



City of Bristol
Conservation Commission/ Inland Wetlands and Watercourses Agency

REGULAR MEETING - MONDAY, JUNE 3, 2024
CITY HALL COUNCIL CHAMBERS
111 NORTH MAIN STREET
6:30 P.M.

INFORMATION FOR THE PUBLIC TO ACCESS THIS MEETING

Zoom Meeting link:

<https://bristolct-gov.zoom.us/j/88604570176?pwd=d7sjlFrdfHOPPYbjZxztSEZBFxfYsL.1>

Meeting ID:

886 0457 0176

Meeting Passcode:

123456

Join by phone

1-929-205-6099

AGENDA

1. Pledge of Allegiance
2. Introductions and Seating of Alternates
3. Public Participation
4. Approval of Minutes
 - a. May 2, 2024 - On-Site Meeting
 - b. May 6, 2024 - Regular Meeting
 - c. May 22, 2024 - Special Meeting
 - d. May 22, 2024 - On-Site Meeting
5. Public Hearings

- a. Application #2027 – Wetlands application for remediation of drainage swale and contaminants including excavation of channel and restoration of riprap along channel bed and banks at 300 Broad Street; Assessor's Map 43, Lot 100; 300 Broad Street Property LLC, applicant.
 - b. Application #2029 – Wetlands application for the replacement of the Divinity Street culvert over an unnamed Brook within Divinity Street Right-of-Way within an existing easement and City of Bristol Right-of-Way; City of Bristol, Department of Public Works, applicant.
6. Pending Applications
- a. Application #2025 – Wetlands application as part of a cease and correct order to level ground and slope away from home, clean brush, and new landscaping or fence at 465 Emmett Street; Assessor's Map 3, Lot 9-1; Peter Plewa, applicant.
7. New Applications
- a. Application #2031– Wetlands application for replacement of Divinity Street Culvert over Unnamed Brook within City of Bristol Right-of-Way; City of Bristol, Department of Public Works, applicant.
 - b. Application #2032 - Wetlands application for the reconstruction of Minor Street including drainage at the intersection of Minor Street and Hill Street extending approximately 475 feet west and within City of Bristol Right-of-Way; City of Bristol, Department of Public Works, applicant.
8. Old Business
- a. Application #2019 – Wetlands boundary change application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.
 - b. Application #2020 – Wetlands application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.
 - c. Application #23-458F-305 – Floodplain application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant
9. New Business
10. Staff-Approved Applications/Published

a

App.#	Approved	Street No.	Address	Purpose of App.
102114	Administrative	42	Marlene Street	Fence
102115		156	Beths Avenue	Above ground pool
102116		393	Jerome Avenue	Deck
102118		31	Buckley Avenue	Above ground pool
102119		159	Redstone Hill Road	Replace fence
102121		352	Shrub Road	New addition
Administrative Floodplain Applications				
24-458F-309		393	Jerome Avenue	Install sono tube footings for deck

11. Staff Reports

- a. IWWC Report - May 2024

12. Communications

- a. DEEP Permit

13. Appointments & Reappointments

- a. City Council Letters - May 15, 2024

14. Adjournment

REMINDER: The next Regular Meeting of the Inland Wetland Commission is Monday, July 1, 2024

Application #2023 – Wetlands application to revise outfall piping and stabilize outfall area at Vine Road and Brace Avenue within an existing easement; Assessor's Map 46, Lot 81-3; City of Bristol, Public Works Department, applicant.

Thursday, May 2, 2024 6:00 PM

Application #2022

120 Perkins Street

Attendees

- Zachary Fisk, Chairman
- Michael Robinson, Vice Chairman
- Dan Massaro, Commissioner
- James Ritchie, Commissioner
- James Carros, Commissioner
- Faye Duquette, Alternate
- Nancy Levesque, Bristol City Engineer

The site conditions were observed. Approximate location of proposed piping and outlet and limit of project indicated by Nancy Levesque. Brief discussion of reason for replacement occurred.

Meeting ended at approximately 6:10 PM

Thursday, May 2, 2024 6:15 PM following 2023

Application #102007

42 Paul St

Cease and Correct

Attendees

- Zachary Fisk, Chairman
- Michael Robinson, Vice Chairman
- Dan Massaro, Commissioner
- James Ritchie, Commissioner
- James Carros, Commissioner
- Faye Duquette, Alternate
- Nancy Levesque, Bristol City Engineer
- Douglas Towne, Owner
- Ethan Towne, Son of owner
- Doreen Town, Wife of owner

Site conditions were observed. Doug Towne indicated the work that was completed for the horseshoe pit and drainage pipe and additional material from under the three season room/deck was relocated to the middle of the yard.

Meeting started at 6:15 PM Site conditions were observed.

Meeting ended at approximately 6:34 PM

**BRISTOL INLAND WETLANDS COMMISSION
MINUTES
REGULAR MEETING OF MONDAY MAY 6, 2024**

1. CALL TO ORDER:

By: Chairman Fisk

Time: 6:30 P.M.

Place: City Hall
111 North Main Street
Council Chambers
First Floor

ROLL CALL:

Chairman Fisk reminded the Commission the next Regular Meeting of the Inland Wetland Commission Monday, June 3, 2024.

MEMBERS	NAME:	PRESENT	ABSENT
REGULAR MEMBERS	Zachary Fisk (Chairman)	X	
	Michael Robinson (Vice Chairman)	X	
	David Rooks (Secretary)	X	
	James Carros	X	
	Daniel Massaro, Jr.	X	
	James Ritchie	X	
	Faye Duquette	X	
ALTERNATE MEMBERS	Anthony Pellerin		X
STAFF	Nancy Levesque, P.E., City Engineer	x	

Chairman Fisk called the meeting to order at 6:30 P.M.

2. Pledge of Allegiance**3. Introductions and Seating of Alternate Commissioners**

Chairman Fisk designated regular Commissioners Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk as voting members tonight.

4. Conservation Commission**a. Presentation by Friends of the Hoppers**

Michelle Randy, Speaking for Friends of the Hoppers, reviewed a presentation regarding the Hoppers area and a conversation the group had with the mayor a while back when the Schaffrick properties went on the market. It has since sold before he reviewed the information that we sent. She reviewed the maps of Birge Pond and Hoppers land, how the hoppers run thru parts of the Schaffrick land and if that land was to get developed, the, affects if could have on the Hoppers area. She is asking for the city to consider buying the land if it becomes available again in the future to prevent development of the area.

Commissioner Robinson asked if the referendum passed in 1988 to protect the land and prevent the removal of gravel/sand in that area. If the Schaffrick property wants to do any mining, the referendum will prevent this. If would be good to go back and review this.

Michelle Randy, stated her understanding was that it did not apply to private property.

Raymond Rogozinski, Director of Public Works, stated the presentation was good, but stated the conservation commission that also serves as inland/wetland commission not to talk specifically about one parcel that may or not be subject of a future application in wetlands and keep in general to the Hoppers.

Chairman Fisk asked if the group has done any outreach for grants for this property.

Michell Randy stated they just received their 501C status so they have not gone for any grants yet.

5. Inland Wetlands and Watercourses Agency
6. Introductions and Seating of Alternate Commissioners

Seating was already done at Conservation Meeting and there were no changes.

7. Public Participation

Mark Farber, 410 Emmett, is asking if any new results or information has come in regarding Superior Electric. He stated that the conditions are continuing to get worse. He asked if the commission is aware that are additional wells for monitoring drilled.

Nancy Levesque, City Engineer, responded that there are no updates received. DEEP was part of the what needed to be done to satisfy the state.

Paul Krell, 86 Vine Road, is asking about the piping on Brace Ave and the other lot of the Delfino Property.

Chairman Fisk stated that the application for that is on the agenda, and he can speak at the public hearing once its opened.

8. Approval of Minutes

- a. March 30, 2024 – On-Site Meeting
- b. April 1, 2024 Meeting

MOTION: Move to approve the regular meeting minutes of the March 30, 2024, On-Site meeting minutes, as amended.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

b. April 1, 2024 – Regular Meeting

MOTION: Move to approve the regular meeting minutes of the March 30, 2024, On-Site meeting minutes, as amended.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

9. Public Hearings:

- a. Application #2019 – Wetlands boundary change application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.
- b. Application #2020 – Wetlands application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.
- c. Application #23-458F-305 – Floodplain application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.

The Commission received the following items in their electronic packets (from the packing list) for Application #2019:

- a. Application
- b. Assessor's Map with Inland Wetlands Watercourse Layers
- c. Narrative (2 pages)
- d. May 1, 2024 Letter from Sebastian Amenta (4 pages).
- e. Review comments by Ray Rogozinski & Responses – April 22, 2024 & May 2, 2024 (5 pages).
- f. Link to 3rd Party Review Agreement (22 pages)
- g. Link to Response 1 Attachments (61 pages)
- h. Response 2 Attachment (2 pages)
- i. Link to Response 3 Attachment (9 pages)
- j. Response 4 Attachment (2 pages)
- k. Link to Response 5 Attachments (5 pages)
- l. Link to Response 9 Attachments (20 pages)
- m. Attachment 10 - CT DEEP Permit Need Determination (3 pages)
- n. Link to Attachment 11 – Detailed Groundwater and Stream Monitoring Plan (11 pages)
- o. Attachment 12 – Letter confirming hydrologic information for project site remains valid (2 pages)
- p. Attachment 13 – Proposed wetlands boundary line change map (2 pages)
- q. Attachment 14 – Resumes of Engineers and Soil Scientists (11 pages)
- r. Letter dated March 28, 2024, from Cameron Covill, North Central Conservation District, Inc., regarding Review of Wetlands Application, New Britain Water Department (3 Pgs.)
- s. Link to Hydrogeologic Study (3 pages)
- t. Link to Application #2019 Correspondence (38 pages)
- u. Summary of Updates Sheet (2 pages)
- v. Whitesbridge Wellsfields Overall Map (1 page)
- w. Letter from Graham Stevens dated February 21, 2024 (2 pages)

- x. Letter dated May 6, 2022, from ConnDEEP, regarding Natural Diversity Database (NDDB) maps and files (2 pages).
- y. Verified Petition to Intervene Under CGS 22a-19, submitted by Rivers Alliance of Connecticut (8 pages)
- z. Letter dated April 27, 2022, from CDM to the CT State Historic Preservation Office, regarding 106 Review, Replacement of White Bridge Waterworks Facilities Applicant: City of New Britain.
- aa. Photos Submitted by Daniel Sutula dated March 11, 2024 (1 page)
- bb. Attachments: Project Site Map; Additional Information; Project Drawings; Abutting Property Map and Property Owners Map; Site Survey: Wetland Replication Areas (26 pages).

The Commission received the following items in their electronic packets previously for Application #2019:

- a. Assessor's Map with Inland Wetlands Watercourse Layers
- b. Application (Attachments 1 to 5: Project Site Map; Additional Information; Project Drawings; Abutting Property Map and Property Owners Map; Site Survey (Wetland Replication Areas.)
- c. Letter, dated March 27, 2024, from John Correia, Wildlife Field Scientist for DEEP, land trusts, non-profits, and universities
- d. Letter from Rivers Alliance of Connecticut, submitted by Alicia Charamut, Executive Director
- e. Verified Petition to Intervene Under CGS 22a-19, submitted by Rivers Alliance of Connecticut
- f. Soil Scientist Report, dated September 29, 2023 (Attachment 6)
- g. Stormwater Management Report dated December 18, 2023, regarding Supplemental Wetland Delineation Report 2023 (attached)
- h. maps and photographs), from C. Webb & Associates, LLC Environmental Consulting Services
- i. White Bridge Waterworks, Data Form Plot reports dated September 2022
- j. Wetland Survey Photos September 28, 2023, NBWC – Maltby Street – Mix Street Sewer Extension Project (attached Wetland Restoration & Mitigation Plan Sheets; Proposed NBWC – Bristol Facility Plantings Sheets; and City of Bristol GIS Wetland Boundary maps (Electronic Copy Only)
- k. Letter dated May 6, 2022, from ConnDEEP, regarding Natural Diversity Database (NDDB) maps and files
- l. Form dated April 27, 2022, from ConnDECD, regarding White Bridge Waterworks Facilities
- m. Letter dated April 27, 2022, from CDM to the CT State Historic Preservation Office, regarding 106 Review, Replacement of White Bridge Waterworks Facilities Applicant: City of New Britain
- n. Form dated April 27, 2022, from ConnDECD, regarding White Bridge Waterworks Facilities (10 attached maps)
- o. Existing and Proposed Test Wells and Stream Gauges Overall Map, dated December 9, 2022
- p. Plan (Electronic Copy Only)
- q. Map entitled Whites Bridge Wellfields, NBWD, Bristol, CT, Existing and Proposed Test Wells and Stream Gauges, Overall Map
- r. CT DEEP Form, dated April 27, 2022, regarding White Bridge Waterworks Facilities
- s. Letter dated May 6, 2022, from ConnDEEP, regarding NDDB Determination #202205409, Replace existing groundwater wells, Upper & Lower Wellfields, White Bridge Waterworks Facility, off Maltby St., Bristol
- t. Letter dated February 2, 2024, from Carol Noble, P.E., CFM, to Chairman Zachary Fisk, regarding Applications #2019, #2020 and #23-569F-305
- u. Letter dated February 5, 2023 (2024), from Alicia Charamut, Executive Director of River Alliance of CT, regarding Applications #2019, #2020 and #23-569F-305
- v. PowerPoint Presentation, entitled White Bridge Waterworks Facilities, Application #2019, #2020 and #23-458F-305, Inland Wetlands and Watercourses & conservation Commission Public Hearing, dated February 5, 2024

The Commission received the following items in their electronic packets (from the packing list) for Application #2020:

- a. Application (2 pages)
- b. Assessor's Maps with Inland Wetlands Watercourse Layers (4 pages)
- c. Narrative (7 pages)
- d. May 1, 2024 Letter from Sebastian Amenta (4 pages).
- e. Review comments by Ray Rogozinski & Responses – April 22, 2024 & May 2, 2024 (5 pages).
- f. Link to 3rd Party Review Agreement (22 pages)
- g. Link to Response 1 Attachments (61 pages)
- h. Response 2 Attachment (2 pages)
- i. Link to Response 3 Attachment (9 pages)
- j. Response 4 Attachment (2 pages)
- k. Link to Response 5 Attachments (5 pages)
- l. Link to Response 9 Attachments (20 pages)
- m. Attachment 10 - CT DEEP Permit Need Determination (3 pages)
- n. Link to Attachment 11 – Detailed Groundwater and Stream Monitoring Plan (11 pages)
- o. Attachment 12 – Letter confirming hydrologic information for project site remains valid (2 pages)
- p. Attachment 13 – Proposed wetlands boundary line change map (2 pages)
- q. Attachment 14 – Resumes of Engineers and Soil Scientists (11 pages)
- r. Letter dated March 28, 2024, from Cameron Covill, North Central Conservation District, Inc., regarding Review of Wetlands Application, New Britain Water Department (3 Pgs.)
- s. Link to Hydrogeologic Study (3 pages)
- t. Executive Summary (2 pages)
- u. Link to Application #2020 Correspondence (38 pages)
- v. Letter dated February 26, 2024 from Sebastian Amenta (1 page)
- w. Summary of Updates (1 page)
- x. Letter dated February 21, 2024 from Sebastian Amenta (2 pages)
- y. CT DEEP Letter dated May 6, 2022 (2 pages)
- z. State of Connecticut Project Review Form (2 pages)
- aa. Letter from CDM Smith dated April 27, 2022 and attachments (15 pages)
- bb. CT DEEP Letter dated May 6, 2022 (3 pages)
- cc. Verified Petition to Intervene Under CGS 22a-19, submitted by Rivers Alliance of Connecticut (8 pages)
- dd. Link to State HPO Submission April 2022 (19 pages)
- ee. Photos Submitted by Daniel Sutula dated March 11, 2024 (1 page)
- ff. Attachments: Project Site Map; Additional Information; Project Drawings; Abutting Property Map and Property Owners Map; Site Survey: Wetland Replication Areas (26 pages).

The Commission received the following items in their electronic packets **previously** for **Application #2020:**

- a. Assessor's Map with Inland Wetlands Watercourse Layers
- b. Application (attached narrative)
- c. Letter, dated March 27, 2024, from John Correia, Wildlife Field Scientist for DEEP, land trusts, non-profits, and universities
- d. Letter from Rivers Alliance of Connecticut, submitted by Alicia Charamut, Executive Director
- e. Verified Petition to Intervene Under CGS 22a-19, submitted by Rivers Alliance of Connecticut
- f. Inland Wetlands Staff comments, undated
- g. Application (Attachments 1 to 5: Project Site Map; Additional Information; Project Drawings; Abutting Property Map and Property Owners Map; Wetland Replication Areas;

- h. Soil Scientist Report, dated September 29, 2023 (Attachment 6)
- i. report dated December 18, 2023, regarding Wetland Delineation Report 2022 (attached maps and photographs), from C. Webb & Associates, LLC Environmental Consulting Services
- j. White Bridge Waterworks, Data Form Plot reports dated September 2022
- k. Wetland Survey Photos September 28, 2023, NBWC – Maltby Street – Mix Street Sewer Extension Project
(Attached Wetland Restoration & Mitigation Plan Sheets, undated; Proposed NBWC – Bristol Facility Plantings Sheets, undated; and City of Bristol GIS Wetland Boundary maps, undated. (Electronic Copy Only)
- l. Stormwater Management Report
- m. Appendixes, Rainfall Data; Resources and Glossary (definitions)
- n. CDM Smith Geotechnical Laboratory Testing Summary Sheet, review date August 11, 2022
- o. Appendixes C to F
- p. Letter dated May 6, 2022, from ConnDEEP, regarding Natural Diversity Database (NDDDB) maps and files
- q. Form dated April 27, 2022, from ConnDECD, regarding White Bridge Waterworks Facilities
- r. Letter dated April 27, 2022, from CDM to the CT State Historic Preservation Office, regarding 106 Review, Replacement of White Bridge Waterworks Facilities Applicant: City of New Britain
- s. Form dated April 27, 2022, from ConnDECD, regarding White Bridge Waterworks Facilities (10 attached maps)
- t. Existing and Proposed Test Wells and Stream Gauges Overall Map, dated December 9, 2022
- u. Plan (Electronic Copy Only)
- v. Letter dated February 3, 2024, from John Correia to Chairman Zachary Fisk, regarding Apps. #2020 and #23-458F-305 (attachments)
- w. Map entitled Whites Bridge Wellfields, NBWD, Bristol, CT, Existing and Proposed Test Wells and Stream Gauges, Overall Map
- x. CT DEEP Form, dated April 27, 2022, regarding White Bridge Waterworks Facilities
- y. Letter dated May 6, 2022, from ConnDEEP, regarding NDDDB Determination #202205409, Replace existing groundwater wells, Upper & Lower Wellfields, White Bridge Waterworks Facility, off Maltby St., Bristol
- z. Letter dated February 2, 2024, from Carol Noble, P.E., CFM, to Chairman Zachary Fisk, regarding Application #2019, #2020 and #23-569F-305
- aa. Letter dated February 3, 2024, from John Correia to Chairman Zachary Fisk, regarding Apps. #2020 and #23-458F-305 (attachments)
- bb. Letter dated February 5, 2023 (2024), from Alicia Charamut, Executive Director of River Alliance of CT, regarding Applications #2019, #2020 and #23-569F-305
- cc. PowerPoint Presentation, entitled White Bridge Waterworks Facilities, Application #2019, #2020 and #23-458F-305, Inland Wetlands and Watercourses & conservation Commission Public Hearing, dated February 5, 2024

The Commission received the following items in their electronic packets (from the packing list) for Application #23-458F-305:

- a. Application (1 page)
- b. Revised Application (1 page)
- c. Application Page 2 (1 page)
- d. Narrative
- e. Pumping Station Data
- f. Assessor Maps (3 pages)
- g. Letter from Sebastian Amenta dated May 1, 2024 (4 pages)
- h. Review comments by Ray Rogozinski & Responses – April 22, 2024 & May 2, 2024 (5 pages).
- i. Link to 3rd Party Review Agreement (22 pages)
- j. Link to Response 1 Attachments (61 pages)
- k. Response 2 Attachment (2 pages)
- l. Link to Response 3 Attachment (9 pages)

- m. Response 4 Attachment (2 pages)
- n. Link to Response 5 Attachments (5 pages)
- o. Link to Response 9 Attachments (20 pages)
- p. Attachment 10 - CT DEEP Permit Need Determination (3 pages)
- q. Link to Attachment 11 – Detailed Groundwater and Stream Monitoring Plan (11 pages)
- r. Attachment 12 – Letter confirming hydrologic information for project site remains valid (2 pages)
- s. Attachment 13 – Proposed wetlands boundary line change map (2 pages)
- t. Attachment 14 – Resumes of Engineers and Soil Scientists (11 pages)
- u. Letter dated March 28, 2024, from Cameron Covill, North Central Conservation District, Inc., regarding Review of Wetlands Application, New Britain Water Department (3 Pgs.)
- v. Hydrogeologic Study December 2007 (3 pages)
- w. Link to Application #23-458F-305 (39 pages)
- x. Letter from Sebastian Amenta dated February 26, 2024 (1 page)
- y. Summary of Updates (1 page)
- z. Update Letter form Sebastian Amenta dated February 21, 2024 (3 pages)
- aa. CT DEEP Letter dated May 6, 2022 (3 pages)
- bb. Verified Petition to Intervene Under CGS 22a-19, submitted by Rivers Alliance of Connecticut (8 pages)
- cc. Link to State HPO Submission April 2022 (19 pages)
- dd. Photos Submitted by Daniel Sutula dated March 11, 2024 (1 page)
- ee. Attachments: Project Site Map; Additional Information; Flood Map; Link to Floodway Areas, Project Drawings, Abutting Property Map and Property Owners Map; Site Survey: Wetland Replication Areas (38 pages).

The Commission received the following items in their electronic packets previously for Application #23-458F-305:

- a. Assessor's Map with Inland Wetlands Watercourse Layers
- b. Application
- c. Project Site Map
- d. Additional Information Narrative
- e. Flood Map
- f. Floodway & Flood Encroachment Areas and Project Drawings
- g. Letter, dated March 27, 2024, from John Correia, Wildlife Field Scientist for DEEP, land trusts, non-profits, and universities
- h. Letter from Rivers Alliance of Connecticut, submitted by Alicia Charamut, Executive Director
- i. Verified Petition to Intervene Under CGS 22a-19, submitted by Rivers Alliance of Connecticut
- j. Stormwater Report
- k. Updated Cut Fill Calculations dated January 24, 2024
- l. Plan (Electronic Copy Only)
- m. Map entitled Whites Bridge Wellfields, NBWD, Bristol, CT, Existing and Proposed Test Wells and Stream Gauges, Overall Map
- n. CT DEEP Form, dated April 27, 2022, regarding White Bridge Waterworks Facilities
- o. Chart, entitled, Pumping Station Fill, Cut,
- p. Letter dated May 6, 2022, from ConnDEEP, regarding NDDB Determination #202205409, Replace existing groundwater wells, Upper & Lower Wellfields, White Bridge Waterworks Facility, off Maltby St., Bristol
- q. Letter dated February 2, 2024, from Carol Noble, P.E., CFM, to Chairman Zachary Fisk, regarding Application #2019, #2020 and #23-569F-305
- r. Letter dated February 3, 2024, from John Correia to Chairman Zachary Fisk, regarding Apps. #2020 and #23-458F-305 (attachments)

- s. Letter dated February 5, 2023 (2024), from Alicia Charamut, Executive Director of River Alliance of CT, regarding Applications #2019, #2020 and # 23-458F-305
- t. PowerPoint Presentation, entitled White Bridge Waterworks Facilities, Application #2019, #2020 and #23-458F-305, Inland Wetlands and Watercourses & conservation Commission Public Hearing, dated February 5, 2024

MOTION: to continue with the public hearing for app# 2019

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

MOTION: to continue with the public hearing for app# 2020

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

MOTION: to continue with the public hearing for app# 23-458F-305

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

Joseph Hammer, MacDermin, Reynolds & Glissman, introduced the speakers for tonight and explained they would be reviewing the adjustments made to the plans based on staff comments.

Sebastian Amenta, One Hartford Square, reviewed the changes made based on staff and commissioner's comments. They are bringing up the wells to drinking water standards. There will be no increase to the flood elevation and a net increase of wetland area. There was a vernal pool discovered during the investigation and site walk so adjustments were made based on this find. We will provide to DEEP a no rise certificate. A CLOMR/LOMR will be submitted to FEMA per the DPW request. A meeting will be had with Bristol water department to ensure that there will be no issues to the Bristol water supply system.

Vinta Varghese, CDM Smith Project Manager, discussed the environmental and sedimentation controls that will be provided during construction and in compliance with best management practice. There will be silt fencing around the site. The refueling for contractor will a containment system provided by the contractors. The construction sequence has been submitted and the contractor has to provide a construction sequence and detailed schedule before construction begins. A restriction of work during November 1st to March 15th for the wetland will be done. There will be fencing and species monitoring during migration from March 15th to November 1st. The anticipated time of the project will be up to three years and ground water monitoring will be done during the entire construction on the project.

Ian Cole, IANCOLE LLC Soil Scientist, spoke about the Vernal pool's assessment and what the best management practices would be during the construction phase. The adjustment made was to expand the replication area up to 200 feet. There will be exclusionary fencing where the temporary road before the vernal pool migration starts and will be monitored.

Clinton Webb, Environmental Scientist, presented the mitigation plans. He discussed the replication plan for the wetlands, the short term and long-term monitoring that will happen for five years post construction. There will be no long term or permanent damage with this project. Flood storage will be increased. Nothing done on this site will cause the wetlands to disappear on other sites. Flooding impacts to the neighbors should be reduced but will not cure the problem. He stated that should application be approved and recommends the condition that the final replication mitigation plan be submitted before the work starts so the commission can review it.

Chairman Fisk asked if Mr. Webb had a background in wildlife as well.

Clinton Webb stated he does, and that there is protection fencing around all the construction. He stated that before construction starts, they do a turtle survey to see if anything got in.

Raymond Rogozinski, Director of Public Works, asked about the replication and will the wetlands support the addition of other soil being added.

Clinton Webb, stated that if there are not enough existing wetland soils from the excavation then it will need to be amended, but generally the manmade soil is 93% mineral soil and some percent of organic material which could be lots of options.

Raymond Esponda, New Britain Water Department Director, explained that this application increases a second source of water for New Britain and it will increase the amount of wetlands. There were many people here concerned about the flooding, this project will provide over two million gallons of storage once complete. We have been good stewards of the land and this project creates benefits for Bristol and the rest of the region. The funding is available for this to be upgraded and will make it better for everyone.

Alsiha Charmnut, Rivers Alliance, (zoom), asked what withdraw rates were used to confirm the long-term impacts to the wetlands or areas outside of the activity and can those numbers be submitted to the commission. She stated if New Britain Water is a good steward, they should be monitoring upstream and downstream of Coppermine brook to ensure that any withdrawals are not impacting the brook going forward.

Sebastian Amenta, responded that in the level A mapping study required by the state, you are looking at maximum withdrawals with 180 days of no rain. Under that study you are looking at drought situation under and is not representative of annual usage. Secondly the USGS has provided statistical analysis of the streamflow of the Coppermine and except for one month out of the year there is a significant amount of streamflow. On a year-to-year basis, there is sufficient amount of water for pumping.

Clinton Webb, Environmental Scientist, stated there are natural cycles to every stream system. There was water on the property during the drought. The study conducted with the City and DEEP found no evidence of any impact previously on the site. He stated he agrees with the speaker's idea of evaluation upstream and downstream and that would be a very suitable project in convert with the City of Bristol and DEEP. There is no evidence of any impact of the wetlands on this site previously which is why we made the bold statement.

Chairman Zachary Fisk, asked if there would be monitoring for stream flow reduction.

Sebastian Amenta, CEI, stated there would be monitoring all aspects. The primary concern would be the Mix Street wells and their streamflow. Adjustments will be made as needed in the final plans.

Adrien Morin, 103 Collins Road, stated he has seen lots of rain events of the past 40 years of living here, there is water where there has never been water before. He presented a video of his property and the water issues that have occurred. He stated there are trees falling everywhere on the New Britain property and the little pond is silted in 100%. I have a lot of damage here and I don't know what to do about, but I am hoping that you can make some common-sense decisions before letting this go thru.

Sebastian Amenta, responded that the amount of fill we are putting in is 6543 kilograms, but we are taking out 16,500 cubic yards and are gaining 2.1 million gallons of storage which should help overall.

John Correa, 919 Southamptton Mass, is asking for clarification on the previous studies claim they cannot support their diversion withdrawal in times of drought. In previous hearing, it was said that this facility will be used as an emergency water source, how is New Britain going to sustain withdrawal in emergencies.

Raymond Esponda, New Britain Water Department Director, stated that emergencies can be different things from pipes breaking, plant failure and we need an alternative source for back up. Drought is an extreme condition.

Michelle Mckenney, 87 Collins Road, stated she is in a unique condition, she gets runoff from the watershed and there is also a storm drain at their driveway so those two merges together and are the lowest point. There is no more wildlife due to all the water and poor conditions of the land. I purchased the house in 2004 as my starter home and in 2009 we became a flood zone and this was after the city changed the topography of the Coppermine. The tree that fell on my shed was the third tree that has fallen on my property. I have lost lilac tress and a beautiful weeping willow tree that fell and was put in to soak up water and it couldn't sustain the water. We have filed claims against the city and they said it was weather related. She stated she bought the house as a starter home and now due to the increased cost of the flood insurance and flooding repairs she cannot sell. She stated that whatever decision is made, just know you are going to have an impact not only on the environment but the people and we matter just as much.

Raymond Esponda, New Britain Water Department Director, responded that the extra storage on the land should help with some water issues, but it will not fix the problem. Connecticut has a state water plan and the access road will be grass which should help absorb some of the water.

Carol Noble, Bristol Resident, stated that most of her questions she had have been answered. Regarding the Vernal pool, when and where did it pop up and did the commission review it? Is there a stabilization plan? She asked for a tabulation on what the impacts are and stated that the Army Corp definition cap is different than the city requirements. She asked is studies were done more toward the aquafer to make sure it never dries up. The replanting versus natural vegetation needs more details or alternate plans. How is the surface water impacted?

Joseph Hammer, responded that the upper and lower well fields have registered diversions with CT DEEP which allow withdrawals of water up to the registered amounts. The city regulations recognize the diversion policy act administered with DEEP which includes a procedure for permits and diversion registration program. If you have a diversion registration, a permit is not required to continue to carry out the activities allowed by the registrations. A letter was submitted from DEEP that reaffirms that the existing registrations are in affect and no permit is needed for this project.

Clinton Webb responded, the proposals before you are for a small area. There is not a lot of diversity between the forest and the flood plain. I have been very successful with wetland replication and adding diversity to the existing system. Vernal pools are perched wetlands and do not function on groundwater. This vernal pool on the site is 6 feet above the highest ground water measurement on the site.

Robert Longo, Bristol Water Department Superintendent, stated that New Britain has been good stewards of the land. Being a good steward is a requirement for us. He asked about the pesticide applications and is DPH monitoring including Mix Street. He stated that Mr. Amenta did state that there were conditions of the approval by DPH. One of the conditions was to monitor for Bristol Waters and I was unaware of that. He stated he is concerned about the 72 hours pump test with only three wells not nine wells. He would like to have the commissioner request to see the condition of approval from DPH. What exactly is the long-term monitoring plans are not just the ground water plans that were submitted. He agrees that there are lot of types of emergencies, however, maybe a second plant instead of this project. This will possibly have impacts for drinking water for the city of Bristol. We take 20% of the available water out of this on a daily basis. Mr. Esponda stated there will be 2 million gallons which is not a lot. This is the size of our water tank at the treatment plant, it is not a lot of water. He thanked everyone for their time in making this important decision.

Clinton Webb, stated that the chemical treatments is from the Army Corp of Engineers and it is an Aquatic round up that is applied. He expressed that having a third-party review by the Army Corp. is the best review you could have.

Commissioner Massaro asked how will this be phased chronologically.

Clinton Webb, stated it depends various things. This will also depend on the sequence of the start of the project.

Sebastian Amenta, stated this will be early on. The mitigation and compensatory storage early and can be adjusted accordingly. We can update the schedule with the conditions. We know the health department is concerned about the Bristol wells, they did not define specifics, but we are willing to work together to see there is no impact and keep them in compliance with their ground water regulations.

Alicia Charmnut, Rivers Alliance, stated to clarify the DEEP registered diversions are accommodations for users who are already using water. The utilities to provide the amount of water to be used. There was never an environmental review on any of these registered diversions to see if the amount of water registered is even available. She expressed that the commission can ensure that there are no negative impacts to the waterways by conditioning a permit to ensure that the withdrawals do not exceed the amount of water that can be provided thru the aquifer and the amount of water the aquifer can provide for Coppermine brook.

Mary Rydingsward, 176 Marcia Road, spoke for the Pequabak Watershed Association. She is concerned about some of the bold statements that no adverse impact to regulated wetlands would result from these projects. Being replicated 3-1 and replanting 3-1 is not the same, it will take 40 years for these to grow. She agrees with Carol Noble's statement regarding those best intentions are put forth but not always followed. She stated that how we hold them accountable is by putting it on paper. On Application 2020 the declaration about the increase to the withdrawals has not been changed, this is still an error.

Sebastian Amenta, engineer for the project, clarified the withdrawal are within the registered amounts.

Joseph Hammer, MacDermin, Reynolds & Glissman made closing remarks, stating that they understand the serious concerns and questions brought up, it is important to put into context of the application before you. This is using the registered diversions already existing. Withdrawals could continue now without any benefits. He reviewed sections of the wetland regulations and these applications meet all three of the standards.

Mary Rydingsward, stated she is confused by the wetland regulations, stating that her understanding is that any adverse impacts from construction or ongoing operations of that construction is part of the regulatory review of this commissioner which includes operations from construction on the wetlands.

Joseph Hammer, MacDermin, Reynolds & Glissman stated that this is a 100-year-old facility that has been in operation. The construction activities are what they are in terms of will they have impacts or won't they, but the future operations are only withdrawals of water as allowed by the State of CT under the water diversion policy act and diversion registration recognized in section five of your regulations. We are in here trying to make this facility better in terms of a potable supply, for example, without the need for chemical or other forms of treatment which doesn't create an opportunity for a reexamination whether a water company should have the ability to draw water up to the limit if their diversion permit. The State Department of Health thru the series of examination that it is doing, is giving consideration to avoiding impact to Bristol supply.

MOTION: to close the public hearing on application # 2019

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The public hearing is closed.

MOTION: to close the public hearing on application # 2020

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The public hearing is closed.

MOTION: to close the public hearing on application # 23-458F-305

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The public hearing is closed.

MOTION: to make a determination at the June 3, 2024 monthly meeting, so the commission can review the information at a special meeting to be scheduled at a later date on application # 2019

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

MOTION: to make a determination at the June 3, 2024 monthly meeting, so the commission can review the information at a special meeting to be scheduled at a later date on application # 2020.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

MOTION: to make a determination at the June 3, 2024 monthly meeting, so the commission can review the information at a special meeting scheduled for a later date on application # 23-458F-305.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The Commission took a short break at 9:30

The Commission returned at 9:35

- d. Application #2023 – Wetlands application to revise outfall piping and stabilize outfall area at Vine Road and Brace Avenue within an existing easement; Assessor's Map 46, Lot 81-3; City of Bristol, Public Works Department, applicant.

The Commission received the following items in their electronic packets:

- a. Application
- b. Maps (4 pages)
- c. Plan Set (9 pages)

MOTION: Move to open the public hearing for #Application 2023.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The public hearing is open.

William Stango, City of Bristol Engineer, gave a review of the project. The project is to replace the storm drainage pipe to a bigger pipe, stabilize the area and this should help with the flooding in the area. There is minimal impact to the wetlands. The preliminary plans were done by a consultant and the larger pipes will be a benefit.

Jeff Poitras, 68 Brace Avenue, stated he has lived there 30 years and the pipes are not big enough for the amount of water. He stated he has videos on his phone of the water. It pours into his yard over the retaining wall. It floods his breezeway and garage.

MOTION: Move to close the public hearing for #Application 2023.

By: Robinson

Seconded: Carros

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The public hearing is closed.

MOTION: Move to approve Application #2023 – Wetlands application to revise outfall piping and stabilize outfall area at Vine Road and Brace Avenue within an existing easement; Assessor's Map 46, Lot 81-3; City of Bristol, Public Works Department, applicant, in accordance with the plot plan and information submitted with standard stipulations.

By: Robinson

Seconded: Carros

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application is approved.

10. Receipt of New Applications:

- a. Application #2024 – Wetlands application for a single-family residential home to replace previous home at Lot 4A, Burlington Avenue; Assessor's Map 58, Lot 4A; William Delfino, applicant.

The Commission received the following items in their electronic packets:

- a. Application
- b. Property Owner List
- c. Maps (3 pages)
- d. Site Plan (1 pages)

MOTION: Move to receive Application #2024.

By: Robinson

Seconded: Carros

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application is received.

Attorney James Ziogas, 104 Bellevue Ave., representing the applicant, explained the applicant is looking to build a home on the property. There was a previous home there that was taken down and they are rebuilding a house on a different area of the property. The amount of impervious surface will be increased and the driveway will be away from the wetland area. He feels this is non-significant as it's just replacing what was already there.

Nancy Levesque, City Engineer, state she agrees that this is a non-significant activity due to the previously disturbed area.

MOTION: Move to declare Application #2024 a non-significant activity.

By: Robinson

Seconded: Carros

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application was declared a non-significant activity.

MOTION: Move to approve Application #2024 – Wetlands application for a single-family residential home to replace previous home at Lot 4A, Burlington Avenue; Assessor's Map 58, Lot 4A; William Delfino, applicant, in accordance with the plot plan and information submitted with standard stipulations.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application is approved.

- b. Application #2025 – Wetlands application as part of a cease and correct order to level ground and slope away from home, clean brush, and new landscaping or fence at 465 Emmett Street; Assessor's Map 3, Lot 9-1; Peter Plewa, applicant.

The Commission received the following items in their electronic packets:

- a. Application
- b. Maps (3 pages)

Nancy Levesque, City Engineer, state the application is received and the fee was paid. She was not sure if the plan is completed. There are photos under the Inland/Wetland report for viewing. There was a cease and correct issued for the property. There was an encroachment onto conservation land of about ten feet.

Peter Plewa, 465 Emmett St., stated that he was just trying to clean up the property which he purchased. He was not aware that there were wetlands there or that he wasn't supposed to remove trees. He stated he plans on landscaping the yard and replanting tress.

Chairman Fisk, asked if the application is in response to the cease and correct. Can we receive this application?

Nancy Levesque, City Engineer, stated we don't have a copy of the plan which would help.

Chairman Fisk stated that they can revisit next month and schedule a site visit. He asked that the property lines be staked for the site walk.

Motion: to schedule a site walk on May 22, 2025 for application # 2025 at 5:30 p.m.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

- c. Application #2026 – Wetlands application for a new addition at 54 Litchfield Lane; Assessor's Map 52, Lot 16; Brendan Till, applicant.

The Commission received the following items in their electronic packets:

- a. Maps (3 pages)
- b. GIS Wetland Map (1 page)

MOTION: Move to receive #Application 2026.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application is received.

Brendan Till, 54 Litchfield Lane, explained that he is going to knock down the back porch that is on pillars and extend the basement 22 feet out for a new basement, and above that will be the kitchen and living room area. The area affected on the property is all lawn.

Nancy Levesque, City Engineer, stated that this is a non-significant event as it is over the 10-yard requirement.

MOTION: Move to declare Application #2026 a non-significant activity.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application was declared a non-significant activity.

MOTION: Move to approve Application #2026 – Wetlands application for a new addition at 54 Litchfield Lane; Assessor's Map 52, Lot 16; Brendan Till, applicant, in accordance with the plot plan and information submitted with standard stipulations.

By: Robinson

Seconded: Carros

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application is approved.

- d. Application #2027 – Wetlands application for remediation of drainage swale and contaminants including excavation of channel and restoration of riprap along channel bed and banks at 300 Broad Street; Assessor's Map 43, Lot 100; 300 Broad Street Property LLC, applicant.

The Commission received the following items in their electronic packets:

- a. Cover Sheet & Table of Contents for Application Submission (3 pages)
- b. Application (2 pages)
- c. Maps (3 pages)
- d. Statewide IWWC Activity reporting Form (1 page)
- e. Project Narrative (8 pages)
- f. Site Mapping (4 pages)
- g. Appendixes A-D (31 pages)

MOTION: Move to receive #Application 2027.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application is received.

Emily Denyer, SLR Consulting, reviewed a presentation about the remediation of the old Theis Precision Steele building. The purpose of the project is to improve the sediment and improve the water to comply with DEEP regulations. The sediment removed will be contained and covered to prevent it from blowing away or leaking into another area. The sediment will be removed once the remediation is complete. The South East portion of the site drainage channel will be cleaned out and soil testing will be done to ensure compliance.

Marlee Antill, SLR Consulting, reviewed the phasing of the project. There will be sandbags installed to avoid back wash from the Pequabck River during excavation. The area will be stabilized for the final stage of the project. The sediment will be stockpiled and analyzed. There will be post samples done as well to ensure the bottom is clean.

MOTION: Move to declare Application #2027 a significant activity and schedule an onsite inspection on May 22, 2024 at 5:45 p.m.

By: Massaro

Seconded: Robinson

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application was declared a significant activity and a site walk was scheduled

- e. Application #2028 – Wetlands application for a new 4 bay garage at 41 Stafford Avenue; Assessor's Map 44, Lot 71; Harold Etherington, applicant.

The Commission received the following items in their electronic packets:

- a. Application (1 page)
- b. Map with Inland Wetlands Watercourse Layers
- c. Site Plan (1 page)

MOTION: Move to receive #Application 2028.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application is received.

Tom Tobacco, Tobacco Construction Company, explained they are building a four-bay garage on the lot and it is 90 feet from wetlands area and above about 12-15 feet higher elevation.

Nancy Levesque, City Engineer, stated that there is a retaining wall already there and it is an elevated area and everything has been developed on the property and should be a non-significant activity

MOTION: Move to declare Application #2028 a non-significant activity.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application was declared a non-significant activity.

MOTION: Move to approve Application #2028 – Wetlands application for a new 4 bay garage at 41 Stafford Avenue; Assessor's Map 44, Lot 71; Harold Etherington, applicant, in accordance with the plot plan and information submitted with standard stipulations.

By: Robinson

Seconded: Carros

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application is approved.

- f. Application #2029 – Wetlands application for the replacement of the Divinity Street culvert over an unnamed Brook within Divinity Street Right-of-Way within an existing easement and City of Bristol Right-of-Way; City of Bristol, Department of Public Works, applicant.

The Commission received the following items in their electronic packets:

- a. Application
- b. Maps (3 pages)
- c. Cover Page: Divinity Street Culvert Replacement City of Bristol, Connecticut Additional Information For: Conservation Commission Inland Wetlands Agency Date: April 2024 for Property Address: Divinity St over Unnamed Brook, undated (3 pages)
- d. Executive Summary, State Project No. L-017-0004, Replacement of Divinity Street Culvert over Unnamed Brook Bristol, Connecticut, undated (3 pages)
- e. U.S. Army Corps of Engineers (USACE) Application for Department of The Army Permit, dated March 8, 2024 (7 pages)
- f. Plan Maps (6 pages) entitled "L017-0004, Environmental Permit Plans, dated March 7, 2024; PMT-02, General Roadway Plans, undated; PMT-03, General Watercourse Impact Plan, undated; PMT-04, Elevation and Section Plan, undated; PMT-05, Staging and Water-handling Plan, undated; PMT-06, Permit Planting Plan, undated;
- g. Link to: Hydrology & Hydraulics Analysis Report March 2024

MOTION: Move to receive #Application 2029.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application is received.

Nancy Levesque, P.E., City Engineer, 111 North Main St., City of Bristol, representing the applicant, explained that this will be a significant activity and needs a site walk scheduled.

MOTION: Move to declare Application #2029 a significant activity and set a public hearing for the June 3, 2024 meeting and schedule an onsite inspection on May 22, 2024 at 6:15 p.m.

By: Rooks

Seconded: Massaro

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application was declared a significant activity.

- g. Application #2030 – Wetlands application to restore, stabilize, realign, and maintain the existing channel and bank within an existing easement at 108 Marlene Street; assessor's Map 60, Lot 24; City of Bristol, Department of Public Works, applicant.

The Commission received the following items in their electronic packets:

- a. Application
- b. Maps (3 pages)
- c. Plan Set (4 pages)

MOTION: Move to receive #Application 2030.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application is received.

William Stango, City Engineer Bristol, presented the application to restore and maintain the existing channel that is out of alignment. It is eroding and impacting the properties around it. A staging plan has been submitted.

MOTION: Move to declare Application #2030 a non-significant activity.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application was declared a non-significant activity.

MOTION: Move to approve Application #2030 – Wetlands application to restore, stabilize, realign, and maintain the existing channel and bank within an existing easement at 108 Marlene Street; assessor's Map 60, Lot 24; City of Bristol, Department of Public Works, applicant., in accordance with the plot plan and information submitted with standard stipulations.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The application is approved.

11. New Business

12. Old Business

13. Staff Approved Applications

App.# Approved Administrative	Street No.	Address	Purpose of App.
102103	80	Redwood Drive	Shed
102106	55	Lacava Road	Demolish & remove structure after fire
102107	77	Winding Brook Road	Split rail fence
102109	58	Marlene Street	Replace existing deck
102110	352	Witches Rock Road	Covered porch
102111	69	Beechwood Lane	Vinyl fence
102112	58	Claire Street	Shed
102113	42	Marlene Street	Fence

MOTION Move to file the report.

By: Robinson

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The report is filed.

14. Staff Reports

a. IWWC Report – April 2024

The Commission received the following item in their electronic packets:

aa. Inland Wetlands Enforcement Officers report dated April 29, 2024 (11 pages)

Nancy Levesque City Engineer stated that the Wetland Enforcement officer inspected the property due to complaints received and sent a letter to property owner as it seems he went over the 10 cubic yard limit that the permit allowed.

Doug Towne, 42 Paul Street, spoke regarding the cease and correct letter he received for work he did in his yard two years ago. Fill was brought in along with stone dust and leveled ground for a bocce court. He is asking what he can do to correct the issues. We haven't touched it in two years. Two trailers of material were taken out and gravel was put in.

Nancy Levesque, City Engineer, stated reviewed GIS mapping and the topography of the area to show how the wetlands flow thru the area.

Commissioner Robinson asked if the area was leveled, what kind of impact will it have on the neighbors.

Nancy Levesque, stated that high ground water we are having, it is very difficult to do anything and say that it is going to solve problems. We have reports of houses and basements that have flooded that have never flooded before.

Donna Mansel, 48 Paul Street, stated that the backyard of her property has more water than ever. Her mom cannot go outside as it a fall risk for her to get to her pond because it's so bad. There is more standing water and we need to resolve this issue.

Dan Strahowski, 23 Mark Street, stated that when he has noticed more water in his property since the work was done at 42 Paul Street. He stated he has always had water in his yard, but since the work was done his yard has flooded. He has eight arborvitaes back there and now he has a river back there which he never had. The water takes out all the mulch from his yard. He stated he added pumps near his hatchway to try to stop the water from getting in and its just since Doug did this work in his yard. Since that yard has been raised, it seems to be diverting the water into my yard.

Doug Towne, stated that the water must be underground water because nothing is going over the bocce courts.

Commission Massaro, stated the pit is raised above the ambient grade. There is now an 8- inch raised structure and is displacing the water.

Randy Lindstrom, 261 Mark Street, stated that all the materials and digging that has been done has caused a significantly more water and flooding. More than ever since he has been living there. He has had ruined carpet, walls, finished basement.

Commissioner Rooks suggested that the owner obtain an engineer to research and make a decision on the right course of correction to take.

MOTION: to leave 42 Paul Street as open and wait for an engineering consult

By: Robinson

Seconded: Massaro

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

Nancy Levesque, City Engineer, stated that at 109 Moody Street work is starting again and is in the building department. It may come back on the agenda.

MOTION Move to file the report.

By: Robinson

Seconded: Massaro

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The report is filed.

MOTION: to add election of officers to the agenda

By: Robinson

Seconded: Carros

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

MOTION: to nominate Zachary Fisk for Chairman

By: Massaro

Seconded: Robinson

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

MOTION: to nominate Michael Robinson for Vice Chairman

By: Massaro

Seconded: Carros

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

MOTION: to nominate David Rooks for Secretary

By: Massaro

Seconded: Robinson

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

15. Communications

a. Permit Application for the Use of Pesticides in State Waters – Sunnydale Basin

The Commission received the following item in their electronic packets:

- aa. Letter undated, from ConnDEEP, regarding Permit Applications for the Use of Pesticides in State Waters (16 pages)

MOTION Move to file the report.

By: Robinson

Seconded: Massaro

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The report is filed.

b. DEEP Permit – Cedar Lake

The Commission received the following item in their electronic packets:

1. Letter April 8, 2024, from ConnDEEP, regarding permit(s.)

MOTION Move to file the report.

By: Robison

Seconded: Massaro

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

The report is filed.

MOTION: Move to adjourn at 11:45 P.M.

By: Robinson

Seconded: Massarro

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

MOTION: to reopen the meeting

By: Massaro

Seconded: Rooks

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

MOTION: to schedule a special meeting for deliberations on the New Britain Water Department Applications # 2019, #2020 and # 23-458F-305 on May 22, 2024 in Council Chambers at 7:00 p.m.

By: Rooks

Seconded: Duquette

For: Robinson, Carros, Massaro, Duquette, Richie, Rooks and Fisk.

Against: None.

Abstained: None.

Zachary Fisk, Chairman
Inland Wetlands Commission

David Rooks, Secretary

**BRISTOL CONSERVATION/INLAND WETLANDS COMMISSION
MINUTES
SPECIAL MEETING OF WEDNESDAY MAY 22, 2024**

CALL TO ORDER:

By: Chairman Fisk

Time: 7:00 P.M.

Place: City Hall
Council chambers
111 North Main Street
First Floor

ROLL CALL:

MEMBERS	NAME:	PRESENT	ABSENT
REGULAR MEMBERS	Zachary Fisk (Chairman)	X	
	Michael Robinson (Vice Chairman)	X	
	David Rooks (Secretary)	X	
	James Carros	X	
	Daniel Massaro, Jr.	X	
	James Ritchie	X	
	Faye Duquette		
ALTERNATE MEMBERS	Greg Klimek	X	
STAFF	Nancy Levesque, P.E., City Engineer	X	

Chairman Fisk called the meeting to order at 7:00 P.M.

1. Pledge of Allegiance

Chairman Fisk reminded the Commission the next Regular Meeting of the Inland Wetland Commission is Monday, June 3, 2024.

2. Call to Order**3. Old Business**

- a. Application #2019 – Wetlands boundary change application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant (Public Hearing Closed at May 6, 2024 Regular Meeting).

The Commission received the following items in their electronic packets for Application #2019:

- a. Application
- b. Assessor's Map with Inland Wetlands Watercourse Layers
- c. Narrative (2 pages)
- d. May 1, 2024 Letter from Sebastian Amenta (4 pages).
- e. Review comments by Ray Rogozinski & Responses – April 22, 2024 & May 2, 2024 (5 pages).
- f. May 6, 2024 letter from Carol Noble (8 pages).
- g. Link to 3rd Party Review Agreement (22 pages)
- h. Link to Response 1 Attachments (61 pages)
- i. Response 2 Attachment (2 pages)
- j. Link to Response 3 Attachment (9 pages)

- k. Response 4 Attachment (2 pages)
- l. Link to Response 5 Attachments (5 pages)
- m. Link to Response 9 Attachments (20 pages)
- n. Attachment 10 - CT DEEP Permit Need Determination (3 pages)
- o. Link to Attachment 11 – Detailed Groundwater and Stream Monitoring Plan (11 pages)
- p. Attachment 12 – Letter confirming hydrologic information for project site remains valid (2 pages)
- q. Attachment 13 – Proposed wetlands boundary line change map (2 pages)
- r. Attachment 14 – Resumes of Engineers and Soil Scientists (11 pages)
- s. Letter dated March 28, 2024, from Cameron Covill, North Central Conservation District, Inc., regarding Review of Wetlands Application, New Britain Water Department (3 Pgs.)
- t. Link to Hydrogeologic Study (3 pages)
- u. Link to Application #2019 Correspondence (38 pages)
- v. Summary of Updates Sheet (2 pages)
- w. Whitesbridge Wellsfields Overall Map (1 page)
- x. Letter from Graham Stevens dated February 21, 2024 (2 pages)
- y. Letter dated May 6, 2022, from ConnDEEP, regarding Natural Diversity Database (NDDDB) maps and files (2 pages).
- z. Verified Petition to Intervene Under CGS 22a-19, submitted by Rivers Alliance of Connecticut (8 pages)
- aa. Letter dated April 27, 2022, from CDM to the CT State Historic Preservation Office, regarding 106 Review, Replacement of White Bridge Waterworks Facilities Applicant: City of New Britain.
- bb. Photos Submitted by Daniel Sutula dated March 11, 2024 (1 page)
- cc. Attachments: Project Site Map; Additional Information; Project Drawings; Abutting Property Map and Property Owners Map; Site Survey; Wetland Replication Areas (26 pages).

The Commission received the following items in their electronic packets for Application #2020:

- b. Application #2020 – Wetlands application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor’s Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.
- a. Application (2 pages)
- b. Assessor’s Maps with Inland Wetlands Watercourse Layers (4 pages)
- c. Narrative (7 pages)
- d. May 1, 2024 Letter from Sebastian Amenta (4 pages).
- e. May 6, 2024 letter from Carol Noble (8 pages).
- f. Review comments by Ray Rogozinski & Responses – April 22, 2024 & May 2, 2024 (5 pages).
- g. Link to 3rd Party Review Agreement (22 pages)
- h. Link to Response 1 Attachments (61 pages)
- i. Response 2 Attachment (2 pages)
- j. Link to Response 3 Attachment (9 pages)
- k. Response 4 Attachment (2 pages)
- l. Link to Response 5 Attachments (5 pages)
- m. Link to Response 9 Attachments (20 pages)
- n. Attachment 10 - CT DEEP Permit Need Determination (3 pages)
- o. Link to Attachment 11 – Detailed Groundwater and Stream Monitoring Plan (11 pages)
- p. Attachment 12 – Letter confirming hydrologic information for project site remains valid (2 pages)
- q. Attachment 13 – Proposed wetlands boundary line change map (2 pages)
- r. Attachment 14 – Resumes of Engineers and Soil Scientists (11 pages)
- s. Letter dated March 28, 2024, from Cameron Covill, North Central Conservation District, Inc., regarding Review of Wetlands Application, New Britain Water Department (3 Pgs.)

- t. Link to Hydrogeologic Study (3 pages)
- u. Executive Summary (2 pages)
- v. Link to Application #2020 Correspondence (38 pages)
- w. Letter dated February 26, 2024 from Sebastian Amenta (1 page)
- x. Summary of Updates (1 page)
- y. Letter dated February 21, 2024 from Sebastian Amenta (2 pages)
- z. CT DEEP Letter dated May 6, 2022 (2 pages)
- aa. State of Connecticut Project Review Form (2 pages)
- bb. Letter from CDM Smith dated April 27, 2022 and attachments (15 pages)
- cc. CT DEEP Letter dated May 6, 2022 (3 pages)
- dd. Verified Petition to Intervene Under CGS 22a-19, submitted by Rivers Alliance of Connecticut (8 pages)
- ee. Link to State HPO Submission April 2022 (19 pages)
- ff. Photos Submitted by Daniel Sutula dated March 11, 2024 (1 page)
- gg. Attachments: Project Site Map; Additional Information; Project Drawings; Abutting Property Map and Property Owners Map; Site Survey: Wetland Replication Areas (26 pages).

The Commission received the following items in their electronic packets for Application #23-458F-305:

- c. Application #23-458F-305 – Floodplain application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.
 - a. Application (1 page)
 - b. Revised Application (1 page)
 - c. Application Page 2 (1 page)
 - d. Narrative
 - e. Pumping Station Data
 - f. Assessor Maps (3 pages)
 - g. Letter from Sebastian Amenta dated May 1, 2024 (4 pages)
 - h. May 6, 2024 letter from Carol Noble (8 pages).
 - i. Review comments by Ray Rogozinski & Responses – April 22, 2024 & May 2, 2024 (5 pages).
 - j. Link to 3rd Party Review Agreement (22 pages)
 - k. Link to Response 1 Attachments (61 pages)
 - l. Response 2 Attachment (2 pages)
 - m. Link to Response 3 Attachment (9 pages)
 - n. Response 4 Attachment (2 pages)
 - o. Link to Response 5 Attachments (5 pages)
 - p. Link to Response 9 Attachments (20 pages)
 - q. Attachment 10 - CT DEEP Permit Need Determination (3 pages)
 - r. Link to Attachment 11 – Detailed Groundwater and Stream Monitoring Plan (11 pages)
 - s. Attachment 12 – Letter confirming hydrologic information for project site remains valid (2 pages)
 - t. Attachment 13 – Proposed wetlands boundary line change map (2 pages)
 - u. Attachment 14 – Resumes of Engineers and Soil Scientists (11 pages)
 - v. Letter dated March 28, 2024, from Cameron Covill, North Central Conservation District, Inc., regarding Review of Wetlands Application, New Britain Water Department (3 Pgs.)
 - w. Hydrogeologic Study December 2007 (3 pages)
 - x. Link to Application #23-458F-305 (39 pages)
 - y. Letter from Sebastian Amenta dated February 26, 2024 (1 page)
 - z. Summary of Updates (1 page)
 - aa. Update Letter form Sebastian Amenta dated February 21, 2024 (3 pages)
 - bb. CT DEEP Letter dated May 6, 2022 (3 pages)
 - cc. Verified Petition to Intervene Under CGS 22a-19, submitted by Rivers Alliance of Connecticut (8 pages)

- dd. Link to State HPO Submission April 2022 (19 pages)
- ee. Photos Submitted by Daniel Sutula dated March 11, 2024 (1 page)
- ff. Attachments: Project Site Map; Additional Information; Flood Map; Link to Floodway Areas, Project Drawings, Abutting Property Map and Property Owners Map; Site Survey: Wetland Replication Areas (38 pages)

Boundary Change in Application # 2019

Nancy Levesque, stated that the solid blank line on the map for the proposed boundary is what was delineated by the soil scientist Ian Cole from CEI.

Commissioner Robinson asked if there is an existing wetlands map from the city.

Nancy Levesque, City Engineer, said the current city wetland mapping is on the map. The city's wetland map goes thru the fingers and roadway on the north wellfield. The line goes around those fingers and due to being filled in years back they are no longer considered wetlands. The city mapping had them as wetlands, but the soil scientist delineated that to remove from our wetlands mapping. The wetlands limits to be delineated and the wetlands areas to be filled, and a stipulation can be that the applicant be requested to come back once work is complete for another boundary change to reflect the modifications that they are making in the field should the application be approved.

Chairman Fisk asked if any questions of comments, as what we are looking for is a consensus of how to act on this application right now.

Nancy Levesque stated that the other application needs to be approved in order to make the stipulation, before the boundary change can be made.

Chairman Fisk stated that in his opinion this application can be approved, and that the stipulation would fall on the next application to come back for a boundary change.

Attorney Olson mentioned that there should be a motion to direct staff, to draft a motion of approval for the next meeting, nothing is being approved tonight.

VOTE: to draft a motion for approval of the application #2019 of at next meeting.

For: Fisk, Robinson, Rooks, Carros, Massaro, Ritchie, Duquette

Against: None

Vote passed.

Chairman Fisk stated this is the same goal to as discussed on the previous application.

Nancy Levesque, City Engineer, reviewed the plan for the wells. The applicant's plan is to abandon the wells and construct new wells, which will need to be two feet above the flood plain. Some of the areas around the wells need to be built up with a radius of fifty feet, which will cause some disturbance. The plan submission indicated prudent and feasible alternatives on site, since the wells are already established and they are reusing the same areas, relocating them on another area of the site would cause more damage to the wetlands than their current locations.

Chairman Fisk states that the wells are generally in the same location, he doesn't feel this is significant.

Commissioner Massaro asked if the old wells were being removed.

Nancy Levesque, City Engineer, responded that they will be abandoned in accordance with the Department of Public Health regulations. The wells would be capped and are located in the lower and upper fields. The new wells are outside of the wetland area.

Nancy Levesque, City Engineer, stated the next item to discuss would be demolition and construction on the structures on the property. The pump house and the cistern in the lower well field, as well as the upper well field. The wall along the river will be left in place.

Commissioner Robinson asked for clarification on the footing and wall of the upper pump house as this is an integral part of the wall.

Nancy Levesque, City Engineer, stated that typically they are left in place and filled within the foundation to prevent it from becoming a safety hazard.

Attorney Olson, stated that the question to ask is, whether the demolition activities present a significant adverse environmental impact on the wetlands.

A discussion was had about adding a stipulation about removal of debris.

Nancy Levesque, City Engineer, stated that there could be a provision stating to shield the river from any demolition activities.

Nancy Levesque, City Engineer, reviewed the construction of the new pumphouse which is located within the upland review area and outside city delineated wetlands. The proposed driveway has an amount of fill associated with it as well. The pumping station will be above the base flood elevation, as well as the driveway so they have access during a 100-year storm. Reducing the overall impervious on site with the new pumpstation going from three buildings to one building.

Attorney Olson, stated the question again, is there a significant environment impact on the wetlands? He also stated that it would be appropriate to break in to two sections. The reason is if you find it does not, then you approve. If it does then you have to question whether there are any feasible alternatives. The pump station being section one and the filling for compensatory wetlands as its own.

Driveway:

Nancy Levesque, reviewed the PowerPoint for the flagging of the wetland's areas for the adapted boundary. This would be working off the boundary change line that we would be looking at for approval. Since it is a utility, it has to be raised at least two feet above the base flood elevation and accessible for a 100-year storm.

Chairman Fisk asked if there were any issues with the driveway portion.

Commissioner Massaro stated obviously there is, but there is not a reasonably prudent alternative for it.

Chairman Fisk also stated that there would be more alternatives, but that it would be more detrimental to other wetlands and the driveway is already in a wetland area, and it would be less detrimental than moving it anywhere else on the site. Considering that and that there will be mitigated wetlands, are we all in agreement that this is a prudent method of constructing the driveway on this site

The commission agreed with Chairman Fisk regarding the driveway having no other prudent alternative.

Gravel and Sediment Removal

Nancy Levesque, began discussing the gravel pile. It is to the south of the supply pond and a portion of it was previously taken out of the supply pond. There were piles left during different projects and the plan is to remove and restore to original grade, possibly using some of what is in those piles.

A conversation was held regarding that the fill on site be used to regrade the area and if additional fill has to be brought in, it should be wetlands type soil. The discussion continued regarding if this would be a significant activity and cause an adverse effect to the wetland environment.

Nancy Levesque, City Engineer, said the act of removal of the gravel and sediment is an adverse during the duration of removal. The reconstruction of the drainage pipe is also a temporary adverse event. The long- term impact would be positive. A sequence of construction was submitted with the plans which includes timeframes of the construction. It was also said that it can be stated the contractor has to follow the sequence of construction or come back to staff for any modifications.

Fill with regards to driveway at the pumphouse and lower well field

Nancy Levesque, City Engineer, described that three of the wells south of the canal have fill and are in wetlands. There has to be a fifty-foot radius around the wells and two feet above so they are kept outside of the wetland area. The fill next to the pump house is required to meet the base flood elevation by FEMA.

A discussion was held regarding the wetland effects of this. There is no other area that would be a feasible alternative to put the pump house on the property.

Wetland Creation

Attorney Olson stated that is a significant environmental impact because it's being created in an area that are not wetlands.

Nancy Levesque, City Engineer, stated that there is usually a creating and monitoring plan and is usually a three-year plan to ensure that the planting come in. It is usually left up discretion to the soil scientist.

Chairman Fisk stated that this could be stipulated in the motion and could be approved by the commission.

Attorney Olson stated that it could be stipulated to require Connecticut native wetlands plants and a final planting plan to be provided to staff for review and approval.

Nancy Levesque, stated slide #99 in the attached documents indicated areas there are stream gauges and piezometers that are proposed as well as monitoring wells. The plan indicates those items to continue ongoing monitoring for three years as a requirement and gauges are placed in various areas on the site. Monitoring will be done daily and could be stipulated that the data be uploaded. This could be a stipulation for staff to access the data and make it public.

Attorney Olson stated that environmental intervention pleading applies to all three application and should be discussed at this time.

Chairman Fisk asked the commission that considering the intervening application and how it applies, have they made a case for evidence, we should consider that is factual that this application is detrimental to the wetland's region.

Attorney Olson stated there is a three-step analysis in the intervention pleading. First, has the pleading complied with the statutes that require there be a specific factual allegation in the pleading that there will be unreasonable pollution, reasonably likely to have an effect on the air, water or other natural resources in the state of ct. The second step is, did they prove it. Did they submit evidence that these effects will occur? The

finding has to be based on a competent technical expert and has the effect been adequately described and quantified. The third step would be to provide feasible prudent alternatives.

The commission reviewed the intervention pleading letter that was submitted.

Commissioner Rooks stated that the third-party review did bring up withdrawals, and if we felt that we need more information from the applicant of intervener we could ask for that. There was a lot of discussion from the public and other areas about the impact of withdrawal. The studies submitted were from 2007 and there is no current in any reports. This is one of the concerns, what if the minimum and maximum

Commission Massaro asked if they could exceed the registered diversions?

The registered diversions cannot be exceeded. Nancy Levesque stated that DEEP is standing by the registered diversion of the upper and lower well fields of approximated 8.7 million gallons per day currently.

Attorney Olsen reminded the commission that the first thing to determine if the pleading on its face makes specific factual allegations about conduct that is likely to result in unreasonable pollution. Also, that the intervention pleading can only raise issues that are in the wetland commission jurisdiction. The commission cannot tell them not to withdraw, but there may be some room for discussion of the impacts those withdrawals have on the wetlands and whether there are better ways to do it. The decision has to be based on what's in the record.

Commissioner Fisk said that based on this and the monitoring that will be in place, what kind of stipulations can we consider as a result of monitoring if we see the stream flows are too low? Can we ask that well pumping cease?

Attorney Olson responded; the registration is the registration. The monitoring provides what would be publicly available information as to the levels in the streams and people who are concerned with the levels of the stream can do with that information what they choose to do with it.

