Subcatchment EDA-2: EDA-2

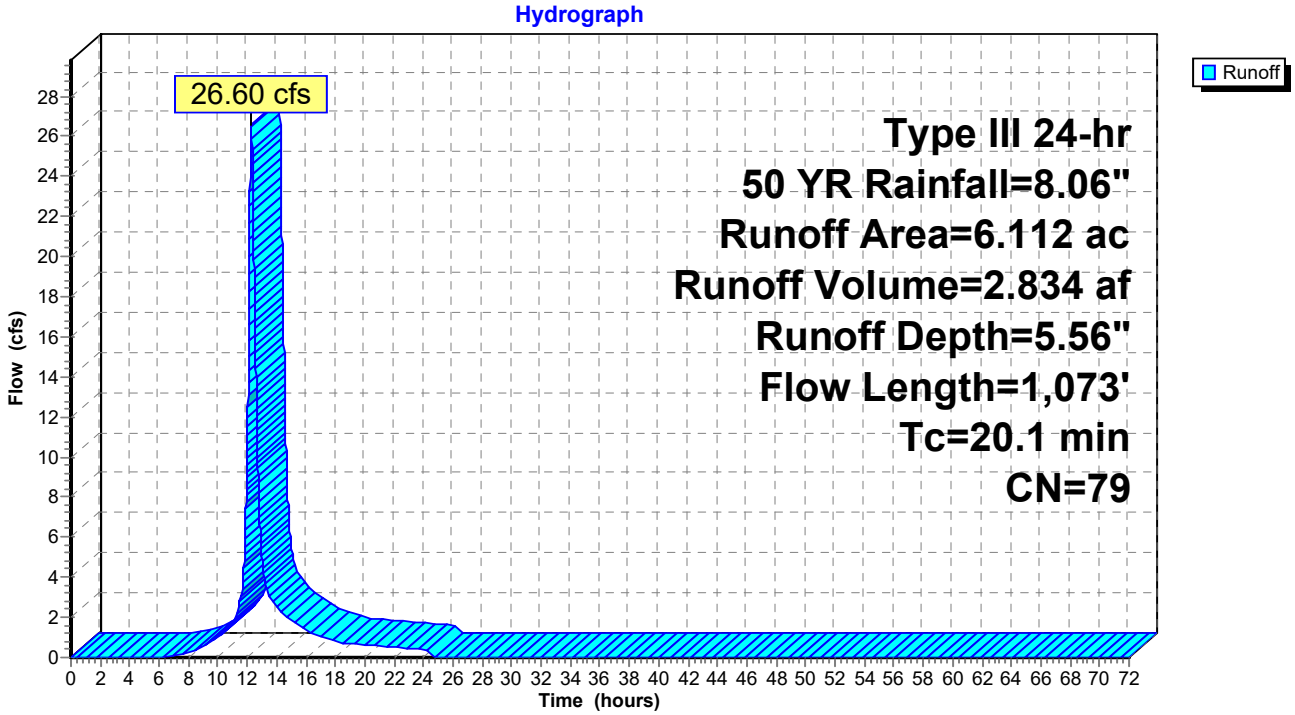
Runoff = 26.60 cfs @ 12.26 hrs, Volume= 2.834 af, Depth= 5.56"
Routed to Link AP-2 : AP-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50 YR Rainfall=8.06"

Area (ac)	CN	Description
2.925	73	Woods, Fair, HSG C
3.174	85	Row crops, straight row, Good, HSG C
0.013	96	Gravel surface, HSG C
6.112	79	Weighted Average
6.112		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0800	0.13		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
2.4	227	0.0969	1.56		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
3.0	519	0.1021	2.88		**Shallow Concentrated Flow, C-D** Cultivated Straight Rows Kv= 9.0 fps
2.3	227	0.1101	1.66		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
20.1	1,073	Total			

Subcatchment EDA-2: EDA-2



Summary for Subcatchment EDA-3: EDA-3

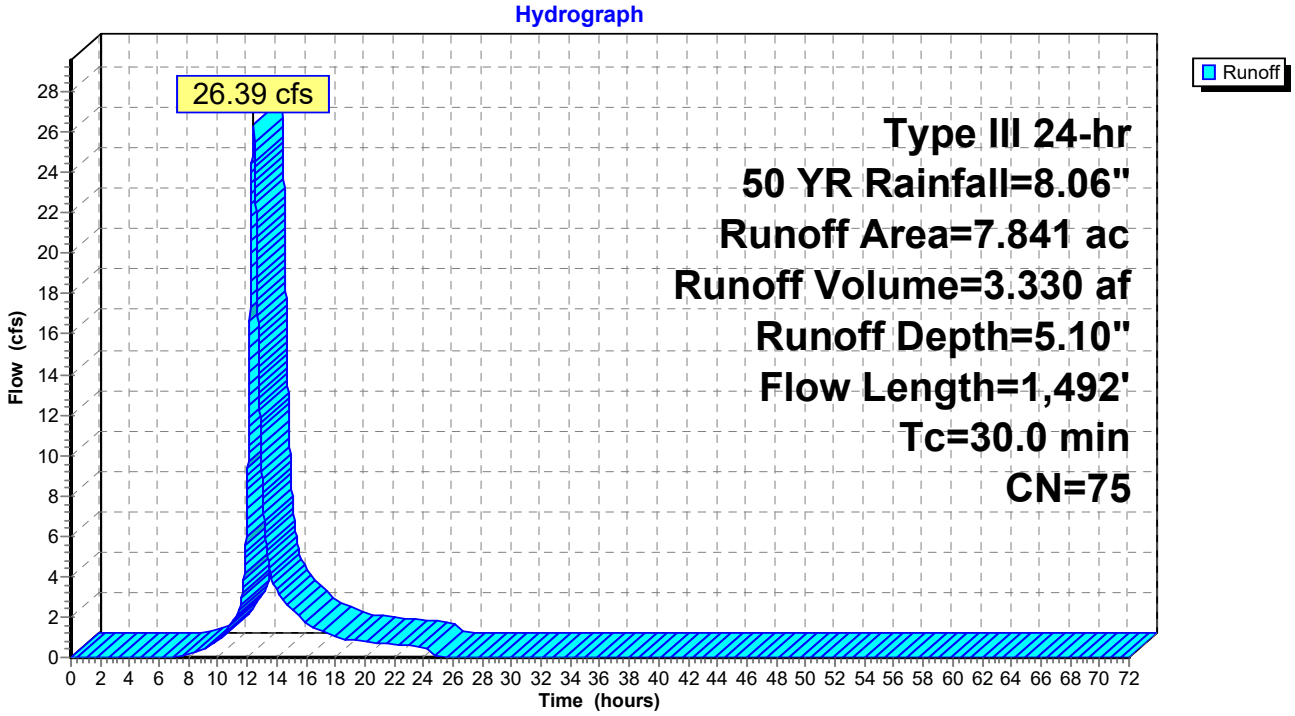
Runoff = 26.39 cfs @ 12.43 hrs, Volume= 3.330 af, Depth= 5.10"
Routed to Link AP-3 : AP-3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50 YR Rainfall=8.06"

Area (ac)	CN	Description
5.502	73	Woods, Fair, HSG C
0.779	85	Row crops, straight row, Good, HSG C
1.560	79	Woods, Fair, HSG D
7.841	75	Weighted Average
7.841		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0500	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
15.1	1,392	0.0942	1.53		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
30.0	1,492	Total			

Subcatchment EDA-3: EDA-3

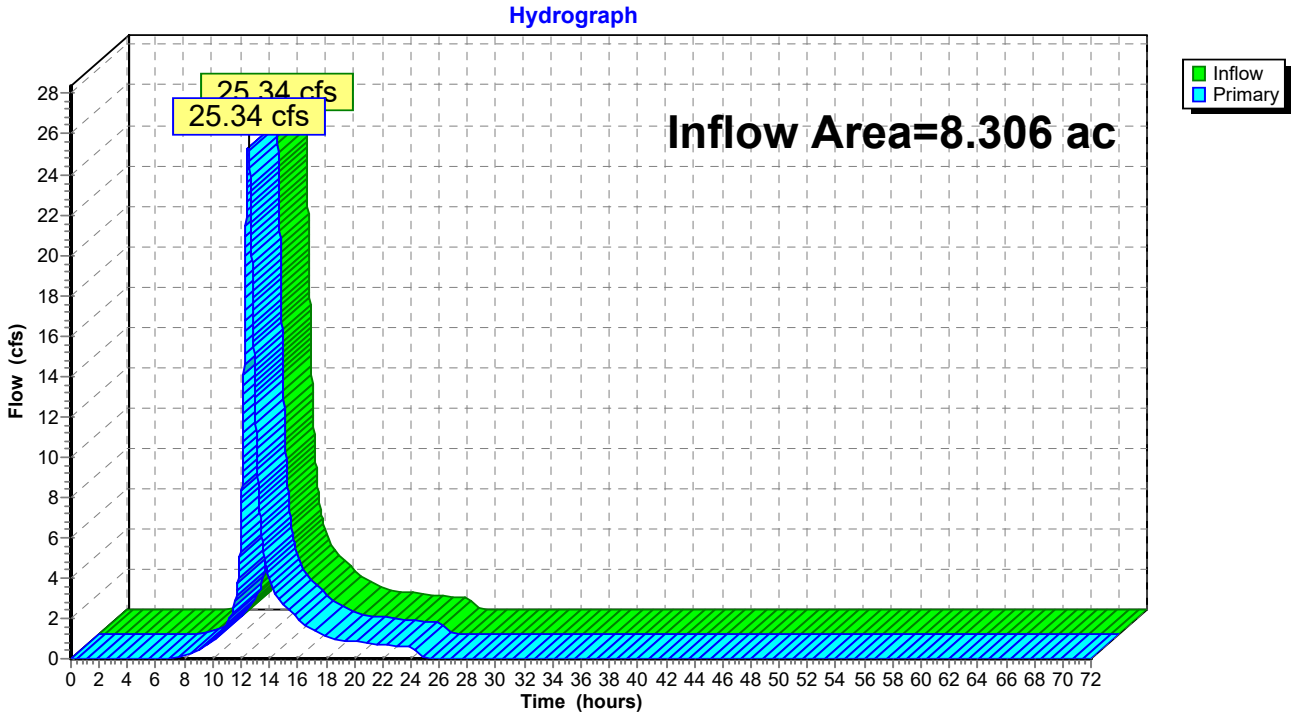


Summary for Link AP-1: AP-1

Inflow Area = 8.306 ac, 2.49% Impervious, Inflow Depth = 5.21" for 50 YR event
Inflow = 25.34 cfs @ 12.52 hrs, Volume= 3.608 af
Primary = 25.34 cfs @ 12.52 hrs, Volume= 3.608 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link AP-1: AP-1

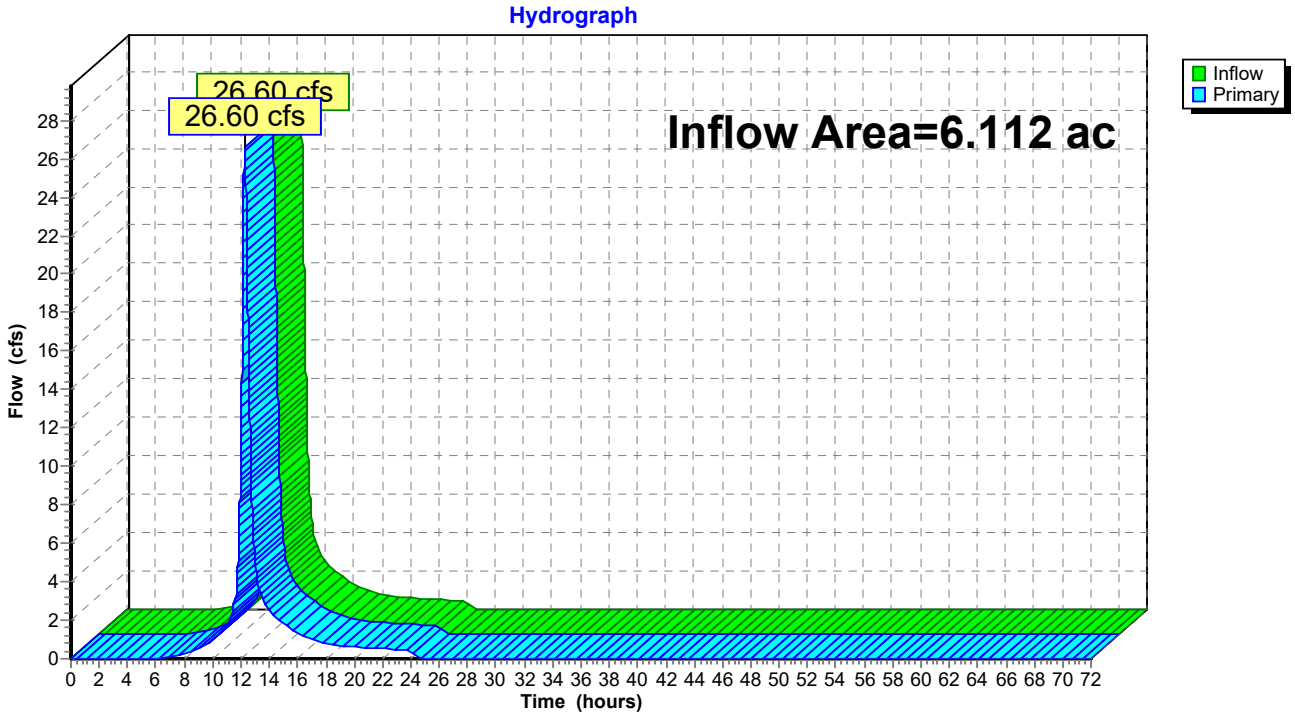


Summary for Link AP-2: AP-2

Inflow Area = 6.112 ac, 0.00% Impervious, Inflow Depth = 5.56" for 50 YR event
Inflow = 26.60 cfs @ 12.26 hrs, Volume= 2.834 af
Primary = 26.60 cfs @ 12.26 hrs, Volume= 2.834 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link AP-2: AP-2

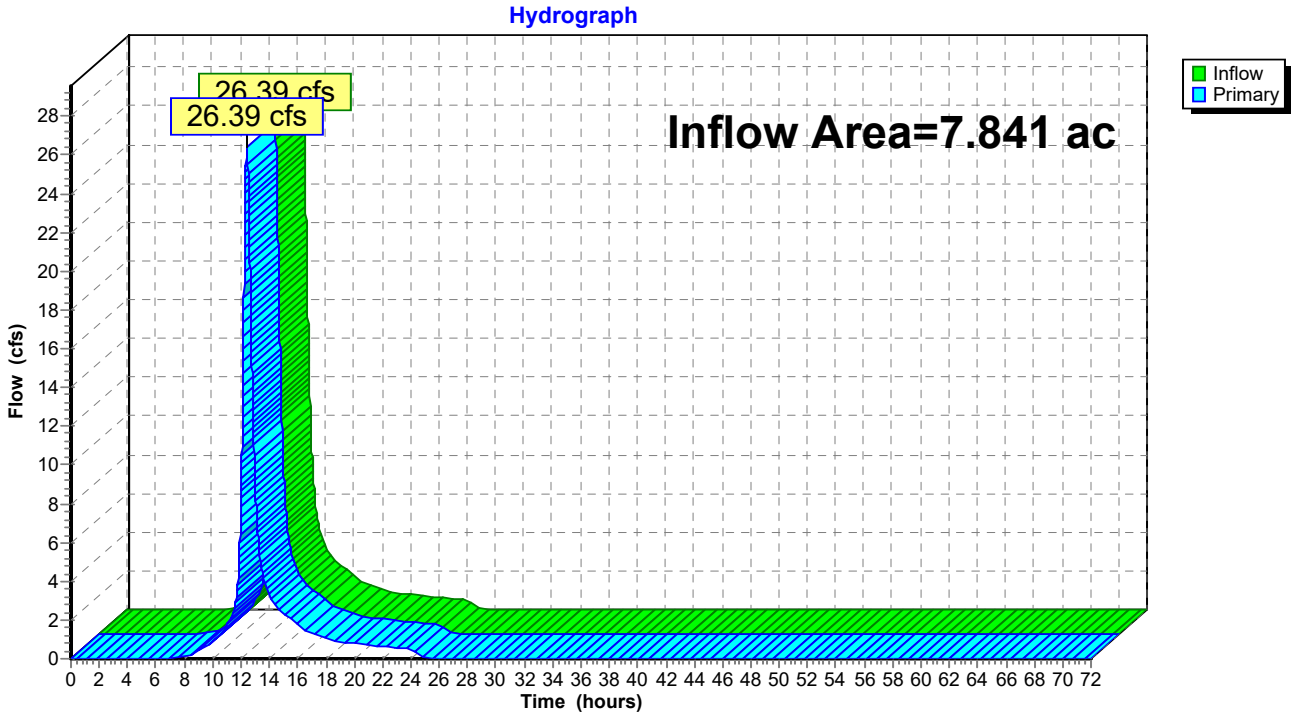


Summary for Link AP-3: AP-3

Inflow Area = 7.841 ac, 0.00% Impervious, Inflow Depth = 5.10" for 50 YR event
Inflow = 26.39 cfs @ 12.43 hrs, Volume= 3.330 af
Primary = 26.39 cfs @ 12.43 hrs, Volume= 3.330 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link AP-3: AP-3



Summary for Subcatchment EDA-1: EDA-1

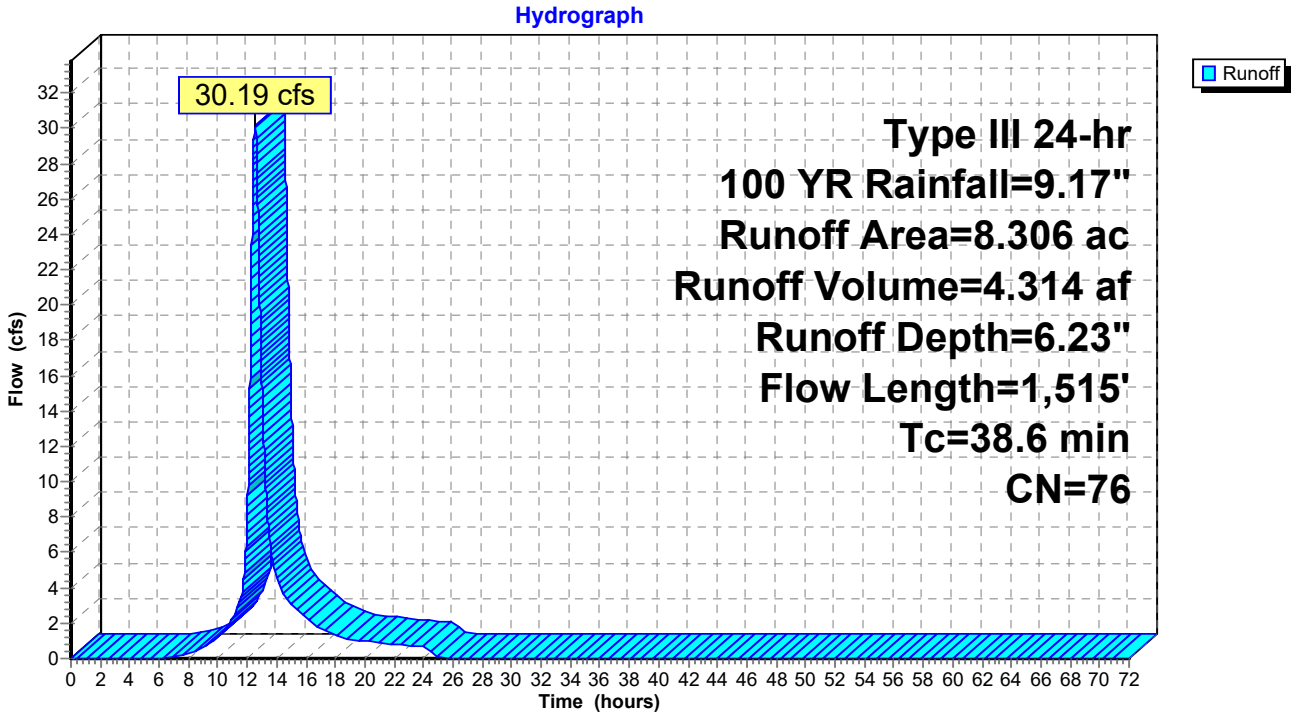
Runoff = 30.19 cfs @ 12.52 hrs, Volume= 4.314 af, Depth= 6.23"
Routed to Link AP-1 : AP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100 YR Rainfall=9.17"

Area (ac)	CN	Description
6.258	73	Woods, Fair, HSG C
1.738	85	Row crops, straight row, Good, HSG C
0.163	98	Paved roads w/curbs & sewers, HSG C
0.007	96	Gravel surface, HSG C
0.081	79	Woods, Fair, HSG D
0.015	96	Gravel surface, HSG D
0.044	98	Paved roads w/curbs & sewers, HSG D
8.306	76	Weighted Average
8.099		97.51% Pervious Area
0.207		2.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	100	0.0600	0.12		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
18.5	795	0.0817	0.71		**Shallow Concentrated Flow, B-C** Forest w/Heavy Litter Kv= 2.5 fps
5.7	359	0.1783	1.06		**Shallow Concentrated Flow, C-D** Forest w/Heavy Litter Kv= 2.5 fps
0.3	89	0.0674	5.27		**Shallow Concentrated Flow, D-E** Paved Kv= 20.3 fps
0.2	172	0.0644	17.83	31.50	**Pipe Channel, E-F** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.011 Concrete pipe, straight & clean
38.6	1,515	Total			

Subcatchment EDA-1: EDA-1



Summary for Subcatchment EDA-2: EDA-2

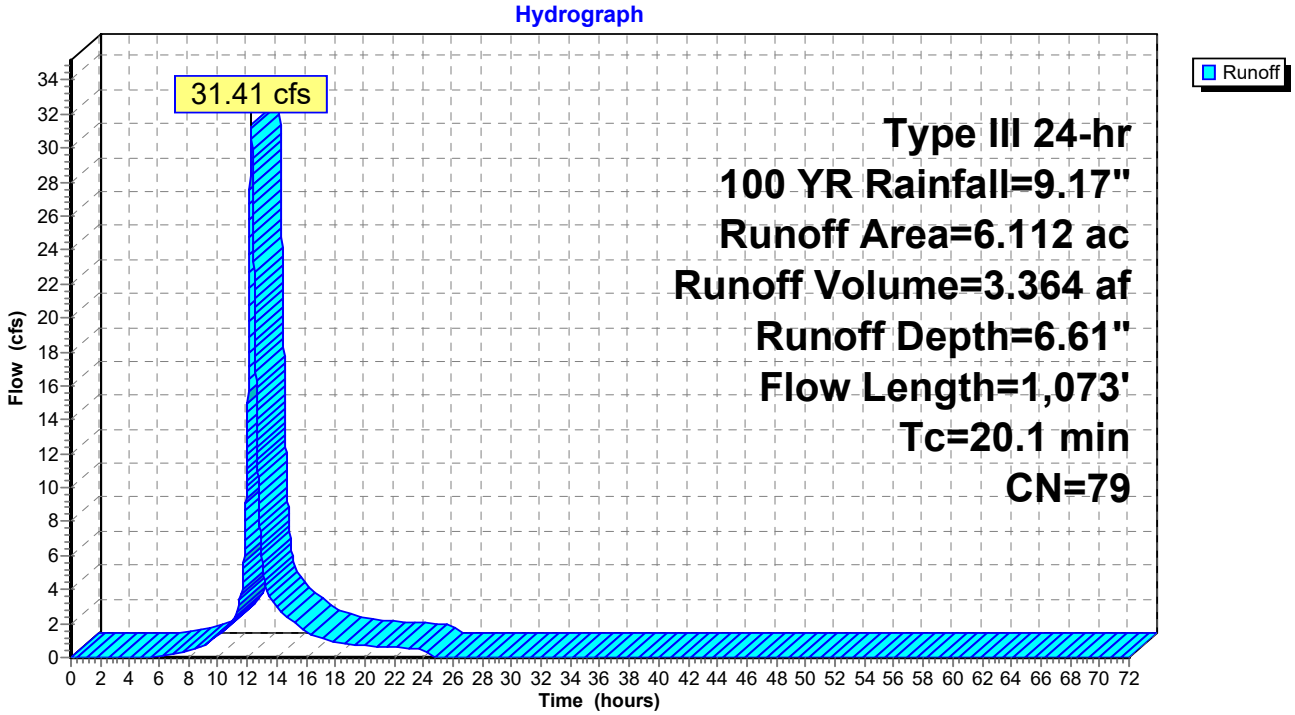
Runoff = 31.41 cfs @ 12.26 hrs, Volume= 3.364 af, Depth= 6.61"
Routed to Link AP-2 : AP-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100 YR Rainfall=9.17"

Area (ac)	CN	Description
2.925	73	Woods, Fair, HSG C
3.174	85	Row crops, straight row, Good, HSG C
0.013	96	Gravel surface, HSG C
6.112	79	Weighted Average
6.112		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0800	0.13		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
2.4	227	0.0969	1.56		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
3.0	519	0.1021	2.88		**Shallow Concentrated Flow, C-D** Cultivated Straight Rows Kv= 9.0 fps
2.3	227	0.1101	1.66		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
20.1	1,073	Total			

Subcatchment EDA-2: EDA-2



Summary for Subcatchment EDA-3: EDA-3

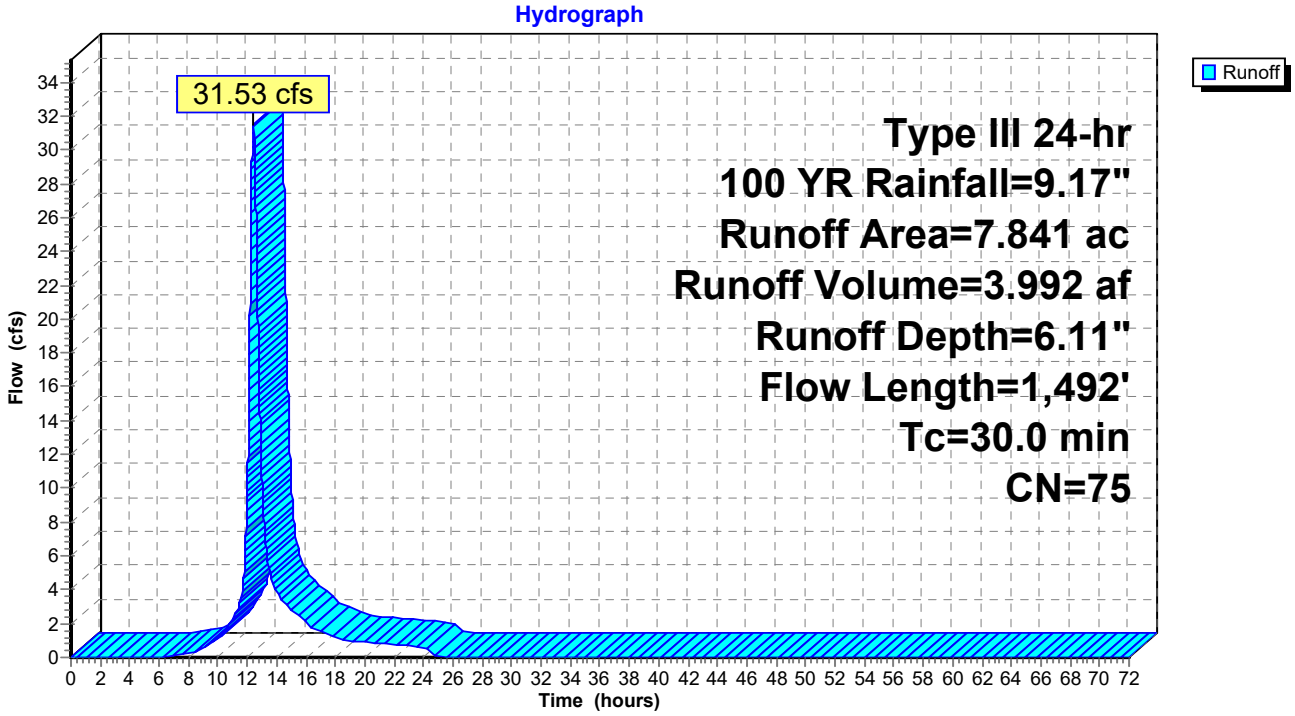
Runoff = 31.53 cfs @ 12.41 hrs, Volume= 3.992 af, Depth= 6.11"
Routed to Link AP-3 : AP-3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100 YR Rainfall=9.17"

Area (ac)	CN	Description
5.502	73	Woods, Fair, HSG C
0.779	85	Row crops, straight row, Good, HSG C
1.560	79	Woods, Fair, HSG D
7.841	75	Weighted Average
7.841		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0500	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
15.1	1,392	0.0942	1.53		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
30.0	1,492	Total			

Subcatchment EDA-3: EDA-3

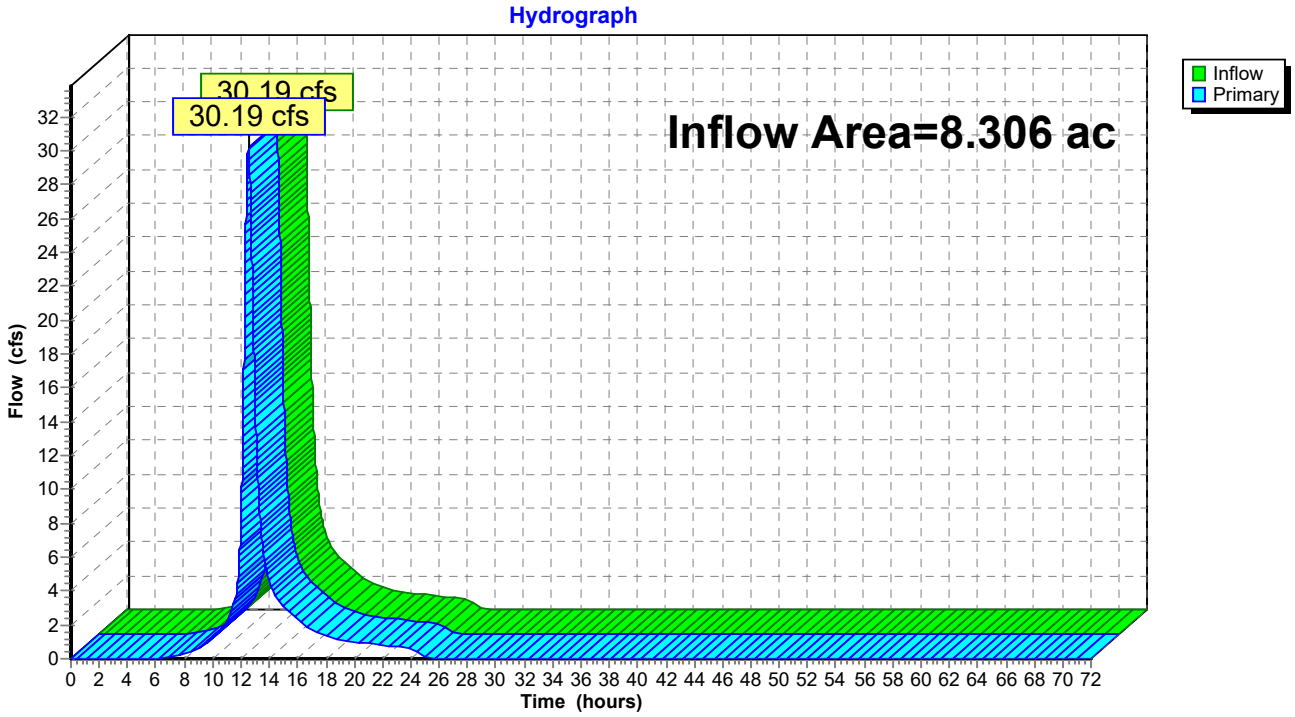


Summary for Link AP-1: AP-1

Inflow Area = 8.306 ac, 2.49% Impervious, Inflow Depth = 6.23" for 100 YR event
Inflow = 30.19 cfs @ 12.52 hrs, Volume= 4.314 af
Primary = 30.19 cfs @ 12.52 hrs, Volume= 4.314 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link AP-1: AP-1

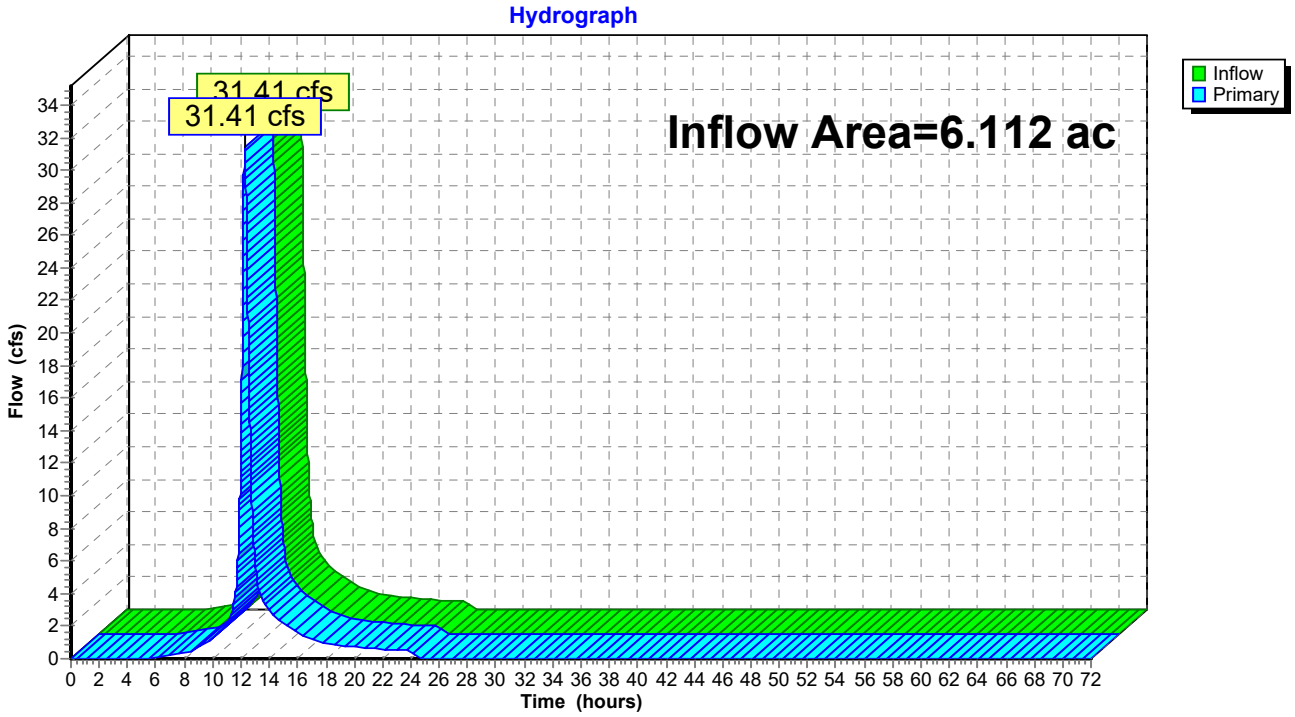


Summary for Link AP-2: AP-2

Inflow Area = 6.112 ac, 0.00% Impervious, Inflow Depth = 6.61" for 100 YR event
Inflow = 31.41 cfs @ 12.26 hrs, Volume= 3.364 af
Primary = 31.41 cfs @ 12.26 hrs, Volume= 3.364 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link AP-2: AP-2

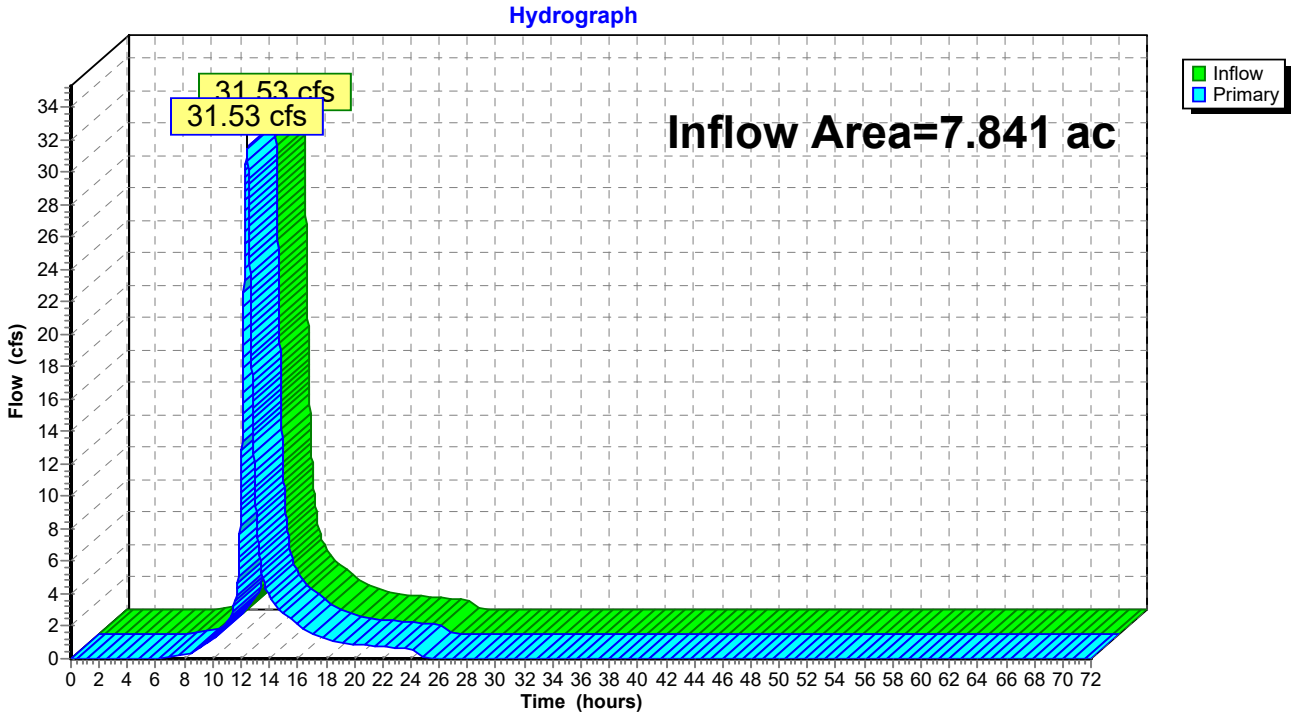


Summary for Link AP-3: AP-3

Inflow Area = 7.841 ac, 0.00% Impervious, Inflow Depth = 6.11" for 100 YR event
Inflow = 31.53 cfs @ 12.41 hrs, Volume= 3.992 af
Primary = 31.53 cfs @ 12.41 hrs, Volume= 3.992 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link AP-3: AP-3



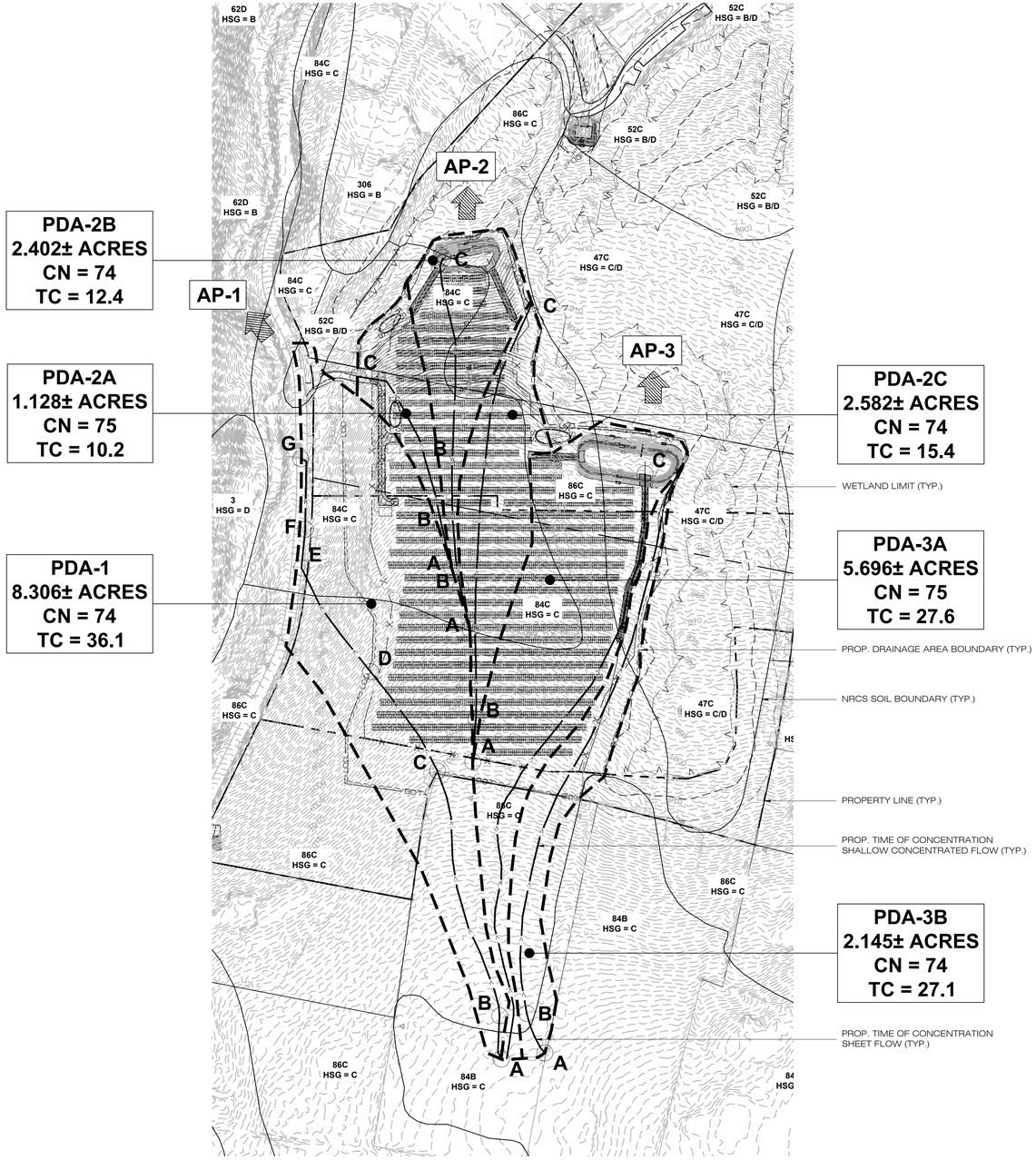
APPENDIX D: PROPOSED DRAINAGE AREA MAP (PDA-1) & HYDROLOGIC COMPUTATION (HYDROCAD)

PROPOSED DRAINAGE AREAS

	TOTAL AREA (ACRES)	COMPOSITE CN	TC (MINS.)
PDA-1	8.306	74	36.1
PDA-2A	1.128	75	10.2
PDA-2B	2.402	74	12.4
PDA-2C	2.582	74	15.4
PDA-3A	5.696	75	27.6
PDA-3B	2.145	74	27.1

PROPOSED CONDITION PEAK FLOWS

ANALYSIS POINT	2-YEAR (CFS)	25-YEAR (CFS)	50-YEAR (CFS)	100-YEAR (CFS)
AP-1	5.96	20.63	25.06	30.03
AP-2	3.93	20.14	24.01	28.24
AP-3	1.76	13.70	22.12	30.02



1 PDA-1 **PROPOSED DRAINAGE AREA MAP**
SCALE : 1" = 150'-0"

150 0 75 150 300
(IN FEET) 1 inch = 150 ft.

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC PERMIT SET

NO	DATE	REVISION
0		
1		
2		
3		
4		
5		
6		

DESIGN PROFESSIONAL OF RECORD

PROF: THOMAS E. LITTLE, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CLOVER RIDGE LLC
ADDRESS: 40 TOWER LANE STE 201 AVON, CT 06001

TORRINGTON SOLAR

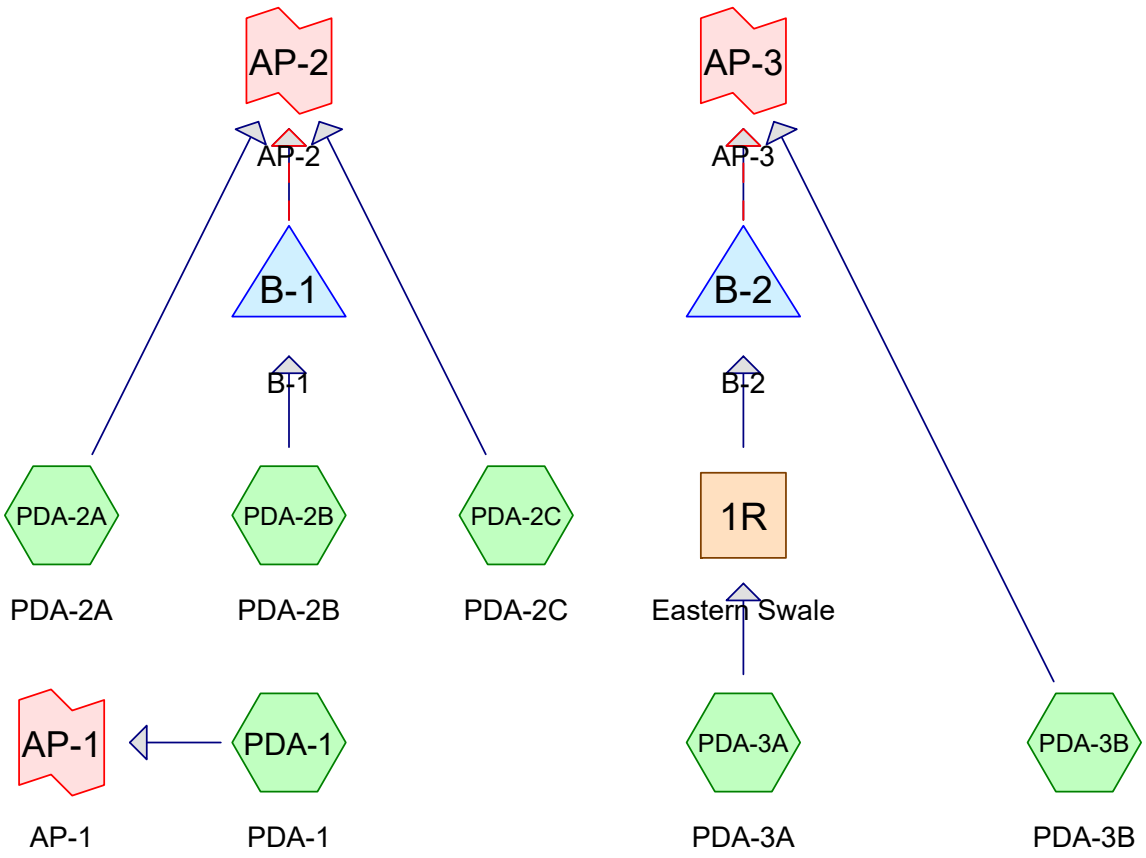
SITE ADDRESS: LOVERS LANE TORRINGTON, CT

APT FILING NUMBER: CT606190

DRAWN BY: CSH
DATE: 08/23
CHECKED BY: TEL

SHEET TITLE:
PROPOSED DRAINAGE AREA MAP

SHEET NUMBER:
PDA-1



Subcat Reach Pond Link

Routing Diagram for CT606190_Torrington - PR - Rev1
Prepared by All-Points Tech Corp, PC, Printed 3/18/2024

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2 YR	Type III 24-hr		Default	24.00	1	3.49	2
2	25 YR	Type III 24-hr		Default	24.00	1	7.06	2
3	50 YR	Type III 24-hr		Default	24.00	1	8.06	2
4	100 YR	Type III 24-hr		Default	24.00	1	9.17	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.102	96	Gravel surface, HSG C/D (PDA-1)
0.076	96	Gravel surface, HSG D (PDA-1, PDA-2A)
3.792	71	Meadow, non-grazed, HSG C (PDA-1, PDA-2A, PDA-2B, PDA-2C, PDA-3A, PDA-3B)
10.841	75	Meadow, non-grazed, HSG C/D (PDA-1, PDA-2A, PDA-2B, PDA-2C, PDA-3A, PDA-3B)
1.562	78	Meadow, non-grazed, HSG D (PDA-1, PDA-3A, PDA-3B)
0.190	98	Paved roads w/curbs & sewers, HSG C (PDA-1)
0.044	98	Paved roads w/curbs & sewers, HSG D (PDA-1)
5.574	73	Woods, Fair, HSG C (PDA-1, PDA-3A, PDA-3B)
0.078	79	Woods, Fair, HSG D (PDA-1)
22.259	**74**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
20.499	HSG C	PDA-1, PDA-2A, PDA-2B, PDA-2C, PDA-3A, PDA-3B
1.760	HSG D	PDA-1, PDA-2A, PDA-3A, PDA-3B
0.000	Other	
22.259		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.102	0.076	0.000	0.178	Gravel surface	PDA-1, PDA-2A
0.000	0.000	14.633	1.562	0.000	16.195	Meadow, non-grazed	PDA-1, PDA-2A, PDA-2B, PDA-2C, PDA-3A, PDA-3B
0.000	0.000	0.190	0.044	0.000	0.234	Paved roads w/curbs & sewers	PDA-1
0.000	0.000	5.574	0.078	0.000	5.652	Woods, Fair	PDA-1, PDA-3A, PDA-3B
0.000	**0.000**	**20.499**	**1.760**	**0.000**	**22.259**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	B-1	895.00	893.00	35.0	0.0571	0.013	0.0	24.0	0.0	
2	B-2	936.00	935.00	35.0	0.0286	0.013	0.0	24.0	0.0	

Summary for Subcatchment PDA-1: PDA-1

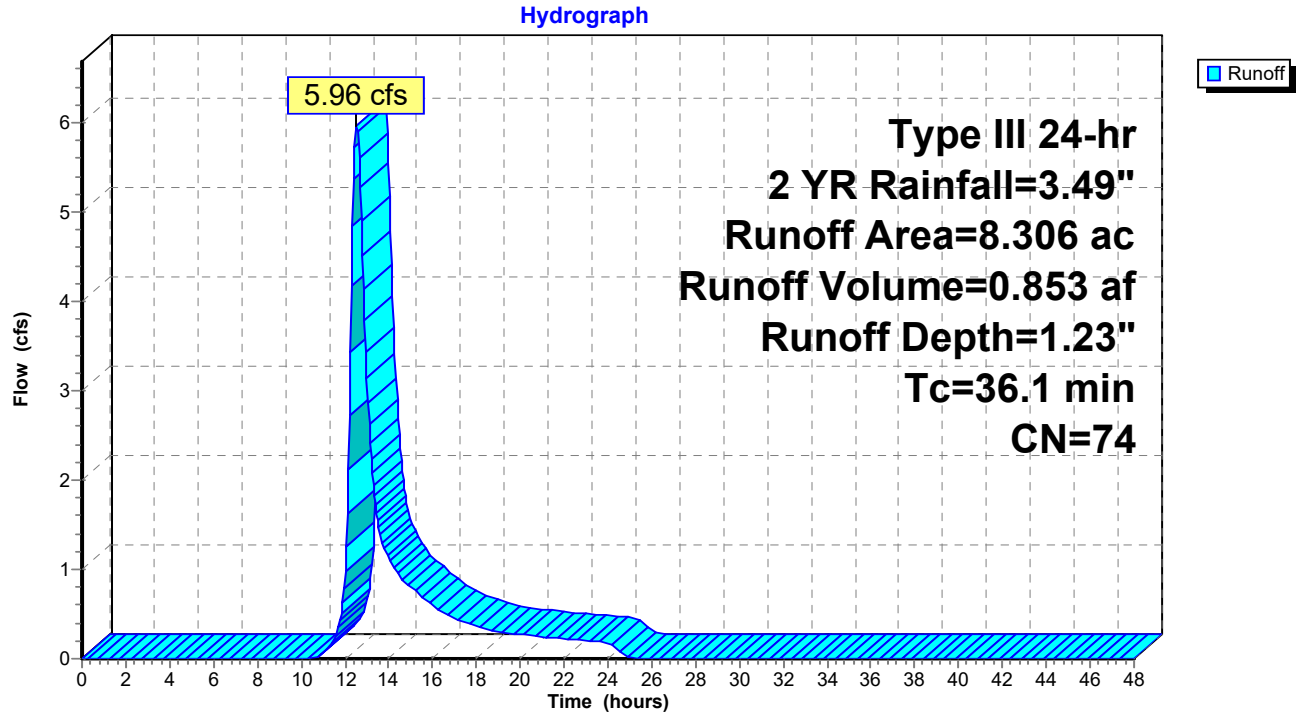
Runoff = 5.96 cfs @ 12.54 hrs, Volume= 0.853 af, Depth= 1.23"
Routed to Link AP-1 : AP-1

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=3.49"

	Area (ac)	CN	Description
	3.527	73	Woods, Fair, HSG C
	1.559	71	Meadow, non-grazed, HSG C
*	2.787	75	Meadow, non-grazed, HSG C/D
*	0.102	96	Gravel surface, HSG C/D
	0.190	98	Paved roads w/curbs & sewers, HSG C
	0.078	79	Woods, Fair, HSG D
	0.003	78	Meadow, non-grazed, HSG D
	0.016	96	Gravel surface, HSG D
	0.044	98	Paved roads w/curbs & sewers, HSG D
	8.306	74	Weighted Average
	8.072		97.18% Pervious Area
	0.234		2.82% Impervious Area

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

Subcatchment PDA-1: PDA-1



Summary for Subcatchment PDA-2A: PDA-2A

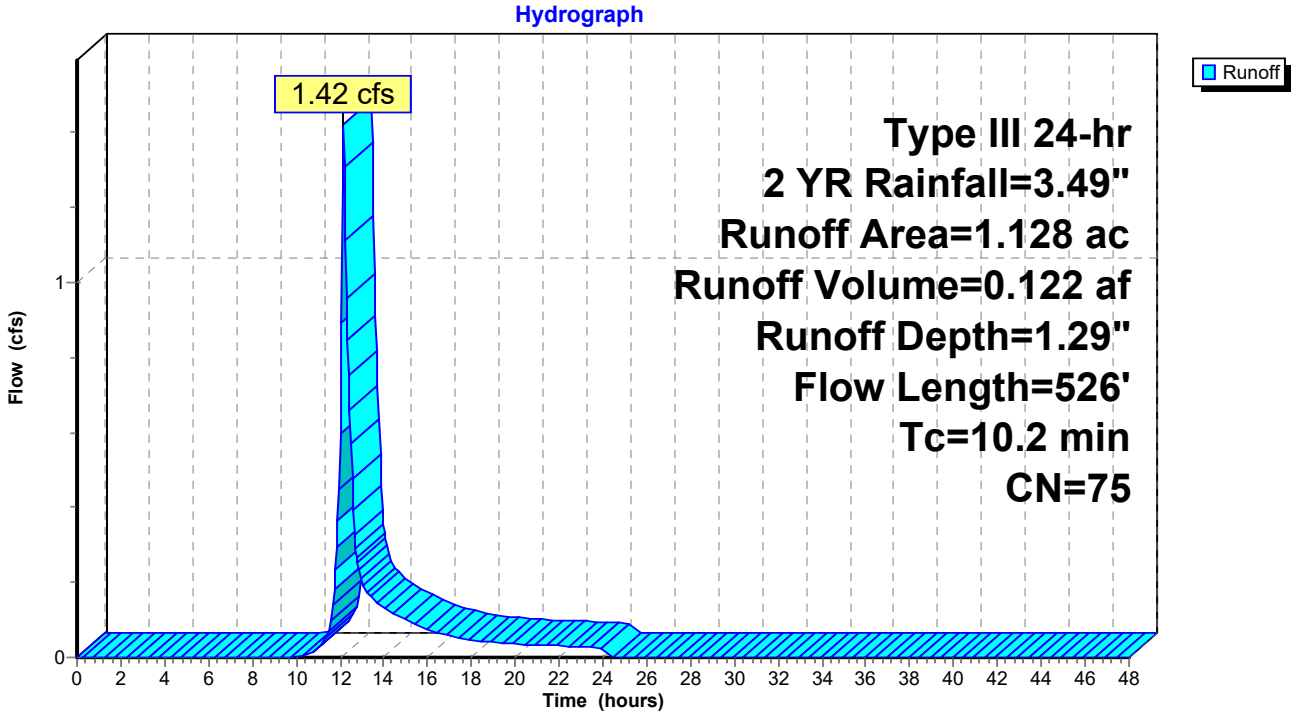
Runoff = 1.42 cfs @ 12.15 hrs, Volume= 0.122 af, Depth= 1.29"
Routed to Link AP-2 : AP-2

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=3.49"

	Area (ac)	CN	Description
	0.297	71	Meadow, non-grazed, HSG C
*	0.771	75	Meadow, non-grazed, HSG C/D
	0.060	96	Gravel surface, HSG D
	1.128	75	Weighted Average
	1.128		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.1100	0.23		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.18"
3.0	426	0.1153	2.38		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
10.2	526	Total			

