
Stormwater Report

Parking Area Project

81 Warehouse Lane, Rowley, Massachusetts

PREPARED FOR:

The Town of Rowley
139 Main Street, Rowley, Massachusetts 01969

September 2022

 DC MACRITCHIE, LLC

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1. CHECKLIST FOR STORMWATER REPORT



Checklist for Stormwater Report

A. Introduction

A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the [Massachusetts Stormwater Handbook](#). The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.¹ This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8²
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

¹ The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

² For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.



Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



Daniel MacRitchie September 26, 2022
Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

- New development
- Redevelopment
- Mix of New Development and Redevelopment



Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- No disturbance to any Wetland Resource Areas
- Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- Reduced Impervious Area (Redevelopment Only)
- Minimizing disturbance to existing trees and shrubs
- LID Site Design Credit Requested:
 - Credit 1
 - Credit 2
 - Credit 3
- Use of “country drainage” versus curb and gutter conveyance and pipe
- Bioretention Cells (includes Rain Gardens)
- Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- Treebox Filter
- Water Quality Swale
- Grass Channel
- Green Roof
- Other (describe): _____

Standard 1: No New Untreated Discharges

- No new untreated discharges
- Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.



Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

- Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.
- Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.
- Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

- Soil Analysis provided.
- Required Recharge Volume calculation provided.
- Required Recharge volume reduced through use of the LID site Design Credits.
- Sizing the infiltration, BMPs is based on the following method: Check the method used.
 - Static
 - Simple Dynamic
 - Dynamic Field¹
- Runoff from all impervious areas at the site discharging to the infiltration BMP.
- Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.
- Recharge BMPs have been sized to infiltrate the Required Recharge Volume.
- Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:
 - Site is comprised solely of C and D soils and/or bedrock at the land surface
 - M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
 - Solid Waste Landfill pursuant to 310 CMR 19.000
 - Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.
- Calculations showing that the infiltration BMPs will drain in 72 hours are provided.
- Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

¹ 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.



Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

- The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.
- Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
 - Provisions for storing materials and waste products inside or under cover;
 - Vehicle washing controls;
 - Requirements for routine inspections and maintenance of stormwater BMPs;
 - Spill prevention and response plans;
 - Provisions for maintenance of lawns, gardens, and other landscaped areas;
 - Requirements for storage and use of fertilizers, herbicides, and pesticides;
 - Pet waste management provisions;
 - Provisions for operation and management of septic systems;
 - Provisions for solid waste management;
 - Snow disposal and plowing plans relative to Wetland Resource Areas;
 - Winter Road Salt and/or Sand Use and Storage restrictions;
 - Street sweeping schedules;
 - Provisions for prevention of illicit discharges to the stormwater management system;
 - Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
 - Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
 - List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.
- A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.
 - Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:
 - is within the Zone II or Interim Wellhead Protection Area
 - is near or to other critical areas
 - is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
 - involves runoff from land uses with higher potential pollutant loads.
 - The Required Water Quality Volume is reduced through use of the LID site Design Credits.
 - Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.



Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

- The BMP is sized (and calculations provided) based on:
 - The ½" or 1" Water Quality Volume or
 - The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
- The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the proprietary BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.
- A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

- The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.
- The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted **prior to** the discharge of stormwater to the post-construction stormwater BMPs.
- The NPDES Multi-Sector General Permit does **not** cover the land use.
- LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
- All exposure has been eliminated.
- All exposure has **not** been eliminated and all BMPs selected are on MassDEP LUHPPL list.
- The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

- The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.
- Critical areas and BMPs are identified in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

- The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:
 - Limited Project
 - Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
 - Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
 - Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
 - Bike Path and/or Foot Path
 - Redevelopment Project
 - Redevelopment portion of mix of new and redevelopment.
- Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.
- The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
 - Construction Period Operation and Maintenance Plan;
 - Names of Persons or Entity Responsible for Plan Compliance;
 - Construction Period Pollution Prevention Measures;
 - Erosion and Sedimentation Control Plan Drawings;
 - Detail drawings and specifications for erosion control BMPs, including sizing calculations;
 - Vegetation Planning;
 - Site Development Plan;
 - Construction Sequencing Plan;
 - Sequencing of Erosion and Sedimentation Controls;
 - Operation and Maintenance of Erosion and Sedimentation Controls;
 - Inspection Schedule;
 - Maintenance Schedule;
 - Inspection and Maintenance Log Form.
- A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

