

**City of Stamford
Environmental Protection Board
888 Washington Boulevard
Stamford, CT 06904
(203) 977-4028**

APPLICATION FOR A PERMIT TO CONDUCT REGULATED ACTIVITIES

1. APPLICANT:

Name of Applicant: City of Stamford, Engineering Department

Home Address: _____

Telephone: _____ Email: _____

Business Address: 888 Washington Blvd., Stamford, CT 06901

Business Phone #: (203) 977-5796

Title / Address of Project (if applicable): Replacement of Bridge No. 04070
Wire Mill Road over Haviland Brook

Applicant's Interest in the Property (check where appropriate):

Owner: ☒ Lessee: ☐ Lessor: ☐ Agent: ☐ Other: ☐

2. OWNER:

Name of Property Owner: City of Stamford

Home Address: _____

Telephone: _____ Email: _____

Business Address: Same as above

Business Phone #: _____

If the applicant is not the owner of record, the owner must provide written/signed correspondence authorizing the applicant to file this application to conduct regulated activities.

2. LOCATION / DESCRIPTION:

- a) Geographical location of the subject property in sufficient detail to allow identification of the property on the "Inland Wetlands and Watercourses Map" (orientation sketch may be included)._____

Bridge No. 04070 - Wire Mill Road over Haviland Brook, approximately 50 feet west of the intersection with Gutzon Borglum Road

- b) Lot Number:_____ List Number:_____
Subdivision #:_____ T-Map Number:_____
Total Acreage:_____ Assessor's Card #:_____
Zone:_____ Block Number:_____

- c) The Property is located within 500 feet of a Municipal Boundary
Yes:___ ***See "Special Conditions", Section III of instructions*** No: ☒

- d) The Property is located within a drinking water supply watershed:
Yes: ☒ ***See "Special Conditions", Section III of instructions*** No:___

- e) The Property is serviced by (check where appropriate):
Septic system:___ Sewer:___ / Private well:___ Municipal water:___

4. REGULATED ACTIVITIES:

- a) License is sought to conduct the following regulated activities (check all that apply):

Alteration:___ Deposition:___ Construction: ☒ Removal: ☒

Pollution:___ Obstruction:___ Other (Specify):_____

- b) The proposed activities will affect the following (check all that apply):

Wetland Soils:___ Open Water:___ Setback: ☒

Watercourse:___ Floodplain: ☒ Open Space/Conservation:___

Other (specify):_____

- c) Purpose and brief description of all activities for which authorization is requested: _____

This City of Stamford project involves the replacement of Bridge No. 04070. The superstructure will be replaced, the existing abutments will be cut down to allow superstructure installation, and the new abutments will be constructed behind the existing abutments. Wildlife shelves will be constructed between the new and existing abutments. Incidental work includes roadway reconstruction and new metal beam rail will be installed within the project limits.

3. **REGULATED ACTIVITIES (CON'T.):**

d) **Existing Conditions - Area Totals (Entire Property):**

- i) Square feet of wetlands: 0
- ii) Linear feet of watercourse: 30
- iii) Square feet of open water: 600
- iv) Square feet of floodplain: 3,200
- v) Square feet of setback: 8,750
- vi) Square feet of open space/conservation area: 0

e) **Proposed Conditions - Total Area Affected:**

- i) Square feet of wetlands affected: 0
- ii) Linear feet of watercourses affected: 0
- iii) Square feet of open water affected: 0
- iv) Square feet of floodplain affected: 3,200
- v) Square feet of setback affected: 8,750
- vi) Square feet of open space/conservation area affected: 708
- vii) Square feet of wetlands created: 0

4. **Notice Requirements (see “General Notifications”, Section II of instructions, for details):**

- a) Names and addresses of individuals notified of this pending application as required by “The Inland Wetland and Watercourse Regulations of the City of Stamford.”

NAME	ADDRESS	LIST NUMBER
<u>Provided separately</u>		
<u> </u>		
<u> </u>		
<u> </u>		
<u> </u>		
<u> </u>		

(Attach separate sheets if necessary.)

- b) See “**Special Conditions**”, **Section III of instructions**, for additional notification requirements.

GENERAL CONDITIONS

The undersigned applicant understands that this application is to be considered complete when all information and documents required by the agency have been submitted.

The agency may request additional information to properly evaluate the proposed activities pursuant to Section 5.5 of the "Inland Wetland and Watercourse Regulations of the City of Stamford." The applicant will be notified in writing of any further information required or when the application is deemed complete.

The undersigned warrants the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge.

The undersigned applicant hereby consents to necessary and proper inspections of the above property by authorized agents of the EPB.

Written signature 

Printed signature Louis Casoco P.E.

Date 9/19/2023

State Project No. 0135-0344
Rehabilitation of Bridge No. 04070
Wire Mill Road over Haviland Brook
City of Stamford
Permit for Regulated Activities

Project Description

Close, Jensen and Miller, P.C. is submitting a regulated work permit application on behalf of the City of Stamford. The following project narrative describes the existing site conditions, proposed bridge replacement project, and resulting city regulated impacts.

Bridge No. 04070, Wire Mill Road over Haviland Brook, is scheduled for replacement as part of the Federal Local Bridge Program under State Project No. 0135-0344. The existing structure, built in 1957, is a single span steel multi-girder and cast-in-place concrete deck superstructure supported by reinforced concrete abutments and wingwalls. The total structure length is 25 feet with a clear span length of 20 feet. The bridge roadway width from curb-to-curb measures 30 feet 6 inches and has an out-to-out width of 33 feet 6 inches. The roadway provides one lane of traffic in each direction with temporary barriers along the shoulders preventing live loads from the fascia girders. Wire Mill Road is an urban local road supporting an average daily traffic count of 1820 vehicles per day. There are no sidewalks on the bridge or along the approaches.

Bridge No. 04070 is surrounded by residential property with lot sizes averaging over an acre. Approximately 0.3 miles to the east of project site Wire Mill Road intersects Route 137 (High Ridge Road), servicing residential areas to the north and providing access to the Merritt Parkway (Route 15 Exit 35) and residential business to the south. Wire Mill Road intersects Gutzon Borglum Road 50 feet west of the project site. Further to the west, Wire Mill Road services residential properties over 1.3 miles, terminating at Route 104 (Long Ridge Road) designed commercial area near the Route 15 Exit 34 interchange.