Chairman Fisk stated they may take that information to another agency that has jurisdiction.

Commissioner Robinson stated that the point that was brought up that during the drought the Coppermine went dry and the aquifer was being sent away. Do we have any jurisdiction or any way or regulating to say we don't want this to happen again?

Attorney Olson responded that the first thing is to find whether the pleading is sufficient, and if that's the commissions determination then you can stop here. But the jurisdiction question, you cannot tell them to stop pumping, but you might have room to have jurisdiction over wetland impact due to the pumping and how those are managed and dealt with. But this is a very grey edge of the commissioner's jurisdiction.

Chairman Fisk asked if the intervener petition is sufficient to go forward and the commission all said no.

Attorney Olson stated that this will be included in the resolution that will be drafted, but it just means that you don't have to go to the analysis portion.

Chairman Fisk asked what if the pumping is excessive and causes low flows and impacts the newly created wetland area.

Attorney Olson respond that in the resolution, it will contain fairly robust monitoring of the new wetlands areas because it doesn't always work.

Chairman Fisk want to revisit that stipulation that the wetlands that are going to created will come back for a boundary change.

A recess was taken at 8:30 p.m.

Meeting resumed at 8:35 p.m.

Chairman Fisk stated that there are a few items to consider. One is the operation maintenance plan that the application can work with the city staff for approval.

Nancy stated that operation s and maintenance for normal mowing and maintained should have a plan in place and we can come back for major issues that come up. The second concern is the heron nesting, and the suggestion was poles and stands. Instead of that, the plan should be to plant some trees in the wetland to support the herons in the future.

Chairman Robinson, stated that this will become an economic feasibility where the dead trees are back there, can we take any action for replant and make it a species that would support the blue herons. The poles will just invite other species to the area. Wetland conducive plants that we specify that will support the blue heron population.

Floodplain Application

Nancy Levesque, reviewed the application stating that they are meeting FEMA's requirements for the proposed wells, buildings and driveway. They are supplying compensatory storage in excess of the fill being brought it. Overall, with the amount of flooding, the compensatory storage is proving additional storage area. They have provided a no rise certificate which indicated there will not be a rise in the elevation. The filing of a Lomar for the application which is a letter of map revision upon completion of the project and recalculation the base flood elevation with relation to the grades after the as built and construction is complete. The applicant has agreed to this.

The commission discussed that they are increasing the storage and it is not their responsibility to fix the flooding that already is happening.

Chairman Fisk stated that the residents who spoke should be directed to the flood and erosion commission to assist with that issue but this application is not going to harm them but it is not the applicant's job to correct it.

The commission was all in agreement with approving this application.

4. Adjournment

MOTION: Move to adjourn at 9:05 P.M.

By: Rooks

Seconded: Robinson

For: Duquette, Robinson, Carros, Massaro, Ministro, Ritchie, Rooks and Fisk.

Against: None.

Abstained: None.

This meeting was taped.

Zachary Fisk, Chairman
Inland Wetlands Commission

David Rooks, Secretary

Application #2025 – Wetlands application as part of a cease and correct order to level ground and slope away from home, clean brush, and new landscaping or fence at 465 Emmett Street; Assessor's Map 3, Lot 9-1; Peter Plewa, applicant.

Wednesday, May 22, 2024 5:30 PM

Attendees

- Zachary Fisk, Chairman
- Michael Robinson, Vice Chairman
- David Rooks, Secretary
- Daniel Massaro, Commissioner
- James Ritchie, Commissioner
- Faye Duquette, Commissioner
- Greg Klimek, Alternate
- Nancy Levesque, Bristol City Engineer
- Peter Plewa, Owner

The site conditions were observed. Approximate location of property line and limit of fill discussed. Directions to correct silt fence installation were given to the owner. Owner discussed removal of debris and placement of fill. Item to be further discussed as June 3 meeting.

Meeting ended at approximately 5:44 PM

Application #2027 – Wetlands application for remediation of drainage swale and contaminants including excavation of channel and restoration of riprap along channel bed and banks at 300 Broad Street; Assessor's Map 43, Lot 100; 300 Broad Street Property LLC, applicant.

Wednesday, May 22, 2024 5:54 PM

Attendees

- Zachary Fisk, Chairman
- Michael Robinson, Vice Chairman
- David Rooks, Secretary
- Daniel Massaro, Commissioner
- James Ritchie, Commissioner
- Faye Duquette, Commissioner
- Greg Klimek, Alternate
- Nancy Levesque, Bristol City Engineer
- Peter Plewa, resident
- Jason Fernet, LEP from SLR
- Armen Boyajian, Owner, 300 Broad Street Property, LLC

The site conditions were observed. Location of swale observed – description of work to be performed on swale provided by Jason Fernet. Bypass to be created during construction to allow in swale work. Protection of river to be provided. Work to be performed during dry period. Existing rip rap to be removed and reused as part of project.

Meeting ended at approximately 6:10 PM

Application #2029 – Wetlands application for the replacement of the Divinity Street culvert over an unnamed Brook within Divinity Street Right-of-Way within an existing easement and City of Bristol Right-of-Way; City of Bristol, Department of Public Works, applicant.

Wednesday, May 22, 2024 6:24 PM

Attendees

- Zachary Fisk, Chairman
- Michael Robinson, Vice Chairman
- David Rooks, Secretary
- Daniel Massaro, Commissioner
- James Ritchie, Commissioner
- James Carros, Commissioner
- Faye Duquette, Commissioner
- Greg Klimek, Alternate
- Peter Plewa, resident
- Jodi Constant, PE, WSP consultant
- Nancy Levesque, Bristol City Engineer

The site conditions were observed. Replacement of culvert discussed. Structure integrity is deficient. Walls to be added to prevent washout of neighboring yards. Location of utilities discussed. Rails to be used to allow and keep water in the center of the channel also. Presence of invasives noted – to be discussed during hearing.

Meeting ended at approximately 6:35 PM



Application for a Wetlands Permit

**300 Broad Street (Former Theis Precision Steel Inc.)
Channel Remediation**

300 Broad Street Property LLC

Prepared by:

SLR International Corporation

99 Realty Drive, Cheshire, Connecticut, 06410

SLR Project No.: 126.20476.00001

April 25, 2024

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City of Bristol Wetlands Permit Application Form

Statewide Inland Wetlands and Watercourses Activity Reporting Form

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Figure 2: Wetlands and Watercourses

Figure 3: FEMA Floodplain



Appendices

Appendix A	Wetland Delineation Report
Appendix B	Site Photos
Appendix C	NDDB Final Determination
Appendix D	Project Site Plans



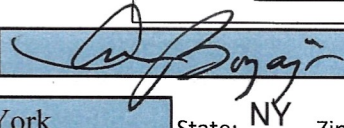
Part I. Application Forms



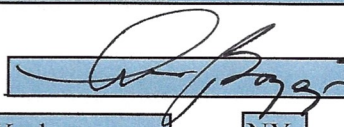
**BRISTOL CONSERVATION COMMISSION
INLAND WETLANDS AGENCY
FORM IW-1 (Application for a Wetlands Permit)**

For Office Use Only
APPLICATION NO. **2027**
DATE FILED: **04-25-24**
DECISION DATE: _____
DECISION: _____

1. APPLICANT:

Name: **300 Broad Street Property LLC** Signature: 
Address: **534 Hudson Street, Suite 3A** City: **New York** State: **NY** Zip: **10014**
Telephone No.: **212-686-5650** ☐ home ☒ work Email: **300BroadStreet@stillmandevelopment.com**

2. PROPERTY OWNER(S):

Name: **300 Broad Street Property LLC** Signature: 
Address: **534 Hudson Street, Suite 3A** City: **New York** State: **NY** Zip: **10014**
Telephone No.: **212-686-5650** ☐ home ☒ work Email: **300BroadStreet@stillmandevelopment.com**

3. DESCRIBE THE SUBJECT PROPERTY:

Address or Location: **300 Broad Street, Bristol, CT**
Assessor's Map No.: **43** Assessor's Lot No.(s): **100**

Description of wetlands (location, approximate area to be disturbed, vegetation, etc.):

The wetland to be disturbed consists of a narrow (approximately 4-foot-wide to 12-foot-wide) drainage swale located in the southeastern extent of the site which receives stormwater from catch basins on site prior to discharge east to the Pequabuck River. The channel bottom is primarily riprap and fine sediment, and it is contained by low and shallow to moderately steep banks primarily stabilized with riprap and vegetated with Japanese knotweed and several small diameter black locust trees. See attached report for additional details.

4. DESCRIBE THE PROPOSED ACTIVITY AND ITS PURPOSE:

The project aims to remediate the drainage swale of contaminants including ETPH, PAHs, and PCBs by excavating the soil within the channel to a depth of two feet and disposing of contaminated material off-site. The existing conditions will be restored by placing clean material and riprap along the channel bed and banks. This work is being funded in part by the Connecticut Department of Economic and Community Development (CT DECD) Municipal Brownfield Grant Program. See attached report for additional details.

5. CHECK THE STATEMENT WHICH APPLIES TO THE PROPOSED ACTIVITY:

- ☐ a. The proposed activity is either a use permitted as of right or a non-regulated use, under subsection of Section 4 of the Inland Wetlands Regulations. *See instructions for submission requirements.*
- ☐ b. The proposed activity is not regulated because it is greater than 100 feet from a wetlands or watercourse or will not adversely affect the wetlands or watercourse. *See instructions for submission requirements.*
- ☐ c. The proposed activity is a regulated activity and will occur:
- | | |
|---|---|
| ☒ in a wetlands or watercourse; | area of impact: 1,239 SF (0.03 acres) |
| ☒ within 100 feet of a wetlands or watercourse; | area of impact: 11,357 SF (0.26 acres) |
| ☐ beyond 100 feet of a wetlands or watercourse; | area of impact: _____ SF (_____ acres) |

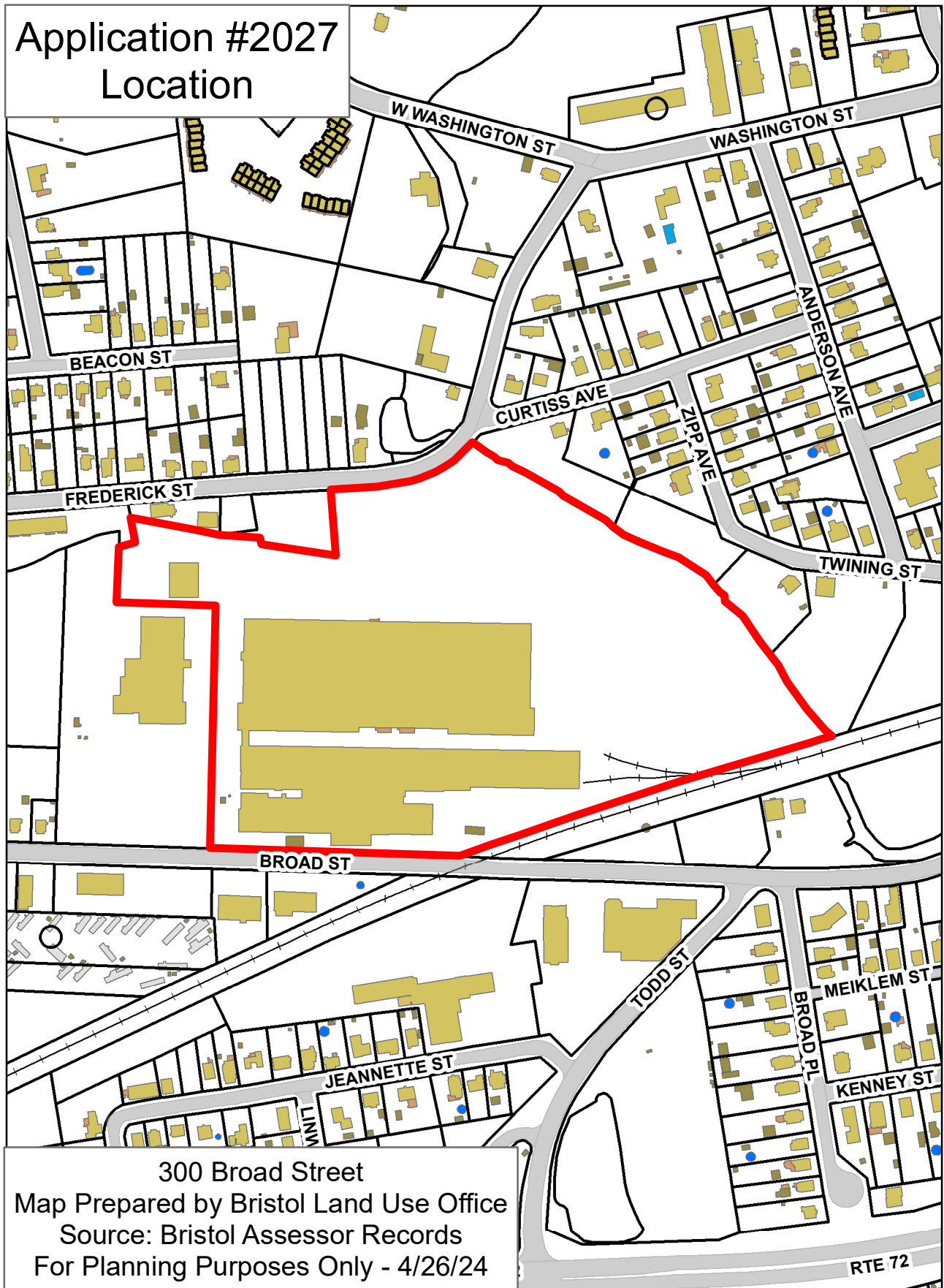
6. FLOW CALCULATIONS:

Does a watercourse flow through the subject property?

☒ yes ☐ no

If "yes", see instructions for submission requirements.

Application #2027
Location



300 Broad Street

Map Prepared by Bristol Land Use Office

Source: Bristol Assessor Records

For Planning Purposes Only - 4/26/24

Application #2027
Aerial



300 Broad Street

Map Prepared by Bristol Land Use Office

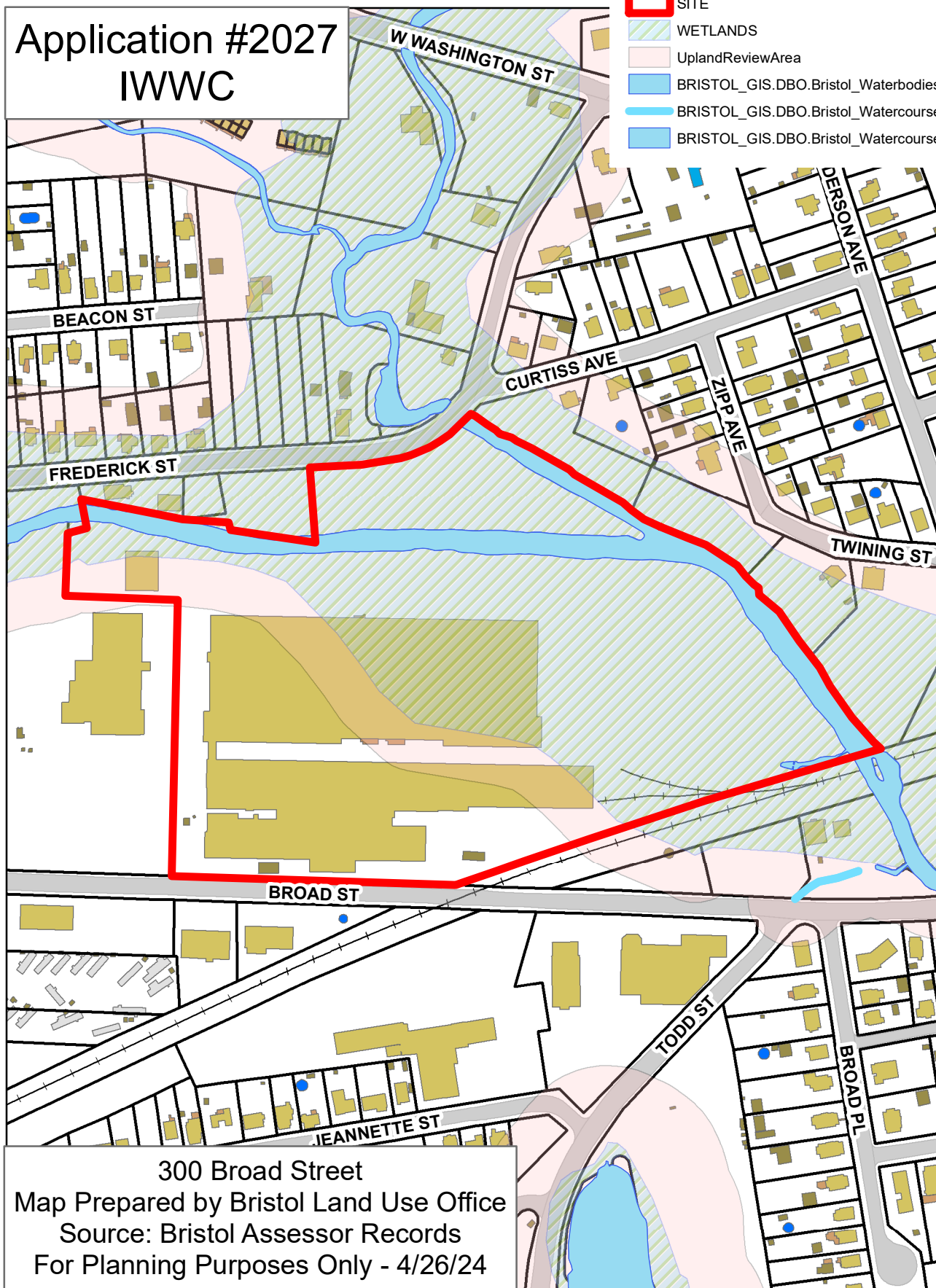
Source: Bristol Assessor Records

For Planning Purposes Only - 4/26/24

Application #2027 IWWC

Legend

-  SITE
-  WETLANDS
-  UplandReviewArea
-  BRISTOL_GIS.DBO.Bristol_Waterbodies
-  BRISTOL_GIS.DBO.Bristol_Watercourse_lines
-  BRISTOL_GIS.DBO.Bristol_Watercourse_Polygons



300 Broad Street

Map Prepared by Bristol Land Use Office

Source: Bristol Assessor Records

For Planning Purposes Only - 4/26/24



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): Bristol
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: Bristol, CT or number: _____
subregional drainage basin number: 4314
7. NAME OF APPLICANT, VIOLATOR OR PETITIONER (print name): 300 Broad Street Property LLC
8. NAME & ADDRESS OF ACTIVITY / PROJECT SITE (print information): 300 Broad Street
briefly describe the action/project/activity (check and print information): temporary ☒ permanent ☐ description: Remediation of contaminated sediments in man-made drainage channel
9. ACTIVITY PURPOSE CODE (see instructions - one code only): E
10. ACTIVITY TYPE CODE(S) (see instructions for codes): 2, 5, _____, _____
11. WETLAND / WATERCOURSE AREA ALTERED (see instructions for explanation, must provide acres or linear feet):
wetlands: _____ acres open water body: _____ acres stream: 115 linear feet
12. UPLAND AREA ALTERED (must provide acres): 0.26 acres
13. AREA OF WETLANDS / WATERCOURSES RESTORED, ENHANCED OR CREATED (must provide acres): 0.03 acres

DATE RECEIVED:

PART III: To Be Completed By The DEEP

DATE RETURNED TO DEEP:

FORM COMPLETED: YES NO

FORM CORRECTED / COMPLETED: YES NO

Part II. Project Narrative



1.0 Introduction

On behalf of 300 Broad Street Property LLC (the Applicant), SLR International Corporation (SLR) has prepared this Wetlands Permit application for proposed remediation activities within an inland watercourse located on 300 Broad Street (former Theis Precision Steel Inc.) in Bristol. The proposed regulated activity is part of a larger remediation project on site to be funded partially by the State of Connecticut Department of Economic and Community Development (DECD) Municipal Brownfield Grant Program. The funding was presented to the Naugatuck Valley Council of Governments (NVCOG) and is being structured as a pass-through to the Applicant, a private entity.

The proposed remediation will take place within a small, man-made drainage channel in the southeastern portion of the parcel. Levels of hazardous substances including extractable total petroleum hydrocarbon (ETPH), polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) that exceed the State Remediation Standard Regulations (RSRs) have been identified within the channel sediments. The project proposes to excavate the channel and safely dispose of the contaminated soil and sediments at an approved off-site location. Following remediation, the channel will be restored to existing bed and bank conditions using clean fill and riprap material. As shown in Table 1, below, the proposed work will result in approximately 1,300 square feet (SF) of permanent impacts to a regulated watercourse, which will include the excavation and restoration of the drainage channel as well as temporary impacts from water control and sedimentation and erosion control measures. Approximately 11,400 SF of temporary impact will occur within the 100-foot regulated upland review area (URA) to the watercourse resulting from temporary site access. There will be no net fill placed within a regulated area or floodplain.

The primary goal of the project is to remediate soil and groundwater within specified areas of concern (AOCs) on site to achieve compliance with the RSRs. This will in turn reduce potential harm to the environment and human health, and return the property to a productive, occupiable state. Ultimately, the Applicant would like to renovate the existing buildings to redevelop the site for light industrial use by a future tenant. Additionally included in the project scope is the placement of Environmental Use Restrictions (EUR) limiting the property to non-residential use and rendering soil environmentally isolated and inaccessible.

Table 1. Drainage Channel Remediation Regulated Resource Impacts

	Drainage Channel Impact Area (SF)	Drainage Channel Impact Area (acres)	100' Upland Review Area Impact Area (SF)	100' Upland Review Area Impact Area (acres)
Permanent Impacts	1,300	0.03	0	0
Temporary Impacts	0	0	11,400	0.26
Total Impacts	1,300	0.03	11,400	0.26



1.1 Background

The Site was initially developed in 1915 by Wallace Barnes Company (also known as Associated Spring Corporation) for the manufacturing of cold rolled steel. In 1976, Associated Spring Company changed its name to Barnes Group Inc. Barnes continued to operate at the Site until 1986, when it was sold to Theis Precision Steel Inc (Theis). Theis continued to operate the facility until 2019. The Applicant obtained the title to the vacant property in 2022 through a debt purchase and foreclosure. The site is currently underutilized with three of the four existing buildings unoccupied and containing evidence of vandalism. Rehabilitation of the existing facilities on site has not occurred due to the presence of pollution in the buildings and soil in the surrounding parts of the site requiring remediation, as documented by existing Phase I, II, and III Environmental Site Assessments (ESAs) conducted on site. All pollution releases occurred during the previous site ownership.



2.0 Existing Conditions

The regulated activity will occur within a small area near the southeasternmost point of the approximately 25-acre parcel (**Figures 1 and 2**). The property is located north of Broad Street with site access from Broad Street in the southwestern portion of the parcel. The northern and eastern boundaries of the site are bordered by the Pequabuck River, which flows east along the northern site boundary before turning south and following the eastern site boundary. A small portion of the parcel is located north of the Pequabuck River and bound to the northwest by Frederick Street and to the northeast by Copper Mine Brook, which flows into the Pequabuck River at the northeastern corner of the property. The majority of the site is occupied by large, industrial buildings and paved surfaces with the exception of a narrow strip of grass with several trees along the northern property boundary, and a forested upland area comprising the eastern portion of the site.

2.1 Federal Emergency Management Agency (FEMA)

According to the FEMA flood zone mapping (Map Number 09003C0466F, effective 9/26/2008), the project area is located within a mapped floodway and Zone AE 100-Year Flood Zone (**Figure 3**). The FEMA-documented 100-year base flood elevation (BFE) ranges from 213 to 215 feet within the project area. The proposed remediation activities will occur below the 100-year BFE; however, as described further in Section 3 and the project plans (under separate cover), the project will take all necessary measures to mitigate flood risk including dewatering the channel, working during a low flow period and under dry weather conditions, and storing all equipment securely and outside of the 100-year floodplain. Further, the project is anticipated to be completed over the course of two weeks, after which existing stream conditions will be restored. There will be no net fill placed within the floodplain associated with the proposed activities.

2.2 Wetlands and Watercourses

Wetland resources were delineated on site by an SLR Registered Soil Scientist (RSS) on August 9, 2021 and reaffirmed on April 9, 2024. As described in the attached soil scientist report dated December 9, 2021 (**Appendix A**), wetland resources on site consist of the ordinary high water (OHW) lines along 0.5-mile of two perennial watercourses (the Pequabuck River and Copper Mine Brook), bordered by narrow, forested fringe banks, as well as the 115-foot-long drainage channel in the southeastern extent of the site. No additional areas of wetland or poorly drained, very poorly drained, floodplain, or alluvial soils were identified on site. Soils across the site consist of well drained udorthents and fill material (**Figure 3 of Appendix A**). Although the City of Bristol official Inland Wetlands Map depicts a large portion of the eastern side of the parcel as containing City wetlands, SLR suggests that this broadscale mapping is less accurate than our on-site investigation, especially as much of the site mapped as City wetlands contains paved surfaces and buildings. The entire site has been disturbed with fill material over the past century and neither wetlands nor their functions exist on the site, outside of the boundaries of the regulated watercourses.

The small (approximately 4-foot-wide to 12-foot-wide), trapezoidal drainage channel in the southeastern portion of the site is primarily fed by stormwater collected in catch basins on site that is discharged first to a concrete stilling pool before flowing through twin 10-inch steel pipes at the upstream end of the channel (**Appendix B**). The channel conveys this flow approximately 115 feet to the east to discharge directly to the Pequabuck River. During high flow conditions



the channel also fills with backwater from the Pequabuck River. The bed substrate is mainly comprised of riprap and fine sediment, and the channel is contained by low, shallow to moderately steep banks stabilized primarily with riprap. Significant bank erosion has displaced much of the riprap in steeper locations and brush is piled high at one section along the southern bank. The vegetated portions of the banks are dominated by Japanese knotweed (*Fallopia japonica*) and patches of small diameter black locust (*Robinia pseudoacacia*) trees with several individual gray birch (*Betula populifolia*) and red maple (*Acer rubrum*) cloaked with poison ivy (*Toxicodendron radicans*) and Oriental bittersweet (*Celastrus orbiculatus*) vines. A large portion of the southern bank was covered in woody debris on the day of the April 2024 site investigation. Surface water depth levels on the day of the site visit ranged between one to three feet deep, and the water surface contained an oily, odorous sheen. Macroalgae are abundant in the channel, and this plant growth, in addition to floating debris such as abandoned silt sacks, inhibit a clear view of the channel bed.

The 100-foot URA in this area of the site shows evidence of both former and recent disturbance. An approximately 25-foot-wide former access road is cleared of most woody vegetation and contains a dense nonnative invasive herbaceous groundcover of common mugwort (*Artemisia vulgaris*). The dead stalks from the previous season had been recently flattened on the day of the site visit, indicating some type of vehicular crossing of the area. The remainder of the wooded area surrounding the channel contains upland deciduous forest species including red and black oak (*Quercus rubra*, *velutina*) and Norway maple (*Acer platanoides*) cloaked in vines of Oriental bittersweet and with a disturbed understory with autumn olive (*Eleagnus umbellata*) and multiflora rose (*Rosa multiflora*).

According to SLR's investigation, the drainage channel wetland resource performs the following wetland functions and values: groundwater recharge/discharge, floodflow alteration, sediment/toxicant retention, nutrient removal/retention, and sediment/watercourse bank stabilization.

2.3 State Natural Resource Consultations

2.3.1 Natural Diversity Data Base

According to results of a Connecticut Department of Energy & Environmental Protection (CTDEEP) Natural Diversity Data Base (NDDB) final determination request from April 16, 2024 (**Appendix C**), the drainage channel has been mapped as potential impact for the common crayfish (*Cambarus bartonii*), a species of state special concern (SC). However, the habitat requirements indicated by NDDB (fast flowing water bodies with high water quality) do not currently exist within the specific project location. In accordance with the NDDB approval (and as further described in Section 3 of this report) the project will take protective measures to minimize water quality impacts downstream. Additionally, the project aims to improve water quality both within the channel and downstream receiving waters, and as such is likely to improve habitat for the common crayfish as well as other wildlife species.



3.0 Proposed Project

3.1 Proposed Conditions

All proposed activities are depicted on the attached site plans titled *300 Broad Street – Assessment and Remediation Remedial Activities*, dated April 4, 2024, prepared by SLR (**Appendix D**). Approximately 1,300 square feet of impact will occur within the drainage channel from the excavation work. All impacts are necessary to remediate the channel sediment and bank soils of harmful substances. Small construction equipment such as an excavator, loader, dump truck and compactor will be used to perform the channel excavation and all excavated material and other debris such as brush will be transported outside of the regulated area using a loader, bobcat or similar equipment to the secured stockpile location. As shown on the project plans, the stockpile location will be located outside of the 100-year floodplain, along the eastern outer wall of the northern building on site and fully contained with polyethylene sheeting placed above and below the stockpile. Work within the 100-foot URA will consist of minor site clearing to construct a temporary access route to reach the channel and to haul material to the stockpile location for pickup and offsite disposal.

Based upon soil sample analytical results, the impacted sediments reach a depth of up to two feet below the channel bed and approximately one foot deep in the lower portion of the banks lining the channel. These depths will dictate the depth of excavation within the channel bed and along the banks. An estimated 100 total cubic yards (CY) of material will be removed from the channel and stockpiled outside of the regulated area and 100-year floodplain. No more than 100 CY of material is to be excavated and stockpiled on the project parcel at any one time. No equipment or material is to be stored within the regulated area at any time.

Excavated material will be sorted when it reaches the upland stockpile location. Excavated soil with ETPH, PAH and PCB concentrations exceeding applicable state and federal regulations will be disposed of off-site. Salvageable riprap will be separated and stockpiled for reuse within the channel. Following excavation of the full channel length to the appropriate depth, the channel conditions will be restored to in-kind by placing clean fill within the channel bed to match existing elevation and topping with clean riprap. The channel banks will be recontoured to match existing grades, stabilized with clean fill, and uniformly covered with riprap. All disturbed areas above the banks will be restabilized with clean topsoil and seeded with an invasive-free, approved seed mix.

Following excavation, the remedial strategy entails performing post-excavation compliance sampling in accordance with current guidance. SLR will review the analytical results from the post-excavation to determine if RSR criteria have been met prior to backfilling. Additional excavation may be required if analytical results indicate an exceedance of the applicable criteria.

3.2 Alternatives Analysis

Based upon the site history and contamination levels, no alternatives have been considered to the proposed project other than the do-nothing alternative. This alternative would leave contaminants in the sediments within the channel which may potentially be released to the Pequabuck River during scour-producing, high velocity flow events. In addition, the cleanup is required under the RSRs. Therefore, the proposed remediation, which will be carried out in accordance with all applicable local and state regulations and using industry-standard procedures, is the preferred alternative.



3.3 Construction Timing and Sequence

It is anticipated that the channel remediation will take approximately 2 weeks to complete, with approximately one week required for the active remediation phases (channel excavation and restoration) and approximately one week between excavation and restoration where the contractor will await analytical results of the sediment sampling to ensure compliance with remediation goals prior to backfilling. The project will be timed to coincide with low flow conditions in the drainage channel and downstream Pequabuck River, likely during the late summer/early fall.

The work will be conducted in three stages, as depicted on sheets CP-1 and CP-2 of the project plans. Phase I will include the installation of temporary site access and S&E controls; Phase II will consist of dewatering and excavation/sediment removal in the upstream concrete stilling area; and Phase III will include the dewatering of the downstream drainage channel, excavation and sediment removal, and restoration of channel existing geometry followed by stabilization of banks.

3.4 Water Controls

The channel will be dewatered prior to commencement of activities and will remain dry for the duration of the channel remediation by closing the 10" diameter pipes at the upstream end of the channel and using a combination of bypass and gravity pumps to divert channel flow to the Pequabuck River via a temporary riprap pump discharge settling area, to be placed above the ordinary high water (OHW) mark to the river and north of the drainage channel/work area. (Dewatering discharge will flow through a filter sock or other turbidity reduction device before entering the pump discharge settling area). The work area is to remain dry until channel conditions are restored and the banks are stabilized. The channel and banks will be stabilized using standard riprap. Riprap will be extended to the top of the banks. Bypass pumps and pipes will be sized accordingly to convey baseflow. Baseflow calculations were based on streamflow measurements obtained during seasonally high hydrologic conditions and are assumed to be a conservative representation of conditions on site. It is expected that all in-channel work will be performed during forecasted dry conditions, and a contingency plan to rapidly stabilize the excavation will be in place should unexpected rainfall occur during construction.



3.5 Impact Avoidance and Minimization

The project has been designed to minimize wetland and watercourses impacts and minimize vegetation clearing. Appropriate sediment and erosion control measures have been incorporated in project plans to protect water quality, wetlands and watercourses, and wildlife resources. To protect water quality downstream of the drainage channel project area, cofferdam will be installed across the downstream end of the channel, upstream of its connection to the Pequabuck River.

Sedimentation and erosion control (S&E) best management practices (BMPs) in accordance with the 2002 *Connecticut Guidelines for Soil Erosion and Sediment Control* will be employed including the placement of haybale-lined silt fencing downgradient of areas to be disturbed where they border regulated areas. Tree clearing in the project area will be minimized to the greatest extent practicable. Areas disturbed by construction will be seeded to restore habitat and prevent erosion.

3.6 Flood Risk Mitigation

According to the FEMA floodplain mapping, the proposed project will be located within a floodway and 100-year AE Flood Zone (Appendix A). The proposed project will result in activities below the 100-year BFE; however, these activities will be of a short duration and will have no adverse impact on flooding in the area. No rise in the BFE is proposed.

To minimize risk of flood damage during in-channel work, the contractor shall monitor weather reports and be prepared to stop work and stabilize the site if more than 1" of rainfall is predicted by the National Weather Service (70 percent chance or higher). Work shall be halted until precipitation stops and chances of further rainfall fall below 50 percent. As the area is prone to flooding, all in-channel remediation work must be performed during low flow conditions and only when dry weather conditions are forecasted for an extended period (3 to 5 days). If rain begins to fall during excavation and/or restoration of the channel, the contractor must stop work and immediately stabilize the channel by covering exposed channel bottom material with polyethylene and securing the sheeting in place.

All work will be performed in the dry. In addition to dewatering pumps in the drainage channel and upstream stilling pool, the use of a cofferdam at the downstream extent of the drainage channel will both prevent the movement of material into the Pequabuck River and the backflow of water from the Pequabuck into the drainage channel, which could overwork the bypass pumps in the channel.

4.0 Conclusions

The contaminated sediments within the drainage channel on site require remediation, which will necessarily result in permanent impacts to a regulated resource. Based on the means and methods as presented on the plans, the long-term impact to the drainage channel should be minimal. The work will be conducted in the dry, thereby protecting water quality downstream of the channel, which flows to the Pequabuck River. Moreover, given the relatively short duration of proposed remediation activities and the installation/maintenance of S&E measures, it is our professional opinion that the project as described will not adversely impact wetlands and watercourses.



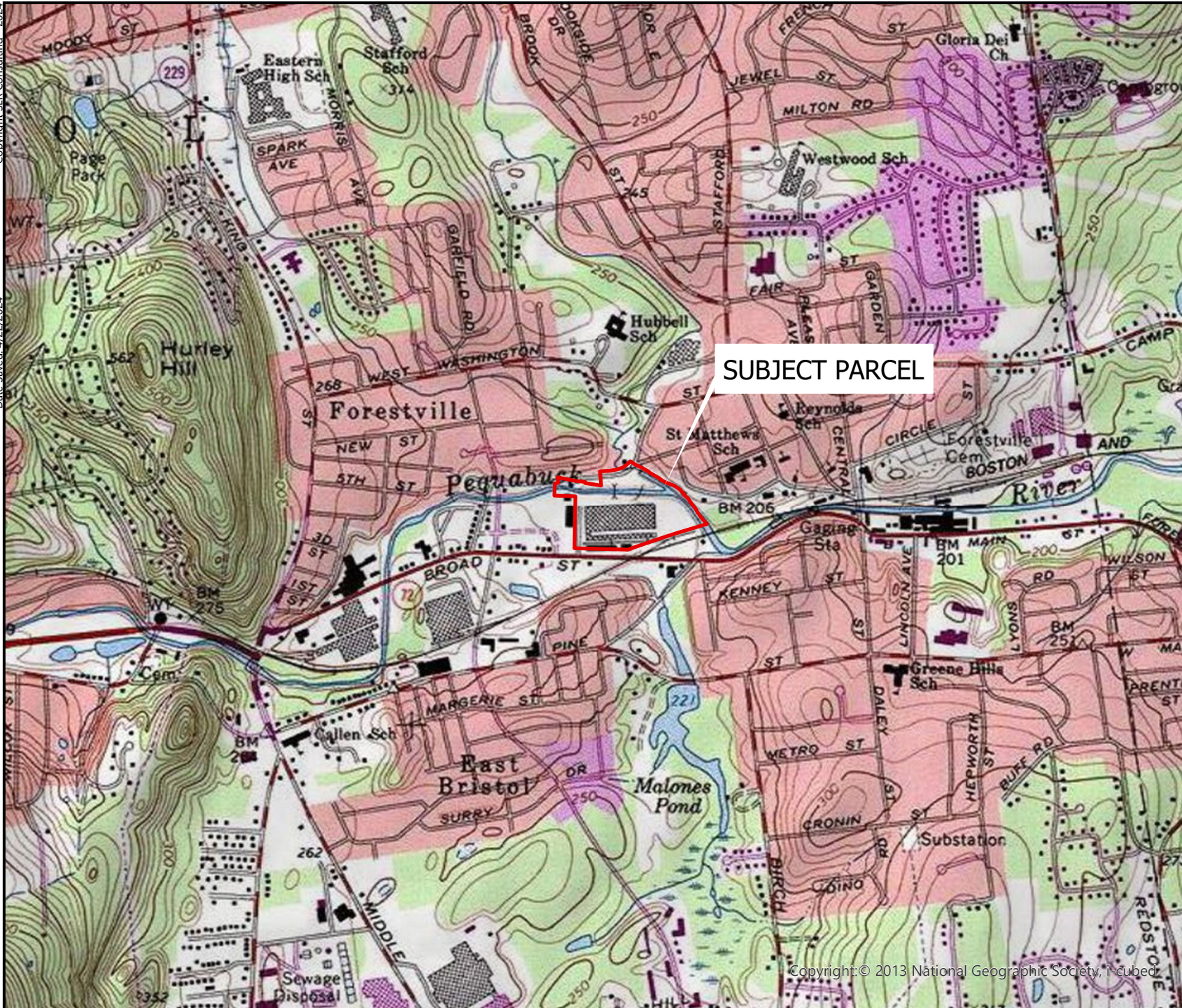


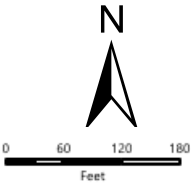
Site Mapping

Figure 1: Site Location

Figure 2: Wetlands and Watercourses

Figure 3: FEMA Floodplain





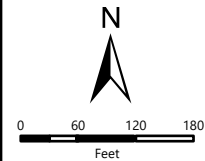
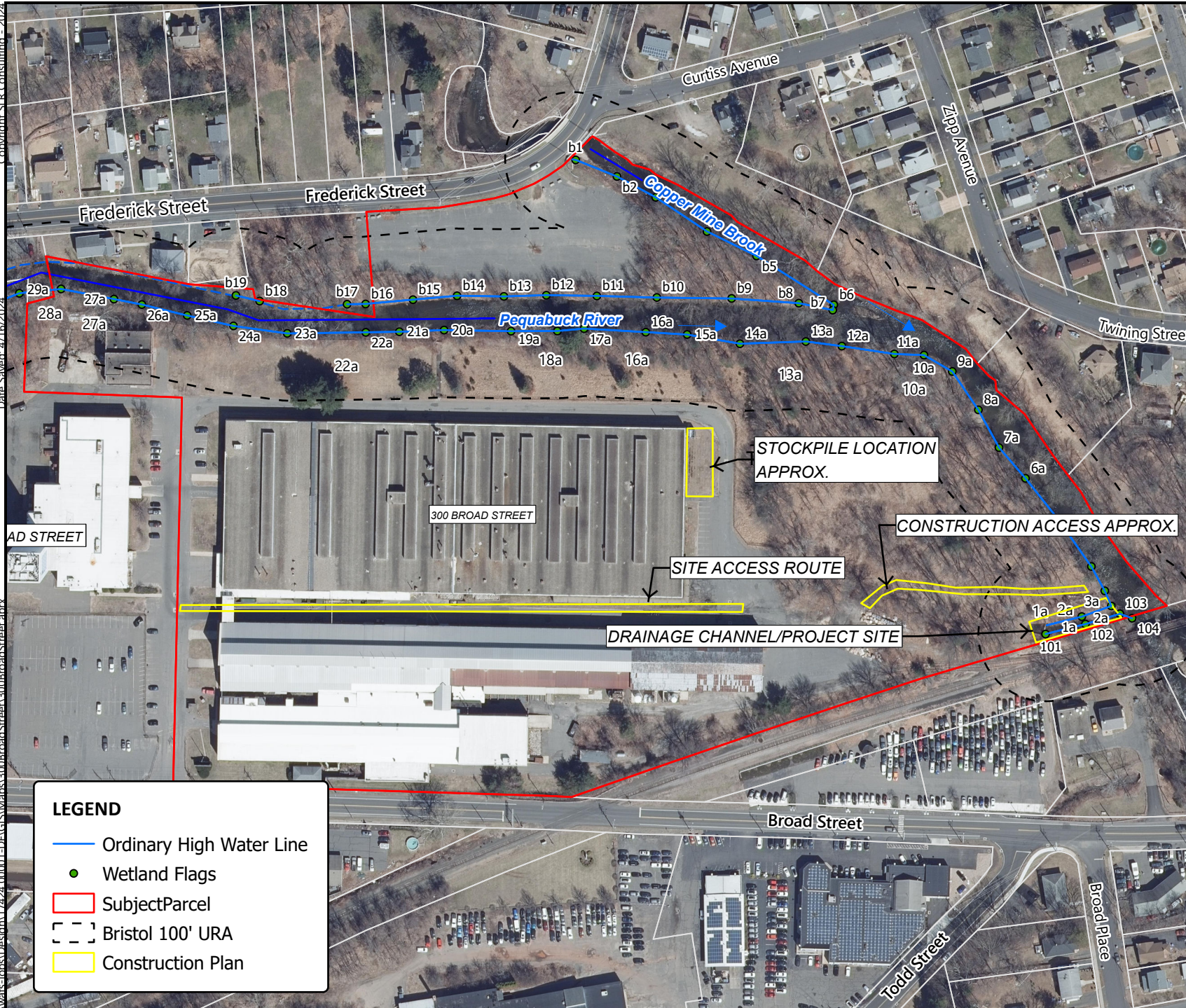
***SLR**
195 CHURCH STREET
7TH FLOOR
NEW HAVEN, CT 06511
203.344.7887

SITE LOCATION
300 BROAD STREET PROPERTY LLC
SITE ASSESSMENT AND REMEDIATION
300 BROAD STREET
BRISTOL, CONNECTICUT

SCALE 1:24,000
DATE 4/22/2024
PROJ. NO. 126.20476.00001

FIG. 1

Path: \\C:\p\h\w\k-jobs\Design\17424\0001-DEGIS\Maps\300BroadStreet.aprx Date Saved: 4/16/2024 Copyright: SLR Consulting - 2024



195 CHURCH STREET
7TH FLOOR
NEW HAVEN, CT 06511
203.344.7887

REGULATED AREAS AND PROPOSED ACTIVITIES

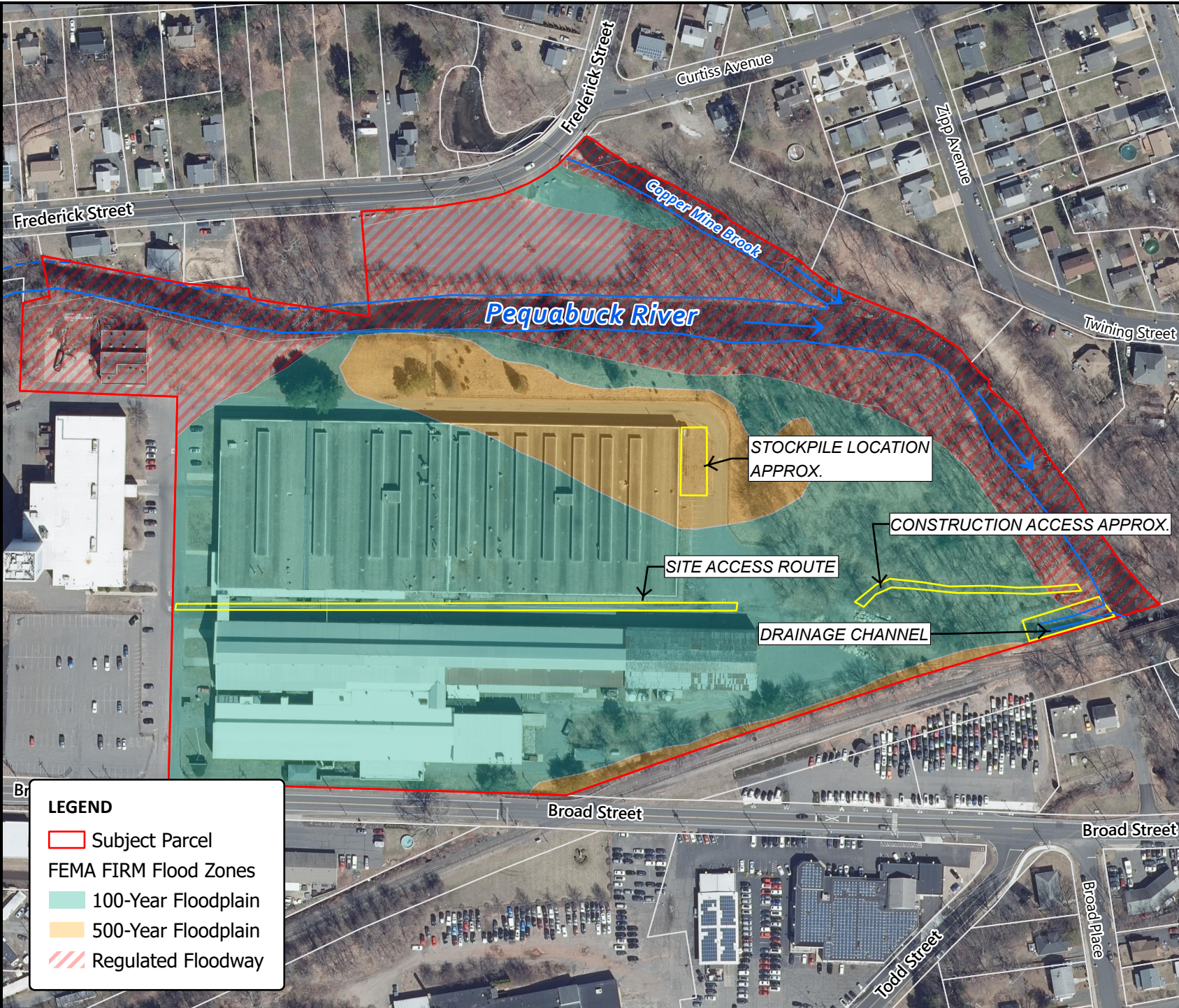
300 BROAD STREET PROPERTY LLC
SITE ASSESSMENT AND REMEDIATION
300 BROAD STREET
BRISTOL, CONNECTICUT

SCALE 1:2,400

DATE 4/16/2024

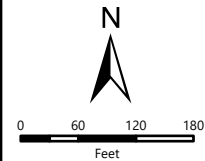
126.20476.00001
PROJ. NO.

FIG. 2



LEGEND

- Subject Parcel
- FEMA FIRM Flood Zones
 - 100-Year Floodplain
 - 500-Year Floodplain
 - Regulated Floodway



195 CHURCH STREET
7TH FLOOR
NEW HAVEN, CT 06511
203.344.7887

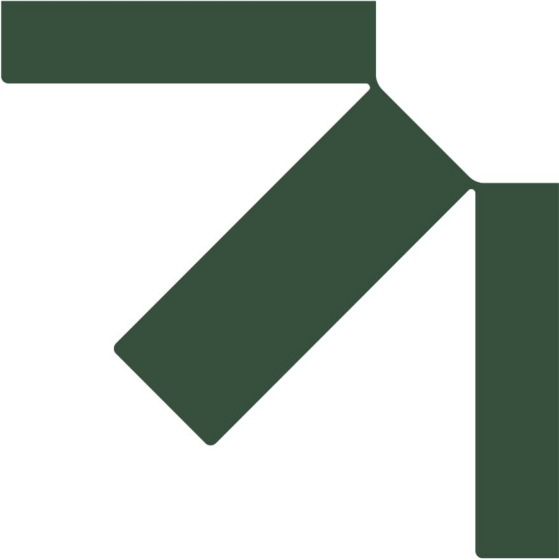
FEMA 100-YEAR FLOODPLAIN
300 BROAD STREET PROPERTY LLC
SITE ASSESSMENT AND REMEDIATION
300 BROAD STREET
BRISTOL, CONNECTICUT

SCALE 1:2,400

DATE 4/22/2024

126.20476.00001
PROJ. NO.

FIG. 3



Appendix A Wetland Delineation Report

Application for a Wetlands Permit

300 Broad Street Remediation

300 Broad Street Property LLC

April 25, 2024

December 9, 2021

Mr. Peter Gersky
Theis Precision Steel USA, Inc
300 and 340 Broad Street
Bristol, CT 06010

**Re: Wetland Delineation and Assessment
300 Broad Street
Bristol, Connecticut
SLR# 141.17424.00001**

Dear Peter,

On August 9, 2021, SLR International Corporation (SLR) registered soil scientist Megan Raymond, MS, PWS, CFM, and Wetland Professional in Training Aidan Barry, MS, visited the 30.68-acre parcels on 300 and 340 Broad Street and Andrew Street in Bristol, Connecticut to determine the presence or absence of wetlands and/or watercourses, demarcate (flag) boundaries of wetlands and watercourses identified, identify potential vernal pools, and identify on-site soil types. This letter includes the methods and results of the investigation. In summary, the ordinary high water (OHW) line along 0.5-mile of two perennial watercourses consisting of the Pequabuck River and Copper Mine Brook, bordered by narrow forested fringe banks, was delineated within the subject site. A description of the field methods and findings follows.

Regulatory Definitions

The Inland Wetlands and Watercourses Act (Connecticut General Statutes §22a-38) defines inland wetlands as "land, including submerged land...which consists of any soil types designated as poorly drained, very poorly drained, alluvial, and floodplain." Watercourses are defined in the act as "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 the state or any portion thereof." The act defines intermittent watercourses as having a defined permanent channel and bank and the occurrence of two or more of the following characteristics: (A) evidence of scour or deposits of recent 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.

The Tidal Wetlands Act (Connecticut General Statutes §22a-28) defines wetlands 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 1 foot above local extreme high water; and upon which may grow or be capable of growing hydrophytic vegetation as identified in the Statutes."

Regulated Activity, per the City of Bristol Inland Wetland and Watercourses Commission Regulations, means any area within 100 feet of wetlands or watercourses or within 200 feet of a watercourse as defined by a pond or lake with a surface area greater than 5 acres.

Methodology

A second-order soil survey in accordance with the principles and practices noted in the United States Department of Agriculture (USDA) publication *Soil Survey Manual* (1993) was completed at the subject site. The classification system of the National Cooperative Soil Survey (NRCS) was used in this investigation. Soil map units identified at the project site generally correspond to those included in the *Soil Survey of the State of Connecticut* (USDA, 2005).

Wetland determinations were completed based on the presence of poorly drained, very poorly drained, alluvial, or floodplain soils and submerged land (e.g., a pond). Soil types were identified by observation of soil morphology (soil texture, color, structure, etc.). To observe the morphology of the property's soils, test pits and/or borings (maximum depth of 2 feet) were completed at this site.

Intermittent watercourse determinations were made based on the presence of a defined permanent channel and bank and the occurrence of two or more of the following characteristics: (A) evidence of scour or deposits of recent 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.

Wetland boundaries were demarcated (flagged) with pink surveyor's tape (hung from vegetation) or small flags (on wire stakes) that are generally spaced at a maximum of every 30 feet. Complete boundaries are located along the lines that connect these sequentially numbered flags. The wetland boundaries are subject to change until adopted by local, state, or federal regulatory agencies. The wetland area consists of one unconsolidated bottom riverine watercourse and surrounding palustrine broad-leaved deciduous forest fringe wetland. The wetland boundaries are depicted by flag series:

Pequabuck River and Palustrine Broad-leaved Deciduous Forest Fringe Wetland

- 1a through 35a; 101 through 104; b7 through b19

Copper Mine Brook and Palustrine Broad-leaved Deciduous Forest Fringe Wetland

- B1 through b6

On the day of the review, the weather was overcast and temperature was 80° Fahrenheit. The conditions were suitable for wetland delineation.

Site Description and Existing Soils

The project area is comprised of three parcels with a total area of 30.86 acres. The subject property is accessed to the north from Broad Street and contains several buildings in the center of the site. The site is

comprised of impervious surface (approximately 20.28 acres), upland forest (approximately 8.40 acres), open meadow (approximately 1.20-acres), and 0.80 acres of on-site wetlands.

300 Broad Street (24.85 acres) is the eastern parcel. This parcel features approximately 850 feet of frontage on Broad Street and 375 feet on Frederick Street. The Pequabuck River flows east through this parcel, partitioning the northern 2.2 acres of the parcel from the remainder to the south, before turning south and flowing along the southeastern boundary. Copper Mine Brook crosses beneath Frederick Street to the north and flows southeast along the northeastern boundary of the parcel before confluenting with Pequabuck River to the south. The majority of the parcel is comprised of impervious features including existing industrial facility buildings in the southern portion of the parcel totaling approximately 341,000 square feet and surrounded by paved parking lots and accessways totaling approximately 8 acres, including an approximately 1-acre abandoned paved lot north of the Pequabuck River. A narrow section of open meadow habitat separates the existing improvements to the south from the southern bank of the Pequabuck River to the north. The eastern one-third of the parcel contains undeveloped upland forested land extending to the riparian zone along both watercourses.

340 Broad Street (3.38 acres) is the center parcel with approximately 125 feet of frontage along Broad Street. An existing building occupies approximately 34,000 square feet in the eastern portion of the parcel with impervious paved areas to the south and west. The Pequabuck River and forested fringe wetlands exist along the northern boundary of the parcel. The western third of the parcel consists of upland hardwood deciduous forested and scrub shrub areas.

The western parcel, Andrew Street (2.63 acres), contains upland forested and scrub shrub land with no existing impervious areas. The Pequabuck River and its fringe wetland form the northern boundary of the parcel, which is bound to the west and south by existing lots off of Andrew Street and Broad Street. A narrow finger extends approximately 250 feet to the west providing approximately 25 feet of frontage along Andrew Street.

The majority of the project area has been disturbed. Anthropogenic debris (i.e., garbage, displaced concrete, and asphalt) are present throughout the surrounding forest and meadow. The open meadow area south of Pequabuck River is comprised of little blue stem (*Schizachyrium scoparium*) and various grasses. Within the upland forest, the canopy is comprised of black oak (*Quercus velutina*), white pine (*Pinus strobus*), sugar maple (*Acer saccharum*), Norway maple (*Acer platanoides*), and catalpa (*Catalpa speciosa*). The understory consists of numerous non-native species including autumn olive (*Elaeagnus umbellata*), Japanese barberry (*Berberis thunbergii*), Japanese knotweed (*Fallopia japonica*), greenbriar (*Smilax glauca*), multiflora rose (*Rosa multiflora*), Asiatic bittersweet (*Celastrus orbiculatus*), burning bush (*Euonymus alatus*), and poison ivy (*Toxicodendron radicans*).

The project area is located in the central portion of its local watershed. The local watershed drains an area of approximately 12.5 square miles. The project area drains into the Pequabuck River, which flows to the east within the site. Copper Mine Brook drains into the Pequabuck River from the north. Both watercourses are mapped within the Federal Emergency Management Agency (FEMA) 100-year floodplain (09003C0466F, effective 9/26/2008). The Pequabuck River drains into the Farmington River approximately

8.5 miles downstream in the town of Farmington, Connecticut. The local watershed is within the Connecticut Major Watershed Basin. This stretch of Pequabuck River and Copper Mine Brook are designated as Connecticut Department of Energy & Environmental Protection (CTDEEP) Trout Management Areas.

One soil map unit was identified on the property according to NRCS soil mapping (Figure 2). Each map unit represents a specific area on the landscape and consists of one or more soils for which the unit is named. Other soils (inclusions that are generally too small to be delineated separately) may account for 10 to 15 percent of each map unit. The mapped units are by name, symbol, and typical characteristics (parent material, drainage class, high water table, depth to bedrock, and slope). These characteristics are generally the primary characteristics to be considered in land use planning and management. A description of each characteristic can be found in the *Soil Survey of the State of Connecticut* (USDA, 2005).

Wetland Delineation

In total, one wetland system comprised of two unconsolidated riverine watercourses and surrounding palustrine broad-leaved deciduous forested fringe wetland was identified (Figure 3). The primary watercourse, Pequabuck River, flows west to east for approximately 0.3-mile in the northern portion of the project area before turning approximately 90 degrees to the south at the confluence point with Copper Mine Brook and flowing approximately 500 feet along the eastern site boundary. The watercourse has an unconsolidated bottom comprised of small rocks and cobbles with diameters of 1 to 2 feet. Within the limits of the project area, the watercourse is comprised of riffles with water depths approximately 0.5 to 2 feet and several pools with depths reaching 4 feet. The width of the watercourse varies between 40 and 50 feet.

Copper Mine Brook drains into Pequabuck River off site near the northeastern portion of the project area. Copper Mine Brook extends approximately 500 feet southeast from Frederick Street before its confluence with Pequabuck River. The channel is linear and comprised of small rocks and cobbles 1 to 2 feet in diameter. The brook is approximately 30 feet wide.

The steep banks of both Pequabuck River and Copper Mine Brook are vegetated with a narrow fringe of broad-leaved deciduous riparian trees. The canopy is comprised of pin oak (*Quercus palustris*), red maple (*Acer rubrum*), white ash (*Fraxinus americana*), and American elm (*Ulmus americana*). The understory along the banks is sparse as the majority of the banks are steep and largely consisting of riprap. However, herbaceous vegetation including Japanese knotweed, jewel weed (*Impatiens capensis*), and boneset (*Eupatorium perfoliatum*) exists in this area.

A functional evaluation of the on-site watercourses and forested banks based on SLR field observations is summarized in Table 1. The first column lists the functions generally ascribed to wetlands; the second column summarizes the rationale used to determine whether these functions are being performed within the subject wetland.

TABLE 1
Functions and Values Assessment – Pequabuck River Corridor

	Functions and Values	Comments
	Groundwater Recharge/Discharge	Yes – This wetland system is supported by groundwater discharge.
	Flood Flow Alteration (Storage & Desynchronization)	Yes – This wetland system exists within a FEMA-mapped 100-year floodplain.
	Fish & Shellfish Habitat	Yes – Portions of the watercourses are mapped as a Trout Management Area.
	Sediment/Toxicant Retention	No – The watercourse has high water velocities and residence time is limited; thus it does not provide retention.
	Nutrient Removal/Retention/Transformation	Yes – This wetland system provides nutrient removal.
	Production Export (Nutrient)	Yes – The wetland system permits potential for production/export.
	Sediment/Shoreline/Watercourse Bank Stabilization	Yes – The banks of the watercourses are well-defined and vegetated.
	Wildlife Habitat	Yes – This wetland system displays a forested canopy and understory.
	Recreation (Consumptive & Non-Consumptive)	No – This wetland system does not provide recreational opportunities.
	Educational Scientific Value	No – This wetland system does not provide recreational opportunities.
	Uniqueness/Heritage	No – This wetland system does not present unique attributes.
	Visual Quality/Aesthetics	No – This wetland system does not contain inherent visual quality or aesthetic value.
ES	Endangered Species	Potential – The site is located within a mapped polygon of the latest June 2021 Natural Diversity Data Base (NDDDB) by CTDEEP.

The principal functions and values of the Pequabuck River corridor include the following:

- Groundwater discharge
- Flood flow alteration
- Fish habitat
- Nutrient removal

Conclusion

On August 9, 2021, SLR delineated one wetland system within the three contiguous parcels comprising the 30.68-acre subject site located at 300 and 340 Broad Street and Andrew Street in Bristol, Connecticut. On-site wetland resources consist of approximately 0.5-linear-mile of unconsolidated riverine watercourses, including the OHW lines to the Pequabuck River and Copper Mine Brook, and narrow, palustrine hardwood deciduous forested banks.

Thank you for the opportunity to assist you. If you should have any questions or comments, please do not hesitate to contact me at (203) 344-7887.

Sincerely,

SLR International Corporation



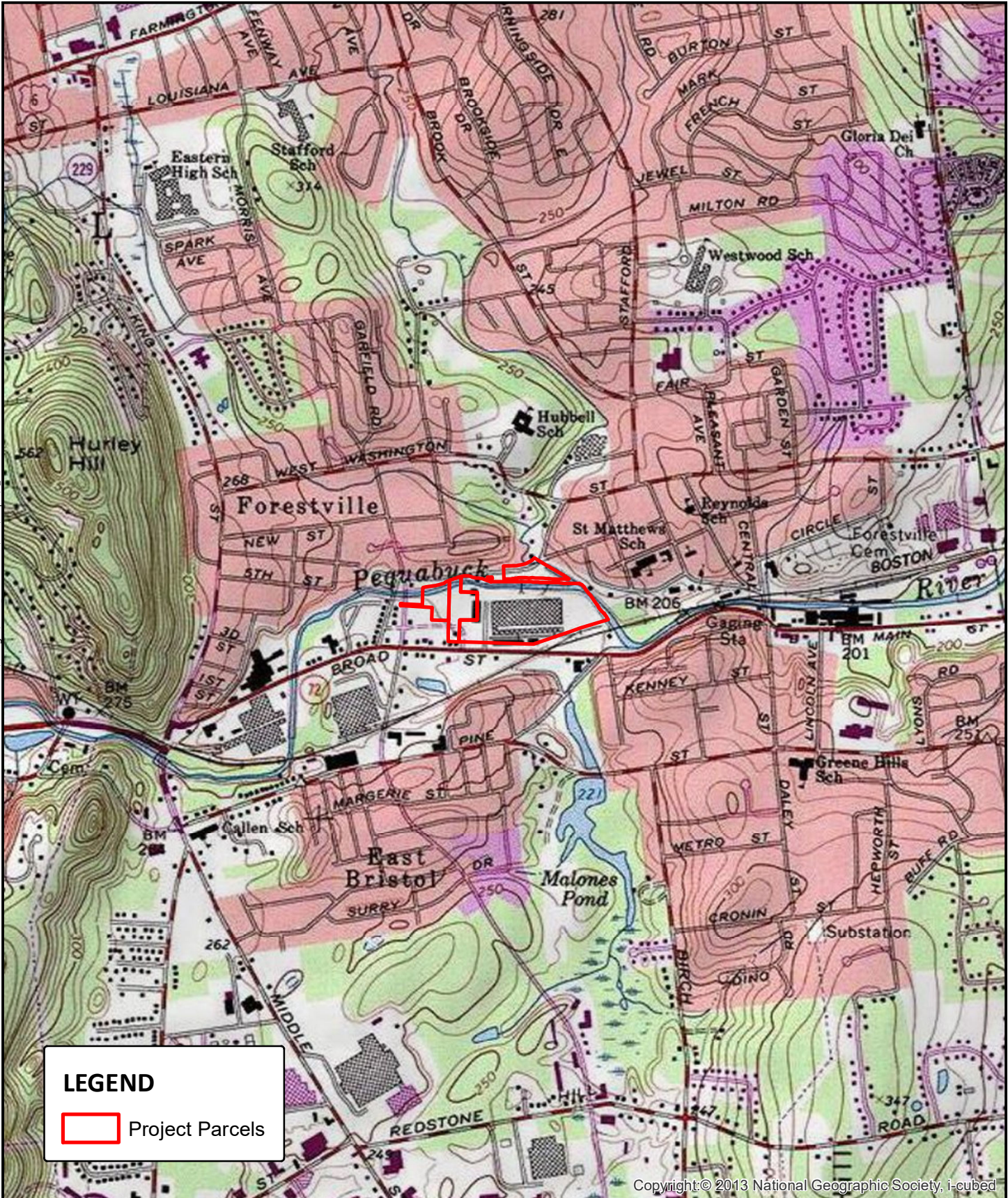
Megan B. Raymond, MS, PWS, CFM
Principal Scientist, U.S. Wetlands and Waterways Lead



Marlee Antill, MS
Project Environmental Scientist

Enclosures

141.17424.00001.d921.ltr



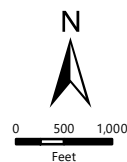
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195 CHURCH STREET
 7TH FLOOR
 NEW HAVEN, CT 06511
 203.344.7887

USGS LOCATION MAP

PARKING STUDY
 THEIS PRECISION STELL SITE
 300 BROAD STREET
 BRISTOL, CONNECTICUT



SCALE 1" = 2,000'

DATE 8/10/2021

141.17424.00001

PROJ. NO.