- The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has **not** been included in the Stormwater Report but will be submitted **before** land disturbance begins.
- The project is **not** covered by a NPDES Construction General Permit.
- The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.
- The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

- The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:
 - Name of the stormwater management system owners;
 - Party responsible for operation and maintenance;
 - Schedule for implementation of routine and non-routine maintenance tasks;
 - Plan showing the location of all stormwater BMPs maintenance access areas;
 - Description and delineation of public safety features;
 - Estimated operation and maintenance budget; and
 - Operation and Maintenance Log Form.
- The responsible party is **not** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:
 - A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
 - A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

- The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;
- An Illicit Discharge Compliance Statement is attached;
- NO Illicit Discharge Compliance Statement is attached but will be submitted **prior to** the discharge of any stormwater to post-construction BMPs.

2. REDEVELOPMENT STATUS

This project is classified as a mix of new development and redevelopment project because:

1. Development of previously undeveloped areas in the buffer zone is proposed, and
2. Work in previously developed areas is limited rehabilitation of a portion of a previously developed area with no net increase in impervious area.

Description of Proposed Activities within areas subject to protection under M.G.L. c. 131, § 40:

1. Work within riverfront area: stabilize an existing eroded gravel surface accessway.
2. Work within the buffer zone but greater than 50' from the resource area: expansion of a seasonal unpaved parking area.

Description of Regulated Activities under the Rowley Stormwater Management and Erosion Control Bylaw (total land disturbance greater than 20,000 square feet):

1. The work described above subject to protection under M.G.L. c. 131, § 40
2. Work outside of areas subject to protection under M.G.L. c. 131, § 40: expansion of a seasonal unpaved parking area.

Existing Conditions:

1. Previously undeveloped areas are generally wooded areas
2. The existing parking area is predominantly a grassed surface with some gravel areas
3. There are no existing impervious surfaces
4. The existing land use is not a land use with higher potential pollutant loads
5. There are no existing structural stormwater best management practices
6. The project is not located in a watershed or sub-watershed, where flooding, low streamflow or where poor water quality is an issue
7. Soils are a mix of hydraulic soil groups A, B, C, and D

3. STORMWATER MANAGEMENT STANDARDS

STANDARD 1. NO UNTREATED DISCHARGES

Standard 1 Requirement: No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

There are no existing discharges in the project area.

There are no proposed discharges for this project. Therefore, the project complies with Standard 1.

STANDARD 2. PEAK RATE ATTENUATION

Standard 2 Requirement: Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.

The proposed work is designed with surface materials that will provide the same infiltration and flow paths so as not to increase peak stormwater flows. Post development peak discharge rates are equal to pre-development peak discharge rates. See Appendix A for Soil Report and Appendix B for Peak Flow Evaluation.

STANDARD 3. STORMWATER RECHARGE

No impervious surfaces are existing or proposed in the project area. Therefore, the pre- and post-project recharge are equal and no loss of recharge will occur.

STANDARD 4. WATER QUALITY

No impervious surfaces are proposed, and no water quality treatment is required.

STANDARD 5. LAND USES WITH HIGHER POTENTIAL POLLUTANT LOADS

Standard 5 is not applicable to this project.

STANDARD 6. CRITICAL AREAS

Standard 6 applies to discharges within Zone II, Interim Wellhead Protection Areas or near or to other Critical Areas: Shellfish Growing Areas, Bathing Beaches, Outstanding Resource Waters, Special Resource Waters, and Cold-Water Fisheries.

The project area is within a watershed tributary to an Outstanding Water Resource. However, no impervious areas or discharges are proposed.

STANDARD 7. REDEVELOPMENT PROJECTS

Per Redevelopment Section, above, this project is a mix of new development and redevelopment. No net increase in impervious area is proposed.