The bridge is in critical condition with a current inspected NBIS rating of 2 out of a possible 9. The superstructure consists of nine rolled steel girders, of which the two fascia (outside) girders have severe section loss of steel support and heavy rust deterioration. Because of this, the shoulders over the bridge are barricaded to restrict traffic to the travel lanes. The bridge deck is in serious condition (NBIS rating of 3) due to underside deterioration of approximately 75% in the form of scaling, map cracking, honeycombing, and leakage. Due to the critical condition of the superstructure and deck, Bridge No. 04070 is in immediate need of replacement.

The proposed project consists of replacing the existing structure with precast prestressed concrete deck units supported on reinforced concrete integral abutments. The new abutments will be supported on H-pile foundation driven to bedrock. The deck units will be topped with a concrete shear slab, waterproofing membrane, and bituminous concrete wearing surface. The proposed clear span is 33 feet with the new abutments constructed behind the existing abutments. The existing flared wingwalls on the side of the bridge will remain. The roadway width will be 30 feet 6 inches, consisting of 11-foot travel lanes and 4-foot 3-inch shoulders, to match the existing roadway approach. The bridge out-to-out width will be increased to 34 feet. Incidental roadway work will include reconstruction/resurfacing of the approaches, approach slabs, and new guiderailing to meet current safety standards. The existing roadway profile will be maintained, as well as the open drainage within the project limits.

Construction will require temporary relocation of overhead utilities as well as permanent relocation of an existing 6-inch gas main. Wire Mill Road will be closed to vehicular traffic during construction and a detour will be implemented during the duration of construction utilizing state and local roads. Access to adjacent properties will be maintained at all times during construction. The proposed construction is expected to begin in the Spring of 2024 and last approximately 6 to 8 months.

The contributing drainage area at Bridge No. 04070 is 3.2 square miles. The regulated resources at the site include a State Regulated Watercourse and Federally Regulated Waters of the U.S. No state or federally regulated wetland vegetation was found in the project area. The project is located within FEMA mapped Flood Zone AE. Coordination has taken place with CT DEEP Fisheries and determined no special accommodations for fish passage are required due to impassable barrier located directly upstream and downstream of the bridge. Coordination has taken place with the Department of Public Health regarding the project location within a designated aquifer protection area and recommendations have been incorporated into the project to protect the public drinking water source.

Haviland Brook is a perennial watercourse that averages 20 feet across at the project site and flows south into a residential pond and then into the Rippowam River. A small dam and pond exist approximately 75 feet upstream of Bridge No. 04070.

All proposed work is proposed above the ordinary high water line, as such there will be no impacts to the Haviland Brook. No wetlands will be impacted as the environmental scientist found no regulated wetlands during the wetland delineation (included with this application). Environmental impacts will be minimized by installing the new abutments behind the existing substructure. The existing abutment stems will be partially removed to provide a larger hydraulic opening and allow installation of riparian shelves to allow wildlife to pass under the bridge. Total impacts to the City of Stamford regulated upland review area, measured 100 feet landward of the ordinary high water line, amount to 8,750 square feet (0.20 acres). Upland impacts are due to installation of the new bridge structure, incidental roadway work, and embankment grading. The upland impacts are within the previously disturbed roadway and structure footprint. Widening of the bridge approaches and roadway embankment grading results in the proposed removal of 2 trees. Replacement of trees will be as requested by the city, and the remaining trees will be protected.

Flood Hazard Area impacts are estimated to be 80 cy of excavation and 30 cy of fill, resulting in no net fill within the FEMA floodplain. Through hydraulic analysis it is shown that there is no rise (0.0 feet) in the calculated base flood elevation and the floodplain capacity is maintained.

Impacts to the stream will be minimized through adherence to CTDOT Form 818, Section 1.10 Best Management Practices and the 2004 Connecticut Stormwater Quality Manual. Sedimentation and erosion control systems will be installed as necessary to limit disturbances to protect the wetlands and watercourses through adherence to the 2002 Connecticut Erosion and Sediment Guidelines. This includes a debris shield installed for the removal of the superstructure, sediment control systems installed at the toe of disturbed slopes, and stabilization and turf establishment of all disturbed areas. Additional management practices will include but are not limited to the following: storage of construction materials outside of wetlands and flood-prone areas, vehicle re-fueling and servicing at a location outside of the watercourse, proper care and maintenance of vehicles and equipment.

In order to protect the public drinking water source, the following mitigation measure have been incorporated into the project:

- Servicing of machinery should be completed outside of the Aquifer Protection Area
- Refueling of vehicles or machinery should take place on an impervious pad with secondary containment designed to contain fuels.
- Fuel and other hazardous materials should not be stored within Aquifer Protection Area. Any fuel or hazardous materials that must be kept within the Aquifer Protection Area during working hours should be stored on an impervious surface utilizing secondary containment.
- A fuel spill remediation kit should be stored on-site so that any spills may be contained and cleaned quickly.
- Aquarion Water Company – Stamford System will be contacted prior to starting this project to review the scope of the project
- Aquarion Water Company – Stamford System personnel will be allowed to periodically inspect this project to ensure that drinking water quality is not being adversely impacted.

Rehabilitation and replacement alternatives were assessed based on criteria including, but not limited to, construction cost, life cycle cost, constructability, environmental impact, safety design standards, connectivity, economic development, and traffic capacity. Two alternatives to the proposed project were thoroughly evaluated, consisting of two rehabilitation options involving superstructure replacement. The rehabilitation options would utilize the existing abutments, which are in satisfactory condition. The two rehabilitation options could be constructed at a reduced cost and schedule in comparison to the full replacement described above. However, the two rehabilitation alternatives would impose increases in the floodplain due to increased superstructure thickness, and would have a reduced design life compared to the full replacement. The proposed full replacement also provides for environmental benefits by allowing installation of wildlife shelves without impacting the watercourse, as well as an increased hydraulic opening that return flow profile and velocities more closely simulate natural conditions.

The proposed project will not require a U.S. Army Corps of Engineers permit as there are no impacts to regulated wetlands or Waters of the United States. The project will meet the requirements of the Flood Management Act and National Flood Insurance Program, and will receive State Flood Management approval. A CTDEEP Statewide Inland Wetlands & Watercourses Activity Reporting Form is included with the application for municipal use.



