

# Preservation of Bridge No. 04549 Firetown Road over Bissell Brook



# Inland Wetlands Permit Application

Town of Simsbury

Office of Community Planning and Development

933 Hopmeadow Street

Simsbury, CT 06070

June 2020

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Town of Simsbury

Office of Community Planning and Development - Inland Wetlands Permit Application

DATE: 3 June 2020	<sub>FEE: \$</sub> 95.0	CK #:	APP #:					
PROPERTY ADDRESS: Brid	PROPERTY ADDRESS: Bridge 04549 (nearest to 507 Firetown Road)							
NAME OF APPLICANT:								
MAILING ADDRESS: 933 H	lopmeadow Street,	Simsbury, CT 06070						
EMAIL ADDRESS:			PHONE # 860-658-3245					
NAME OF OWNER: Town of								
MAILING ADDRESS: same								
EMAIL ADDRESS: same		TELEI	PHONE # same					
		Y DULY ACKNOWLEDGED	TO ACT FOR THE OWNER					

NOTE: ATTACH A WRITTEN LETTER OF AGENCY, DULY ACKNOWLEDGED, TO ACT FOR THE OWNER, INCLUDING THE ABILITY TO CARRY OUT ACTIVITIES SET FORTH HEREIN.

DESCRIBE THE SPECIFIC ACTIVITY(ies) FOR WHICH A PERMIT IS SOUGHT AS IT RELATES TO "REGULATED ACTIVITIES" AS DEFINED IN SECTION 6 OF THE SIMSBURY INLAND WETLANDS REGULATIONS, SUCH AS: A) REMOVE MATERIAL FROM; B) DEPOSIT MATERIAL IN OR DISCHARGE TO; C) CONSTRUCT ON; D) OBSTRUCT; E) ALTER; F) POLLUTE; OR G) OTHERWISE ADVERSELY AFFECT A REGULATED AREA: Rehabilitation of Bridge 04549, Firetown Road over Bissell Brook.

A permit is sought for the following regulated activities: clearing (vegetation), paving (re-paving), and filling (stone rip-rap).

#### **CERTIFICATIONS AND PERMISSIONS:**

As owner, I hereby give permission to the Town of Simsbury's Conservation Commission Inland Wetlands Watercourses Agency, their Agents, or Town Staff to enter upon my land to make observations and tests as may be necessary to evaluate this application and ongoing work, subject to twenty-four hours notice of such entry/testing.

I hereby certify that all statements herein are true to the best of my knowledge, whether made by me or my agents. Any permit issued shall be contingent upon field conditions and activities being substantiated as indicated herein. A changed situation shall require reconsideration of the permit by the Commission upon discovery by either party.

I certify that I have the authority to sign this application.

Capitola 7/16/20

Signature of Owner

Telephone (860) 658-3245 *Facsimile* (860) 658-3206

www.simsbury~ct.gov

Signature and Title of Applicant

933 Hopmeadow Street Simsbury, CT 06070

1 of 4

# **INSTRUCTIONS FOR APPLICANT**

Any person seeking a permit to carry out a regulated activity on property which has been designated an inland wetland or watercourse by the Conservation Commission or within the 100foot regulated buffer area of a designated inland wetland or watercourse must complete and submit the Inland Wetlands Permit Application to the Planning Department.

Submission shall occur by the day before a regular meeting of the Conservation Commission. (See Section 5 of the Inland Wetlands and Watercourses Regulations of the Town of Simsbury.) Application will be heard at the following meeting, after petition period.

The original application shall be submitted with eleven (11) copies. Maps on sheets larger than 11"x14" shall be submitted in at least three (3) copies. Additional copies of site plans may be required. PDFs of the maps, if available, should be submitted, as well. PDFs can be emailed to lbarkowski@simsbury-ct.gov.

A filing fee shall accompany the application, as required by the Land Use Application Fees schedule. Please consult with the Planning Office for specific fee determination.

The following information shall be provided on white paper (8 <sup>1</sup>/<sub>2</sub>"x11") and typewritten. <u>Reproduce the following questions along with the answer and attach to the application.</u>

- 1. *In the case of a public hearing or map amendment*, list on a separate sheet of paper the names and addresses of all abutting property owners and property owners within 100 feet of all property lines. Identify on one of the attached maps.
- 2. Describe the site and the regulated area or wetlands/watercourses involved:
  - a. General site conditions, including vegetation and general soil conditions.
  - b. Size of wetland within site or distance of the activity from the wetland.
  - c. Size of total contiguous wetland.
  - d. Position relative to other wetlands on site.
  - e. Type of wetland characterized by vegetative and soil type and/or watercourse, such as: 1) open/deep fresh water pond or lake; 2) shallow marsh; 3) seasonally flooded basins and flats; 4) meadow; 5) shrub swamp; 6) wooded swamp; 7) bog; 8) kettle;
    9) stream type; 10) other.

- 3. Depth to water table, depth to mottled soil, and seasonal variation of water table.
- 4. Describe the immediate impact on the wetlands and watercourses, including, but not limited to:
  - a. Quantities, by volume and area disturbed, of materials to be removed, deposited, or altered.
  - b. Kinds of materials by soil types and vegetative classifications, and materials classification to be removed, deposited, or altered.
  - c. Percent of wetlands/watercourses disturbed or altered to total area of wetlands/watercourses on the parcel.
- 5. Describe the related construction activities and their impact on:
  - a. Area and location of wetlands and watercourses.
  - b. Types and amounts of vegetation.
  - c. Surface and groundwater.
  - d. Visual impacts.
  - e. Wildlife habitats.
- 6. Describe the long term or permanent impact of the activity(ies) on environmental aspects, such as the surface and groundwater quality, storm water runoff, visual impact(s), or wildlife habitats on:
  - a. Wetlands and/or watercourses.
  - b. Abutting riparian properties and/or wetlands and/or watercourses.
- 7. Identify sedimentation and erosion control measures to be used.
- 8. Identify alternatives to the proposed activity that were considered, including alternative sites and why this one was chosen.
- 9. Estimate cost of work and time for completion.
- 10. Attach drainage calculations and other reports as indicated to substantiate the statements made above.

# 11. <u>REQUIRED MAPS</u>

a. Attach a <u>vicinity map</u> on an 8 ½"x11" sheet at scale 1"=200' or 1'=800' (depending upon the size of the parcel) showing the general location of the area in which the regulated activity is proposed. The map should be in sufficient detail to allow the identification of the property on the official Inland Wetlands and Watercourses map. A guide to the kinds of information to be shown is available in the Planning Department at the Town Hall.

# b. <u>Site Plan(s)</u> showing:

- i. The topography showing contours at intervals of not more than two (2) feet and a minimum of two (2) contour marks per ten (10) acres at a scale of 1"=100' or 1"=40' (whichever is more appropriate).
- ii. Location of existing watercourses and/or ponds.
- iii. Location of regulated activity.
- iv. Proposed grading and/or filling.
- v. Proposed drainage, site utilities, wells, etc.
- vi. Sedimentation and erosion control measures.

# 12. The Applicant shall certify whether:

- a. Any portion of the property on which the regulated activity is proposed is located within 500 feet of the boundary of an adjoining municipality. Yes. The project is situated within 500-feet of an adjoining.
- b. Traffic attributable to the completed project on the site will adjoining municipality to enter or exit the site. Not applicable - existing traffic patterns will not change as a result of the project.
- c. Sewer or water drainage from the project site will flow through and affect the Not applicable - existing sewer and sewage or drainage system within the adjoining municipality or stormwater flow will not be altered
- d. Water runoff from the improved site will affect streets or other municipal or private property within the adjoining municipality. Not applicable - Water runoff will not be altered as a result of the project.
- e. Documentation that notice of the pending application was provided to the adjacent municipality (certified mail, return receipt requested) on the same day of filing an Not applicable The proposed work is within a inland wetland permit application with the Town of Sim public right of way entirely within the Town of
- f. The property is subject to a conservation restriction Simsbury.
   and, if so, what party or parties are holders thereof or intended to be benefitted thereby.
   Yes. The project will include work on land owned by McLean Game Refuge, Inc. which is subject to a conservation easement.

ALL INFORMATION MUST BE COMPLETED TO THE EXTENT INDICATED BY THE COMMISSION BEFORE ANY ACTION IS TAKEN ON THE PERMIT APPLICATION. <u>INCOMPLETE APPLICATIONS WILL BE DENIED</u>. ADDITIONAL INFORMATION MAY BE REQUIRED BY THE COMMISSION.

THE <u>APPLICANT</u> AND/OR <u>AUTHORIZED AGENT</u> SHOULD ATTEND THE CONSERVATION COMMISSION/INLAND WETLANDS & WATERCOURSES AGENCY MEETING IN ORDER FOR A DECISION TO BE RENDERED. IF APPLICANT OR AGENT DOES NOT ATTEND, AND QUESTIONS ARISE, DECISION ON APPLICATION MAY BE DEFERRED OR DENIED.

**Project Narrative** 





**Project Narrative** 

The Bridge Preservation Program involves maintenance repairs to extend the service life of Bridge 04549 (the Project). The Program does not involve the replacement or the enhancement of hydraulic capacity. The Bridge carrying Firetown Road over Bissell Brook consists of a single span concrete slab superstructure supported on conventional cast in place concrete abutments. The original structure was built in 1949 and there is no record of rehabilitation. The Bridge has a travel way width of approximately 26 feet, an overall length of 24 feet and crosses the Bissell Brook at a 45 degree skew angle. The existing roadway is classified "Rural – Local".

# Bridge No. 04549 Firetown Road Over Bissell Brook

# LOCATION MAP

This Project involves maintenance type repairs to extend the service life of the Bridge. Consequently, the proposed repairs do not involve the replacement or the enhancement of hydraulic capacity of the Bridge. As such, no detailed hydraulic or scour analyses were performed. However, a summary level hydraulic capacity assessment using HDS No. 5 nomographs based on the USGS StreamStats 1% recurrence interval

115 GLASTONBURY BLVD • GLASTONBURY CT 06033	P 860.659.1416
6 CHESTNUT ST • AMESBURY MA 01913	P 978.388.2157
197 LOUDON RD • CONCORD NH 03301	P 603.856.7854
235 PROMENADE ST SUITE 535 • PROVIDENCE RI 02908	P 401.383.6530

(Q100) design storm flow rate was performed. As a result, the evaluation indicates that Bridge 04549 is hydraulically adequate.

Bridge 04549 Preservation Program maintenance repairs will consist of

- 1. Remove vegetation growth near wingwalls;
- 2. Remove existing guiderail system;
- 3. Remove existing bridge rail;
- 4. Remove existing bituminous overlay to expose top of deck slab or deck units;
- 5. Perform repairs to top of deck slab or pre-stressed deck units;
- 6. Repair concrete parapets;
- 7. Repair/reseal joints;
- 8. Install membrane waterproofing;
- 9. Install new pavement on bridge and roadway approaches;
- 10. Mill and overlay roadway approaches;
- 11. Patch and repair concrete abutments and wingwalls ;
- 12. Patch and repair concrete bridge deck, curbing and end blocks;
- 13. Install new curb mounted steel-backed timber guiderail on bridge;
- 14. Install new steel-backed timber guiderail on roadway approaches.
- 15. Perform embankment repairs.

At the roadway approaches for Firetown Road Bridge, there is curbing along the west edge of the road and no curbing along the east edge of the road. There is typical country (open) drainage that sheet flows off of the bridge and beyond the bridge on the east edge of the roadway. No drainage improvements are recommended or necessary at the site. However, it is recommended that riprap be added to fill in spots of local surface erosion and convey the discharges from the leak offs around the wingwalls and into the edge of the wetlands at the site.

It is anticipated that some water handling with temporary cofferdams/sandbags and in-stream work will be necessary to facilitate access for performing some of the repairs.

Prior to beginning construction erosion control measures will be installed as shown on the plans provided. Erosion control measures will consist of silt fence. Water diversion barriers will be installed to facilitate crack repair to the headwalls and wingwalls as shown on the plans provided. The erosion control measures will be removed following completion of construction. Refer to the plans provided for more information.

Within the project limits are CT inland wetlands and waterways. No federal wetlands were noted within the project limits. Refer to the Wetland Delineation Report for more information. During construction we anticipate temporarily disturbing 164 square feet (sf) of wetlands and up to 1,020 sf of waterway due to temporary cofferdams/sandbags and in-stream work. There will be a permanent disruption of 46 sf wetlands due to installing stone rip-rap near the base of the southeast wingwall. The project is located entirely within the 100-year floodplain. Due to this the project will displace approximately 55 cubic yards (cy) of available flood storage (70 cy of fill less 15 cy cubic yards of excavation).



**DEEP Activity Reporting Form** 





79 Elm Street • Hartford, CT 06106-5127

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# STATEWIDE INLAND WETLANDS & WATERCOURSES ACTIVITY REPORTING FORM

Pursuant to section 22a-39(m) of the General Statutes of Connecticut and section 22a-39-14 of the Regulations of Connecticut State Agencies, inland wetlands agencies must complete the Statewide Inland Wetlands & Watercourses Activity Reporting Form for **each** action taken by such agency.