STANDARD 8. CONSTRUCTION PERIOD CONTROLS

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan is attached (Appendix A) to this Stormwater Management Report.

STANDARD 9. OPERATION AND MAINTENANCE PLAN

The proposed project does not include any stormwater management systems. No Operation and Maintenance Plan is required.

STANDARD 10. ILLICIT DISCHARGES TO DRAINAGE SYSTEM

The proposed project does not include a drainage system. An Illicit Discharge Compliance Statement has not been submitted for this project.

APPENDIX A



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Essex County, Massachusetts, Northern Part; and Essex County, Massachusetts, Southern Part



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

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

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

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

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

Custom Soil Resource Report

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

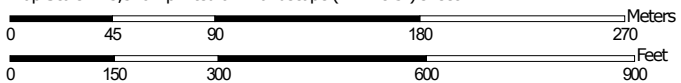
Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over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

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

Custom Soil Resource Report Map—Hydrologic Soil Group




Map Scale: 1:3,320 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Lines


-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Points






-  A
-  A/D
-  B
-  B/D

-  C
-  C/D
-  D
-  Not rated or not available


Water Features

 Streams and Canals

Transportation

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

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

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

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

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

Soil Survey Area: Essex County, Massachusetts, Northern Part
 Survey Area Data: Version 17, Sep 2, 2021

Soil Survey Area: Essex County, Massachusetts, Southern Part
 Survey Area Data: Version 18, Sep 2, 2021

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

MAP LEGEND

MAP INFORMATION

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

Date(s) aerial images were photographed: May 22, 2020—Sep 25, 2020

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

Custom Soil Resource Report

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
6A	Scarboro mucky fine sandy loam, 0 to 3 percent slopes	A/D	5.0	10.8%
21A	Walpole variant fine sandy loam, 0 to 3 percent slopes	C/D	0.8	1.6%
31A	Walpole sandy loam, 0 to 3 percent slopes	B/D	2.2	4.7%
31B	Walpole fine sandy loam, 3 to 8 percent slopes	A/D	0.1	0.2%
40A	Swanton fine sandy loam, 0 to 3 percent slopes	C/D	1.5	3.2%
240B	Elmwood fine sandy loam, 3 to 8 percent slopes	B	2.6	5.5%
255A	Windsor loamy sand, 0 to 3 percent slopes	A	0.0	0.1%
255B	Windsor loamy sand, 3 to 8 percent slopes	A	9.7	20.7%
256A	Deerfield loamy fine sand, 0 to 3 percent slopes	A	2.4	5.1%
276B	Ninigret fine sandy loam, 3 to 8 percent slopes	C	3.5	7.6%
607	Water, saline		1.9	4.2%
712A	Ipswich and Westbrook mucky peats, 0 to 2 percent slopes, very frequently flooded	A/D	9.2	19.7%
720A	Whately variant fine sandy loam, 0 to 3 percent slopes	C/D	1.6	3.5%
Subtotals for Soil Survey Area			40.5	87.0%
Totals for Area of Interest			46.6	100.0%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
306B	Paxton fine sandy loam, 0 to 8 percent slopes, very stony	C	1.0	2.2%
607	Water, saline		1.6	3.4%
712A	Ipswich and Westbrook mucky peats, 0 to 2 percent slopes, very frequently flooded	A/D	3.4	7.4%
Subtotals for Soil Survey Area			6.1	13.0%

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Totals for Area of Interest			46.6	100.0%