Statewide Inland Wetlands & Watercourses Activity Reporting Form

Please complete this form in accordance with the instructions on pages 2 and 3 and mail to:

DEEP Land & Water Resources Division, Inland Wetlands Management Program, 79 Elm Street, 3rd 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 - one code only): _____
3. WAS A PUBLIC HEARING HELD (check one)? yes ☐ no ☐
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 ACTIVITY IS OCCURRING (print name): Stamford
does this project cross municipal boundaries (check one)? yes ☐ no ☒
if yes, list the other town(s) in which the activity is occurring (print name(s)): _____
6. LOCATION (see instructions for information): USGS quad name: Stamford or number: 113
subregional drainage basin number: 7405
7. NAME OF APPLICANT, VIOLATOR OR PETITIONER (print name): City of Stamford
8. NAME & ADDRESS OF ACTIVITY / PROJECT SITE (print information): Wire Mill Road over Haviland Brook
briefly describe the action/project/activity (check and print information): temporary ☐ permanent ☒ description: Replacement of Bridge No. 04070
9. ACTIVITY PURPOSE CODE (see instructions - one code only): E
10. ACTIVITY TYPE CODE(S) (see instructions for codes): 1, 2, 9, 12
11. WETLAND / WATERCOURSE AREA ALTERED (see instructions for explanation, must provide acres or linear feet):
wetlands: 0 acres open water body: 0 acres stream: 0 linear feet
12. UPLAND AREA ALTERED (must provide acres): 0.2 acres
13. AREA OF WETLANDS / WATERCOURSES RESTORED, ENHANCED OR CREATED (must provide acres): 0 acres

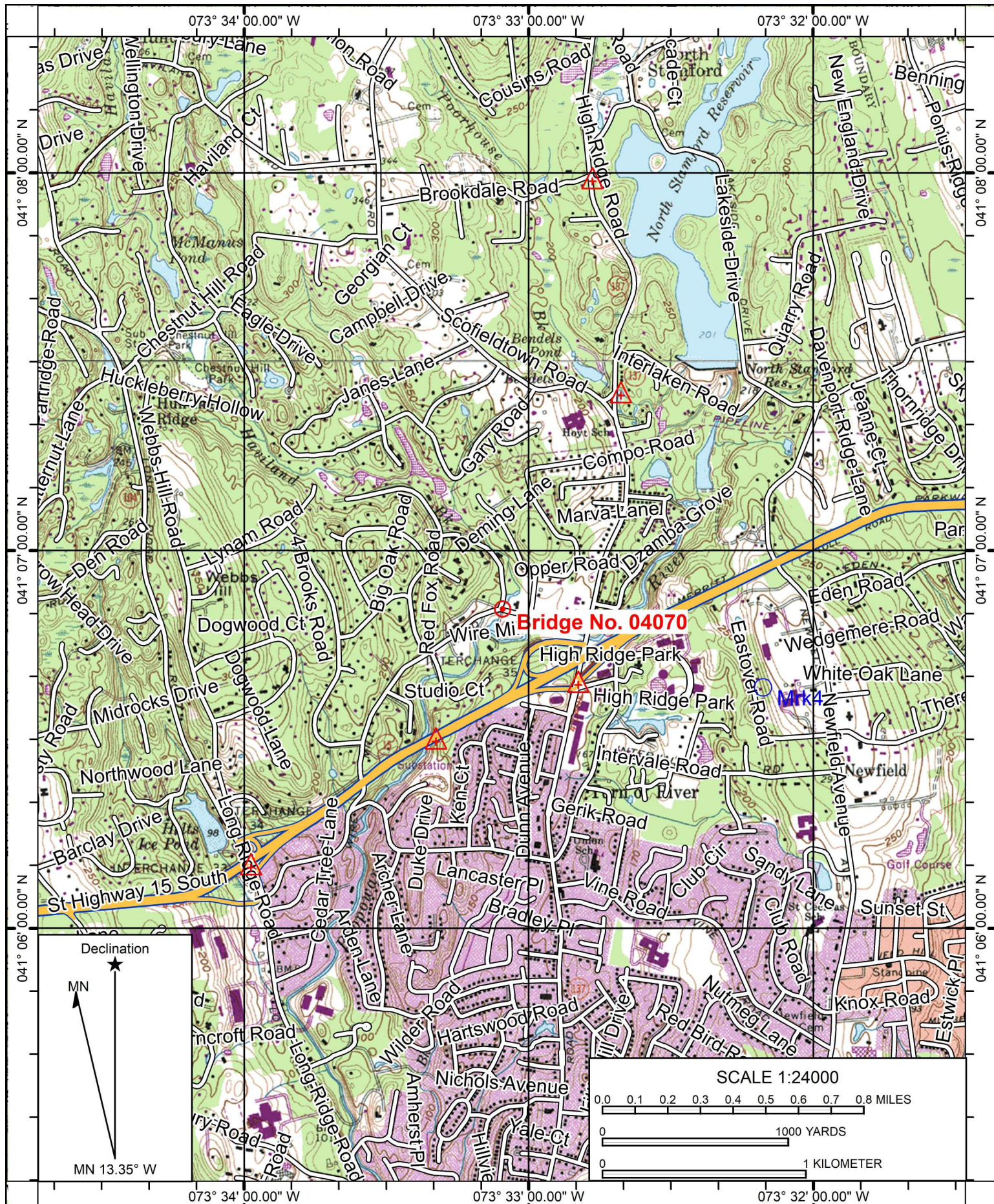
DATE RECEIVED:

PART III: To Be Completed By The DEEP

DATE RETURNED TO DEEP:

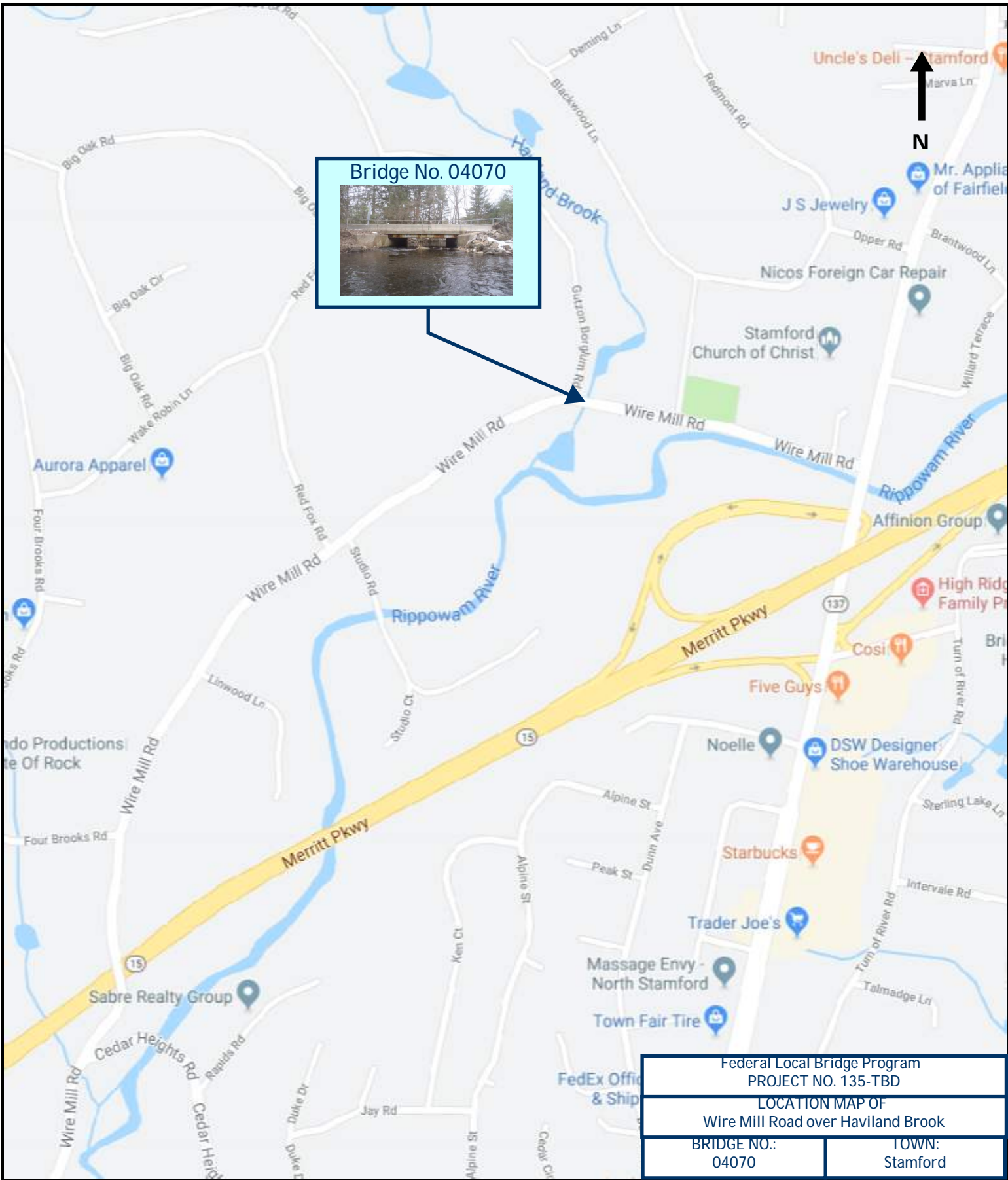
FORM COMPLETED: YES NO

FORM CORRECTED / COMPLETED: YES NO



Name: STAMFORD
 Date: 06/12/18
 Scale: 1 inch = 2,000 ft.

Location: 041° 06' 50.76" N, 073° 33' 05.73" W
 Wire Mill Road Over Haviland Brook



Federal Local Bridge Program	
PROJECT NO. 135-TBD	
LOCATION MAP OF	
Wire Mill Road over Haviland Brook	
BRIDGE NO.:	TOWN:
04070	Stamford



Federal Local Bridge Program PROJECT NO. 135-TBD	
Aerial View of: Wire Mill Road over Haviland River	
BRIDGE NO.: 04070	TOWN: Stamford



SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

FEMA



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community





The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **5/14/2018 at 2:38:16 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmappped and unmodernized areas cannot be used for regulatory purposes.

AQUIFER PROTECTION AREAS

Stamford, CT

December 23, 2021

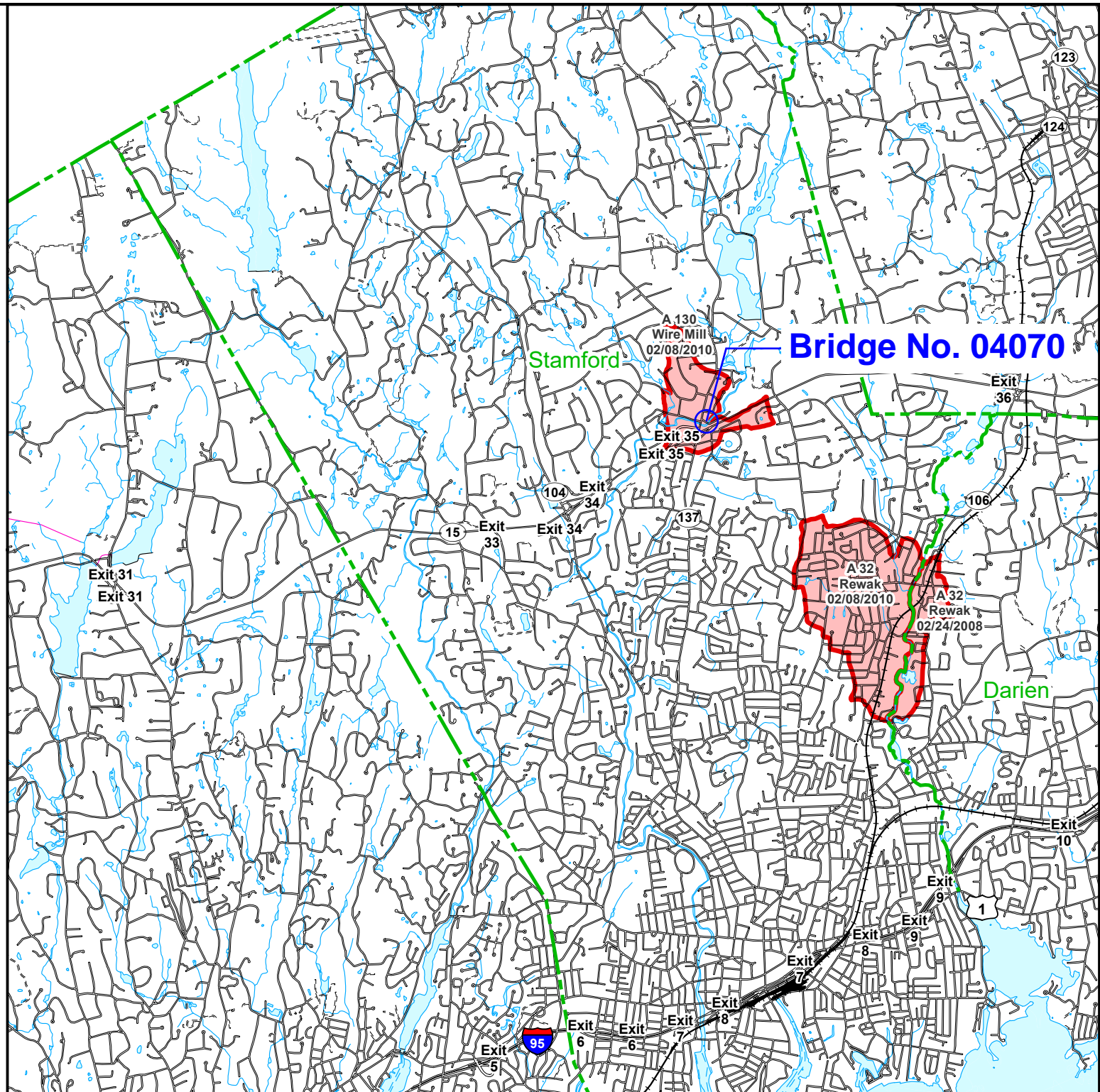
-  Level A APA (Final Adopted)
-  Level A APA (Final)
-  Level B APA (Preliminary)
-  Town Boundary

