October 13, 2020

Mendon Conservation Commission
20 Main Street
Mendon, MA 01756

Re: Notice of Intent
50 Milford St, Mendon, MA

Dear Mendon Conservation Commission:

Goddard Consulting, LLC is pleased to submit this Notice of Intent (NOI) on behalf of the applicant, Robert Sweet for after the fact compliance for incomplete wetland replication from DEP # 218-674 and the construction of a commercial building at 50 Milford St, Mendon, MA (Assessors Map: 9, Parcel: 177, Lots: 50 & 44). This is a joint filing under the MA Wetlands Protection Act and the Town of Mendon Wetlands Protection Bylaw.

Two (2) copies of the NOI application are enclosed along with two (2) sets of plans. The title of all documents enclosed are as follows:

- NOI (WPA Form 3) Application Form
- NOI Wetland Fee Transmittal Form, Copy of Checks
- Affidavit of Service, Abutters List, Notification to Abutters
- *Wetland Border Report*, Goddard Consulting, LLC, 10/8/19
- USGS Site Locus. Goddard Consulting, LLC, 2/4/20
- Orthophoto View of Site. Goddard Consulting, LLC, 2/4/20
- *Wetland Replication Plan,* Goddard Consulting, LLC, 10/7/20
- *Stormwater Report and Drainage Calculations,* Munden Engineering, 9/22/20
- *Proposed Subdivision and Commercial Development,* Munden Engineering 9/22/20
- *Construction Period Pollution Prevention Plan,* Munden Engineering 9/22/20
- *Existing Conditions Plan of Land,* Munden Engineering 3/27/20

Existing Conditions

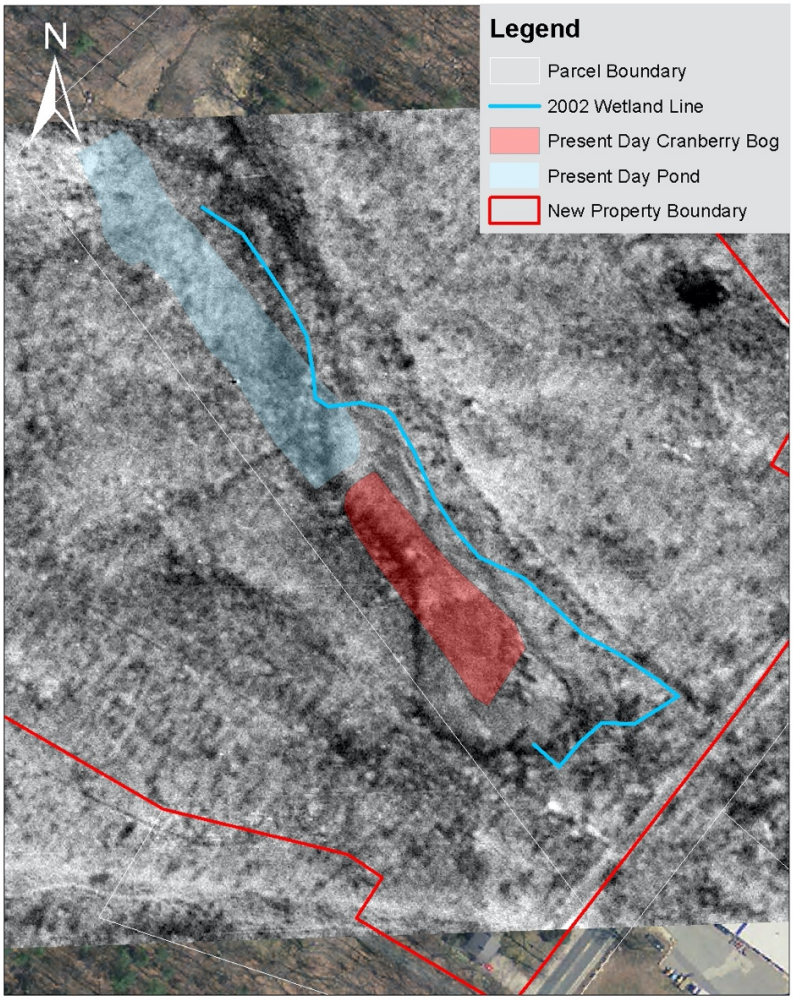
This ±38.5-acre site consists of a single-family house, with associated driveway and shed, and an abandoned cranberry bog and associated pond (see Figure 3). On-site resource areas consist of Bordering Vegetated Wetland (BVW), Bank of a Pond, and Bank of an intermittent stream channel. The portion of the property along Milford St. is gravelly with sparse vegetation (see Figures 1-2). This is the area of the proposed development described below.

Figure 1. The area of proposed development facing south towards Milford St.

Figure 2. The proposed area for the development of the commercial building, facing north. The on-site cranberry bog can be seen in the background.

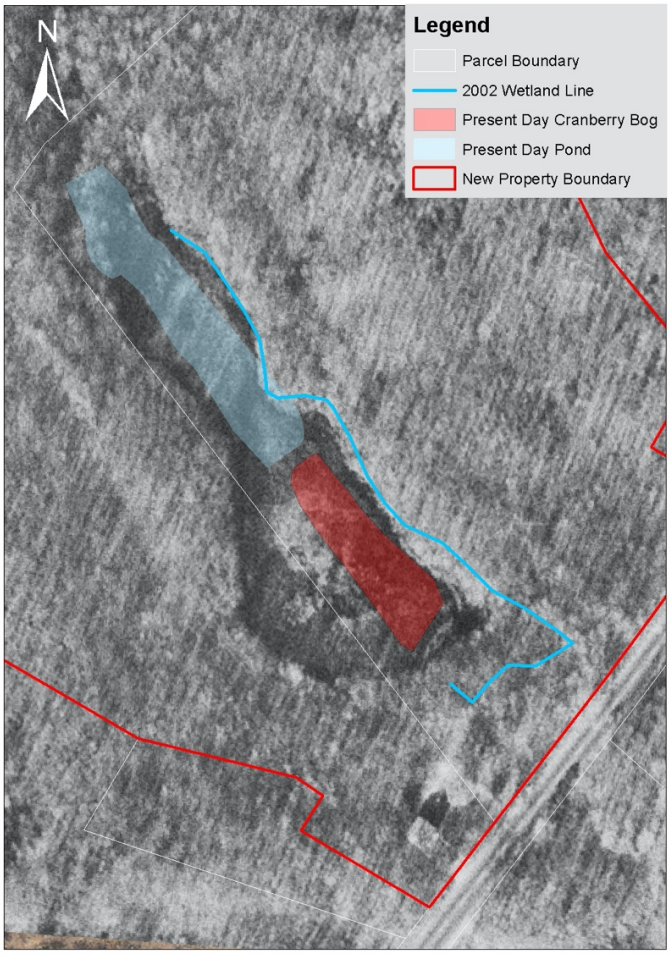
Figure 3. The on-site cranberry bog, facing north. The edges on the northern, western, and eastern sides of the bog will be grading down to the elevation of the bog for the construction of the wetland replication area (See attached *Wetland Replication Plan*).

Site History



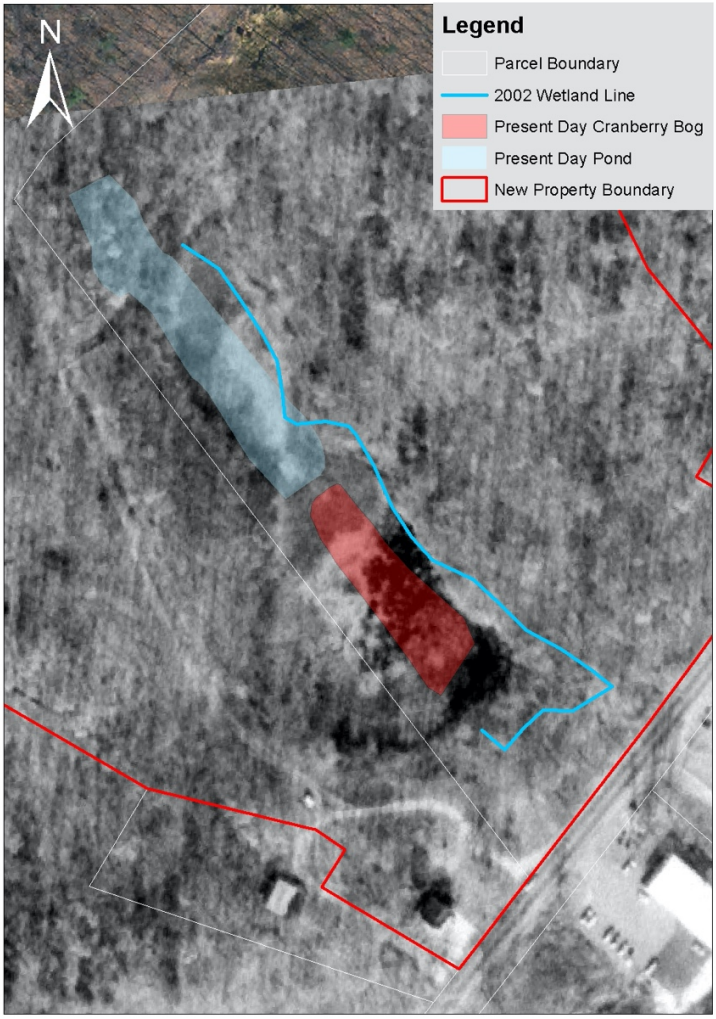
November 10, 1938

- The first obtained aerial photograph of the locus site. The location of the present-day cranberry bog and pond are overlaid over the historical aerial image.



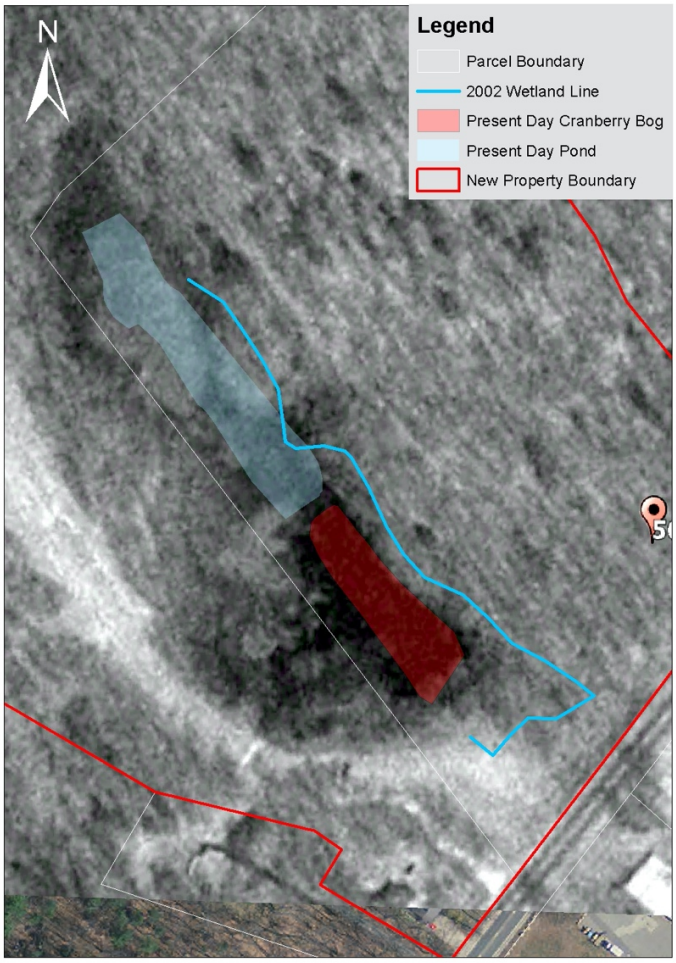
December 1, 1967

- Aerial view of the site from 1967. The location of the present-day cranberry bog and pond are overlaid over the historical aerial image. What is a cranberry bog today appears to have been previously a wetland and perhaps sparsely planted with cranberries. A cart path runs northwest along the wetland meeting with Milford St. to the south. The areas within the wetland may have previously been used for the harvesting of cranberry bogs based on appearance.



November 17, 1980

- Aerial view of the site from 1980 The location of the present-day cranberry bog and pond are overlaid over the historical aerial image. No notable change since 1967.



April 1995

- Aerial view of the site from 1995 The location of the present-day cranberry bog and pond are overlaid over the historical aerial image. No notable change since 1980.

December 2001

December 2001

- Aerial view of the site from 2001, prior to the purchase of the property by Laurie Sweet. In these photographs the areas within the wetland are more visible and seem to have the red coloration characteristic of cranberry bogs. This supports the presumption that the wetland area was previously used to harvest cranberries. The wetland area between Milford Street and the cranberry bog boundary is more visible. Based on all previous aerials up to this point, it is clear that the current cranberry bog was not created from an upland area.

5/30/2001

- Property purchased by Laurie Sweet.

9/20/2001

- Shea Engineering prepares Flood Control and Stormwater Management Plan for Laurie Sweet.
- Shea drafts "Site Plan of Land."

9/26/2001

- Shea Drafts "Sewage Disposal Plan" for proposed industrial building.

10/1/2001

- Laurie Sweet files a NOI (218-527) for the "clearing, excavating, filing, and grading consistent with construction of a driveway, utilities and detention basin to service an industrial building."
- Represented by Fred Lapham of Shea Engineering.

11/8/2001

- Order of Conditions is issued for NOI 218-527.

6/27/2002

- Certificate of Compliance issued for NOI 218-527.

7/9/2002

- Shea drafts "Sewage Disposal Plan" for the proposed single-family house.

8/13/2002

- Order of Conditions Issued for NOI 218-548.

11/8/2002

- Mendon Conservation Commission notifies the Sweets that they received request their request to rejuvenate the cranberry bogs on-site.
- Unanimous decision at Conservation Commission meeting to allow request with the condition that the best acceptable agricultural practices are used.

12/6/2002

- "As-built Plan" for house drafted by Shea Engineering.

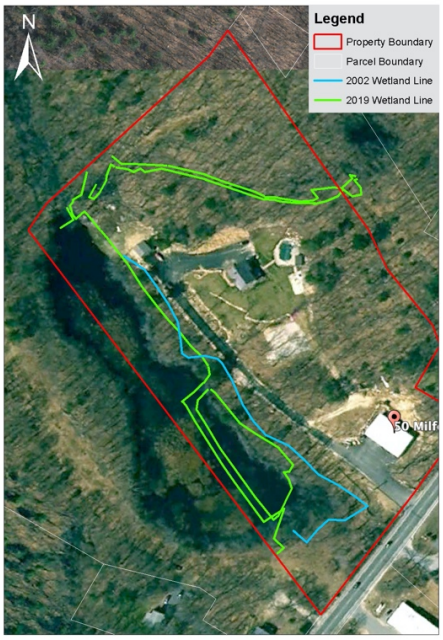
2002

- On-site house built.

April 2003

April 2003

- Aerial view of the site from 2003. At this point the on-site commercial building, house, and associated construction are visible. The blue 2002 wetland line is from the 2002 Shea Engineering “Sewage Disposal Plan.” The Green 2019 wetland line is from the delineation completed by Goddard Consulting in 2019.

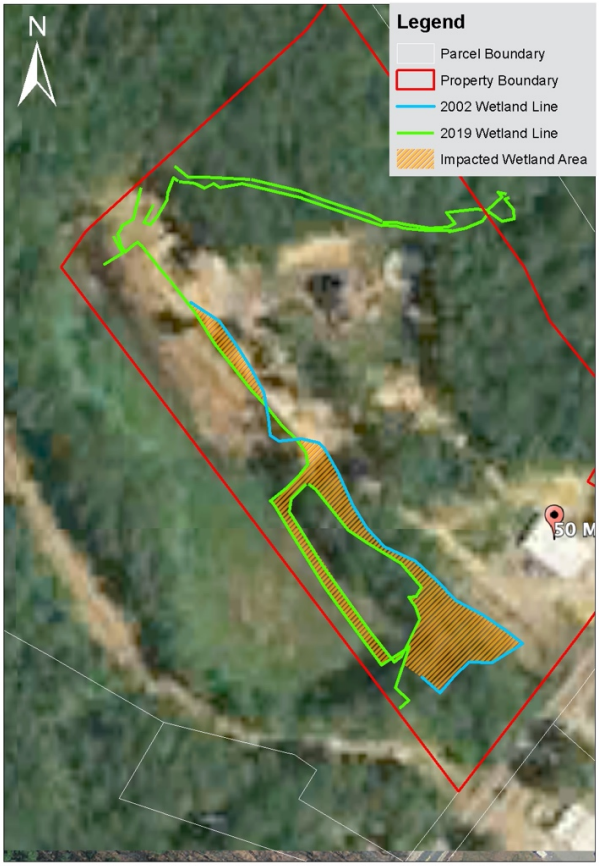


April 2005

April 2005

2005

- Aerial view of the site from 2005. The construction associated with the house has continued.



September 2006

- Aerial view of the site from 2006. The edge being formed around the wetland becomes more prominent. The beginning of pond construction is visible. This was done with approval from MassDEP with an exemption from the Mendon Conservation Commission.

11/24/2006

- USDA NRCS writes to the Sweets in regard to their request of information on effective soil protection methods and the approximate volume of the pond.

2006

- NRCS approved "Conservation Plan" describes that a pond was constructed in the Freetown Muck in 2006

3/8/2007

- Conservation Commission Hearing.
- Robert and Laurie Sweet file a determination of Applicability with the Mendon Conservation Commission for a driveway.

- "The area described in the Request is within an area subject to protection under the Act or the buffer zone." (From the March 8, 2007 meeting minutes).

July 2007

- Aerial view of the site from 2007. The formation of the pond is completed.

10/25/2007

- Conservation Commission Hearing.
- Bob Sweet requests an RDA for the construction of a U-shaped driveway at the Mendon Conservation Commission meeting.
- Explains the difficulty of trucks entering and exiting property with current driveway.
- Members request that the wetland be re-delineated.

12/19/2007

- Conservation Commission hearing.
- Fred Lapham of Shea Engineering Tells Mendon Conservation Commission that he will draft a plan for the site.
    - He will calculate the square footage that was filled in the flagged area.
    - Explains how replication will be required.

3/6/2008

- Conservation Commission hearing.
- Bob Sweet asks the Mendon Conservation Commission what determines the existence of a wetland.
    - Commission suggests that he get estimates from different soil testing companies to make a delineation.

4/10/2008

- Conservation Commission hearing.
- Bob Sweet indicates at Mendon Conservation Commission meeting that he has not yet had the soil on-site tested.
- The Commission reiterates that the Sweet's need to have the soil tested.
- Bob Sweet informs the commission that the Army Corps of Engineers informed him that trees may be cut on site as long as it is not in the growing season.
- Bob Sweet presented a plan of the proposed driveway that he drew, along with the proposed additional bog.
    - The Commission reminds him that they still need to know where the on-site wetland is located.
    - The Commission explains that an exact replication area must be created of the same type of wetland that was filled, creating a new cranberry bog does not count as sufficient replication.

4/24/2008

- Conservation Commission hearing.
- Bob Sweet informed the Commission that NRCS would generate a letter confirming that the construction of the cranberry bog is sufficient replication.

5/8/2008

- Conservation Commission hearing.
- Bob Sweet requests an RDA from the Conservation Commission to dig banking out, level ground, and plant trees on the left side of the driveway. The RDA is denied.
- The commission indicates that two NOI's will be required, one for the driveway and one for the cranberry bog.

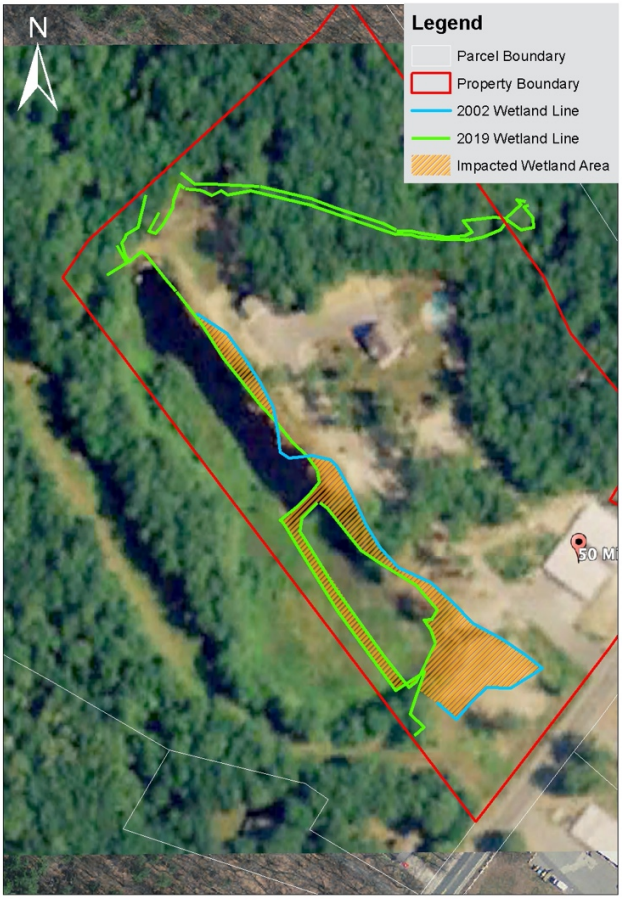
6/12/2008

- Conservation Commission hearing.
- Commission explains that 50 Milford Street will require a Notice of Intent for working in a wetland. The wetland area must be returned to the condition in which it was previously, or an area needs to be replicated. Wetlands were filled to the left of the driveway Commission describes that an NOI will be necessitated no matter what solution is chosen.
- Commission explains that the Certificate of Compliance for DEP# 218-0548 was not previously issued even though members signed it due to the pending issue of the cranberry bog. Note that this COC was later issued February 24, 2009.

- The Commission discussed options to return to compliance.
    - Some fill could be left in places and replication could be done with a similar sized area. This assumes no driveway is built.
    - Replication could be done along the wetland line equal to what was filled. This assumes a full driveway.
    - The third option would entail less replication and return the edge of the wetland that was filled.
    - The last option was to bring water level up to minimize the amount of restoration necessary.

6/26/2008

- Conservation Commission hearing.
- DEP agreed with the options that the Commission had provided.
    - DEP informs the commission that they would like to see replication low against the swamp area.
    - DEP would like to see the replication completed prior to the filing of an NOI.



July 2008

- Aerial view of the site from 2008.

10/9/2008

- Conservation Commission hearing.
- Bob Sweet explained to the Commission that he dug out a larger area that needed to be restored. It has been hydro seeded and has a wetland mix. He provided a plan certified by his engineer as well as a letter saying the same. The turnaround has been completed. The commission seconded a motion to accept the plan and information as provided. The enforcement order will be lifted except area will be checked again in one year to ensure grass is growing.

10/23/2008

- Conservation Commission hearing.
- The Sweets receive a business certificate from the Commonwealth of Massachusetts for “Sweet Cranberries.”

1/8/2009

- Conservation Commission hearing.
- Dam restoration plan is presented to the Conservation Commission.

2/12/2009

- Commission reviews as-built for dam restoration.

2/24/2009

- Conservation Commission hearing.
- Certificate of Compliance issued for NOI 218-548.

3/3/2009

- Certificate of Compliance for NOI 218-548 recorded at Worcester registry of deeds.

3/12/2009

- Bob Sweet submitted an RDA to clean up rocks on the side of his driveway
- A second RDA was submitted to remove lilac bush near retention pond.
    - The Commission agreed that the first RDA must be complete prior to the second's approval.
- Bob Sweet informed the Commission that he wants to install a dyke in the future.

4/9/2009

- Commission signs a negative determination for the lilac bush removal.

4/23/2009

- Commission signed the Negative Determination of Applicability the cleanup of rocks.
- Bob Sweet submits an RDA for the creation of a picnic area.

6/25/2009

- Commission visits site to view completed picnic area.

8/13/2009

- Bob Sweet submitted an RDA to "increase the parking lot on right side of driveway. Work is more than 100' from wetlands as shown on picnic area plan".

9/10/2009

- Commission performed site visit to 50 Milford Street for parking lot expansion. Bob Sweet was directed to install silt fence along driveway.

7/21/2010

- NOI 218-674 is filed.
    - "Cranberry bog renovation and construction" drafted by Land Planning Inc.

8/24/2010

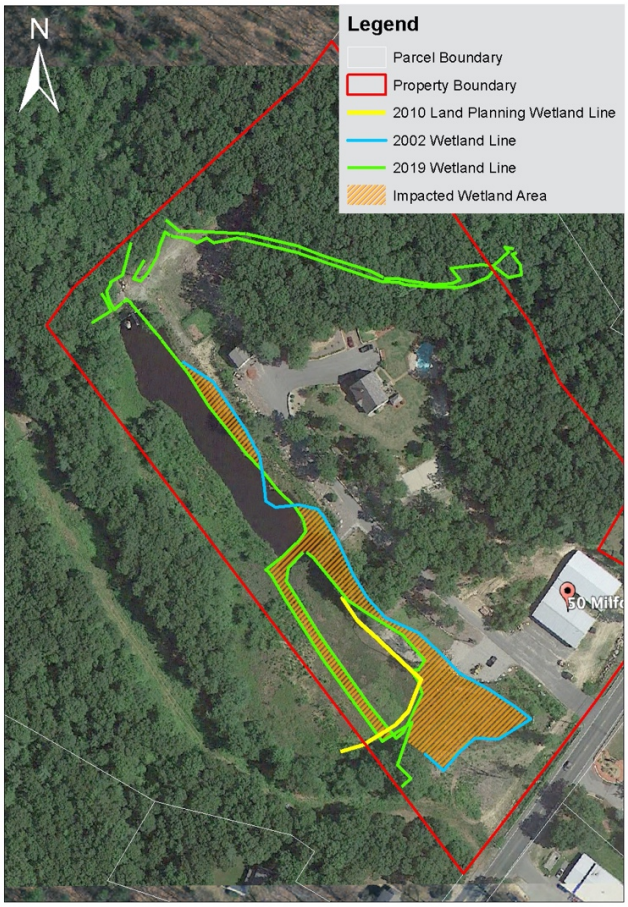
- Mendon Conservation Commission Meeting.
- Discussed construction and renovation of the bog on-site.
- Motion to continue 50 Milford Street hearing until September 14 pending a site walk on September 1 at 4:30 p.m. The motion carried unanimously.

9/28/2010

- Conservation Commission hearing for 50 Milford Street.
- Members reviewed the revised plan and directed for the placement of hay bales and silt fence on the property line.
- If construction sequence needs to be changed, applicant must present it at a Conservation Committee meeting.

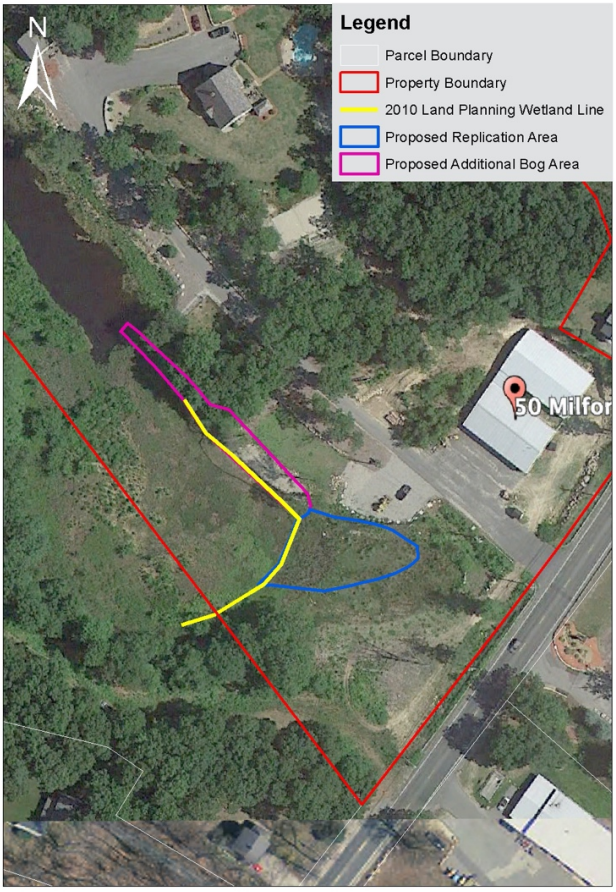
10/5/10

- Order of Conditions for NOI 218-674 is issued.



June 2010

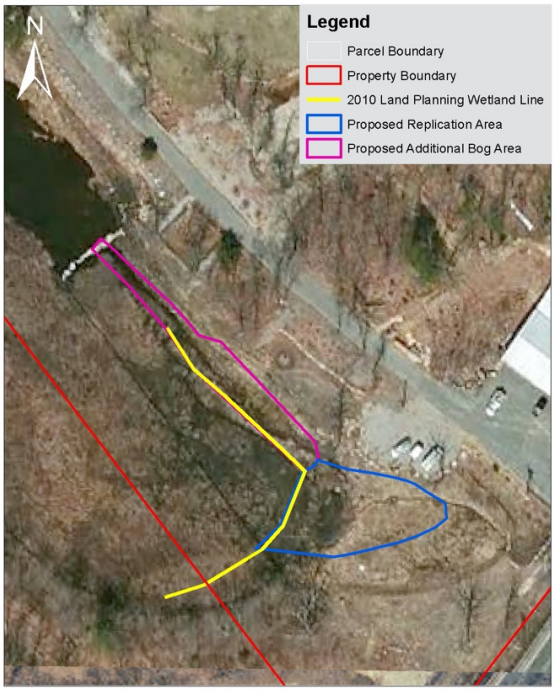
- Aerial view of the site from 2010.



June 2010

- Aerial view of the site from 2010. The wetland line, proposed additional bog area, and proposed replication area from the 2010 Site Plan by Land Planning Inc. are included.