FIG. 1



0 400
Feet



195 CHURCH STREET
7TH FLOOR
NEW HAVEN, CT 06511
203.344.7887

NRCS SOILS

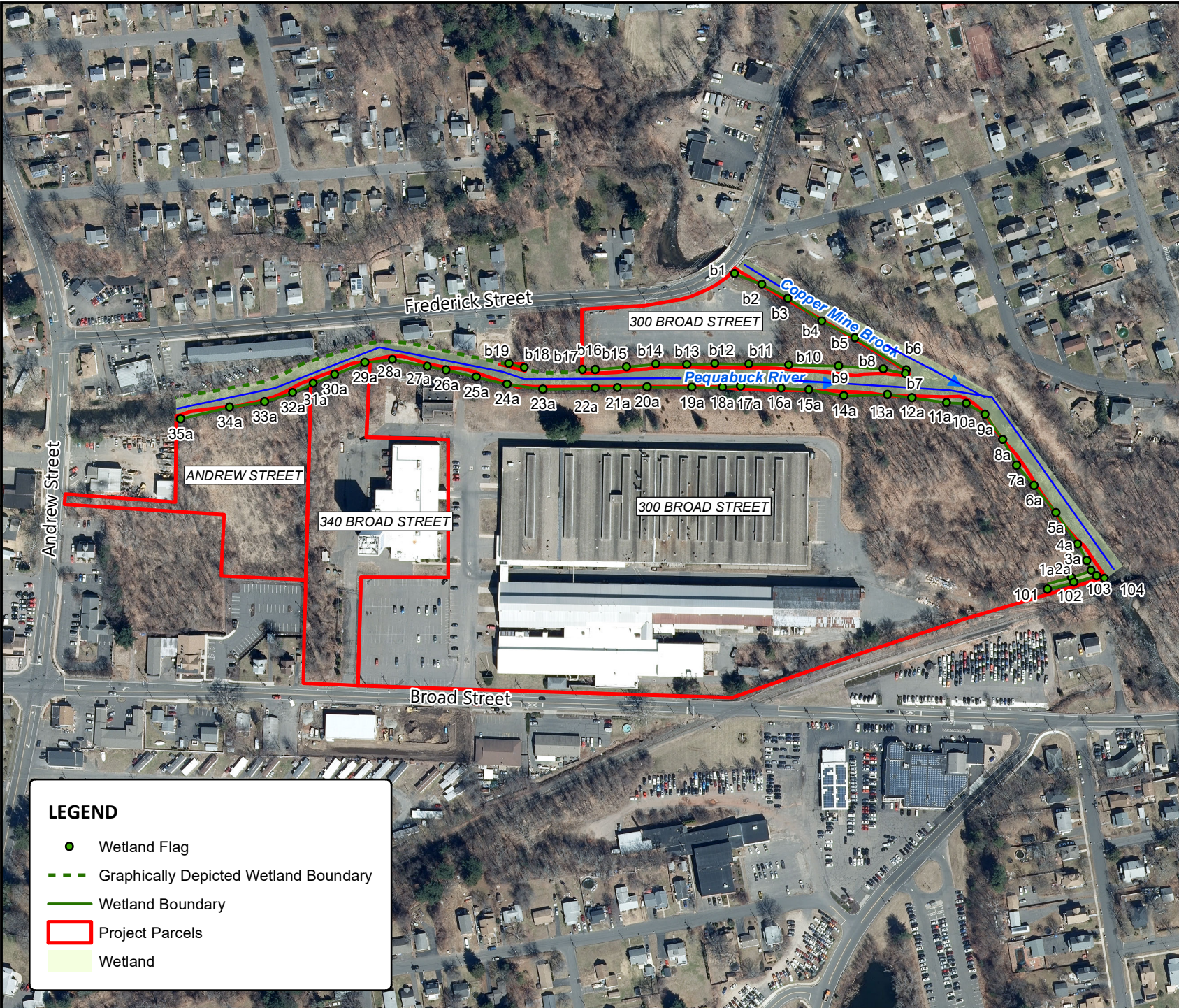
PARKING STUDY
THEIR PRECISION STEEL SITE
300 BROAD STREET
BRISTOL, CONNECTICUT

SCALE 1" = 400'

DATE 8/10/2021

141.17424.00001
PROJ. NO.

FIG. 2



LEGEND

Wetland Flag

Graphically Depicted Wetland Boundary

Wetland Boundary

Project Parcels

Wetland

N

0

300

Feet

SLR

195 CHURCH STREET
7TH FLOOR
NEW HAVEN, CT 06511
203.344.7887

WETLAND DELINEATION

PARKING STUDY

THEIR PRECISION STEEL SITE

300 BROAD STREET

BRISTOL, CONNECTICUT

SCALE 1" = 300'

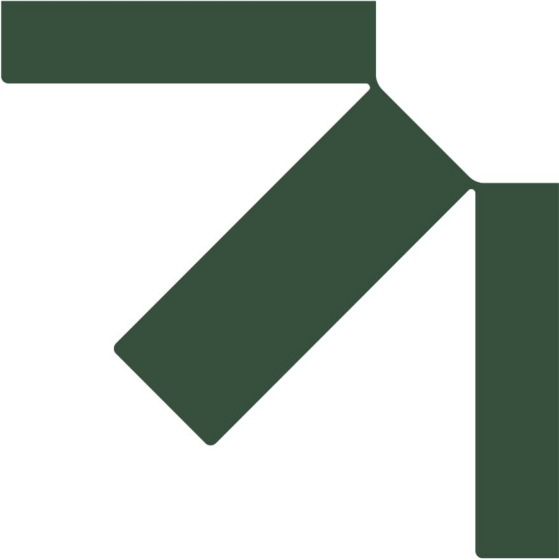
DATE 11/16/2021

141.17424.00001

PROJ. NO.

FIG. 3

Page 71



Appendix B Site Photos

Application for a Wetlands Permit

300 Broad Street Remediation

300 Broad Street Property LLC

April 25, 2024

Client Name:
300 Broad Street Property LLC

Site Location:
300 Broad Street Bristol, CT

Project No.
141.20476.00001

Photo No.
1

Date:
4/9/2024

Direction Photo Taken:
North

Description:
Twin 10" pipes discharging to the head of the drainage channel (photo right) from the stilling pool (photo left). Photo taken from southern bank of channel looking at northern bank.



Photo No.
2

Date:
4/9/2024

Direction Photo Taken:
Northeast

Description:
View from southern drainage channel bank, looking downstream.



Client Name:
300 Broad Street Property LLC

Site Location:
300 Broad Street Bristol, CT

Project No.
141.20476.00001

Photo No.
3

Date:
4/9/2024

Direction Photo Taken:
Northwest

Description:
View from northern bank of drainage channel, looking upstream at stilling pool and twin discharge pipes.



Photo No.
4

Date:
4/9/2024

Direction Photo Taken:
Southeast

Description:
View from northern drainage channel bank, looking downstream. Note large woody debris pile along southern bank.



Client Name:
300 Broad Street Property LLC

Site Location:
300 Broad Street Bristol, CT

Project No.
141.20476.00001

Photo No.
5

Date:
4/9/2024

Direction Photo Taken:
South

Description:
Pequabuck River, looking downstream from western bank just upstream of the drainage channel discharge point into the river.



Photo No.
6

Date:
4/9/2024

Direction Photo Taken:
South

Description:
Proposed construction access and bypass pump discharge point, north of drainage channel and west of Pequabuck River.



Client Name:
300 Broad Street Property LLC

Site Location:
300 Broad Street Bristol, CT

Project No.
141.20476.00001

Photo No.
7

Date:
4/9/2024

Direction Photo Taken:
West

Description:
Proposed/former access road north of drainage channel, looking towards buildings on site.



Photo No.
8

Date:
4/9/2024

Direction Photo Taken:
East

Description:
Proposed/former access road north of drainage channel, looking towards Pequabuck River.



Client Name:
300 Broad Street Property LLC

Site Location:
300 Broad Street Bristol, CT

Project No.
141.20476.00001

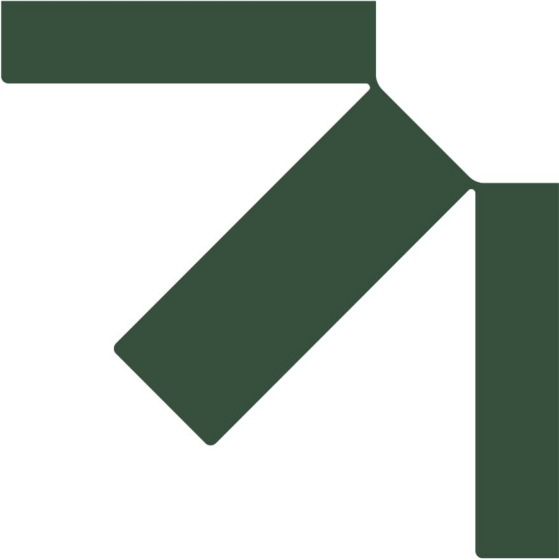
Photo No.
9

Date:
4/9/2024

Direction Photo Taken:
North

Description:
Potential stockpile area
east of northern building on
site.





Appendix C NDDB Final Determination

Application for a Wetlands Permit

300 Broad Street Remediation

300 Broad Street Property LLC

April 25, 2024

Generated by eNDDDB on:
4/16/2024

Marlee Antill
SLR CONSULTING US LLC
195 Church St - 7TH FL
NEW HAVEN, CT 06510
mantill@slrconsulting.com

Subject: Former Theis Steel Property Drainage Channel Remediation
Filing # 110357
NDDDB – New Determination Number: 202405378
300 BROAD ST
BRISTOL

Expiration Date: 4/16/2026

Current data maintained by the Natural Diversity Database (NDDDB) and housed in the DEEP ezFile portal indicates that populations of the following State Endangered, Threatened, or Special Concern species (RCA Sec. 26-306) have been documented within the project area or in close proximity to the proposed Remediation/Contaminated soil remediation, Former Theis Steel Property Drainage Channel Remediation.

Common crayfish (*Cambarus bartonii*)

In accordance with the project information provided in your request submittal, implementation of the following Best Management Practices will avoid negative impacts to listed species:

Common Name	Common crayfish
Scientific Name	<i>Cambarus bartonii</i>
Taxa	invertebrate
Status ¹	SC
General Ecology	This freshwater crustacean can be found in fast flowing streams, brooks, rivers and occasionally in ponds. The species has a life span of three to four years. Its burrows are often found in gravel and sand under larger rocks and along the edges of streams. Burrows have been known to be as deep as 1 m. Localized declines are attributed to general habitat destruction and loss. Spring to autumn delineates the period of reproduction with the offspring hatching in July and August. Low pH values and other water quality deterioration have been demonstrated to threaten juvenile and molting crayfish.
Best Management Practice	Impact from this project can be minimized if you follow any applicable Best Practices and monitoring associated with your project activities and/or permit requirements, minimize impact to and loss of preferred habitat, and include any protection measures included here in the Species General Ecology that relate to your project activities before, during, and after completion.

¹E = State Endangered, T = State Threatened, SC = State Special Concern, FE = Federally Endangered, FT = Federally Threatened, NA = Not applicable.

Your submission information indicates that your project requires a state permit, license, registration, or authorization, or utilizes state funding or involves state agency action. This NDDDB – New determination may be utilized to fulfill the Endangered and Threatened Species requirements for state-issued permit applications, licenses, registration submissions, and authorizations.

Please be aware of the following limitations and conditions:

Natural Diversity Database information includes all information regarding listed species available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, land owners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as enhance existing data. Such new information is incorporated into the Database and accessed through the ezFile portal as it becomes available. New information may result in additional review, and new or modified restrictions or conditions may be necessary to remain in compliance with certain state permits.

- During your work listed species may be encountered on site. A report must be submitted by the observer to the Natural Diversity Database promptly and additional review and restrictions or conditions may be necessary to remain in compliance with certain state permits. Please fill out the [appropriate survey form](#) and follow the instructions for submittal.
- Your project involves the state permit application process or other state involvement, including state funding or state agency actions; please note that consultations with your permit analyst or the agency may result in modifications or additional requirements. In this situation, additional evaluation of the proposal by the DEEP Wildlife Division may be necessary and additional information, including but not limited to species-specific site surveys, may be required.
- If your project involves preparing an Environmental Impact Assessment, this NDDDB consultation and determination should not be substituted for conducting biological field surveys assessing on-site habitat and species presence.
- This determination applies only to the project as described in the submission and summarized at the end of this letter. Please re-submit an updated Request for Review if the project's scope of work and/or timeframe changes, including if work has not begun by 4/16/2026.
- If biological surveys have been conducted in accordance with Best Management Practices provided, please forward a copy of the results to the address listed at the end of this letter. Include the Project Name and Determination Number on all correspondence.

The NDDDB – New determination for the Former Theis Steel Property Drainage Channel Remediation at 300 BROAD ST, BRISTOL, as described in the submitted information and summarized at the end of this document is valid until 4/16/2026. This determination applies only to the project as described in the submission and summarized at the end of this letter. Please re-submit an updated Request for Review if the project's scope of work and/or timeframe changes, including if work has not begun by 4/16/2026.

This letter is computer generated and carries no signature. If however, any clarification is needed, or, if you have further questions, please contact the following:

CT DEEP Bureau of Natural Resources
Wildlife Division
Natural Diversity Database, 6th floor
79 Elm Street,
Hartford, CT 06106-5127
(860) 424-3011
deep.nddbrequest@ct.gov

Please reference the Determination Number provided in this letter when you e-mail or write. Thank you for submitting your project through DEEP's ezFile portal for Natural Diversity Database reviews.

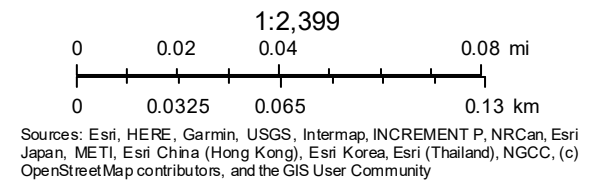
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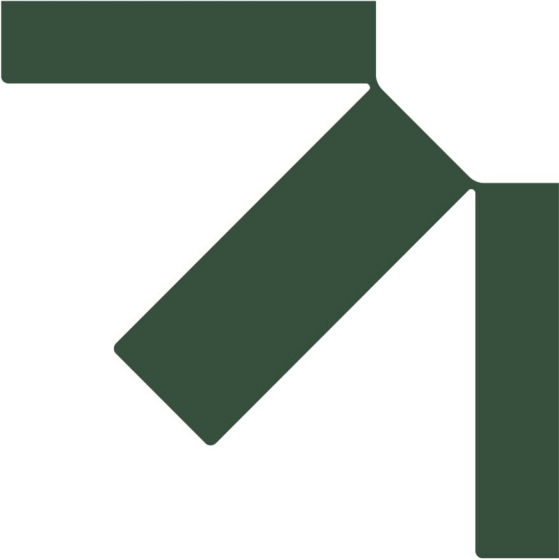
Project involves federal funds or federal permit:	No
Project involves state funds, state agency action, or relates to CEPA request:	Yes
Project requires state permit, license, registration, or authorization:	Yes
DEEP enforcement action related to project:	
Project Type:	Remediation
Project Sub-type:	Contaminated soil remediation
Project Name:	Former Theis Steel Property Drainage Channel Remediation
Project Description:	

Former Theis Steel Property Drainage Channel Remediation Map



April 16, 2024





Appendix D Project Site Plans

Application for a Wetlands Permit

300 Broad Street Remediation

300 Broad Street Property LLC

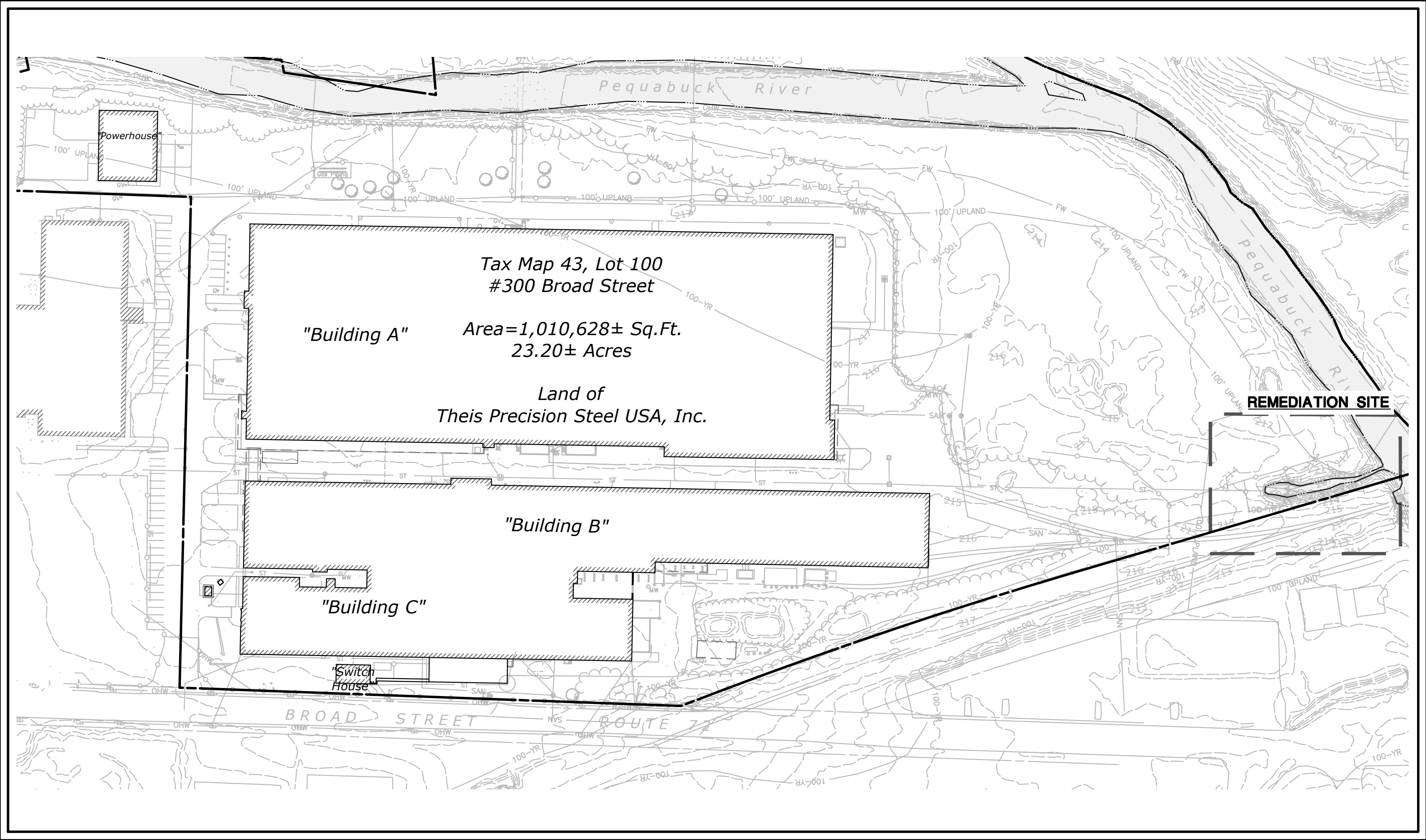
April 25, 2024

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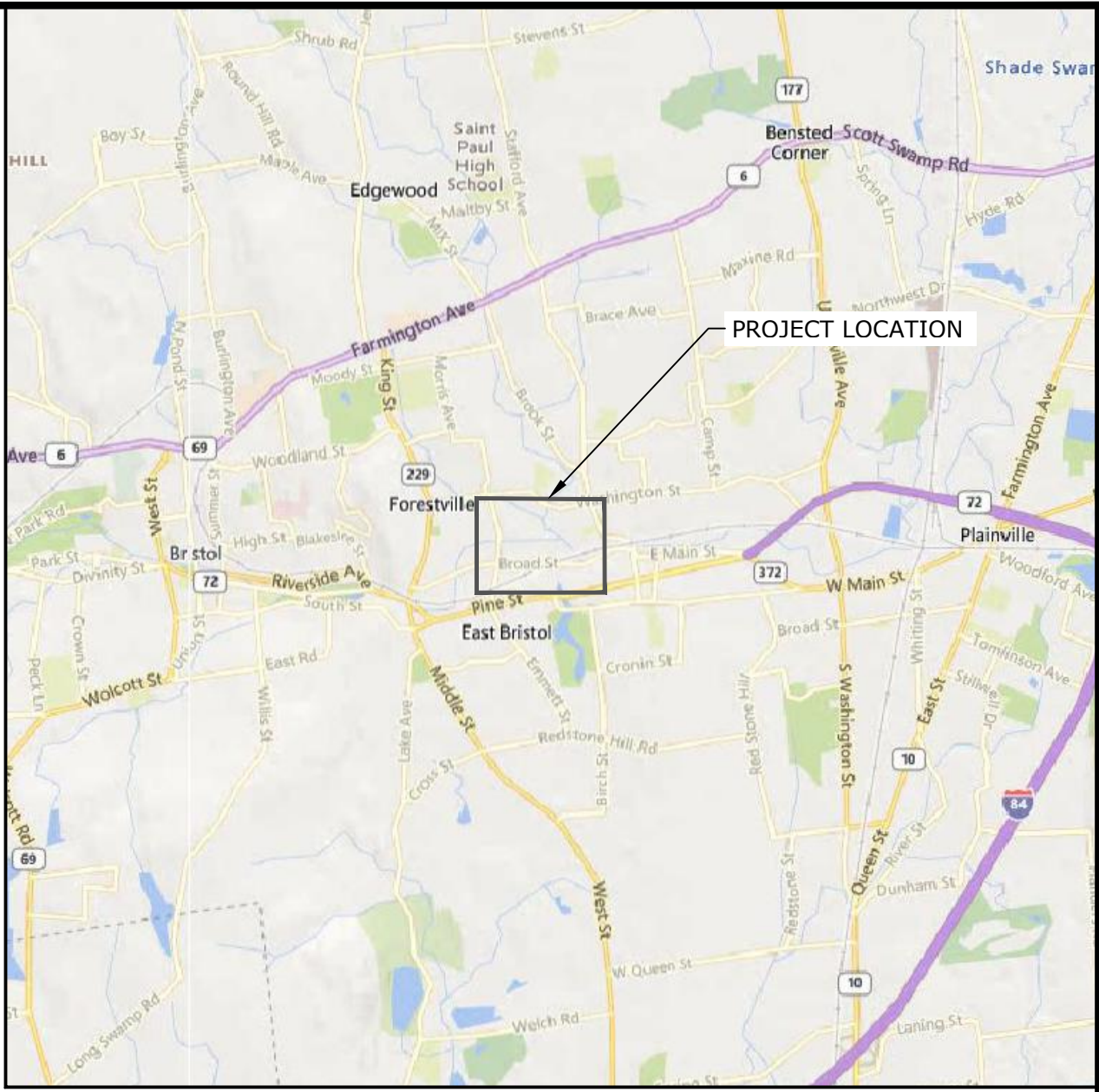
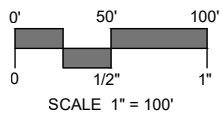
300 BROAD STREET - ASSESSMENT AND REMEDIATION REMEDIAL ACTIVITIES

300 BROAD STREET
BRISTOL, CT

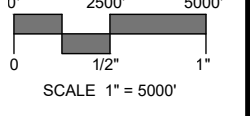
126.V20476.00001
APRIL 4, 2024



PROJECT SITE VICINITY MAP:



LOCATION MAP:



PREPARED FOR:

300 BROAD STREET PROPERTY LLC
534 HUDSON STREET SUITE 3A
NEW YORK, NY 10010

LIST OF DRAWINGS

NO.	NAME	TITLE
1	-	TITLE
2	EX-1	EXISTING CONDITIONS
3	CP-1	CONSTRUCTION PLAN
4	CP-2	CONSTRUCTION PLAN
5	RS-1	GRADING AND RESTORATION PLAN
6	RR-1	REGULATED RESOURCES
7	DE-1	DETAILS

PREPARED BY:

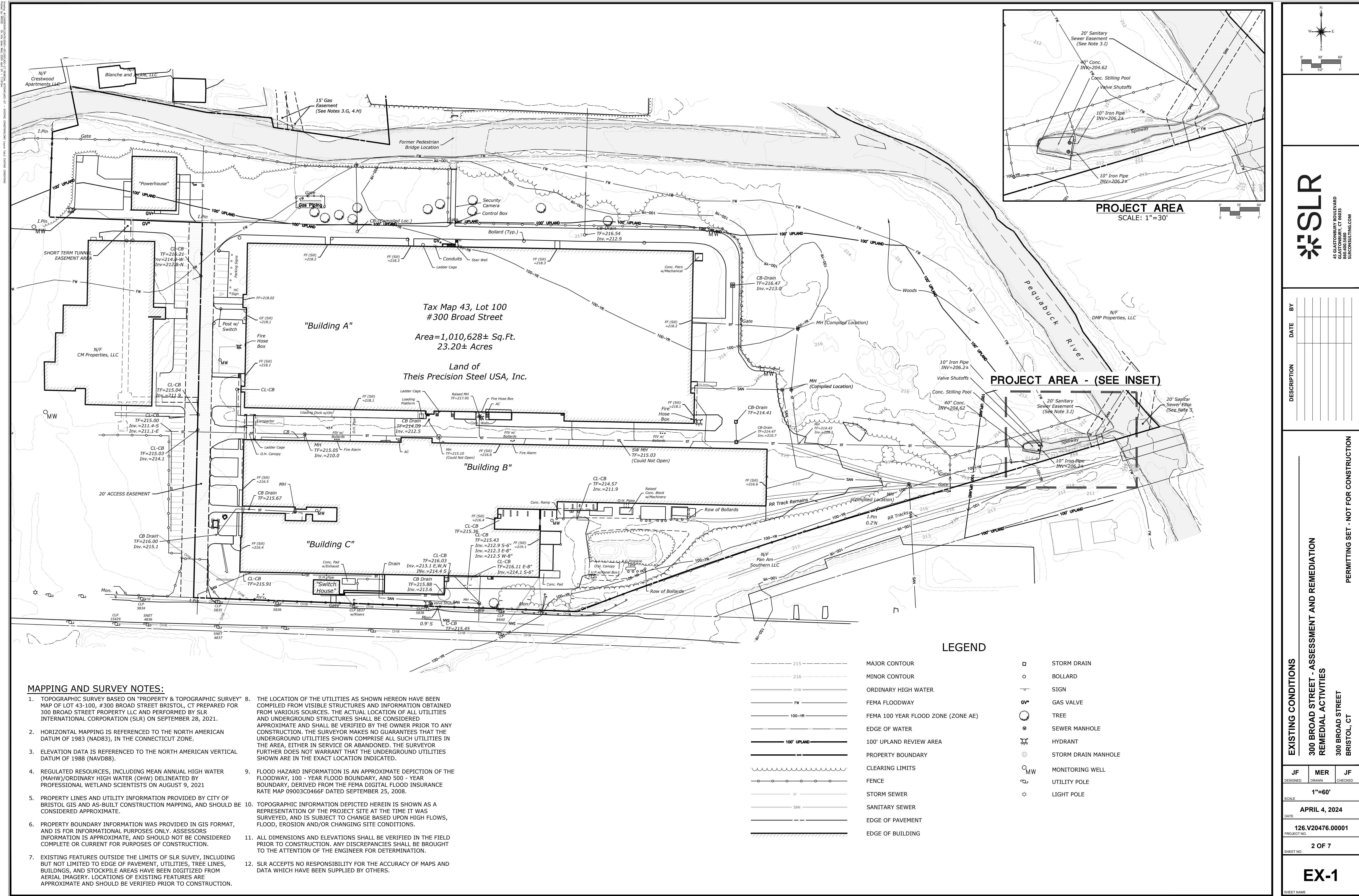


45 GLASTONBURY BOULEVARD
GLASTONBURY, CT 06033
860.400.5680
SLRCONSULTING.COM



Know what's below.
Call before you dig.
www.cbyd.com

NOT FOR CONSTRUCTION





RE-MEDIATION

PERMITTING SET - NOT FOR CONSTRUCTION

CONSTRUCTION PLAN

**300 BROAD STREET - ASSESSMENT AND
REMEDIAL ACTIVITIES**

**300 BROAD STREET
BRISTOL, CT**

CONSTRUCTION PLAN

**300 BROAD STREET - ASSESSMENT AND
REMEDIAL ACTIVITIES**

**300 BROAD STREET
BRISTOL, CT**

CONSTRUCTION PLAN

**300 BROAD STREET - ASSESSMENT AND
REMEDIAL ACTIVITIES**

**300 BROAD STREET
BRISTOL, CT**

JF DESIGNED	MER DRAWN	JF CHECKED
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SCALE		
APRIL 4, 2024		
DATE		
126.V20476.00001		
PROJECT NO.		
3 OF 7		
SHEET NO.		

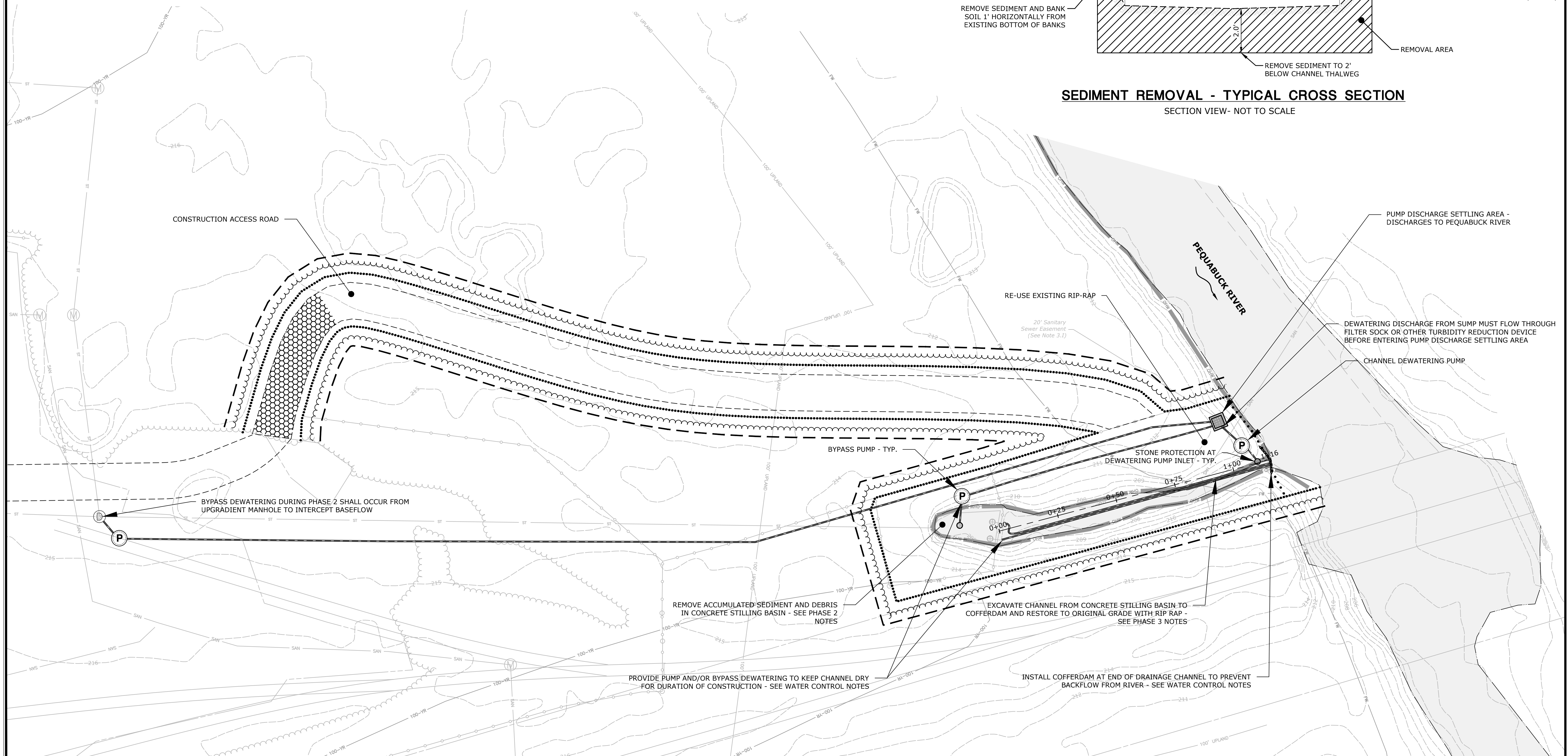
CP-1

EXPECTED FLOW RATES

NOTE: EXPECTED BASEFLOW BASED UPON STREAMFLOW MEASUREMENTS PERFORMED ON 4/15/2024 DURING NEAR-SEASONALLY HIGH WATER TABLE CONDITIONS ACCORDING TO USGS WELL CT-SB 42 412916073121701.

NOTE: EXPECTED BASEFLOW BASED UPON STREAMFLOW MEASUREMENTS PERFORMED ON 4/15/2024 DURING NEAR-SEASONALLY HIGH WATER TABLE CONDITIONS ACCORDING TO USGS WELL CT-SB 42 412916073121701.

1. ALL WORK IN PHASE II AND PHASE III SHALL OCCUR WITHIN FULLY DEWATERED CONDITIONS. WORK IN THESE PHASES SHALL NOT COMMENCE IF ANY RAINFALL IS FORECAST DURING THE DURATION OF THE PHASE. IF RAIN BEGINS TO FALL DURING EXCAVATION OF THE CHANNEL, THE CONTRACTOR MUST STOP WORK AND IMMEDIATELY STABILIZE THE CHANNEL BY COVERING EXPOSED CHANNEL BOTTOM MATERIAL WITH 10 MIL POLYETHYLENE AND SECURING THE SHEETING IN PLACE.
2. CLEAN WATER BYPASS SHALL OCCUR THROUGH THE MEANS OF A TEMPORARY BYPASS PUMP OR GRAVITY BYPASS IN THE CONCRETE STILLING POOL TO INTERCEPT BASEFLOW. TEMPORARY BYPASS MEASURES SHOULD BE CAPABLE OF PASSING THE EXPECTED FLOW RATES SHOWN ON THIS SHEET. THESE FLOW RATES REFLECT BASEFLOW CONDITIONS.
3. A COFFERDAM SHALL BE CONSTRUCTED AT THE DOWNSTREAM END OF THE CHANNEL IN ORDER TO PREVENT BACKFLOW FROM THE PEQUABUCK RIVER FROM ENTERING THE EXCAVATION. THE COFFERDAM SHALL NOT EXCEED FOUR FEET IN HEIGHT, BUT SHALL BE OF SUFFICIENT SIZE TO ALLOW FOR DEWATERING OF THE CHANNEL DURING EXCAVATION.
4. THE CONTRACTOR SHALL INSTALL A TURBID WATER SUMP AND PUMP WITHIN THE ACTIVE DREDGE AREA TO MANAGE GROUNDWATER AND COFFERDAM SEEPAGE. WATER FROM THIS PUMP MUST BE DISCHARGED TO A FILTER SOCK OR OTHER APPROVED TURBIDITY REDUCTION DEVICE BEFORE ENTERING THE PUMP DISCHARGE SETTLING AREA.
5. BYPASS AND DEWATERING DISCHARGE PIPES SHALL BE ROUTED AROUND THE ACTIVE WORK AREA AS NEEDED. CLEAN WATER BYPASS (WATER FROM BEHIND THE CONCRETE STILLING BASIN OR FROM UPGRADE MANHOLES) MAY DISCHARGE DIRECTLY TO THE PUMP DISCHARGE SETTLING AREA.
6. SEE SEDIMENT AND EROSION CONTROL NOTES ON SHEET CP-1 FOR MANAGEMENT OF BYPASS AND DEWATERING DISCHARGE.



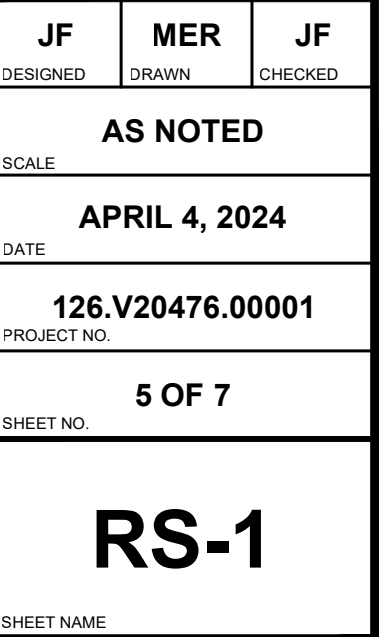
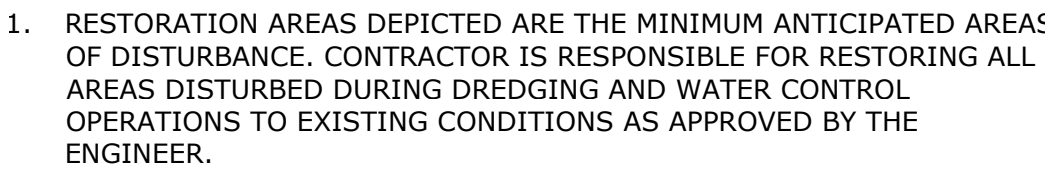
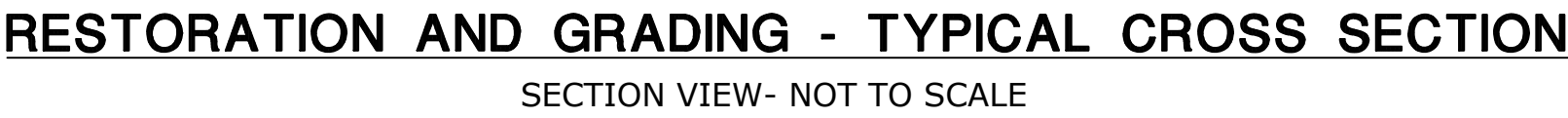
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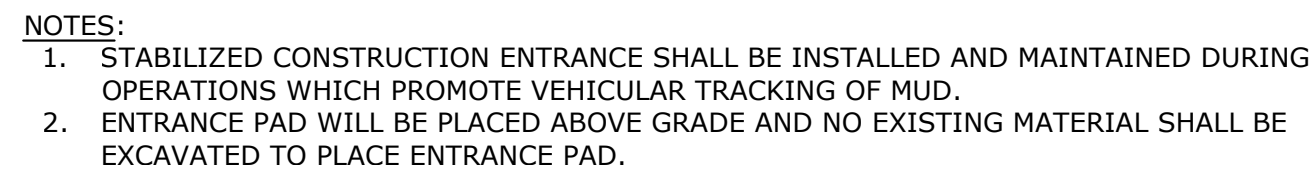
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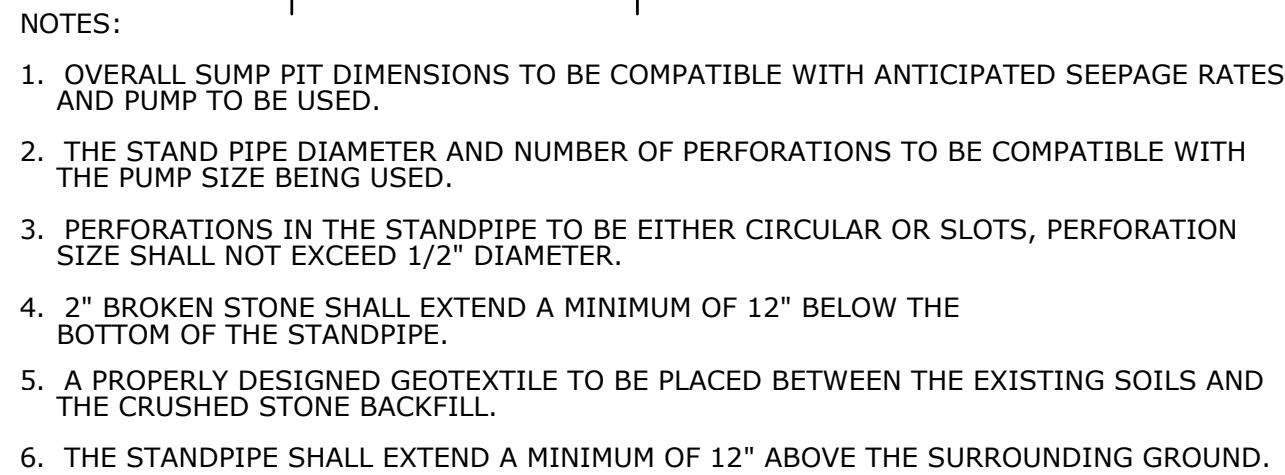


TOTAL CONSERVATION MIX - APPROX. 13,000 SQ. FT. AS SHOWN





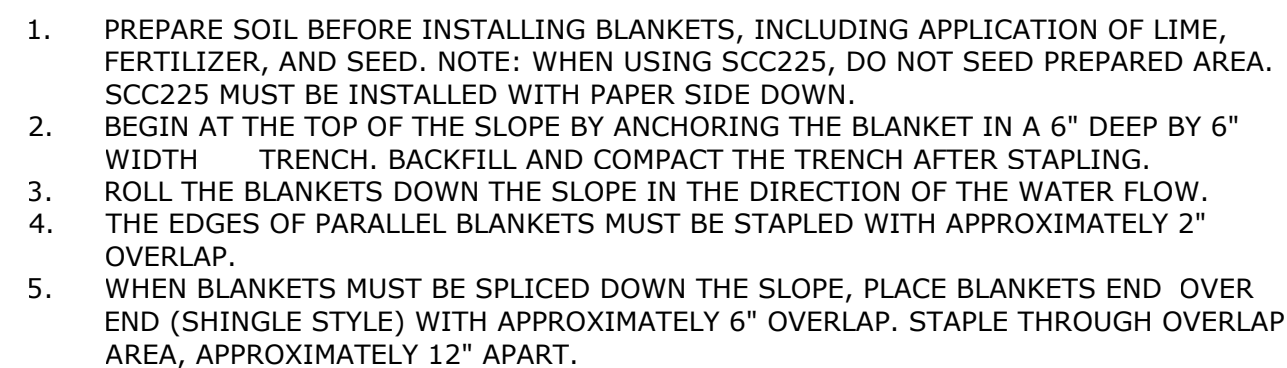
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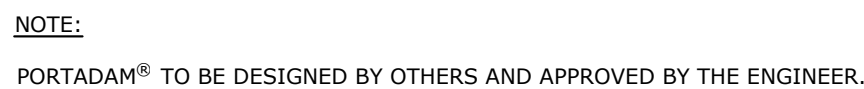


NOT TO SCALE



REFER TO GENERAL STAPLE PATTERN GUIDE IN NORTH AMERICAN GREEN CATALOG
FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.

NOT TO SCALE



NOT TO SCALE



MEDIATION

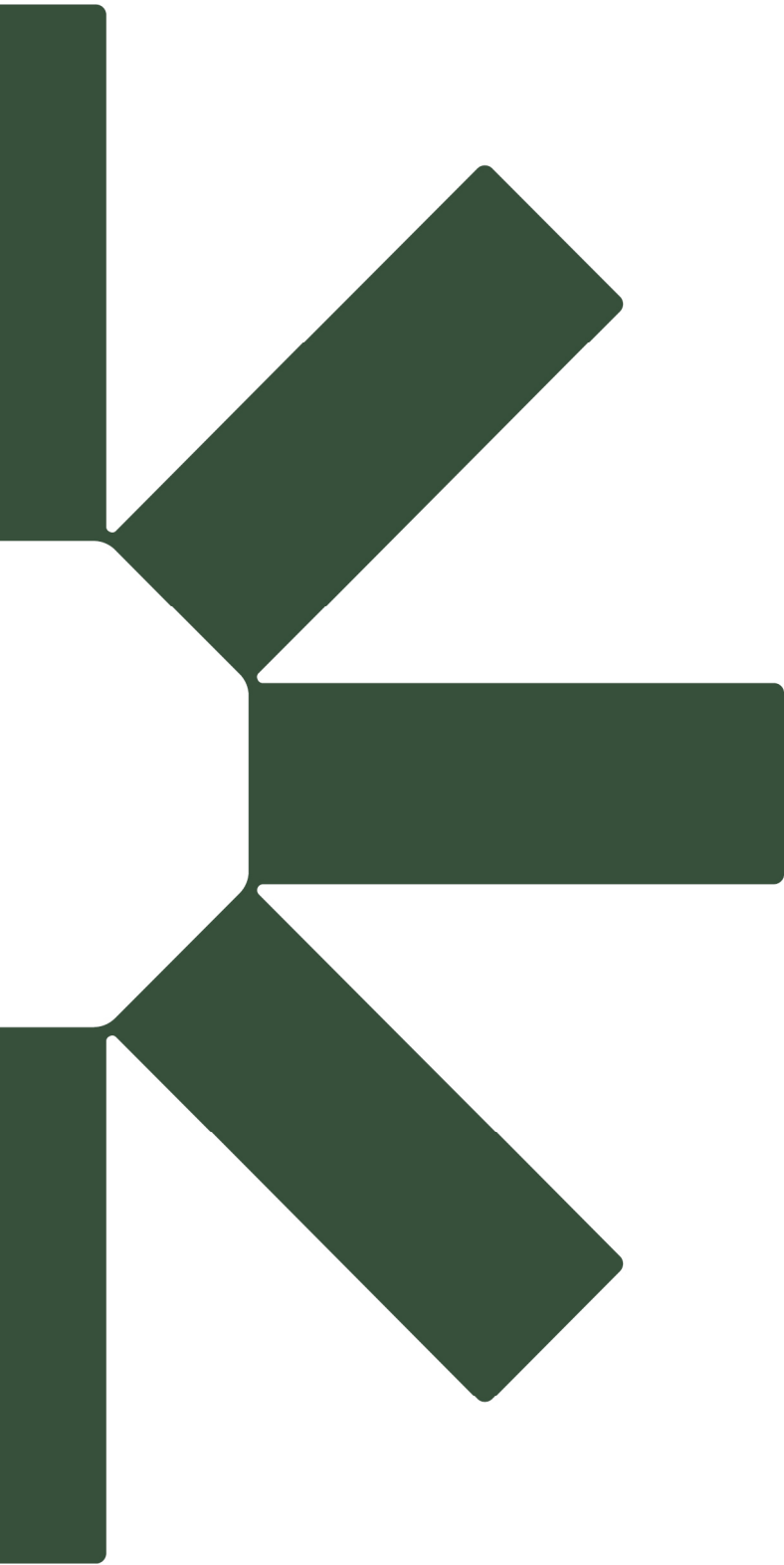
PERMITTING SET - NOT FOR CONSTRUCTION

DETAILS

**300 BROAD STREET - ASSESSMENT AND
REMEDIAL ACTIVITIES**

**300 BROAD STREET
BRISTOL, CT**

---	GAB	MEM
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AS NOTED		
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APRIL 4, 2024		
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126.V20476.00001		
PROJECT NO.		
7 OF 7		
SHEET NO.		
DE-1		
SHEET NAME		



**BRISTOL CONSERVATION COMMISSION
INLAND WETLANDS AGENCY
FORM IW-1 (Application for a Wetlands Permit)**

For Office Use Only
APPLICATION NO. **2029**
DATE FILED: **04-25-2024**
DECISION DATE: _____
DECISION: _____

1. APPLICANT:

Name: **Jeffrey Caggiano** Signature: _____
Address: **111 North Main Street** City: **Bristol** State: **CT** Zip: **06010**
Telephone No.: **860-584-6250** ☐ home ☐ work Email: **mayorsoffice@bristolct.gov**

2. PROPERTY OWNER(S):

Name: **City of Bristol** Signature: _____
Address: **111 North Main Street** City: **Bristol** State: **CT** Zip: **06010**
Telephone No.: **860-584-6100** ☐ home ☐ work Email: _____

3. DESCRIBE THE SUBJECT PROPERTY:

Address or Location: **Right of Way adjacent to 315-350 Divinity Street**
Assessor's Map No.: **N/A** Assessor's Lot No.(s): **Right of Way**

Description of wetlands (location, approximate area to be disturbed, vegetation, etc.):

CT inland wetlands and a perennial watercourse are present within the Divinity Street culvert project limits. No Federal wetlands are present within the project area. The project is proposed to permanently impact 700 SF of watercourse and 420 SF of CT inland wetlands and temporarily impact 450 SF of watercourse and 360 SF of CT inland wetlands for a total of 1930 SF of activity in wetlands or watercourse. Further description of vegetation provided within attached Wetlands Report.

4. DESCRIBE THE PROPOSED ACTIVITY AND ITS PURPOSE:

The purpose of this project is to address the structural deficiency of the existing Divinity Street culvert which will be fully replaced. The project includes the replacement of existing Divinity Street culvert over Unnamed Brook and approximately 140 ft of roadway reconstruction. The culvert will be completely removed and replaced with a precast box culvert buried with 18" of natural streambed material infilled through the full length.

5. CHECK THE STATEMENT WHICH APPLIES TO THE PROPOSED ACTIVITY:

- ☐ a. The proposed activity is either a use permitted as of right or a non-regulated use, under subsection of Section 4 of the Inland Wetlands Regulations. *See instructions for submission requirements.*
- ☐ b. The proposed activity is not regulated because it is greater than 100 feet from a wetlands or watercourse or will not adversely affect the wetlands or watercourse. *See instructions for submission requirements.*
- ☐ c. The proposed activity is a regulated activity and will occur:
- | | |
|---|--|
| ☒ in a wetlands or watercourse; | area of impact: 1930 SF 0.045 acres) |
| ☒ within 100 feet of a wetlands or watercourse; | area of impact: 8870 SF 0.204 acres) |
| ☐ beyond 100 feet of a wetlands or watercourse; | area of impact: _____ SF _____ acres) |

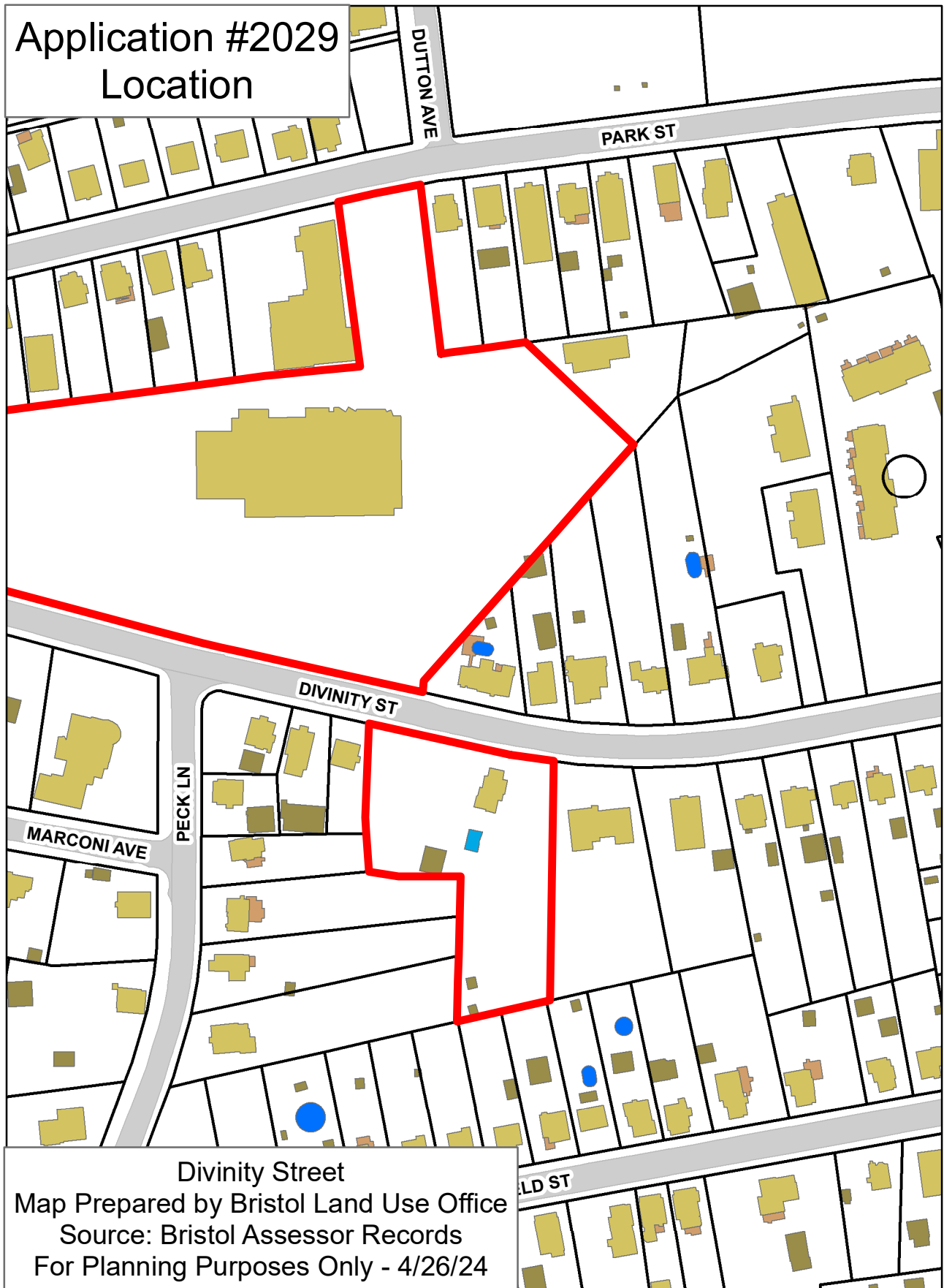
6. FLOW CALCULATIONS:

Does a watercourse flow through the subject property?

☒ yes ☐ no

If "yes", see instructions for submission requirements.

Application #2029
Location



Divinity Street

Map Prepared by Bristol Land Use Office

Source: Bristol Assessor Records

For Planning Purposes Only - 4/26/24

Application #2029
Aerial

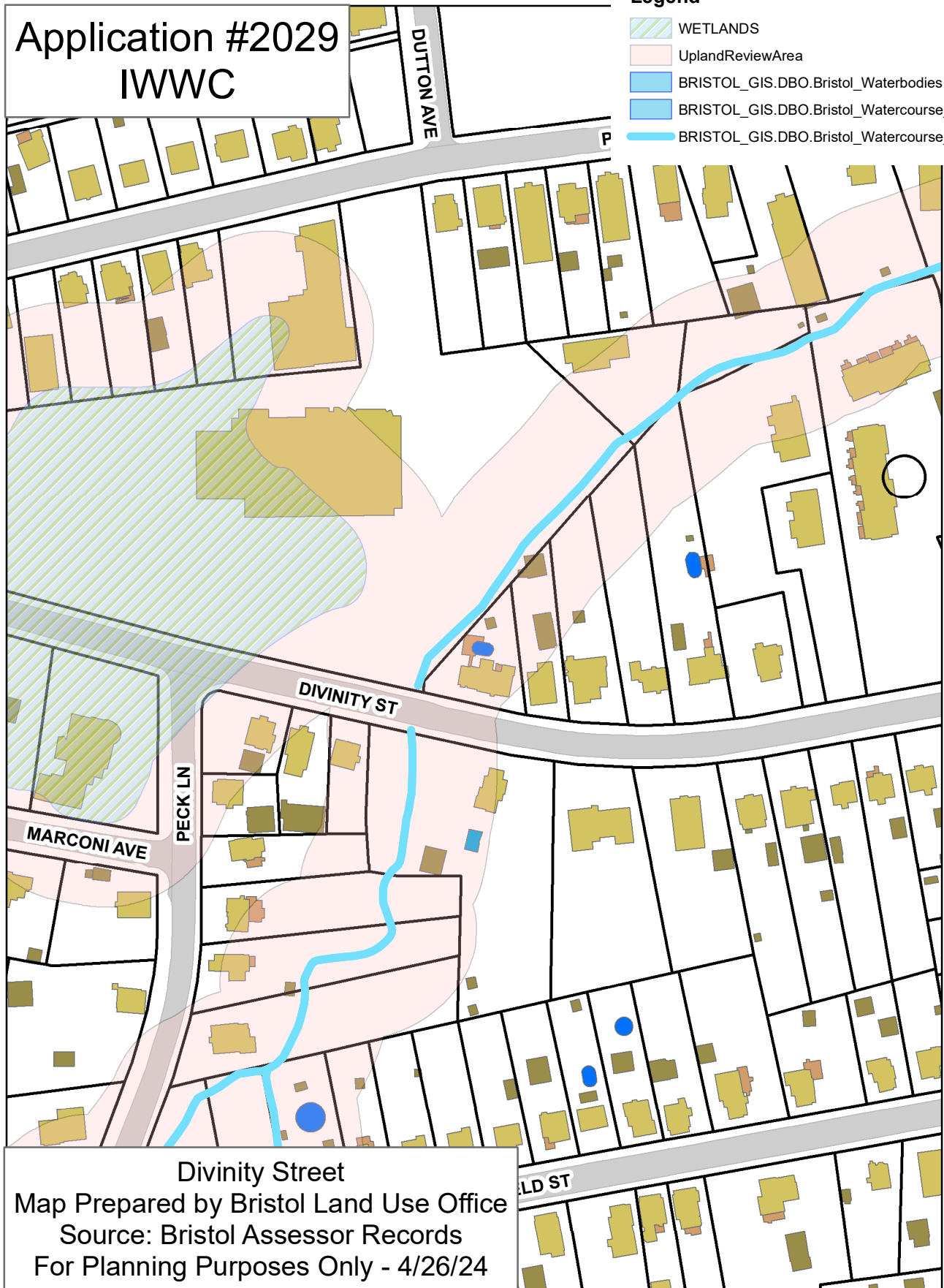


Divinity Street
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 4/26/24

Application #2029
IWWC

Legend

- WETLANDS
- UplandReviewArea
- BRISTOL_GIS.DBO.Bristol_Waterbodies
- BRISTOL_GIS.DBO.Bristol_Watercourse_Polygons
- BRISTOL_GIS.DBO.Bristol_Watercourse_lines



Divinity Street
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 4/26/24



DIVINITY STREET CULVERT REPLACEMENT

CITY OF BRISTOL, CONNECTICUT

ADDITIONAL INFORMATION FOR: CITY OF BRISTOL
CONSERVATION COMMISSION INLAND WETLANDS AGENCY

DATE: APRIL 2024

500 WINDING BROOK DRIVE
GLASTONBURY, CT 06033

TEL.: +1 860 633-8117
WSP.COM

Additional Information for
City of Bristol Conservation Commission Inland Wetlands Agency
Property Address: Divinity St over Unnamed Brook

Inland Wetlands and Watercourses Regulations of the Conservation Commission of the City of Bristol, CT
Section 7 Application Requirements

7.4 If the proposed activity involves a significant activity as defined in Section 2.1 of these regulations, additional information, based on the nature and anticipated effects of the activity, including but not limited to the following may be required.

a. Site plans for the proposed use or operation and the property which will be affected, which show existing and proposed conditions, wetland and watercourse boundaries, land contours, boundaries of land ownership, proposed alterations and uses of the wetlands and watercourses, and other pertinent features of the development drawn by a licensed surveyor, professional engineer or architect registered in the State of Connecticut or by such other person acceptable to the Agency;

Environmental Permit Plans titled "Replacement of Divinity Street Culvert Over Unnamed Brook"
Prepared by: WSP, Dated: March 2024.

b. Engineering reports and analyses and additional drawings to fully describe the proposed project and any filling, excavation, drainage or hydraulic modifications to watercourses;

Hydrology and Hydraulics Analysis Report, Prepared by: WSP, Dated: March 2024

c. Mapping of soil types consistent with the categories established by the National Cooperative Soil Survey of the U.S. Soil Conservation Service;

See Hydrology and Hydraulics Analysis Report, Prepared by: WSP, Dated: March 2024
Soil Map titled "Hydrologic Soil Group – State of Connecticut"

d. Description of the ecological communities and functions of the wetlands or watercourses involved with the application and the effects of the proposed regulated activities on these communities and wetland functions;

Wetland Report, Prepared by: Soil Science and Environmental Services, Inc., Dated: August 2, 2022

7.5 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;

NO

b. Traffic attributable to the completed project on the site will use streets within an adjoining municipality to enter or exit the site;

NO

c. Sewer or water drainage from the project site will flow through and impact the sewage or drainage system within the adjoining municipality; or,

NO

d. Water run-off from the improved site will impact streets or other municipal or private property within the adjoining municipality.

NO

Executive Summary

State Project No. L-017-0004 Replacement of Divinity Street Culvert over Unnamed Brook Bristol, Connecticut

Project Description

WSP USA Inc. (WSP) was engaged by the City of Bristol (City) to provide engineering services for the complete replacement of the Divinity Street Culvert which carries an unnamed brook. The structure that is estimated to have been built in 1913 is scheduled to be replaced under the Divinity Street Culvert Replacement (“the Project”). The project limits start approximately 200 feet east of the intersection of Divinity Street and Peck Lane and extend approximately 140 feet east.

The overall project consists of reconstructing a portion of Divinity Street over the culvert. The improvements include replacement of the existing culvert at the unnamed brook; revised stormwater drainage system including catch basins, manholes, and outlets; full-depth roadway reconstruction; new concrete sidewalk on the north side of the roadway; and signing and pavement markings.

The existing open-bottomed culvert is a reinforced concrete slab supported by masonry walls providing approximately five feet by five feet opening, estimated to have been built in 1913. During a storm event in September 2021 the culvert overtopped and a large portion of the northeast embankment (downstream right side) eroded away. There are existing sanitary and water utilities which run under the existing culvert which are exposed in the streambed and an existing gas utility which runs over the existing culvert. There are existing stormwater drainage networks located to the east and to the west of the culvert which discharge directly into the culvert and catch basins on the north and south gutterlines which discharge into the roof of the culvert.

The proposed structure type is a 6 feet by 8 feet precast box culvert that will be buried and infilled with an 18-inch minimum depth of natural streambed material throughout its length for a hydraulic waterway opening of 4.5 feet by 8 feet. Headwalls and wingwalls will be constructed of reinforced cast in place concrete. The existing sanitary and water utilities will be relocated below the proposed culvert. The gas

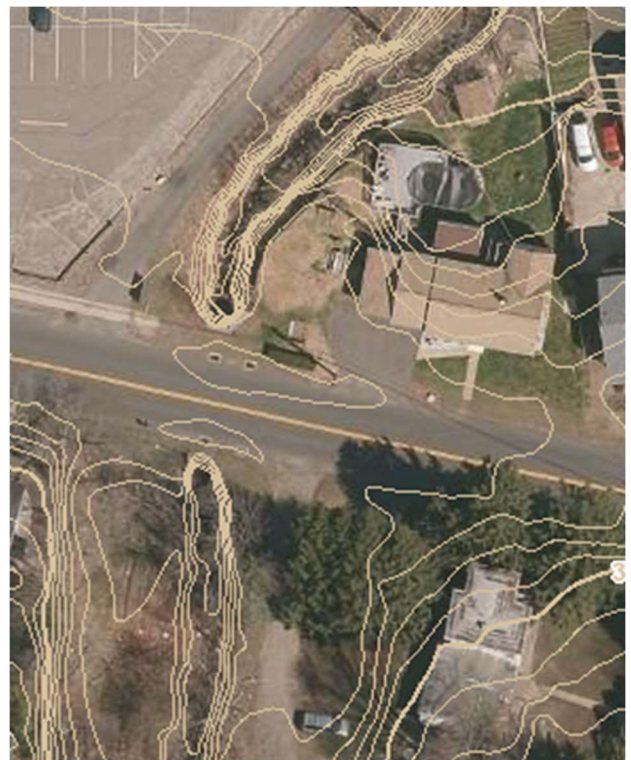


Figure 1- Aerial image with 1-foot contours of site

utility will be reconstructed over the proposed culvert. The existing stormwater drainage networks will be slightly reconfigured and discharge through outlet pipes in the downstream northeast and northwest wingwalls. The final catch basin in the new eastern system will include a four foot deep sump.

The total project length along the roadway is 140 feet. During the culvert demolition and reconstruction activities, the roadway will be closed with public access restricted between the Peck Lane and View Street intersections.

The total project length along the centerline of the unnamed brook is approximately 150 feet, including the 52 feet of culvert. At the northeast corner (downstream right embankment) the collapsed northeast embankment will be supported with an extended wingwall. All other corners will be regraded to a maximum of 1.5H:1 and consist of modified riprap topped with 12" depth of natural streambed material upstream of the culvert and standard riprap topped with 12" depth of natural streambed material downstream of the culvert. During the culvert demolition and reconstruction activities, temporary water-handling-cofferdams are proposed with temporary bypass pumping around the construction site.

At the Project, Divinity Street is generally an east-west roadway and is classified as an urban local road with an average daily traffic of approximately 4,600 vehicles and a posted speed limit of 25 mph. For the length of the project, Divinity Street will be constructed to a 30-foot-wide roadway with one 11-foot lane and a four-foot shoulder in each direction. The widths slightly vary at the project limits to tie into the existing roadway geometry.

Hydraulic Considerations

At the Project, the Unnamed Brook flows generally south to north. The watershed area for the Unnamed Brook at the Divinity Street culvert is $0.71 \pm$ square miles ($457 \pm$ acres). Since the culvert drainage area is less than 1 square mile, the CTDOT Drainage Manual, Chapter 8, Table 8-4, classifies this crossing as a Small Structure. The design frequency for a Small Structure is 50-year with a check frequency of 100-year.

As previously discussed, the proposed culvert will increase the span, which in turn will improve the hydraulic capacity. The proposed culvert will improve the hydraulic capacity, however, will not allow for the continuous uninterrupted flow of the 50-year flood event. HEC-RAS calculations indicate that the water surface elevation overtops the road at the proposed culvert during a storm event between a 25-year and 50-year flood event. The 25-year flood is 322 cfs and the 50-year flood is 402 cfs per StreamStats computations.

An existing and proposed model were generated utilizing HEC-RAS. The existing hydraulic model indicates that the road is overtopped with approximate 0.7 feet of water during the 50-year storm (water surface elevation 376.04), whereas the proposed model indicates that the road is overtopped with approximately 0.1 feet of water (water surface elevation 375.39).



The proposed 8' wide hydraulic opening width will provide less than the recommended Best Management Practice of 1.2 times the bank full width (BFW). The bank full width is 7.25'. The proposed 8' width provides 1.1 times the BFW.

The proposed 8' wide hydraulic opening provides 32.8 square feet of open area hydraulic conveyance through the culvert. With a 52 feet length, this results in an openness ratio of 0.63 ft which is less than the recommended Best Management Practice of 0.82 ft. In order to provide then 0.82 ft openness ratio while maintaining the proposed length, the width would need to increase to 11 feet or while maintaining the proposed open area, the length would need to decrease to 40 feet. Both of these are not feasible given the site constraints. The width can not be increased due to the adjacent existing driveways and properties and the length can not be decreased due to maintaining the necessary road width with sidewalks and clear zones.

The proposed 8' wide culvert would need to increase to 10' in width in order to convey the 50-year flood frequency. Similar to the openness ratio discussed above this is not feasible given the site constraints.

Included Attachments:

- Wetland Report, Prepared by: Soil Science and Environmental Services, Inc., Dated: August 2, 2022
- Divinity Street Culvert Replacement, City of Bristol, Hydrology and Hydraulics Analysis Report, Prepared by: WSP, Dated: March 2024
- Hydraulics Summary

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT

DATE

Jodi Constant

SIGNATURE OF AGENT

3/8/2024
DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

Part VI: Applicant Certification

The applicant(s) and any individual(s) responsible for actually preparing the application must sign this section. An application will be considered insufficient unless *all* required signatures are provided.

"I have personally examined and am familiar with the information submitted in the LWRD application and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of the individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement in the submitted information may be punishable as a criminal offense, in accordance with section 22a-6 of the General Statutes, pursuant to section 53a-157b of the General Statutes, and in accordance with any other applicable statute. I certify that the LWRD application is on complete and accurate forms as prescribed by the commissioner without alteration of the text. I certify that I have complied with all notice requirements, if applicable, as listed in Section 22a-6g of the General Statutes."	
Signature of Applicant	Date
Raymond Rogozinski, City of Bristol	
Name of Applicant (print or type)	Title (if applicable)
<i>Jodi Constant</i>	3/8/2024
Signature of Preparer (if different than above)	Date
Jodi Constant, P.E.	Senior Consultant Structural Engineer
Name of Preparer (print or type)	Title (if applicable)
☒ Check here if additional signatures are required. If so, please reproduce this sheet and attach signed copies to this sheet as Attachment D. You must include signatures of any person preparing any report or parts thereof required in this application (i.e., professional engineers, surveyors, soil scientists, consultants, etc.).	

