Soil Erosion and Sediment Control Plan
(to be effective 1/1/17)
For:

EDPR Moo Cow Solar

2446 Victory Highway

Coventry, RI 02816

AP 304, Lot 27.1 & 28

Owner:	EDPR NA Distributed Generation, LLC 100 Park Avenue, Suite 2400 New York, New York
Operator: *TO BE DETERMINED UPON CONTRACT AWARD*	Company Name Name Address City, State, Zip Code Telephone Number Email Address
Estimated Project Dates:	Start Date: July 2024 Completion Date: December 2024
SESC Plan Prepared By:	TRC 10 Hemingway Drive, 2nd Floor East Providence, RI 02915 781.419.7750

SESC Plan Preparation Date:	Original: February 1, 2024 Revised: April 24, 2024
SESC Plan Revision Date:	

(this will be located on the Single App)

OPERATOR CERTIFICATION

Upon contract award, the OPERATOR must sign this certification statement before construction may begin.

I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I am aware that it is the responsibility of the owner/operator to implement and amend the Soil Erosion and Sediment Control Plan as appropriate in accordance with the requirements of the RIPDES Construction General Permit.

_____

Operator Signature: Date

Contractor Representative: Name

Contractor Title: Title

Contractor Company Name: Company Name (if applicable)

Address: Mailing Address

Phone Number: Phone Number

Email Address: Email

TABLE OF CONTENTS

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INTRODUCTION

This Construction Site Soil Erosion and Sediment Control Plan (SESC Plan) has been prepared for EDPR for the Moo Cow Solar project. In accordance with the RIDEM Rhode Island Pollutant Discharge Elimination System (RIPDES) General Permit for Stormwater Discharge Associated with Construction Activity (RIPDES Construction General Permit ("CGP")), projects that disturb one (1) or more acres require the preparation of a SESC Plan. This SESC Plan provides guidance for complying with the terms and conditions of the RIPDES Construction General Permit and Minimum Standard 10 of the RI Stormwater Design and Installation Standards Manual. In addition, this SESC Plan is also consistent with Part D of the *RI SESC Handbook* entitled "Soil Erosion and Sediment Control Plans". This document does not negate or eliminate the need to understand and adhere to all applicable RIPDES regulations.

The purpose of erosion, runoff, and sedimentation control measures is to prevent pollutants from leaving the construction site and entering waterways or environmentally sensitive areas during and after construction. This SESC Plan has been prepared prior to the initiation of construction activities to address anticipated worksite conditions. The control measures depicted on the site plan and described in this narrative should be considered the minimum measures required to control erosion, sedimentation, and stormwater runoff at the site. Since construction is a dynamic process with changing site conditions, it is the operator's responsibility to manage the site during each construction phase so as to prevent pollutants from leaving the site. This may require the operator to revise and amend the SESC Plan during construction to address varying site and/or weather conditions, such as by adding or realigning erosion or sediment controls to ensure the SESC Plan remains compliant with the RIPDES Construction General Permit. Records of these changes must be added to the amendment log attached to the SESC Plan, and to the site plans as "red-lined" drawings. Please Note: **Even if practices are correctly installed on a site according to the approved plan, the site is only in compliance when erosion, runoff, and sedimentation are effectively controlled throughout the entire site.**

It is the responsibility of the site owner and the site operator to maintain the SESC Plan at the site, including all attachments, amendments and inspection records, and to make all records available for inspection by RIDEM during and after construction. (RIPDES CGP - Part III.G)

The site owner, the site operator, and the designated site inspector are required to review the SESC Plan and sign the Party Certification pages (Section 8). The primary contractor (if different) and all subcontractors (if applicable) involved in earthwork or exterior construction activities are also required to review the SESC Plan and sign the certification pages before construction begins.

Any questions regarding the SESC Plan, control measures, inspection requirements, or any other facet of this document may be addressed to the RIDEM Office of Water Resources, at 401-222-4700 or via email: water@dem.ri.gov.

ADDITIONAL RESOURCES

Rhode Island Department of Environmental Management
Office of Water Resources
235 Promenade Street
Providence, RI 02908-5767
phone: 401-222-4700
email: water@dem.ri.gov

RIDEM *RI Stormwater Design and Installation Standards Manual* (RISDISM) (as amended)
http://www.dem.ri.gov/pubs/regs/regs/water/swmanual15.pdf

RI Soil Erosion and Sediment Control Handbook http://www.dem.ri.gov/soilerosion2014final.pdfRIDEM 2013 RIPDES Construction General Permit
http://www.dem.ri.gov/pubs/regs/regs/water/ripdesca.pdfRhode Island Department of Transportation *Standard Specifications for Road and Bridge Design and Other Specifications* and *Standard Details*
http://www.dot.ri.gov/business/bluebook.php

RIDEM Office of Water Resources Coordinated Stormwater Permitting website
http://www.dem.ri.gov/programs/water/permits/ripdes/stormwater/coordinated-stormwater-permitting.phpRIDEM RIPDES Stormwater website
http://www.dem.ri.gov/programs/water/permits/ripdes/stormwater/RIDEM Water Quality website (for 303(d) and TMDL listings)
http://www.dem.ri.gov/programs/water/quality/

RIDEM Rhode Island Natural Heritage Program mailto:plan@dem.ri.gov

RIDEM Geographic Data Viewer – Environmental Resource Map
http://www.dem.ri.gov/maps/

Natural Resources Conservation Service - Rhode Island Soil Survey Program
http://www.ri.nrcs.usda.gov/technical/soils.html

Note:

The *Soil Survey of Rhode Island*, issued in 1980 is no longer available or supported. More information on site-specific soil data and maps for Rhode Island is available from the Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture through the Web Soil Survey. This information is available online at: http://websoilsurvey.nrcs.usda.gov.

EPA NPDES – Stormwater Discharges from Construction Activities webpage:
http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Discharges-From-Construction-Activities.cfm

EPA Construction Site Stormwater Runoff Control BMP Menu
http://water.epa.gov/polwaste/npdes/swbmp/Construction-Site-Stormwater-Run-Off-Control.

SECTION 1: SITE DESCRIPTION

1.1 Project/Site Information

Project/Site Name:

- EDPR Moo Cow Solar
- The Applicant is proposing to construct a ground-mounted solar array at the Moo Cow Solar site located at 2446 Victory Highway in Coventry, Rhode Island (Site). The Site is located east of Victory Highway within a currently wooded and vegetated area, east of the existing residence on the property. The project is a 4.37± MW direct current (DC) ground-mounted solar installation occupying 9.74± acres, associated electrical equipment and 7± new utility poles. A 7-foot-high chain link fence encompassing 13.5± acres will surround the solar array, two stormwater basins and sand filter. The array will be accessed via a pervious gravel road. The area within the fence will be cleared, grubbed, loamed, and seeded. Shade trees will be cut between the fence and the buffer zone, but stumps and existing ground cover will remain in this area. The proposed tree line encompasses 15.4± acres, including shade tree cutting, the existing driveway, and areas of existing clearing.

Project Street/Location:

- 2446 Victory Highway, Coventry, RI
- 

The following are estimates of the construction site area:

- Total Project Area 15.4 acres
- Total Project Area to be Disturbed 15.4 acres

1.3 Natural Heritage Area Information

RIPDES CGP - Part III.H

Each project authorized under the RIPDES Construction General Permit must determine if the site is within or directly discharges to a Natural Heritage Area (NHA). DEM Natural Heritage Areas include known occurrences of state and federal rare, threatened and endangered species. Review RIDEM NHA maps to determine if there are natural heritage areas on or near the construction site that may be impacted during construction. (See also the RIDEM Notice of Intent instructions which can be found at the following link:

http://www.dem.ri.gov/programs/benviron/water/permits/swcoord/pdf/maptutor.pdf)

Are there any Natural Heritage Areas being disturbed by the construction activity or will discharges be directed to the Natural Heritage Area as a result of the construction activity?

☐ Yes ☒ No

If yes, describe or refer to documentation which determines the likelihood of an impact on this area and the steps that will be taken to address any impacts.

- INSERT TEXT HERE

1.4 Historic Preservation/Cultural Resources

The National Historic Preservation Act, and any state, local, and tribal historic preservation laws apply to construction activities. As with endangered species, some permits may specifically require you to assess the potential impact of your stormwater discharges on historic properties. However, whether or not this is stated as a condition for permit coverage, the National Historic Preservation Act and any applicable state or tribal laws apply to you. Contact the Rhode Island Historic Preservation Officer (http://www.preservation.ri.gov/) or your Tribal Historic Preservation Officer (http://grants.cr.nps.gov/THPO_Review/index.cfm) for more information.

Are there any historic properties, historic cemeteries or cultural resources on or near the construction site?

☒ Yes ☐ No

Describe how this determination was made and summarize state or tribal review comments:

- Two historical cemeteries are located within Lot 27.1, located north of the Project Area and proposed road, and include the Herman Koegel Lot (Cemetery No. CY141) and the Benjamite Potter Lot (Cemetery No. CY086) (RIGIS 2012).

If yes, describe or refer to documentation which determines the likelihood of an impact on this historic property, historic cemetery or cultural resource and the steps taken to address that impact including any conditions or mitigation measures that were approved by other parties.

- The Project does not impact the two historical cemeteries. An access easement will be provided for the Town to access each cemetery for maintenance purposes. The Town will appropriate funds for the maintenance of the historical cemetery. The Owner is not responsible for maintenance of the historical cemeteries.

SECTION 2: EROSION, RUNOFF, AND SEDIMENT CONTROL

RIPDES Construction General Permit – Part III.J.1

The purpose of erosion controls is to prevent sediment from being detached and moved by wind or the action of raindrop, sheet, rill, gully, and channel erosion. Properly installed and maintained erosion controls are the primary defense against sediment pollution.

Runoff controls are used to slow the velocity of concentrated water flows. By intercepting and diverting stormwater runoff to a stabilized outlet or treatment practice or by converting concentrated flows to sheet flow erosion and sedimentation are reduced.

Sediment controls are the last line of defense against moving sediment. The purpose is to prevent sediment from leaving the construction site and entering environmentally sensitive areas.

This section describes the set of control measures that will be installed before and during the construction project to avoid, mitigate, and reduce impacts associated with construction activity. Specific control

measures and their applicability are contained in Section Four: Erosion Control Measures, Section Five: Runoff Control Measures, and Section Six: Sediment Control Measures of the *RI SESC Handbook*. The *RI SESC Handbook* can be found at the following address:

http://www.dem.ri.gov/soilerosion2014final.pdf

2.1 Avoid and Protect Sensitive Areas and Natural Features

Per RI Stormwater Design and Installation Standards Manual 3.3.7.1:

Areas of existing and remaining vegetation and areas that are to be protected as identified in the Section 1.6 of the SESC Plan must be clearly identified on the SESC Site Plans for each Phase of Construction. Prior to any land disturbance activities commencing on the site, the Contractor shall physically mark limits of disturbance (LOD) on the site and any areas to be protected within the site, so that workers can clearly identify the areas to be protected.

Constraints are identified to ensure a comprehensive understanding of the project and surrounding areas. The first goal in the low impact development (LID) site planning and design process is to avoid disturbance of natural features. This includes identification and preservation of natural areas that can be used in the protection of water resources. It is important to understand that minimizing the hydrologic alteration of a site is just as important as stormwater treatment for resource protection. Therefore, describe all site features and sensitive resources that exist at the site such as, view barriers,, steep slopes (>15%)that if disturbed will require additional erosion controls, areas with the potential to receive run-on from off-site areas, wetlands, surface waters, and their riparian buffers, specimen trees, natural vegetation, forest areas, stream crossings, historic properties, historic cemeteries or cultural resources that are to be preserved. ***This includes those site features that should be avoided within the designated limits of disturbance.*** *These areas are often identified on a constraints map or in a separate constraints report. For additional discussion on this topic refer to Appendix F. Site Constraint Map of the RI SESC Handbook.*

Note:

The *Soil Survey of Rhode Island*, issued in 1980 is no longer available or supported. More information on site-specific soil data and maps for Rhode Island is available from the Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture through the Web Soil Survey. This information is available online at: http://websoilsurvey.nrcs.usda.gov.

Describe and illustrate on SESC Site Plans Sensitive Areas and Natural Features and how each will be protected during construction activity. Examples of areas to be protected include vegetated buffers, forests, stands of trees on the perimeter and within the site, large diameter trees, areas designated for infiltration (QPAs), bioretention, rain gardens, and OWTS leachfields. Protection for stands of trees and individual trees to be preserved must be specified and such protection must comply with the RI SESC Handbook and extend to the drip line.

Describe and illustrate on SESC Site Plans based on Constraints Map, the areas that will be disturbed with each phase of construction and the control measures (signs, fences, etc.) that will be used to protect those areas that should not be disturbed. ***This includes marking for limits of disturbance at the perimeter and areas within the limits of disturbance.*** *Acceptable measures include but are not limited to construction fencing (plastic mesh, snow fence, chain link fence etc.) appropriate for the site, boundary markers using construction tape, flagged stakes, etc. for low density use, sediment barriers such as silt fence, compost socks with flagging where also required for sediment control, and signage. The narrative portion of the plan and SESC Site Plans must highlight measures to prevent soil compaction in areas designated as Qualified Pervious Areas (QPAs) and infiltration practices to protect infiltration capacity.*

Feature Requiring Protection	Construction Phase #	Method of Protection	Sheet #
Wetland	All	Filter Sock, Silt Fence	C-5, C-6
All Areas Outside of the LOD	All	Filter Sock, Silt Fence	C-5, C-6
Steep Slopes	All	Filter Sock, Silt Fence, Snow Fence or Construction Tape	C-5, C-6
Stream	All	Filter Sock	C-6
Stormwater Basins, including Sand Filter	All	Filter Sock, Silt Fence, Temporary Diversion Swale/Traps	C-6

2.2 Minimize Area of Disturbance

Per RI Stormwater Design and Installation Standards Manual 3.3.7.2:

Will >5 acres be disturbed in order to complete this project?

☒ Yes ☐ No

If yes, phasing must be utilized at this site.

Will <5 acres be disturbed or will disturbance activities be completed within a six (6) month window?

☐ Yes ☒ No

If yes, phasing is not required as long as all other performance criteria will be met and phasing is not necessary to protect sensitive or highly vulnerable areas.

Based on the answers to the above questions will phasing be required for this project?

☒ Yes ☐ No

Phasing shall be implemented to minimize the amount of earth disturbance at any one time. Earth disturbance activities during each phase of construction shall be limited to a maximum of five (5) acres with a common drainage location. Appropriate stabilization practices shall be initiated on all disturbed areas as soon as possible, but not more than fourteen days after the construction activity in the area has temporarily or permanently ceased and prior to Initiating land disturbance in subsequent phases.

Construction sequence shall be coordinated to minimize disturbance of existing conditions and operations.

If yes, and phasing is required, describe phasing plan as prompted below.

If No, provide substantive reasons why this was determined to be infeasible.
The project construction timeline is expected to be within 6-months. The Contractor will implement erosion and sediment control measures, as described in this document and shown on the attached SESC plans.

PHASING PLAN

For each phase of the construction project, provide site estimates of the total area of the project phase, and the total area of the project phase that is expected to undergo soil disturbance.