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

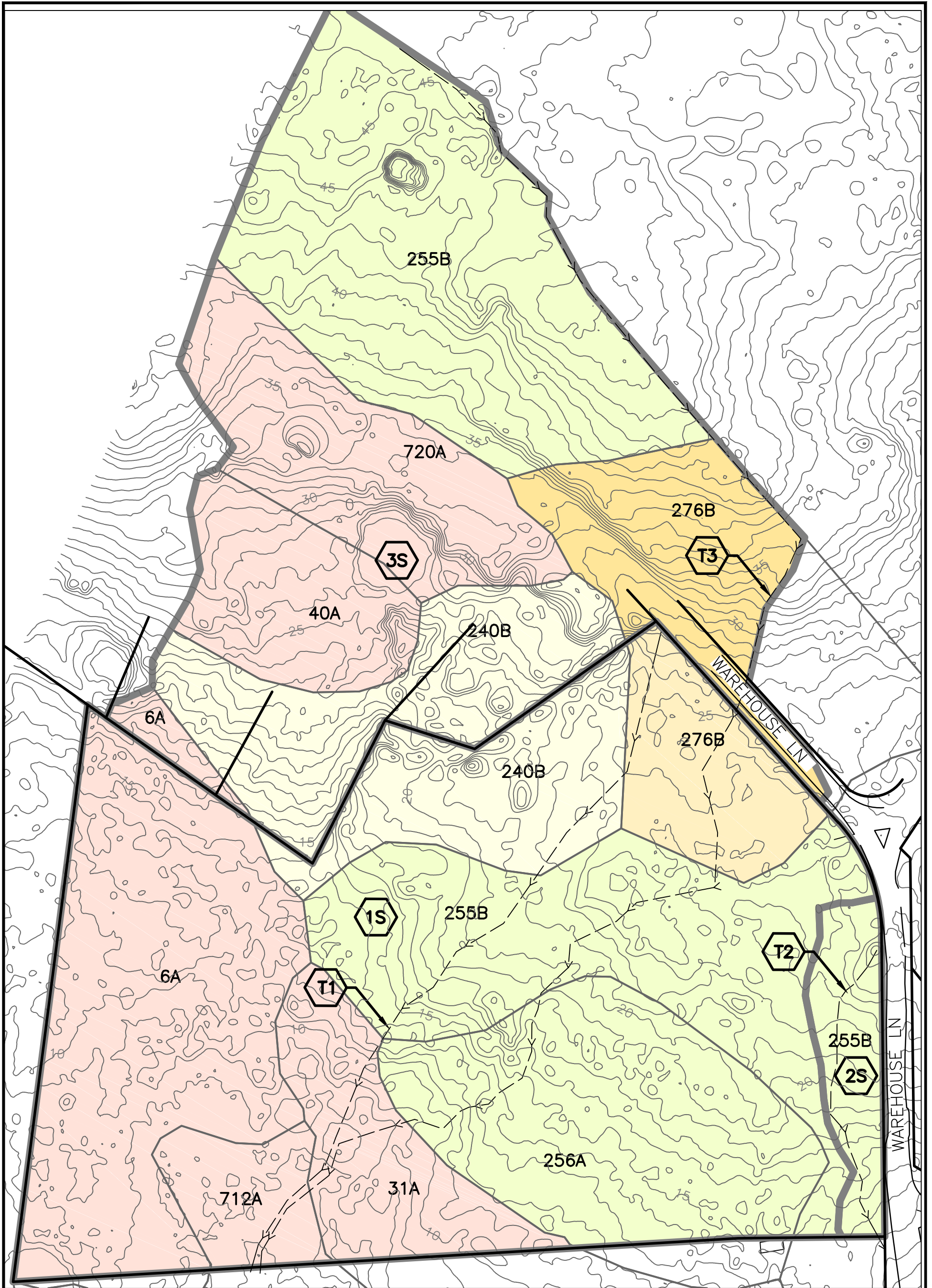
Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

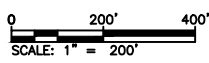
United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

APPENDIX B



LEGEND

- HSG A
- HSG B
- HSG C
- HSG D
- IMPERVIOUS AREA



PRE-DEVELOPMENT CONDITIONS

TAX MAP 26 LOT 10&11 .81 WAREHOUSE LANE, ROWLEY, MA

PROJECT: PARKING LOT PROJECT

OWNER OF RECORD: TOWN OF ROWLEY
139 MAIN STREET, ROWLEY, MA

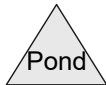
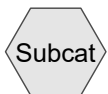
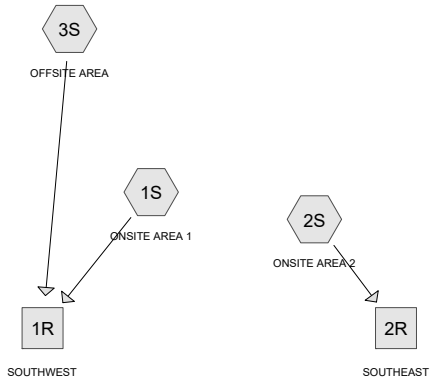
9/26/2022