Part VII: Application Submission

Instructions for submitting an application to DEEP LWRD:

- Please submit a hardcopy of **only** this completed License Application Transmittal Form and fee, to:
**CENTRAL PERMIT PROCESSING UNIT
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127**
Applications will not be processed without the fee. Fee shall be non-refundable and shall be paid by check or money order to the Connecticut Department of Energy & Environmental Protection. State Agencies should submit the applicable registration/application package **without** the application fee and check the box in Part I to indicate the fee will be paid by Inter-Agency Transfer of Funds.
- Upon receipt of the Transmittal Form and fee, the Central Permit Processing Unit (CPPU) will e-mail a confirmation receipt letter to you containing the DEEP assigned application number.
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If you are not capable of submitting the application electronically or if you have other questions or concerns regarding application submittals, please contact LWRD staff at 860-424-3019.

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Signature of Applicant

Date

Raymond Rogozinski, City of Bristol

Name of Applicant (print or type)

Title (if applicable)



Digitally signed by Kati Mercier
DN: c=US, e=kati.mercier@wsp.com,
o=WSP USA, CN=Kati Mercier
Date: 2024.03.07 18:51:38-0500

Signature of Preparer (if different than above)

Date

Kati L. Mercier, P.E.

Lead Civil Engineer

Name of Preparer (print or type)

Title (if applicable)

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Signature of Applicant

Date

Raymond Rogozinski, City of Bristol

Name of Applicant (print or type)

Title (if applicable)



3/1/2024

Signature of Preparer (if different than above)

Date

Thomas R. Laliberte, P.E.

Vice President, Structural Engineering

Name of Preparer (print or type)

Title (if applicable)

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Signature of Applicant	Date
Raymond Rogozinski, City of Bristol	
Name of Applicant (print or type)	Title (if applicable)
	3-8-2024
Signature of Preparer (if different than above)	Date
Scott D. Stevens	Registered Professional Soil Scientist
Name of Preparer (print or type)	Title (if applicable)
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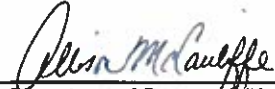
Signature of Applicant

Date

Raymond Rogozinski, City of Bristol

Name of Applicant (print or type)

Title (if applicable)



3/12/2024

Signature of Preparer (if different than above)

Date

Allison M. McCauliffe, P.E.

Senior Geotechnical Engineer/
Project Manager

Name of Preparer (print or type)

Title (if applicable)

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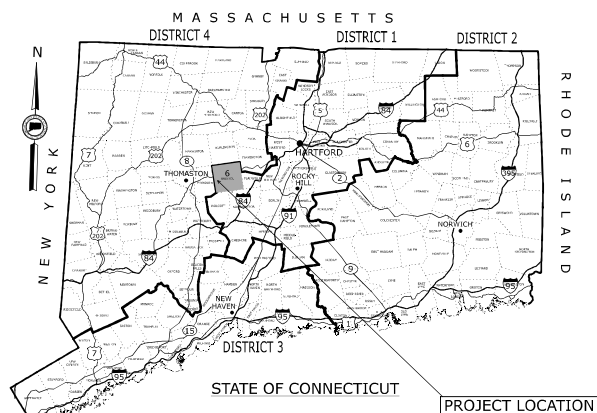
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Plans For
T OF DIVINITY STR
ER UNNAMED BRO

Town(s)/City of
CITY OF BRISTOL



1. THESE PLANS ARE NOT FOR CONSTRUCTION AND ARE INTENDED ONLY FOR ENVIRONMENTAL PERMITTING PURPOSES. THESE PLANS HOLD AUTHORITY FOR ALL ACTIVITIES CONCERNING THE REGULATED AREA. FOR DETAILED PLANIMETRIC INFORMATION AND PAYMENT, REFER TO THE APPLICABLE CONTRACT DOCUMENTS.

2. REVISIONS WILL ONLY BE SUBMITTED FOR CHANGES TO THE DESIGN THAT WILL AFFECT REGULATED AREAS.

3. THE PROTECTION OF ALL WETLANDS, COURSES, WETLANDS, AND WETLAND SOILS SEE RELEVANT SECTIONS OF THE PERMIT APPLICATION.

4. CONSTRUCTION SPECIFICATIONS:

5. State of Connecticut Department of Transportation, Standard Specifications

6. for Bridges, Facilities and Structural Construction, Form 518, dated 2020;

7. Supplemental Specifications, dated July 2023; and Special Provisions

8. 400 FOOT GRID BASED ON CONNECTICUT COORDINATE SYSTEM N.A.D., 1983

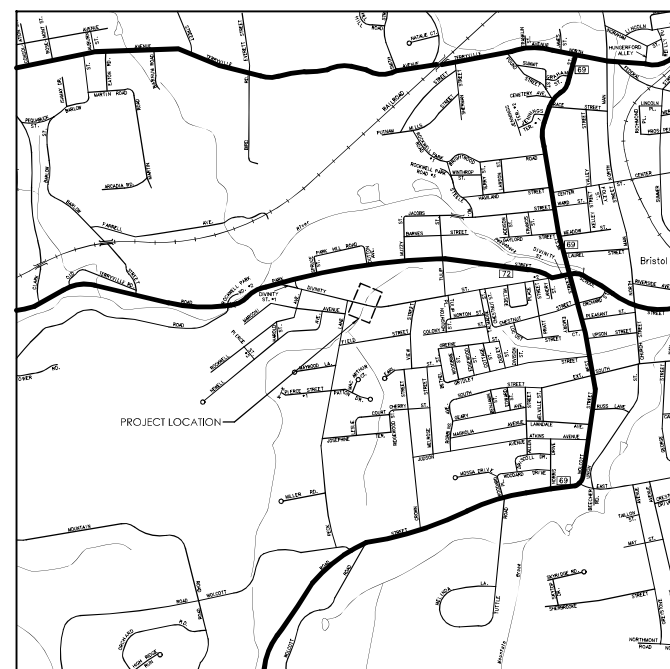
9. VERTICAL DATUM BASED ON NAVD 988

10. SURVEYED BY: CLARK LARSEN CONSULTING, LLC

11. WETLAND FLAGGING BY: SOIL SCIENCE AND ENVIRONMENTAL SERVICES, INC

12. ALL CONSTRUCTION ACTIVITIES WILL BE CONDUCTED IN ACCORDANCE WITH THE DEPARTMENT STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND STRUCTURES AND THE CONNECTICUT CONSTRUCTION CODE, 10 AND WILL ALSO FOLLOW REQUIRED BEST MANAGEMENT PRACTICES (BMPs) AND SEDIMENT AND EROSION CONTROL MEASURES IN ACCORDANCE WITH THE 2024 CONNECTICUT CONSTRUCTION PERMITTING REGULATIONS AND PERMIT CONTROL AND REP. 0024 CONNECTICUT STORMWATER QUALITY MANUAL.

ROAD	MAINTENANCE RESPONSIBILITY	LENGTH
DIVINITY STREET	CITY OF BRISTOL	140 FEET
F.A.P. #	MAINTENANCE RESPONSIBILITY	PROJECT #
#####	CITY	L017-0004

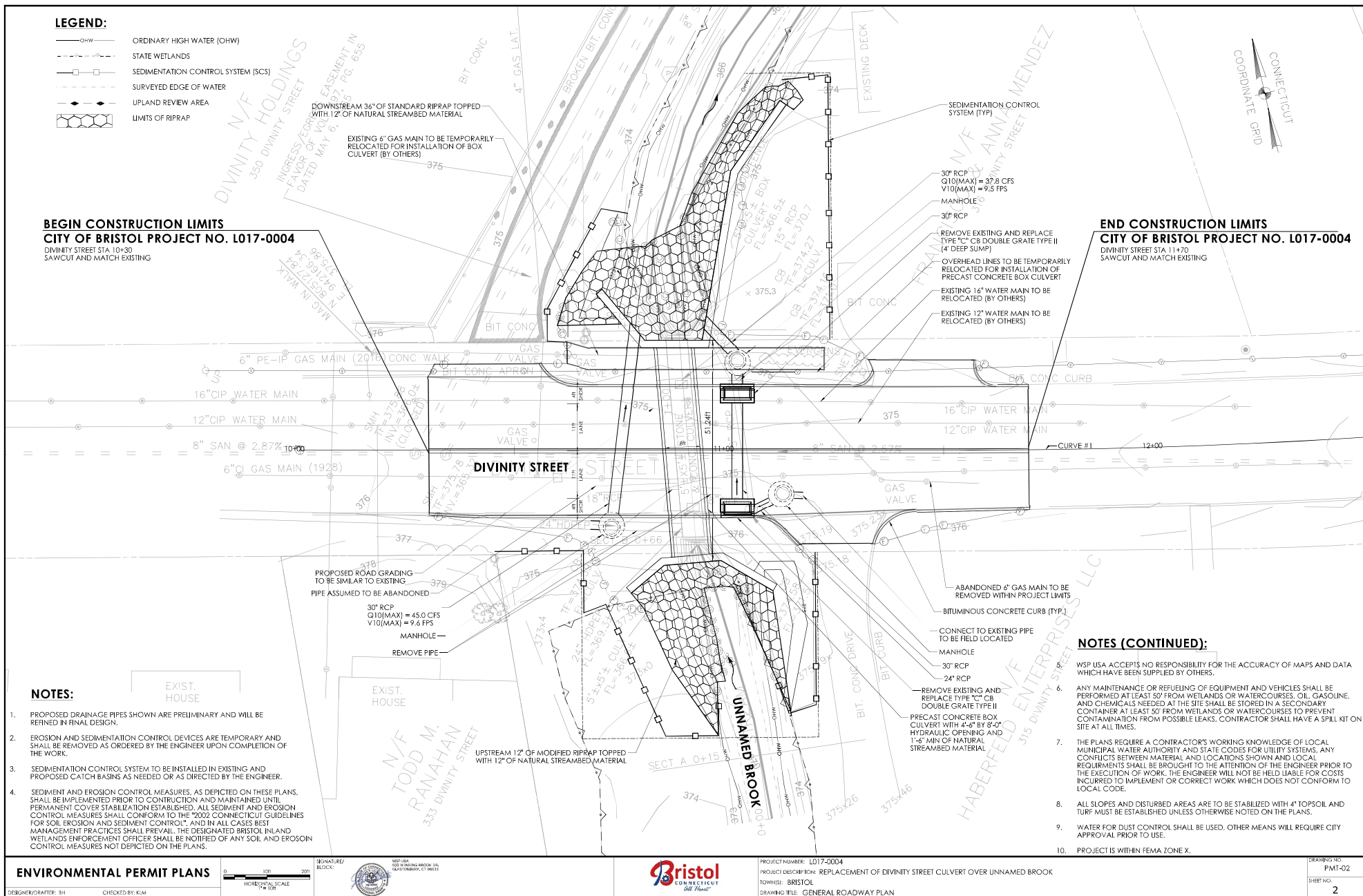


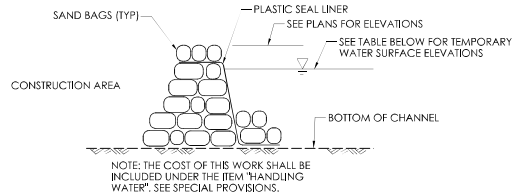
LOCATION PLAN
NOT TO SCALE

SHEET NO.	DRAWING TITLE
PMT-01	TITLE SHEET
PMT-02	GENERAL ROADWAY PLAN
PMT-03	WETLAND/WATERCOURSE IMPACT PLAN
PMT-04	ELEVATION AND SECTION PLAN
PMT-05	STAGING AND WATER HANDLING PLAN
PMT-06	PERMIT PLANTING PLAN

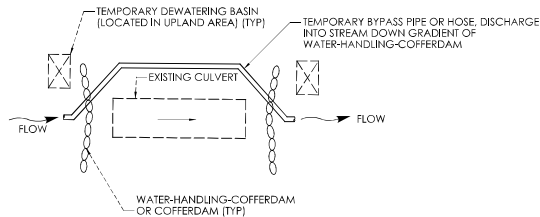
ENVIRONMENTAL PERMIT PLANS

[illegible]

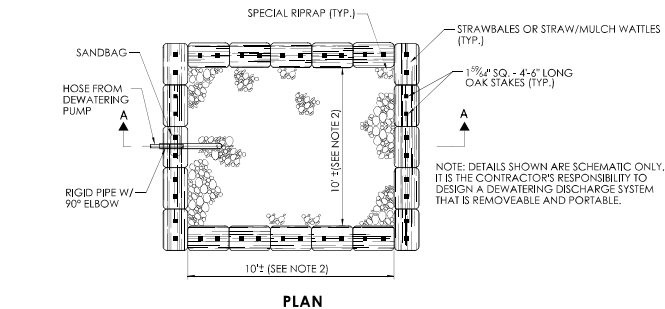




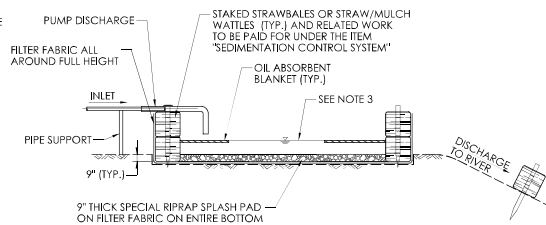
**SUGGESTED WATER-HANDLING-COFFERDAM
DETAIL - SANDBAGS**
NOT TO SCALE



TEMPORARY PUMPING
NOT TO SCALE



PLAN



SECTION A-A

**TEMPORARY SEDIMENT BASIN FOR
DEWATERING DISCHARGE**
NOT TO SCALE

TEMPORARY HYDRAULIC DATA

AVERAGE DAILY FLOW	1.4 CFS
AVERAGE SPRING FLOW	2.8 CFS
2 YEAR FREQUENCY DISCHARGE	81 CFS
LOW FLOW PUMPING TEMPORARY DESIGN DISCHARGE = 5 x AVERAGE SPRING FLOW	14 CFS
TEMPORARY DESIGN FREQUENCY	5 x ASF
TEMPORARY DESIGN DISCHARGE	14 CFS
TEMPORARY WATER SURFACE ELEVATION UPSTREAM	368.9
TEMPORARY WATER SURFACE ELEVATION DOWNSTREAM	368.1

BASIN NOTES:

1. CONTRACTOR TO BRACE STRAWBALES OR STRAW/MULCH WATTLES AS REQUIRED FOR STABILITY.
2. DIMENSIONS TO VARY DEPENDENT UPON DE-WATERING RATE.
3. VOLUME OF BASIN IS EQUAL TO THE MAXIMUM VOLUME OF WATER CAPABLE OF BEING PUMPED.
4. SPECIAL RIPRAP STONE SHALL CONFORM TO NO. 3 STONE AS SHOWN IN SECTION M.01.01 OF CONNDOT FORM 818.
5. AT THE COMPLETION OF THE WORK, THE BASIN AND ALL RELATED MATERIALS SHALL BE REMOVED FROM THE SITE. AND THE AREA SHALL BE RETURNED TO ITS ORIGINAL CONDITION BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. THE COST OF THIS WORK WILL BE INCLUDED UNDER EACH ITEM, EXCEPT THE CLEAN-UP WHICH WILL NOT BE MEASURED FOR PAYMENT BUT INCLUDED IN THE GENERAL COST OF THE WORK.
6. THE TEMPORARY SEDIMENT BASIN SHALL BE DESIGNED IN ACCORDANCE WITH 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

UNCONFINED IN-STREAM WORK BMP:

ANY UNCONFINED IN-STREAM WATER WORK WITHIN THE WATERCOURSE SHALL BE RESTRICTED TO THE PERIOD FROM JUNE 1 TO SEPTEMBER 30, INCLUSIVE.

THE DEPARTMENT WILL REVIEW AND MAY APPROVE THE METHODS OF UNCONFINED IN-WATER WORK WITH CONSIDERATION OF THE FOLLOWING:

- PROPOSED SCHEDULE FOR WORKING OPERATIONS
- ALL UNCONFINED IN-WATER WORK SHALL BE MINOR IN NATURE
- DISTURBANCE SHALL BE LIMITED TO AREAS THAT HAVE BEEN APPROVED FOR TEMPORARY AND PERMANENT IMPACT
- BEST MANAGEMENT PRACTICES SHALL BE UTILIZED WHEREVER POSSIBLE TO MINIMIZE TURBIDITY/SEDIMENT TRANSPORT DOWNSTREAM
- DISTURBED AREAS AND THE DURATION OF DISTURBANCE SHALL BE MINIMIZED TO THE EXTENT POSSIBLE
- IN-STREAM WORK SHALL BE DONE DURING PERIODS OF LOW FLOW

SUGGESTED SEQUENCE OF CONSTRUCTION:

1. IMPLEMENT DETOUR PLAN.
2. CLOSE DIVINITY STREET AT THE CULVERT CROSSING. MAINTAIN ACCESS TO PRIVATE PROPERTIES.
3. INSTALL SEDIMENTATION CONTROL SYSTEM (SCS), INCLUDING SCS AT CATCH BASIN AS NEEDED, AND PERFORM CLEARING AND GRUBBING.
4. CONSTRUCT TEMPORARY DEWATERING BASIN.
5. INSTALL TEMPORARY WATER-HANDLING-COFFERDAMS AND INSTALL TEMPORARY PUMPING.
6. REMOVE EXISTING CULVERT CROSSING.
7. CONSTRUCT CULVERT CROSSING.
8. REGRADE EXISTING STREAMBED AT THE CULVERT INVERTS WITH STREAMBED MATERIAL.
9. REMOVE TEMPORARY WATER-HANDLING-COFFERDAMS AND TEMPORARY PUMPING.
10. UPON COMPLETION OF CULVERT CONSTRUCTION, ROADWAY TO BE RE-OPENED TO TRAFFIC.
11. PERFORM FINAL GRADING AND INSTALL PLANTINGS.
12. REMOVE SEDIMENTATION CONTROL SYSTEMS UPON PERMANENT STABILIZATION.

WATER HANDLING NOTES:

1. THE CONTRACTOR SHALL MAINTAIN WATER THROUGH THE TEMPORARY WATER-HANDLING SYSTEM AS REQUIRED DURING THE CONSTRUCTION OF THE NEW STRUCTURE.
2. EQUIPMENT SHALL NOT BE PERMITTED IN THE BROOK WHEN TEMPORARY WATER-HANDLING SYSTEM IS NOT IN PLACE WITHOUT APPROVAL FROM THE ENGINEER.
3. DEWATERING BASIN SHALL BE ESTABLISHED OUTSIDE OF THE WETLAND LIMITS. THE LOCATION OF THE DEWATERING BASIN IS APPROXIMATE. THE EXACT POSITION MAY VARY BASED ON THE PUMPING DESIGN SUBMISSION APPROVED BY THE ENGINEER.
4. WATER-HANDLING MEASURES SHALL NOT EXCEED IMPACT AREAS SHOWN ON THE WETLAND/WATERCOURSE IMPACT PLAN OF THE PERMIT PLANS.
5. IF A PUMP SYSTEM IS PROPOSED DURING LOW FLOW CONDITIONS, THE SYSTEM SHALL BE DESIGNED BY THE CONTRACTOR AND HAVE A MINIMUM CAPACITY AS SHOWN IN THE TEMPORARY HYDRAULIC TABLE. PUMP PLAN SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BASED UPON FIELD CONDITIONS, WORK DURATION, AND EXPECTED WEATHER CONDITIONS. THE ENGINEER MAY APPROVE A CONSTRUCTION WATER-HANDLING PLAN WITH LOWER PUMPING FLOWS, PROVIDED THAT THIS INCLUDES A CONTINGENCY PLAN WHICH MINIMIZES NEGATIVE IMPACTS AND SAFELY CONVERTS LARGER FLOWS THROUGH THE WORK AREA.
6. ANY STORM DRAINAGE DISCHARGING INTO A CONFINED WORK AREA FROM EXISTING DRAINAGE SHALL BE DIVERTED OR PUMPED OUTSIDE THE CONFINED AREAS. PUMPS/PIPES SHALL BE SIZED BY THE CONTRACTOR TO HANDLE THE EXPECTED FLOWS AND BE DISCHARGED TO A STABLE LOCATION. THE CONTRACTOR SHALL SUBMIT THE MEANS AND METHODS OF HANDLING STORM DRAINAGE TO THE ENGINEER FOR APPROVAL AND IS INCLUDED AS PART OF THE WATER-HANDLING.

ENVIRONMENTAL PERMIT PLANS

DESIGNER/DRAWN: SH CHECKED BY: KLM

LASTED SAVED BY: green FILE NAME: c:\bmv\wsp\cbw\cbw\02\wsp\job\green\02785635\PMI_MSD\J17_000L\HWY01.dgn

PLOTTED DATE:

SIGNATURE/ BLOCK



10519-04
10/20/2019 BROOK, CT
04/20/2019, CT 10519



PROJECT NUMBER: 1017-0004

PROJECT DESCRIPTION: DIVINITY STREET OVER UNNAMED BROOK

TOWNSHIP: BRISTOL

DRAWING TITLE: STAGING AND WATER HANDLING PLAN

DRAWING NO.

PMI-05

SHEET NO.

5

Hydrology & Hydraulics Analysis Report

March 2024

[Link to Report:](#)

https://www.bristolct.gov/DocumentCenter/View/46648/2029_Hydrology-and-Hydraulics-Analysis-Report

**BRISTOL CONSERVATION COMMISSION
INLAND WETLANDS AGENCY
FORM IW-1 (Application for a Wetlands Permit)**

For Office Use Only	
APPLICATION NO.	2025
DATE FILED:	04-25-24
DECISION DATE:	
DECISION:	

1. APPLICANT:

Name: Peter Plewa Signature: [Signature]
Address: 465 emmett st City: Bristol State: CT Zip 06010
Telephone No.: 860-839-9933 ☐ home ☐ work Email: Peterplewa@outlook.com

2. PROPERTY OWNER(S):

Name: Peter plewa Signature: [Signature]
Address: 465 emmett st City: Bristol State: CT Zip 06010
Telephone No.: 860-839-9933 ☐ home ☐ work Email: Peterplewa@outlook.com

3. DESCRIBE THE SUBJECT PROPERTY:

Address or Location: Same as above
Assessor's Map No.: Map 3 Assessor's Lot No.(s): 9-1

Description of wetlands (location, approximate area to be disturbed, vegetation, etc.):

10 feet from property line of owner
According to our map, 30 feet from rear left corner of the house is property line of owner and the water(creek) is 30 feet from that on the side closer to street.
On the far side its well over 75 feet because of the angle.

4. DESCRIBE THE PROPOSED ACTIVITY AND ITS PURPOSE:

Not building anything just leveling ground and sloping away from home.
Cleaning brush on owner side of property.
Possibly planting some green hedges, if not building fence on property line, depends on budget and what the town allows, currently leaning towards the hedges. (Green giants, colorado blue spruce) havent decided, this is all on side closer to creek.

5. CHECK THE STATEMENT WHICH APPLIES TO THE PROPOSED ACTIVITY:

- ☐ a. The proposed activity is either a use permitted as of right or a non-regulated use, under subsection of Section 4 of the Inland Wetlands Regulations. *See instructions for submission requirements.*
- ☐ b. The proposed activity is not regulated because it is greater than 100 feet from a wetlands or watercourse or will not adversely affect the wetlands or watercourse. *See instructions for submission requirements.*
- ☒ c. The proposed activity is a regulated activity and will occur:
- | | |
|---|---|
| ☐ in a wetlands or watercourse; | area of impact: <input type="text"/> SF <input type="text"/> acres) |
| ☒ within 100 feet of a wetlands or watercourse; | area of impact: <u>1000</u> SF <input type="text"/> acres) |
| ☐ beyond 100 feet of a wetlands or watercourse; | area of impact: <input type="text"/> SF <input type="text"/> acres) |

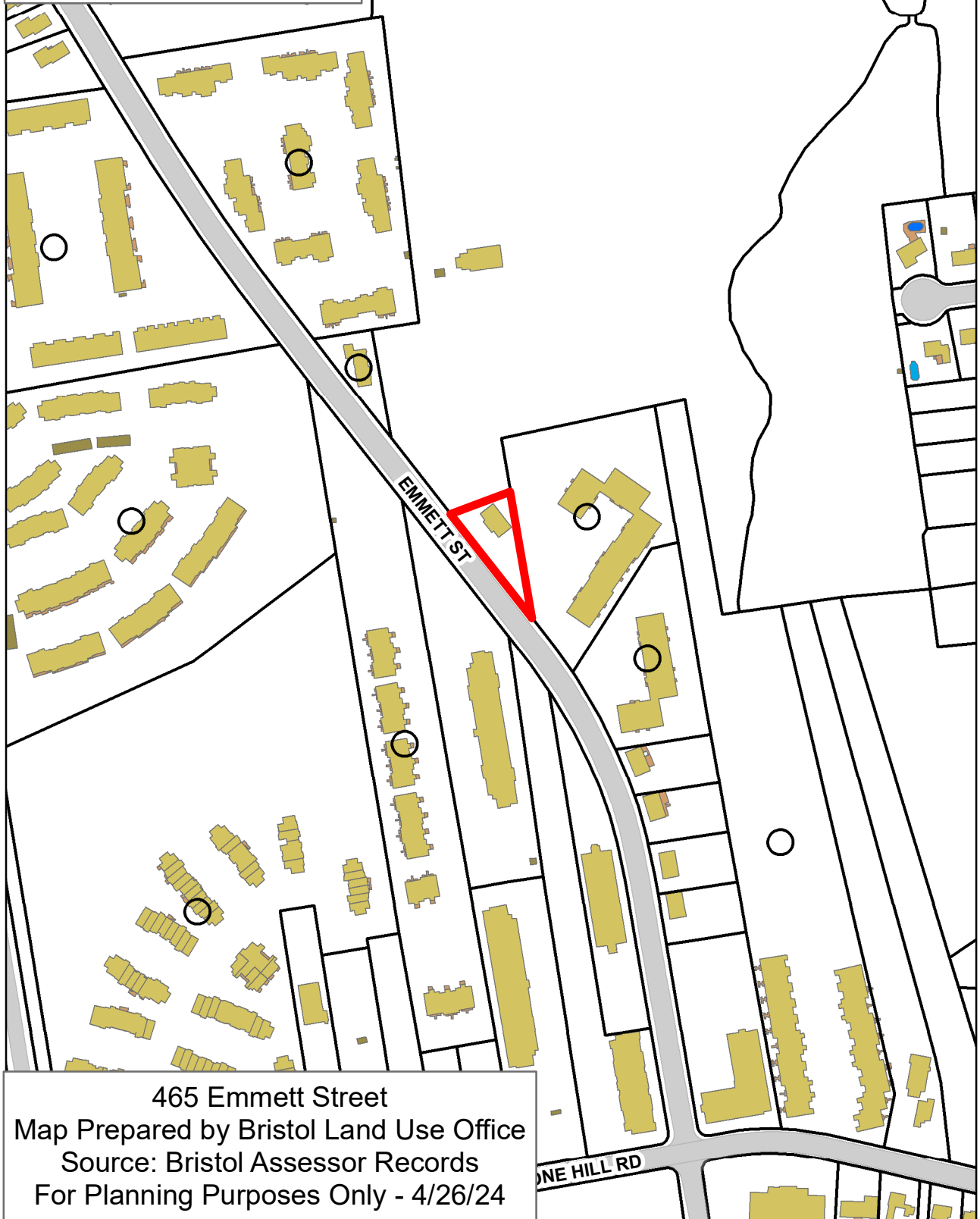
6. FLOW CALCULATIONS:

Does a watercourse flow through the subject property?

☐ yes ☒ no

If "yes", see instructions for submission requirements.

Application #2025
Location



465 Emmett Street
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 4/26/24

Application #2025
Aerial

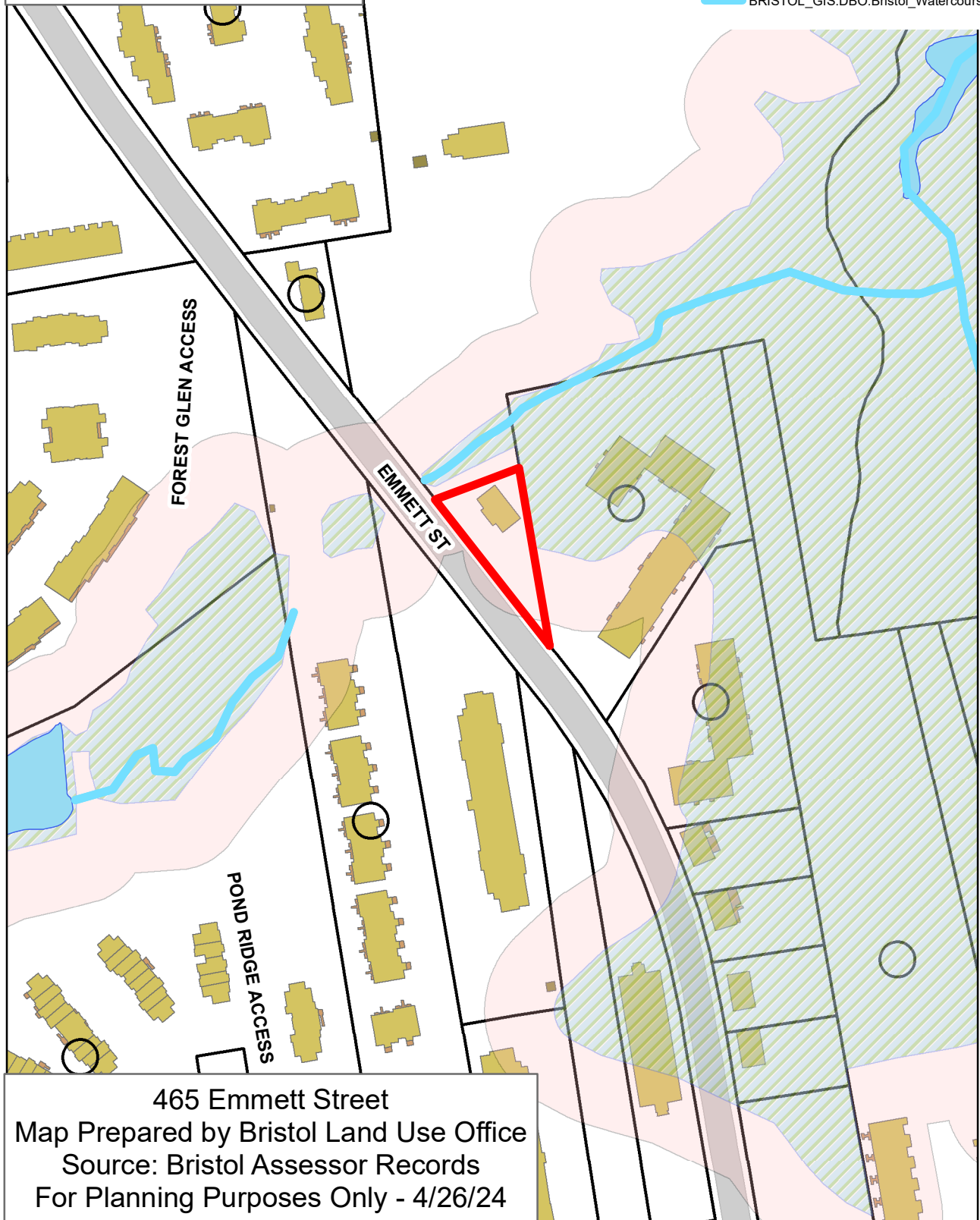


465 Emmett Street
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 4/26/24

Application #2025
IWWC

Legend

-  SITE
-  WETLANDS
-  UplandReviewArea
-  BRISTOL_GIS.DBO.Bristol_Waterbodies
-  BRISTOL_GIS.DBO.Bristol_Waterbodies
-  BRISTOL_GIS.DBO.Bristol_Watercourse_lines



465 Emmett Street
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 4/26/24

**BRISTOL CONSERVATION COMMISSION
INLAND WETLANDS AGENCY
FORM IW-1 (Application for a Wetlands Permit)**

For Office Use Only	
APPLICATION NO.	<u>2032</u>
DATE FILED:	<u>05-20-2024</u>
DECISION DATE:	_____
DECISION:	_____

1. APPLICANT:

Name: Bristol Department of Public Works
Address: 111 North Main Street City: Bristol State: CT Zip 06010
Telephone No.: (860) 584 - 6125 [] home [✓] work E-Mail: williamstango@bristolct.gov
Signature: _____ Signature – (Printed/Typed) Raymond Rogozinski
CHECK ONE: [] owner [✓] other (specify): Public Works Director

2. PROPERTY OWNER(S):

Name: City of Bristol
Address: 111 North Main Street City: Bristol State: CT Zip 06010
Telephone No.: (860) 584 - 6250 [] home [✓] work E-Mail: MayorsOffice@bristolct.gov
Signature: _____ Signature – (Printed/Typed) Mayor Jeffrey Caggiano

3. DESCRIBE THE SUBJECT PROPERTY:

Address or Location: Minor Street (Intersection of Minor Street and Hill Street extending 475' to the west)
Assessor's Map No.: - _____ Assessor's Lot No.(s): - _____
Description of wetlands (location, approximate area to be disturbed, vegetation, etc.): An unnamed stream flows through an existing culvert within the project area. Wetland vegetation is located adjacent to the existing roadway. Approximate location and areas of disturbance have been approximated from Bristol GIS mapping.

4. DESCRIBE THE PROPOSED ACTIVITY AND ITS PURPOSE: The project will involve installing drainage and constructing a full depth roadway from the intersection of Minor Street and Hill Street extending 475' to the west. The purpose of this project is to reconstruct Minor Street to current city standards and to accept it as an official city street.

5. CHECK THE STATEMENT WHICH APPLIES TO THE PROPOSED ACTIVITY:

- [] a. The proposed activity is either a use permitted as of right or a non-regulated use, under subsection _____ of Section 4 of the Inland Wetlands Regulations. *See instructions for submission requirements.*
- [] b. The proposed activity is not regulated because it is greater than 100 feet from a wetlands or watercourse or will not adversely affect the wetlands or watercourse. *See instructions for submission requirements.*
- [✓] c. The proposed activity is a regulated activity and will occur:
- | | |
|-----------------------------------|--------------------|
| [✓] in a wetlands or watercourse | area: <u>4,610</u> |
| [✓] within the upland review area | area: <u>2,860</u> |

6. FLOW CALCULATIONS:

Does a watercourse flow through the subject property?
[] yes [] no

If "yes", see instructions for submission requirements.

**CITY OF BRISTOL, CONNECTICUT
SUPPLEMENTARY INFORMATION**

For Office Use Only
APPLICATION NO. **2032**

Address or location of property: Minor Street (Intersection of Minor Street and Hill Street extending 475' to the west)

ADDITIONAL INFORMATION/COMMENTS (click inside the box below and begin typing)

Minor Street is an existing gravel road which is currently serviced by the City of Bristol. The work outlined in this project will provide significant improvement to the safety, functionality, and maintainability of the existing roadway.

ADDITIONAL APPLICANT

Name: _____ CHECK ONE: ☐ owner ☐ other: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

ADDITIONAL OWNER(S) OF RECORD

Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

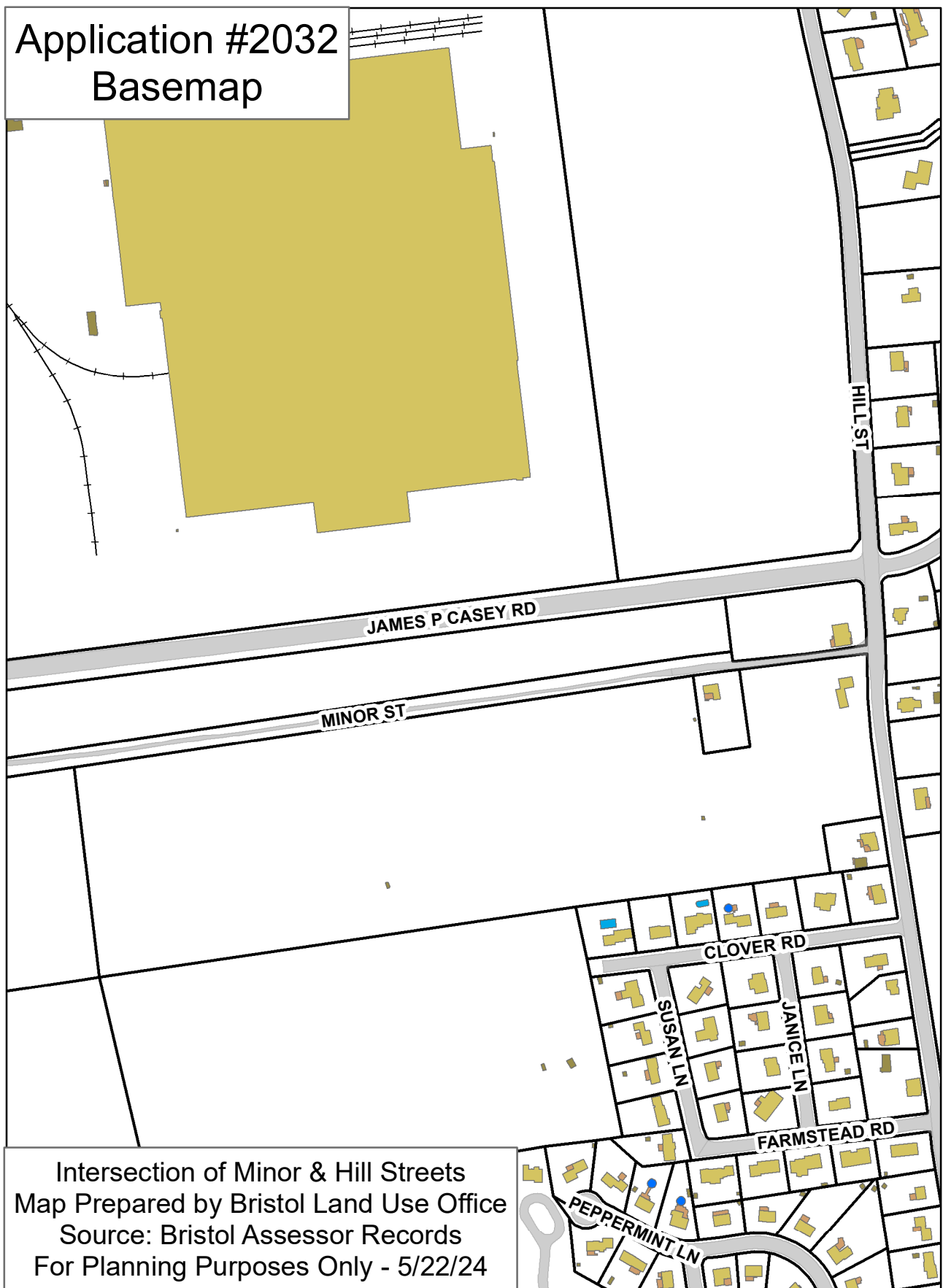
(OPTIONAL) SEND COPIES OF ALL CORRESPONDENCE TO:

Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ E-Mail: _____

Application #2032
Basemap



Intersection of Minor & Hill Streets
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 5/22/24

Application #2032
Aerial

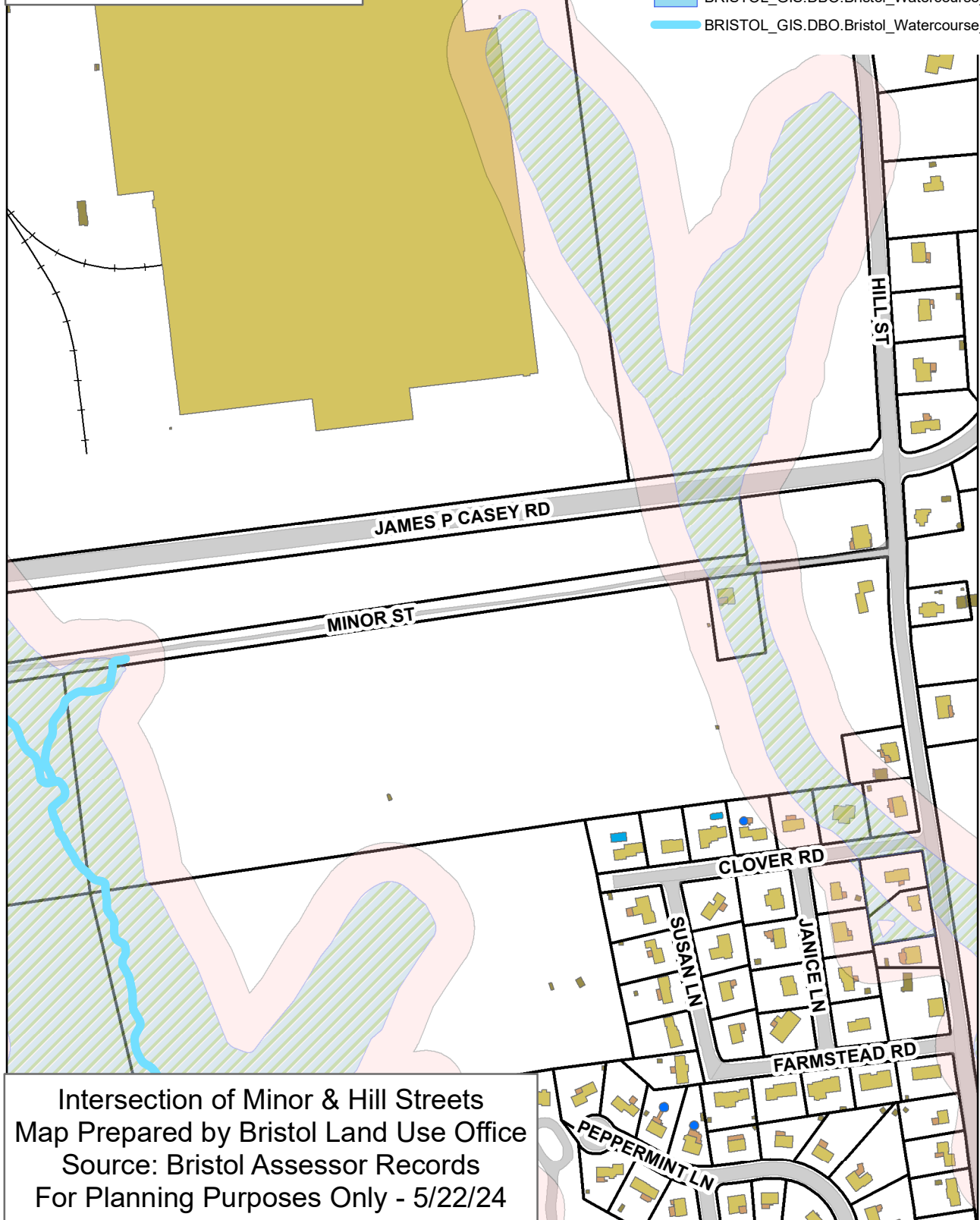


Intersection of Minor & Hill Streets
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 5/22/24

Application #2032
IWWC

Legend

- WETLANDS
- UplandReviewArea
- BRISTOL_GIS.DBO.Bristol_Waterbodies
- BRISTOL_GIS.DBO.Bristol_Watercourse_Polygons
- BRISTOL_GIS.DBO.Bristol_Watercourse_lines



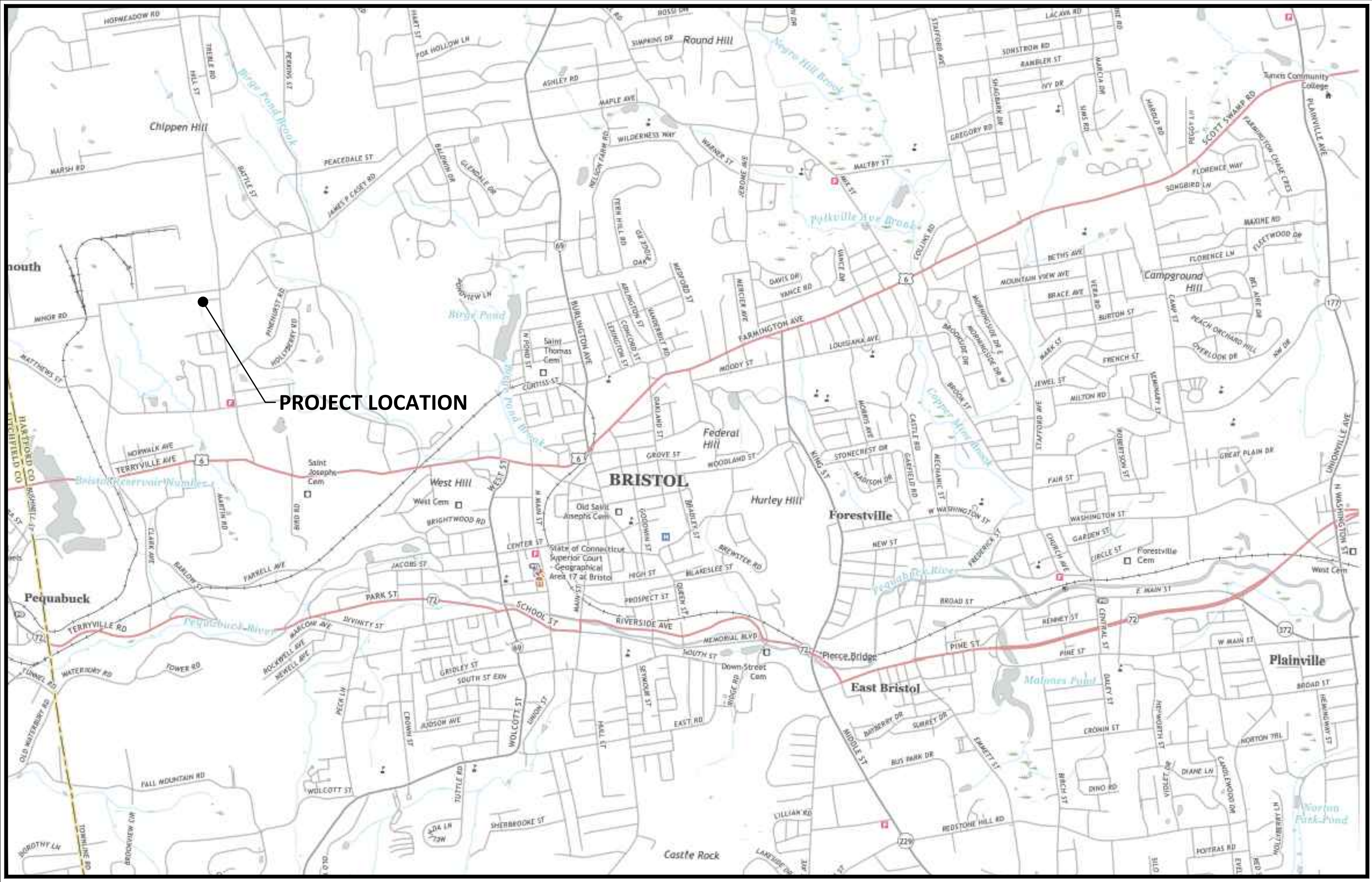
Intersection of Minor & Hill Streets
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 5/22/24

CONSTRUCTION OF MINOR STREET DRAINAGE AND ROADWAY BRISTOL, CONNECTICUT

APRIL 18, 2024
Contract : XXX-XXX

LIST OF DRAWINGS

NO.	NAME	TITLE
01	TITLE-01	TITLE SHEET
02	TYP-01	GENERAL NOTES AND TYPICAL SECTIONS
03	EX-01	EXISTING CONDITIONS
04	PRO-01	ROADWAY PROFILE
05	RWY-01	ROADWAY PLAN
06 - 12	CSX-01 - CSX-07	CHANNEL SECTIONS



BOARD OF PUBLIC WORKS
MAYOR JEFFREY CAGGIANO, CHAIRMAN

DIRECTOR OF PUBLIC WORKS
RAYMOND A. ROGOZINSKI, P.E.

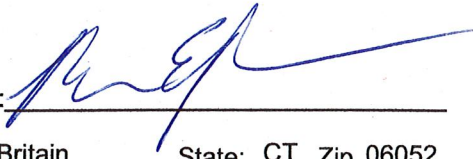
CITY ENGINEER
NANCY LEVESQUE, P.E.



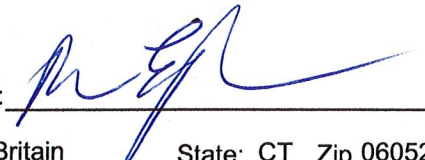
APPLICATION NO. 2019
DATE FILED: 12-28-23
APPROVED: _____
DENIED: _____

**BRISTOL CONSERVATION COMMISSION
INLAND WETLANDS AGENCY
FORM IW-2 (Application for a Wetlands Boundary Change)**

1. APPLICANT:

Name: New Britain Water Department Ramon Esponda Signature: 
Address: 1000 Shuttle Meadow Ave. City: New Britain State: CT Zip 06052
Telephone No.: (860) 826-3535 [] home [x] work

2. PROPERTY OWNER(S):

Name: New Britain Water Department Ramon Esponda Signature: 
Address: 1000 Shuttle Meadow Ave. City: New Britain State: CT Zip 06052
Telephone No.: (860) 826-3535 [] home [x] work

3. DESCRIBE THE SUBJECT PROPERTY:

Address or Location: Parcels North and South of Maltby Street, Bristol, CT.

Assessor's Map No.: 52, 53 Assessor's Lot No.(s): 11, 15, 16B16A, 17, 145, 147, 149, 150, 151

Description of wetlands (see instructions):

Freshwater Forested/Shrub, Freshwater Emergent, Freshwater Pond & Riverine wetlands. Wetlands are located centrally within the property parcels. The wetlands have been delineated by Ian Cole, Soil Scientist #2006.

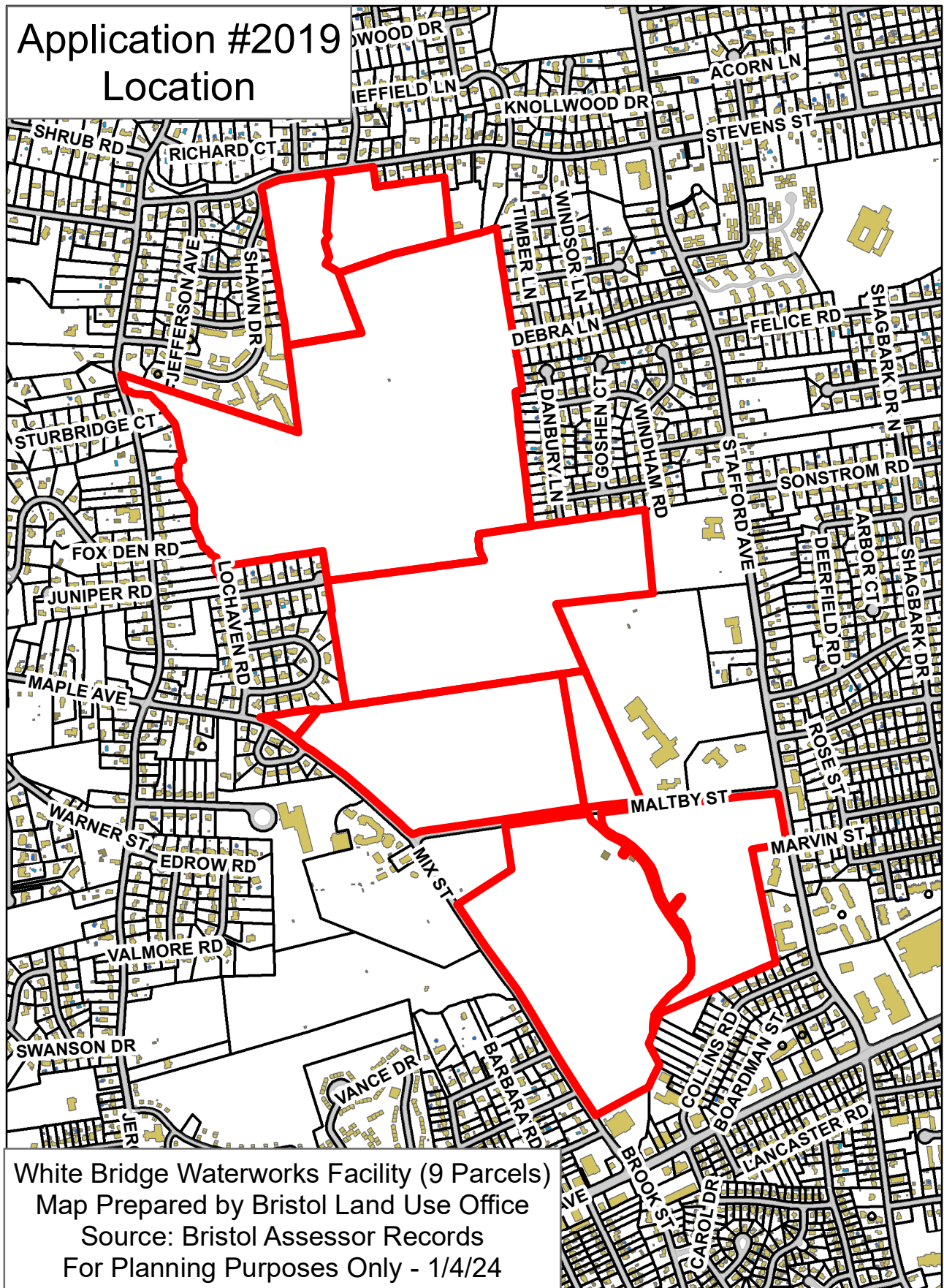
4. DESCRIBE THE REASON FOR THE PROPOSED BOUNDARY CHANGE:

As part of the proposed project, portions of project site will be cut to provide for compensatory storage. Many of these portions are located contiguously with the current wetland marker flags. Since the cuts will bring the elevations of those areas down (see attached maps) these areas will become wetlands and the boundary of the wetlands will change. The compensatory storage is necessary to prevent current flood elevation levels from increasing.

5. AUTHORIZATIONS AND CERTIFICATIONS:

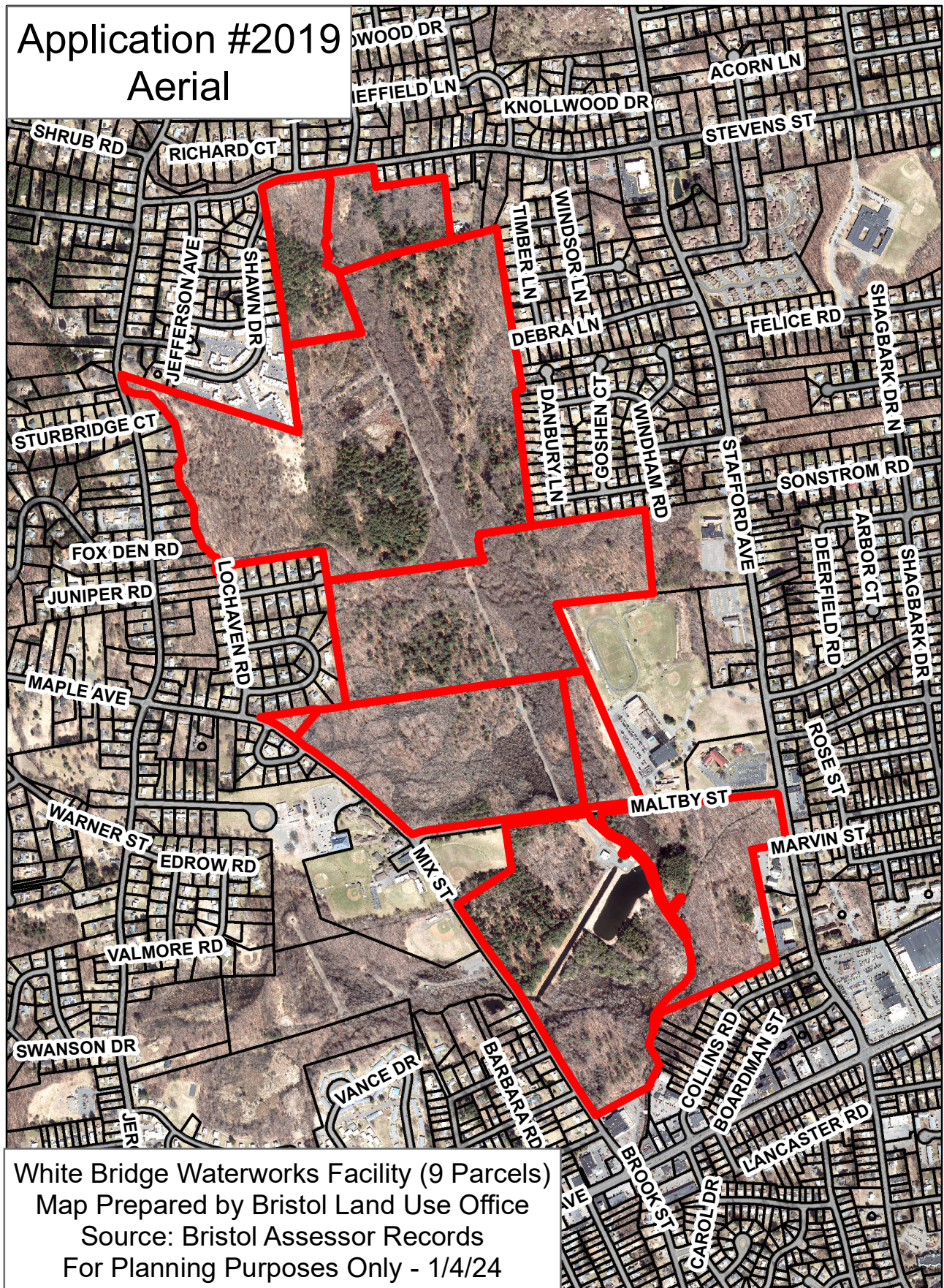
- a. I/we hereby authorize the commissioners and agents of the Bristol Inland Wetlands Agency to inspect the subject property at reasonable times, both before and after a final decision has been made regarding this application.
- b. I/we hereby certify that I/we am/are familiar with the information included in this application and am/are aware that the law provides that any person who commits, takes part in, or assists in any violation of any provision of Sections 22a-36 through 22a-45, inclusive, of the Connecticut General Statutes, including regulations adopted by the Commissioner of Environmental Protection and ordinances and regulations of the City of Bristol through its Inland Wetlands Agency, shall be assessed a civil penalty of not more than one thousand dollars for each offense. I/we further certify that I/we am/are aware that it is a violation of law to obtain a wetlands ruling through deception or through inaccurate or misleading information.

Application #2019 Location



White Bridge Waterworks Facility (9 Parcels)
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 1/4/24

Application #2019 Aerial

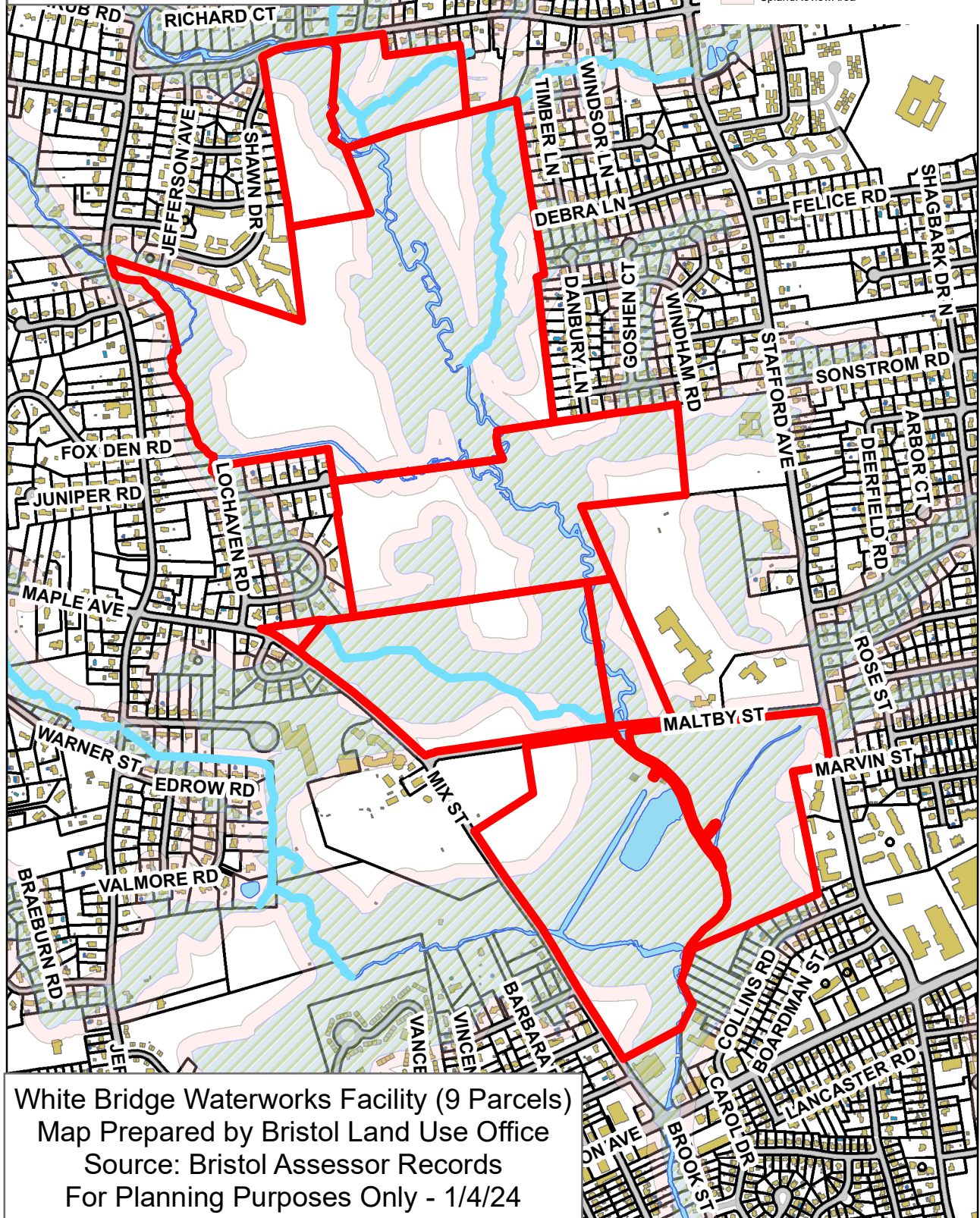


White Bridge Waterworks Facility (9 Parcels)
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 1/4/24

Application #2019 IWWC

Legend

- SITE
- BRISTOL_GIS.DBO.Bristol_Waterbodies
- BRISTOL_GIS.DBO.Bristol_Watercourse_lines
- WETLANDS
- UplandReviewArea



White Bridge Waterworks Facility (9 Parcels)
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 1/4/24

Wetlands Permit Application – IW-2

This attachment to the IW-2 application serves to provide the additional information required for changes to wetlands boundaries application submittals, including:

- Site plans
- Proposed project activities related to changes in wetlands boundaries
- Description and delineation of wetlands

Proposed Project Activities:

A rehabilitative/restorative project will be conducted at the Upper and Lower Wellfields of the White Bridge Waterworks Facility owned by the New Britain Water Department (NBWD). The purpose of this project is to redevelop the existing Upper and Lower Wellfields, which were constructed in 1955 and 1921, respectively. This will allow the NBWD to optimize the volume of water collected from this resource and potentially utilize it as a backup source of potable water since the NBWD only has one water treatment plant and no other wells. Presently, these wellfields serve as a raw water supply only and cannot serve as a backup in their present condition. In order to become a potable water supply, any new wells must be located 50 feet from any water bodies or wetland limits per Department of Public Health (DPH) requirements. In addition, the wells must be raised 2' above the one-hundred-year flood elevation. Because of these requirements, the existing wells cannot be redrilled or rehabilitated in their present location. All currently existing wells will be abandoned in accordance with DPH requirements.

Compensatory flood storage areas will be created so as to not increase the current flood elevation levels as given by FEMA guidelines. These compensatory storage areas will also create additional wetland areas and, as such, will change relatively small portions of the wetlands boundaries as were mapped and flagged by professional soil and wetlands scientists in August/September 2022. See the attached maps for further information on the extent of the boundary flagging as well as the areas of interest with respect to changes in wetlands boundaries.

Category of Proposed Activity:

The proposed activity, which will occur in a wetlands area, is requested to be permitted as an “as of right” use. This activity falls under Subsection 4.1.e of the Inland Wetlands and Watercourses Regulations of the Conservation Commission of the City of Bristol, CT, because it involves the operation by a municipal water supply system of facilities necessary for the withdrawal of water in connection with public water supplies.

Significant Activity:

The proposed activity constitutes a “significant activity” because it has the potential to have a major effect or substantial impact to a wetlands regulated area, due to the deposit of material in a regulated area. Erosion control cautionary measures will be in place to reduce the impact of the project.

Description of Property and Wetlands:

This property spans a total of 303.7 acres, which includes the following parcels (by Map/Lot number): 52-15, 52-16B16A, 52-17, 52-11, 53-149, 53-150, 53-151, 53-145 and 53-147. Copper Mine Brook travels through the entirety of the property from north to south. The Upper Wellfield is located on parcel 52-17, which is 104.6 acres and has PFO1E and PEM1E wetland areas. PFO1E areas are seasonally flooded/saturated broad-leaved deciduous wetlands. PEM1E areas are seasonally flood/saturated persistent emergent wetlands. Soils in this project area consist mostly of Scarboro muck, with some Saco silt loam located closer to Copper Mine Brook. Soil scientist Ian Cole located all the wetland boundaries in the vicinity of the test well explorations. These boundaries are shown on the plans provided.

The Lower Wellfield is located on parcel 53-145, which is 50.3 acres and also has PFO1E and PEM1E wetland areas. Polkville Brook travels west to east, then southerly through this parcel before flowing into Copper Mine Brook. Onsite vehicular transport, between the Upper and Lower Wellfield areas will use existing travel ways on the site not within any wetland boundaries. Soils in the Lower Wellfield project area consist mostly of Raypol silt loam, with some Hinckley loamy sand located closer to Polkville Brook. Detailed wetlands mapping is provided on the plans.



COMPREHENSIVE
ENVIRONMENTAL
INCORPORATED

Gateway Crossing
1 Hartford Square East, Suite 227
New Britain, CT 06052
860.224.0442

May 1, 2024

Mr. Robert Flanagan, City Planner
City Hall
111 North Main Street
Bristol, CT 06010

**RE: Wetlands and Flood Commission Permits- Applications #2019, #2020 & #23-458F-305
Submission of Response to Staff Comments and Supplemental Information**

Dear Mr. Flanagan,

On behalf of the Applicant, the New Britain Water Department, Comprehensive Environmental Inc. (CEI) is providing in this document responses to comments and supplemental information regarding the above referenced applications.