The following are estimates of each phase of the construction project:

(Copy and paste this section for projects with multiple phases)

Phase No. or Identifier	1
Total Area of Phase	1.7± acres
Area to be Disturbed	1.7± acres

Description of Construction Sequencing for Phase: Site Access

Proper sequencing of construction activities is essential to maximize the effectiveness of erosion, runoff, and sediment control measures. Construction sequencing of construction activities for each phase must address the following elements:

1. *Installation of control measures identifying limits of disturbance and areas internal to the site that require protection before start of land disturbance.*
2. *Installation of all erosion, runoff, and sediment controls and temporary pollution prevention measures that are required to be in place and functional before any earthwork begins. This shall be done in accordance with the RI SESC Handbook and/or the RI Department of Transportation Standard Specifications for Road and Bridge Construction (as amended). Upon acceptable completion of site preparation and installation of erosion, runoff, and sediment controls and temporary pollution prevention measures, site construction activities may commence.*
3. *The phasing plan shall address the use of phasing to manage and limit increases in runoff rates and volumes during construction. Designated phases and timing of construction should also address the impacts to important or sensitive habitats.*
4. *Upon commencement of site construction activities, the operator shall initiate appropriate stabilization practices on all disturbed areas as soon as possible, but not more than fourteen (14) days after the construction activity in that area has temporarily or permanently ceased. Such temporary or permanent soil stabilization measures must be installed prior to initiating land disturbance in subsequent phases.*
5. *Routine inspection and maintenance and/or modification of erosion, runoff, and sediment controls and temporary pollution prevention measures while earthwork is ongoing is required.*
6. *Final site stabilization of any disturbed areas after earthwork has been completed and removal of temporary erosion, runoff, and sediment controls and temporary pollution prevention measures.*
7. *Activation of post-construction stormwater treatment conveyances and practices.*

1. Erect or post a twelve (12) inch wide by eighteen (18) inch long weather resistant sign which boldly states the RIDEM permit number. Sign shall not be installed to a live tree.
2. Clearly mark limits of disturbance for all phases.
3. Install all perimeter erosion, runoff, and sediment controls and temporary pollution prevention measures that are required to be in place and functional before any site work begins. This shall be done in accordance with the RI SESC handbook. Upon acceptable completion of site preparation and installation of erosion, runoff, and sediment controls and temporary pollution prevention measures, site construction activities may commence.
4. Mark shade trees to be cut for approval.

5. Clear trees and selectively cut approved shade trees
6. Clear and grub only areas required to complete the work included in phase 1.
7. Install and maintain construction entrance and laydown area.

Phase No. or Identifier	2
Total Area of Phase	2.9± acres
Area to be Disturbed	2.9± acres

Description of Construction Sequencing for Phase: Site Stormwater Controls

1. Install interior erosion and sediment controls.
2. Clear and grub only as needed to complete the work included in phase 2.
3. Install temporary sediment traps.
4. Install basins.
5. Special care shall be taken to prevent sediment-laden runoff from entering the basins. Any sediment deposited within the basins or trapped by the filter sock must be promptly removed. Sediment-laden runoff has the potential to adversely affect the infiltration capacity of underlying soils. If sediment is deposited into the basins the underlying soils must be excavated to remove any deposited sediment and supplemented to re-establish the infiltration capacity of the underlying soils to their pre-construction condition.

Phase No. or Identifier	3
Total Area of Phase	7.2± acres
Area to be Disturbed	7.2± acres

Description of Construction Sequencing for Phase: Equipment and Fence Installation

1. Clear and grub only as needed to complete the work included in phase 3.
2. Grade and prepare area within fence as necessary for solar array installation.
3. Install temporary stabilization.
4. Restore temporary sediment traps.
5. Install perimeter fence, solar array, and associated work.
6. Remove and restore temporary laydown area by removing crushed stone and filter cloth and suitably tilling and amending soils to restore infiltration capacity. Aerate any existing turf areas that have become compacted during construction

Phase No. or Identifier	4
Total Area of Phase	13.0± acres
Area to be Disturbed	0± acres

Description of Construction Sequencing for Phase: Final Site Stabilization

1. Permanently stabilize site.

2. Inspect, clean, and repair all basins and forebays.
3. Remove RIDEM permit sign, LOD markings, temporary pollution prevention measures, and temporary erosion and sediment controls.
4. Complete final site stabilization of all remaining disturbed areas after removal of temporary erosion, runoff, and sediment controls and temporary pollution prevention measures.
5. Complete site cleanup and restoration.

2.3 Minimize the Disturbance of Steep Slopes

Per RI Stormwater Design and Installation Standards Manual 3.3.7.3:

Are steep slopes (>15%) present within the proposed project area?

☒ Yes ☐ No

If yes, steep slopes must be identified on SESC Site Plans.

If yes, also list the specific control measures that will be used to control surface runoff and reduce erosion potential on steep slopes during construction including references to SESC Site Plans where the locations of such control measures are shown. Examples include limiting the number of steep slopes that are disturbed at one time, implementing land grading techniques such as reverse slope benches, diversions, stair steps, and terraced landforms, installation of retaining walls for stabilization of challenging slopes, prevention of soil movement, and slope protection, applying materials for temporary and permanent protection of slopes to prevent erosion such as stone aggregates, rip-rap, erosion control blankets, appropriate spacing of sediment barriers as a function of barrier size, slope, and slope length, geotextile, cellular confinement systems, mattresses (gabions and others), and articulating blocks.

The locations of steep slopes (slopes greater than 15%) are identified on drawing C-5 and C-6. Filter socks will be placed along the top and bottom of steep slope, as applicable.

2.4 Preserve Topsoil

Per RI Stormwater Design and Installation Standards Manual 3.3.7.4:

Site owners and operators must preserve existing topsoil on the construction site to the maximum extent feasible and as necessary to support healthy vegetation, promote soil stabilization, and increase stormwater infiltration rates in the post-construction phase of the project.

Will existing topsoil be preserved at the site?

☒ Yes ☐ No

If Yes, describe how topsoil will be preserved at the site by describing the techniques that will be implemented to achieve appropriate depths of topsoil (4 inch minimum) and identify the locations where topsoil will be restored on SESC Site Plans.

Existing topsoil shall be preserved to the maximum extent feasible and as necessary to support healthy vegetation, promote soil stabilization, and increase stormwater infiltration rates. During construction, the topsoil storage area will be surrounded by a 12” filter sock. See Sediment Control Note 15 on drawing N-1.

If No, provide substantive reasons why this was determined to be infeasible.

Insert Text Here

Soil compaction must be minimized by maintaining limits of disturbance throughout construction. In instances where site soils are compacted the site owner and operator must restore infiltration capacity of the compacted soils by tilling or scarifying compacted soils and amending soils as necessary to ensure a minimum depth of topsoil is available in these areas. In areas where infiltrating stormwater treatment practices are located compacted soils must be amended such that they will comply the design infiltration rates established in the *RI Stormwater Design and Installation Standards Manual*.

Identify the methods that will be used to restore and amend topsoil at the site. Include references to plan notes and SESC Site Plan sheet numbers where this information is made available for the site operator.

Additional topsoil will be imported as needed. Please see drawing C-5 and C-6 for the location of the topsoil storage area and Erosion and Sediment Control Note 15 on drawing N-1.

2.5 Stabilize Soils

Per RI Stormwater Design and Installation Standards Manual 3.3.7.5:

Upon completion and acceptance of site preparation and initial installation of erosion, runoff, and sediment controls and temporary pollution prevention measures, the operator shall initiate appropriate temporary or permanent stabilization practices during all phases of construction on all disturbed areas as soon as possible, but not more than fourteen (14) days after the construction activity in that area has temporarily or permanently ceased.

Any disturbed areas that will not have active construction activity occurring within 14 days must be stabilized using the control measures depicted in the SESC Site Plans, in accordance with the *RI SESC Handbook*, and per manufacturer product specifications.

Only areas that can be reasonably expected to have active construction work being performed within 14 days of disturbance will be cleared/grubbed at any one time. It is NOT acceptable to clear and grub the entire construction site if portions will not be active within the 14-day time frame. Proper phasing of clearing and grubbing activities shall include temporary stabilization techniques for areas cleared and grubbed that will not be active within the 14-day time frame.

All disturbed soils exposed prior to October 15 of any calendar year shall be seeded by that date if vegetative measures are the intended soil stabilization method. Any such areas that do not have adequate vegetative stabilization, as determined by the site operator or designated inspector, by November 15, must be stabilized through the use of non-vegetative erosion control measures. If work continues within any of these areas during the period from October 15 through April 15, care must be taken to ensure that only the area required for that day's work is exposed, and all erodible soil must be restabilized within 5 working days. In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed (i.e. construction of a motocross track).

Describe controls (i.e., temporary seeding with native vegetation, hydroseeding, mulching, application of rolled erosion control products, etc.) including design specifications and details that will be implemented to stabilize exposed soils where construction activities have temporarily or permanently ceased.

Temporary Vegetative Control Measures

- Temporary seeding shall be used where vegetative cover is required for a period greater than one month but less than twelve months on disturbed soil areas. Rapidly growing annual grasses will be uniformly applied at the rate associated with hydraulic application (hydroseed). The site shall be checked periodically to assess the growth of the plants. If seeding fails to grow, the area shall be re-established to provide adequate erosion Control. The seed mixture shall be RIDOT temporary seed mix (M18.10.5), or approved equivalent.

Temporary Non-Vegetative Control Measures

- Temporary straw mulch, wood chip mulch, or temporary erosion control blankets shall be used where non-vegetative cover is required for a period greater than 14 days but less than six months. Mulch shall be spread uniformly by hand or machine resulting in 100% coverage of the disturbed soil. If anchoring is necessary, tackifiers and/or netting either with the mulch or immediately following mulch application shall be used

- Identify the specific locations where vegetative stabilization techniques alone would be inappropriate such as on steep slopes (<15%), areas of concentrated runoff, etc. Identify the specific non-vegetative control measures that will be used in such locations and include references to SESC Site Plans and specifications.

Permanent Vegetative Control Measures

- Permanent seeding shall be used on areas where permanent vegetative cover is needed to stabilize the soil and reduce erosion and sedimentation. Rapidly growing annual grasses shall be uniformly applied at the rate associated with hydraulic application (hydroseeding). The seed mixtures to be used for permanent stabilization are shown herein.

Permanent Non-Vegetative Control Measures

- Identify the specific control measures and locations on the site where permanent non-vegetative soil stabilization techniques will be utilized, include references to SESC Site Plans and associated specifications.

2.6 Protect Storm Drain Outlets

Per RI Stormwater Design and Installation Standards Manual 3.3.7.7:

Temporary or permanent outlet protection must be used to prevent scour and erosion at discharge points through the protection of the soil surface, reduction in discharge velocities, and through the promotion of infiltration. Outlets often have high velocity, high volume flows, and require strong materials that will withstand the forces of stormwater. Storm drain outlet control measures also offer a last line of protection against sediment entering environmentally sensitive areas.

All stormwater outlets that may discharge sediment-laden stormwater flow from the construction site must be protected using the control practices depicted on the approved plan set and in accordance with the *RI SESC Handbook*.

Describe controls, including design specifications and details, which will be implemented to protect outlets discharging stormwater from the project.

Will temporary or permanent point source discharges be generated at the site as the result of construction of sediment traps or basins, diversions, and conveyance channels?

☒ Yes ☐ No

If Yes, describe the method(s) of outlet protection specified for each instance where a point source discharge will be generated. In addition, specifically reference SESC Site Plan Sheet Numbers which identify where the outlets will be constructed at the site and the corresponding control measures that will be utilized for their protection including any associated specifications required for their installation and maintenance.

Stormwater basin outfalls will be protected with rip-rap aprons, as needed. Please see Drawing C-4, C-6, D-2 and D-4.

If No, discuss rationale for not including these elements in the SESC Plan.

Insert text

2.7 Establish Temporary Controls for the Protection of Post-Construction Stormwater Treatment Practices

Per RI Stormwater Design and Installation Standards Manual 3.3.7.8:

Temporary measures shall be installed to protect permanent or long-term stormwater control and treatment measures as they are installed and throughout the construction phase of the project so that they will function properly when they are brought online.

Examples of temporary control measures that can be used to protect permanent stormwater control measures include: establishing temporary sediment barriers around infiltrating practices, ensuring proper material staging areas and equipment routing (i.e. do not allow construction equipment to compact areas where infiltrating practices will be installed), and by conducting final cleaning of structural long term practices after construction is completed.

List and describe all post-construction stormwater treatment practices that will be installed during the construction process. Next, outline how these measures will be protected during the construction phase of the project to ensure that they will function appropriately once they are brought online.

Will long-term stormwater treatment practices be installed at the site?

☒ Yes ☐ No

If Yes, describe the specific long-term stormwater treatment practices that will require protection from sedimentation and compaction. In addition, specifically reference SESC Site Plan Sheet Numbers which identify the location of these practices and the corresponding control measures that will be utilized for their protection including any associated specifications required for their installation and maintenance.

Two infiltration basins and a sand filter will require protection from sedimentation and compaction. Each basin will be protected by a combination of filter socks and silt fences. Please see Sheet Number C-6.

If No, discuss rationale for not including these elements in the SESC Plan.

Insert text

2.8 Divert or Manage Run-on from Up-gradient Areas

Per RI Stormwater Design and Installation Standards Manual 3.3.7.10:

Is stormwater from off-site areas anticipated to flow onto the project area or onto areas where soils will be disturbed?

☒ Yes ☐ No

If Yes, describe the specific runoff control measures (i.e., check dams, water bars, diversions, perimeter dikes, lined waterways, vegetated waterways, temporary line channels, sediment barriers, pipe slope drains, etc.) that will be utilized at the site including references to the SESC Site Plan Sheet Numbers, design specifications and details. See the RI SESC Handbook,Section Five: Runoff Control Measures for additional guidance.

Pre-Construction and Construction sub-watershed maps are included for each phase in this SESC Plan submittal.

Structural control measures will be used to limit stormwater flow from coming onto the project area, and to divert and slow on-site stormwater flow that is expected to impact exposed soils for the purpose of minimizing erosion, runoff, and the discharge of pollutants from the site.

Control measures shall be installed as depicted on the approved plan set and in accordance with the *RI SESC Handbook* or the *RI Department of Transportation Standard Specifications for Road and Bridge Construction*. **Run-on and Run-off Management**				
Construction Phase #	On-site or Off-site Run-on?	Control measure	Identified on Sheet #	Detail(s) is/are on Sheet #
All	On - Site	12” Filter Sock	C-5, C-6	D-1
All	Off-Site	12” Filter Sock	C-5, C-6	D-1

If No, discuss rationale for not including these elements in the SESC Plan.

Insert text

2.9 Retain Sediment Onsite through Structural and Non-Structural Practices

Per RI Stormwater Design and Installation Standards Manual 3.3.7.12:

Once the erosion control measures and the run-on diversions are identified and located on the plans, the next step to site planning is sediment control and sediment management. Sediment barriers, inlet protection, construction entrances, stockpile containment, temporary sediment traps, and temporary sediment basins must be integrated into the SESC Plan if applicable. Refer to the RI SESC Handbook Section Six: Sediment Control Measures for additional guidance.

Per RI Stormwater Design and Installation Standards Manual 3.3.7.9:

SEDIMENT BARRIERS must be installed along the perimeter areas of the site that will receive stormwater from disturbed areas. This also may include the use of sediment barriers along the contour of disturbed slopes to maintain sheet flow and minimize rill and gully erosion during construction. Installation and maintenance of sediment barriers must be completed in accordance with the maintenance requirements specified by the product manufacturer or the *RI SESC Handbook*.

Will sediment barriers be utilized at the toe of slopes and other downgradient areas subject to stormwater impacts and erosion during construction?

☒ Yes ☐ No

If Yes, Describe the rationale for selecting control measures to serve as sediment barriers at the toe of slopes and other down gradient areas subject to stormwater impacts during construction. Describe the specific sediment barriers that will be used at the site in the table provided.