2011- 2012



2011- 2012

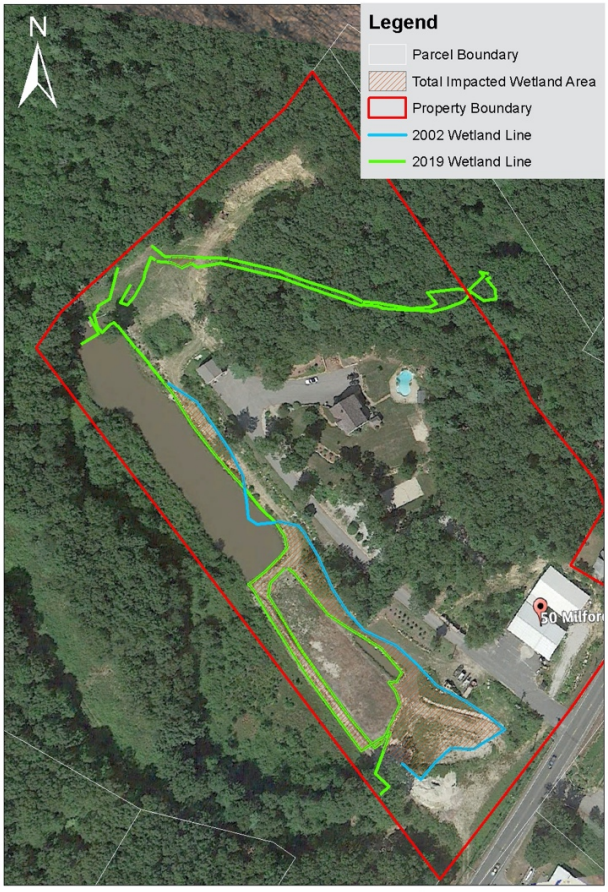
- Aerial view of the site from 2011-2012. The replication area approved in the Order of Conditions for DEP # 218-674 is shown in blue along with proposed additional bog area in pink. The proposed replication area appears to have not been constructed.

06/07/2011

- The administrative clerk of the Mendon Conservation Commission informs the Sweets that hay bales and silt fences on-site are inspected and improved.

6/3/2013

- Property transferred from "Laurie Sweet" to Laurie & Robert Sweet."



August 2013

8/2013

- Aerial view of the site from 2013. Construction of the cranberry bog is underway, dike constructed around berm.

2013- 2014

2013-2014

- Aerial view of the site from 2007. The historically altered BVW area between the bog and Milford St. is appearing to be used as a staging area for construction associated with the cranberry bog. Even if partial restoration took place in 2008, it is now altered again.

2015

2015

- Aerial view of the site from 2015. No notable change from 2014.

April 2017

4/2017

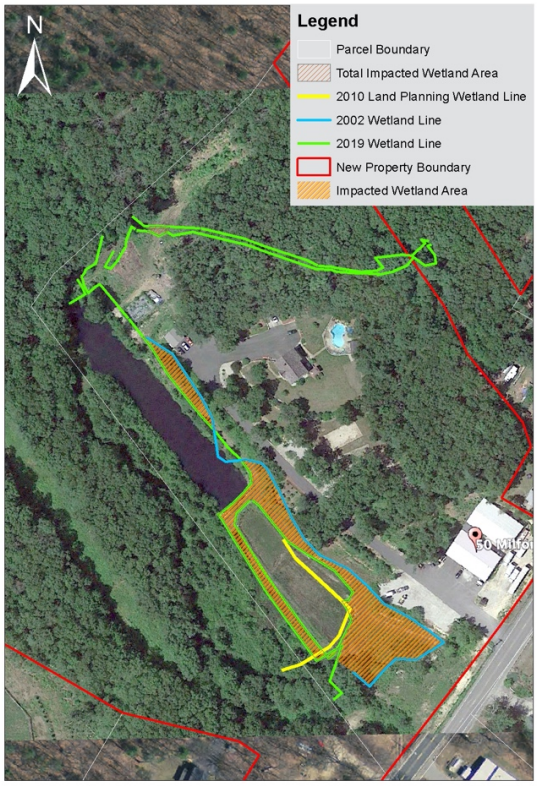
- Aerial view of the site from 2017. The interior of the bog is managed and regraded.

6/29/2018

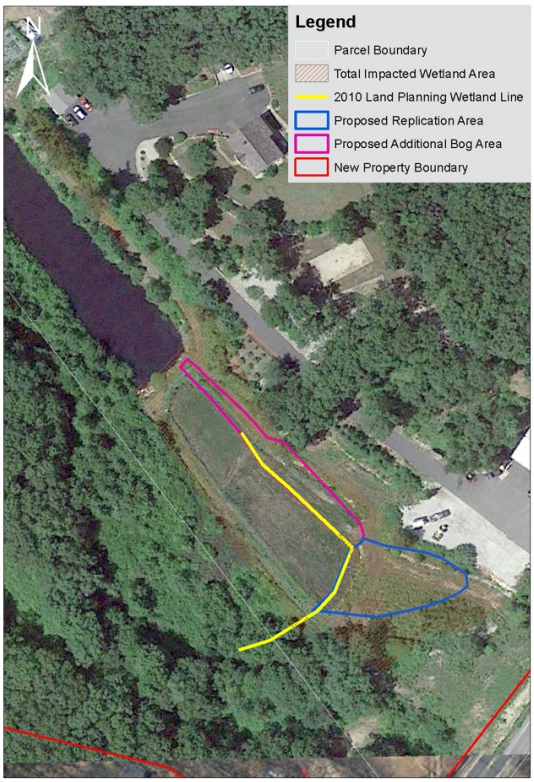
- Property transferred from Laurie & Robert Sweet" to "Laurie & Robert Sweet A T."

April 2018

- Aerial view of the site from 2018. No significant change since 2017



June 2019



June 2019

- The most recent aerial view of the site from 2019.

- The location of the replication area approved in the Order of Conditions for DEP #218-674 (9,130sf) and the current proposed replication area (10,530sf, see below for more information).

Proposed Conditions

The above historic outline of events on-site demonstrates that in light the events that have transpired on-site, the final step needed to bring site into compliance is the creation of the replication area. The proposed location for the replication area provides a better hydrologic connection to the on-site wetland than the previously approved area. With the issuance of the Order of Conditions for this current proposed project the applicant seeks a Certificate of Compliance for the remaining replication work that needs to be completed for wetland fill associated DEP #218-674. The site plan drafted by Land Planning Inc. in accordance with this

NOI called for the historically altered BVW area between the bog and Milford St. to be used for 9,130 square feet of wetland replication area. This replication was not completed

The Conservation Commission indicated in 2008 that they would be willing to allow a replication area to be constructed elsewhere on the site. With this current project the applicant proposes ±10,530sf of wetland replication around the existing cranberry bog to make up for the previously necessitate replication work that was not completed (see *Wetland Replication Plan).* The currently proposed replication area occurs within a better, more productive area than originally proposed. This area surrounding the existing bog will allow for a better direct hydrological connection to the existing bog wetland.

Additionally, the applicant proposes the construction of a commercial building. Despite the large size of the site, development will be restricted to southern portion of the site adjacent to Milford St. No impacts to wetland resource areas are proposed, and erosion control barriers will be established along the limits of work prior to construction.

Regulatory Standards Compliance

Statement of Jurisdiction: 310 CMR 10.02(3)

No work is proposed within BVW. The work proposed under this application impacts the Buffer Zone to BVW, therefore under the WPA the project is subject to 310 CMR 10.02(3) which states:

"3. Activities within the buffer zone which do not meet the requirements of 310 CMR 10.02(2)(b)1. and 2. are subject to preconstruction review through the filing of a Determination of Applicability to clarify jurisdiction or a Notice of Intent under the provisions of 310 CMR 10.05(4) and 10.53(1)."

This submittal is a Notice of Intent application. The WPA Regulations [*310 CMR 10.02(2)(b)]* do not contain performance standards for Buffer Zone Alteration. All reasonable efforts to avoid and minimize adverse impacts on the buffer zone have been considered, however alteration of the buffer zone will be necessary to meet project goals because the site is located within the 100-ft buffer zone. 8" silt stock will be installed as an erosion control at the limit of work.

Regulatory Compliance under the Mendon Wetlands Protection Bylaw

No disturbance other than grading associated with the creation of the wetland replication area around the existing bog is proposed within the Town's 25' *No Disturb Zone*. No building is proposed within the Town's 50' *No Build Zone*.

Conclusion

It is our professional opinion that the proposed construction of the commercial building will not have a significant adverse impact to the BVW resource areas on site. Adequate sedimentation

control has been proposed to protect resource areas during the construction process. It is therefore our professional opinion that the Conservation Commission should approve this application with the issuance of an Order of Conditions.

Please feel free to contact us if you have any questions.

Very truly yours,

Scott Goddard,
Principal & PWS

CC:
Robert Sweet, 50 Milford St. Mendon, MA 01757
Mass DEP Wetlands Division, 8 New Bond Street, Worcester, MA 01606

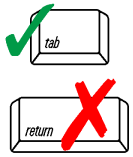
Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Mendon
City/Town

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note:
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

50 Milford St — a. Street Address
Mendon — b. City/Town
01756 — c. Zip Code

Latitude and Longitude:
42.115741 — d. Latitude
-71.546446 — e. Longitude

9 — f. Assessors Map/Plat Number
177-50, 177-44 — g. Parcel /Lot Number

2. Applicant:

Robert — a. First Name
Sweet — b. Last Name

c. Organization

50 Milford St. — d. Street Address

Mendon — e. City/Town
MA — f. State
01756 — g. Zip Code

h. Phone Number
i. Fax Number
bobsmc@verizon.net — j. Email Address

3. Property owner (required if different from applicant): ☐ Check if more than one owner

a. First Name
b. Last Name

c. Organization

d. Street Address

e. City/Town
f. State
g. Zip Code

h. Phone Number
i. Fax Number
j. Email address

4. Representative (if any):

Scott — a. First Name
Goddard — b. Last Name

Goddard Consulting LLC — c. Company

291 Main St. Suite 8 — d. Street Address

Northborough — e. City/Town
MA — f. State
01532 — g. Zip Code

(508) 393-3784 — h. Phone Number
i. Fax Number
scott@goddardconsultingllc.com — j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

$1,080 — a. Total Fee Paid
$512.50 — b. State Fee Paid
$567.50 — c. City/Town Fee Paid

Massachusetts Department of Environmental Protection
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A. General Information (continued)

6. General Project Description:

The proposed construction of a commercial building within buffer zone to Bordering Vegetated Wetlands and after the fact compliance for incomplete wetland replication from DEP # 218-674.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

1. ☐ Single Family Home
2. ☐ Residential Subdivision
3. ☒ Commercial/Industrial
4. ☐ Dock/Pier
5. ☐ Utilities
6. ☐ Coastal engineering Structure
7. ☐ Agriculture (e.g., cranberries, forestry)
8. ☐ Transportation
9. ☐ Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. ☐ Yes ☒ No

If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

a. County	b. Certificate # (if registered land)
Worcester	
c. Book	d. Page Number
59036	171

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1. ☒ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
2. ☐ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Bank	1. linear feet	2. linear feet
b. ☐ Bordering Vegetated Wetland	1. square feet	2. square feet
c. ☐ Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. ☐ Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. ☐ Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced

f. ☐ Riverfront Area

1. Name of Waterway (if available) - **specify coastal or inland**

2. Width of Riverfront Area (check one):

☐ 25 ft. - Designated Densely Developed Areas only

☐ 100 ft. - New agricultural projects only

☐ 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: _____ square feet

4. Proposed alteration of the Riverfront Area:

a. total square feet _____ b. square feet within 100 ft. _____ c. square feet between 100 ft. and 200 ft. _____

5. Has an alternatives analysis been done and is it attached to this NOI? ☐ Yes ☐ No

6. Was the lot where the activity is proposed created prior to August 1, 1996? ☐ Yes ☐ No

3. ☐ Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f**. above.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. ☐ Land Under the Ocean	1. square feet 2. cubic yards dredged	
c. ☐ Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. ☐ Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. ☐ Land Under Salt Ponds	1. square feet 2. cubic yards dredged	
j. ☐ Land Containing Shellfish	1. square feet	
k. ☐ Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above 1. cubic yards dredged	
l. ☐ Land Subject to Coastal Storm Flowage	1. square feet	

4. ☐ Restoration/Enhancement

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW

b. square feet of Salt Marsh

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 3 – Notice of Intent
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Mendon
City/Town

C. Other Applicable Standards and Requirements

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

   a. ☐ Yes ☒ No

   If yes, include proof of mailing or hand delivery of NOI to:

   Natural Heritage and Endangered Species Program
   Division of Fisheries and Wildlife
   1 Rabbit Hill Road
   Westborough, MA 01581

   August 2017
   b. Date of map

   If *yes*, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

   c. Submit Supplemental Information for Endangered Species Review*

      1. ☐ Percentage/acreage of property to be altered:

         (a) within wetland Resource Area _____ percentage/acreage

         (b) outside Resource Area _____ percentage/acreage

      2. ☐ Assessor's Map or right-of-way plan of site

2. ☒ Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

   (a) ☒ Project description (including description of impacts outside of wetland resource area & buffer zone)

   (b) ☒ Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see https://www.mass.gov/ma-endangered-species-act-mesa-regulatory-review).
Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.

Massachusetts Department of Environmental Protection
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C. Other Applicable Standards and Requirements (cont'd)

(c) ☐ MESA filing fee (fee information available at https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review).
Make check payable to "Commonwealth of Massachusetts - NHESP" and ***mail to NHESP*** at above address

*Projects altering **10 or more acres** of land, also submit:*

(d) ☐ Vegetation cover type map of site

(e) ☐ Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1. ☐ Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing. a. NHESP Tracking # b. Date submitted to NHESP

3. ☐ Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a. ☒ Not applicable – project is in inland resource area only b. ☐ Yes ☐ No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: dmf.envreview-south@mass.gov

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: dmf.envreview-north@mass.gov

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

c. ☐ Is this an aquaculture project? d. ☐ Yes ☐ No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Mendon
City/Town

C. Other Applicable Standards and Requirements (cont'd)

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

a. ☐ Yes ☒ No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.

b. ACEC

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

a. ☐ Yes ☒ No

6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?

a. ☐ Yes ☒ No

7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

a. ☒ Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:

1. ☐ Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
2. ☐ A portion of the site constitutes redevelopment
3. ☒ Proprietary BMPs are included in the Stormwater Management System.

b. ☐ No. Check why the project is exempt:

1. ☐ Single-family house
2. ☐ Emergency road repair
3. ☐ Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. ☒ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. ☒ Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

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Mendon
City/Town

D. Additional Information (cont'd)

3. ☒ Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. ☐ List the titles and dates for all plans and other materials submitted with this NOI.

Proposed Subdivision and Commercial Development
a. Plan Title

Munden Engineering
b. Prepared By

Gamze Munden, PE
c. Signed and Stamped by

9/22/20
d. Final Revision Date

1" = 25'
e. Scale

Stormwater Report and Drainage Calculations
f. Additional Plan or Document Title

9/22/20
g. Date

5. ☐ If there is more than one property owner, please attach a list of these property owners not listed on this form.

6. ☐ Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7. ☐ Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8. ☒ Attach NOI Wetland Fee Transmittal Form

9. ☒ Attach Stormwater Report, if needed.

E. Fees

1. ☐ Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

9533
2. Municipal Check Number

8/25/20
3. Check date

9532
4. State Check Number

8/25/20
5. Check date

Laurie
6. Payor name on check: First Name

Sweet
7. Payor name on check: Last Name

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

1. Signature of Applicant (Robert Sweet) — 2. Date: 8-25-2020

3. Signature of Property Owner (if different) — 4. Date

5. Signature of Representative (if any) (Scott Goddard) — 6. Date: 9/20/20

For Conservation Commission:
Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:
One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mai' or hand delivery.

Other:
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

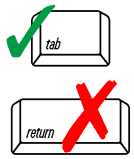
The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Applicant Information

1. Location of Project:

50 Milford St.	Mendon
a. Street Address	b. City/Town
9532	$512.50
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Robert	Sweet
a. First Name	b. Last Name

c. Organization

50 Milford St.
d. Mailing Address

Mendon	MA	01756
e. City/Town	f. State	g. Zip Code

h. Phone Number	i. Fax Number	bobsmc@verizon.net j. Email Address

3. Property Owner (if different):

a. First Name	b. Last Name

c. Organization

d. Mailing Address

e. City/Town	f. State	g. Zip Code

h. Phone Number	i. Fax Number	j. Email Address

B. Fees

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

Fee should be calculated using the following process & worksheet. ***Please see Instructions before filling out worksheet.***

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract $12.50. To calculate the city/town share of the fee, divide the total fee in half and add $12.50.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 3b.) Construction of a commerical building	1	$1,050	$1,050
Town of Mendon Compliance Inspection Fee			$30

Step 5/Total Project Fee:

Step 6/Fee Payments:

Total Project Fee:	$1,080 (a. Total Fee from Step 5)
State share of filing Fee:	$512.50 (b. 1/2 Total Fee **less $**12.50)
City/Town share of filling Fee:	$567.50 (c. 1/2 Total Fee **plus** $12.50)

C. Submittal Requirements

a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
Box 4062
Boston, MA 02211

b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

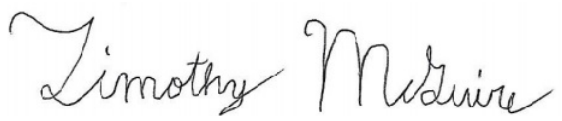
AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act & Mendon Wetlands Protection Bylaw

I, Tim McGuire, hereby certify under the pains and penalties of perjury that on July 30, 2020 I gave notification to abutters in Compliance with the second paragraph of Massachusetts General Law Chapter 131, Section 40, and the DEP Guide to Abutter Notification dating April 8, 1994 in connection with the following matter:

An Notice of Intent was filed under the Massachusetts Wetlands Protection Act and Mendon Wetlands Protection Bylaw with the Mendon Conservation Commission on October 13, 2020 for the property addressed as 50 Milford St. Mendon, MA.

The form of the notification, and the list of abutters to whom it was given, and their addresses, are attached to this Affidavit of Service.



_____ 10/13/2020

(Name) (Date)

$30

TOWN OF MENDON
BOARD OF ASSESSORS
20 Main Street
MENDON, MA 01756
508-473-2738
508-478-8241 (Fax)
e-mail: assessor@mendonma.gov

REQUEST FOR ABUTTERS

Date: 10/6/20

Name: Tim McGuire

Company: Goddard Consulting LLC

Address: 291 Main St. Suite 8, Northborough, MA 01532

Phone Number: (774) 265-2779 *Email address:* tim@goddardconsultingllc.com

Owner of Subject Property: Robert Sweet

Map: 9 *Street Code:* 177 *Parcel:* 50 & 44

Number of feet from subject required: _____
(if left blank, 300' will be utilized)

☐ *Check here for mailing labels* *Number of sets:* _____

Board for which abutters are requested: Conservation Commission

Fees: $1.00 per name on the abutters list - $1.00 per sheet of labels

**The Board of Assessors reserves 10 working days to provide all certified lists of abutters. This list is valid for 30 days from the date of certification.*

ROBERT + LAURIE A SWEET TRUSTEES
SWEET LIVING TRUST
50 MILFORD ST
6/29/18 59036 171

MENDON SMC REALTY LLC
50 MILFORD
8/9/19 60858 86

TOWN OF MENDON
BOARD OF ASSESSORS
20 MAIN STREET
MENDON, MA 01756
508-473-2738
508-478-8241 (Fax)
e-mail: assessor@mendonma.gov

October 6, 2020

PROPERTY LOCATION(S):	*50 Milford Street, Mendon, Massachusetts*
	Assessor's Map #9-177-50
PROPERTY OWNER(S):	*Robert & Laurie A. Sweet Trustees*
	Sweet Living Trust
OWNER(S) ADDRESS:	*50 Milford Street, Mendon, MA 01756*
RECORDED:	*Worcester Registry of Deeds*
	June 29, 2018, Book #59036, Page #171

AND

PROPERTY LOCATION(S):	*44 Milford Street, Mendon, Massachusetts*
	Assessor's Map #9-177-44
PROPERTY OWNER(S):	*Mendon SMC Realty LLC*
OWNER(S) ADDRESS:	*50 Milford Street, Mendon, MA 01756*
RECORDED:	*Worcester Registry of Deeds*
	August 9, 2019, Book #60858, Page #86

The attached 100' abutter's list is true and accurate to the best of our knowledge.

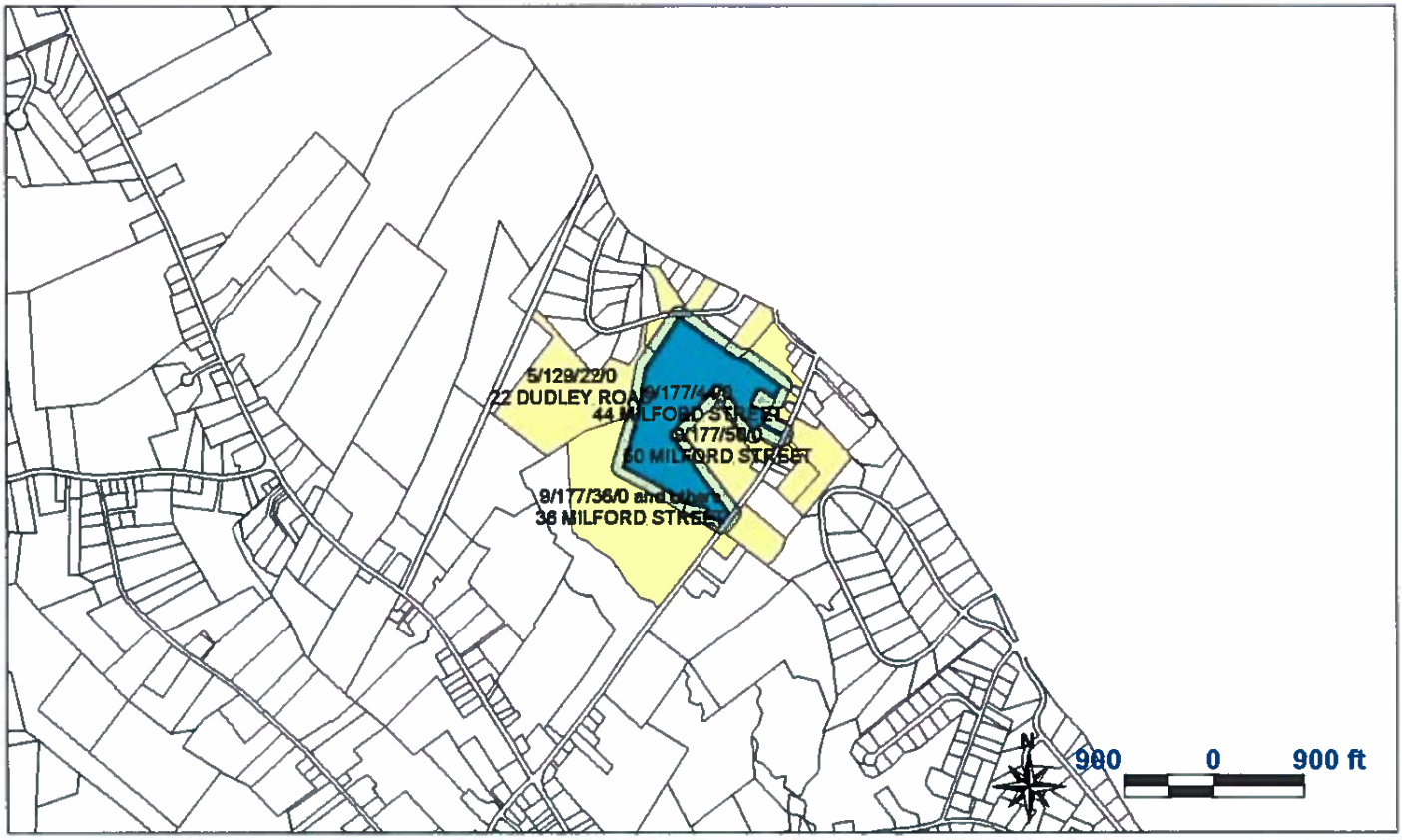
Sincerely,

Jean M. Berthold, MAA
Principal Assessor

Attachment

TOWN OF MENDON, MA
BOARD OF ASSESSORS
20 Main Street, Mendon, MA 01756

Abutters List Within 100 feet of Parcel 9/177/44/0

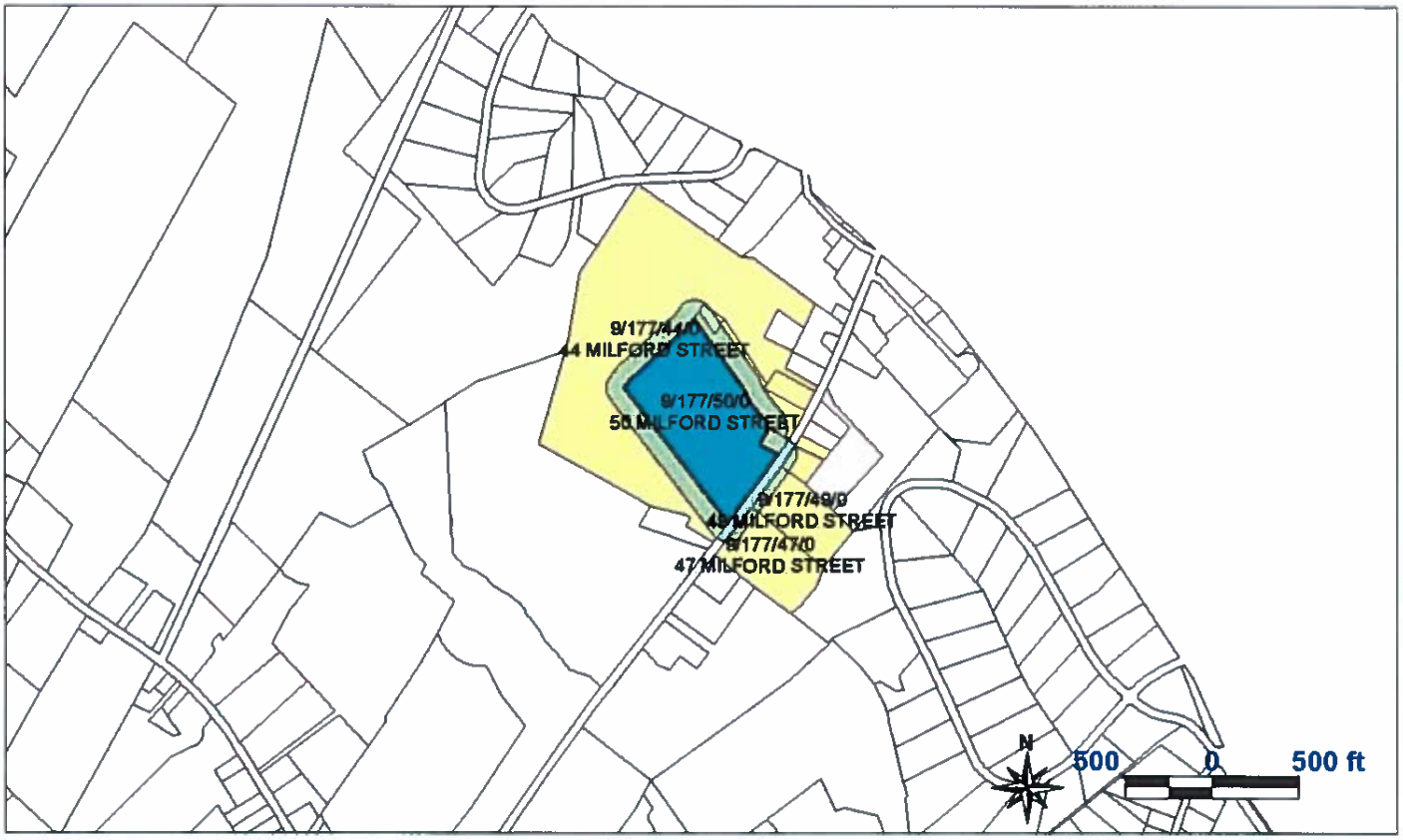


Key	Parcel ID	Owner	Location	Mailing Street	Mailing City	ST	ZipCd/Country
139	5-129-22-0-R	BEDROSIAN TANIEL & MIKAEL N/O BROOKVIEW LLC	22 DUDLEY ROAD	12 DUDLEY ROAD	MENDON	MA	01756
179	6-124-12-0-R	GATELY THOMAS J & TANYA L	12 EIGHT ROD RD EXT	6 WESTCOTT ROAD	HOPEDALE	MA	01747
182	6-124-20-0-R	CAICO BETH A & MICHAEL N N/O GILMORE-CAICO BETH A	20 EIGHT ROD RD EXT	12 WESTCOTT ROAD	HOPEDALE	MA	01747
2856	6-129-4-0-R	VAZQUEZ RAFAEL & LILIA	4 DUDLEY ROAD	4 DUDLEY ROAD	MENDON	MA	01756
2857	6-129-5-0-R	LANDERS BRENDAN MICHAEL & DARAH MARIE	5 DUDLEY ROAD	5 DUDLEY ROAD	MENDON	MA	01756
2858	6-129-6-0-R	WILLIS MARK B & WENDY L N/O WILLIS MARK B TRUSTEE 1/2	6 DUDLEY ROAD	6 DUDLEY ROAD	MENDON	MA	01756
207	6-177-5-A-R	BOUCHARD PAUL E ET AL	5-A MILFORD STREET (OFF)	101 HARTFORD AVENUE WEST	MENDON	MA	01756
208	6-177-7-1-R	SPENCE DAVID M & NATALIA	7-1 MILFORD STREET (OFF)	56 MILFORD STREET	MENDON	MA	01756
209	6-177-58-0-R	VINCENT WILLIAM A & LEBLANC MARGARET M	58 MILFORD STREET	58 MILFORD STREET	MENDON	MA	01756
3224	6-177-59-0-R	YATES SUSAN M (ESTATE) & RICHARD WHEELWRIGHT	59 MILFORD STREET	59 MILFORD STREET	MENDON	MA	01756
210	6-177-60-0-R	KELL PATRICIA A TRUSTEE P A KELL IRREVOCABLE TRUST	60 MILFORD STREET	60 MILFORD STREET	MENDON	MA	01756
211	6-177-61-0-R	RUA ELAINE A	61 MILFORD STREET	61 MILFORD STREET	MENDON	MA	01756-0108
3304	6-177-62-A-R	ROSE STACY M & GREGORY JR	62-A MILFORD STREET	62 MILFORD STREET	MENDON	MA	01756
212	6-177-62-B-R	PAIVA RENATA	62-B MILFORD STREET	66 MILFORD STREET	MENDON	MA	01756
222	6-177-78-0-R	HOWARTH CAROL A TRUSTEE HOWARTH FAMILY TRUST	78 MILFORD STREET	4 EIGHT ROD ROAD	MENDON	MA	01756