PREPARED BY:

D.C. MacRitchie, LLC

CIVIL ENGINEERING & CONSULTING
7 Hillside Ave, Exeter, NH 3833 603-845-3572 DCMacRitchie.com

DRAWN BY: DCM CHECKED BY: DCM PLOT DATE: 9/26/2022



EX**Area Listing (all nodes)**

Area (sq-ft)	CN	Description (subcatchment-numbers)
64,700	85	1/2 acre lots, 25% imp, HSG D (3S)
140,700	46	2 acre lots, 12% imp, HSG A (3S)
53,500	77	2 acre lots, 12% imp, HSG C (3S)
42,200	82	2 acre lots, 12% imp, HSG D (3S)
20,800	39	>75% Grass cover, Good, HSG A (2S)
21,600	73	Brush, Good, HSG D (1S)
2,300	96	Gravel surface, HSG A (2S)
95,300	30	Woods, Good, HSG A (1S)
113,400	55	Woods, Good, HSG B (1S, 3S)
36,600	70	Woods, Good, HSG C (1S)
175,600	77	Woods, Good, HSG D (1S, 3S)
109,200	32	Woods/grass comb., Good, HSG A (1S)
875,900	58	TOTAL AREA

EX

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Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
368,300	HSG A	1S, 2S, 3S
113,400	HSG B	1S, 3S
90,100	HSG C	1S, 3S
304,100	HSG D	1S, 3S
0	Other	
875,900		TOTAL AREA

EX

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Type III 24-hr 2-Year Rainfall=3.10"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: ONSITE AREA 1

Runoff Area=482,100 sf 0.00% Impervious Runoff Depth=0.22"
Flow Length=670' Tc=27.5 min CN=55 Runoff=0.7 cfs 8,923 cf

Subcatchment 2S: ONSITE AREA 2

Runoff Area=23,100 sf 0.00% Impervious Runoff Depth=0.03"
Flow Length=360' Tc=19.4 min CN=45 Runoff=0.0 cfs 64 cf

Subcatchment 3S: OFFSITE AREA

Runoff Area=370,700 sf 12.02% Impervious Runoff Depth=0.48"
Flow Length=1,850' Tc=70.0 min CN=63 Runoff=1.2 cfs 14,685 cf

Reach 1R: SOUTHWEST

Inflow=1.7 cfs 23,608 cf
Outflow=1.7 cfs 23,608 cf

Reach 2R: SOUTHEAST

Inflow=0.0 cfs 64 cf
Outflow=0.0 cfs 64 cf

Total Runoff Area = 875,900 sf Runoff Volume = 23,672 cf Average Runoff Depth = 0.32"
94.91% Pervious = 831,357 sf 5.09% Impervious = 44,543 sf

EX*Type III 24-hr 10-Year Rainfall=4.50"*

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points x 3
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: ONSITE AREA 1

Runoff Area=482,100 sf 0.00% Impervious Runoff Depth=0.74"
 Flow Length=670' Tc=27.5 min CN=55 Runoff=4.2 cfs 29,827 cf

Subcatchment 2S: ONSITE AREA 2

Runoff Area=23,100 sf 0.00% Impervious Runoff Depth=0.30"
 Flow Length=360' Tc=19.4 min CN=45 Runoff=0.0 cfs 570 cf

Subcatchment 3S: OFFSITE AREA

Runoff Area=370,700 sf 12.02% Impervious Runoff Depth=1.20"
 Flow Length=1,850' Tc=70.0 min CN=63 Runoff=3.8 cfs 37,138 cf