If No, discuss rationale for not including these elements in the SESC Plan.

Filter socks will be utilized to protect down gradient areas subject to stormwater impacts and erosion during construction

Describe rationale for whether or sediment barriers are required at regular intervals along slopes in order to minimize the creation of concentrated flow paths (i.e. rilling, gully erosion) and to encourage sheet flow. Keep in mind that sediment barriers can be placed at the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow. The description of the selected control measures must focus on sediment barrier spacing as a function of slope length and steepness. Refer to the RI SESC Handbook, Section Six: Sediment Control Measure, Straw Wattles, Compost Tubes, and Fiber Rolls Control Measure for additional information on acceptable spacing distances.

Will sediment barriers be utilized along the contour of slopes to maintain sheet flow and minimize rill and gully erosion during construction?

☒ Yes ☐ No

If Yes, list the specific sediment barriers that will be used at the site in the table provided. Describe the rationale for the locations and spacing frequency selected by the designer based on slope length and steepness. For additional guidance refer to the RI SESC Handbook or sediment barrier manufacturer's specifications.

SEDIMENT BARRIERS			
Construction Phase #	Sediment Barrier Type	Sediment Barrier is Labeled on Sheet #	Detail is on Sheet #
1	12" Filter Sock	C-5, C-6	D-1

If No, discuss rationale for not including these elements in the SESC Plan.
Insert text

Per RI Stormwater Design and Installation Standards Manual 3.3.7.6:

INLET PROTECTION will be utilized to prevent soil and debris from entering storm drain inlets. These measures are usually temporary and are implemented before a site is disturbed. ALL stormwater inlets &/or catch basins that are operational during construction and have the potential to receive sediment-laden stormwater flow from the construction site must be protected using control measures outlined in the *RI SESC Handbook*.

For more information on inlet protection refer to the *RI SESC Handbook*, Inlet Protection control measure.

Maintenance

The operator must clean, or remove and replace the inlet protection measures as sediment accumulates, the filter becomes clogged, and/or as performance is compromised. Accumulated sediment adjacent to the

inlet protection measures should be removed by the end of the same work day in which it is found or by the end of the following work day if removal by the same work day is not feasible.

Describe controls, including design specifications and details, which will be implemented to protect all inlets receiving stormwater from the project during the entire duration of the project. For more information on inlet protection refer to the RI SESC Handbook Inlet Protection control measure.

Do inlets exist adjacent to or within the project area that require temporary protection?

☐ Yes ☒ No

If Yes, describe the method(s) of inlet protection, including maintenance requirements and complete the table provided.

The following lists the proposed storm drain inlet types selected from Section Six of the *RI SESC Handbook*. Each row is unique for each phase and inlet protection type.

INLET PROTECTION			
Construction Phase #	Inlet Protection Type	Inlet Protection is labeled on Sheet #	Detail(s) is/are on Sheet #
N/A	N/A	N/A	N/A

If No, discuss rationale for not including these elements in the SESC Plan.
Storm drain inlets do not exist adjacent to or within the project area; therefore, temporary inlet protection is not required

CONSTRUCTION ENTRANCES will be used in conjunction with the stabilization of construction roads to reduce the amount of sediment tracking off the project. This project has avoided placing construction entrances on poorly drained soils where possible. Where poorly drained soils could not be eliminated, the detail includes subsurface drainage.

Any construction site access point must employ the control measures on the approved SESC site plans and in accordance with the *RI SESC Handbook*. Construction entrances shall be used in conjunction with the stabilization of construction roads to reduce the amount of mud picked up by construction vehicles. All construction access roads shall be constructed prior to any roadway accepting construction traffic.

The site owner and operator must:

1. Restrict vehicle use to properly designated exit points.

2. Use properly designed and constructed construction entrances at all points that exit onto paved roads so that sediment removal occurs prior to vehicle exit.

3. When and where necessary, use additional controls to remove sediment from vehicle tires prior to exit (i.e. wheel washing racks, rumble strips, and rattle plates).

4. Where sediment has been tracked out from the construction site onto the surface of off-site streets, other paved areas, and sidewalks, the deposited sediment must be removed by the end of the same work day in which the track out occurs. Track-out must be removed by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal.

Will construction entrances be utilized at the proposed construction site?

☒ Yes ☐ No

If Yes, indicate location(s) of vehicle entrance(s) and exit(s), and stabilization practices used to prevent sediment from being tracked off-site in the table provided. See also RI SESC Handbook, Section Six, Construction Entrances Measure.

CONSTRUCTION ENTRANCE			
Construction Phase #	Soil Type at the Entrance	Entrance is located on Sheet #	Detail is on Sheet #
All	Woodbridge Fine Sandy Loam	C-5	D-1

If No, discuss rationale.

Insert text

STOCKPILE CONTAINMENT will be used onsite to minimize or eliminate the discharge of soil, topsoil, base material or rubble, from entering drainage systems or surface waters. All stockpiles must be located within the limit of disturbance, protected from run-on with the use of temporary sediment barriers and provided with cover or stabilization to avoid contact with precipitation and wind where and when practical.

Stock pile management consists of procedures and practices designed to minimize or eliminate the discharge of stockpiled material (soil, topsoil, base material, rubble) from entering drainage systems or surface waters.

For any stockpiles or land clearing debris composed, in whole or in part, of sediment or soil, you must comply with the following requirements:

1. Locate piles within the designated limits of disturbance.
2. Protect from contact with stormwater (including run-on) using a temporary perimeter sediment barrier.
3. Where practicable, provide cover or appropriate temporary vegetative or structural stabilization to avoid direct contact with precipitation or to minimize sediment discharge.
4. NEVER hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance, storm drain inlet, or surface water.
5. To the maximum extent practicable, contain and securely protect from wind.

Describe materials expected to be stockpiled or stored on-site and procedures for storage of materials to minimize exposure of the materials to stormwater and to eliminate the discharge of stockpiled material from entering drainage systems and surface waters. Refer to the RI SESC Handbook, Stockpile and Staging Area Management Control Measure for additional guidance. Complete the table provided.

STOCKPILE CONTAINMENT				
Construction Phase #	Run-on measures necessary? (yes/no)	Stabilization or Cover Type	Stockpile Containment Measure	Sheet #
All	Yes	Temporary Vegetation or Polyethylene Sheeting	Filter Sock	D-1

CONSTRUCTED SEDIMENT STRUCTURES

If each common drainage location receives water from an area with less than one (1) acre disturbed at a time, this section can be deleted and no sediment traps or basins are required. However, it is important to remember that there is still a requirement to retain sediment on-site. Therefore, if it is in the best professional judgment of the designer, that there is a condition or circumstance which may require structural controls (per Section 3.3.7.13 of the RI Stormwater Design and Installation Standards Manual), this section can be used.

TEMPORARY SEDIMENT TRAPS will be utilized onsite. There will be no disturbed drainage areas greater than one acre that will be exposed for longer than six months. Design and sizing calculations in accordance with the *RI SESC Handbook*, Section Six are found in __Attachment H___ of this SESC Plan. A summary of the calculations are provided below:

For Disturbed Areas 1 to 5 Acres – Those areas with a common drainage location that serves an area between one (1) and five (5) acres disturbed at one time, a temporary sediment trap must be provided where attainable and where the sediment trap is only intended to be used for a period of six (6) months or less. For longer term projects with a common drainage location that serves between one (1) and five (5) acres disturbed at one time, a temporary sediment basin must be provided where attainable. Temporary sediment trapping practices must be designed in accordance with the RI SESC Handbook and must be sized to have a total storage volume capable of storing one (1) inch of runoff from the contributing area or one hundred and thirty four (134) cubic yards per acre of drainage area. A minimum of fifty percent (50%) of the total volume shall be storage below the outlet (wet storage). See RISDISM 3.3.7.12 for requirements and RI SESC Handbook, Section Six: Temporary Sediment Traps Measure for design details.

Are temporary sediment traps required at the site?

☒ Yes ☐ No

If Yes, complete the table provided. If an area greater than one acre will be exposed for longer than 6 months and a sediment trap is proposed, explain why the sediment basin was not attainable.

SEDIMENT TRAPS				
Construction Phase #	Exposed Area (acres)	Trap #	Sheet #	Detail found on Sheet#
2	1.52	TST-1	C-6	D-2
2	5.00	TST-2	C-6	D-2
2	1.97	TST-3	C-6	D-2

Trap #	Wet Storage Volume (cu.ft)	Dry Storage Volume (cu.ft.)	Cleanout Depth (ft)	Provide Reference to Location of Supporting Design and Sizing Calculations
TST-1	2764	2764	1	Attachment H - Calculations
TST-2	9075	9075	1	Attachment H - Calculations
TST-3	3576	3576	1	Attachment H - Calculations

All traps will be functional and installed prior to disturbance in the contributing drainage area. Access for sediment removal is provided on the plans with cleanout depth requirements. The removed sediment will be utilized onsite or disposed of properly off-site.

If No, discuss rationale.

Insert text

TEMPORARY SEDIMENT BASIN(S) will be utilized onsite. Every effort must be made to prevent erosion and control it near the source.

If the following criterion does not apply to your proposed construction project, then this section may be eliminated from the plan.

For Disturbed Areas of 1 to 5 Acres – Those areas with a common drainage location that serves an area between one (1) and five (5) acres disturbed at one time for longer than six (6) months.

For Disturbed Areas > 5 Acres – Those areas with a common drainage location that serves an area with greater than five (5) acres disturbed at one time, a temporary (or permanent) sediment basin must be provided where attainable until final stabilization of the site is complete. Temporary sediment basins must be designed in accordance with the RI SESC Handbook. The volume of wet storage shall be at least twice the sediment storage volume and shall have a minimum depth of two (2) feet. Sediment storage volume must accommodate a minimum of one year of predicted sediment load as calculated using the sediment volume formula in the RI SESC Handbook. In addition to sediment storage volume and wet storage volume, the sediment basin shall provide adequate residence storage volume to provide a minimum 10 hours residence time for a ten (10) -year frequency, twenty four (24) hour duration, Type III distribution storm. To the maximum extent practicable, outlet structures must be utilized that withdraw water from the surface of temporary sedimentation basins for the purpose of minimizing the discharge of pollutants. Exceptions may include periods of extended cold weather, where alternative outlets are required during frozen periods. If such a device is infeasible for portions of or the entire construction period justification must be made in the SESC Plan. Describe the reasons sediment basins are required for this project. They may include physical conditions, land ownership, construction operations etc. For design details see RI SESC Handbook Section Six: Temporary Sediment Basins Measure.

Are temporary sediment basins required at the site?

☐ Yes ☒ No

If No, discuss rationale.

Insert text

If Yes, complete the table provided.

There will be disturbed areas greater than 5 acres and/or disturbed areas greater than one acre but exposed for longer than six months. The basins have been located to intercept runoff only from disturbed areas and minimize interference with other construction activities and construction of utilities. They have been located outside of any natural buffers. The dam height is less than six feet and holds less than fifteen (15) acre-ft.

Modeling, Design and Sizing calculations in accordance with the *RI SESC Handbook*, Section Six are found in __Insert Text___ of this SESC Plan. The designs were also prepared to satisfy Section 3.3.7.13 of the Stormwater Manual and will control Temporary Increases in Stormwater Velocity, Volume, and Peak Flows. A summary of the assumptions and calculations are provided below:

TEMPORARY SEDIMENT BASINS				
Construction Phase #	Exposed Area (acres)	Basin #	Sheet #	Detail found on Sheet#
Insert Text	Insert Text	Insert Text	Insert Text	Insert Text
Insert Text	Insert Text	Insert Text	Insert Text	Insert Text
Insert Text	Insert Text	Insert Text	Insert Text	Insert Text
Insert Text	Insert Text	Insert Text	Insert Text	Insert Text

Provide the following tables for each temporary sediment basin. Each basin shall be designed to contain sediment and runoff from the 10-year Type III distribution storm.

SEDIMENT BASIN #1 **Pre-Development**					
Pre-Construction Cover Type	Contributing Area (acres)	Soil Type	Curve Number	Tc (minutes)	10- Year Type III (cfs, at time t, acre feet)
Insert Text	Insert Text	Insert Text	Insert Text	Insert Text	Insert Text
Insert Text	Insert Text	Insert Text	Insert Text	Insert Text	Insert Text
Insert Text	Insert Text	Insert Text	Insert Text	Insert Text	Insert Text
				Total Pre-Construction Volume (cuft):	**Insert Text**
During Construction					
Construction Cover Type	Contributing Area	Erosion Rates	Curve Number	Tc (minutes)	10-Year Type III (cfs, at time t, acre feet)
Insert Text	Insert Text	Insert Text	Insert Text	Insert Text	Insert Text
Insert Text	Insert Text	Insert Text	Insert Text	Insert Text	Insert Text
Insert Text	Insert Text	Insert Text	Insert Text	Insert Text	Insert Text
				Total Runoff Volume During Construction (cuft):	**Insert Text**
Basin #1					
Pre-Construction	Wet Storage Volume (cuft)	Sediment Storage	Residence Storage	Outlet Max Discharge Rate (cfs)	Emergency Spillway Discharge Capacity

Peak Discharge (cfs)		Volume (cuft)	Volume (cuft)		(cfs)
Insert Text	Insert Text	Insert Text	Insert Text	Insert Text	Insert Text

Discuss if baffles will be required in order to create effective flow length. The details should contain sediment storage markers.

Describe the surface outlets. Identify whether or not these devices will be infeasible to use during periods of extended cold weather. If periods of extended cold weather are anticipated to be an issue, provide the operator with instructions for discharging from the basin using an alternate method during this period of time. In addition, instruct the operator to document the justification for not using a surface outlet device during frozen periods in the inspection reports associated with these instances.

All sediment basins will be functional and installed prior to disturbance in the contributing drainage area. Access for sediment removal is provided on the plans with cleanout depth specifications. The removed sediment will be utilized onsite or properly disposed of off-site.

2.10 Properly Design Constructed Stormwater Conveyance Channels

Conveyances are required to be designed for inlets to temporary sediment basins. The construction site planner must use best professional judgment to determine if additional conveyance design is required for run-on control or in any other location where velocity control is required.

Are temporary stormwater conveyance practices required in order to properly manage runoff within the proposed construction project?

☒ Yes ☐ No

If Yes, describe the specific control measures that will be used at the site. Provide or attach design calculations associated with each proposed conveyance measure, demonstrating that each one is designed and sized to handle the peak flow from a 10-year, 24-hour, Type III design storm. Note where within the site plans each specified conveyance is depicted, including specifications and construction details.

Temporary diversions are proposed to direct runoff to the temporary sediment traps. The diversions are sized in general accordance with the RI Sediment and Erosion Control Handbook and are designed to handle the peak flow from the 10-year, 24-hour, Type III design storm. The diversion locations are shown on drawings C-5 and C-6, a typical detail is provided on drawing D-2, and calculations are included in Attachment H. The conveyance will be maintained as depicted on SESC Site Plans and in accordance with the *RI SESC Handbook* and if applicable. The temporary diversion swale for TST-2 will require jute or excelsior matting since design velocities are expected to be more than 3.5 fps.

The conveyance will be maintained as depicted on SESC Site Plans and in accordance with the *RI SESC Handbook* and if applicable.

If No, discuss rationale for not including conveyance measures in the SESC Plan.

Insert text

2.11 Erosion, Runoff, and Sediment Control Measure List

Complete the following table for each Phase of construction where Erosion, Runoff, and Sediment Control Measures are located. This table is to be used as part of the SESC Plan Inspection Report – please fill out accordingly.