NOTE: The Aquifer Protection Areas were delineated through Connecticut's Level A and Level B Mapping Processes. Aquifer Protection Areas are delineated for active public water supply wells in stratified drift that serve more than 1000 people, in accordance with Sections 22a-354c and 22a-354z of the Connecticut General Statutes. Level B Mapping delineates a preliminary aquifer protection area, providing an estimate of the land area from which the well draws its water. Level A Mapping delineates the final Aquifer Protection Area, which becomes the regulatory boundary for land use controls designed to protect the well from contamination. As Level A Mapping is completed for each well field and approved by DEEP, it replaces the Level B Mapping. Final Adopted Level A Areas are those where towns have land use regulations for them. Massachusetts and Rhode Island Wellhead Protection Areas may be shown for informational purposes.

QUESTIONS:
Bureau of Water Protection and Land Reuse
Planning and Standards Division
Phone: (860) 424-3020
www.ct.gov/deep/aquiferprotection



STATE OF CONNECTICUT
DEPARTMENT OF
ENERGY & ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127





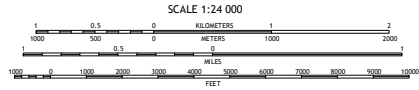
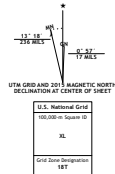
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



STAMFORD QUADRANGLE
CONNECTICUT-FAIRFIELD CO.
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84) Projection and
1 000 meter grid; Universal Transverse Mercator, Zone 18T
10 000 foot (3048 meter) Contour Interval; Datum of 1983
This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands within government
reservations may not be shown. Obtain permission before
entering private lands.



SCALE 1:24 000
CONTOUR INTERVAL 10 FEET
NORTH AMERICAN DATUM OF 1983
This map was produced to conform with the
National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18



ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
AWD
US Route
State Route

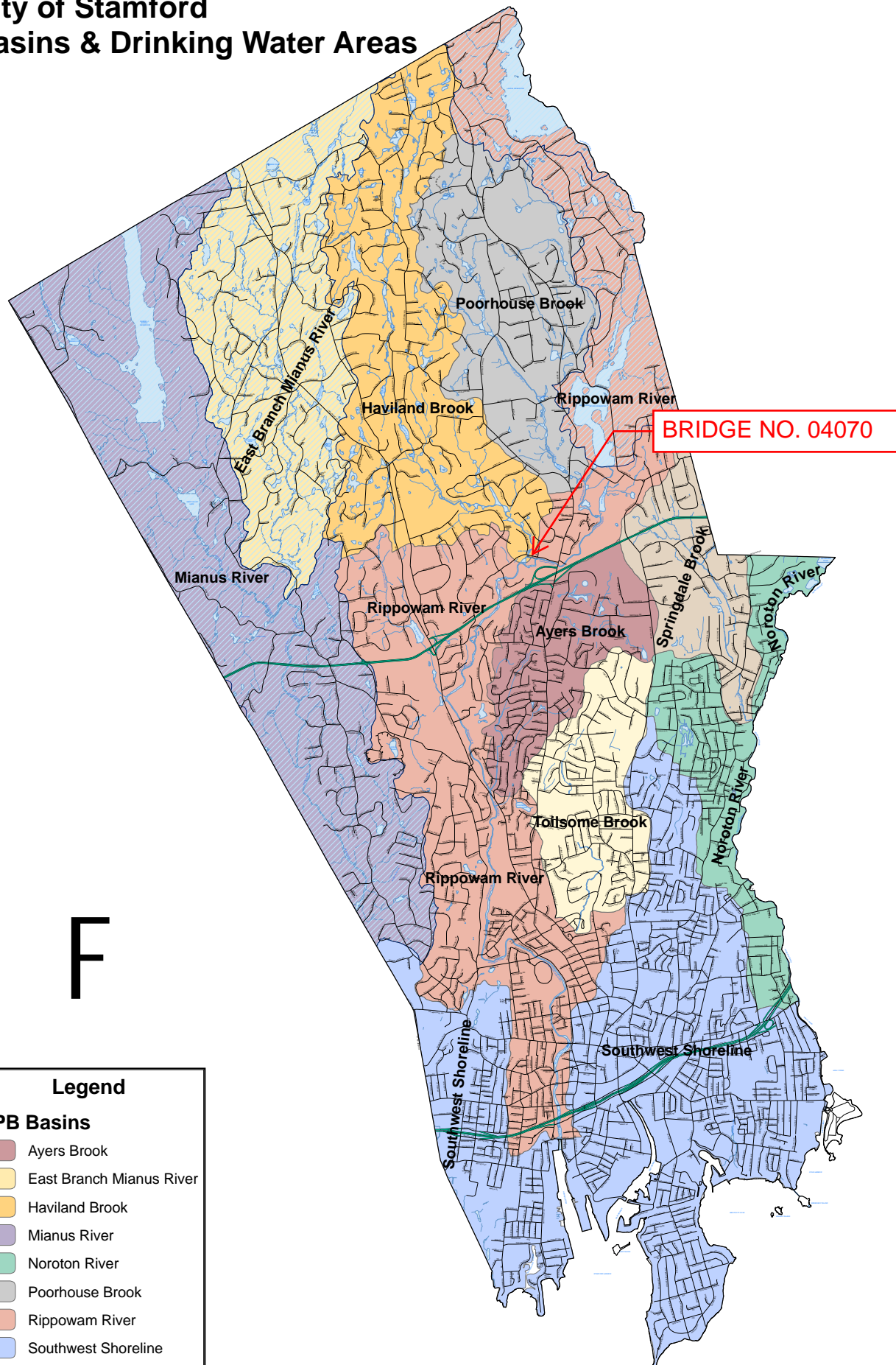
1	2	3	4
5	6	7	8

ADJOINING QUADRANGLES

STAMFORD, CT
2015



City of Stamford Basins & Drinking Water Areas



F

Legend

EPB Basins

- Ayers Brook
- East Branch Mianus River
- Haviland Brook
- Mianus River
- Noroton River
- Poorhouse Brook
- Rippowam River
- Southwest Shoreline
- Springdale Brook
- Toilsome Brook
- Drinking Water Areas

1:24,000

1 inch equals 2,000 feet

0 6,000 12,000 Feet




Disclaimer: Information displayed on this map is for general reference purposes only and is not represented as survey-accurate or up to date. All information is subject to verification by any user. The City of Stamford assumes no legal responsibility for the information contained herein. Map created 03/15/05 in the Land Use Bureau of the City of Stamford.