Responses to City Staff Comments:

Comment #1. *Proposed construction wetland “replication” appears to consist of excavation adjacent to existing wetland and installation of 3 inches of hydrophilic soil. Provide additional information associated with the hydrophilic soil specification and post development groundwater depth to support wetland “replication” areas. DPW Engineering Division proposes a min of 12-inch depth of hydrophilic soil within wetland “replication” area. On adjacent 2:1 slopes 6 inches of hydrophilic soil is sufficient. Detail/document short and long term monitoring and wetland “replication” area management plan to ensure long-term viability of area.*

Response #1. The wetland replication and compensatory storage plans and sections have been revised to address the above comments. Please note that due to the presence of a vernal pool in the upper wellfield area the compensatory storage and wetland replication area was moved further north. In addition, the United States Army Corp of Engineers (USACE) has requested a 3:1 wetlands replication as part of their permit review. These changes are reflected in revised sheets WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 and C-14A which are attached herein as **Attachment 1.A**. Also attached as **Attachment 1.B**. are the calculations for the compensatory storage. More information about the vernal pool can be found in the NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC., which is also attached to this document as **Attachment 1.C**. Sheet XS-5 and Section 4 of the NBWD Supplemental Environmental/Wetlands Permit Information detail the short term and long term monitoring for wetland replication.

Comment #2. *Plan indicates dewater sedimentation basin, however provide anticipated/ proposed discharge rates with sizing of sedimentation basins. In addition, indicate controls / monitoring of turbidity discharge from sedimentation basin.*

Response #2. Temporary dewatering sedimentation basins are intended to be used in the event high groundwater is encountered during excavation activities. Anticipated/proposed discharges will vary depending on the required amount of excavation dewatering but typically can range from 20-50 gpm, intermittently. As shown in Detail J of Drawing Sheet C-24 (included herein as **Attachment 2**), the dewatering sedimentation basin size may vary depending on necessity with a 5-foot diameter being the minimum diameter of the basin. Sedimentation basins will be inspected at least once per week and cleaned as needed to remove accumulated sediments. The Contractor may also elect to install permeable geotextile dewatering bags in addition to the dewatering sedimentation basins for sediment filtration.

Comment #3. *Provide construction sequence with durations along with staging plan, areas of stockpile storage and refueling areas.*

Response #3. See the Proposed Construction Sequence Memorandum included in **Attachment 3.A.** for more information, and the associated Drawing Sheets C-20, C-21, and C-22 in Attachment 3.B. Additionally, see Sheet C-1 and C-7 of **Attachment 3.B.** for notes and depiction of Contractor staging, stockpiling, and refueling areas.

Comment #4. *Clarify proposed location of floating turbidity curtain.*

Response #4. Floating turbidity curtains are to be located within the canal, east and west of the proposed sediment removal areas. See revised Sheet C-23 in **Attachment 4.**

Comment #5. *Include installation line of silt fence along the toe of ALL proposed slopes. Silt fence shall be installed prior to construction, be monitored during construction and removed once slopes are stabilized.*

Response #5. Notes requiring the installation of silt fence has been included throughout drawings. See revised sheets C-1, C-6, C-7, C-8, C-13, C-14, C-14A in **Attachment 5.**

Comment #6. *Provide additional detail associated with compensation storage area 3. The plans indicate excavation to elevation 252, however indicate proposed access to area, erosion control and restoration.*

Response #6. The revised plans referenced in Comment Response #1 address these comments.

Comment #7. *Provide additional detail associated with compensation area 4, including additional elevation east of the area between the compensation area and the Coppermine. Detail cross section AA-1 and indicate erosion control measures and proposed access to area.*

Response #7. The revised plans referenced in Comment Response #1 address this comment.

Comment #8. *The Storm Water Management Report is prepared in accordance with the CT Storm Water Quality Manual. As indicated in your report the manual requires maintaining the pre-*

development annual groundwater recharge volume. The report indicates recharge is achieved through reduction in impervious area; however, please indicate impact of additional well withdrawal will have on wetlands.

Response #8. See Section 3 of the NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC., which is included in **Attachment 1.C.**

Comment #9. *Proposed plans indicate flood plain mitigation measures (excavation within flood plain to offset the placement of fill within flood plain). However, Bristol DPW recommends a CLOMR prior to work and will require a LOMR as condition of approval (if approved).*

Response #9. See No Rise Certification included in **Attachment 9.** No objection to coordinating with FEMA for CLOMR/LOMR as a condition of approval.

Responses to North Central Conservation District (Letter Dated March 28, 2024):

1. See the Letter from CT DEEP in **Attachment 10**, which confirms the continued applicability of the Diversion Registration to the facilities and that no diversion permit is required for continued operation of the facilities as proposed with this project.
2. See Section 3 of the NBWD Supplemental Environmental/Wetlands Permit Information, included in **Attachment 1.C.**, concluding no permanent impacts from withdrawals.
3. See Section 5 of the NBWD Supplemental Environmental/Wetlands Permit Information and the related Supplemental Alternatives Evaluation contained therein, detailing alternatives considered for this project. There are no feasible and prudent alternatives to the proposed plan.
4. See Section 5 of the NBWD Supplemental Environmental/Wetlands Permit Information concluding no permanent impacts to wetlands functions and values.

Additional Information Submitted:

1. Detailed Groundwater and Stream Flow Monitoring Plan, as required by CT DPH, is included in **Attachment 11.**
2. Letter confirming hydrogeologic information for project site remains valid. See **Attachment 12.**
3. Proposed wetlands boundary line change map is submitted for consideration. See **Attachment 13.**
4. Resumes of Engineers and Soil Scientist are included in **Attachment 14.**

Attachments Includes:

- Response 1 – Attachments
 - 1.A. Drawings: WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 to and C-14A
 - 1.B. Calculations: Compensatory Storage
 - 1.C. NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC
- Response 2 – Attachment
 - 2. Drawing: C-24
- Response 3 – Attachments
 - 3.A. Proposed Construction Sequence Memorandum
 - 3.B. Drawings: C-1 and C-7; C-20, C-21, and C-22
- Response 4 – Attachment

- 4. Drawing: C-23
- Response 5 – Attachment
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- Response 9 – Attachment
 - 9. No Rise Certification
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 - 10. CT DEEP Permit Need Determination
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 - 11. Detailed Groundwater and Stream Flow Monitoring Plan
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 - Ian T. Cole - Professional Soil Scientist
 - Joseph L. Laliberte, PE, BCEE, PM
 - Clinton L. Webb Jr. – Senior Environmental Scientist/Ecologist

If you have any questions or require any additional information, please do not hesitate to contact me at 860.224.0442 or samenta@ceiengineers.com.

Sincerely,
Comprehensive Environmental Inc.



Sebastian Amenta, PE
Regional Program Director

Ray Rogozinski Review Comments

April 22, 2024

&

Applicant Responses

May 2, 2024

Bristol Department of Public Works has completed the review of the following materials submitted as part of Applications #2019, #2020 & #23-458F-305.

- i. Central Conservation District review letter, dated March 28, 2024.
- ii. CDM Smith Stormwater Management Report for the White Bridge Waterworks Facilities Pond Pumping Station.
- iii. C. Webb & Associates, LLC Wetland Delineation Report, dated September 29, 2022. iv. CDM Smith Plan Set, dated December 2022: Existing Conditions sheets 1-3, Wetlands replication areas sheets 1-3, Cross-Sections sheets 1-4.
- v. Freeman Companies Existing Conditions Survey Upper & Lower Wellfield, topography survey.
- vi. CDM Smith Plan Set: C-2,6-10, 10B, 11-17, 18A, 18B, 2, 19, 23-29, 9, 11-14, 18 A, 18 B. vii. CDM Smith Plan Set: Attachment 4: Floodway & Flood Fringe Encroachment Areas 60% Submittal C9, 5, 11, 13, 14, 9, 9, 9, 11 (10 sheets), 5 (8 sheets), CS1-CS4. Based on the review the following comments are provided:

1. Proposed construction wetland “replication” appears to consist of excavation adjacent to existing wetland and installation of 3 inches of hydrophic soil. Provide additional information associated with the hydrophic soil specification and post development groundwater depth to support wetland “replication” areas. DPW Engineering Division proposes a min of 12 inch depth of hydrophic soil within wetland “replication” area. On adjacent 2:1 slopes 6 inches of hydrophic soil is sufficient. Detail/document short and long term monitoring and wetland “replication” area management plan to ensure long-term viability of area.

4/22/24 Applicant Response: The wetland replication and compensatory storage plans and sections have been revised to address the above comments. Please note that due to the presence of a vernal pool in the upper wellfield area the compensatory storage and wetland replication area was moved further north. In addition, the United States Army Corp of Engineers (USACE) has requested a 3:1 wetlands replication as part of their permit review. These changes are reflected in revised sheets WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 and C-14A which are attached herein as Attachment 1.A. Also attached as Attachment 1.B. are the calculations for the compensatory storage. More information about the vernal pool can be found in the NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC., which is also attached to this document as Attachment 1.C. Sheet XS-5 and Section 4 of the NBWD Supplemental Environmental/Wetlands Permit Information detail the short term and long term monitoring for wetland replication.

5/2/24 City Response: Depth of hydrophilic soil revised in wetland “replication” detail”. Please have the Cert Soil Scientist available to address the Commission with the post development groundwater depth to support the wetland “replication”, the additional wetland replication requested by the USACE and specification for the hydrophilic soil.

2. Plan indicates dewater sedimentation basin, however provide anticipated/ proposed discharge rates with sizing of sedimentation basins. In addition, indicate controls / monitoring of turbidity discharge from sedimentation basin.

4/22/24 Applicant Response: Temporary dewatering sedimentation basins are intended to be used in the event high groundwater is encountered during excavation activities. Anticipated/proposed discharges will vary depending on the required amount of excavation dewatering but typically can range from 20-50 gpm, intermittently. As shown in Detail J of Drawing Sheet C-24 (included herein as Attachment 2), the dewatering sedimentation basin size may vary depending on necessity with a 5-foot diameter being the minimum diameter of the basin. Sedimentation basins will be inspected at least once per week and cleaned as needed to remove accumulated sediments. The Contractor may also elect to install permeable geotextile dewatering bags in addition to the dewatering sedimentation basins for sediment filtration.

5/2/24 City Response: Please provide additional details/procedures to prevent sediment/ discharge of dewatering water from being discharges with a high turbidity.

3. Provide construction sequence with durations along with staging plan, areas of stockpile storage and refueling areas.

4/22/24 Applicant Response: See the Proposed Construction Sequence Memorandum included in Attachment 3.A. for more information, and the associated Drawing Sheets C-20, C-21, and C-22 in Attachment 3.B. Additionally, see Sheet C-1 and C-7 of Attachment 3.B. for notes and depiction of Contractor staging, stockpiling, and refueling areas.

5/2/24 City Response: Construction sequence provided. Please have a representative available to review the sequence and anticipated duration of construction with the Commission.

4. Clarify proposed location of floating turbidity curtain.

4/22/24 Applicant Response: Floating turbidity curtains are to be located within the canal, east and west of the proposed sediment removal areas. See revised Sheet C-23 in Attachment 4.

5/2/24 City Response: Turbidity curtain location clarified.

5. Include installation line of silt fence along the toe of ALL proposed slopes. Silt fence shall be installed prior to construction, be monitored during construction and removed once slopes are stabilized.

4/22/24 Applicant Response: Notes requiring the installation of silt fence has been included throughout drawings. See revised sheets C-1, C-6, C-7, C-8, C-13, C-14, C-14A in Attachment 5.

5/2/24 City Response: No additional comments.

6. Provide additional detail associated with compensation storage area 3. The plans indicate excavation to elevation 252, however indicate proposed access to area, erosion control and restoration.

4/22/24 Applicant Response: The revised plans referenced in Comment Response #1 address these comments.

5/2/24 City Response: No additional comments, please be prepared to address any questions the commission may have at the meeting.

7. Provide additional detail associated with compensation area 4, including additional elevation east of the area between the compensation area and the Coppermine. Detail cross section AA-1 and indicate erosion control measures and proposed access to area.

4/22/24 Applicant Response: The revised plans referenced in Comment Response #1 address this comment.

5/2/24 City Response: 9. No additional comments, please be prepared to address any questions the commission may have at the meeting.

8. The Storm Water Management Report is prepared in accordance with the CT Storm Water Quality Manual. As indicated in your report the manual requires maintaining the pre- development annual groundwater recharge volume. The report indicates recharge is achieved through reduction in impervious area, however please indicate impact of additional well withdrawal will have a wetlands.

4/22/24 Applicant Response: See Section 3 of the NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC., which is included in Attachment 1.C.

5/2/24 City Response: Please have a representative available address any questions the Commission may have regarding section 3 and 4 (Impact to Wetlands Associated with Well Drawdown & Wetland Creation) of the Supplemental Env/Wetland Permit Information.

9. Proposed plans indicate flood plain mitigation measures (excavation within flood plain to offset the placement of fill within flood plain). However, Bristol DPW recommends a CLOMR prior to work and will require a LOMR as condition of approval (if approved).

4/22/24 Applicant Response: See No Rise Certification included in **Attachment 9**. No objection to coordinating with FEMA for CLOMR/LOMR as a condition of approval.

5/2/24 City Response: Comment received, please plan on submitting a LOMAR to FEMA.

Responses to North Central Conservation District (Letter Dated March 28, 2024):

1. See the Letter from CT DEEP in **Attachment 10**, which confirms the continued applicability of the Diversion Registration to the facilities and that no diversion permit is required for continued operation of the facilities as proposed with this project.
2. See Section 3 of the NBWD Supplemental Environmental/Wetlands Permit Information, included in **Attachment 1.C.**, concluding no permanent impacts from withdrawals.
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Additional Information Submitted:

1. Detailed Groundwater and Stream Flow Monitoring Plan, as required by CT DPH, is included in **Attachment 11**.
2. Letter confirming hydrogeologic information for project site remains valid. See **Attachment 12**.
3. Proposed wetlands boundary line change map is submitted for consideration. See **Attachment 13**.
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If you have any questions or require any additional information, please do not hesitate to contact me at 860.224.0442 or samenta@ceiengineers.com.

May 6, 2024

Zach Fisk, Chair
Bristol Inland Wetland Commission
c/o Bristol Land Use Division via email

RE: **Application #2019, Application #2020, Application #23-458F-305** Application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessors Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.

Dear Chair Fisk and Bristol IWW Commissioners:

This letter is written in response to the recent submittal (dated May 1, 2024) of additional information regarding subject applications. This additional submittal information includes revisions made to the proposed plans in response to the discovery of a vernal pool at the north wellfield site, as well as revisions made to address staff comments, and revisions made to the plans as a result of the comments from the Army Corps of Engineers to address the federal requirements for wetland mitigation for the impacts to wetlands as a result of the proposed improvements. Also, the Streamflow monitoring plan, prepared for the Department of Public Health, was presented in Attachment 11.

Additionally, since the last public hearing, third party review letter from the North Central Conservation District desktop review (dated March 28, 2024, 3 pp) has been available. Further third party review for wetland/floodplain environmental services has not yet been made available.

The following comments are made in response to the May 1, 2024 additional information submittal.

1. Regarding the Supplemental information/vernal pool discovery in the vicinity of the north wellfield:
 - a. Was the Commission able to review the vernal pool extents during the site walk to confirm limits and conditions? (According to sheet WR-1, the proposed access road to the modified mitigation area north of the pool impacts the 100' review area of the vernal pool.)
 - b. Where is the vernal pool location compared to the well drawdown contours presented in the hydrogeologic report? These contours appear to extend into the vernal pool protection area, and the drawdown contours were presented for operations at Well 5A, (pumping at approximately 1/7 of the north wellfield proposed rate). What drawdown data was provided to the wetland scientists to respond to the surface water drawdown impacts to the ecological systems? What protections will be proposed to protect the existing natural systems (wetlands and stream) from impact due to increase well water withdrawals?
2. Regarding the revised wetland mitigation / floodplain compensation areas:
 - a. Sheet WR-1 shows a wetland replication area (represented by section A1-1) to excavate up to 8' in depth from an area of approximately 28,726 SF in size (to el 261). This area is located immediately adjacent to brook. The proposed transition slope areas to the north and west of this area add additional significant area of

disturbance. How close is the proposed replication area to the brook and what riparian impacts will result from the clearing? What is the total disturbance of the mitigation area, including the transition slope areas and haul road? What portions of the disturbed areas are located in regulated wetlands/upland review areas? What is the existing land cover in the proposed impacted areas, i.e. what kind of land cover will be cleared to accommodate the wetland replication area (and how much is considered brook riparian area)? What is the estimated time period for the mitigation area to restore to land cover conditions similar to the mature conditions (similar to the existing condition)? Will the perimeter fringe areas be more subject to invasive species (and if managed, chemical treatment) than the existing conditions (presumably with no current chemical use and less potential for introduction of invasives)? Are there seasonal restrictions in specifications to help minimize impacts related to clearing, dewatering and removal of the substantial proposed excavation materials? What is the proposed time period required and any seasonal restrictions for the proposed grading and planting? Will mitigation work be completed before the proposed impacts? Have any borings been performed to determine the need for access road stabilization and wetland material reuse? Will the haul/access road remain through Growing Seasons 2-5. Quantify the areas of haul/access road for clearing, grading, and stabilization and whether these areas occur in regulated wetlands or regulated floodplain. Has any road fill been computed in the floodplain impacts? Will any stabilized road work be removed and restored?

- b. On sheet WR-2, will any grading and stabilization be done for the haul/construction/access road? (The south road shows “dips” of 3’ - 4’ in the vicinity of the road narrowing for the south longitudinal section of mitigation). What is the tabulated area of impact for wetlands/upland review for these areas, including slope transitions, with a discussion of the existing land cover? Please discuss periods for invasive management and any proposed chemical use that may be needed to manage invasives in these proposed mitigation area. Due to the proximity of the wells, will chemical use be restricted? The plan calls for wetland replication of 3,057 SF to el 257 and 2,008 SF to el 256. The third area of impact/replication is not called out. What is the quantity of temporary impacts in regulated wetlands for each area’s construction? What is the anticipated surface water fluctuation to the adjacent wetlands and brook resulting from the new wells?

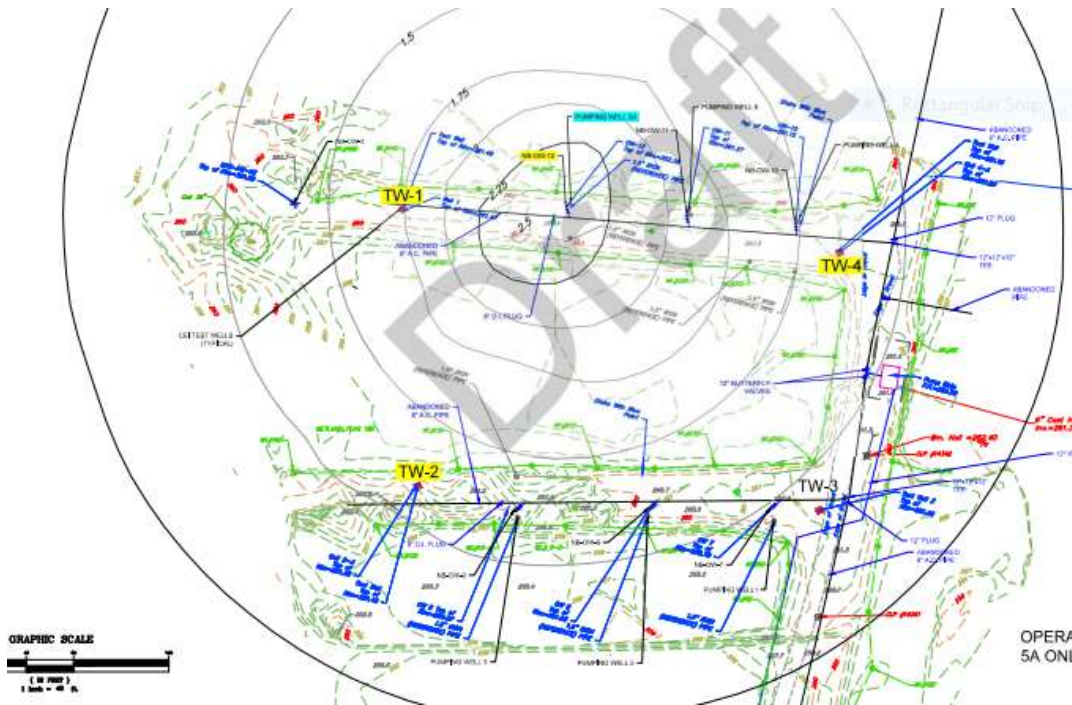


Exhibit taken from Hydrogeologic report, Figure 2

- c. On sheet WR-3, the wetland replication area (represented by Section A3-1) is tabulated at 31,146 SF by excavating the area immediately adjacent to the Coppermine to depths up to 10' (to el 247). This area is shown to be located immediately adjacent to brook. Contours on the northwest of the proposed replication area indicate an existing adjacent area of bottom contour 248. Was this area investigated as a potential pool or wetland? Where are the wetland limits in this area? The proposed transition slope areas to the north and west and southwest of this area add additional significant area of disturbance to this area. What is the total disturbance of this mitigation area construction, including the transition slopes and haul/access road areas? What portions of these areas are located in regulated wetlands/upland review areas? What is the land cover in the proposed impacted areas, i.e. how much and what kind of land cover will be cleared to accommodate the wetland replication area, slope and access road areas? What is the estimated time period for the mitigation area to restore to land cover conditions similar to the existing conditions? Will the perimeter fringe areas be more subject to invasive species (and if managed, chemical treatment) than the existing conditions? What is the proposed time period required and any seasonal restrictions for removal of the substantial proposed excavation materials to minimize disturbance? What is the proposed time period required and any seasonal restrictions for the proposed grading and planting? How long will the silt fences and haul/access road remain for management of the wetland replication area? Will it be removed/restored? Have any borings been performed to determine the need for haul road stabilization and wetland material reuse?

- d. On Sheet WR-4, the proposed replication area 7,000 SF graded to el 249 with an unidentified quantity of area graded to 252 and grassed (represented by Section A4-1). Please describe the existing and replacement land covers, label contours and tabulate the impacted areas, including slopes and access road, in the regulated wetland areas.
 - e. On Sheet WR-5, the proposed replication area, excavated up to 10' in depth is proposed to be graded to el 250 (represented by Section A5-1), immediately adjacent to the Coppermine. Similarly, please similarly address land use cover, identify contours and slope transitions, limits of impact, similar to previous comments.
3. With respect to investigation into project alternatives with less wetland/watercourse impact, the applicant can consider; **propose less pump capacity withdrawals for each of the wellfields and the pond.** This request is further supported by past studies that indicate the state registration withdrawal quantities cannot be supported. It's obvious from past and more recent pump testing that the shallow aquifer is of limited capacity and influenced by infiltration (and therefore drawdown) of the adjacent surface waters and wetlands. The well testing report by S.B Church (Sept 2019), based on test wells approved in the previous wetland application), suggests 2 wells in the south wellfield, and (report summary as clipped below) estimates yields considerably below the proposed six wells at 470 gpm in the south wellfield.

yields do not reflect the influence that the wells may have on each other and they do not reflect the influence of the drainage basin supplying water to each well throughout the year.

Well Number	Estimated Yield GPM
5	400
6	68
7	250
8	80
9	148
10	220
11	374
12	180
Estimated Total 1721 GPM of 1.54 MGD	

Handwritten notes:
 - Assume 8' drawdown?
 2 45
 5, 7, 9, 10, 11, 12

We suggest that two 30 inch large diameter wells be constructed at the sites of 5 and 11. We suggest that these wells be constructed as 30 inch diameter by 24 inch diameter gravel packed wells. The wells may be drilled a permanent production wells or as test wells with the plan to later permit them as permanent production wells.

We suggest that 72 hour pump tests be conducted on each of the wells to determine their influence on the other potential well sites. We also suggest that both wells be pumped simultaneously at approximately one million gallons per day to determine their influence on other potential well sites. This data could be used to determine where other future production wells should be drilled.

The applicant has not addressed the drawdown impacts for the proposed well withdrawals and for the adjacent south wellfield pond/surface water pump withdrawals, **except to recognize that brook impacts have and will occur.** Portions of the current Hydrogeology report states:

- Surface water elevations recorded by Lenard both before and during pump testing revealed a total water surface elevation decrease of 1 ft. for both the Copper Mine and Polkville Brook, strongly implying a hydraulic connection between surface water bodies within the wellfield. CEI observed a decrease in canal water levels of 1 ft, with near complete dewatering and drying of the canal observed within approximately 7 days of wellfield operation (primarily impact do to operation of the pond pump), implying the canal and unconsolidated wellfield formation are hydraulically well connected.
- The 2007 Lenard report implied that several brooks, including The Copper Mine, Polkville, Negro Hill, Wildcat, Whigville, and several unnamed tributaries are part of the Copper Mine drainage basin, and directly supply both the upper and Lower Wellfields with significant amounts of surface water, with the Upper Wellfield likely receiving the most recharge.
- Following observations made of historic data collected by Maguire during the Summer 1985 Lower Wellfield performance evaluation, it appears that operation of the 1985 wellfield at 2 MGD was unsustainable due to limitations imposed by the close proximity of installed wells and the unaccounted-for principal of well interference. 1 MGD was reported to be sustainable but is significantly lower than the permitted 4 MGD pumping limit. It is the opinion of CEI that due to this unaccounted-for phenomenon, the Lower Wellfield will be able to sustainably produce approximately 2 MGD should a more optimal wellfield configuration be installed accounting for the phenomena of well interference and nearby vertical recharge sources.

Recall that these statements were observations after the most recent pump test monitoring of pump discharges that were much, much lower than the proposed application pump rates. No clear documentation has been provided on the influence of the proposed simultaneous pond surface water pumps and well pumps on regulated wetlands and watercourses.

The applicant has the capability and the responsibility to test, model, and evaluate safe sub-surface and surface withdrawals to reduce impact to the adjacent wetlands/surface waters. Further evaluation, considering simultaneous well withdrawals and surface water withdrawals, is needed to realize a practical solution.

The applicant should also consider options to increase redundancy of its existing treatment system, located central to its main customer base. Considering that the proposed water capacity upgrades are presented as emergency supply for New Britain Water customers, it's hard to understand why these substantial upgrades are proposed in mapped floodplain and regulated wetland areas in the City of Bristol, making them subject to natural disaster and potentially unavailable.

4. The Streamflow monitoring plan (Attachment 11 of the May 1, 2024 submittal materials) was prepared for the Department of Public Health and does not address wetlands protections. It's noted that while monitoring is crucial, but it does not protect wetlands and streamflow unless protective management measures are developed and implemented.

5. The proposed re-fueling area located in the floodplain/regulated wetlands adjacent to Coppermine should be examined.
6. The Bristol Inland Wetland Commission follows local and state guidelines for wetlands and watercourse protections that differ from state health or federal requirements. Clear tabulation of the Bristol regulated wetland areas needs to be presented.
7. Due to review time constraints, portions of past comments are repeated below.

How can the Bristol Inland Wetland Commission protect the flow-impaired Coppermine and surrounding wetlands? Please consider the following:

- a. North wellfield: Applicant should model the effects of the groundwater and surface water drawdown resulting from proposed wells' pump rate capacities, operating simultaneously. Clearly show the extents of the estimated drawdown relative to regulated wetlands and surface waters and evaluate protective pump rates. Tabulate the impacted area and provide a flora and fauna assessment of the impacts. Address surface water fluctuations relative to operational and seasonal changes. Address operational management protocols to protect Copper Mine and associated wetland areas. Address mitigation plan, including monitoring, for all unavoidable impacts.
- b. South wellfield/pond: Applicant should model the effects of the groundwater and surface water withdrawal capacities simultaneously to clearly show the extents of the drawdown relative to regulated wetlands and surface waters. Evaluate protective pump rates. Tabulate the impacted area and provide a flora and fauna assessment of the impacts. Address surface water fluctuations relative to operational and seasonal changes. Address operational protocols to protect Coppermine and associated wetland areas. Address mitigation plan, including monitoring, for all unavoidable impacts.

The well and pond withdrawals have been documented to affect and to rely on the adjacent surface water natural system. These surface water sources and wetland storage areas serve valuable water quality, quantity and wildlife functions. Thank you for your consideration.

Carol Noble, P.E., CFM (ret)

Attachment 1:

Tables of the rates and the study references are compiled below for informational purposes.

White Bridge Upper Wellfield:

	DEEP Diversion Registration (2)	Existing Withdrawal (3)	Proposed Withdrawal (2)	Level A Study Withdrawal (4)	Safe Yield Ave (4)	Safe Yield Drought (4)	Pump test (2, 3)
gpm	1,500	~200	3@470=1,400	840	694	600	200 (Well 5A)
MGD (1)	2.16	~0.3	2.0	1.2	1.0	0.86	0.3

Notes:

(1) Conversion 1 MGD = 694.44 gpm

(2) Preliminary Engineering Study, CEI CDE Smith, Feb 2021

(3) Existing withdrawal assumed from the April 2020 CEI Hydrogeologic report estimating the most current working well pump

(4) Level A Study Withdrawal taken from Dec 2007 Lenard Hydrogeologic Level A Study Executive Summary. Note the Lenard Study states ““It was determined that the aquifer could not support the maximum registered diversion of the New Britain upper, lower and Bristol Mix Street wellfields”. The study reassigned “agreed upon” reduced flow rates to simulate a safe yield for each of the wellfields.

White Bridge Lower Wellfield:

	DEEP Diversion Registration (2)	Existing Withdrawal (3)	Proposed Withdrawal (2)	Level A Study Withdrawal (4)	Safe Yield Ave (4)	Safe Yield Drought (4)	Pump test (2, 3)
gpm	4,333	700 - 1250	6@470=2,800	2,190	1,958	611	850-1080 (meas at caisson (3,4))
MGD ⁽¹⁾	6.24	1 - 1.8	4.0	3.15	2.82	0.88	1.2 – 1.6 (meas at caisson ^(3,4))

Notes:

(1) Conversion 1 MGD = 694.44 gpm

(2) Preliminary Engineering Study, CEI CDE Smith, Feb 2021

(3) Existing withdrawal taken from the April 2020 CEI Hydrogeologic report inferring test well pump rates based on 1985 pump test.

(4) Level A Study Withdrawal taken from Dec 2007 Lenard Hydrogeologic Level A Study Executive Summary. Note the Lenard Study states ““It was determined that the aquifer could not support the maximum registered diversion of the New Britain upper, lower and Bristol Mix Street wellfields”. The study reassigned “agreed upon” reduced flow rates to simulate a safe yield for each of the wellfields. No pond pump withdrawal was considered in the evaluation.

White Bridge Pond System:

	DEEP Diversion Registration (2)	Existing Withdrawal	Proposed Withdrawal	Level A Study Withdrawal (4)	Safe Yield Ave (4)	Safe Yield Drought (4)	Pump test (4)
gpm	10,400	~2,000	3@3,500=10,500	NSE	NSE	NSE	NSE
MGD ⁽¹⁾	15	~3	20.2 (4 pumps) 15 (3 pumps)	NSE	NSE	NSE	NSE

Notes:

(1) 1 MGD = 694.44 gpm

(2) Preliminary Engineering Study, CEI CDE Smith, Feb 2021

(3) Existing withdrawal assumed from the April 2020 CEI Hydrogeologic report reference

(4) NSE = Not Specifically evaluated

Although the engineering reports document the influence of the pond pumping on the lower wellfield pump tests, simultaneous pond pumping influence was not evaluated.

Link to City of Bristol 3rd Party Environmental Review Agreement:

[https://www.bristolct.gov/DocumentCenter/View/46665
/N-PRP-2401017-City-of-Bristol-WhiteBridge-Well-Field-
Review--04162024](https://www.bristolct.gov/DocumentCenter/View/46665/N-PRP-2401017-City-of-Bristol-WhiteBridge-Well-Field-Review--04162024)

Link to Response 1 - Attachments:
<https://www.bristolct.gov/DocumentCenter/View/46659/Response-1-Attachments>

Response 1 – Attachments

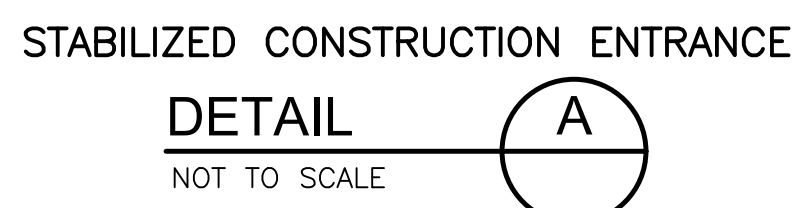
1.A. Drawings: WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 to and C-14A

1.B. Calculations: Compensatory Storage

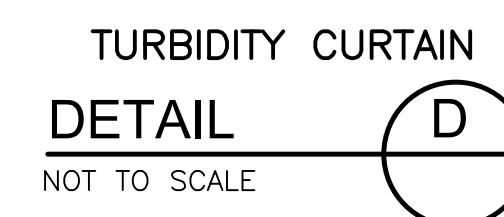
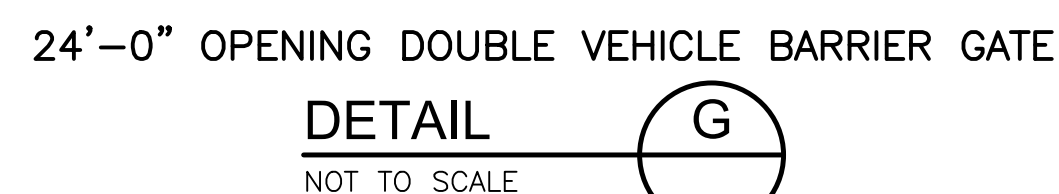
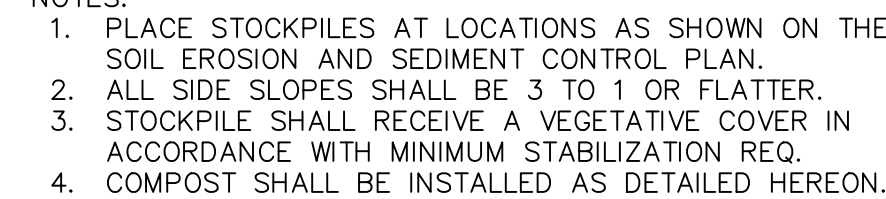
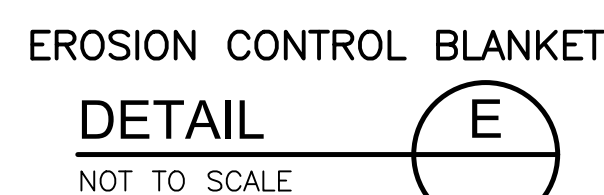
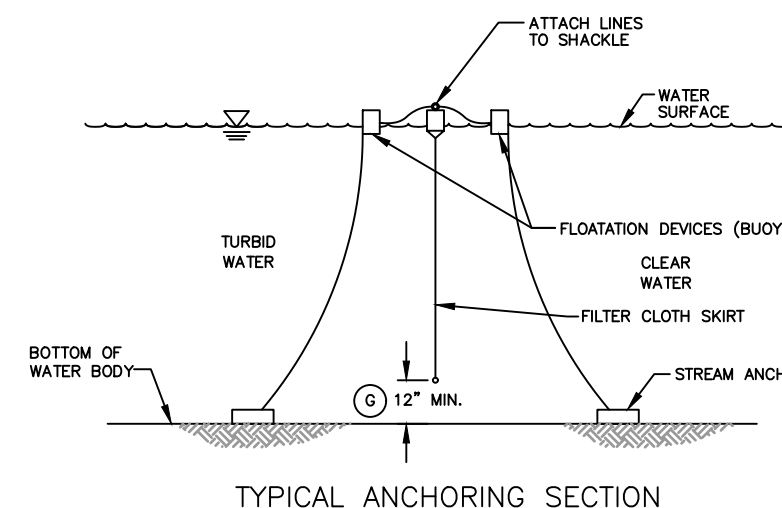
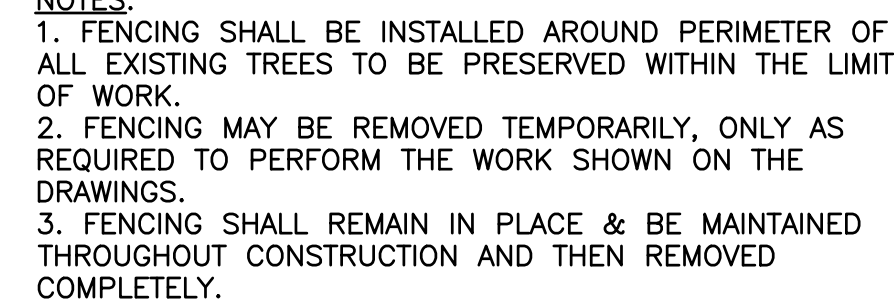
1.C. NBWD Supplemental Environmental/Wetlands Permit Information prepared by C.Webb and Associates, LLC

Response 2 – Attachment

2. Drawing: C-24



4.) REPAIR AND CLEANOUT MEASURES USED TO TRAP SEDIMENT.
ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO EXISTING PAVEMENT SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.



DESIGNED BY: _____ K. GERLACH
DRAWN BY: _____ J. BRONENKANT
SHEET CHK'D BY: _____ K. WAGNER
CROSS CHK'D BY: _____ K. GERLACH
APPROVED BY: _____ K. WAGNER
DATE: _____ APRIL 2023

**CDM
Smith**
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CIVIL DETAILS I

PROJECT NO.	10739-264571
FILE NAME:	CD001CSDT.DWG
SHEET NO.	C-24

Link to Response 3 Attachments:

<https://www.bristolct.gov/DocumentCenter/View/46660/Response-3-Attachments>

Response 3 – Attachments

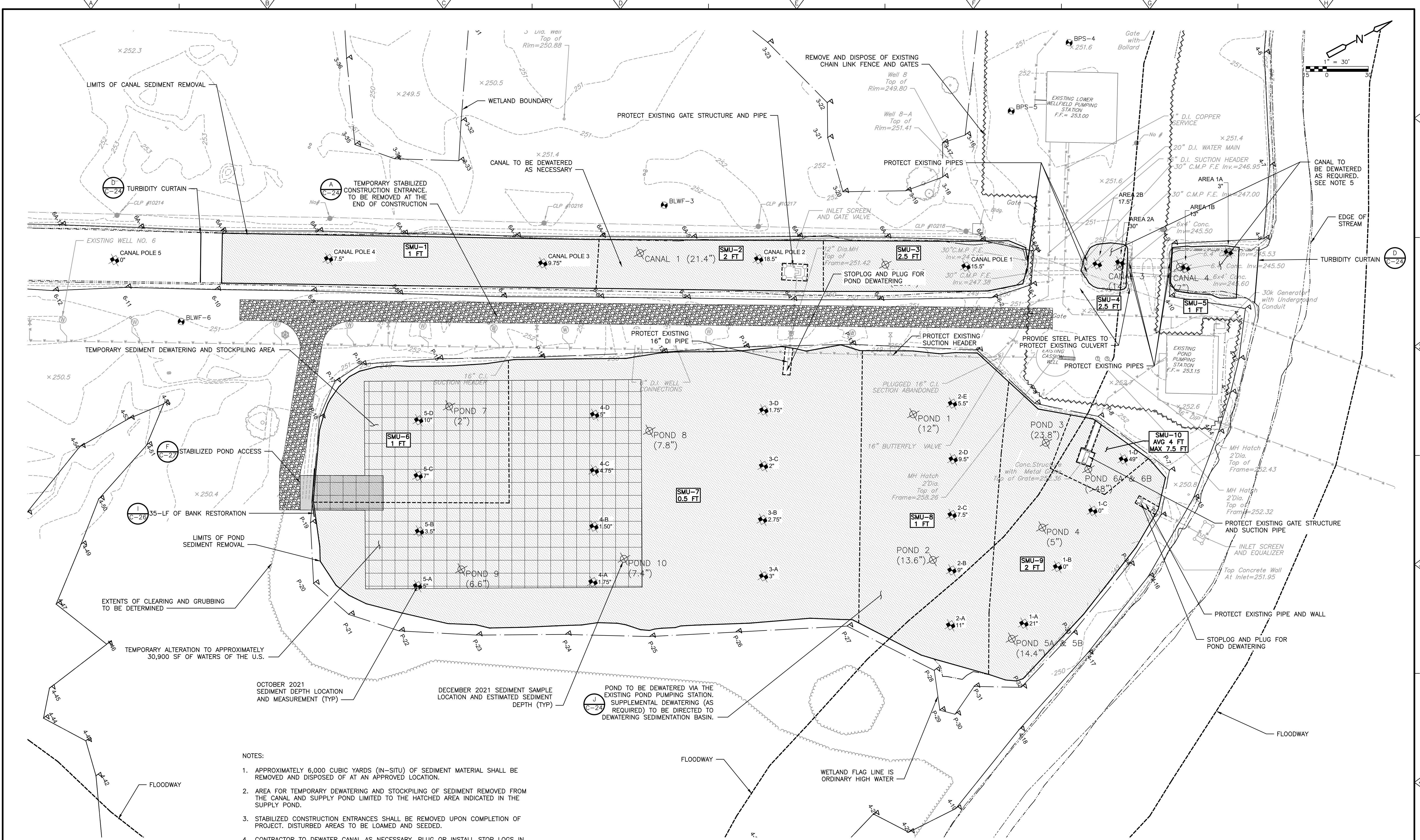
3.A. Proposed Construction Sequence Memorandum

3.B. Drawings: C-1 and C-7; C-20, C-21, and C-22

Response 4 – Attachment

4. Drawing: C-23

XREFs: [TEST HOLE POINTS, CDMS 2436, XSYRLO40, 2022-17, BORING LOCATIONS, Floodway_Floodplain] Images: []
Last saved by: ENGELS.B, Time: 3/1/2024 3:37:31 PM
C:\Users\engelsb\Documents\CDM Smith Inc\10739-264571 - New Britain CT White Bridge Well Fields and PS\Project Files\02 Civil (C)\10 CADD\C023SDRM.dwg
© 2024 CDM SMITH. ALL RIGHTS RESERVED. THESE DOCUMENTS AND DESIGNS PROVIDED BY PROFESSIONAL SERVICE, INCORPORATED HEREIN, ARE THE PROPERTY OF CDM SMITH AND ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CDM SMITH.



PLAN
1" = 30'

- NOTES:
- APPROXIMATELY 6,000 CUBIC YARDS (IN-SITU) OF SEDIMENT MATERIAL SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION.
 - AREA FOR TEMPORARY DEWATERING AND STOCKPILING OF SEDIMENT REMOVED FROM THE CANAL AND SUPPLY POND LIMITED TO THE HATCHED AREA INDICATED IN THE SUPPLY POND.
 - STABILIZED CONSTRUCTION ENTRANCES SHALL BE REMOVED UPON COMPLETION OF PROJECT. DISTURBED AREAS TO BE LOAMED AND SEEDED.
 - CONTRACTOR TO DEWATER CANAL AS NECESSARY. PLUG OR INSTALL STOP LOGS IN EXISTING CULVERTS OR INSTALL COFFERDAM. SUPPLEMENTAL DEWATERING (AS REQUIRED) TO BE DIRECTED TO DEWATERING SEDIMENTATION BASINS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: T. BURKE
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: T. BURKE
APPROVED BY: K. WAGNER
DATE: JANUARY 2024

CDM Smith
101 East River Drive, Suite 1A
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

SUPPLY POND AND CANAL
SEDIMENT REMOVAL PLAN
C-23

PROJECT NO. 10739-264571
FILE NAME: C023SDRM.DWG
SHEET NO.
C-23

Link to Response 5 Attachments:
<https://www.bristolct.gov/DocumentCenter/View/46664/Response-5-Attachments>

Response 5 – Attachment

5. Drawings: C-1, C-6, C-7, C-8, C-13, C-14, C-14A

Link to Response 9 Attachments:
<https://www.bristolct.gov/DocumentCenter/View/46661/Response-9-Attachments>

Response 9 – Attachment

9. No Rise Certification

Attachment 10

10. CT DEEP Permit Need Determination



Mr. Sebastian Amenta, P.E.
Comprehensive Environmental, Inc.
1 Hartford Square, Suite 227
New Britain, CT 06052
samenta@ceiengineers.com

RE: Request for Diversion Permit Need Determination
Whites Bridge Wellfield Improvements
New Britain Water Department
Bristol, CT

Dear Mr. Amenta:

This letter is in response to your November 8, 2023 request for Water Diversion permit need determination regarding your proposal to modify certain registered water diversions. The proposed activities are documented in the report you submitted on behalf of the New Britain Water Department (NBWD) entitled “Negative Declaration of Diversion / White Bridge Wellfield Improvements / Bristol, Connecticut,” dated November 2023 (“the report”), as well as other information provided in a subsequent email dated December 5, 2023. The project involves the replacement of several public water supply wells that make up two separate, but nearby wellfields registered to the NBWD pursuant to Section 22a-368 Connecticut General Statutes (CGS) as described in the table below.

REGISTRATION NUMBER	NAME OF DIVERSION	REGISTERED WITHDRAWAL (million gallons per day)	BASIN NAME
4314-007-PWS-GR	Upper White Bridge Wells	2.1600	Copper Mine River
4314-008-PWS-GR	Lower White Bridge Wells	6.6240	Copper Mine River

The report states that these “wellfields are unable to be used in accordance with their original design intent and drastic improvements are needed due to poor groundwater well performance caused by clogged well screens and an antiquated suction withdrawal system.” The proposed redevelopment includes the abandonment of all existing wells in these two wellfields, replacing them with new wells, all within the extent of the existing wellfields as registered. The proposed wells, as described in the report, will be withdrawing from the same stratified drift aquifer wherein the existing wells are located.

Based on our review of your submittal, it has been determined that this proposal as presented in the submitted materials conforms with Section 22a-377(c)-1(c)(1) of the Regulations of Connecticut State Agencies (RCSA) included below in its entirety:

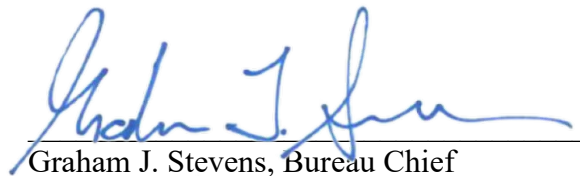
Any person or municipality which registered a diversion pursuant to section 22a-368 of the General Statutes may maintain such diversion only in accordance with the information provided in the registration form filed with the Commissioner. Any person or municipality which registered a diversion pursuant to section 22a-368 of the General Statutes may not cause or allow any modification of such diversion, including but not limited to an increase in withdrawal capacity, without having first obtained a permit under sections 22a-365 to 22a-378, inclusive, of the General Statutes and 22a-377(c)-2 of the Regulations of Connecticut State Agencies, unless such modification is exempt under section 22a-377 of the General Statutes or section 22a-377 (b)-1 of the Regulations of Connecticut State Agencies.

As such, this department finds that the proposed diversion modifications, comprising of the wellfields identified on page 1 of this determination, **will not** require a water diversion permit pursuant to Section 22a-368(a) CGS, provided the total combined withdrawal from the respective wellfields does not exceed the registered withdrawal as indicated in the above table. However, it is requested that you keep us informed as the project develops, particularly on matters relating to aquifer response modeling and induced infiltration studies.

If you should have any additional questions regarding this matter, please contact Doug Hoskins at 860-424-4192 or douglas.hoskins@ct.gov.

February 21, 2024

Date



Graham J. Stevens, Bureau Chief
Water Protection and Land Resources

GS/dh

Cc:

Ray Esponda, New Britain Water Dept., Ray.Esponds@NewBritainCT.gov

Raul Tejada, CT DPH, raul.tejada@ct.gov

Lori Mathieu, CT DPH, Lori.Mathieu@ct.gov

Brendan Schain, CT DEEP brendan.schain@ct.gov

Shalyn Zappulla, CT DEEP shalyn.zappulla@ct.org

Alicia Charamut, Rivers Alliance, alicea@riversalliance.org

Link to Attachment 11:

<https://www.bristolct.gov/DocumentCenter/View/46662/Response-11-Attachments>

Attachment 11

11. Detailed Groundwater and Stream Flow Monitoring Plan

Attachment 12

12. Letter confirming hydrogeologic information for project site remains valid



COMPREHENSIVE
ENVIRONMENTAL
INCORPORATED

Gateway Crossing
1 Hartford Square East, Suite 227
New Britain, CT 06052
860.224.0442

April 30, 2024

Robert Flanigan, City Planner
City Hall
111 North Main Street
Bristol, CT 06010

**RE: White Bridge Wellfield Improvements -Applications #2019, #2020 & #23-458F-305
Confirmation of Hydrogeologic Report**

Pursuant to City Staff request Comprehensive Environmental Inc. is confirming by way of this letter that the hydrogeologic studies and report (*Hydrogeology Report of Upper and Lower White Bridge Wellfield Bristol, Connecticut* dated April 6, 2020) submitted to CT DPH for the above project site is still valid and relevant for the intended use.

Feel free to contact me with any questions or comments at 860-620-3673 or samenta@ceiengineers.com.

Sincerely,

COMPREHENSIVE ENVIRONMENTAL INC.

A handwritten signature in blue ink that reads "Sebastian A. Amenta". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Sebastian A Amenta, P.E.
Northeast Program Manager

Attachment 13

13. Proposed wetlands boundary line change map

Link to Attachment 14:

<https://www.bristolct.gov/DocumentCenter/View/46663/Response-14-Attachments>

Attachment 14

14. Resumes of Engineers and Soil Scientist



AVON ▪ BLOOMFIELD ▪ BOLTON ▪ BRISTOL ▪ BURLINGTON ▪ CANTON ▪ COVENTRY ▪ EAST GRANBY ▪ EAST WINDSOR ▪ EAST HARTFORD ▪ ELLINGTON
ENFIELD ▪ FARMINGTON ▪ GLASTONBURY ▪ GRANBY ▪ HARTFORD ▪ MANCHESTER ▪ PLAINVILLE ▪ SIMSBURY ▪ SOMERS ▪ SOUTH WINDSOR
STAFFORD ▪ SUFFIELD ▪ WEST HARTFORD ▪ WETHERSFIELD ▪ TOLLAND ▪ VERNON ▪ WILLINGTON ▪ WINDSOR ▪ WINDSOR LOCKS

Date: March 28, 2024

To: Nancy Levesque, Bristol City Engineer
Bristol Inland Wetlands and Watercourses Commission

From: Covill, Natural Resources Specialist *Cameron J. Covill*
Joanna Shapiro, Executive Director *Joanna Shapiro*

Re: Review of Wetland Application, New Britain Water

This review is limited to a desktop review of the wetland application and related materials, with general recommendations based on the proposed activities. A site walk and wetland boundary review were not completed within the given timeframe.

If the Commission still deems it necessary following their site walk, a limited wetland boundary review can be performed before a subsequent meeting. Based on the size of the site and time limitations, a field review of all wetland boundaries on site by our staff is not feasible, but rather the Commission can direct the District to specific areas they feel require further review.

Background

District staff reviewed the 10-sheet site plan entitled “White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station” prepared by CDM Smith dated December 2022, as well as Attachment 3, “Project Drawings” and Attachment 4, “Floodway and Flood Fringe Encroachment Areas” (hereto forth referred to as “the Plans”). Staff also reviewed the materials submitted for applications #23-458F-305, #2019 and #2020 along with previous meeting minutes, relevant imagery, topographic, soil, and other maps.

The Plans propose construction of a new single building to house surface water pumping facilities with space for future groundwater treatment facilities, well replacement at Lower and Upper Wellfields, dewatering and sediment removal from the existing pond and canal, new utility connections, culvert replacement, paving an existing gravel access road, and associated work to ultimately bring an aging facility up to current requirements. In order to become a potable water supply, any new wells must be located 50 feet from any water bodies or wetland limits per CT Department of Public Health requirements. The wells must be raised 2’ above the one-hundred-year flood elevation. Due to these requirements, existing wells cannot be used and the new wells are proposed. Wetland resources are proposed to be filled in order to comply with these DPH regulations. Wetland replication, replacement, and enhancements are proposed to mitigate or offset the loss of these wetland areas, and compensatory flood storage areas are proposed to offset the activities which may raise the flood elevation, per FEMA requirements.

Comments/Recommendations

Withdrawals/Flow Calculations

Discussion on the record has included concern related to groundwater withdrawals. While groundwater withdrawals are regulated by CT DEEP and are not explicitly in the purview of the Inland Wetlands and Watercourses Commission, they may be considered if the Commission has reason to believe that such withdrawal may impact wetlands or watercourses. Review of aquifer withdrawals, resiliency, and recharge, and their impacts to wetlands and watercourses are outside the area of expertise of the North Central Conservation District.

- The Commission may request additional information from the applicant or intervenor regarding the potential impact of withdrawals on wetlands and watercourses, including their functions and values, if deemed a concern of the Commission necessary to render a decision and/or to rule on the claims of the petition to intervene.
- If additional information from the applicant or intervenor is deemed insufficient to make these rulings, the Town may consider further 3rd party review from a hydrogeologist or similarly qualified individual or firm, to review the proposed withdrawals from the aquifer as it pertains to impacts to the wetlands and watercourses in the project area.

In the comments submitted by Rivers Alliance on February 5th, 2024, they note that for diversions registered prior to 1983, registrants have rights to divert the amount of water originally registered in perpetuity, and that they were never and are not currently subject to any environmental review.

- Recommend that the Town request information from the applicant and CT DEEP on the accuracy of this statement, and whether any environmental review or impact analysis has ever been completed for this project location.

In Application #2020, the applicant states in the Additional Comments/Information section, “No flow calculations are provided due to zero impact as a result of the proposed work”.

- If the Commission has concerns about potential wetland/watercourse impacts related to potential flow alteration as a result of this application, recommend requesting flow calculations from the applicant to determine the average and seasonal flows of the brook, the average and/or seasonal withdrawals proposed, and any historical withdrawal information the applicant can provide.
- Recommend that the Commission require the applicant to develop an action plan to be submitted to and approved by the Commission, outlining under which circumstances withdrawals would be limited or stopped to ensure adequate flows, both for the benefit of future withdrawals and to reduce or prevent negative impacts to wetlands, watercourses, and dependent flora and fauna. To develop this action plan, recommend that the applicant use historical flow data from stream gauges or similar methods, predicted future flow calculations, and average rainfall data, contrasted with proposed withdrawal amounts and frequencies. This action plan can be required as part of the application, or this can potentially be a condition of approval of a Wetland Permit.

Functions and Values Assessment

Functions and values were assessed within the applicant’s soil scientist’s report, and replication/replacement of wetlands is proposed. However, it was not made clear in the application materials or the meeting minutes whether those functions and values of the existing wetlands will be preserved or replicated.

- Recommend that the Commission request testimony from the project soil scientist regarding whether functions and values assessed for existing wetlands will be preserved and/or replicated through proposed wetland replications, replacements, or enhancements.

Alternatives Analysis

Per section 10.3 of the Bristol Inland Wetlands and Watercourses Regulations, “In the case of an application which received a public hearing pursuant to a finding by the Inland Wetlands Agency that the proposed activity may have a significant impact on wetlands or watercourses, a permit shall not be issued unless the Agency finds on the basis of the record that a feasible and prudent alternative does not exist. In making the finding, the Agency shall consider the facts and circumstances set forth in subsection 10.2. The finding and the reasons therefore shall be stated on the record in writing”. Section 10.2 outlines the considerations for assessment by the Commission of Prudent and Feasible alternatives.

- While alternatives assessments were discussed upon the record of the March 4, 2024 meeting minutes, the District recommends that the Commissioners review Sections 10.2 and 10.3 of the Bristol Inland Wetlands and Watercourses Regulations, and state upon the record in their decision whether alternatives were adequately assessed to the extent required by the regulations.

Thank you for the opportunity to comment.

Link to Hydrology Report:

<https://www.bristolct.gov/DocumentCenter/View/46559/Hydrology-Report-Extracted>

HYDROGEOLOGIC STUDY

**UPPER AND LOWER WHITE BRIDGE
WELL FIELDS CITY OF NEW BRITAIN
WATER DEPARTMENT AND MIX STREET
WELL FIELD (WELLS 3, 4, &5) CITY OF
BRISTOL WATER DEPARTMENT**

PREPARED FOR:

**CITY OF NEW BRITAIN WATER
DEPARTMENT AND CITY OF BRISTOL
WATER DEPARTMENT**

DECEMBER 2007

Prepared by:

LENARD ENGINEERING, INC.

CIVIL, ENVIRONMENTAL & HYDROGEOLOGICAL CONSULTANTS

1768 STORRS ROAD, P.O. BOX 580

STORRS, CT 06268-0580

Link to Application #2019

Letters, Emails & Correspondence:

<https://www.bristolct.gov/DocumentCenter/View/46560/Extracted-Correspondence-041224>

Summary of Updates
to
Applications #2019, #2020 and #23-458F-305

#2019-1) Please add the attached map to Attachment 4. It is an overlay of scientist wetlands flagging on the City's wetlands map for the project area.

#2020-1) Please insert the corrected page and substitute it for the page on file.

2) Please add the NDDB and SHPO documents to the filing

3) Map showing Monitor well locations and stream gauge locations.

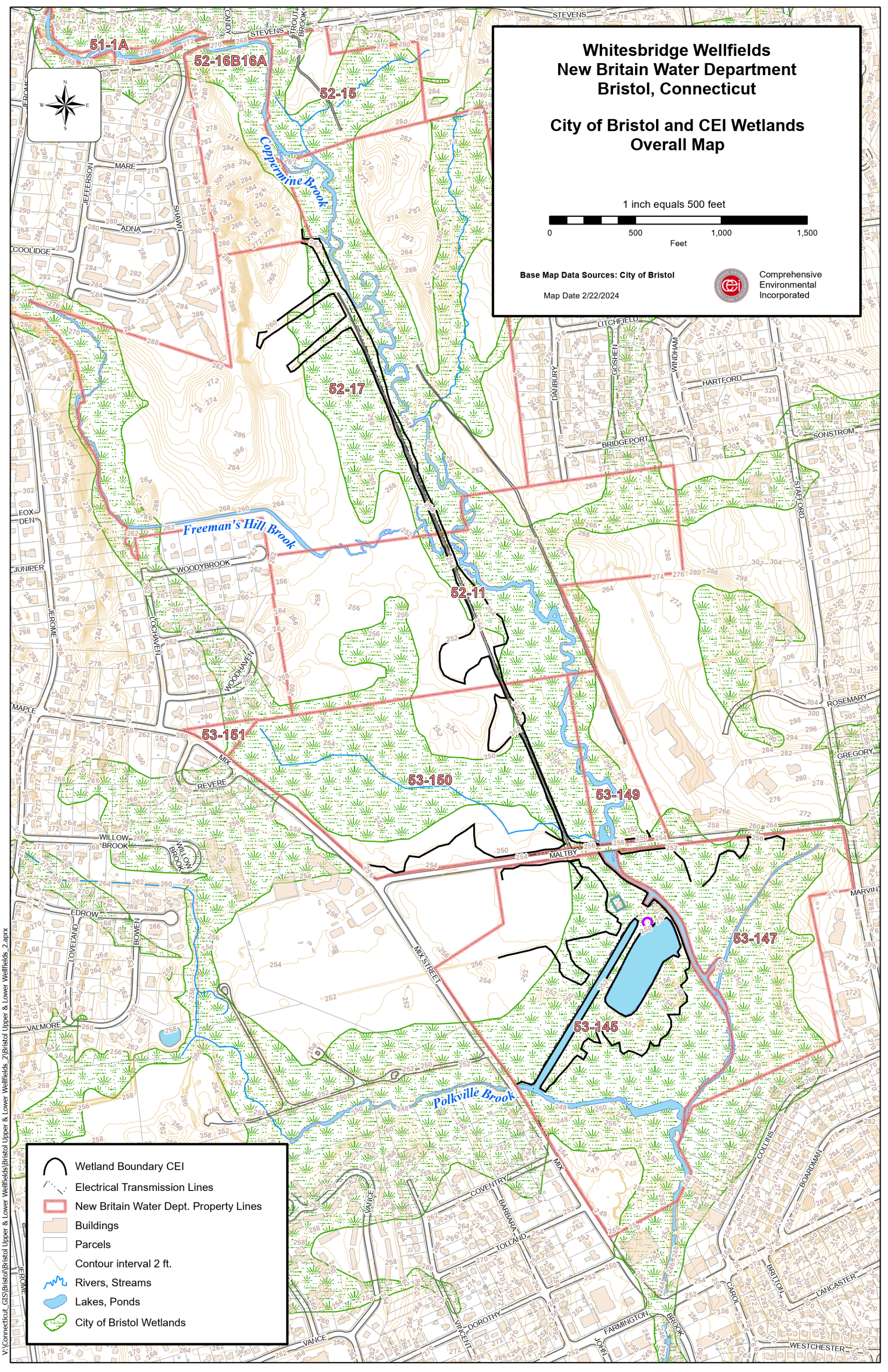
4) Please add the CT DEEP letter which confirms the Diversion Registrations will remain in force and no permit is required.

#23-458F-305-1) Please insert substitute page 2 of the Application PDF which indicates updated volumes for fill and compensatory storage.

2) Please insert page 9 of the PDF which indicates the revised volumes.

3) Please add the attached spreadsheet summary for cut/fill and compensatory storage volume.

#2019 Update



Whitesbridge Wellfields
New Britain Water Department
Bristol, Connecticut
City of Bristol and CEI Wetlands
Overall Map

1 inch equals 500 feet



Base Map Data Sources: City of Bristol

Map Date 2/22/2024



Comprehensive
Environmental
Incorporated

- Wetland Boundary CEI
- Electrical Transmission Lines
- New Britain Water Dept. Property Lines
- Buildings
- Parcels
- Contour interval 2 ft.
- Rivers, Streams
- Lakes, Ponds
- City of Bristol Wetlands



Mr. Sebastian Amenta, P.E.
Comprehensive Environmental, Inc.
1 Hartford Square, Suite 227
New Britain, CT 06052
samenta@ceiengineers.com

RE: Request for Diversion Permit Need Determination
Whites Bridge Wellfield Improvements
New Britain Water Department
Bristol, CT

Dear Mr. Amenta:

This letter is in response to your November 8, 2023 request for Water Diversion permit need determination regarding your proposal to modify certain registered water diversions. The proposed activities are documented in the report you submitted on behalf of the New Britain Water Department (NBWD) entitled “Negative Declaration of Diversion / White Bridge Wellfield Improvements / Bristol, Connecticut,” dated November 2023 (“the report”), as well as other information provided in a subsequent email dated December 5, 2023. The project involves the replacement of several public water supply wells that make up two separate, but nearby wellfields registered to the NBWD pursuant to Section 22a-368 Connecticut General Statutes (CGS) as described in the table below.

REGISTRATION NUMBER	NAME OF DIVERSION	REGISTERED WITHDRAWAL (million gallons per day)	BASIN NAME
4314-007-PWS-GR	Upper White Bridge Wells	2.1600	Copper Mine River
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The report states that these “wellfields are unable to be used in accordance with their original design intent and drastic improvements are needed due to poor groundwater well performance caused by clogged well screens and an antiquated suction withdrawal system.” The proposed redevelopment includes the abandonment of all existing wells in these two wellfields, replacing them with new wells, all within the extent of the existing wellfields as registered. The proposed wells, as described in the report, will be withdrawing from the same stratified drift aquifer wherein the existing wells are located.

Based on our review of your submittal, it has been determined that this proposal as presented in the submitted materials conforms with Section 22a-377(c)-1(c)(1) of the Regulations of Connecticut State Agencies (RCSA) included below in its entirety:

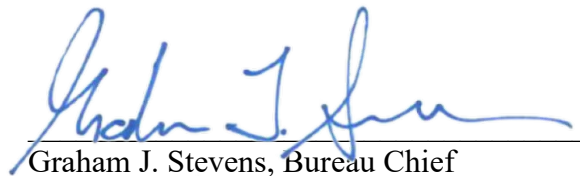
Any person or municipality which registered a diversion pursuant to section 22a-368 of the General Statutes may maintain such diversion only in accordance with the information provided in the registration form filed with the Commissioner. Any person or municipality which registered a diversion pursuant to section 22a-368 of the General Statutes may not cause or allow any modification of such diversion, including but not limited to an increase in withdrawal capacity, without having first obtained a permit under sections 22a-365 to 22a-378, inclusive, of the General Statutes and 22a-377(c)-2 of the Regulations of Connecticut State Agencies, unless such modification is exempt under section 22a-377 of the General Statutes or section 22a-377 (b)-1 of the Regulations of Connecticut State Agencies.

As such, this department finds that the proposed diversion modifications, comprising of the wellfields identified on page 1 of this determination, **will not** require a water diversion permit pursuant to Section 22a-368(a) CGS, provided the total combined withdrawal from the respective wellfields does not exceed the registered withdrawal as indicated in the above table. However, it is requested that you keep us informed as the project develops, particularly on matters relating to aquifer response modeling and induced infiltration studies.

If you should have any additional questions regarding this matter, please contact Doug Hoskins at 860-424-4192 or douglas.hoskins@ct.gov.

February 21, 2024

Date



Graham J. Stevens, Bureau Chief
Water Protection and Land Resources

GS/dh

Cc:

Ray Esponda, New Britain Water Dept., Ray.Esponds@NewBritainCT.gov

Raul Tejada, CT DPH, raul.tejada@ct.gov

Lori Mathieu, CT DPH, Lori.Mathieu@ct.gov

Brendan Schain, CT DEEP brendan.schain@ct.gov

Shalyn Zappulla, CT DEEP shalyn.zappulla@ct.org

Alicia Charamut, Rivers Alliance, alicea@riversalliance.org

CT DEEP Letter

May 6, 2022

May 6, 2022

Magdalena Lofstedt
CDM Smith Inc
77 Hartland St, Suite 201
East Hartford, CT 06108
LOFSTEDTMH@CDMSMITH.COM

NDDB DETERMINATION NUMBER: 202205409

Project: (City of New Britain) Replace existing groundwater wells, Upper & Lower Wellfields, White Bridge Waterworks Facility, off Maltby St, Bristol

Expiration: May 6, 2024

I have reviewed Natural Diversity Database (NDDB) maps and files regarding this project. According to our records, there are State-listed species (RCSA Sec. 26-306) documented nearby and within the watershed of your project area. Recommendations to minimize impacts are included below.