It is expected that this table and corresponding Inspection Reports will be amended as needed throughout the construction project as control measures are added or modified.

Phase No. All		
Location/Station	**Control Measure Description/Reference**	**Maintenance Requirement**
Throughout the Site (C-5 and C-6)	12" Filter Socks/RI Soil Erosion and Sediment Handbook Section Six.	Inspection should be made after each storm event or 1/week and repair or replacement should be made promptly as needed. Cleanout of accumulated sediment behind the filter sock if sediment accumulates to at least ½ the distance between the top of sock and ground surface.
Throughout the Site, Abutting Wetlands, Around Temporary Stockpiles and downstream of Temporary Sediment Traps (C-5 and C-6)	Silt Fence/ RI Soil Erosion and Sediment Handbook Section Six.	Remove all devices once permanent erosion control measures are in place and functioning. Inspect regularly for water undercutting and bypassing of devices. Inspect for damage and replace or repair damaged sections as needed. Remove sediment when it reaches ½ of the height of the device. The silt fence may be removed only when the adjacent exposed area is stabilized, i.e., the area has an established grass cover and is free from future uncontrolled discharges. Immediately upon removal of the silt fence the remaining exposed areas will be finished as specified above in plan.
Construction Entrance (C-5)	Stone Stabilized Pad. Section Six: Sediment Control Measures – Construction Entrances –*RI SESC Handbook*.	The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto paved surfaces. Provide periodic top dressing with additional stone or additional length as conditions demand. Roads adjacent to entrance shall be clean at the end of each day. If maintenance alone is not enough to prevent excessive track out, increase length of entrance, modify construction access road surface, or install washrack or mudrack.

Laydown Area: Sheet C-5	Concrete Washout Area/Section Three-RI SESC Handbook	Washout facilities shall be maintained to provide adequate holding capacity with a minimum freeboard of 12 inches. Washout facilities must be cleaned once the washout is 75% full. If the washout is nearing capacity, vacuum and dispose of the waste material in an approved manner. Place a secure, non-collapsing, non-water collecting cover over the concrete washout facility prior to predicted wet weather to prevent accumulation and overflow of precipitation. Remove and dispose of hardened concrete and return the structure to a functional condition. When materials from the self-installed concrete washout are removed, inspect for signs of weakening or damage, and make any necessary repairs. Re-line the structure with new plastic after each cleaning. Materials used to construct temporary concrete washout facilities shall be removed from the site of the work and disposed of or recycled. Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities shall be backfilled, repaired, and stabilized to prevent erosion.
Temporary Sediment Traps TST-1, TST-2 and TST-3 (C-6)	Diversions/Section Five-RI SESC handbook	Inspect the diversion once a week and within 24 hours of a 0.25 inch or greater storm during construction or until the diversion is completely stabilized. Check for seed and or/mulch movement and/or rill erosion. Remove sediment and repair damage to diversions immediately. Reinstall jute matting for conveyance of TST-2 if observed to be shifting or broken.

Temporary Sediment Traps TST-1, TST-2 and TST-3 (C-6)	Temporary Sediment Traps/Section Five-RI SESC handbook	Inspect the temporary sediment trap at least once a week and within 24 hours of a 0.25 inch or greater storm. Check the outlet to ensure that it is structurally sound and has not been damaged by erosion or construction equipment. Check for sediment accumulation and filtration performance. When sediments have accumulated to one-half of the minimum required volume of the wet storage, dewater the trap as needed to remove sediments and restore the trap to its original dimensions. Dispose of the sediment removed from the basin in a suitable area and in such a manner that it will not erode and cause sedimentation problems. Remove the temporary sediment trap after the contributing drainage area is stabilized.

SECTION 3: CONSTRUCTION ACTIVITY POLLUTION PREVENTION

Per RI Stormwater Design and Installation Standards Manual 3.3.7.14:

The purpose of construction activity pollution prevention is to prevent day to day construction activities from causing pollution.

This section describes the key pollution prevention measures that must be implemented to avoid and reduce the discharge of pollutants in stormwater. Example control measures include the proper management of waste, material handling and storage, and equipment/vehicle fueling/washing/maintenance operations.

Where applicable, include *RI SESC Handbook* or the *RI Department of Transportation Standard Specifications for Road and Bridge Construction* (as amended) specifications.

3.1 Existing Data of Known Discharges from Site

Per RIPDES Construction General Permit – Part III.I:

List and provide existing data (if available) on the quality of any known discharges from the site. Examples include discharges from existing stormwater collection systems, discharges from industrial areas of the site, etc.

Are there known discharges from the project area?

☐ Yes ☒ No

Describe how this determination was made:

- TRC has conducted site walks of the site and has not observed and/or is not aware of any discharges within the project area.

If yes, list discharges and locations:

- INSERT TEXT HERE

Is there existing data on the quality of the known discharges?

☐ Yes ☒ No

If yes, provide data:

- INSERT TEXT HERE

3.2 Prohibited Discharges

Per RI SESC Handbook – Part D

The following discharges are prohibited at the construction site:

- Contaminated groundwater, unless specifically authorized by the DEM. These types of discharges may only be authorized under a separate DEM RIPDES permit.
- Wastewater from washout of concrete, unless the discharge is contained and managed by appropriate control measures.
- Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials.
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance. Proper storage and spill prevention practices must be utilized at all construction sites.
- Soaps or solvents used in vehicle and equipment washing.
- Toxic or hazardous substances from a spill or other release.

All types of waste generated at the site shall be disposed of in a manner consistent with State Law and/or regulations.

Will any of the above listed prohibited discharges be generated at the site?

☐ Yes ☒ No

If Yes, provide a list of those that will be generated at the site and provide a discussion of how they will be managed, including references to the specific SESC Site Plans where such control measures are specified.

Insert text and references to SESC Site Plan Sheet Numbers here.

If No, discuss rationale.

None of the listed prohibited discharges shall be generated at the site. An above grade, lined washout area will be provided to contain and manage concrete washout water.

3.3 Proper Waste Disposal

Per RI SESC Handbook – Part D

Building materials and other construction site wastes must be properly managed and disposed of in a manner consistent with State Law and/or regulations.

- A waste collection area shall be designated on the site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterbody or storm drain.
- All waste containers shall be covered to avoid contact with wind and precipitation.
- Waste collection shall be scheduled frequently enough to prevent containers from overfilling.
- All construction site wastes shall be collected, removed, and disposed of in accordance with applicable regulatory requirements and only at authorized disposal sites.
- Equipment and containers shall be checked for leaks, corrosion, support or foundation failure, or other signs of deterioration. Those that are found to be defective shall be immediately repaired or replaced.

Is waste disposal a significant element of the proposed project?

☐ Yes ☒ No

If Yes, identify potential building materials and other construction wastes and document how these wastes will be properly managed and disposed of at the construction site (i.e., trash disposal, sanitary wastes, recycling, and proper material handling). Include references to the specific SESC Site Plans where such control measures are specified.

- Insert text and references to SESC Site Plan Sheet Numbers here.

If No, discuss rationale.

Waste generation shall be limited to construction activities. A roll-off container shall be provided as needed for debris collection. Refer to Note 1, Drawing C-5.

3.4 Spill Prevention and Control

Per RI SESC Handbook – Part D

All chemicals and/or hazardous waste material must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. All areas where potential spills can occur and their accompanying drainage points must be described. The owner and operator must establish spill prevention and control measures to reduce the chance of spills, stop the source of spills, contain and clean-up spills, and dispose of materials contaminated by spills. The operator must establish and make highly visible location(s) for the storage of spill prevention and control equipment and provide training for personnel responsible for spill prevention and control on the construction site.

Are spill prevention and control measures required for this particular project?

☐ Yes ☒ No

If Yes, describe all areas where potential spills can occur, and their accompanying drainage points, and describe the spill prevention and control plan to reduce the chance of spills, stop the source of spills, contain and clean up spills, dispose of materials contaminated by spills, and train personnel responsible for spill prevention and control. Provide the method of establishing and making highly visible the location(s) for the storage of spill prevention equipment. Refer to the RI SESC Handbook, Spill Prevention and Control Plan for guidance.

- Insert text and references to SESC Site Plan Sheet Numbers here.

If No, discuss rationale.

The use or generation of significant amounts of chemicals or hazardous waste is not anticipated.

3.5 Control of Allowable Non-Stormwater Discharges

Per RIPDES Construction General Permit – Part III.J.2.e:

Discharges not comprised of stormwater are allowed under the RIPDES Construction General Permit but are limited to the following: discharges which result from the washdown of vehicles where no detergents are used; external building wash-down where no detergents are used; the use of water to control dust; firefighting activities; fire hydrant flushing; natural springs; uncontaminated groundwater; lawn watering; potable water sources including waterline flushing; irrigation drainage; pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed) and where detergents are not used; and foundation or footing drains where flows are not contaminated with process materials such as solvents, or contaminated by contact with soils where spills or leaks of toxic or hazardous materials has occurred. If any of these discharges may reasonably be expected to be present and to be mixed with stormwater discharges, they must be specifically listed here.

Are there allowable non-Stormwater discharges present on or near the project area?

☐ Yes ☒ No

If yes, list the sources of allowable non-Stormwater discharge(s) associated with construction activity. For each of the allowable non-stormwater discharge(s) identified, describe the controls and measures that will be implemented at those locations to minimize pollutant contamination of these discharges and to separate them from temporary discharges of stormwater during construction.

List of allowable non-stormwater discharge(s) and the associated control measure(s):

Allowable non-stormwater discharges include wash-down of concrete vehicles where no detergents are used. Above grade, lined, concrete washout areas shall be provided. Refer to Note 1, Drawing C-5.

If any existing or proposed discharges consist of contaminated groundwater, such discharges are not authorized under the RIPDES Construction General Permit. These discharges must be permitted separately by seeking coverage to treat and discharge under a separate RIPDES individual permit or under the RIPDES Remediation General Permit. Contact the RIDEM Office of Water Resources RIPDES Permitting Program at 401-222-4700 for application requirements and additional information.

Are there any known or proposed contaminated discharges, including anticipated contaminated dewatering operations, planned on or near the project area?

☐ Yes ☒ No

If yes, list the discharge types and the RIPDES individual permit number(s) or RIPDES Remediation General Permit Authorization number(s) associated with these discharges.

- Discharge Type and RIPDES Individual Permit number : INSERT TEXT HERE
- Discharge Type and RIPDES Remediation General Permit Authorization number: INSERT TEXT HERE

3.6 Control Dewatering Practices

Per RI SESC Handbook – Part D

Site owners and operators are prohibited from discharging groundwater or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation, unless such waters are first effectively managed by appropriate control measures.

Examples of appropriate control measures include, but are not limited to, temporary sediment basins or sediment traps, sediment socks, dewatering tanks and bags, or filtration systems (e.g. bag or sand filters) that are designed to remove sediment. Uncontaminated, non-turbid dewatering water can be discharged without being routed to a control.

At a minimum the following discharge requirements must be met for dewatering activities:

1. Do not discharge visible floating solids or foam.
2. To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. In no case will surface waters be considered part of the treatment area.
3. At all points where dewatering water is discharged, utilize velocity dissipation devices.
4. With filter backwash water, either haul it away for disposal or return it to the beginning of the treatment process.
5. Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.
6. Dewatering practices must involve the implementation of appropriate control measures as applicable (i.e. containment areas for dewatering earth materials, portable sediment tanks and bags, pumping settling basins, and pump intake protection.)

Is it at all likely that the site operator will need to implement construction dewatering in order to complete the proposed project?

☒ Yes ☐ No

If Yes, describe all areas where construction dewatering may be required and the proposed control measures that will be used to treat and manage dewatering fluids including all proposed discharge points. Proposed control measures must comply with the RI SESC Handbook. Include references to all relevant SESC Site Plans.

Minimal dewatering may be required to keep the work area of the culvert replacement dry during the removal and installation of the replacement culvert.

If No, discuss rationale.

Insert text

3.7 Establish Proper Building Material Staging Areas

Per RI SESC Handbook – Part D

All construction materials that have the potential to contaminate stormwater must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. Designated areas shall be approved by the site owner/engineer. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in the discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

Describe construction materials expected to be stored on-site and procedures for storage of materials to minimize exposure of the materials to stormwater. Include references to all relevant SESC Site Plans.

Construction materials that have the potential to contaminate stormwater are not anticipated.

3.8 Minimize Dust

Per RI SESC Handbook – Part D

Dust control procedures and practices shall be used to suppress dust on a construction site during the construction process, as applicable. Precipitation, temperature, humidity, wind velocity and direction will determine amount and frequency of applications. However, the best method of controlling dust is to prevent dust production. This can best be accomplished by limiting the amount of bare soil exposed at one time. Dust Control measures outlined in the *RI SESC Handbook* shall be followed. Other dust control methods include watering, chemical application, surface roughening, wind barriers, walls, and covers.

Describe dust control practices that will be used to suppress dust and limit its generation (i.e. applying water, limiting the amount of bare soil exposed at one time etc.).

Dust control procedures and practices shall be used to suppress dust during the construction process. Examples of dust control measures include water treatment, temporary vegetative and non-vegetative measures as described above.

3.9 Designate Washout Areas

Per RI SESC Handbook – Part D

At no time shall any material (concrete, paint, chemicals) be washed into storm drains, open ditches, streets, streams, wetlands, or any environmentally sensitive area. The site operator must ensure that construction waste is properly disposed of, to avoid exposure to precipitation, at the end of each working day.

Will washout areas be required for the proposed project?

☒ Yes ☐ No

If Yes, describe location(s) and control measures that will be used to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, washout areas for concrete mixers, paint, stucco, etc. The recommended location(s) of washout areas should be identified, or at a minimum the locations where these washout areas should not be sited should be called out.

Above grade, lined, concrete washout areas shall be used. Refer to Note 1, Drawing C-5, detail on Drawing D-1.

If No, discuss rationale.

Insert text

3.10 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

Per RI SESC Handbook – Part D

Vehicle fueling shall not take place within regulated wetlands or buffer zone areas, or within 50-feet of the storm drain system. Designated areas shall be depicted on the SESC Site Plans, or shall be approved by the site owner.

Vehicle maintenance and washing shall occur off-site, or in designated areas depicted on the SESC Site Plans or approved of by the site owner. Maintenance or washing areas shall not be within regulated wetlands or buffer zone areas, or within 50-feet of the storm drain system. Maintenance areas shall be clearly designated, and barriers shall be used around the perimeter of the maintenance area to prevent stormwater contamination.

Construction vehicles shall be inspected frequently for leaks. Repairs shall take place immediately. Disposal of all used oil, antifreeze, solvents and other automotive-related chemicals shall be according to applicable regulations; at no time shall any material be washed down the storm drain or in to any environmentally sensitive area.

Describe equipment/vehicle fueling and maintenance practices that will be implemented to prevent pollutants from mixing with stormwater (e.g., secondary containment, drip pans, spill kits, etc.) Provide recommended location(s) of fueling/maintenance areas, or, at minimum, locations where fueling/maintenance should be avoided.

Fueling or maintenance of vehicles shall be avoided or minimized to the extent feasible. If fueling or minor maintenance is necessary, it shall be conducted within the temporary laydown area.

3.11 Chemical Treatment for Erosion and Sediment Control

Per RI SESC Handbook – Appendix J

Chemical stabilizers, polymers, and flocculants are readily available on the market and can be easily applied to construction sites for the purposes of enhancing the control of erosion, runoff, and sedimentation. The following guidelines should be adhered to for construction sites that plan to use treatment chemicals as part of their overall erosion, runoff, and sedimentation control strategy.