Subcatchment PDA-2A: PDA-2A



Summary for Subcatchment PDA-2B: PDA-2B

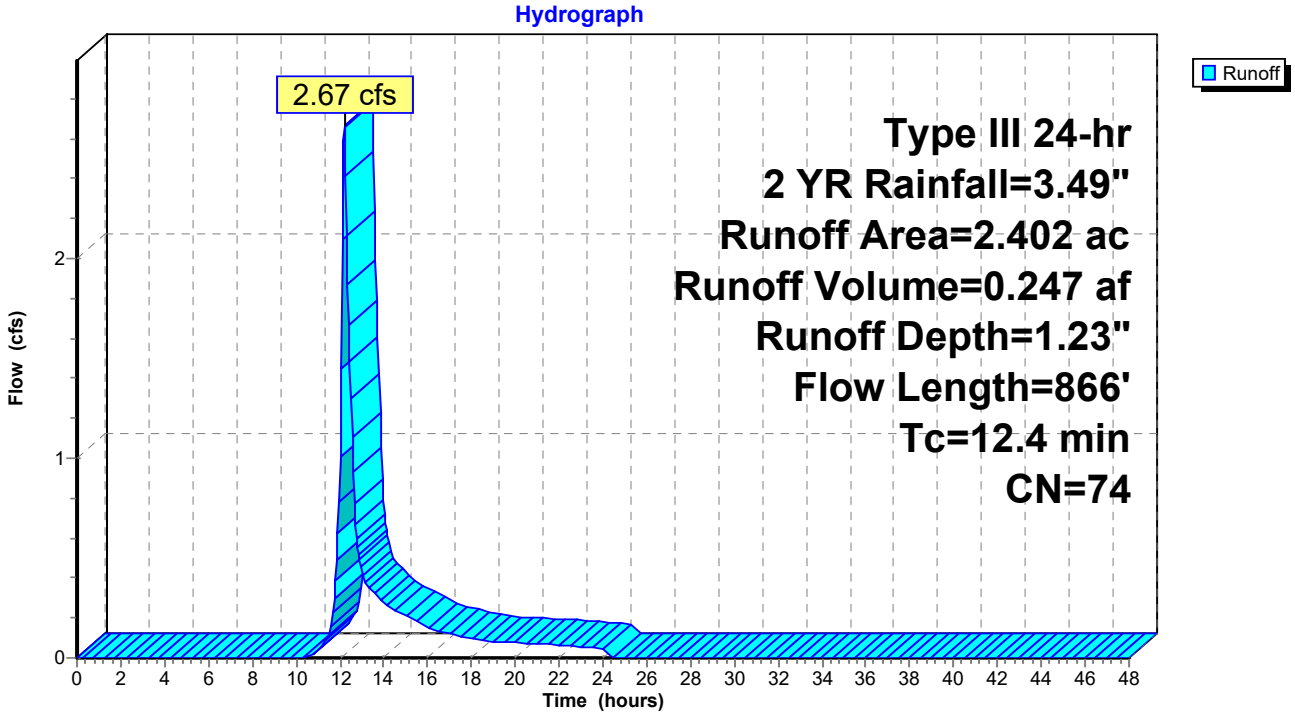
Runoff = 2.67 cfs @ 12.19 hrs, Volume= 0.247 af, Depth= 1.23"
Routed to Pond B-1 : B-1

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=3.49"

	Area (ac)	CN	Description
	0.706	71	Meadow, non-grazed, HSG C
*	1.696	75	Meadow, non-grazed, HSG C/D
	2.402	74	Weighted Average
	2.402		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.1200	0.24		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.18"
5.4	766	0.1162	2.39		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
12.4	866	Total			

Subcatchment PDA-2B: PDA-2B



Summary for Subcatchment PDA-2C: PDA-2C

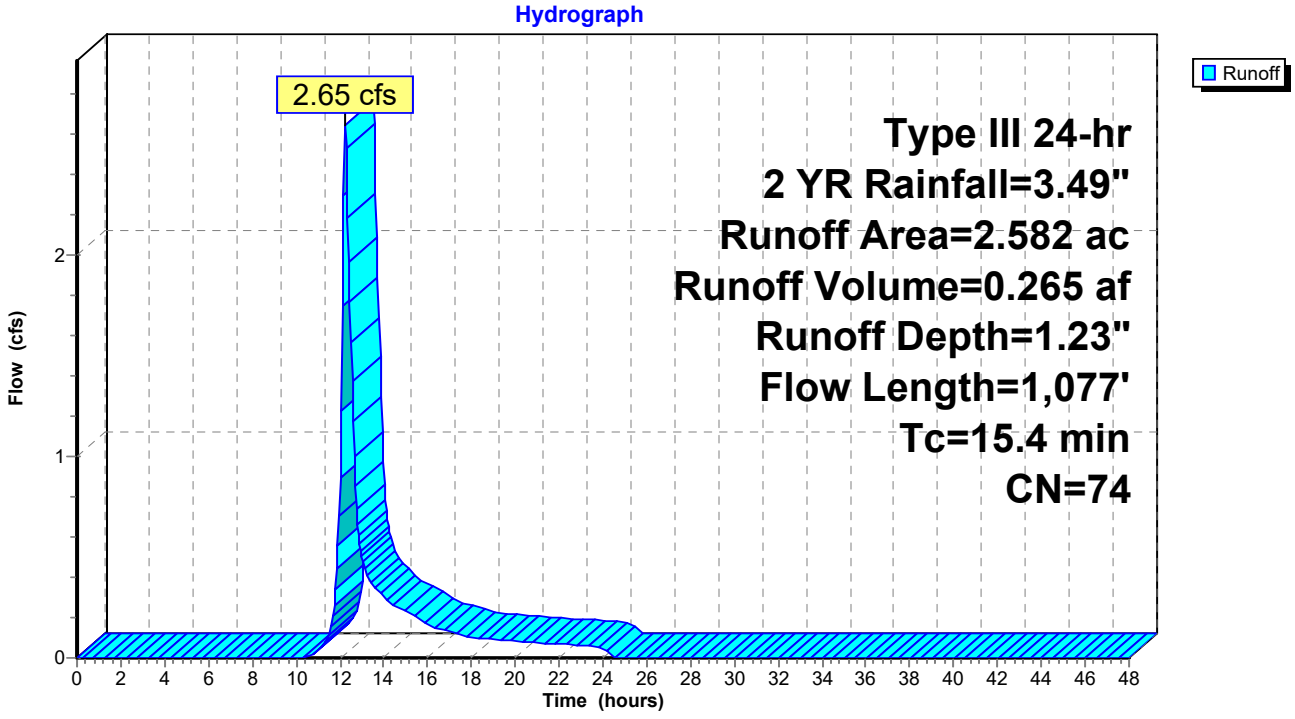
Runoff = 2.65 cfs @ 12.23 hrs, Volume= 0.265 af, Depth= 1.23"
Routed to Link AP-2 : AP-2

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=3.49"

	Area (ac)	CN	Description
	0.444	71	Meadow, non-grazed, HSG C
*	2.138	75	Meadow, non-grazed, HSG C/D
	2.582	74	Weighted Average
	2.582		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0800	0.20		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.18"
7.2	977	0.1034	2.25		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
15.4	1,077	Total			

Subcatchment PDA-2C: PDA-2C



Summary for Subcatchment PDA-3A: PDA-3A

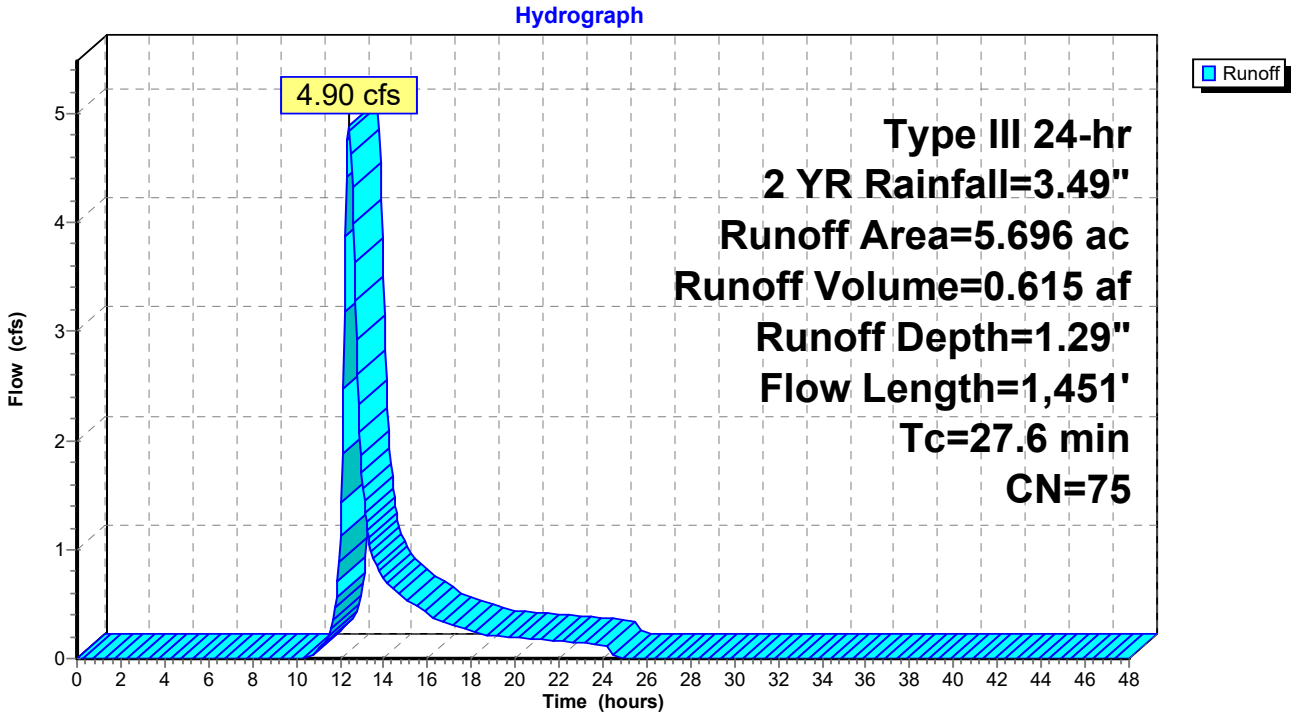
Runoff = 4.90 cfs @ 12.41 hrs, Volume= 0.615 af, Depth= 1.29"
Routed to Reach 1R : Eastern Swale

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=3.49"

	Area (ac)	CN	Description
	0.877	73	Woods, Fair, HSG C
	0.399	71	Meadow, non-grazed, HSG C
*	3.237	75	Meadow, non-grazed, HSG C/D
	1.183	78	Meadow, non-grazed, HSG D
	5.696	75	Weighted Average
	5.696		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.3	100	0.0400	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
6.8	543	0.0718	1.34		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
3.3	456	0.1096	2.32		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
1.2	352	0.1080	4.93		**Shallow Concentrated Flow, D-E** Grassed Waterway Kv= 15.0 fps
27.6	1,451	Total			

Subcatchment PDA-3A: PDA-3A



Summary for Subcatchment PDA-3B: PDA-3B

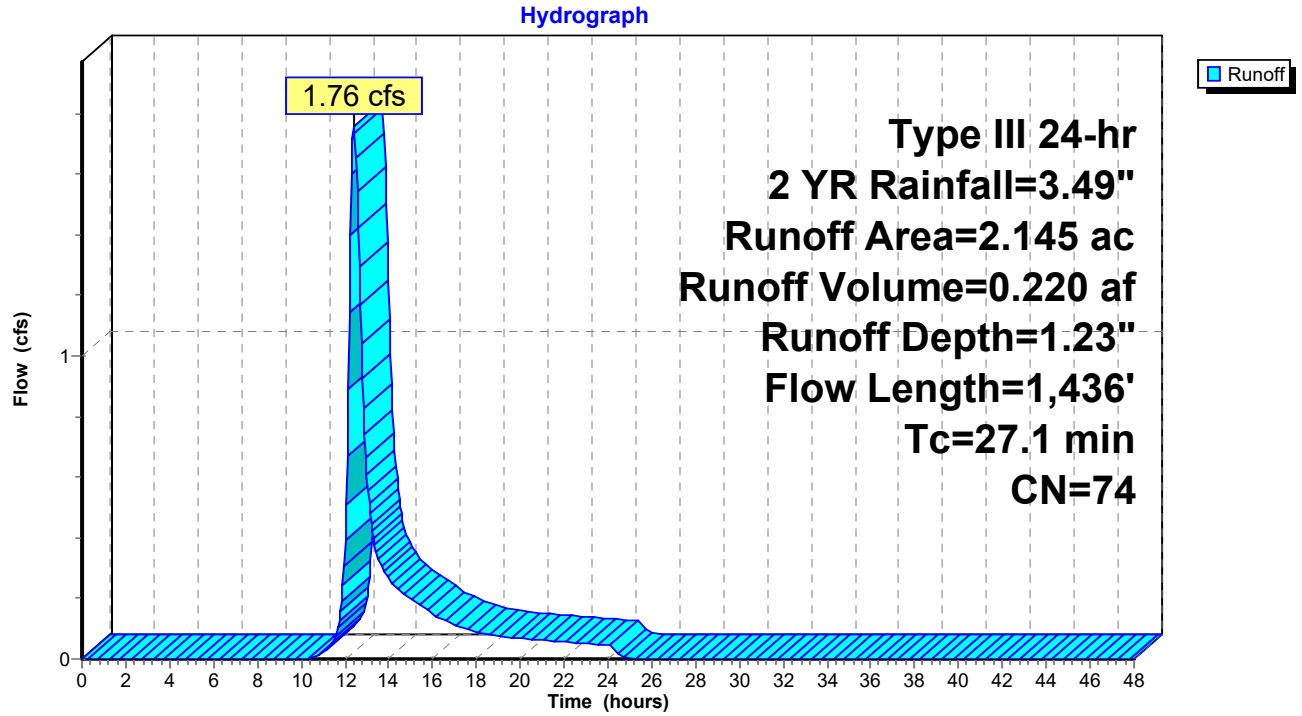
Runoff = 1.76 cfs @ 12.41 hrs, Volume= 0.220 af, Depth= 1.23"
Routed to Link AP-3 : AP-3

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=3.49"

	Area (ac)	CN	Description
	1.170	73	Woods, Fair, HSG C
	0.387	71	Meadow, non-grazed, HSG C
*	0.212	75	Meadow, non-grazed, HSG C/D
	0.376	78	Meadow, non-grazed, HSG D
	2.145	74	Weighted Average
	2.145		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0500	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
6.1	518	0.0814	1.43		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
6.1	818	0.1027	2.24		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
27.1	1,436	Total			

Subcatchment PDA-3B: PDA-3B



Summary for Reach 1R: Eastern Swale

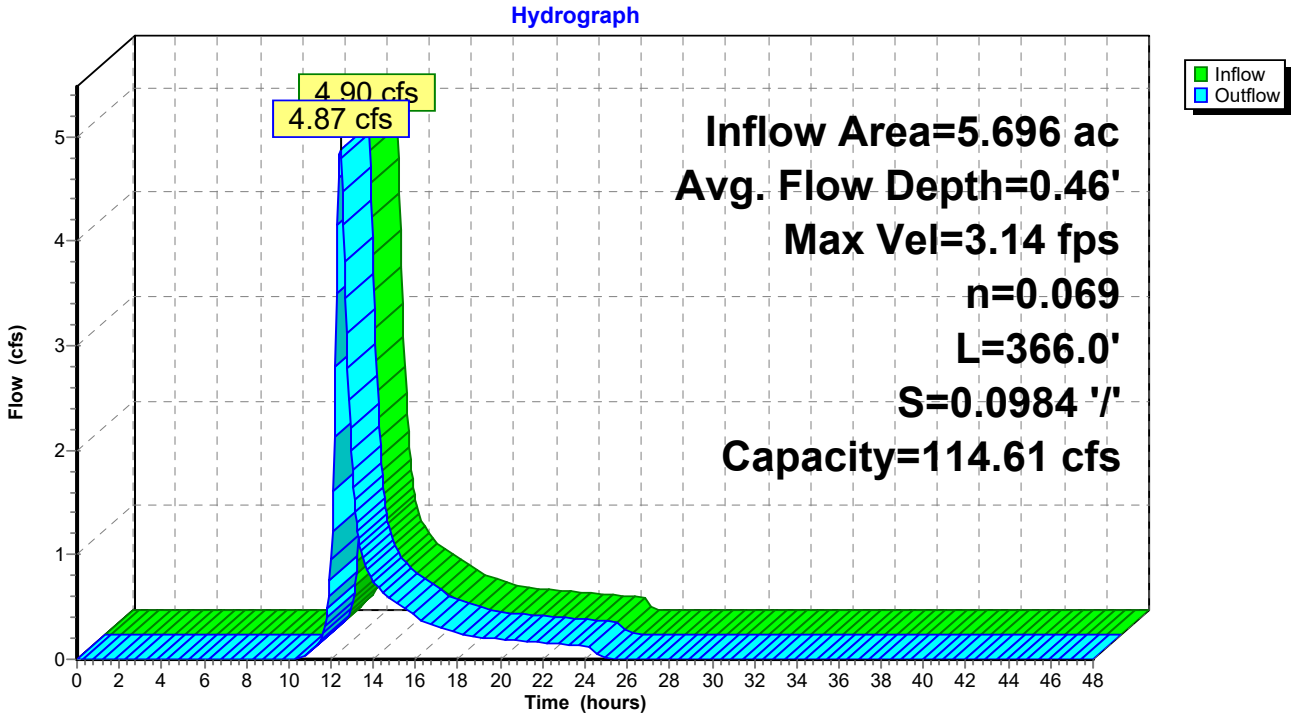
Inflow Area = 5.696 ac, 0.00% Impervious, Inflow Depth = 1.29" for 2 YR event
Inflow = 4.90 cfs @ 12.41 hrs, Volume= 0.615 af
Outflow = 4.87 cfs @ 12.43 hrs, Volume= 0.615 af, Atten= 0%, Lag= 1.5 min
Routed to Pond B-2 : B-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.14 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 1.26 fps, Avg. Travel Time= 4.8 min

Peak Storage= 569 cf @ 12.43 hrs
Average Depth at Peak Storage= 0.46' , Surface Width= 4.76'
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 114.61 cfs

2.00' x 2.00' deep channel, n= 0.069 Riprap, 6-inch
Side Slope Z-value= 3.0 '/' Top Width= 14.00'
Length= 366.0' Slope= 0.0984 '/'
Inlet Invert= 980.00', Outlet Invert= 944.00'

Reach 1R: Eastern Swale



Stage-Area-Storage for Reach 1R: Eastern Swale

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
980.00	0.0	0
980.02	0.0	15
980.04	0.1	31
980.06	0.1	48
980.08	0.2	66
980.10	0.2	84
980.12	0.3	104
980.14	0.3	124
980.16	0.4	145
980.18	0.5	167
980.20	0.5	190
980.22	0.6	214
980.24	0.7	239
980.26	0.7	265
980.28	0.8	291
980.30	0.9	318
980.32	0.9	347
980.34	1.0	376
980.36	1.1	406
980.38	1.2	437
980.40	1.3	468
980.42	1.4	501
980.44	1.5	535
980.46	1.6	569
980.48	1.7	604
980.50	1.8	641
980.52	1.9	678
980.54	2.0	715
980.56	2.1	754
980.58	2.2	794
980.60	2.3	834
980.62	2.4	876
980.64	2.5	918
980.66	2.6	961
980.68	2.7	1,005
980.70	2.9	1,050
980.72	3.0	1,096
980.74	3.1	1,143
980.76	3.3	1,191
980.78	3.4	1,239
980.80	3.5	1,288
980.82	3.7	1,339
980.84	3.8	1,390
980.86	3.9	1,442
980.88	4.1	1,494
980.90	4.2	1,548
980.92	4.4	1,603
980.94	4.5	1,658
980.96	4.7	1,715
980.98	4.8	1,772
981.00	5.0	1,830
981.02	5.2	1,889
981.04	5.3	1,949
981.06	5.5	2,010
981.08	5.7	2,071
981.10	5.8	2,134
981.12	6.0	2,197
981.14	6.2	2,261
981.16	6.4	2,327
981.18	6.5	2,393
981.20	6.7	2,460
981.22	6.9	2,527
981.24	7.1	2,596
981.26	7.3	2,666
981.28	7.5	2,736
981.30	7.7	2,807
981.32	7.9	2,879
981.34	8.1	2,952
981.36	8.3	3,026
981.38	8.5	3,101
981.40	8.7	3,177
981.42	8.9	3,253
981.44	9.1	3,331
981.46	9.3	3,409
981.48	9.5	3,488
981.50	9.8	3,569
981.52	10.0	3,649
981.54	10.2	3,731
981.56	10.4	3,814
981.58	10.6	3,898
981.60	10.9	3,982
981.62	11.1	4,067
981.64	11.3	4,154
981.66	11.6	4,241
981.68	11.8	4,329
981.70	12.1	4,418
981.72	12.3	4,507
981.74	12.6	4,598
981.76	12.8	4,689
981.78	13.1	4,782
981.80	13.3	4,875
981.82	13.6	4,969
981.84	13.8	5,064
981.86	14.1	5,160
981.88	14.4	5,257
981.90	14.6	5,355
981.92	14.9	5,453
981.94	15.2	5,553
981.96	15.4	5,653
981.98	15.7	5,754
982.00	**16.0**	**5,856**

Summary for Pond B-1: B-1

Inflow Area = 2.402 ac, 0.00% Impervious, Inflow Depth = 1.23" for 2 YR event
Inflow = 2.67 cfs @ 12.19 hrs, Volume= 0.247 af
Outflow = 0.19 cfs @ 15.38 hrs, Volume= 0.174 af, Atten= 93%, Lag= 191.8 min
Primary = 0.19 cfs @ 15.38 hrs, Volume= 0.174 af
Routed to Link AP-2 : AP-2
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link AP-2 : AP-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 896.77' @ 15.38 hrs Surf.Area= 4,238 sf Storage= 6,101 cf

Plug-Flow detention time= 385.3 min calculated for 0.174 af (70% of inflow)
Center-of-Mass det. time= 284.6 min (1,147.3 - 862.7)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	17,970 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

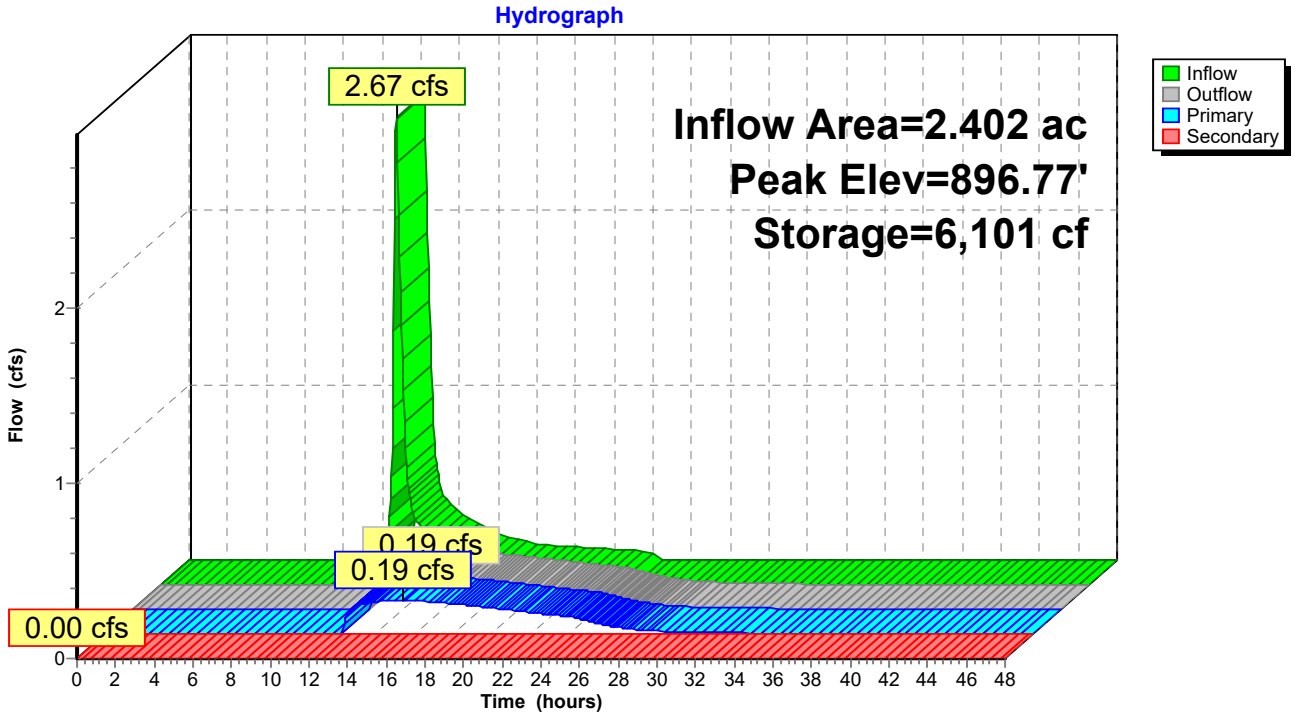
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
895.00	2,698	274.0	0	0	2,698
896.00	3,550	293.0	3,114	3,114	3,601
897.00	4,458	312.0	3,995	7,110	4,564
898.00	5,424	331.0	4,933	12,043	5,588
899.00	6,445	349.0	5,927	17,970	6,620

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**24.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 895.00' / 893.00' S= 0.0571 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Primary	896.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	897.00'	**18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	898.00'	**20.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.19 cfs @ 15.38 hrs HW=896.77' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.00 cfs of 10.50 cfs potential flow)
  - **3=Orifice/Grate** (Controls 0.00 cfs)
- **2=Orifice/Grate** (Orifice Controls 0.19 cfs @ 3.86 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=895.00' TW=0.00' (Dynamic Tailwater)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond B-1: B-1


Hydrograph
2.67 cfs
Inflow Area=2.402 ac
Peak Elev=896.77'
Storage=6,101 cf
0.19 cfs
0.19 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0
1
2
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48

Stage-Area-Storage for Pond B-1: B-1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
895.00	2,698	0
895.05	2,738	136
895.10	2,778	274
895.15	2,818	414
895.20	2,859	556
895.25	2,900	700
895.30	2,941	846
895.35	2,983	994
895.40	3,025	1,144
895.45	3,067	1,296
895.50	3,109	1,451
895.55	3,152	1,607
895.60	3,195	1,766
895.65	3,239	1,927
895.70	3,282	2,090
895.75	3,326	2,255
895.80	3,370	2,422
895.85	3,415	2,592
895.90	3,460	2,764
895.95	3,505	2,938
896.00	3,550	3,114
896.05	3,593	3,293
896.10	3,636	3,474
896.15	3,680	3,656
896.20	3,723	3,842
896.25	3,767	4,029
896.30	3,812	4,218
896.35	3,856	4,410
896.40	3,901	4,604
896.45	3,946	4,800
896.50	3,991	4,998
896.55	4,037	5,199
896.60	4,082	5,402
896.65	4,128	5,607
896.70	4,175	5,815
896.75	4,221	6,025
896.80	4,268	6,237
896.85	4,315	6,452
896.90	4,363	6,669
896.95	4,410	6,888
897.00	4,458	7,110
897.05	4,504	7,334
897.10	4,550	7,560
897.15	4,597	7,789
897.20	4,644	8,020
897.25	4,691	8,253
897.30	4,738	8,489
897.35	4,785	8,727
897.40	4,833	8,967
897.45	4,881	9,210
897.50	4,929	9,455
897.55	4,978	9,703
897.60	5,026	9,953
897.65	5,075	10,206
897.70	5,124	10,461
897.75	5,174	10,718
897.80	5,223	10,978
897.85	5,273	11,241
897.90	5,323	11,505
897.95	5,373	11,773
898.00	5,424	12,043
898.05	5,473	12,315
898.10	5,522	12,590
898.15	5,572	12,867
898.20	5,621	13,147
898.25	5,671	13,430
898.30	5,721	13,714
898.35	5,771	14,002
898.40	5,822	14,291
898.45	5,873	14,584
898.50	5,924	14,879
898.55	5,975	15,176
898.60	6,026	15,476
898.65	6,078	15,779
898.70	6,129	16,084
898.75	6,182	16,392
898.80	6,234	16,702
898.85	6,286	17,015
898.90	6,339	17,331
898.95	6,392	17,649
899.00	**6,445**	**17,970**

Summary for Pond B-2: B-2

Inflow Area = 5.696 ac, 0.00% Impervious, Inflow Depth = 1.29" for 2 YR event
Inflow = 4.87 cfs @ 12.43 hrs, Volume= 0.615 af
Outflow = 0.21 cfs @ 18.74 hrs, Volume= 0.382 af, Atten= 96%, Lag= 378.7 min
Primary = 0.21 cfs @ 18.74 hrs, Volume= 0.382 af
Routed to Link AP-3 : AP-3
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link AP-3 : AP-3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 937.95' @ 18.74 hrs Surf.Area= 11,311 sf Storage= 19,288 cf

Plug-Flow detention time= 766.1 min calculated for 0.382 af (62% of inflow)
Center-of-Mass det. time= 650.4 min (1,527.5 - 877.1)

Volume	Invert	Avail.Storage	Storage Description
#1	936.00'	45,694 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

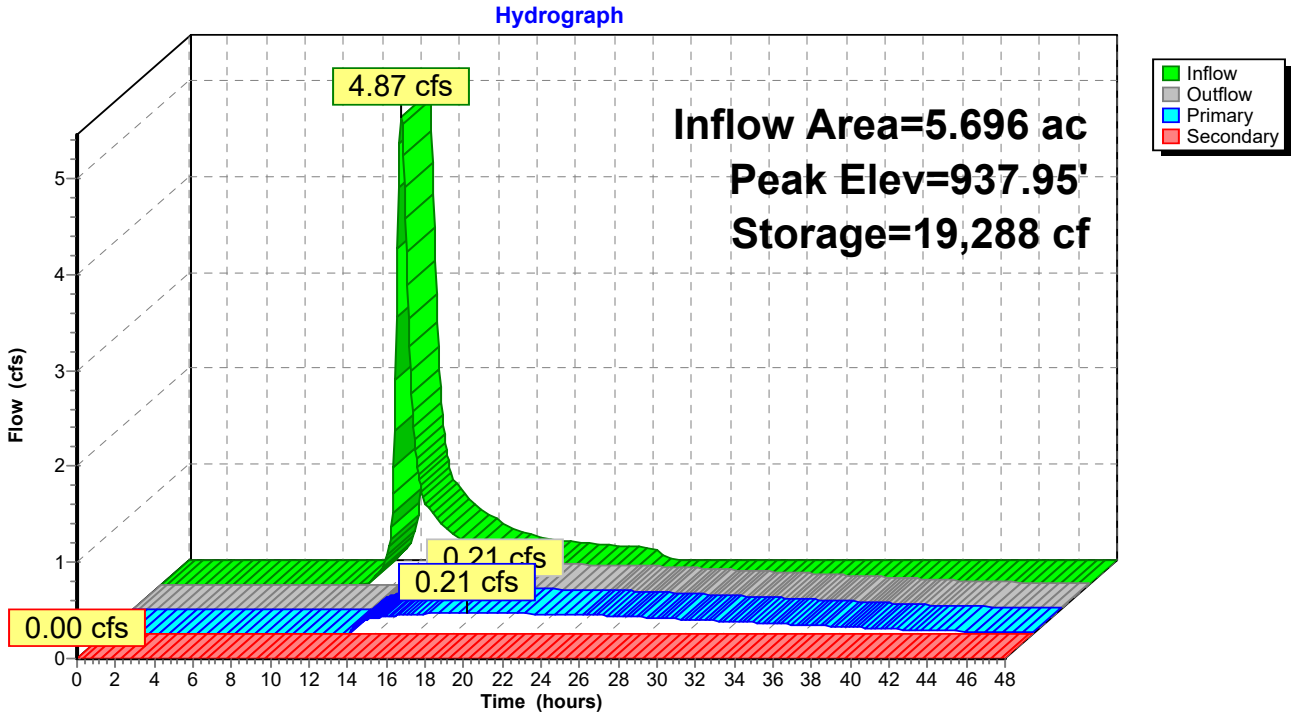
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
936.00	8,529	458.0	0	0	8,529
937.00	9,931	477.0	9,221	9,221	10,018
938.00	11,389	495.0	10,652	19,873	11,493
939.00	12,904	514.0	12,139	32,011	13,099
940.00	14,476	533.0	13,682	45,694	14,767

Device	Routing	Invert	Outlet Devices
#1	Primary	936.00'	**24.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 936.00' / 935.00' S= 0.0286 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Primary	937.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	938.00'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	939.00'	**30.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.21 cfs @ 18.74 hrs HW=937.95' TW=0.00' (Dynamic Tailwater)
1=Culvert (Passes 0.00 cfs of 11.71 cfs potential flow)
3=Orifice/Grate (Controls 0.00 cfs)
2=Orifice/Grate (Orifice Controls 0.21 cfs @ 4.37 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=936.00' TW=0.00' (Dynamic Tailwater)
4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond B-2: B-2


Hydrograph
4.87 cfs
Inflow Area=5.696 ac
Peak Elev=937.95'
Storage=19,288 cf
0.21 cfs
0.21 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0 1 2 3 4 5
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48

Stage-Area-Storage for Pond B-2: B-2

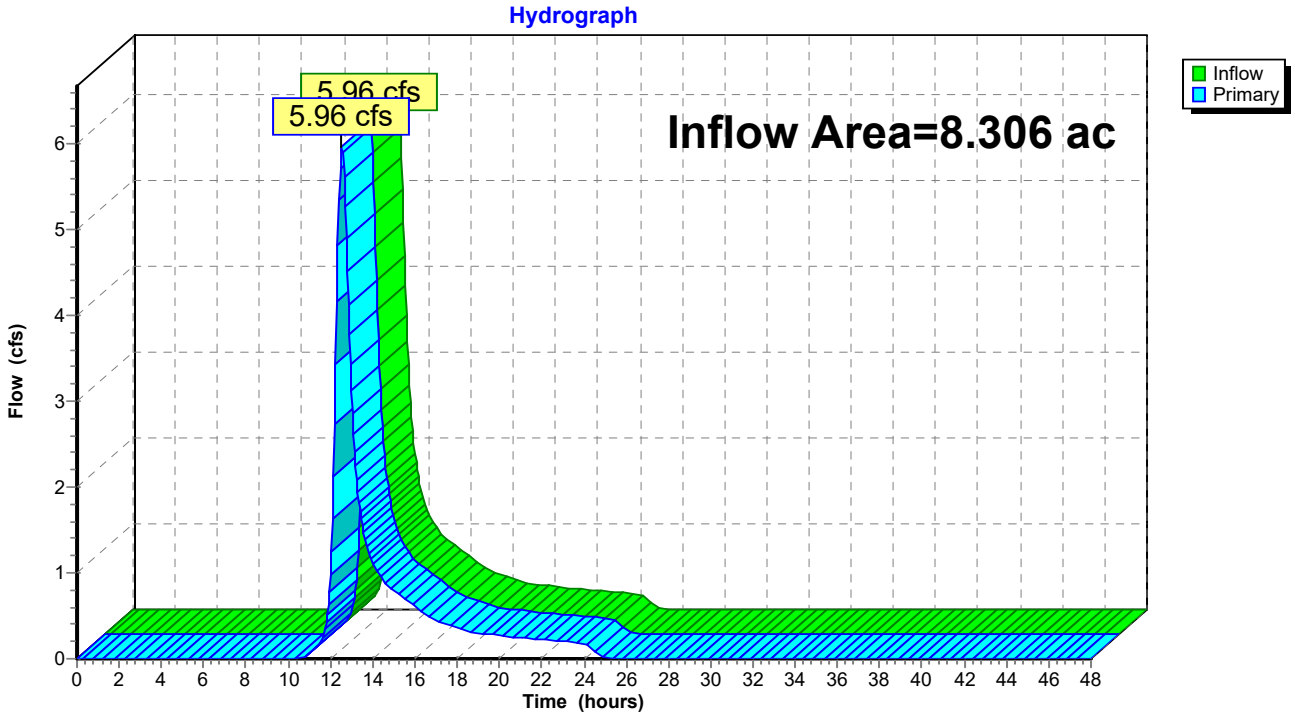
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
936.00	8,529	0
936.05	8,597	428
936.10	8,664	860
936.15	8,733	1,295
936.20	8,801	1,733
936.25	8,870	2,175
936.30	8,938	2,620
936.35	9,008	3,069
936.40	9,077	3,521
936.45	9,147	3,976
936.50	9,217	4,435
936.55	9,287	4,898
936.60	9,357	5,364
936.65	9,428	5,834
936.70	9,499	6,307
936.75	9,571	6,784
936.80	9,642	7,264
936.85	9,714	7,748
936.90	9,786	8,235
936.95	9,858	8,726
937.00	9,931	9,221
937.05	10,002	9,719
937.10	10,072	10,221
937.15	10,143	10,727
937.20	10,215	11,236
937.25	10,286	11,748
937.30	10,358	12,264
937.35	10,430	12,784
937.40	10,502	13,307
937.45	10,575	13,834
937.50	10,648	14,365
937.55	10,721	14,899
937.60	10,794	15,437
937.65	10,867	15,978
937.70	10,941	16,524
937.75	11,015	17,072
937.80	11,089	17,625
937.85	11,164	18,181
937.90	11,239	18,741
937.95	11,314	19,305
938.00	11,389	19,873
938.05	11,463	20,444
938.10	11,536	21,019
938.15	11,610	21,598
938.20	11,684	22,180
938.25	11,759	22,766
938.30	11,834	23,356
938.35	11,908	23,950
938.40	11,984	24,547
938.45	12,059	25,148
938.50	12,135	25,753
938.55	12,211	26,361
938.60	12,287	26,974
938.65	12,363	27,590
938.70	12,440	28,210
938.75	12,516	28,834
938.80	12,593	29,462
938.85	12,671	30,093
938.90	12,748	30,729
938.95	12,826	31,368
939.00	12,904	32,011
939.05	12,980	32,659
939.10	13,057	33,309
939.15	13,134	33,964
939.20	13,211	34,623
939.25	13,289	35,285
939.30	13,366	35,952
939.35	13,444	36,622
939.40	13,522	37,296
939.45	13,600	37,974
939.50	13,679	38,656
939.55	13,757	39,342
939.60	13,836	40,032
939.65	13,916	40,726
939.70	13,995	41,423
939.75	14,075	42,125
939.80	14,154	42,831
939.85	14,234	43,541
939.90	14,315	44,254
939.95	14,395	44,972
940.00	**14,476**	**45,694**

Summary for Link AP-1: AP-1

Inflow Area = 8.306 ac, 2.82% Impervious, Inflow Depth = 1.23" for 2 YR event
Inflow = 5.96 cfs @ 12.54 hrs, Volume= 0.853 af
Primary = 5.96 cfs @ 12.54 hrs, Volume= 0.853 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

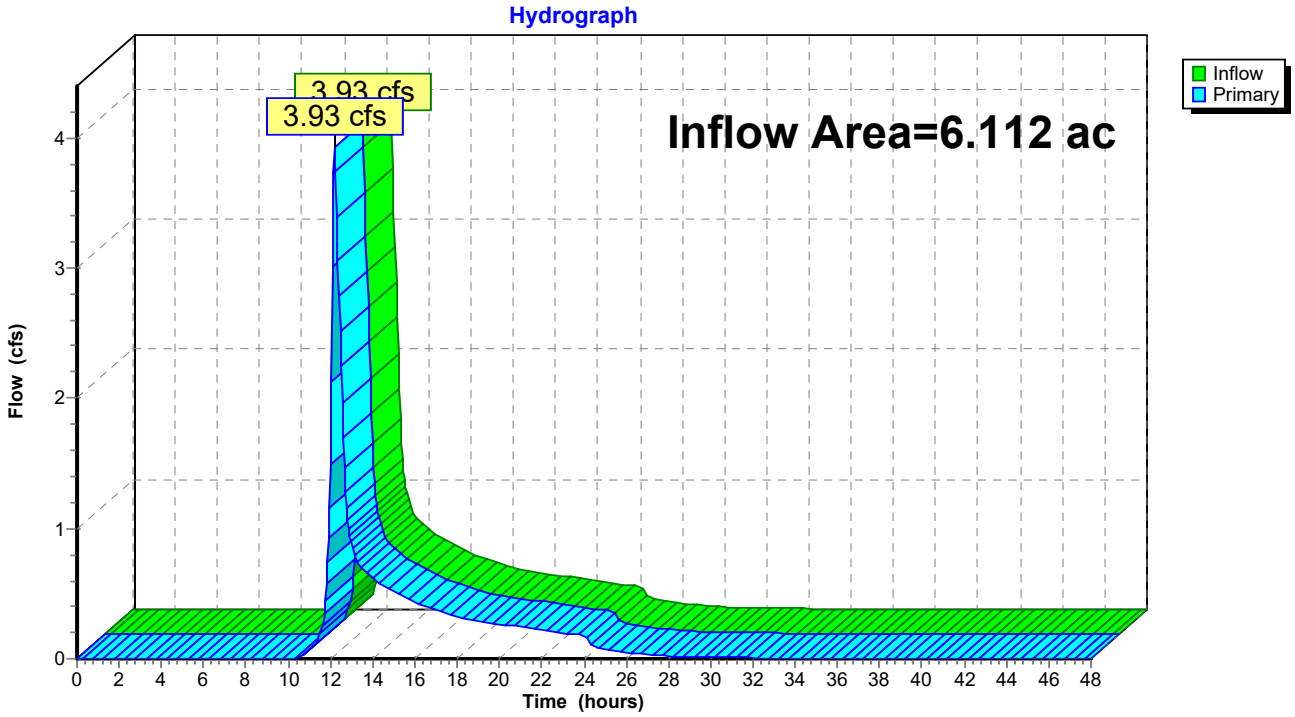


Summary for Link AP-2: AP-2

Inflow Area = 6.112 ac, 0.00% Impervious, Inflow Depth > 1.10" for 2 YR event
Inflow = 3.93 cfs @ 12.20 hrs, Volume= 0.561 af
Primary = 3.93 cfs @ 12.20 hrs, Volume= 0.561 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

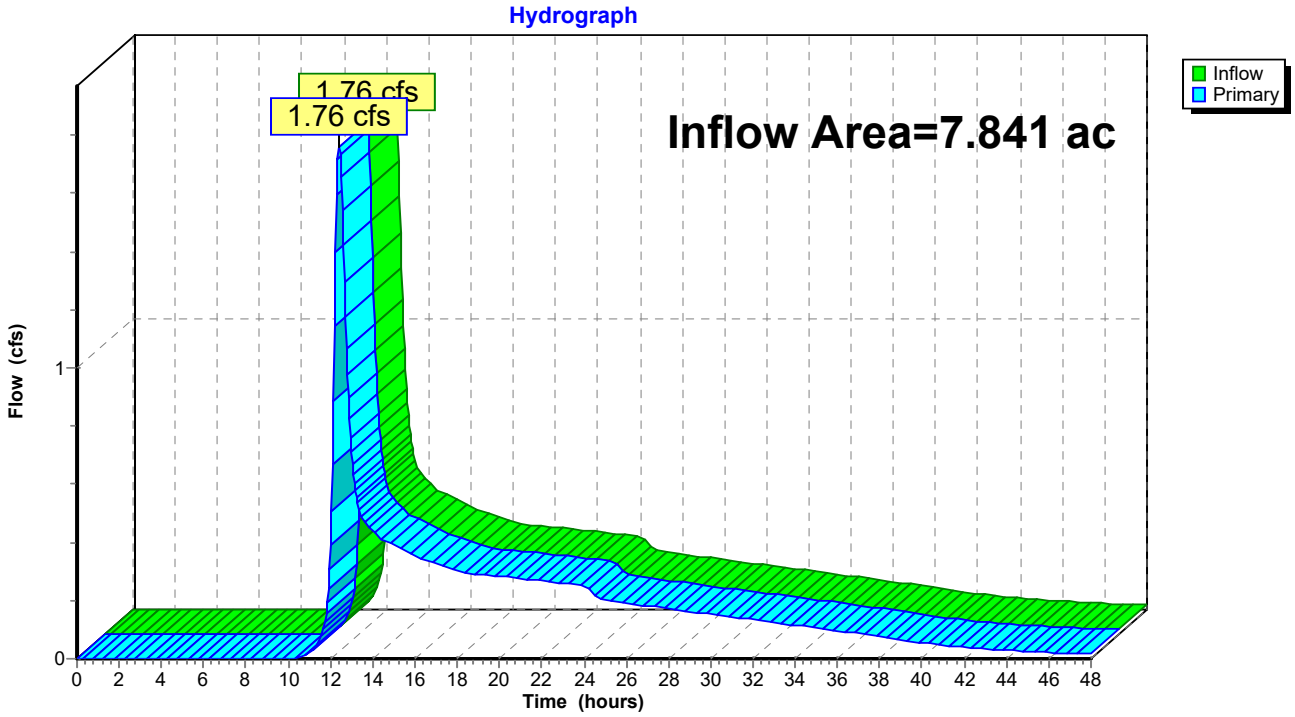


Summary for Link AP-3: AP-3

Inflow Area = 7.841 ac, 0.00% Impervious, Inflow Depth > 0.92" for 2 YR event
Inflow = 1.76 cfs @ 12.41 hrs, Volume= 0.602 af
Primary = 1.76 cfs @ 12.41 hrs, Volume= 0.602 af, Atten= 0%, Lag= 0.0 min

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

Link AP-3: AP-3



Summary for Subcatchment PDA-1: PDA-1

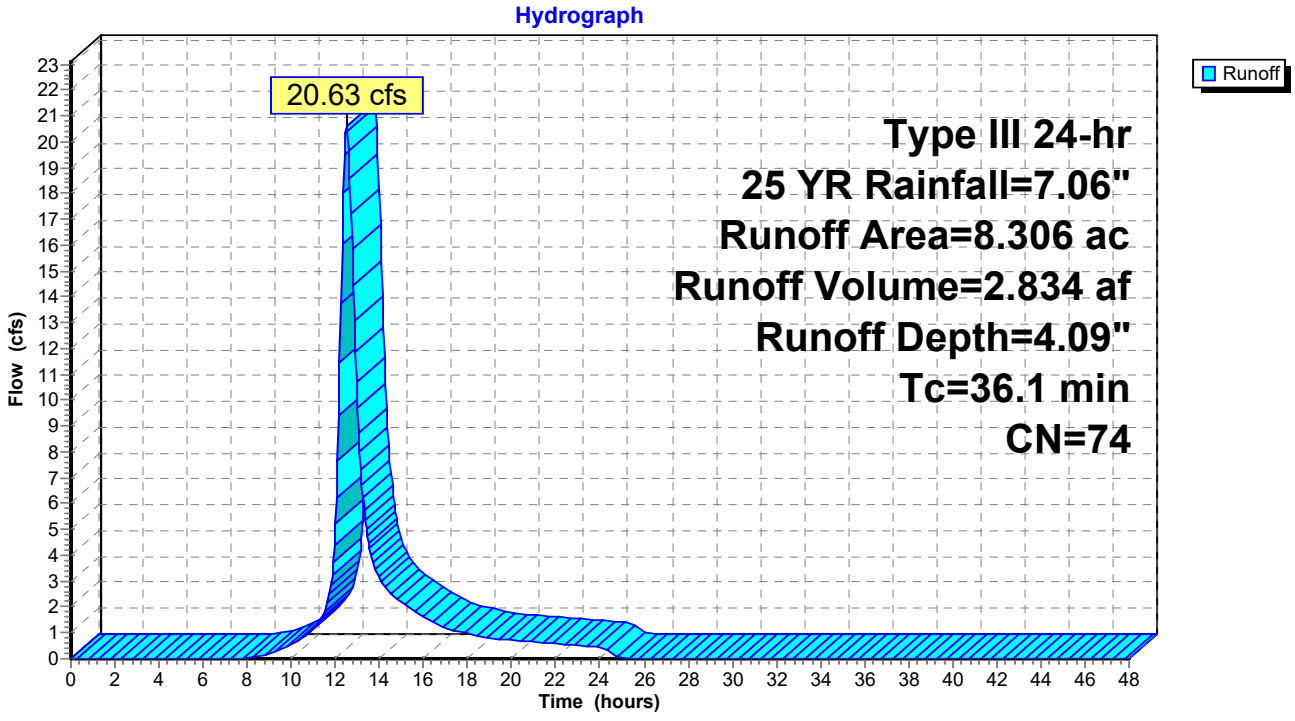
Runoff = 20.63 cfs @ 12.50 hrs, Volume= 2.834 af, Depth= 4.09"
Routed to Link AP-1 : AP-1

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=7.06"

	Area (ac)	CN	Description
	3.527	73	Woods, Fair, HSG C
	1.559	71	Meadow, non-grazed, HSG C
*	2.787	75	Meadow, non-grazed, HSG C/D
*	0.102	96	Gravel surface, HSG C/D
	0.190	98	Paved roads w/curbs & sewers, HSG C
	0.078	79	Woods, Fair, HSG D
	0.003	78	Meadow, non-grazed, HSG D
	0.016	96	Gravel surface, HSG D
	0.044	98	Paved roads w/curbs & sewers, HSG D
	8.306	74	Weighted Average
	8.072		97.18% Pervious Area
	0.234		2.82% Impervious Area

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

Subcatchment PDA-1: PDA-1



Summary for Subcatchment PDA-2A: PDA-2A

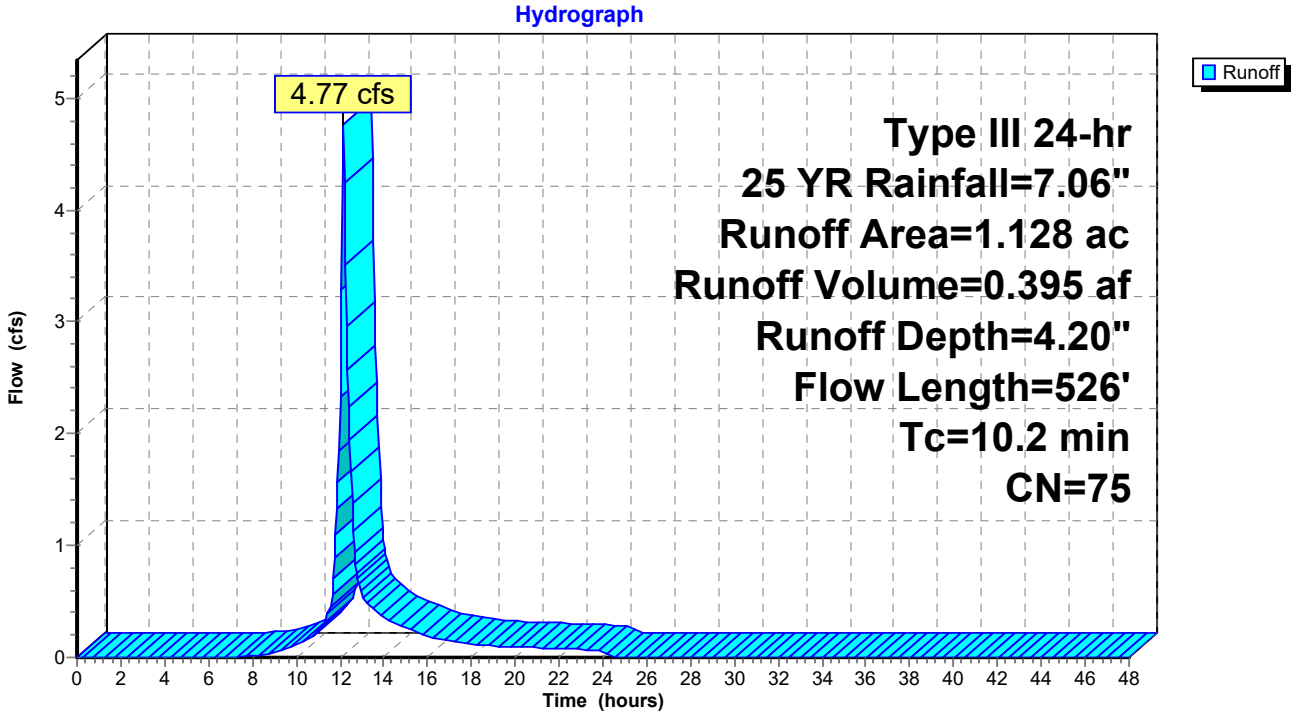
Runoff = 4.77 cfs @ 12.15 hrs, Volume= 0.395 af, Depth= 4.20"
Routed to Link AP-2 : AP-2

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=7.06"

	Area (ac)	CN	Description
	0.297	71	Meadow, non-grazed, HSG C
*	0.771	75	Meadow, non-grazed, HSG C/D
	0.060	96	Gravel surface, HSG D
	1.128	75	Weighted Average
	1.128		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.1100	0.23		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.18"
3.0	426	0.1153	2.38		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
10.2	526	Total			

Subcatchment PDA-2A: PDA-2A



Summary for Subcatchment PDA-2B: PDA-2B

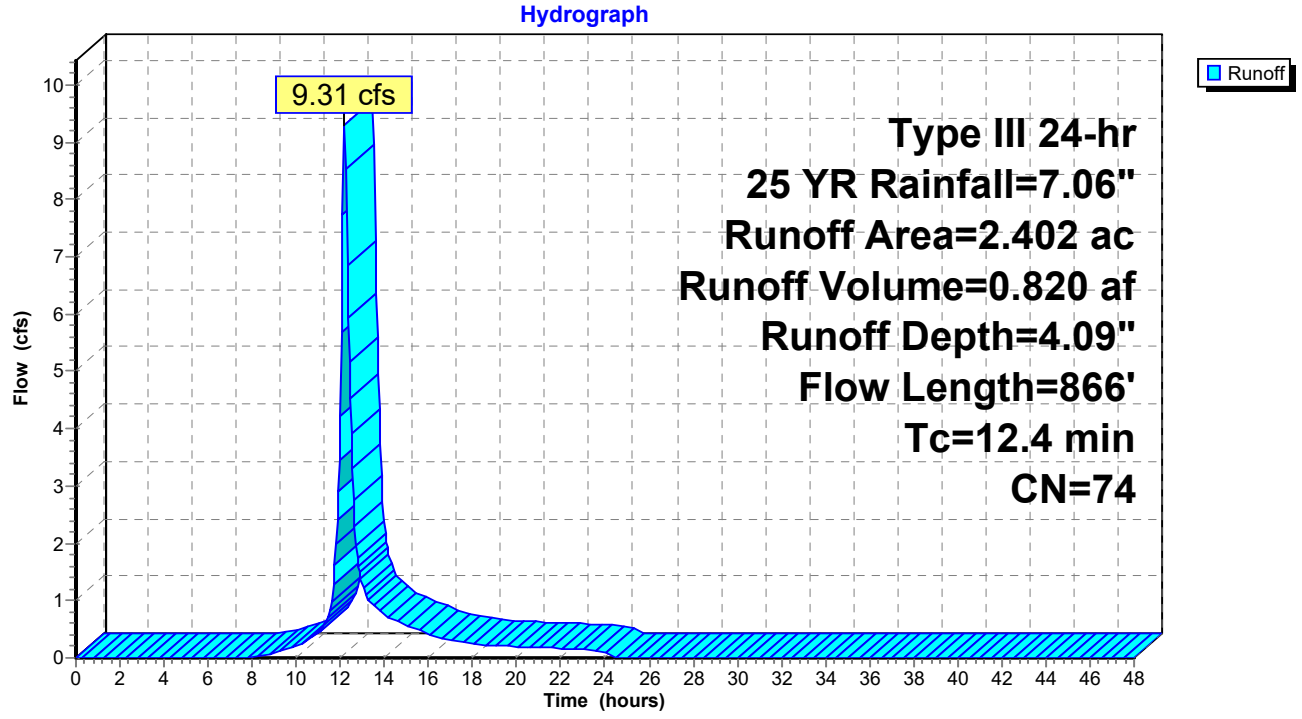
Runoff = 9.31 cfs @ 12.17 hrs, Volume= 0.820 af, Depth= 4.09"
Routed to Pond B-1 : B-1

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=7.06"

	Area (ac)	CN	Description
	0.706	71	Meadow, non-grazed, HSG C
*	1.696	75	Meadow, non-grazed, HSG C/D
	2.402	74	Weighted Average
	2.402		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.1200	0.24		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.18"
5.4	766	0.1162	2.39		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
12.4	866	Total			