Key	Parcel ID	Owner	Location	Mailing Street	Mailing City	ST	ZipCd/Country
556	9-177-36-0-E	TOWN OF MENDON	36 MILFORD STREET	20 MAIN STREET	MENDON	MA	01756
3520	9-177-36-S-R	TOWN OF MENDON C/O BWC MYSTIC RIVER LLC	36 MILFORD STREET	AMERESCO - SHERRIE BROGAN 111 SPEEN ST - STE 410	FRAMINGHAM	MA	01701
559	9-177-42-0-R	GHELLI ENRICO H & PATRICIA TRUSTEES GHELLI FAMILY RT	42 MILFORD STREET	42 MILFORD STREET	MENDON	MA	01756
560	9-177-43-0-R	WORCESTER COUNTY ELECTRIC CO C/O PROPERTY TAX DEPARTMENT	43 MILFORD STREET	40 SYLVAN ROAD	WALTHAM	MA	02451-2286
561	9-177-44-0-R	MENDON SMC REALTY LLC	44 MILFORD STREET	50 MILFORD STREET	MENDON	MA	01756
562	9-177-47-0-R	SPINNEY PROPERTIES LLC	47 MILFORD STREET	47 MILFORD STREET	MENDON	MA	01756
566	9-177-50-0-R	SWEET ROBERT & LAURIE A TRSTES SWEET LIVING TRUST	50 MILFORD STREET	50 MILFORD STREET	MENDON	MA	01756
570	9-177-56-0-R	SPENCE DAVID M & NATALIA	56 MILFORD STREET	56 MILFORD STREET	MENDON	MA	01756
571	9-177-57-0-R	LARSON PAUL J & MARIAN C	57 MILFORD STREET	P O BOX 376	MENDON	MA	01756

TOWN OF MENDON, MA
BOARD OF ASSESSORS
20 Main Street, Mendon, MA 01756

Abutters List Within 100 feet of Parcel 9/177/50/0



Key	Parcel ID	Owner	Location	Mailing Street	Mailing City	ST	ZipCd/Country
208	6-177-7-1-R	SPENCE DAVID M & NATALIA	7-1 MILFORD STREET (OFF)	56 MILFORD STREET	MENDON	MA	01756
209	6-177-58-0-R	VINCENT WILLIAM A & LEBLANC MARGARET M	58 MILFORD STREET	58 MILFORD STREET	MENDON	MA	01756
561	9-177-44-0-R	MENDON SMC REALTY LLC	44 MILFORD STREET	50 MILFORD STREET	MENDON	MA	01756
562	9-177-47-0-R	SPINNEY PROPERTIES LLC	47 MILFORD STREET	47 MILFORD STREET	MENDON	MA	01756
563	9-177-49-0-R	FUNARI GEORGE C TRUSTEE LANDMARK REALTY TRUST II	49 MILFORD STREET	297 BOSTON ROAD	SUTTON	MA	01590
566	9-177-50-0-R	SWEET ROBERT & LAURIE A TRSTES SWEET LIVING TRUST	50 MILFORD STREET	50 MILFORD STREET	MENDON	MA	01756
565	9-177-51-0-R	FUNARI GEORGE C TRUSTEE 51 MILFORD ST REALTY TRUST	51 MILFORD STREET	297 BOSTON ROAD	SUTTON	MA	01590
567	9-177-53-0-R	ROSSETTI ROBERT J C/O ROSSETTI ROBERT A	53 MILFORD STREET	39 VEERY ROAD	ATTLEBORO	MA	02703
568	9-177-54-0-R	MAY LISA M	54 MILFORD STREET	264 SOUTH MAIN STREET	HOPEDALE	MA	01747
570	9-177-56-0-R	SPENCE DAVID M & NATALIA	56 MILFORD STREET	56 MILFORD STREET	MENDON	MA	01756

5-129-22-0

BROOKVIEW LLC
12 DUDLEY ROAD
MENDON, MA 01756

6-124-12-0

GATELY THOMAS J & TANYA L
6 WESTCOTT ROAD
HOPEDALE, MA 01747

6-124-20-0

GILMORE-CAICO BETH A
12 WESTCOTT ROAD
HOPEDALE, MA 01747

6-129-4-0

VAZQUEZ RAFAEL & LILIA
4 DUDLEY ROAD
MENDON, MA 01756

6-129-5-0

LANDERS BRENDAN MICHAEL &
DARAH MARIE
5 DUDLEY ROAD
MENDON, MA 01756

6-129-6-0

WILLIS MARK B TRUSTEE 1/2
WENDY L WILLIS TRUSTEE 1/2
6 DUDLEY ROAD
MENDON, MA 01756

6-177-5-A

BOUCHARD PAUL E ET AL
101 HARTFORD AVENUE WEST
MENDON, MA 01756

6-177-7-1

SPENCE DAVID M & NATALIA
56 MILFORD STREET
MENDON, MA 01756

6-177-58-0

VINCENT WILLIAM A
& LEBLANC MARGARET M
58 MILFORD STREET
MENDON, MA 01756

6-177-59-0

YATES SUSAN M (ESTATE) &
RICHARD WHEELWRIGHT
59 MILFORD STREET
MENDON, MA 01756

6-177-60-0

KELL PATRICIA A TRUSTEE
P A KELL IRREVOCABLE TRUST
60 MILFORD STREET
MENDON, MA 01756

6-177-61-0

RUA ELAINE A
61 MILFORD STREET
MENDON, MA 01756-0108

6-177-62-A

ROSE STACY M & GREGORY JR
62 MILFORD STREET
MENDON, MA 01756

6-177-62-B

PAIVA RENATA
66 MILFORD STREET
MENDON, MA 01756

6-177-78-0

HOWARTH CAROL A TRUSTEE
HOWARTH FAMILY TRUST
4 EIGHT ROD ROAD
MENDON, MA 01756

9-177-36-0

TOWN OF MENDON
20 MAIN STREET
MENDON, MA 01756

9-177-42-0

GHELLI ENRICO H & PATRICIA
TRUSTEES GHELLI FAMILY RT
42 MILFORD STREET
MENDON, MA 01756

9-177-43-0

WORCESTER COUNTY ELECTRIC CO
C/O PROPERTY TAX DEPARTMENT
40 SYLVAN ROAD
WALTHAM, MA 02451-2286

9-177-44-0

MENDON SMC REALTY LLC
50 MILFORD STREET
MENDON, MA 01756

9-177-47-0

SPINNEY PROPERTIES LLC
47 MILFORD STREET
MENDON, MA 01756

9-177-49-0

FUNARI GEORGE C TRUSTEE
LANDMARK REALTY TRUST II
297 BOSTON ROAD
SUTTON, MA 01590

9-177-50-0

SWEET ROBERT & LAURIE A TRSTES
SWEET LIVING TRUST
50 MILFORD STREET
MENDON, MA 01756

9-177-53-0

ROSSETTI ROBERT J
C/O ROSSETTI ROBERT A
39 VEERY ROAD
ATTLEBORO, MA 02703

9-177-54-0

MAY LISA M
264 SOUTH MAIN STREET
HOPEDALE, MA 01747

9-177-56-0

SPENCE DAVID M & NATALIA
56 MILFORD STREET
MENDON, MA 01756

9-177-57-0

LARSON PAUL J
& MARIAN C.
P O BOX 376
MENDON, MA 01756

Notification to Abutters
Under the Massachusetts Wetlands Protection Act

In accordance with the second paragraph of the Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following:

The name of the applicant is: Robert Sweet.

The applicant has filed a Notice of Intent with the Mendon Conservation Commission seeking permission to remove, fill, dredge or alter an Area Subject to Protection Under the Wetlands Protection Act (General Laws Chapter 131, Section 40).

The Notice of Intent is for the following activity: The proposed construction of a commercial building within buffer zone to Bordering Vegetated Wetlands and after the fact compliance for incomplete wetland replication from DEP # 218-674.

The address of the lot where the activity is proposed is 50 Milford St. Mendon, MA.

Copies of the Notice of Intent may be examined at the Mendon Conservation Commission Office, 20 Main Street, Mendon, MA 01756 between the hours of 10:00 a.m. and 2:00 p.m., Tuesdays and Thursdays.

Copies of the Notice of Intent and more information may be obtained from either (check one) the applicant ____, or the applicant's representative __X__, by calling this telephone number (508) 393 - 3784 between the hours of 9 and 4 on the following days of the week: MONDAY-FRIDAY.

The Public Hearing will be held via remote participation on 10/29/20 at 7:30 PM. More information may be obtained from the Mendon Conservation Commission by calling (508) 634-6898.

NOTE: Notice of the public hearing, including the date, time, and place, will be published at least five (5) days in advance of the hearing in the Milford Daily News.

NOTE: Notice of the public hearing, including its date, time, and place, will be posted in the Mendon Town Hall not less than forty-eight (48) hours in advance.

NOTE: You may contact the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call the Central Region at (508) 792-7650.

October 8, 2019

Robert Sweet
50 Milford Street
Mendon, MA 01756

Re: 50 Milford Street, Mendon

Dear Mr. Sweet:

On October 8, 2019 the wetland resources were delineated on land located at the above referenced site. The wetland border was flagged using the criteria in the most recent edition of MA Wetland Protection Act (WPA) and Regulations 310 CMR 10.00 et al and the local wetland bylaw. Hydric soil indicators, vegetation changes, hydrological indicators, and topography were all considered for delineation purposes.

The resources on site consist of a Bordering Vegetated Wetland (BVW), Bank of a Pond and Bank of an intermittent stream channel. There is also an abandoned cranberry bog in the field (flagged with series B1-19) which according to historic USGS and Aerial photographs appears to have been created in a wetland and therefore is jurisdictional (classified as BVW since it is hydrologically connected via culverts to a natural wetland flagged with series "A" and a pond). The cranberry bog also consists of 100 percent wetland species of sedges, rushes, cattail, cranberry, and loosestrife with hydric soils and other indicators of hydrology.

A BVW, flagged with series A1-30 and C1-4, is located along the western property line and includes the Bank of an on-site pond. This wetland is vegetated with sedges, rushes, s. moss, cattail, red maple, highbush blueberry and winterberry. Department of Environmental Protection BVW field data forms were documented at wetland flag A-4 (see attached forms). Bank of an intermittent stream channel and associated BVW was flagged with series E1-18 and D1-29 in the northern portion of the property. This system is draining an off-site BVW. The Bank channel is 2-4 feet wide with 4-18-inch banks. No flowing water was observed on October 8, 2019. BVW associated along the banks of the channel and at the bottom of the channel is vegetated with sedges, rushes, loosestrife, sweet pepperbush, red maple, brier and poison ivy. Department of Environmental Protection BVW field data forms were documented at wetland flag D-24 (see attached forms).

According to the Mass GIS data layers this site is not located within Estimated and/or Priority Habitat of Rare Wildlife, is not located within an Area of Critical Concern, is not located within 200-ft of a mapped perennial stream and is not located in a jurisdictional FEMA Flood Zone and no potential or certified vernal pools are located on the site (however the stream channel flagged on site with series E and D is draining a mapped potential vernal pool).

Any work within the resource areas (BVW, Bank) and/or their 100-foot buffer zones requires a Request for Determination (RDA) or Notice of Intent (NOI) be filed with the Conservation Commission. If you need further assistance with permitting, please call us we would be happy to assist.

Very truly yours,

Scott Goddard,
Principal & PWS

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: _____ Prepared by: **Goddard Consulting LLC** Project location: **50 Milford St, Mendon** DEP File #: _____

Check all that apply:
- [ ] Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- [x] Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- [ ] Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **D-24** Transect Number: **Upgradient** Date of Delineation: **8-Oct-19**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
Black birch	*Betula lenta*	36%	64.3%	Yes	FACU
Red Oak	*Quercus rubra*	20%	35.7%	Yes	FACU
Sapling Layer					
Red Oak	*Quercus rubra*	10%	100.0%	Yes	FACU
Shrub Layer					
Rambler rose	*Rosa multiflora*	10%	100.0%	Yes	FACU
Climbing Woody Vine					
American bittersweet	*Celastrus scandens*	10%	100.0%	Yes	FACU
Ground Cover					
Goldenrod	*Solidago sp.*	63%	63.6%	Yes	NI
Upland grasses	*Gramineae sp.*	36%	36.4%	Yes	FACU

Remarks: * An asterisk after common plant name indicates stunted growth; ** indicates extremely stunted growth

Morphological Adaptations: 0 **Description:** _____

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FACW, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 0 **Number of dominant non-wetland indicator plants: 7**

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? no

If vegetation alone is presumes adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☑ yes ☐ no

title/date: **Soil Survey of Worcester County, Southern Part - 1998**

map number:

soil type mapped: **Canton fine sandy loam**

hydric soil inclusions:

Are field observations consistent with soil survey? ☑ yes ☐ no

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
A	0-8"	10YR2/2	
B	8-18"	10YR5/6	

Remarks:

3. Other:

Conclusion: Is soil hydric? ☐ yes ☑ no

Other Indicators of Hydrology: (check all that apply and describe)

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in BVW:
- ☐ Oxidized rhizoshperes:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion for Upgradient of D-24	**yes**	**no**
Number of wetland indicator plants >= number of non-wetland plants		**X**
Wetland hydrology present:		
hydric soils present		**X**
other indicators of hydrology present		**X**
Sample location is in a BVW		**X**

Submit this form with the Request for Determination of Applicability or Notice of Intent

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: _____ Prepared by: **Goddard Consulting LLC** Project location: **50 Milford St, Mendon** DEP File #: _____

Check all that apply:
- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **D-24** Transect Number: **Downgradient** Date of Delineation: **8-Oct-19**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
Red Maple	*Acer rubrum*	10%	100.0%	Yes	FAC*
Sapling Layer					
Red Maple	*Acer rubrum*	10%	33.3%	Yes	FAC*
Willow	*Salix sp.*	20%	66.7%	Yes	FACW*
Shrub Layer					
Steeplebush	*Spiraea tomentosa*	10%	100.0%	Yes	FACW*
Climbing Woody Vine					
Eastern poison ivy	*Toxicodendron radicans*	10%	100.0%	Yes	FAC*
Ground Cover					
Lamp rush	*Juncus effusus*	20%	35.7%	Yes	OBL*
Goldenrod	*Solidago sp.*	36%	64.3%	Yes	NI

Remarks: * An asterisk after common plant name indicates stunted growth; ** indicates extremely stunted growth

Morphological Adaptations: 0 **Description:** _____

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FACW, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 6 **Number of dominant non-wetland indicator plants: 1**

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes

If vegetation alone is presumes adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☑ yes ☐ no

title/date: **Soil Survey of Worcester County, Southern Part - 1998**

map number:

soil type mapped: **Canton fine sandy loam**

hydric soil inclusions: **none listed**

Are field observations consistent with soil survey? ☐ yes ☑ no

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
O	0-12"	10YR2/1	
C	12-19	10YR5/3	10YR5/6

Remarks:

3. Other:

Conclusion: Is soil hydric? ☑ yes ☐ no

Other Indicators of Hydrology: (check all that apply and describe)

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☑ Drainage patterns in BVW:
- ☑ Oxidized rhizoshperes:
- ☑ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion for Downgradient of D-24

	yes	no
Number of wetland indicator plants >= number of non-wetland plants	X	
Wetland hydrology present:		
hydric soils present	X	
other indicators of hydrology present	X	
Sample location is in a BVW	X	

Submit this form with the Request for Determination of Applicability or Notice of Intent

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: _____ Prepared by: **Goddard Consulting LLC** Project location: **50 Milford St, Mendon** DEP File #: _____

Check all that apply:
- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **A-4** Transect Number: **Upgradient** Date of Delineation: **8-Oct-19**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
Sapling Layer					
Red Oak	*Quercus rubra*	10%	100.0%	Yes	FACU
Shrub Layer					
Rambler rose	*Rosa multiflora*	20%	100.0%	Yes	FACU
Climbing Woody Vine					
American bittersweet	*Celastrus scandens*	10%	100.0%	Yes	FACU
Ground Cover					
Goldenrod	*Solidago sp.*	36%	43.9%	Yes	NI
Red clover	*Trifolium pratense*	10%	12.2%	No	FACU
Upland grasses	*Gramineae sp.*	36%	43.9%	Yes	FACU

Remarks: * An asterisk after common plant name indicates stunted growth; ** indicates extremely stunted growth

Morphological Adaptations: 0 **Description:** _____

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FACW, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 0 **Number of dominant non-wetland indicator plants: 5**

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? no

If vegetation alone is presumes adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☑ yes ☐ no

title/date: **Soil Survey of Worcester County, Southern Part - 1998**

map number:

soil type mapped: **Canton fine sandy loam**

hydric soil inclusions:

Are field observations consistent with soil survey? ☑ yes ☐ no

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
A	0-10"	10YR2/2	
B	10-18"	10YR5/4	

Remarks:

3. Other:

Conclusion: Is soil hydric? ☐ yes ☑ no

Other Indicators of Hydrology: (check all that apply and describe)

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in BVW:
- ☐ Oxidized rhizoshperes:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion for Upgradient of A-4	**yes**	**no**
Number of wetland indicator plants >= number of non-wetland plants		**X**
Wetland hydrology present:		
hydric soils present		**X**
other indicators of hydrology present		**X**
Sample location is in a BVW		**X**

Submit this form with the Request for Determination of Applicability or Notice of Intent

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: _____ Prepared by: **Goddard Consulting LLC** Project location: **50 Milford St, Mendon** DEP File #: _____

Check all that apply:
- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **A-4** Transect Number: **Downgradient** Date of Delineation: **8-Oct-19**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
Red Maple	*Acer rubrum*	36%	100.0%	Yes	FAC*
Sapling Layer					
Red Maple	*Acer rubrum*	10%	33.3%	Yes	FAC*
Willow	*Salix sp.*	20%	66.7%	Yes	FACW*
Shrub Layer					
Sweet pepperbush	*Clethra alnifolia*	36%	100.0%	Yes	FAC*
Climbing Woody Vine					
Eastern poison ivy	*Toxicodendron radicans*	10%	100.0%	Yes	FAC*
Ground Cover					
Sensitive fern	*Onoclea sensibilis*	36%	100.0%	Yes	FACW*

Remarks: * An asterisk after common plant name indicates stunted growth; ** indicates extremely stunted growth

Morphological Adaptations: 0 **Description:** _____

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FACW, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 6 **Number of dominant non-wetland indicator plants: 0**

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes

If vegetation alone is presumes adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☑ yes ☐ no

title/date: **Soil Survey of Worcester County, Southern Part - 1998**

map number:

soil type mapped: **Freetown muck**

hydric soil inclusions:

Are field observations consistent with soil survey? ☐ yes ☑ no

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
O	0-12"	10YR2/1	
C	12-19	10YR6/1	

Remarks:

3. Other:

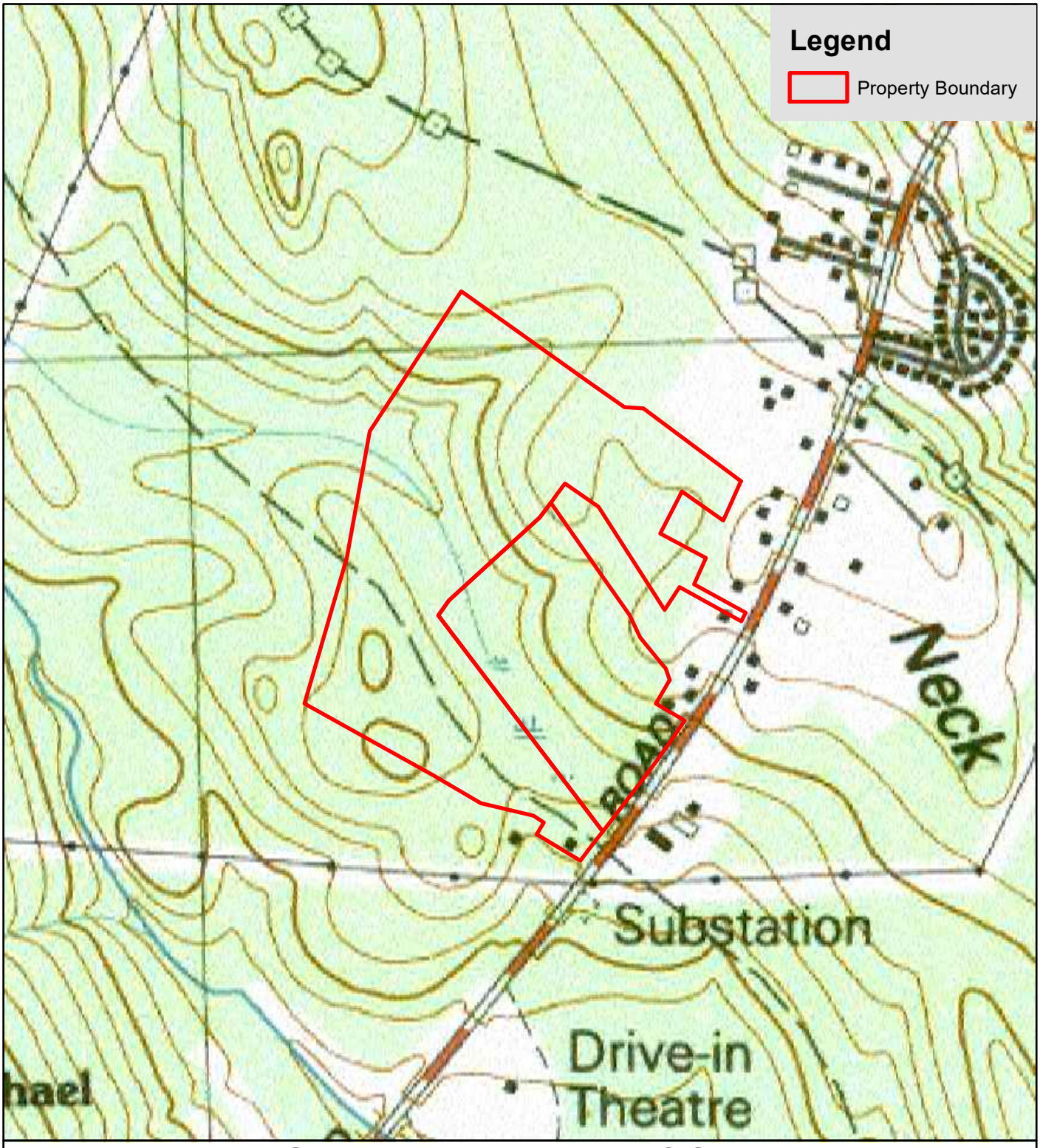
Conclusion: Is soil hydric? ☑ yes ☐ no

Other Indicators of Hydrology: (check all that apply and describe)

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☑ Drainage patterns in BVW:
- ☑ Oxidized rhizoshperes:
- ☑ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion for Downgradient of A-4	**yes**	**no**
Number of wetland indicator plants >= number of non-wetland plants	**X**	
Wetland hydrology present:		
hydric soils present	**X**	
other indicators of hydrology present	**X**	
Sample location is in a BVW	**X**	

Submit this form with the Request for Determination of Applicability or Notice of Intent



Orthophoto View of Site

50 Milford St. - Mendon, MA

(Map:9 , Lot: 177-50)

N

Date: 2/4/20

0 175 350 700 Feet

1 inch = 500 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING LLC
Strategic Wetland Permitting

USGS Site Locus

50 Milford St. - Mendon, MA
(Map:9 , Lot: 177-50)

N

Date: 2/4/20

0 125 250 500 Feet

1 inch = 333 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING LLC
Strategic Wetland Permitting

October 7, 2020

Mendon Conservation Commission
Mendon Town Hall
20 Main Street
Mendon, MA 01756

Re: Wetland Replication Plan
50 Milford St. Mendon, MA 01756

Dear Conservation Commission:

Attached please find the Wetland Replication Plan supplemental to the Notice of Intent application for the property addressed as 50 Milford St. Mendon, MA.

The current proposed project proposes no fill of wetlands. The purpose of this Wetland Replication Plan is to provide replication for wetland fill associated with the construction of the cranberry bog in the past that was not completed. The area of replication necessitated by the bog construction was to be ±9,130sf. The current project proposes 10,530sf of replication around the existing cranberry bog wetland. The surrounding edges of the bog to the north, west, and east will be graded down to elevation 320 in order to match the existing conditions of the adjacent wetland prior to planting.

Figure 1. The on-site cranberry bog, facing north.

Figure 2. The on-site cranberry bog, facing west.

Figure 3. The on-site cranberry bog, facing northwest. The replication area will wrap around the bog on the north, east, and western edges.

Figure 4. The easterm edge of the on-site cranberry bog. Along with the northern and western edge, this side will be graded down for the construction of the replication area.

This cranberry bog wetland is vegetated with sedges, rushes, sphagnum moss, cattails, red maple, highbush blueberry and winterberry. This wetland replication plan proposes the following native planting selections as plants that mirror the existing conditions of the wetland and that will thrive in the proposed replication area. To determine the amount of species needed, the Army Corps of Engineers guidelines for wetland replication area replacement planting specifications were followed. These specifications state that shrubs be planted 8-10 feet on center and herbaceous material 3-4 feet on center throughout the replication area. With these calculations, the 10,530sf wetland replication area should be planted/seeded with a total of 156 shrubs, 60 herbaceous plugs, and 5lbs of New England Wetland Mix.

Table 1: Planting Schedule

Size	Quantity	Common Name	Scientific Name
1-2 gallon(s) or 2-4' or larger	33	Red Maple	*Acer rubrum*
1-2 gallon(s) or 2-4' or larger	33	Sweet Pepperbush	*Clethra alnifolia*
1-2 gallon(s) or 2-4' or larger	30	Highbush Blueberry	*Vaccinium corymbosum*
1-2 gallon(s) or 2-4' or larger	30	Silky Dogwood	*Cornus amomuum*
1-2 gallon(s) or 2-4' or larger	30	Winterberry	*Ilex verticillata*
2' plug or larger	28	Sensitive Fern	*Onoclea sensibillis*
2' plug or larger	28	Cinnamon Fern	*Osmundastrum cinnamomeum*
-	5lb	New England Wetland Mix.	var.

General Installation Procedures

Supervision: All work within the replication area shall be supervised by a qualified wetland scientist with a minimum of five years' experience. The supervisor shall submit monitoring reports to the Conservation Commission as described below. Reports shall contain details of all work performed and photographs of completed conditions.

Step 1: Install Erosion Control Barriers
Prior to any work, erosion control barriers will be installed at the downgradient edge of the limit of work.

Step 2: Grade Replication Area to Appropriate Elevation
In order to facilitate the growth of wetland species in the area, the area will be graded to elevation 319.5 prior to adding appropriate soil.

Step 3: Add Appropriate Soil
A wetland scientist will ensure that at least 6in. of this soil is organic rich topsoil is added to the areas prior to planting. This will bring the elevation of the replication area to 320 to match the existing

conditions of the on-site cranberry bog. The topsoil that comes from the excavation of the berms surrounding the bog can be reused for this purpose as approved by a Wetland Scientist.

Step 4: Planting

Precise citing of plants may be determined by the wetland scientist in the field prior to installation, however overall placement should be reflective of the Wetland Replication Plan submitted with this document. Planting spacing shall be as follows: shrubs spaced at 8-10' on center and herbaceous species 3-4' on center. All plantings will be removed from burlap sacks, wire cages and plastic containers prior to planting. Each plant will have it roots loosened prior to planting to encourage root growth away from the root ball. Planting holes shall be dug a minimum of 2x the diameter of the root ball to reduce soil compaction and allow for healthy root establishment.

Step 5: Seeding

Wetland seed mix comparable to that specified in this document, shall be scattered evenly by hand throughout the replication areas. Following seeding a light application of weed free hay mulch shall be applied to the replication area to encourage seed germination and reduce water loss.

Step 6: Replication Monitoring

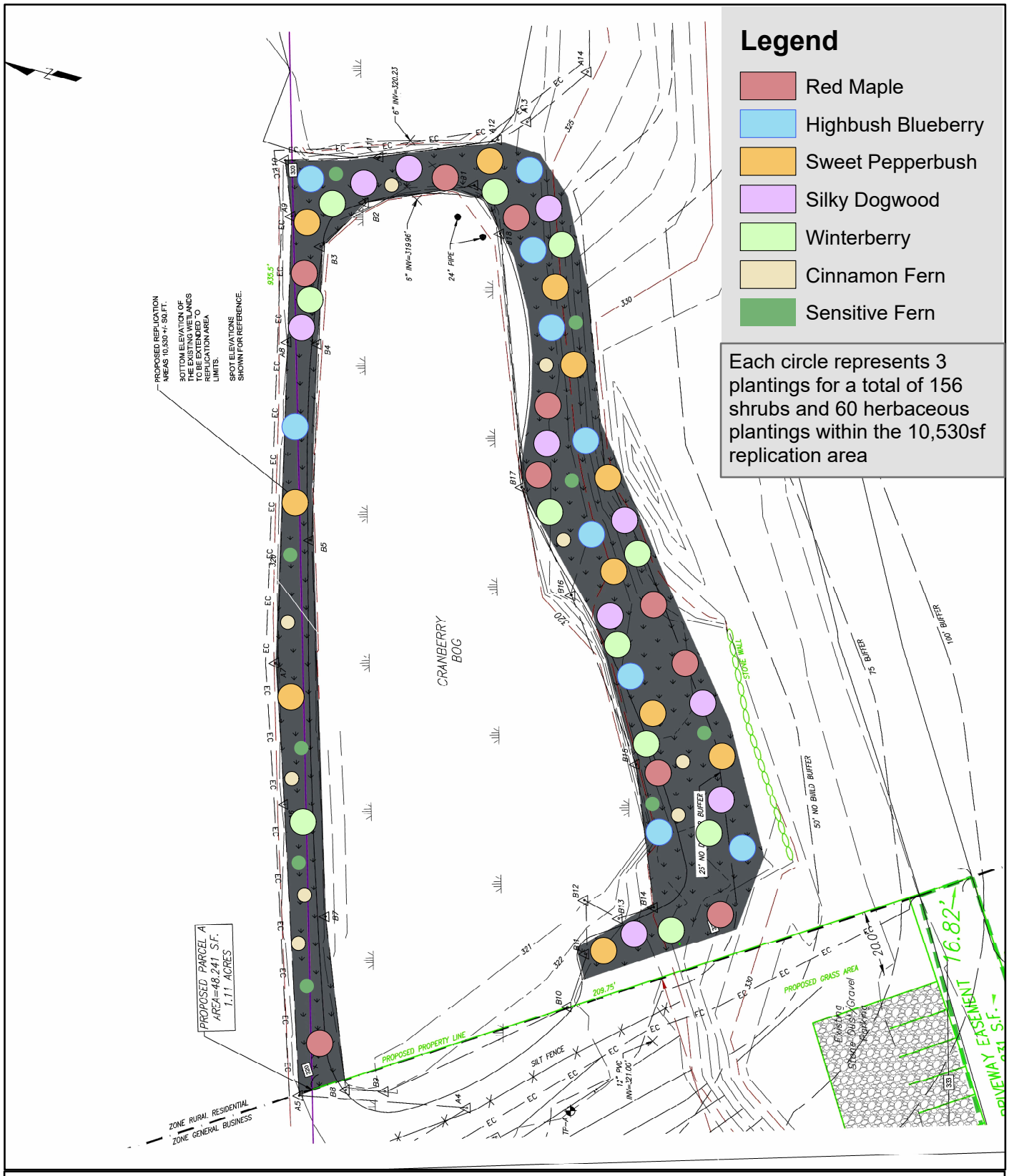
a. **Seasonal monitoring reports** shall be prepared for the replication area by a qualified wetland scientist for a period of two additional years after replication completion. This monitoring program will consist of early summer and early fall inspections and will include photographs and details about the vitality of the replication area. Monitoring reports shall be submitted to the Commission by November 15th of each year. Monitoring reports shall describe, using narratives, plans, and color photographs, the physical characteristics of the replication area with respect to stability, survival of vegetation and plant mortality, aerial extent and distribution, species diversity and vertical stratification (i.e. herb, shrub and tree layers). Invasive species will be documented if present within areas impacted by the project, monitored and removed.

b. **At least 75% survival of installed native plants** shall be observed by the end of the second growing season. If the replication area does not meet the 75% survival requirement by the end of the second growing season after installation, the Applicant shall submit a remediation plan to the Commission for approval that will achieve, under the supervision of a Wetland Specialist, replication goals. This plan must include an analysis of why the areas have not been successful and how the Applicant intends to resolve the problem.