The U.S. Environmental Protection Agency has conducted research into the relative toxicity of chemicals commonly used for the treatment of construction stormwater discharges. The research conducted by the EPA focused on different formulations of chitosan, a cationic compound, and both cationic and anionic polyacrylamide (PAM). In summary, the studies found significant toxicity resulting from the use of chitosan and cationic PAM in laboratory conditions, and significantly less toxicity associated with using anionic PAM. EPA's research has led to the conclusion that the use of treatment chemicals for erosion, runoff, and sedimentation control requires proper operator training and appropriate usage to avoid risk to aquatic species. In the case of cationic treatment chemicals additional safeguards may be necessary.

Application/Installation Minimum Requirements

If a site operator plans to use polymers, flocculants, or other treatment chemicals during construction the SESC plan must address the following:

1. Treatment chemicals shall not be applied directly to or within 100 feet of any surface water body, wetland, or storm drain inlet.

2. Use conventional erosion, runoff, and sedimentation controls prior to and after the application of treatment chemicals. Use conventional erosion, runoff, and sedimentation controls prior to chemical addition to ensure effective treatment. Chemicals may only be applied where treated stormwater is directed to a sediment control (e.g. temporary sediment basin, temporary sediment trap or sediment barrier) prior to discharge.

3. Sites shall be stabilized as soon as possible using conventional measures to minimize the need to use chemical treatment.

4. Select appropriate treatment chemicals. Chemicals must be selected that are appropriately suited to the types of soils likely to be exposed during construction and to the expected turbidity, pH, and flow rate of stormwater flowing into the chemical treatment system or treatment area. **Soil testing is essential. Using the wrong form of chemical treatment will result in some form of performance failure and unnecessary environmental risk.**

5. Minimize discharge risk from stored chemicals. Store all treatment chemicals in leak-proof containers that are kept under storm-resistant cover and surrounded by secondary containment structures (e.g., spill berms, decks, spill containment pallets), or provide equivalent measures, designed and maintained to minimize the potential discharge of treatment chemicals in stormwater or by any other means (e.g., storing chemicals in covered areas or having a spill kit available on site).

6. Use chemicals in accordance with good engineering practices and specifications of the chemical provider/supplier. You must also use treatment chemicals and chemical treatment systems in accordance with good engineering practices, and with dosing specifications and sediment removal design specifications provided by the supplier of the applicable chemicals, or document specific departures from these practices or specifications and how they reflect good engineering practice.

Will chemical stabilizers, polymers, flocculants or other treatment chemicals be utilized on the proposed construction project?

☐ Yes ☒ No

If Yes, create a Treatment Chemical Application Plan and describe how the owner or SESC Plan preparer/designer intends to educate the designated operator prior to the application of such treatment chemicals.

Treatment Chemical Application Plan Required Elements

Insert information listed below:

1. *List Manufacturer's name and product name for each treatment chemical proposed for use at the site.*
2. *Attach a copy of applicable Material Safety Data Sheets (MSDSs) or Safety Data Sheets (SDS) for each proposed treatment chemical.*
3. *Provide the results of third party toxicity testing of the materials proposed for use at the site.*
4. *Provide a certification from the site owner and operator that all proposed treatment chemicals are the same as those used in the toxicity tests and will not be altered in any way.*
5. *Provide an explanation as to why conventional erosion, runoff, and sediment control measures, alone or in combination, will not be sufficient to prevent turbidity impacts and sedimentation in downstream receptors.*
6. *Provide a plan prepared in consultation with the chemical treatment manufacturer(s) or authorized manufacturer's representative which includes the following:*
    a. *Identification of the areas of the site where treatment chemicals will be applied and the name, location, and distance to all downstream receptors that have the potential to be impacted from the discharges from the treatment areas.*
    b. *List the expected start and end dates or specific phases of the project during which each treatment chemical will be applied.*
    c. *Provide test results for representative soils from the site, and any recommendations from the manufacturer based on the soil tests, indicating the type of treatment chemical and the recommended application rate.*

d. List the frequency, method, and rates of application which are designed to ensure that treatment chemical concentrations will not exceed 50% of the IC25 or NOEC toxicity values, whichever is less, for each treatment chemical proposed.
e. Provide the frequency of inspection and maintenance of the treatment chemical application system.
f. List the method proposed for the collection, removal, and disposal or stabilization of settled particles to prevent re-suspension.
g. Describe the training that will be provided to all persons who will handle and use treatment chemicals at the construction site. Training must include appropriate, product-specific training and proper dosing requirements for each product.

Treatment Chemical SESC Plan Weekly Inspection Report Documentation Requirements

1. Document the type and quantity of treatment chemicals applied.

2. List the date, duration of discharge, and estimated discharge rate.

3. Provide an estimate of the volume of water treated.

4. Provide an estimate of the concentration of treatment chemicals in the discharge, with supporting calculations.

3.12 Construction Activity Pollution Prevention Control Measure List

Complete the following table for each Phase of construction where Pollution Prevention Control Measures will be implemented. This table is to be used as part of the SESC Plan Inspection Report – please fill out accordingly.

It is expected that this table will be amended as needed throughout the construction project.

Phase No. #		
Location/Station	**Control Measure Description/Reference**	**Maintenance Requirement**
Note 1, Drawing C-5	Roll-Off Container /Section Three-RI SESC Handbook	Empty when full
	Minimizing Disturbed Area: Preserving Soils & Vegetation	• Routinely inspect no-disturbance areas and protected areas to ensure that they are flagged, protected, and healthy. Re-delineate and protect, as necessary. Remove measures only once all construction has ceased and the entire site is stable.
	Limit of Work and Site Access Control	• Inspect controls each workday and maintain them in effective operating condition. Maintenance of controls should be proactive, not reactive. Where controls have been damage, sagged, ripped, or failed, repair or replacement should be initiated upon discovery of the failure (and always within 24 hours of a storm that causes surface erosion). Inspect controls each workday and

		maintain them in effective operating condition. Maintenance of controls should be proactive, not reactive. Where controls have been damage, sagged, ripped, or failed, repair or replacement should be initiated upon discovery of the failure (and always within 24 hours of a storm that causes surface erosion). • Inspections and corrective measures should be documented thoroughly. • Controls are to remain in place until the upgradient disturbed area is stabilized and approved by the local jurisdiction. When controls are removed, all disturbed areas associated with the installation, maintenance, and/or removal of the barrier/structure shall be covered with topsoil, seeded, mulched, or otherwise stabilized as approved by the local jurisdiction.
	Dust Control	• Treatments using water, tackifiers, etc. need to be maintained and repeated as required by wet and dry conditions and product longevity. • Areas with dust control measures in place should be inspected daily. Physical structures such as barriers and fences should be regularly inspected and repaired as needed.
	Stockpile and Staging Area Management	• Inspect and verify that activity–based measures are in place prior to the commencement of associated activities. • While activities associated with the measure are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued measure implementation. • Repair and/or replace perimeter controls and covers as needed to keep them functioning properly. • After the stockpile has been removed, the site should be graded and permanently stabilized.
	Street Sweeping	• Inspect and sweep prior to rain events. • Properly disposed of collected street sweeping wastes. Street sweeping material often includes sand, salt, leaves, and debris removed from roads. Often the collected sweepings contain pollutants and must be tested prior to disposal to determine if the material is hazardous. Constructions Site Owners and Operators should adhere to all federal and state regulations that apply to the disposal and reuse of sweepings.

		• Federal and state regulations may allow the reuse of sweepings for general fill, parks, road shoulders and other applications as long as the material is not a threat to surface waters. Prior to reuse, trash, leaves, and other debris from sweepings should be removed by screening or other methods (MPCA, 1997). Trash and debris removed should be disposed of by recycling or sent to a landfill (MPCA, 1997). • Repeat application of sweeping control measures when fugitive dust becomes evident.
	Waste Management	• All waste containers will be covered to avoid contact with wind and precipitation. • Waste collection will be scheduled frequently enough to prevent containers from overfilling. • All construction site wastes will be collected, removed, and disposed of in accordance with applicable regulatory requirements and only at authorized disposal sites. • Inspect storage and use areas and identify containers or equipment that could malfunction and cause leaks or spills. • Check equipment and containers for leaks, corrosion, support or foundation failure, or other signs of deterioration, and test them for soundness. Immediately repair or replace any that are found to be defective.
Refer to Note 1, Drawing C-5, detail on Drawing D-1.	Concrete Washout Area Section Three-RI SESC Handbook	• Washout facilities shall be maintained to provide adequate holding capacity with a minimum freeboard of 12 inches. • Washout facilities must be cleaned once the washout is 75% full. • If the washout is nearing capacity, vacuum and dispose of the waste material in an approved manner. • Place a secure, non-collapsing, non-water collecting cover over the concrete washout facility prior to predicted wet weather to prevent accumulation and overflow of precipitation. • Remove and dispose of hardened concrete and return the structure to a functional condition. • When materials from the self-installed concrete washout are removed, inspect for signs of weakening or damage, and make any necessary repairs. • Re-line the structure with new plastic after each cleaning.

		Materials used to construct temporary concrete washout facilities shall be removed from the site of the work and disposed of or recycled. Holes, depressions, or other ground disturbance caused by the removal of the temporary concrete washout facilities shall be backfilled, repaired, and stabilized to prevent erosion.
	Vehicle Fueling, Maintenance	Inspection, Maintenance, and Removal Requirements. • Inspect vehicles, equipment, and storage containers daily for leaks. • Repair leaks immediately or remove problem vehicles or equipment from the project site. • Keep ample supplies of spill cleanup materials onsite. • Clean up spills and dispose of cleanup materials immediately. Disposal of all used oil, antifreeze, solvents and other automotive-related chemicals will be according to applicable regulations; at no time will any material be washed down the storm drain or into any environmentally sensitive area.

SECTION 4: CONTROL MEASURE INSTALLATION, INSPECTION, and MAINTENANCE

4.1 Installation

Per RI SESC Handbook – Part D:

Complete the installation of temporary erosion, runoff, sediment, and pollution prevention control measures by the time each phase of earth-disturbance has begun. All stormwater control measures must be installed in accordance with good judgment, including applicable design and manufacturer specifications. Installation techniques and maintenance requirements may be found in manufacturer specifications and/or the *RI SESC Handbook*.

Include references to SESC Site Plans where installation requirements are located.

See Drawings N-1, C-5, C-6, D-1, and D-2.

4.2 Monitoring Weather Conditions

Per RI SESC Handbook – Part D:

Anticipating Weather Events - Care will be taken to the best of the operator's ability to avoid disturbing large areas prior to anticipated precipitation events. Weather forecasts must be routinely checked, and in the case of an expected precipitation event of over 0.25-inches over a 24-hour period, it is highly recommended that all control measures should be evaluated and maintained as necessary, prior to the weather event. In

the case of an extreme weather forecast (greater than one-inch of rain over a 24-hour period), additional erosion/sediment controls may need to be installed.

Storm Event Monitoring For Inspections - At a minimum, storm events must be monitored and tracked in order to determine when post-storm event inspections must be conducted. Inspections must be conducted and documented at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event, which generates at least 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff or snowmelt.

In order for an operator to successfully satisfy this requirement list the weather gauge station that will be utilized to monitor weather conditions on the construction site. See www.wunderground.com or www.weather.gov for available stations.

The weather gauge station and website that will be utilized to monitor weather conditions on the construction site is as follows:

The recommended weather gauge station is Old Sawmill Farm – KRICOVEN74. This station can be monitored on www.wunderground.com

4.3 Inspections

Per RI SESC Handbook – Part D:

Minimum Frequency - Each of the following areas must be inspected by or under the supervision of the owner and operator at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event, which generates at least 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff or snowmelt:

a. All areas that have been cleared, graded, or excavated and where permanent stabilization has not been achieved;

b. All stormwater erosion, runoff, and sediment control measures (including pollution prevention control measures) installed at the site;

c. Construction material, unstabilized soil stockpiles, waste, borrow, or equipment storage, and maintenance areas that are covered by this permit and are exposed to precipitation;

d. All areas where stormwater typically flows within the site, including temporary drainage ways designed to divert, convey, and/or treat stormwater;

e. All points of discharge from the site;

f. All locations where temporary soil stabilization measures have been implemented;

g. All locations where vehicles enter or exit the site.

Reductions in Inspection Frequency - If earth disturbing activities are suspended due to frozen conditions, inspections may be reduced to a frequency of once per month. The owner and operator must document the beginning and ending dates of these periods in an inspection report.

Qualified Personnel – The site owner and operator are responsible for designating personnel to conduct inspections and for ensuring that the personnel who are responsible for conducting the inspections are “qualified” to do so. A “qualified person” is a person knowledgeable in the principles and practices of erosion, runoff, sediment, and pollution prevention controls, who possesses the skills to assess conditions at the

construction site that could impact stormwater quality, and the skills to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of the permit.

Recordkeeping Requirements - All records of inspections, including records of maintenance and corrective actions must be maintained with the SESC Plan. Inspection records must include the date and time of the inspection, and the inspector's name, signature, and contact information.

General Notes

- A separate inspection report will be prepared for each inspection.
- The Inspection Reference Number shall be a combination of the RIPDES Construction General Permit No - consecutively numbered inspections. ex/ Inspection reference number for the **4**th inspection of a project would be: RIR10####-**4**
- Each report will be signed and dated by the Inspector and must be kept onsite.
- Each report will be signed and dated by the Site Operator.
- The corrective action log contained in each inspection report must be completed, signed, and dated by the site operator once all necessary repairs have been completed.
- It is the responsibility of the site operator to maintain a copy of the SESC Plan, copies of all completed inspection reports, and amendments as part of the SESC Plan documentation at the site during construction.

Failure to make and provide documentation of inspections and corrective actions under this part constitutes a violation of your permit and enforcement actions under 46-12 of R.I. General Laws may result.

4.4 Maintenance

Per RI SESC Handbook – Part D:

Maintenance procedures for erosion and sedimentation controls and stormwater management structures/facilities are described on the SESC Site Plans and in the *RI SESC Handbook*.

Site owners and operators must ensure that all erosion, runoff, sediment, and pollution prevention controls remain in effective operating condition and are protected from activities that would reduce their effectiveness. Erosion, runoff, sedimentation, and pollution prevention control measures must be maintained throughout the course of the project.

Note: It is recommended that the site operator designates a full-time, on-site contact person responsible for working with the site owner to resolve SESC Plan-related issues.

4.5 Corrective Actions

Per RI SESC Handbook – Part D:

If, in the opinion of the designated site inspector, corrective action is required, the inspector shall note it on the inspection report and shall inform the site operator that corrective action is necessary. The site operator

must make all necessary repairs whenever maintenance of any of the control measures instituted at the site is required.

In accordance with the *RI SESC Handbook*, the site operator shall initiate work to fix the problem immediately after its discovery, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance.

When installation of a new control or a significant repair is needed, site owners and operators must ensure that the new or modified control measure is installed and made operational by no later than seven (7) calendar days from the time of discovery where feasible. If it is infeasible to complete the installation or repair within seven (7) calendar days, the reasons why it is infeasible must be documented in the SESC Plan along with the schedule for installing the control measures and making it operational as soon as practicable after the 7-day timeframe. Such documentation of these maintenance procedures and timeframes should be described in the inspection report in which the issue was first documented. If these actions result in changes to any of the control measures outlined in the SESC Plan, site owners and operators must also modify the SESC Plan accordingly within seven (7) calendar days of completing this work.