- **Spotted turtle (*Clemmys guttata*) State Special Concern**
- **Wood turtle (*Glyptemys insculpta*) State Special Concern**

Spotted turtle: Individuals of this species are associated with wetlands and vernal pools. Over the course of a season and lifetime, individuals will travel large distances (up to 1km) over upland forest and fields between multiple wetlands. They overwinter burrowed into the mud in wetlands between Nov 1-March 15. They do not begin to reproduce until 7-10 years old and adults can live at least 30 years. This species is threatened most by any activities that reduce adult survivorship including road kills, commercial and casual collection, increased predation in areas around commercial and residential development, mortality and injury from agricultural equipment or other mechanical equipment.

Wood turtle: Individuals of this species are riverine and riparian obligates, overwintering and mating in clear, cold, primarily sand-gravel and rock bottomed streams and foraging in riparian zones, fields and upland forests during the late spring and summer. They hibernate in the banks of the river in submerged tree roots between November 1 and March 31. Their summer habitat focuses within 90m (300ft of rivers) and they regularly travel 300m (0.2 mile) from rivers during this time. During summer they seek out early successional habitat: pastures, old fields, woodlands, powerline cuts and railroad beds bordering or adjacent to streams and rivers. Their habitat in Connecticut is already severely threatened by fragmentation of riverine, instream, riparian, and upland habitats, but is exacerbated by heavy adult mortality from machinery, cars, and collection. This is compounded by the species late maturity, low reproductive potential, and high nest and hatchling depredation rates.

Land disturbance activities that will crush active turtles or unearth/or crush hibernating turtles or nests need to consider local habitat features and apply fencing and/or time of year restrictions as appropriate. We recommend you consult with a herpetologist familiar with preferred habitats to assist you with proper techniques to ensure the best protection strategies are employed for your site.

- Land disturbance and excavation confined to the upland (greater than 10 meters from a wetland) can be done without risk for impact if it is restricted to the dormant season (November 1- March 15).

If land disturbance activity will include significant areas within and around wetlands, you will need to take precautions to avoid crushing or killing hibernating adults.

- Do not conduct land disturbance activities within a wetland during the turtle's dormant period (November 1- March 15).

Additionally, when working in the upland between March 15- November 1:

- Exclusionary practices will be required to prevent any turtle access into construction areas. These measures will need to be installed at the limits of disturbance as shown on the plans.
- Exclusionary fencing be at least 20 inches tall and must be secured to and remain in contact with the ground and be regularly maintained (at least bi-weekly and after major weather events) to secure any gaps or openings at ground level that may let animal pass through.
- Prior to construction, all turtles occurring within fencing work area will be relocated to suitable habitat outside disturbance area. This should be performed by a qualified professional familiar with habitat requirements and behavior of the species.
- The Contractor must search the work area each morning prior to any work being done.
- All construction personnel working within the turtle habitat must be apprised of the species description and the possible presence of a listed species.
- Any turtles encountered within the immediate work area shall be carefully moved to an adjacent area outside of the excluded area and fencing should be inspected to identify and remove access point. These animals are protected by law and no turtles should be relocated from the site.
- In areas where silt fence is used for exclusion, it shall be removed as soon as the area is stable to allow for reptile and amphibian passage to resume.
- No heavy machinery or vehicles may be parked in any turtle habitat.
- Special precautions must be taken to avoid degradation of wetland habitats including any wet meadows and seasonal vernal pools.

Natural Diversity Database information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Bureau of Natural Resources and cooperating units of DEEP, independent conservation groups, and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDDB should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated in the NDDDB as it becomes available.

Please contact me if you have any questions (shannon.kearney@ct.gov). Thank you for consulting with the Natural Diversity Database and continuing to work with us to protect State-listed species.

Sincerely,

/s/ Shannon B. Kearney
Wildlife Biologist

Verified Petition to Intervene

February 5, 2024

**BRISTOL INLAND WETLANDS AND WATERCOURSES AGENCY/CONSERVATION
COMMISSION**

Application #2019 - Wetlands boundary change application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.

Application #2020 – Wetlands application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.

Application #23-458F-305 – Floodplain application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.

February 5, 2024

VERIFIED PETITION TO INTERVENE UNDER CGS §22a-19

Rivers Alliance of Connecticut, Inc. (RA) requests that the Bristol Inland Wetlands and Watercourses Agency/Conservation Commission (Agency) grant it intervenor status in the above captioned proceedings, pursuant to the Connecticut Environmental Protection Act, CGS section 22a-19(a)(1) (CEPA). RA does not oppose the work that is proposed by New Britain Water Department (NBWD) in the above-referenced applications to purportedly rehabilitate its wellfields and to come into compliance with Connecticut Department of Public Health (DPH) and Federal Emergency Management Agency (FEMA) requirements, so long as the reasonably foreseeable environmental threats posed by these activities are appropriately conditioned to protect the important natural resources comprised of waters of the State under the stewardship of

the City of Bristol. RA's participation in this matter is in the interests of justice and will not impair the orderly conduct of the proceedings.

In support of its petition, RA represents the following:

1. CEPA provides in pertinent part at General Statutes Section 22a-19(a) that

In any administrative, . . . proceeding, and in any judicial review thereof made available by law, . . . any person, . . . corporation . . . or other legal entity may intervene as a party on the filing of a verified pleading asserting that the proceeding or action for judicial review involves conduct which has, or which is reasonably likely to have, the effect of unreasonably polluting, impairing or destroying the public trust in the air, water or other natural resources of the state.

2. The Agency is the town agency authorized to administer the statutory provisions regulating the use of inland wetlands and watercourses pursuant to General Statutes Section 22a-36, et seq., and of its own duly enacted Inland Wetlands and Watercourses Regulations of the City of Bristol (Regulations).

3. RA is a 501(c)(3) non-profit environmental organization, founded in 1992, and dedicated to the protection and preservation of the water resources of the State. Its membership includes, primarily, river and watershed groups in the state, civic and business groups, municipal commissions, and individuals concerned with water health, thus representing a network of thousands of members statewide. RA's mission is to protect the quality and availability of surface and ground waters of Connecticut and Long Island Sound and associated recreational uses and habitat values. RA advocates for the protection of ample, healthy sources of water for drinking and other vital societal uses. RA brings expertise in policy, law, and science to participation in policy-making entities and to its extensive educational program. RA's goal is to bring people together to protect our state waters for current and future generations. Numerous

RA members are residents of Bristol or customers of NBWD. RA's offices are located at 28 Russel Street, P.O. Box 1797, Litchfield, Connecticut, 06759.

4. The Agency's decision in this matter will specifically affect RA, its members, and important natural resources of the State. NBWD owns or manages water supply facilities in the City of Bristol. Pursuant to CGS §22a-365 through 22a-379 as well as Sections 22a-372-1, 22a-377(b)-1 and 22a-377(c)-1 to 22a-377(c)-2 of the Regulations of Connecticut State Agencies, NBWD is authorized to divert 23.78 million gallons of water per day (mgd) in perpetuity.

5. Bristol Water Department (BWD) also owns or manages water supply facilities within the same drainage basin as the White Bridge Waterworks Facility. Pursuant to CGS §22a-365 through 22a-379 as well as Sections 22a-372-1, 22a-377(b)-1 and 22a-377(c)-1 to 22a-377(c)-2 of the Regulations of Connecticut State Agencies, BWD is authorized to divert 3.87 million gallons of water per day (mgd) in perpetuity.

6. Coppermine Brook is listed in Connecticut Department of Energy and Environmental Protection's (DEEP) 2022 Integrated Water Quality Report to Congress under Nonpollutant Impairments (EPA Category 4c) for Flow Regime Modification. DEEP has developed a methodology for assessing flow impairments when sufficient information is available. The term "flow regime modification" is used to reflect the impairments which are predominantly due to flow alterations that serve public needs and safety.

7. Sections of Coppermine Brook below and adjacent to the NBWD and BWD were effectively dry during the 2016-2017 drought and DEEP has documented impairment due to low flow for periods following the 2016-2017 drought. Due to decreased well performance, NBWD has been able to withdraw only a portion of the 23.78 mgd it is authorized pursuant to

CGS §22a-365 through 22a-379 as well as Sections 22a-372-1, 22a-377(b)-1 and 22a-377(c)-1 to 22a-377(c)-2 of the Regulations of Connecticut State Agencies.

8. NBWD has stated in Application #2020 that “The NBWD has registered diversions and those withdrawals will be increased.” It also stated that “The proposed wetland disturbances activity will not affect the nearby watercourse flow rate.”

9. RA seeks to intervene in this proceeding for the purposes of assuring that Coppermine Brook is not further impaired for regime flow modification due to an increase in withdrawals by the NBWD. The potential for such further impairment is not adequately addressed in the Application. RA further seeks to ensure that the Agency has a complete record on which to make an informed decision on all aspects of this complicated proceeding. As DEEP cannot intervene on impairments from low flow (as this activity is purportedly in compliance with CGS §22a-365 through 22a-379 as well as Sections 22a-372-1, 22a-377(b)-1 and 22a-377(c)-1 to 22a-377(c)-2 of the Regulations of Connecticut State Agencies), it is reasonable for the Agency to inquire into potential impacts to downstream flow from NBWD withdrawals. In addition, impacts on streams from groundwater withdrawals are not included in DEEP’s Streamflow Standards and Regulations pursuant to CGS §26-141(a) and (b) and §26-141b-7(a) of the Regulations of Connecticut State Agencies. Appropriate regulation and oversight of potential impacts to downstream flow can be accomplished by requiring monitoring of streamflow above and below the wellfields and requiring that NBWD work with DEEP to determine a threshold at which NBWD would have to work with DEEP to find an operational mode that would not impair Coppermine Brook, as per the NBWD agreement with DPH for funds procured through DPH’s Drinking Water State Revolving Fund for the project. This regulation and oversight clearly falls

within the Agency's jurisdiction in this proceeding pursuant to CGS section 22a-41, 22a-42, and the city's Inland Wetlands and Watercourses Regulations.

10. It is RA's position that prudent conditions to protect critical natural resources of the State, which are threatened by the increased uncertainty of climate change, are necessary and appropriate. RA is focused on a narrow but important set of natural resources that receive limited, but critical, protections under state statute. RA's intervention in this matter is in the interests of justice and will not impair the orderly conduct of the proceedings.

11. RA is not aware of any other intervening party to this proceeding whose focus is to ensure that the water resources of the state under the care of the City of Bristol are protected from undue impairment.

12. RA intends to offer brief and pertinent direct testimony from Connecticut water conservation experts with personal knowledge of wetlands and hydrology, as it applies to the Applications.

13. RA requests that the following individuals be listed on the Service List in this proceeding:

Alicea Charamut, Executive Director
Rivers Alliance of Connecticut, Inc.
28 Russel Street, P.O. Box 1797
Litchfield, CT 06759
(860) 416-7859
alicea@riversalliance.org

and

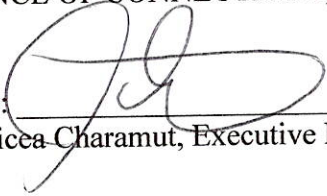
Mary Ridingsward, Executive Director
Pequabuck River Watershed Association
PO Box 1461
Bristol, CT 06011-1461
pequabuckriverct@gmail.com

Copies of filings and notices should be sent to alicea.@riversalliance.org.

WHEREFORE, Rivers Alliance of Connecticut, Inc. respectfully requests intervention status in this proceeding pursuant to CEPA upon the filing of this verified pleading for intervention.

Respectfully submitted,

INTERVENOR
RIVERS ALLIANCE OF CONNECTICUT, INC.

By: 
Alicea Charamut, Executive Director

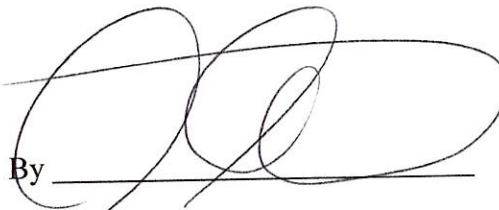
VERIFICATION OF PETITION FOR INTERVENTION
UNDER GENERAL STATUTES SECTION 22a-19(a)

I, the undersigned, being duly sworn, depose and say that (i) I am the Executive Director of Rivers Alliance of Connecticut; (ii) I have the authority to execute this Petition for Intervention on behalf of Rivers Alliance of Connecticut; and (iii) I have read the foregoing Petition for Intervention and verify that the facts stated therein are true and correct to the best of my knowledge, information and belief based on my personal knowledge, and the records which I have reviewed in this matter.

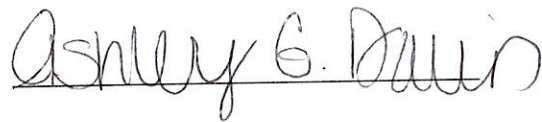
Dated at Newington Connecticut, this 5th day of February, 2024.

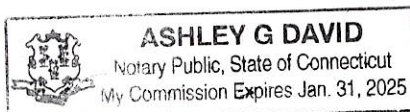
INTERVENOR

RIVERS ALLIANCE OF CONNECTICUT

By 
Alicea Charamut, Executive Director

Subscribed and sworn to before me the undersigned this 5th day of February, 2024.





Notary Public: Ashley G. David
My Commission Expires: 01/31/2025

Link to State Historic Preservation Office Application, Letter, Response (April 2022)

Link to Document:

https://www.bristolct.gov/DocumentCenter/View/45992/NBWD-SHPO_Letter_Response-and-Application-April-27-2022



Photos submitted by Daniel Sutula - 3/11/24

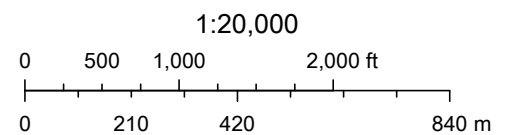
ATTACHMENT 1

PROJECT SITE MAP

White Bridge Waterworks Facility



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USGS The National Map: Orthoimagery and US Topo. Data refreshed December, 2022.

ATTACHMENT 2

ADDITIONAL INFORMATION

Wetlands Permit Application – IW-2

This attachment to the IW-2 application serves to provide the additional information required for changes to wetlands boundaries application submittals, including:

- Site plans
- Proposed project activities related to changes in wetlands boundaries
- Description and delineation of wetlands

Proposed Project Activities:

A rehabilitative/restorative project will be conducted at the Upper and Lower Wellfields of the White Bridge Waterworks Facility owned by the New Britain Water Department (NBWD). The purpose of this project is to redevelop the existing Upper and Lower Wellfields, which were constructed in 1955 and 1921, respectively. This will allow the NBWD to optimize the volume of water collected from this resource and potentially utilize it as a backup source of potable water since the NBWD only has one water treatment plant and no other wells. Presently, these wellfields serve as a raw water supply only and cannot serve as a backup in their present condition. In order to become a potable water supply, any new wells must be located 50 feet from any water bodies or wetland limits per Department of Public Health (DPH) requirements. In addition, the wells must be raised 2' above the one-hundred-year flood elevation. Because of these requirements, the existing wells cannot be redrilled or rehabilitated in their present location. All currently existing wells will be abandoned in accordance with DPH requirements.

Compensatory flood storage areas will be created so as to not increase the current flood elevation levels as given by FEMA guidelines. These compensatory storage areas will also create additional wetland areas and, as such, will change relatively small portions of the wetlands boundaries as were mapped and flagged by professional soil and wetlands scientists in August/September 2022. See the attached maps for further information on the extent of the boundary flagging as well as the areas of interest with respect to changes in wetlands boundaries.

Category of Proposed Activity:

The proposed activity, which will occur in a wetlands area, is requested to be permitted as an “as of right” use. This activity falls under Subsection 4.1.e of the Inland Wetlands and Watercourses Regulations of the Conservation Commission of the City of Bristol, CT, because it involves the operation by a municipal water supply system of facilities necessary for the withdrawal of water in connection with public water supplies.

Significant Activity:

The proposed activity constitutes a “significant activity” because it has the potential to have a major effect or substantial impact to a wetlands regulated area, due to the deposit of material in a regulated area. Erosion control cautionary measures will be in place to reduce the impact of the project.

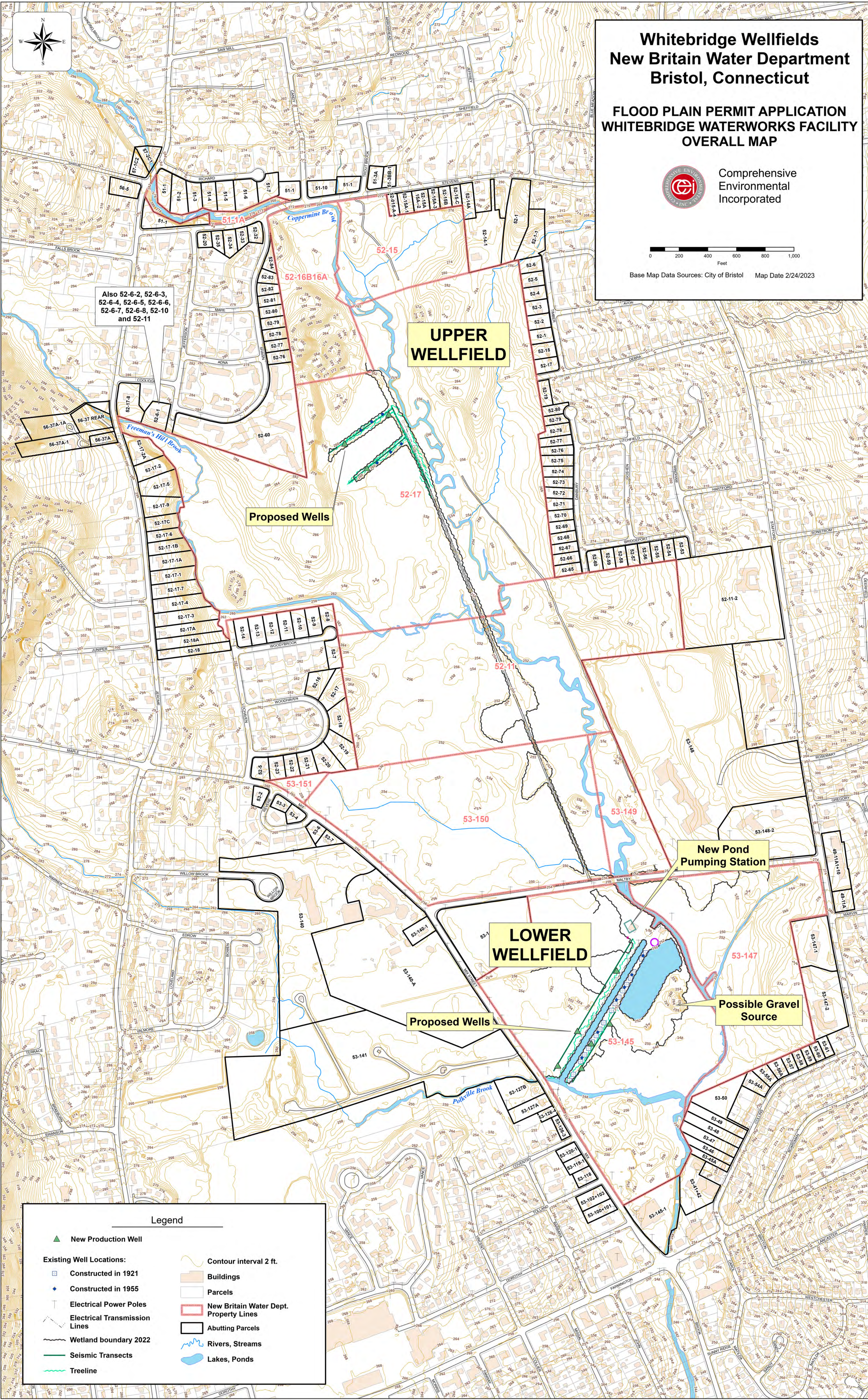
Description of Property and Wetlands:

This property spans a total of 303.7 acres, which includes the following parcels (by Map/Lot number): 52-15, 52-16B16A, 52-17, 52-11, 53-149, 53-150, 53-151, 53-145 and 53-147. Copper Mine Brook travels through the entirety of the property from north to south. The Upper Wellfield is located on parcel 52-17, which is 104.6 acres and has PFO1E and PEM1E wetland areas. PFO1E areas are seasonally flooded/saturated broad-leaved deciduous wetlands. PEM1E areas are seasonally flood/saturated persistent emergent wetlands. Soils in this project area consist mostly of Scarboro muck, with some Saco silt loam located closer to Copper Mine Brook. Soil scientist Ian Cole located all the wetland boundaries in the vicinity of the test well explorations. These boundaries are shown on the plans provided.

The Lower Wellfield is located on parcel 53-145, which is 50.3 acres and also has PFO1E and PEM1E wetland areas. Polkville Brook travels west to east, then southerly through this parcel before flowing into Copper Mine Brook. Onsite vehicular transport, between the Upper and Lower Wellfield areas will use existing travel ways on the site not within any wetland boundaries. Soils in the Lower Wellfield project area consist mostly of Raypol silt loam, with some Hinckley loamy sand located closer to Polkville Brook. Detailed wetlands mapping is provided on the plans.

ATTACHMENT 3

ABUTTING PROPERTY AND OWNERS

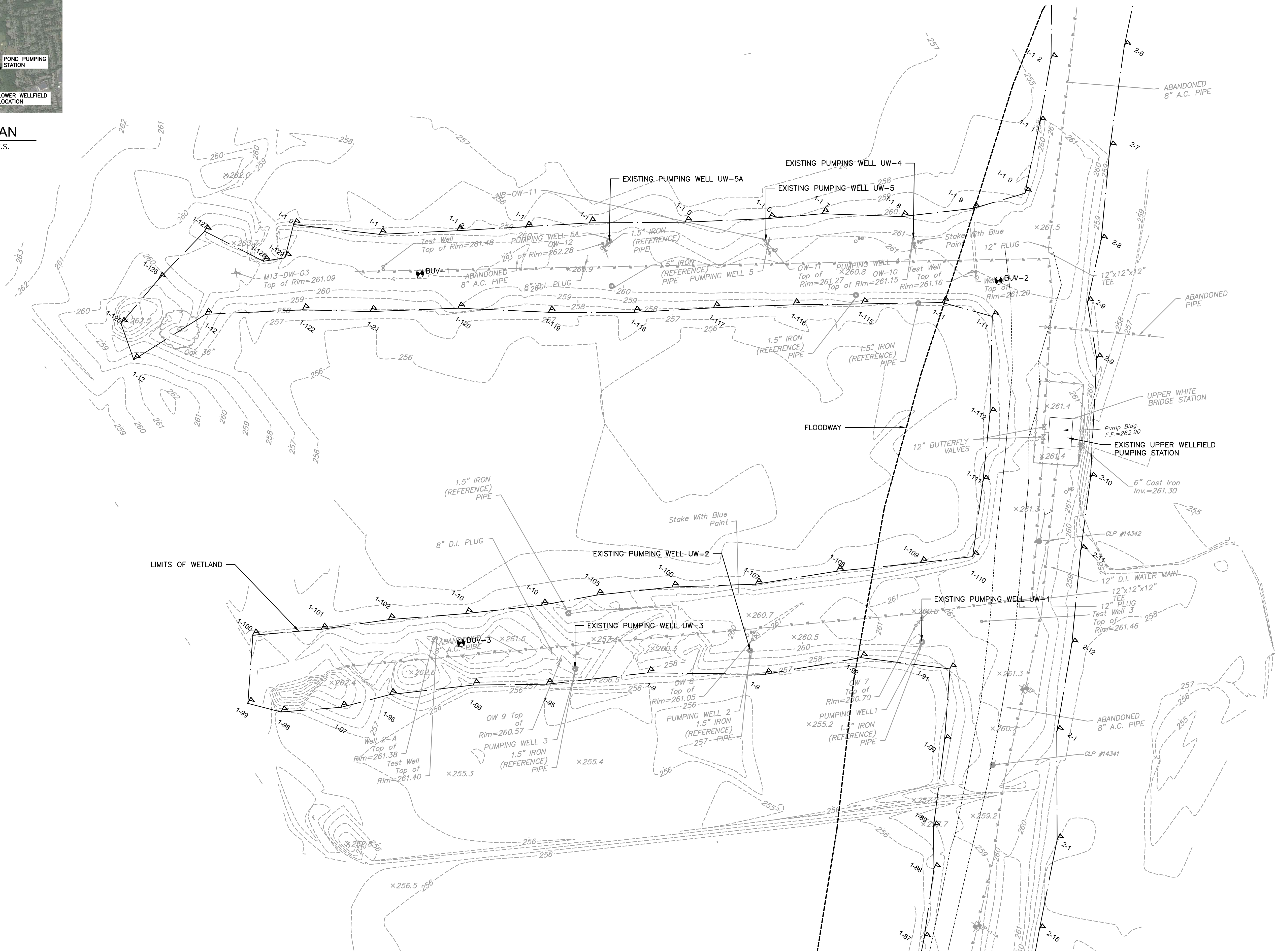
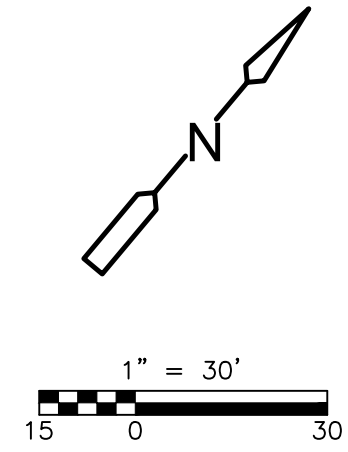
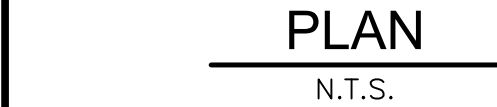


ABUTTING PROPERTY OWNERS

PARENT ID	MAP	BLOCK	LOT	UNIT	OWNER NAME	LOCATION	MUNI	ACRES	ZONING	LAND USE	COMMENT	MAIL_ADDR	MAIL_CITY	MAIL_STATE	MAIL_ZIP
49-11A	49	11A-10	1		STARFORD COMMONS LLC	915 STARFORD AVE	BRISTOL	0.32 R 15		Appt	1253 BURLINGTON AVE	BRISTOL	CT	06010	
49-11A-10	49	11A-10	1		STARFORD COMMONS LLC	915 STARFORD AVE	BRISTOL	1.33 Bn		Nebl Ctr	200 SUMNER ST	BRISTOL	CT	06010	
51-1	51	1			ORRIN CRISTAL	3 STEVENS ST	BRISTOL	0.72 R 15		Single Family	3 STEVENS ST	BRISTOL	CT	06010	
51-1	51	1			ROSDEN RICHARD	108 CANDY LA	BRISTOL	0.28 R 15		Single Family	108 CANDY LA	BRISTOL	CT	06010	
51-1	51	1			BENSTON JANICE	135 STEVENS ST	BRISTOL	0.39 R 15		Single Family	135 STEVENS ST	BRISTOL	CT	06010	
51-1	51	1			HARRIS BRUCE C	8 RICHARD CT	BRISTOL	0.34 R 15		Single Family	8 RICHARD CT	BRISTOL	CT	06010	
51-10	51	10			STUART WILLIAM G + RITA M INT TENANTS	107 CANDY LA	BRISTOL	0.49 R 15		Single Family	107 CANDY LA	BRISTOL	CT	06010	
51-2	51	2			DONAHUE FRANK G + CARRIE M	16 RICHARD CT	BRISTOL	0.66 R 15		Single Family	16 RICHARD CT	BRISTOL	CT	06010	
51-3	51	3			BARTLEY DAVID + ANANDA SURV	26 RICHARD CT	BRISTOL	0.46 R 15		Single Family	26 RICHARD CT	BRISTOL	CT	06010	
51-3A	51	3A			CALLAHAN JOSHUA	165 STEVENS ST	BRISTOL	0.37 R 15		Single Family	15 PINNACLE RIDGE FARM CANTON	06019			
51-3B-1	51	3B-1			COMBS CAMERON	167 STEVENS ST	BRISTOL	0.35 R 15		Single Family	167 STEVENS ST	BRISTOL	CT	06010	
51-4	51	4			REBEZ JESY + WIOLETA	36 RICHARD CT	BRISTOL	0.43 R 15		Single Family	36 RICHARD CT	BRISTOL	CT	06010	
51-5	51	5			HARVEY BEATA + MATTHEW J	46 RICHARD CT	BRISTOL	0.6 R 15		Single Family	46 RICHARD CT	BRISTOL	CT	06010	
51-6	51	6			LAPLANTE ZACHARY C	60 RICHARD CT	BRISTOL	0.76 R 15		Single Family	60 RICHARD CT	BRISTOL	CT	06010	
51-7	51	7			MCGLOULIN WILLIAM E + GRACE	72 RICHARD CT	BRISTOL	0.49 R 15		Single Family	72 RICHARD CT	BRISTOL	CT	06010	
51-015-A-4	52	015-A-4			D'AMATO MICHAEL + LISA SURV	176 STEVENS ST	BRISTOL	0.25 R 15		Single Family	176 STEVENS ST	BRISTOL	CT	06010	
52-1	52	1			SIMONE JOSEPH WILLIAM	25 TIMBER LA	BRISTOL	0.39 R 15		Single Family	25 TIMBER LA	BRISTOL	CT	06010	
52-1	52	1			CONTINUUM OF CARE INC	276 STEVENS ST	BRISTOL	2.1 R 15		Single Family	109 LEGION AVE	NEW HAVEN	CT	06519	
52-10	52	10			DEFLUO SHERI L	45 WOODBROOK RD	BRISTOL	0.46 R 15		Single Family	45 WOODBROOK RD	BRISTOL	CT	06010	
52-10	52	10			CURRENT OWNER	76 JEFFERSON AVE	BRISTOL	0.32							
52-11	52	11			MORELLI MICHAEL + MICHELLE L	35 WOODBROOK RD	BRISTOL	0.46 R 15		Single Family	35 WOODBROOK RD	BRISTOL	CT	06010	
52-11	52	11			CURRENT OWNER	68 JEFFERSON AVE	BRISTOL	0.31							
52-1-1	52	1-1			NEWMAN KAREN E	87 TIMBER LA	BRISTOL	1 R 15		Single Family	87 TIMBER LA	BRISTOL	CT	06010	
52-1-2	52	1-2			ST ANDREW EVANGELICAL LUTHERAN	1125 STARFORD AVE	BRISTOL	10 R 40		Church 34	1125 STARFORD AVE	BRISTOL	CT	06010	
52-12	52	12			AKAGOW ESSE	25 WOODBROOK RD	BRISTOL	0.46 R 15		Single Family	25 WOODBROOK RD	BRISTOL	CT	06010	
52-13	52	13			MADSEN ALLEN E AND CATHERINE M	15 WOODBROOK RD	BRISTOL	0.46 R 15		Single Family	15 WOODBROOK RD	BRISTOL	CT	06010	
52-14	52	14			RUGHTON SUSAN M	5 WOODBROOK RD	BRISTOL	0.44 R 15		Single Family	5 WOODBROOK RD	BRISTOL	CT	06010	
52-14-1	52	14-1			RAMSEY JASON M + STEPHANIE	250 STEVENS ST	BRISTOL	2.41 R 15		Single Family	250 STEVENS ST	BRISTOL	CT	06010	
52-14A	52	14A			LOHR ANDREW + LUMLEY LISA TRUSTEES	236 STEVENS ST	BRISTOL	0.5 R 15		Single Family	236 STEVENS ST	BRISTOL	CT	06010	
52-15A-15A-2	52	15A-15A-2			SCHMIDT ERNEST W JR	186 STEVENS ST	BRISTOL	0.39 R 15		Single Family	186 STEVENS ST	BRISTOL	CT	06010	
52-15A	52	15A-1			BYRNE SABRINA	186 STEVENS ST	BRISTOL	0.35 R 15		Single Family	186 STEVENS ST	BRISTOL	CT	06010	
52-15A-3	52	15A-3			CASTONGUAY BERNARD D	206 STEVENS ST	BRISTOL	0.26 R 15		Single Family	206 STEVENS ST	BRISTOL	CT	06010	
52-15B	52	15B			BROUSSEAU DAVID R	214 STEVENS ST	BRISTOL	0.28 R 15		Single Family	214 STEVENS ST	BRISTOL	CT	06010	
52-15-C	52	15-C			WASKO PAMELA D	222 STEVENS ST	BRISTOL	0.28 R 15		Single Family	222 STEVENS ST	BRISTOL	CT	06010	
52-16	52	16			WHEELER MARGARET R + JOHN H SR	84 WOODHAVEN RD	BRISTOL	0.61 R 15		Single Family	84 WOODHAVEN RD	BRISTOL	CT	06010	
52-17	52	17			JANE STEVEN + SHARON M	100 WOODHAVEN RD	BRISTOL	0.71 R 15		Single Family	100 WOODHAVEN RD	BRISTOL	CT	06010	
52-17	52	17			ZIGLE ANDREW + LUMLEY LISA TRUSTEES	5 TIMBER LA	BRISTOL	0.37 R 15		Single Family	112 MADISON DR	BRISTOL	CT	06010	
52-17-1	52	17-1			NEUMANN DAVID LIFE USE	634 JEROME AVE	BRISTOL	0.26 R 15		Single Family	634 JEROME AVE	BRISTOL	CT	06010	
52-17-1A	52	17-1A			BENTLEY HENRY G JR + TAFFIE A SURV LIFE	624 JEROME AVE	BRISTOL	0.46 R 15		Single Family	624 JEROME AVE	BRISTOL	CT	06010	
52-17-1B	52	17-1B			RUCHAS JESICA A + JOAN M	636 JEROME AVE	BRISTOL	0.38 R 15		Single Family	636 JEROME AVE	BRISTOL	CT	06010	
52-17-2	52	17-2			BAILEY BARBARA L	602 JEROME AVE	BRISTOL	0.19 R 15		Single Family	602 JEROME AVE	BRISTOL	CT	06010	
52-17-2A	52	17-2A			OLSON DIANE M	690 JEROME AVE	BRISTOL	0.5 R 15		Single Family	690 JEROME AVE	BRISTOL	CT	06010	
52-17-3	52	17-3			JOHNSON JEREMIAH R + ROY LINDA L	326 JEROME AVE	BRISTOL	0.32 R 15		Single Family	326 JEROME AVE	BRISTOL	CT	06010	
52-17-4	52	17-4			HATCHCOCK CHARLES + MARISA L SURV	588 JEROME AVE	BRISTOL	0.48 R 15		Single Family	588 JEROME AVE	BRISTOL	CT	06010	
52-17-5	52	17-5			LOMBARD ANTHONY G + MARCIA M	682 JEROME AVE	BRISTOL	0.88 R 15		Single Family	682 JEROME AVE	BRISTOL	CT	06010	
52-17-6	52	17-6			WILLIAMS THOMAS D + KASE	644 JEROME AVE	BRISTOL	0.21 R 15		Single Family	644 JEROME AVE	BRISTOL	CT	06010	
52-17-7	52	17-7			KIRSCHNER JAMES R +	606 JEROME AVE	BRISTOL	0.78 R 15		Single Family	606 JEROME AVE	BRISTOL	CT	06010	
52-17-8	52	17-8			PALMISTO CORY JAMES + ABRAMS EDEN P +	746 JEROME AVE	BRISTOL	0.5 R 15		Single Family	746 JEROME AVE	BRISTOL	CT	06010	
52-17-9	52	17-9			LOMBARD ANTHONY G + MARCIA M SURV	682 JEROME AVE	BRISTOL	0.78 R 15		Single Family	682 JEROME AVE	BRISTOL	CT	06010	
52-17A	52	17A			RICH VICTOR SEAN B	578 JEROME AVE	BRISTOL	0.41 R 15		Single Family	578 JEROME AVE	BRISTOL	CT	06010	
52-17C	52	17C			MURRAY JAC	636 JEROME AVE	BRISTOL	0.46 R 15		Single Family	636 JEROME AVE	BRISTOL	CT	06010	
52-18	52	18			BICK JENNIFER J	56 WOODHAVEN RD	BRISTOL	0.72 R 15		Single Family	56 WOODHAVEN RD	BRISTOL	CT	06010	
52-18	52	18			HUIGS JONAS F	562 JEROME AVE	BRISTOL	0.41 R 15		Single Family	562 JEROME AVE	BRISTOL	CT	06010	
52-18	52	18			MICCICI BARBARA	15 TIMBER LA	BRISTOL	0.36 R 15		Single Family	15 FAULKN RD	FORESTVILLE	CT	06010	
52-18A	52	18A			568 JEROME AVE LLC	568 JEROME AVE	BRISTOL	0.41 R 15		Retail	133 CHESTNUT RD	NEWINGTON	CT	06111	
52-19	52	19			MCDONOUGH JEFFREY T + MARCIA B SURV	48 WOODHAVEN RD	BRISTOL	0.81 R 15		Single Family	48 WOODHAVEN RD	BRISTOL	CT	06010	
52-19	52	19			SUTULA DANIEL P	135 DEBRA LA	BRISTOL	0.13 R 15		Single Family	135 DEBRA LA	BRISTOL	CT	06010	
52-2	52	2			GIANNINI JOHN D JR	35 TIMBER LA	BRISTOL	0.35 R 15		Single Family	35 TIMBER LA	BRISTOL	CT	06010	
52-20	52	20			MARRAS SAM J	42 WOODHAVEN RD	BRISTOL	0.22 R 15		Single Family	42 WOODHAVEN RD	BRISTOL	CT	06010	
52-20	52	20			SLEDONIA BRIAN J + JENNIFER J	44 STEVENS ST	BRISTOL	0.28 R 10		Single Family	44 STEVENS ST	BRISTOL	CT	06010	
52-21	52	21			NORMAN JOHN + ANNE SURV	34 WOODHAVEN RD	BRISTOL	0.4 R 15		Single Family	34 WOODHAVEN RD	BRISTOL	CT	06010	
52-22	52	22			LEWANDOWSKI EDWARD +	24 WOODHAVEN RD	BRISTOL	0.36 R 15		Single Family	24 WOODHAVEN RD	BRISTOL	CT	06010	
52-23	52	23			BEATON STEPHEN W	14 WOODHAVEN RD	BRISTOL	0.38 R 15		Single Family	14 WOODHAVEN RD	BRISTOL	CT	06010	
52-3	52	3			CURRENT RESIDENT	45 TIMBER LA	BRISTOL	0.34 R 15		Single Family	45 TIMBER LA	BRISTOL	CT	06010	
52-32	52	32			DOODY MAREE B	6 SHAWN DR	BRISTOL	0.22 R 10		Single Family	6 SHAWN DR	BRISTOL	CT	06010	
52-33	52	33			TRUDEL KEVIN F	68 STEVENS ST	BRISTOL	0.24 R 10		Single Family	68 STEVENS ST	BRISTOL	CT	06010	
52-34	52	34			ARCHAMBAULT RYAN + TABARA	60 STEVENS ST	BRISTOL	0.22 R 10		Single Family	60 STEVENS ST	BRISTOL	CT	06010	
52-35	52	35			VARRONE JOSEPH L	52 STEVENS ST	BRISTOL	0.27 R 10		Single Family	52 STEVENS ST	BRISTOL	CT	06010	
52-4	52	4			DECLARD MARY L	55 TIMBER LA	BRISTOL	0.34 R 15		Single Family	55 TIMBER LA	BRISTOL	CT	06010	
52-5	52	5			MARTINELLI LINDA S	81 WOODHAVEN RD	BRISTOL	0.36 R 15		Single Family	81 WOODHAVEN RD	BRISTOL	CT	06010	
52-5	52	5			ANGELLO DAVID + MOTTASAMATHAJOINT	165 TIMBER LA	BRISTOL	0.34 R 15		Single Family	65 TIMBER LA	BRISTOL	CT	06010	
52-5	52	5			HARRINGTON CAROLE D	5 BRIDGEPORT AVE	BRISTOL	0.36 R 15		Single Family	5 BRIDGEPORT AVE	BRISTOL	CT	06010	
52-54	52	54			CLARK DA + TODD R	13 BRIDGEPORT AVE	BRISTOL	0.29 R 15		SFR w/ACC Apt	13 BRIDGEPORT AVE	BRISTOL	CT	06010	
52-55	52	55			RAVIA JOSEPH + ELIZABETH W TRUSTEES UTY	21 BRIDGEPORT AVE	BRISTOL	0.29 R 15		Single Family	21 BRIDGEPORT AVE	BRISTOL	CT	06010	
52-56	52	56			COSTELLO GREGORY	31 BRIDGEPORT AVE	BRISTOL	0.29 R 15		Single Family	31 BRIDGEPORT AVE	BRISTOL	CT	06010	
52-57	52	57			CARPENTER NANCY P	39 BRIDGEPORT AVE	BRISTOL	0.29 R 15		Single Family	39 BRIDGEPORT AVE	BRISTOL	CT	06010	
52-58	52	58			DAKES VERNIE A JR ESTATE OF + BETTY L	47 BRIDGEPORT AVE	BRISTOL	0.28 R 15		Single Family	47 BRIDGEPORT AVE	BRISTOL	CT	06010	
52-59	52	59			WIMAN JEFFREY + KATHLEEN M SURV	47 BRIDGEPORT AVE	BRISTOL	0.28 R 15		Single Family	47 BRIDGEPORT AVE	BRISTOL	CT	06010	
52-6	52	6			ANDERSON DAVID G + SHARON S SURV	75 TIMBER LA	BRISTOL	0.34 R 15		Single Family	75 TIMBER LA	BRISTOL	CT	06010	
52-60	52	60			AUGUST BENJAMIN	67 BRIDGEPORT AVE	BRISTOL	0.36 R 15		Single Family	67 BRIDGEPORT AVE	BRISTOL	CT	06010	
52-60	52	60			COPPERHINE HOUSING ASSOCIATES LLC	135 SHAWN DR	BRISTOL	7.1 A		Apartments	2 CENTER PLAZA SUITE 700 BOSTON	MA	02108		
52-61	52	61		1	CURRENT OWNER	130 JEFFERSON AVE #1	BRISTOL	0 A		Condo Res.					
52-62	52	62		2	CURRENT OWNER	130 JEFFERSON AVE #2	BRISTOL	0 A							
52-63	52	63		3	CURRENT OWNER	130 JEFFERSON AVE #3	BRISTOL	0							
52-64	52	64		4	CURRENT OWNER	130 JEFFERSON AVE #4	BRISTOL	0							
52-65	52	65		5	CURRENT OWNER	130 JEFFERSON AVE #5	BRISTOL	0.27 R 15		Single Family	102 DANBURY LA	BRISTOL	CT	06010	
52-65	52	65		6	CURRENT OWNER	130 JEFFERSON AVE #6	BRISTOL	0							
52-66	52	66		5	CURRENT OWNER	92 DANBURY LA	BRISTOL	0.28 R 15		Single Family	92 DANBURY LA	BRISTOL	CT	06010	
52-67	52	67		7	CURRENT OWNER	84 DANBURY LA	BRISTOL	0.28 R 15		Single Family	84 DANBURY LA	BRISTOL	CT	06010	
52-67	52	67		7	CURRENT OWNER	130 JEFFERSON AVE #7	BRISTOL	0							
52-68	52	68		8	CURRENT OWNER	76 DANBURY LA	BRISTOL	0.29 R 15		Single Family	76 DANBURY LA	BRISTOL	CT	06010	
52-69	52	69		8	CURRENT OWNER	140 JEFFERSON AVE #8	BRISTOL	0							
52-7	52	7			MULLER ELEANOR	68 DANBURY LA	BRISTOL	0.31 R 15		Single Family	68 DANBURY LA	BRISTOL	CT	06010	
52-72	52	72			WINIARCZYK LIZABEL H + MARKS SURV	64 WOODBROOK RD	BRISTOL	0.41 R 15		Single Family	64 WOODBROOK RD	BRISTOL	CT	06010	
52-73	52	73			ARIEL MICHAEL A AND	62 DANBURY LA	BRISTOL	0.31 R							

ATTACHMENT 4

**PROJECT DRAWINGS-EXISTING AND PROPOSED WETLAND
BOUNDARIES.**



REV. NO.	DATE	DRWN	CHKD	REMARKS

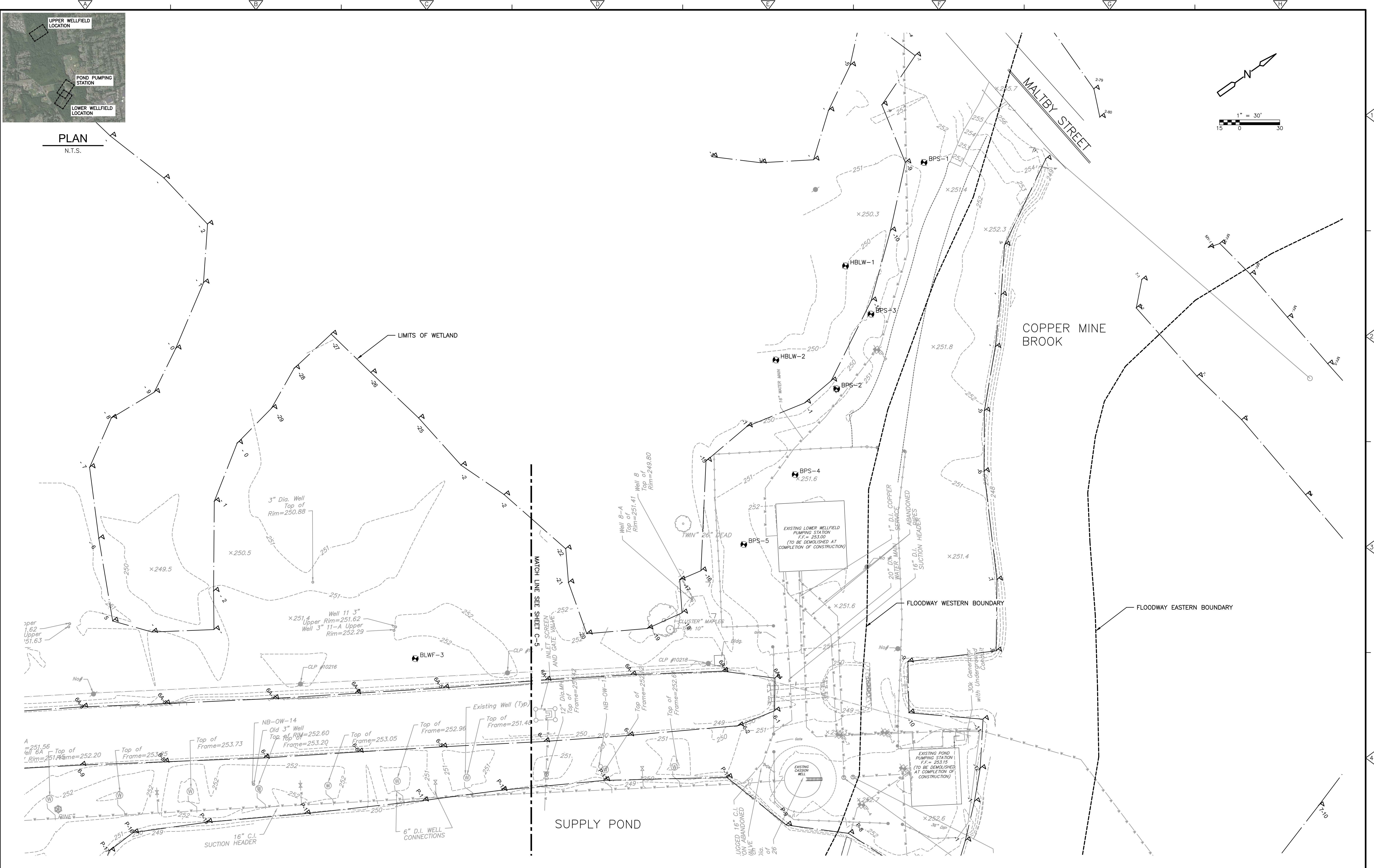
DESIGNED BY: _____ G. HOWARD
DRAWN BY: _____ J. BRONENKANT
SHEET CHK'D BY: _____
CROSS CHK'D BY: _____
APPROVED BY: _____
DATE: _____ DECEMBER 2022

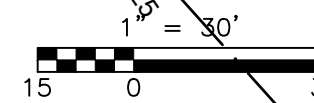
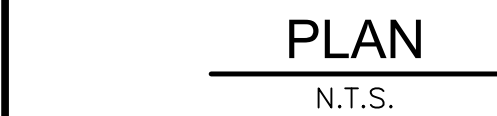


CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

UPPER WELLFIELD EXISTING CONDITIONS PLAN

PROJECT NO.	10739-264571
FILE NAME:	C003STPL.DWG
SHEET NO. 1 of 3	

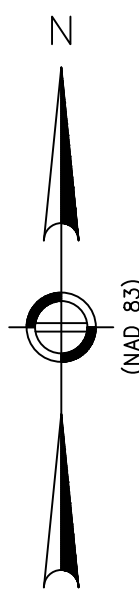
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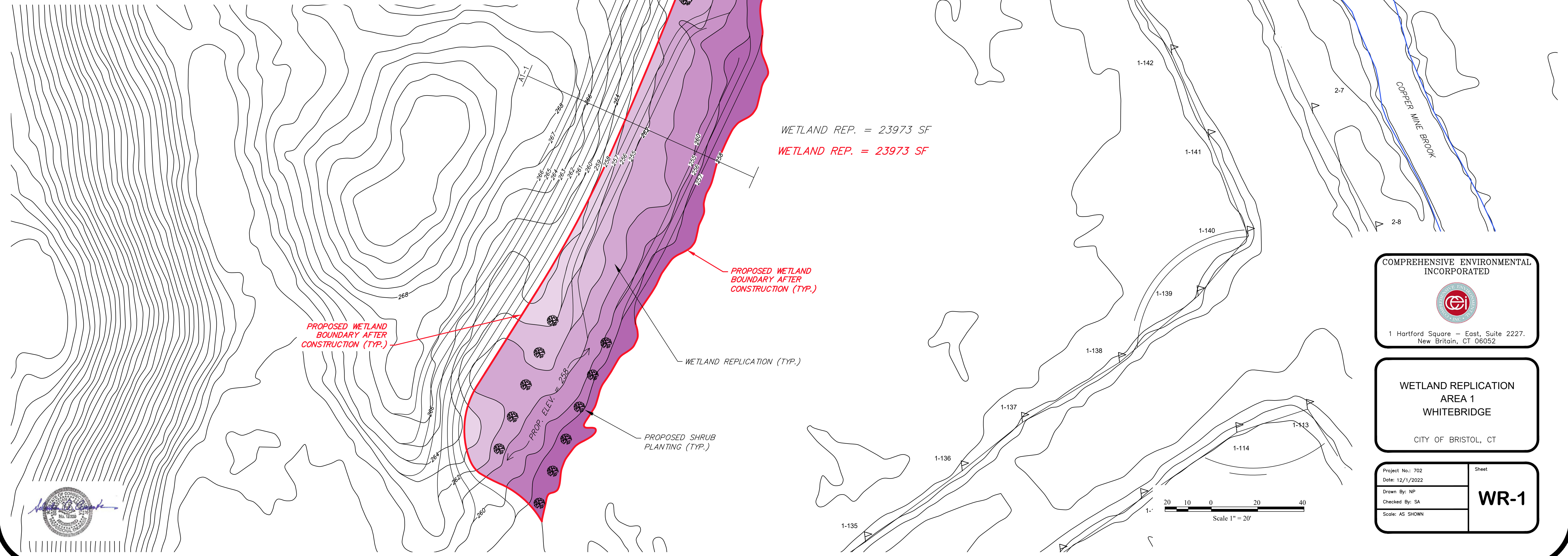
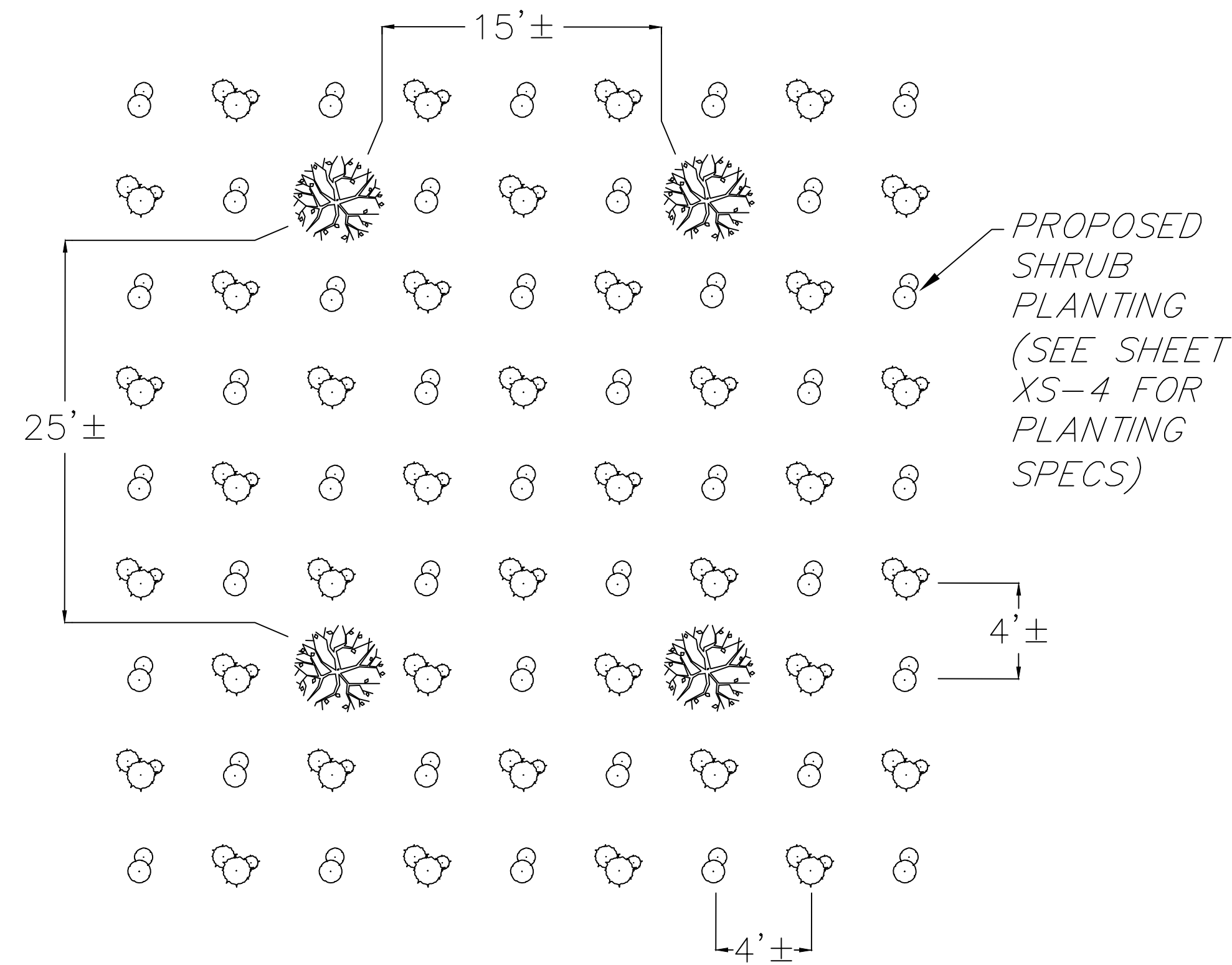
DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: _____
CROSS CHK'D BY: _____
APPROVED BY: _____
DATE: DECEMBER 2022

LOWER WELLFIELD EXISTING CONDITIONS PLAN

90% SUBMITTAL - NOT FOR CONSTRUCTION



PLANTING PLAN



COMPREHENSIVE ENVIRONMENTAL
INCORPORATED



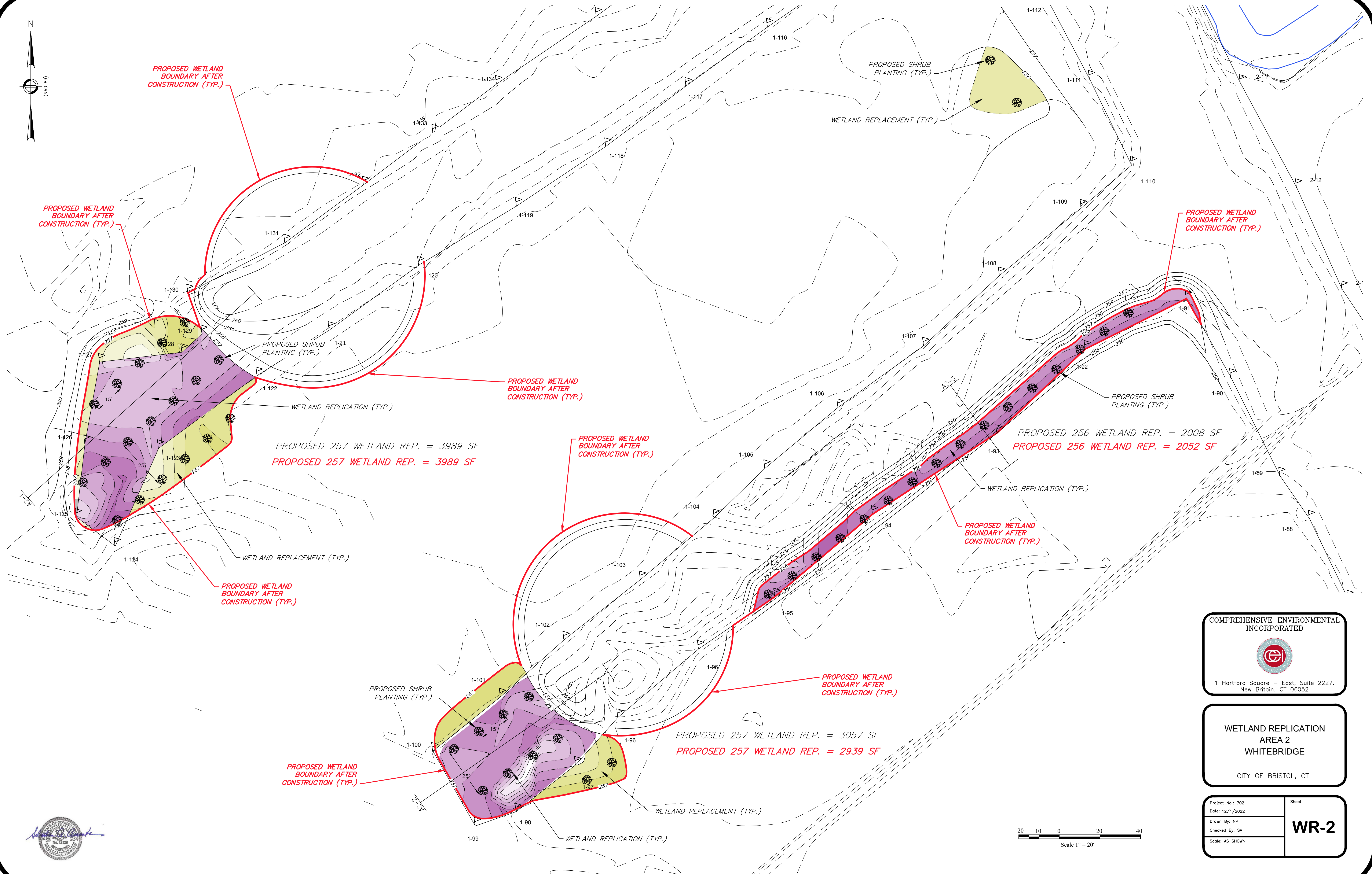
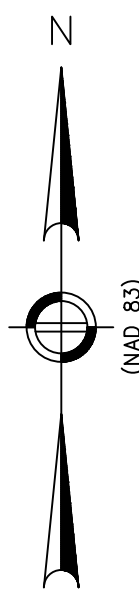
1 Hartford Square - East, Suite 2227.
New Britain, CT 06052

WETLAND REPLICATION
AREA 1
WHITEBRIDGE

CITY OF BRISTOL, CT

Project No.: 702	Sheet
Date: 12/1/2022	WR-1
Drawn By: NP	
Checked By: SA	
Scale: AS SHOWN	





COMPREHENSIVE ENVIRONMENTAL
INCORPORATED

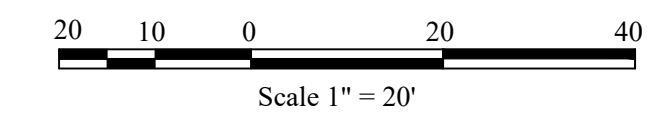


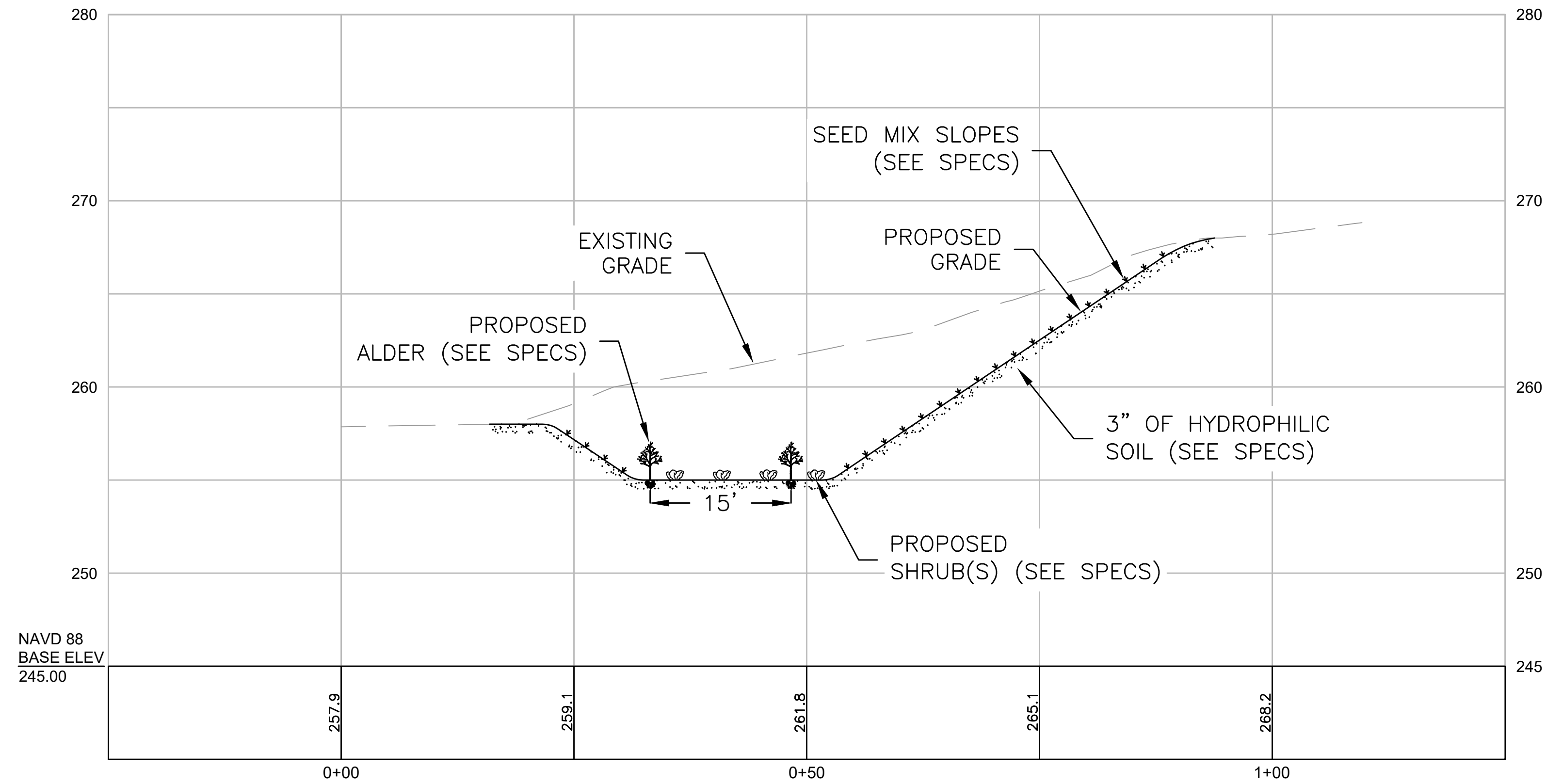
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New Britain, CT 06052

WETLAND REPLICATION
AREA 2
WHITEBRIDGE

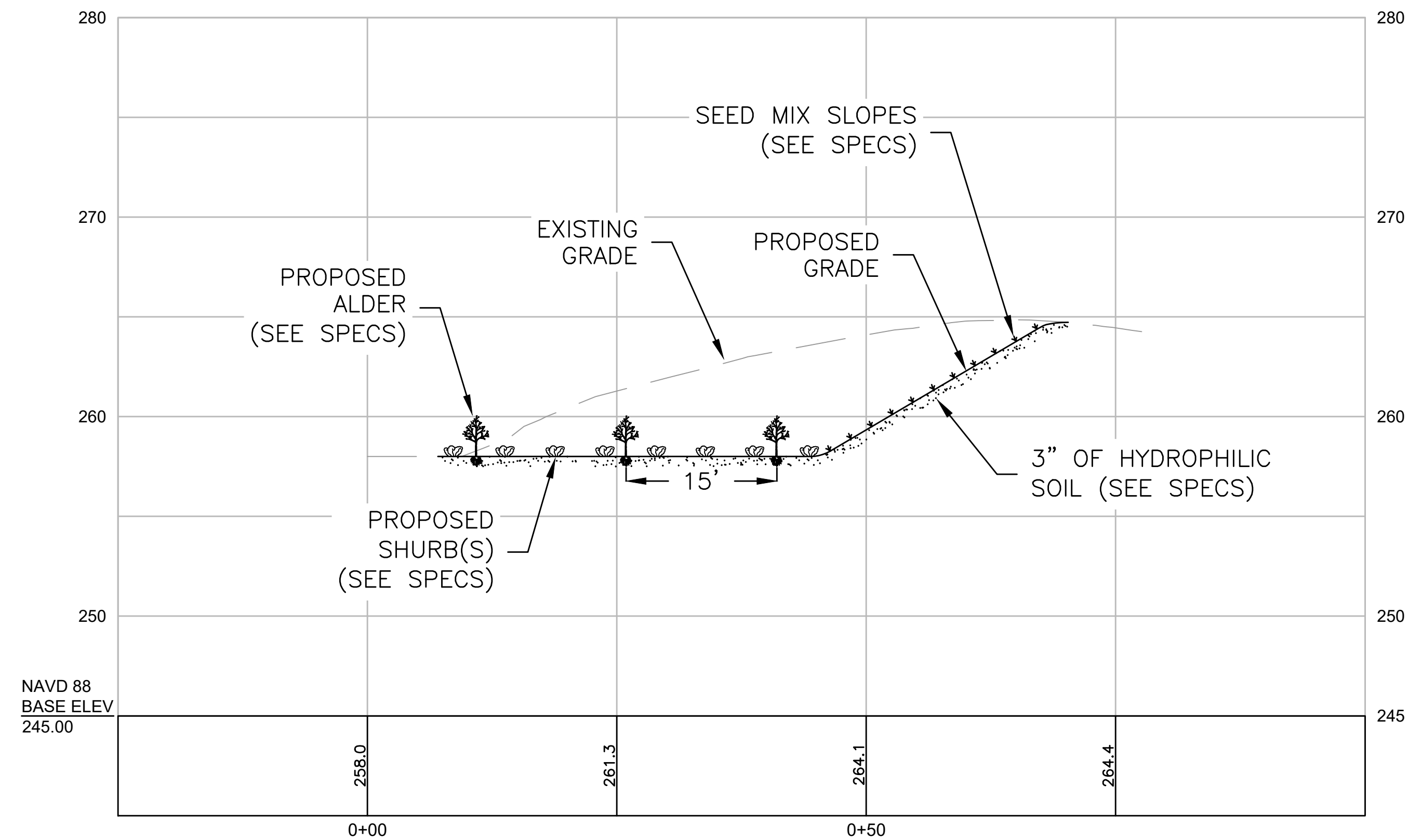
CITY OF BRISTOL, CT

Project No.: 702	Sheet
Date: 12/1/2022	WR-2
Drawn By: NP	
Checked By: SA	
Scale: AS SHOWN	





A1-1
SHEET WR-1
SCALE: 1' = 10'



A1-2
SHEET WR-1
SCALE: 1' = 10'

NOTE: ALL SLOPES SHALL BE SEEDED WITH THE 'NEW ENGLAND EROSION CONTROL/RESTORATION MIX', AS DESCRIBED ON SHEET XS-4.