This form may be made part of a municipality's inland wetlands application package. If the municipality chooses to do this, it is recommended that a copy of the Town and Quadrangle Index of Connecticut and a copy of the municipality's subregional drainage basin map be included in the package.

Please remember, the inland wetlands agency is responsible for ensuring that the information provided is **accurate** and that it reflects the **final** action of the agency. Incomplete or incomprehensible forms will be mailed back to the agency. Instructions for completing the form are located on the following pages.

The inland wetlands agency shall mail completed forms for actions taken during a calendar month no later than the 15<sup>th</sup> day of the following month to the Department of Energy and Environmental Protection (DEEP). Do **not** mail this cover page or the instruction pages. Please mail **only** the **completed** reporting form to:

DEEP Land & Water Resources Division Inland Wetlands Management Program 79 Elm Street, 3<sup>rd</sup> Floor Hartford, CT 06106

Questions may be directed to the DEEP's Inland Wetlands Management Program at (860) 424-3019.

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# INSTRUCTIONS FOR COMPLETING

# THE STATEWIDE INLAND WETLANDS & WATERCOURSES ACTIVITY REPORTING FORM

# Use a separate form to report EACH action taken by the Agency. Complete the form as described below. Do NOT submit a reporting form for withdrawn actions.

# PART I: Must Be Completed By The Inland Wetlands Agency

- 1. Choose the year and month the Inland Wetlands Agency took the action being reported. If multiple actions were taken regarding the same project or activity then multiple forms need to be completed.
- 2. Choose ONE code letter to describe the final action or decision taken by the Inland Wetlands Agency. Do NOT submit a reporting form for withdrawn actions. Do NOT enter multiple code letters (for example: if an enforcement notice was given and subsequent permit issued two forms for the two separate actions are to be completed).
  - A = A Permit Granted by the Inland Wetlands Agency (not including map amendments, see code D below)
  - **B** = Any Permit Denied by the Inland Wetlands Agency
  - **C** = A Permit Renewed or Amended by the Inland Wetlands Agency
  - D = A Map Amendment to the Official Town Wetlands Map or -An Approved/Permitted Wetland or Watercourse Boundary Amendment to a Project Site Map
  - **E** = An Enforcement Action: Permit Revocation, Citation, Notice of Violation, Order, Court Injunction, or Court Fines
  - $\mathbf{F}$  = A Jurisdictional Ruling by the Inland Wetlands Agency (i.e.: activities "permitted as of right" or activities
  - considered non-regulated)
  - **G** = An Agent Approval pursuant to CGS 22a-42a(c)(2)
  - H = An Appeal of Agent Approval Pursuant to 22a-42a(c)(2)
- 3. Check "yes" if a public hearing was held in regards to the action taken; otherwise check "no".
- 4. Enter the name of the Inland Wetlands Agency official verifying that the information provided on this form is accurate and that it reflects the FINAL action of the agency.

**PART II: To Be Completed By The Inland Wetlands Agency Or The Applicant** - If Part II is completed by the applicant, the applicant MUST return the form to the Inland Wetlands Agency. The Inland Wetlands Agency MUST ensure that the information provided is accurate and that it reflects the FINAL action of the Agency.

5. Enter the name of the municipality for which the Inland Wetlands Agency has jurisdiction and in which the action/project/activity is occurring.

Check "yes" if the action/project/activity crosses municipal boundaries and enter the name(s) of the other municipality(ies) where indicated. Check "no" if it does not cross municipal boundaries.

6. Enter the USGS Quad Map name or number (1 through 115) as found on the Connecticut Town and Quadrangle Index Map (the directory to all USGS Quad Maps) that contains the location of the action/project/activity. Click on the following website for USGS Quad Map information: http://ct.gov/deep/lib/deep/gis/resources/Index\_NamedQuadTown.pdf

ALSO enter the four-digit identification number of the corresponding Subregional Drainage Basin in which the action/project/activity is located. If the action/project/activity is located in more than one subregional drainage basin, enter the number of the basin in which the majority of the action/project/activity is located. Town subregional drainage basin maps can be found at UConn – CLEAR's website: <u>http://clear.uconn.edu/data/map\_set/index.htm</u>

- 7. Enter the name of the individual applying for, petitioning, or receiving the action.
- 8. Enter the name and address or location of the action/project/activity. Check if the action/project/activity is TEMPORARY or PERMANENT in nature. Also provide a brief DESCRIPTION of the action/project/activity. It is always best to provide as much information as possible (i.e., don't just state "forestry", provide details such as "20 acre forestry harvest, permit required for stream crossing".)

- 9. Carefully review the list below and enter ONLY ONE code letter which best characterizes the action/project/activity. All state agency projects must code "N".
  - **A** = Residential Improvement by Homeowner
  - **B** = New Residential Development for Single Family Units
  - **C** = New Residential Development for Multi-Family / Condos
  - D = Commercial / Industrial Uses
  - E = Municipal Project
  - **F** = Utility Company Project
  - **G** = Agriculture, Forestry or Conservation
  - H = Wetland Restoration, Enhancement, Creation

- I = Storm Water / Flood Control
- J = Erosion / Sedimentation Control
- K = Recreation / Boating / Navigation
- L = Routine Maintenance
- M = Map Amendment
- **N** = State Agency Project
- P = Other (this code includes the approval of concept plans with no-on-the-ground work)
- 10. Enter between one and four code numbers to best characterize the project or activity being reported. Enter "NA" if this form is being completed for the action of map amendment. You MUST provide code 12 if the activity is located in an established upland review area. You MUST provide code 14 if the activity is located beyond the established upland review area or no established upland review area exists.

1 = Filling	8 = Underground Utilities Only (no other activities)
2 = Excavation	9 = Roadway / Driveway Construction
3 = Land Clearing / Grubbing (no other activity)	10 = Drainage Improvements
4 = Stream Channelization	11 = Pond, Lake Dredging / Dam Construction
<ul> <li>5 = Stream Stabilization (includes lakeshore stabilization)</li> <li>6 = Stream Clearance (removal of debris only)</li> <li>7 = Culverting (not for roadways)</li> </ul>	<ul> <li>12 = Activity in an Established Upland Review Area</li> <li>14 = Activity in Upland</li> </ul>

**Examples:** Jurisdictional ruling allowing construction of a parking lot in an upland where the municipality does not have an established upland review area must use code 14, other possible codes are 2 and 10. Permitted construction of a free standing garage (residential improvement by homeowner) partially in an established upland review area with the remainder in the upland must use code 12 and 14, other possible codes are 1 and 2.

- 11. Leave blank for TEMPORARY alterations but please indicate action/project/activity is temporary under question #8 on the form. For PERMANENT alterations, enter in acres the area of wetland soils or watercourses altered. Include areas that are permanently altered, or are proposed to be, for all agency permits, denials, amendments, renewals, jurisdictional rulings, and enforcement actions. For those activities that involve filling or dredging of lakes, ponds or similar open water bodies enter the acres filled or dredged under "open water body". For those activities that involve directly altering a linear reach of a brook, river, lakeshore or similar linear watercourse, enter the total linear feet altered under "stream". Remember that these figures represent only the acreage altered not the total acreage of wetlands or watercourses on the site. You MUST provide all information in ACRES (or linear feet as indicated) including those areas less than one acre. To convert from square feet to acres, divide square feet by the number 43,560. If this report is being completed for an agency jurisdictional ruling and detailed information is not available, provide an estimate. Enter zero if there is no alteration.
- 12. Enter in acres the area of upland altered as a result of an ACTIVITY REGULATED BY the inland wetlands agency, or as a result of an AGENT APPROVAL pursuant to CGS section 22a-42a(c)(2). Leave blank for TEMPORARY alterations but please indicate action/project/activity is temporary under question #8 on the form. Include areas that are permanently altered, or proposed to be permanently altered, for all agent approvals, agency permits, denials, amendments, renewals, jurisdictional rulings, and enforcement actions. You MUST provide all information in ACRES including those areas less than one acre. See directions above (#11) for conversion factor. If this report is being completed for an agent approval or an agency jurisdictional ruling and detailed information is not available, provide an estimate. Enter zero if there is no alteration.
- 13. Enter the acres that are, or are proposed to be, restored, enhanced or created for all agency permits, denials, amendments, renewals, jurisdictional rulings and enforcement actions. NOTE restored or enhanced applies to previously existing wetlands or watercourses. Created applies to a non-wetland or non-watercourse area which is converted into wetlands or watercourses (question #10 must provide 12 and/or 14 as an answer, and question #12 must also be answered). You MUST provide all information in ACRES including those areas less than one acre. See directions above (#11) for conversion factor. Enter zero if there is no restoration, enhancement or creation.

**PART III: To Be Completed By The DEEP** - Please leave this area blank. Incomplete or incomprehensible forms will be mailed back to the inland wetlands agency.



GIS CODE #: \_\_\_\_\_ For DEEP Use Only

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www.ct.gov/deep

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# Statewide Inland Wetlands & Watercourses Activity Reporting Form

Please complete and mail this form in accordance with the instructions on pages 2 and 3 to: DEEP Land & Water Resources Division, Inland Wetlands Management Program, 79 Elm Street, 3<sup>rd</sup> Floor, Hartford, CT 06106 Incomplete or incomprehensible forms will be mailed back to the inland wetlands agency.

# PART I: Must Be Completed By The Inland Wetlands Agency

1. DATE ACTION WAS TAKEN: year: \_\_\_\_\_ month: \_\_\_\_

2. ACTION TAKEN (see instructions, only use one code):

3.	WAS A PUBLIC HEARING HELD (check one)?	yes 🗌	no 🗌
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4. NAME OF AGENCY OFFICIAL VERIFYING AND COMPLETING THIS FORM:

(print name)

(signature)

	PART II: To Be Completed By The Inland Wetlands Agency Or The Applicant
5.	TOWN IN WHICH THE ACTION IS OCCURRING (print name):
	does this project cross municipal boundaries (check one)? yes D no
	if yes, list the other town(s) in which the action is occurring (print name(s)):,,
6.	LOCATION (see instructions for information): USGS quad name: or number:
	subregional drainage basin number:
7.	NAME OF APPLICANT, VIOLATOR OR PETITIONER (print name):
8.	NAME & ADDRESS / LOCATION OF PROJECT SITE (print information):
	briefly describe the action/project/activity (check and print information): temporary 🗌 permanent 🔲 description:
9.	ACTIVITY PURPOSE CODE (see instructions, only use one code):
10.	ACTIVITY TYPE CODE(S) (see instructions for codes):,,,,,
11.	WETLAND / WATERCOURSE AREA ALTERED (must provide acres or linear feet):
	wetlands:acres open water body:acres stream:linear feet
12.	UPLAND AREA ALTERED (must provide acres): acres
13.	AREA OF WETLANDS / WATERCOURSES RESTORED, ENHANCED OR CREATED (must provide acres): acres
DA	TE RECEIVED: PART III: TO BE Completed By The DEEP DATE RETURNED TO DEEP:

FORM COMPLETED: YES NO

Wetlands Delineation Report



Wetland Delineations Ecological Studies Site Assessments Project Planning Soil Testing

February 13, 2019

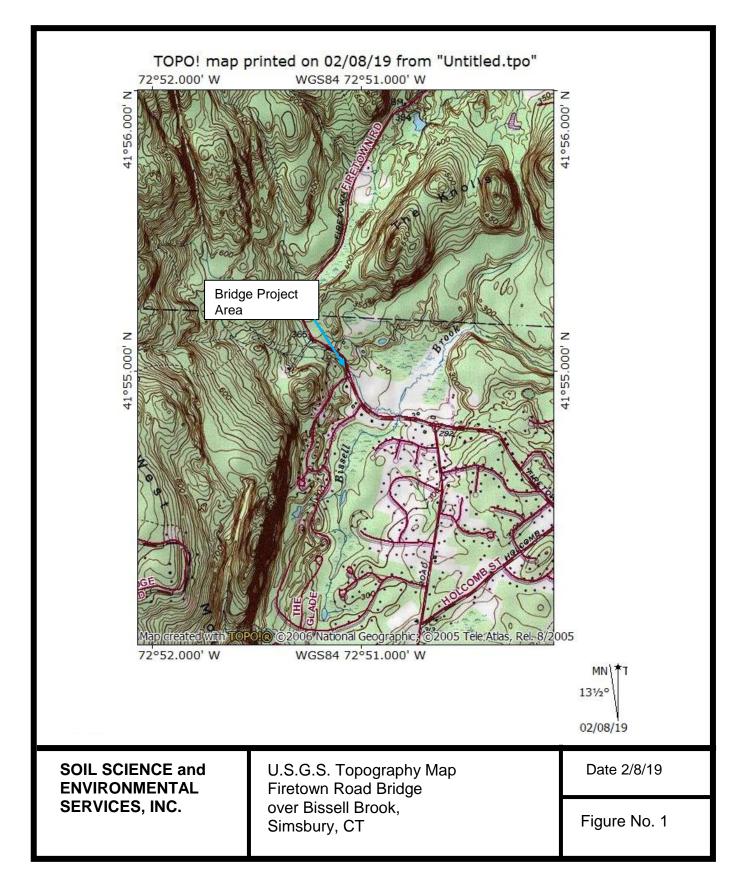
ATTN: Jagdeesh Gopal GM2 Associates, Inc. 115 Glastonbury Boulevard, Suite 200 Glastonbury, CT 06033

# Re: <u>Wetlands Delineation Report</u> Firetown Road Bridge (No. 04549) over Bissell Brook, Simsbury, CT SS&ES Job No. 2019-6-CT-SIM

Dear Mr. Gopal:

In accordance with your request, Scott D. Stevens, Soil Scientist and Jennifer L. Beno, Biologist/Wetland Scientist, with Soil Science And Environmental Services, Inc. (SSES) inspected the Firetown Road bridge over Bissell Brook project area on February 5, 2019. During our inspection, we encountered variable snow cover ranging from approximately 2 to 8" in depth and frost within the ground at 0 to 3 inches. The topography adjacent to the bridge project area includes moderate to steep slopes down to Bissell Brook. The purpose of the inspection was to identify regulated wetlands and waters and ordinary high water in the vicinity of the bridge project area. The project site is situated in the northwestern portion of Simsbury (Figure 1).