SECTION 5: AMENDMENTS

Per RIPDES Construction General Permit – Part III.F:

This SESC Plan is intended to be a working document. It is expected that amendments will be required throughout the active construction phase of the project. **Even if practices are installed on a site according to the approved plan, the site is only in compliance when erosion, runoff, and sedimentation are effectively controlled throughout the entire site for the entire duration of the project.**

The SESC Plan shall be amended within seven (7) days whenever there is a change in design, construction, operation, maintenance or other procedure which has a significant effect on the potential for the discharge of pollutants, or if the SESC Plan proves to be ineffective in achieving its objectives (i.e. the selected control measures are not effective in controlling erosion or sedimentation).

In addition, the SESC Plan shall be amended to identify any new operator that will implement a component of the SESC Plan.

All revisions must be recorded in the Record of Amendments Log Sheet, which is contained in Attachment G of this SESC Plan, and dated red-lined drawings and/or a detailed written description must be appended to the SESC Plan. Inspection Forms must be revised to reflect all amendments. Update the Revision Date and the Version # in the footer of the Report to reflect amendments made.

All SESC Plan Amendments, except minor non-technical revisions, must be approved by the site owner and operator. Any amendments to control measures that involve the practice of engineering must be reviewed, signed, and stamped by a Professional Engineer registered in the State of RI.

The amended SESC plan must be kept on file at the site while construction is ongoing and any modifications must be documented.

Attach a copy of the Amendment Log.

Reference RI Model SESC Plan ATTACHMENT G

SECTION 6: RECORDKEEPING

RIPDES Construction General Permit – Parts III.D, III.G, III.J.3.b.iii, & V.O

It is the site owner and site operator's responsibility to have the following documents available at the construction site and immediately available for RIDEM review upon request:

- A copy of the fully signed and dated SESC Plan, which includes:
    - A copy of the General Location Map
      INCLUDED AS ATTACHMENT A
    - A copy of all SESC Site Plans
      INCLUDED AS ATTACHMENT B
    - A copy of the RIPDES Construction General Permit *(To save paper and file space, do not include in DEM/CRMC submittal, for operator copy only)*
      INCLUDED AS ATTACHMENT C
    - A copy of any regulatory permits (RIDEM Freshwater Wetlands Permit, CRMC Assent, RIDEM Water Quality Certification, RIDEM Groundwater Discharge Permit, RIDEM RIPDES Construction General Permit authorization letter, etc.)
      INCLUDED AS ATTACHMENT D
    - The signed and certified NOI form or permit application form *(if required as part of the application, see RIPDES Construction General Permit for applicability)*
      INCLUDED AS ATTACHMENT E
    - Completed Inspection Reports w/Completed Corrective Action Logs
      INCLUDED AS ATTACHMENT F
    - SESC Plan Amendment Log
      INCLUDED AS ATTACHMENT G

SECTION 7: PARTY CERTIFICATIONS

RIPDES Construction General Permit – Part V.G

All parties working at the project site are required to comply with the Soil Erosion and Sediment Control Plan (SESC Plan including SESC Site Plans) for any work that is performed on-site. The site owner, site operator, contractors and sub-contractors are encouraged to advise all employees working on this project of the requirements of the SESC Plan. A copy of the SESC Plan is available for your review at the following location: Office Trailer, or may be obtained by contacting the site owner or site operator.

The site owner and site operator and each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement.

I acknowledge that I have read and understand the terms and conditions of the Soil Erosion and Sediment Control (SESC) Plan for the above designated project and agree to follow the control measures described in the SESC Plan and SESC Site Plans.

Site Owner:

EDPR
100 Park Avenue, Suite 2400
New York, NY 10017

_____
signature/date

Site Operator:
Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

_____
signature/date

Designated Site Inspector:
Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

_____
signature/date

SubContractor SESC Plan Contact:
Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

_____
signature/date

Insert more contact/signature lines as necessary

LIST OF ATTACHMENTS

Attachment A - General Location Map

Attachment B - SESC Site Plans

Attachment C - Copy of RIPDES Construction General Permit and Authorization to Discharge *(To save paper and file space, do not include in DEM/CRMC submittal, for operator copy only)*

Attachment D - Copy of Other Regulatory Permits

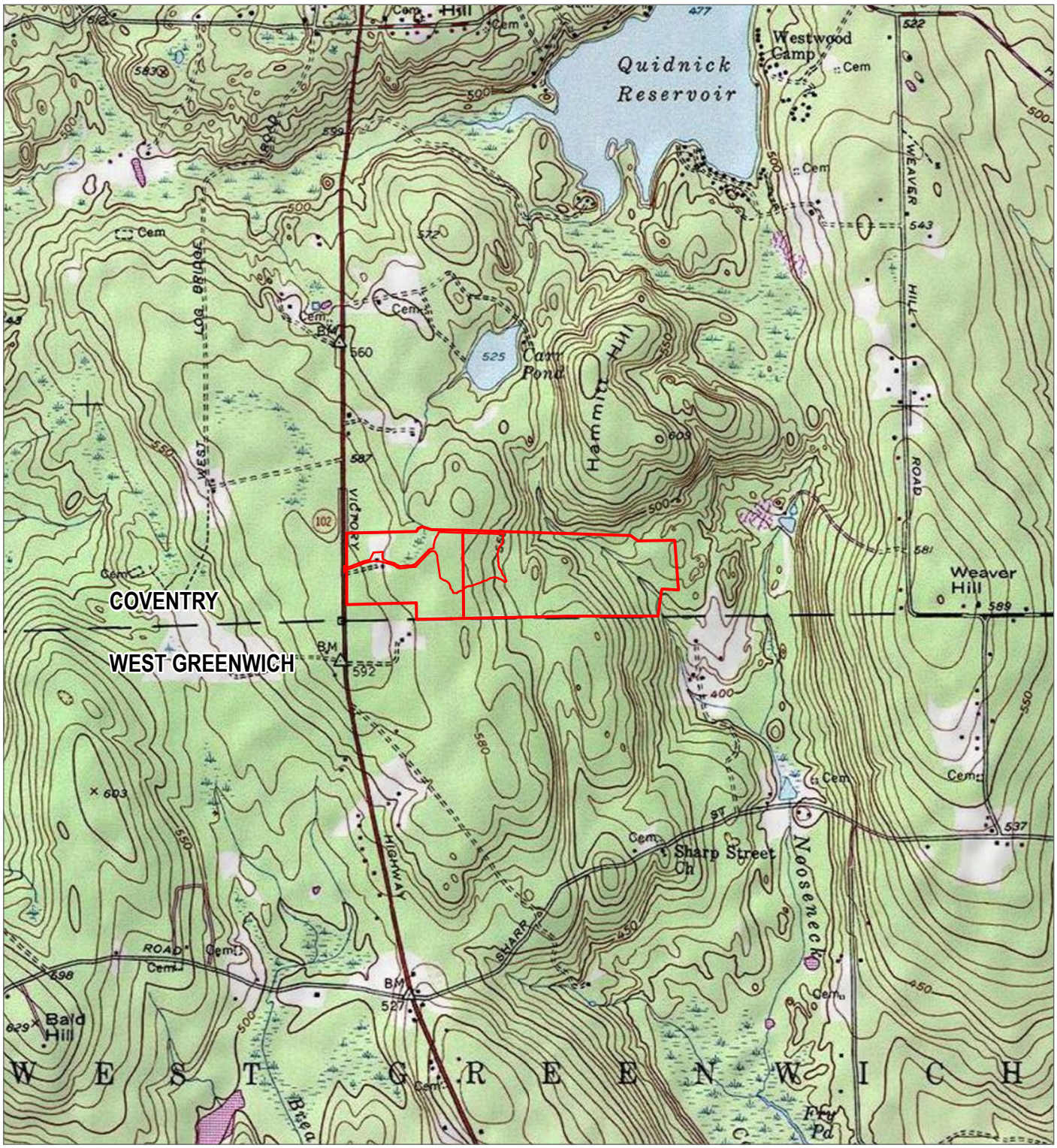
Attachment E - Copy of RIPDES NOI *(if required as part of application, see RIPDES Construction General Permit for applicability)*

Attachment F - Inspection Reports w/ Corrective Action Log

Attachment G - SESC Plan Amendment Log

Attachment H - Calculations

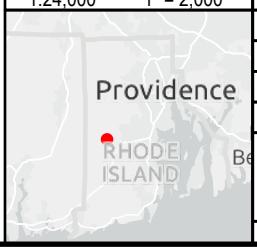
ATTACHMENT A



PROJECT LOCUS

BASE MAP: USA TOPOGRAPHIC MAP 2019.
DATA SOURCES: TRC, PROJECT AREA, 2024.

0 1,000 2,000
FEET
1:24,000 1" = 2,000'



PROJECT: **MOO COW SOLAR**
2446 VICTORY HIGHWAY
COVENTRY, RHODE ISLAND

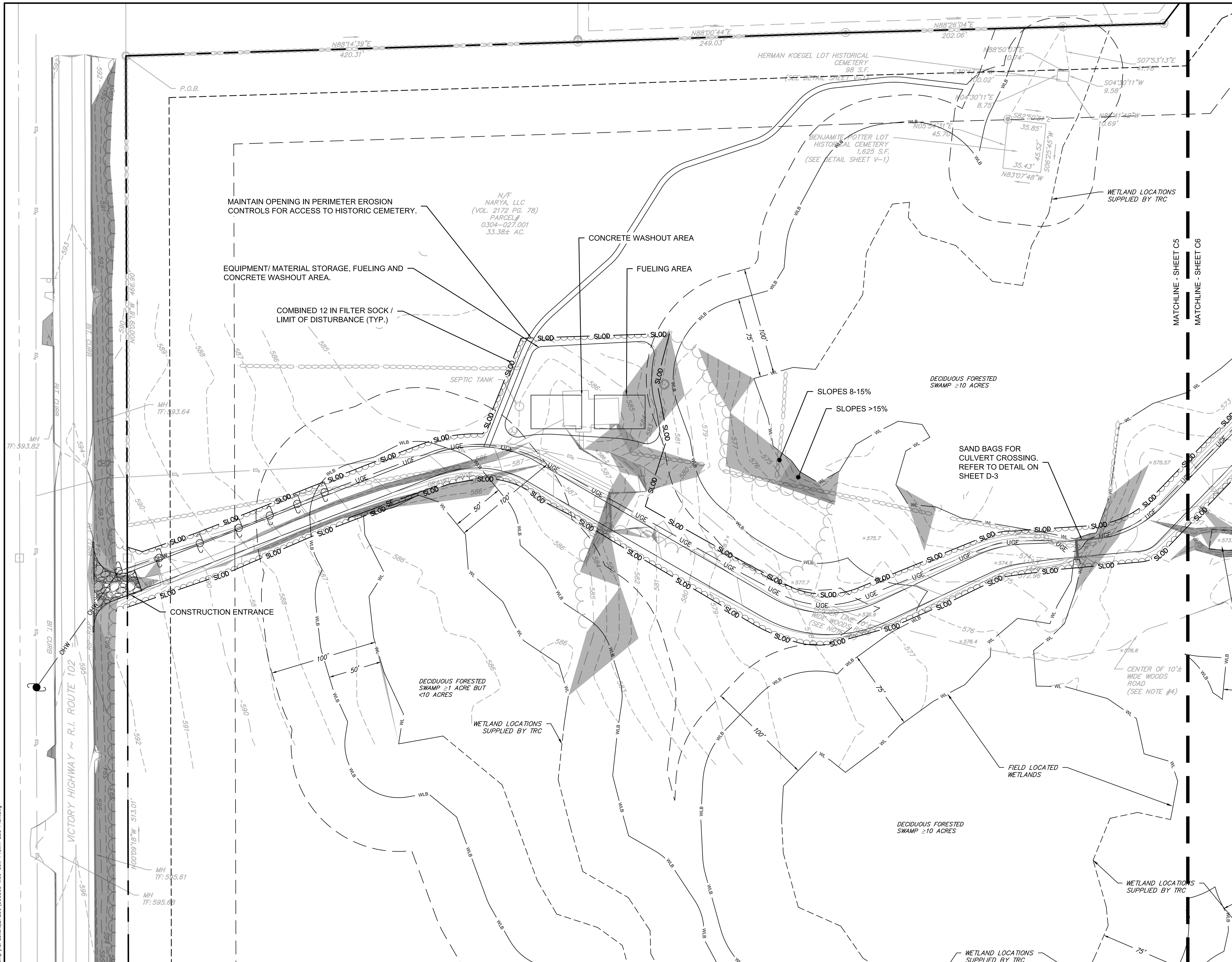
TITLE: **PROJECT LOCUS**

DRAWN BY:	J. BERTHERMAN	PROJ. NO.:	500563.0000.0000
CHECKED BY:	M. O'BRIEN		
APPROVED BY:	A. TING		**FIGURE 1**
DATE:	JANUARY 2024		

TRC
10 HEMINGWAY DRIVE
2ND FLOOR
EAST PROVIDENCE, RI 02915
PHONE: 401.330.1236

FILE: 500563_MOOCOW_DATA

ATTACHMENT B



SLOPE LEGEND:

(light shading)	SLOPES 8% - 15%
(dark shading)	SLOPES >15%

NOTES:

1. ROLL-OFF CONTAINER AND CONCRETE WASHOUT AREA TO BE LOCATED WITHIN TEMPORARY LAYDOWN AREA. FINAL LOCATIONS OF TO BE DETERMINED BY CONTRACTOR AS APPROVED BY OWNER.