Subcatchment PDA-2B: PDA-2B



Summary for Subcatchment PDA-2C: PDA-2C

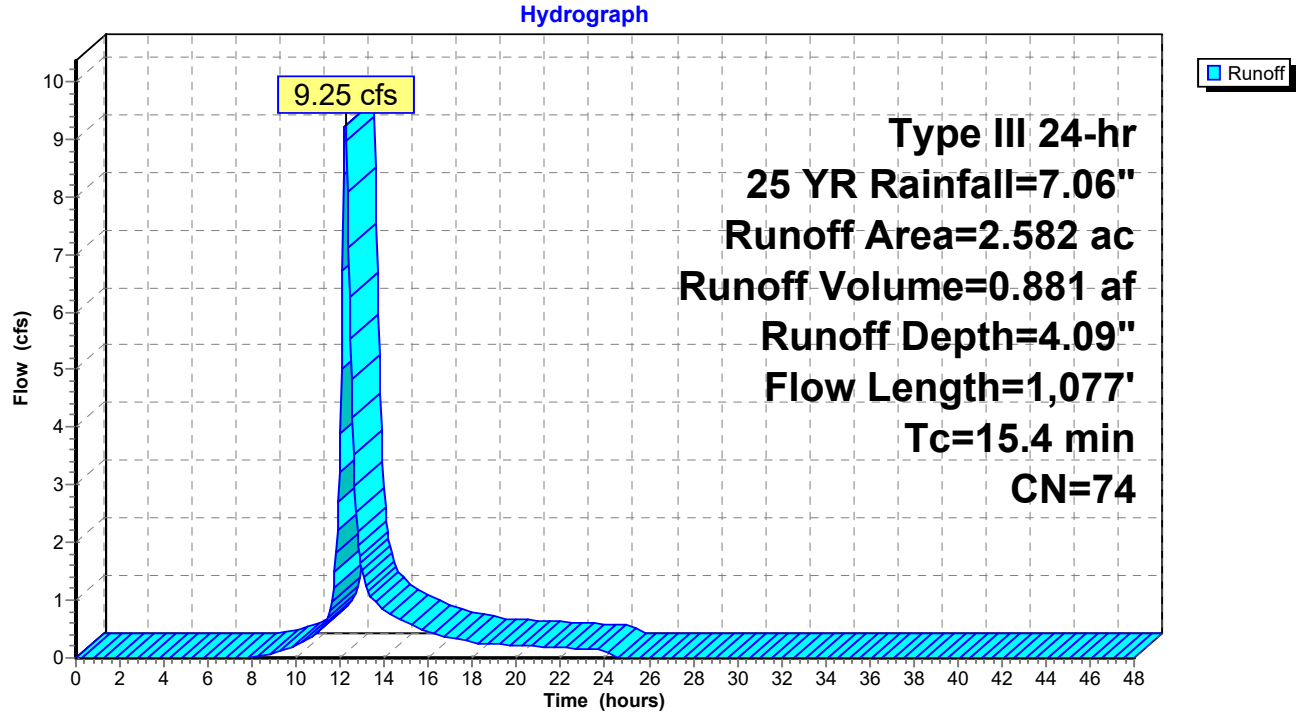
Runoff = 9.25 cfs @ 12.21 hrs, Volume= 0.881 af, Depth= 4.09"
Routed to Link AP-2 : AP-2

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=7.06"

	Area (ac)	CN	Description
	0.444	71	Meadow, non-grazed, HSG C
*	2.138	75	Meadow, non-grazed, HSG C/D
	2.582	74	Weighted Average
	2.582		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0800	0.20		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.18"
7.2	977	0.1034	2.25		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
15.4	1,077	Total			

Subcatchment PDA-2C: PDA-2C



Summary for Subcatchment PDA-3A: PDA-3A

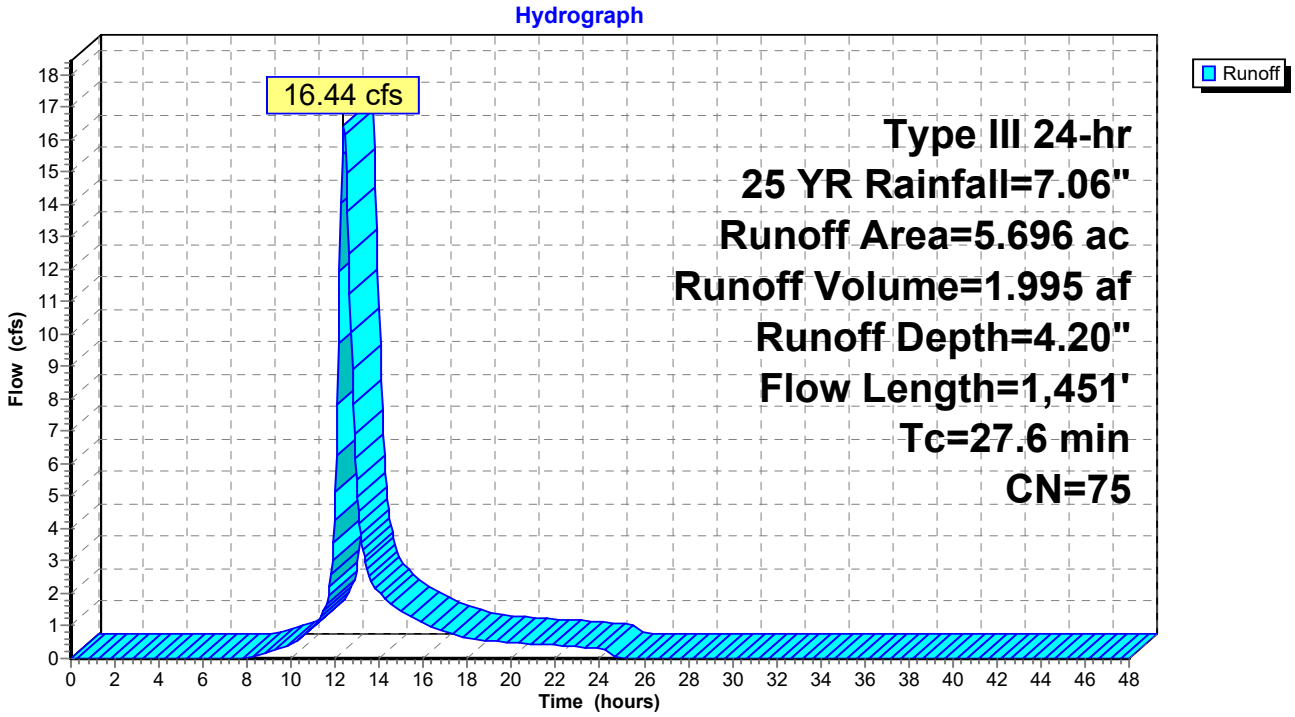
Runoff = 16.44 cfs @ 12.38 hrs, Volume= 1.995 af, Depth= 4.20"
Routed to Reach 1R : Eastern Swale

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=7.06"

	Area (ac)	CN	Description
	0.877	73	Woods, Fair, HSG C
	0.399	71	Meadow, non-grazed, HSG C
*	3.237	75	Meadow, non-grazed, HSG C/D
	1.183	78	Meadow, non-grazed, HSG D
	5.696	75	Weighted Average
	5.696		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.3	100	0.0400	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
6.8	543	0.0718	1.34		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
3.3	456	0.1096	2.32		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
1.2	352	0.1080	4.93		**Shallow Concentrated Flow, D-E** Grassed Waterway Kv= 15.0 fps
27.6	1,451	Total			

Subcatchment PDA-3A: PDA-3A



Summary for Subcatchment PDA-3B: PDA-3B

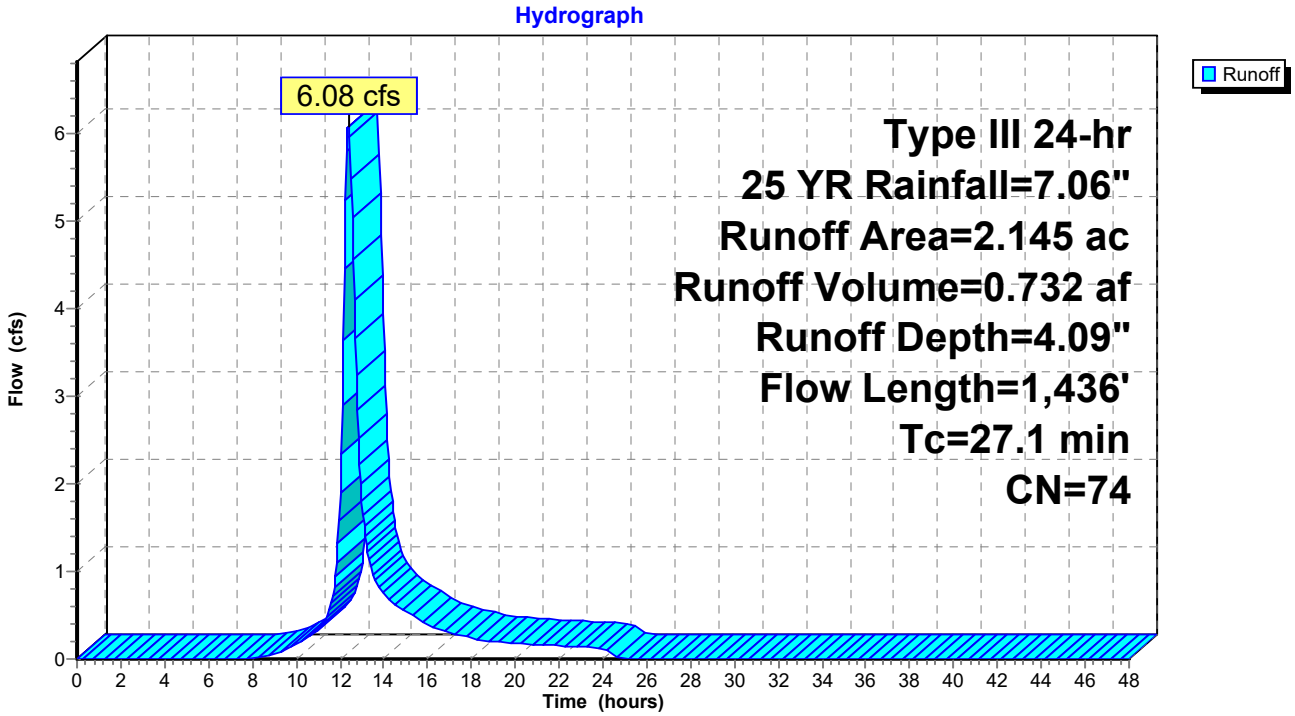
Runoff = 6.08 cfs @ 12.38 hrs, Volume= 0.732 af, Depth= 4.09"
Routed to Link AP-3 : AP-3

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=7.06"

	Area (ac)	CN	Description
	1.170	73	Woods, Fair, HSG C
	0.387	71	Meadow, non-grazed, HSG C
*	0.212	75	Meadow, non-grazed, HSG C/D
	0.376	78	Meadow, non-grazed, HSG D
	2.145	74	Weighted Average
	2.145		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0500	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
6.1	518	0.0814	1.43		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
6.1	818	0.1027	2.24		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
27.1	1,436	Total			

Subcatchment PDA-3B: PDA-3B



Summary for Reach 1R: Eastern Swale

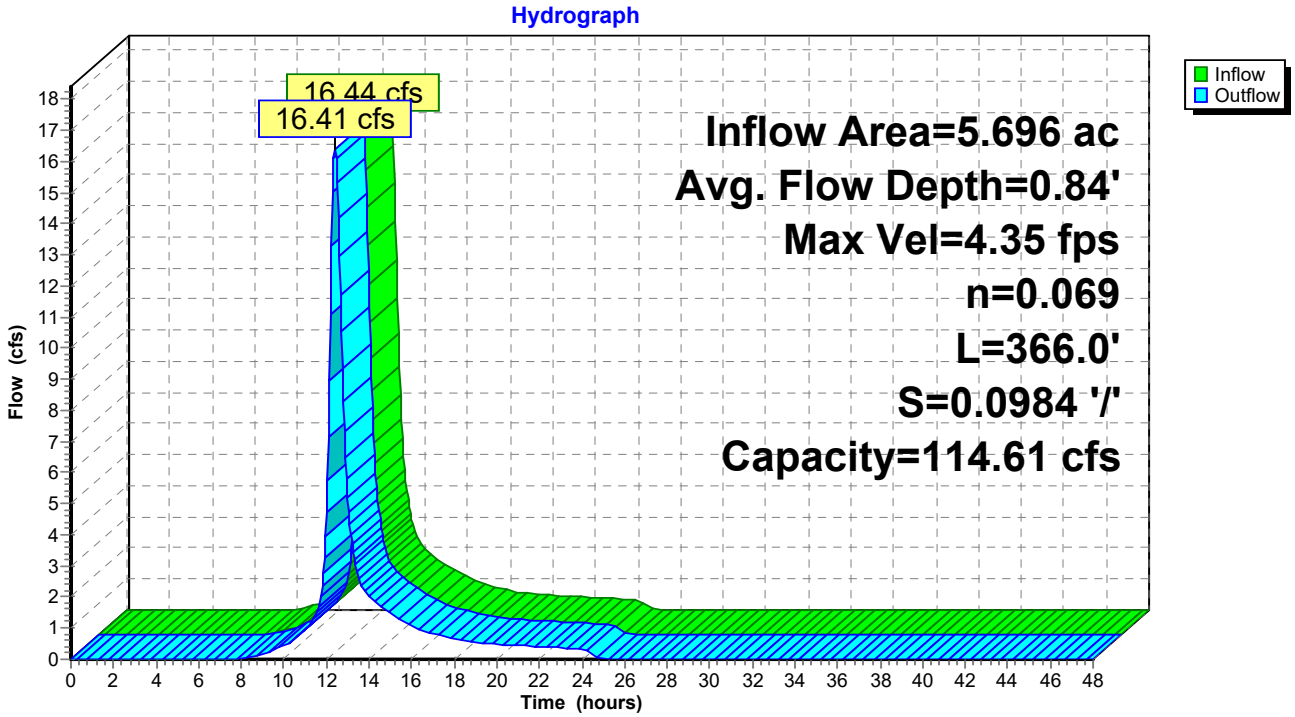
Inflow Area = 5.696 ac, 0.00% Impervious, Inflow Depth = 4.20" for 25 YR event
Inflow = 16.44 cfs @ 12.38 hrs, Volume= 1.995 af
Outflow = 16.41 cfs @ 12.40 hrs, Volume= 1.995 af, Atten= 0%, Lag= 1.1 min
Routed to Pond B-2 : B-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.35 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 1.68 fps, Avg. Travel Time= 3.6 min

Peak Storage= 1,380 cf @ 12.40 hrs
Average Depth at Peak Storage= 0.84' , Surface Width= 7.02'
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 114.61 cfs

2.00' x 2.00' deep channel, n= 0.069 Riprap, 6-inch
Side Slope Z-value= 3.0 '/' Top Width= 14.00'
Length= 366.0' Slope= 0.0984 '/'
Inlet Invert= 980.00', Outlet Invert= 944.00'

Reach 1R: Eastern Swale



Stage-Area-Storage for Reach 1R: Eastern Swale

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
980.00	0.0	0
980.02	0.0	15
980.04	0.1	31
980.06	0.1	48
980.08	0.2	66
980.10	0.2	84
980.12	0.3	104
980.14	0.3	124
980.16	0.4	145
980.18	0.5	167
980.20	0.5	190
980.22	0.6	214
980.24	0.7	239
980.26	0.7	265
980.28	0.8	291
980.30	0.9	318
980.32	0.9	347
980.34	1.0	376
980.36	1.1	406
980.38	1.2	437
980.40	1.3	468
980.42	1.4	501
980.44	1.5	535
980.46	1.6	569
980.48	1.7	604
980.50	1.8	641
980.52	1.9	678
980.54	2.0	715
980.56	2.1	754
980.58	2.2	794
980.60	2.3	834
980.62	2.4	876
980.64	2.5	918
980.66	2.6	961
980.68	2.7	1,005
980.70	2.9	1,050
980.72	3.0	1,096
980.74	3.1	1,143
980.76	3.3	1,191
980.78	3.4	1,239
980.80	3.5	1,288
980.82	3.7	1,339
980.84	3.8	1,390
980.86	3.9	1,442
980.88	4.1	1,494
980.90	4.2	1,548
980.92	4.4	1,603
980.94	4.5	1,658
980.96	4.7	1,715
980.98	4.8	1,772
981.00	5.0	1,830
981.02	5.2	1,889
981.04	5.3	1,949
981.06	5.5	2,010
981.08	5.7	2,071
981.10	5.8	2,134
981.12	6.0	2,197
981.14	6.2	2,261
981.16	6.4	2,327
981.18	6.5	2,393
981.20	6.7	2,460
981.22	6.9	2,527
981.24	7.1	2,596
981.26	7.3	2,666
981.28	7.5	2,736
981.30	7.7	2,807
981.32	7.9	2,879
981.34	8.1	2,952
981.36	8.3	3,026
981.38	8.5	3,101
981.40	8.7	3,177
981.42	8.9	3,253
981.44	9.1	3,331
981.46	9.3	3,409
981.48	9.5	3,488
981.50	9.8	3,569
981.52	10.0	3,649
981.54	10.2	3,731
981.56	10.4	3,814
981.58	10.6	3,898
981.60	10.9	3,982
981.62	11.1	4,067
981.64	11.3	4,154
981.66	11.6	4,241
981.68	11.8	4,329
981.70	12.1	4,418
981.72	12.3	4,507
981.74	12.6	4,598
981.76	12.8	4,689
981.78	13.1	4,782
981.80	13.3	4,875
981.82	13.6	4,969
981.84	13.8	5,064
981.86	14.1	5,160
981.88	14.4	5,257
981.90	14.6	5,355
981.92	14.9	5,453
981.94	15.2	5,553
981.96	15.4	5,653
981.98	15.7	5,754
982.00	**16.0**	**5,856**

Summary for Pond B-1: B-1

Inflow Area = 2.402 ac, 0.00% Impervious, Inflow Depth = 4.09" for 25 YR event
Inflow = 9.31 cfs @ 12.17 hrs, Volume= 0.820 af
Outflow = 7.03 cfs @ 12.30 hrs, Volume= 0.746 af, Atten= 24%, Lag= 7.4 min
Primary = 7.03 cfs @ 12.30 hrs, Volume= 0.746 af
Routed to Link AP-2 : AP-2
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link AP-2 : AP-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 897.63' @ 12.30 hrs Surf.Area= 5,054 sf Storage= 10,094 cf

Plug-Flow detention time= 175.1 min calculated for 0.745 af (91% of inflow)
Center-of-Mass det. time= 132.0 min (959.5 - 827.5)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	17,970 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

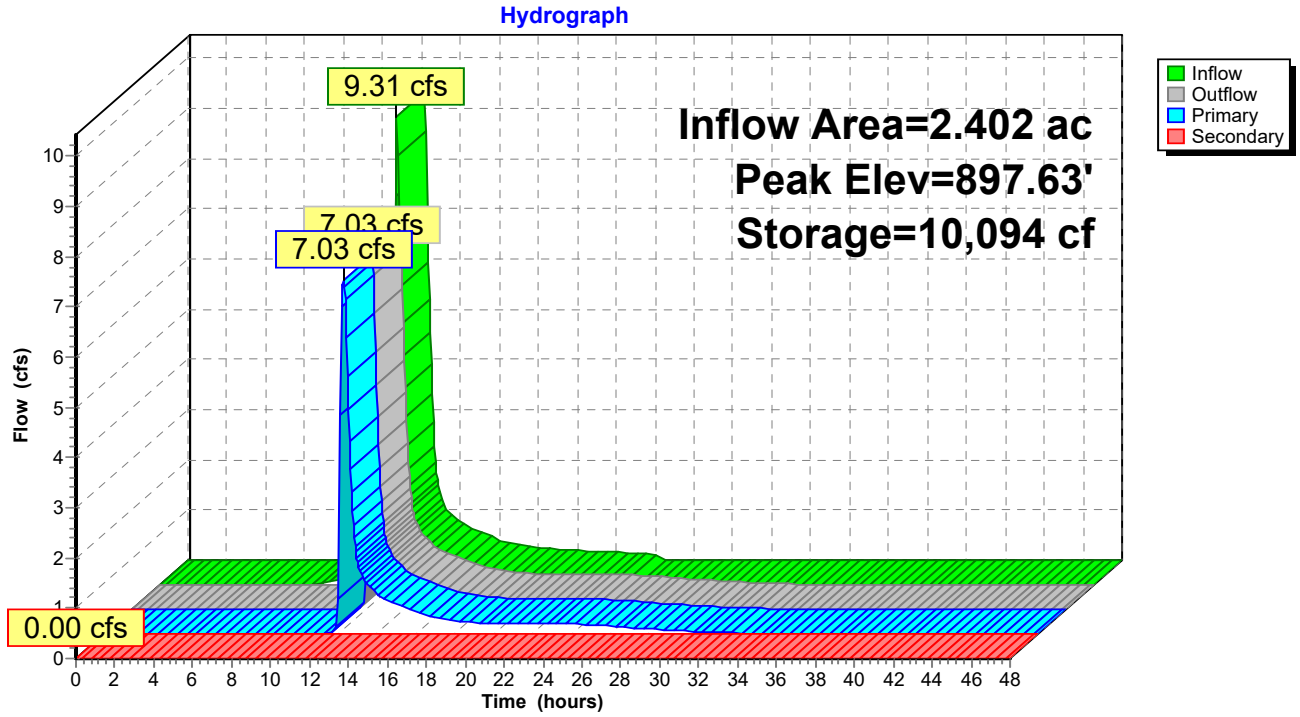
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
895.00	2,698	274.0	0	0	2,698
896.00	3,550	293.0	3,114	3,114	3,601
897.00	4,458	312.0	3,995	7,110	4,564
898.00	5,424	331.0	4,933	12,043	5,588
899.00	6,445	349.0	5,927	17,970	6,620

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**24.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 895.00' / 893.00' S= 0.0571 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Primary	896.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	897.00'	**18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	898.00'	**20.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=7.02 cfs @ 12.30 hrs HW=897.63' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 6.73 cfs of 15.23 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 6.73 cfs @ 3.81 fps)
- **2=Orifice/Grate** (Orifice Controls 0.29 cfs @ 5.90 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=895.00' TW=0.00' (Dynamic Tailwater)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond B-1: B-1


Hydrograph
9.31 cfs
7.03 cfs
7.03 cfs
0.00 cfs
Inflow Area=2.402 ac
Peak Elev=897.63'
Storage=10,094 cf
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48
0 1 2 3 4 5 6 7 8 9 10

Stage-Area-Storage for Pond B-1: B-1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
895.00	2,698	0
895.05	2,738	136
895.10	2,778	274
895.15	2,818	414
895.20	2,859	556
895.25	2,900	700
895.30	2,941	846
895.35	2,983	994
895.40	3,025	1,144
895.45	3,067	1,296
895.50	3,109	1,451
895.55	3,152	1,607
895.60	3,195	1,766
895.65	3,239	1,927
895.70	3,282	2,090
895.75	3,326	2,255
895.80	3,370	2,422
895.85	3,415	2,592
895.90	3,460	2,764
895.95	3,505	2,938
896.00	3,550	3,114
896.05	3,593	3,293
896.10	3,636	3,474
896.15	3,680	3,656
896.20	3,723	3,842
896.25	3,767	4,029
896.30	3,812	4,218
896.35	3,856	4,410
896.40	3,901	4,604
896.45	3,946	4,800
896.50	3,991	4,998
896.55	4,037	5,199
896.60	4,082	5,402
896.65	4,128	5,607
896.70	4,175	5,815
896.75	4,221	6,025
896.80	4,268	6,237
896.85	4,315	6,452
896.90	4,363	6,669
896.95	4,410	6,888
897.00	4,458	7,110
897.05	4,504	7,334
897.10	4,550	7,560
897.15	4,597	7,789
897.20	4,644	8,020
897.25	4,691	8,253
897.30	4,738	8,489
897.35	4,785	8,727
897.40	4,833	8,967
897.45	4,881	9,210
897.50	4,929	9,455
897.55	4,978	9,703
897.60	5,026	9,953
897.65	5,075	10,206
897.70	5,124	10,461
897.75	5,174	10,718
897.80	5,223	10,978
897.85	5,273	11,241
897.90	5,323	11,505
897.95	5,373	11,773
898.00	5,424	12,043
898.05	5,473	12,315
898.10	5,522	12,590
898.15	5,572	12,867
898.20	5,621	13,147
898.25	5,671	13,430
898.30	5,721	13,714
898.35	5,771	14,002
898.40	5,822	14,291
898.45	5,873	14,584
898.50	5,924	14,879
898.55	5,975	15,176
898.60	6,026	15,476
898.65	6,078	15,779
898.70	6,129	16,084
898.75	6,182	16,392
898.80	6,234	16,702
898.85	6,286	17,015
898.90	6,339	17,331
898.95	6,392	17,649
899.00	**6,445**	**17,970**

Summary for Pond B-2: B-2

Inflow Area = 5.696 ac, 0.00% Impervious, Inflow Depth = 4.20" for 25 YR event
Inflow = 16.41 cfs @ 12.40 hrs, Volume= 1.995 af
Outflow = 10.15 cfs @ 12.72 hrs, Volume= 1.758 af, Atten= 38%, Lag= 19.3 min
Primary = 4.46 cfs @ 12.72 hrs, Volume= 1.591 af
Routed to Link AP-3 : AP-3
Secondary = 5.69 cfs @ 12.72 hrs, Volume= 0.167 af
Routed to Link AP-3 : AP-3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 939.19' @ 12.72 hrs Surf.Area= 13,192 sf Storage= 34,456 cf

Plug-Flow detention time= 264.6 min calculated for 1.756 af (88% of inflow)
Center-of-Mass det. time= 210.8 min (1,052.6 - 841.7)

Volume	Invert	Avail.Storage	Storage Description
#1	936.00'	45,694 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

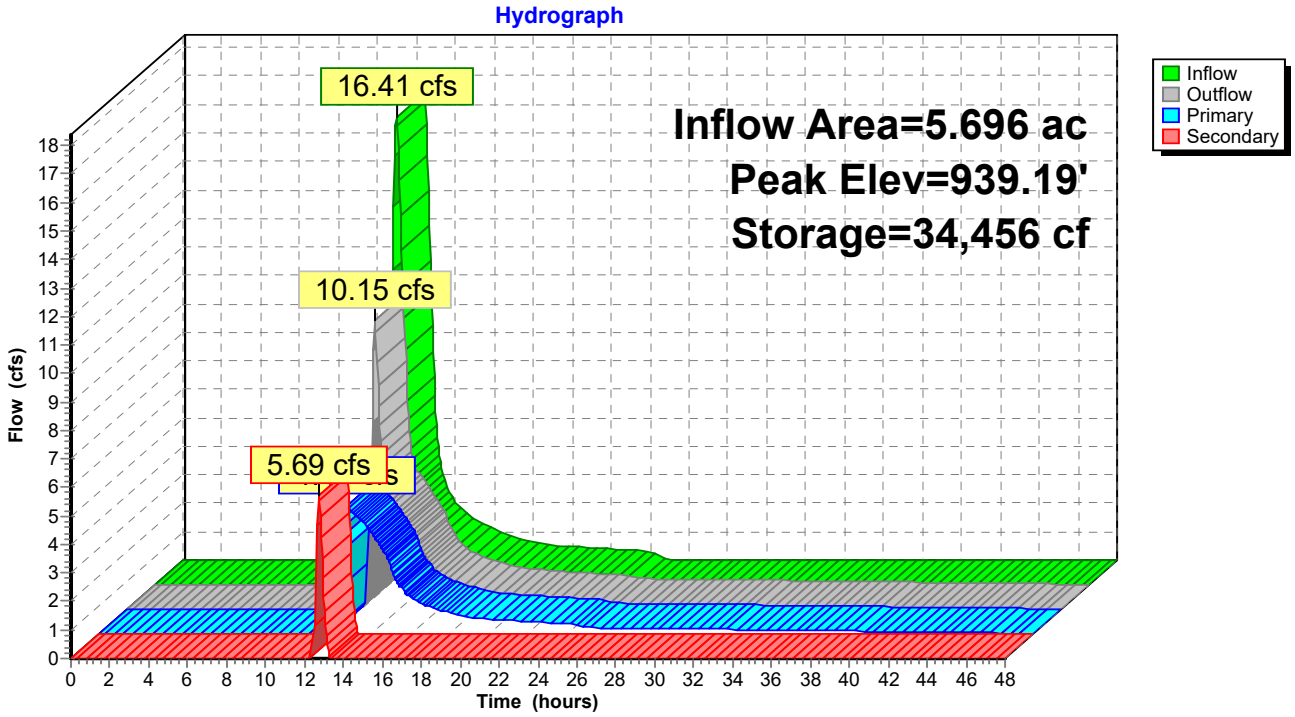
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
936.00	8,529	458.0	0	0	8,529
937.00	9,931	477.0	9,221	9,221	10,018
938.00	11,389	495.0	10,652	19,873	11,493
939.00	12,904	514.0	12,139	32,011	13,099
940.00	14,476	533.0	13,682	45,694	14,767

Device	Routing	Invert	Outlet Devices
#1	Primary	936.00'	**24.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 936.00' / 935.00' S= 0.0286 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Primary	937.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	938.00'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	939.00'	**30.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=4.46 cfs @ 12.72 hrs HW=939.18' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 4.12 cfs of 17.65 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 4.12 cfs @ 5.24 fps)
- **2=Orifice/Grate** (Orifice Controls 0.34 cfs @ 6.91 fps)

Secondary OutFlow Max=5.57 cfs @ 12.72 hrs HW=939.18' TW=0.00' (Dynamic Tailwater)
- **4=Broad-Crested Rectangular Weir** (Weir Controls 5.57 cfs @ 1.01 fps)

Pond B-2: B-2


Hydrograph
16.41 cfs
10.15 cfs
5.69 cfs
Inflow Area=5.696 ac
Peak Elev=939.19'
Storage=34,456 cf
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Stage-Area-Storage for Pond B-2: B-2

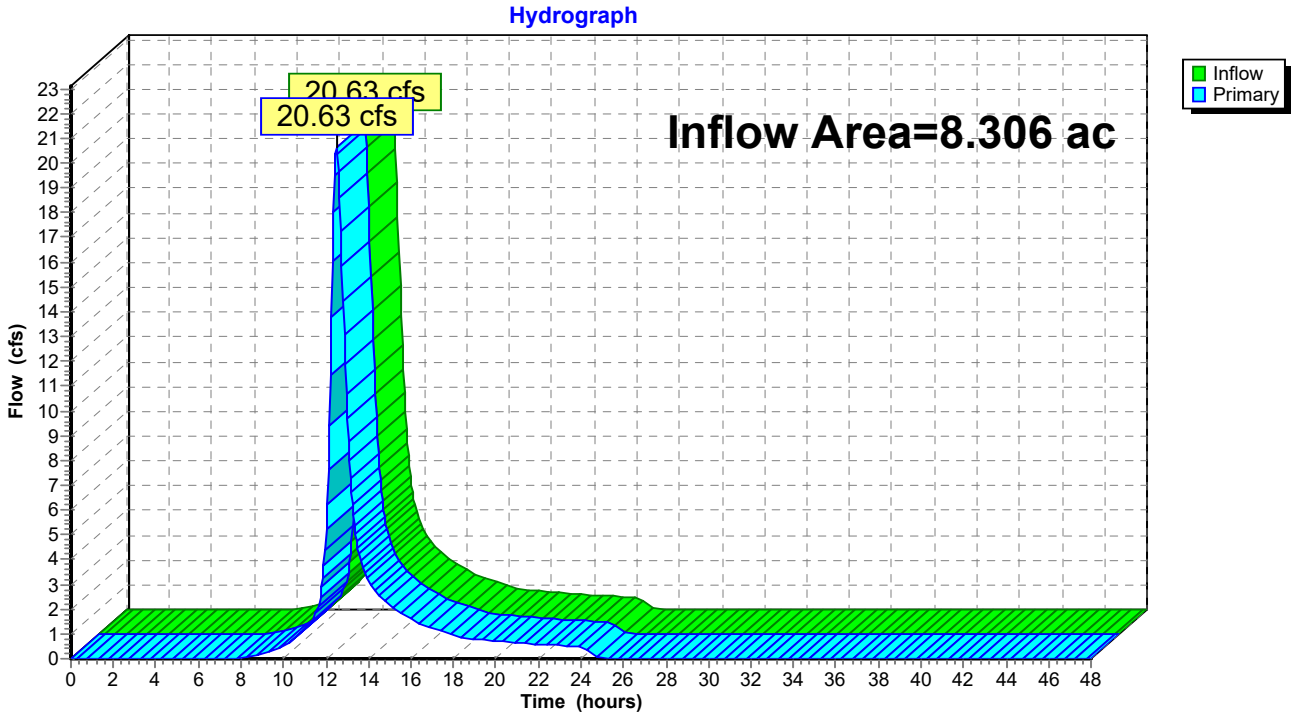
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
936.00	8,529	0
936.05	8,597	428
936.10	8,664	860
936.15	8,733	1,295
936.20	8,801	1,733
936.25	8,870	2,175
936.30	8,938	2,620
936.35	9,008	3,069
936.40	9,077	3,521
936.45	9,147	3,976
936.50	9,217	4,435
936.55	9,287	4,898
936.60	9,357	5,364
936.65	9,428	5,834
936.70	9,499	6,307
936.75	9,571	6,784
936.80	9,642	7,264
936.85	9,714	7,748
936.90	9,786	8,235
936.95	9,858	8,726
937.00	9,931	9,221
937.05	10,002	9,719
937.10	10,072	10,221
937.15	10,143	10,727
937.20	10,215	11,236
937.25	10,286	11,748
937.30	10,358	12,264
937.35	10,430	12,784
937.40	10,502	13,307
937.45	10,575	13,834
937.50	10,648	14,365
937.55	10,721	14,899
937.60	10,794	15,437
937.65	10,867	15,978
937.70	10,941	16,524
937.75	11,015	17,072
937.80	11,089	17,625
937.85	11,164	18,181
937.90	11,239	18,741
937.95	11,314	19,305
938.00	11,389	19,873
938.05	11,463	20,444
938.10	11,536	21,019
938.15	11,610	21,598
938.20	11,684	22,180
938.25	11,759	22,766
938.30	11,834	23,356
938.35	11,908	23,950
938.40	11,984	24,547
938.45	12,059	25,148
938.50	12,135	25,753
938.55	12,211	26,361
938.60	12,287	26,974
938.65	12,363	27,590
938.70	12,440	28,210
938.75	12,516	28,834
938.80	12,593	29,462
938.85	12,671	30,093
938.90	12,748	30,729
938.95	12,826	31,368
939.00	12,904	32,011
939.05	12,980	32,659
939.10	13,057	33,309
939.15	13,134	33,964
939.20	13,211	34,623
939.25	13,289	35,285
939.30	13,366	35,952
939.35	13,444	36,622
939.40	13,522	37,296
939.45	13,600	37,974
939.50	13,679	38,656
939.55	13,757	39,342
939.60	13,836	40,032
939.65	13,916	40,726
939.70	13,995	41,423
939.75	14,075	42,125
939.80	14,154	42,831
939.85	14,234	43,541
939.90	14,315	44,254
939.95	14,395	44,972
940.00	**14,476**	**45,694**

Summary for Link AP-1: AP-1

Inflow Area = 8.306 ac, 2.82% Impervious, Inflow Depth = 4.09" for 25 YR event
Inflow = 20.63 cfs @ 12.50 hrs, Volume= 2.834 af
Primary = 20.63 cfs @ 12.50 hrs, Volume= 2.834 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

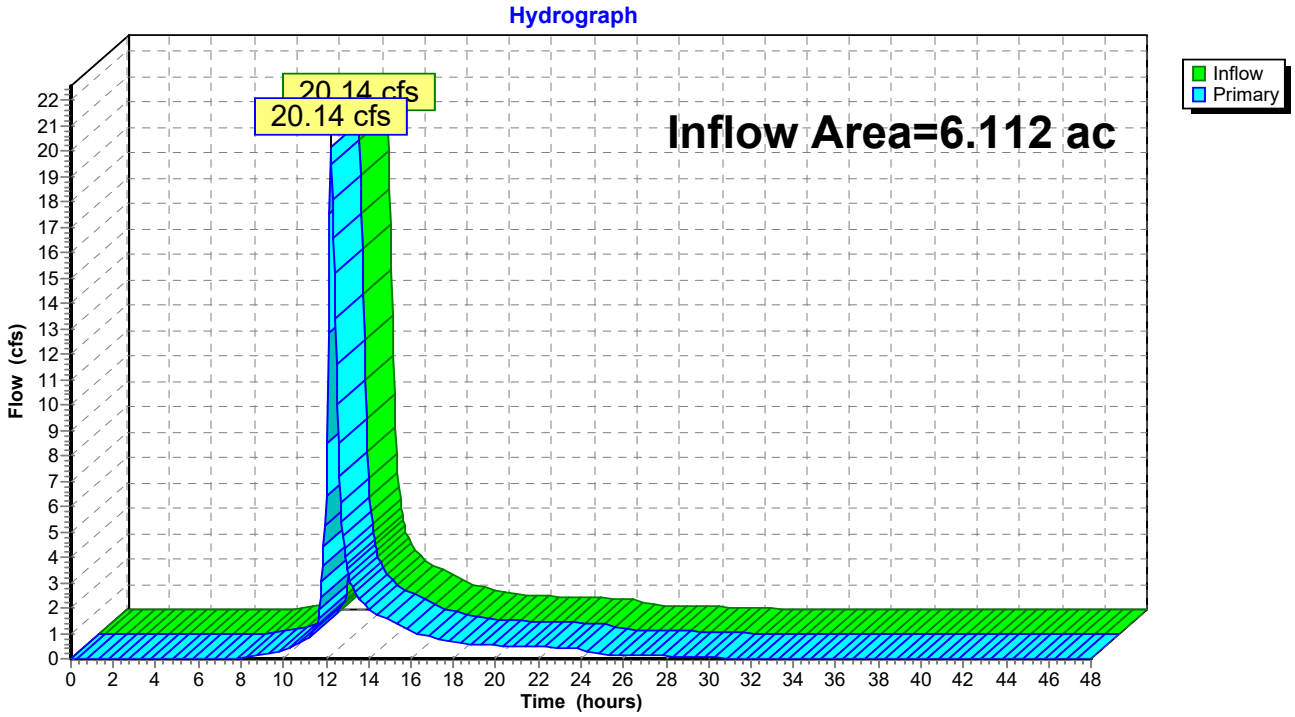


Summary for Link AP-2: AP-2

Inflow Area = 6.112 ac, 0.00% Impervious, Inflow Depth = 3.97" for 25 YR event
Inflow = 20.14 cfs @ 12.22 hrs, Volume= 2.022 af
Primary = 20.14 cfs @ 12.22 hrs, Volume= 2.022 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

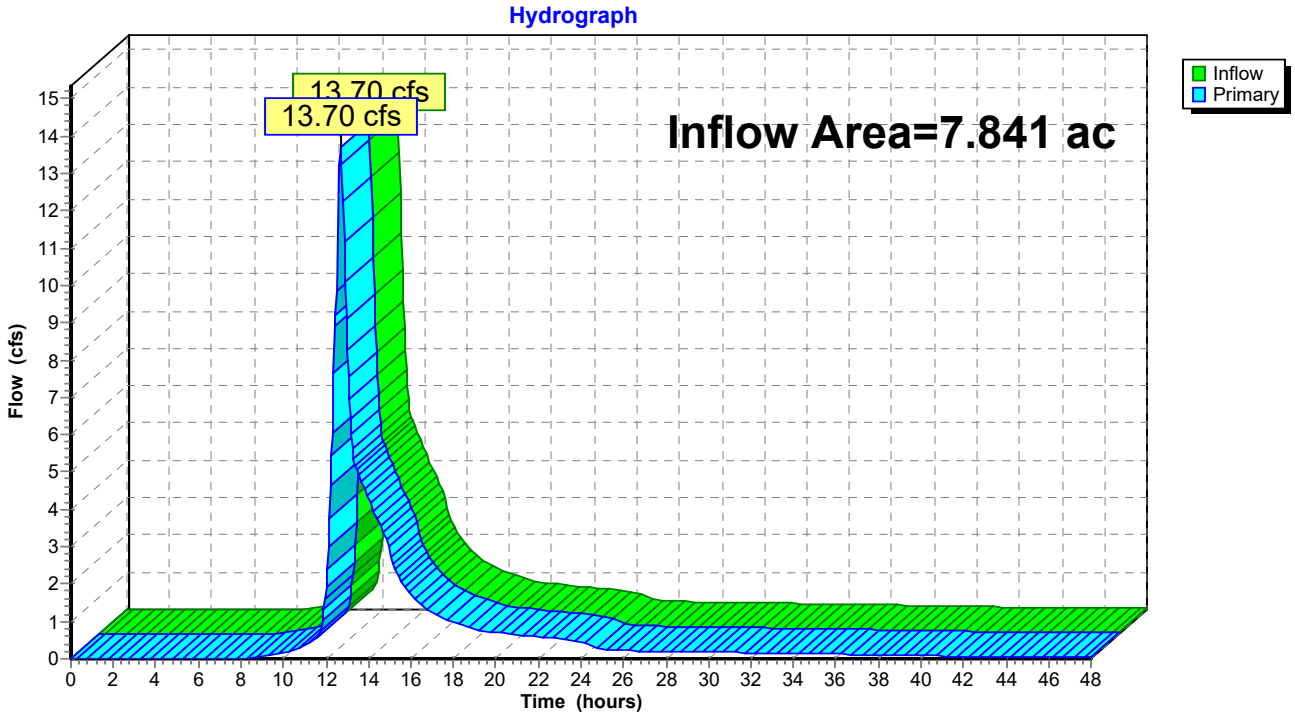


Summary for Link AP-3: AP-3

Inflow Area = 7.841 ac, 0.00% Impervious, Inflow Depth > 3.81" for 25 YR event
Inflow = 13.70 cfs @ 12.70 hrs, Volume= 2.489 af
Primary = 13.70 cfs @ 12.70 hrs, Volume= 2.489 af, Atten= 0%, Lag= 0.0 min

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

Link AP-3: AP-3



Summary for Subcatchment PDA-1: PDA-1

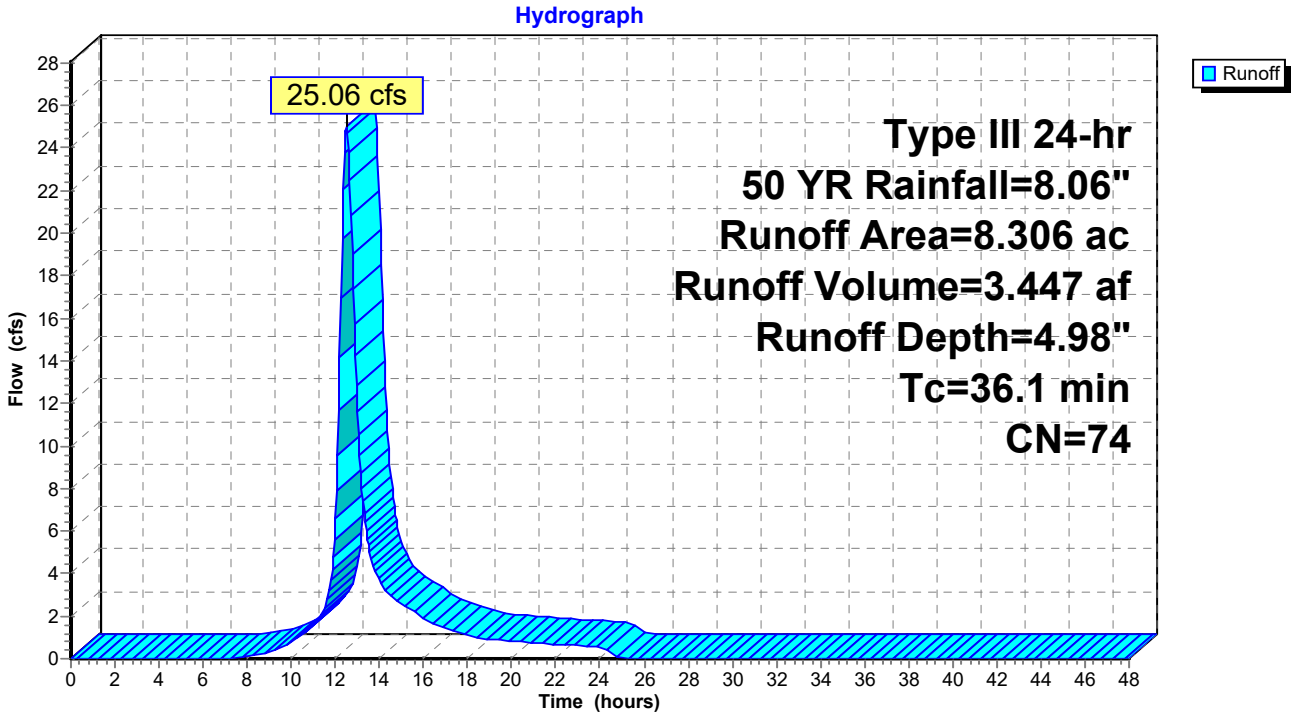
Runoff = 25.06 cfs @ 12.50 hrs, Volume= 3.447 af, Depth= 4.98"
Routed to Link AP-1 : AP-1

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 50 YR Rainfall=8.06"

	Area (ac)	CN	Description
	3.527	73	Woods, Fair, HSG C
	1.559	71	Meadow, non-grazed, HSG C
*	2.787	75	Meadow, non-grazed, HSG C/D
*	0.102	96	Gravel surface, HSG C/D
	0.190	98	Paved roads w/curbs & sewers, HSG C
	0.078	79	Woods, Fair, HSG D
	0.003	78	Meadow, non-grazed, HSG D
	0.016	96	Gravel surface, HSG D
	0.044	98	Paved roads w/curbs & sewers, HSG D
	8.306	74	Weighted Average
	8.072		97.18% Pervious Area
	0.234		2.82% Impervious Area

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

Subcatchment PDA-1: PDA-1



Summary for Subcatchment PDA-2A: PDA-2A

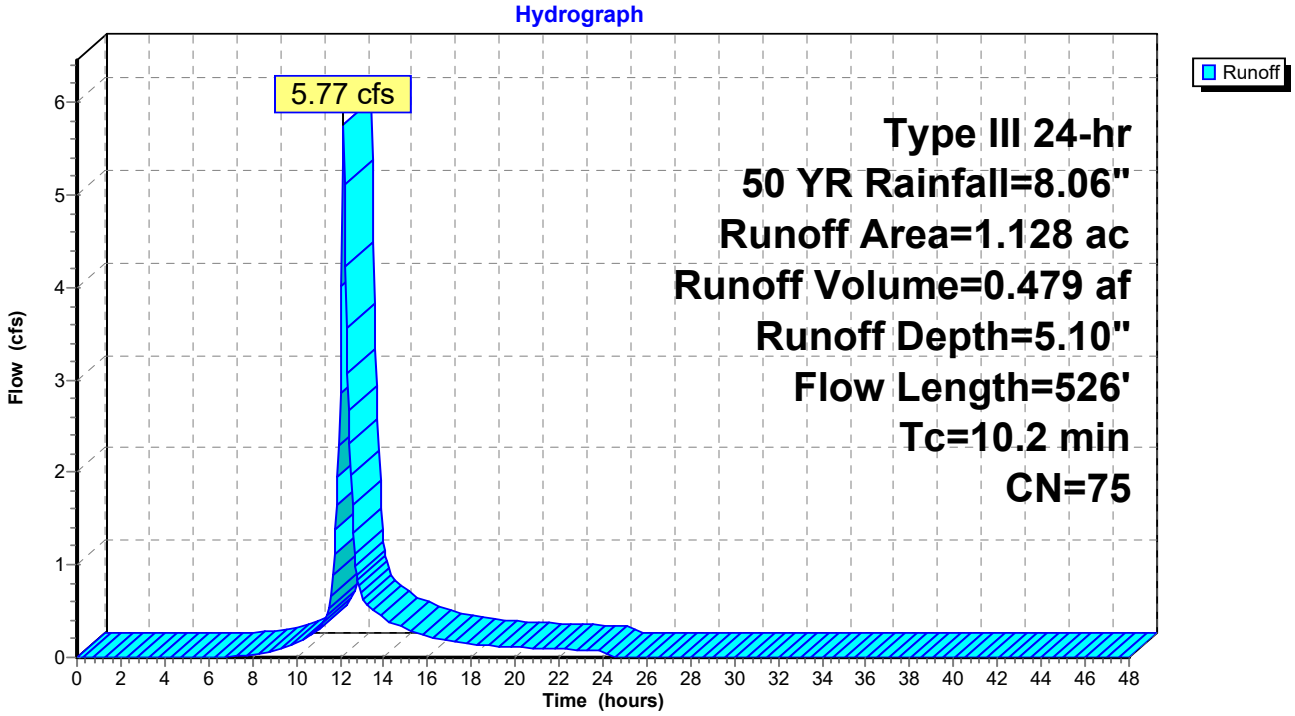
Runoff = 5.77 cfs @ 12.14 hrs, Volume= 0.479 af, Depth= 5.10"
Routed to Link AP-2 : AP-2

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 50 YR Rainfall=8.06"

	Area (ac)	CN	Description
	0.297	71	Meadow, non-grazed, HSG C
*	0.771	75	Meadow, non-grazed, HSG C/D
	0.060	96	Gravel surface, HSG D
	1.128	75	Weighted Average
	1.128		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.1100	0.23		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.18"
3.0	426	0.1153	2.38		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
10.2	526	Total			

Subcatchment PDA-2A: PDA-2A



Summary for Subcatchment PDA-2B: PDA-2B

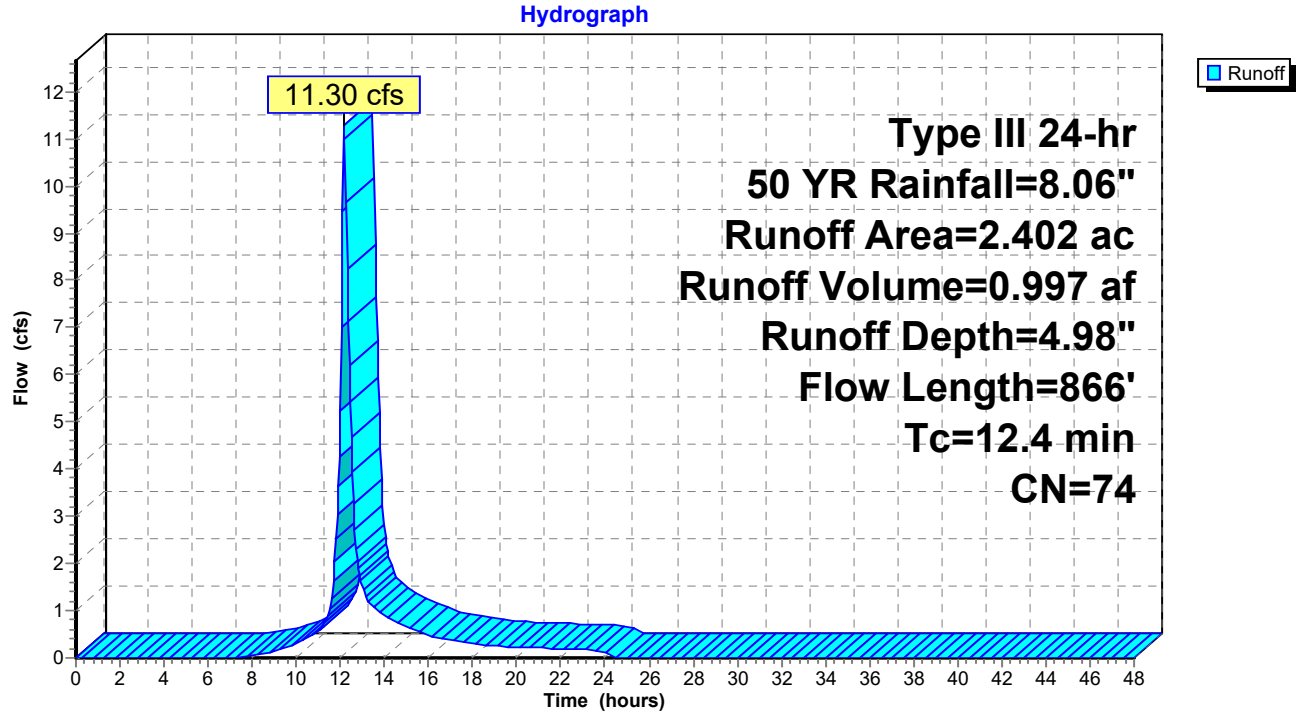
Runoff = 11.30 cfs @ 12.17 hrs, Volume= 0.997 af, Depth= 4.98"
Routed to Pond B-1 : B-1

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 50 YR Rainfall=8.06"

	Area (ac)	CN	Description
	0.706	71	Meadow, non-grazed, HSG C
*	1.696	75	Meadow, non-grazed, HSG C/D
	2.402	74	Weighted Average
	2.402		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.1200	0.24		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.18"
5.4	766	0.1162	2.39		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
12.4	866	Total			

Subcatchment PDA-2B: PDA-2B



Summary for Subcatchment PDA-2C: PDA-2C

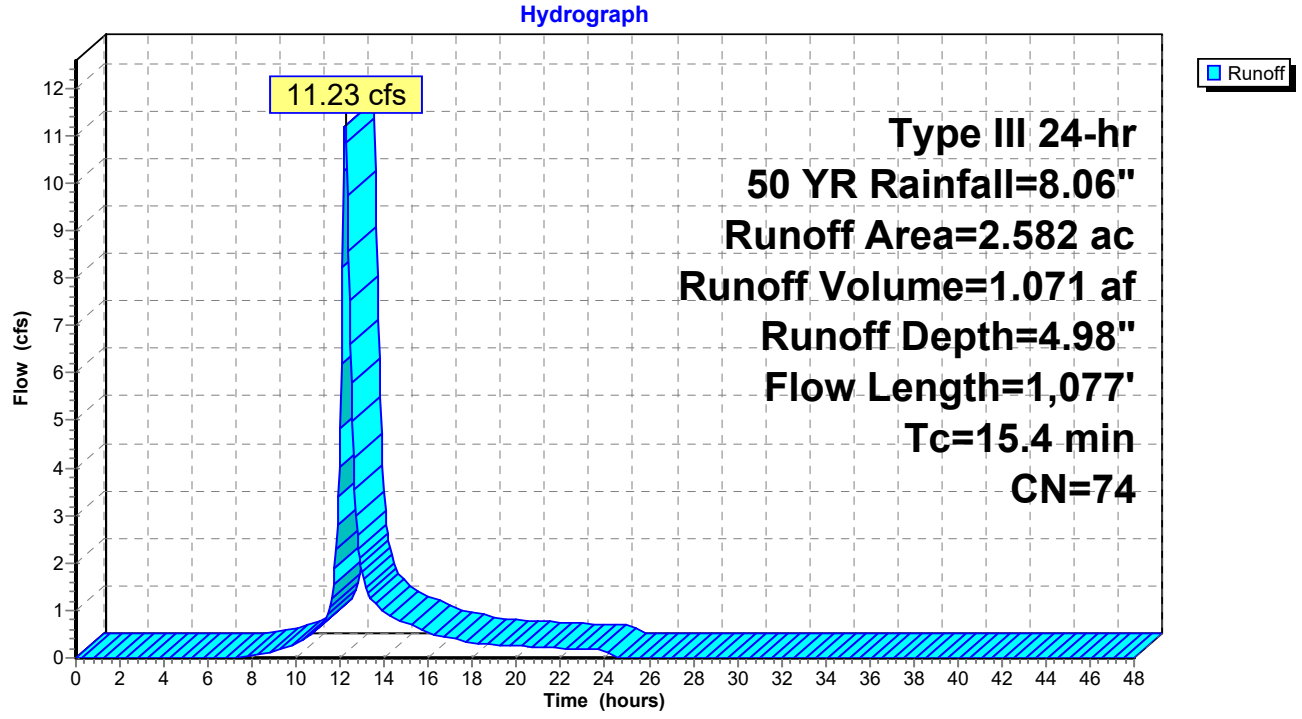
Runoff = 11.23 cfs @ 12.21 hrs, Volume= 1.071 af, Depth= 4.98"
Routed to Link AP-2 : AP-2

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 50 YR Rainfall=8.06"

	Area (ac)	CN	Description
	0.444	71	Meadow, non-grazed, HSG C
*	2.138	75	Meadow, non-grazed, HSG C/D
	2.582	74	Weighted Average
	2.582		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0800	0.20		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.18"
7.2	977	0.1034	2.25		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
15.4	1,077	Total			