Regulated waters and wetlands present in and near the project area include Bissell Brook and associated CT inland wetlands. Definitions of waters and wetlands that are regulated by the State of Connecticut and Federal Government are presented in Appendix I. Rivers and streams are regulated by the State of CT as watercourses, according to the Inland Wetlands and Watercourses Act. Rivers and streams are regulated by the Federal Government as "Waters of the U.S." Wetlands are defined differently by the State of CT and the Federal Government. CT Inland Wetlands are defined by soil types that are either poorly drained, very poorly drained, floodplain or alluvial. Federal Wetlands consist of areas that are inundated or saturated by ground or surface water at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.



A spade and auger were used to dig test holes for soils identification during the investigation. The vegetation communities and any physical indicators of hydrology in the project area were also examined. The CT inland wetland boundaries were delineated with consecutively numbered pink survey tapes. No Federal wetlands exist within the bridge project area. A sketch map of the delineated CT inland wetland boundaries is included as Figure 2.

# **CONNECTICUT INLAND WETLANDS & SOIL TYPES**

CT inland wetlands were delineated within the bridge project area. See Figure 2.

The wetland soils within the project area include:

101 <u>Occum fine sandy loam</u> (Fluventic Dystrudepts) – This is a deep, well drained, friable, coarseloamy textured soil that formed in alluvial sediments principally derived from schist, gneiss and granite. Occum soils occur in nearly level floodplains which are subject to occasional flooding.

103 <u>Rippowam fine sandy loam</u> (Aeric Fluvaquents) – This is a deep, poorly drained, friable, coarseloamy textured soil that formed in alluvial sediments principally derived from schist, gneiss and granite. Rippowam soils occur in nearly level floodplains and along rivers and streams which are subject to frequent flooding.

109 <u>Fluvaquents-Udifluvents</u> This soil map unit consists of well drained to very poorly drained, nearly level soils that formed in very recent alluvium deposited by rivers and streams. The soils are occasionally to frequently flooded, which often results in stream scouring, lateral erosion and shifting of soil from place to place. Soil characteristics, such as texture and stoniness, are usually highly variable within short distances.

The non-wetland soils within the project area include:

38 <u>Hinckley gravelly sandy loam</u> (Typic Udorthents) – This is a deep, excessively drained, gravelly sandy textured soil that developed over sandy and gravelly, glacial outwash derived from schist, gneiss and granite. Hinckley soils occur in valleys, outwash plains, terraces, kames and eskers landforms.

308 <u>Udorthents, smoothed</u> This is a well drained to moderately well drained soil area that has had two or more feet of the original soil surface altered by filling, excavation or grading activities. Udorthents, smoothed soils commonly occur on leveled land and fill landforms.



Figure No. 2 – Sketch of CT Wetland Boundaries (approximate)

# FEDERAL WETLANDS

No Federal wetlands were delineated within the project area.

# **ORDINARY HIGH WATER MARK IDENTIFICATION**

The lateral limits of U.S. Army Corps jurisdiction for non-tidal rivers, streams and water bodies extends to the ordinary high water mark (OHW), in the absence of adjacent wetlands. The Corps defines the term "ordinary high water mark" as the following: "means the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." 33 CFR 328.3(e). The Corps recommends that whenever possible the investigator should consider the former indicators along with a number of others, that include: wracking; vegetation matted down, bent or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; beds and banks; water staining; and change in plant community.

The above-listed indicators were utilized during the February 5, 2019 investigation to determine the ordinary high water (OHW) along Bissell Brook within the project area. Orange survey tapes were tied onto plant material within the bridge project area in order to identify the OHW elevation. The knot of the tied survey tape marks the OHW elevation. A sketch showing locations of the OHW boundary survey tapes is presented in Figure 3.

Respectfully submitted,

SOIL SCIENCE AND ENVIRONMENTAL SERVICES, INC.

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Jemif J Beno

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Figure No. 3 – Sketch of Ordinary High Water Flag Locations (approximate)

#### APPENDIX I

# REGULATED WATERS AND WETLANDS BY THE STATE OF CT AND FEDERAL GOVERNMENT I. State of Connecticut

Wetlands and watercourses are regulated in the State of Connecticut by the Connecticut General Statutes, Chapter 440, section 22a-28 to 22a-45. These Statutes are divided into the Inland Wetlands and Watercourses Act (sections 22a-36 to 22a-45) and the Tidal Wetlands Act (sections 22a-28 to 22a-35). Definitions of the resources are provided in the statutes.

Inland Wetlands, "means land, including submerged land, not regulated pursuant to sections 22a-28 to 22a-35, inclusive, which consist of any of the soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soils Survey, as may be amended from time to time, of the Natural Resources Conservation Service of the United States Department of Agriculture" section 22a-38(15). Watercourses "means rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private which are contained within, flow through or border upon this state or any portion thereof, not regulated pursuant to sections 22a-28 to 22a-35, inclusive. Intermittent watercourses shall be delineated by a defined permanent channel and bank and the occurrence of two or more of the following characteristics: (A) Evidence of scour or deposits of alluvium or detritus, (B) the presence of standing or flowing water for a duration longer than a particular storm incident, and (C) the presence of hydrophytic vegetation" section 22a-38(16).

<u>Tidal Wetlands</u> are defined as "those areas which border on or lie beneath tidal waters, such as, but not limited to banks, bogs, salt marsh, swamps, meadows, flats, or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water; and upon which may grow or be capable of growing some but not necessarily all, of the following:" (includes plant list) section 22a-29(2).

#### II. Federal Government

The Federal Government regulates waters and wetlands in accordance with the Code of Federal Regulations, Title 33, Parts 320 through 330 (33 CFR parts 320 to 330). Regulated areas include navigable waters; interstate waters; tributaries to navigable and interstate waters, including adjacent wetlands; and certain other waters and wetlands of the U.S. The United States Army Corps of Engineers has been authorized to regulate these waters and wetlands by Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. Definitions of wetlands and watercourses that are regulated by the Corps are found in Parts 328 and 329 of the Code.

Waters of the United States as defined in Part 328 means, " (1) all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (2) all interstate waters including interstate wetlands; (3) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce; (4) all impoundments of waters otherwise defined as waters of the U.S. under the definition; (5) tributaries of waters indentified in 1 thru 4; (6) territorial seas; and (7) wetlands adjacent to waters that were identified in 1 thru 6. Waters of the United States do not include prior converted cropland" (33 CFR Part 328.3 (a)). Wetlands are a subset of waters of the United States and are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (33CFR Part 328.3(b)). The 1987 U.S. Corps of Engineers Delineation Manual and the Draft Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (dated July 2008) provide information and procedures for conducting Federal Wetland delineation. The methodology established by the Federal Government uses a three parameter approach utilizing hydrologic indicators, hydrophytic vegetation and hydric soils for identifying Federal Wetlands.

<u>Navigable waters of the United States</u> as defined in Part 329 mean "those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce" (33CFR Part 329.2).

NRCS Soil Map





USDA United States Department of Agriculture

> Natural Resources Conservation

Service

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

# **Custom Soil Resource Report for** State of Connecticut

Br 04549 Firetown Road



# Preface

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

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

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/? cid=nrcs142p2\_053951).

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

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

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

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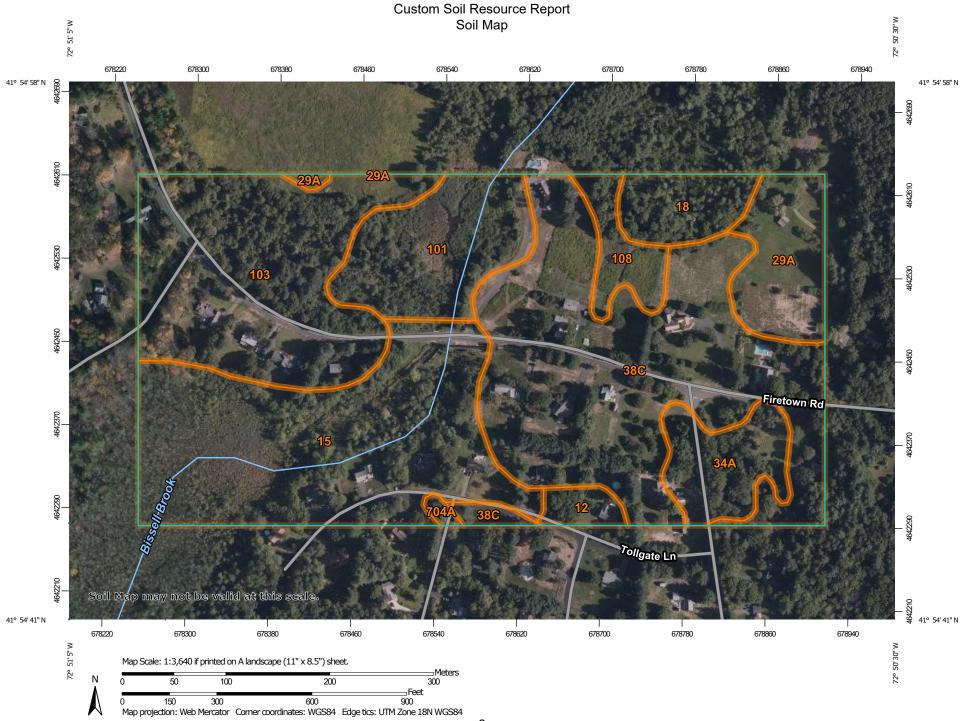
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# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



MAP LEGEND				MAP INFORMATION	
Area of Intere	<b>st (AOI)</b> rea of Interest (AOI)	8	Spoil Area Stony Spot	The soil surveys that comprise your AOI were mapped at 1:12,000.	
Soils	oil Map Unit Polygons	å	Very Stony Spot	Warning: Soil Map may not be valid at this scale.	
	oil Map Unit Lines	\$	Wet Spot	Enlargement of maps beyond the scale of mapping can cause	
So So	oil Map Unit Points		Other Special Line Features	misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of	
Special Point	<b>nt Features</b> Iowout	Water Fea		contrasting soils that could have been shown at a more detailed scale.	
-	orrow Pit	~~ Transport	Streams and Canals	Diagon roly on the bar again an each man sheet for man	
~	lay Spot	+++	Rails	Please rely on the bar scale on each map sheet for map measurements.	
~	losed Depression ravel Pit	~	Interstate Highways	Source of Map: Natural Resources Conservation Service	
	ravelly Spot	~	US Routes Major Roads	Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)	
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	andfill	~	Local Roads	Maps from the Web Soil Survey are based on the Web Mercator	
<i>N</i>	ava Flow arsh or swamp	Backgrou	<b>nd</b> Aerial Photography	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	
~	ine or Quarry iscellaneous Water			accurate calculations of distance or area are required.	
9	erennial Water			This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.	
*	ock Outcrop			Soil Survey Area: State of Connecticut Survey Area Data: Version 19, Sep 13, 2019	
1	aline Spot andy Spot			Soil map units are labeled (as space allows) for map scales	
	everely Eroded Spot			1:50,000 or larger.	
*	inkhole lide or Slip			Date(s) aerial images were photographed: Aug 24, 2019—Oct 24, 2019	
20	odic Spot			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.	