If there are any questions concerning this report, please do not hesitate to contact us.

Very truly yours,

Scott Goddard,
Principal & PWS



Wetland Replication Plan

50 Milford St. - Mendon, MA

(Map:9 , Lot: 177-44, 177-50)

Date: 10/7/20

Feet

0 12.5 25 50

1 inch = 40 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING LLC
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STORMWATER REPORT & DRAINAGE CALCULATIONS

50 MILFORD ST
MENDON MA

September 22nd 2020

Prepared By: Gamze Munden, P.E

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Table of Contents

Appendices

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Design Calculations & Standards

Pre- and Post-Development drainage calculations were prepared utilizing the U.S. Soil Conservation Service Technical Release 20 – Urban Hydrology for Small Watersheds, Technical Release 55 - Urban Hydrology for Small Watersheds, the U.S. Soil Conservation Service National Engineering Hydrology Handbook, design rainfall data obtained from Extreme Precipitation Tables presented by Northeast Regional Climate Center, and accepted engineering design practice. These standards were applied in the use of HydroCAD stormwater modeling software to generate a representative model of existing hydrology and proposed stormwater management features. Details of this model can be found in the appendices of this report.

Where applicable, MA Department of Environmental Protection (DEP) Stormwater Handbook performance standards, along with accepted engineering practices, are utilized in preparing a stormwater management system design.

Locus Analysis & Project Summary

The project proponent and current property owners, Laurie and Robert Sweet, are proposing to subdivide an approximately 48,241 sq.ft. from their existing property located at 50 Milford Street in Mendon MA. Calculations and considerations discussed in this report include the existing and proposed conditions within the limits of the proposed parcel (depicted as Parcel A on the plans). Existing parcel is approximately 10.3 acres occupying both general business and rural residence zones and has a sngle-family dwelling and a commercial building. Proposed parcel is within the general business zone and proposed building is a commercial warehouse. The proposed parcel is located on the North side of Milford and has a 249 ft frontage, and abuts wetlands/cranberry bogs in the back.

The NRCS Soil Survey classifies the native soils on site as a "Canton fine sandy loam, 3 to 8 percent slopes (420 B)" and “Freetown muck, ponded, 0 to 1 percent slopes (53A) that has rating "B" and “B/D”, respectively. Only approximately quarter of the proposed parcel has the rating “B” which indicates higher infiltration rates, however soil profile being consisted of

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mostly “B/D” soils makes the overall soil profile of the site of the low infiltration soils. Four (4) test pits were performed by a registered soil evaluator for the proposed septic system on the south east corner and two (2) test pits were performed by a registered professional engineer on the northern side of the property. Please also refer to the test exploration logs as depicted on the Proposed Commercial Development Plan in Appendix F.

Pre-Development Condition

Existing conditions of the lot includes an asphalt paved driveway and stone dust/gravel parking area that is impervious. The total existing impervious footprint on the site is 11,281 square feet. The existing topography slopes downhill from the street and the driveway towards the back of the property in slopes ranging from 1 to 50 percent.

Photo 1.
View of the Driveway and Parking Area within the Limits of Proposed Parcel A

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For the purposes of producing a hydrologic model, one design point was analyzed for the pre-development conditions, which includes runoff from front to the back towards the existing wetlands area. The existing conditions on site are considered as woods with light to dense underbrush.

Photo 2.

View of the Existing conditions from Milford Street for Proposed Parcel A

There is a 3-in pipe exposed on the southeast corner of the proposed Parcel A within a basin shaped area with a concrete wall followed by a rock swale another 12” pipe inlet at the end of the swale in the Northeast corner of the proposed Parcel A. The 12-inch section has an outlet at the border of wetlands and cranberry bogs on the outside of the proposed Parcel A limits and within proposed Parcel B limits. The owner of the property stated that the 3” invert is connected to the existing 1 story commercial building perimeter drain and was not designed and or sized by a registered professional engineer. Therefore it is proposed the 3” pipe to be disconnected, removed to the extend possible and buried, and, the rock swale and the concrete wall also to be removed. Any possible effects of these mentioned on the existing runoff for the proposed Parcel A is not considered for drainage calculations for the following reasons:

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1. During on-site inspection the 3-in pipe appeared to be discharging droplets of water in infrequent periods which might indicate the pipe is crushed, blocked, disconnected or too flat,
2. The basin-like area did not appear to have standing water,
3. The rock swale appeared dry and rip-rap was not consistent and bare in several areas.
4. Connected to the perimeter drain intended to manage groundwater.

Which all might be considered to indicate the system is not contributing to the stormwater management and/or runoff attenuation.

Drainage calculations for the pre-development conditions are shown with the post-development conditions below.

Post-Development Condition

Upon legal approval of the proposed parcel, the applicant proposes a 6000 sq.ft. warehouse, a pervious gravel parking/driving/bay area (5963 sq.ft.) supported with a system such as geoweb or an approved equal to support proposed vehicle loads without braking to prevent compaction of the gravel which would reduce permeability, and a septic system. Grade is proposed to be raised 1 to 6 feet. Proposed conditions proposed a reduction in impervious area in the amount of 1050 sq.ft. approximately.

For the purposes of producing a hydrologic model, one design point was analyzed for the pre-development conditions, which includes runoff from front to the back towards the existing wetlands area. The ground conditions were considered as grass cover as accordingly with the proposed development conditions as depicted on the attached plans.

Drainage calculations for the pre-development conditions are shown with the post-development conditions below.

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Table 1. Summary of Analyses Results

Storm Frequency	Rainfall 24 -hr (in)	Existing Conditions Peak Rate of Runoff (cfs)	Proposed Conditions Peak Rate of Runoff (cfs)
2 - yr	3.24	2.09	2.05
10 - yr	4.86	3.86	3.74
25 - yr	6.12	5.27	5.08
50 - yr	7.29	6.59	6.32
100 - yr	8.69	8.16	7.81

Stormwater Management

Structural and permanent stormwater management systems were not proposed due to the reduction in impervious surfaces are proposed. Construction and post-construction phase erosion control measures are discussed below. See below compliance section to compliance with standards and waivers seeked.

Erosion Control

Construction Erosion Control

During construction, erosion control will be installed around the limit of work as indicated on the site plans and maintained until the entire site is stabilized with vegetation. The erosion control barrier will consist of a staked-in silt fence placed north and west sides of the proposed construction area as depicted on the proposed conditions plan and detailed in the Construction Period Pollution Prevention Plan in Appendix G.

Post-Construction Erosion Control

Post construction erosion control will be accomplished with grass vegetation in general and other specific requirements of the registered professional who will assess and design the geotechnical specifications of the proposed slope and foundation. Long term operation and maintenance plan must be provided by the gravel driveway system manufacturer and the geotechnical engineer responsible for the slope design.

Compliance with Stormwater Management Standards

The proposed project complies with the Stormwater Management Standards to the maximum extent practicable as follows:

Standard 1: No New Stormwater Conveyances of Untreated Stormwater or Erosion Offsite

There will be no new stormwater conveyances of untreated stormwater since peak runoff will be reduced with the proposed development.

Standard 2: Peak Rate Attenuation

Peak rate of runoff is reduced with the proposed conditions

Standard 3: Recharge and Discharge Volume

The volume of location of the D rated soils on site does not allow recharge infiltration on-site. The applicant is seeking a waiver of this standard.

Standard 4: Water Quality

Runoff from paved parking areas are reduced and the roof runoff is considered clean.

The applicant is seeking a waiver of this standard.

Standard 5: Land Uses with Higher Pollutant Loads (LUHPPLs)

Not applicable.

Standard 6: Critical Areas

The site is not located within a critical area.

Standard 7: Redevelopment

This project is considered redevelopment.

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

See Construction Period Pollution Prevention Plan in Appendix G.

Standard 9: Long Term Operation and Maintenance Plan

Post construction erosion control measures are provided in this report. The gravel roadway system O&M plan must be provided by the manufacturer and slope stability and erosion control and O&M plan must be provided by geotechnical engineer responsible for the slope design.

Standard 10: Prohibition of Illicit Discharges

Routine visual inspections, good housekeeping and compliance with MassDEP Stormwater Management and Erosion and Sediment Control Policies are required to prevent illicit discharges into the stormwater system.

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Appendix A
GIS and FEMA Maps

FEMA Flood Map Service Center: Search By Address

Enter an address, place, or coordinates:

50 milford street mendon ma

Search

The USGS will be conducting network maintenance Friday, July 24th, through Sunday, July 26th. Maintenance may impact the ability to access the National Map data which will affect the visibility of the base map (for example: trees, houses) during this time frame.

Whether you are in a high risk zone or not, you may need flood insurance (https://www.fema.gov/national-flood-insurance-program) because most homeowners insurance doesn't cover flood damage. If you live in an area with low or moderate flood risk, you are 5 times more likely to experience flood than a fire in your home over the next 30 years. For many, a National Flood Insurance Program's flood insurance policy could cost less than $400 per year. Call your insurance agent today and protect what you've built.

Learn more about steps you can take (https://www.fema.gov/what-mitigation) to reduce flood risk damage.

Search Results—Products for **MENDON, TOWN OF**

Show ALL Products » (https://msc.fema.gov/portal/availabilitySearch?addcommunity=250316&communityName=MENDO

The flood map for the selected area is number **25027C1031E**, effective on **07/04/2011**

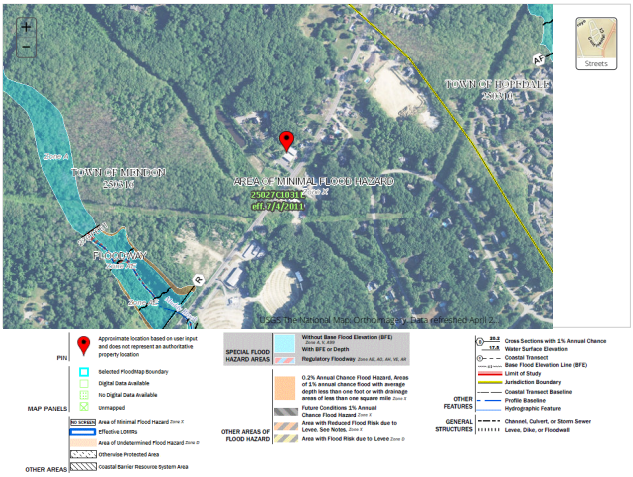
DYNAMIC MAP
PRINT MAP/ FIRMette

MAP IMAGE
DOWNLOAD FIRM PANEL
(https://msc.fema.gov/portal/downloadProduct?filepath=/25/P/Firm/25027C1031E.png&productTypeID=FINAL_PRODUCT&productSubTypeID=FIRM_PANEL&productID=25027C1031E)

Changes to this FIRM
Revisions (0)
Amendments (1)
Revalidations (1)

You can choose a new flood map or move the location pin by selecting a different location on the locator map below or by entering a new location in the search field above. It may take a minute or more during peak hours to generate a dynamic FIRMette. If you are a person with a disability, are blind, or have low vision, and need assistance, please contact a map specialist (https://msc.fema.gov/portal/resources/contact).

Go To NFHL Viewer » (https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d487



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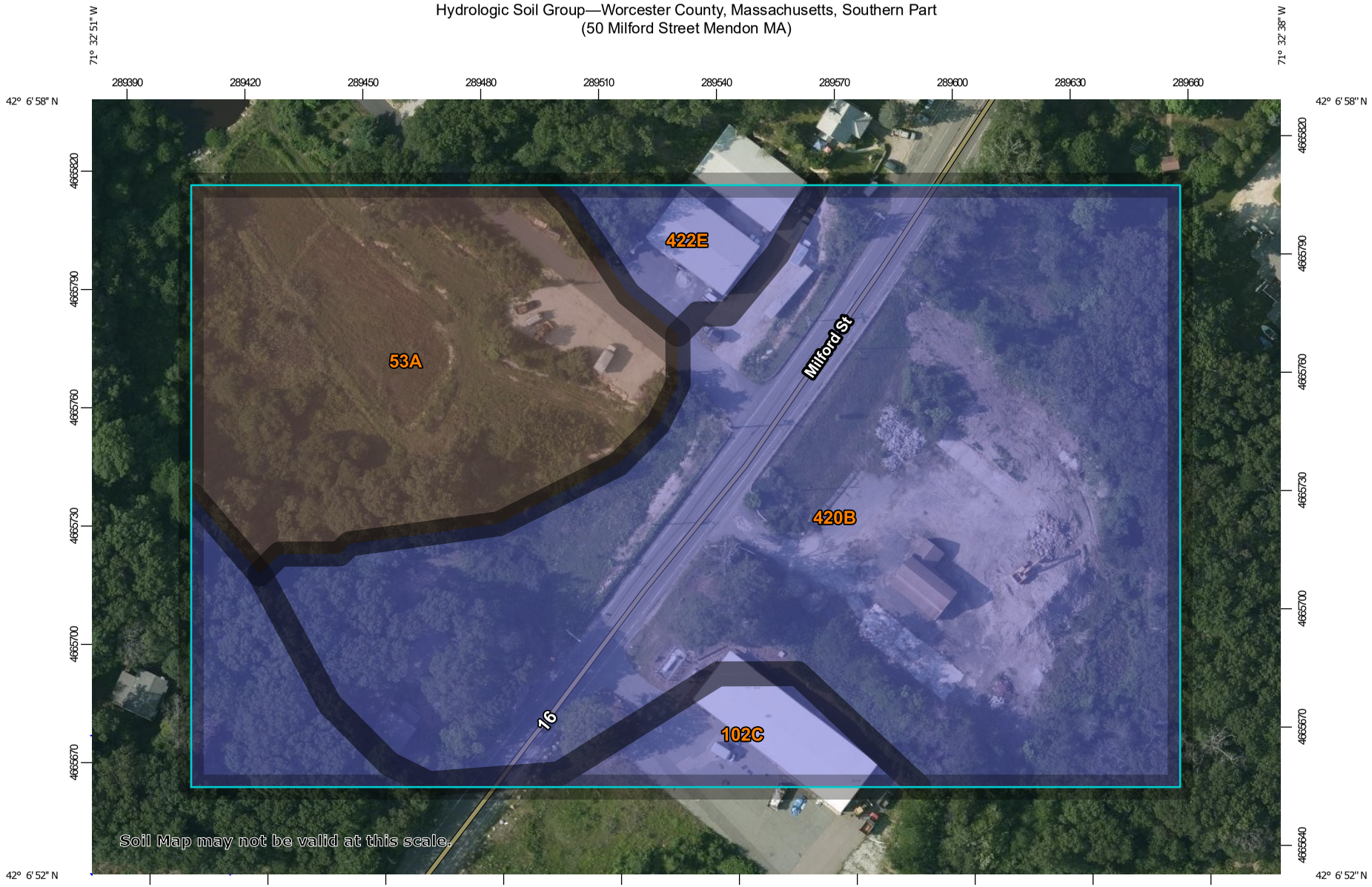
Appendix B
NRCS Soil Data

Hydrologic Soil Group—Worcester County, Massachusetts, Southern Part
(50 Milford Street Mendon MA)



Map Scale: 1:1,380 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

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 1:25,000.

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

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

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

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

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

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

Soil Survey Area: Worcester County, Massachusetts, Southern Part
Survey Area Data: Version 13, Jun 11, 2020

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

Date(s) aerial images were photographed: Jul 28, 2019—Aug 15, 2019

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
53A	Freetown muck, ponded, 0 to 1 percent slopes	B/D	2.4	25.3%
102C	Chatfield-Hollis-Rock outcrop complex, 0 to 15 percent slopes	B	0.9	9.8%
420B	Canton fine sandy loam, 3 to 8 percent slopes	B	5.8	61.0%
422E	Canton fine sandy loam, 15 to 35 percent slopes, extremely stony	B	0.4	3.9%
Totals for Area of Interest			**9.5**	**100.0%**

Description

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

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

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

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

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

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

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

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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Appendix C
Precipitation Data

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	Massachusetts
Location	
Longitude	71.546 degrees West
Latitude	42.116 degrees North
Elevation	0 feet
Date/Time	Tue, 28 Jul 2020 12:06:25 -0400

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.29	0.45	0.55	0.73	0.91	1.14	**1yr**	0.78	1.08	1.33	1.68	2.12	2.70	2.95	**1yr**	2.39	2.84	3.27	3.97	4.59	**1yr**
2yr	0.35	0.55	0.68	0.90	1.13	1.42	**2yr**	0.97	1.30	1.64	2.06	2.58	3.24	3.55	**2yr**	2.87	3.41	3.92	4.65	5.28	**2yr**
5yr	0.42	0.65	0.82	1.10	1.40	1.79	**5yr**	1.21	1.62	2.07	2.61	3.26	4.08	4.53	**5yr**	3.61	4.35	4.98	5.87	6.55	**5yr**
10yr	0.47	0.75	0.94	1.28	1.66	2.13	**10yr**	1.44	1.91	2.49	3.13	3.91	4.86	5.44	**10yr**	4.30	5.23	5.97	7.00	7.72	**10yr**
25yr	0.56	0.90	1.14	1.57	2.08	2.69	**25yr**	1.80	2.38	3.14	3.96	4.94	6.12	6.94	**25yr**	5.41	6.67	7.60	8.84	9.58	**25yr**
50yr	0.63	1.02	1.31	1.84	2.47	3.23	**50yr**	2.13	2.81	3.78	4.76	5.92	7.29	8.35	**50yr**	6.45	8.03	9.12	10.55	11.28	**50yr**
100yr	0.73	1.19	1.53	2.16	2.94	3.85	**100yr**	2.53	3.32	4.52	5.69	7.07	8.69	10.06	**100yr**	7.69	9.67	10.96	12.60	13.30	**100yr**
200yr	0.84	1.36	1.77	2.53	3.49	4.60	**200yr**	3.01	3.92	5.41	6.82	8.46	10.37	12.11	**200yr**	9.17	11.65	13.17	15.05	15.68	**200yr**
500yr	1.01	1.66	2.16	3.14	4.39	5.83	**500yr**	3.79	4.89	6.87	8.66	10.72	13.10	15.51	**500yr**	11.59	14.91	16.80	19.04	19.49	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.24	0.37	0.45	0.60	0.74	0.92	**1yr**	0.64	0.90	1.10	1.42	1.86	2.42	2.67	**1yr**	2.14	2.57	2.86	3.36	4.12	**1yr**
2yr	0.34	0.53	0.65	0.88	1.09	1.29	**2yr**	0.94	1.26	1.47	1.93	2.47	3.14	3.43	**2yr**	2.78	3.30	3.79	4.47	5.10	**2yr**
5yr	0.39	0.60	0.74	1.02	1.30	1.53	**5yr**	1.12	1.50	1.74	2.28	2.88	3.74	4.16	**5yr**	3.31	4.00	4.60	5.35	6.00	**5yr**
10yr	0.43	0.66	0.82	1.14	1.48	1.75	**10yr**	1.28	1.71	1.98	2.58	3.24	4.27	4.82	**10yr**	3.78	4.63	5.33	6.11	6.79	**10yr**
25yr	0.50	0.76	0.94	1.34	1.77	2.07	**25yr**	1.52	2.02	2.34	3.06	3.80	5.10	5.84	**25yr**	4.51	5.61	6.46	7.26	7.99	**25yr**
50yr	0.55	0.84	1.04	1.50	2.02	2.35	**50yr**	1.74	2.30	2.66	3.47	4.28	5.83	6.78	**50yr**	5.16	6.52	7.49	8.29	9.05	**50yr**
100yr	0.61	0.93	1.16	1.68	2.30	2.67	**100yr**	1.99	2.61	3.02	3.95	4.83	6.67	7.91	**100yr**	5.91	7.60	8.71	9.48	10.26	**100yr**
200yr	0.68	1.03	1.30	1.88	2.63	3.05	**200yr**	2.27	2.99	3.43	4.51	5.45	7.66	9.19	**200yr**	6.78	8.83	10.13	10.84	11.65	**200yr**
500yr	0.79	1.17	1.51	2.19	3.12	3.63	**500yr**	2.69	3.55	4.07	5.37	6.42	9.23	11.31	**500yr**	8.16	10.88	12.39	12.94	13.82	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.32	0.50	0.61	0.82	1.01	1.21	**1yr**	0.87	1.19	1.39	1.79	2.32	3.01	3.26	**1yr**	2.66	3.14	3.74	4.42	5.02	**1yr**
2yr	0.37	0.57	0.70	0.95	1.17	1.38	**2yr**	1.01	1.35	1.58	2.06	2.63	3.39	3.73	**2yr**	3.00	3.59	4.10	4.87	5.50	**2yr**
5yr	0.46	0.70	0.87	1.20	1.52	1.80	**5yr**	1.31	1.76	2.05	2.65	3.33	4.42	4.89	**5yr**	3.91	4.70	5.37	6.46	7.14	**5yr**
10yr	0.54	0.83	1.03	1.44	1.87	2.20	**10yr**	1.61	2.15	2.50	3.20	3.98	5.41	6.07	**10yr**	4.78	5.84	6.63	8.01	8.71	**10yr**
25yr	0.69	1.05	1.30	1.86	2.45	2.88	**25yr**	2.11	2.81	3.25	4.10	5.06	7.09	8.05	**25yr**	6.27	7.74	8.77	10.66	11.34	**25yr**
50yr	0.82	1.25	1.56	2.24	3.01	3.53	**50yr**	2.60	3.45	3.97	4.96	6.04	8.69	9.96	**50yr**	7.69	9.57	10.82	13.25	13.85	**50yr**
100yr	0.99	1.50	1.87	2.71	3.71	4.33	**100yr**	3.20	4.23	4.85	6.00	7.24	10.64	12.31	**100yr**	9.42	11.84	13.36	16.44	16.92	**100yr**
200yr	1.19	1.79	2.27	3.28	4.58	5.31	**200yr**	3.95	5.19	5.94	7.25	8.67	13.03	15.21	**200yr**	11.53	14.63	16.48	20.41	20.58	**200yr**
500yr	1.53	2.27	2.93	4.25	6.05	6.97	**500yr**	5.22	6.81	7.76	9.32	11.00	17.03	20.12	**500yr**	15.07	19.35	21.77	27.17	26.74	**500yr**

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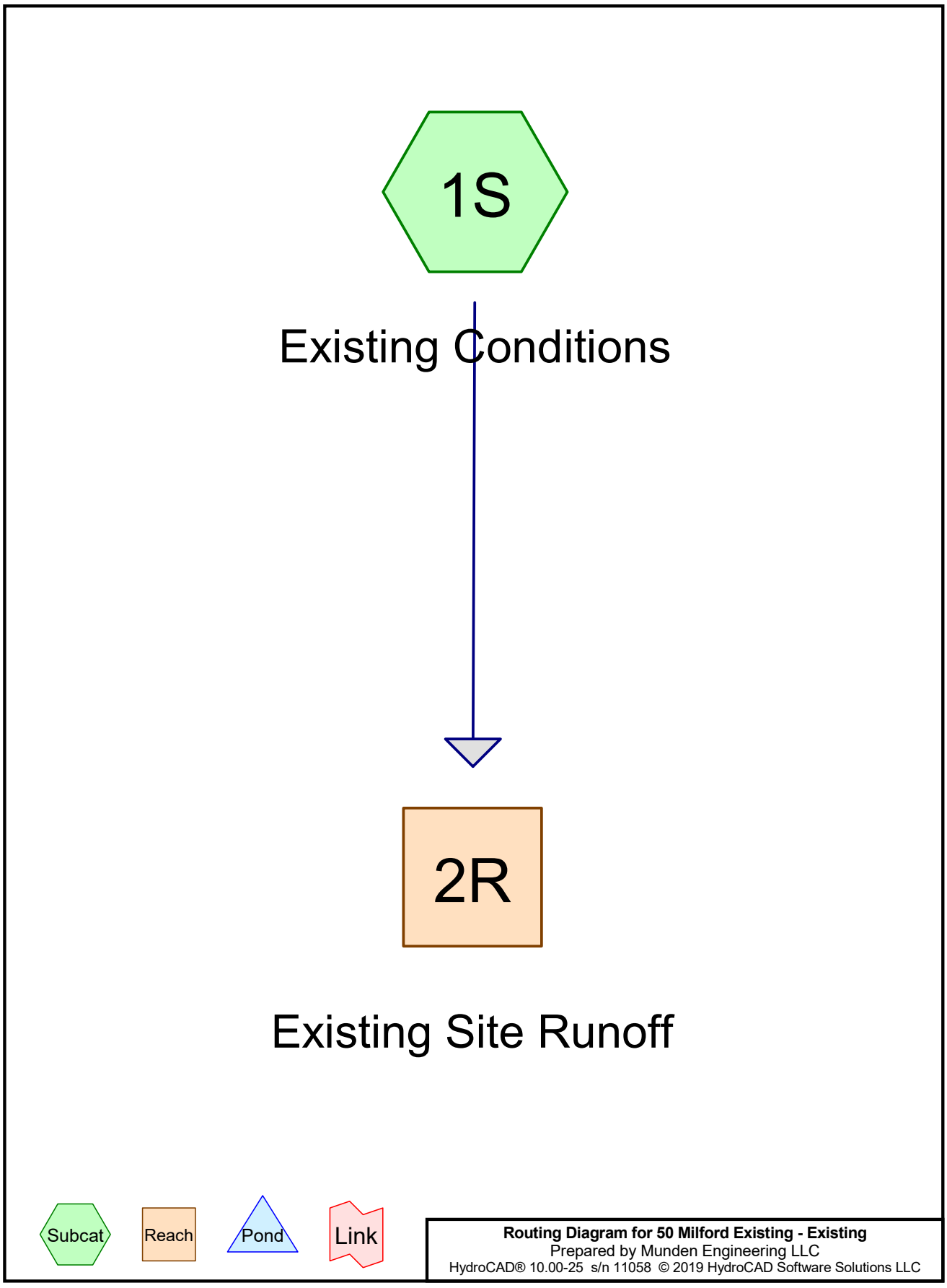
Appendix D
Pre-Development Drainage Calculations



Routing Diagram for 50 Milford Existing - Existing
Prepared by Munden Engineering LLC

50 Milford Existing - Existing

Prepared by Munden Engineering LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.097	98	Existing Driveway (1S)
0.162	98	Impervious gravel parking (1S)
0.254	66	Woods, Poor, HSG B (1S)
0.595	83	Woods, Poor, HSG D (1S)
1.107	**83**	**TOTAL AREA**

50 Milford Existing - Existing

Prepared by Munden Engineering LLC

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.254	HSG B	1S
0.000	HSG C	
0.595	HSG D	1S
0.259	Other	1S
1.107		**TOTAL AREA**

50 Milford Existing - Existing

Prepared by Munden Engineering LLC

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	0.097	0.097	Existing Driveway	1S
0.000	0.000	0.000	0.000	0.162	0.162	Impervious gravel parking	1S
0.000	0.254	0.000	0.595	0.000	0.848	Woods, Poor	1S
0.000	**0.254**	**0.000**	**0.595**	**0.259**	**1.107**	**TOTAL AREA**	

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Existing Conditions Runoff Area=48,241 sf 23.38% Impervious Runoff Depth=1.64"
Flow Length=200' Tc=6.0 min CN=83 Runoff=2.09 cfs 0.152 af

Reach 2R: Existing Site Runoff Inflow=2.09 cfs 0.152 af
Outflow=2.09 cfs 0.152 af

Total Runoff Area = 1.107 ac Runoff Volume = 0.152 af Average Runoff Depth = 1.64"
76.62% Pervious = 0.848 ac 23.38% Impervious = 0.259 ac

Summary for Subcatchment 1S: Existing Conditions

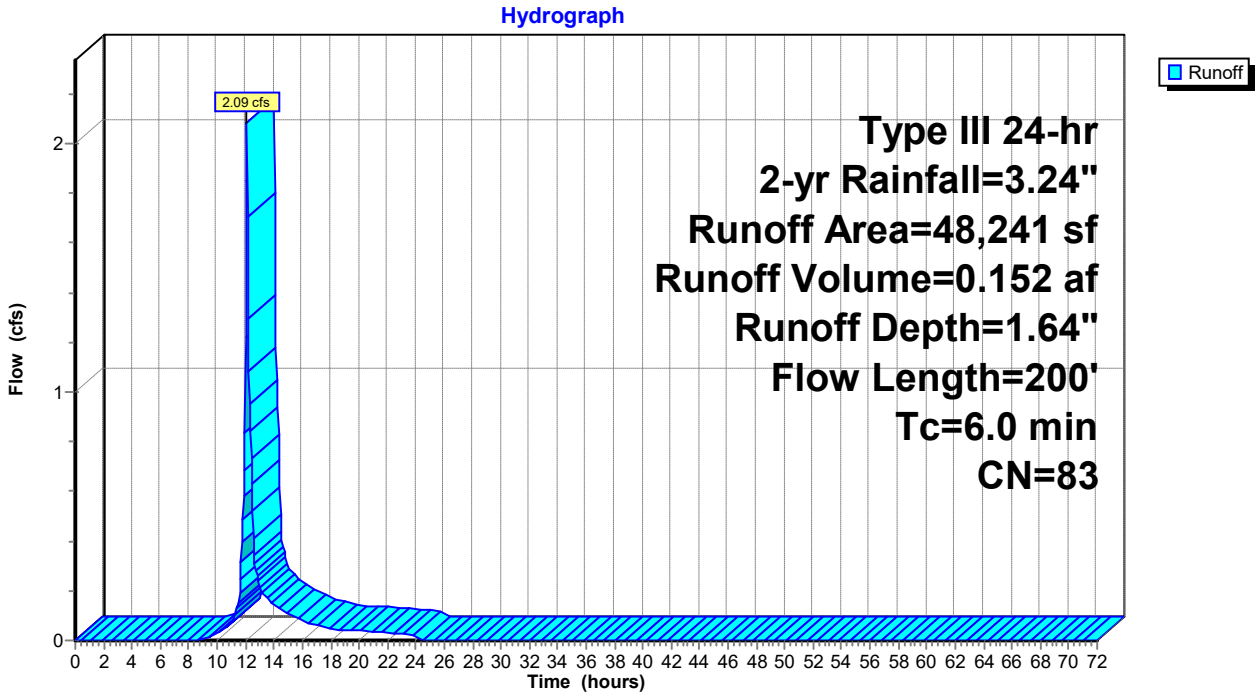
Runoff = 2.09 cfs @ 12.09 hrs, Volume= 0.152 af, Depth= 1.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.24"