TRC
10 HEMINGWAY DRIVE, 2ND FL.
EAST PROVIDENCE, RI 02915
P: 401-434-5560
WWW.TRCCOMPANIES.COM

EDPR NA DISTRIBUTED GENERATION LLC
100 PARK AVE, SUITE 2400
NEW YORK, NEW YORK
10017

MOO COW SOLAR
AP 304, LOTS 27.1 and 28
2446 VICTORY HIGHWAY
COVENTRY, RHODE ISLAND

AARON CHIN-HUI TING
No. 15252
REGISTERED PROFESSIONAL ENGINEER CIVIL

Not Valid Without Signature

0 50 100
SCALE: 1" = 50'

No.	REVISION	DATE	DRAWN	DESIGN	CHK
1	RESPONSE TO TOWN'S COMMENTS	4/24/2024	MMO	ACT	ACT

DRAWN BY: TL | DESIGNED BY: TL | CHECKED BY: PRW

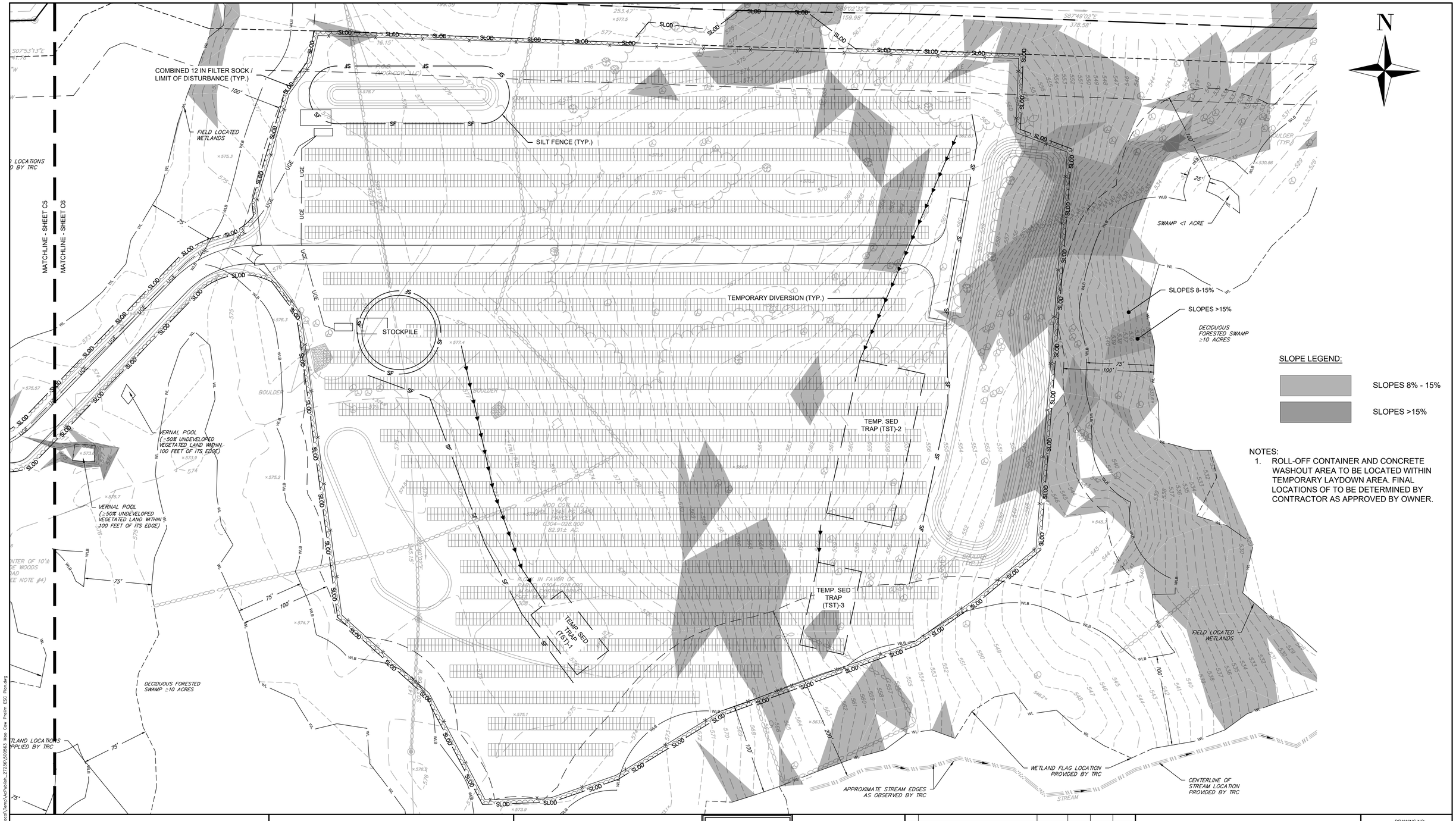
PRELIMINARY PLAN APPLICATION
EROSION AND SEDIMENT CONTROL

FOR PERMITTING ONLY

DRAWING NO:
C-5

PROJECT NO: 500563
DATE OF ISSUE: 2/1/2024
SHEET NO: 8 OF 17

DATE: Apr 24, 2024 - 1:47PM
FILENAME: C:\Users\mobrien\AppData\Local\Temp\AcPublish_27236\500563 Moo Cow Prelim ESC Plan.dwg



NOTES:

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MOO COW SOLAR

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AARON CHIN-HUI TING
No. 15252
REGISTERED PROFESSIONAL ENGINEER
CIVIL

Not Valid Without Signature

0 50 100
SCALE: 1" = 50'

No.	REVISION	DATE	DRAWN	DESIGN	CHK
1	RESPONSE TO TOWN'S COMMENTS	4/24/2024	MMO	ACT	ACT

DRAWN BY: TL | DESIGNED BY: TL | CHECKED BY: PRW

PRELIMINARY PLAN APPLICATION EROSION AND SEDIMENT CONTROL

FOR PERMITTING ONLY

DRAWING NO:

C-6

PROJECT NO: 500563
DATE OF ISSUE: 2/1/2024
SHEET NO: 9 OF 17

DATE: Apr 24, 2024 - 1:47PM
FILENAME: C:\Users\mmoore\AppData\Local\Temp\AcPublish_27236\500563 Moo Cow Prelim ESC Plan.dwg

ATTACHMENT C

RIPDES Permit No. RIR1#####

AUTHORIZATION TO DISCHARGE UNDER THE
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

GENERAL PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY

In compliance with the provisions of Chapter 46-12 of the Rhode Island General Laws, as amended, except as provided in Part I.B.3 of the permit, operators of stormwater discharges associated with construction activity located in the State of Rhode Island are authorized to discharge in accordance with the conditions and requirements set forth herein.

Operators of stormwater discharges associated with construction activity within Rhode Island who intend to be authorized by this general permit must meet the application requirements outlined in Part I.D.1 of the permit. Authorization to discharge shall be granted in accordance with Part I.D of this permit.

This general permit shall become effective on September 26, 2020.

The general permit and the authorization to discharge will expire at midnight, five years from the effective date, or September 25, 2025.

Signed this 25th day of September, 2020.

Charles A. Horbert

Charles A. Horbert
Deputy Administrator
Groundwater and Freshwater Wetlands Protection
Office of Water Resources
Rhode Island Department of Environmental Management
Providence, Rhode Island

General Permit
Rhode Island Pollutant Discharge Elimination System
Stormwater Discharge Associated with Construction Activity

Effective Date: September 26, 2020

Valid ONLY in accordance with Part I.D.

Expiration Date: September 25, 2025

Rhode Island Department of Environmental Management
Office of Water Resources
RIPDES Program

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GENERAL PERMIT
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM
STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY

PLEASE READ THIS PERMIT CAREFULLY!

The RIPDES Program of the Office of Water Resources realizes that effective regulatory mechanisms to control erosion and sedimentation are currently required by the RIDEM Freshwater Wetland Program, the RIDEM Water Quality Certification Program, the RIDEM UIC/Groundwater Discharge Permit Program, the RI Coastal Resources Management Council (CRMC); and in those towns/cities which have a Qualifying Local Program (QLP) that has been formally approved by the Department (see 250-RICR-150-10-1.16(A)(10) for the definition of Qualifying State, or Local Programs). **Regardless of the means of obtaining approval, the permittee is still responsible for complying with all terms and conditions of this permit and any other applicable State, local and/or federal regulations. The Department will be held harmless for any failure of the permittee to comply with this permit.**

I. GENERAL COVERAGE UNDER THIS PERMIT

A. Permit Area. This permit applies to all areas of the State of Rhode Island.

B. Eligibility.

1. Allowable Stormwater Discharges. Subject to compliance with the terms and conditions of this permit, you are authorized to discharge the following:

   a. All new and existing stormwater discharges associated with construction, including, but not limited to, clearing, grading, excavation, and filling, where total land disturbance is equal to or greater than one (1) acres including construction activities involving soil disturbances of less than one (1) acre of disturbance if that construction is part of a larger common plan of development or sale that would disturb one (1) or more acre, and the discharge is composed entirely of stormwater. A discharge shall be considered composed entirely of stormwater if there is adequate access to sample the stormwater discharge covered under this permit prior to mixing with a discharge which is authorized and in compliance with an existing RIPDES permit or the discharge is listed in Part I.B.2. below.

   b. Stormwater Discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging areas, material storage areas, excavated material disposal areas, borrow areas) provided:

      i. The support activity is directly related to the construction site required to have a RIPDES permit coverage for discharges of stormwater associated with construction activity;

ii. The support activity is not a commercial operation serving multiple unrelated construction projects by different operators, and does not operate beyond the completion of the construction at the last construction project it supports; and

iii. Appropriate controls and measures are identified in a Soil Erosion and Sediment Control Plan covering the discharges from the support activity areas.

c. Discharges composed of allowable discharges listed in Part I.B.2 of this permit commingled with a discharge authorized by a different RIPDES permit and/or discharge that does not require a RIPDES permit authorization.

d. Stormwater discharges from earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining. Stormwater discharges associated with active mining may need to obtain authorization to discharge under the RIPDES Multi-Sector General Permit for Stormwater Discharge Associated with Industrial Activity. Guidance for managing discharges from industrial sites can be found in Part II.C of this permit.

2. Allowable Non-Stormwater Discharges. Allowable non-stormwater discharges under this permit are limited to discharges from the following:

a. washing of vehicles provided chemicals, soaps, detergents, steam, or heated water are not used; cleaning is restricted to the outside of the vehicle (e.g., no engines, transmissions, undercarriages, or truck beds); or washing is not used to remove accumulated industrial materials, paint residues, heavy metals or any other potentially hazardous materials from surfaces;

b. the use of water to control dust;

c. fire fighting activities;

d. fire hydrant flushings;

e. natural springs; uncontaminated groundwater;

f. lawn watering;

g. potable water sources including waterline flushings; irrigation drainage;

h. pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed) and where detergents are not used;

i. foundation or footing drains where flows are not contaminated with process materials such as solvents, or contaminated by contact with soils where spills or leaks of toxic or hazardous materials has occurred;

j. external building washdown, provided soaps, solvents, and detergents are not used, and external surfaces do not contain hazardous substances (e.g., paint or caulk containing polychlorinated biphenyls (PCBS)) and appropriate control measures have been implemented to minimize discharges of mobilized solids and other pollutants (e.g., filtration, detention, settlement).

If any of these discharges may reasonably be expected to be present and to be mixed with stormwater discharges, they must be specifically identified in the site's Soil Erosion and Sediment Control Plan as described in Part III of this permit.

3. Limitations of Coverage. The following discharges associated with construction are not authorized by this permit.

a. Stormwater discharges associated with construction that the Director of the Department of Environmental Management has found to be or may reasonably be expected to be contributing to a violation of water quality standards, or to be a significant contributor of pollutants;

b. Stormwater discharges associated with construction, allowable non-stormwater discharges and discharge related activities that adversely affect a listed, or a proposed to be listed, endangered or threatened species or its critical habitat;

c. Stormwater associated with construction discharging into any water for which a Total Maximum Daily Load (TMDL) has been either established or approved by the EPA or other water quality determination unless the Stormwater Management Plan incorporates measures or controls that meet the requirements of this permit and are consistent with the assumptions and requirements of the TMDL and Minimum Standard 3: Water Quality of the Rhode Island Stormwater Management, Design and Installation Rules (250-RICR-150-10-8; RI Stormwater Rules) or the project was authorized and has maintained coverage under the 2018 permit (e.g. a RIPDES or a RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Groundwater Discharge Permit, CRMC Assent or QLP approval remains in effect). If the EPA approved or established TMDL or other water quality determination specifically prohibits the discharges, the discharges are not eligible for coverage under this permit.

d. Stormwater associated with construction discharging into any Impaired water listed on the latest State of Rhode Island 303(d) List of Impaired Waters, unless the Stormwater Management Plan incorporates measures or controls that meet the requirements of this permit and address the pollutant(s) of concern as required by Standard 3: Water Quality of the RI Stormwater Rules or if the project was authorized and has maintained coverage under the 2018 permit (e.g. a RIPDES

or a RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Groundwater Discharge Permit, CRMC Assent or QLP approval remains in effect).

If you propose to discharge to a water that is impaired for polychlorinated biphenyls (PCBs) and are engaging in demolition of any structure with at least 10,000 square feet of floor space built or renovated before January 1, 1980, you must:

a. Implement controls to minimize the exposure of PCB-containing materials, including paint, caulk and pre-1980 fluorescent lighting fixtures, to precipitation and stormwater; and

b. Ensure that disposal of such materials is performed in compliance with applicable state, federal and local laws.

e. Post-construction discharges that originate from the site after construction activities have been completed and the site has achieved final stabilization, including any temporary support activity. Post-construction stormwater from industrial sites may need to be covered by a separate RIPDES individual permit or may need to obtain authorization to discharge under the RIPDES Multi-Sector General Permit for Stormwater Discharge Associated with Industrial Activity. Guidance for managing discharges from industrial sites can be found in Part II.C of this permit.

C. Definition of "Owner" & "Operator":

1. For the purposes of this permit, the "owner" of a property is the person, as defined by 250-RICR-150-10-1-1.4(A)(75), holding the title, deed, or legal document to the regulated property, facility, or activity, including a party working under an easement on the property.

2. The "operator" is defined as the person who has operational control over plans and specifications, or the person who has day-to-day supervision and control of activities occurring at the site. Further, for purposes of this permit, the operator is the owner if that person is performing all work related to complying with this permit.

Where a new operator is selected after the submittal of a Notice of Intent (NOI; see Part IV of this permit) and that new operator is directly responsible for performing the work necessary to comply with this permit, prior to performing any work at the site a new operator must sign and certify within the Soil Erosion and Sediment Control Plan document that they are an operator of the site as defined above.

D. Authorization. To be covered under this general permit, owners or operators of stormwater discharges associated with construction activities that disturb one (1) or more acres or less than one (1) acre if that construction is part of a larger common plan of development or sale that would disturb one (1) or more acre, must comply with the applicable sections below.

1. Application Requirements

    a. Sites previously authorized under the 2018 Construction Activity General Permit are not required to reapply to maintain authorization.

    b. New Applications – Submittal of an NOI (as defined in Section IV) is only required for construction activities that disturb greater than one (1) acre. Where applicable, the NOI is to be submitted as part of an application to obtain a RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Groundwater Discharge Permit, CRMC Assent or QLP approval. Specific application requirements, unless otherwise required by the aforementioned permitting programs, are as follows:

        i. Construction activities that disturb an area equal to or greater than five (5) acres are required to submit the *Application for Stormwater Construction Permit and Water Quality Certification Form,* the *Appendix A Checklist* and a Stormwater Management Plan.

        ii. Construction activities that disturb an area equal to or greater than one (1) acre and less than five (5) acres are required to submit the *Application for Stormwater Construction Permit and Water Quality Certification Form,* the *Appendix A Checklist,* a project narrative, and a site plan/map showing flow paths, discharges, and receiving waters.

2. Deadlines for Requesting Authorization

    a. For stormwater discharges associated with construction activities which were authorized under the 2018 Construction General Permit which are expected to continue beyond the effective date of this permit, the owner is not required to reapply to maintain permit coverage in accordance with Part I.D.3 of this permit.

    b. For stormwater discharges associated with construction activities which commence after the effective date of this permit, and are required to submit an application in accordance with Part I.D.1.b of this permit, an application must be submitted at least thirty (30) days prior to the commencement of land disturbing activities.

3. Granting of Authorization

    a. Owners and operators previously authorized under the 2018 Construction Activity General Permit with an active RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Groundwater Discharge Permit, CRMC Assent or QLP approval will be authorized upon the effective date of this permit.

b. Owners and operators previously authorized under the 2018 Construction Activity General Permit will be authorized upon the effective date of this permit.

c. Construction activities that disturb an area equal to or greater than one (1) acre that are required to obtain a RIDEM Freshwater Wetlands permit, RIDEM Water Quality Certification, RIDEM UIC/Groundwater Discharge Permit, CRMC Assent or QLP approval are authorized to discharge stormwater from construction activities under the terms and conditions of this permit upon receipt of all of the applicable permits listed here.

d. For construction activities that disturb an area equal to or greater than five (5) acres and are not required to obtain one of the approvals listed above in Part I.D.3.c, authorization to discharge will only be granted upon notification from the Director after review of the application.

e. For construction activities that disturb an area equal to or greater than one (1) acre and less than five (5) acres and are not required to obtain one of the approvals listed in Part I.D.3.c automatic authorization to discharge will be granted upon receipt of the information required in Part I.D.1.b.ii unless notified to the contrary by the Director.