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
12	Raypol silt loam	0.7	1.2%
15	Scarboro muck, 0 to 3 percent slopes	13.3	23.9%
18	Catden and Freetown soils, 0 to 2 percent slopes	2.0	3.5%
29A	Agawam fine sandy loam, 0 to 3 percent slopes	3.2	5.8%
34A	Merrimac fine sandy loam, 0 to 3 percent slopes	2.7	4.8%
38C	Hinckley loamy sand, 3 to 15 percent slopes	16.4	29.6%
101	Occum fine sandy loam	4.8	8.7%
103	Rippowam fine sandy loam	10.8	19.4%
108	Saco silt loam	1.5	2.7%
704A	Enfield silt loam, 0 to 3 percent slopes	0.2	0.3%
Totals for Area of Interest		55.6	100.0%

# **Map Unit Legend**

# **Map Unit Descriptions**

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the

scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# State of Connecticut

# 12—Raypol silt loam

# **Map Unit Setting**

National map unit symbol: 9ljx Elevation: 0 to 1,200 feet Mean annual precipitation: 43 to 54 inches Mean annual air temperature: 45 to 55 degrees F Frost-free period: 140 to 185 days Farmland classification: Farmland of statewide importance

# **Map Unit Composition**

Raypol and similar soils: 80 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Raypol**

# Setting

Landform: Depressions, drainageways Down-slope shape: Concave Across-slope shape: Concave Parent material: Coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

# **Typical profile**

Ap - 0 to 8 inches: silt loam

Bg1 - 8 to 12 inches: very fine sandy loam

Bg2 - 12 to 20 inches: silt loam

Bw1 - 20 to 26 inches: silt loam

Bw2 - 26 to 29 inches: very fine sandy loam

- 2C1 29 to 52 inches: stratified very gravelly coarse sand to loamy fine sand
- 2C2 52 to 65 inches: stratified very gravelly coarse sand to loamy fine sand

# **Properties and qualities**

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.0 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: C/D Hydric soil rating: Yes

#### **Minor Components**

#### Haven

Percent of map unit: 5 percent Landform: Terraces, outwash plains Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

## Enfield

Percent of map unit: 5 percent Landform: Outwash plains, terraces Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

#### Ninigret

Percent of map unit: 3 percent Landform: Outwash plains, terraces Down-slope shape: Linear Across-slope shape: Concave Hydric soil rating: No

# Scarboro

Percent of map unit: 2 percent Landform: Drainageways, depressions, terraces Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

#### Tisbury

Percent of map unit: 2 percent Landform: Outwash plains, terraces Down-slope shape: Concave Across-slope shape: Linear Hydric soil rating: No

#### Walpole

Percent of map unit: 2 percent Landform: Depressions on terraces, drainageways on terraces Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

# Unnamed, loamy substratum

Percent of map unit: 1 percent

# 15—Scarboro muck, 0 to 3 percent slopes

# Map Unit Setting

National map unit symbol: 2svkt

*Elevation:* 0 to 1,350 feet *Mean annual precipitation:* 36 to 71 inches *Mean annual air temperature:* 39 to 55 degrees F *Frost-free period:* 140 to 240 days *Farmland classification:* Not prime farmland

## Map Unit Composition

Scarboro and similar soils: 80 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

## **Description of Scarboro**

#### Setting

Landform: Outwash deltas, depressions, drainageways, outwash terraces Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope, tread, dip Down-slope shape: Concave Across-slope shape: Concave, linear Parent material: Sandy glaciofluvial deposits derived from schist and/or gneiss and/or granite

# **Typical profile**

*Oa - 0 to 8 inches:* muck *A - 8 to 14 inches:* mucky fine sandy loam *Cg1 - 14 to 22 inches:* sand *Cg2 - 22 to 65 inches:* gravelly sand

# Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (1.42 to 14.17 in/hr)
Depth to water table: About 0 to 2 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Moderate (about 6.1 inches)

## Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 5w Hydrologic Soil Group: A/D Hydric soil rating: Yes

# **Minor Components**

## Timakwa

Percent of map unit: 10 percent Landform: Swamps Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope, tread, dip Down-slope shape: Linear, concave Across-slope shape: Linear, concave Hydric soil rating: Yes

## Walpole

Percent of map unit: 8 percent Landform: Depressions, outwash plains, depressions, deltas, outwash terraces Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread, dip, talf Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

## Deerfield

Percent of map unit: 2 percent Landform: Outwash plains, terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Linear Across-slope shape: Concave Hydric soil rating: No

# 18—Catden and Freetown soils, 0 to 2 percent slopes

## Map Unit Setting

National map unit symbol: 2t2r2 Elevation: 0 to 1,390 feet Mean annual precipitation: 36 to 71 inches Mean annual air temperature: 39 to 55 degrees F Frost-free period: 140 to 240 days Farmland classification: Not prime farmland

#### Map Unit Composition

*Freetown and similar soils:* 40 percent *Catden and similar soils:* 40 percent *Minor components:* 20 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

#### Description of Freetown

#### Setting

Landform: Swamps, bogs, marshes, kettles, depressions, depressions Landform position (three-dimensional): Tread, dip Down-slope shape: Concave Across-slope shape: Concave Parent material: Highly decomposed organic material

# **Typical profile**

Oe - 0 to 2 inches: mucky peat Oa - 2 to 79 inches: muck

#### **Properties and qualities**

Slope: 0 to 2 percent Percent of area covered with surface fragments: 0.0 percent Depth to restrictive feature: More than 80 inches Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Rare
Frequency of ponding: Frequent
Available water storage in profile: Very high (about 26.9 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 5w Hydrologic Soil Group: B/D Hydric soil rating: Yes

#### **Description of Catden**

#### Setting

Landform: Marshes, bogs, kettles, depressions, depressions, depressions, fens, swamps

Landform position (three-dimensional): Base slope, tread

*Down-slope shape:* Concave

Across-slope shape: Concave

*Parent material:* Highly decomposed herbaceous organic material and/or highly decomposed woody organic material

#### **Typical profile**

Oa1 - 0 to 2 inches: muck Oa2 - 2 to 79 inches: muck

#### **Properties and qualities**

Slope: 0 to 2 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Rare
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Very high (about 26.9 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 5w Hydrologic Soil Group: B/D Hydric soil rating: Yes

#### **Minor Components**

#### Natchaug

Percent of map unit: 7 percent Landform: Depressions, depressions, depressions Landform position (three-dimensional): Base slope, tread Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

#### Whitman

Percent of map unit: 6 percent Landform: Depressions, drainageways Landform position (three-dimensional): Base slope Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

#### Timakwa

Percent of map unit: 5 percent Landform: Depressions Landform position (three-dimensional): Base slope Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

#### Scarboro

Percent of map unit: 2 percent Landform: Outwash deltas, depressions, drainageways, outwash terraces Landform position (three-dimensional): Base slope, tread, dip Down-slope shape: Concave Across-slope shape: Concave, linear Hydric soil rating: Yes

### 29A—Agawam fine sandy loam, 0 to 3 percent slopes

#### **Map Unit Setting**

National map unit symbol: 2tyqw Elevation: 0 to 1,040 feet Mean annual precipitation: 36 to 71 inches Mean annual air temperature: 39 to 55 degrees F Frost-free period: 140 to 250 days Farmland classification: All areas are prime farmland

#### Map Unit Composition

Agawam and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Agawam**

#### Setting

Landform: Moraines, kames, outwash terraces, outwash plains, kame terraces Landform position (two-dimensional): Backslope, shoulder, footslope, summit Landform position (three-dimensional): Side slope, crest, tread, riser, rise, dip Down-slope shape: Convex Across-slope shape: Convex Parent material: Coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from gneiss, granite, schist, and/or phyllite

#### **Typical profile**

Ap - 0 to 11 inches: fine sandy loam Bw1 - 11 to 16 inches: fine sandy loam Bw2 - 16 to 26 inches: fine sandy loam 2C1 - 26 to 39 inches: loamy fine sand 2C2 - 39 to 55 inches: loamy fine sand 2C3 - 55 to 65 inches: loamy sand

#### **Properties and qualities**

Slope: 0 to 3 percent
Depth to restrictive feature: 15 to 35 inches to strongly contrasting textural stratification
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Low (about 3.4 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2s Hydrologic Soil Group: B Hydric soil rating: No

#### **Minor Components**

#### Ninigret

Percent of map unit: 5 percent Landform: Terraces Down-slope shape: Linear Across-slope shape: Concave Hydric soil rating: No

#### Windsor

Percent of map unit: 4 percent Landform: Outwash plains, dunes, deltas, outwash terraces Landform position (three-dimensional): Tread, riser Down-slope shape: Linear, convex Across-slope shape: Linear, convex Hydric soil rating: No

#### Walpole

Percent of map unit: 3 percent Landform: Depressions, deltas, outwash terraces, outwash plains, depressions Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread, dip, talf Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

#### Hinckley

Percent of map unit: 3 percent Landform: Eskers, outwash plains, kames, deltas Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Nose slope, side slope, crest, head slope, rise Down-slope shape: Convex Across-slope shape: Convex, linear Hydric soil rating: No

### 34A—Merrimac fine sandy loam, 0 to 3 percent slopes

#### **Map Unit Setting**

National map unit symbol: 2tyqr Elevation: 0 to 1,100 feet Mean annual precipitation: 36 to 71 inches Mean annual air temperature: 39 to 55 degrees F Frost-free period: 140 to 240 days Farmland classification: All areas are prime farmland

#### **Map Unit Composition**

*Merrimac and similar soils:* 85 percent *Minor components:* 15 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

#### **Description of Merrimac**

#### Setting

Landform: Outwash terraces, moraines, outwash plains, kames, eskers Landform position (two-dimensional): Backslope, footslope, summit, shoulder Landform position (three-dimensional): Side slope, crest, riser, tread Down-slope shape: Convex

Across-slope shape: Convex

*Parent material:* Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

#### **Typical profile**

Ap - 0 to 10 inches: fine sandy loam Bw1 - 10 to 22 inches: fine sandy loam Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand 2C - 26 to 65 inches: stratified gravel to very gravelly sand

#### **Properties and qualities**

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)

Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Calcium carbonate, maximum in profile: 2 percent Salinity, maximum in profile: Nonsaline (0.0 to 1.4 mmhos/cm) Sodium adsorption ratio, maximum in profile: 1.0 Available water storage in profile: Low (about 4.6 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2s Hydrologic Soil Group: A Hydric soil rating: No

#### **Minor Components**

#### Sudbury

Percent of map unit: 5 percent Landform: Outwash plains, terraces, deltas Landform position (two-dimensional): Footslope Landform position (three-dimensional): Tread, dip Down-slope shape: Concave Across-slope shape: Linear Hydric soil rating: No

#### Hinckley

Percent of map unit: 5 percent Landform: Kames, eskers, outwash plains, deltas Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Crest, head slope, nose slope, side slope, rise Down-slope shape: Convex Across-slope shape: Convex, linear Hydric soil rating: No

#### Agawam

*Percent of map unit:* 3 percent *Landform:* Outwash terraces, moraines, outwash plains, kames, stream terraces,

eskers Landform position (three-dimensional): Rise Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

#### Windsor

Percent of map unit: 2 percent Landform: Outwash terraces, outwash plains, deltas, dunes Landform position (two-dimensional): Summit Landform position (three-dimensional): Tread, riser Down-slope shape: Linear, convex Across-slope shape: Linear, convex Hydric soil rating: No

## 38C—Hinckley loamy sand, 3 to 15 percent slopes

#### Map Unit Setting

National map unit symbol: 2svmb Elevation: 0 to 1,290 feet Mean annual precipitation: 36 to 71 inches Mean annual air temperature: 39 to 55 degrees F Frost-free period: 140 to 240 days Farmland classification: Farmland of statewide importance

#### Map Unit Composition

*Hinckley and similar soils:* 85 percent *Minor components:* 15 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

#### **Description of Hinckley**

#### Setting

*Landform:* Eskers, outwash terraces, kames, kame terraces, outwash plains, moraines, outwash deltas

- *Landform position (two-dimensional):* Footslope, toeslope, shoulder, backslope, summit
- *Landform position (three-dimensional):* Nose slope, side slope, crest, head slope, riser, tread

Down-slope shape: Convex, concave, linear

Across-slope shape: Concave, linear, convex

*Parent material:* Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

#### **Typical profile**

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 8 inches: loamy sand

Bw1 - 8 to 11 inches: gravelly loamy sand

Bw2 - 11 to 16 inches: gravelly loamy sand

BC - 16 to 19 inches: very gravelly loamy sand

C - 19 to 65 inches: very gravelly sand

### **Properties and qualities**

Slope: 3 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Low (about 3.1 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4e Hydrologic Soil Group: A Hydric soil rating: No

#### **Minor Components**

#### Windsor

Percent of map unit: 5 percent

- *Landform:* Moraines, outwash terraces, eskers, kames, kame terraces, outwash plains, outwash deltas
- *Landform position (two-dimensional):* Shoulder, backslope, footslope, toeslope, summit
- *Landform position (three-dimensional):* Nose slope, side slope, crest, head slope, riser, tread

Down-slope shape: Convex, linear, concave

- Across-slope shape: Linear, convex, concave
- Hydric soil rating: No

#### Merrimac

Percent of map unit: 5 percent

Landform: Outwash terraces, kames, moraines, outwash plains, eskers

- *Landform position (two-dimensional):* Backslope, footslope, shoulder, toeslope, summit
- *Landform position (three-dimensional):* Side slope, crest, head slope, nose slope, riser, tread
- Down-slope shape: Convex
- Across-slope shape: Convex
- Hydric soil rating: No