Subcatchment PDA-2C: PDA-2C



Summary for Subcatchment PDA-3A: PDA-3A

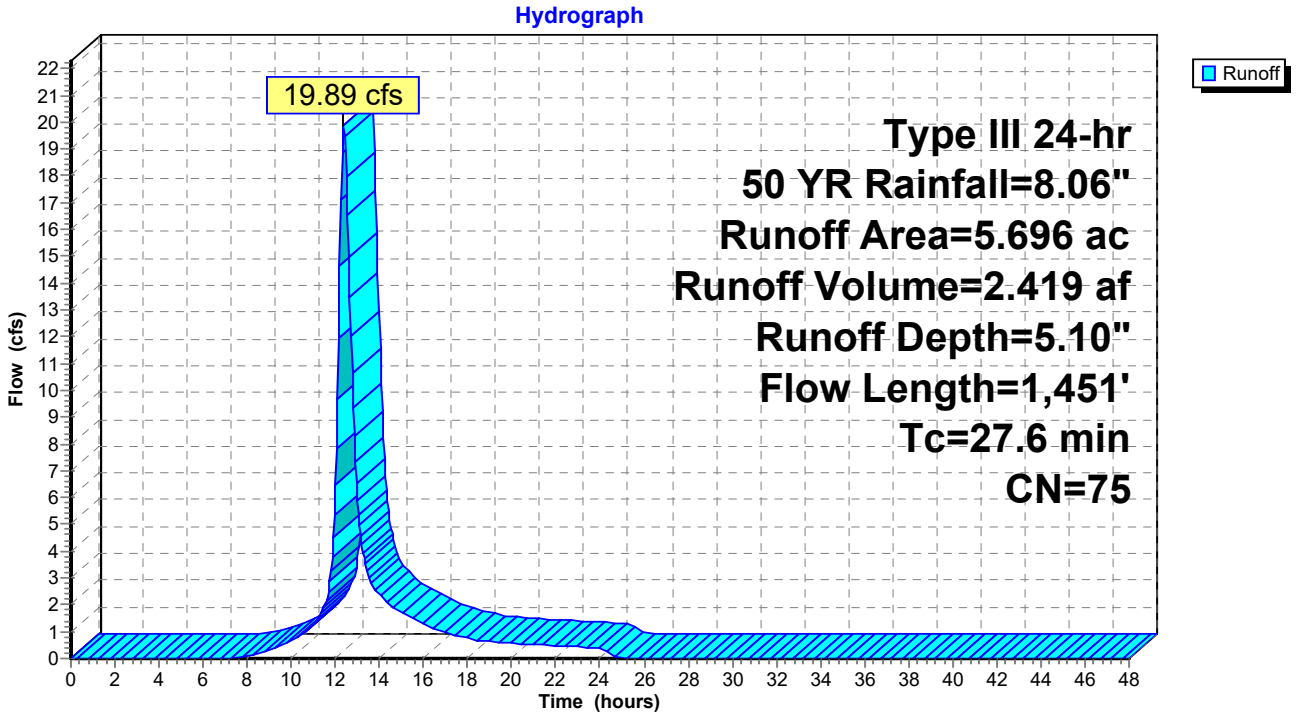
Runoff = 19.89 cfs @ 12.38 hrs, Volume= 2.419 af, Depth= 5.10"
Routed to Reach 1R : Eastern Swale

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 50 YR Rainfall=8.06"

	Area (ac)	CN	Description
	0.877	73	Woods, Fair, HSG C
	0.399	71	Meadow, non-grazed, HSG C
*	3.237	75	Meadow, non-grazed, HSG C/D
	1.183	78	Meadow, non-grazed, HSG D
	5.696	75	Weighted Average
	5.696		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.3	100	0.0400	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
6.8	543	0.0718	1.34		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
3.3	456	0.1096	2.32		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
1.2	352	0.1080	4.93		**Shallow Concentrated Flow, D-E** Grassed Waterway Kv= 15.0 fps
27.6	1,451	Total			

Subcatchment PDA-3A: PDA-3A



Summary for Subcatchment PDA-3B: PDA-3B

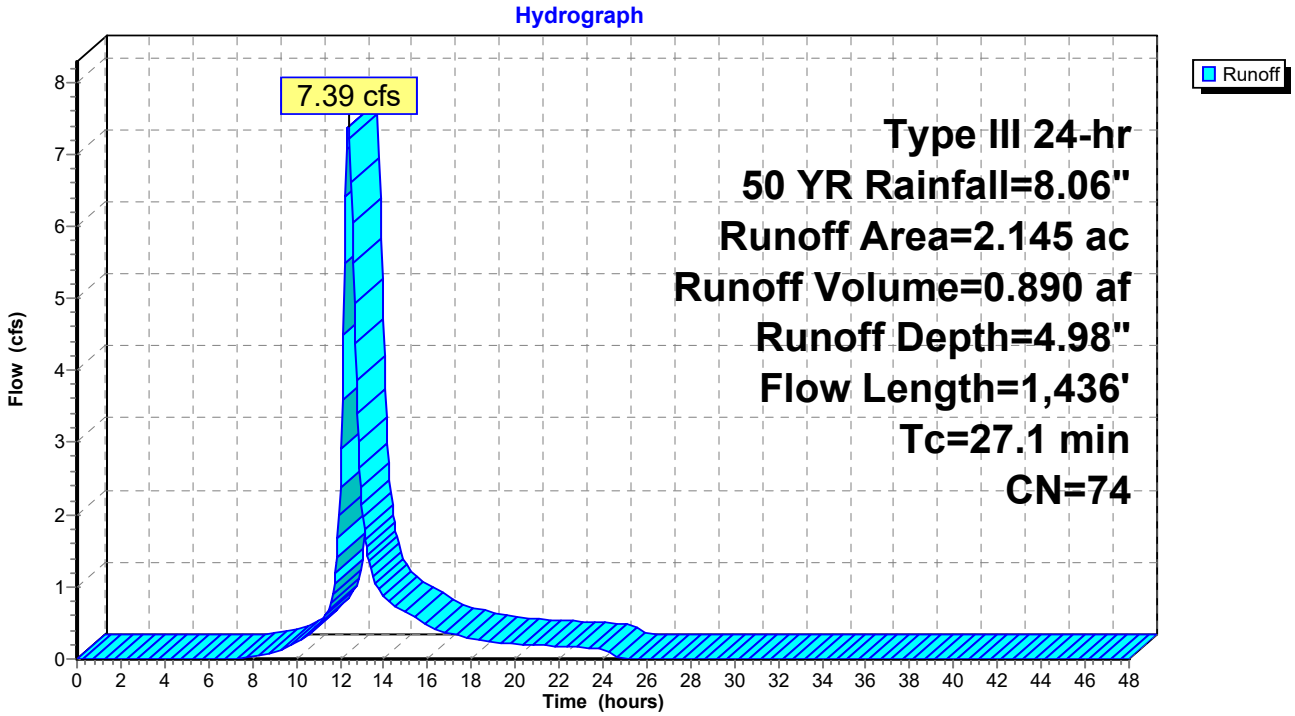
Runoff = 7.39 cfs @ 12.37 hrs, Volume= 0.890 af, Depth= 4.98"
Routed to Link AP-3 : AP-3

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 50 YR Rainfall=8.06"

	Area (ac)	CN	Description
	1.170	73	Woods, Fair, HSG C
	0.387	71	Meadow, non-grazed, HSG C
*	0.212	75	Meadow, non-grazed, HSG C/D
	0.376	78	Meadow, non-grazed, HSG D
	2.145	74	Weighted Average
	2.145		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0500	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
6.1	518	0.0814	1.43		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
6.1	818	0.1027	2.24		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
27.1	1,436	Total			

Subcatchment PDA-3B: PDA-3B



Summary for Reach 1R: Eastern Swale

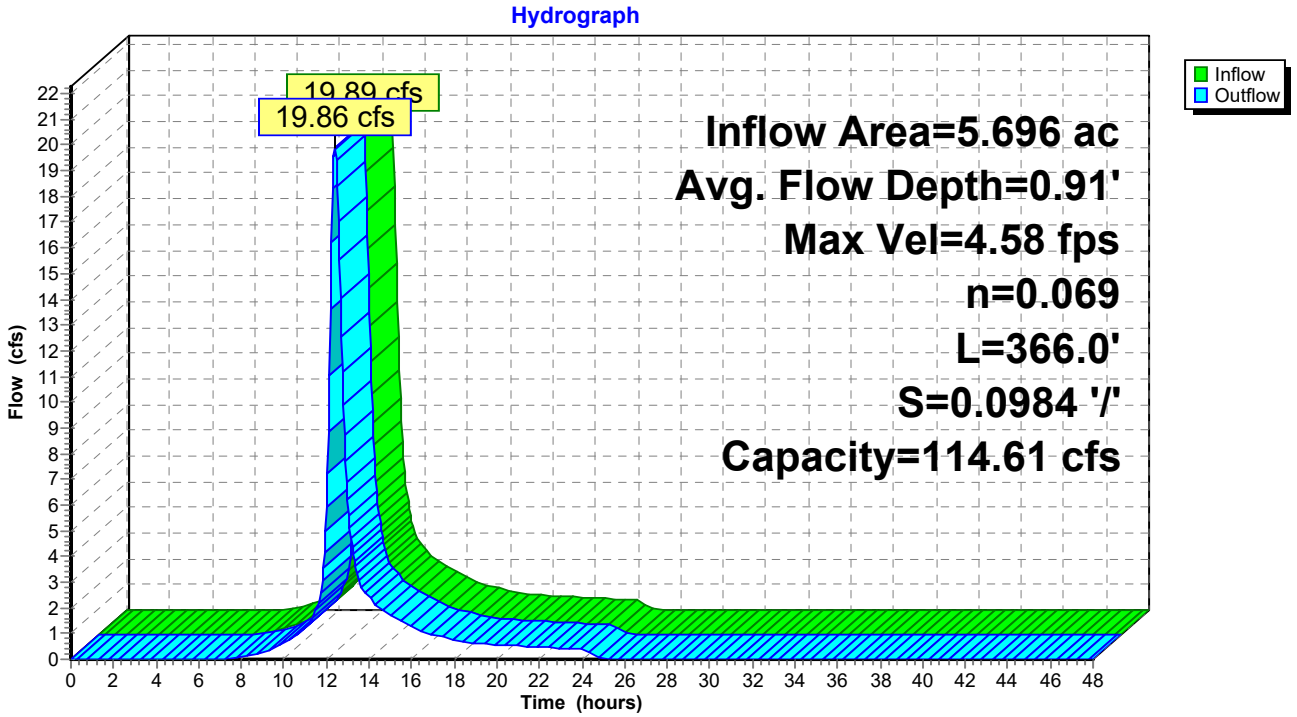
Inflow Area = 5.696 ac, 0.00% Impervious, Inflow Depth = 5.10" for 50 YR event
Inflow = 19.89 cfs @ 12.38 hrs, Volume= 2.419 af
Outflow = 19.86 cfs @ 12.40 hrs, Volume= 2.419 af, Atten= 0%, Lag= 1.1 min
Routed to Pond B-2 : B-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.58 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 1.76 fps, Avg. Travel Time= 3.5 min

Peak Storage= 1,589 cf @ 12.40 hrs
Average Depth at Peak Storage= 0.91' , Surface Width= 7.49'
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 114.61 cfs

2.00' x 2.00' deep channel, n= 0.069 Riprap, 6-inch
Side Slope Z-value= 3.0 '/' Top Width= 14.00'
Length= 366.0' Slope= 0.0984 '/'
Inlet Invert= 980.00', Outlet Invert= 944.00'

Reach 1R: Eastern Swale



Stage-Area-Storage for Reach 1R: Eastern Swale

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
980.00	0.0	0
980.02	0.0	15
980.04	0.1	31
980.06	0.1	48
980.08	0.2	66
980.10	0.2	84
980.12	0.3	104
980.14	0.3	124
980.16	0.4	145
980.18	0.5	167
980.20	0.5	190
980.22	0.6	214
980.24	0.7	239
980.26	0.7	265
980.28	0.8	291
980.30	0.9	318
980.32	0.9	347
980.34	1.0	376
980.36	1.1	406
980.38	1.2	437
980.40	1.3	468
980.42	1.4	501
980.44	1.5	535
980.46	1.6	569
980.48	1.7	604
980.50	1.8	641
980.52	1.9	678
980.54	2.0	715
980.56	2.1	754
980.58	2.2	794
980.60	2.3	834
980.62	2.4	876
980.64	2.5	918
980.66	2.6	961
980.68	2.7	1,005
980.70	2.9	1,050
980.72	3.0	1,096
980.74	3.1	1,143
980.76	3.3	1,191
980.78	3.4	1,239
980.80	3.5	1,288
980.82	3.7	1,339
980.84	3.8	1,390
980.86	3.9	1,442
980.88	4.1	1,494
980.90	4.2	1,548
980.92	4.4	1,603
980.94	4.5	1,658
980.96	4.7	1,715
980.98	4.8	1,772
981.00	5.0	1,830
981.02	5.2	1,889
981.04	5.3	1,949
981.06	5.5	2,010
981.08	5.7	2,071
981.10	5.8	2,134
981.12	6.0	2,197
981.14	6.2	2,261
981.16	6.4	2,327
981.18	6.5	2,393
981.20	6.7	2,460
981.22	6.9	2,527
981.24	7.1	2,596
981.26	7.3	2,666
981.28	7.5	2,736
981.30	7.7	2,807
981.32	7.9	2,879
981.34	8.1	2,952
981.36	8.3	3,026
981.38	8.5	3,101
981.40	8.7	3,177
981.42	8.9	3,253
981.44	9.1	3,331
981.46	9.3	3,409
981.48	9.5	3,488
981.50	9.8	3,569
981.52	10.0	3,649
981.54	10.2	3,731
981.56	10.4	3,814
981.58	10.6	3,898
981.60	10.9	3,982
981.62	11.1	4,067
981.64	11.3	4,154
981.66	11.6	4,241
981.68	11.8	4,329
981.70	12.1	4,418
981.72	12.3	4,507
981.74	12.6	4,598
981.76	12.8	4,689
981.78	13.1	4,782
981.80	13.3	4,875
981.82	13.6	4,969
981.84	13.8	5,064
981.86	14.1	5,160
981.88	14.4	5,257
981.90	14.6	5,355
981.92	14.9	5,453
981.94	15.2	5,553
981.96	15.4	5,653
981.98	15.7	5,754
982.00	**16.0**	**5,856**

Summary for Pond B-1: B-1

Inflow Area = 2.402 ac, 0.00% Impervious, Inflow Depth = 4.98" for 50 YR event
Inflow = 11.30 cfs @ 12.17 hrs, Volume= 0.997 af
Outflow = 8.23 cfs @ 12.30 hrs, Volume= 0.923 af, Atten= 27%, Lag= 8.0 min
Primary = 8.23 cfs @ 12.30 hrs, Volume= 0.923 af
Routed to Link AP-2 : AP-2
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link AP-2 : AP-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 897.87' @ 12.30 hrs Surf.Area= 5,289 sf Storage= 11,323 cf

Plug-Flow detention time= 153.4 min calculated for 0.923 af (93% of inflow)
Center-of-Mass det. time= 115.2 min (937.1 - 821.9)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	17,970 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

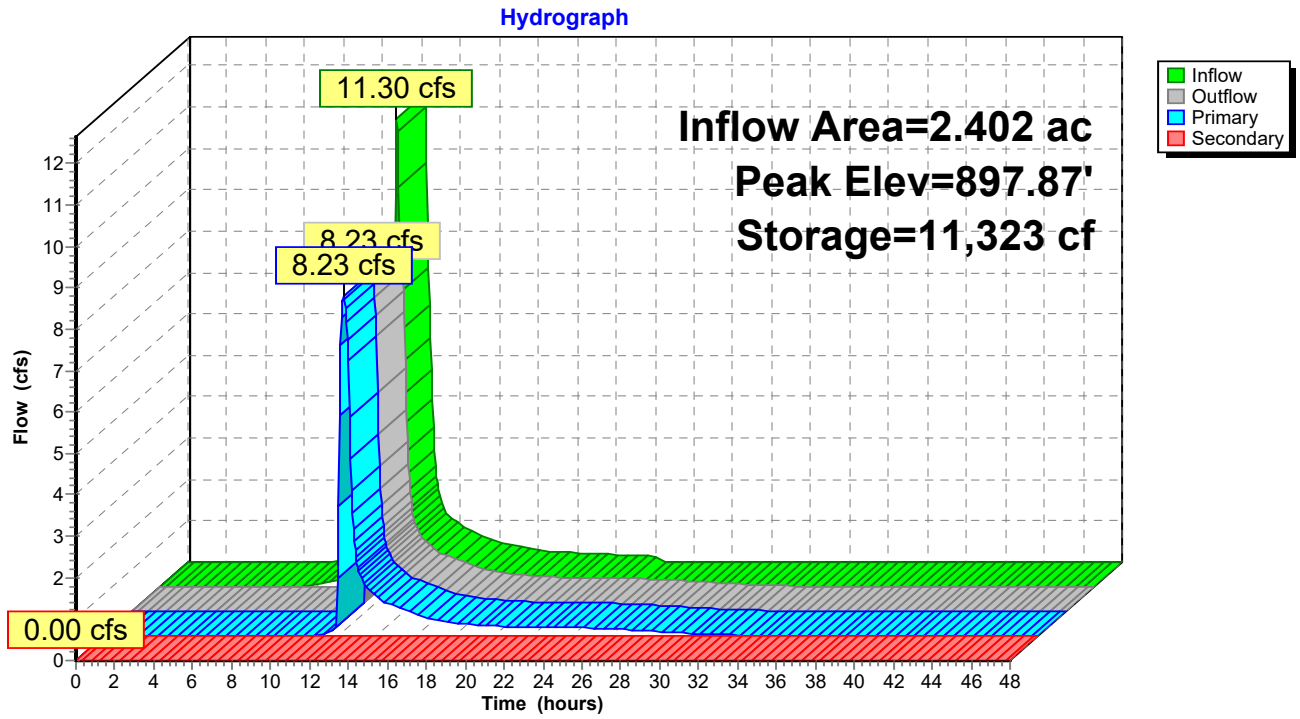
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
895.00	2,698	274.0	0	0	2,698
896.00	3,550	293.0	3,114	3,114	3,601
897.00	4,458	312.0	3,995	7,110	4,564
898.00	5,424	331.0	4,933	12,043	5,588
899.00	6,445	349.0	5,927	17,970	6,620

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**24.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 895.00' / 893.00' S= 0.0571 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Primary	896.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	897.00'	**18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	898.00'	**20.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=8.22 cfs @ 12.30 hrs HW=897.86' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 7.91 cfs of 16.30 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 7.91 cfs @ 4.47 fps)
- **2=Orifice/Grate** (Orifice Controls 0.31 cfs @ 6.35 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=895.00' TW=0.00' (Dynamic Tailwater)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond B-1: B-1


Hydrograph
11.30 cfs
8.23 cfs
8.23 cfs
0.00 cfs
Inflow Area=2.402 ac
Peak Elev=897.87'
Storage=11,323 cf
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48
0 2 3 4 5 6 7 8 9 10 11 12

Stage-Area-Storage for Pond B-1: B-1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
895.00	2,698	0
895.05	2,738	136
895.10	2,778	274
895.15	2,818	414
895.20	2,859	556
895.25	2,900	700
895.30	2,941	846
895.35	2,983	994
895.40	3,025	1,144
895.45	3,067	1,296
895.50	3,109	1,451
895.55	3,152	1,607
895.60	3,195	1,766
895.65	3,239	1,927
895.70	3,282	2,090
895.75	3,326	2,255
895.80	3,370	2,422
895.85	3,415	2,592
895.90	3,460	2,764
895.95	3,505	2,938
896.00	3,550	3,114
896.05	3,593	3,293
896.10	3,636	3,474
896.15	3,680	3,656
896.20	3,723	3,842
896.25	3,767	4,029
896.30	3,812	4,218
896.35	3,856	4,410
896.40	3,901	4,604
896.45	3,946	4,800
896.50	3,991	4,998
896.55	4,037	5,199
896.60	4,082	5,402
896.65	4,128	5,607
896.70	4,175	5,815
896.75	4,221	6,025
896.80	4,268	6,237
896.85	4,315	6,452
896.90	4,363	6,669
896.95	4,410	6,888
897.00	4,458	7,110
897.05	4,504	7,334
897.10	4,550	7,560
897.15	4,597	7,789
897.20	4,644	8,020
897.25	4,691	8,253
897.30	4,738	8,489
897.35	4,785	8,727
897.40	4,833	8,967
897.45	4,881	9,210
897.50	4,929	9,455
897.55	4,978	9,703
897.60	5,026	9,953
897.65	5,075	10,206
897.70	5,124	10,461
897.75	5,174	10,718
897.80	5,223	10,978
897.85	5,273	11,241
897.90	5,323	11,505
897.95	5,373	11,773
898.00	5,424	12,043
898.05	5,473	12,315
898.10	5,522	12,590
898.15	5,572	12,867
898.20	5,621	13,147
898.25	5,671	13,430
898.30	5,721	13,714
898.35	5,771	14,002
898.40	5,822	14,291
898.45	5,873	14,584
898.50	5,924	14,879
898.55	5,975	15,176
898.60	6,026	15,476
898.65	6,078	15,779
898.70	6,129	16,084
898.75	6,182	16,392
898.80	6,234	16,702
898.85	6,286	17,015
898.90	6,339	17,331
898.95	6,392	17,649
899.00	**6,445**	**17,970**

Summary for Pond B-2: B-2

Inflow Area = 5.696 ac, 0.00% Impervious, Inflow Depth = 5.10" for 50 YR event
Inflow = 19.86 cfs @ 12.40 hrs, Volume= 2.419 af
Outflow = 16.18 cfs @ 12.59 hrs, Volume= 2.181 af, Atten= 19%, Lag= 11.4 min
Primary = 4.65 cfs @ 12.59 hrs, Volume= 1.778 af
Routed to Link AP-3 : AP-3
Secondary = 11.53 cfs @ 12.59 hrs, Volume= 0.404 af
Routed to Link AP-3 : AP-3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 939.29' @ 12.59 hrs Surf.Area= 13,356 sf Storage= 35,868 cf

Plug-Flow detention time= 225.7 min calculated for 2.181 af (90% of inflow)
Center-of-Mass det. time= 177.7 min (1,013.8 - 836.1)

Volume	Invert	Avail.Storage	Storage Description
#1	936.00'	45,694 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

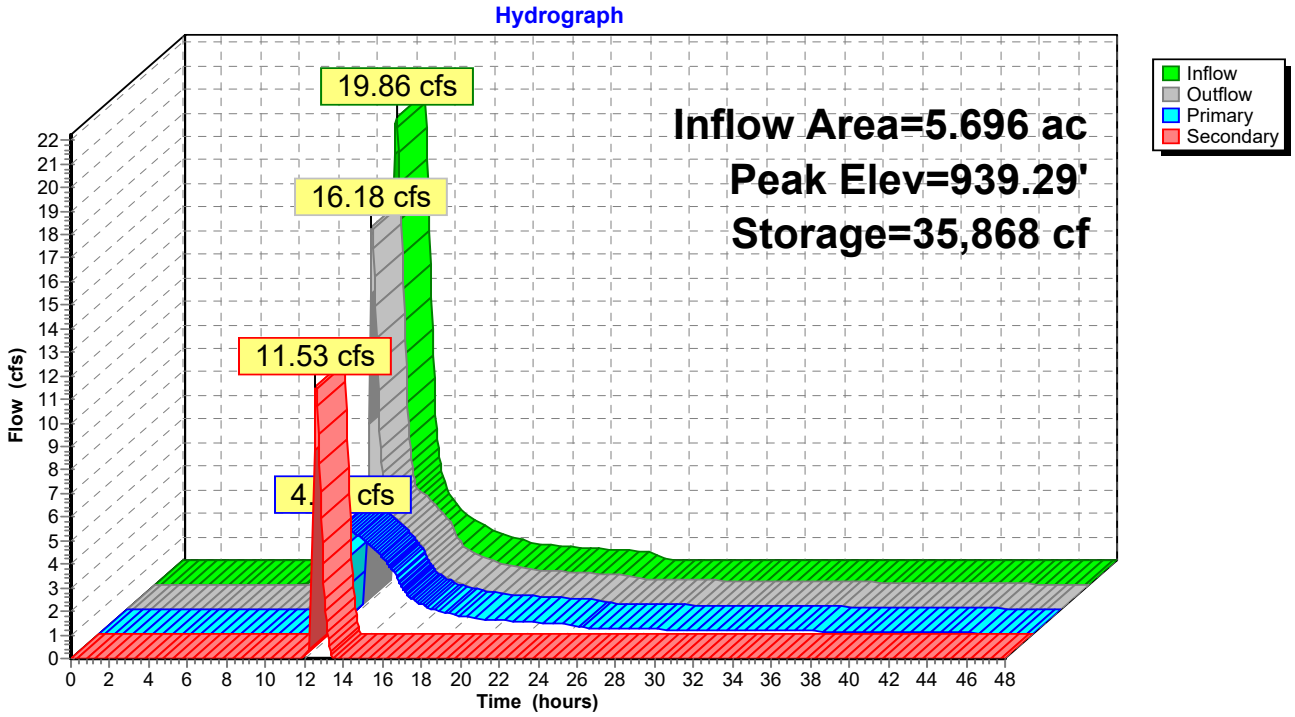
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
936.00	8,529	458.0	0	0	8,529
937.00	9,931	477.0	9,221	9,221	10,018
938.00	11,389	495.0	10,652	19,873	11,493
939.00	12,904	514.0	12,139	32,011	13,099
940.00	14,476	533.0	13,682	45,694	14,767

Device	Routing	Invert	Outlet Devices
#1	Primary	936.00'	**24.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 936.00' / 935.00' S= 0.0286 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Primary	937.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	938.00'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	939.00'	**30.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=4.65 cfs @ 12.59 hrs HW=939.29' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 4.30 cfs of 18.08 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 4.30 cfs @ 5.47 fps)
- **2=Orifice/Grate** (Orifice Controls 0.35 cfs @ 7.09 fps)

Secondary OutFlow Max=11.43 cfs @ 12.59 hrs HW=939.29' TW=0.00' (Dynamic Tailwater)
- **4=Broad-Crested Rectangular Weir** (Weir Controls 11.43 cfs @ 1.30 fps)

Pond B-2: B-2


Hydrograph
19.86 cfs
16.18 cfs
11.53 cfs
4. cfs
Inflow Area=5.696 ac
Peak Elev=939.29'
Storage=35,868 cf
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Stage-Area-Storage for Pond B-2: B-2

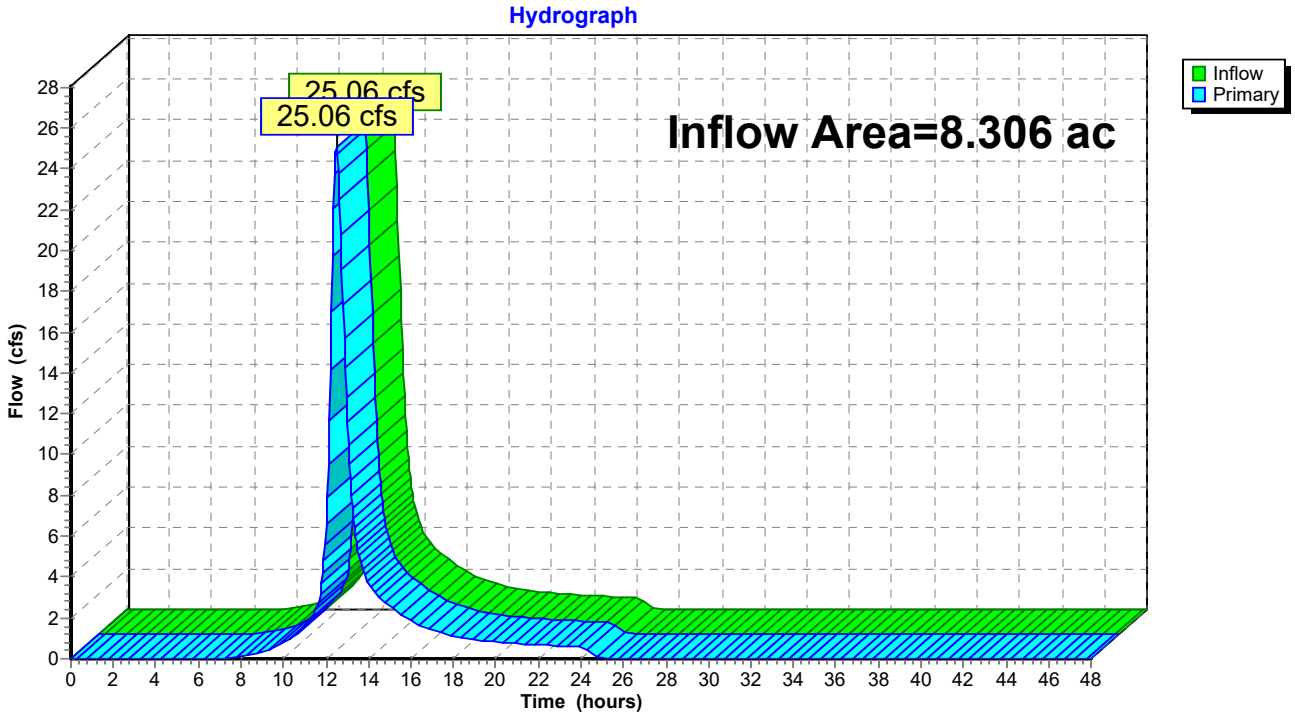
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
936.00	8,529	0
936.05	8,597	428
936.10	8,664	860
936.15	8,733	1,295
936.20	8,801	1,733
936.25	8,870	2,175
936.30	8,938	2,620
936.35	9,008	3,069
936.40	9,077	3,521
936.45	9,147	3,976
936.50	9,217	4,435
936.55	9,287	4,898
936.60	9,357	5,364
936.65	9,428	5,834
936.70	9,499	6,307
936.75	9,571	6,784
936.80	9,642	7,264
936.85	9,714	7,748
936.90	9,786	8,235
936.95	9,858	8,726
937.00	9,931	9,221
937.05	10,002	9,719
937.10	10,072	10,221
937.15	10,143	10,727
937.20	10,215	11,236
937.25	10,286	11,748
937.30	10,358	12,264
937.35	10,430	12,784
937.40	10,502	13,307
937.45	10,575	13,834
937.50	10,648	14,365
937.55	10,721	14,899
937.60	10,794	15,437
937.65	10,867	15,978
937.70	10,941	16,524
937.75	11,015	17,072
937.80	11,089	17,625
937.85	11,164	18,181
937.90	11,239	18,741
937.95	11,314	19,305
938.00	11,389	19,873
938.05	11,463	20,444
938.10	11,536	21,019
938.15	11,610	21,598
938.20	11,684	22,180
938.25	11,759	22,766
938.30	11,834	23,356
938.35	11,908	23,950
938.40	11,984	24,547
938.45	12,059	25,148
938.50	12,135	25,753
938.55	12,211	26,361
938.60	12,287	26,974
938.65	12,363	27,590
938.70	12,440	28,210
938.75	12,516	28,834
938.80	12,593	29,462
938.85	12,671	30,093
938.90	12,748	30,729
938.95	12,826	31,368
939.00	12,904	32,011
939.05	12,980	32,659
939.10	13,057	33,309
939.15	13,134	33,964
939.20	13,211	34,623
939.25	13,289	35,285
939.30	13,366	35,952
939.35	13,444	36,622
939.40	13,522	37,296
939.45	13,600	37,974
939.50	13,679	38,656
939.55	13,757	39,342
939.60	13,836	40,032
939.65	13,916	40,726
939.70	13,995	41,423
939.75	14,075	42,125
939.80	14,154	42,831
939.85	14,234	43,541
939.90	14,315	44,254
939.95	14,395	44,972
940.00	**14,476**	**45,694**

Summary for Link AP-1: AP-1

Inflow Area = 8.306 ac, 2.82% Impervious, Inflow Depth = 4.98" for 50 YR event
Inflow = 25.06 cfs @ 12.50 hrs, Volume= 3.447 af
Primary = 25.06 cfs @ 12.50 hrs, Volume= 3.447 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

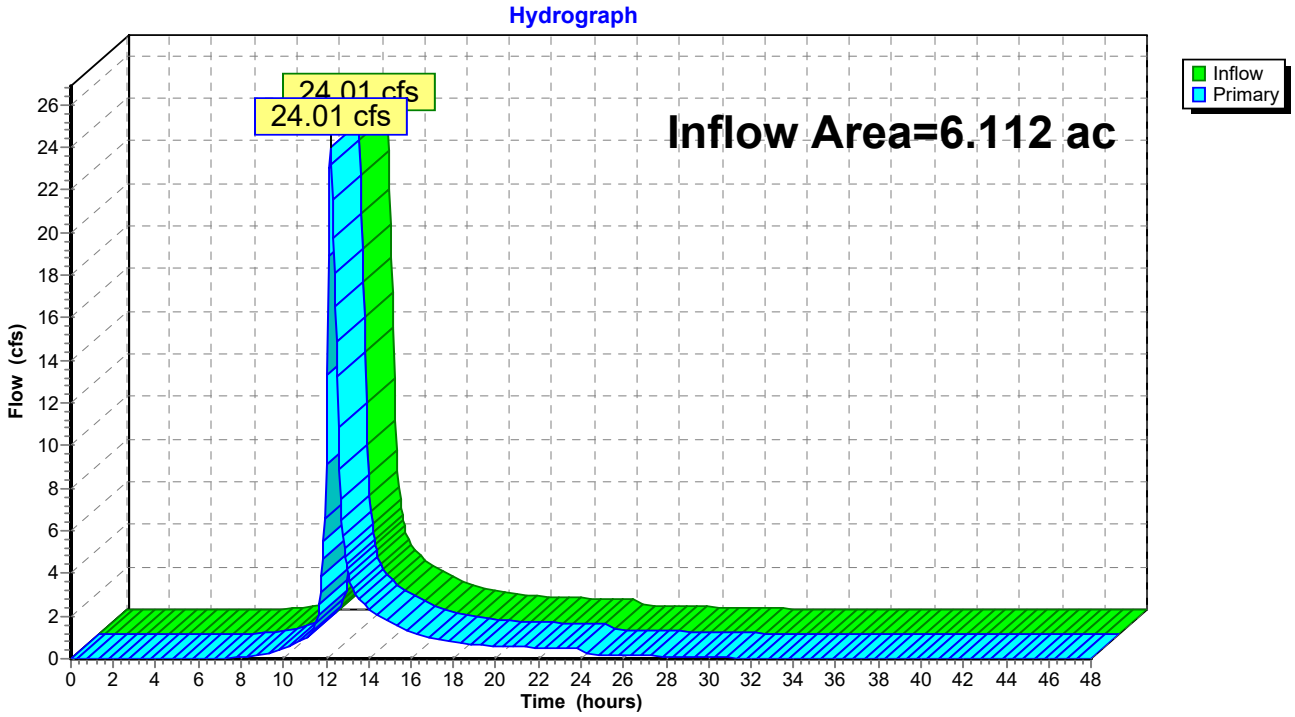


Summary for Link AP-2: AP-2

Inflow Area = 6.112 ac, 0.00% Impervious, Inflow Depth = 4.86" for 50 YR event
Inflow = 24.01 cfs @ 12.20 hrs, Volume= 2.474 af
Primary = 24.01 cfs @ 12.20 hrs, Volume= 2.474 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

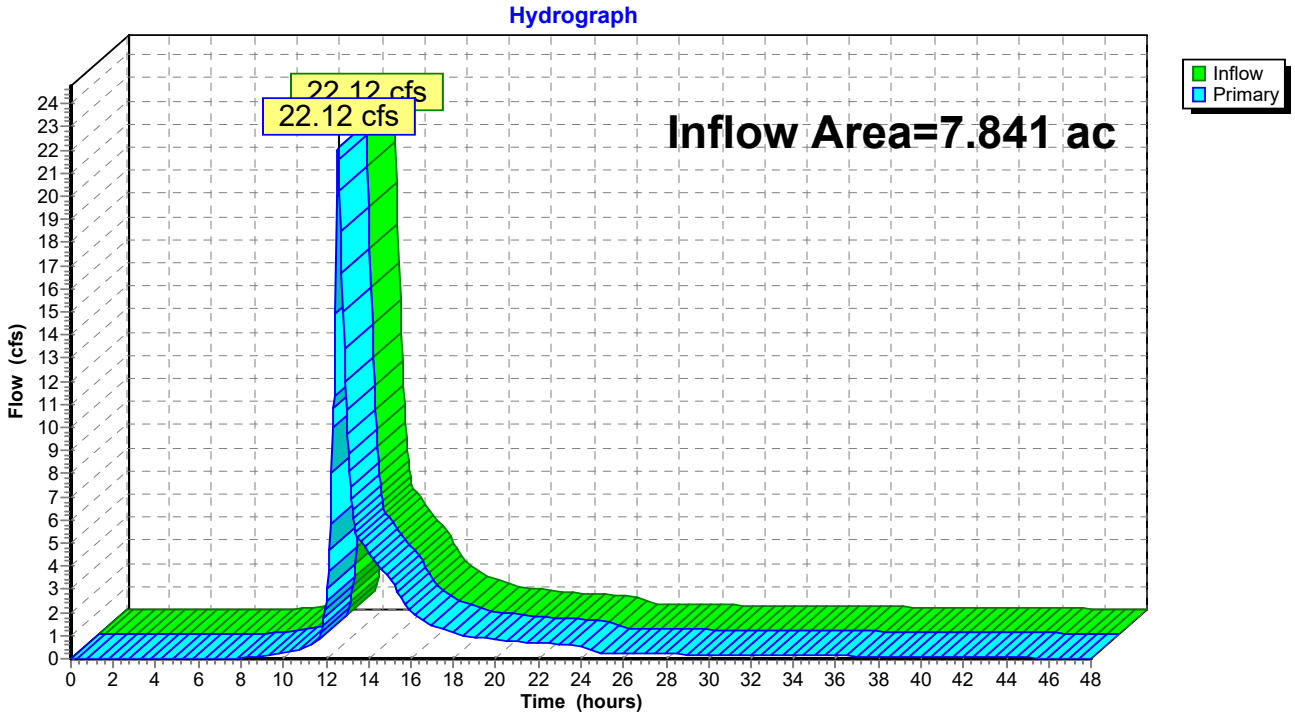


Summary for Link AP-3: AP-3

Inflow Area = 7.841 ac, 0.00% Impervious, Inflow Depth > 4.70" for 50 YR event
Inflow = 22.12 cfs @ 12.57 hrs, Volume= 3.072 af
Primary = 22.12 cfs @ 12.57 hrs, Volume= 3.072 af, Atten= 0%, Lag= 0.0 min

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

Link AP-3: AP-3



Summary for Subcatchment PDA-1: PDA-1

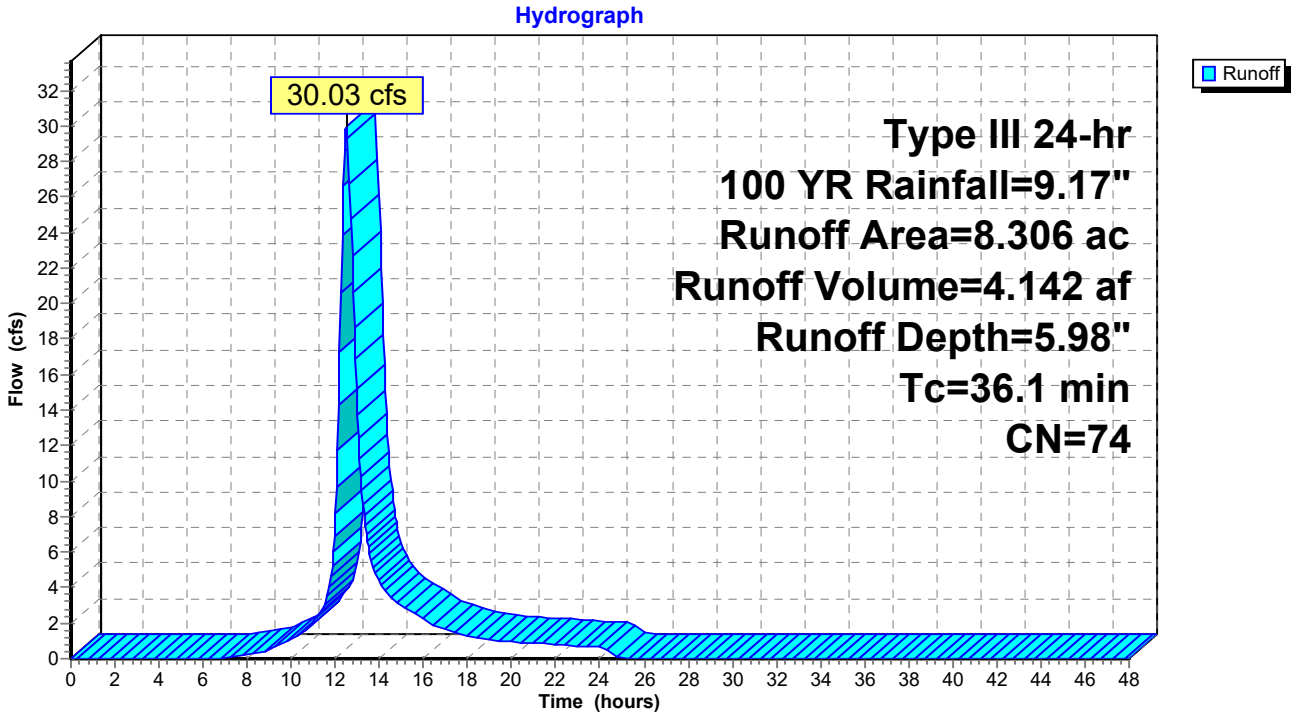
Runoff = 30.03 cfs @ 12.49 hrs, Volume= 4.142 af, Depth= 5.98"
Routed to Link AP-1 : AP-1

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=9.17"

	Area (ac)	CN	Description
	3.527	73	Woods, Fair, HSG C
	1.559	71	Meadow, non-grazed, HSG C
*	2.787	75	Meadow, non-grazed, HSG C/D
*	0.102	96	Gravel surface, HSG C/D
	0.190	98	Paved roads w/curbs & sewers, HSG C
	0.078	79	Woods, Fair, HSG D
	0.003	78	Meadow, non-grazed, HSG D
	0.016	96	Gravel surface, HSG D
	0.044	98	Paved roads w/curbs & sewers, HSG D
	8.306	74	Weighted Average
	8.072		97.18% Pervious Area
	0.234		2.82% Impervious Area

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

Subcatchment PDA-1: PDA-1



Summary for Subcatchment PDA-2A: PDA-2A

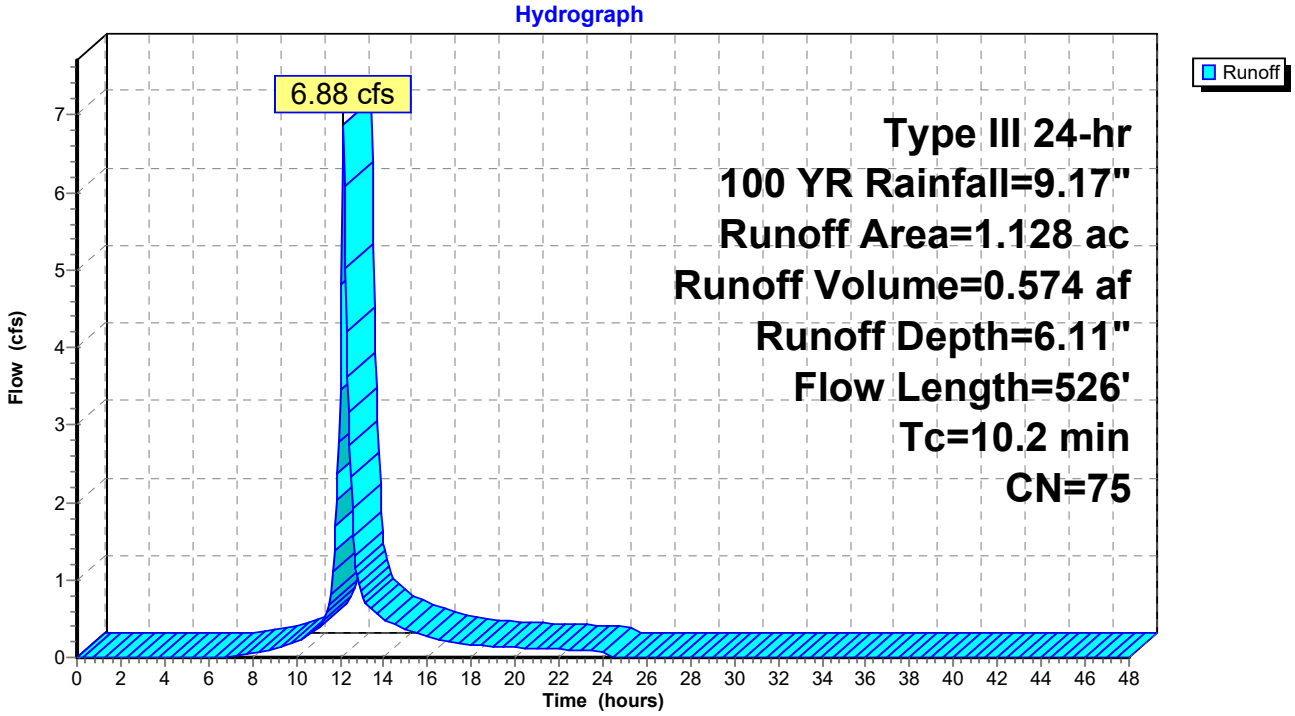
Runoff = 6.88 cfs @ 12.14 hrs, Volume= 0.574 af, Depth= 6.11"
Routed to Link AP-2 : AP-2

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=9.17"

	Area (ac)	CN	Description
	0.297	71	Meadow, non-grazed, HSG C
*	0.771	75	Meadow, non-grazed, HSG C/D
	0.060	96	Gravel surface, HSG D
	1.128	75	Weighted Average
	1.128		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.1100	0.23		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.18"
3.0	426	0.1153	2.38		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
10.2	526	Total			

Subcatchment PDA-2A: PDA-2A



Summary for Subcatchment PDA-2B: PDA-2B

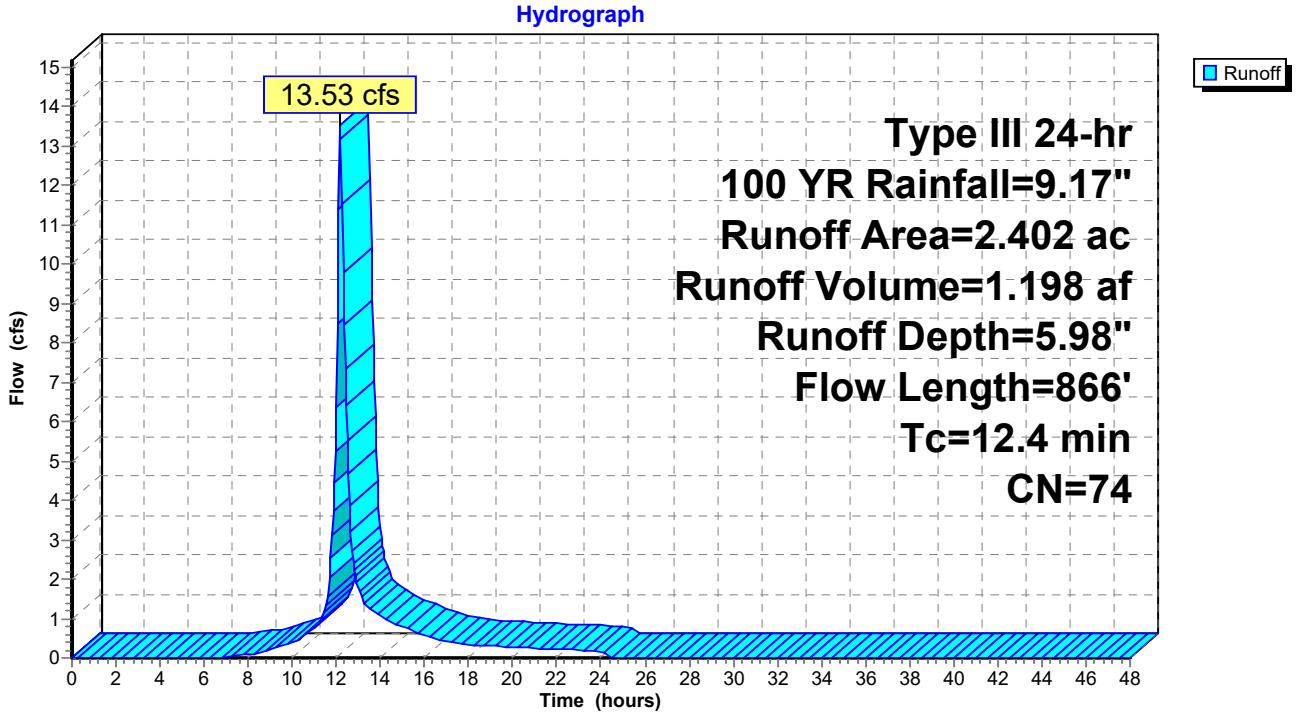
Runoff = 13.53 cfs @ 12.17 hrs, Volume= 1.198 af, Depth= 5.98"
Routed to Pond B-1 : B-1

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=9.17"

	Area (ac)	CN	Description
	0.706	71	Meadow, non-grazed, HSG C
*	1.696	75	Meadow, non-grazed, HSG C/D
	2.402	74	Weighted Average
	2.402		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.1200	0.24		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.18"
5.4	766	0.1162	2.39		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
12.4	866	Total			

Subcatchment PDA-2B: PDA-2B



Summary for Subcatchment PDA-2C: PDA-2C

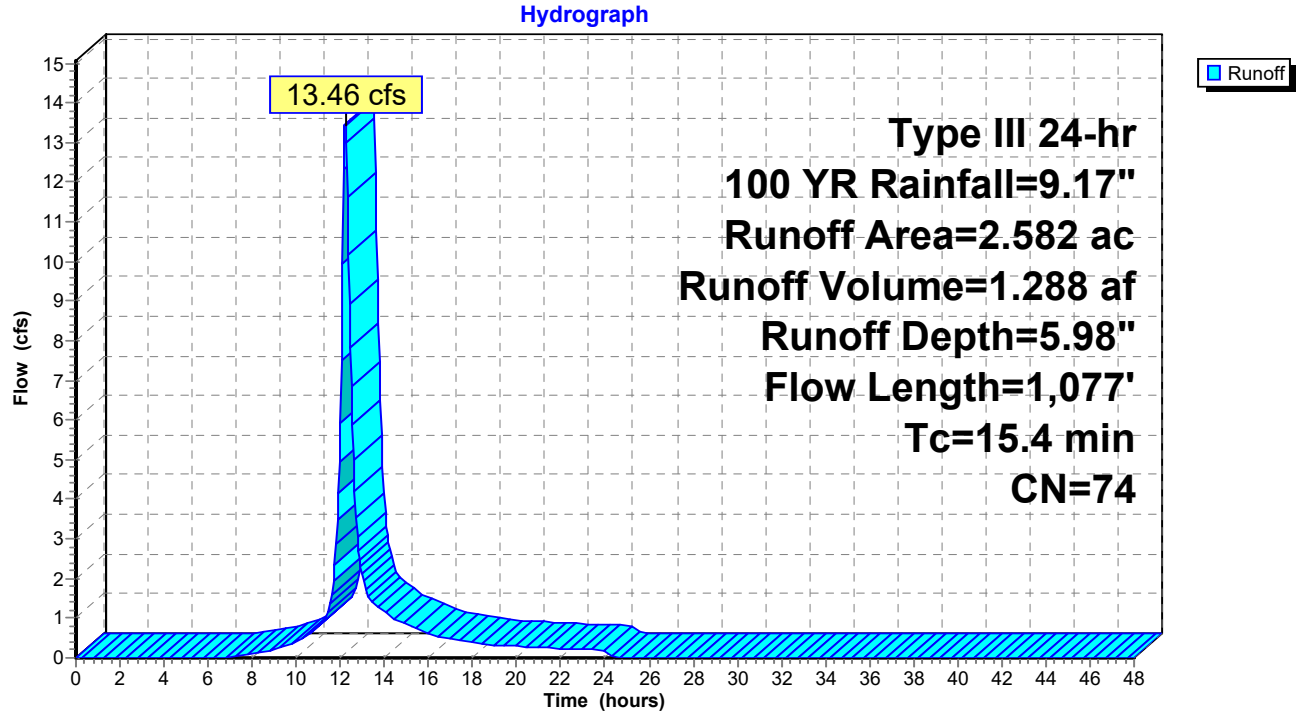
Runoff = 13.46 cfs @ 12.21 hrs, Volume= 1.288 af, Depth= 5.98"
Routed to Link AP-2 : AP-2

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=9.17"

	Area (ac)	CN	Description
	0.444	71	Meadow, non-grazed, HSG C
*	2.138	75	Meadow, non-grazed, HSG C/D
	2.582	74	Weighted Average
	2.582		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0800	0.20		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 3.18"
7.2	977	0.1034	2.25		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
15.4	1,077	Total			

Subcatchment PDA-2C: PDA-2C



Summary for Subcatchment PDA-3A: PDA-3A

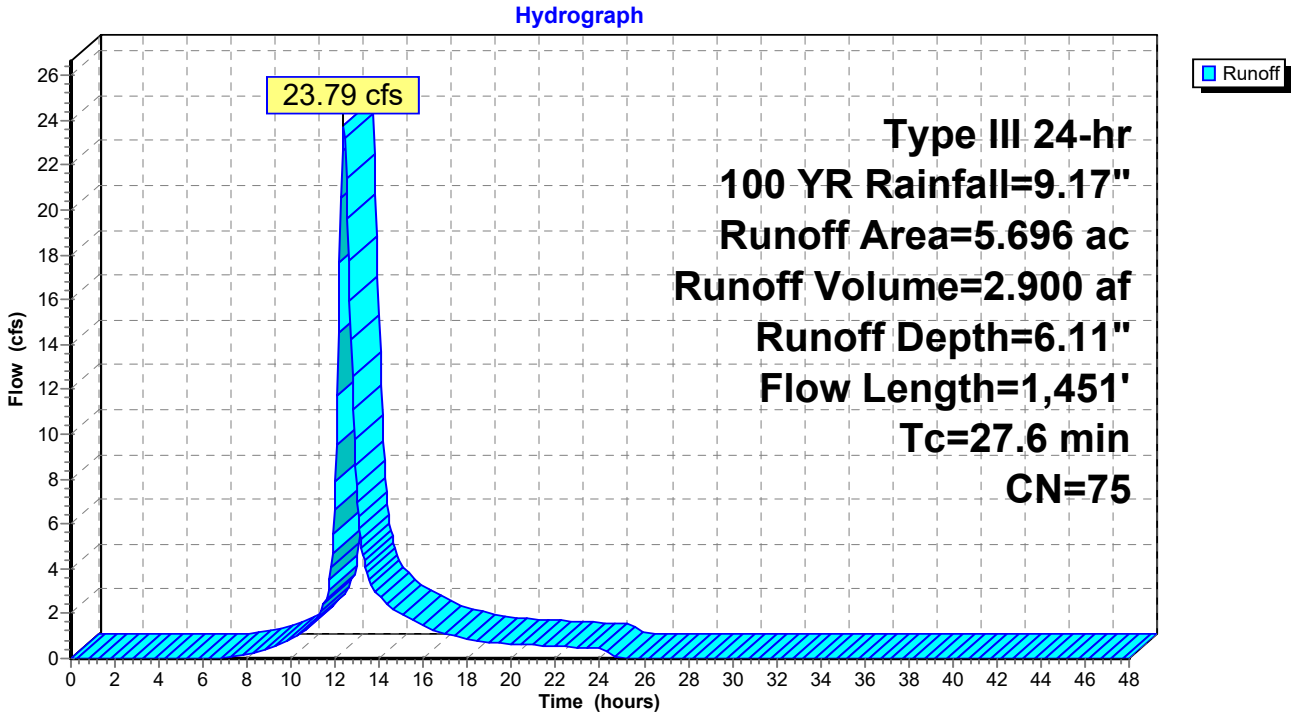
Runoff = 23.79 cfs @ 12.37 hrs, Volume= 2.900 af, Depth= 6.11"
Routed to Reach 1R : Eastern Swale

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=9.17"

	Area (ac)	CN	Description
	0.877	73	Woods, Fair, HSG C
	0.399	71	Meadow, non-grazed, HSG C
*	3.237	75	Meadow, non-grazed, HSG C/D
	1.183	78	Meadow, non-grazed, HSG D
	5.696	75	Weighted Average
	5.696		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.3	100	0.0400	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
6.8	543	0.0718	1.34		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
3.3	456	0.1096	2.32		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
1.2	352	0.1080	4.93		**Shallow Concentrated Flow, D-E** Grassed Waterway Kv= 15.0 fps
27.6	1,451	Total			