Reach 1R: SOUTHWEST

Inflow=6.4 cfs 66,965 cf
 Outflow=6.4 cfs 66,965 cf

Reach 2R: SOUTHEAST

Inflow=0.0 cfs 570 cf
 Outflow=0.0 cfs 570 cf

Total Runoff Area = 875,900 sf Runoff Volume = 67,534 cf Average Runoff Depth = 0.93"
94.91% Pervious = 831,357 sf 5.09% Impervious = 44,543 sf

EX

Type III 24-hr 100-Year Rainfall=6.50"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: ONSITE AREA 1

Runoff Area=482,100 sf 0.00% Impervious Runoff Depth=1.81"
Flow Length=670' Tc=27.5 min CN=55 Runoff=12.6 cfs 72,848 cf

Subcatchment 2S: ONSITE AREA 2

Runoff Area=23,100 sf 0.00% Impervious Runoff Depth=1.01"
Flow Length=360' Tc=19.4 min CN=45 Runoff=0.3 cfs 1,945 cf

Subcatchment 3S: OFFSITE AREA

Runoff Area=370,700 sf 12.02% Impervious Runoff Depth=2.53"
Flow Length=1,850' Tc=70.0 min CN=63 Runoff=8.8 cfs 78,233 cf

Reach 1R: SOUTHWEST

Inflow=17.0 cfs 151,081 cf
Outflow=17.0 cfs 151,081 cf

Reach 2R: SOUTHEAST

Inflow=0.3 cfs 1,945 cf
Outflow=0.3 cfs 1,945 cf

Total Runoff Area = 875,900 sf Runoff Volume = 153,026 cf Average Runoff Depth = 2.10"
94.91% Pervious = 831,357 sf 5.09% Impervious = 44,543 sf

Summary for Subcatchment 1S: ONSITE AREA 1

Runoff = 4.2 cfs @ 12.50 hrs, Volume= 29,827 cf, Depth= 0.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.50"

Area (sf)	CN	Description
126,900	77	Woods, Good, HSG D
21,600	73	Brush, Good, HSG D
42,700	77	Woods, Good, HSG D
95,300	30	Woods, Good, HSG A
109,200	32	Woods/grass comb., Good, HSG A
36,600	70	Woods, Good, HSG C
49,800	55	Woods, Good, HSG B
482,100	55	Weighted Average
482,100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	100	0.0400	0.1		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.10"
11.0	570	0.0300	0.9		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
27.5	670	Total			

Summary for Subcatchment 2S: ONSITE AREA 2

Runoff = 0.0 cfs @ 12.57 hrs, Volume= 570 cf, Depth= 0.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.50"

Area (sf)	CN	Description
20,800	39	>75% Grass cover, Good, HSG A
2,300	96	Gravel surface, HSG A
23,100	45	Weighted Average
23,100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0500	0.1		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.10"
4.3	260	0.0400	1.0		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
19.4	360	Total			

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Type III 24-hr 10-Year Rainfall=4.50"

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Page 2

Summary for Subcatchment 3S: OFFSITE AREA

Runoff = 3.8 cfs @ 13.00 hrs, Volume= 37,138 cf, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-Year Rainfall=4.50"

Area (sf)	CN	Description
6,000	77	Woods, Good, HSG D
63,600	55	Woods, Good, HSG B
53,500	77	2 acre lots, 12% imp, HSG C
42,200	82	2 acre lots, 12% imp, HSG D
64,700	85	1/2 acre lots, 25% imp, HSG D
140,700	46	2 acre lots, 12% imp, HSG A
370,700	63	Weighted Average
326,157		87.98% Pervious Area
44,543		12.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.8	100	0.0100	0.1		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.10"
41.2	1,750	0.0200	0.7		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
70.0	1,850	Total			

Summary for Reach 1R: SOUTHWEST

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 852,800 sf, 5.22% Impervious, Inflow Depth = 0.94" for 10-Year event
 Inflow = 6.4 cfs @ 12.68 hrs, Volume= 66,965 cf
 Outflow = 6.4 cfs @ 12.68 hrs, Volume= 66,965 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 3