#### Agawam

Percent of map unit: 3 percent

*Landform:* Eskers, outwash terraces, kames, kame terraces, outwash plains, moraines, outwash deltas

- Landform position (two-dimensional): Shoulder, backslope, toeslope, summit, footslope
- *Landform position (three-dimensional):* Crest, head slope, nose slope, side slope, riser, tread
- *Down-slope shape:* Linear, convex, concave
- Across-slope shape: Convex, linear, concave Hydric soil rating: No

#### Sudbury

Percent of map unit: 2 percent Landform: Outwash deltas, outwash terraces, kame terraces, outwash plains, moraines Landform position (two-dimensional): Backslope, footslope Landform position (three-dimensional): Base slope, tread Down-slope shape: Linear, concave Across-slope shape: Concave, linear Hydric soil rating: No

## 101—Occum fine sandy loam

#### Map Unit Setting

National map unit symbol: 9ljm Elevation: 0 to 1,200 feet Mean annual precipitation: 43 to 54 inches Mean annual air temperature: 45 to 55 degrees F Frost-free period: 140 to 185 days Farmland classification: All areas are prime farmland

#### Map Unit Composition

Occum and similar soils: 80 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Occum**

#### Setting

Landform: Flood plains Down-slope shape: Linear Across-slope shape: Linear Parent material: Coarse-loamy alluvium

#### **Typical profile**

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: sandy loam
C1 - 28 to 32 inches: stratified very gravelly coarse sand to loamy fine sand
C2 - 32 to 42 inches: stratified very gravelly coarse sand to loamy fine sand
C3 - 42 to 65 inches: stratified very gravelly coarse sand to loamy fine sand

#### **Properties and qualities**

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 60 to 72 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: Low (about 5.4 inches)

## Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 1 Hydrologic Soil Group: B Hydric soil rating: No

#### **Minor Components**

#### Pootatuck

Percent of map unit: 5 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Concave Hydric soil rating: No

#### Rippowam

Percent of map unit: 5 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Concave Hydric soil rating: Yes

#### Suncook

Percent of map unit: 5 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Convex Hydric soil rating: No

#### Agawam

Percent of map unit: 5 percent Landform: Outwash plains, terraces Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

## 103—Rippowam fine sandy loam

#### **Map Unit Setting**

National map unit symbol: 9ljp Elevation: 0 to 1,200 feet Mean annual precipitation: 43 to 54 inches Mean annual air temperature: 45 to 55 degrees F Frost-free period: 140 to 185 days Farmland classification: Farmland of statewide importance

#### **Map Unit Composition**

Rippowam and similar soils: 80 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Rippowam**

#### Setting

Landform: Flood plains Down-slope shape: Linear Across-slope shape: Concave Parent material: Coarse-loamy alluvium

#### **Typical profile**

A - 0 to 5 inches: fine sandy loam

*Bg1 - 5 to 12 inches:* fine sandy loam

Cg2 - 12 to 19 inches: fine sandy loam

Cg3 - 19 to 24 inches: sandy loam

Cg4 - 24 to 27 inches: sandy loam

Cg5 - 27 to 31 inches: loamy sand

Cg6 - 31 to 65 inches: stratified very gravelly coarse sand to loamy fine sand

#### Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: Low (about 5.9 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: B/D Hydric soil rating: Yes

#### Minor Components

#### Occum

Percent of map unit: 5 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

#### Suncook

Percent of map unit: 5 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Convex Hydric soil rating: No

#### Lim

Percent of map unit: 3 percent Landform: Flood plains Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

#### Pootatuck

Percent of map unit: 3 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Concave Hydric soil rating: No

#### Limerick

Percent of map unit: 2 percent Landform: Flood plains Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

#### Saco

Percent of map unit: 2 percent Landform: Flood plains Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

## 108—Saco silt loam

#### Map Unit Setting

National map unit symbol: 9ljv Elevation: 0 to 1,200 feet Mean annual precipitation: 43 to 54 inches Mean annual air temperature: 45 to 55 degrees F Frost-free period: 140 to 185 days Farmland classification: Not prime farmland

#### Map Unit Composition

Saco and similar soils: 80 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Saco**

#### Setting

Landform: Flood plains Down-slope shape: Concave Across-slope shape: Concave Parent material: Coarse-silty alluvium

#### **Typical profile**

A - 0 to 12 inches: silt loam Cg1 - 12 to 32 inches: silt loam Cg2 - 32 to 48 inches: silt loam 2Cg3 - 48 to 60 inches: stratified very gravelly coarse sand to loamy fine sand

### **Properties and qualities**

*Slope:* 0 to 2 percent *Depth to restrictive feature:* More than 80 inches *Natural drainage class:* Very poorly drained *Runoff class:* Low Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr) Depth to water table: About 0 to 6 inches Frequency of flooding: Frequent Frequency of ponding: Frequent Available water storage in profile: High (about 10.1 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6w Hydrologic Soil Group: B/D Hydric soil rating: Yes

#### Minor Components

Lim

Percent of map unit: 5 percent Landform: Flood plains Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

#### Limerick

Percent of map unit: 5 percent Landform: Flood plains Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

#### Winooski

Percent of map unit: 3 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

#### Rippowam

Percent of map unit: 3 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Concave Hydric soil rating: Yes

#### Hadley

Percent of map unit: 2 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

#### Bash

Percent of map unit: 2 percent Landform: Flood plains Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

## 704A—Enfield silt loam, 0 to 3 percent slopes

#### **Map Unit Setting**

National map unit symbol: 2y07p Elevation: 0 to 1,200 feet Mean annual precipitation: 43 to 54 inches Mean annual air temperature: 45 to 55 degrees F Frost-free period: 140 to 185 days Farmland classification: All areas are prime farmland

#### Map Unit Composition

*Enfield and similar soils:* 85 percent *Minor components:* 15 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

#### **Description of Enfield**

#### Setting

Landform: Outwash terraces, outwash plains Landform position (three-dimensional): Tread Down-slope shape: Convex Across-slope shape: Linear Parent material: Coarse-silty eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite, schist, and/or gneiss

### **Typical profile**

Ap - 0 to 7 inches: silt loam Bw1 - 7 to 15 inches: silt loam Bw2 - 15 to 25 inches: silt loam 2C - 25 to 60 inches: stratified very gravelly coarse sand to loamy sand

#### **Properties and qualities**

Slope: 0 to 3 percent

*Depth to restrictive feature:* 16 to 39 inches to strongly contrasting textural stratification

Natural drainage class: Well drained

Runoff class: Low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.3 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 1 Hydrologic Soil Group: B Hydric soil rating: No

#### **Minor Components**

#### Haven

Percent of map unit: 5 percent Landform: Outwash terraces, outwash plains Landform position (three-dimensional): Tread Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

#### Tisbury

Percent of map unit: 5 percent Landform: Outwash terraces, outwash plains, deltas, valley trains Landform position (three-dimensional): Tread Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: No

#### Agawam

Percent of map unit: 3 percent Landform: Kame terraces, outwash terraces, kames, moraines, outwash plains Landform position (two-dimensional): Summit, shoulder Landform position (three-dimensional): Side slope, crest, tread Down-slope shape: Convex Across-slope shape: Convex Hydric soil rating: No

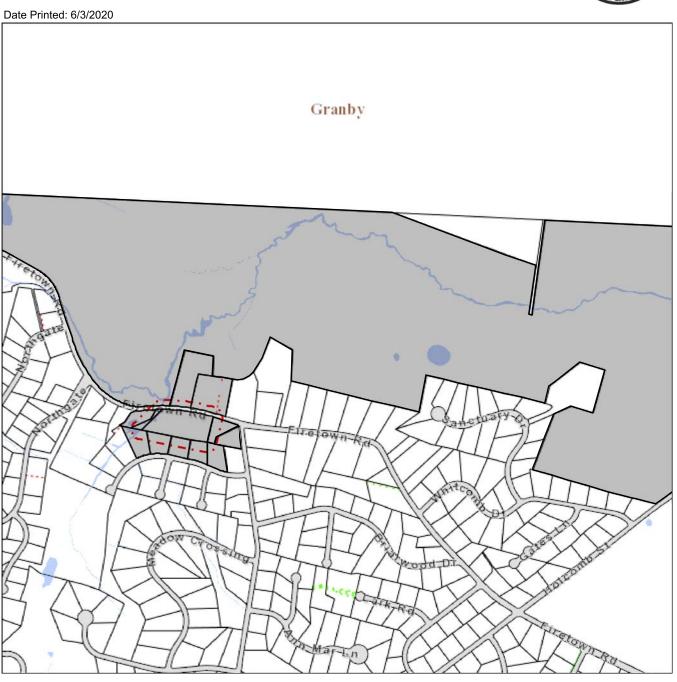
#### Raypol

Percent of map unit: 2 percent Landform: Drainageways, depressions Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes List of adjacent property owners



# **Town of Simsbury** Geographic Information System (GIS)





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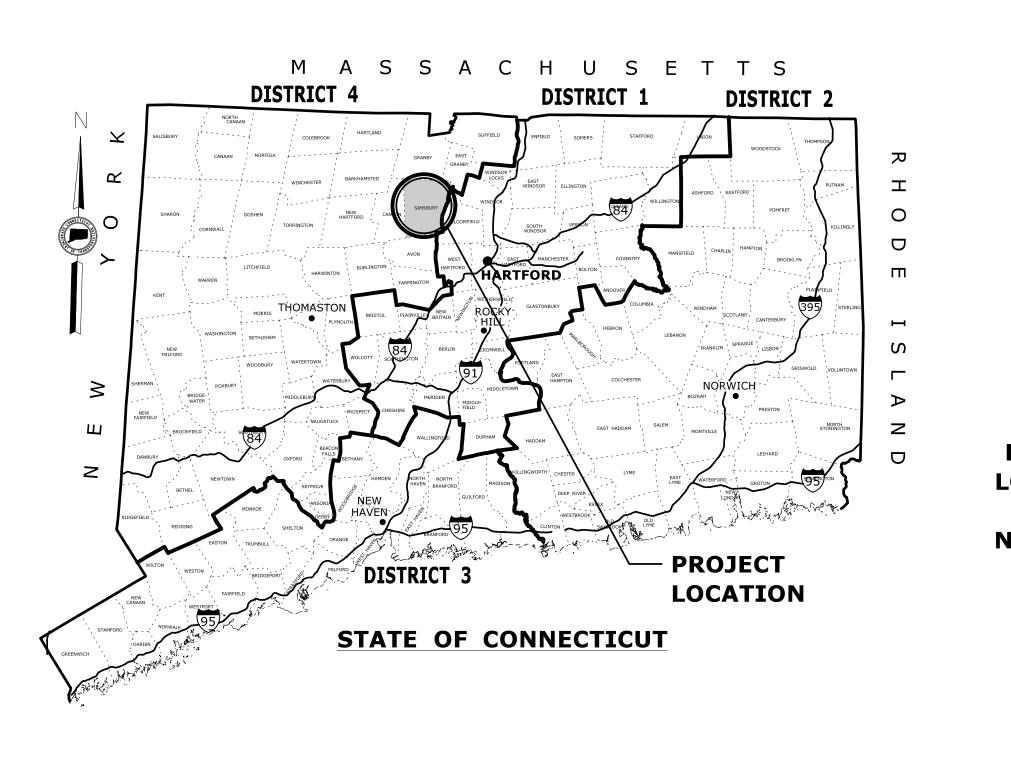
## TOWN OF SIMSBURY, CONNECTICUT

Parcel ID	Site Address	Owner Name	Mailing Address	Mailing City	Mailing State	Mailing Zip
C02 202 001	550 FIRETOWN ROAD	MCLEAN GAME REFUGE INC	75 GREAT POND ROAD	SIMSBURY	СТ	06070- 0000
C03 203 023B	499 FIRETOWN ROAD	CUMMINGS JANINA B	499 FIRETOWN RD	SIMSBURY	СТ	06070- 0000
C03 203 023BB	FIRETOWN ROAD	CUMMINGS JANINA B	499 FIRETOWN ROAD	SIMSBURY	СТ	06070- 0000
C03 202 009	500 FIRETOWN ROAD	LOOMIS KATHLEEN B AND JOHN M CO-TRS	500 FIRETOWN ROAD	SIMSBURY	СТ	06070- 0000
C03 203 0023AA	503 FIRETOWN ROAD	STEWART MARK AND KATHLEEN E	503 FIRETOWN ROAD	SIMSBURY	СТ	06070- 0000
C03 203 023F	511 FIRETOWN ROAD	TASSINARI PETER A AND SUSAN D	511 FIRETOWN ROAD	SIMSBURY	СТ	06070- 0000
C03 203 023A	507 FIRETOWN ROAD	TAYLOR DAVID R AND MIRIAM M	507 FIRETOWN ROAD	SIMSBURY	СТ	06070- 0000
C03 202 010	504 FIRETOWN ROAD	MCKENNA RITA M TRUSTEE	504 FIRETOWN ROAD	SIMSBURY	СТ	06070- 0000