	Area (sf)	CN	Description
	25,906	83	Woods, Poor, HSG D
	11,054	66	Woods, Poor, HSG B
*	7,050	98	Impervious gravel parking
*	4,231	98	Existing Driveway
	48,241	83	Weighted Average
	36,960		76.62% Pervious Area
	11,281		23.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	35	0.3300	0.39		**Sheet Flow, slope down** Cultivated: Residue>20% n= 0.170 P2= 3.24"
1.0	65	0.0500	1.12		**Shallow Concentrated Flow, Lower level in the front** Woodland Kv= 5.0 fps
1.7	100	0.0400	1.00		**Shallow Concentrated Flow, Lower level in the back** Woodland Kv= 5.0 fps
4.2	200	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 1S: Existing Conditions



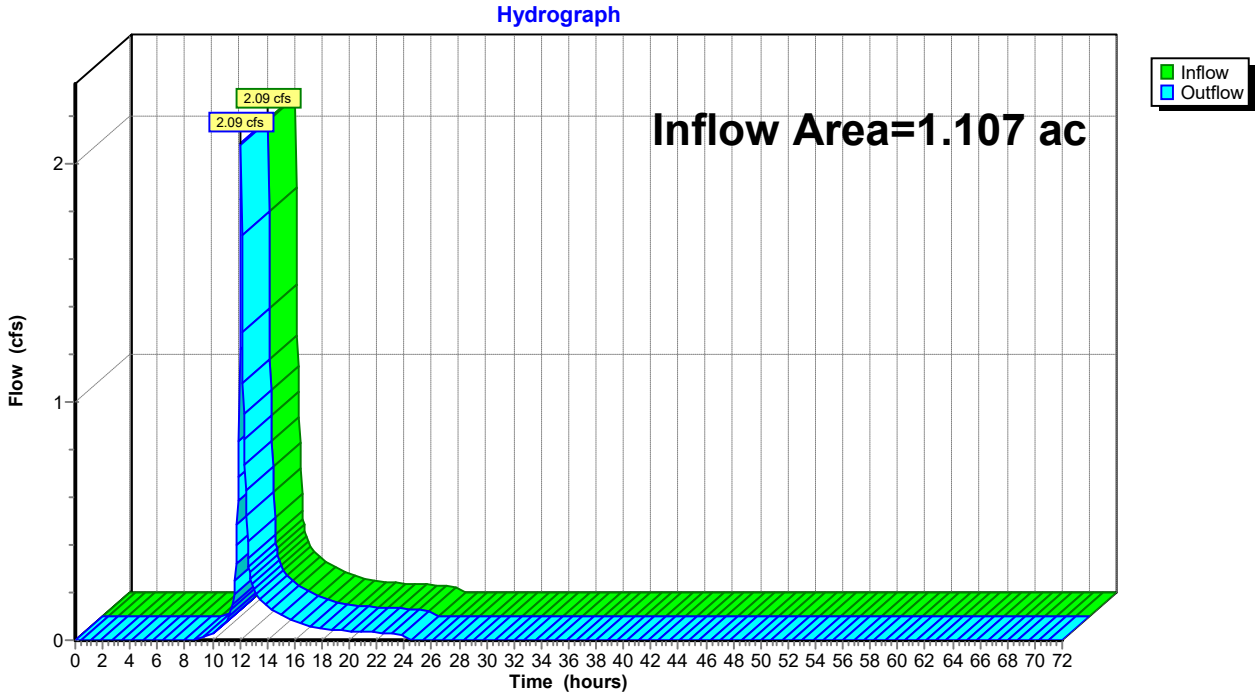
Summary for Reach 2R: Existing Site Runoff

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

Inflow Area = 1.107 ac, 23.38% Impervious, Inflow Depth = 1.64" for 2-yr event
Inflow = 2.09 cfs @ 12.09 hrs, Volume= 0.152 af
Outflow = 2.09 cfs @ 12.09 hrs, Volume= 0.152 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Reach 2R: Existing Site Runoff



Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Existing Conditions Runoff Area=48,241 sf 23.38% Impervious Runoff Depth=3.05"
Flow Length=200' Tc=6.0 min CN=83 Runoff=3.86 cfs 0.281 af

Reach 2R: Existing Site Runoff Inflow=3.86 cfs 0.281 af
Outflow=3.86 cfs 0.281 af

Total Runoff Area = 1.107 ac Runoff Volume = 0.281 af Average Runoff Depth = 3.05"
76.62% Pervious = 0.848 ac 23.38% Impervious = 0.259 ac

Summary for Subcatchment 1S: Existing Conditions

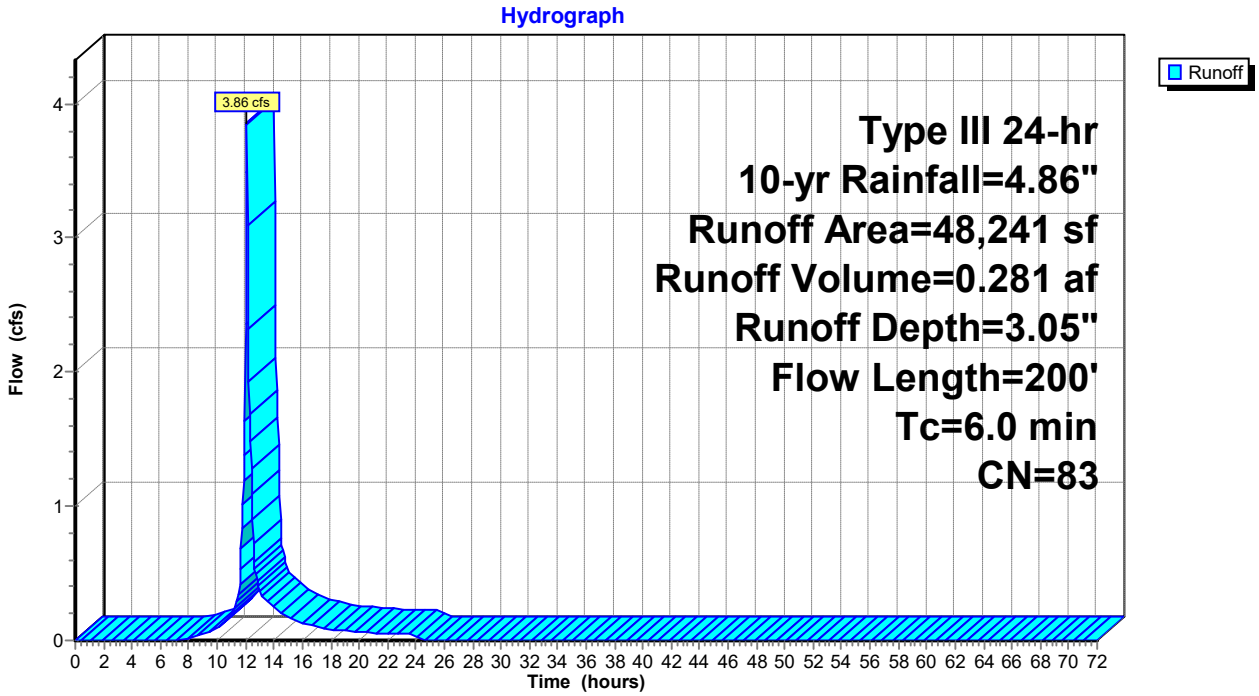
Runoff = 3.86 cfs @ 12.09 hrs, Volume= 0.281 af, Depth= 3.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.86"

	Area (sf)	CN	Description
	25,906	83	Woods, Poor, HSG D
	11,054	66	Woods, Poor, HSG B
*	7,050	98	Impervious gravel parking
*	4,231	98	Existing Driveway
	48,241	83	Weighted Average
	36,960		76.62% Pervious Area
	11,281		23.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	35	0.3300	0.39		**Sheet Flow, slope down** Cultivated: Residue>20% n= 0.170 P2= 3.24"
1.0	65	0.0500	1.12		**Shallow Concentrated Flow, Lower level in the front** Woodland Kv= 5.0 fps
1.7	100	0.0400	1.00		**Shallow Concentrated Flow, Lower level in the back** Woodland Kv= 5.0 fps
4.2	200	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 1S: Existing Conditions



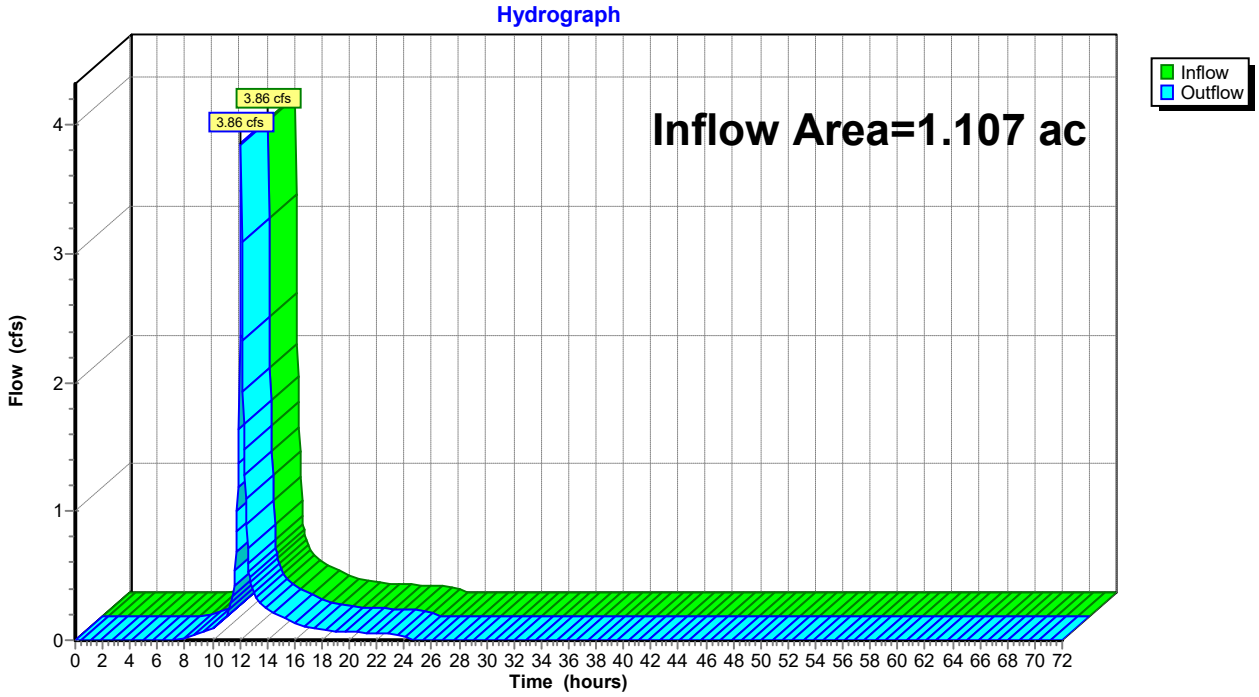
Summary for Reach 2R: Existing Site Runoff

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

Inflow Area = 1.107 ac, 23.38% Impervious, Inflow Depth = 3.05" for 10-yr event
Inflow = 3.86 cfs @ 12.09 hrs, Volume= 0.281 af
Outflow = 3.86 cfs @ 12.09 hrs, Volume= 0.281 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Reach 2R: Existing Site Runoff



Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Existing Conditions Runoff Area=48,241 sf 23.38% Impervious Runoff Depth=4.20"
Flow Length=200' Tc=6.0 min CN=83 Runoff=5.27 cfs 0.388 af

Reach 2R: Existing Site Runoff Inflow=5.27 cfs 0.388 af
Outflow=5.27 cfs 0.388 af

Total Runoff Area = 1.107 ac Runoff Volume = 0.388 af Average Runoff Depth = 4.20"
76.62% Pervious = 0.848 ac 23.38% Impervious = 0.259 ac

Summary for Subcatchment 1S: Existing Conditions

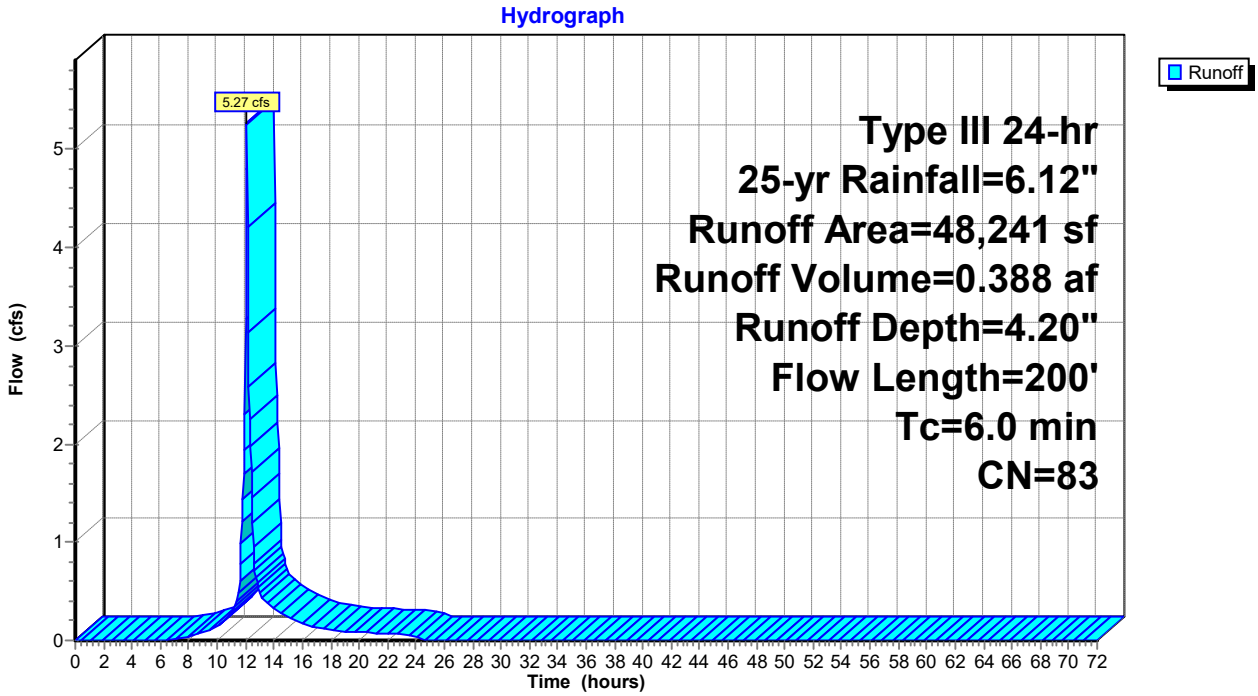
Runoff = 5.27 cfs @ 12.09 hrs, Volume= 0.388 af, Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.12"

	Area (sf)	CN	Description
	25,906	83	Woods, Poor, HSG D
	11,054	66	Woods, Poor, HSG B
*	7,050	98	Impervious gravel parking
*	4,231	98	Existing Driveway
	48,241	83	Weighted Average
	36,960		76.62% Pervious Area
	11,281		23.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	35	0.3300	0.39		**Sheet Flow, slope down** Cultivated: Residue>20% n= 0.170 P2= 3.24"
1.0	65	0.0500	1.12		**Shallow Concentrated Flow, Lower level in the front** Woodland Kv= 5.0 fps
1.7	100	0.0400	1.00		**Shallow Concentrated Flow, Lower level in the back** Woodland Kv= 5.0 fps
4.2	200	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 1S: Existing Conditions



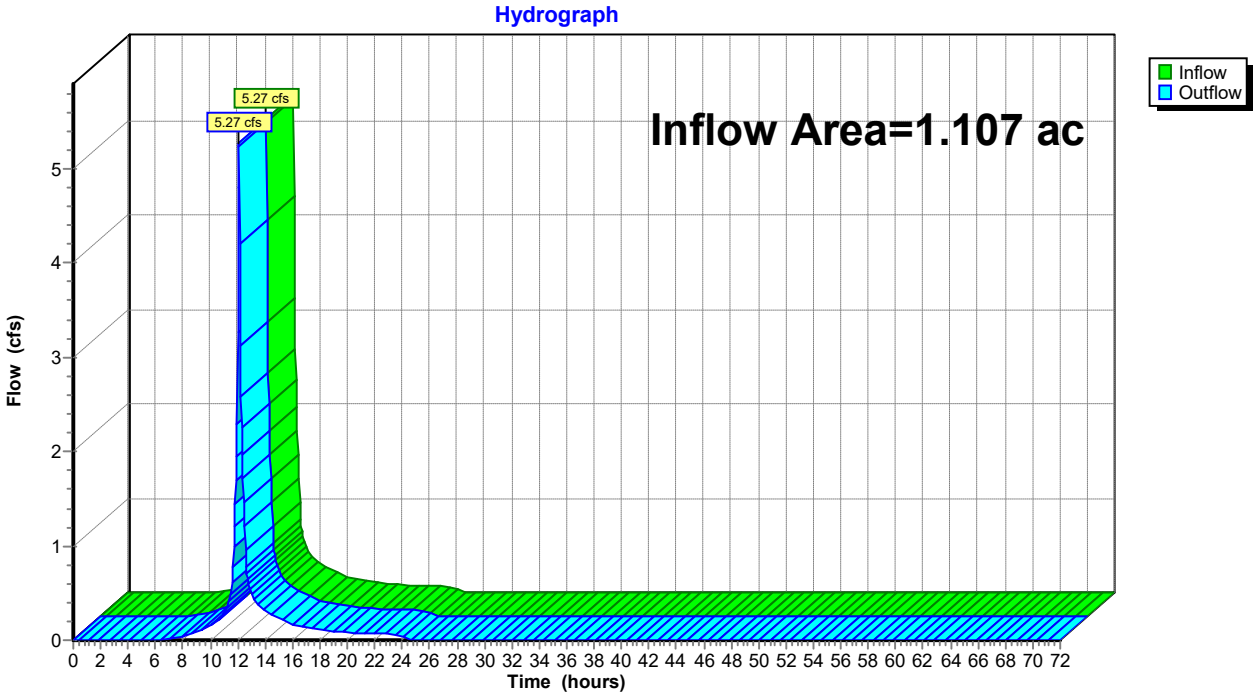
Summary for Reach 2R: Existing Site Runoff

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

Inflow Area = 1.107 ac, 23.38% Impervious, Inflow Depth = 4.20" for 25-yr event
Inflow = 5.27 cfs @ 12.09 hrs, Volume= 0.388 af
Outflow = 5.27 cfs @ 12.09 hrs, Volume= 0.388 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Reach 2R: Existing Site Runoff



Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Existing Conditions Runoff Area=48,241 sf 23.38% Impervious Runoff Depth=5.30"
Flow Length=200' Tc=6.0 min CN=83 Runoff=6.59 cfs 0.489 af

Reach 2R: Existing Site Runoff Inflow=6.59 cfs 0.489 af
Outflow=6.59 cfs 0.489 af

Total Runoff Area = 1.107 ac Runoff Volume = 0.489 af Average Runoff Depth = 5.30"
76.62% Pervious = 0.848 ac 23.38% Impervious = 0.259 ac

Summary for Subcatchment 1S: Existing Conditions

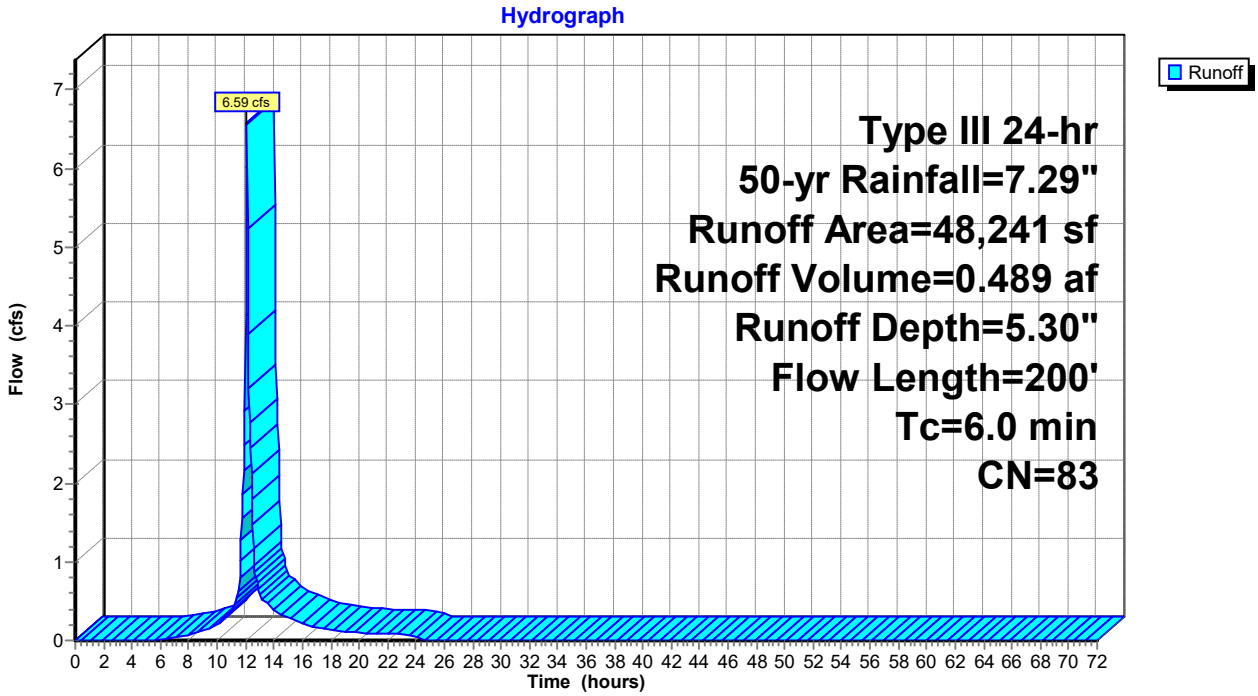
Runoff = 6.59 cfs @ 12.09 hrs, Volume= 0.489 af, Depth= 5.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-yr Rainfall=7.29"

	Area (sf)	CN	Description
	25,906	83	Woods, Poor, HSG D
	11,054	66	Woods, Poor, HSG B
*	7,050	98	Impervious gravel parking
*	4,231	98	Existing Driveway
	48,241	83	Weighted Average
	36,960		76.62% Pervious Area
	11,281		23.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	35	0.3300	0.39		**Sheet Flow, slope down** Cultivated: Residue>20% n= 0.170 P2= 3.24"
1.0	65	0.0500	1.12		**Shallow Concentrated Flow, Lower level in the front** Woodland Kv= 5.0 fps
1.7	100	0.0400	1.00		**Shallow Concentrated Flow, Lower level in the back** Woodland Kv= 5.0 fps
4.2	200	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 1S: Existing Conditions



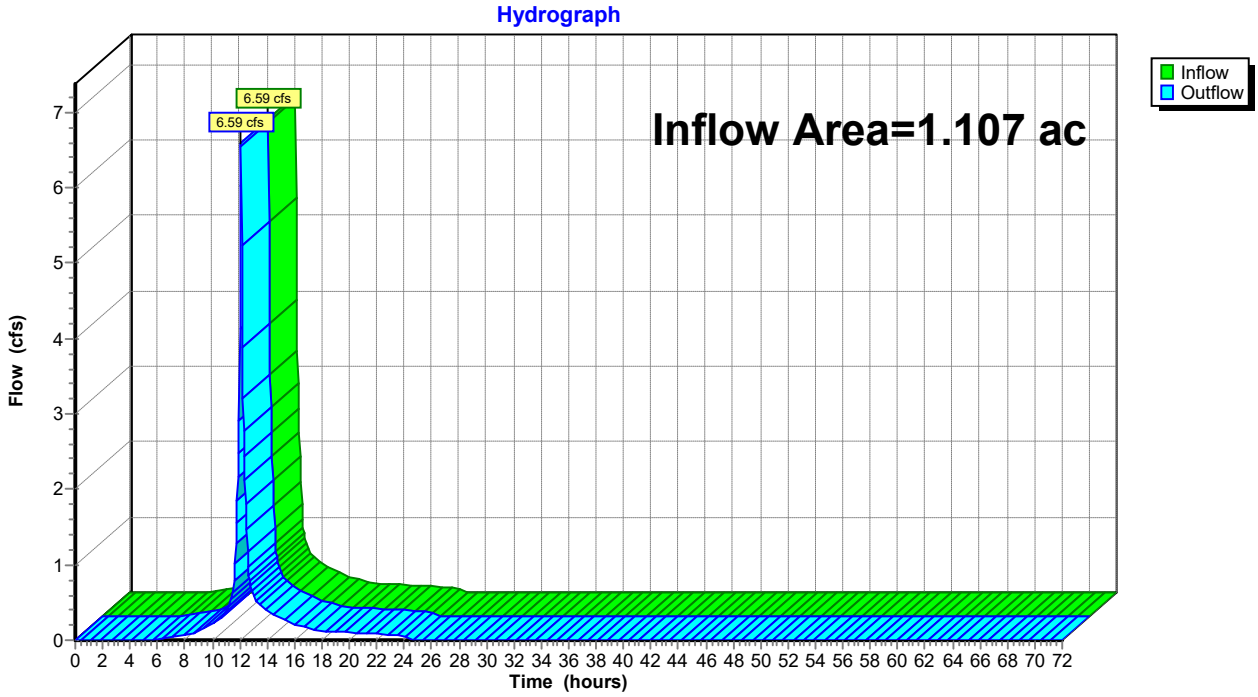
Summary for Reach 2R: Existing Site Runoff

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

Inflow Area = 1.107 ac, 23.38% Impervious, Inflow Depth = 5.30" for 50-yr event
Inflow = 6.59 cfs @ 12.09 hrs, Volume= 0.489 af
Outflow = 6.59 cfs @ 12.09 hrs, Volume= 0.489 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Reach 2R: Existing Site Runoff



Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Existing Conditions Runoff Area=48,241 sf 23.38% Impervious Runoff Depth=6.64"
Flow Length=200' Tc=6.0 min CN=83 Runoff=8.16 cfs 0.613 af

Reach 2R: Existing Site Runoff Inflow=8.16 cfs 0.613 af
Outflow=8.16 cfs 0.613 af

Total Runoff Area = 1.107 ac Runoff Volume = 0.613 af Average Runoff Depth = 6.64"
76.62% Pervious = 0.848 ac 23.38% Impervious = 0.259 ac

Summary for Subcatchment 1S: Existing Conditions

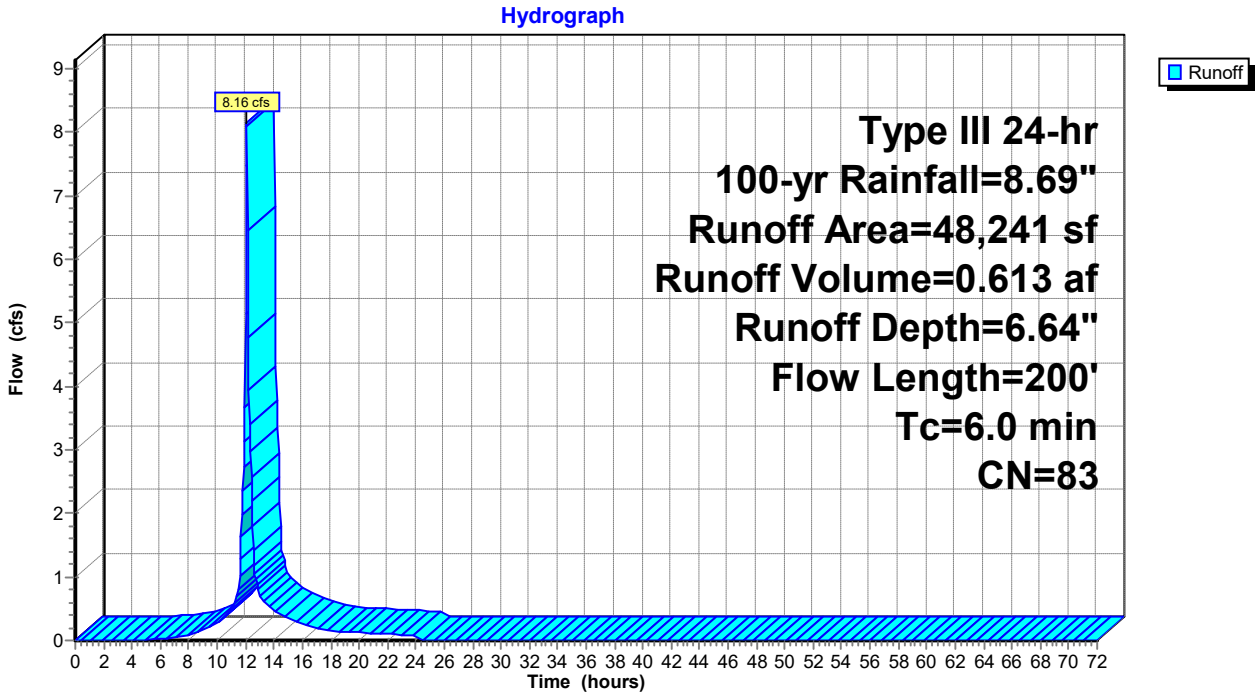
Runoff = 8.16 cfs @ 12.09 hrs, Volume= 0.613 af, Depth= 6.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-yr Rainfall=8.69"

	Area (sf)	CN	Description
	25,906	83	Woods, Poor, HSG D
	11,054	66	Woods, Poor, HSG B
*	7,050	98	Impervious gravel parking
*	4,231	98	Existing Driveway
	48,241	83	Weighted Average
	36,960		76.62% Pervious Area
	11,281		23.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	35	0.3300	0.39		**Sheet Flow, slope down** Cultivated: Residue>20% n= 0.170 P2= 3.24"
1.0	65	0.0500	1.12		**Shallow Concentrated Flow, Lower level in the front** Woodland Kv= 5.0 fps
1.7	100	0.0400	1.00		**Shallow Concentrated Flow, Lower level in the back** Woodland Kv= 5.0 fps
4.2	200	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 1S: Existing Conditions