Summary for Reach 2R: SOUTHEAST

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 23,100 sf, 0.00% Impervious, Inflow Depth = 0.30" for 10-Year event
 Inflow = 0.0 cfs @ 12.57 hrs, Volume= 570 cf
 Outflow = 0.0 cfs @ 12.57 hrs, Volume= 570 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 3

APPENDIX C

Town of Rowley Warehouse Lane Parking Area Project

Construction Period Erosion, Sedimentation, and Pollution Prevention Plan (Standard 8)

Tax Map 26, Lots 10 & 11
81 Warehouse Lane, Rowley, MA
DEP File # ____ - ____

September 26, 2022

1.1 General

The area of land to be disturbed is greater than 1 acre (43,560 sf) of land; A SWPPP is required for this project.

The party responsible for implementing this plan is the Town of Rowley.

1.2 General Guidelines

Erosion and Sediment Controls for this project shall be consistent with the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Area, originally printed in March 1997 and reprinted in May 2003.

In areas where earth change or vegetation removal is required, areas of exposure shall be kept to a minimum. Only areas that are actively being developed will remain exposed. All other areas shall have a good cover of vegetation or mulch.

Disturbed areas shall be stabilized and protected as soon as possible. Stormwater runoff shall be diverted from entering disturbed areas as necessary to avoid transport of sediment off site. Sediment and erosion controls shall be maintained to retain sediment within the site area.

1.3 Construction Schedule

1. Obtain plan approval and other applicable permits.
2. Flag the work limits.
3. Place erosion and sediment controls as shown on plan.
4. Hold a pre-construction conference at least one week prior to starting construction.
5. Clear & grub area within footprint of the proposed parking area.
6. Prepare parking area subgrade
7. Place and compact parking area cover material to the finish grades specified on the plan
8. Grade disturbed areas to promote sheet flow

9. Spread stockpiled topsoil over graded areas
10. Permanently vegetate, landscape, and mulch.
11. After the site is stabilized, remove all temporary erosion and sediment controls.

1.4 Construction Phase BMP Maintenance

1. All erosion and sediment control practices will be checked for stability and operation following every runoff-producing rainfall but in no case less than once every week. Any needed repairs will be made immediately to maintain all practices as designed.
2. Sediment will be removed from behind the sediment barrier when it reaches one-half the height of the barrier. Barriers shall be repaired as necessary to maintain a barrier.
3. All seeded areas will be fertilized, reseeded as necessary, and mulched to maintain a vigorous, dense vegetative cover.
4. Close attention should be paid to the repair of erosion controls, undercutting beneath erosion controls, and flow around the ends of erosion controls.
5. Repairs or replace sections of barriers as necessary.
6. Any sediment deposits remaining in place after the barrier is no longer required should be dressed to conform to the existing grade, prepared and seeded.

APPENDIX D

Operation & Maintenance Plan (Standard 9)
&
Long-Term Pollution Prevention Plan (Standard 4)
for
Tax Map 26, Lots 10 & 11
81 Warehouse Lane, Rowley, MA
DEP File # ____ - ____

Property Owner:
Town of Rowley
Warehouse Lane Parking Area Project

September 26, 2022

1.1 General

1. Stormwater management system(s) owner: Town of Rowley
2. The party or parties responsible for operation and maintenance: Owner
3. The party or parties responsible for notifying future property owners of the presence of the stormwater management system and the requirement for proper operation and maintenance: Owner
4. The estimated cost for Operation and Maintenance will be dependent upon many other factors but is initially assumed to be in the \$2,000 per year range primarily for mowing.

1.2 Operation and Maintenance for Structural Best Management Practices

- a. None proposed

1.3 Long Term Pollution Prevention

1. This is a seasonal lot – no snow plowing or winter maintenance is proposed.
2. Store materials and waste products inside or under cover;
3. Maintain lawns, gardens, and other landscaped areas;
4. Do not store fertilizers, herbicides, and pesticides onsite;
5. Remove pet waste to prevent accumulation of waste