Subcatchment PDA-3A: PDA-3A



Summary for Subcatchment PDA-3B: PDA-3B

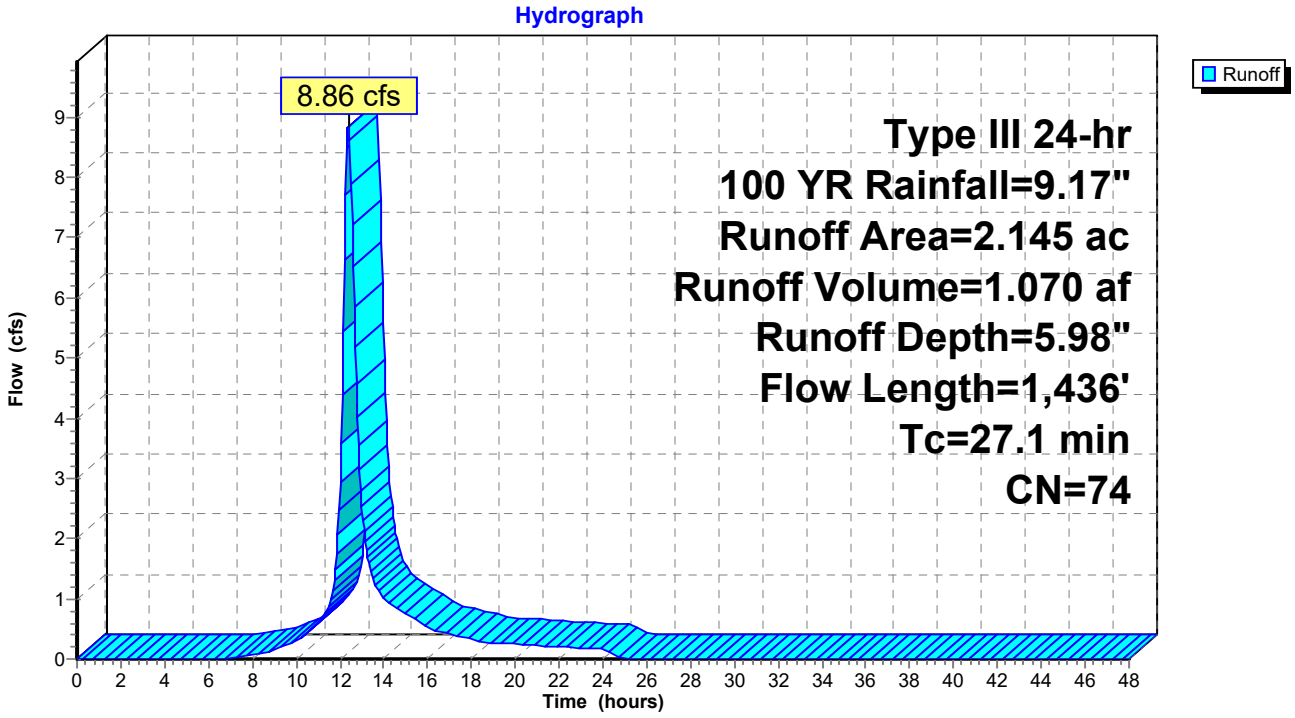
Runoff = 8.86 cfs @ 12.37 hrs, Volume= 1.070 af, Depth= 5.98"
Routed to Link AP-3 : AP-3

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=9.17"

	Area (ac)	CN	Description
	1.170	73	Woods, Fair, HSG C
	0.387	71	Meadow, non-grazed, HSG C
*	0.212	75	Meadow, non-grazed, HSG C/D
	0.376	78	Meadow, non-grazed, HSG D
	2.145	74	Weighted Average
	2.145		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0500	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.18"
6.1	518	0.0814	1.43		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
6.1	818	0.1027	2.24		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
27.1	1,436	Total			

Subcatchment PDA-3B: PDA-3B



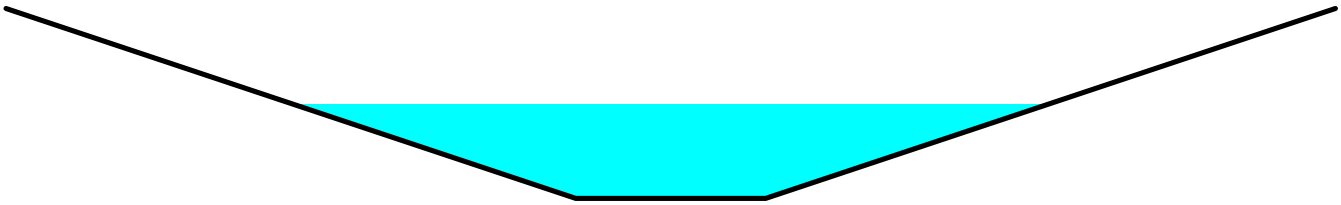
Summary for Reach 1R: Eastern Swale

Inflow Area = 5.696 ac, 0.00% Impervious, Inflow Depth = 6.11" for 100 YR event
Inflow = 23.79 cfs @ 12.37 hrs, Volume= 2.900 af
Outflow = 23.73 cfs @ 12.39 hrs, Volume= 2.900 af, Atten= 0%, Lag= 1.1 min
Routed to Pond B-2 : B-2

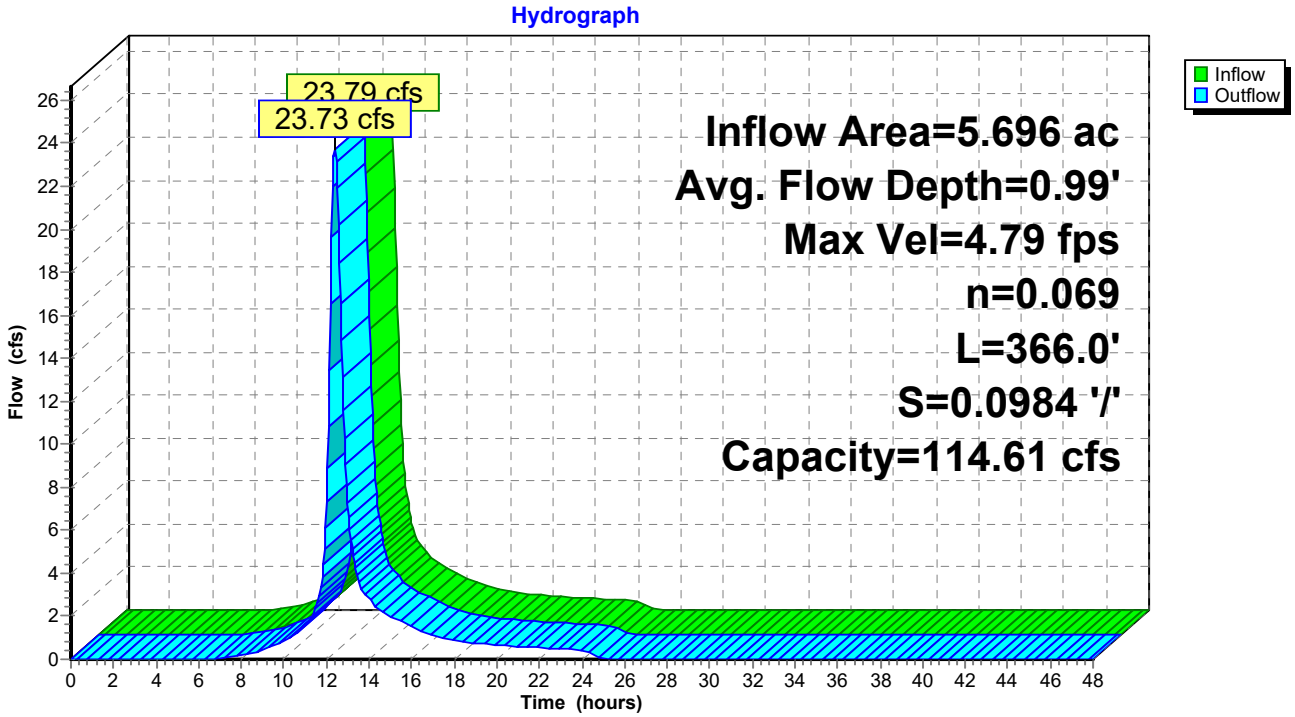
Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.79 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 1.83 fps, Avg. Travel Time= 3.3 min

Peak Storage= 1,812 cf @ 12.39 hrs
Average Depth at Peak Storage= 0.99' , Surface Width= 7.96'
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 114.61 cfs

2.00' x 2.00' deep channel, n= 0.069 Riprap, 6-inch
Side Slope Z-value= 3.0 '/' Top Width= 14.00'
Length= 366.0' Slope= 0.0984 '/'
Inlet Invert= 980.00', Outlet Invert= 944.00'



Reach 1R: Eastern Swale



Stage-Area-Storage for Reach 1R: Eastern Swale

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
980.00	0.0	0
980.02	0.0	15
980.04	0.1	31
980.06	0.1	48
980.08	0.2	66
980.10	0.2	84
980.12	0.3	104
980.14	0.3	124
980.16	0.4	145
980.18	0.5	167
980.20	0.5	190
980.22	0.6	214
980.24	0.7	239
980.26	0.7	265
980.28	0.8	291
980.30	0.9	318
980.32	0.9	347
980.34	1.0	376
980.36	1.1	406
980.38	1.2	437
980.40	1.3	468
980.42	1.4	501
980.44	1.5	535
980.46	1.6	569
980.48	1.7	604
980.50	1.8	641
980.52	1.9	678
980.54	2.0	715
980.56	2.1	754
980.58	2.2	794
980.60	2.3	834
980.62	2.4	876
980.64	2.5	918
980.66	2.6	961
980.68	2.7	1,005
980.70	2.9	1,050
980.72	3.0	1,096
980.74	3.1	1,143
980.76	3.3	1,191
980.78	3.4	1,239
980.80	3.5	1,288
980.82	3.7	1,339
980.84	3.8	1,390
980.86	3.9	1,442
980.88	4.1	1,494
980.90	4.2	1,548
980.92	4.4	1,603
980.94	4.5	1,658
980.96	4.7	1,715
980.98	4.8	1,772
981.00	5.0	1,830
981.02	5.2	1,889
981.04	5.3	1,949
981.06	5.5	2,010
981.08	5.7	2,071
981.10	5.8	2,134
981.12	6.0	2,197
981.14	6.2	2,261
981.16	6.4	2,327
981.18	6.5	2,393
981.20	6.7	2,460
981.22	6.9	2,527
981.24	7.1	2,596
981.26	7.3	2,666
981.28	7.5	2,736
981.30	7.7	2,807
981.32	7.9	2,879
981.34	8.1	2,952
981.36	8.3	3,026
981.38	8.5	3,101
981.40	8.7	3,177
981.42	8.9	3,253
981.44	9.1	3,331
981.46	9.3	3,409
981.48	9.5	3,488
981.50	9.8	3,569
981.52	10.0	3,649
981.54	10.2	3,731
981.56	10.4	3,814
981.58	10.6	3,898
981.60	10.9	3,982
981.62	11.1	4,067
981.64	11.3	4,154
981.66	11.6	4,241
981.68	11.8	4,329
981.70	12.1	4,418
981.72	12.3	4,507
981.74	12.6	4,598
981.76	12.8	4,689
981.78	13.1	4,782
981.80	13.3	4,875
981.82	13.6	4,969
981.84	13.8	5,064
981.86	14.1	5,160
981.88	14.4	5,257
981.90	14.6	5,355
981.92	14.9	5,453
981.94	15.2	5,553
981.96	15.4	5,653
981.98	15.7	5,754
982.00	**16.0**	**5,856**

Summary for Pond B-1: B-1

Inflow Area = 2.402 ac, 0.00% Impervious, Inflow Depth = 5.98" for 100 YR event
Inflow = 13.53 cfs @ 12.17 hrs, Volume= 1.198 af
Outflow = 10.32 cfs @ 12.29 hrs, Volume= 1.124 af, Atten= 24%, Lag= 7.5 min
Primary = 9.19 cfs @ 12.29 hrs, Volume= 1.114 af
Routed to Link AP-2 : AP-2
Secondary = 1.13 cfs @ 12.29 hrs, Volume= 0.010 af
Routed to Link AP-2 : AP-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 898.08' @ 12.29 hrs Surf.Area= 5,506 sf Storage= 12,500 cf

Plug-Flow detention time= 134.2 min calculated for 1.124 af (94% of inflow)
Center-of-Mass det. time= 101.3 min (918.0 - 816.7)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	17,970 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

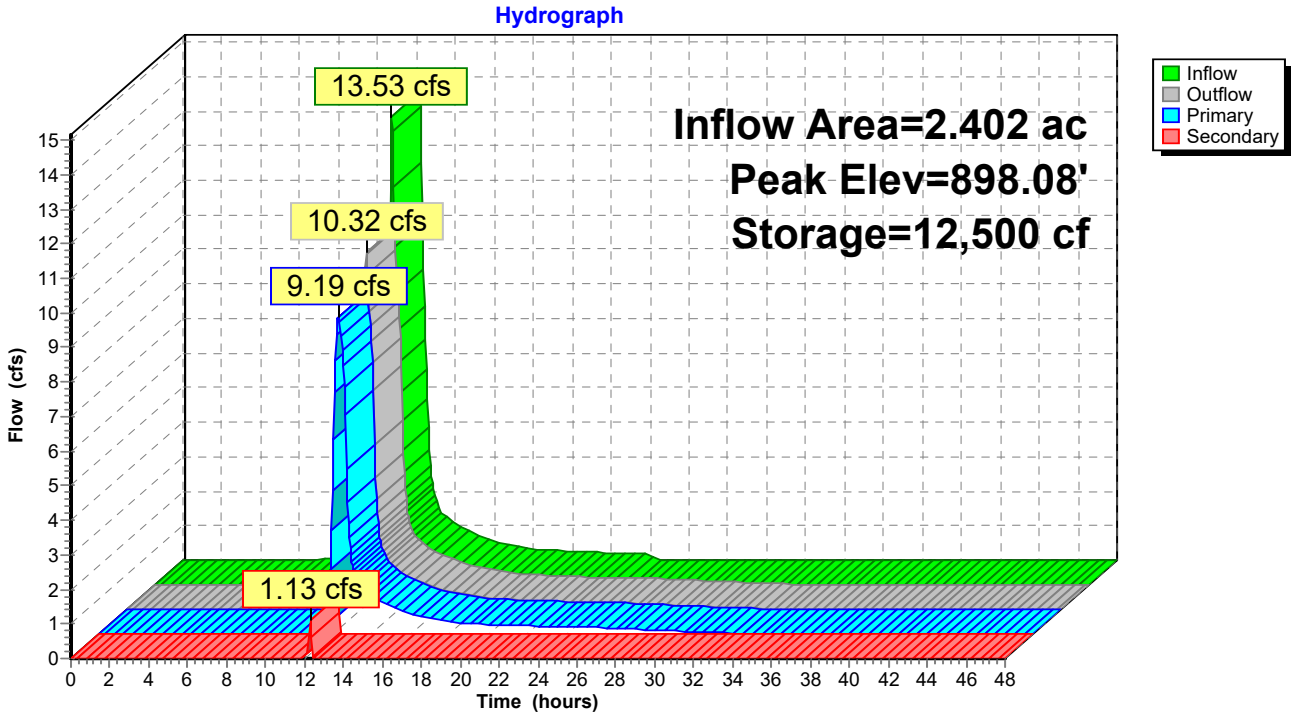
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
895.00	2,698	274.0	0	0	2,698
896.00	3,550	293.0	3,114	3,114	3,601
897.00	4,458	312.0	3,995	7,110	4,564
898.00	5,424	331.0	4,933	12,043	5,588
899.00	6,445	349.0	5,927	17,970	6,620

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**24.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 895.00' / 893.00' S= 0.0571 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Primary	896.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	897.00'	**18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	898.00'	**20.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=9.18 cfs @ 12.29 hrs HW=898.08' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 8.85 cfs of 17.23 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 8.85 cfs @ 5.01 fps)
- **2=Orifice/Grate** (Orifice Controls 0.33 cfs @ 6.73 fps)

Secondary OutFlow Max=1.08 cfs @ 12.29 hrs HW=898.08' TW=0.00' (Dynamic Tailwater)
- **4=Broad-Crested Rectangular Weir** (Weir Controls 1.08 cfs @ 0.67 fps)

Pond B-1: B-1


Hydrograph
13.53 cfs
10.32 cfs
9.19 cfs
1.13 cfs
Inflow Area=2.402 ac
Peak Elev=898.08'
Storage=12,500 cf
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Stage-Area-Storage for Pond B-1: B-1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
895.00	2,698	0
895.05	2,738	136
895.10	2,778	274
895.15	2,818	414
895.20	2,859	556
895.25	2,900	700
895.30	2,941	846
895.35	2,983	994
895.40	3,025	1,144
895.45	3,067	1,296
895.50	3,109	1,451
895.55	3,152	1,607
895.60	3,195	1,766
895.65	3,239	1,927
895.70	3,282	2,090
895.75	3,326	2,255
895.80	3,370	2,422
895.85	3,415	2,592
895.90	3,460	2,764
895.95	3,505	2,938
896.00	3,550	3,114
896.05	3,593	3,293
896.10	3,636	3,474
896.15	3,680	3,656
896.20	3,723	3,842
896.25	3,767	4,029
896.30	3,812	4,218
896.35	3,856	4,410
896.40	3,901	4,604
896.45	3,946	4,800
896.50	3,991	4,998
896.55	4,037	5,199
896.60	4,082	5,402
896.65	4,128	5,607
896.70	4,175	5,815
896.75	4,221	6,025
896.80	4,268	6,237
896.85	4,315	6,452
896.90	4,363	6,669
896.95	4,410	6,888
897.00	4,458	7,110
897.05	4,504	7,334
897.10	4,550	7,560
897.15	4,597	7,789
897.20	4,644	8,020
897.25	4,691	8,253
897.30	4,738	8,489
897.35	4,785	8,727
897.40	4,833	8,967
897.45	4,881	9,210
897.50	4,929	9,455
897.55	4,978	9,703
897.60	5,026	9,953
897.65	5,075	10,206
897.70	5,124	10,461
897.75	5,174	10,718
897.80	5,223	10,978
897.85	5,273	11,241
897.90	5,323	11,505
897.95	5,373	11,773
898.00	5,424	12,043
898.05	5,473	12,315
898.10	5,522	12,590
898.15	5,572	12,867
898.20	5,621	13,147
898.25	5,671	13,430
898.30	5,721	13,714
898.35	5,771	14,002
898.40	5,822	14,291
898.45	5,873	14,584
898.50	5,924	14,879
898.55	5,975	15,176
898.60	6,026	15,476
898.65	6,078	15,779
898.70	6,129	16,084
898.75	6,182	16,392
898.80	6,234	16,702
898.85	6,286	17,015
898.90	6,339	17,331
898.95	6,392	17,649
899.00	**6,445**	**17,970**

Summary for Pond B-2: B-2

Inflow Area = 5.696 ac, 0.00% Impervious, Inflow Depth = 6.11" for 100 YR event
Inflow = 23.73 cfs @ 12.39 hrs, Volume= 2.900 af
Outflow = 22.06 cfs @ 12.50 hrs, Volume= 2.662 af, Atten= 7%, Lag= 6.7 min
Primary = 4.79 cfs @ 12.50 hrs, Volume= 1.974 af
Routed to Link AP-3 : AP-3
Secondary = 17.27 cfs @ 12.50 hrs, Volume= 0.688 af
Routed to Link AP-3 : AP-3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 939.38' @ 12.50 hrs Surf.Area= 13,487 sf Storage= 36,992 cf

Plug-Flow detention time= 194.5 min calculated for 2.662 af (92% of inflow)
Center-of-Mass det. time= 152.7 min (983.6 - 830.9)

Volume	Invert	Avail.Storage	Storage Description
#1	936.00'	45,694 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

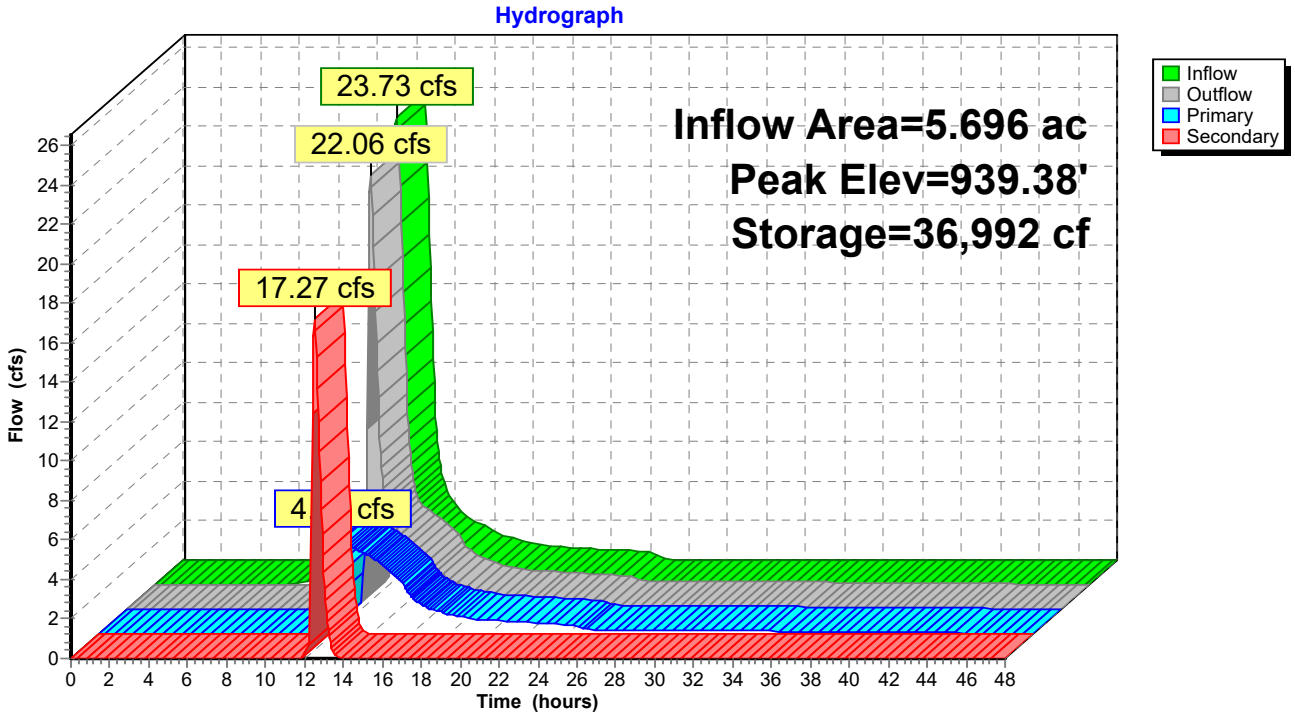
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
936.00	8,529	458.0	0	0	8,529
937.00	9,931	477.0	9,221	9,221	10,018
938.00	11,389	495.0	10,652	19,873	11,493
939.00	12,904	514.0	12,139	32,011	13,099
940.00	14,476	533.0	13,682	45,694	14,767

Device	Routing	Invert	Outlet Devices
#1	Primary	936.00'	**24.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 936.00' / 935.00' S= 0.0286 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Primary	937.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	938.00'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	939.00'	**30.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=4.79 cfs @ 12.50 hrs HW=939.38' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 4.44 cfs of 18.41 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 4.44 cfs @ 5.65 fps)
- **2=Orifice/Grate** (Orifice Controls 0.35 cfs @ 7.23 fps)

Secondary OutFlow Max=17.21 cfs @ 12.50 hrs HW=939.38' TW=0.00' (Dynamic Tailwater)
- **4=Broad-Crested Rectangular Weir** (Weir Controls 17.21 cfs @ 1.52 fps)

Pond B-2: B-2


Hydrograph
23.73 cfs
22.06 cfs
17.27 cfs
4. cfs
Inflow Area=5.696 ac
Peak Elev=939.38'
Storage=36,992 cf
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Stage-Area-Storage for Pond B-2: B-2

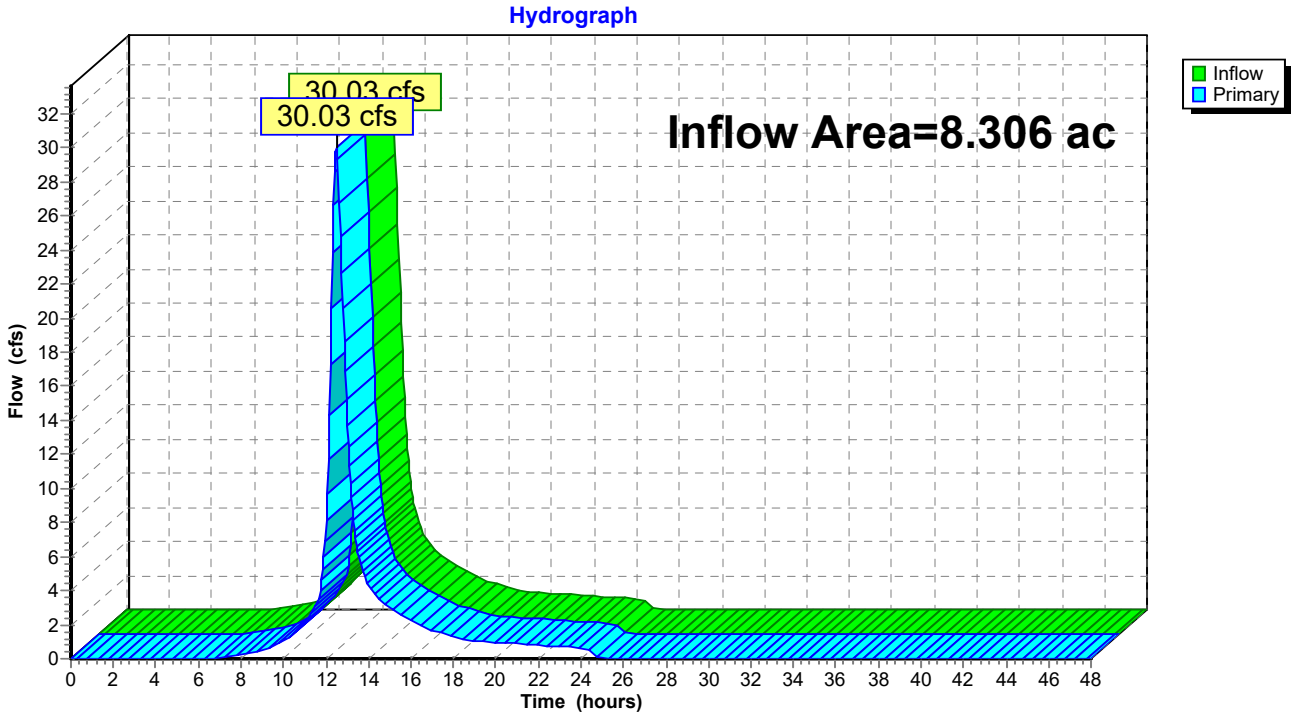
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
936.00	8,529	0
936.05	8,597	428
936.10	8,664	860
936.15	8,733	1,295
936.20	8,801	1,733
936.25	8,870	2,175
936.30	8,938	2,620
936.35	9,008	3,069
936.40	9,077	3,521
936.45	9,147	3,976
936.50	9,217	4,435
936.55	9,287	4,898
936.60	9,357	5,364
936.65	9,428	5,834
936.70	9,499	6,307
936.75	9,571	6,784
936.80	9,642	7,264
936.85	9,714	7,748
936.90	9,786	8,235
936.95	9,858	8,726
937.00	9,931	9,221
937.05	10,002	9,719
937.10	10,072	10,221
937.15	10,143	10,727
937.20	10,215	11,236
937.25	10,286	11,748
937.30	10,358	12,264
937.35	10,430	12,784
937.40	10,502	13,307
937.45	10,575	13,834
937.50	10,648	14,365
937.55	10,721	14,899
937.60	10,794	15,437
937.65	10,867	15,978
937.70	10,941	16,524
937.75	11,015	17,072
937.80	11,089	17,625
937.85	11,164	18,181
937.90	11,239	18,741
937.95	11,314	19,305
938.00	11,389	19,873
938.05	11,463	20,444
938.10	11,536	21,019
938.15	11,610	21,598
938.20	11,684	22,180
938.25	11,759	22,766
938.30	11,834	23,356
938.35	11,908	23,950
938.40	11,984	24,547
938.45	12,059	25,148
938.50	12,135	25,753
938.55	12,211	26,361
938.60	12,287	26,974
938.65	12,363	27,590
938.70	12,440	28,210
938.75	12,516	28,834
938.80	12,593	29,462
938.85	12,671	30,093
938.90	12,748	30,729
938.95	12,826	31,368
939.00	12,904	32,011
939.05	12,980	32,659
939.10	13,057	33,309
939.15	13,134	33,964
939.20	13,211	34,623
939.25	13,289	35,285
939.30	13,366	35,952
939.35	13,444	36,622
939.40	13,522	37,296
939.45	13,600	37,974
939.50	13,679	38,656
939.55	13,757	39,342
939.60	13,836	40,032
939.65	13,916	40,726
939.70	13,995	41,423
939.75	14,075	42,125
939.80	14,154	42,831
939.85	14,234	43,541
939.90	14,315	44,254
939.95	14,395	44,972
940.00	**14,476**	**45,694**

Summary for Link AP-1: AP-1

Inflow Area = 8.306 ac, 2.82% Impervious, Inflow Depth = 5.98" for 100 YR event
Inflow = 30.03 cfs @ 12.49 hrs, Volume= 4.142 af
Primary = 30.03 cfs @ 12.49 hrs, Volume= 4.142 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

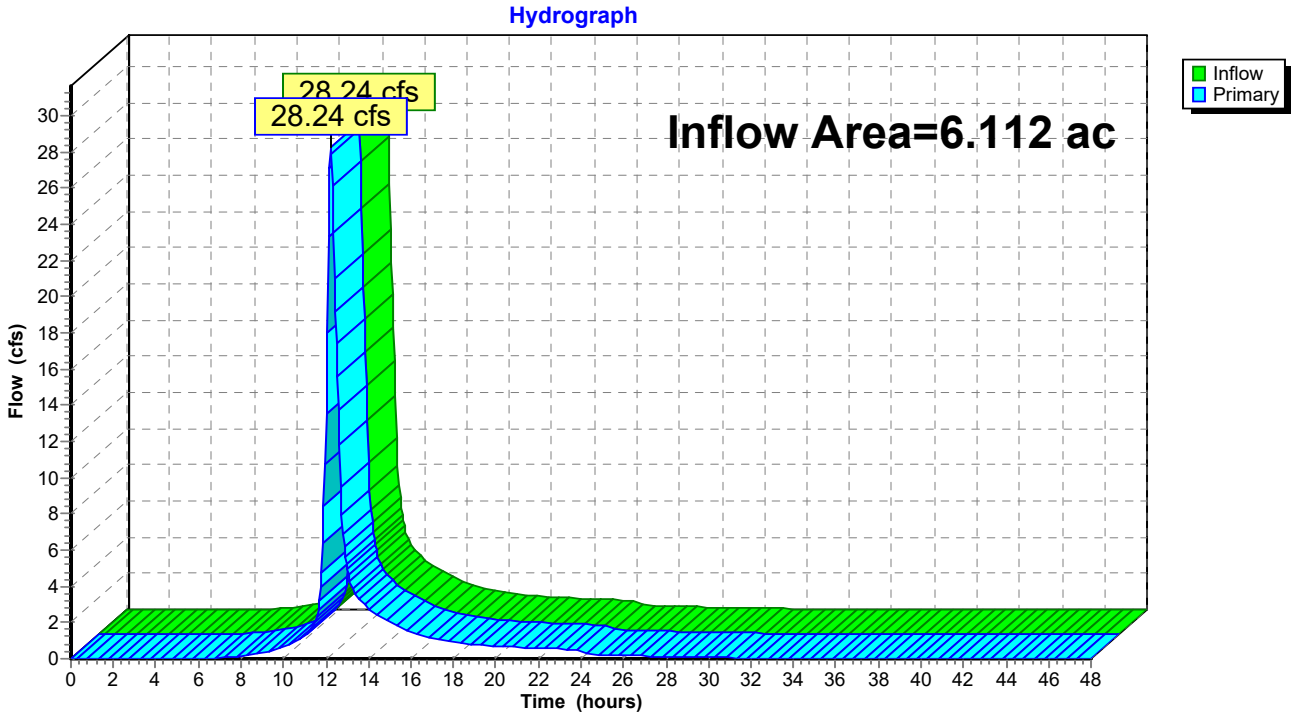


Summary for Link AP-2: AP-2

Inflow Area = 6.112 ac, 0.00% Impervious, Inflow Depth = 5.86" for 100 YR event
Inflow = 28.24 cfs @ 12.21 hrs, Volume= 2.986 af
Primary = 28.24 cfs @ 12.21 hrs, Volume= 2.986 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

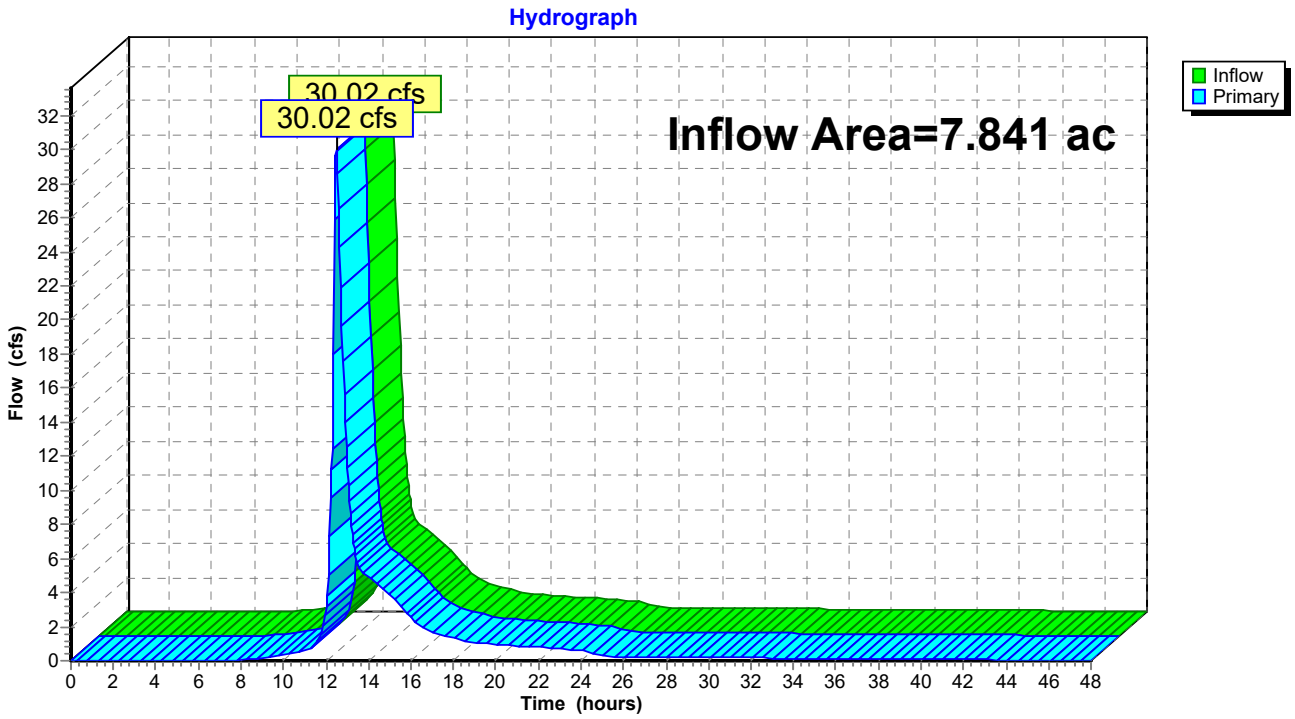


Summary for Link AP-3: AP-3

Inflow Area = 7.841 ac, 0.00% Impervious, Inflow Depth > 5.71" for 100 YR event
Inflow = 30.02 cfs @ 12.49 hrs, Volume= 3.732 af
Primary = 30.02 cfs @ 12.49 hrs, Volume= 3.732 af, Atten= 0%, Lag= 0.0 min

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

Link AP-3: AP-3



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100 YR Event
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APPENDIX E: WATER QUALITY VOLUME CALCULATIONS

WATER QUALITY VOLUME CALCULATIONS
FOR
TORRINGTON SOLAR
LOVERS LANE, TORRINGTON, CT

$$WQV = \frac{(1")(R)(A)}{12}$$

where:
- WQV = water quality volume (ac-ft)
- R = volumetric runoff coefficient = 0.05+0.009(I)
- I = percent impervious cover
- A = site area in acres

$$V = WQV + ((P)(A_b)/12)$$

- V=required basin storage volume (ac-ft)
- WQV=Water Quality Volume (ac-ft)
- P= design water quality precipitation (in)
- A_b=basin surface area (ac)

Basin/Watershed	Area (ac)	Pervious (ac)	Imperv. (ac)	I	R	WQV (ac-ft)	P (in)	Ab (ac)	V (ac-ft)	Total V Req. (cf)	V Provided (cf)
Basin 1	2.40	2.32	0.08	3%	0.08	0.02	1	0.168503	0.03	1,315.68	3,114.00
Basin 2	5.70	5.70	-	0%	0.05	0.02	1	0.363384	0.05	2,353.63	9,221.00
Total	8.10	8.02	0.08	0.03	0.13	0.04	2.00	0.53	0.08	3,669.31	12,335.00

APPENDIX F: NOAA ATLAS 14 PRECIPITATION FREQUENCY TABLE

NOAA Atlas 14, Volume 10, Version 3
Location name: Town of Torrington, Connecticut, USA*
Latitude: 41.8132°, Longitude: -73.1546°
Elevation: m/ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

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

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

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

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.356** (0.269-0.466)	**0.423** (0.320-0.555)	**0.533** (0.403-0.701)	**0.625** (0.470-0.826)	**0.752** (0.548-1.03)	**0.849** (0.607-1.19)	**0.947** (0.659-1.37)	**1.05** (0.702-1.57)	**1.19** (0.770-1.84)	**1.30** (0.823-2.06)
10-min	**0.504** (0.382-0.660)	**0.600** (0.454-0.786)	**0.757** (0.571-0.996)	**0.886** (0.665-1.17)	**1.07** (0.776-1.47)	**1.20** (0.860-1.69)	**1.34** (0.933-1.95)	**1.49** (0.994-2.22)	**1.69** (1.09-2.61)	**1.84** (1.17-2.91)
15-min	**0.593** (0.449-0.776)	**0.705** (0.534-0.925)	**0.889** (0.670-1.17)	**1.04** (0.782-1.38)	**1.25** (0.914-1.73)	**1.41** (1.01-1.99)	**1.58** (1.10-2.29)	**1.75** (1.17-2.62)	**1.98** (1.28-3.07)	**2.17** (1.37-3.42)
30-min	**0.810** (0.614-1.06)	**0.965** (0.730-1.26)	**1.22** (0.918-1.60)	**1.43** (1.07-1.89)	**1.71** (1.25-2.36)	**1.93** (1.38-2.71)	**2.16** (1.50-3.13)	**2.39** (1.60-3.58)	**2.71** (1.75-4.20)	**2.97** (1.88-4.68)
60-min	**1.03** (0.779-1.35)	**1.22** (0.926-1.60)	**1.54** (1.17-2.03)	**1.81** (1.36-2.39)	**2.17** (1.59-2.99)	**2.45** (1.76-3.44)	**2.74** (1.91-3.97)	**3.04** (2.03-4.54)	**3.44** (2.23-5.33)	**3.76** (2.38-5.94)
2-hr	**1.36** (1.04-1.77)	**1.59** (1.21-2.07)	**1.97** (1.49-2.57)	**2.28** (1.72-3.00)	**2.71** (1.99-3.71)	**3.03** (2.19-4.25)	**3.37** (2.37-4.90)	**3.75** (2.51-5.58)	**4.28** (2.78-6.61)	**4.72** (3.00-7.44)
3-hr	**1.58** (1.21-2.05)	**1.84** (1.41-2.39)	**2.28** (1.73-2.96)	**2.64** (2.00-3.45)	**3.13** (2.31-4.29)	**3.50** (2.54-4.90)	**3.89** (2.76-5.67)	**4.35** (2.92-6.47)	**5.02** (3.26-7.74)	**5.59** (3.55-8.78)
6-hr	**1.98** (1.52-2.54)	**2.35** (1.80-3.02)	**2.95** (2.26-3.82)	**3.46** (2.63-4.50)	**4.15** (3.08-5.67)	**4.66** (3.41-6.53)	**5.22** (3.74-7.64)	**5.90** (3.98-8.75)	**6.96** (4.53-10.7)	**7.88** (5.03-12.4)
12-hr	**2.38** (1.84-3.05)	**2.93** (2.26-3.75)	**3.82** (2.94-4.91)	**4.56** (3.49-5.89)	**5.58** (4.17-7.62)	**6.32** (4.66-8.87)	**7.14** (5.18-10.5)	**8.20** (5.54-12.1)	**9.88** (6.45-15.1)	**11.4** (7.27-17.7)
24-hr	**2.76** (2.14-3.51)	**3.49** (2.71-4.44)	**4.69** (3.63-5.99)	**5.69** (4.38-7.31)	**7.06** (5.32-9.63)	**8.06** (5.99-11.3)	**9.17** (6.72-13.6)	**10.6** (7.22-15.7)	**13.1** (8.54-19.9)	**15.2** (9.75-23.7)
2-day	**3.12** (2.44-3.93)	**4.01** (3.13-5.06)	**5.46** (4.25-6.92)	**6.67** (5.16-8.51)	**8.33** (6.33-11.3)	**9.53** (7.14-13.4)	**10.9** (8.06-16.1)	**12.7** (8.66-18.7)	**15.8** (10.4-24.1)	**18.6** (12.0-28.9)
3-day	**3.40** (2.67-4.28)	**4.38** (3.43-5.51)	**5.98** (4.67-7.55)	**7.30** (5.67-9.28)	**9.13** (6.95-12.4)	**10.4** (7.85-14.6)	**11.9** (8.87-17.7)	**14.0** (9.53-20.5)	**17.4** (11.5-26.5)	**20.6** (13.3-31.9)
4-day	**3.66** (2.88-4.59)	**4.71** (3.70-5.90)	**6.41** (5.02-8.07)	**7.82** (6.09-9.91)	**9.77** (7.46-13.2)	**11.2** (8.42-15.6)	**12.8** (9.51-18.9)	**15.0** (10.2-21.9)	**18.7** (12.3-28.3)	**22.0** (14.2-34.1)
7-day	**4.38** (3.46-5.46)	**5.56** (4.38-6.93)	**7.48** (5.88-9.37)	**9.07** (7.09-11.4)	**11.3** (8.63-15.2)	**12.8** (9.71-17.8)	**14.6** (10.9-21.5)	**17.1** (11.7-24.9)	**21.1** (14.0-32.0)	**24.8** (16.0-38.3)
10-day	**5.11** (4.05-6.35)	**6.35** (5.03-7.90)	**8.38** (6.61-10.5)	**10.1** (7.89-12.6)	**12.4** (9.49-16.6)	**14.1** (10.6-19.4)	**15.9** (11.9-23.2)	**18.5** (12.7-26.9)	**22.6** (15.0-34.2)	**26.3** (17.1-40.6)
20-day	**7.44** (5.93-9.17)	**8.73** (6.95-10.8)	**10.8** (8.59-13.4)	**12.6** (9.92-15.7)	**15.0** (11.5-19.8)	**16.7** (12.7-22.8)	**18.7** (13.8-26.7)	**21.2** (14.6-30.6)	**25.1** (16.7-37.8)	**28.6** (18.6-44.0)
30-day	**9.38** (7.49-11.5)	**10.7** (8.53-13.1)	**12.8** (10.2-15.8)	**14.6** (11.5-18.1)	**17.0** (13.1-22.3)	**18.8** (14.2-25.3)	**20.8** (15.3-29.2)	**23.1** (16.0-33.3)	**26.7** (17.8-40.0)	**29.8** (19.4-45.7)
45-day	**11.7** (9.42-14.4)	**13.1** (10.5-16.0)	**15.3** (12.2-18.8)	**17.1** (13.6-21.2)	**19.6** (15.1-25.4)	**21.5** (16.2-28.6)	**23.4** (17.1-32.5)	**25.6** (17.8-36.7)	**28.7** (19.2-42.9)	**31.2** (20.4-47.8)
60-day	**13.7** (11.0-16.7)	**15.1** (12.1-18.4)	**17.3** (13.9-21.3)	**19.2** (15.3-23.7)	**21.8** (16.8-28.1)	**23.8** (17.9-31.4)	**25.8** (18.8-35.4)	**27.8** (19.4-39.8)	**30.5** (20.5-45.4)	**32.5** (21.2-49.7)

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

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

Please refer to NOAA Atlas 14 document for more information.

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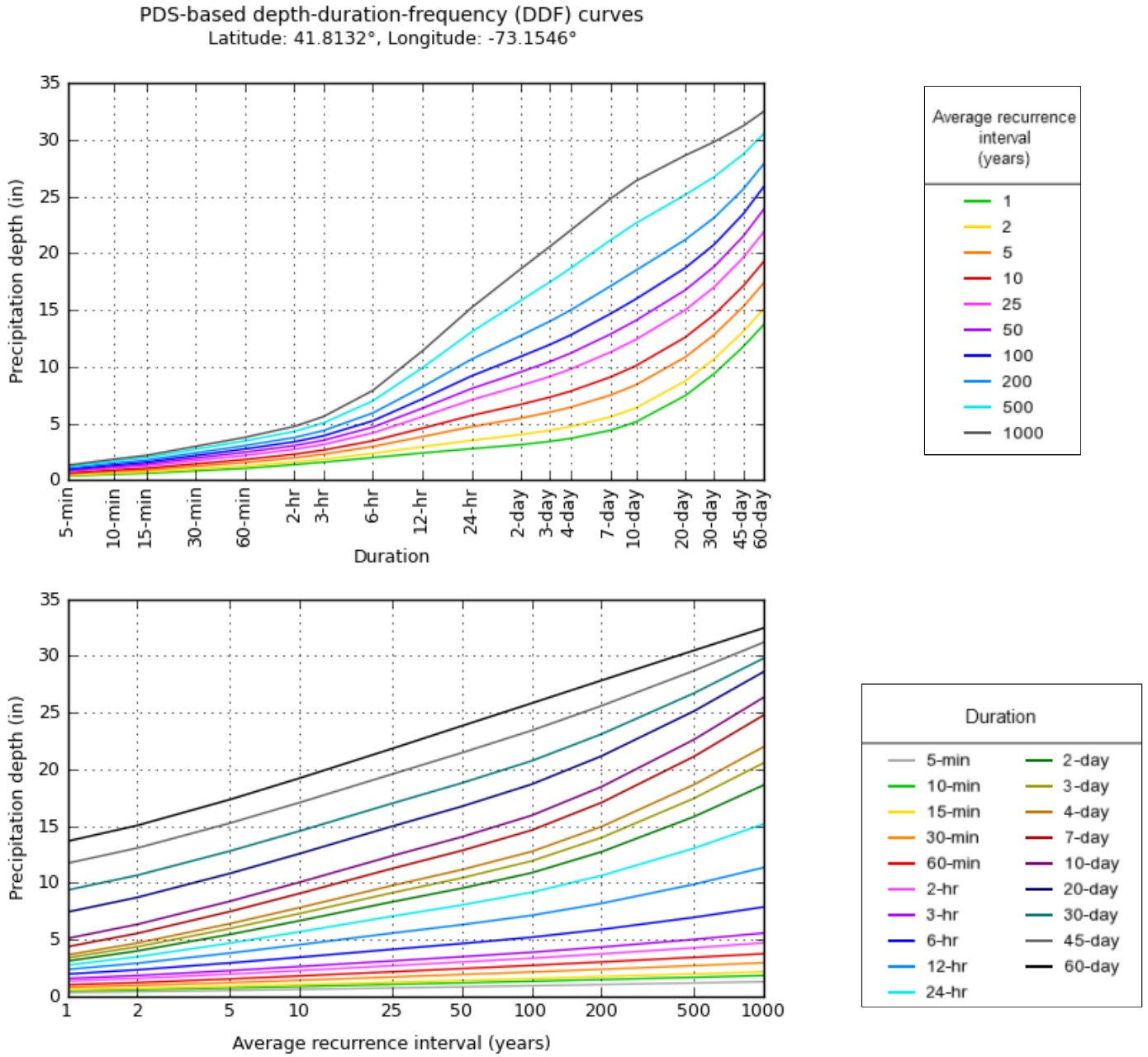
PF graphical



NOAA Atlas 14, Volume 10, Version 3

Created (GMT): Fri May 5 17:23:55 2023

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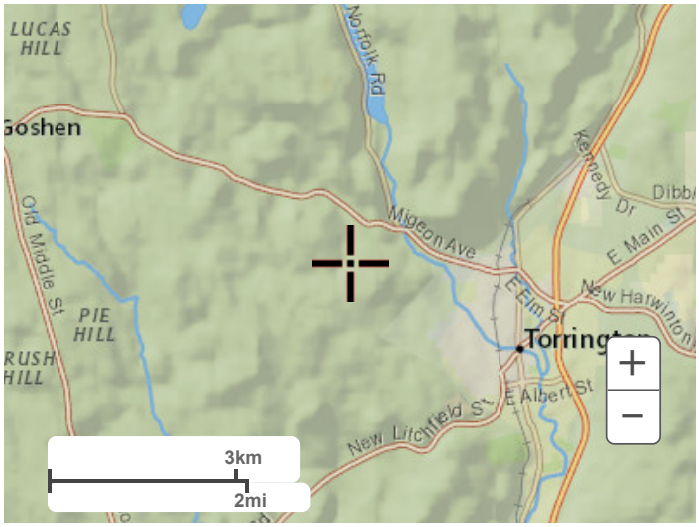
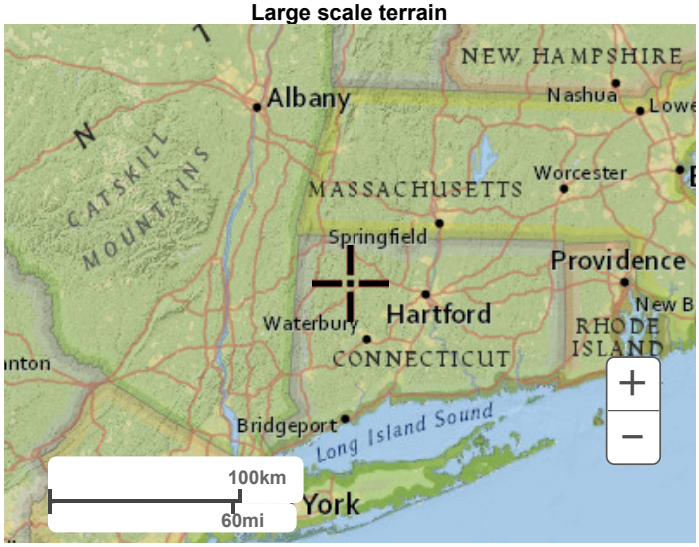
Maps & aerials

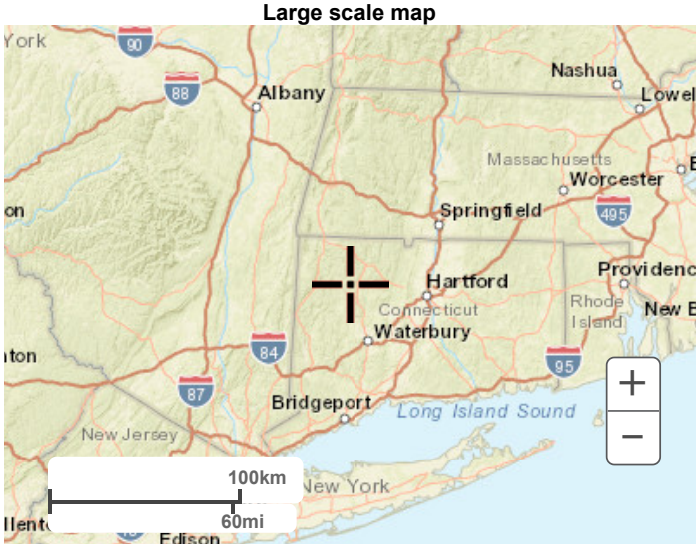
Small scale terrain



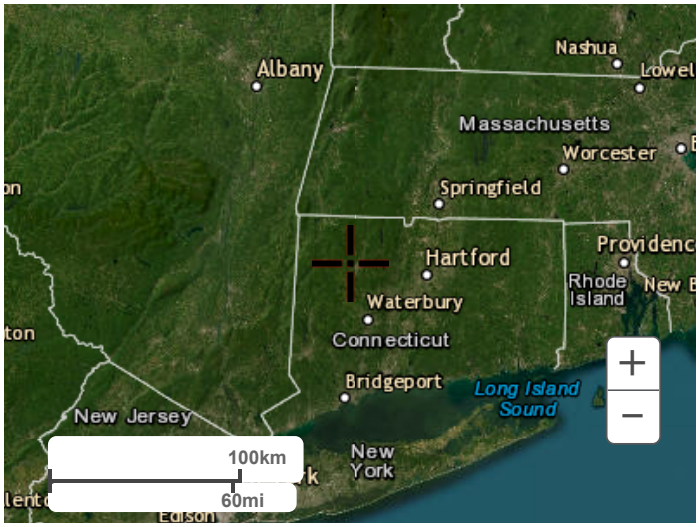
Large scale terrain



Large scale map



Large scale aerial



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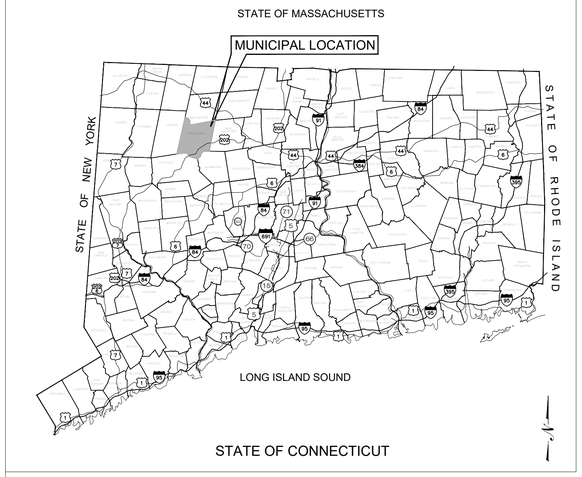
US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

APPENDIX D
Design Plans



LSE SEXTANS LLC

"LOVERS LANE SOLAR"

LOVERS LANE
TORRINGTON, CT

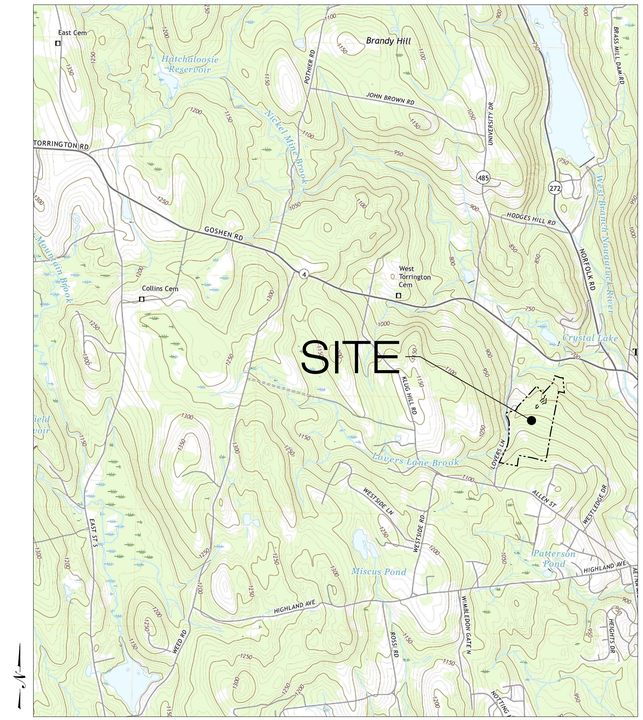
LIST OF DRAWINGS

T-1	TITLE SHEET
1 OF 1	PROPERTY/BOUNDARY & TOPOGRAPHIC SURVEY PROVIDED BY MARTIN SURVEYING ASSOCIATES, LLC
GN-1	GENERAL NOTES
OP-1	OVERALL LOCUS MAP
SP-0	OVERALL SITE & UTILITY PLAN
SP-1 - SP-3	SITE & UTILITY PLANS
GD-1 - GD-3	GRADING & DRAINAGE PLANS
EC-1	SEDIMENTATION & EROSION CONTROL NOTES
EC-2	SEDIMENTATION & EROSION CONTROL DETAILS
EC-3	ENVIRONMENTAL NOTES RESOURCE PROTECTION MEASURES
EC-4 - EC-6	PHASE 1 SEDIMENTATION & EROSION CONTROL PLANS
EC-7 - EC-9	PHASE 2 SEDIMENTATION & EROSION CONTROL PLANS
EC-10 - EC-12	PHASE 3 SEDIMENTATION & EROSION CONTROL PLANS
DN-1	SITE DETAILS
DN-2	SITE DETAILS