Data Sources: 1. Connecticut DEP, Environmental and Geographic Information Center
http://www.dep.state.ct.us/gis/dataguides/dep/layers/sbasin.htm
2. City of Stamford Environmental Protection Board

Natural Diversity Data Base Areas

STAMFORD, CT

June 2023

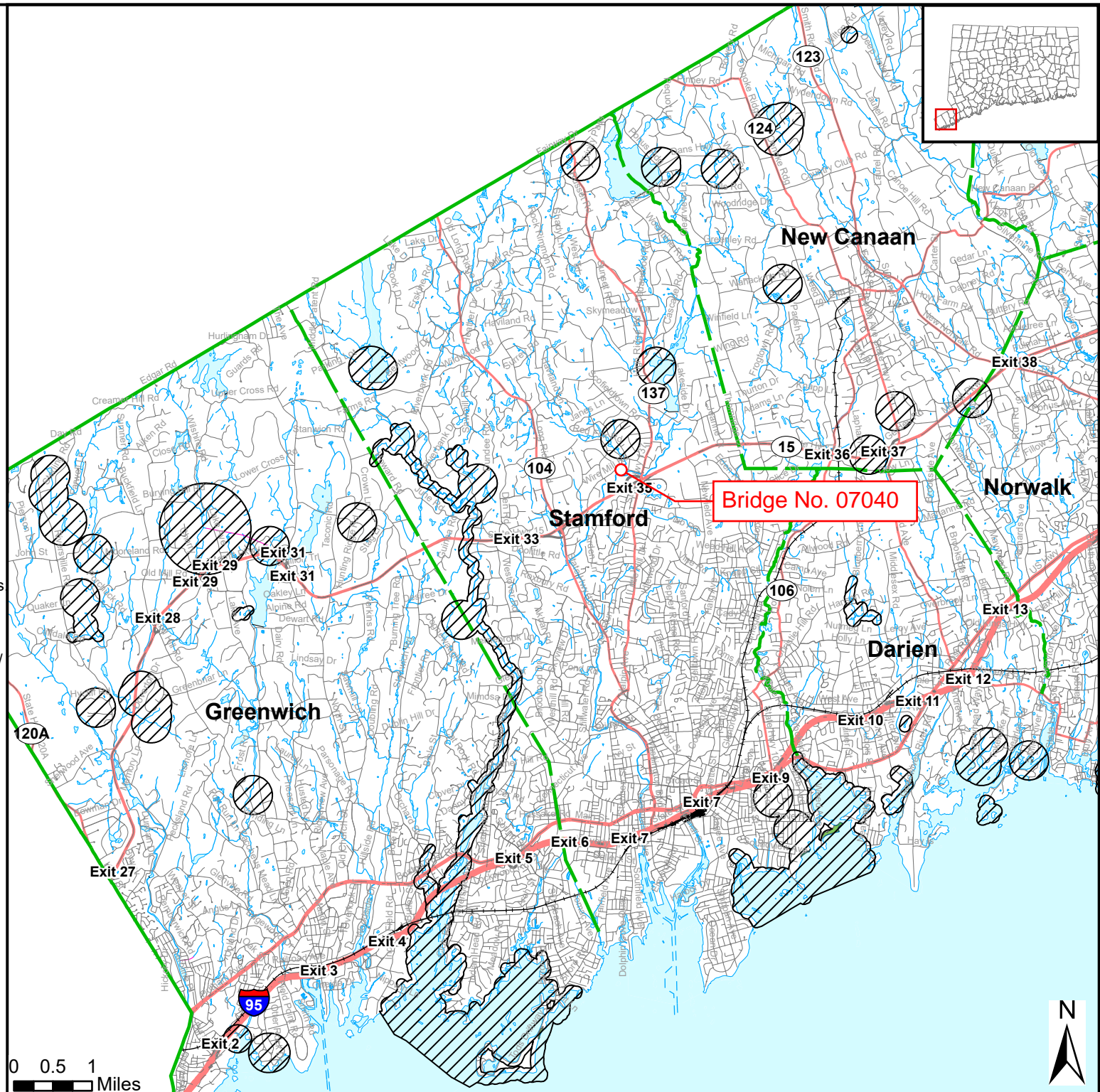
-  State and Federal Listed Species
-  Critical Habitat
-  Town Boundary

NOTE: This map shows known locations of State and Federal Listed Species and Critical Habitats. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDDB) from a variety of data sources. Exact locations of species have been buffered to produce the generalized locations.

This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas. If the project is within a hatched area there may be a potential conflict with a listed species. For more information, use DEEP ezFile <https://filings.deep.ct.gov/DEEPPortal/> to submit a Request for Natural Diversity Data Base State Listed Species Review or Site Assessment. More detailed instructions are provided along with the request form on our website.
<https://portal.ct.gov/deep-nddbrequest>

Use the CTECO Interactive Map Viewers at <http://cteco.uconn.edu> to more precisely search for and locate a site and to view aerial imagery with NDDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)
79 Elm St, Hartford, CT 06106
email: deep.nddbrequest@ct.gov
Phone: (860) 424-3011



STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH



Raul Pino, M.D., M.P.H.
Commissioner

Dannel P. Malloy
Governor
Nancy Wyman
Lt. Governor

Drinking Water Section

July 6, 2018

Thomas E. Weldon Jr.
Close, Jensen and Miller, P.C.
1137 Silas Deane Highway
Wethersfield, CT 06109-4201

RECEIVED
JUL 11 2018

CLOSE, JENSEN & MILLER, P.C.