E. Notice of Start of Construction. You must notify RIDEM in writing of the anticipated start date, and of your contractor's contact information, by submitting the Notice of Start of Construction Form (available on the RIDEM Stormwater Construction Permitting website[1]). Prior to construction you must erect or post a sign resistant to the weather and at least twelve (12) inches wide and eighteen (18) inches long, which identifies the initials "DEM" and the application number(s) assigned to the permit. The sign must be maintained at the site in a conspicuous location until such time that the project is complete.

F. Termination of Coverage. Upon achieving final site stabilization, owners and operators of stormwater discharges associated with construction must submit to the DEM a completed Notice of Termination (NOT). At a minimum, the following information is required to terminate coverage under this permit:

1. The owner's name, mailing address, email address, and telephone number,
2. The operator's name, mailing address, email address, and telephone number
3. The name and location of the facility,
4. The RIPDES Construction General Permit authorization number,
5. A signed certification by the owner and operator that the stormwater discharge associated with construction activity no longer exists at the site.

[1] The RIDEM Stormwater Construction Permitting website is available at http://www.dem.ri.gov/programs/water/permits/ripdes/stormwater/construction.php

Upon DEM receipt of the completed NOT coverage under this permit is terminated.

G. Failure to Notify. Owners or operators who fail to notify the Director of their intent to be covered under a general permit, and discharge pollutants to the waters of the State or to a separate storm sewer system without a RIPDES permit, are in violation of Chapter 46-12 of Rhode Island General Laws and the Clean Water Act (CWA).

II. PERMIT LIMITS AND CONDITIONS

To be covered under this permit you must develop a Stormwater Management Plan, prior to submitting your *Application for Stormwater Construction Permit and Water Quality Certification Form* and the *Appendix A Checklist* (or your application for RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Groundwater Discharge Permit, CRMC Assent or QLP approval). In accordance with the RI Stormwater Rules and the *Rhode Island Stormwater Design and Installation Standards Manual* (RISDISM), the Stormwater Management Plan must include the following major elements, which serve to satisfy the eleven Minimum Standards outlined in the RI Stormwater Rules, as well as comply with specific criteria for the site planning process, groundwater recharge, water quality, channel protection, and peak flow control requirements:

A. Stormwater Site Planning, Analysis, and Design. This element of the Stormwater Management Plan must address the following Minimum Standards and include supporting documentation and calculations:

1. Minimum Standard 1: LID Site Planning and Design Strategies
2. Minimum Standard 2: Groundwater Recharge,
3. Minimum Standard 3: Water Quality,
4. Minimum Standard 4: Conveyance and Natural Channel Protection,
5. Minimum Standard 5: Overbank Flood Protection,
6. Minimum Standard 6: Redevelopment and Infill Projects.
7. Minimum Standard 8: Land Uses with Higher Potential Pollutant Loads (LUHPPLs)
8. Minimum Standard 9: Illicit Discharges

In addition, the following Appendices from the RISDISM provide additional guidance on how to comply with the above listed standards:

1. Appendix B: Vegetation Guidelines and Planting List
2. Appendix C: Guidance for Retrofitting Existing Development for Stormwater Management
3. Appendix F: Guidance on BMP Construction Specifications
4. Appendix I: Rhode Island River and Stream Order
5. Appendix K: Hydrologic and Hydraulic Modeling Guidance

B. Soil Erosion, Runoff, and Sediment Control. In order to comply with this permit, a component of the Stormwater Management Plan must address two sources of stormwater pollution: (1) pollution caused by soil erosion, runoff, and sedimentation during construction and (2) stormwater pollution generated as a direct result of the construction activity itself (i.e. stormwater contaminated by construction wastes and practices). The Stormwater

Management Plan must satisfy Part III of this permit and Minimum Standard 10 of the RI Stormwater Rules – Construction Activity, Soil Erosion, Runoff, Sedimentation, and Pollution Prevention Control Measure Requirements. In order to facilitate an expeditious DEM review and make it easier for the site owner and operator to comply with applicable soil erosion and sediment control requirements, it is recommended that a Soil Erosion and Sediment Control Plan be developed as a stand-alone document.

C. **Post Construction Operation and Maintenance.** The Stormwater Management Plan must address *Minimum Standard 11*: *Stormwater Management System Operation and Maintenance* of the RI Stormwater Rules to ensure that the stormwater management system constructed will continue to function as designed. The Plan must address the O&M requirements for each stormwater management practice in Chapter 5 of the RISDISM. Additional guidance on developing O&M plans can be found in Appendix E of the RISDISM. In addition, the Plan must address *Minimum Standard 7: Pollution Prevention* of the RI Stormwater Rules by incorporating source control and pollution prevention measures to minimize the impact that the land use may have on stormwater runoff quality after the construction development activities have been completed and the site is fully stabilized. Additional guidance can be found in Appendix G of the RISDISM. In order to facilitate an expeditious DEM review and make it easier for the site owner(s) to comply with applicable Operation and Maintenance requirements, it is recommended that an Operation and Maintenance Plan be developed as a stand-alone document.

The facility may be required to obtain authorization to discharge under the RIPDES Multi-Sector General Permit for Stormwater Discharge Associated with Industrial Activity depending on the Standard Industrial Classification that will be applicable to the site when construction is complete. In these cases the Stormwater Management Plan should address the requirements of the RIPDES Multi-Sector General Permit for Stormwater Discharge Associated with Industrial Activity.

III. SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN REQUIREMENTS

A. The Soil Erosion and Sediment Control (SESC) Plan shall describe and ensure the implementation of stormwater control measures which are to be used to reduce or eliminate pollutants in stormwater discharge(s) from the site and assure compliance with the terms and conditions of this permit. Control practice selection shall include an evaluation of the effectiveness of available practices and be made with proper references.

B. Soil erosion, runoff, sediment, and pollution prevention control measures must be designed, implemented, and maintained in accordance with the requirements of this permit and in accordance with the design specifications and guidance contained in the RI Stormwater Rules, the RISDISM (as amended), and the *Rhode Island Soil Erosion and Sediment Control (RISESC) Handbook* (as amended).

C. The SESC Plan shall be stamped and signed by a Registered Professional Engineer, a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Professional in Stormwater Quality (CPSWQ), or a Registered Landscape Architect certifying that the SESC Plan meets all requirements of this permit. SESC Plans which require the practice of

engineering must be stamped and signed by a Registered Professional Engineer.

D. If the SESC Plan is not required to be submitted along with the application (see Part I.D of this permit), then the owner, operator, or other designated person under the supervision of the owner or operator shall make it available to the Department upon request.

E. If the SESC Plan is requested and reviewed by the Director, he or she may notify the permittee at any time that it does not meet one or more of the minimum requirements of this permit. After such notification from the Director, the permittee shall amend the SESC Plan and shall submit to the Director, within seven (7) days of the notification, a written certification that the required changes have been made.

F. The owner and operator shall amend the SESC Plan within seven (7) days whenever there is a change in design, construction, operation, maintenance or other procedure which has a significant effect on the potential for the discharge of pollutants, or if the SESC Plan proves to be ineffective in achieving its objectives. In addition, the SESC Plan shall be amended to identify any new operator that will implement a component of the SESC Plan. The amended SESC Plan must be kept on file at the construction site and any SESC Plan modifications must be documented. Any amendments to control measures which involved the practice of engineering, must first be reviewed, signed, and stamped by a Professional Engineer registered in the State of Rhode Island. The DEM reserves the right to review any SESC Plan amendments in the same manner as described in paragraph III.E (above).

G. A copy of the SESC Plan including site plans, amendments to the SESC Plan and site plans, records of inspections, maintenance, and corrective actions, and any regulatory permits granted must be kept on site at all times during the extent of coverage under this permit. The site operator as defined by Part I.C.2 of this permit must maintain a copy of the SESC Plan at a central location on-site for the use of all those identified as having responsibilities under the SESC Plan whenever they are on the construction site. If an on-site location is unavailable to store the SESC Plan and associated records when no personnel are present, notice of the SESC Plan's location must be posted near the main entrance of the construction site.

H. Each project authorized under this permit must determine if the site is within or directly discharges to a Natural Heritage Area (NHA). DEM Natural Heritage Areas include known occurrences of state and federal rare, threatened and endangered species. Review DEM NHA maps to determine if there are natural heritage areas on or near the construction site.

I. List and provide existing data (if available) on the quality of known discharges from the site. The SESC Plan must identify any stormwater discharge associated with industrial activity other than construction if applicable.

J. Soil Erosion and Sediment Control Plans: Required Contents

1. Erosion, Runoff, and Sediment Control Requirements – Owners and Operators must design, install, and maintain effective erosion, runoff, and sediment controls that address the nature of stormwater run-on and runoff at the site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. If

stormwater flow will be channelized at the site, site owners and operators must design temporary stormwater controls that will control peak flow rates and total stormwater volume, to minimize channel and stream bank erosion in the immediate vicinity of discharge points. These controls must be designed to address the range of soil particle sizes expected to be present, site soils, slope, and the expected amount, frequency, intensity, and duration of precipitation. At a minimum the following must be addressed:

a. Phase Construction Activity – describe the intended construction sequencing and timing of major activities, including grading activities, road and utility installation, and building phases. The estimated timetable and sequence of construction activities must address the following key activities:

    i. Installation of erosion, runoff, and sediment controls and temporary pollution prevention measures.

    ii. Protection of planned infiltration sites and qualifying pervious areas from compaction.

    iii. Inspection and maintenance of erosion, runoff, sediment controls and other temporary pollution prevention measures.

    iv. Final site stabilization and removal of temporary erosion, runoff, and sediment controls and temporary pollution prevention measures.

b. Control Stormwater Flowing Onto and Through the Project – Describe controls that will be used to divert flows from exposed soils, retain or detain flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. A description of controls, including design specifications and details must be provided.

c. Stabilize Soils – Describe controls that will be used to stabilize soils throughout the entire duration of the construction project, including phased clearing/grubbing, initiating stabilization practices, and maintaining stabilization practices. Soil stabilization of disturbed areas must, at a minimum be initiated immediately whenever any clearing, grading, excavating or other earth disturbance activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding fourteen (14) calendar days. Stabilization must be completed using vegetative stabilization measures or using alternative measures whenever vegetative measures are deemed impracticable or during periods of drought.

d. Protect Storm Drain Inlets – Describe controls, including design specifications and details, that will be used to prevent soil and debris from entering storm drain inlets. If stormwater discharges from the construction

site have the potential to enter storm drain inlets that then discharge to a surface water, the site owner and operator must:

i. *Installation Requirements:* Install inlet protection practices that remove sediment from the discharge prior to entry into the storm drain inlet.

ii. *Maintenance Requirements:* Clean, or remove and replace, the protection practices as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Accumulated sediment adjacent to the inlet protection measures should be removed by the end of the same work day in which it is found or by the end of the following work day if removal by the same work day is not feasible.

e. Protect Storm Drain Outlets - Describe controls, including design specifications and details, to be used to protect outlets discharging stormwater from the project. Outfall protection must be used to prevent scour or severe erosion at discharge points. The function of the specified controls must be to protect the soil surface, reduce velocity, and promote infiltration.

f. Establish Perimeter Controls and Sediment Barriers – Describe controls, including selection criteria and details, to be used to prevent soil erosion, filter, and trap sediment before it leaves the construction site.

i. *Installation Requirements*: Sediment controls must be installed along those perimeter areas of the site that will receive stormwater from earth disturbing activities.

ii. *Maintenance Requirements*: Maintenance of perimeter controls and sediment barriers must be completed in accordance with the maintenance requirements specified in the RISESC Handbook (as amended).

g. Establish Temporary Controls For The Protection of Post Construction Stormwater Practices – Identify the temporary practices that will be installed to protect permanent or long-term stormwater practices as they are installed and throughout the construction phase of the project so that they will function properly when they are brought online. Examples of long-term practices that may require protection include: infiltration basins, open vegetated swales and natural depressions, vegetated buffer strips, and permanent detention/retention structures. Examples of temporary control measures that can be used to protect permanent stormwater control measures include: establishing temporary sedimentation barriers around infiltrating practices, ensuring proper material staging areas and equipment routing (i.e. do not allow construction equipment to compact areas where infiltrating practices will be installed), and by conducting final cleaning of structural long-term

practices after construction is completed.

h. Temporary Sediment Trapping and Temporary Stormwater Conveyance Practices – Describe the need for temporary sediment trapping and temporary stormwater conveyance practices, and if required include design specifications and details which demonstrate that they comply with Minimum Standard 10 of the RI Stormwater Rules.

i. Utilize Surface Outlets – To the maximum extent practicable, outlet structures must be utilized that withdraw water from the surface of temporary sedimentation basins, in order to minimize the discharge of pollutants. Exceptions may include periods of extended cold weather, where alternate outlets are required during frozen periods. If such a device is infeasible for portions of or the entire construction period justification must be made in the SESC Plan.

j. Properly Use Treatment Chemicals - If the owner and/or operator plans to utilize polymers, flocculants, or other treatment chemicals at the construction site (e.g. dewatering, temporary sediment traps, stormwater conveyance practices, soil stabilization), the use of such chemicals must be managed in accordance with current best management practices and in accordance with the requirements of the *Rhode Island Soil Erosion and Sediment Control (RISESC) Handbook* (as amended).

2. Construction Activity Pollution Prevention Requirements – The purpose of pollution prevention is to prevent daily construction activities from causing pollution. The owner and operator must design, install, implement, and maintain effective pollution prevention practices to minimize the discharge of pollutants. Pollution prevention practices must be described that will serve to control pollutants used at the site. At a minimum pollution prevention measures must address the following:

a. Prohibited Discharges - The following discharges are prohibited at the construction site:

i. Contaminated groundwater, unless specifically authorized by the DEM. These types of discharges may only be authorized under a separate DEM RIPDES permit.

ii. Wastewater from washout of concrete, unless the discharge is contained and managed by appropriate controls.

iii. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials.

iv. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance. Proper storage and spill

prevention practices must be utilized at all construction sites.

v. Soaps or solvents used in vehicle and equipment washing.

vi. Toxic or hazardous substances from a spill or other release.

b. Minimize Off-Site Tracking of Sediments – Describe the location(s) of vehicle entrance(s) and exit(s), and stabilization practices used to prevent sediment from being tracked off-site. Sediment track-out must be minimized onto off-site streets, other paved areas, and sidewalks from vehicles exiting the construction site. Site owners and operators must:

i. Restrict vehicle use to properly designated exit points.

ii. Use properly designed and constructed construction entrances at all points that exit onto paved roads so that sediment removal occurs prior to vehicle exit.

iii. When and where necessary, use additional controls to remove sediment from vehicle tires prior to exit (i.e. wheel washing racks, rumble strips, and rattle plates).

iv. Where sediment has been tracked out from the construction site onto the surface of off-site streets, other paved areas, and sidewalks, the deposited sediment must be removed by the end of the same work day in which the trackout occurs. Track-out must be removed by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. Operators are prohibited from hosing or sweeping tracked-out sediment into any stormwater conveyance, storm drain inlet, or surface water.

c. Proper Waste Disposal – Identify potential building materials and other construction wastes and document how these wastes will be properly managed and disposed of at the construction site. All types of wastes generated at the site must be disposed of in a manner consistent with State Law and/or regulations.

d. Spill Prevention and Control – All chemicals and/or hazardous waste material must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. All areas where potential spills can occur, and their accompanying drainage points must be described. The owner and operator must establish spill prevention and control measures to reduce the chance of spills, stop the source of spills, contain and clean-up spills, and dispose of materials contaminated by spills. The operator must establish and make highly visible location(s) for the storage of spill prevention and control equipment and provide training for personnel responsible for spill prevention and control on the construction site.