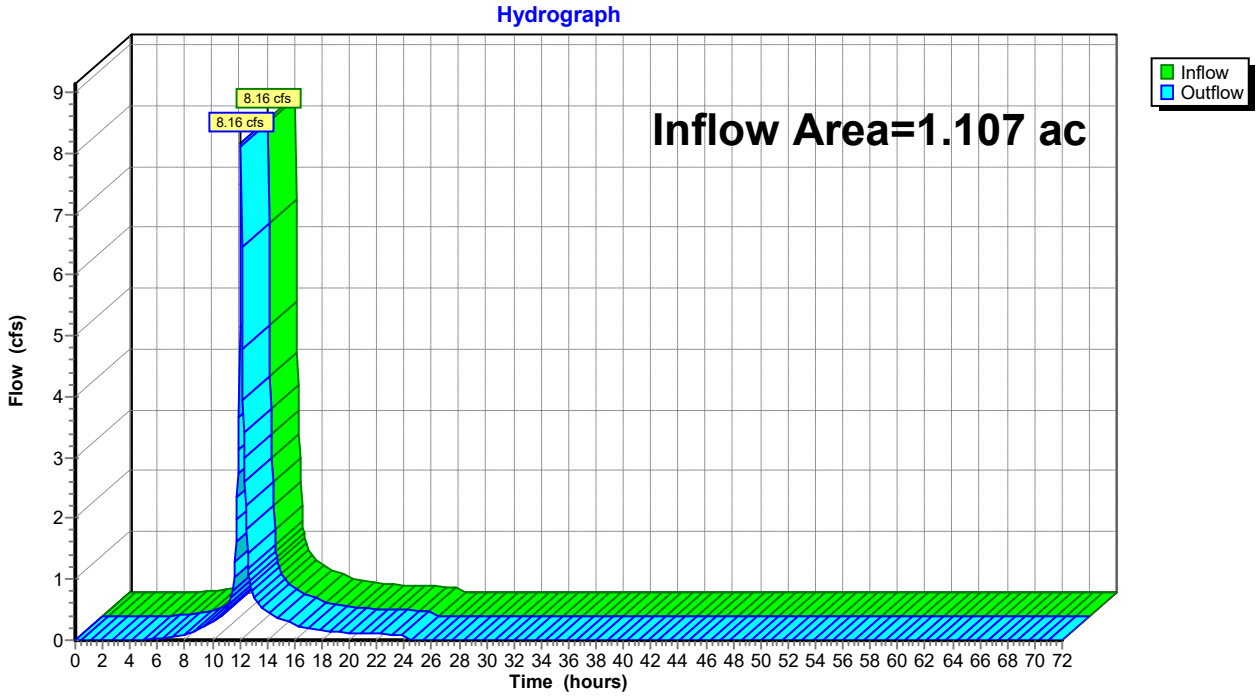
Summary for Reach 2R: Existing Site Runoff

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

Inflow Area = 1.107 ac, 23.38% Impervious, Inflow Depth = 6.64" for 100-yr event
Inflow = 8.16 cfs @ 12.09 hrs, Volume= 0.613 af
Outflow = 8.16 cfs @ 12.09 hrs, Volume= 0.613 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Reach 2R: Existing Site Runoff



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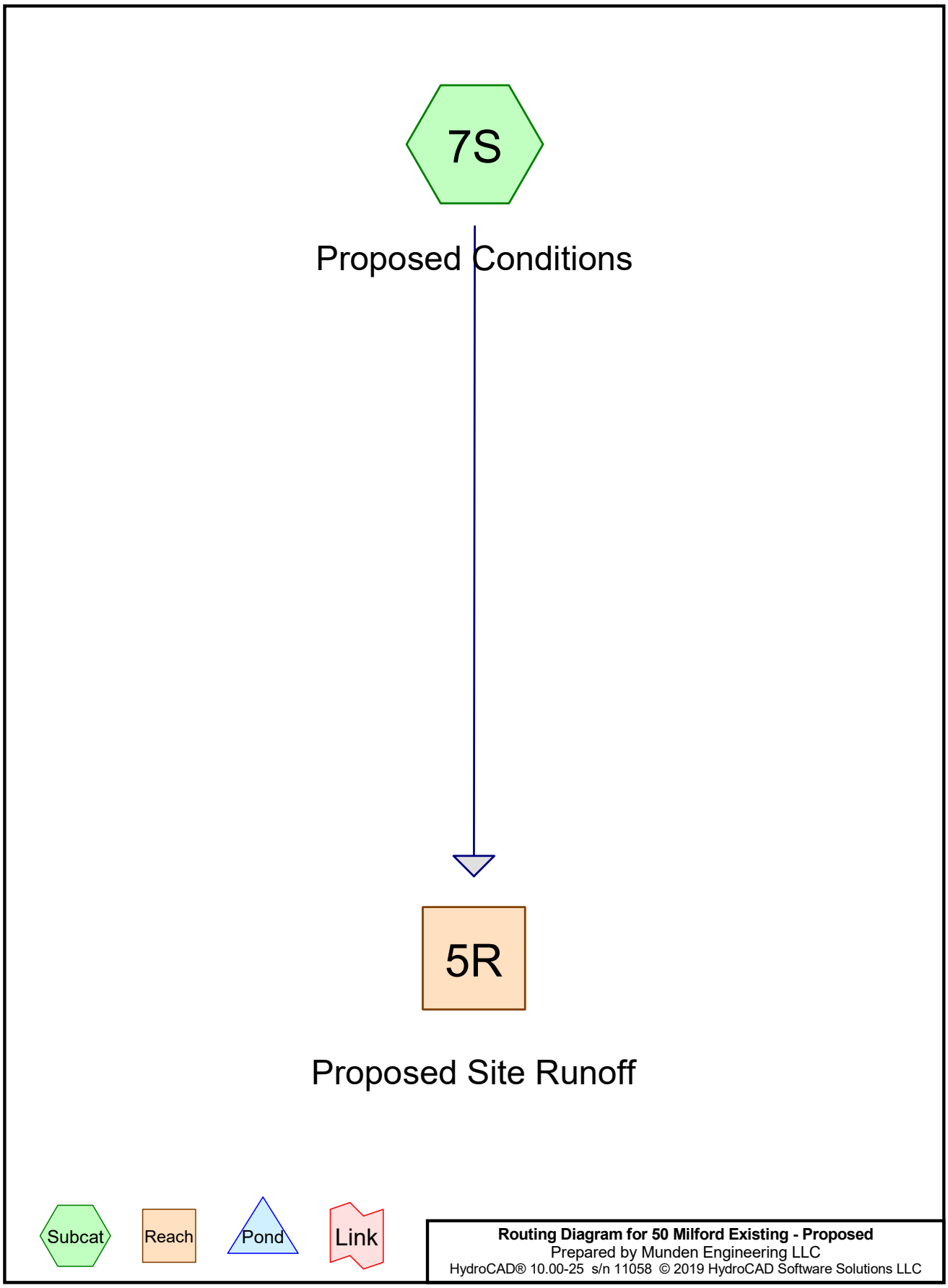
Appendix E
Post-Development Drainage Calculations


7S
Proposed Conditions
5R
Proposed Site Runoff
Subcat
Reach
Pond
Link
Routing Diagram for 50 Milford Existing - Proposed
Prepared by Munden Engineering LLC
HydroCAD® 10.00-25 s/n 11058 © 2019 HydroCAD Software Solutions LLC

50 Milford Existing - Proposed

Prepared by Munden Engineering LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.252	69	50-75% Grass cover, Fair, HSG B (7S)
0.484	84	50-75% Grass cover, Fair, HSG D (7S)
0.097	98	Existing Driveway (7S)
0.137	91	Gravel areas, HSG D (7S)
0.138	98	Proposed roof (7S)
1.107	**84**	**TOTAL AREA**

50 Milford Existing - Proposed

Prepared by Munden Engineering LLC

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.252	HSG B	7S
0.000	HSG C	
0.621	HSG D	7S
0.235	Other	7S
1.107		**TOTAL AREA**

50 Milford Existing - Proposed

Prepared by Munden Engineering LLC

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.252	0.000	0.484	0.000	0.736	50-75% Grass cover, Fair	7S
0.000	0.000	0.000	0.000	0.097	0.097	Existing Driveway	7S
0.000	0.000	0.000	0.137	0.000	0.137	Gravel areas	7S
0.000	0.000	0.000	0.000	0.138	0.138	Proposed roof	7S
0.000	**0.252**	**0.000**	**0.621**	**0.235**	**1.107**	**TOTAL AREA**	

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 7S: Proposed Conditions Runoff Area=48,241 sf 21.21% Impervious Runoff Depth=1.72"
Flow Length=200' Tc=8.0 min CN=84 Runoff=2.05 cfs 0.158 af

Reach 5R: Proposed Site Runoff Inflow=2.05 cfs 0.158 af
Outflow=2.05 cfs 0.158 af

Total Runoff Area = 1.107 ac Runoff Volume = 0.158 af Average Runoff Depth = 1.72"
78.79% Pervious = 0.873 ac 21.21% Impervious = 0.235 ac

Summary for Subcatchment 7S: Proposed Conditions

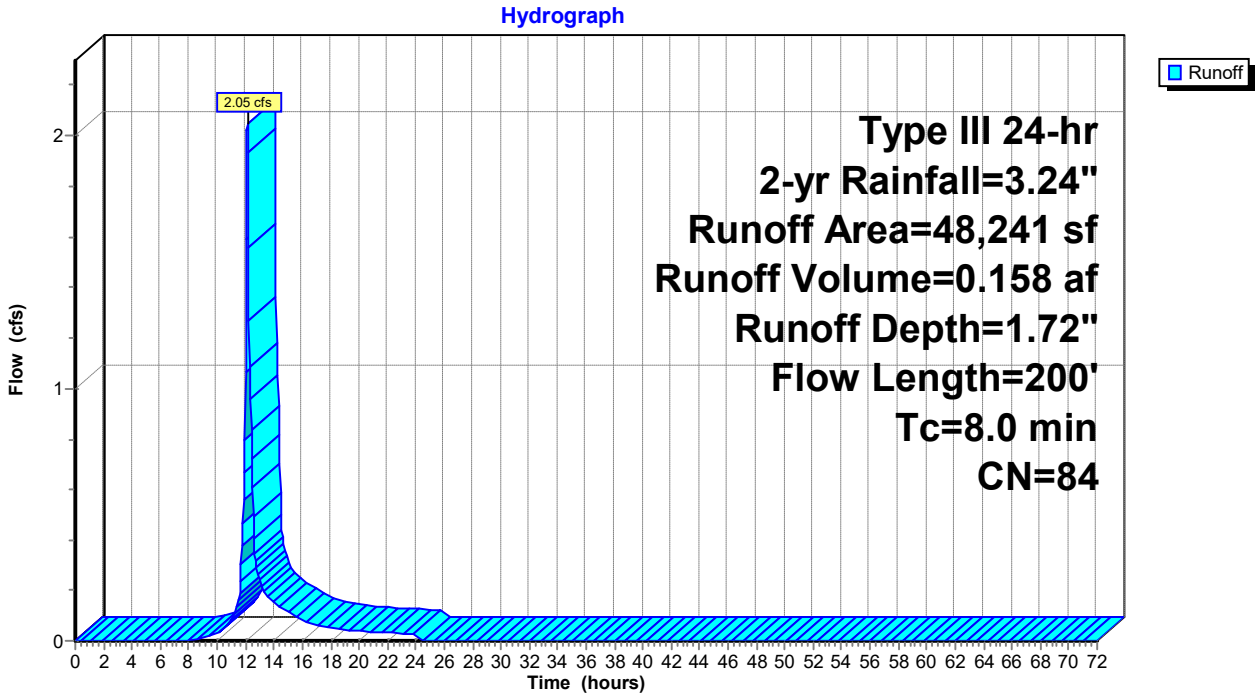
Runoff = 2.05 cfs @ 12.12 hrs, Volume= 0.158 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.24"

	Area (sf)	CN	Description
	21,067	84	50-75% Grass cover, Fair, HSG D
	10,980	69	50-75% Grass cover, Fair, HSG B
*	4,231	98	Existing Driveway
*	5,963	91	Gravel areas, HSG D
*	6,000	98	Proposed roof
	48,241	84	Weighted Average
	38,010		78.79% Pervious Area
	10,231		21.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	100	0.0400	0.23		**Sheet Flow, Raised area in the front** Grass: Short n= 0.150 P2= 3.24"
0.6	100	0.1500	2.71		**Shallow Concentrated Flow, Filles area in the back/sloped** Short Grass Pasture Kv= 7.0 fps
8.0	200	Total			

Subcatchment 7S: Proposed Conditions



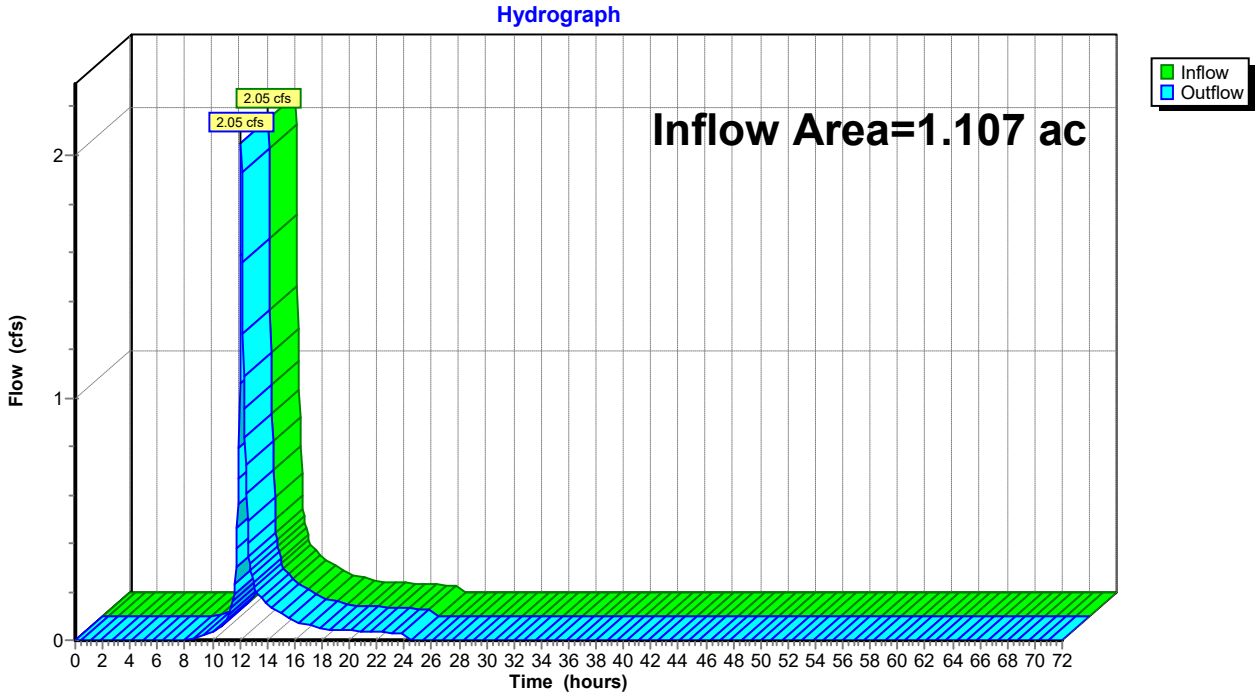
Summary for Reach 5R: Proposed Site Runoff

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

Inflow Area = 1.107 ac, 21.21% Impervious, Inflow Depth = 1.72" for 2-yr event
Inflow = 2.05 cfs @ 12.12 hrs, Volume= 0.158 af
Outflow = 2.05 cfs @ 12.12 hrs, Volume= 0.158 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Reach 5R: Proposed Site Runoff



Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 7S: Proposed Conditions Runoff Area=48,241 sf 21.21% Impervious Runoff Depth=3.14"
Flow Length=200' Tc=8.0 min CN=84 Runoff=3.74 cfs 0.290 af

Reach 5R: Proposed Site Runoff Inflow=3.74 cfs 0.290 af
Outflow=3.74 cfs 0.290 af

Total Runoff Area = 1.107 ac Runoff Volume = 0.290 af Average Runoff Depth = 3.14"
78.79% Pervious = 0.873 ac 21.21% Impervious = 0.235 ac

Summary for Subcatchment 7S: Proposed Conditions

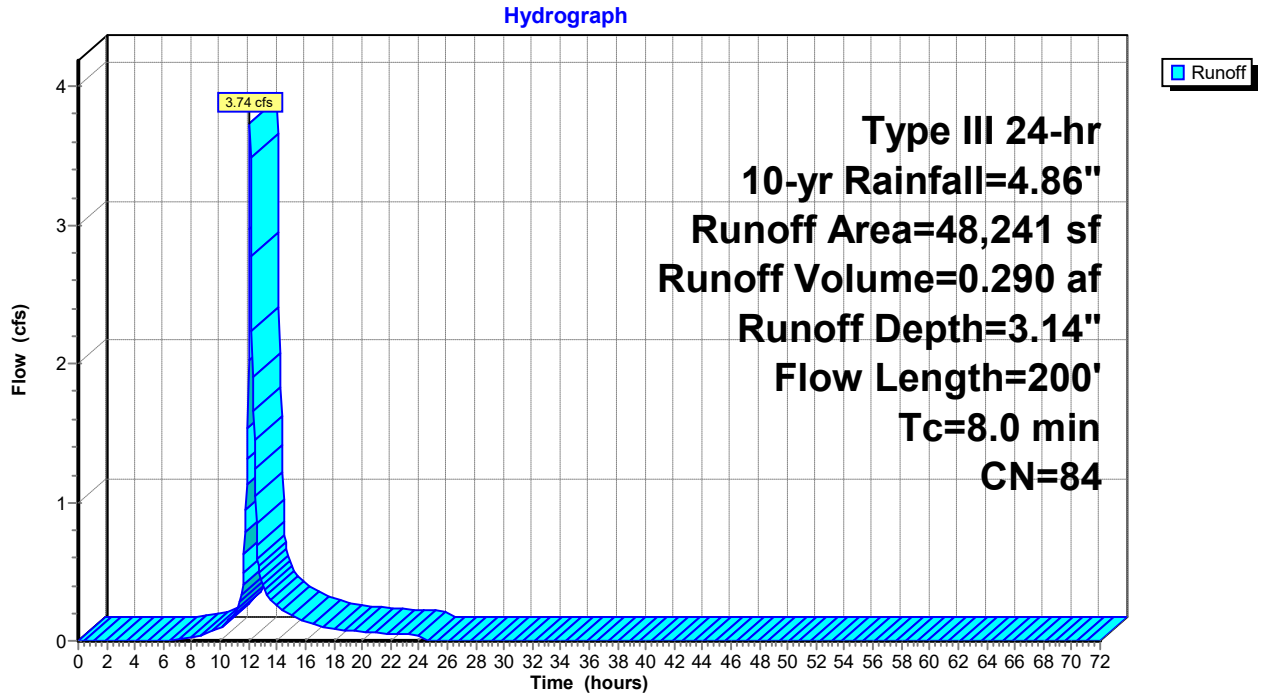
Runoff = 3.74 cfs @ 12.11 hrs, Volume= 0.290 af, Depth= 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.86"

	Area (sf)	CN	Description
	21,067	84	50-75% Grass cover, Fair, HSG D
	10,980	69	50-75% Grass cover, Fair, HSG B
*	4,231	98	Existing Driveway
*	5,963	91	Gravel areas, HSG D
*	6,000	98	Proposed roof
	48,241	84	Weighted Average
	38,010		78.79% Pervious Area
	10,231		21.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	100	0.0400	0.23		**Sheet Flow, Raised area in the front** Grass: Short n= 0.150 P2= 3.24"
0.6	100	0.1500	2.71		**Shallow Concentrated Flow, Filles area in the back/sloped** Short Grass Pasture Kv= 7.0 fps
8.0	200	Total			

Subcatchment 7S: Proposed Conditions



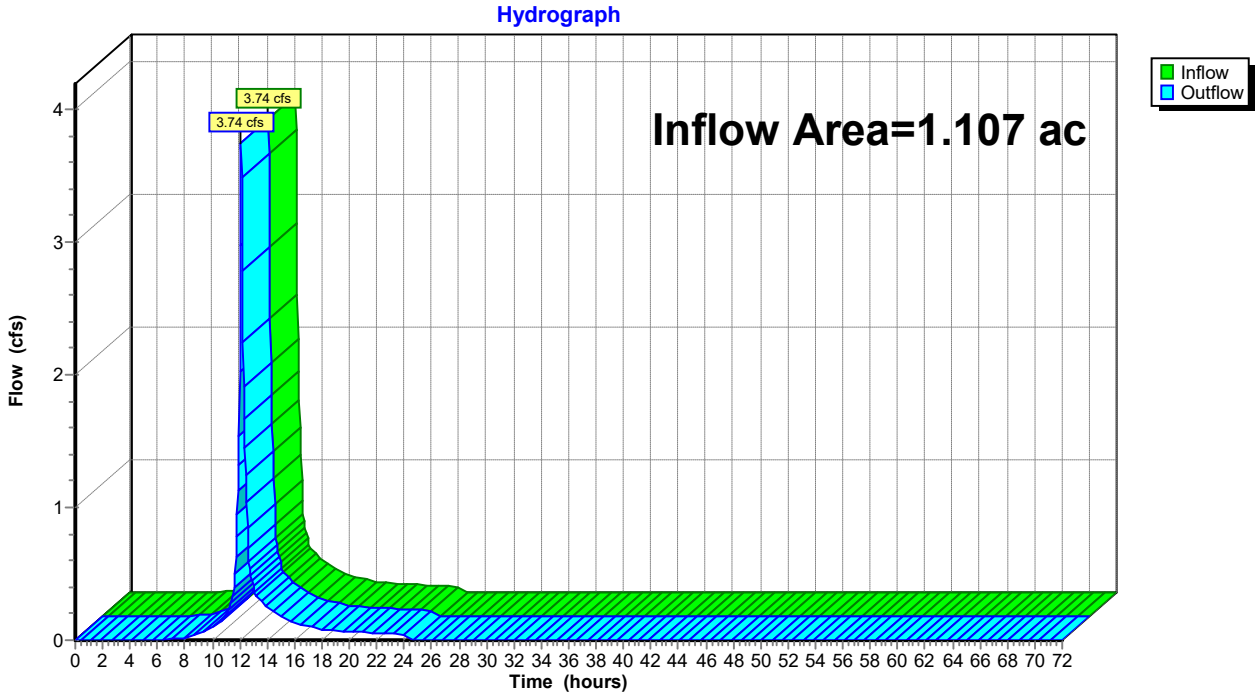
Summary for Reach 5R: Proposed Site Runoff

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

Inflow Area = 1.107 ac, 21.21% Impervious, Inflow Depth = 3.14" for 10-yr event
Inflow = 3.74 cfs @ 12.11 hrs, Volume= 0.290 af
Outflow = 3.74 cfs @ 12.11 hrs, Volume= 0.290 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Reach 5R: Proposed Site Runoff



Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 7S: Proposed Conditions Runoff Area=48,241 sf 21.21% Impervious Runoff Depth=4.31"
Flow Length=200' Tc=8.0 min CN=84 Runoff=5.08 cfs 0.398 af

Reach 5R: Proposed Site Runoff Inflow=5.08 cfs 0.398 af
Outflow=5.08 cfs 0.398 af

Total Runoff Area = 1.107 ac Runoff Volume = 0.398 af Average Runoff Depth = 4.31"
78.79% Pervious = 0.873 ac 21.21% Impervious = 0.235 ac

Summary for Subcatchment 7S: Proposed Conditions

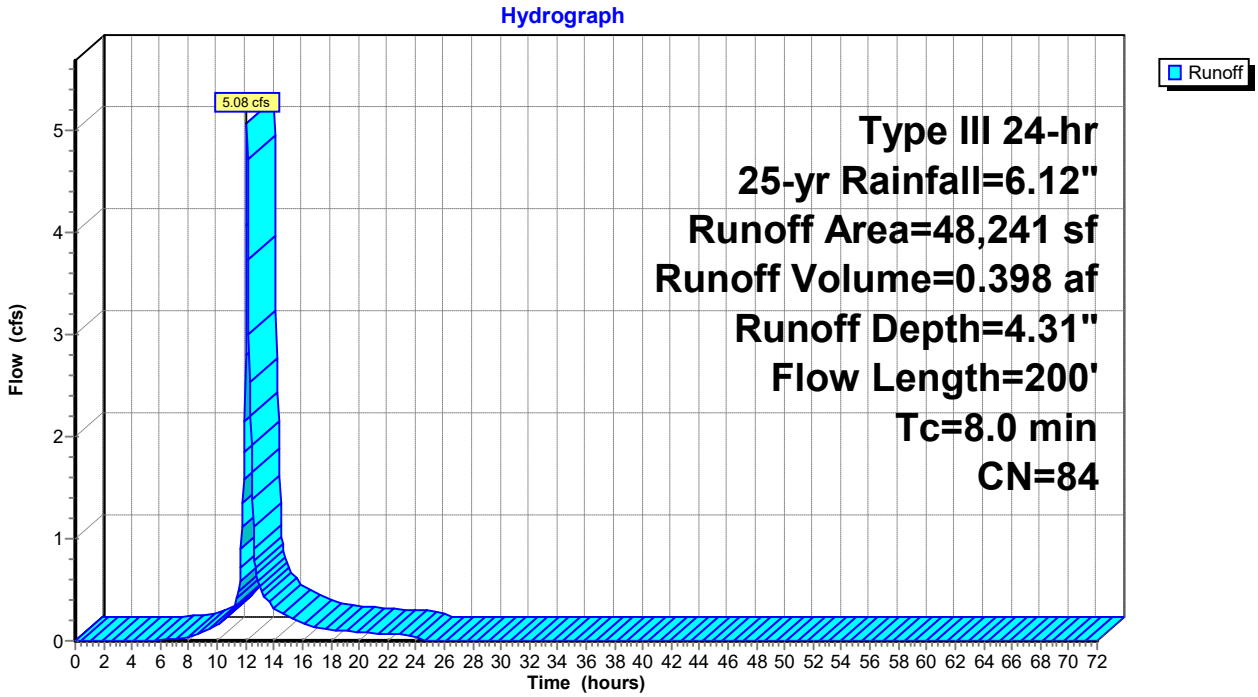
Runoff = 5.08 cfs @ 12.11 hrs, Volume= 0.398 af, Depth= 4.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.12"

	Area (sf)	CN	Description
	21,067	84	50-75% Grass cover, Fair, HSG D
	10,980	69	50-75% Grass cover, Fair, HSG B
*	4,231	98	Existing Driveway
*	5,963	91	Gravel areas, HSG D
*	6,000	98	Proposed roof
	48,241	84	Weighted Average
	38,010		78.79% Pervious Area
	10,231		21.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	100	0.0400	0.23		**Sheet Flow, Raised area in the front** Grass: Short n= 0.150 P2= 3.24"
0.6	100	0.1500	2.71		**Shallow Concentrated Flow, Filles area in the back/sloped** Short Grass Pasture Kv= 7.0 fps
8.0	200	Total			

Subcatchment 7S: Proposed Conditions



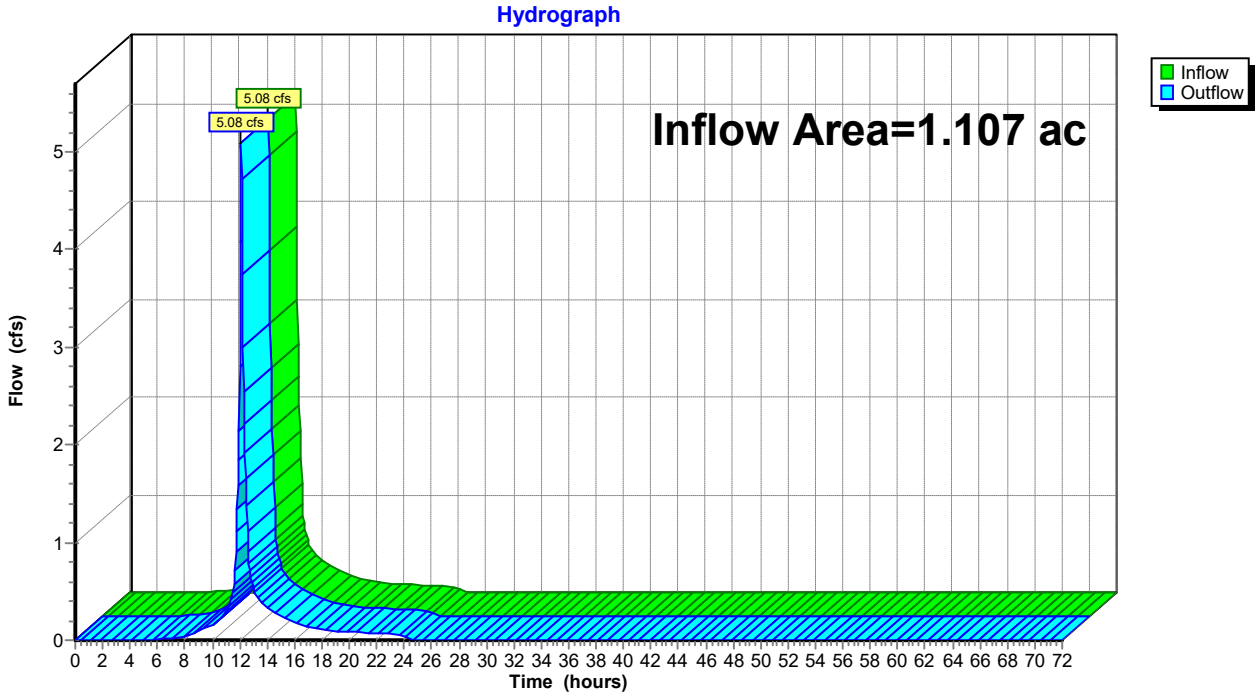
Summary for Reach 5R: Proposed Site Runoff

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

Inflow Area = 1.107 ac, 21.21% Impervious, Inflow Depth = 4.31" for 25-yr event
Inflow = 5.08 cfs @ 12.11 hrs, Volume= 0.398 af
Outflow = 5.08 cfs @ 12.11 hrs, Volume= 0.398 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Reach 5R: Proposed Site Runoff



Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 7S: Proposed Conditions Runoff Area=48,241 sf 21.21% Impervious Runoff Depth=5.42"
Flow Length=200' Tc=8.0 min CN=84 Runoff=6.32 cfs 0.500 af

Reach 5R: Proposed Site Runoff Inflow=6.32 cfs 0.500 af
Outflow=6.32 cfs 0.500 af

Total Runoff Area = 1.107 ac Runoff Volume = 0.500 af Average Runoff Depth = 5.42"
78.79% Pervious = 0.873 ac 21.21% Impervious = 0.235 ac

Summary for Subcatchment 7S: Proposed Conditions

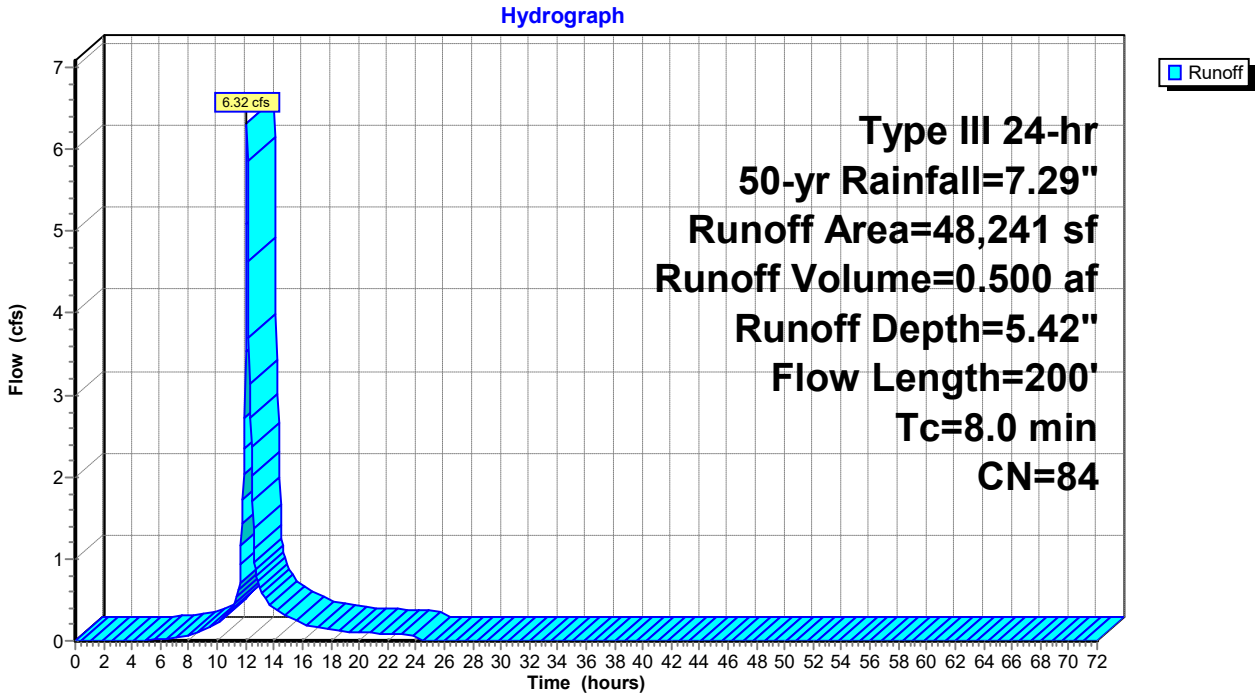
Runoff = 6.32 cfs @ 12.11 hrs, Volume= 0.500 af, Depth= 5.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-yr Rainfall=7.29"

	Area (sf)	CN	Description
	21,067	84	50-75% Grass cover, Fair, HSG D
	10,980	69	50-75% Grass cover, Fair, HSG B
*	4,231	98	Existing Driveway
*	5,963	91	Gravel areas, HSG D
*	6,000	98	Proposed roof
	48,241	84	Weighted Average
	38,010		78.79% Pervious Area
	10,231		21.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	100	0.0400	0.23		**Sheet Flow, Raised area in the front** Grass: Short n= 0.150 P2= 3.24"
0.6	100	0.1500	2.71		**Shallow Concentrated Flow, Filles area in the back/sloped** Short Grass Pasture Kv= 7.0 fps
8.0	200	Total			

Subcatchment 7S: Proposed Conditions



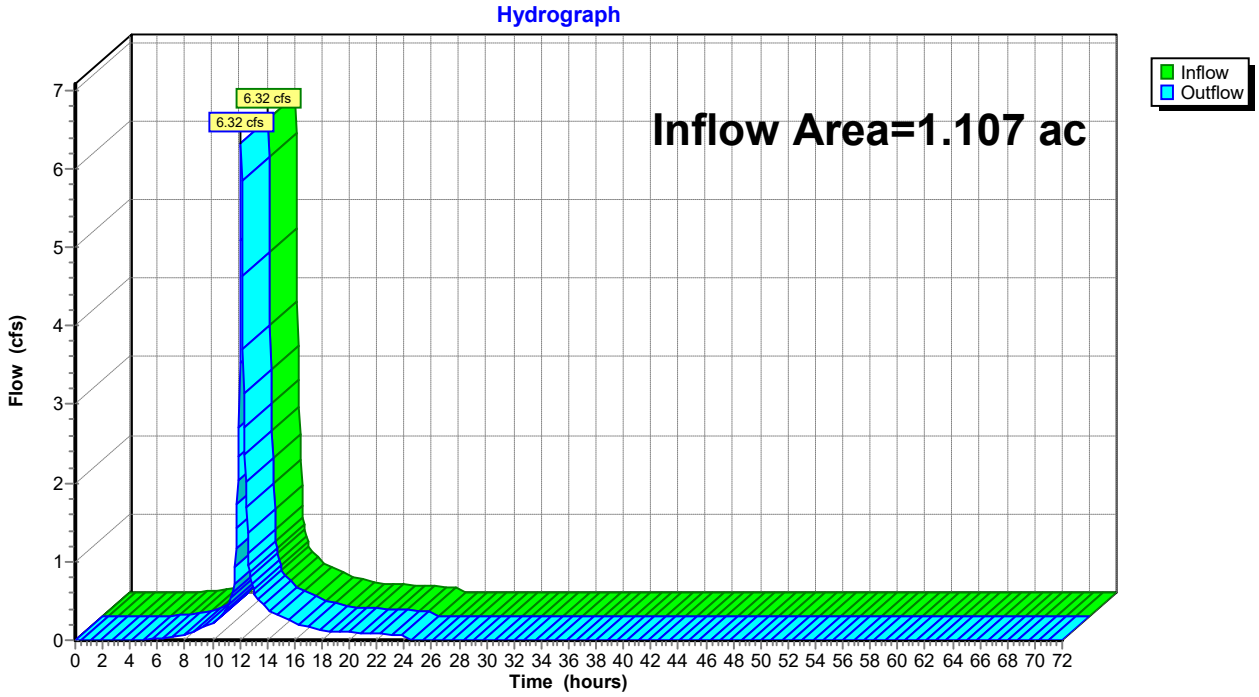
Summary for Reach 5R: Proposed Site Runoff

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

Inflow Area = 1.107 ac, 21.21% Impervious, Inflow Depth = 5.42" for 50-yr event
Inflow = 6.32 cfs @ 12.11 hrs, Volume= 0.500 af
Outflow = 6.32 cfs @ 12.11 hrs, Volume= 0.500 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Reach 5R: Proposed Site Runoff



Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 7S: Proposed Conditions Runoff Area=48,241 sf 21.21% Impervious Runoff Depth=6.76"
Flow Length=200' Tc=8.0 min CN=84 Runoff=7.81 cfs 0.624 af

Reach 5R: Proposed Site Runoff Inflow=7.81 cfs 0.624 af
Outflow=7.81 cfs 0.624 af

Total Runoff Area = 1.107 ac Runoff Volume = 0.624 af Average Runoff Depth = 6.76"
78.79% Pervious = 0.873 ac 21.21% Impervious = 0.235 ac

Summary for Subcatchment 7S: Proposed Conditions

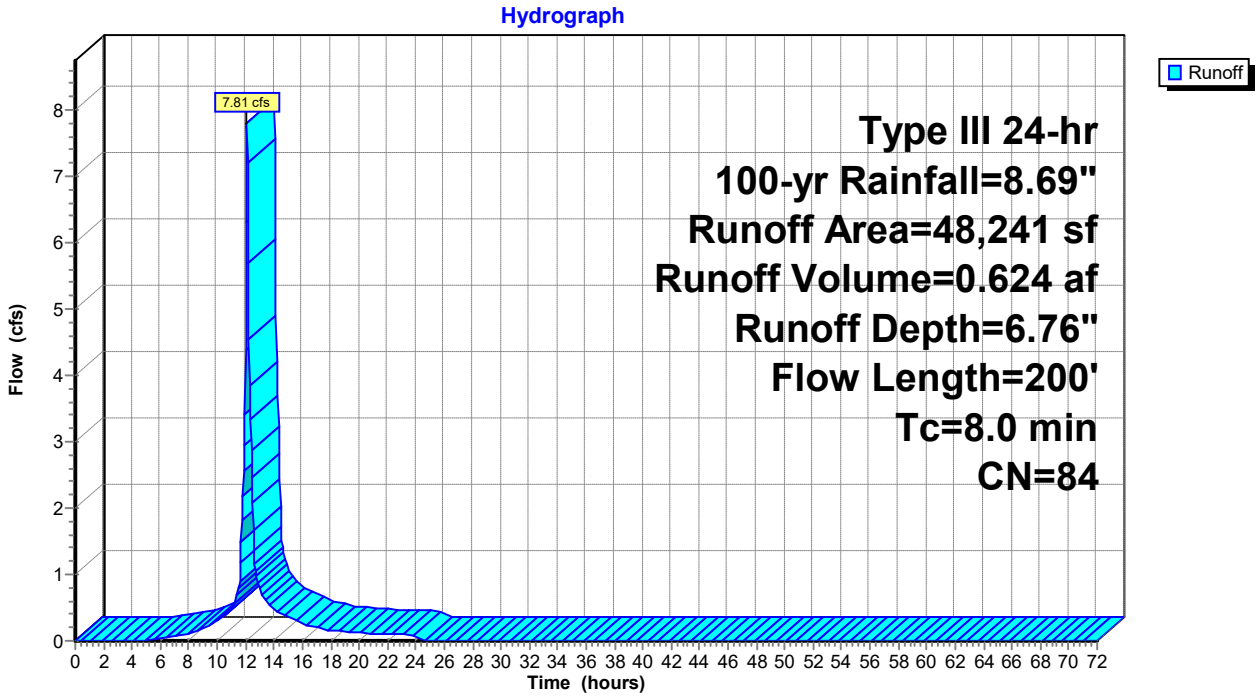
Runoff = 7.81 cfs @ 12.11 hrs, Volume= 0.624 af, Depth= 6.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-yr Rainfall=8.69"

	Area (sf)	CN	Description
	21,067	84	50-75% Grass cover, Fair, HSG D
	10,980	69	50-75% Grass cover, Fair, HSG B
*	4,231	98	Existing Driveway
*	5,963	91	Gravel areas, HSG D
*	6,000	98	Proposed roof
	48,241	84	Weighted Average
	38,010		78.79% Pervious Area
	10,231		21.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	100	0.0400	0.23		**Sheet Flow, Raised area in the front** Grass: Short n= 0.150 P2= 3.24"
0.6	100	0.1500	2.71		**Shallow Concentrated Flow, Filles area in the back/sloped** Short Grass Pasture Kv= 7.0 fps
8.0	200	Total			

Subcatchment 7S: Proposed Conditions



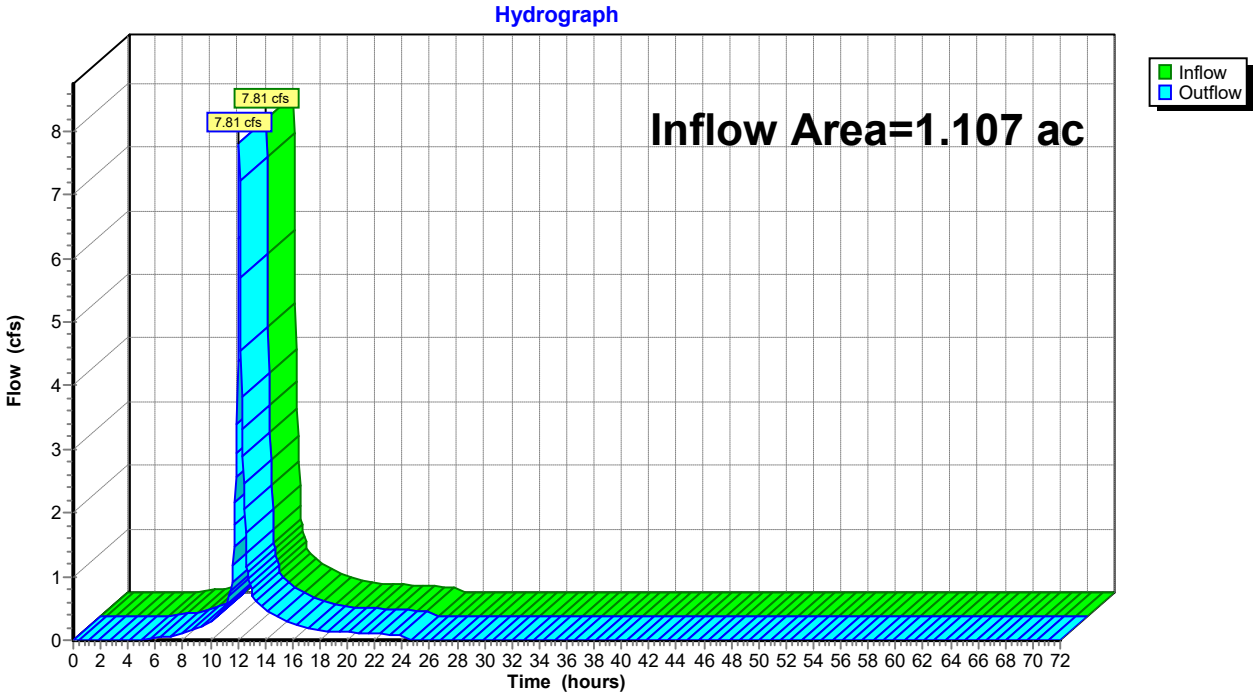
Summary for Reach 5R: Proposed Site Runoff

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

Inflow Area = 1.107 ac, 21.21% Impervious, Inflow Depth = 6.76" for 100-yr event
Inflow = 7.81 cfs @ 12.11 hrs, Volume= 0.624 af
Outflow = 7.81 cfs @ 12.11 hrs, Volume= 0.624 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Reach 5R: Proposed Site Runoff



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Appendix F
Proposed Conditions Plan

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Appendix G
Construction Period Pollution Prevention Plan (CPPPP)

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CONSTRUCTION PERIOD POLLUTION PREVENTION PLAN

50 MILFORD STREET
MENDON MA

September 22nd, 2020

Munden Engineering

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Table of Contents

Appendices

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Section 1 Introduction

Standard 8 of the Massachusetts Standards requires:

> "a plan to control construction-related impacts including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented".

The following Construction Period Pollution Prevention Plan (CPPPP) outlines the requirements to comply with Standard 8.

Section 2 Project Information

2.1 Responsible Parties

This Construction Period Pollution Prevention Plan has been prepared for the construction phase activity for the subdivision and development of a commercial warehouse at the address located at 50 Milford Street in Mendon, Massachusetts. The property is owned by Laurie and Robert Sweet. During construction, the contractor will be responsible for pollution prevention and erosion and sediments controls as follows below.

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2.2 General Description of Project

The project proponent and current property owners, Laurie and Robert Sweet, are proposing to subdivide an approximately 48,241 sq.ft. from their existing property located at 50 Milford Street in Mendon MA. Calculations and considerations discussed in this report include the existing and proposed conditions within the limits of the proposed parcel (depicted as Parcel A on the plans). Existing parcel is approximately 10.3 acres occupying both general business and rural residence zones and has a single-family dwelling and a commercial building. Proposed parcel is within the general business zone and proposed building is a commercial warehouse. The proposed parcel is located on the North side of Milford and has a 249 ft frontage, and abuts wetlands/cranberry bogs in the back.

2.3 Stormwater Management and Erosion Control Plan

A Stormwater Management and Erosion Control Plan (SMECP) is provided on sheet 1 of the Site Plans. The SMECP outlines the minimum requirements for the prevention of erosion and sedimentation due to construction impacts. The SMECP provides locations of the perimeter controls, anti-tracking pads, and check dams.

Section 3 Erosion and Sediment Controls

The Contractor shall comply with the following temporary erosion and sediment controls to minimize the discharge of pollutants in stormwater from construction activities.

3.1 Construction Entrance Limitations

Only the existing driveway shall be used for construction vehicle entering and existing of the site during construction. If the existing driveway gets damaged and/or removed during construction the responsible party must contact the engineer of the record and stop construction until an acceptable construction entrance is provided.

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3.2 Hydromulching

Description: Hydromulching will provide immediate protection to exposed soils for the existing slopes in the back of the property within the limits shown on the ESCP.

Installation: Straw mulch and wood fiber will be mixed with a tackifier (amount specified per manufacturer's instructions) and applied uniformly by machine with an application rate of 90–100 pounds (2–3 bales) per 1,000 square feet or 2 tons (100–200 bales) per acre. If the tackifier does not appear effective in anchoring the mulch to the disturbed soil, crimping equipment will be used to provide additional binding to the soil. The mulch will cover 75 to 90 percent of the ground surface. In areas, where hydromulching is inaccessible, straw mulch will be applied by hand with an application rate of 90–100 pounds (2–3 bales) per 1,000 square feet. Winter stabilization will occur between November 15 and March 15. All disturbed areas are scheduled to be stabilized well before construction; however, if any vegetated areas show signs of erosion, mulch will be applied at the same rate as described above.

Maintenance Requirements: Mulched areas will be inspected weekly and after every rainstorm 0.25 inches or greater to check for movement of mulch or erosion. If washout, breakage, or erosion occurs, the surface will be repaired, and new mulch will be applied to the damaged area.

3.3 Perimeter Controls

Description: The erosion control barriers will consist of silt fencing placed in a manner that restricts the contractor to the areas necessary to perform the work. The perimeter controls will generally define the limits of work.

Installation: The temporary erosion control measures shall be installed before construction begins at the site and around soil stockpiles once they have been established. Silt fencing will be installed by excavating a 12-inch-deep trench along the line of proposed installation. Wooden posts supporting the silt fence will be spaced 4 to 6 feet apart and driven securely into the ground; a minimum of 18 to 20 inches deep. The silt fence will be fastened securely to the wooden posts with wire ties spaced every 24 inches at the top, mid section, and bottom of the wooden post. The bottom edge of the silt fence will extend across the bottom of the trench and the trench will be

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backfilled and compacted to prevent stormwater and sediment from discharging underneath the silt fence. Perform work in accordance with the ESCP.

Maintenance Requirements: Silt fences will be inspected weekly and immediately after storm events to ensure it is intact and that there are no gaps where the fence meets the ground or tears along the length of the fence. If gaps or tears are found during the inspection, the fabric will be repaired or replaced immediately. Accumulated sediment will be removed from the fence base if it reaches one-third the height of the silt fence and properly disposed off-site. If accumulated sediment is creating noticeable strain on the fabric and the fence might fail from a sudden storm event, the sediment will be removed more frequently. Before the fence is removed from the project area, the sediment will be removed. The erosion control barriers will be removed and properly disposed off-site following the stabilization of disturbed areas. The anticipated life span of the silt fence is 6 months and will likely need to be replaced after this period.

3.4 Stockpile Area

Description: Temporary stockpiling of excavated or imported soil must be at the designated areas and surrounded with perimeter controls as shown in the details on the ESCP accompanying this report.

Installation: The stockpiling area must be stabilized and geofabric must be laid prior to the start of stockpiling. A sediment barrier shall be installed along downgradient perimeter areas of stockpiles.If piles are to be unused for 14 or more days, erosion control seeding shall be used for temporary stabilization if perimeter controls or a temporary covering is not sufficient.

Maintenance Requirements: Accumulated soil from the stockpile shall not be hose down or swept off impervious surfaces into any stormwater conveyance unless connected to sediment trap, or similarly effective control.

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Section 4 Pollution Prevention

A typical construction site generates pollutants through construction activities. The following identifies preventative measures to reduce the opportunity for pollutants to teh enter the stormwater runoff stream.

4.1 Waste Management

Description: All waste materials will be collected and disposed of into one metal trash dumpster in the materials storage area. Only trash and construction debris from the site will be deposited in the dumpster. No construction materials will be buried on-site. All personnel will be instructed, during tailgate training sessions, regarding the correct disposal of trash and construction debris. Notices that state these practices will be posted on site and the individual who manages day-today site operations will be responsible for seeing that these practices are followed.

Installation: Trash dumpsters will be installed once the materials storage area has been established.

Maintenance Requirements: The dumpsters will be inspected weekly and immediately after storm events. The dumpster will be emptied weekly and taken to a landfill. If trash and construction debris are exceeding the dumpster's capacity, the dumpsters will be emptied more frequently.

4.1.2 Hazardous or Toxic Waste

Hazardous waste materials such as oil filters, petroleum products, paint, and equipment maintenance fluids shall not be placed in the dumpster and disposed of daily accordingly with local, state and federal regulations.

4.2 Material Staging Area

Description: Construction equipment and maintenance materials will be stored at the combined staging area and materials storage areas.

Installation: Gravel bag berms will be installed around the perimeter to designate the staging and materials storage area.

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Maintenance Required: The staging area will be inspected weekly and immediately after storm events. If gaps or tears are found during the inspection, the bag berms will be replaced.

4.4 Washout Area

Description: Contractors should be encouraged where possible, to use washout facilities off-site.

Installation: If washout is to be performed on site, trucks and other construction vehicles can only washout in the designated areas as shown on the accompanying ESCP. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation.

Maintenance Required: The washout areas must be inspected weekly and after storm events or heavy use for clogging from sediments and cleaned and/or riprap replaced as required.

Stormwater Construction Site Inspection Form

General Information			
Project Name			
Project Location			
Date of Inspection		**Start/End Time**	
Inspector's Name(s)			
Inspector's Title(s)			
Inspector's Contact Information			
Describe present phase of construction			
Type of Inspection: ✈ Regular ✈ Pre-storm event ✈ During storm event ✈ Post-storm event			
Weather Information			
Amount of rainfall since last inspection (inches):			
Weather at time of this inspection? ✈ Clear ✈ Cloudy ✈ Rain ✈ Sleet ✈ Fog ✈ Snowing ✈ High Winds ✈ Other: Temperature:			
Have any discharges occurred since the last inspection? ✈ Yes ✈ No **If yes, describe:**			
Are there any discharges at the time of inspection? ✈Yes ✈ No **If yes, describe:**			
Field Observations			
Description of Work Accomplished:			

Site-specific BMPs

	BMP	BMP Installed or Required	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Perimeter Controls	✈Yes ✈No	✈Yes ✈No	
2	Sediment track out	✈Yes ✈No	✈Yes ✈No	
3	Sediment basin/traps	✈Yes ✈No	✈Yes ✈No	
4	Inlet protection	✈Yes ✈No	✈Yes ✈No	

Stormwater Construction Site Inspection Form

Overall Site Issues

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	✈Yes ✈No	✈Yes ✈No	
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	✈Yes ✈No	✈Yes ✈No	.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	✈Yes ✈No	✈Yes ✈No	
4	Are discharge points and receiving waters free of any sediment deposits?	✈Yes ✈No	✈Yes ✈No	
5	Is the construction sediment track out procedures preventing sediment from being tracked into the street?	✈Yes ✈No	✈Yes ✈No	
6	Are temporary stockpiles on site which will remain or have remained for more than 7 days have erosion controls?	✈ Yes ✈No	✈Yes ✈No	
7	Are dust control measures being utilized as to prevent the migration of dust from the site and are the effective?	✈Yes ✈No	✈Yes ✈No	
8	Have areas adjacent to the site work been disturbed, which has resulted in disruption of topsoil outside of the limits of work?	✈Yes ✈No	✈Yes ✈No	
9	Is trash/litter from work areas	✈Yes ✈No	✈Yes ✈No	

Stormwater Construction Site Inspection Form

	collected and placed in covered dumpsters?			
10	Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained?	✈Yes ✈No	✈Yes ✈No	
11	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	✈Yes ✈No	✈Yes ✈No	
12	Are materials that are potential stormwater contaminants stored inside or under cover?	✈Yes ✈No	✈Yes ✈No	
13	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	✈Yes ✈No	✈Yes ✈No	

Non-Compliance

Describe any incidents of non-compliance not described above:

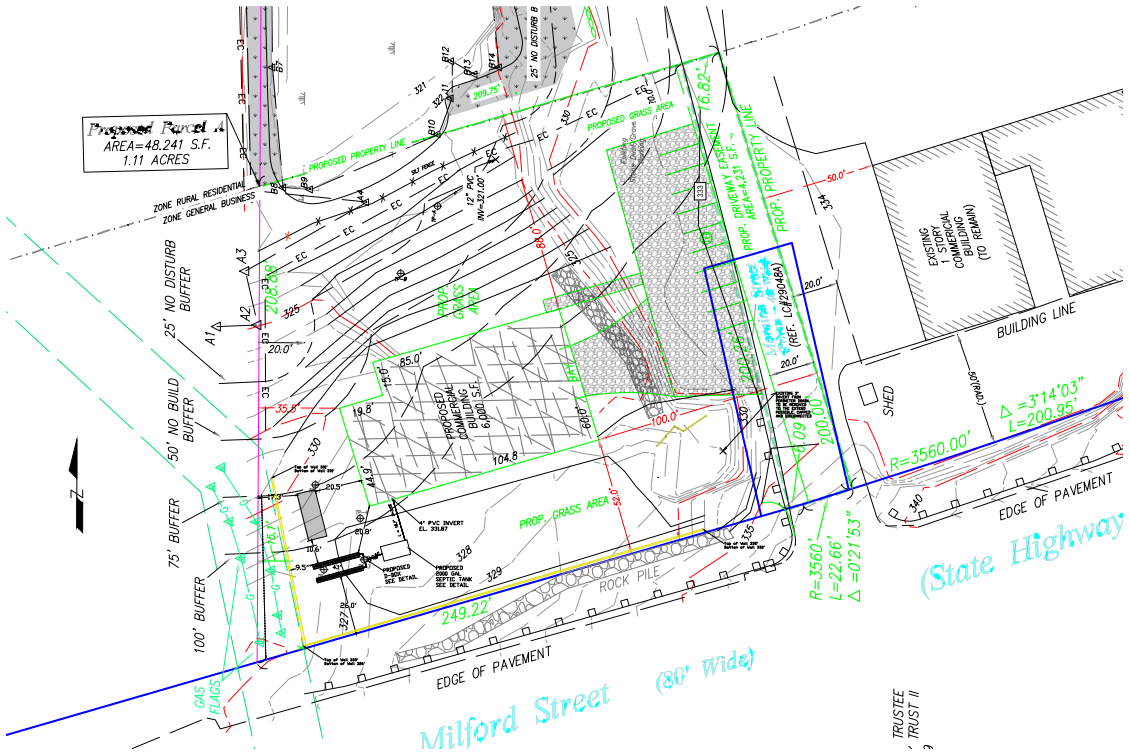
CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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."

Print name and title: _____

Signature: _____

Date: _____



PLAN NOTES:

1. *Existing conditions including contours, pavement, buildings, and wetland limits and buffer zone limits are based on the plan entitled "Plan of Land Showing Proposed Subdivision & Driveway Easement" prepared by certified land surveyor Elliott& Associates and dated May 31, 2019.*
2. The location, limit, size and scope of any and all proposed structures are subject to change and/or subject to approval of the subdivision by the land court.

CONSTRUCTION NOTES:

1. *Retaining wall and geotechnical effects of placement of proposed fill and buildings and stability of the proposed slope must be designed and evaluated by a registered design professional.*
2. *NPDES Permit required prior to construction.*
3. *Construction period pollution prevention plan must be followed in addition that is a part of the NOI submission and stormwater management plan related to this project.*
4. The contractor is responsible for requesting inspections from the Town of Mendon.
5. If subsurface conditions or elevation of groundwater appear to be different than that is depicted on this plan, the engineer of the record must be contacted immediately.
6. This plan designed for this specific project and under the proposed specific design assumptions. This design is not valid and needs to be updated if conditions other than design conditions are encountered.
7. The contractor is responsible for contacting digsafe prior to construction.
8. It is the contractor's responsibility to comply with OSHA and all other federal, state and local safety requirements.
9. The contractor is responsible for compliance with manufacturer's requirements regarding installation,shipping and handling.
10. All fill and crushed stone must be clean and free of debris, organic materials and recycled materials.
11. Existing 3" Pipe to be capped, buried and removed to the extend practicable and disconnected from the perimeter drain around the existing commercial building on Proposed Parcel B prior to any construction.
12. Existing rock swale to be removed prior to construction.
13. Proposed pervious gravel area must be supported with geoweb or approved equivalent to provide structural support of load distribution for applicable vehicles to prevent compaction of gravel which will effect the pervious properties of the area. This system must be designed by the manufacturer or a registered design professional.

NPDES PERMIT REQUIRED

CONSTRUCTION PERIOD POLLUTION PREVENTION PLAN (CPPPP) MUST BE IMPLEMENTED PRIOR TO START OF WORK

LEGEND

- Δ WF ..... Wetland Flag
- HDPE ..... High Density Polyethylene Pipe
- ..... Proposed Wetland Replication Area
- EC ..... Erosion Control
- 100 ..... Proposed Grade
- 100 ..... Existing Grade
- SS ..... Sewer lines (proposed)
- ..... Approx. Test Pit Locations

STORMWATER DESIGN NOTES:

Existing Impervious Area:

Roof : 0 sq. ft.

Impervious stonedust/gravel parking area : 7,050 sq. ft.

Existing Paved Driveway : 4,231 sq. ft.

Existing Total Impervious : 11,281 sq.ft.

Proposed Impervious Area:

Roof : 6,000 sq. ft.

Gravel parking/loading/walkway areas : 5,963 sq. ft. (pervious see see detail and report for detail)

Paved Driveway : 4,231 sq.ft.

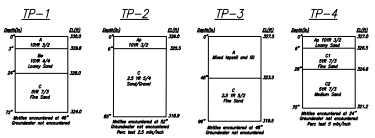
Proposed Total Impervious : 10,231 sq. ft.