Plans Identifying Proposed Work



# ENVIRONMENTAL PERMIT PLANS



## **GENERAL NOTES:**

1. FEDERAL AID PROJECT NO. NA

2. CONSTRUCTION SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION, FORM 817, DATED 2016; SUPPLEMENTAL SPECIFICATIONS, DATED JULY 2019; AND SPECIAL PROVISIONS

3. 400 FOOT GRID BASED ON CONNECTICUT COORDINATE SYSTEM N.A.D. 1983 4. VERTICAL DATUM BASED ON NAVD 1988

## DISCLAIMER

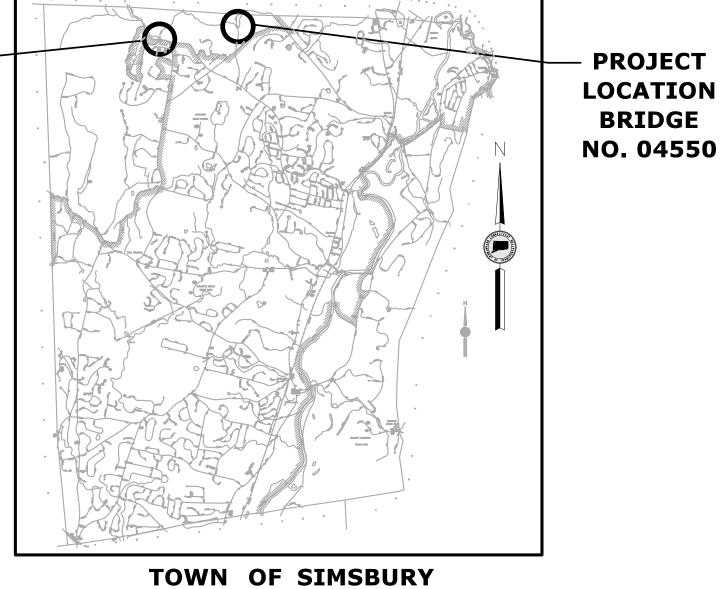
IT IS THE RESPONSIBILITY OF EACH BIDDER AND ALL OTHER INTERESTED PARTIES TO OBTAIN ALL BIDDING RELATED INFORMATION AND DOCUMENTS FROM OFFICIAL SOURCES WITHIN THE DEPARTMENT.

PERSONS AND/OR ENTITIES WHICH REPRODUCE AND/OR MAKE SUCH INFORMATION AVAILABLE BY ANY MEANS ARE NOT AUTHORIZED BY THE DEPARTMENT TO DO SO AND MAY BE LIABLE FOR CLAIMS RESULTING FROM THE DISSEMINATION OF UNOFFICIAL, INCOMPLETE AND/OR INACCURATE INFORMATION.

					DESIGNER/DRAFTER:
				THE INFORMATION, INCLUDING ESTIMATED	DK
				QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED	
				INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE	PB
				THE CONDITIONS OF ACTUAL QUANTITIES	
				OF WORK WHICH WILL BE REQUIRED.	SCALE AS NOTED
					SCALL AS NOTED
REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 7/10/2020	

# **PRESERVATION OF** BRIDGES NO. 04549, **AND 04550** IN THE TOWN OF **SIMSBURY**





NOT TO SCALE

# LIST OF DRAWINGS

SHEET NO.	DRAWING TITLE
PMT-01	TITLE SHEET
PMT-02	ROADWAY PLAN BRIDGE NO. 04549
PMT-03	WATER HANDLING PLAN BRIDGE NO. 04549
PMT-04	GENERAL PLAN BRIDGE NO. 04549
PMT-05	ROADWAY PLAN BRIDGE NO. 04550
PMT-06	WATER HANDLING PLAN BRIDGE NO. 04550
PMT-07	GENERAL PLAN BRIDGE NO. 04550

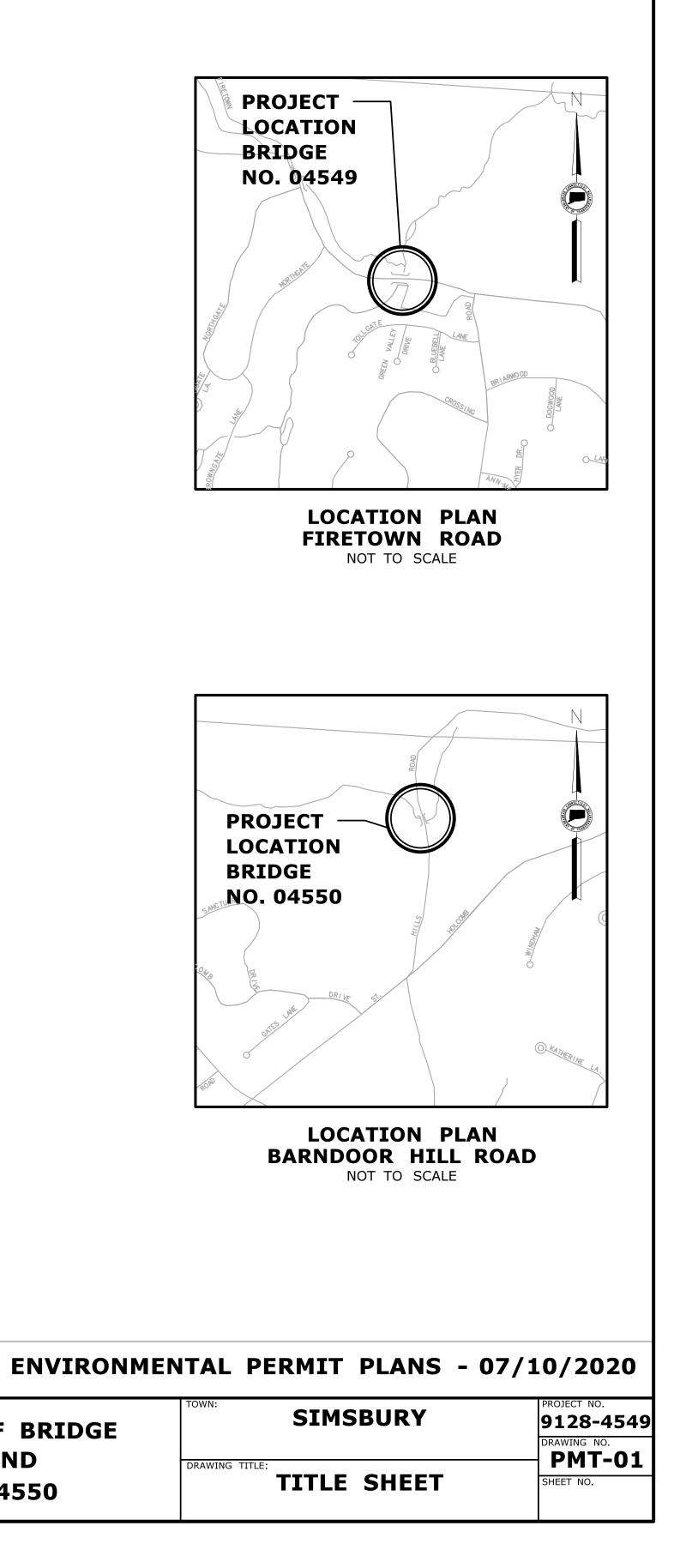
TOWN OF SIMSBURY

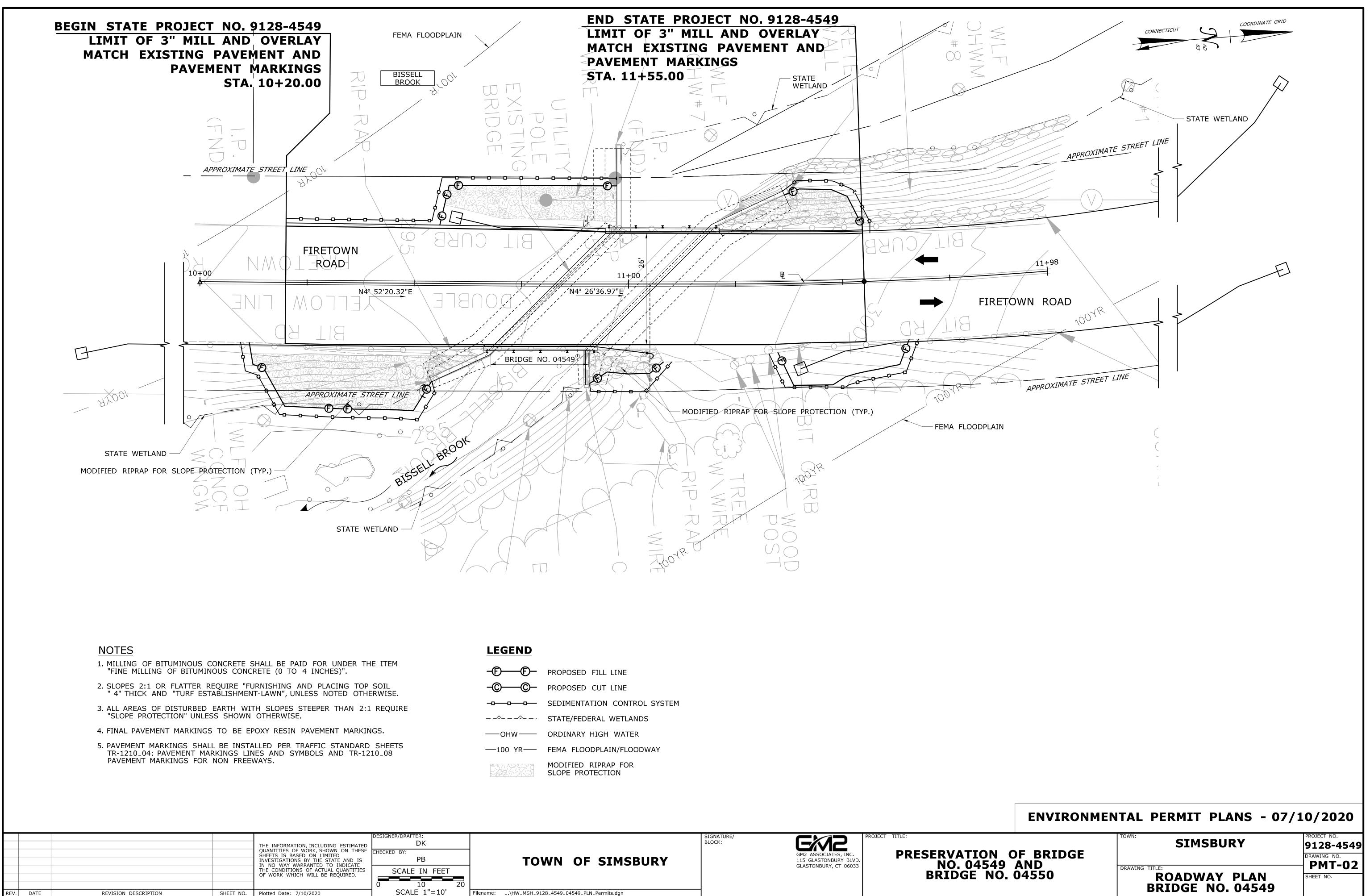
SIGNATURE/ BLOCK:

EXA2 GM2 ASSOCIATES, INC 115 GLASTONBURY BLVD GLASTONBURY, CT 06033

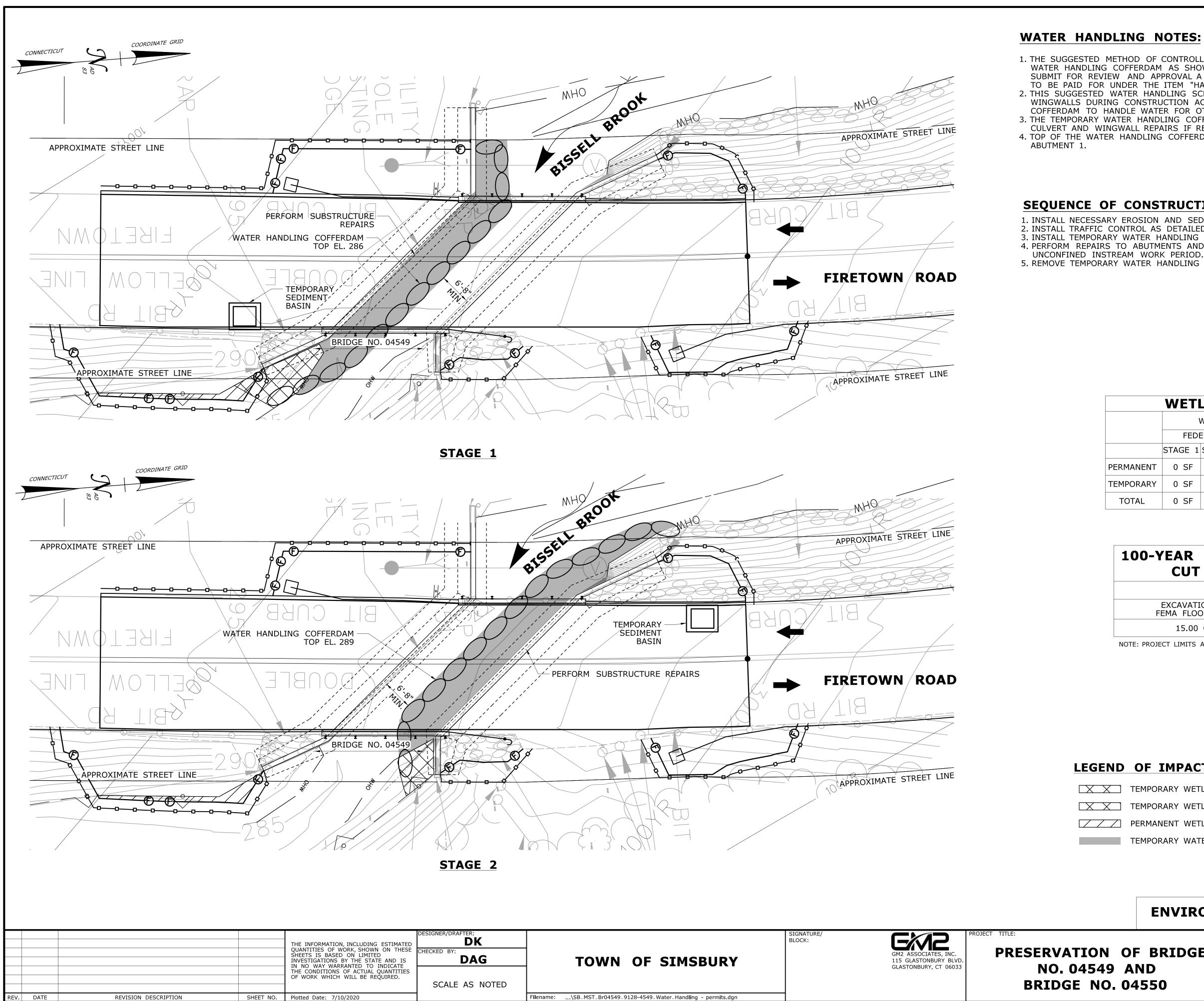
PRESERVATION OF BRIDGE NO. 04549 AND BRIDGE NO. 04550

Filename: ...\HW\_MSH\_9128-4549\_TSH\_pERMITS.dgn





-®®-	PROPOSED FILL LINE
-©©-	PROPOSED CUT LINE
-00	SEDIMENTATION CONTROL SYSTEM
	STATE/FEDERAL WETLANDS
—-онw	ORDINARY HIGH WATER
—100 YR—	FEMA FLOODPLAIN/FLOODWAY
	MODIFIED RIPRAP FOR SLOPE PROTECTION



# WATER HANDLING NOTES:

# **SEQUENCE OF CONSTRUCTION:**

1. THE SUGGESTED METHOD OF CONTROLLING WATER DURING CONSTRUCTION CONSISTS OF A TEMPORARY WATER HANDLING COFFERDAM AS SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL DESIGN AND SUBMIT FOR REVIEW AND APPROVAL A WATER HANDLING PLAN PRIOR TO INSTALLATION. THIS WORK TO BE PAID FOR UNDER THE ITEM "HANDLING WATER (SITE NO.1)". SEE SPECIAL PROVISIONS. 2. THIS SUGGESTED WATER HANDLING SCHEME IS TO PERFORM REPAIRS TO THE EXISTING CULVERT AND WINGWALLS DURING CONSTRUCTION ACTIVITIES ONLY. THE INSTALLATION OF WATER HANDLING COFFERDAM TO HANDLE WATER FOR OTHER CONSTRUCTION ACTIVITIES IS NOT PERMITTED. 3. THE TEMPORARY WATER HANDLING COFFERDAM SHALL BE IN PLACE PRIOR TO START OF ANY EXISTING CULVERT AND WINGWALL REPAIRS IF REQUIRED. 4. TOP OF THE WATER HANDLING COFFERDAM SHALL BE EL. 286 MIN. AT ABUTMENT 2 AND EL. 289 MIN. AT

1. INSTALL NECESSARY EROSION AND SEDIMENTATION CONTROLS. 2. INSTALL TRAFFIC CONTROL AS DETAILED IN M&PT PLANS. 3. INSTALL TEMPORARY WATER HANDLING COFFERDAM AS SHOWN. 4. PERFORM REPAIRS TO ABUTMENTS AND WINGWALLS DURING 5. REMOVE TEMPORARY WATER HANDLING COFFERDAM.

	WETI	AND	IMP	ACT <sup>·</sup>	TABLE		
	١	WETLAND	IMPACTS	5	WATE		TOTAL
	FEDE	ERAL	STA	TE	IMPA	CIS	
	STAGE 1	STAGE 2	STAGE 1	STAGE 2	STAGE 1	STAGE 2	
MANENT	0 SF	0 SF	46 SF	0 SF	0 SF	0 SF	46 SF
PORARY	0 SF	0 SF	108 SF	56 SF	500 SF	520 SF	1184 SF
OTAL	0 SF	0 SF	154 SF	56 SF	500 SF	520 SF	1230 SF

# **100-YEAR FLOODPLAIN AREA IMPACTS, CUT & FILL INFORMATION**

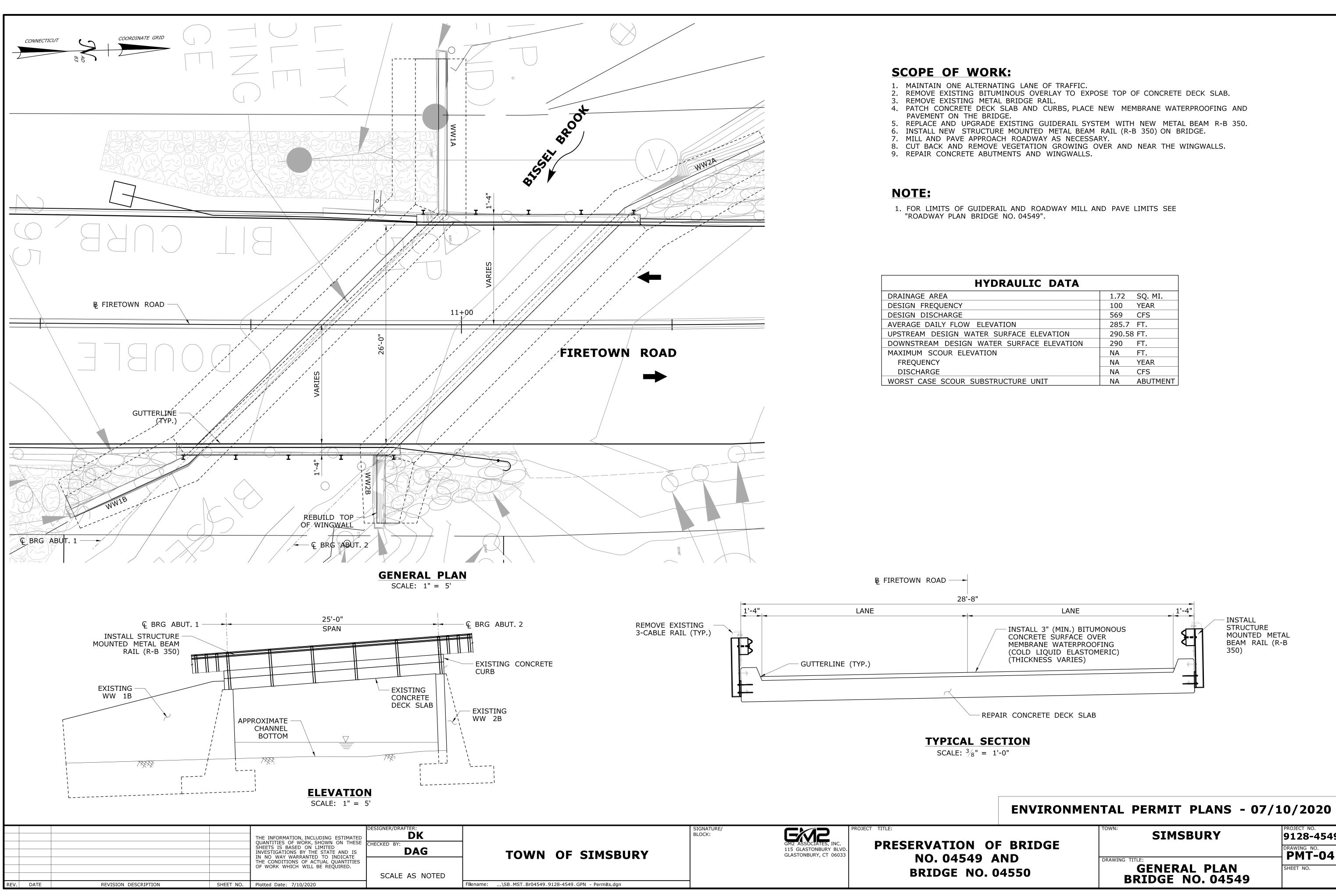
VOLUME IMPACTS					
EXCAVATION IN FEMA FLOODPLAIN	FILL IN FEMA FLOODPLAIN				
15.00 CY	70.00 CY				

NOTE: PROJECT LIMITS ARE ENTIRELY WITHIN THE 100 YEAR FLOODPLAIN

## LEGEND OF IMPACTS

**X** TEMPORARY WETLAND IMPACTS (FEDERAL) TEMPORARY WETLAND IMPACTS (STATE) PERMANENT WETLAND IMPACTS (STATE) TEMPORARY WATERWAY IMPACTS

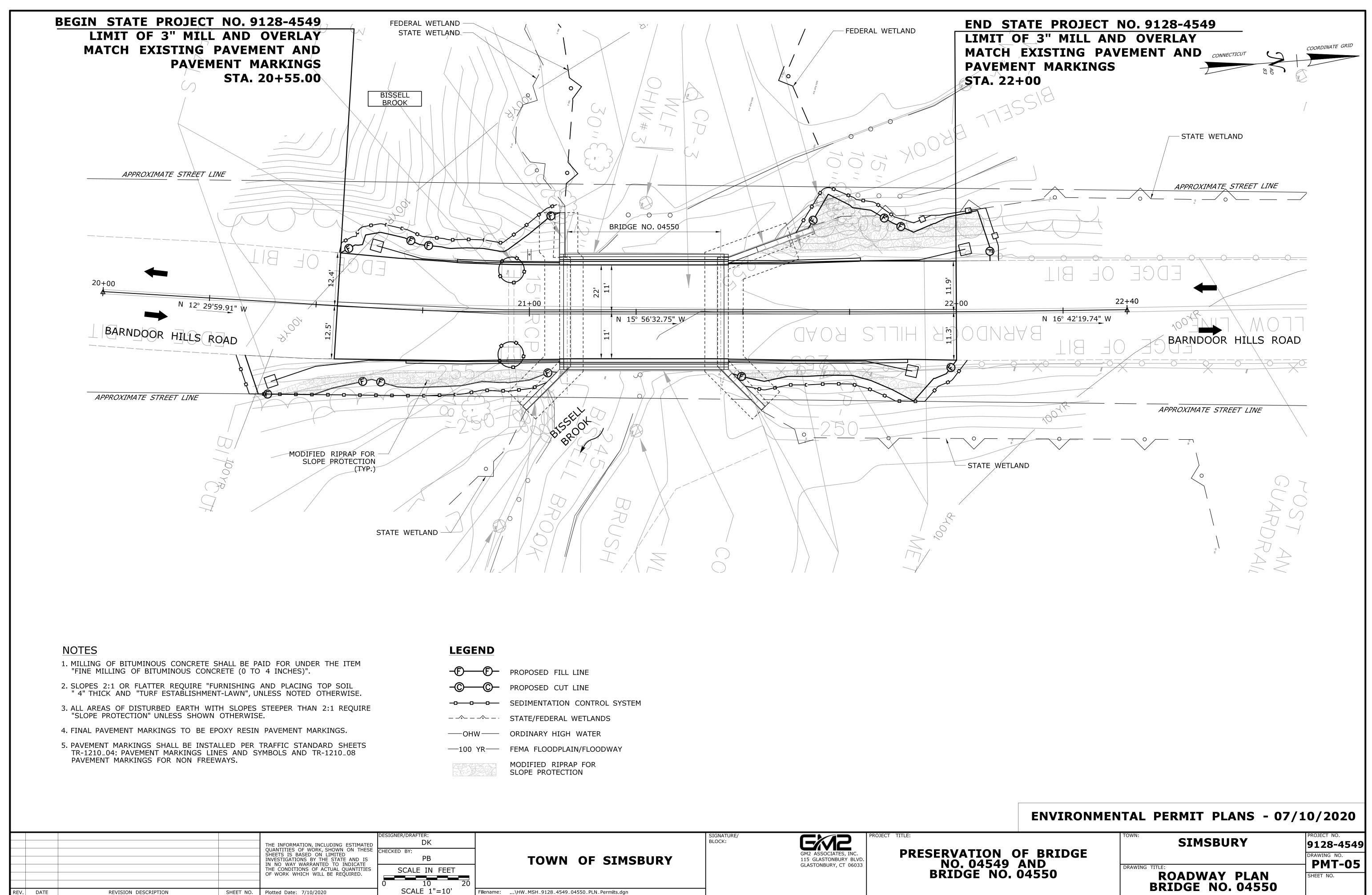
ENVIRONM	ENTAL PERMIT PLANS - 07	/10/2020
	TOWN: SIMSBURY	PROJECT NO. 9128-4549
OF BRIDGE AND	DRAWING TITLE:	DRAWING NO. PMT-03
4550	WATER HANDLING PLAN BRIDGE NO. 04549	SHEET NO.