SITE INFORMATION

SITE NAME:	"LOVERS LANE SOLAR"
LOCATION:	LOVERS LANE TORRINGTON, CT
SITE TYPE/DESCRIPTION:	ADD (2) GROUND MOUNTED SOLAR PANEL ARRAY W/ ASSOCIATED EQUIPMENT, GRAVEL ACCESS DRIVE. NORTHERN ARRAY - 2,824 540W MODULES, 1.0 MW AC SOUTHERN ARRAY - 4,746 540W MODULES, 2.0 MW AC TOTAL MW AC - 3.0 MW DC.
PROPERTY OWNER:	CLOVER RIDGE LLC 40 TOWER LANE STE 201 AVON, CT 06001
APPLICANT:	LSE SEXTANS LLC 40 TOWER LANE, SUITE 145 AVON, CT 06001
ENGINEER CONTACT:	THOMAS E. LITTLE, P.E. (860) 552-2046
LATITUDE: LONGITUDE:	N 41° 48' 47.17" W 73° 09' 16.07"
MBLU: ZONE:	221-3-1 & 222-4-26 R40 & RRC
TOTAL SITE ACREAGE: TOTAL DISTURBED AREA:	54.08± AC. 17.19± AC.
APPROX. VOLUME OF CUT: APPROX. VOLUME OF FILL: APPROX. NET VOLUME:	8,348± CY 1,467± CY 6,881± CY OF CUT

USGS TOPOGRAPHIC MAP



SOURCE: USGS 7.5 WEST TORRINGTON QUADRANGLE, CT 2021

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC PERMIT SET

NO	DATE	REVISION
1		
2		
3		
4		
5		
6		
7		

DESIGN PROFESSIONAL OF RECORD

PROF: THOMAS E. LITTLE, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385

OWNER: CLOVER RIDGE LLC
ADDRESS: 40 TOWER LANE STE 201
AVON, CT 06001

LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE
TORRINGTON, CT

APT FILING NUMBER: CT606190

DRAWN BY: TEL
DATE: 04/22/2024
CHECKED BY: RCB

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T-1

STATE OF CONNECTICUT
THOMAS E. LITTLE
33443
LICENSED PROFESSIONAL ENGINEER

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" ADOPTED JUNE 21, 1996; AMENDED OCTOBER 26, 2018.
2. THE TYPE OF SURVEY PERFORMED AND THE MAPPED FEATURES DEPICTED HEREON ARE IN ACCORDANCE WITH THE REQUIREMENTS OF A PROPERTY/BOUNDARY AND TOPOGRAPHIC SURVEY AND IS INTENDED TO DEPICT EXISTING CONDITIONS UPON THE SUBJECT PARCELS AS THEY RELATE TO THE ADJACENT PROPERTY/BOUNDARY LINES.
3. THE PROPERTY/BOUNDARY DETERMINATION/OPINION DEPICTED HEREON CONFORMS TO A CLASS A-2 ACCURACY. PARCEL, 222-4-26 IS BASED UPON A RESURVEY OF MAP REFERENCE 'A'. PARCEL 221-3-1 IS BASED UPON A FIRST SURVEY.
4. THE HORIZONTAL BASELINE CONFORMS TO A CLASS A-2 ACCURACY. THE VERTICAL BASELINE CONFORMS TO A CLASS V-2 ACCURACY. THE TOPOGRAPHIC FEATURES CONFORM TO A CLASS T-3 ACCURACY.
5. 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 18. COORDINATES AND ELEVATIONS WERE DETERMINED FROM RTK GPS OBSERVATIONS MADE ON MARCH 13, 2023, USING THE CT DOT RTK NETWORK KNOWN AS ACORN (CTWI BASE), HAVING THE FOLLOWING VALUES:

LATITUDE = N 41° 53' 51.90745"
LONGITUDE= W 73° 04' 10.96847"
ELLIPSOID HEIGHT = 192.098M

MAP NOTES (CONTINUED):

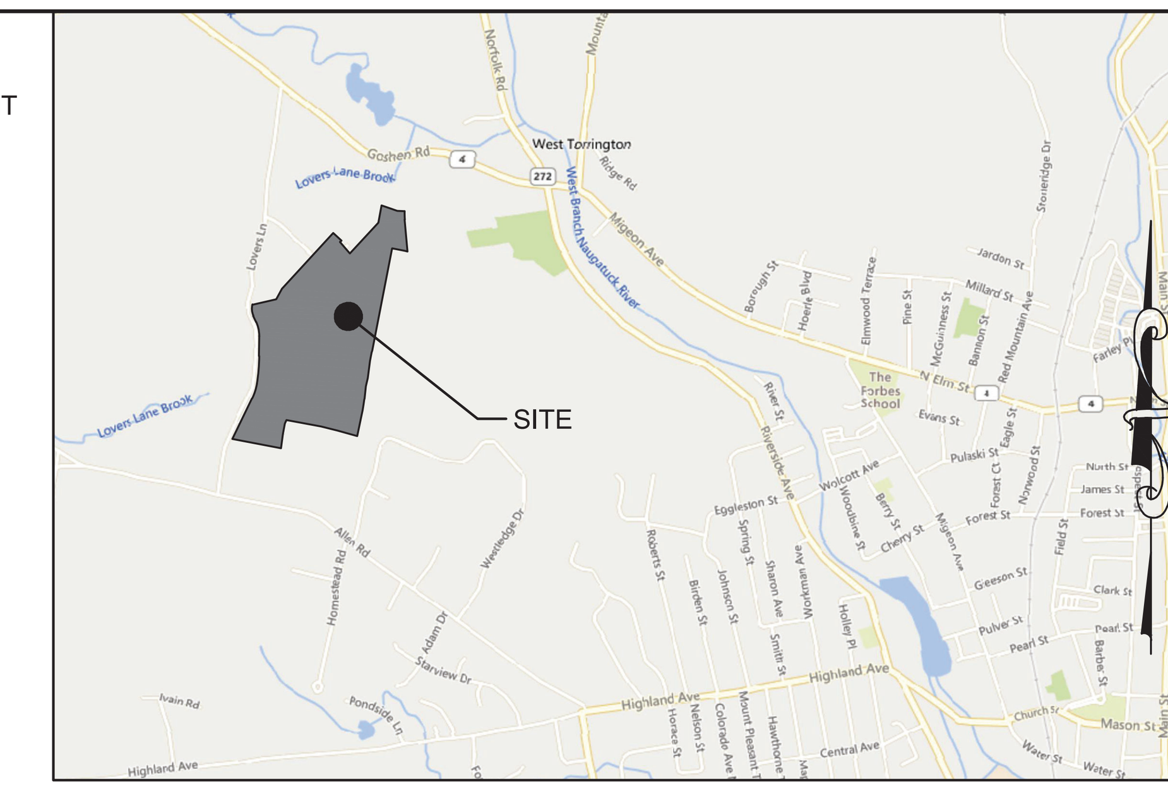
6. CONTOURS AND GROUND RELIEF ELEVATIONS DEPICTED HEREON ARE BASED UPON THE LIDAR DATA SET OF 2016 COMPILED BY THE STATE OF CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION, QUALITY LEVEL 2, AVAILABLE AT CTECO.UCONN.EDU. SAID DATA SET WAS FIELD VERIFIED AT VARIOUS LOCATIONS.
7. THE FIELD SURVEY WAS COMPLETED ON APRIL 12, 2023.
8. UNDERGROUND UTILITIES, STRUCTURES AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON ARE BASED UPON OBSERVABLE SURFACE EVIDENCE WHILE CONDUCTING THE FIELD SURVEY. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE WHICH IS UNKNOWN TO MARTIN SURVEYING ASSOCIATES, LLC.. ALL CONTRACTORS ARE REQUIRED TO CONTACT CALL-BEFORE-YOU-DIG AT 1-800-922-4455 FOR LOCATION AND OR STAKEOUT OF ANY UTILITY PRIOR TO ANY EXCAVATION.
9. THE WETLAND DELINEATION DEPICTED HEREON IS BASED UPON AN ELECTRONIC DRAWING FILE PROVIDE BY THE CLIENT "3995 FOR LODESTAR-UPDATED WETLAND.DWG"

MAP REFERENCES:

A. "PROPERTY OF FIFTH BRT DEVELOPMENT CORPORATION LOVERS LANE TORRINGTON, CONNECTICUT" SCALE: 1"=100'; DATED: SEPTEMBER, 1986; BY: WILLIAM A. BERGLUND.
B. "SURVEY OF PROPERTY BELONGING TO JAMES A & HARRIET M. HANDS TORRINGTON, CONNECTICUT" SCALE: 1"=50'; DATED: DECEMBER 30, 1983; BY: DOUGLAS G. LITTLE.
C. "WESTLEDGE PROPERTY OF J.F.C. ASSOCIATES RESUBDIVISION TORRINGTON CONNECTICUT" SCALE: 1"=40'; DATED: MAY, 1984; BY: DONALD DUFFY.
D. "MAP PREPARED FOR FIFTH DEVELOPMENT CORPORATION ROUTE 4 & LOVERS LANE TORRINGTON, CONNECTICUT" SCALE: 1" 50'; DATED: JULY, 1986; BY: WILLIAM A. BERGLUND.

MAP REFERENCES (CONTINUED):

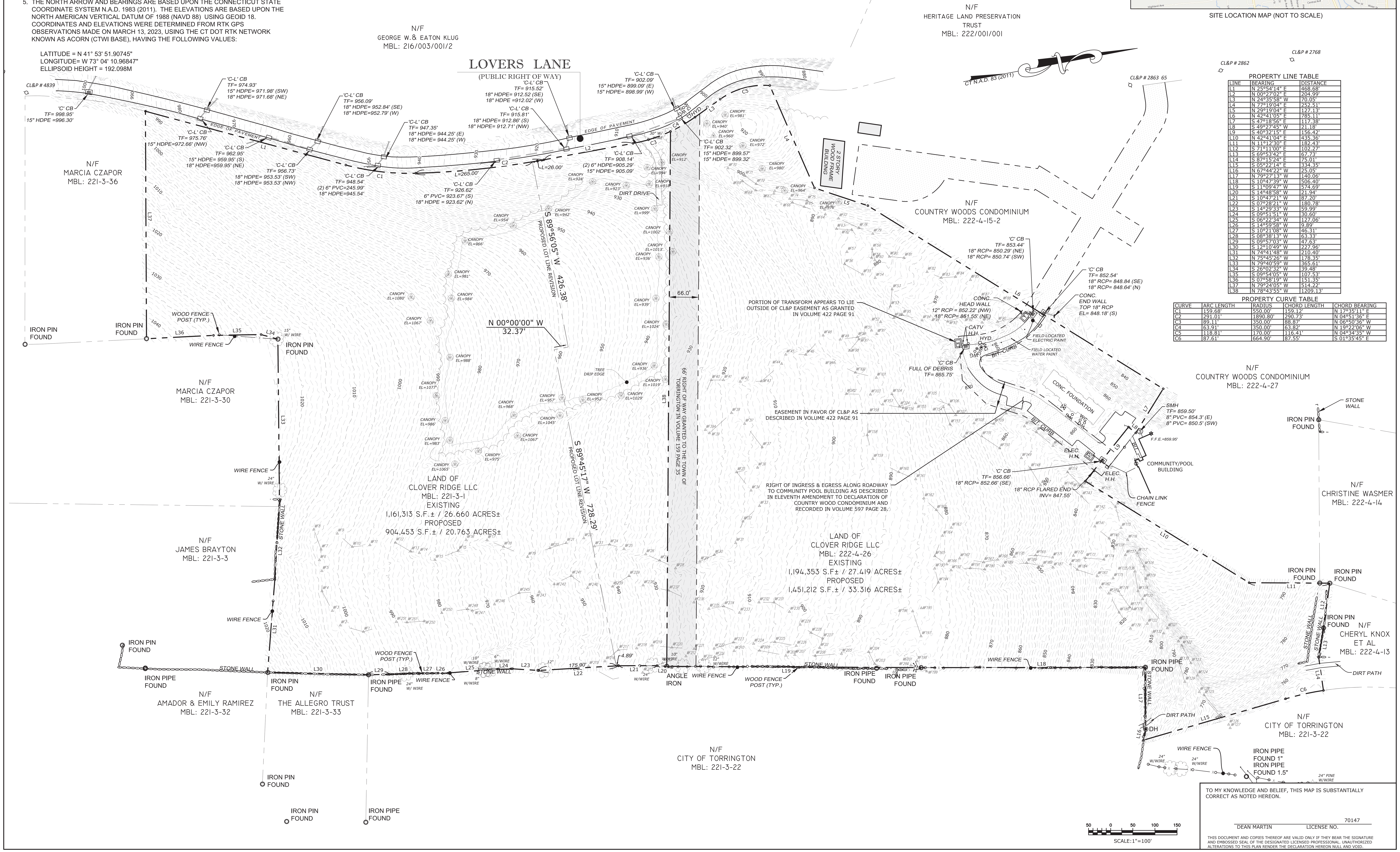
E. " MAP SHOWING EASEMENT AREA TO BE GRANTED TO THE CONNECTICUT LIGHT AND POWER COMPANY ACROSS THE PROPERTY OF REI IV LIMITED PARTNERSHIP LOVERS LANE TORRINGTON, CONNECTICUT" SCALE: 1"=\40'; DATED: AUGUST, 1987; BY: WILLIAM A. BERLUND.
F. "SUBDIVISION OF A PORTION OF THE GEORGE E. KLUG [PROPERTY TO BE CONVEYED TO ROBERT A & JACQUELINE C. MACKENZIE TORRINGTON, CONNECTICUT" SCALE: 1"=40'; DATED: JULY 27, 1987.
G. "COUNTRY WOODS CONDOMINIUMS PHASES A,B,C,D,E,F & G LOVERS LANE TORRINGTON, CONNECTICUT" SCALE: 1"=100'; DATED: FEBRUARY, 1990; BY: WILLIAM A. BERLUND.
H. "COUNTRY WOODS CONDOMINIUMS PHASE 'H' LOVERS LANE TORRINGTON, CONNECTICUT" SCALE: 1"100'; DATED: MARCH 1994; BY: WILLIAM BERLUND.



SITE LOCATION MAP (NOT TO SCALE)

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
- CBX TRAFFIC CONTROL BOX
- SIGN
- POST
- LIGHT POLE
- GUY ANCHOR
- UTILITY POLE
- WG WATER GATE
- WM WATER METER
- GV GAS VALVE
- GM GAS METER
- TRANSFORMER
- EM ELEC. METER
- MAIL BOX
- HAND HOLE
- BUTTON BOX
- A.C. UNIT
- TRAFFIC LIGHT POLE
- BOUNDARY LINE
- GUARD RAIL
- UNDERGROUND PIPING (San.,Stm.)
- G U/G GAS LINE
- E U/G ELEC. LINE
- W WATER LINE
- \\ OVERHEAD UTILITIES
- T U/G TELE. LINE
- CHAIN LINK FENCE
- TREE LINE



PROPERTY LINE TABLE

LINE	BEARING	DISTANCE
L1	N 25°54'14" E	468.68'
L2	N 00°27'02" E	204.99'
L3	N 24°35'58" W	70.05'
L4	N 77°19'04" E	252.51'
L5	N 29°19'04" E	127.13'
L6	N 42°41'05" E	785.11'
L7	S 47°18'56" E	117.38'
L8	S 49°27'45" W	21.18'
L9	S 40°32'15" E	156.42'
L10	N 42°41'04" E	435.36'
L11	N 11°12'30" E	182.43'
L12	S 71°11'00" E	102.27'
L13	S 69°53'42" E	67.73'
L14	S 87°15'24" E	75.01'
L15	S 05°22'14" E	334.35'
L16	N 67°44'22" W	25.05'
L17	N 79°27'13" W	140.06'
L18	S 10°47'39" W	506.40'
L19	S 11°09'47" W	574.69'
L20	S 14°48'58" W	21.94'
L21	S 10°47'21" W	87.20'
L22	S 07°28'21" W	180.78'
L23	S 14°29'33" W	59.99'
L24	S 09°51'51" W	30.60'
L25	S 06°22'34" W	127.06'
L26	S 14°59'58" W	9.89'
L27	S 10°21'08" W	46.31'
L28	S 08°38'13" W	63.33'
L29	S 09°57'03" W	47.63'
L30	S 12°10'49" W	227.96'
L31	N 74°41'48" W	210.40'
L32	N 75°45'26" W	178.35'
L33	N 79°40'59" W	365.61'
L34	S 26°02'32" W	39.48'
L35	S 09°54'05" W	107.53'
L36	S 07°58'19" W	151.35'
L37	N 79°24'05" W	514.22'
L38	N 78°43'55" W	1209.13'

PROPERTY CURVE TABLE

CURVE	ARC LENGTH	RADIUS	CHORD LENGTH	CHORD BEARING
C1	159.68'	550.00'	159.12'	N 17°35'11" E
C2	291.01'	1890.80'	290.73'	N 04°51'36" E
C3	89.11'	350.00'	88.87'	N 06°50'36" W
C4	63.91'	350.00'	63.82'	N 19°22'06" W
C5	118.81'	170.00'	116.41'	N 04°34'35" W
C6	87.61'	664.90'	87.55'	S 01°35'45" E

martin Surveying Associates, LLC
201 CHRISTIAN LANE BERLIN, CT 06037
860-832-9328
WWW. MARTINSURVEY.COM

REVISIONS:
2024-04-10: REVISED PROPOSED LOT LINE LOCATION

PROPERTY/BOUNDARY &TOPOGRAPHIC SURVEY
LAND OF CLOVER RIDGE LLC
MAP: 221 BLOCK: 3 LOT: 1
&
MAP: 222 BLOCK: 4 LOT: 26
LOVERS LANE
TORRINGTON, CONNECTICUT

MSA PROJECT NO: 22-123

SCALE: 1"=100'
DATE: 2024-04-13
DRAWN BY: G.S.D.
CHECKED BY: D.G.M.
SHEET: 1 OF 1

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

DEAN MARTIN   70147
LICENSE NO.

GENERAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH PROJECT DEVELOPER STANDARDS, CITY OF TORRINGTON 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 MANUFACTURER, CITY OF TORRINGTON, 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 TORRINGTON 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 CITY OF TORRINGTON.
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 'CALL BEFORE YOU DIG' 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 AND PERMITS ARE GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.

SITE PLAN NOTES

1. THE SURVEY WAS PROVIDED BY MARTIN SURVEYING ASSOCIATES DATED APRIL 13, 2023.
2. THERE ARE BORDERING VEGETATED WETLANDS (BVW/S) LOCATED ON THE SITE AS INDICATED ON THE PLANS. BVW BOUNDARIES WERE FLAGGED AND LOCATED BY IAN T. COLE, LLC IN NOVEMBER 2022 AND MODIFIED AND VERIFIED BY ALL-POINTS TECHNOLOGY CORPORATION, IN FEBRUARY 2023.
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 BVWS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. IN ADDITION, THE CONTRACTOR SHALL ADHERE TO THE "SEDIMENTATION 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 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 TORRINGTON AND 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 DEVELOPERS 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 TORRINGTON TO SECURE CONSTRUCTION PERMITS AND FOR PAYMENT OF FEES 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 AND SHALL PAY ALL FEES 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 CITY OF TORRINGTON.
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 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 AND CITY OF TORRINGTON.
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 'CALL BEFORE YOU DIG' 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, CITY OF TORRINGTON, UTILITY PROVIDERS AND GOVERNING AUTHORITIES.

GENERAL LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
BUILDING SETBACK		
SOLAR SETBACK		
EASEMENT		
TREE LINE		
WETLAND		
WETLAND BUFFER		
VERNAL POOL		
VERNAL POOL BUFFER		
WATERCOURSE		
WATERCOURSE BUFFER		
MAJOR CONTOUR		
MINOR CONTOUR		
UNDERGROUND ELECTRIC		E E
OVERHEAD ELECTRIC		OH OH
BASIN		
SWALE		
FENCE		X X X
LIMIT OF DISTURBANCE		LOD
FILTER SOCK		FS FS
SILT FENCE		SF SF
BAFFLE		

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC PERMIT SET

NO	DATE	REVISION
1		
2		
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DESIGN PROFESSIONAL OF RECORD

PROF: THOMAS E. LITTLE, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CLOVER RIDGE LLC
ADDRESS: 40 TOWER LANE STE 201 AVON, CT 06001

LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE TORRINGTON, CT

APT FILING NUMBER: CT606190

DRAWN BY: TEL

DATE: 04/22/2024

CHECKED BY: RCB

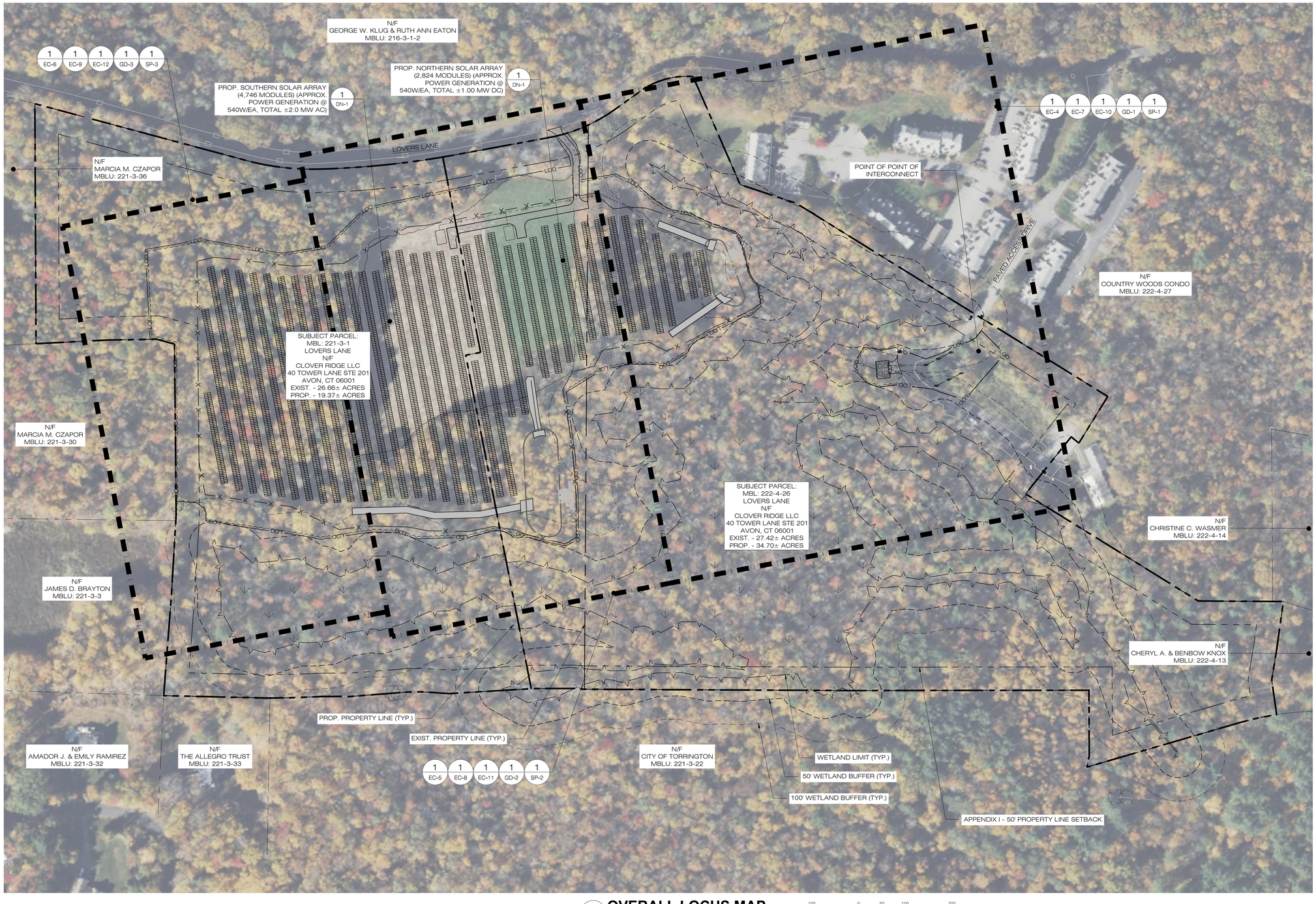
SHEET TITLE:

GENERAL NOTES

SHEET NUMBER:

GN-1

STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER



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1 OP-1 **OVERALL LOCUS MAP**
SCALE : 1" = 100'-0"

100 0 50 100 200
(IN FEET) 1 inch = 100 ft.

LSE SEXTANS LLC
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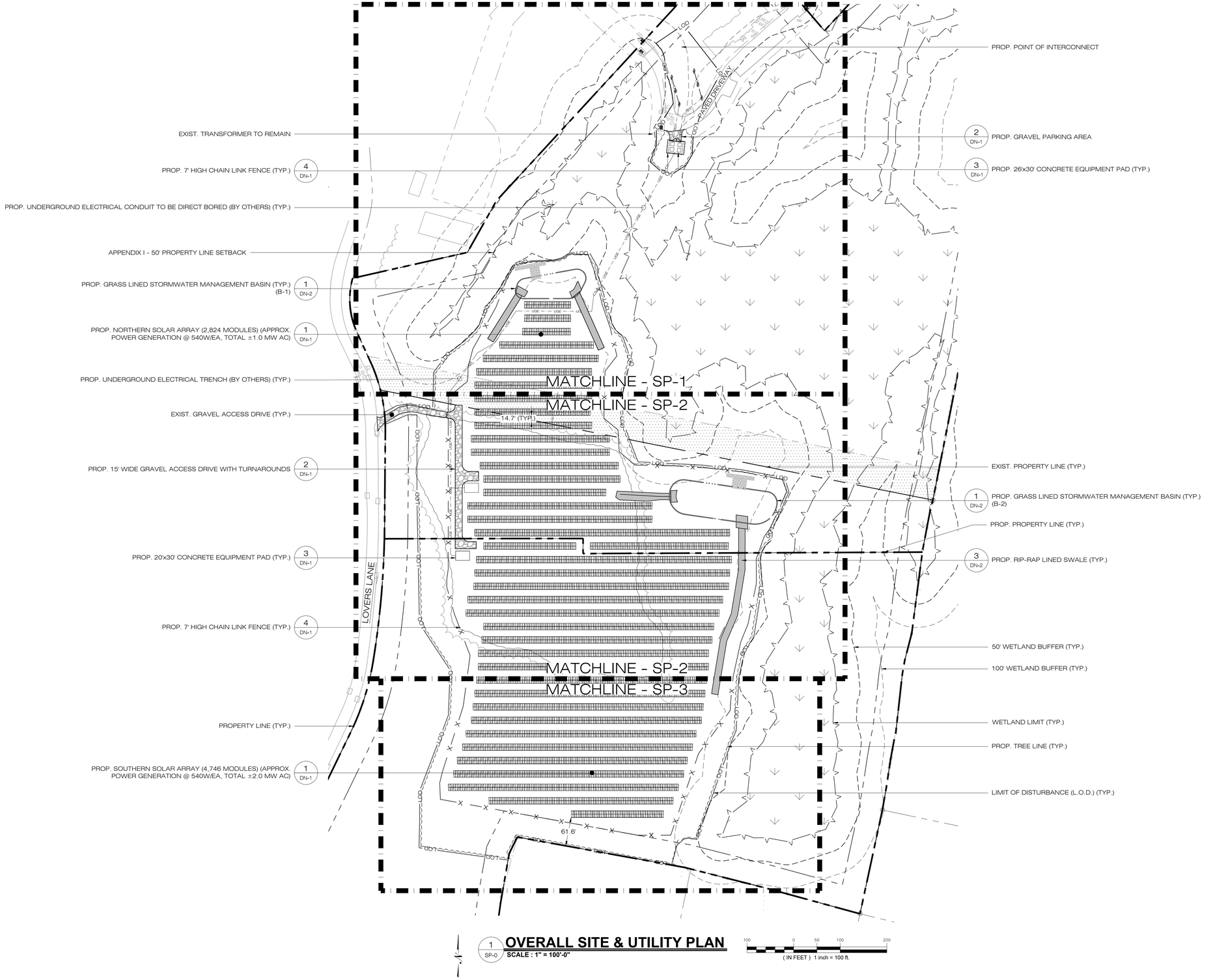
OP-1

STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER



1 SP-0 **OVERALL SITE & UTILITY PLAN**
SCALE : 1" = 100'-0"

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

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OVERALL SITE & UTILITY PLAN

SHEET NUMBER:
SP-0

STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER

PROP. INTERCONNECTION POINT (BY OTHERS).

PROPERTY LINE (TYP.)

100' WETLAND BUFFER (TYP.)

50' WETLAND BUFFER (TYP.)

WETLAND LIMIT (TYP.)

EXIST. TRANSFORMER TO REMAIN. PROTECT TRANSFORMER & ASSOCIATED UTILITIES DURING CONSTRUCTION

3 DN-1 PROP. 20'x30' CONCRETE EQUIPMENT PAD (TYP.)

1,3 EC-2 PROP. TEMPORARY MATERIAL & SPOIL STOCKPILE FROM JACKING PIT (TYP.)

APPENDIX I - 50' PROPERTY LINE SETBACK

2 DN-2 PROP. OVERFLOW WEIR TO LEVEL SPREADER (TYP.)
SPILLWAY ELEV. = 898.00'
SPILLWAY WIDTH = 20.0'

1 DN-2 PROP. PERMANENT GRASS LINED STORMWATER MANAGEMENT BASIN (B-1)
BOTTOM ELEV. = 895.00'
TOP ELEV. = 899.00'

3 DN-2 PROP. RIP-RAP LINED SWALE (TYP.)

4 DN-1 PROP. 7' HIGH CHAIN LINK FENCE (TYP.)

1 DN-1 PROP. NORTHERN SOLAR ARRAY (2,824 MODULES) (APPROX. POWER GENERATION @ 540W/EA, TOTAL ±1.00 MW AC)

PROP. UNDERGROUND ELECTRICAL TRENCH FROM PROP. EQUIPMENT PADS TO DIRECT BORE JACKING PIT (BY OTHERS) (TYP.)

LOVERS LANE

PAVED DRIVEWAY

4,5 DN-1 PROP. CHAIN LINK GATE (TYP.) W/ SITE IDENTIFICATION SIGN AND KNOX PADLOCK MODEL 3770

2 DN-1 PROP. 625' SQFT GRAVEL PARKING AREA

4 DN-1 PROP. 7' HIGH CHAIN LINK FENCE (TYP.)

PROP. DIRECT BORE RECEIVING PIT (BY OTHERS)

SECTION OF PROP. UNDERGROUND ELECTRICAL CONDUIT TO BE DIRECT BORED (BY OTHERS) (TYP.)

PROP. DIRECT BORE JACKING PIT (BY OTHERS)

1 EC-2 PROP. TEMPORARY MATERIAL & SPOIL STOCKPILE FROM JACKING PIT (TYP.)

PROP. TREE LINE (TYP.)

3 DN-2 PROP. RIP-RAP LINED SWALE (TYP.)

LIMIT OF DISTURBANCE (TYP.)

14.7' (TYP.)

MATCHLINE: SEE SHEET SP-2

1 SP-1 **SITE & UTILITY PLAN**
SCALE : 1" = 40'-0"

40 0 20 40 80
(IN FEET) 1 inch = 40 ft.

NOTE:
1. SEE DRAWING GN-1 FOR GENERAL LEGEND.

LSE SEXTANS LLC
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LOVERS LANE SOLAR

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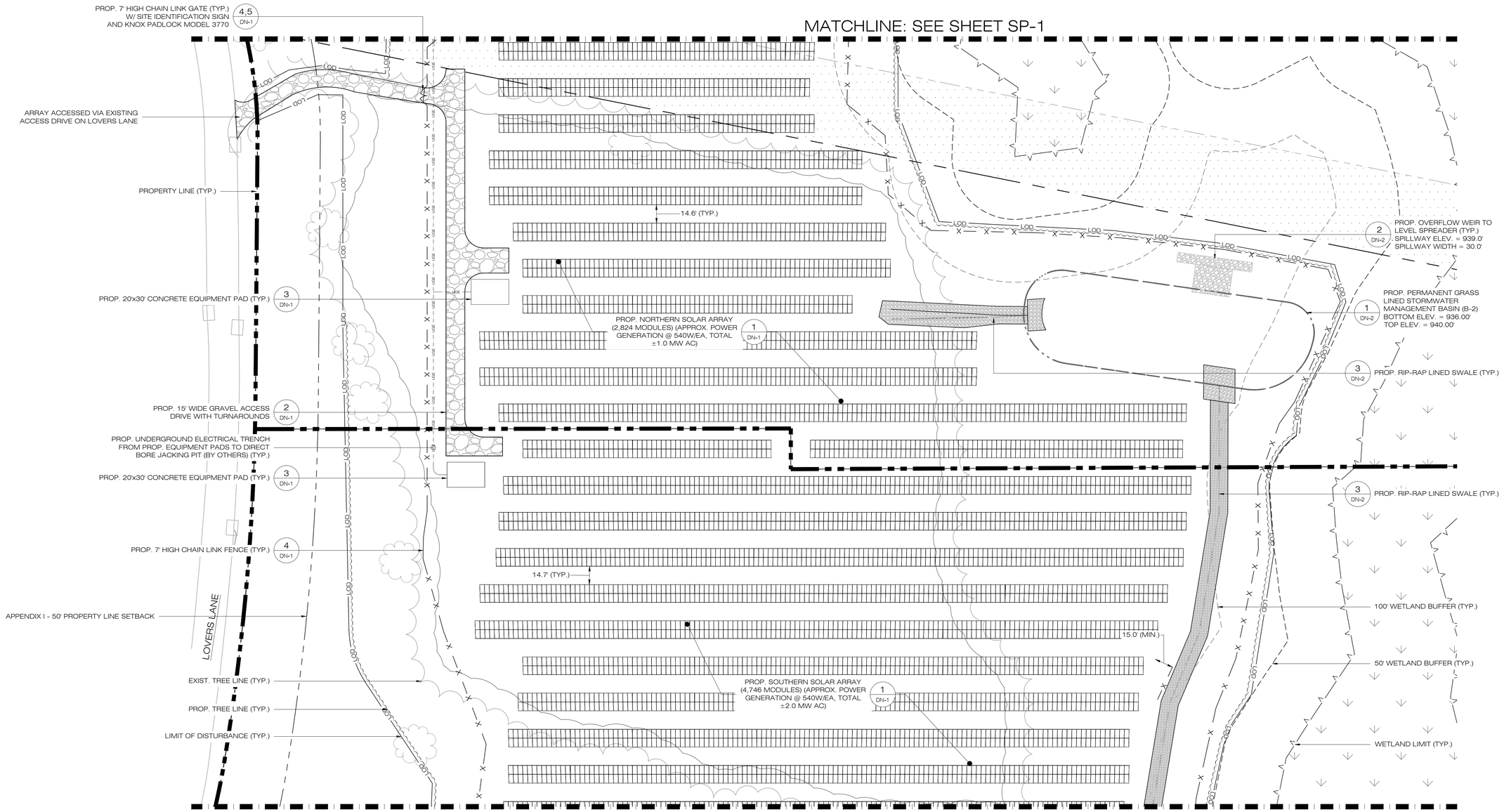
SHEET TITLE:

SITE & UTILITY PLAN

SHEET NUMBER:

SP-1

STATE OF CONNECTICUT THOMAS E. LITTLE 33443 LICENSED PROFESSIONAL ENGINEER



1 SP-2 **SITE & UTILITY PLAN**
SCALE : 1" = 40'-0"

40 0 20 40 80
(IN FEET) 1 inch = 40 ft.

NOTE:
1. SEE DRAWING GN-1 FOR GENERAL LEGEND.

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
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LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE TORRINGTON, CT

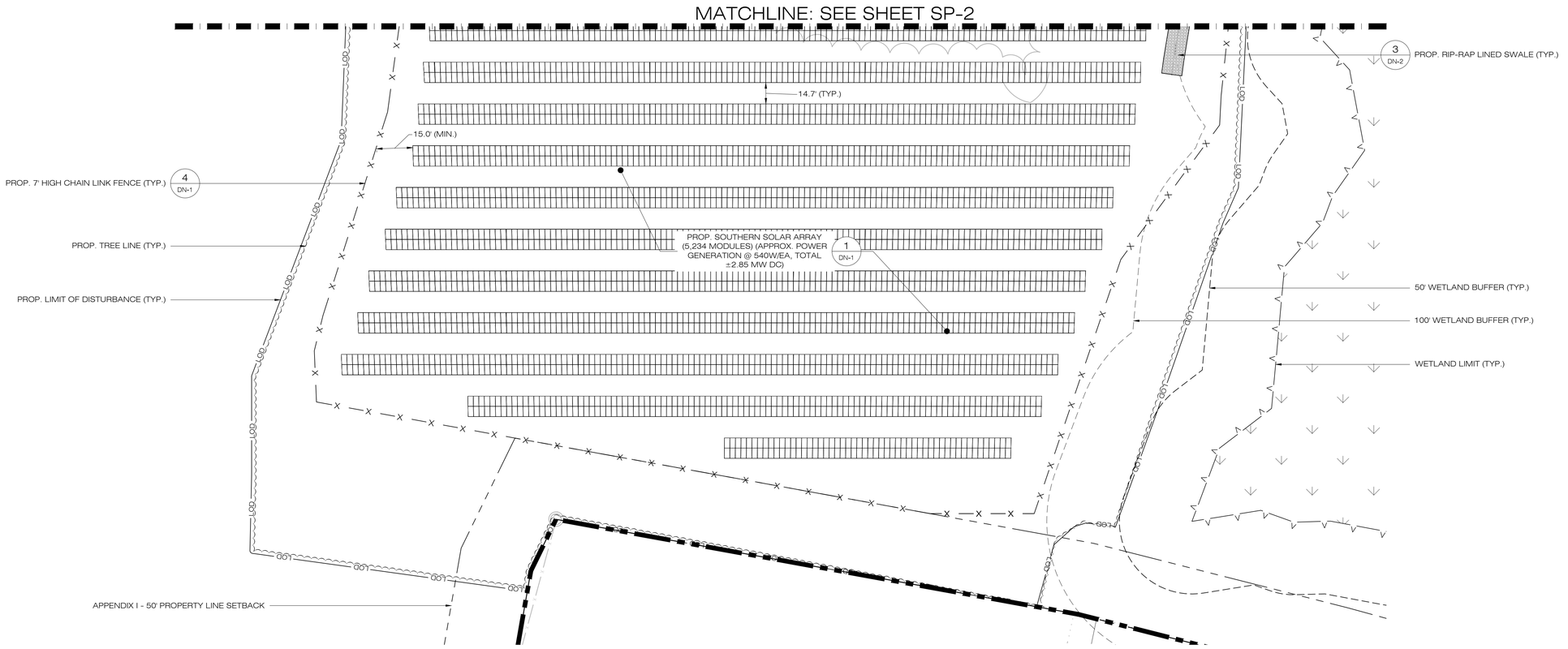
APT FILING NUMBER: CT606190

DRAWN BY: TEL
DATE: 04/22/2024
CHECKED BY: RCB

SHEET TITLE:
SITE & UTILITY PLAN

SHEET NUMBER:
SP-2

STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER



1 SP-3 **SITE & UTILITY PLAN**

SCALE : 1" = 40'-0"

40 0 20 40 80

(IN FEET) 1 inch = 40 ft.

NOTE:
1. SEE DRAWING GN-1 FOR GENERAL LEGEND.

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION

567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

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DESIGN PROFESSIONAL OF RECORD

PROF: THOMAS E. LITTLE, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CLOVER RIDGE LLC
ADDRESS: 40 TOWER LANE STE 201 AVON, CT 06001

LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE TORRINGTON, CT

APT FILING NUMBER: CT606190

DRAWN BY: TEL

DATE: 04/22/2024 CHECKED BY: RCB

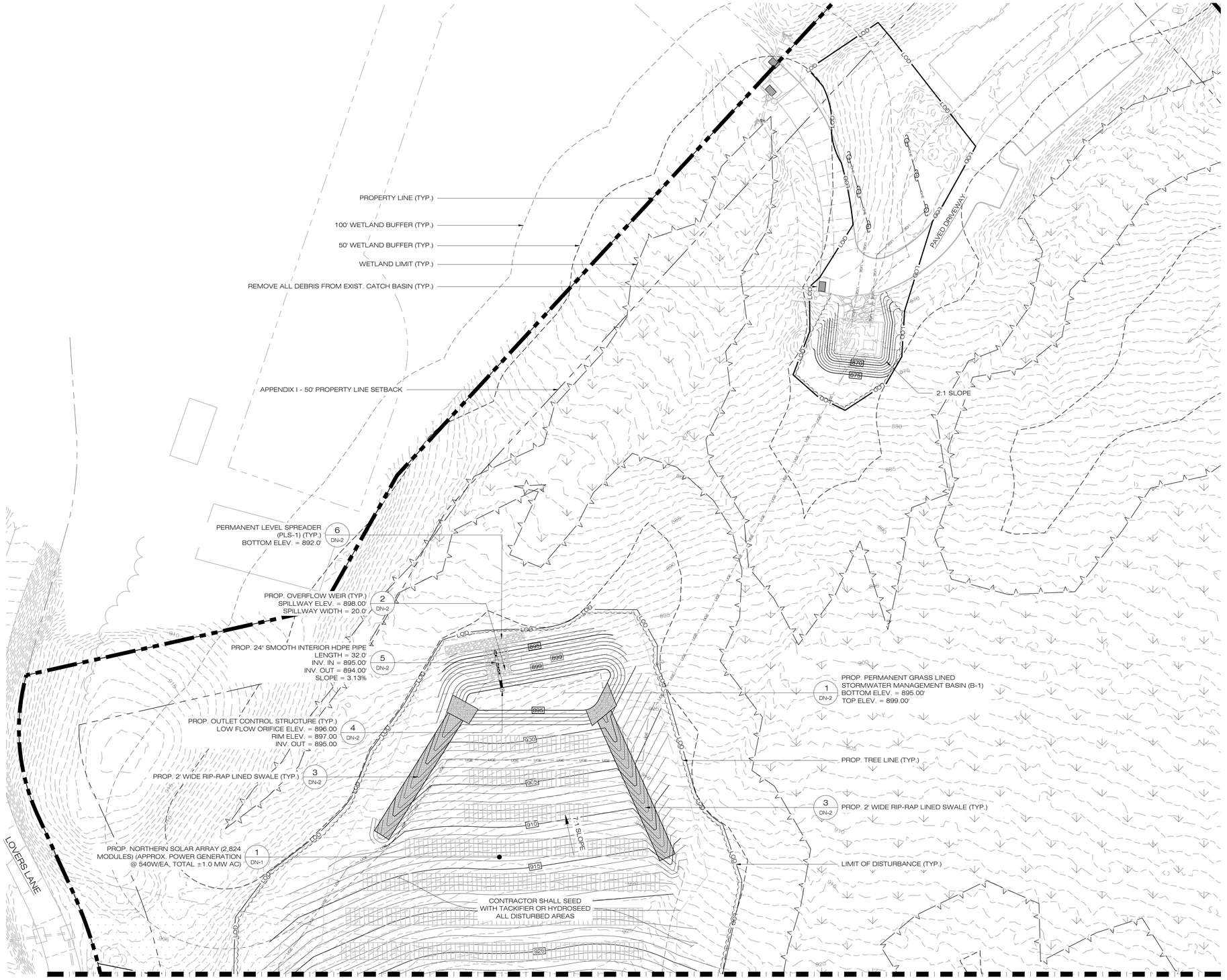
SHEET TITLE:

SITE & UTILITY PLAN

SHEET NUMBER:

SP-3

STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER



MATCHLINE: SEE SHEET GD-2

1 GD-1 **GRADING & DRAINAGE PLAN**

SCALE : 1" = 40'-0"

40 0 20 40 80

(IN FEET) 1 inch = 40 ft.

NOTES:
1. GRADE/SHAPE AREA TO MAINTAIN EXIST. SLOPE & DRAINAGE PATTERNS.

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

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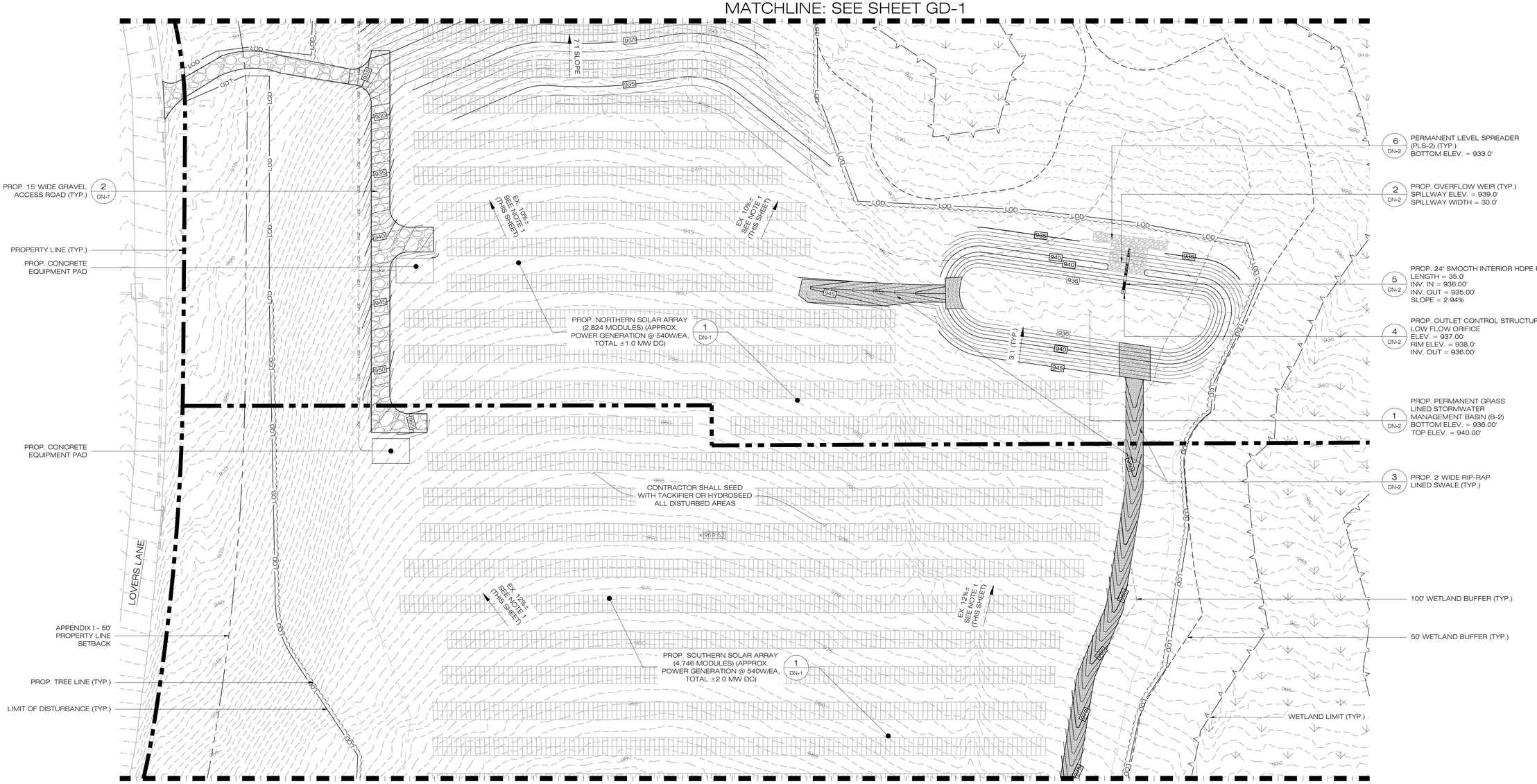
GRADING & DRAINAGE PLAN

SHEET NUMBER:

GD-1

STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER

MATCHLINE: SEE SHEET GD-1



MATCHLINE: SEE SHEET GD-3

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1 GD-2 **GRADING & DRAINAGE PLAN**
SCALE : 1" = 40'-0"

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NOTES:
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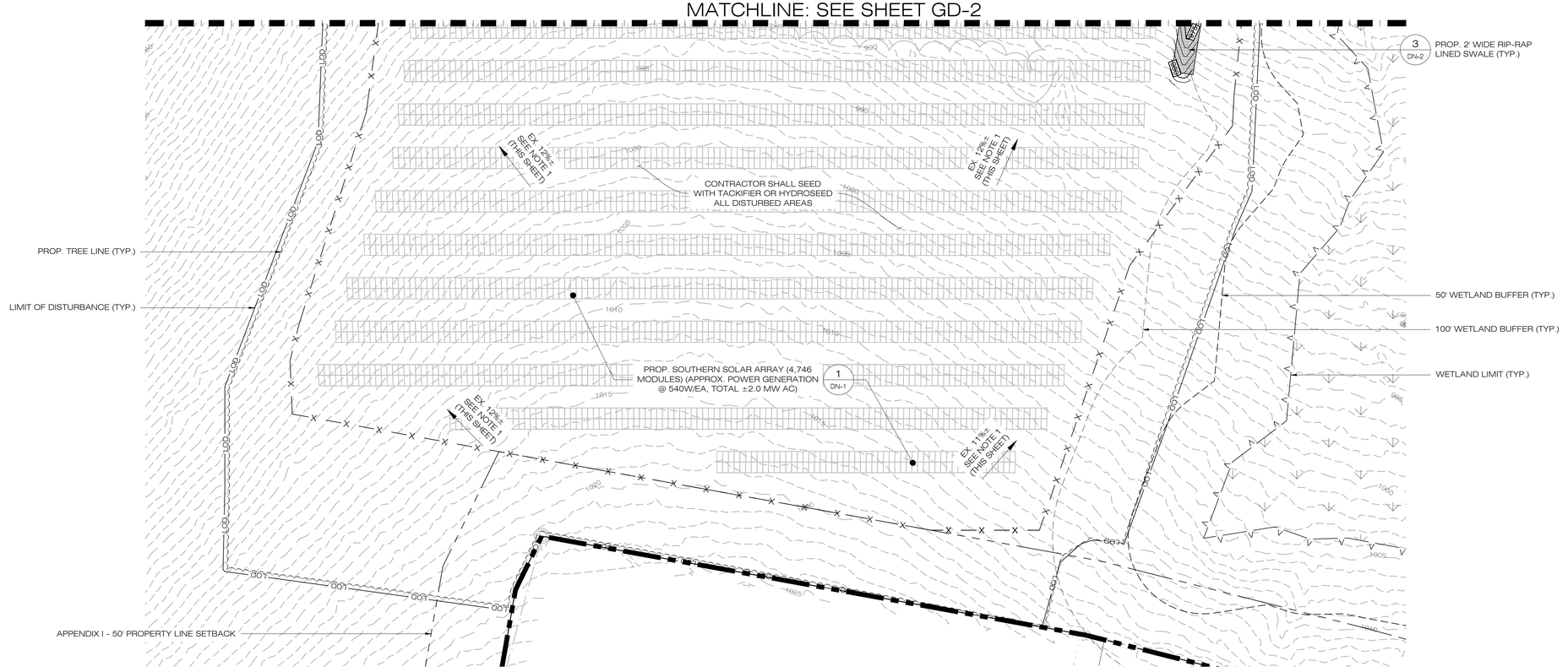
SHEET TITLE:
GRADING & DRAINAGE PLAN

SHEET NUMBER:
GD-2

STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER



1 GD-3 **GRADING & DRAINAGE PLAN**
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(IN FEET) 1 inch = 40 ft.

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STATE OF CONNECTICUT THOMAS E. LITTLE 33443 LICENSED PROFESSIONAL ENGINEER

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 CITY OF TORRINGTON, PERMITTEE, AND/OR SWPCP MONITOR. ALL PERIMETER 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. SEE CONSTRUCTION SEQUENCE FOR ADDITIONAL INFORMATION. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE EROSION & SEDIMENT CONTROL PLANS ARE SHOWN AS REQUIRED BY THE ENGINEER. 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, AS REQUIRED, AND AS DIRECTED BY THE PERMITTEE AND/OR SWPCP MONITOR. REFER TO SITE PLAN FOR GENERAL INFORMATION AND OTHER CONTRACT PLANS FOR APPROPRIATE INFORMATION.

3. A BOND OR LETTER OF CREDIT MAY BE REQUIRED TO BE POSTED WITH THE GOVERNING AUTHORITY FOR THE EROSION CONTROL INSTALLATION AND MAINTENANCE.

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, OWNER, SITE ENGINEER, MUNICIPAL OFFICIALS, OR ANY GOVERNING AGENCY. THE CONTRACTOR SHALL CONTACT THE OWNER 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 INSTALLED SEDIMENTATION AND EROSION CONTROL MEASURES. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS WEEKLY AND WITHIN 24 HOURS OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCHES OR GREATER TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS AS NECESSARY IN A TIMELY MANOR.

6. THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIAL (SILT FENCE, COMPOST FILTER SOCK, EROSION CONTROL BLANKET, 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. PROTECT EXISTING TREES THAT ARE TO BE SAVED BY FENCING, ORANGE SAFETY FENCE, CONSTRUCTION TAPE, OR EQUIVALENT FENCING/TAPE. 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. CONSTRUCTION ENTRANCES (ANTI-TRACKING PADS) SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR CONSTRUCTION ACTIVITY AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF ALL CONSTRUCTION IF REQUIRED. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED. CONTRACTOR SHALL ENSURE THAT ALL VEHICLES EXITING THE SITE ARE PASSING OVER THE ANTI-TRACKING PADS PRIOR TO EXITING.

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.

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

12. DIRECT ALL DEWATERING PUMP DISCHARGE TO A SEDIMENT CONTROL DEVICE CONFORMING TO THE GUIDELINES WITHIN THE APPROVED LIMIT OF DISTURBANCE IF REQUIRED. DISCHARGE TO STORM DRAINS OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR AND APPROVED BY THE PERMITTEE OR MUNICIPALITY.

13. 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 AND SECURED APPROPRIATELY. 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.

14. MINIMIZE LAND DISTURBANCES. SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE. MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDED WITH TACKIFIER.

15. 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 TRAVELWAYS DAMP. CALCIUM CHLORIDE MAY ALSO BE APPLIED TO ACCESS ROADS. DUMP TRUCK LOADS EXITING THE SITE SHALL BE COVERED.

16. VEGETATIVE ESTABLISHMENT SHALL OCCUR ON 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.

17. MAINTAIN ALL PERMANENT AND TEMPORARY SEDIMENT CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP CONCRETE PADS, CLEAN THE STORMWATER MANAGEMENT SYSTEMS AND REMOVE ALL TEMPORARY SEDIMENT CONTROLS ONCE THE SITE IS FULLY STABILIZED AND APPROVAL HAS BEEN RECEIVED FROM PERMITTEE OR THE MUNICIPALITY.

18. THE SITE WAS DESIGNED TO COMPLY WITH FEDERAL, STATE, AND, IF APPLICABLE, LOCAL STANDARDS, PLUS CURRENT ACCEPTED PRACTICES FOR THE INDUSTRY. ADDITIONAL CONTROLS AND ACTIVITIES MAY BE DEEMED NECESSARY BY THE SWPCP MONITOR DURING CONSTRUCTION AS A RESULT OF UNFORESEEN CONDITIONS AND/OR MEANS AND METHODS. SUCH ITEMS MAY INCLUDE, BUT ARE NOT LIMITED TO: ADDITIONAL FOREBAYS, BASINS, OR UPSTREAM STRUCTURAL CONTROLS, THE USE OF FLOCCULANTS OF FLOCK LOGS TO DECREASE SEDIMENT, DISCHARGE MANAGEMENT SUCH AS ADDITIONAL ARMORING AND FILTERING MEASURES (I.E. STRAW BALES, WATTLES, ETC.), AND HYDROSEEDING WITH RAPIDLY GERMINATING SEED.

19. SEEDING MIXTURES SHALL BE FUZZ & BUZZ MIX - ERNMX-147, OR APPROVED EQUAL BY OWNER, IN ALL DISTURBED AREAS OTHER THAN THE STORMWATER MANAGEMENT BASINS.NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES WILL BE USED WITHIN THE STORMWATER MANAGEMENT BASINS, OR APPROVED EQUAL BY OWNER. SEE 6/DN-1 & 7/DN-1 FOR SEE MIXTURES.

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.
COMPOST FILTER SOCK	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR/REPLACE WHEN FAILURE OR DETERIORATION IS OBSERVED.
SILT FENCE	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	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 SEDIMENT BASIN (W/ BAFFLES)	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.5"	REMOVE SEDIMENT ONCE IT HAS ACCUMULATED TO ONE HALF OF MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATERING AS NEEDED. RESTORE TRAP TO ORIGINAL DIMENSIONS. REPAIR/REPLACE BAFFLES WHEN FAILURE OR DETERIORATION IS OBSERVED.
TEMPORARY SEDIMENT TRAP (W/ BAFFLES)	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.5"	REMOVE SEDIMENT ONCE IT HAS ACCUMULATED TO ONE HALF OF MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATERING AS NEEDED. RESTORE TRAP TO ORIGINAL DIMENSIONS. REPAIR/REPLACE BAFFLES WHEN FAILURE OR DETERIORATION IS OBSERVED.
TEMPORARY SOIL PROTECTION	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR ERODED OR BARE AREAS IMMEDIATELY. RESEED AND MULCH.