Change in Impervious Area: 1050 sq. ft. decrease

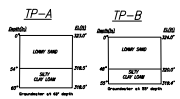
Peak Runoff rates for existing and proposed conditions:

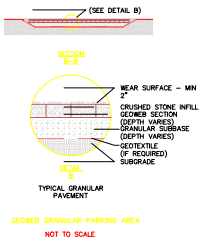
Design Storm	Rainfall (in)	Existing Runoff (cfs)	Proposed Runoff (cfs)
2-yr	3.24	2.09	2.05
10-yr	4.86	3.86	3.74
25-yr	6.12	5.27	5.08
50-yr	7.29	6.59	6.32
100-yr	8.69	8.16	7.81

TP-1 TP-2 TP-3 TP-4



TP-A TP-B





POST CONSTRUCTION SEDIMENT AND EROSION CONTROL NOTES:

1. Sloped areas must be inspected after every major storm for the first 6 months after construction for signs of erosion, gullying, and intactness of the plants and vegetation and riprap areas. If gullying or localized, differential erosion is observed the engineer of the record must be connected. After the slopes, the inspection frequency can reduce to a monthly schedule.
2. Maintenance of the vegetation, planting and the rip rap areas are the responsibility of the owner.

Revisions

Rev. No.	Rev. Date	Description

PROPOSED SUBDIVISION AND COMMERCIAL DEVELOPMENT

50 MILFORD ST MENDON MA

SEPTEMBER 22, 2020

COMMONWEALTH OF MASSACHUSETTS
GANZE MUNDEN CIVIL No. 54125 REGISTERED PROFESSIONAL ENGINEER

Prepared For:

LAURIE & ROBERT SWEET

50 MILFORD ST MENDON MA

Prepared By:

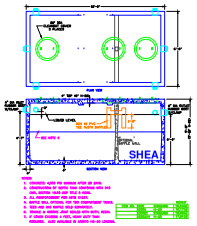
Munden Engineering

PO BOX 286
Canton MA 02021
781-302-6099
mundenengineering.com

SEPTIC TANK DETAIL : 2,000 GAL

Septic Tank Notes:

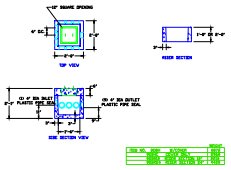
1. Septic tanks shall be steel reinforced concrete.
2. Septic tank to withstand H-10 loading unless under pavement, driveways or graveled ways, where H-20 loading shall apply.
3. All pipe connections and concrete construction shall be watertight.
4. Fill all unused knockouts with mortar.
5. Inlet and outlet tees to be Schedule 40 PVC. Tees to be centered under manhole covers.
6. Recommended manufacturer Shea or approved equal.
7. A 2000 gallon 2-compartment tank connected by a 4" U-shaped pipe is required.
8. Septic tanks shall be placed on a min 6" layer of ¾" to 1-½" double washed stone (no fines). Bottom of the septic tank shall be level.
9. Manholes or inspection ports must be raised to or within 3" of finished grade.
10. Outlet tees must be equipped with corrosion resistant gas baffles.
11. Effluent filters shall be provided in the outlet tee of all septic tanks.

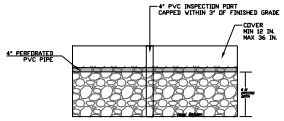


DISTRIBUTION BOX DETAIL: 9 OUTLETS

Distribution Box Notes:

1. Distribution boxes shall be steel reinforced concrete.
2. Distribution box to withstand H-20 loading per Town of Weston regulations.
3. All pipe connections and concrete construction shall be watertight.
4. Fill all unused knockouts with mortar.
5. Manholes or inspection ports must be raised to or within 3" of finished grade.
6. Provide inlet tee of baffle where slope of pipe exceeds 0.06 ft/ft or in pumped system.
7. Distribution boxes shall be placed on a min 6" layer of ¾" to 1-½" double washed stone (no fines). Bottom of the septic tank shall be level.

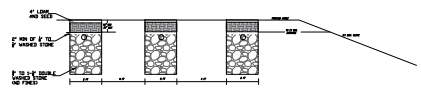




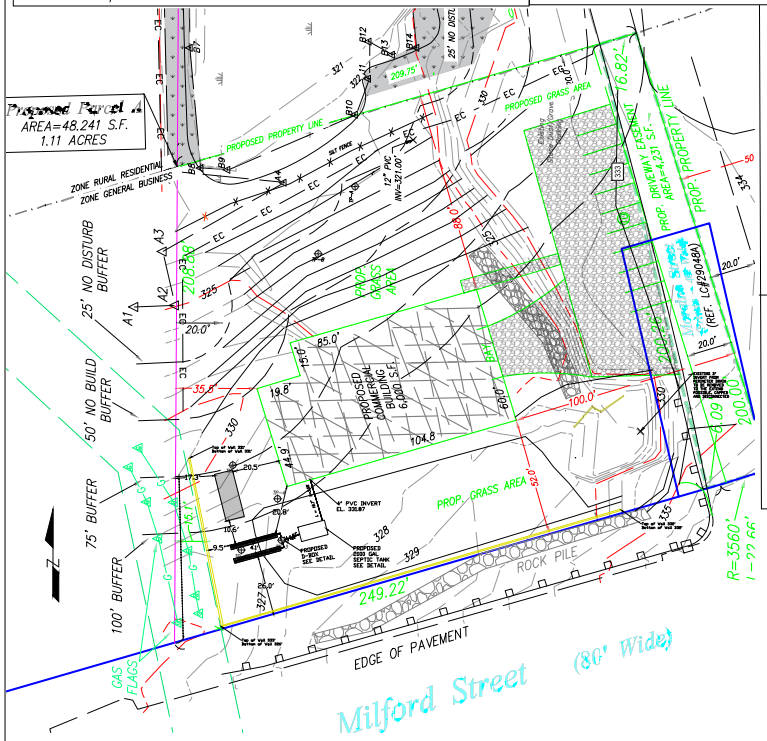
TRENCH PROFILE
NOT TO SCALE

Notes:

1. Bottom of the leaching trench must be level.
2. Finished grade shall have a minimum 2% slope, and, stabilized and graded to reduce infiltration of surface water and minimize erosion.
3. Finished grade must be stabilized with minimum 4" layer of loam and seed.
4. Gravity effluent distribution lines shall have a slope of 0.005 feet per foot along a straight line without bends and shall have ends capped or connected together by unperforated pipe of the same materials specifications.

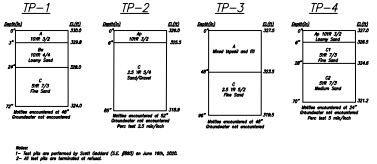


TRENCH CROSS SECTION
NOT TO SCALE



Elevation Schedule

Location	El. (ft)
Top of Foundation	334.00
Basement Floor	330.00
Invert at Foundation (Outside)	331.87
Invert at Septic Tank Inlet	331.18
Invert at Septic Tank Outlet	330.93
Invert at Distribution Box Inlet	330.79
Invert at Distribution Box Outlet	330.63
4" invert at the beginning of the leaching Trenches	330.61
4" invert at the end of the leaching trenches	330.50
Bottom Elevation of Leaching trenches	330.00
Depth to Groundwater	326.00



LEGEND

- △ WF ..... Wetland Flag
- HDPE ..... High Density Polyethylene Pipe
- ..... Proposed Wetland Replication Area
- EC ..... Erosion Control
- 100 ..... Proposed Grade
- 100 ..... Existing Grade
- SS ..... Sewer lines (proposed)
- ⊕ ..... Approx. Test Pit Locations

PLAN AND CONSTRUCTION NOTES:

1- *Existing conditions including contours, pavement, buildings, and wetland limits and buffer zone limits are based on the plan entitled "Plan of Land Showing Proposed Subdivision & Driveway Easement" prepared by certified land surveyor Elliott& Associates and dated May 31, 2019.*

2. All construction shall conform to the requirements of the state sanitary code Title 5 and the Town of Mendon Board of Health Regulations.

3. The septic tank, distribution box , risers, manholes and proposed connection to existing pipe shall be sealed watertight per 310 CMR 15.221(1-3).

4.All system components shall be marked with magnetic tape prior to backfilling.

5. The contractor is responsible for requesting inspections from the Board of Health.

6. If subsurface conditions or elevation of groundwater appear to be different than that is depicted on this plan, the engineer of the record must be contacted immediately.

7. This system is designed for this specific project and under the proposed specific design assumptions. This design is not valid and needs to be updated if conditions other than design conditions are encountered.

8. The contractor is responsible for contacting digsafe prior to construction.

9. It is the contractor's responsibility to comply with OSHA and all other Federal, state and local safety requirements.

10. The contractor is responsible for compliance with manufacturer's requirements regarding installation,shipping and handling.

11. All fill and crushed stone must be clean and free of debris, organic materials and recycled materials.

12. When replacing unsuitable soils, the excavation of unsuitable soils must extend a minimum of five (5) feet laterally in all directions beyond the parameter of the Soil Absorption system (S.A.S.) and to the depth of naturally occurring pervious strata as required by 310 CMR 15.240 and replaced with Fill material meeting specifications of 310 CMR 15.255(13).

13. Hot tubs, saunas or any other additional drains must not be connected to this system without seeking approval from local authorities and the engineer of the record.

14. The location, limit, size and scope of any and all proposed structures are subject to change and/or subject to approval of the subdivision by the land court.

SEPTIC DESIGN NOTES:

1. Sizing of leaching field is based on the parameters presented in "310 CMR 15.000: The State Environmental Code, Title 5" and summarized below:

   90 gpd design flow quantity for 6 people (15 gpd per person for institutional,factory warehouse space without cafeteria)

   0.74gpd/sq.ft. loading rate for =< 5 in./min. percolation rate and Class 1 soil (sands,loamy sands)

2. Sizing of the septic tank was determined by the following
   200% x 90 gpd = 180 Gallons

   Use two compartments 2000 gal septic tank

3. Sizing of the leaching field was determined by the following:
   infiltration area required = daily flow (gpd)/loading rate(gpd/sq. ft.)
   = 90 gpd/0.74 gpd/sq. ft.
   = 122 sq. ft.

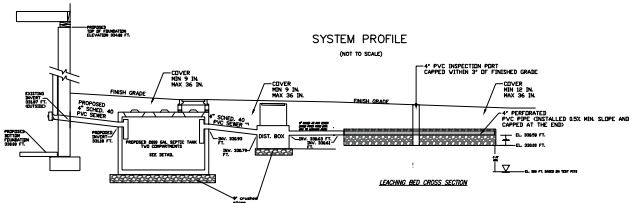
Use a gravel leaching trenches configuration with dimensions 2 ft width and 6-in effective depth:

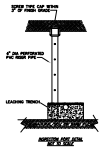
2 x 21 ft length trenches with 3 sq.ft effective leaching area = 126 sq. ft.

6. Construction of permanent structures is not allowed over the limits of the any component of septic system or on the reserved S.A.S. area.

7. Outlet tee of septic tank must be fitted with gas baffle.

8. Required minimum distance and separation from proposed Soil Absorption System (S.A.S.) based on the Mass DEP Title 5 Setback Area Maps provided online as of the date of this plan:
The property is not known to be in a surface water protection district.
There are no bordering vegetated wetlands, inland banks or surface waters located within 100 feet.
There are no known private water supply wells located within 200 feet of the leaching facility.
There are no known public water supply wells located within 500 feet.
There are no known surface drains, open surface, subsurface or foundation drains which intercept high groundwater, storm drainage leaching catch basins or dry wells within 50 feet.
There are no known certified vernal pools located within 100 feet.
There are no FEMA designated regulatory floodways within 150 feet.





Revisions

Rev. No.	Rev. Date	Description

PROPOSED SUBDIVISION AND COMMERCIAL DEVELOPMENT

50 MILFORD ST
MENDON MA

SEPTEMBER 22, 2020

COMMONWEALTH OF MASSACHUSETTS
GANZE MUNDEN CIVIL No. 54125 REGISTERED PROFESSIONAL ENGINEER

Prepared For:

LAURIE & ROBERT SWEET

50 MILFORD ST
MENDON MA

Prepared By:

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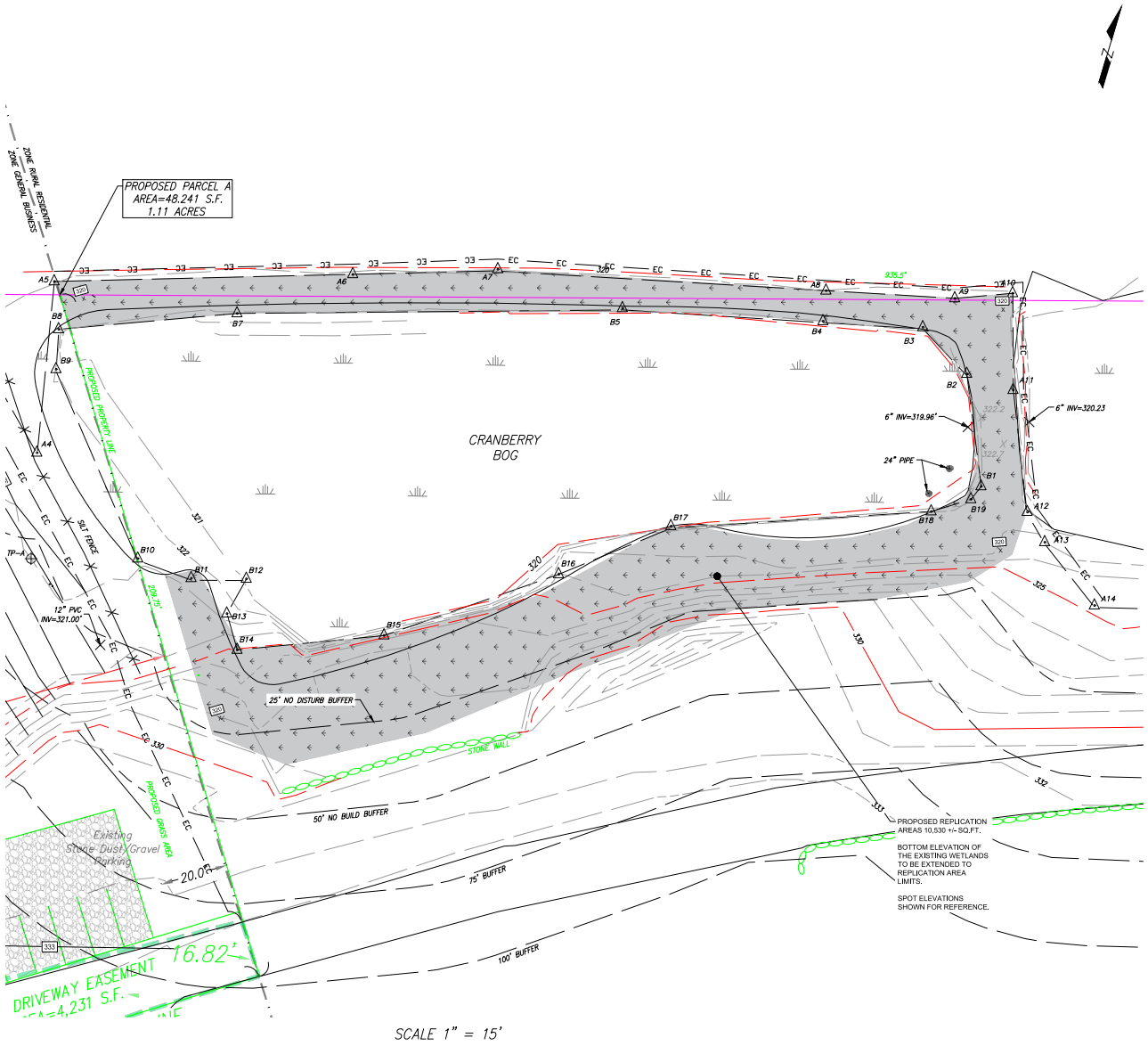


SCALE 1" = 15'

LEGEND

WF	Wetland Flag
HDPE	High Density Polyethylene Pipe
	Proposed Wetland Replication Area
EC	Erosion Control
100	Proposed Grade
100	Existing Grade
SS	Sewer lines (proposed)
	Approx. Test Pit Locations

PLAN NOTES:

1. Existing conditions including contours, pavement, buildings, and wetland limits and buffer zone limits are based on the plan entitled "Plan of Land Showing Proposed Subdivision & Driveway Easement" prepared by certified land surveyor Elliott& Associates and dated May 31, 2019.

Revisions

Rev. No.	Rev. Date	Description

PROPOSED WETLAND RESTORATION

50 MILFORD ST
MENDON MA

SEPTEMBER 22, 2020

Prepared For:

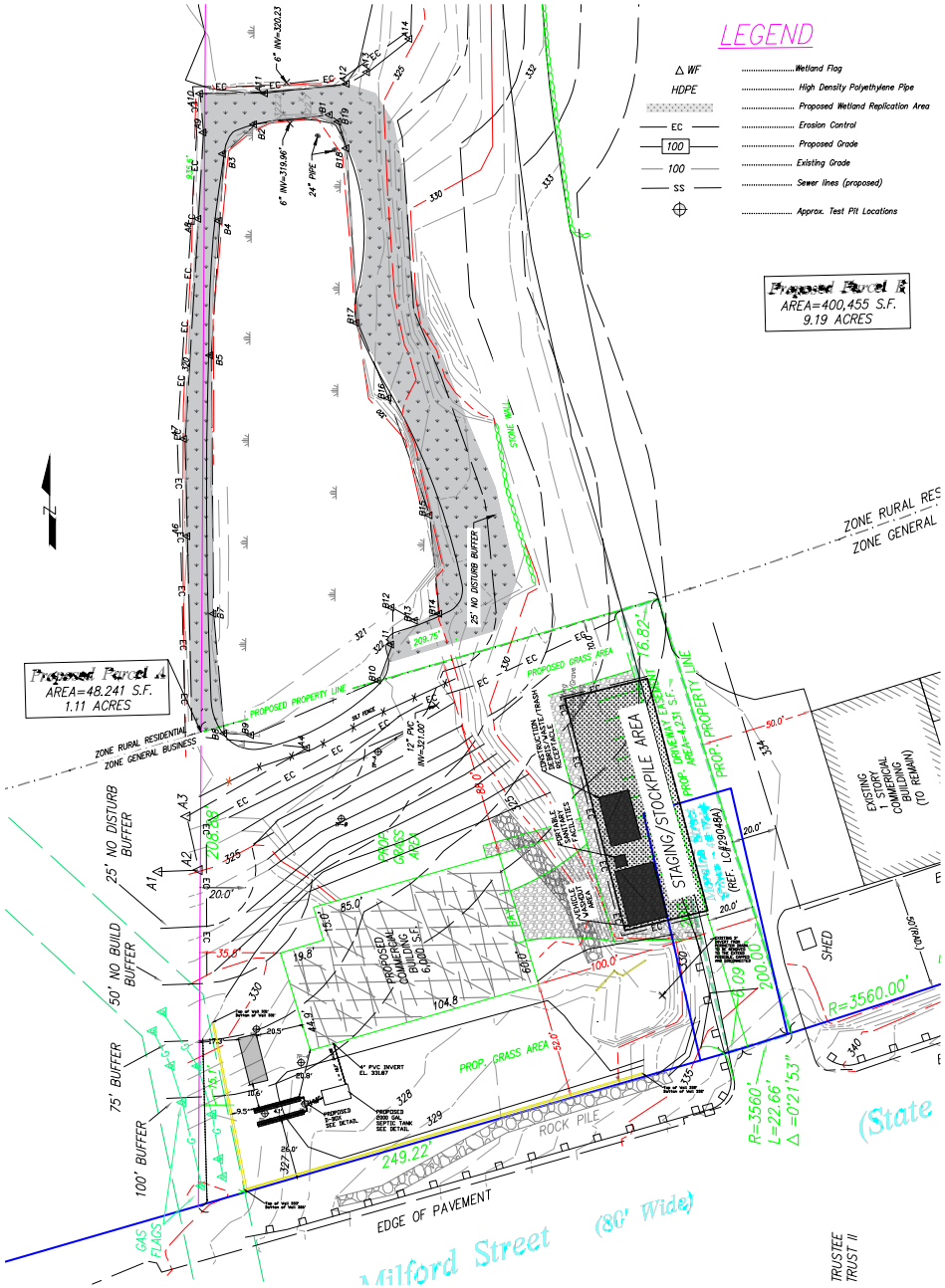
LAURIE & ROBERT SWEET

50 MILFORD ST
MENDON MA

Prepared By:

Munden Engineering

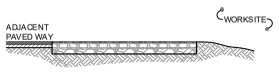
PO BOX 286
Canton MA 02021
781-302-6099
mundenengineering.com

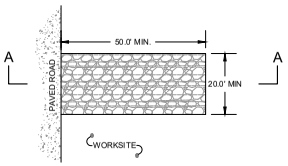


CONSTRUCTION SEQUENCE

ITEMS MUST OCCUR IN THE ORDER LISTED; ITEMS CANNOT OCCUR CONCURRENTLY UNLESS SPECIFICALLY NOTED.

1. NO CONSTRUCTION CAN BEGIN UNTIL ANY AND ALL PERMITS ARE OBTAINED FROM THE TOWN OF MENDON.
2. EXISTING DRIVEWAY MUST BE USED AS CONSTRUCTION ENTRANCE. IF THE DRIVEWAY GETS DAMAGED OR DISPLACED DURING CONSTRUCTION THE CONTRACTOR SHALL STOP WORK, INSTALL THE STABILIZED CONSTRUCTION PAD AS SHOWN ON DETAIL IMMEDIATELY AND CONTACT TOWN OF MENDON FOR INSPECTION.
3. STAKE LIMITS OF CLEARING.
4. INSTALL EROSION CONTROL BARRIERS AT LIMIT OF WORK AS DEPICTED.
5. SCHEDULE INSPECTION BY CONTACTING THE TOWN OF MENDON.
6. PERFORM CLEARING AND CURB CUT NECESSARY TO INSTALL STONE CONSTRUCTION ENTRANCES.
7. PERFORM TREE CUT WITHIN LIMITS OF WORK.
8. INSTALL REMAINING EROSION CONTROL SYSTEMS (WASHOUT AREA, STOCKPILE/STAGING AREA).
9. SCHEDULE INSPECTION BY CONTACTING THE TOWN OF MENDON.
10. PERFORM CLEARING AND GRUBBING AS NECESSARY.
11. STRIP AND STOCKPILE LOAM.
12. PERFORM EARTHWORK CUT AND FILLS FOR ROUGH GRADE.
13. CONSTRUCT RETAINING WALL STRUCTURES.
14. INSTALL CONCRETE FOUNDATION FOR THE PROPOSED BUILDING.
15. CONSTRUCT UPPER STRUCTURE INCLUDING ROOFS AND SIDING.
16. INSTALLATION OF UTILITIES.
14. REMOVE TEMPORARY CONTROLS EXCEPT PERIMETER CONTROLS.
17. PERFORM FINE GRADING AND PREPARE SUBGRADE FOR PAVING/PARKING AREAS.
18. PERMANENT/FINAL STABILIZATION.
19. REMOVE PERIMETER EROSION CONTROLS.
20. PERFORM AS-BUILT SURVEYS AND SUBMIT TO TOWN OF MENDON FOR ACCEPTANCE.





STABILIZED CONSTRUCTION ENTRANCE DETAIL
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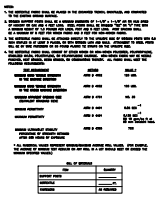
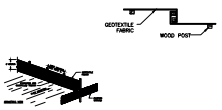
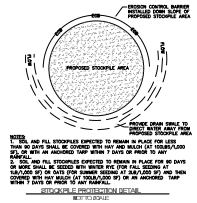
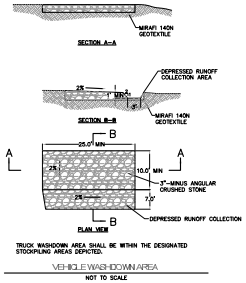






GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. All erosion and sediment control measures are to be placed prior to commencement of land disturbance activities.
2. The contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation.
3. Existing bituminous concrete driveway must be used as the construction entrance.
4. Existing parking area must be used as the stockpile, staging, and washout area constructed accordingly with the details shown.
3. All disturbances to drain to approved sediment control measures at all times during land disturbing activities and during site development until final stabilization is achieved.
4. The contractor shall inspect all erosion control measures weekly and after each rainfall event. Any necessary repairs or cleanup to maintain the effectiveness of the erosion control devices shall be made immediately.
5. The contractor shall maintain a surplus supply of necessary erosion control devices on-site for emergency use (straw bales, wattles, filter berm, silt fence, stakes, crushed stone).



TRUCK WASHDOWN AREA SHALL BE WITHIN THE DESIGNATED STOCKPILING AREAS DEPICTED.

VEHICLE WASHDOWN AREA
NOT TO SCALE

Revisions

Rev. No.	Rev. Date	Description

CONSTRUCTION PERIOD POLLUTION PREVENTION PLAN (CPPPP)

50 MILFORD ST
MENDON MA

SEPTEMBER 22, 2020

COMMONWEALTH OF MASSACHUSETTS
GANZE MUNDEN CIVIL No. 54125 REGISTERED PROFESSIONAL ENGINEER

Prepared For:

LAURIE & ROBERT SWEET

50 MILFORD ST
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Prepared By:

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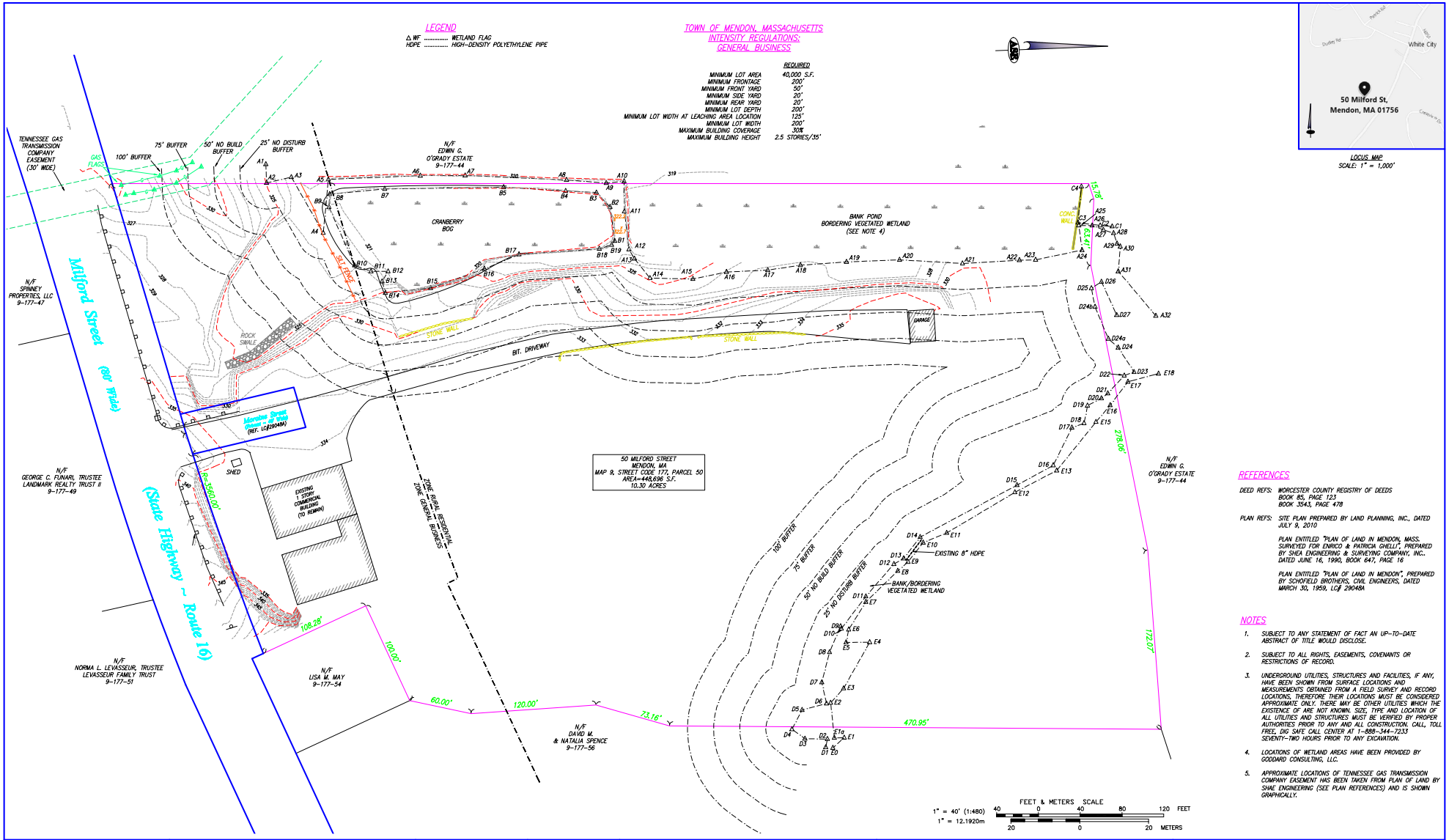
SHEET 1 OF 1



ZONING DESIGNATION:
TOWN OF MENDON ZONING DISTRICT
GENERAL BUSINESS
RURAL RESIDENTIAL

ASSESSORS REFERENCE:
MAP 9, STREET CODE 177, PARCEL 50

I CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY PERFORMED ON THE GROUND ON DECEMBER 12, 2018, FEBRUARY 4, 2019, NOVEMBER 21, 2109, MARCH 27, 2020 AND THE LATEST PLANS AND DEEDS OF RECORD.

I CERTIFY THAT THE SUBJECT DWELLING SHOWN LIES IN ZONE "X", SHOWN ON MAP NUMBER 25027C1031E, HAVING AN EFFECTIVE DATE OF JULY 4, 2011.

REVISIONS

DATE	DESCRIPTION

FIELD: MRI/BMD
CALCS: EJP/SMI
DRAWN BY: SMI
FIELD EDIT: N/A
CHECKED: EJP
APPROVED:
JOB #: 181688

COMMONWEALTH OF MASSACHUSETTS ELLIOTT PATURZO NO. 34823

7/31/20
PROFESSIONAL LAND SURVEYOR DATE

A.S. Elliott & Associates
Professional Land Surveyors
P.O. BOX 85 ~ HOPEDALE, MA 01747
(508) 634-0256
www.aselliott.com

Existing Conditions Plan of Land

50 MILFORD STREET

MENDON, MASSACHUSETTS

PREPARED FOR: ROBERT SWEET

SCALE: 1" = 40' DATE: MARCH 27, 2020