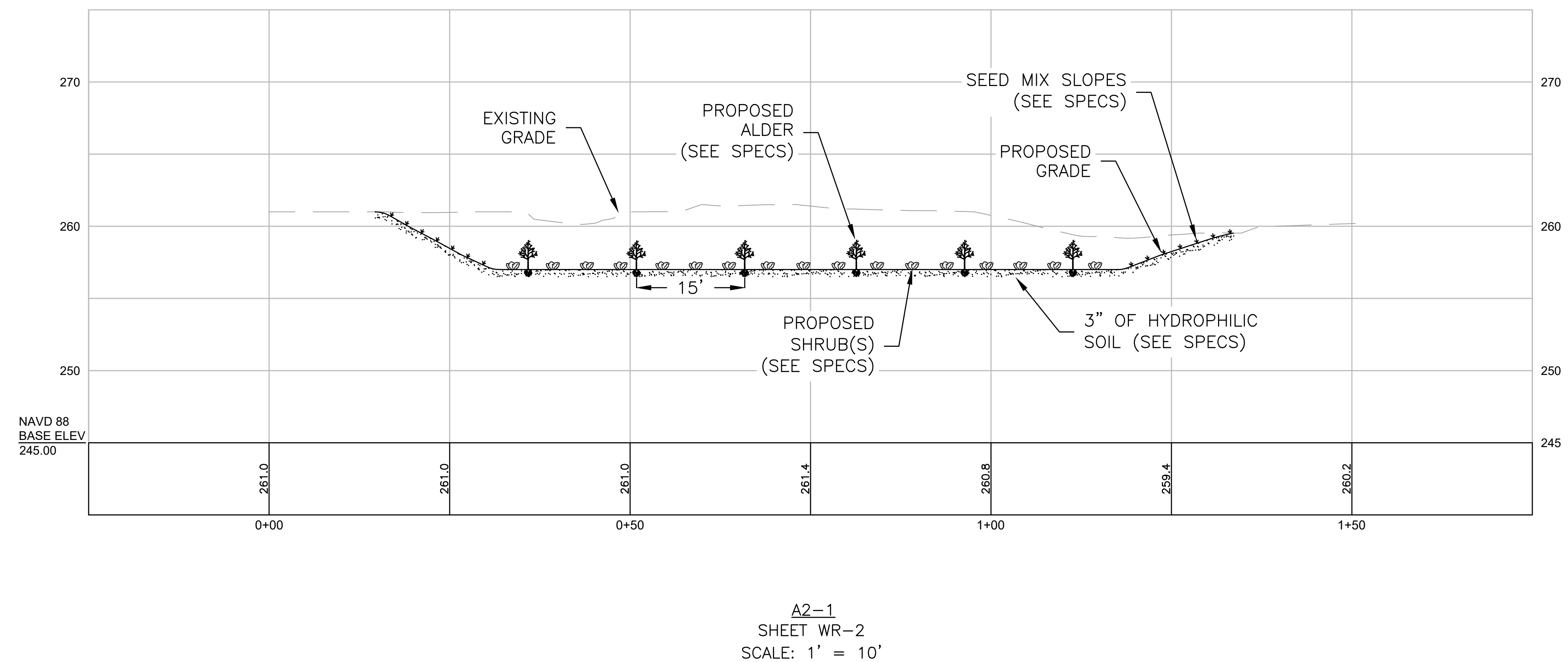
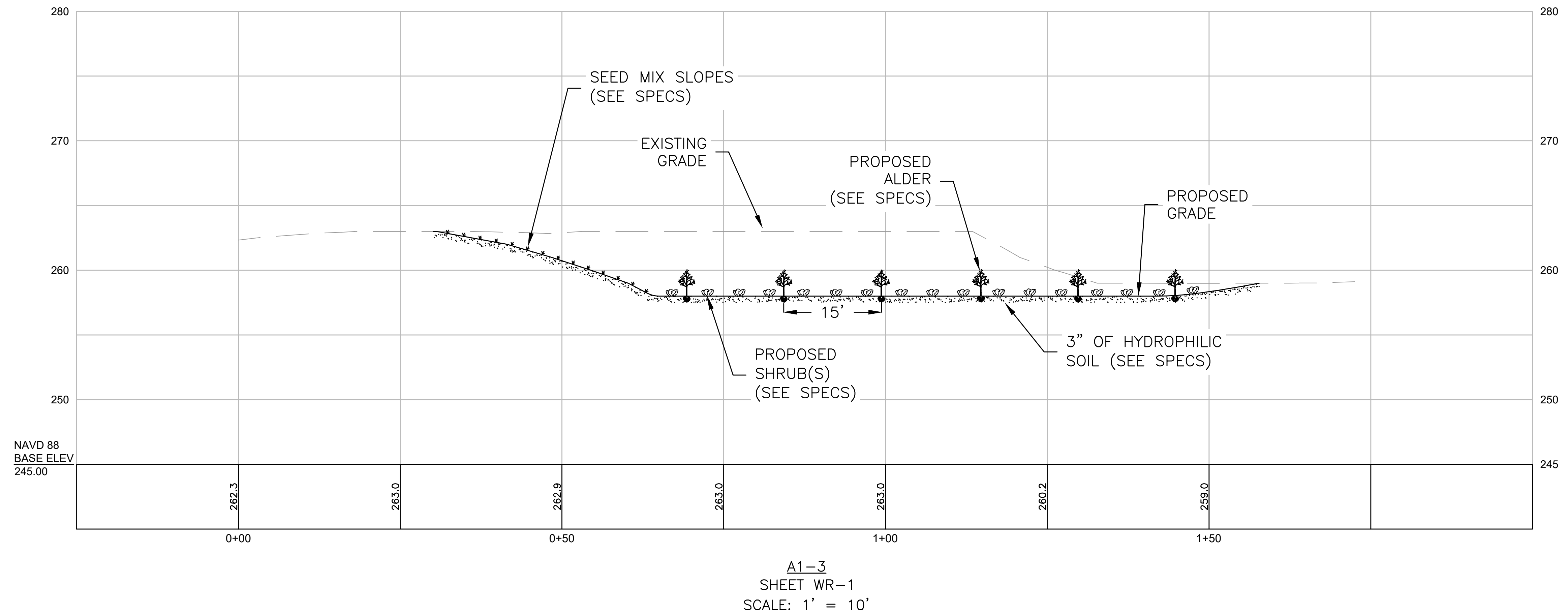
CROSS-SECTIONS
WHITEBRIDGE

CITY OF BRISTOL, CT

Project No.: 702	Sheet
Date: 12/1/2022	
Drawn By: NP	
Checked By: SA	
Scale: AS SHOWN	

XS-1





NOTE: ALL SLOPES SHALL BE SEEDED WITH THE 'NEW ENGLAND EROSION CONTROL/RESTORATION MIX', AS DESCRIBED ON SHEET XS-4.

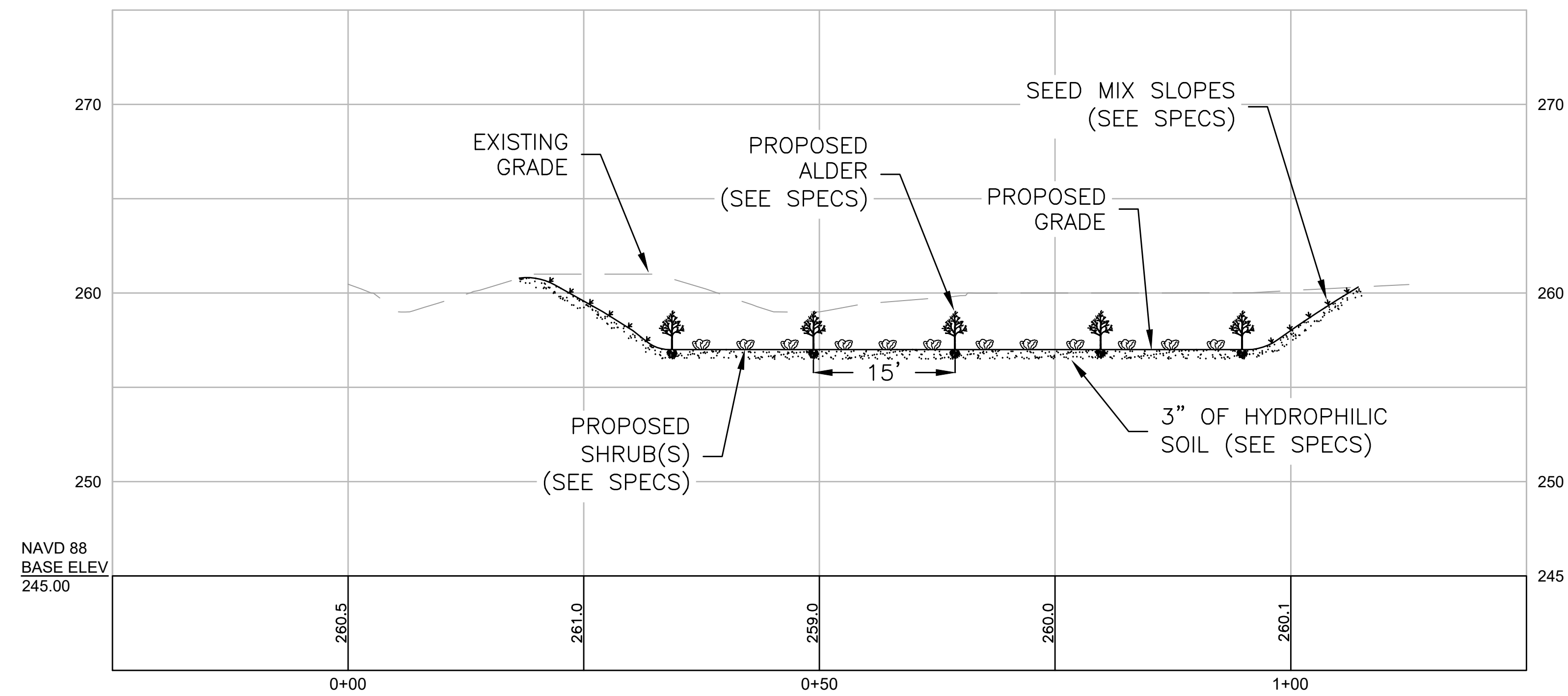


CROSS-SECTIONS
WHITEBRIDGE

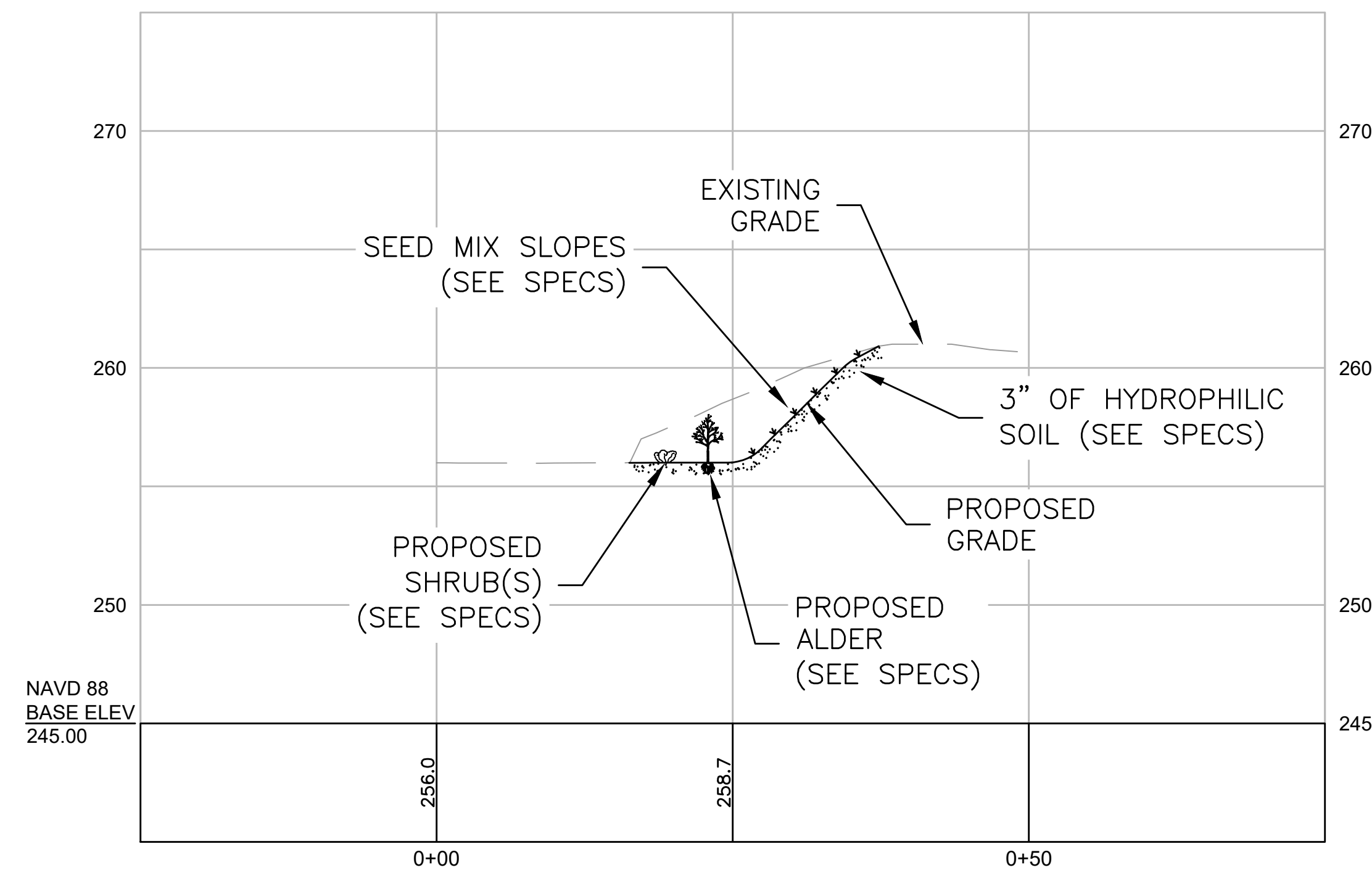
CITY OF BRISTOL, CT

Project No.: 702	Sheet
Date: 12/1/2022	
Drawn By: NP	
Checked By: SA	
Scale: AS SHOWN	XS-2





A2-2
SHEET WR-2
SCALE: 1' = 10'



A2-3
SHEET WR-2
SCALE: 1' = 10'

NOTE: ALL SLOPES SHALL BE SEEDED WITH THE 'NEW ENGLAND EROSION CONTROL/RESTORATION MIX', AS DESCRIBED ON SHEET XS-4.

COMPREHENSIVE ENVIRONMENTAL
INCORPORATED



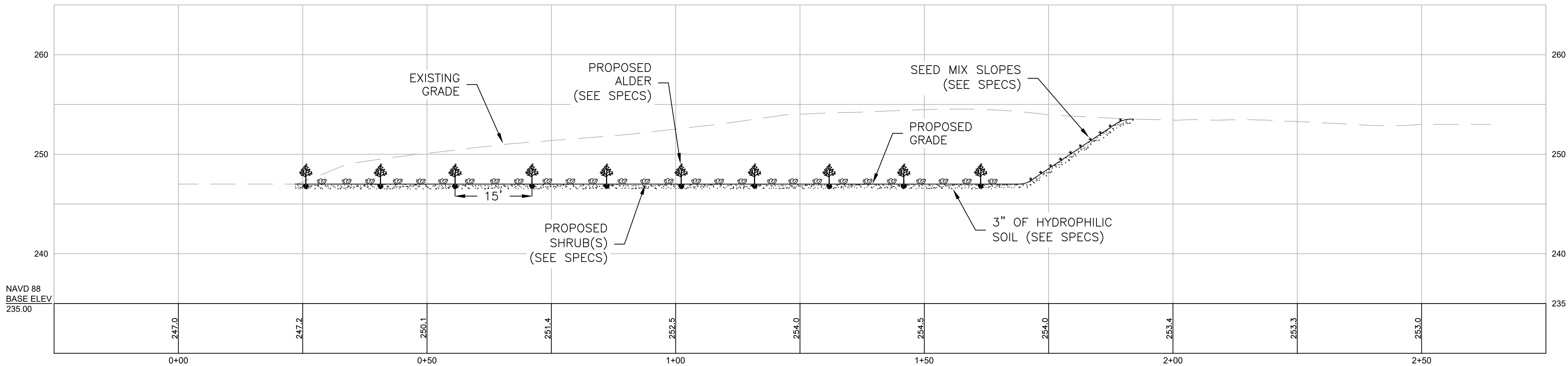
1 Hartford Square - East, Suite 2227.
New Britain, CT 06052

CROSS-SECTIONS
WHITEBRIDGE

CITY OF BRISTOL, CT

Project No.: 702	Sheet
Date: 12/1/2022	XS-3
Drawn By: NP	
Checked By: SA	
Scale: AS SHOWN	





A4-1
SHEET WR-4
SCALE: 1' = 10'

THE FOLLOWING LIST OF SHRUB AND HERBACEOUS PLANTS IS PROPOSED FOR THE RESTORATION OF DISTURBED AREAS ON THE SUBJECT PROJECT. THIS LIST CONTAINS A VARIETY OF SPECIES SO THAT THE APPLICANT HAS SOME FLEXIBILITY WHEN PURCHASING THEM. ANY PROPOSED CHANGES TO THE PLANT LIST SHOULD BE APPROVED BY THE TOWN.

RECOMMENDED SHRUB PLANT LIST

THE SHRUBS SHOULD BE CONTAINER PLANTS (NO BAREROOT PLANTS), APPROXIMATELY 3 TO 4 FEET TALL, THAT INCLUDE A MIX OF THESE SPECIES, TY AFTER THE FILL MATERIAL IS REMOVED. THE SHRUBS SHOULD BE INSTALLED IN CLUMPS OF THREE (3) TO FIVE (5) PLANTS TO CREATE A "THICKET" TYPE OF WILDLIFE HABITAT. SPACING BETWEEN THE ROOT BALLS CAN BE APPROXIMATELY 4+/- FEET APART AT THE LOCATIONS IDENTIFIED ON THE ATTACHED LAYOUT PLAN.

ALNUS INCANA (RUGOSA) – SPECKLED ALDER

A LARGE SHRUB (15') THAT GROWS ALONG STREAM EDGES AND SWAMPS. HAS ABILITY TO FIX NITROGEN. CLUMPS OF ALDER FORM EXCELLENT WILDLIFE COVER. GOOD FOR BANK STABILIZATION. ONE OF THE MOST ADAPTABLE SHRUBS FOR DIFFICULT SITES. GOOD FOR SHORES, WET MEADOWS AND WETLAND FORESTS. RECOMMENDED PLANT SIZE 3 TO 4 FEET.

ARONIA ARBUTIFOLIA/PHOTINIA PYRIFOLIA – RED CHOKEBERRY

A MEDIUM-SIZED SHRUB (6-10') WITH SMALL WHITE TO PINKISH FLOWERS IN THE SPRING. PERSISTENT RED BERRIES ARE EATEN BY WILDLIFE IN WINTER. VERY SOIL ADAPTABLE. GOOD FOR SHORES, WET MEADOWS AND WETLAND FORESTS. RECOMMENDED PLANT SIZE 3 TO 4 FEET.

CORNUS AMOMUM – SILKY DOGWOOD

A FAST-GROWING, CLUMP-FORMING, MEDIUM SHRUB (5-8'). REDDISH WINTER COLOR ON YOUNG STEMS. BLUE FRUIT IN THE FALL EATEN BY MANY ANIMALS. PROVIDES NESTING AND COVER FOR BIRDS. GOOD FOR SHORES, WET MEADOWS AND WETLAND FORESTS. RECOMMENDED PLANT SIZE 3 TO 4 FEET.

CORNUS SERICEA – RED-OSIER DOGWOOD

FORMERLY C. STOLONIFERA, THIS RAPIDLY GROWING, SPREADING SHRUB REACHES 6-10'. SHOWY RED STEMS IN WINTER. BERRIES AND TWIGS PROVIDE FOOD FOR A WIDE VARIETY OF WILDLIFE. GOOD FOR STREAM BANK STABILIZATION. RECOMMENDED PLANT SIZE 3 TO 4 FEET.

ILEX VERTICILLATA – WINTERBERRY HOLLY

MEDIUM TO TALL SHRUB FOUND IN A VARIETY OF WETLANDS. SHADE TO FULL SUN. BRIGHT RED BERRIES PERSIST INTO WINTER AND ARE IMPORTANT WILDLIFE FOOD. GOOD FOR SHORES, WET OPEN AREAS AND WETLAND FORESTS. RECOMMENDED PLANT SIZE 3 TO 4 FEET.

LINDERA BENZOIN – COMMON SPICEBUSH

MEDIUM SHRUB FOUND IN SEASONAL WETLANDS AND MOIST WOODS. RED FRUIT IMPORTANT FOOD SOURCE FOR MANY BIRDS. THE PRIMARY FOOD OF LARVAL SPICEBUSH SWALLOWTAIL BUTTERFLIES. FALL FOLIAGE. GOOD FOR SHORES AND WET OPEN AREAS. RECOMMENDED PLANT SIZE 3 TO 4 FEET.

NEMOPANTHUS (ILEX) MUCRONATUS – MOUNTAIN HOLLY

A MEDIUM-SIZED SHRUB (5-10'). VELVETY RED BERRIES PROVIDE EXCELLENT WILDLIFE FOOD. FRUIT RIPENS JULY-AUGUST AND MAY PERSIST UNTIL OCTOBER. GOOD FOR SHORES AND WETLAND FORESTS. RECOMMENDED PLANT SIZE 3 TO 4 FEET.

RESTORATION SEED MIXES

THE FOLLOWING SEED MIXES SHOULD BE PLANTED ON THE OPEN AREAS BETWEEN THE SHRUB THICKETS AFTER ALL THE SHRUBS HAVE BEEN INSTALLED.

NEW ENGLAND WETMIX (WETLAND SEED MIX)

THE NEW ENGLAND WETMIX (WETLAND SEED MIX) CONTAINS A WIDE VARIETY OF NATIVE SEEDS WHICH ARE SUITABLE FOR MOST WETLAND RESTORATION SITES THAT ARE NOT PERMANENTLY FLOODED. ALL SPECIES ARE BEST SUITED TO MOIST GROUND AS FOUND IN MOST WET MEADOWS, SCRUB SHRUB, OR FORESTED WETLAND RESTORATION AREAS. THE MIX IS WELL SUITED FOR DETENTION BASIN BORDERS AND THE BOTTOM OF DETENTION BASINS NOT FREQUENTLY UNDER STANDING WATER. THE SEEDS WILL NOT GERMINATE UNDER INUNDATED CONDITIONS. IF PLANTED DURING THE FALL MONTHS, THE SEED MIX WILL GERMINATE THE FOLLOWING SPRING. DURING THE FIRST SEASON OF GROWTH, SEVERAL SPECIES WILL PRODUCE SEEDS WHILE OTHER SPECIES WILL PRODUCE SEEDS AFTER THE SECOND GROWING SEASON. NOT ALL SPECIES WILL GROW IN ALL WETLAND SITUATIONS. THIS MIX IS COMPRISED OF THE WETLAND SPECIES MOST LIKELY TO GROW IN CREATED/RESTORED WETLANDS. PLANT SPECIES CONTAINED IN THIS MIX INCLUDE THE FOLLOWING:

LURID SEDGE, (CAREX LURIDA), BLUNT BROOM SEDGE, (CAREX SCOPARIA), BLUE VERVAIN, (VERBENA HASTATA), HOP SEDGE, (CAREX LUPULINA), GREEN BULRUSH, (SCIRPUS ATROVIRENS), REDTOP PANIC GRASS, (PANICUM RIGIDULUM), TUFTED HAIRGRASS, (DESCHAMPSIA CESPITOSA), TICKSEED SUNFLOWER/BUR MARIGOLD, (BIDENS ARISTOSA), CREEPING SPIKE RUSH, (ELEOCHARIS PALUSTRIS), SOFT RUSH, (JUNCUS EFFUSUS), FRINGED SEDGE, (CAREX CRINITA), SQUARE STEMMED MONKEY FLOWER, (MIMULUS RINGENS), SWAMP ASTER, (ASTER PUNICEUS), BONESET, (EUPATORIUM PERFOLIATUM), RATTLESNAKE GRASS, (GLYCERIA CANADENSIS), SWAMP MILKWEED, (ASCLEPIAS INCARNATA), COMMON SNEEZEWEED, (HELENIUM AUTUMNALE), DITCH STONECROP, (PENTHORUM SEDOIDES).

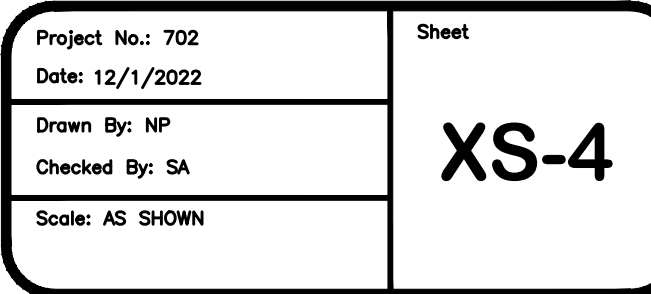
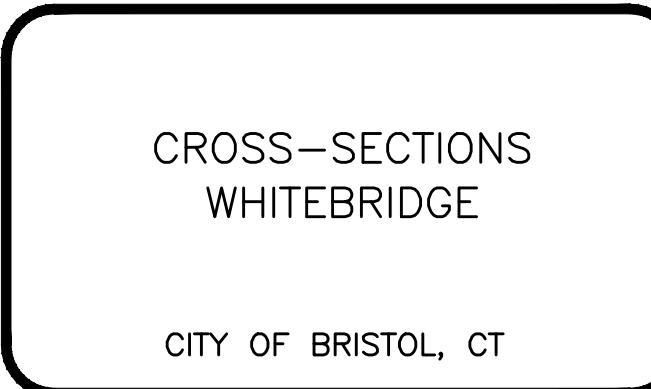
NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR THE DETENTION BASINS AND MOIST SITES

THE NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES CONTAINS A SELECTION OF NATIVE GRASSES AND WILDFLOWERS DESIGNED TO COLONIZE GENERALLY MOIST, RECENTLY DISTURBED SITES WHERE QUICK GROWTH OF VEGETATION IS DESIRED TO STABILIZE THE SOIL SURFACE. IT IS AN APPROPRIATE SEED MIX FOR ECOLOGICALLY SENSITIVE RESTORATIONS THAT REQUIRE STABILIZATION AS WELL AS LONG-TERM ESTABLISHMENT OF NATIVE VEGETATION. THIS MIX IS PARTICULARLY APPROPRIATE FOR DETENTION BASINS THAT DO NOT HOLD STANDING WATER. MANY OF THE PLANTS IN THIS MIX CAN TOLERATE INFREQUENT INUNDATION, BUT NOT CONSTANT FLOODING. THE MIX MAY BE APPLIED BY HAND, BY MECHANICAL SPREADER, OR BY HYDRO-SEEDER. AFTER SOWING THE SEED, LIGHTLY RAKE, ROLL OR CULTIPACK INTO THE SOIL TO INSURE GOOD SEED-TO-SOIL CONTACT. BEST RESULTS ARE OBTAINED WITH A SPRING OR LATE SUMMER SEEDING. SOWING SEED IN THE LATE FALL AND/OR WINTER DORMANT SEEDING REQUIRES AN INCREASE IN THE APPLICATION RATE. A LIGHT MULCHING OF CLEAN, WEED-FREE STRAW IS RECOMMENDED. PLANT SPECIES CONTAINED IN THIS MIX INCLUDE THE FOLLOWING:

VIRGINIA WILD RYE, (ELYMUS VIRGINICUS), CREEPING RED FESCUE, (FESTUCA RUBRA), LITTLE BLUESTEM, (SCHIZACHYRIUM SCOPARIUM), BIG BLUESTEM, (ANDROPOGON GERARDII), FOX SEDGE, (CAREX VULPINOIDEA), SWITCH GRASS, (PANICUM VIRGATUM), ROUGH BENTGRASS, (AGROSTIS SCABRA), NEW ENGLAND ASTER, (ASTER NOVAE-ANGLIAE), BONESET, (EUPATORIUM PERFOLIATUM), GRASS LEAVED GOLDENROD, (EUTHAMIA GRAMINIFOLIA), GREEN BULRUSH, (SCIRPUS ATROVIRENS), BLUE VERVAIN, (VERBENA HASTATA), SOFT RUSH, (JUNCUS EFFUSUS), WOOL GRASS, (SCIRPUS CYPERINUS).



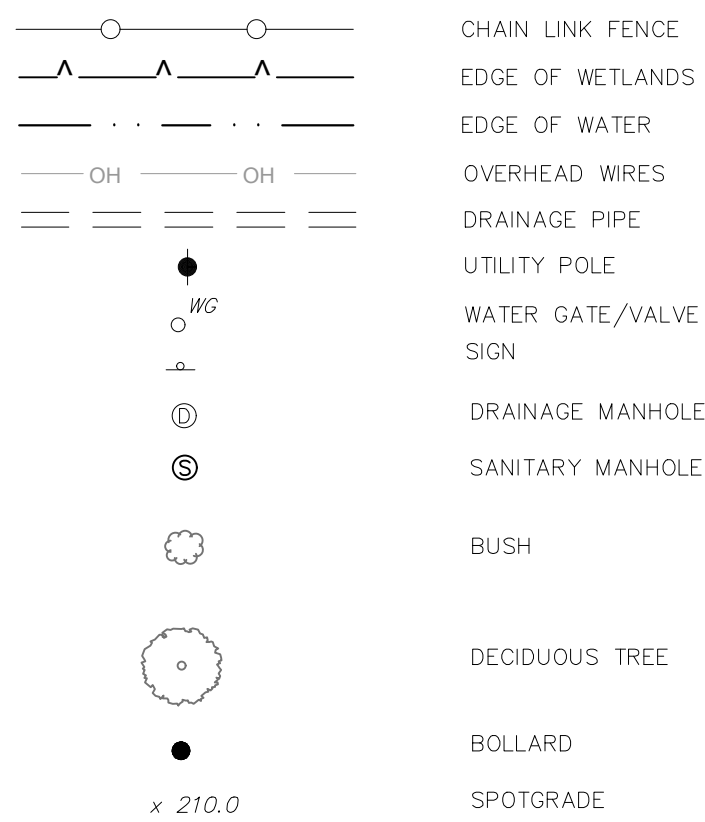
NOTE: ALL SLOPES SHALL BE SEEDED WITH THE 'NEW ENGLAND EROSION CONTROL/RESTORATION MIX'



ATTACHMENT 5

SITE SURVEY

LEGEND

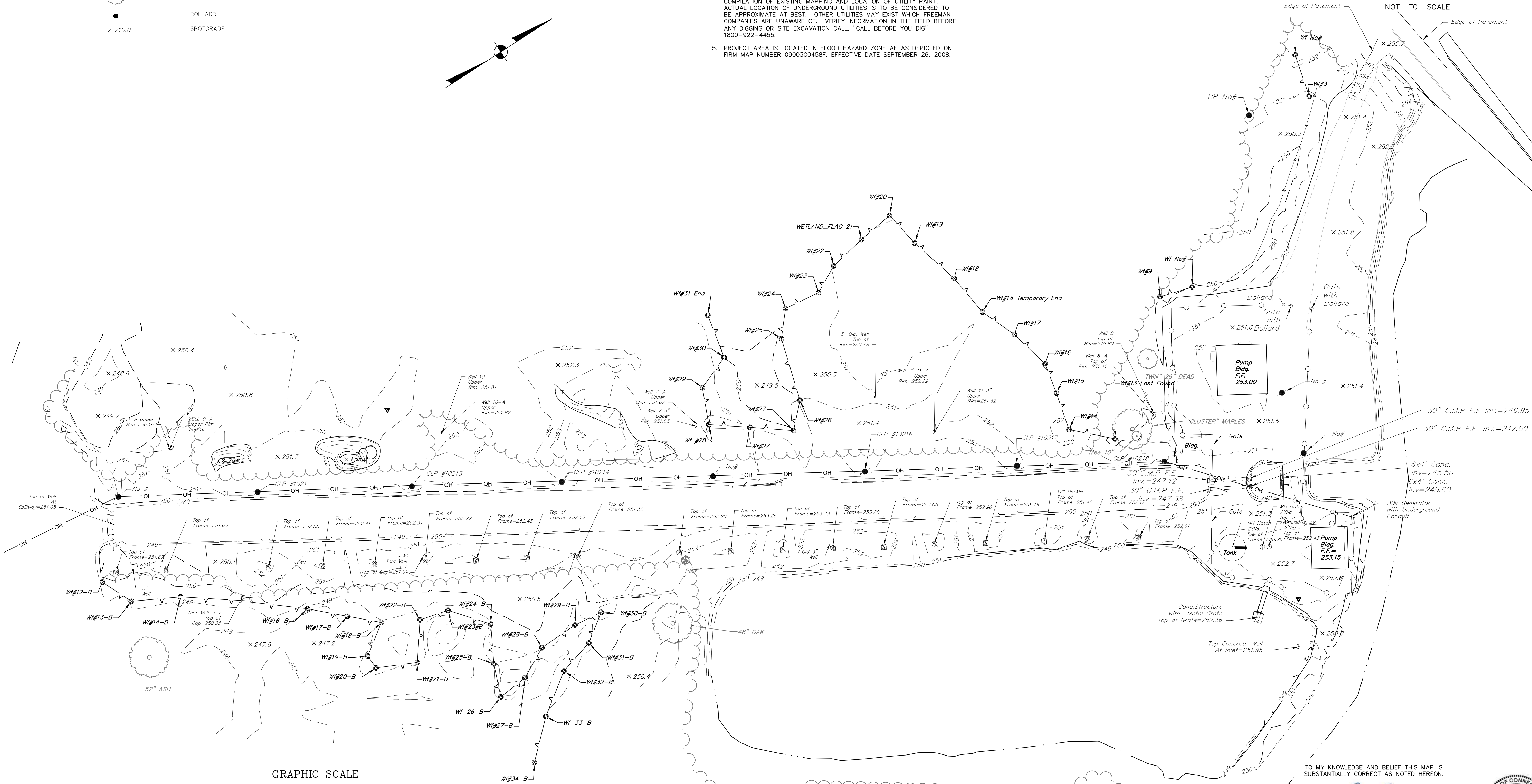


GENERAL NOTES

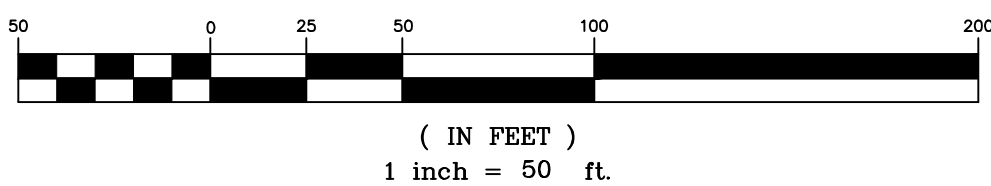
- THIS SURVEY HAS BEEN PREPARED BY FREEMAN COMPANIES, LLC. IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THRU 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26,1996
- 1.1. THIS PLAN CONFORMS TO HORIZONTAL ACCURACY CLASS A-2 AND TOPOGRAPHIC ACCURACY CLASS 1-2.
- 1.2. THE TYPE OF SURVEY PERFORMED IS A TOPOGRAPHIC SURVEY.
2. NORTH ARROW AND BEARINGS REFER TO THE CONNECTICUT STATE PLANE COORDINATE SYSTEM (NAD83) AND IS BASED UPON GPS OBSERVATIONS PERFORMED BY FREEMAN COMPANIES).
3. ELEVATIONS REFER TO NAVD88 AND ARE BASED ON GPS OBSERVATIONS PERFORMED BY FREEMAN COMPANIES).
4. THE UNDERGROUND FEATURES DEPICTED HEREON ARE THE RESULT OF COMPILATION OF EXISTING MAPPING AND LOCATION OF UTILITY PAINT. ACTUAL LOCATION OF UNDERGROUND UTILITIES IS TO BE CONSIDERED TO BE APPROXIMATE AT BEST. OTHER UTILITIES MAY EXIST WHICH FREEMAN COMPANIES ARE UNAWARE OF. VERIFY INFORMATION IN THE FIELD BEFORE ANY DIGGING OR SITE EXCAVATION CALL, "CALL BEFORE YOU DIG" 1800-922-4455.
5. PROJECT AREA IS LOCATED IN FLOOD HAZARD ZONE AE AS DEPICTED ON FIRM MAP NUMBER 09003C0458F, EFFECTIVE DATE SEPTEMBER 26, 2008.

LOCATION MAP

NOT TO SCALE



GRAPHIC SCALE



TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

PETER PARIZO, L.S. #14653

NO CERTIFICATION IS EXPRESSED OR IMPLIED UNLESS THIS MAP BEARS THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE ABOVE NAMED LAND SURVEYOR.



FREEMAN COMPANIES
REGISTERED PROFESSIONAL ENGINEER
C.E. 15861 MBE 1 SBA 18(a) CERTIFIED
LAND DEVELOPMENT
ENGINEERING DESIGN
CONSTRUCTION SERVICES

FREEMAN COMPANIES, LLC
36 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCO.COM
(860) 251-9500
FAX: (860) 986-7161

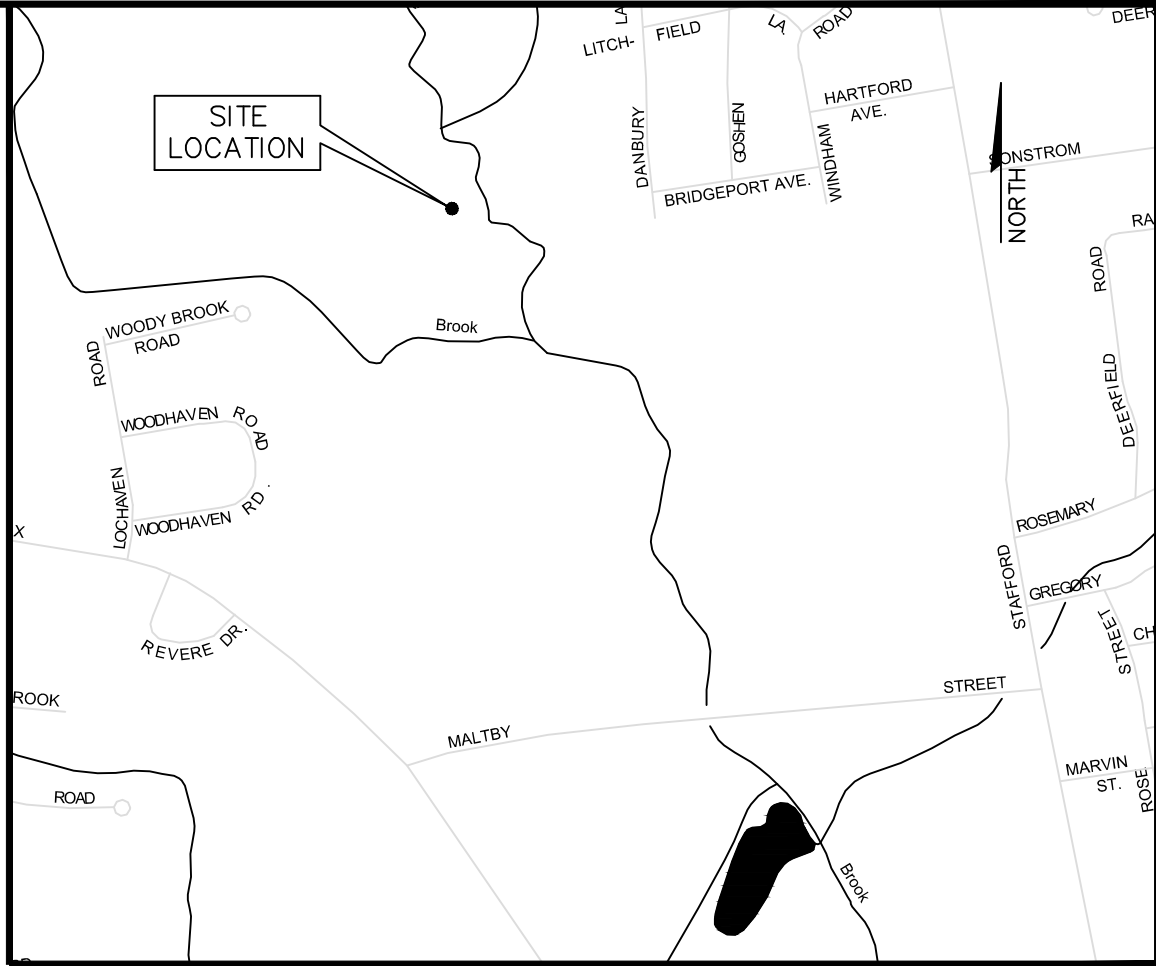
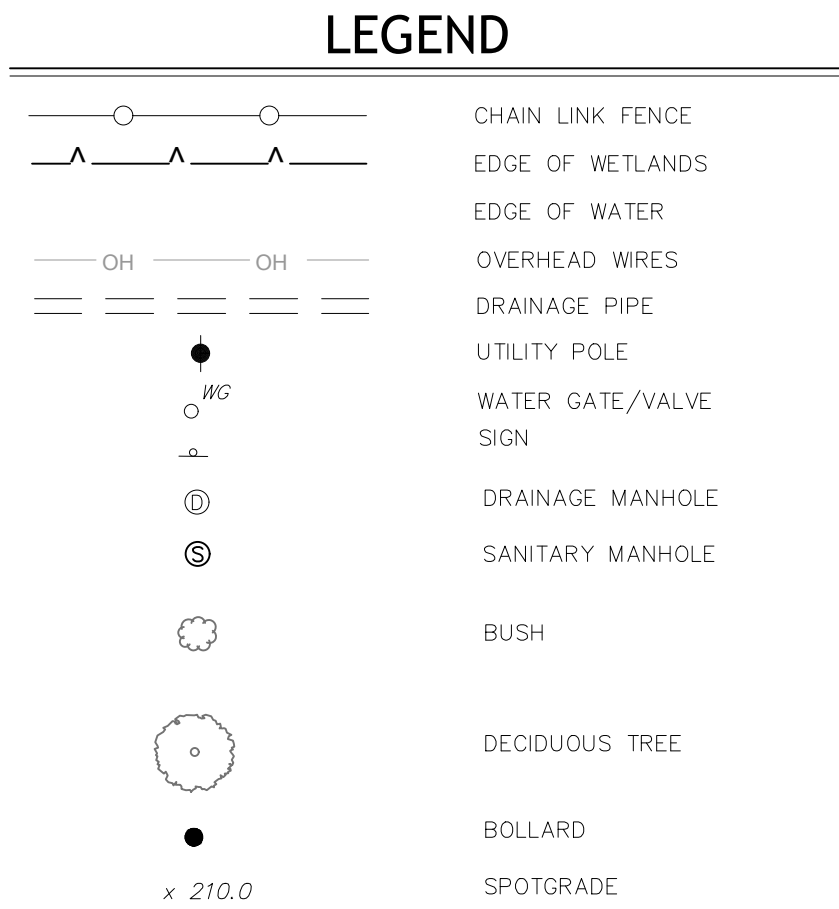
LAND OF
NEW BRITAIN WATER DEPARTMENT
LOWER WELL FIELD
MIX STREET
BRISTOL, CONNECTICUT

SURVEYED: R.A.C.
DRAFTED: R.L.C.
APPROVED: L.K.
SCALE: 1" = 50'
PROJECT NO.: 2019-0901
DATE: 08/20/2019
CAD FILE: 2018-0901-SRV

TITLE:
EXISTING
CONDITIONS
SURVEY

SHEET NUMBER:

EX-1



GENERAL NOTES

1. THIS SURVEY HAS BEEN PREPARED BY FREEMAN COMPANIES, LLC, IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTION 20-302a OF THE CONN. GEN. STAT. AND THE STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.
- 1.1. THIS PLAN CONFORMS TO HORIZONTAL ACCURACY CLASS A-2 AND TOPOGRAPHIC ACCURACY CLASS 1-2.
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5. PROJECT AREA IS LOCATED IN FLOOD HAZARD ZONE AE AS DEPICTED ON FIRM MAP NUMBER 0903C0458F, EFFECTIVE DATE SEPTEMBER 26, 2009.

[illegible]

FREEMAN
COMPANIES
LAND DEVELOPMENT | ENGINEERING DESIGN | CONSTRUCTION SERVICES
DBE | SBE | MBE | SBA (8)(a) CERTIFIED
LAND DEVELOPMENT
ENGINEERING DESIGN
CONSTRUCTION SERVICES

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36 JOHN STREET
HARTFORD, CT 06106
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(860)251-9550
FAX:(860)986-7161

LAND OF
NEW BRITAIN WATER DEPARTMENT
UPPER WELL FIELD
JEROME AVENUE
BRISTOL, CONNECTICUT

SURVEYED: R.A.C.
DRAFTED: R.L.C.
APPROVED: L.K.
SCALE: 1" = 50'
PROJECT NO.: 2019-0901
DATE: 08/20/2019
CAD FILE: 2018-0901-SRV

TITLE: EXISTING
CONDITIONS
SURVEY

EX-1

TO MY KNOWLEDGE AND BELIEF THIS MAP IS
SUBSTANTIALLY CORRECT AS NOTED HEREON.

PETER PARIZO, L.S. #14653

NO CERTIFICATION IS EXPRESSED OR IMPLIED UNLESS THIS
MAP BEARS THE ORIGINAL SIGNATURE AND EMBOSSED
SEAL OF THE ABOVE NAMED LAND SURVEYOR.



Link to Soil Scientist Report

<https://www.bristolct.gov/DocumentCenter/View/45995/Soil-Scientist-Report-Extracted-2019>

ATTACHMENT 6
SOIL SCIENTIST
REPORT

ATTACHMENT 7

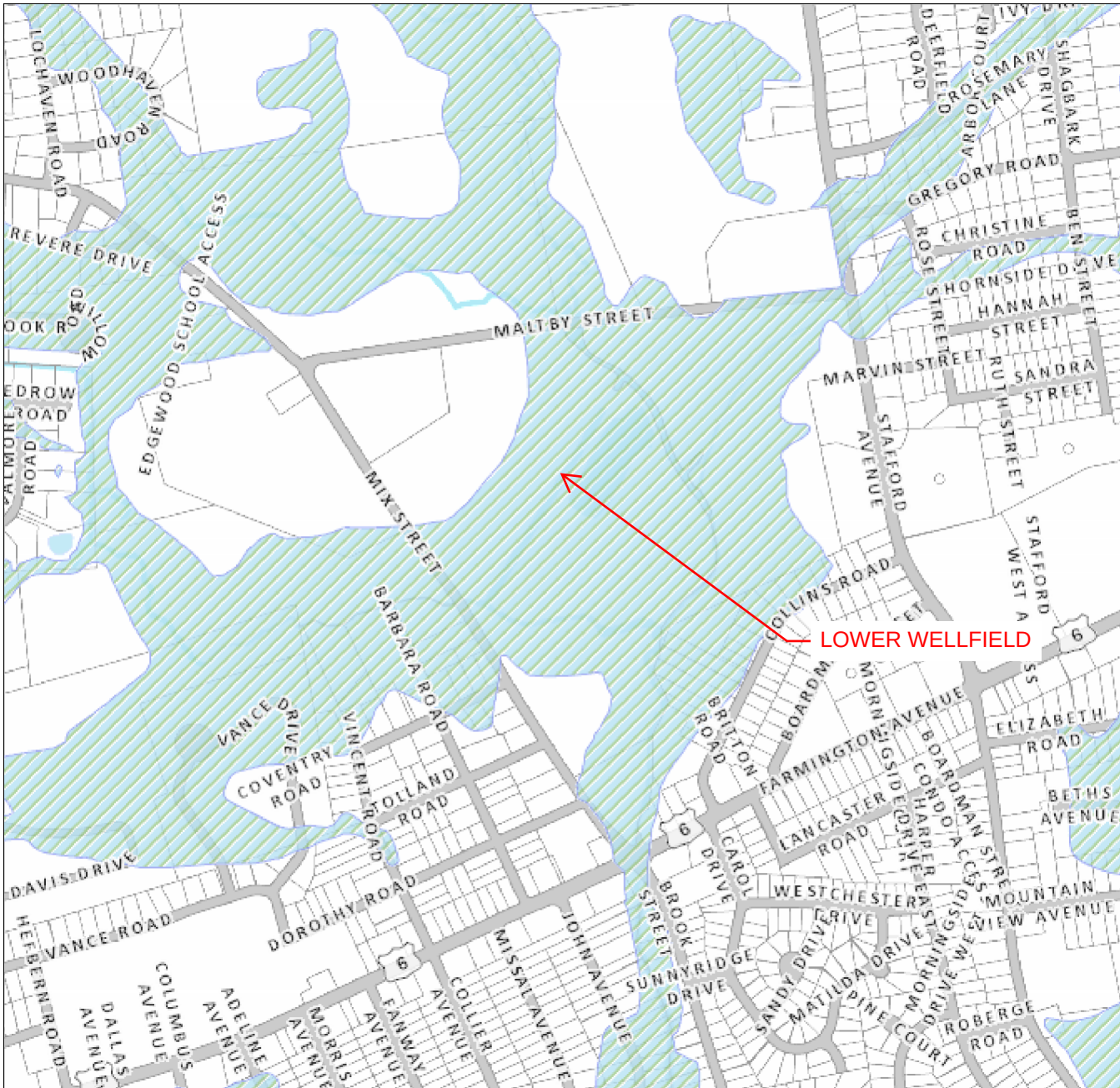
CITY OF BRISTOL GIS WETLAND BOUNDARY

City of Bristol

Geographic Information System (GIS)



Date Printed: 12/20/2023

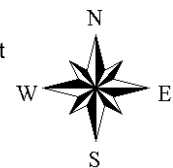


LOWER WELLFIELD

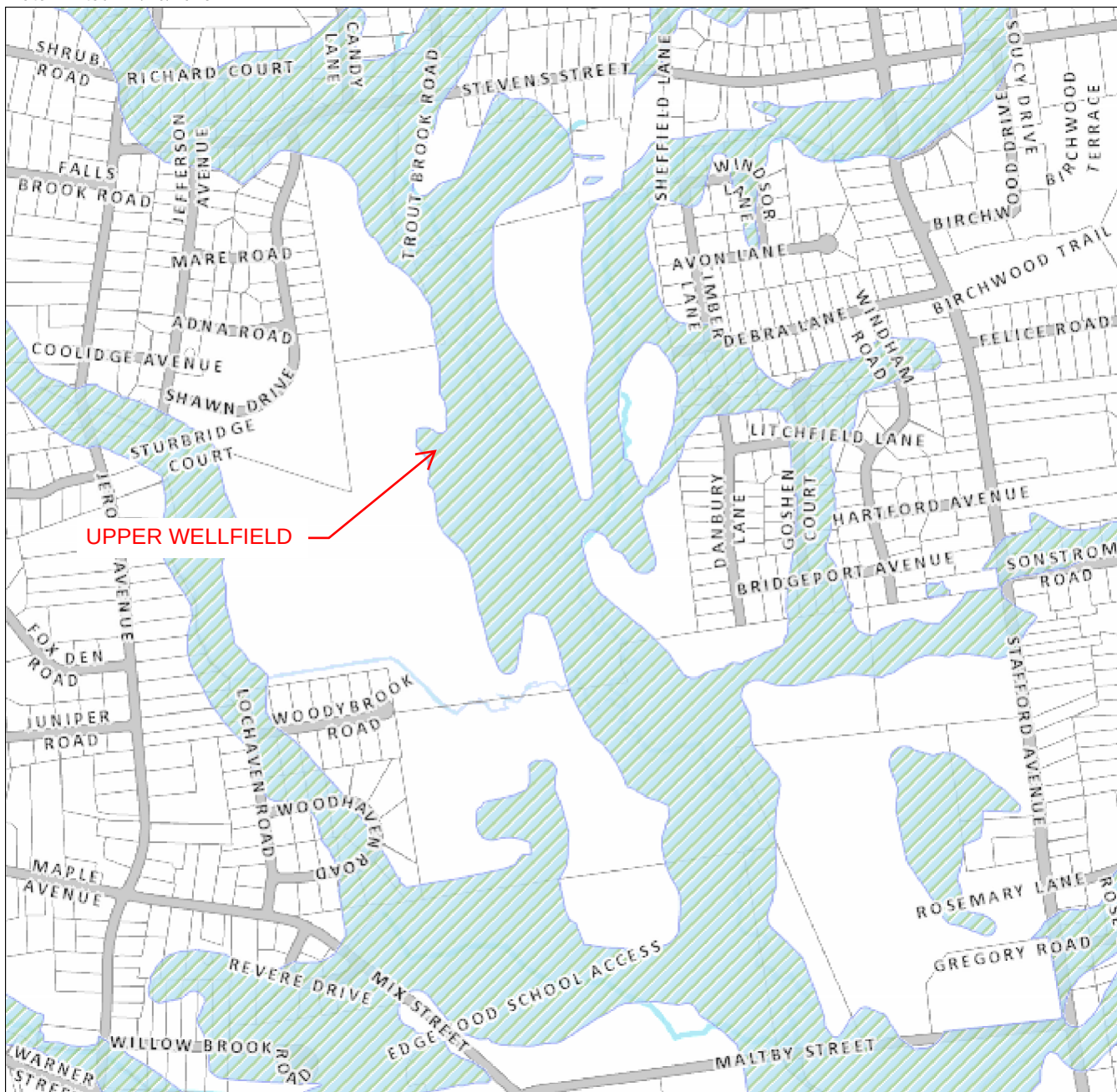
MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The City of Bristol and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 800 feet



Date Printed: 12/20/2023



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0 800 Feet



**BRISTOL CONSERVATION COMMISSION
INLAND WETLANDS AGENCY
FORM IW-1 (Application for a Wetlands Permit)**

For Office Use Only	
APPLICATION NO.	<u>2020</u>
DATE FILED:	<u>12-28-23</u>
DECISION DATE:	_____
DECISION:	_____

1. APPLICANT:

Name: New Britain Water Department, Ramon Esponda
Address: 1000 Shuttle Meadow Ave. City: New Britain State: CT Zip 06052
Telephone No.: (860) 826-3535 [] home [x] work E-Mail: Ray.Esponda@NewBritainCT.gov
Signature: [Signature] Signature – (Printed/Typed) Ramon Esponda
CHECK ONE: [x] owner [] other (specify): _____

2. PROPERTY OWNER(S):

Name: New Britain Water Department, Ramon Esponda
Address: 1000 Shuttle Meadow Ave. City: New Britain State: CT Zip 06052
Telephone No.: (860) 826-3535 [] home [x] work E-Mail: Ray.Esponda@NewBritainCT.gov
Signature: [Signature] Signature – (Printed/Typed) Ray Esponda

3. DESCRIBE THE SUBJECT PROPERTY:

Address or Location: Maltby Street, Bristol CT
Assessor's Map No.: 52, 53 Assessor's Lot No.(s): 11, 15, 16B16A, 17, 145, 147, 149, 150, 151
Description of wetlands (location, approximate area to be disturbed, vegetation, etc.): Freshwater Forested/Shrub, Freshwater Emergent, Freshwater Pond & Riverine wetlands. Wetlands are located centrally within the property parcels.
Approximate area to be disturbed = 31,291 SQ. FT. (0.72 Acres).

4. DESCRIBE THE PROPOSED ACTIVITY AND ITS PURPOSE: Restoration of the White Bridge Waterworks Facility.

Proposed activities include the demolition of existing structures in addition to the construction of new groundwater wells, a pump house and underground piping. Project will provide a potable backup water supply to New Britain and update the facilities.

5. CHECK THE STATEMENT WHICH APPLIES TO THE PROPOSED ACTIVITY:

- [] a. The proposed activity is either a use permitted as of right or a non-regulated use, under subsection _____ of Section 4 of the Inland Wetlands Regulations. See instructions for submission requirements.
- [] b. The proposed activity is not regulated because it is greater than 100 feet from a wetlands or watercourse or will not adversely affect the wetlands or watercourse. See instructions for submission requirements.
- [x] c. The proposed activity is a regulated activity and will occur:
- | | |
|-----------------------------------|------------------------------|
| [x] in a wetlands or watercourse | area: <u>31,291 SQ. FT.</u> |
| [x] within the upland review area | area: <u>177,924 SQ. FT.</u> |

6. FLOW CALCULATIONS:

Does a watercourse flow through the subject property?

[x] yes [] no

If "yes", see instructions for submission requirements.

**CITY OF BRISTOL, CONNECTICUT
SUPPLEMENTARY INFORMATION**

For Office Use Only
APPLICATION NO. _____

Address or location of property: Maltby Street, Bristol CT

ADDITIONAL INFORMATION/COMMENTS (click inside the box below and begin typing)

Permanent and temporary wetland impact areas have been broken down and are included on the attached maps. Temporarily impacted wetlands will be cared for according to a predetermined plan provided by the contractor (TBD). Matted areas may be necessary to reach some of the compensatory storage areas for the purposes of cutting the terrain at those locations to create the compensatory storage. By creating compensatory storage areas new wetland areas will also be created at a ratio of more than 2:1. Due to the creation of wetlands, an IW-2 form has been filed with the City concurrently with this application. The flood elevation will not be increased as a result of this work but may decrease due to the compensatory storage areas. See attached documents for further information.

No flow calculations are provided due the zero impact to flow as a result of the proposed work. All water drawn by the wells and other utilities are part of a registered diversion, which will not be exceeded as a result of this project.