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 17.18± ACRES OF EXISTING LOT.

THE PROPOSED PROJECT INVOLVES THE FOLLOWING CONSTRUCTION:

A. CLEARING, GRUBBING, AND GRADING OF EXISTING LOT.
B. CONSTRUCTION OF 7,570 GROUND MOUNTED SOLAR PANELS AND ASSOCIATED EQUIPMENT.
B. THE STABILIZATION OF DISTURBED AREAS WITH PERMANENT VEGETATIVE TREATMENTS.

2. FOR THIS PROJECT, THERE ARE APPROXIMATELY 16.64± ACRES OF THE SITE BEING DISTURBED WITH NEGLIGIBLE INCREASE IN THE IMPERVIOUS AREA OF THE SITE, AS ALL ACCESS THROUGH 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 STATE OF CONNECTICUT (NRCS, VERSION 22, SEP 12, 2022), CONTAINS TYPE 84B, 84C AND 86C (HYDROLOGIC SOIL GROUP C), 47C (HYDROLOGIC SOIL GROUP C/D), AND 52C (HYDROLOGIC SOIL GROUP B/D) SOILS. A GEOTECHNICAL ENGINEERING REPORT HAS NOT BEEN COMPLETED.

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

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

6. STORMWATER MANAGEMENT DESIGN CRITERIA UTILIZES THE APPLICABLE SECTIONS OF THE 2004 CONNECTICUT STORMWATER QUALITY MANUAL AND THE CITY OF TORRINGTON STANDARDS, 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 CONNECTICUT EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, LATEST EDITION.

7. DETAILS FOR THE TYPICAL STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION MEASURES ARE SHOWN ON THE PLAN SHEETS OR PROVIDED AS SEPARATE SUPPORT DOCUMENTATION FOR REVIEW IN THIS PLAN.

8. CONSERVATION PRACTICES TO BE USED DURING CONSTRUCTION:
   A. STAGED CONSTRUCTION;
   B. MINIMIZE THE DISTURBED AREAS TO THE EXTENT PRACTICABLE DURING CONSTRUCTION;
   C. STABILIZE DISTURBED AREAS WITH TEMPORARY OR PERMANENT MEASURES AS SOON AS POSSIBLE, BUT NO LATER THAN 7-DAYS FOLLOWING DISTURBANCE;
   D. MINIMIZE IMPERVIOUS AREAS;
   E. UTILIZE APPROPRIATE CONSTRUCTION EROSION AND SEDIMENTATION MEASURES.

9. THE FOLLOWING SEPARATE DOCUMENTS ARE TO BE CONSIDERED A PART OF THE EROSION AND SEDIMENTATION PLAN:
   A. STORMWATER MANAGEMENT REPORT DATED APRIL 2024.
   B. SWPCP DATED APRIL 2024.

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. SHOULD THE CONTRACTOR ALTER THE CONSTRUCTION SEQUENCE OR ANY EROSION AND SEDIMENTATION CONTROL MEASURES THEY SHALL MODIFY THE STORMWATER POLLUTION CONTROL PLAN ("SWPCP") AS REQUIRED BY THE GENERAL PERMIT. MAJOR CHANGES IN SEQUENCING AND/OR METHODS MAY REQUIRE REGULATORY APPROVAL PRIOR TO IMPLEMENTATION.

1. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING. PHYSICALLY FLAG THE LIMITS OF DISTURBANCE IN THE FIELD AS NECESSARY TO FACILITATE THE PRE-CONSTRUCTION MEETING.

2. CONDUCT A PRE-CONSTRUCTION MEETING TO DISCUSS THE PROPOSED WORK AND EROSION AND SEDIMENTATION CONTROL MEASURES. THE MEETING SHOULD BE ATTENDED BY THE OWNER, THE OWNER'S 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 CALL BEFORE YOU DIG AT 811, AS REQUIRED, PRIOR TO THE START OF CONSTRUCTION.

PHASE 1

4. REMOVE EXISTING IMPEDIMENTS AS NECESSARY AND PROVIDE MINIMAL CLEARING AND GRUBBING TO INSTALL THE REQUIRED CONSTRUCTION ENTRANCE/S.

5. CLEAR ONLY AS NEEDED TO INSTALL THE PERIMETER EROSION AND SEDIMENTATION CONTROL MEASURES, SWALES, SEDIMENT TRAPS/BASIN AND, IF APPLICABLE, TREE PROTECTION. ALL WETLAND AREAS SHALL BE PROTECTED BEFORE MAJOR CONSTRUCTION BEGINS.

6. INSTALL PERIMETER EROSION CONTROL AS SHOWN ON PLANS, INCLUDING SILT FENCE, SILT FENCE WINGS, AND COMPOST FILTER SOCKS.

7. INSTALL TEMPORARY SEDIMENT TRAP TST-1 AND ASSOCIATED SWALES & PLUG OUTLET PIPE. UPON COMPLETED INSTALLATION AND STABILIZATION OF THE BASIN AND SWALES, PHASE 2 & PHASE 3 WORK UP GRADIENT CAN PROCEED.

8. INSTALL TEMPORARY SEDIMENT BASIN TSB-2 AND ASSOCIATED SWALES. PLUG OUTLET PIPE. UPON COMPLETED INSTALLATION AND STABILIZATION OF THE BASIN AND SWALES, PHASE 2 & PHASE 3 WORK UP GRADIENT CAN PROCEED.

PHASE 2

9. UPON COMPLETION OF THE INSTALLATION OF TEMPORARY SEDIMENT BASINS, COMPLETE THE CLEARING & GRUBBING OF THE REMAINING SOUTHERN WOODED AREA AS REQUIRED, IN 5 ACRE MAXIMUM INCREMENTS. REMOVE CUT WOOD AND STOCKPILE FOR FUTURE USE OR REMOVE OFF-SITE. REMOVE AND DISPOSE OF DEMOLITION DEBRIS OFF-SITE IN ACCORDANCE WITH APPLICABLE LAWS.

10. TEMPORARILY SEED DISTURBED AREAS NOT UNDER CONSTRUCTION FOR THIRTY (30) DAYS OR MORE.

PHASE 3

12. WORKING FROM SOUTH TO NORTH, COMPLETE THE CLEARING & GRUBBING OF THE REMAINING WOODED AREA AS REQUIRED, IN 5 ACRE MAXIMUM INCREMENTS. REMOVE CUT WOOD AND STOCKPILE FOR FUTURE USE OR REMOVE OFF-SITE. REMOVE AND DISPOSE OF DEMOLITION DEBRIS OFF-SITE IN ACCORDANCE WITH APPLICABLE LAWS.

13. TEMPORARILY SEED DISTURBED AREAS NOT UNDER CONSTRUCTION FOR THIRTY (30) DAYS OR MORE.

FINAL GRADING & DRAINAGE PLAN

14. INSTALL CONCRETE EQUIPMENT PAD.

15. INSTALL ELECTRICAL CONDUITS.

16. INSTALL RACKING POSTS FOR GROUND MOUNTED SOLAR PANELS.

17. INSTALL GROUND MOUNTED SOLAR PANELS AND COMPLETE ELECTRICAL INSTALLATION.

18. AFTER SUBSTANTIAL COMPLETION OF THE INSTALLATION OF THE SOLAR PANELS, COMPLETE REMAINING SITE WORK AND STABILIZE ALL DISTURBED AREAS.

19. FINE GRADE, RAKE, SEED AND MULCH ALL REMAINING DISTURBED AREAS.

20. AFTER THE SITE IS STABILIZED AND WITH THE APPROVAL OF THE PERMITTEE, REMOVE REMAINING EROSION AND SEDIMENTATION CONTROLS AND CLEAN & CONVERT TEMPORARY SEDIMENT TRAPS/BASIN TO FINAL GRASS LINED STORMWATER BASINS. RESHAPE AND RESEED BASINS AS NECESSARY, UNPLUG OUTLET PIPES AND INSTALL LOW FLOW ORIFICES PER PLANS AND DETAIL 4/DN-2. ANY AREAS DISTURBED DURING CLEAN UP SHALL BE PERMANENTLY SEEDED.

21. THE SITE SHALL BE MONITORED EVERY MONTH OF THE YEAR FOR TWO (2) FULL GROWING SEASONS (GROWING SEASONS ARE APRIL-OCTOBER).

22. ISSUE NOTICE OF TERMINATION UPON COMPLETION OF MONITORING REQUIRED PER CT DEEP CONSTRUCTION GENERAL PERMIT APPENDIX I.

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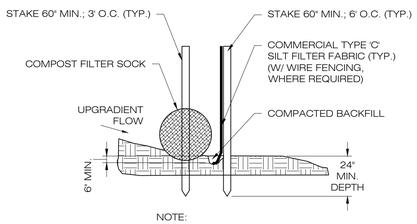
SEDIMENTATION & EROSION CONTROL NOTES

SHEET NUMBER:

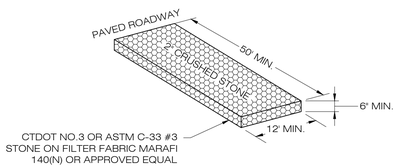
EC-1



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

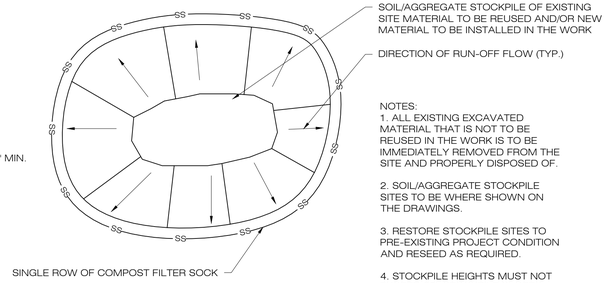
SILT FENCE W/ COMPOST FILTER SOCK DETAIL

1 / EC-2 **SCALE : N.T.S.**



CONSTRUCTION ENTRANCE DETAIL

2 / EC-2 **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.

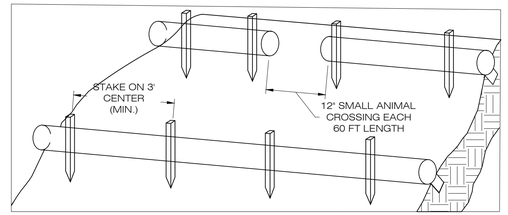
2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.

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.

MATERIALS STOCKPILE DETAIL

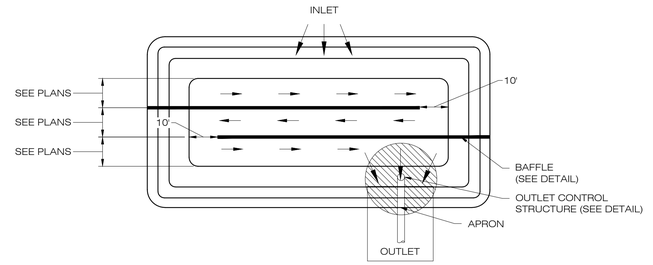
3 / EC-2 **SCALE : N.T.S.**



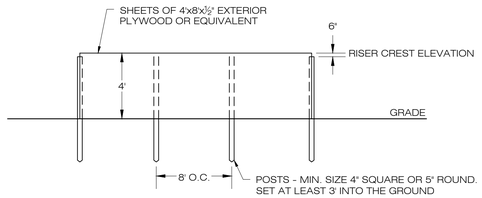
1. BEGIN AT THE LOCATION WHERE THE SOCK IS TO BE INSTALLED BY EXCAVATING A 2-3" (5-7.5 CM) DEEP X 9" (22.9 CM) WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UP SLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE SOCK IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE SOCK ON THE UPHILL SIDE. SOCKS SHALL BE INSTALLED IN 60 FT CONTINUOUS LENGTHS WITH ADJACENT SOCKS TIGHTLY ABUT. EVERY 60 FT THE SOCK ROW SHALL BE SPACED 12 INCHES CLEAR, END TO END, FOR AMPHIBIAN AND REPTILE TRAVEL. THE OPEN SPACES SHALL BE STAGGERED MID LENGTH OF THE NEXT DOWN GRADIENT SOCK.
3. SECURE THE SOCK WITH 18-24" (45.7-61 CM) STAKES EVERY 3' (0.9 -1.2 M) AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE SOCK LEAVING AT LEAST 2-3" (5-7.5 CM) OF STAKE EXTENDING ABOVE THE SOCK. STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE.
4. CONTRACTOR TO FOLLOW MANUFACTURES SPECIFICATIONS AND INSTALL DIRECTIONS IF DIRECTED THAN WHAT IS PROVIDED ABOVE.

COMPOST FILTER SOCK SEDIMENTATION CONTROL BARRIER

4 / EC-2 **SCALE : N.T.S.**



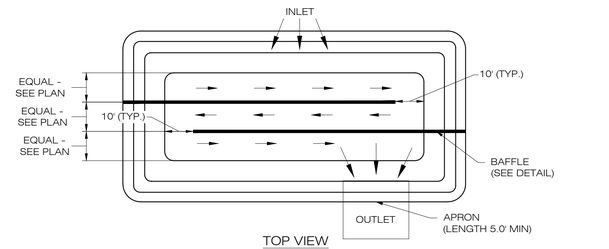
TOP VIEW



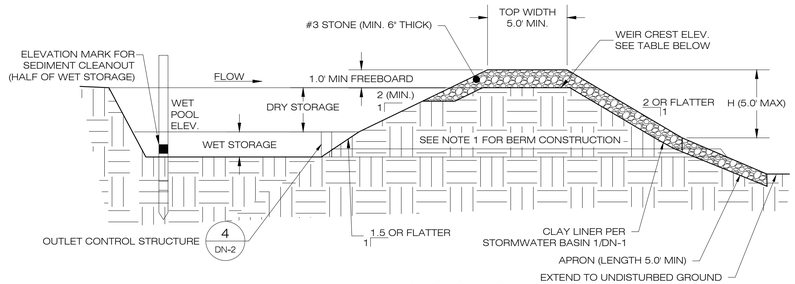
NOTES:
1. FILL ANY VOIDS BETWEEN THE BOTTOM OF THE BASIN AND BAFFLE.

SEDIMENT TRAP BAFFLE

6 / EC-2 **SCALE : N.T.S.**



TOP VIEW



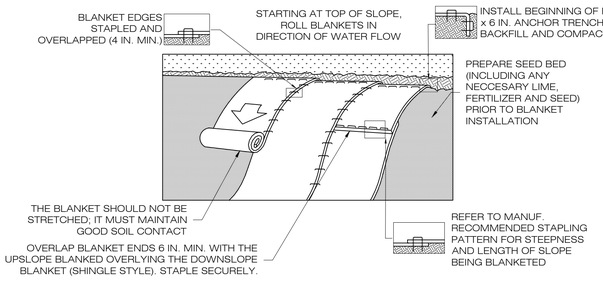
CROSS SECTION

NOTES:
1. CONSTRUCT TEMPORARY SEDIMENT BASIN BERMS AND SIDEWALLS PER THE GRASS LINED BASIN DETAIL.
2. SEDIMENT BAFFLES SHALL BE INSTALLED AS SHOWN ON EC-4 & EC-5.
3. SEE TSB SIZING TABLE FOR WET AND DRY STORAGE VOLUMES.

TEMPORARY SEDIMENT BASIN SIZING TABLE											
NAME	DRAINAGE AREA (AC)	REQ. WET VOLUME (CF)	REQ. RESIDENCE TIME VOLUME (CF)	TOTAL VOLUME REQ. (CF)	PROP. BTM. ELEV. (FT)	PROP. OUTLET RIM ELEV. (FT)	PROP. WEIR CREST ELEV. (FT)	PROP. TOP ELEV. (FT)	WET VOL. PROVIDED (CF)	RESIDENCE TIME VOLUME PROVIDED (CF)	TOTAL VOL. PROVIDED (CF)
TSB-2	5.70 AC	11,225	10,346	27,182	936.00'	938.00	939.00	940.00'	19,873	12,138	32,011

TEMPORARY SEDIMENT BASIN

5 / EC-2 **SCALE : N.T.S.**

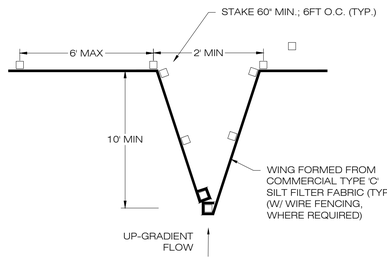


EROSION CONTROL BLANKET INSTALLATION
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPS), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECPS IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECPS EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPS WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12" PORTION OF RECPS BACK OVER THE SEED AND COMPACTED SOIL. SECURE RECPS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECPS.
3. ROLL THE RECPS DOWN HORIZONTALLY ACROSS THE SLOPE. RECPS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECPS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL RECPS MUST BE STAPLED WITH APPROXIMATELY 2" - 5" OVERLAP DEPENDING ON THE RECPS TYPE.
5. CONSECUTIVE RECPS SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECPS WIDTH.

NOTES:
1. PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.
2. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.
3. BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.
4. THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
5. BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

EROSION CONTROL BLANKET STEEP SLOPES

9 / EC-2 **SCALE : N.T.S.**

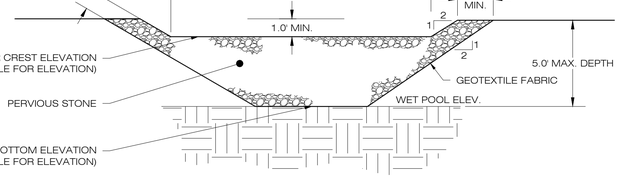


NOTES:
1. WRAP SILT FENCE AT ENDS.

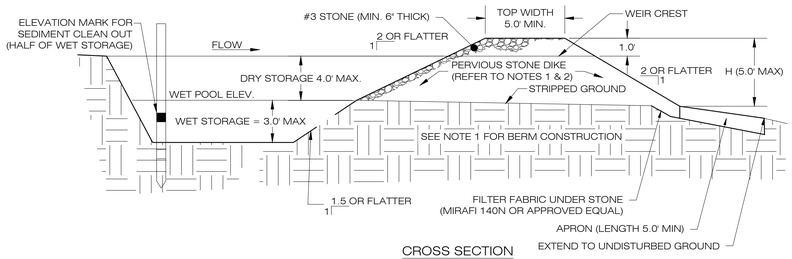
2. NO JOINING FENCE SECTIONS SHALL BE INSTALLED WITHIN 30 FEET OF WING.

SILT FENCE WING DETAIL

8 / EC-2 **SCALE : N.T.S.**



OUTLET ELEVATION



CROSS SECTION

NOTES:
1. CONSTRUCT TEMPORARY SEDIMENT TRAP BERMS AND SIDEWALLS PER THE INFILTRATION BASIN DETAIL.
2. PERVIOUS STONE DIKE SHALL BE CONSTRUCTED OF CT DOT MODIFIED RIP-RAP WITH #3 STONE ON FACE.
3. SEDIMENT TRAP BAFFLES SHALL BE INSTALLED AS SHOWN ON EC-4.
4. SEE TST SIZING TABLE FOR WET AND DRY STORAGE VOLUMES.

TEMPORARY SEDIMENT TRAP SIZING TABLE										
NAME	DRAINAGE AREA (AC)	SEDIMENT VOLUME/ACRE AREA (CY)	REQ. VOLUME (CY)	REQ. WET VOLUME (CY)	PROP. BTM. ELEV. (FT)	PROP. STONE DIKE BTM. ELEV. (FT)	PROP. WEIR CREST ELEV. (FT)	PROP. TOP ELEV. (FT)	WET VOL. PROVIDED (CY)	TOTAL VOL. PROVIDED. (CY)
TST-1	2.40	134	322	161	895.00	897.00	898.00	899.00	263	446

TEMPORARY SEDIMENT TRAP

7 / EC-2 **SCALE : N.T.S.**

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC PERMIT SET

NO	DATE	REVISION
1		
2		
3		
4		
5		
6		
7		

DESIGN PROFESSIONAL OF RECORD

PROF: THOMAS E. LITTLE, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CLOVER RIDGE LLC
ADDRESS: 40 TOWER LANE STE 201 AVON, CT 06001

LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE TORRINGTON, CT

APT FILING NUMBER: CT606190

DRAWN BY: TEL

DATE: 04/22/2024 **CHECKED BY:** RCB

SHEET TITLE:

SEDIMENTATION & EROSION CONTROL NOTES

SHEET NUMBER:

EC-2

STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER

ENVIRONMENTAL NOTES - RESOURCE PROTECTION PROGRAM

WETLAND AND RARE SPECIES PROTECTION MEASURES

AS A RESULT OF THE PROJECTS LOCATION IN THE VICINITY OF SENSITIVE HABITATS INCLUDING WETLAND RESOURCES AND RARE SPECIES, THE FOLLOWING PROTECTION PROGRAM SHALL BE IMPLEMENTED BY THE CONTRACTOR TO AVOID UNINTENTIONAL IMPACTS TO PROXIMATE WETLAND RESOURCES AND RARE SPECIES DURING CONSTRUCTION ACTIVITIES.

WOOD TURTLE (GLYPTEMYS INSCULPTA), A STATE SPECIAL CONCERN SPECIES AFFORDED PROTECTION UNDER THE CONNECTICUT ENDANGERED SPECIES ACT, IS KNOWN TO OCCUR ON OR PROXIMITY TO THE PROPOSED FACILITY. THESE RARE SPECIES PROTECTION MEASURES ARE SIMILAR TO PROTECTION MEASURES PREVIOUSLY APPROVED BY THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION ("DEEP") WILDLIFE DIVISION ON OTHER COMPARABLE PROJECTS. DETAILS OF PROTECTION MEASURES TO BE IMPLEMENTED IN ASSOCIATION WITH CONSTRUCTION AND MAINTENANCE OF THE FACILITY ARE PROVIDED BELOW.

IT IS OF THE UTMOST IMPORTANCE THAT THE CONTRACTOR COMPLIES WITH THE REQUIREMENT FOR THE INSTALLATION OF PROTECTIVE MEASURES AND THE EDUCATION OF ITS EMPLOYEES AND SUBCONTRACTORS PERFORMING WORK ON THE PROJECT SITE. THE WETLAND PROTECTION MEASURES SHALL BE IMPLEMENTED AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES UNTIL PERMANENT STABILIZATION OF SITE SOILS HAS OCCURRED.

ALL-POINTS TECHNOLOGY CORPORATION, P.C. ("APT") WILL SERVE AS THE ENVIRONMENTAL MONITOR FOR THIS PROJECT TO ENSURE THAT THESE PROTECTION MEASURES ARE IMPLEMENTED PROPERLY AND WILL PROVIDE AN EDUCATION SESSION ON THE PROJECTS PROXIMITY TO SENSITIVE WETLANDS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONTACT DEAN GUSTAFSON, SENIOR WETLAND SCIENTIST AT APT, AT LEAST 5 BUSINESS DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING. MR. GUSTAFSON CAN BE REACHED BY PHONE AT (860) 552-2033 OR VIA EMAIL AT DGUSTAFSON@ALLPOINTSTECH.COM.

THIS RESOURCES PROTECTION PROGRAM CONSISTS OF SEVERAL COMPONENTS INCLUDING: EDUCATION OF ALL CONTRACTORS AND SUB-CONTRACTORS PRIOR TO INITIATION OF WORK ON THE SITE; INSTALLATION OF EROSION CONTROLS; PETROLEUM MATERIALS STORAGE AND SPILL PREVENTION; PROTECTIVE MEASURES; RARE SPECIES PROTECTION MEASURES; HERBICIDE, PESTICIDE, AND SALT RESTRICTIONS; AND REPORTING.

1. CONTRACTOR EDUCATION:

a. PRIOR TO WORK ON SITE, THE CONTRACTOR SHALL ATTEND AN EDUCATIONAL SESSION AT THE PRE-CONSTRUCTION MEETING WITH APT. THIS ORIENTATION AND EDUCATIONAL SESSION WILL CONSIST OF AN INTRODUCTORY MEETING WITH APT TO EMPHASIZE THE ENVIRONMENTALLY SENSITIVE NATURE OF THE PROJECT, THE VARIOUS WETLAND AND RARE SPECIES RESOURCES, AND THE REQUIREMENT TO DILIGENTLY FOLLOW THE PROTECTIVE MEASURES AS DESCRIBED IN SECTIONS BELOW. WORKERS WILL ALSO BE PROVIDED INFORMATION REGARDING THE IDENTIFICATION OF OTHER TURTLES, SNAKES, COMMON HERPETOFAUNA THAT COULD BE ENCOUNTERED. THE MEETING WILL FURTHER EMPHASIZE THE NON-AGGRESSIVE NATURE OF THESE SPECIES, THE ABSENCE OF NEED TO DESTROY SUCH ANIMALS AND THE NEED TO FOLLOW PROTECTIVE MEASURES AS DESCRIBED IN FOLLOWING SECTIONS. THE CONTRACTOR WILL DESIGNATE ONE OF ITS WORKERS AS THE "PROJECT MONITOR", WHO WILL RECEIVE MORE INTENSE TRAINING ON THE IDENTIFICATION AND PROTECTION OF WOOD TURTLES.

b. THE EDUCATION SESSION WILL ALSO FOCUS ON MEANS TO DISCRIMINATE BETWEEN THE SPECIES OF CONCERN AND OTHER NATIVE SPECIES TO AVOID UNNECESSARY "FALSE ALARMS". ENCOUNTERS WITH ANY SPECIES OF TURTLES, SNAKES AND AMPHIBIANS WILL BE DOCUMENTED.

c. THE CONTRACTOR WILL DESIGNATE A MEMBER OF ITS CREW AS THE PROJECT MONITOR TO BE RESPONSIBLE FOR THE PERIODIC "SWEEPS" FOR TURTLES AND OTHER HERPETOFAUNA WITHIN THE CONSTRUCTION ZONE EACH MORNING AND FOR ANY GROUND DISTURBANCE WORK. THIS INDIVIDUAL WILL RECEIVE MORE INTENSE TRAINING FROM APT ON THE IDENTIFICATION AND PROTECTION OF WOOD TURTLES AND OTHER HERPETOFAUNA IN ORDER TO PERFORM SWEEPS. ANY HERPETOFAUNA DISCOVERED WOULD BE TRANSLOCATED OUTSIDE THE WORK ZONE IN THE GENERAL DIRECTION THE ANIMAL WAS ORIENTED.

d. THE CONTRACTORS PROJECT MONITOR WILL BE PROVIDED WITH CELL PHONE AND EMAIL CONTACTS FOR APT PERSONNEL. EDUCATIONAL POSTER MATERIALS WILL BE PROVIDED BY APT AND DISPLAYED ON THE JOB SITE TO MAINTAIN WORKER AWARENESS AS THE PROJECT PROGRESSES.

e. APT WILL ALSO POST CAUTION SIGNS THROUGHOUT THE PROJECT SITE FOR THE DURATION OF THE CONSTRUCTION PROJECT PROVIDING NOTICE OF THE ENVIRONMENTALLY SENSITIVE NATURE OF THE WORK AREA, THE POTENTIAL FOR ENCOUNTERING VARIOUS AMPHIBIANS AND REPTILES AND PRECAUTIONS TO BE TAKEN TO AVOID INJURY TO OR MORTALITY OF THESE ANIMALS.

f. IF ANY RARE SPECIES ARE ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY CEASE ALL WORK, AVOID ANY DISTURBANCE TO THE SPECIES, AND CONTACT APT.

2. EROSION AND SEDIMENTATION CONTROLS/ISOLATION BARRIERS

a. 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 THAT WILL BE EXPOSED AT THE GROUND SURFACE AND REPRESENT A POTENTIAL FOR WILDLIFE ENTANGLEMENT WILL USE EITHER EROSION CONTROL BLANKETS AND FIBER ROLLS COMPOSED OF PROCESSED FIBERS MECHANICALLY BOUND TOGETHER TO FORM A CONTINUOUS MATRIX (NETLESS) OR NETTING COMPOSED OF PLANAR WOVEN NATURAL BIODEGRADABLE FIBER TO AVOID/MINIMIZE WILDLIFE ENTANGLEMENT.

b. EXCLUSIONARY FENCING SHALL BE AT LEAST 20 INCHES TALL AND MUST BE SECURED TO AND REMAIN IN CONTACT WITH THE GROUND AND BE REGULARLY MAINTAINED BY THE CONTRACTOR (AT LEAST BI-WEEKLY AND AFTER MAJOR WEATHER EVENTS) TO SECURE ANY GAPS OR OPENINGS AT GROUND LEVEL THAT MAY LET ANIMAL PASS THROUGH.

c. THE EXTENT OF THE EROSION CONTROLS WILL BE AS SHOWN ON THE SITE PLANS. THE CONTRACTOR SHALL HAVE ADDITIONAL SEDIMENTATION AND EROSION CONTROLS STOCKPILED ON SITE SHOULD FIELD OR CONSTRUCTION CONDITIONS WARRANT EXTENDING DEVICES. IN ADDITION TO THE CONTRACTOR MAKING THESE DETERMINATIONS, REQUESTS FOR ADDITIONAL CONTROLS WILL ALSO BE AT THE DISCRETION OF THE ENVIRONMENTAL MONITOR.

d. INSTALLATION OF SEDIMENTATION AND EROSION CONTROLS, REQUIRED FOR EROSION CONTROL COMPLIANCE AND CREATION OF A BARRIER TO POSSIBLE MIGRATING/DISPERSING TURTLES, SHALL BE PERFORMED BY THE CONTRACTOR FOLLOWING CLEARING ACTIVITIES AND PRIOR TO ANY EARTHWORK. THE ENVIRONMENTAL MONITOR WILL INSPECT THE WORK ZONE AREA PRIOR TO AND FOLLOWING EROSION CONTROL BARRIER INSTALLATION TO ENSURE THE AREA IS FREE OF WOOD TURTLE (ALONG WITH OTHER AMPHIBIANS AND REPTILES THAT MAY BE ENCOUNTERED) AND DOCUMENT BARRIERS HAVE BEEN SATISFACTORILY INSTALLED. THE INTENT OF THE BARRIER IS TO SEGREGATE THE MAJORITY OF THE WORK ZONE AND ISOLATE IT FROM NESTING/FORAGING/MIGRATING/DISPERSING TURTLES, SNAKES AND OTHER HERPETOFAUNA. OFTENTIMES COMPLETE ISOLATION OF A WORK ZONE IS NOT FEASIBLE DUE TO ACCESSIBILITY NEEDS AND LOCATIONS OF STAGING/MATERIAL STORAGE AREAS, ETC. ALTHOUGH THE BARRIERS MAY NOT COMPLETELY ISOLATE THE WORK ZONE, THEY WILL BE POSITIONED TO DEFLECT MIGRATING/DISPERSAL ROUTES AWAY FROM THE WORK ZONE TO MINIMIZE POTENTIAL ENCOUNTERS WITH TURTLES, SNAKES AND OTHER HERPETOFAUNA.

e. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS OF THE SEDIMENTATION AND EROSION CONTROLS FOR TEARS OR BREACHES AND ACCUMULATION LEVELS OF SEDIMENT, PARTICULARLY FOLLOWING STORM EVENTS THAT GENERATE A DISCHARGE, AS DEFINED BY AND IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. THE CONTRACTOR SHALL NOTIFY THE APT ENVIRONMENTAL MONITOR WITHIN 24 HOURS OF ANY BREACHES OF THE SEDIMENTATION AND EROSION CONTROLS AND ANY SEDIMENT RELEASES BEYOND THE PERIMETER CONTROLS THAT IMPACT WETLANDS, WATERCOURSES, OR AREAS WITHIN 100 FEET OF WETLANDS. THE APT ENVIRONMENTAL MONITOR WILL PROVIDE PERIODIC INSPECTIONS OF THE SEDIMENTATION AND EROSION CONTROLS THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES ONLY AS IT PERTAINS TO THEIR FUNCTION TO PROTECT NEARBY WETLANDS. SUCH INSPECTIONS WILL GENERALLY OCCUR ONCE PER MONTH. THE FREQUENCY OF MONITORING MAY INCREASE DEPENDING UPON SITE CONDITIONS, LEVEL OF CONSTRUCTION ACTIVITIES IN PROXIMITY TO SENSITIVE RECEPTORS, OR AT THE REQUEST OF REGULATORY AGENCIES. IF THE ENVIRONMENTAL MONITOR IS NOTIFIED BY THE CONTRACTOR OF A SEDIMENT RELEASE, AN INSPECTION WILL BE SCHEDULED SPECIFICALLY TO INVESTIGATE AND EVALUATE POSSIBLE IMPACTS TO WETLAND RESOURCES.

f. THIRD PARTY MONITORING OF SEDIMENTATION AND EROSION CONTROLS WILL BE PERFORMED BY OTHER PARTIES, AS NECESSARY, UNDER APPLICABLE LOCAL, STATE AND/OR FEDERAL REGULATIONS AND PERMIT CONDITIONS.

g. NO EQUIPMENT, VEHICLES OR CONSTRUCTION MATERIALS SHALL BE STORED WITHIN 100 FEET OF WETLAND OR WATERCOURSE RESOURCES.

h. ALL SILT FENCING AND OTHER EROSION CONTROL DEVICES SHALL BE REMOVED WITHIN 30 DAYS OF COMPLETION OF WORK AND PERMANENT STABILIZATION OF SITE SOILS. IF FIBER ROLLS/WATTLES, STRAW BALES, OR OTHER NATURAL MATERIAL EROSION CONTROL PRODUCTS ARE USED, SUCH DEVICES WILL NOT BE LEFT IN PLACE TO BIODEGRADE AND SHALL BE PROMPTLY REMOVED AFTER SOILS ARE STABLE SO AS NOT TO CREATE A BARRIER TO WILDLIFE MOVEMENT. SEED FROM SEEDING OF SOILS SHOULD NOT SPREAD OVER FIBER ROLLS/WATTLES AS IT MAKES THEM HARDER TO REMOVE ONCE SOILS ARE STABILIZED BY VEGETATION.

3. PETROLEUM MATERIALS STORAGE AND SPILL PREVENTION

a. CERTAIN PRECAUTIONS ARE NECESSARY TO STORE PETROLEUM MATERIALS, REFUEL AND CONTAIN AND PROPERLY CLEAN UP ANY INADVERTENT FUEL OR PETROLEUM (I.E., OIL, HYDRAULIC FLUID, ETC.) SPILL DUE TO THE PROJECT'S LOCATION IN PROXIMITY TO WETLAND RESOURCES.

b. IF A SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN FOR THIS PROJECT, PER THE REQUIREMENTS OF 40 CFR 112, HAS BEEN DEVELOPED FOR THIS FACILITY, PLEASE REFER TO THE SPCC FOR SPECIFIC REQUIREMENTS. BASIC REQUIREMENTS FOR PETROLEUM MATERIALS STORAGE AND SPILL PREVENTION ARE PROVIDED BELOW. IN THE EVENT THESE BASIC REQUIREMENTS CONTRADICT THE SPCC, THE CONTRACTOR SHALL RELY ON REQUIREMENTS PROVIDED IN THE SPCC.

c. A SPILL CONTAINMENT KIT CONSISTING OF A SUFFICIENT SUPPLY OF ABSORBENT PADS AND ABSORBENT MATERIAL WILL BE MAINTAINED BY THE CONTRACTOR AT THE CONSTRUCTION SITE THROUGHOUT THE DURATION OF THE PROJECT. IN ADDITION, A WASTE DRUM WILL BE KEPT ON SITE TO CONTAIN ANY USED ABSORBENT PADS/MATERIAL FOR PROPER AND TIMELY DISPOSAL OFF SITE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL LAWS.

d. THE SERVICE OF MACHINERY SHALL NOT OCCUR WITHIN 100 FEET OF WETLANDS OR WATERCOURSES.

e. AT A MINIMUM, THE FOLLOWING PETROLEUM AND HAZARDOUS MATERIALS STORAGE AND REFUELING RESTRICTIONS AND SPILL RESPONSE PROCEDURES WILL BE ADHERED TO BY THE CONTRACTOR.

i. PETROLEUM AND HAZARDOUS MATERIALS STORAGE AND REFUELING

1. REFUELING OF VEHICLES OR MACHINERY SHALL OCCUR A MINIMUM OF 100 FEET FROM WETLANDS AND SHALL TAKE PLACE ON AN IMPERVIOUS PAD WITH SECONDARY CONTAINMENT DESIGNED TO CONTAIN FUELS.
2. ANY FUEL OR HAZARDOUS MATERIALS THAT MUST BE KEPT ON SITE SHALL BE STORED ON AN IMPERVIOUS SURFACE UTILIZING SECONDARY CONTAINMENT A MINIMUM OF 100 FEET FROM WETLANDS.

ii. INITIAL SPILL RESPONSE PROCEDURES

1. STOP OPERATIONS AND SHUT OFF EQUIPMENT.
2. REMOVE ANY SOURCES OF SPARK OR FLAME.
3. CONTAIN THE SOURCE OF THE SPILL.
4. DETERMINE THE APPROXIMATE VOLUME OF THE SPILL.
5. IDENTIFY THE LOCATION OF NATURAL FLOW PATHS TO PREVENT THE RELEASE OF THE SPILL TO SENSITIVE NEARBY WETLANDS AND VERNAL POOL.
6. ENSURE THAT FELLOW WORKERS ARE NOTIFIED OF THE SPILL.

iii. SPILL CLEAN UP & CONTAINMENT

1. OBTAIN SPILL RESPONSE MATERIALS FROM THE ON-SITE SPILL RESPONSE KIT. PLACE ABSORBENT MATERIALS DIRECTLY ON THE RELEASE AREA.
2. LIMIT THE SPREAD OF THE SPILL BY PLACING ABSORBENT MATERIALS AROUND THE PERIMETER OF THE SPILL.
3. ISOLATE AND ELIMINATE THE SPILL SOURCE.
4. CONTACT APPROPRIATE LOCAL, STATE AND/OR FEDERAL AGENCIES, AS NECESSARY.
5. CONTACT A DISPOSAL COMPANY TO PROPERLY DISPOSE OF CONTAMINATED MATERIALS.

iv. REPORTING

1. COMPLETE AN INCIDENT REPORT.
2. SUBMIT A COMPLETED INCIDENT REPORT TO LOCAL, STATE AND FEDERAL AGENCIES, AS NECESSARY, INCLUDING THE CONNECTICUT SITING COUNCIL.

4. HERBICIDE, PESTICIDE, AND SALT RESTRICTIONS

a. THE USE OF HERBICIDES AND PESTICIDES AT THE FACILITY SHALL BE MINIMIZED. IF HERBICIDES AND/OR PESTICIDES ARE REQUIRED AT THE FACILITY, THEIR USE WILL BE USED IN ACCORDANCE WITH CURRENT INTEGRATED PEST MANAGEMENT ("IPM") PRINCIPLES WITH PARTICULAR ATTENTION TO AVOID/MINIMIZE APPLICATIONS WITHIN 100 FEET OF WETLAND AND VERNAL POOL RESOURCES.

b. MAINTENANCE OF THE FACILITY DURING THE WINTER MONTHS SHALL MINIMIZE THE APPLICATION OF SALT OR SIMILAR PRODUCTS FOR MELTING SNOW OR ICE. NON-CHLORIDE BASED DEICING PRODUCTS ARE RECOMMENDED.

5. WOOD TURTLE PROTECTION MEASURES - CONSTRUCTION PHASE

a. PRIOR TO CONSTRUCTION AND FOLLOWING INSTALLATION OF ISOLATION BARRIERS, THE CONSTRUCTION AREA WILL BE SWEPT BY APT AND ANY TURTLES OCCURRING WITHIN THE WORK AREA WILL BE RELOCATED TO SUITABLE HABITAT OUTSIDE OF THE ISOLATION BARRIERS.

b. PRIOR TO THE START OF CONSTRUCTION EACH DAY, THE CONTRACTOR SHALL SEARCH THE ENTIRE WORK AREA FOR TURTLES.

c. IF A TURTLE IS FOUND DURING THE ACTIVE PERIOD, IT SHALL BE IMMEDIATELY MOVED, UNHARMED, BY BEING CAREFULLY GRASPED IN BOTH HANDS, ONE ON EACH SIDE OF THE SHELL, BETWEEN THE TURTLE'S FORELIMBS AND THE HIND LIMBS, AND PLACED JUST OUTSIDE OF THE ISOLATION BARRIER IN THE SAME APPROXIMATE DIRECTION IT WAS HEADING. THESE ANIMALS ARE PROTECTED BY LAW AND NO TURTLES SHOULD BE RELOCATED FROM THE PROPERTY.

d. SPECIAL CARE SHALL BE TAKEN BY THE CONTRACTOR DURING EARLY MORNING AND EVENING HOURS SO THAT POSSIBLE BASKING OR FORAGING TURTLES ARE NOT HARMED BY CONSTRUCTION ACTIVITIES.

e. THE CONTRACTOR SHALL BE PARTICULARLY DILIGENT DURING THE MONTHS OF MAY AND JUNE WHEN TURTLES ARE ACTIVELY SELECTING NESTING SITES WHICH RESULTS IN AN INCREASE IN TURTLE MOVEMENT ACTIVITY.

f. NO HEAVY MACHINERY OR VEHICLES MAY BE PARKED IN ANY TURTLE HABITAT.

g. AVOID AND LIMIT ANY EQUIPMENT USE WITHIN 100 FEET OF WETLANDS AND NO HEAVY MACHINERY OR VEHICLES MAY BE PARKED IN ANY TURTLE HABITAT OR WITHIN 100 FEET OF WETLANDS.

h. SPECIAL PRECAUTIONS MUST BE TAKEN TO AVOID DEGRADATION OF WETLAND HABITATS, PARTICULARLY ALONG AN PERENNIAL STREAM RIPARIAN CORRIDORS.

6. TURTLE PROTECTION MEASURES - FACILITY MAINTENANCE (MOWING RECOMMENDATIONS)

a. PERFORM MOWING DURING THE TURTLE DORMANT PERIOD - NOVEMBER 1ST THROUGH MARCH 31ST WHEN POSSIBLE.

b. IF MOWING IS REQUIRED OUTSIDE OF THE TURTLE DORMANT PERIOD, AVOID MOWING DURING MAY 15TH THROUGH AUGUST 30TH WHEN TURTLES MAY BE LOCATED WITHIN THE FACILITY (AND AWAY FROM FORESTED HABITAT), IF POSSIBLE, UNDERSTANDING THAT SOME VEGETATION MAINTENANCE IS NECESSARY FOR OPERATIONAL AND ELECTRICAL SAFETY PURPOSES.

c. VEGETATION MAINTENANCE WITHIN THE FENCED SOLAR FACILITY MAY BE ACCOMPLISHED THROUGH SHEEP GRAZING. SHOULD THAT TECHNIQUE BE USED, MOWING RESTRICTIONS WOULD NOT APPLY; MOWING RECOMMENDATIONS OUTSIDE OF THE FENCED FACILITY WOULD STILL APPLY.

d. IF MOWING IS REQUIRED DURING THE TURTLE ACTIVE SEASON (APRIL 1ST THROUGH OCTOBER 31ST), MOWING SHOULD BE PERFORMED AS FOLLOWS.

i. MOWING STYLE: AVOID FLAIL MOWER HEADS WITH GUIDE BARS THAT RIDE ALONG THE GROUND. SICKLE BAR MOWERS WILL HAVE THE LEAST IMPACT IF MOWING EVERY 1-5 YEARS. IN AREAS WITH MORE WOODY VEGETATION >1-2" DIAMETER BRONTOSAURUS-STYLE MOWER WILL LIKELY HAVE THE LEAST IMPACT ON TURTLES.

ii. MOWING HEIGHT: IF MOWING DURING ACTIVE SEASON, RETENTION OF MOWING STUBBLE TO 7-12 INCHES WILL REDUCE MORTALITY, REDUCE BLADE WEAR, AND WILL LEAVE IMPORTANT COVER FOR ANIMALS.

iii. DIRECTIONALITY: IF MOWING DURING THE ACTIVE SEASON IS NECESSARY, START MOWING FROM THE CENTER OF THE FIELD AND USE A BACK-AND-FORTH APPROACH, OR LARGE CIRCULAR PATTERN, TO AVOID CONCENTRATING FLEEING ANIMALS WHERE THEY MAY BE KILLED OR STRANDED. IN ADDITION, LEAVE AN UN-MOWED 30 FT STRIP AROUND THE PERIMETER OF THE FIELD AND MOW THIS AREA LAST. MOST TURTLES ARE FOUND IN THESE AREAS, AND THIS PROVIDES TIME FOR THEM TO REACT TO THE MOWING ACTIVITY AND MOVE OUT OF THE AREA.

iv. MOWER SPEED: MOWING IN LOW GEAR OR AT SLOW SPEEDS WILL ALLOW TURTLES TO REACT AND MOVE OUT OF THE FIELD.

v. UN-MOWED EDGE: LEAVING AN UN-MOWED FIELD EDGE IN HIGH TURTLE USE AREAS UNTIL AFTER SEPTEMBER 15TH. WOOD TURTLES ARE OFTEN IN FIELD EDGES CLOSEST TO NEARBY STREAMS.

7. REPORTING

a. A COMPLIANCE MONITORING REPORT (BRIEF NARRATIVE AND APPLICABLE PHOTOS) DOCUMENTING EACH APT INSPECTION WILL BE SUBMITTED BY APT TO THE PERMITTEE AND ITS CONTRACTOR FOR COMPLIANCE VERIFICATION OF THESE PROTECTION MEASURES. THESE REPORTS ARE NOT TO BE USED TO DOCUMENT COMPLIANCE WITH ANY OTHER PERMIT AGENCY APPROVAL CONDITIONS (I.E., DEEP STORMWATER PERMIT MONITORING, ETC.). ANY NON-COMPLIANCE OBSERVATIONS OF EROSION CONTROL MEASURES OR EVIDENCE OF EROSION OR SEDIMENT RELEASE WILL BE IMMEDIATELY REPORTED TO THE PERMITTEE AND ITS CONTRACTOR AND INCLUDED IN THE REPORTS. ANY OBSERVATIONS OF RARE SPECIES, RESOURCE IMPACTS, OR CORRECTIVE ACTIONS WILL BE INCLUDED IN THE REPORTS.

b. FOLLOWING COMPLETION OF THE CONSTRUCTION PROJECT, APT WILL PROVIDE A FINAL COMPLIANCE MONITORING REPORT TO THE PERMITTEE DOCUMENTING IMPLEMENTATION OF THIS WETLAND AND RARE SPECIES PROTECTION PROGRAM AND MONITORING OBSERVATIONS. THE PERMITTEE IS RESPONSIBLE FOR PROVIDING A COPY OF THE FINAL COMPLIANCE MONITORING REPORT TO THE CONNECTICUT SITING COUNCIL FOR COMPLIANCE VERIFICATION.

c. ANY OBSERVATIONS OF RARE SPECIES WILL BE REPORTED TO DEEP BY APT ON THE APPROPRIATE SPECIAL ANIMAL REPORTING FORM, WITH PHOTO-DOCUMENTATION (IF POSSIBLE) AND SPECIFIC INFORMATION ON THE LOCATION AND DISPOSITION OF THE ANIMAL.

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

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DESIGN PROFESSIONAL OF RECORD

PROF: THOMAS E. LITTLE, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CLOVER RIDGE LLC
ADDRESS: 40 TOWER LANE STE 201 AVON, CT 06001

LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE TORRINGTON, CT

APT FILING NUMBER: CT606190

DRAWN BY: TEL

DATE: 04/22/2024 **CHECKED BY:** RCB

SHEET TITLE:

ENVIRONMENTAL NOTES - RESOURCE PROTECTION

SHEET NUMBER:

EC-3

STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER

PHASE 1 CLEARING AND GRUBBING AREA

PROPERTY LINE (TYP.)

100' WETLAND BUFFER (TYP.)

50' WETLAND BUFFER (TYP.)

WETLAND LIMIT (TYP.)

PROP. 12" FILTER SOCK TO BE INSTALLED AROUND JACKING PIT & STOCKPILE FOR JACKING OPERATIONS. (1 EC-2)

PROP. TEMPORARY MATERIAL & SPOIL STOCKPILE FROM JACKING PIT (TYP.) (3 EC-2)

PROP. EROSION CONTROL BLANKETS ON ALL SLOPES 3:1 7 GREATER. (9 EC-2)

PROP. OVERFLOW WEIR (TYP.)
SPILLWAY ELEV. = 898.00
SPILLWAY WIDTH = 20.0' (2 DN-2)

PERMANENT LEVEL SPREADER (PLS-1) (TYP.)
BOTTOM ELEV. = 892 (6 DN-2)

PROP. 24" SMOOTH INTERIOR HDPE PIPE
LENGTH = 35.0'
INV. IN = 895.00'
INV. OUT = 894.00'
SLOPE = 3.13% (5 DN-2)

PROP. OUTLET CONTROL STRUCTURE (TYP.) ORIFICE TO BE PLUGGED UNTIL SEDIMENT TRAP IS CONVERTED TO STORMWATER BASIN.
RIM ELEV. = 898.00
INV. OUT = 896.00 (4 DN-2)

PROP. 2' WIDE RIP-RAP LINED SWALE (TYP.) (3 DN-2)

PROP. TEMPORARY SEDIMENT TRAP (TST-1)
BOTTOM ELEV. = 895.00'
WET ELEV. = 897.00'
TOP ELEV. = 899.00' (7 EC-2)

PROP. TEMPORARY SEDIMENT BAFFLE (TYP.) (6,7 EC-2)

PROP. STOCK PILE AREA WITH SINGLE ROW COMPOST FILTER SOCK (TYP.) (IF REQUIRED) (3 EC-2)

TST-1
±2.04 AC

PERIMETER CONTROL AREA
±0.76 AC

PERIMETER CONTROL AREA
±0.96 AC

EROSION CONTROL DRAINAGE AREA LIMITS (TYP.)

LOVERS LANE

PAVED DRIVEWAY

PROP. SILT FENCE W/ 12" COMPOST FILTER SOCK (TYP.) (1 EC-2)

PROP. DIRECT BORE RECEIVING PIT.
DEWATERING OF PIT TO OCCUR AS NECESSARY DURING JACKING OPERATIONS (BY OTHERS)

PROP. PHASE 1 CLEARING AND GRUBBING (±3.95 AC) TO FACILITATE INSTALLATION OF PERIMETER CONTROLS, SWALES & SEDIMENT TRAPS/BASIN. CLEARING ACTIVITIES TO INCLUDE THE REMOVAL OF ALL BRUSH, TREES, & STUMPS. CLEARED MATERIAL TO BE CHIPPED & STOCKPILED, TO BE USED FOR TEMPORARY STABILIZATION. ALL DISTURBED AREAS TO BE STABILIZED, LOAMED & SEEDED. (TYP.)

1 EC-2 PROP. 12 COMPOST FILTER SOCK TO BE INSTALLED AROUND STOCKPILE FOR JACKING OPERATIONS.

PROP. DIRECT BORE JACKING PIT. DEWATERING OF PIT TO OCCUR AS NECESSARY DURING JACKING OPERATIONS (BY OTHERS)

3 EC-2 PROP. TEMPORARY MATERIAL & SPOIL STOCKPILE FROM JACKING PIT (TYP.)

3 DN-2 PROP. 2' WIDE RIP-RAP LINED SWALE (TYP.)

PROP. TREE LINE (TYP.)

8 EC-2 PROP. SILT FENCE WING TO BE INSTALLED ALONG SILT FENCE AT DRAINAGE AREA LIMITS

LIMIT OF DISTURBANCE (TYP.)

1 EC-2 PROP. SILT FENCE W/ 12" COMPOST FILTER SOCK (TYP.)

8 EC-2 PROP. SILT FENCE WING TO BE INSTALLED ALONG SILT FENCE AT DRAINAGE AREA LIMITS

MATCHLINE: SEE SHEET EC-5

40 0 20 40 80
(IN FEET) 1 inch = 40 ft.

1 EC-4 **PHASE 1 - SEDIMENTATION & EROSION CONTROL PLAN**
SCALE : 1" = 40'-0"

NOTES:
1. SEE SHEET GN-1 FOR GENERAL LEGEND

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

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DESIGN PROFESSIONAL OF RECORD

PROF: THOMAS E. LITTLE, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CLOVER RIDGE LLC
ADDRESS: 40 TOWER LANE STE 201 AVON, CT 06001

LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE TORRINGTON, CT

APT FILING NUMBER: CT606190

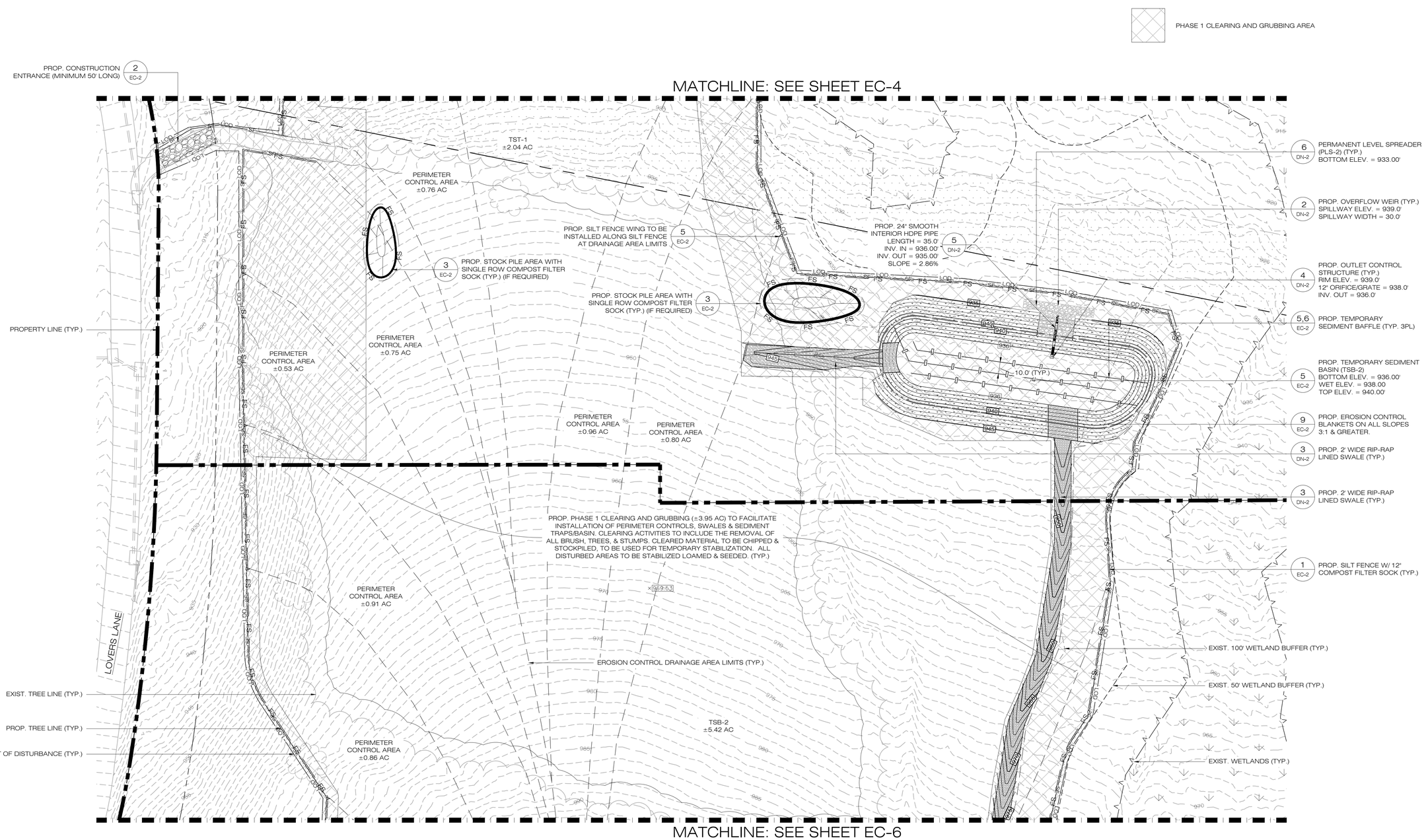
DRAWN BY: TEL

DATE: 04/22/2024 **CHECKED BY: RCB**

SHEET TITLE:
PHASE 1 SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:
EC-4

STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER



1 EC-5 **PHASE 1 - SEDIMENTATION & EROSION CONTROL PLAN**

SCALE : 1" = 40'-0"

40 0 20 40 80
(IN FEET) 1 inch = 40 ft.