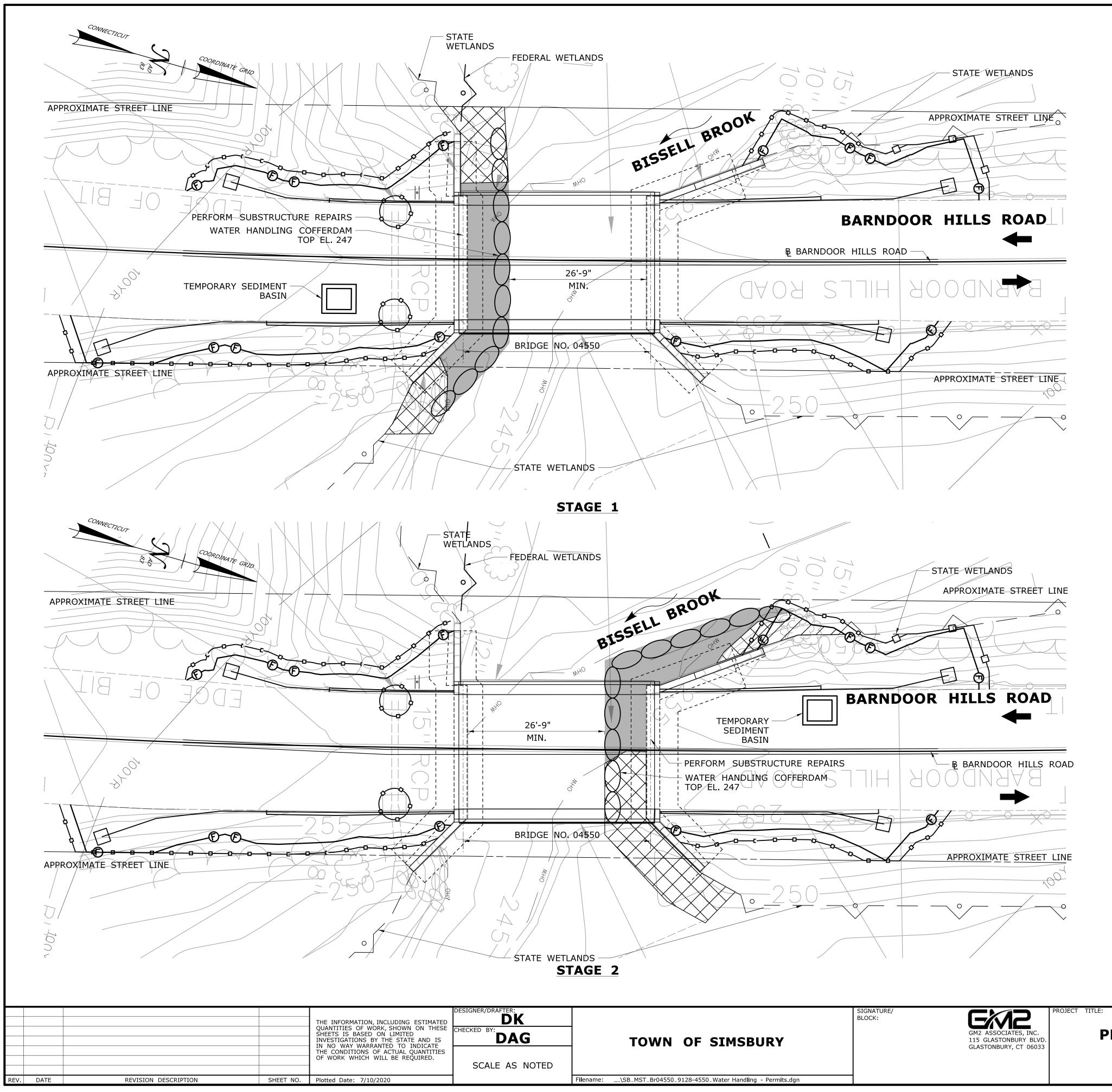
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DRAULIC DATA						
	1.72	SQ. MI.				
	100	YEAR				
	569	CFS				
EVATION	285.7	FT.				
R SURFACE ELEVATION	290.58	FT.				
ATER SURFACE ELEVATION	290	FT.				
ON	NA	FT.				
	NA	YEAR				
	NA	CFS				
STRUCTURE UNIT	NA	ABUTMENT				

9128-4549 DRAWING NO. **PMT-04** 



TOWN OF SIMSBURY	
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# WATER HANDLING NOTES:

1. THE SUGGESTED METHOD OF CONTROLLING WATER DURING CONSTRUCTION CONSISTS OF A TEMPORARY WATER HANDLING COFFERDAM AS SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL DESIGN AND SUBMIT FOR REVIEW AND APPROVAL A WATER HANDLING PLAN PRIOR TO INSTALLATION. THIS WORK TO BE PAID FOR UNDER THE ITEM "HANDLING WATER (SITE NO. 2)". SEE SPECIAL PROVISIONS.

2. THIS SUGGESTED WATER HANDLING SCHEME IS TO PERFORM REPAIRS TO THE EXISTING ABUTMENTS AND WINGWALLS DURING CONSTRUCTION ACTIVITIES ONLY. THE INSTALLATION OF WATER HANDLING COFFERDAM TO HANDLE WATER FOR OTHER CONSTRUCTION ACTIVITIES IS NOT PERMITTED. 3. THE TEMPORARY WATER HANDLING COFFERDAM SHALL BE IN PLACE PRIOR TO START OF ANY EXISTING CULVERT AND WINGWALL REPAIRS IF REQUIRED. 4. TOP OF THE WATER HANDLING COFFERDAM SHALL BE EL. 30.00 MIN.

## **SEQUENCE OF CONSTRUCTION:**

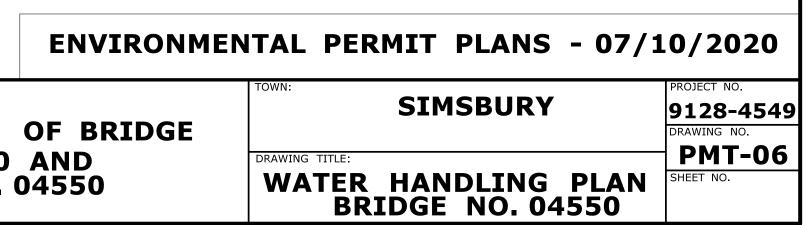
1. INSTALL NECESSARY EROSION AND SEDIMENTATION CONTROLS. 2. INSTALL TRAFFIC CONTROL AS DETAILED IN M&PT PLANS. 3. INSTALL TEMPORARY WATER HANDLING COFFERDAM AS SHOWN. 4. PERFORM REPAIRS TO ABUTMENTS AND WINGWALLS DURING UNCONFINED INSTREAM WORK PERIOD. 5. REMOVE TEMPORARY WATER HANDLING COFFERDAM.

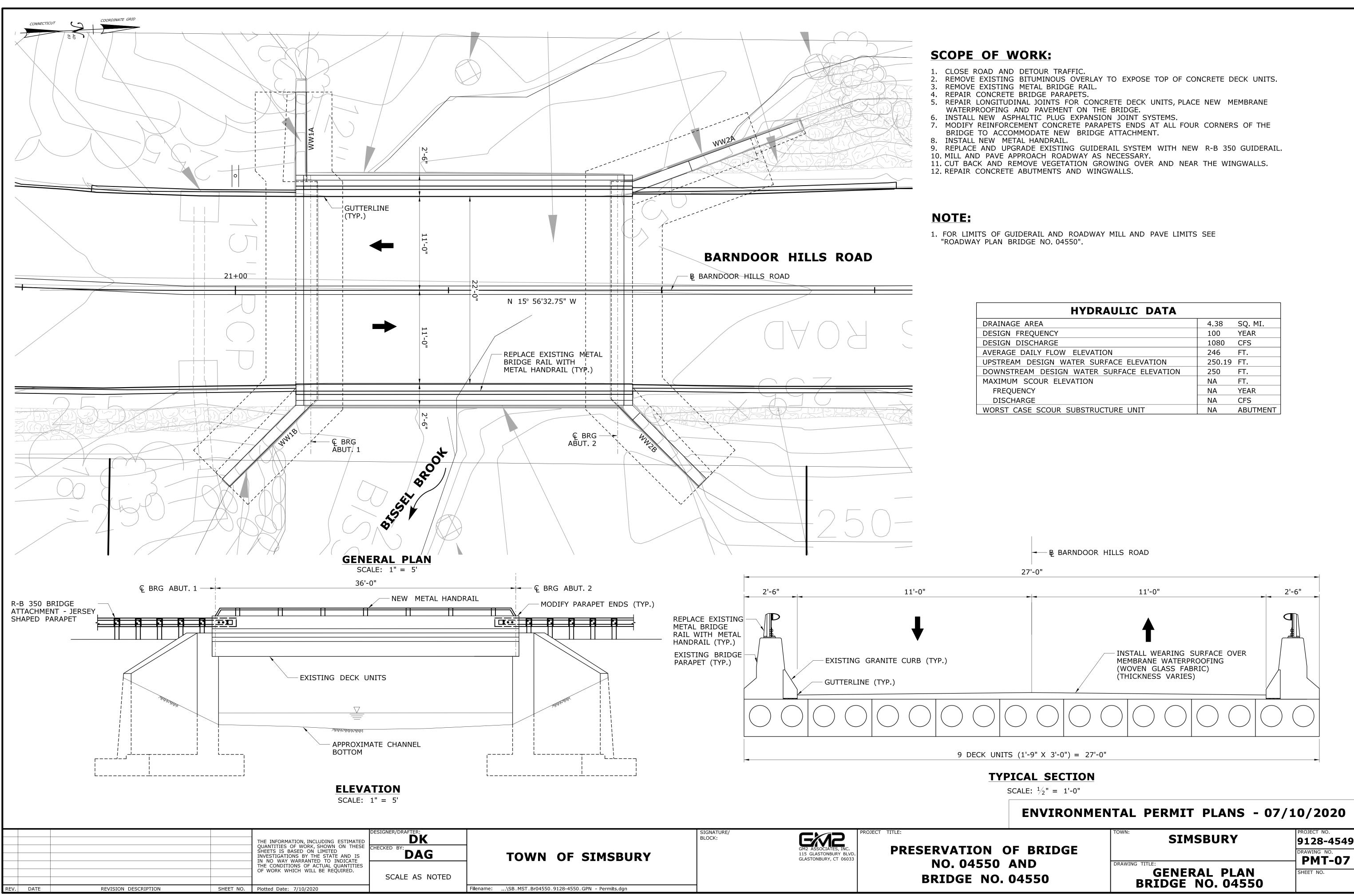
	WET	LAND	IMP	ACT	TABLE		
	WETLAND IMPACTS			WATE	TOTAL		
	FEDI	ERAL	STA	TE	IMPA	CIS	101/12
	STAGE 1	STAGE 2	STAGE 1	STAGE 2	STAGE 1	STAGE 2	
PERMANENT	0 SF	0 SF	0 SF	45 SF	0 SF	0 SF	45 SF
TEMPORARY	130 SF	0 SF	110 SF	340 SF	340 SF	324 SF	1244 SF
TOTAL	130 SF	0 SF	110 SF	385 SF	340 SF	324 SF	1289 SF

	AIN AREA IMPACTS, INFORMATION				
VOLUME IMPACTS					
EXCAVATION IN FEMA FLOODPLAIN	FILL IN FEMA FLOODPLAIN				
15.00 CY	85.00 CY				

# **LEGEND OF IMPACTS**

- TEMPORARY WETLAND IMPACTS (FEDERAL)
- TEMPORARY WETLAND IMPACTS (STATE)
- PERMANENT WETLAND IMPACTS (STATE)
  - TEMPORARY WATERWAY IMPACTS





HYDRAULIC DATA		
AINAGE AREA	4.38	SQ. MI.
SIGN FREQUENCY	100	YEAR
SIGN DISCHARGE	1080	CFS
ERAGE DAILY FLOW ELEVATION	246	FT.
STREAM DESIGN WATER SURFACE ELEVATION	250.19	FT.
WNSTREAM DESIGN WATER SURFACE ELEVATION	250	FT.
XIMUM SCOUR ELEVATION	NA	FT.
FREQUENCY	NA	YEAR
DISCHARGE	NA	CFS