Re: Rehabilitation of Bridge No. 04070
DPH Project #2018-0156

Dear Mr. Weldon:

The Drinking Water Section (DWS) of the Department of Public Health has reviewed the location of the following bridge rehabilitation project:

Project No.	Bridge No.	Town	Road	Feature Crossed	Scope
135-TBD(2)	04070	Stamford	Wire Mill Road	Haviland Brook	Rehabilitation

Based on our review it appears that this above bridge project is located within the Aquifer Protection Area of Aquarion Water Company – Stamford System's Wire Mill Well. The Drinking Water Section offers the following recommendations to protect this source of public drinking water:

- Servicing of machinery should be completed outside of the Aquifer Protection Area.
- Refueling of vehicles or machinery should take place on an impervious pad with secondary containment designed to contain fuels.
- Fuel and other hazardous materials should not be stored within the Aquifer Protection Area. Any fuel or hazardous materials that must be kept within the Aquifer Protection Area during working hours should be stored on an impervious surface utilizing secondary containment.
- A fuel spill remediation kit should be stored on-site so that any spills may be contained and cleaned quickly.
- Aquarion Water Company – Stamford System should be contacted prior to starting this project to review the scope of this project.
- Aquarion Water Company – Stamford System personnel should be allowed to periodically inspect this project to ensure that drinking water quality is not being adversely impacted.



Phone: (860) 509-7333 • Fax: (860) 509-7359 • VP: (860) 899-1611
410 Capitol Avenue, MS#12DWS, P.O. Box 340308
Hartford, Connecticut 06134-0308
www.ct.gov/dph

Affirmative Action/Equal Opportunity Employer



Thomas E. Weldon, Jr.
July 6, 2018
Page 2

If you have any questions regarding this matter, please contact Rich Iozzo of this office at 860-509-7333.

Sincerely,

A handwritten signature in blue ink, appearing to read 'EMC', with a long horizontal stroke extending to the right.

Eric McPhee
Supervising Environmental Analyst
Drinking Water Section

Cc: David Martin, Mayor, City of Stamford

TO: Marilyn Gould, Office of Environmental Planning, DOT

FROM: Bruce Williams, DEEP - Fisheries Division

DATE: April 22, 2019

SUBJECT: Preliminary Fisheries Review – DOT Project 135-TBD(2)

Type of Permit:

☒ 1. DOT Culvert/Bridge Projects

Project#: 135-TBD(2)

☐ 2. Diversion

☐ 3. PGP/Inland Wetland

Bridge#: 04070

☐ 4. Water Quality Certification

Applicant: Connecticut Department of Transportation

State P.E. Project #:

Town: Stamford

Waters: Haviland Brook

Sub Regional Basin #: 7405

Project Scope: The existing bridge at Wire Mill Road has been classified as structurally deficient due to poor condition ratings for both the reinforced concrete deck and the steel beam superstructure. Due to section losses in the steel beams, jersey type concrete barriers have been placed along the north and south sides of the bridge. Proposed renovations include replacing the superstructure and repairing the concrete abutments and wingwalls. Incidental work includes repaving roadway approaches and upgrading guide rails to meet current safety regulations.

Fisheries Resources: Haviland Brook is a small first order tributary of the Rippowam River. Prior Fisheries Division sampling at the next bridge crossing upstream of Wire Mill Road has documented the following fish species: American Eel, Blacknose Dace, Chain Pickerel, and White Sucker.

Comments/Recommendations: There are impassable barriers both directly upstream and downstream of the Wire Mill Road Bridge. Since no fish are not expected to pass upstream of the bridge, no special accommodations for fish passage are required. Planned construction activities do have the potential to cause siltation in the downstream pond. The Fisheries Division therefore makes the following recommendations:

1. Proper erosion and sedimentation controls must be installed and maintained throughout the duration of this project. Care should also be exercised so as not to increase turbidity levels and all disturbed areas will need to be stabilized and restored with native

vegetation after completion of the project.

2. As a best management practice, any “unconfined” instream work should be restricted to the period from June 1 to September 30, inclusive. This timeframe coincides with historic low rainfall levels in Connecticut a period in which instream construction activities such as dewatering, excavation, trenching, and cofferdam placement are most effective. This restriction does not include the placement or removal of water control structures such as cofferdams.

CC: Steve Gephard, Supervising Fisheries Biologist

Wetland Delineation Report



Connecticut Bridge Program Replacement of Bridge No. 04070

State Project No. 135-344
Wire Mill Road over Haviland Brook

Stamford, Connecticut

February 2020

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APPENDIX A: REPRESENTATIVE PHOTOGRAPHS

Figures

Figure 1: Overview Map 2

Figure 2: Wetlands Sketch Map 3

Figure 3: NRCS Soils Map 6

1. INTRODUCTION

Fitzgerald & Halliday, Inc. (FHI) was retained by Close, Jensen and Miller, PC (CJM) to identify and delineate wetlands and watercourses within, or adjacent to, the Replacement of Bridge No. 04070, Wire Mill Road over Haviland Brook project site in Stamford, Connecticut (**see Figure 1 – Overview Map**). This work effort is to support State Project No. 135-344. FHI soil scientists conducted the wetland investigation in October 2019. The methods used and results are detailed in this wetland delineation report.

2. METHODS


All wetland resources were delineated in accordance with state and federal definitions and guidelines. The identification of inland wetlands and watercourses, as regulated by the State of Connecticut, was based upon definitions contained in Section 22a-38 of the Connecticut General Statutes (CGS). Connecticut inland wetland boundaries are determined by the limit 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 (NRCS) of the United States Department of Agriculture (§22a-38-15). NRCS soil surveys were consulted to compare field observed soil types to those generally expected in the project area. Hydric soils, which include both poorly and very poorly drained soils, were identified for conformance with the *Field Indicators for Identifying Hydric Soils in New England Version 4 (2019)* and *Field Indicators of Hydric Soils in the United States, Version 8.2 (2018)*.

Federal wetlands were identified per the U.S. Army Corps of Engineers (USACE) 1987 *Wetland Delineation Manual* and the USACE 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region – Version 2.0*. The federal wetland boundary was determined by the limit of wetland vegetation (limit of plant community dominated, 50% or more cover, by species adapted to living in wetland conditions) based on visual inspection, and via the observation of hydric soil indicators and wetland hydrology.

No USACE Wetland Determination Forms or Wetland Function and Value Forms were prepared for this project as no wetland systems were observed in the project area. Photographs were taken of the project area, and these representative photographs can be found in Appendix A. The delineation sketch graphic is depicted in **Figure 2 – Wetlands Sketch Map**.