NOTES:
1. SEE SHEET GN-1 FOR GENERAL LEGEND

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

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SHEET TITLE:

PHASE 1 SEDIMENTATION & EROSION CONTROL PLAN

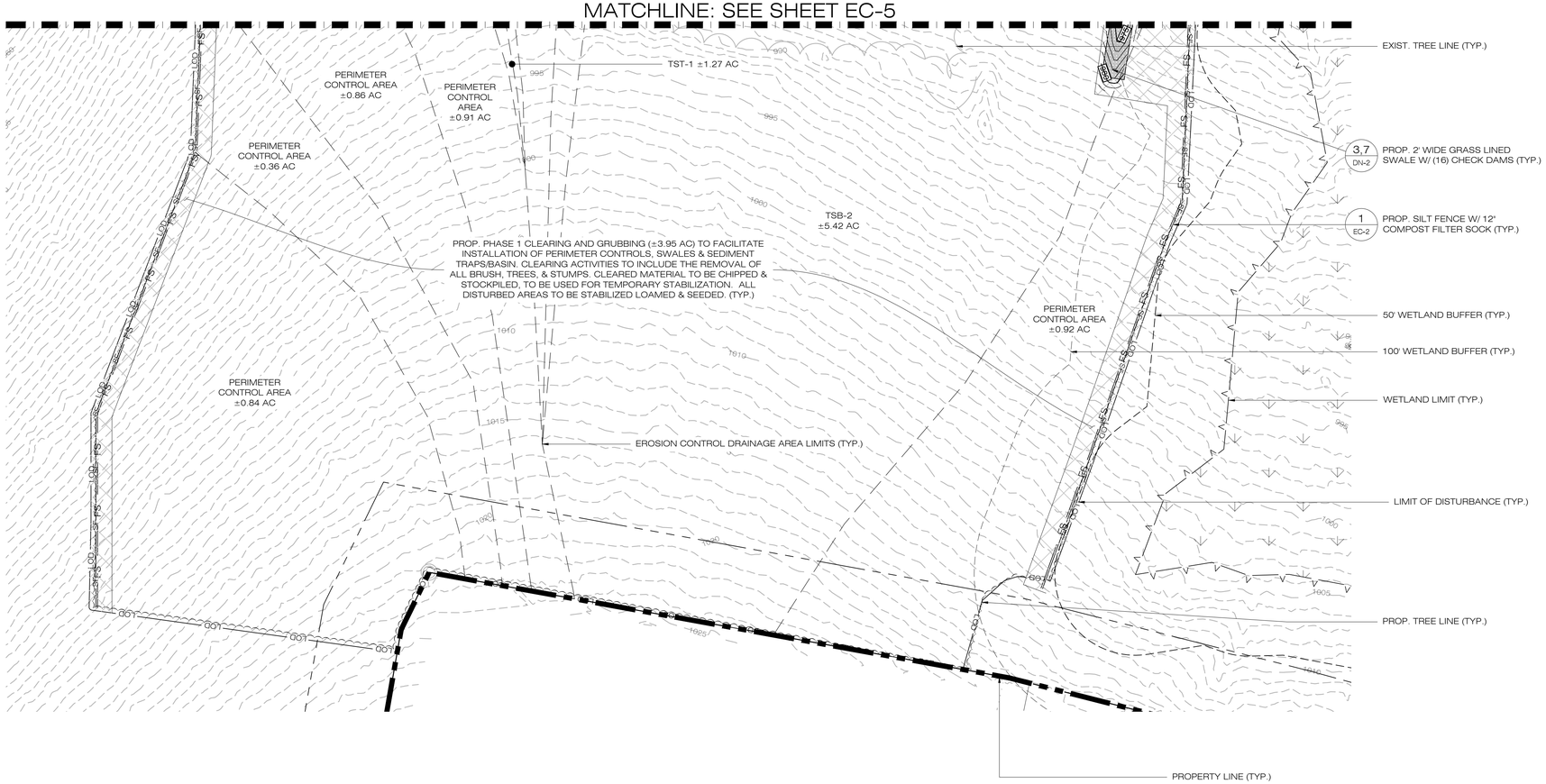
SHEET NUMBER:

EC-5

STATE OF CONNECTICUT THOMAS E. LITTLE 33443 LICENSED PROFESSIONAL ENGINEER

PHASE 1 CLEARING AND GRUBBING AREA

MATCHLINE: SEE SHEET EC-5



1 EC-6 PHASE 1 - SEDIMENTATION & EROSION CONTROL PLAN

SCALE : 1" = 40'-0"

40 0 20 40 80

(IN FEET) 1 inch = 40 ft.

NOTES:
1. SEE SHEET GN-1 FOR GENERAL LEGEND

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
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LOVERS LANE SOLAR

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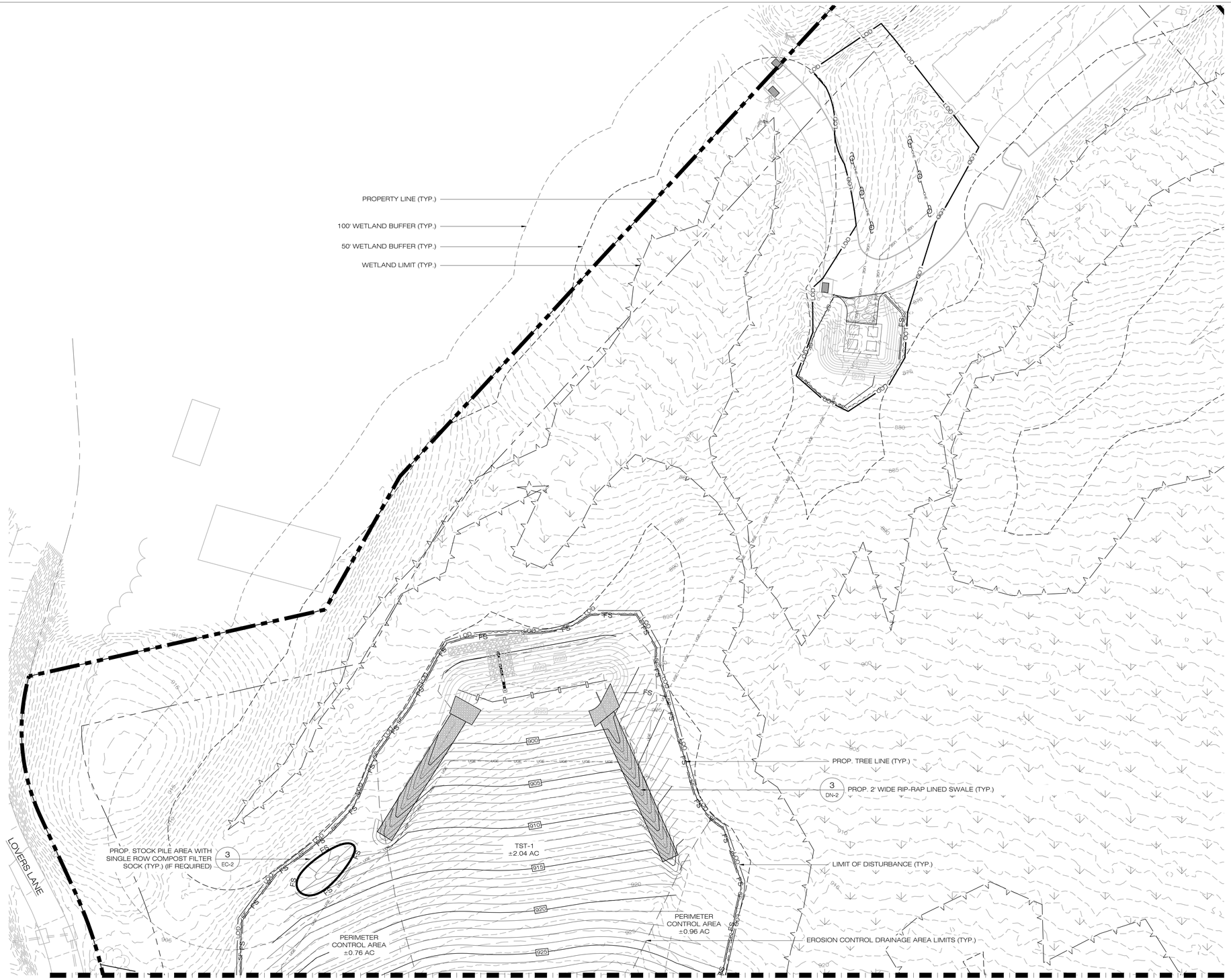
SHEET TITLE:
PHASE 1 SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:
EC-6

STATE OF CONNECTICUT THOMAS E. LITTLE 33443 LICENSED PROFESSIONAL ENGINEER



MATCHLINE: SEE SHEET EC-8

1 EC-7 **PHASE 2 - SEDIMENTATION & EROSION CONTROL PLAN**

SCALE : 1" = 40'-0"

40 0 20 40 80

(IN FEET) 1 inch = 40 ft.

NOTES:
1. SEE SHEET GN-1 FOR GENERAL LEGEND

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
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SHEET TITLE:
PHASE 2 SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:
EC-7

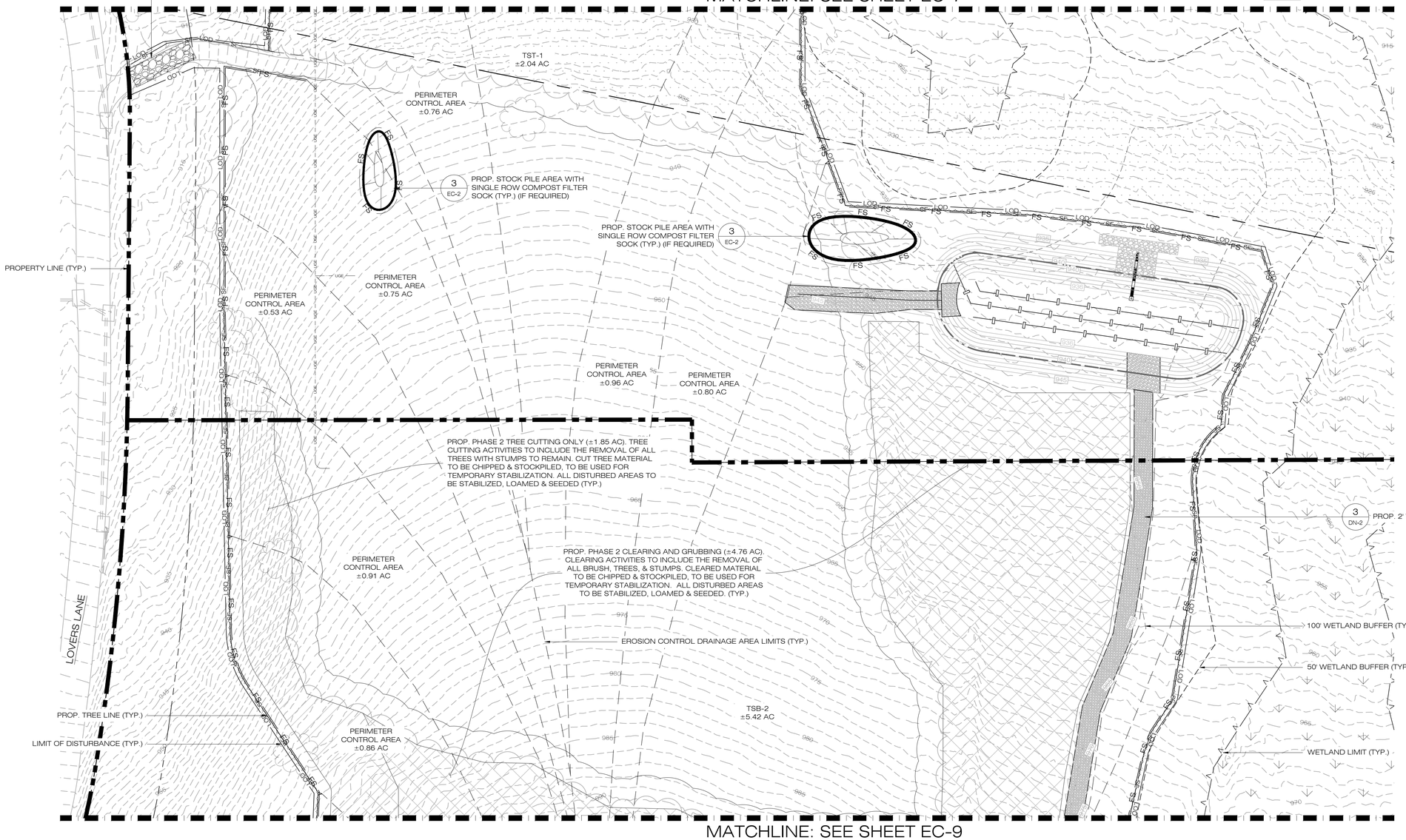
STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER

PHASE 2 CLEARING AND GRUBBING AREA

PHASE 2 TREE CUTTING ONLY AREA

PROP. CONSTRUCTION ENTRANCE (MINIMUM 50' LONG) (2 / EC-2)

MATCHLINE: SEE SHEET EC-7



MATCHLINE: SEE SHEET EC-9

1 / EC-8 PHASE 2 - SEDIMENTATION & EROSION CONTROL PLAN

SCALE : 1" = 40'-0"

40 0 20 40 80

(IN FEET) 1 inch = 40 ft.

NOTES:
1. SEE SHEET GN-1 FOR GENERAL LEGEND

LSE SEXTANS LLC
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LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE TORRINGTON, CT

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DATE: 04/22/2024 CHECKED BY: RCB

SHEET TITLE:
PHASE 2 SEDIMENTATION & EROSION CONTROL PLAN

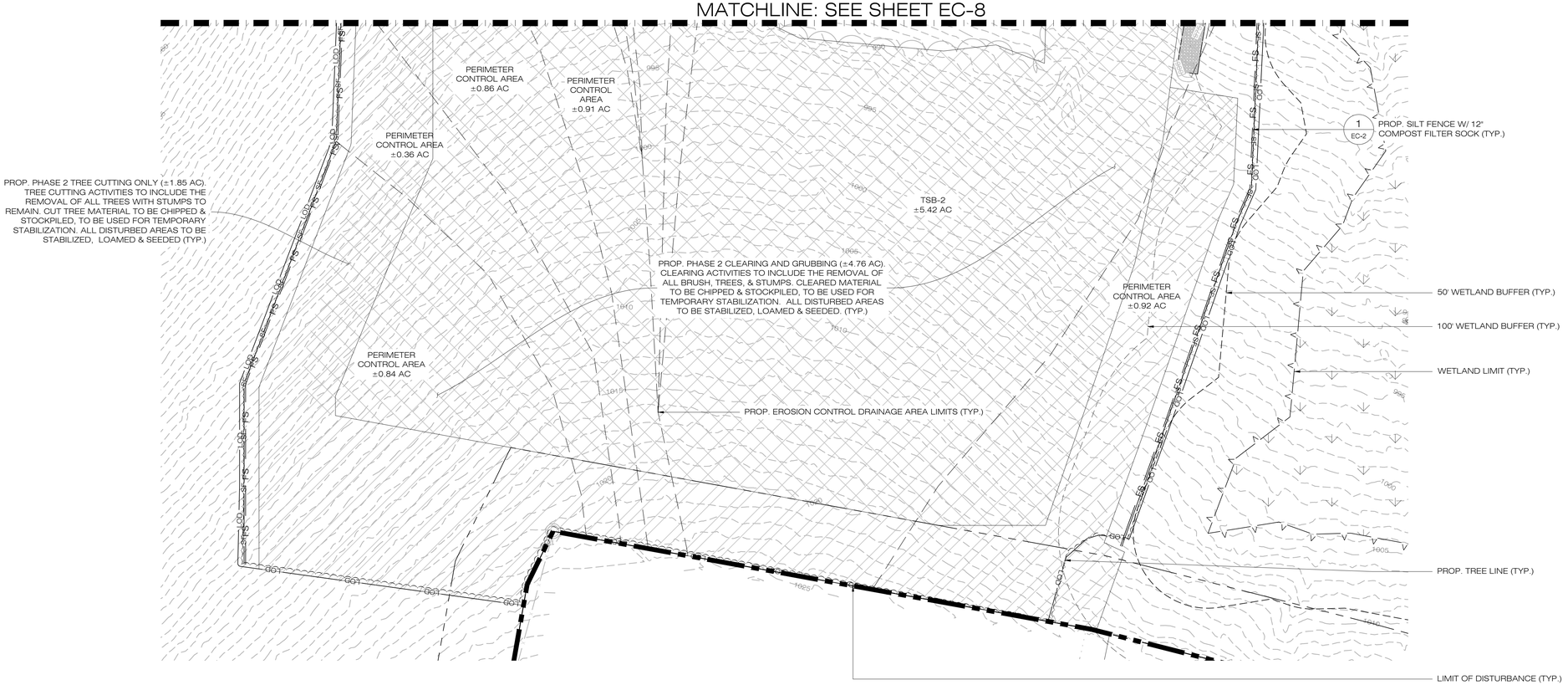
SHEET NUMBER:
EC-8

STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER

PHASE 2 CLEARING AND GRUBBING AREA

PHASE 2 TREE CUTTING ONLY AREA

MATCHLINE: SEE SHEET EC-8



1 EC-9 **PHASE 2 - SEDIMENTATION & EROSION CONTROL PLAN**

SCALE : 1" = 40'-0"

40 0 20 40 80

(IN FEET) 1 inch = 40 ft.

NOTES:
1. SEE SHEET GN-1 FOR GENERAL LEGEND

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
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OWNER: CLOVER RIDGE LLC
ADDRESS: 40 TOWER LANE STE 201 AVON, CT 06001

LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE TORRINGTON, CT

APT FILING NUMBER: CT606190

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DATE: 04/22/2024 **CHECKED BY: RCB**

SHEET TITLE:

PHASE 2 SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:

EC-9

STATE OF CONNECTICUT THOMAS E. LITTLE 33443 LICENSED PROFESSIONAL ENGINEER

PHASE 3 CLEARING AND GRUBBING AREA

PROPERTY LINE (TYP.)

100' WETLAND BUFFER (TYP.)

50' WETLAND BUFFER (TYP.)

WETLAND LIMIT (TYP.)

PROP. STOCK PILE AREA WITH SINGLE ROW COMPOST FILTER SOCK (TYP.) (IF REQUIRED) — 3 / EC-2

LOVERS LANE

TST-1
±2.04 AC

PERIMETER CONTROL AREA
±0.76 AC

EROSION CONTROL DRAINAGE AREA LIMITS (TYP.)

PERIMETER CONTROL AREA
±0.96 AC

PROP. TREE LINE (TYP.)

PROP. PHASE 3 CLEARING AND GRUBBING (±1.44 AC). CLEARING ACTIVITIES TO INCLUDE THE REMOVAL OF ALL BRUSH, TREES, & STUMPS. CLEARED MATERIAL TO BE CHIPPED & STOCKPILED, TO BE USED FOR TEMPORARY STABILIZATION. ALL DISTURBED AREAS TO BE STABILIZED, LOAMED & SEEDED. (TYP.)

LIMIT OF DISTURBANCE (TYP.)

1 / EC-2 PROP. SILT FENCE W/ 12" COMPOST FILTER SOCK (TYP.)

MATCHLINE: SEE SHEET EC-11

1 / EC-10 **PHASE 3 - SEDIMENTATION & EROSION CONTROL PLAN**
SCALE : 1" = 40'-0"

40 0 20 40 80
(IN FEET) 1 inch = 40 ft.

NOTES:
1. SEE SHEET GN-1 FOR GENERAL LEGEND

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
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WATERFORD, CT 06385 PHONE: (860)-663-1697
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DESIGN PROFESSIONAL OF RECORD

PROF: THOMAS E. LITTLE, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CLOVER RIDGE LLC
ADDRESS: 40 TOWER LANE STE 201 AVON, CT 06001

LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE TORRINGTON, CT

APT FILING NUMBER: CT606190

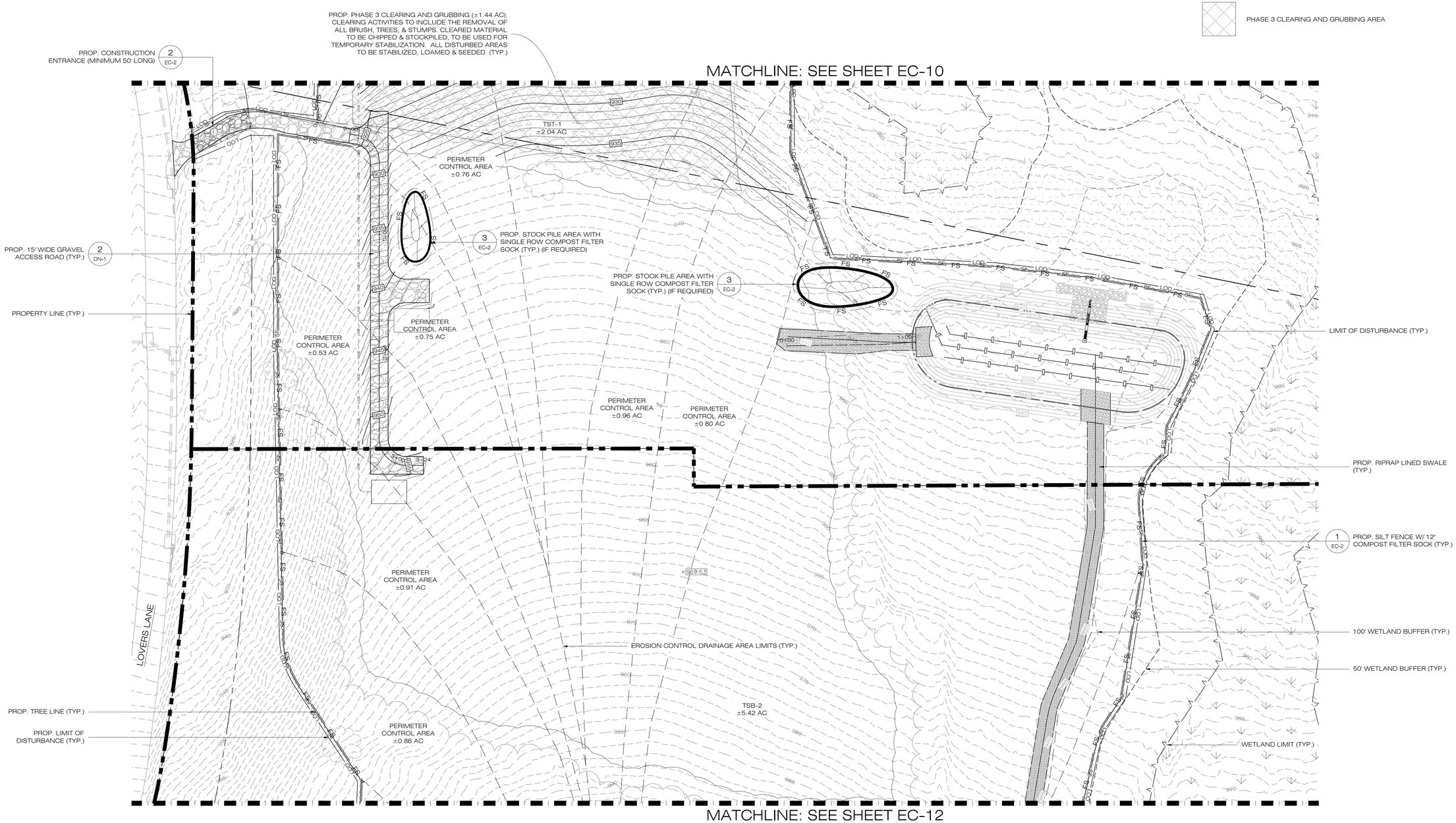
DRAWN BY: TEL

DATE: 04/22/2024 CHECKED BY: RCB

SHEET TITLE:
PHASE 3 SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:
EC-10

STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER



1 EC-11 PHASE 3 - SEDIMENTATION & EROSION CONTROL PLAN

SCALE : 1" = 40'-0"

40 0 20 40 80

(IN FEET) 1 inch = 40 ft.

NOTES:
1. SEE SHEET GN-1 FOR GENERAL LEGEND

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC PERMIT SET

NO	DATE	REVISION
1		
2		
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7		

DESIGN PROFESSIONAL OF RECORD

PROF: THOMAS E. LITTLE, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CLOVER RIDGE LLC
ADDRESS: 40 TOWER LANE STE 201 AVON, CT 06001

LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE TORRINGTON, CT

APT FILING NUMBER: CT606190

DRAWN BY: TEL
DATE: 04/22/2024 CHECKED BY: RCB

SHEET TITLE:
PHASE 3 SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:
EC-11

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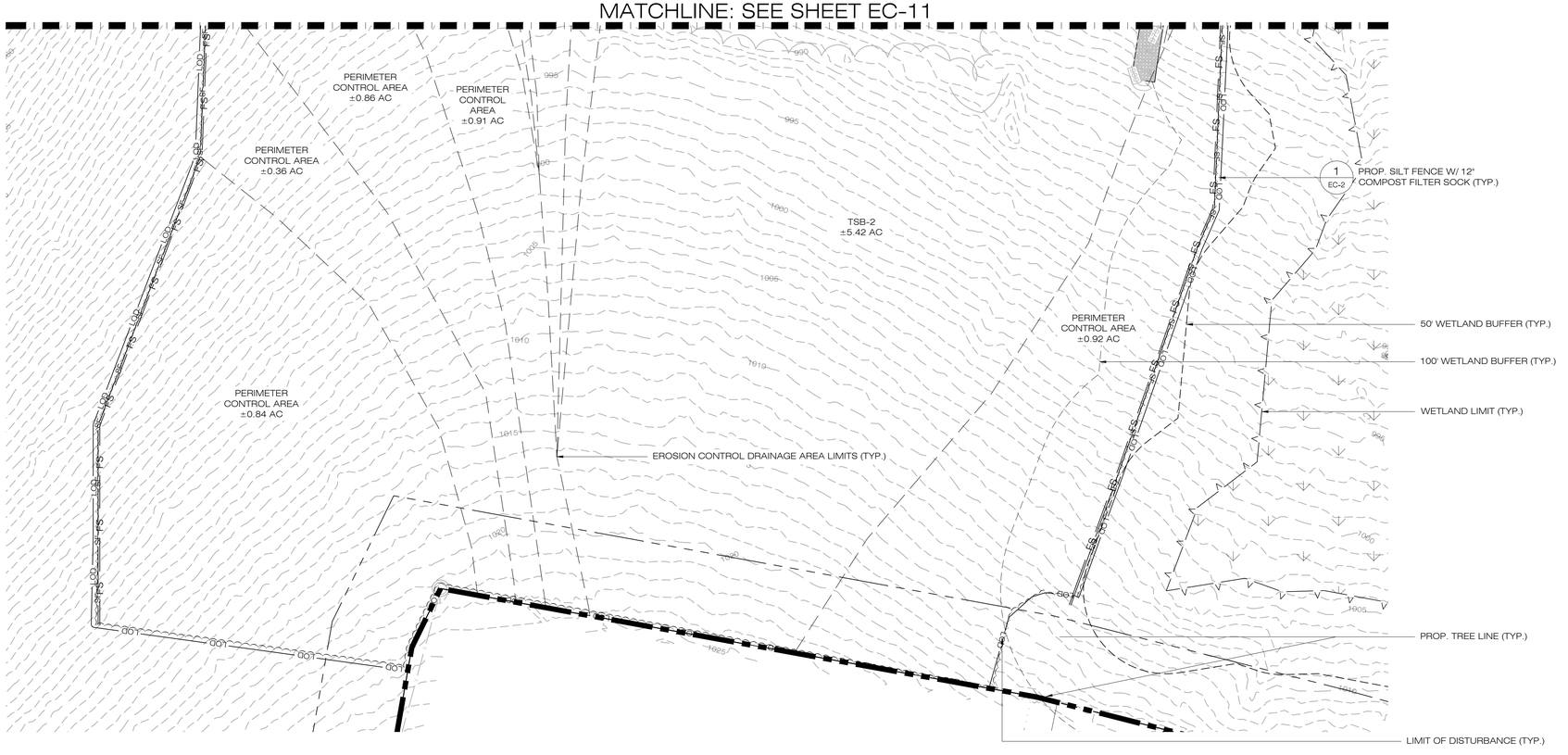
PHASE 3 CLEARING AND GRUBBING AREA

PHASE 3 TREE CUTTING ONLY AREA

MATCHLINE: SEE SHEET EC-11



1 EC-12 PHASE 3 - SEDIMENTATION & EROSION CONTROL PLAN

SCALE : 1" = 40'-0"

40 0 20 40 80

(IN FEET) 1 inch = 40 ft.

NOTES:
1. SEE SHEET GN-1 FOR GENERAL LEGEND

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
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CSC PERMIT SET

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DESIGN PROFESSIONAL OF RECORD

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COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

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LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE TORRINGTON, CT

APT FILING NUMBER: CT606190

DRAWN BY: TEL

DATE: 04/22/2024 **CHECKED BY:** RCB

SHEET TITLE:
PHASE 3 SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:
EC-12

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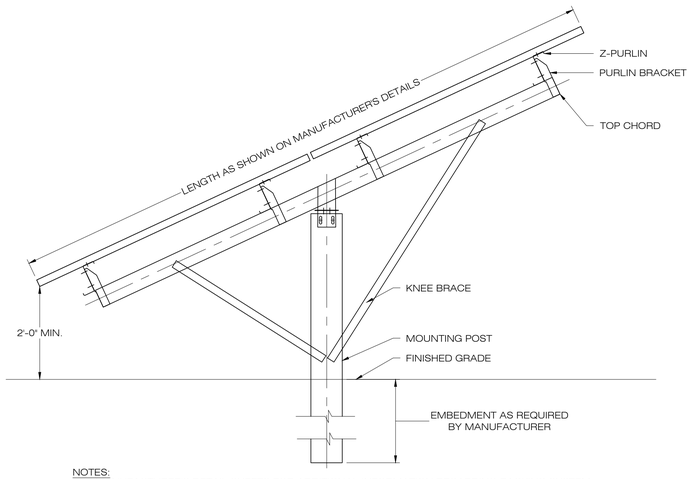
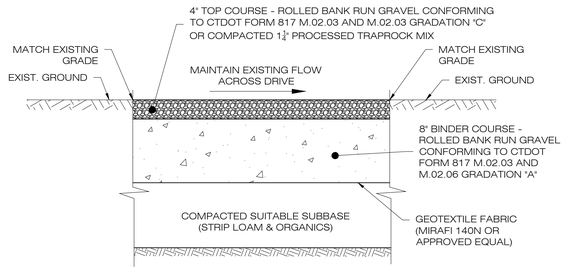


NOTES:
SEE MANUFACTURER'S DETAIL SHEETS FOR ADDITIONAL INFORMATION REGARDING RACKING SYSTEM REQUIREMENTS AND INSTALLATION PROCEDURES. RACKING SYSTEM TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

1 DN-1 TYPICAL POST MOUNTED RACKING SYSTEM

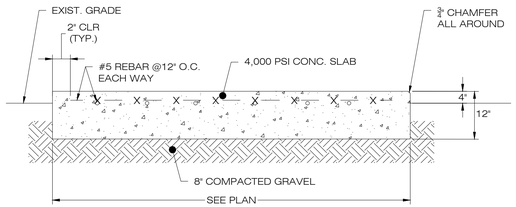
SCALE : N.T.S.



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. CONTRACTOR SHALL INSTALL ACCESS ROAD FLUSH WITH EXISTING GRADE TO ENSURE DRAINAGE FLOW PATHS ARE MAINTAINED.
4. SEE PLAN VIEW SHEETS FOR ROAD WIDTH.

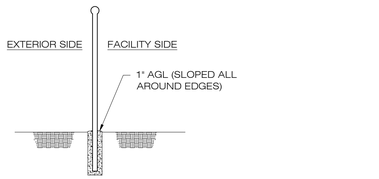
2 DN-1 GRAVEL ACCESS DRIVE SECTION

SCALE : N.T.S.

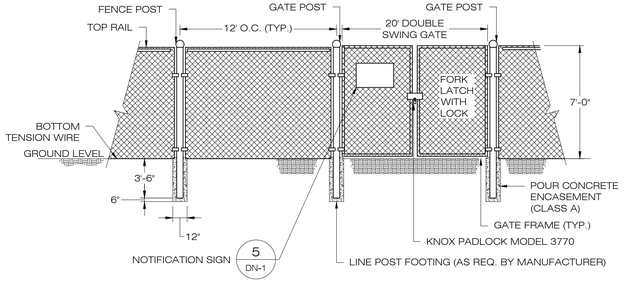


3 DN-1 CONCRETE EQUIPMENT PAD

SCALE : N.T.S.



SECTION VIEW



4 DN-1 BLACK VINYL CHAIN-LINK FENCE & GATE DETAIL

SCALE : N.T.S.

LOVERS LANE SOLAR

IN CASE OF EMERGENCY
CALL T.B.D.

NOTES:
EMERGENCY CALL NUMBER TO BE PROVIDED ONCE DETERMINED.

5 DN-1 NOTIFICATION SIGN DETAIL

SCALE : N.T.S.

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: April 14, 2021

Fuzz & Buzz Mix - Premium - ERNMX-147

	Botanical Name	Common Name	Price/lb
24.20 %	*Lolium perenne, 'Crave', Tetraploid*	Perennial Ryegrass, 'Crave', Tetraploid	3.48
17.70 %	*Dactylis glomerata, 'Pennlate'*	Orchardgrass, 'Pennlate'	3.00
17.70 %	*Festuca elatior*	Meadow Fescue	4.80
17.70 %	*Poa pratensis, 'Ginger'*	Kentucky Bluegrass, 'Ginger' (pasture type)	3.36
5.40 %	*Trifolium hybridum*	Alsike Clover	3.90
4.90 %	*Trifolium incarnatum, Variety Not Stated*	Crimson Clover, Variety Not Stated	1.92
4.50 %	*Trifolium pratense, Medium, Variety Not Stated*	Red Clover, Medium, Variety Not Stated	3.00
2.00 %	*Lotus corniculatus, 'Leo'*	Bird's Foot Trefoil, 'Leo'	7.50
1.30 %	*Chrysanthemum leucanthemum*	Oxeye Daisy	33.60
1.30 %	*Cichorium intybus*	Blue Chicory	19.20
0.80 %	*Chamaecrista fasciculata, PA Ecotype*	Partridge Pea, PA Ecotype	7.20
0.40 %	*Aster oblongifolius, PA Ecotype*	Aromatic Aster, PA Ecotype	336.00
0.40 %	*Aster prenanthoides, PA Ecotype*	Zigzag Aster, PA Ecotype	432.00
0.40 %	*Coreopsis lanceolata*	Lanceleaf Coreopsis	28.80
0.40 %	*Tradescantia ohiensis, PA Ecotype*	Ohio Spiderwort, PA Ecotype	192.00
0.40 %	*Zizia aurea*	Golden Alexanders	288.00
0.30 %	*Solidago nemoralis, PA Ecotype*	Gray Goldenrod, PA Ecotype	336.00
0.10 %	*Asclepias syriaca*	Common Milkweed	163.20
0.10 %	*Penstemon hirsutus*	Hairy Beardtongue	480.00
100.00 %		**Mix Price/lb Bulk:**	**$10.91**

Seeding Rate: Expect to apply about 42 lbs per acre with a cover crop of annual ryegrass at 12 lbs/acre.

Forage & Pasture Sites; Solar Sites

6 DN-1 FUZZ & BUZZ MIX

SCALE : N.T.S.

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: March 14, 2024

Retention Basin Floor Mix - Low Maintenance - ERNMX-126

	Botanical Name	Common Name	Price/Lb
20.00 %	*Panicum clandestinum, Tioga*	Deertongue, Tioga	22.08
20.00 %	*Puccinellia distans, Fults*	Alkaligrass, Fults	4.56
18.00 %	*Elymus virginicus, Madison-NY Ecotype*	Virginia Wildrye, Madison-NY Ecotype	10.45
15.00 %	*Agrostis stolonifera, 'Penncross'*	Creeping Bentgrass, 'Penncross'	14.40
15.00 %	*Poa palustris*	Fowl Bluegrass	16.80
10.00 %	*Carex vulpinoidea, PA Ecotype*	Fox Sedge, PA Ecotype	28.80
1.00 %	*Carex scoparia, PA Ecotype*	Blunt Broom Sedge, PA Ecotype	81.60
1.00 %	*Juncus effusus*	Soft Rush	48.00
100.00 %		**Mix Price/Lb Bulk:**	**$16.06**

Seeding Rate: 20-40 lbs per acre, or 0.5-1 lb/1,000 sq ft with a cover crop. For a cover crop use one of the following: grain rye (1 Sep to 30 Apr; 30 lbs/acre), Japanese millet (1 May to 31 Aug; 10 lbs/acre), or barnyard grass (1 May to 31 Aug; 10 lbs/acre).

Grasses & Grass-like Species - Herbaceous Perennial; Stormwater Management

The hardy inexpensive grass and grass-like species are ideal for retention basins that may have high salt inflows and where mowing may be required. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

7 DN-1 STORMWATER MANAGEMENT BASIN MIX

SCALE : N.T.S.

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

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OWNER: CLOVER RIDGE LLC
ADDRESS: 40 TOWER LANE STE 201 AVON, CT 06001

LOVERS LANE SOLAR

SITE ADDRESS: LOVERS LANE TORRINGTON, CT

APT FILING NUMBER: CT606190

DRAWN BY: TEL
DATE: 04/22/2024 **CHECKED BY: RCB**

SHEET TITLE:

SITE DETAILS

SHEET NUMBER:

DN-1

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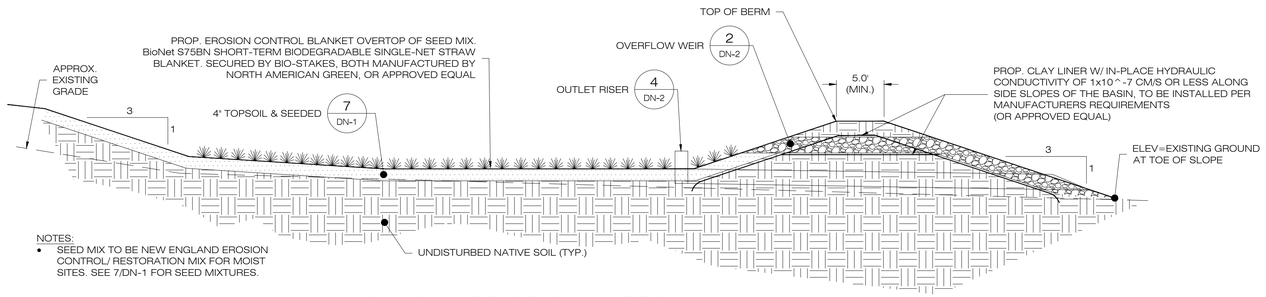
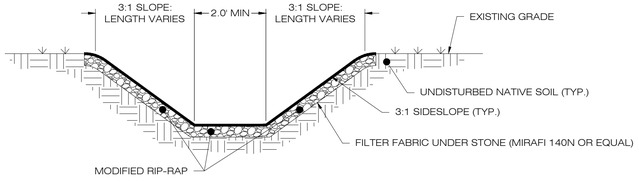


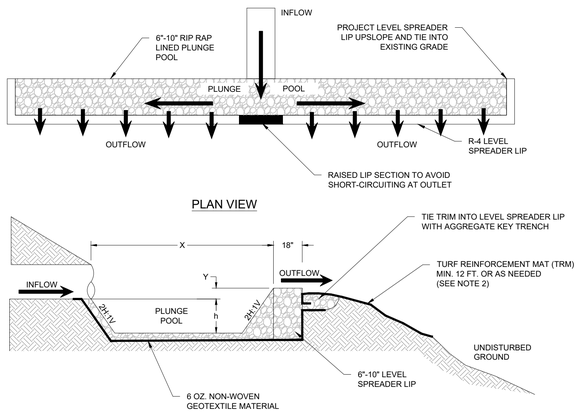
NOTES:
- SEED MIX TO BE NEW ENGLAND EROSION CONTROL/ RESTORATION MIX FOR MOIST SITES. SEE 7/DN-1 FOR SEED MIXTURES.

1 DN-2 GRASS LINED STORMWATER BASIN
SCALE : N.T.S.

HDPE OUTLET PIPE SIZING TABLE										
BASIN	ORIFICE SIZE (IN)	ORIFICE ELEV. (FT.)	GRATE SIZE (IN)	GRATE ELEV. (FT)	GRATE	OUTLET PIPE SIZE (IN.)	OUTLET PIPE LENGTH (FT)	OUTLET PIPE SLOPE (%)	OUTLET PIPE INV. ELEV. AT STRUCTURE (FT)	OUTLET PIPE INV. AT OUTFALL (FT)
B-1	3	896.0	12	897.0	12	24	32.0	3.13%	895.0	894.00'
B-2	3	937.0	12	938.0	12	24	34	2.94%	936.0	935.00'



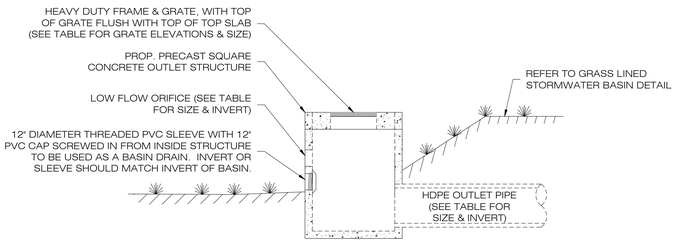
3 DN-2 RIP-RAP LINED SWALE
SCALE : N.T.S.



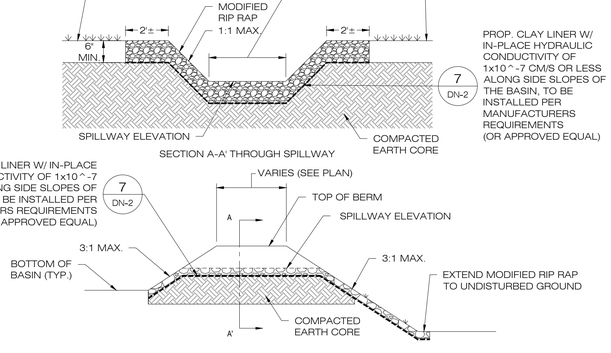
LEVEL SPREADER ID	LEVEL SPREADER LENGTH, L(FT)	PLUNGE POOL LENGTH, X (FT)	PLUNGE POOL HEIGHT, h (FT)	VERTICAL SEPERATION Y(FT)
PLS-1	67	6	1	0.5
PLS-2	59	6	1	0.5

NOTES:
1. UNDERLYING SOILS TO REMAIN UNDISTURBED, COMPACTED AND PROTECTED FROM HEAVY EQUIPMENT TO PRESERVE INFILTRATION CAPACITY.
2. LEVEL SPREADER TO BE INSTALLED COMPLETELY LEVEL ALONG THE EXISTING CONTOUR WITH A SMOOTH TRANSITION BETWEEN THE LEVEL SPREADER AND THE EXISTING GRADE. THE IDEAL ELEVATION OF THE LEVEL SPREADER LIP IS 3 INCHES ABOVE THE EXISTING GRADE.
3. THE MINIMUM WIDTH OF 12' OF TURF REINFORCEMENT MAT (TRM) IS TO BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE LEVEL SPREADER LIP. CONTRACTOR TO INSTALL ADDITIONAL TRM AS NECESSARY BASED ON EXISTING SITE CONDITIONS TO ADEQUATELY STABILIZE THE DOWNSLOPE AREA.

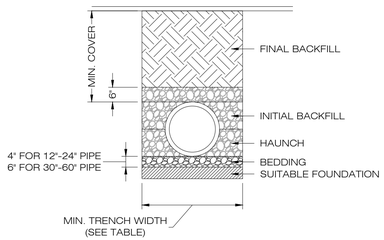
6 DN-2 PERMANENT LEVEL SPREADER
SCALE : N.T.S.



4 DN-2 OUTLET CONTROL STRUCTURE
SCALE : N.T.S.



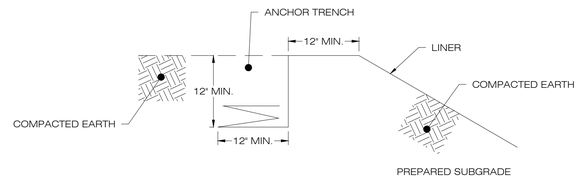
2 DN-2 OVERFLOW WEIR DETAIL
SCALE : N.T.S.



RECOMMENDED MIN. TRENCH WIDTH	
PIPE DIA.	MIN. TRENCH WIDTH
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
48"	80"
60"	96"

NOTES:
1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321 , "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

5 DN-2 HDPE STORM DRAINAGE TRENCH DETAIL
SCALE : N.T.S.



7 DN-2 LINER ANCHOR DETAIL
SCALE : N.T.S.

LSE SEXTANS LLC
40 TOWER LANE, SUITE 145
AVON, CT 06001

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SHEET TITLE:

SITE DETAILS

SHEET NUMBER:

DN-2

STATE OF CONNECTICUT · THOMAS E. LITTLE · 33443 · LICENSED PROFESSIONAL ENGINEER

APPENDIX E
Stormwater Monitoring Report Form

General Information					
Name of Project				**Inspection Date**	
Inspector Name, Title & Contact Information					
Inspector Qualifications					
Present Phase of Construction					
Inspection Location (if multiple inspections are required, specify location where this inspection is being conducted)					

Inspection Frequency *(Note: you may be subject to different inspection frequencies in different areas of the site. Check all that apply.)*

Standard Frequency: ☐ Weekly ☐ Within 24 hours of the end of a storm that generates a discharge

Reduced Frequency:

- ☐ Once per month (for stabilized areas)

Date of last rainfall:

Total rainfall amount:

Current Weather Conditions:

Condition and Effectiveness of Erosion and Sediment (E&S) Controls (see reverse for instructions)			
Type/Location of E&S Control [Add an additional sheet if necessary]	**Repairs or Other Maintenance Needed?***	**Corrective Action Required?***	**Notes**
1. Sediment Traps	☐Yes ☐No	☐Yes ☐No	
2. Sediment Basins	☐Yes ☐No	☐Yes ☐No	
3. Diversion Ditches	☐Yes ☐No	☐Yes ☐No	
4. Perimeter Control	☐Yes ☐No	☐Yes ☐No	
5. Surface Stabilization	☐Yes ☐No	☐Yes ☐No	
6. Construction Entrance	☐Yes ☐No	☐Yes ☐No	
7. Soil Stockpile Areas	☐Yes ☐No	☐Yes ☐No	
8. Natural Depression	☐Yes ☐No	☐Yes ☐No	

*** Note:** The permit differentiates between conditions requiring repairs and maintenance, and those requiring corrective action. The permit requires maintenance in order to keep controls in effective operating condition and requires repairs if controls are not operating as intended. Corrective actions are triggered only for specific, more serious conditions, which include: 1) A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in the Guidelines; 2) You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements; 3) A prohibited discharge is occurring or has occurred; or 4) Corrective actions are required as a result of a permit violation found during an inspection. If a condition on your site requires a corrective action, engineered corrective actions shall be implemented within 7 days of the inspection.

Condition and Effectiveness of Pollution Prevention (Good Housekeeping) Practices (see reverse for instructions)			
Type/Location of PP Practices [Add an additional sheet if necessary]	**Repairs or Other Maintenance Needed?***	**Corrective Action Required?***	**Notes**
1. Storage of Construction Materials	☐Yes ☐No	☐Yes ☐No	
2. Oil/Gas/Chemicals	☐Yes ☐No	☐Yes ☐No	
3. Haz/Toxic Waste	☐Yes ☐No	☐Yes ☐No	
4. Construction Waste	☐Yes ☐No	☐Yes ☐No	
5. Sanitary Waste	☐Yes ☐No	☐Yes ☐No	
6. Offsite Vehicle Tracking	☐Yes ☐No	☐Yes ☐No	
7.	☐Yes ☐No	☐Yes ☐No	
8.	☐Yes ☐No	☐Yes ☐No	

*** Note:** The permit differentiates between conditions requiring repairs and maintenance, and those requiring corrective action. The permit requires maintenance in order to keep controls in effective operating condition and requires repairs if controls are not operating as intended. Corrective actions are triggered only for specific, more serious conditions, which include: 1) A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in the Guidelines; 2) You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements; 3) A prohibited discharge is occurring or has occurred; or 4) Corrective actions are required as a result of a permit violation found during an inspection. If a condition on your site requires a corrective action, engineered corrective actions shall be implemented within 7 days of the inspection.

Stabilization of Exposed Soil			
Stabilization Area [Add an additional sheet if necessary]	**Stabilization Method**	**Have Stabilization Been Initiated?**	**Notes**
1. Interior (Solar Array)		☐ YES ☐ NO If yes, provide date: 04/2019	
2. Soil Stockpile		☐ YES ☐ NO If yes, provide date: 05/29/2019	
3.		☐ YES ☐ NO If yes, provide date: 5	
4.		☐ YES ☐ NO If yes, provide date:	
5.		☐ YES ☐ NO If yes, provide date:	

Instructions for Filling Out the "Stabilization of Exposed Soil" Table

Stabilization Area

List all areas where soil stabilization is required to begin because construction work in that area has permanently stopped or temporarily stopped, and all areas where stabilization has been implemented.

Stabilization Method
For each area, specify the method of stabilization (e.g., hydroseed, sod, planted vegetation, erosion control blanket, mulch, rock).

Have You Initiated Stabilization
For each area, indicate whether stabilization has been initiated.
Notes
For each area where stabilization has been initiated, describe the progress that has been made, and what additional actions are necessary to complete stabilization. Note the effectiveness of stabilization in preventing erosion. If stabilization has been initiated but not completed, make a note of the date it is to be completed. If stabilization has been completed, make a note of the date it was completed. If stabilization has not yet been initiated, make a note of the date it is to be initiated, and the date it is to be completed.

Description of Discharges	
Was a stormwater discharge or other discharge occurring from any part of your site at the time of the inspection? ☐ Yes ☐ No **If "yes", provide the following information for each point of discharge:**	
Discharge Location [Add an additional sheet if necessary]	**Observations**
1.	Describe the discharge:
	At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? ☐ Yes ☐ No
	If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
2.	Describe the discharge:
	At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? ☐ Yes ☐ No
	If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
3.	Describe the discharge:
	At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? ☐ Yes ☐ No
	If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
4.	Describe the discharge:
	At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? ☐ Yes ☐ No
	If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:

Summary
The Site is: ☐ In Compliance ☐ Out of Compliance **with the terms and conditions of the SWPCP and General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities.**
Describe remedial actions required to bring the Site back into compliance (Refer to Corrective Action Log Form):
Describe interim measures required to minimize the potential for the discharge of pollutants from the Site:
Notes: Non-engineered corrective actions (as identified in the Guidelines) shall be implemented on site within 24 hours and incorporated into a revised SWPCP within three (3) calendar days of the date of inspection unless another schedule is specified in the Guidelines. Engineered corrective actions (as identified in the Guidelines) shall be implemented on site within seven (7) days and incorporated into a revised SWPCP within ten (10) days of the date of inspection unless another schedule is specified in the Guidelines or is approved by DEEP.

Section B – Corrective Action Progress (Complete this section no later than 7 calendar days after discovering the condition that triggered corrective action)			
Stormwater Control Modifications to be Implemented to Correct the Problem			
List of Stormwater Control Modification(s) Needed to Correct Problem (Add an additional sheet if necessary)	**Date of Completion**	**SWPCP Update Necessary?**	**Notes**
1.		☐Yes ☐No If yes, provide date SWPCP modified:	
2.		☐Yes ☐No If yes, provide date SWPCP modified:	
3.		☐Yes ☐No If yes, provide date SWPCP modified:	
4.		☐Yes ☐No If yes, provide date SWPCP modified:	
5.		☐Yes ☐No If yes, provide date SWPCP modified:	
6.		☐Yes ☐No If yes, provide date SWPCP modified:	
7.			

Stormwater Construction Site Inspection Report

CERTIFICATION STATEMENT

"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 General Statutes, pursuant to Section 53a-157b of the General Statutes, and in accordance with any other applicable statute."

Inspector:

SIGNATURE:_____

PRINTED NAME: _____

TITLE:_____

AFFILIATION:_____

ADDRESS: _____

_____

PHONE: _____

DATE: _____

Permittee or his/her authorized representative:

SIGNATURE:_____

PRINTED NAME: _____

TITLE:_____

AFFILIATION:_____

ADDRESS: _____

_____

PHONE: _____

DATE: _____

APPENDIX F
Notice of Termination 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

Notice of Termination Form: Solar Projects (Appendix I)

This Notice serves as a request to terminate the below listed permit as well as any applicable Letter(s) of Credit.

Part I: Permittee Information

The below information is required in accordance with Section 6(b) of the General Permit.

1. Permit Number: GSN _____
2. Registrant: _____
3. Site Address: _____

   City/Town: _____ State: _____ Zip Code: _____
4. Date of completion of construction: _____

   Date all storm drainage structures were cleared of construction sediment and debris: _____

   Beginning and Ending Dates of post-construction inspections: _____

   Date of final stabilization inspection(s)*: _____

   Qualified Inspector who conducted the Final Stabilization Inspection: (This person must sign Part III) _____
5. Check the post-construction activity(ies)** at the site (check all that apply):

   ☐ Industrial ☐ Residential ☐ Capped Landfill

   ☐ Commercial ☐ Solar Array ☐ Other: _____

* The Final Stabilization Inspection must occur at least two full growing seasons after final stabilization has been achieved. A full growing season is defined as the timeframe encompassed by two consecutive full seeding seasons: April 1 through June 15, and August 15 through October 1. If final stabilization is achieved during a seeding season, the following seeding season will be considered the first full seeding season after final stabilization has been achieved.

** Any questions regarding this form can be sent via email to DEEP.StormwaterStaff@ct.gov.

Locally Approvable and Locally Exempt Projects Must Complete the following Part II - *(Attach additional sheets as needed)*

Part II: Locally Approvable and Locally Exempt Post-Construction Inspection Certification

The below information is required in accordance with Section 5(b)(4)(C)(i)/(ii) and Appendix I(I)(7) of the General Permit.

Certification by a Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional and a District Representative

"I hereby certify that I am a qualified professional engineer / a qualified soil erosion and sediment control professional and a representative of the District in which the site is located as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that all post-construction measures have been installed as specified in the permittee's Stormwater Pollution Control Plan and in accordance with Section 5(b)(2)(C) of the general permit and that all such measures have been cleaned of construction sediment and debris. I understand that this certification is part of a registration submitted in accordance with section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional	Date
Printed Name of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional	Title
Signature of District Representative	Date
Printed Name of District Representative	Title

State Agency Projects Must Complete the following Part II - (Attach additional sheets as needed)

Part II: State Agency Post-Construction Inspection Certification

The below information is required in accordance with Section 5(b)(4)(C)(iii) and Appendix I(I)(7) of the General Permit.

Certification by a DOT District Engineer or his/her designee / a DOT District Environmental Coordinator / a designated employee of another state agency and a District Representative

"I hereby certify that I am a DOT District Engineer or his/her designee / a DOT District Environmental Coordinator / a designated employee of another state agency and a representative of the District in which the site is located as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that all post-construction measures have been installed as specified in the permittee's Stormwater Pollution Control Plan and in accordance with Section 5(b)(2)(C) of the general permit and that all such measures have been cleaned of construction sediment and debris. I understand that this certification is part of a registration submitted in accordance with Section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature	Date
Printed Name	Title
Signature of District Representative	Date
Printed Name of District Representative	Title

All Projects Must Complete the following Part III - *(Attach additional sheets as needed)*

Part III: Final Stabilization Inspection Certification

The below information is required in accordance with Section 5(b)(4)(D) and Appendix I(I)(7) of the General Permit.

Certification by a Qualified Inspector and a District Representative

"I hereby certify that I am a qualified inspector and a representative of the District in which the site is located as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that the site has been stabilized, as defined in Section 2 of the general permit, for a period of no less than two full growing seasons following the cessation of construction activities. I further certify that there is no active erosion or sedimentation present on site and no disturbed areas remain exposed. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Qualified Inspector	Date
Printed Name of Qualified Inspector	Title
Signature of District Representative	Date
Printed Name of District Representative	Title

All Projects Must Complete the following Part IV - *(Attach additional sheets as needed)*

Part IV: Permittee Certification

The below information is required in accordance with Section 5(b)(4)(D) of the General Permit.

Certification by the Permittee

"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
Printed Name of Permittee	Title

All Projects Must Complete the following Part V - *(Attach additional documentation as needed)*

Part V: Additional Submittals

The following attachments are required to be submitted along with the Notice of Termination Form:

☐ Post-Construction Inspection Report (must contain photos with time stamps)

☐ Final Stabilization Inspection Report (must contain photos with time stamps)

Complete and submit this form in accordance with the general permit (DEEP-WPED-GP-015) to ensure the proper handling of the termination. Print or type unless otherwise noted.

Submit this Notice of Termination Form to the address below, as well as via email to DEEP.StormwaterStaff@ct.gov:

WATER PERMITTING AND ENFORCEMENT DIVISION/STORMWATER GROUP
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127