**Wire Mill Road over
Haviland Brook
Bridge No. 04070
State Project No. 135-344
Stamford, CT
Figure 1
Overview Map**

Legend

 Approximate Limits of Investigation





0 50 100 150 200
Feet

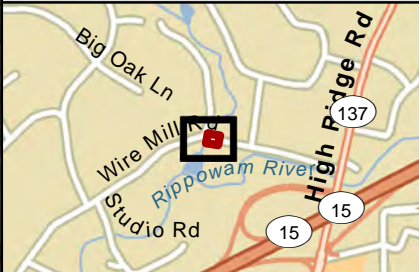


**Wire Mill Road over
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Figure 2
Wetland Sketch Map**

Legend

-  Approximate Limits of Investigation
-  Ordinary High Water (OHW)

NOTE:
-No Inland Wetlands Delineated



0 10 20 30 40
Feet



3. RESULTS

One perennial watercourse was observed within the project limits. The Ordinary High Water (OHW) limits of Haviland Brook were demarcated in the field within the project limits. The OHW extends beyond the project limits, along the edge of Haviland Brook as described in detail below. There were no state or federal wetlands observed in the project area, as the banks of Haviland Brook are rocky and steep.

The NRCS mapped soil designation was Hinckley loamy sand, 3 to 15 percent slopes, in the area surrounding all sides of Bridge 04070. Refer to Section 5.0 of this report for the NRCS map depicting the location and extent of these soil units and respective soil descriptions.

4. DETAILED RESOURCE DESCRIPTIONS

Haviland Brook

Haviland Brook, which flows beneath Bridge No. 04070, is a perennial watercourse that averages approximately 20 feet across. Flows tend to be swift in this area due to the narrow, straight channel. The brook flows south into a residential pond, then into the Rippowam River, and ultimately into Long Island Sound. The brook is adjacent to residential properties in all directions. A small dam and pond exist approximately 60 feet upstream of the bridge structure.

The eastern bank of Haviland Brook is steep leading down to the watercourse, with the northeast area comprised of riprap along the bank north to a dam. The southeast area bank was also steep and comprised of large rocks. The northwestern bank of the brook was comprised of riprap near the bridge and natural cobble further north (approximately 20 feet north of the bridge). The southwestern bank of the river was also steep, but less rocky than the other banks. The uplands surrounding the river are residential properties that contain trees and shrubs along the edge of the river, and lawn areas further from the river. The dominant vegetation along the river's edge included: Sugar Maple (*Acer saccharum*), Northern Spicebush (*Lindera benzoin*), Japanese Wisteria (*Wisteria floribunda*), and Border Forsythia (*Forsythia × intermedia*) in the northwest; Sugar Maple, Porcelainberry (*Ampelopsis brevipedunculata*), *Pachysandra sp.*, and Oriental Bittersweet (*Celastrus orbiculatus*) in the northeast; Red Maple (*Acer rubrum*), Norway Spruce (*Picea abies*), and *Rhododendron sp.* in the southeast; and Red Maple and Norway Spruce in the southwest.

The brook both north and south of Bridge No. 04070 was mostly shaded with trees and has a range in depth of between zero to 48 inches. The brook's bottom was dominated by cobble north of the bridge and embedded cobble with sand deposits south of the bridge. There was a sediment island in the brook located just north of Bridge No. 04070 that had Buttonbush (*Cephalanthus occidentalis*) growing on it.

Haviland Brook provides fish and wildlife habitat, with fish observed surface feeding in the brook south of Bridge No. 04070.

5. NRCS MAPPED SOILS

The mapped Natural Resources Conservation Service (NRCS) soils classifications on the project site are depicted in **Figure 3 – NRCS Soils**.

Hinckley loamy sand, 3 to 15 percent

The Hinckley component makes up 85 percent of the map unit. This component is on kame terraces on valleys. The parent material consists of sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist. The natural drainage class is excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. This soil is not flooded or ponded. There is no zone of water saturation within a depth of 72 inches. This soil does not meet hydric criteria.

Ninigret fine sandy loam, 0 to 3 percent slopes

The Ninigret component makes up 85 percent of the map unit. This component is on outwash terraces on valleys. The parent material consists of coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from gneiss, granite, schist, and/or phyllite. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. This soil is not flooded or ponded. A seasonal zone of water saturation is at 26 inches during January, February, March, April, December. This soil does not meet hydric criteria.

6. SUMMARY

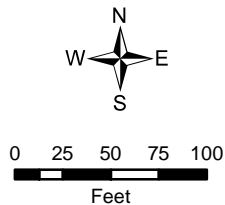
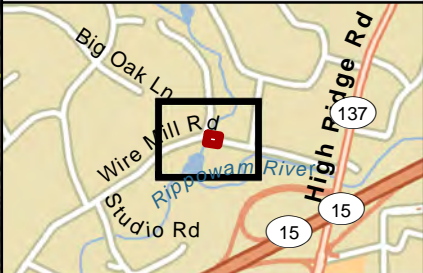
The major resource in the project area is Haviland Brook. No wetland resources were observed in the project area.

Representative photographs are attached to this report in Appendix A.

Wire Mill Road over Haviland Brook Bridge No. 04070 State Project No. 135-344 Stamford, CT NRCS Soils Map

- Legend
- Approximate Limits of Investigation
 - NRCS Mapped Soil Unit (Oct. 2019)

NOTE:
Data Source - NRCS Soils 2020



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Soil ID	Mapped Soil Unit Name	Parent Material	Drainage Class
3	Ridgebury, Leicester, and Whitman soils, extremely stony	Lodgement Till	Poorly drained
38C	Hinckley loamy sand, 3 to 15 percent slopes	Glaciofluvial	Excessively drained
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	Melt-out Till - Moderate to Bedrock	Well drained
701A	Ninigret fine sandy loam, 0 to 3 percent slopes	Glaciofluvial	Moderately well drained
W	Water	Water	Water

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APPENDIX A: REPRESENTATIVE PHOTOGRAPHS

APPENDIX A: REPRESENTATIVE PHOTOGRAPHS



Photo 1 – Haviland Brook and Bridge No. 04070 looking south



Photo 2 – Haviland Brook looking north from Bridge No. 04070; small dam shown in background



Photo 3 – Haviland Brook looking south from Bridge No. 04070



Photo 4 – Haviland Brook and Bridge No. 04070 looking northeast



Photo 5 – Haviland Brook looking east (southeast bank)



Photo 6 – Haviland Brook looking west (southwest bank)