ADDITIONAL APPLICANT

Name: _____ CHECK ONE: ☐ owner ☐ other: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

ADDITIONAL OWNER(S) OF RECORD

Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

(OPTIONAL) SEND COPIES OF ALL CORRESPONDENCE TO:

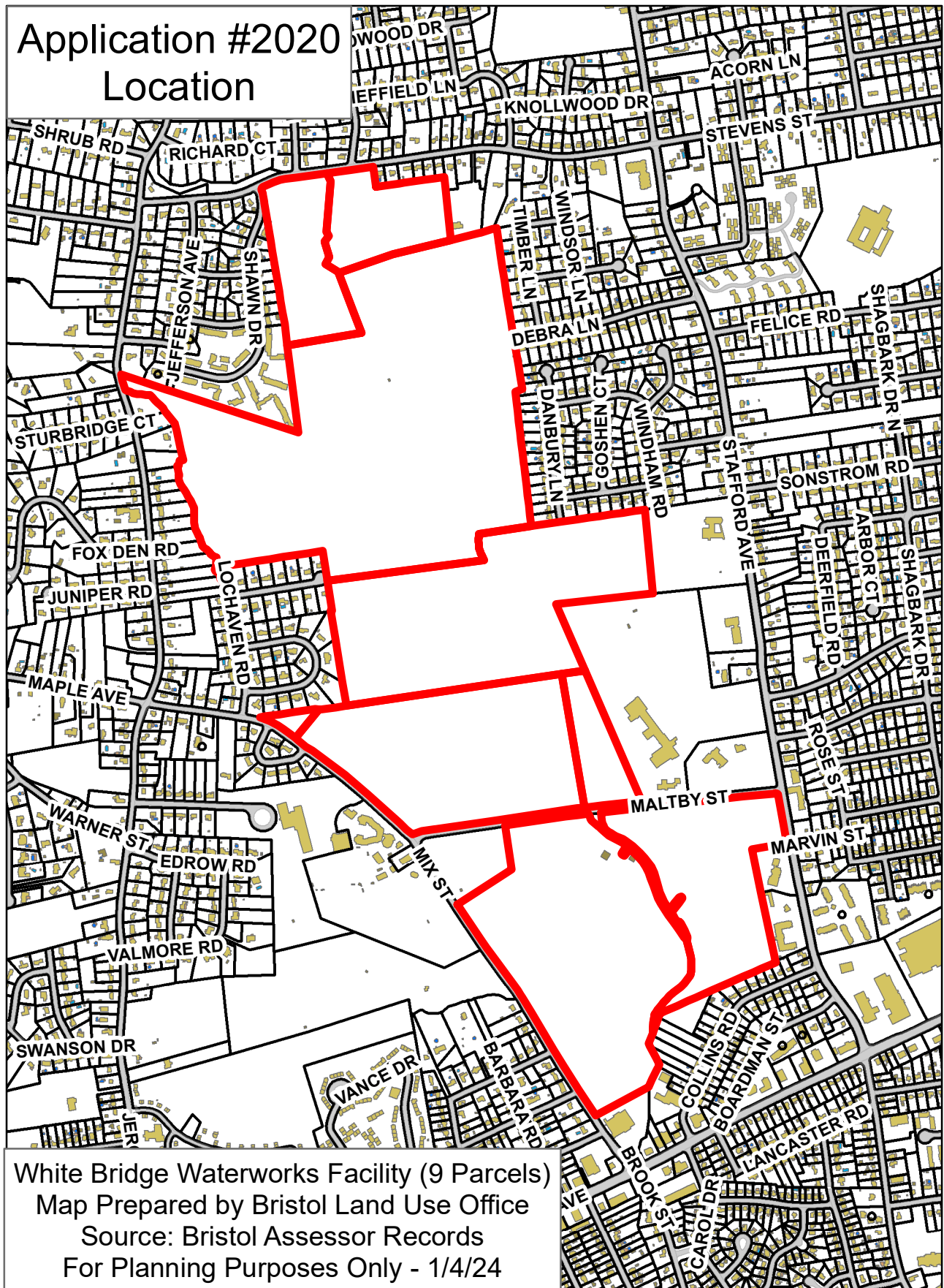
Name: Sebastian Amenta, PE

Address: 1 Hartford Square, Suite 227 City: New Britain State: CT Zip: 06052

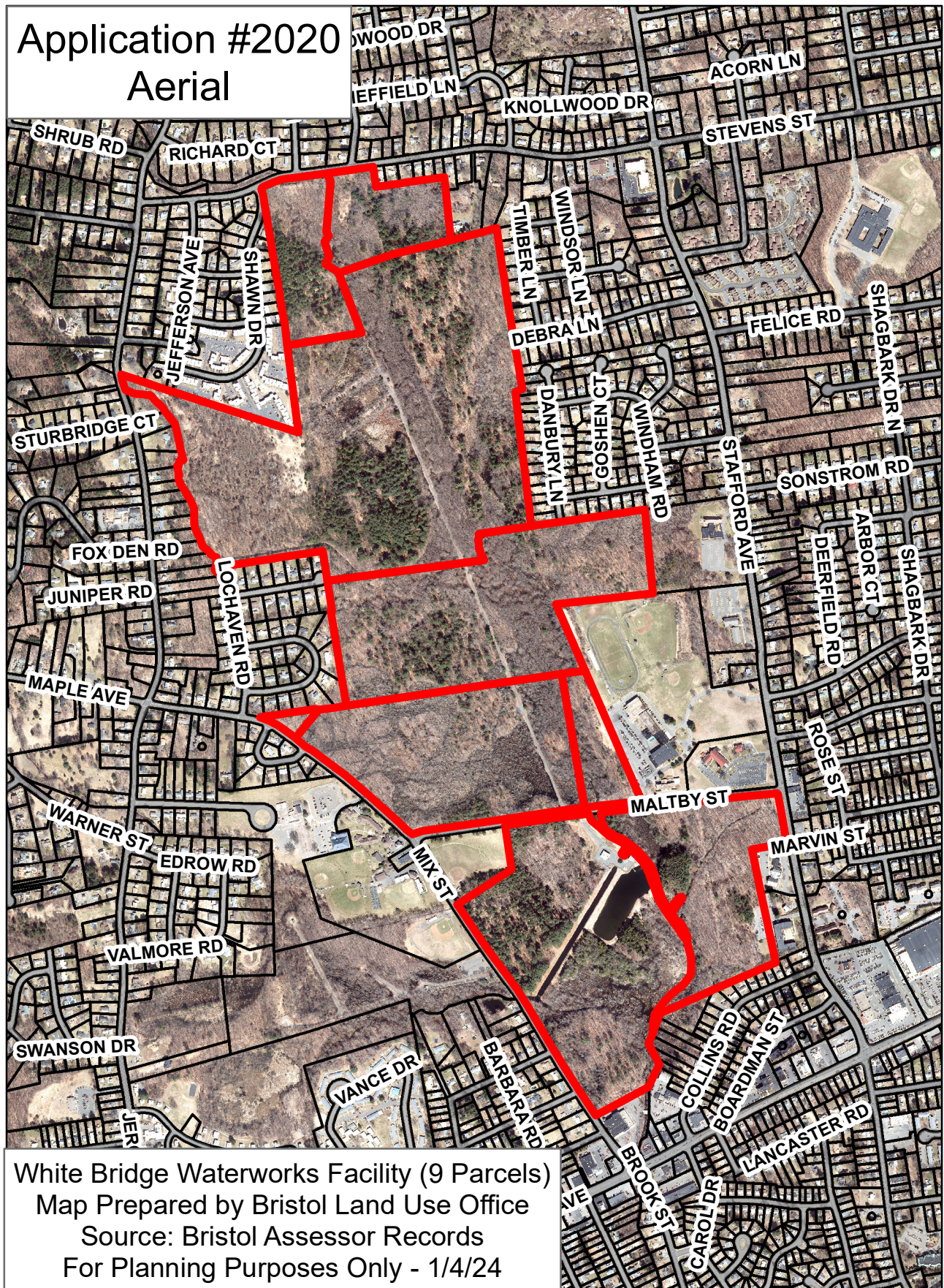
Telephone No.: (860) 224-0442/860 620 3673 E-Mail: samenta@ceiengineers.com

08/17 - LUO

Application #2020 Location



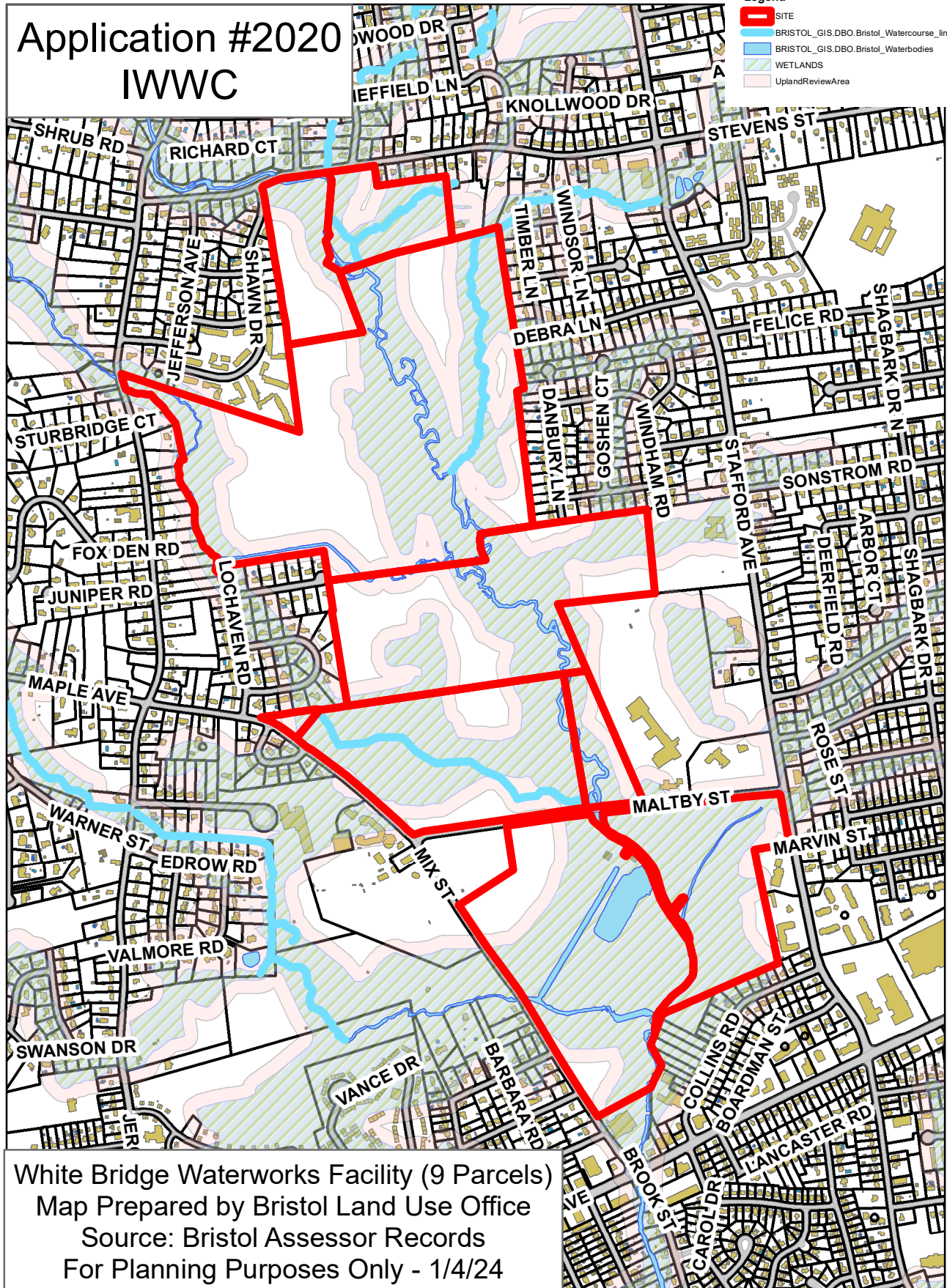
Application #2020 Aerial



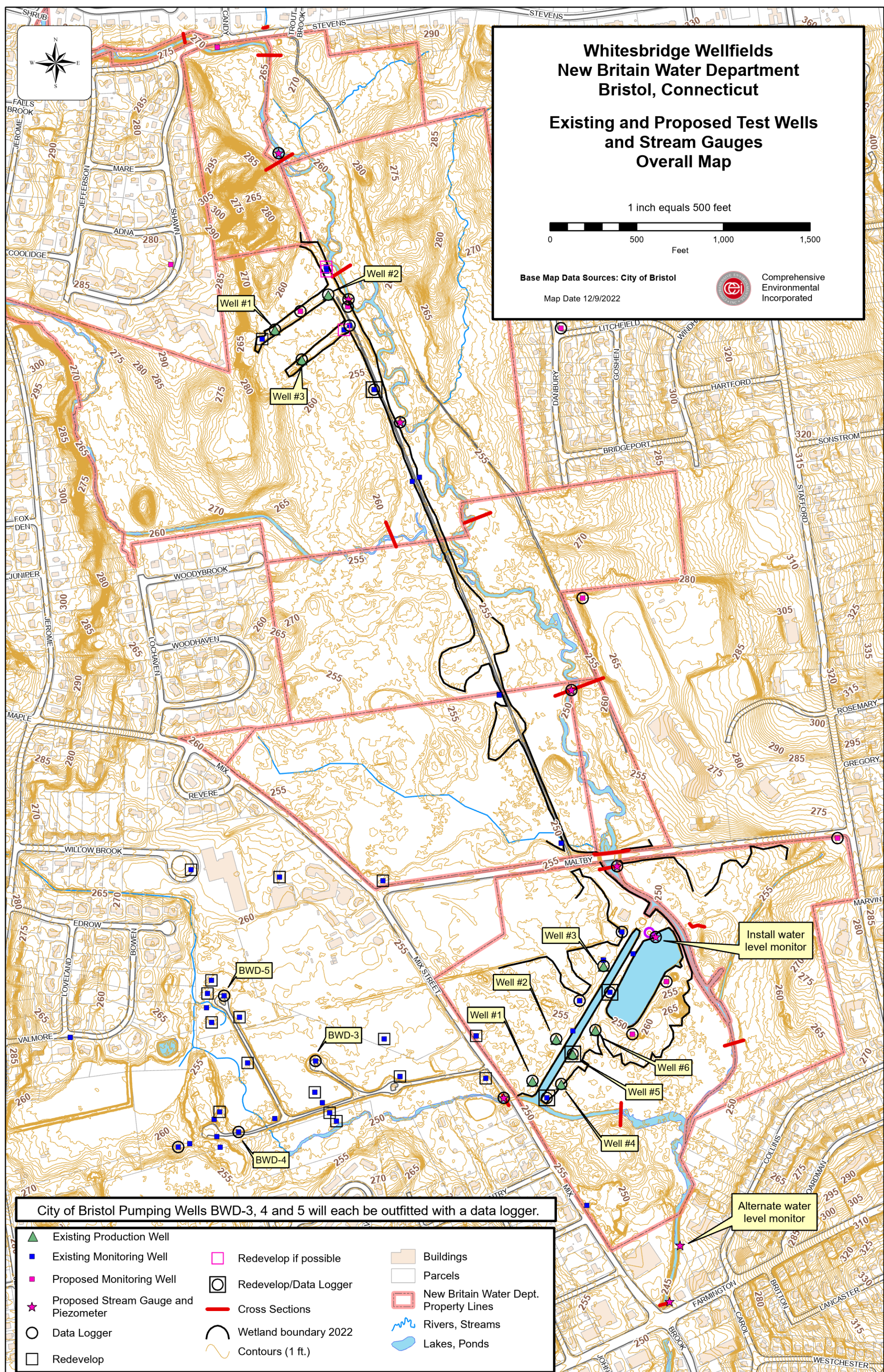
White Bridge Waterworks Facility (9 Parcels)
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 1/4/24

Application #2020 IWWC

- Legend**
- SITE
 - BRISTOL_GIS.DBO.Bristol_Watercourse_lines
 - BRISTOL_GIS.DBO.Bristol_Waterbodies
 - WETLANDS
 - UplandReviewArea



White Bridge Waterworks Facility (9 Parcels)
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 1/4/24



Wetlands Permit Application – IW-1

This attachment to the IW-1 application serves to provide the additional information required for significant activity application submittals, including:

- Site plans
- Proposed project activities
- Description and delineation of wetlands (Wetland Delineation Report)
- Impact on watercourse & flowrate
- Project alternatives
- Measures to mitigate the impact of the proposed activity

Proposed Project Activities:

A rehabilitative project will be conducted at the Upper and Lower Wellfields of the White Bridge Waterworks Facility owned by the New Britain Water Department (NBWD) accessed via Maltby Street. The purpose of this project is to redevelop the existing Upper and Lower Wellfields, which were constructed in the 1940s and 1921, respectively. Presently, these wellfields serve as a raw water supply only and cannot serve as a backup in their present condition. The age of the wellfields is such that they have come to the end of their useful life and repair and replacement equipment is no longer available. The NBWD needs to upgrade the facilities and modernize the equipment.

To become a potable water supply, any new wells must be located 50 feet from any water bodies or wetland limits per Department of Public Health (DPH) requirements. In addition, the wells must be raised 2' above the one-hundred-year flood plain elevation. Because of these requirements, the existing wells cannot be redrilled or rehabilitated in their present location. All currently existing wells will be abandoned in accordance with DPH requirements. The Lower Wellfield may but suitable as a public water supply subject to the ground water under the direct influence of surface water testing which will be done once the project is completed in a future phase of construction.

Numerous studies have been performed in preparation for this project including:

- A detailed test well program
- A seismic refraction study
- Wetlands mapping

The project will be executed according to a predetermined schedule prepared by the design consultant (CDM Smith) in coordination with the contractor (TBD). A 2-year duration from start of construction to completion is anticipated. A total of nine wells will be installed at the Upper and Lower Wellfields (three at the Upper Wellfield and six at the Lower Wellfield). A new pumphouse will be constructed at the Lower Wellfield along with all the necessary underground piping related to the new wells and pump house. The new pump house will house chemical treatment facilities. The pump house will be constructed 2' above the 100-year flood elevation per DPH regulation.

Compensatory flood storage areas will be created so as to not increase the current flood elevation levels as given by FEMA guidelines. These compensatory storage areas will also create additional wetland

areas and, as such, an IW-2 permit application has been submitted for review. See the attached maps for further information on the locations of these affected areas.

The proposed project also includes the removal of sediment from both the existing supply pond and canal located to the north. See a detailed drawing of the sediment removal attached. Over the years sediment has accumulated significantly in these water bodies and has decreased the capacity of both. The benefit of sediment removal will be an increased capacity of readily available surface water.

Description of Property and Wetlands:

This property spans a total of 303.7 acres, which includes the following parcels (by Map/Lot number): 52-15, 52-16B16A, 52-17, 52-11, 53-149, 53-150, 53-151, 53-145 and 53-147. Copper Mine Brook travels through the entirety of the property from north to south. The Upper Wellfield is located on parcel 52-17, which is 104.6 acres and has PFO1E and PEM1E wetland areas. PFO1E areas are seasonally flooded/saturated broad-leaved deciduous wetlands. PEM1E areas are seasonally flood/saturated persistent emergent wetlands. Soils in this project area consist mostly of Scarboro muck, with some Saco silt loam located closer to Copper Mine Brook. Soil scientist Ian Cole located all the wetland boundaries in the vicinity of the test well explorations. These boundaries are shown on the plans provided.

The Lower Wellfield is located on parcel 53-145, which is 50.3 acres and also has PFO1E and PEM1E wetland areas. Polkville Brook travels west to east, then southerly through this parcel before flowing into Copper Mine Brook. Onsite vehicular transport, between the Upper and Lower Wellfield areas will use existing travel ways on the site not within any wetland boundaries. Soils in the Lower Wellfield project area consist mostly of Raypol silt loam, with some Hinckley loamy sand located closer to Polkville Brook. Detailed wetlands mapping is provided on the plans.

Impact on Watercourse & Flowrate:

The proposed wetland disturbances activity will not affect the nearby watercourse flow rate.

The subject project includes the following watercourses that flow through the project site:

- Copper Mine Brook
- Polkville Ave Brook
- Freeman's Brook

The NBWD has registered diversions and those withdrawals will be increased.

Project Alternatives:

The following project alternatives were considered in selecting the preferred option for this project:

- Alternative 1 – No Action – The City would continue to run the existing White Bridge facilities at their current capacity without capital improvements.
- Alternative 2 – Purchasing water from The Metropolitan District (MDC) supply – Multiple alternatives were established to purchase raw or finished water from the MDC.
 - Alternative 2A – Raw Water to WTP/Shuttle Meadow Reservoir – Through existing agreements with MDC, the City has the ability to pump up to 7.5 mgd of raw water from MDC's Nepaug Reservoir, through the City's Nepaug pumping station, to the City's WTP or Shuttle Meadow Reservoir.
 - Alternative 2B – Raw Water to a new treatment plant – This alternative is similar to 2A, but would pump raw water to a new treatment facility near the existing White Bridge facilities to provide a redundant finished water source for New Britain customers.
 - Alternative 2C – Finished Water - There are also two existing interconnections with MDC's potable water distribution system. At the intersection of Fienemann and Farm Springs Road in Farmington, there is a hydrant-to-hydrant connection and at Hartford Road, just south of Westfarms Mall, there is a 12-inch meter pit connection. These are emergency-only interconnections and would need to be upgraded to become regularly-utilized sources. Once upgraded, these interconnections would provide up to 3 mgd of finished water to the City's distribution system.
- Alternative 3 – New Pond Pump Station Phased Approach – A new Pond Pump Station providing pumping of the surface water and Upper Wellfield water to the Shuttle Meadow Reservoir as raw water, as is currently the case for those supply sources. The facility will also include space for chemical addition, installed under a subsequent phase, to treat the Lower Wellfield water. A conceptual plan for the chemical addition would be included in this alternative. All wells would be replaced, and new pumps installed. The foregoing work constitutes Phase 1. Design and construction of the chemical addition for the subsequent Phase 2 would be dependent on the results of GWUDI (groundwater under the direct influence of surface water) testing.
- Alternative 4 - New Pond Pump Station / Lower Wellfield Chemical Addition Building - A combined facility providing pumping of the surface water and Upper Wellfield water to the Shuttle Meadow Reservoir as raw water, as is currently the case for those supply sources. The facility would also include chemical treatment facilities for sequestering manganese in the Lower Wellfield water. The finished Lower Wellfield water would be pumped directly to the City's water distribution system. Treatment of the Lower Wellfield water is dependent on the results of a GWUDI study. All wells would be replaced, and new pumps installed. Alternative 4 differs from Alternative 3 only in the timing of construction of the chemical addition facilities. In Alternative 4, they would be built at the same time as the rest of the facilities, not in a subsequent phase.

The following improvements were identified to be common to Alternatives 3 and 4:

- New wells at the Lower and Upper Wellfields to increase their production to levels closer to the Diversion Registrations.
- Supply Pond and Canal Restoration to remove sediment and restore these facilities back to their original intent.
- Intake Upgrade to replace the existing screens and piping up to the intake structure. The bridge from the bank of the supply pond to the intake structure would be repaired as well.
- Abandonment of the existing wells, caisson, and associated piping.

An initial screening of alternatives was performed, which eliminated Alternatives 1, 2A, 2B, and 2C as these alternatives did not meet the needs of the project or had high capital cost. Alternatives 3 and 4 were carried forward to additional evaluation and represent the proposed activity for this permit application.

Measures to Mitigate Project Impact – Erosion Control Measures:

The erosion and sedimentation control measures at the White Bridge facility focus on the protection of wetlands and waterways during and following construction since the work includes land disturbances, excavation dewatering, supply pond and canal sediment removal activities, and other associated construction activities. Several methods are included on the Drawings to slow the flow of runoff and protect disturbed land during construction activities. Please refer to the project plans for typical details of measures to protect wetlands and waterways during and after construction. The following summary presents typical mitigation measures that will be implemented to avoid and minimize wetland impacts during construction.

Construction Period

- During construction, the limit of land disturbances will be kept to a minimum, where possible, and the construction will be sequenced so the entire site will not be disturbed at the same time.
- Clearing and grubbing will be limited to only the areas necessary for work to be performed, specifically in areas at the Upper and Lower Wellfields (Sheet C-9 and C-11) where wells and piping will be installed, at the Maltby Street 16" pipe crossing (Sheet C-18), at areas where wetlands and compensatory storage will be created (Sheet C-13 and C-14), and areas around the Supply Pond for access during sediment removal activities (Sheet C-23).
- Sedimentation barriers (i.e., silt fence and/or compost logs/straw wattles installed per industry standards) will be installed at the down gradient limits of work and construction access roadways prior to the commencement of work to prevent the transport of sediment to the downgradient wetlands and waterways during construction (see Sheets C-6 thru C-8). Specifically, at the Upper Wellfield this includes compost logs/straw wattles along the facility driveway from Maltby Street to the existing Pumping Station and down each of the well field laterals. At the Lower Wellfield, this includes along the wetlands to the north and west of proposed work, along the Coppermine

Brook to the east, around the Supply Pond, and along both sides of the Canal to the Polkville Avenue Brook. These barriers will be inspected at least once per week and within 24 hours of rainfall events ½-inch or greater and repaired as needed. These barriers will remain in place until all disturbed soils are stabilized. A stockpile of compost logs/straw wattles and silt fence will be maintained on site for routine maintenance and emergency repairs. Barriers will be replaced as necessary due to sediment build-up and degradation.

- Sedimentation barriers (i.e., silt fence and/or compost logs/straw wattles installed per industry standards) will be installed surrounding temporary stockpile areas.
- For all slopes 4:1 or steeper, an erosion control blanket will be required, including at the Upper and Lower Wellfield wells (see Sheet C-9 and C-11). Temporary erosion control blankets will be inspected at least once per week and within 24 hours of rainfall events.
- A turbidity curtain will be installed to prevent sedimentation and turbidity disturbances in the Coppermine Brook during canal and supply pond sediment removal activities (see Sheet C-23 and Detail Sheet C-24). Turbidity curtains will be inspected daily during Supply Pond and canal sediment removal activities. The turbidity curtain will not be removed before sediment removal activities have ended and clarity of water has returned.
- Catch basin filters will be installed on catch basins near all excavation work on Maltby Street, Stafford Avenue, and Mix Street (See Sheet C-18 and Detail Sheet C-24).
- In the event that excavation dewatering is necessary, water will be pumped and discharged to one of the temporary sedimentation basins in designated areas of the site (see Sheet C-6 thru C-8 and Detail Sheet C-24). Temporary sedimentation basins will be inspected at least once per week and cleaned as needed to remove accumulated sediments. Temporary portable sediment tanks may also be used to handle significant amounts of excavation dewatering. All water to be discharged from dewatering activities will be filtered or otherwise treated prior to discharge to prevent siltation to adjacent areas. Best management practices will be used by the Contractor in order to prevent siltation to adjacent areas during dewatering activities.
- A temporary sediment dewatering and stockpiling area has been designated within the Supply Pond to dewater removed sediments during restoration activities (see Sheet C-23 and Detail Sheet C-24). Stockpiled materials and containment area will be inspected daily during dewatering activities, weekly during non-dewatering activities, and within 24 hours of rainfall events of ½-inch or greater.
- A stabilized construction entrance is also being required for the site to prevent tire tracked soils to onsite and offsite locations (see Sheet C-23 and Detail Sheet C-24). The stabilized construction entrance will be inspected periodically and additional top dressing or length will be added, as necessary, to continue capturing sediment tracked on vehicles.
- The silt fence and/or compost log/straw wattle barrier will not be removed until the site areas are vegetated, paved or otherwise permanently stabilized to prevent erosion of exposed soils. Work

will proceed as rapidly as possible, limiting the exposure time of disturbed soils to wind and precipitation.

- The sedimentation barriers will not be removed until the site areas are vegetated, paved or otherwise permanently stabilized to prevent erosion of exposed soils. Work will proceed as rapidly as possible, limiting the exposure time of disturbed soils to wind and precipitation.
- Periodic inspections will be made by the applicant to ensure compliance with the permit conditions.

Spill Control Measures

- Spill containment equipment (e.g. oil absorbent pads, oil absorbent materials, containment booms, shovels, etc.) will be stored in the equipment storage and refueling area in an easily accessible manner for use in the clean-up of accidental releases of fuel or other hazardous materials. Should there be an accidental release the proper authorities will be notified in accordance with all applicable federal, state, and local laws; and
- To minimize the possibility of leakage of hydraulic fluid, all hydraulic lines on all construction equipment and vehicles will be inspected at the end of each workday. If any excessive wear or leakage is observed, the line will be repaired prior to further use. In addition, a supply of oil absorbent materials (i.e. pads, "speedy dry," and/or booms) will be maintained with the equipment at the work area for immediate deployment in the event of an accidental release of fuel, hydraulic fluid, oil, etc.

Post-Construction Period

The following summary of mitigation measures will be implemented to restore any areas affected by short-term impacts that occur in or adjacent to wetlands.

- The final site is designed to have a 3-foot wide gravel infiltration trench with 1.5"-3" diameter washed aggregate covered with 6" pea gravel running along the facility driveway to collect and slow the flow of runoff from impervious surfaces (see Sheet C-10 and Detail Sheet C-26).
- All areas disturbed during construction activities are to be loamed and seeded to provide vegetated soil cover protection against sheet runoff and wind erosion (see Sheet C-9 thru C-12). Seeded areas will be inspected at least once per week and within 24 hours of rainfall events of ½-inch or greater.
- Once established, seeded areas will be mowed and maintained as appropriate.
- The Pond Pumping Station building roof drain leader will outlet to a riprap apron (See Sheet C-10 and Detail Sheet C-26). Riprap used in the roof drain apron will be inspected periodically to determine if high flows have caused scour beneath riprap or if vegetation removal is required. On the northeast side of the Pond Pumping Station building, a retaining wall will be utilized to prevent steep slopes.

- The wetland replication and restoration areas will be planted with trees and shrubs per the planting plans, and seeded with a wetland seed mixture.
- If seeding occurs outside of the growing season, temporary stabilization measures (i.e., mulching or erosion control blankets) will be used to prevent erosion until the area can be seeded during the following growing season.
- Reseeding and mulching disturbed areas. These areas will be maintained and re-seeded to ensure that grass cover is adequate to stabilize the exposed soil, and
- Sedimentation and erosion control barriers will not be removed until a vegetative cover dense enough to prevent erosion is established.

Selections from Figure 3-2 of the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control:

Figure 3-2 Measure Selection Matrix					
Identify Problem Areas	Identify Control Problems	Identify Strategy	Select Specific Measure		Plan Key
			Functional Group	Measure	
Disturbed Areas	Control Soil Detachment	Preserve and Conserve Existing Site Resources	Protect Vegetation	Tree Protection	TP
			Preserve and Conserve Soil	Topsoiling	TO
Short or Shallow Slopes	Raindrop Splash	Protect Surface	Vegetative Soil Cover	Land Grading	LG
				Surface Roughening	SR
Steep Slopes	Sheet & Rill Erosion	Protect Surface	Vegetative Soil Cover	Dust Control	DC
				Temporary Seeding	TS
Long Slopes	Wind Erosion	Protect Surface	Vegetative Soil Cover	Permanent Seeding	PS
				Sodding	SO
Stockpile Areas	Control Water Movement	Protect Surface and/or Convey Runoff	Non-Living Soil Protection	Landscape Planting	LP
				Temporary Soil Protection	TSP
Borrow Areas	Gully Erosion	Protect Surface and/or Convey Runoff	Non-Living Soil Protection	Mulch for Seed	MS
			Non-Living Soil Protection	Landscape Mulch	LM
Drainage Ways	Channel & Stream Erosion	Convey Runoff	Stabilization Structures	Temporary Erosion Control Blanket	ECB
			Stabilization Structures	Permanent Turf Reinforcement Mat	TRM
Wetlands and Watercourses	Channel & Stream Erosion	Convey Runoff	Stabilization Structures	Stone Slope Protection	SSP
	Channel & Stream Erosion	Convey Runoff	Stabilization Structures	Retaining Walls	RW
Waterbodies	Channel & Stream Erosion	Convey Runoff	Stabilization Structures	Riprap	RR
	Channel & Stream Erosion	Convey Runoff	Stabilization Structures	Coirlogs	G
Areas of Flooding and Existing Erosion	Natural Resource Degradation	Diffuse Runoff	Energy Dissipators	Permanent Slope Drain	PSD
	Natural Resource Degradation	Diffuse Runoff	Energy Dissipators	Channel Grade Stabilization Structure	CSS
Drainage Outlets	Control Sediment Deposition	Detain Sediments	Sediment Impoundments, Barriers, and Filters	Temporary Lined Chute	TC
	Control Sediment Deposition	Detain Sediments	Sediment Impoundments, Barriers, and Filters	Temporary Pipe Slope Drain	TSD
Travel Areas	Control Mechanically Moved Waters and Soils	Control Mechanically Moved Waters and Soils	Tire Tracked Soils	Vegetated Waterway	VW
	Control Mechanically Moved Waters and Soils	Control Mechanically Moved Waters and Soils	Tire Tracked Soils	Temporary Lined Channel	TLC
Dewatering	Control Mechanically Moved Waters and Soils	Control Mechanically Moved Waters and Soils	Dewatering	Permanent Lined Waterway	PW
	Control Mechanically Moved Waters and Soils	Control Mechanically Moved Waters and Soils	Dewatering	Temporary Stream Crossing	TSC
				Temporary Fill Berm	TFB
				Water Bar	WB
				Temporary Diversion	TD
				Permanent Diversion	PD
				Subsurface Drains	SD
				Detention Structures	DB
				Level Spreader	LS
				Outlet Protection	OP
				Stone Check Dam	SCD
				Temporary Sediment Basin	SB
				Temporary Sediment Trap	TST
				Hay Bale Barrier	HB
				Geotextile Silt Fence	GSF
				Turbidity Curtain	TC
				Vegetative Filter	VF
				Construction Entrance	CE
				Pump Intake and Outlet Protection	PuP
				Pumping Settling Basin	PSB
				Portable Sediment Tank	PST
				Dewatering of Earth Materials	DWM



COMPREHENSIVE
ENVIRONMENTAL
INCORPORATED

Gateway Crossing
1 Hartford Square East, Suite 227
New Britain, CT 06052
860.224.0442

May 1, 2024

Mr. Robert Flanagan, City Planner
City Hall
111 North Main Street
Bristol, CT 06010

**RE: Wetlands and Flood Commission Permits- Applications #2019, #2020 & #23-458F-305
Submission of Response to Staff Comments and Supplemental Information**

Dear Mr. Flanagan,

On behalf of the Applicant, the New Britain Water Department, Comprehensive Environmental Inc. (CEI) is providing in this document responses to comments and supplemental information regarding the above referenced applications.

Responses to City Staff Comments:

Comment #1. *Proposed construction wetland “replication” appears to consist of excavation adjacent to existing wetland and installation of 3 inches of hydrophilic soil. Provide additional information associated with the hydrophilic soil specification and post development groundwater depth to support wetland “replication” areas. DPW Engineering Division proposes a min of 12-inch depth of hydrophilic soil within wetland “replication” area. On adjacent 2:1 slopes 6 inches of hydrophilic soil is sufficient. Detail/document short and long term monitoring and wetland “replication” area management plan to ensure long-term viability of area.*

Response #1. The wetland replication and compensatory storage plans and sections have been revised to address the above comments. Please note that due to the presence of a vernal pool in the upper wellfield area the compensatory storage and wetland replication area was moved further north. In addition, the United States Army Corp of Engineers (USACE) has requested a 3:1 wetlands replication as part of their permit review. These changes are reflected in revised sheets WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 and C-14A which are attached herein as **Attachment 1.A**. Also attached as **Attachment 1.B**. are the calculations for the compensatory storage. More information about the vernal pool can be found in the NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC., which is also attached to this document as **Attachment 1.C**. Sheet XS-5 and Section 4 of the NBWD Supplemental Environmental/Wetlands Permit Information detail the short term and long term monitoring for wetland replication.

Comment #2. *Plan indicates dewater sedimentation basin, however provide anticipated/ proposed discharge rates with sizing of sedimentation basins. In addition, indicate controls / monitoring of turbidity discharge from sedimentation basin.*

Response #2. Temporary dewatering sedimentation basins are intended to be used in the event high groundwater is encountered during excavation activities. Anticipated/proposed discharges will vary depending on the required amount of excavation dewatering but typically can range from 20-50 gpm, intermittently. As shown in Detail J of Drawing Sheet C-24 (included herein as **Attachment 2**), the dewatering sedimentation basin size may vary depending on necessity with a 5-foot diameter being the minimum diameter of the basin. Sedimentation basins will be inspected at least once per week and cleaned as needed to remove accumulated sediments. The Contractor may also elect to install permeable geotextile dewatering bags in addition to the dewatering sedimentation basins for sediment filtration.

Comment #3. *Provide construction sequence with durations along with staging plan, areas of stockpile storage and refueling areas.*

Response #3. See the Proposed Construction Sequence Memorandum included in **Attachment 3.A.** for more information, and the associated Drawing Sheets C-20, C-21, and C-22 in Attachment 3.B. Additionally, see Sheet C-1 and C-7 of **Attachment 3.B.** for notes and depiction of Contractor staging, stockpiling, and refueling areas.

Comment #4. *Clarify proposed location of floating turbidity curtain.*

Response #4. Floating turbidity curtains are to be located within the canal, east and west of the proposed sediment removal areas. See revised Sheet C-23 in **Attachment 4.**

Comment #5. *Include installation line of silt fence along the toe of ALL proposed slopes. Silt fence shall be installed prior to construction, be monitored during construction and removed once slopes are stabilized.*

Response #5. Notes requiring the installation of silt fence has been included throughout drawings. See revised sheets C-1, C-6, C-7, C-8, C-13, C-14, C-14A in **Attachment 5.**

Comment #6. *Provide additional detail associated with compensation storage area 3. The plans indicate excavation to elevation 252, however indicate proposed access to area, erosion control and restoration.*

Response #6. The revised plans referenced in Comment Response #1 address these comments.

Comment #7. *Provide additional detail associated with compensation area 4, including additional elevation east of the area between the compensation area and the Coppermine. Detail cross section AA-1 and indicate erosion control measures and proposed access to area.*

Response #7. The revised plans referenced in Comment Response #1 address this comment.

Comment #8. *The Storm Water Management Report is prepared in accordance with the CT Storm Water Quality Manual. As indicated in your report the manual requires maintaining the pre-*

development annual groundwater recharge volume. The report indicates recharge is achieved through reduction in impervious area; however, please indicate impact of additional well withdrawal will have on wetlands.

Response #8. See Section 3 of the NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC., which is included in **Attachment 1.C.**

Comment #9. *Proposed plans indicate flood plain mitigation measures (excavation within flood plain to offset the placement of fill within flood plain). However, Bristol DPW recommends a CLOMR prior to work and will require a LOMR as condition of approval (if approved).*

Response #9. See No Rise Certification included in **Attachment 9.** No objection to coordinating with FEMA for CLOMR/LOMR as a condition of approval.

Responses to North Central Conservation District (Letter Dated March 28, 2024):

1. See the Letter from CT DEEP in **Attachment 10**, which confirms the continued applicability of the Diversion Registration to the facilities and that no diversion permit is required for continued operation of the facilities as proposed with this project.
2. See Section 3 of the NBWD Supplemental Environmental/Wetlands Permit Information, included in **Attachment 1.C.**, concluding no permanent impacts from withdrawals.
3. See Section 5 of the NBWD Supplemental Environmental/Wetlands Permit Information and the related Supplemental Alternatives Evaluation contained therein, detailing alternatives considered for this project. There are no feasible and prudent alternatives to the proposed plan.
4. See Section 5 of the NBWD Supplemental Environmental/Wetlands Permit Information concluding no permanent impacts to wetlands functions and values.

Additional Information Submitted:

1. Detailed Groundwater and Stream Flow Monitoring Plan, as required by CT DPH, is included in **Attachment 11.**
2. Letter confirming hydrogeologic information for project site remains valid. See **Attachment 12.**
3. Proposed wetlands boundary line change map is submitted for consideration. See **Attachment 13.**
4. Resumes of Engineers and Soil Scientist are included in **Attachment 14.**

Attachments Includes:

- Response 1 – Attachments
 - 1.A. Drawings: WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 to and C-14A
 - 1.B. Calculations: Compensatory Storage
 - 1.C. NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC
- Response 2 – Attachment
 - 2. Drawing: C-24
- Response 3 – Attachments
 - 3.A. Proposed Construction Sequence Memorandum
 - 3.B. Drawings: C-1 and C-7; C-20, C-21, and C-22
- Response 4 – Attachment

- 4. Drawing: C-23
- Response 5 – Attachment
 - 5. Drawings: C-1, C-6, C-7, C-8, C-13, C-14, C-14A
- Response 9 – Attachment
 - 9. No Rise Certification
- Attachment 10
 - 10. CT DEEP Permit Need Determination
- Attachment 11
 - 11. Detailed Groundwater and Stream Flow Monitoring Plan
- Attachment 12
 - 12. Letter confirming hydrogeologic information for project site remains valid
- Attachment 13
 - 13. Proposed wetlands boundary line change map
- Attachment 14
 - 14. Resumes of Engineers and Soil Scientist
 - Sebastian Amenta, P.E.
 - Ian T. Cole - Professional Soil Scientist
 - Joseph L. Laliberte, PE, BCEE, PM
 - Clinton L. Webb Jr. – Senior Environmental Scientist/Ecologist

If you have any questions or require any additional information, please do not hesitate to contact me at 860.224.0442 or samenta@ceiengineers.com.

Sincerely,
Comprehensive Environmental Inc.



Sebastian Amenta, PE
Regional Program Director

May 6, 2024

Zach Fisk, Chair
Bristol Inland Wetland Commission
c/o Bristol Land Use Division via email

RE: **Application #2019, Application #2020, Application #23-458F-305** Application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessors Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.

Dear Chair Fisk and Bristol IWW Commissioners:

This letter is written in response to the recent submittal (dated May 1, 2024) of additional information regarding subject applications. This additional submittal information includes revisions made to the proposed plans in response to the discovery of a vernal pool at the north wellfield site, as well as revisions made to address staff comments, and revisions made to the plans as a result of the comments from the Army Corps of Engineers to address the federal requirements for wetland mitigation for the impacts to wetlands as a result of the proposed improvements. Also, the Streamflow monitoring plan, prepared for the Department of Public Health, was presented in Attachment 11.

Additionally, since the last public hearing, third party review letter from the North Central Conservation District desktop review (dated March 28, 2024, 3 pp) has been available. Further third party review for wetland/floodplain environmental services has not yet been made available.

The following comments are made in response to the May 1, 2024 additional information submittal.

1. Regarding the Supplemental information/vernal pool discovery in the vicinity of the north wellfield:
 - a. Was the Commission able to review the vernal pool extents during the site walk to confirm limits and conditions? (According to sheet WR-1, the proposed access road to the modified mitigation area north of the pool impacts the 100' review area of the vernal pool.)
 - b. Where is the vernal pool location compared to the well drawdown contours presented in the hydrogeologic report? These contours appear to extend into the vernal pool protection area, and the drawdown contours were presented for operations at Well 5A, (pumping at approximately 1/7 of the north wellfield proposed rate). What drawdown data was provided to the wetland scientists to respond to the surface water drawdown impacts to the ecological systems? What protections will be proposed to protect the existing natural systems (wetlands and stream) from impact due to increase well water withdrawals?
2. Regarding the revised wetland mitigation / floodplain compensation areas:
 - a. Sheet WR-1 shows a wetland replication area (represented by section A1-1) to excavate up to 8' in depth from an area of approximately 28,726 SF in size (to el 261). This area is located immediately adjacent to brook. The proposed transition slope areas to the north and west of this area add additional significant area of

disturbance. How close is the proposed replication area to the brook and what riparian impacts will result from the clearing? What is the total disturbance of the mitigation area, including the transition slope areas and haul road? What portions of the disturbed areas are located in regulated wetlands/upland review areas? What is the existing land cover in the proposed impacted areas, i.e. what kind of land cover will be cleared to accommodate the wetland replication area (and how much is considered brook riparian area)? What is the estimated time period for the mitigation area to restore to land cover conditions similar to the mature conditions (similar to the existing condition)? Will the perimeter fringe areas be more subject to invasive species (and if managed, chemical treatment) than the existing conditions (presumably with no current chemical use and less potential for introduction of invasives)? Are there seasonal restrictions in specifications to help minimize impacts related to clearing, dewatering and removal of the substantial proposed excavation materials? What is the proposed time period required and any seasonal restrictions for the proposed grading and planting? Will mitigation work be completed before the proposed impacts? Have any borings been performed to determine the need for access road stabilization and wetland material reuse? Will the haul/access road remain through Growing Seasons 2-5. Quantify the areas of haul/access road for clearing, grading, and stabilization and whether these areas occur in regulated wetlands or regulated floodplain. Has any road fill been computed in the floodplain impacts? Will any stabilized road work be removed and restored?

- b. On sheet WR-2, will any grading and stabilization be done for the haul/construction/access road? (The south road shows “dips” of 3’ - 4’ in the vicinity of the road narrowing for the south longitudinal section of mitigation). What is the tabulated area of impact for wetlands/upland review for these areas, including slope transitions, with a discussion of the existing land cover? Please discuss periods for invasive management and any proposed chemical use that may be needed to manage invasives in these proposed mitigation area. Due to the proximity of the wells, will chemical use be restricted? The plan calls for wetland replication of 3,057 SF to el 257 and 2,008 SF to el 256. The third area of impact/replication is not called out. What is the quantity of temporary impacts in regulated wetlands for each area’s construction? What is the anticipated surface water fluctuation to the adjacent wetlands and brook resulting from the new wells?

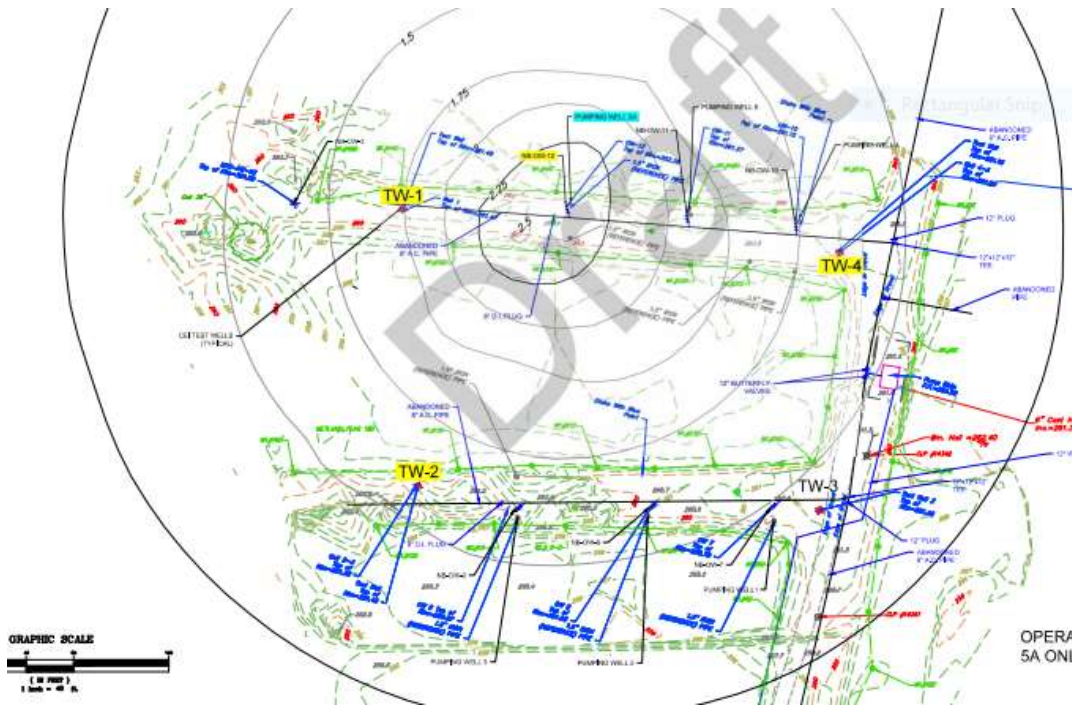


Exhibit taken from Hydrogeologic report, Figure 2

- c. On sheet WR-3, the wetland replication area (represented by Section A3-1) is tabulated at 31,146 SF by excavating the area immediately adjacent to the Coppermine to depths up to 10' (to el 247). This area is shown to be located immediately adjacent to brook. Contours on the northwest of the proposed replication area indicate an existing adjacent area of bottom contour 248. Was this area investigated as a potential pool or wetland? Where are the wetland limits in this area? The proposed transition slope areas to the north and west and southwest of this area add additional significant area of disturbance to this area. What is the total disturbance of this mitigation area construction, including the transition slopes and haul/access road areas? What portions of these areas are located in regulated wetlands/upland review areas? What is the land cover in the proposed impacted areas, i.e. how much and what kind of land cover will be cleared to accommodate the wetland replication area, slope and access road areas? What is the estimated time period for the mitigation area to restore to land cover conditions similar to the existing conditions? Will the perimeter fringe areas be more subject to invasive species (and if managed, chemical treatment) than the existing conditions? What is the proposed time period required and any seasonal restrictions for removal of the substantial proposed excavation materials to minimize disturbance? What is the proposed time period required and any seasonal restrictions for the proposed grading and planting? How long will the silt fences and haul/access road remain for management of the wetland replication area? Will it be removed/restored? Have any borings been performed to determine the need for haul road stabilization and wetland material reuse?

- d. On Sheet WR-4, the proposed replication area 7,000 SF graded to el 249 with an unidentified quantity of area graded to 252 and grassed (represented by Section A4-1). Please describe the existing and replacement land covers, label contours and tabulate the impacted areas, including slopes and access road, in the regulated wetland areas.
 - e. On Sheet WR-5, the proposed replication area, excavated up to 10' in depth is proposed to be graded to el 250 (represented by Section A5-1), immediately adjacent to the Coppermine. Similarly, please similarly address land use cover, identify contours and slope transitions, limits of impact, similar to previous comments.
3. With respect to investigation into project alternatives with less wetland/watercourse impact, the applicant can consider; **propose less pump capacity withdrawals for each of the wellfields and the pond.** This request is further supported by past studies that indicate the state registration withdrawal quantities cannot be supported. It's obvious from past and more recent pump testing that the shallow aquifer is of limited capacity and influenced by infiltration (and therefore drawdown) of the adjacent surface waters and wetlands. The well testing report by S.B Church (Sept 2019), based on test wells approved in the previous wetland application), suggests 2 wells in the south wellfield, and (report summary as clipped below) estimates yields considerably below the proposed six wells at 470 gpm in the south wellfield.

yields do not reflect the influence that the wells may have on each other and they do not reflect the influence of the drainage basin supplying water to each well throughout the year.

Well Number	Estimated Yield GPM
5	400
6	68
7	250
8	80
9	148
10	220
11	374
12	180

Estimated Total 1721 GPM of 1.54 MGD

We suggest that two 30 inch large diameter wells be constructed at the sites of 5 and 11. We suggest that these wells be constructed as 30 inch diameter by 24 inch diameter gravel packed wells. The wells may be drilled a permanent production wells or as test wells with the plan to later permit them as permanent production wells.

We suggest that 72 hour pump tests be conducted on each of the wells to determine their influence on the other potential well sites. We also suggest that both wells be pumped simultaneously at approximately one million gallons per day to determine their influence on other potential well sites. This data could be used to determine where other future production wells should be drilled.

- Assume
8' drawdown?

5, 7, 9, 10, 11, 12

2 45

The applicant has not addressed the drawdown impacts for the proposed well withdrawals and for the adjacent south wellfield pond/surface water pump withdrawals, **except to recognize that brook impacts have and will occur.** Portions of the current Hydrogeology report states:

- Surface water elevations recorded by Lenard both before and during pump testing revealed a total water surface elevation decrease of 1 ft. for both the Copper Mine and Polkville Brook, strongly implying a hydraulic connection between surface water bodies within the wellfield. CEI observed a decrease in canal water levels of 1 ft, with near complete dewatering and drying of the canal observed within approximately 7 days of wellfield operation (primarily impact do to operation of the pond pump), implying the canal and unconsolidated wellfield formation are hydraulically well connected.
- The 2007 Lenard report implied that several brooks, including The Copper Mine, Polkville, Negro Hill, Wildcat, Whigville, and several unnamed tributaries are part of the Copper Mine drainage basin, and directly supply both the upper and Lower Wellfields with significant amounts of surface water, with the Upper Wellfield likely receiving the most recharge.
- Following observations made of historic data collected by Maguire during the Summer 1985 Lower Wellfield performance evaluation, it appears that operation of the 1985 wellfield at 2 MGD was unsustainable due to limitations imposed by the close proximity of installed wells and the unaccounted-for principal of well interference. 1 MGD was reported to be sustainable but is significantly lower than the permitted 4 MGD pumping limit. It is the opinion of CEI that due to this unaccounted-for phenomenon, the Lower Wellfield will be able to sustainably produce approximately 2 MGD should a more optimal wellfield configuration be installed accounting for the phenomena of well interference and nearby vertical recharge sources.

Recall that these statements were observations after the most recent pump test monitoring of pump discharges that were much, much lower than the proposed application pump rates. No clear documentation has been provided on the influence of the proposed simultaneous pond surface water pumps and well pumps on regulated wetlands and watercourses.

The applicant has the capability and the responsibility to test, model, and evaluate safe sub-surface and surface withdrawals to reduce impact to the adjacent wetlands/surface waters. Further evaluation, considering simultaneous well withdrawals and surface water withdrawals, is needed to realize a practical solution.

The applicant should also consider options to increase redundancy of its existing treatment system, located central to its main customer base. Considering that the proposed water capacity upgrades are presented as emergency supply for New Britain Water customers, it's hard to understand why these substantial upgrades are proposed in mapped floodplain and regulated wetland areas in the City of Bristol, making them subject to natural disaster and potentially unavailable.

4. The Streamflow monitoring plan (Attachment 11 of the May 1, 2024 submittal materials) was prepared for the Department of Public Health and does not address wetlands protections. It's noted that while monitoring is crucial, but it does not protect wetlands and streamflow unless protective management measures are developed and implemented.

5. The proposed re-fueling area located in the floodplain/regulated wetlands adjacent to Coppermine should be examined.
6. The Bristol Inland Wetland Commission follows local and state guidelines for wetlands and watercourse protections that differ from state health or federal requirements. Clear tabulation of the Bristol regulated wetland areas needs to be presented.
7. Due to review time constraints, portions of past comments are repeated below.

How can the Bristol Inland Wetland Commission protect the flow-impaired Coppermine and surrounding wetlands? Please consider the following:

- a. North wellfield: Applicant should model the effects of the groundwater and surface water drawdown resulting from proposed wells' pump rate capacities, operating simultaneously. Clearly show the extents of the estimated drawdown relative to regulated wetlands and surface waters and evaluate protective pump rates. Tabulate the impacted area and provide a flora and fauna assessment of the impacts. Address surface water fluctuations relative to operational and seasonal changes. Address operational management protocols to protect Copper Mine and associated wetland areas. Address mitigation plan, including monitoring, for all unavoidable impacts.
- b. South wellfield/pond: Applicant should model the effects of the groundwater and surface water withdrawal capacities simultaneously to clearly show the extents of the drawdown relative to regulated wetlands and surface waters. Evaluate protective pump rates. Tabulate the impacted area and provide a flora and fauna assessment of the impacts. Address surface water fluctuations relative to operational and seasonal changes. Address operational protocols to protect Coppermine and associated wetland areas. Address mitigation plan, including monitoring, for all unavoidable impacts.

The well and pond withdrawals have been documented to affect and to rely on the adjacent surface water natural system. These surface water sources and wetland storage areas serve valuable water quality, quantity and wildlife functions. Thank you for your consideration.

Carol Noble, P.E., CFM (ret)

Attachment 1:

Tables of the rates and the study references are compiled below for informational purposes.

White Bridge Upper Wellfield:

	DEEP Diversion Registration (2)	Existing Withdrawal (3)	Proposed Withdrawal (2)	Level A Study Withdrawal (4)	Safe Yield Ave (4)	Safe Yield Drought (4)	Pump test (2, 3)
gpm	1,500	~200	3@470=1,400	840	694	600	200 (Well 5A)
MGD (1)	2.16	~0.3	2.0	1.2	1.0	0.86	0.3

Notes:

(1) Conversion 1 MGD = 694.44 gpm

(2) Preliminary Engineering Study, CEI CDE Smith, Feb 2021

(3) Existing withdrawal assumed from the April 2020 CEI Hydrogeologic report estimating the most current working well pump

(4) Level A Study Withdrawal taken from Dec 2007 Lenard Hydrogeologic Level A Study Executive Summary. Note the Lenard Study states ““It was determined that the aquifer could not support the maximum registered diversion of the New Britain upper, lower and Bristol Mix Street wellfields”. The study reassigned “agreed upon” reduced flow rates to simulate a safe yield for each of the wellfields.

White Bridge Lower Wellfield:

	DEEP Diversion Registration (2)	Existing Withdrawal (3)	Proposed Withdrawal (2)	Level A Study Withdrawal (4)	Safe Yield Ave (4)	Safe Yield Drought (4)	Pump test (2, 3)
gpm	4,333	700 - 1250	6@470=2,800	2,190	1,958	611	850-1080 (meas at caisson (3,4))
MGD ⁽¹⁾	6.24	1 - 1.8	4.0	3.15	2.82	0.88	1.2 – 1.6 (meas at caisson ^(3,4))

Notes:

(1) Conversion 1 MGD = 694.44 gpm

(2) Preliminary Engineering Study, CEI CDE Smith, Feb 2021

(3) Existing withdrawal taken from the April 2020 CEI Hydrogeologic report inferring test well pump rates based on 1985 pump test.

(4) Level A Study Withdrawal taken from Dec 2007 Lenard Hydrogeologic Level A Study Executive Summary. Note the Lenard Study states ““It was determined that the aquifer could not support the maximum registered diversion of the New Britain upper, lower and Bristol Mix Street wellfields”. The study reassigned “agreed upon” reduced flow rates to simulate a safe yield for each of the wellfields. No pond pump withdrawal was considered in the evaluation.

White Bridge Pond System:

	DEEP Diversion Registration (2)	Existing Withdrawal	Proposed Withdrawal	Level A Study Withdrawal (4)	Safe Yield Ave (4)	Safe Yield Drought (4)	Pump test (4)
gpm	10,400	~2,000	3@3,500=10,500	NSE	NSE	NSE	NSE
MGD ⁽¹⁾	15	~3	20.2 (4 pumps) 15 (3 pumps)	NSE	NSE	NSE	NSE

Notes:

(1) 1 MGD = 694.44 gpm

(2) Preliminary Engineering Study, CEI CDE Smith, Feb 2021

(3) Existing withdrawal assumed from the April 2020 CEI Hydrogeologic report reference

(4) NSE = Not Specifically evaluated

Although the engineering reports document the influence of the pond pumping on the lower wellfield pump tests, simultaneous pond pumping influence was not evaluated.

Ray Rogozinski Review Comments

April 22, 2024

&

Applicant Responses

May 2, 2024

Bristol Department of Public Works has completed the review of the following materials submitted as part of Applications #2019, #2020 & #23-458F-305.

- i. Central Conservation District review letter, dated March 28, 2024.
- ii. CDM Smith Stormwater Management Report for the White Bridge Waterworks Facilities Pond Pumping Station.
- iii. C. Webb & Associates, LLC Wetland Delineation Report, dated September 29, 2022. iv. CDM Smith Plan Set, dated December 2022: Existing Conditions sheets 1-3, Wetlands replication areas sheets 1-3, Cross-Sections sheets 1-4.
- v. Freeman Companies Existing Conditions Survey Upper & Lower Wellfield, topography survey.
- vi. CDM Smith Plan Set: C-2,6-10, 10B, 11-17, 18A, 18B, 2, 19, 23-29, 9, 11-14, 18 A, 18 B. vii. CDM Smith Plan Set: Attachment 4: Floodway & Flood Fringe Encroachment Areas 60% Submittal C9, 5, 11, 13, 14, 9, 9, 9, 11 (10 sheets), 5 (8 sheets), CS1-CS4. Based on the review the following comments are provided:

1. Proposed construction wetland “replication” appears to consist of excavation adjacent to existing wetland and installation of 3 inches of hydrophic soil. Provide additional information associated with the hydrophic soil specification and post development groundwater depth to support wetland “replication” areas. DPW Engineering Division proposes a min of 12 inch depth of hydrophic soil within wetland “replication” area. On adjacent 2:1 slopes 6 inches of hydrophic soil is sufficient. Detail/document short and long term monitoring and wetland “replication” area management plan to ensure long-term viability of area.

4/22/24 Applicant Response: The wetland replication and compensatory storage plans and sections have been revised to address the above comments. Please note that due to the presence of a vernal pool in the upper wellfield area the compensatory storage and wetland replication area was moved further north. In addition, the United States Army Corp of Engineers (USACE) has requested a 3:1 wetlands replication as part of their permit review. These changes are reflected in revised sheets WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 and C-14A which are attached herein as Attachment 1.A. Also attached as Attachment 1.B. are the calculations for the compensatory storage. More information about the vernal pool can be found in the NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC., which is also attached to this document as Attachment 1.C. Sheet XS-5 and Section 4 of the NBWD Supplemental Environmental/Wetlands Permit Information detail the short term and long term monitoring for wetland replication.

5/2/24 City Response: Depth of hydrophilic soil revised in wetland “replication” detail”. Please have the Cert Soil Scientist available to address the Commission with the post development groundwater depth to support the wetland “replication”, the additional wetland replication requested by the USACE and specification for the hydrophilic soil.

2. Plan indicates dewater sedimentation basin, however provide anticipated/ proposed discharge rates with sizing of sedimentation basins. In addition, indicate controls / monitoring of turbidity discharge from sedimentation basin.

4/22/24 Applicant Response: Temporary dewatering sedimentation basins are intended to be used in the event high groundwater is encountered during excavation activities. Anticipated/proposed discharges will vary depending on the required amount of excavation dewatering but typically can range from 20-50 gpm, intermittently. As shown in Detail J of Drawing Sheet C-24 (included herein as Attachment 2), the dewatering sedimentation basin size may vary depending on necessity with a 5-foot diameter being the minimum diameter of the basin. Sedimentation basins will be inspected at least once per week and cleaned as needed to remove accumulated sediments. The Contractor may also elect to install permeable geotextile dewatering bags in addition to the dewatering sedimentation basins for sediment filtration.

5/2/24 City Response: Please provide additional details/procedures to prevent sediment/ discharge of dewatering water from being discharges with a high turbidity.

3. Provide construction sequence with durations along with staging plan, areas of stockpile storage and refueling areas.

4/22/24 Applicant Response: See the Proposed Construction Sequence Memorandum included in Attachment 3.A. for more information, and the associated Drawing Sheets C-20, C-21, and C-22 in Attachment 3.B. Additionally, see Sheet C-1 and C-7 of Attachment 3.B. for notes and depiction of Contractor staging, stockpiling, and refueling areas.

5/2/24 City Response: Construction sequence provided. Please have a representative available to review the sequence and anticipated duration of construction with the Commission.

4. Clarify proposed location of floating turbidity curtain.

4/22/24 Applicant Response: Floating turbidity curtains are to be located within the canal, east and west of the proposed sediment removal areas. See revised Sheet C-23 in Attachment 4.

5/2/24 City Response: Turbidity curtain location clarified.

5. Include installation line of silt fence along the toe of ALL proposed slopes. Silt fence shall be installed prior to construction, be monitored during construction and removed once slopes are stabilized.

4/22/24 Applicant Response: Notes requiring the installation of silt fence has been included throughout drawings. See revised sheets C-1, C-6, C-7, C-8, C-13, C-14, C-14A in Attachment 5.

5/2/24 City Response: No additional comments.

6. Provide additional detail associated with compensation storage area 3. The plans indicate excavation to elevation 252, however indicate proposed access to area, erosion control and restoration.

4/22/24 Applicant Response: The revised plans referenced in Comment Response #1 address these comments.

5/2/24 City Response: No additional comments, please be prepared to address any questions the commission may have at the meeting.

7. Provide additional detail associated with compensation area 4, including additional elevation east of the area between the compensation area and the Coppermine. Detail cross section AA-1 and indicate erosion control measures and proposed access to area.

4/22/24 Applicant Response: The revised plans referenced in Comment Response #1 address this comment.

5/2/24 City Response: 9. No additional comments, please be prepared to address any questions the commission may have at the meeting.

8. The Storm Water Management Report is prepared in accordance with the CT Storm Water Quality Manual. As indicated in your report the manual requires maintaining the pre- development annual groundwater recharge volume. The report indicates recharge is achieved through reduction in impervious area, however please indicate impact of additional well withdrawal will have a wetlands.

4/22/24 Applicant Response: See Section 3 of the NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC., which is included in Attachment 1.C.

5/2/24 City Response: Please have a representative available address any questions the Commission may have regarding section 3 and 4 (Impact to Wetlands Associated with Well Drawdown & Wetland Creation) of the Supplemental Env/Wetland Permit Information.

9. Proposed plans indicate flood plain mitigation measures (excavation within flood plain to offset the placement of fill within flood plain). However, Bristol DPW recommends a CLOMR prior to work and will require a LOMR as condition of approval (if approved).

4/22/24 Applicant Response: See No Rise Certification included in **Attachment 9**. No objection to coordinating with FEMA for CLOMR/LOMR as a condition of approval.

5/2/24 City Response: Comment received, please plan on submitting a LOMAR to FEMA.

Responses to North Central Conservation District (Letter Dated March 28, 2024):

1. See the Letter from CT DEEP in **Attachment 10**, which confirms the continued applicability of the Diversion Registration to the facilities and that no diversion permit is required for continued operation of the facilities as proposed with this project.
2. See Section 3 of the NBWD Supplemental Environmental/Wetlands Permit Information, included in **Attachment 1.C.**, concluding no permanent impacts from withdrawals.
3. See Section 5 of the NBWD Supplemental Environmental/Wetlands Permit Information and the related Supplemental Alternatives Evaluation contained therein, detailing alternatives considered for this project. There are no feasible and prudent alternatives to the proposed plan.
4. See Section 5 of the NBWD Supplemental Environmental/Wetlands Permit Information concluding no permanent impacts to wetlands functions and values.

Additional Information Submitted:

1. Detailed Groundwater and Stream Flow Monitoring Plan, as required by CT DPH, is included in **Attachment 11**.
2. Letter confirming hydrogeologic information for project site remains valid. See **Attachment 12**.
3. Proposed wetlands boundary line change map is submitted for consideration. See **Attachment 13**.
4. Resumes of Engineers and Soil Scientist are included in **Attachment 14**.

Attachments Includes:

Response 1 – Attachments

- 1.A. Drawings: WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 to and C-14A
- 1.B. Calculations: Compensatory Storage
- 1.C. NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC

Response 2 – Attachment

- 2. Drawing: C-24

Response 3 – Attachments

- 3.A. Proposed Construction Sequence Memorandum
- 3.B. Drawings: C-1 and C-7; C-20, C-21, and C-22

Response 4 – Attachment

- 4. Drawing: C-23

Response 5 – Attachment

- 5. Drawings: C-1, C-6, C-7, C-8, C-13, C-14, C-14A

Response 9 – Attachment

- 9. No Rise Certification

Attachment 10

- 10. CT DEEP Permit Need Determination

Attachment 11

- 11. Detailed Groundwater and Stream Flow Monitoring Plan

Attachment 12

- 12. Letter confirming hydrogeologic information for project site remains valid

Attachment 13

- 13. Proposed wetlands boundary line change map

Attachment 14

- 14. Resumes of Engineers and Soil Scientist
 - Sebastian Amenta, P.E.
 - Ian T. Cole - Professional Soil Scientist
 - Joseph L. Laliberte, PE, BCEE, PM
 - Clinton L. Webb Jr. – Senior Environmental Scientist/Ecologist

If you have any questions or require any additional information, please do not hesitate to contact me at 860.224.0442 or samenta@ceiengineers.com.

Link to City of Bristol 3rd Party Environmental Review Agreement:

[https://www.bristolct.gov/DocumentCenter/View/46665
/N-PRP-2401017-City-of-Bristol-WhiteBridge-Well-Field-
Review--04162024](https://www.bristolct.gov/DocumentCenter/View/46665/N-PRP-2401017-City-of-Bristol-WhiteBridge-Well-Field-Review--04162024)

Link to Response 1 - Attachments:
<https://www.bristolct.gov/DocumentCenter/View/46659/Response-1-Attachments>

Response 1 – Attachments

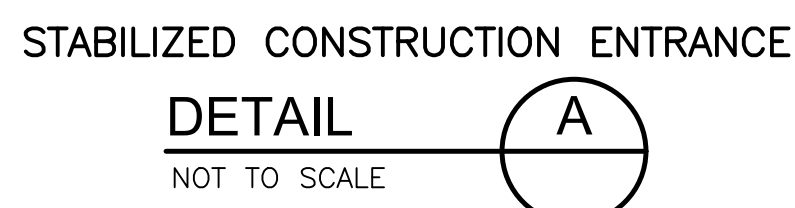
1.A. Drawings: WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 to and C-14A

1.B. Calculations: Compensatory Storage

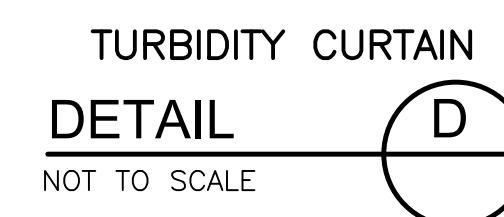
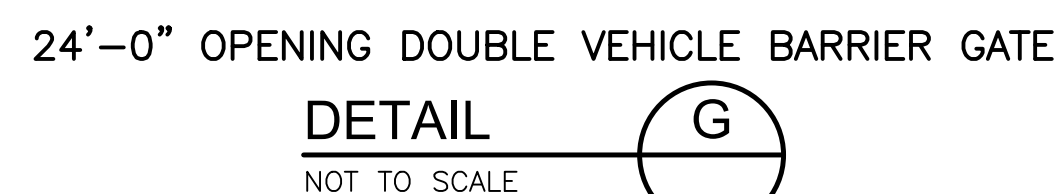
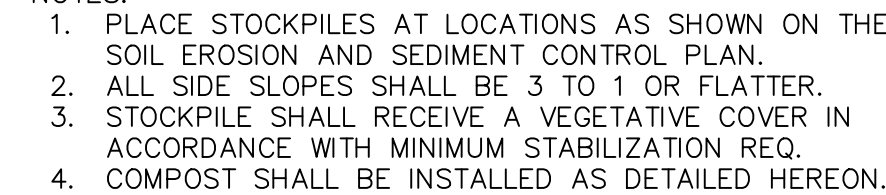
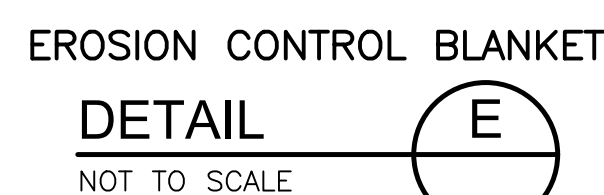
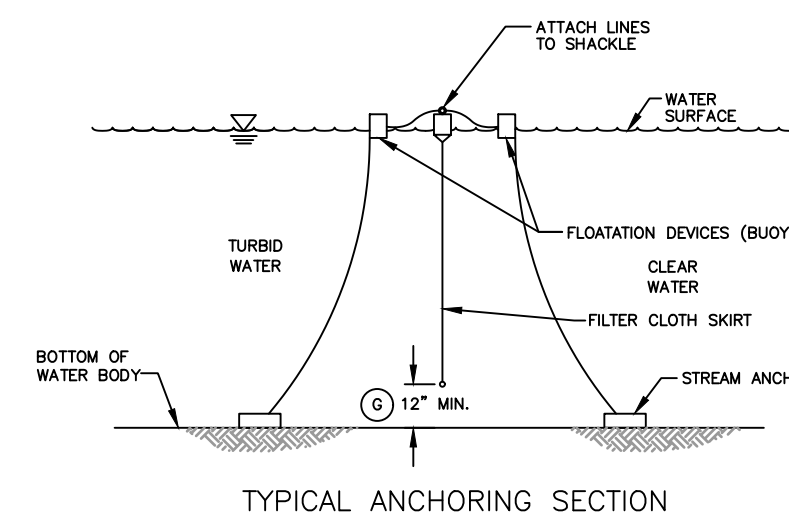
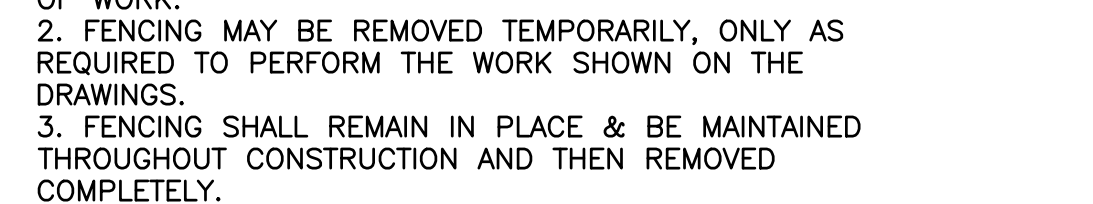
1.C. NBWD Supplemental Environmental/Wetlands Permit Information prepared by C.Webb and Associates, LLC

Response 2 – Attachment

2. Drawing: C-24



4.) REPAIR AND CLEANOUT MEASURES USED TO TRAP SEDIMENT.
ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO EXISTING PAVEMENT SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.



DESIGNED BY: _____ K. GERLACH
DRAWN BY: _____ J. BRONENKANT
SHEET CHK'D BY: _____ K. WAGNER
CROSS CHK'D BY: _____ K. GERLACH
APPROVED BY: _____ K. WAGNER
DATE: _____ APRIL 2023

**CDM
Smith**
77 Hartland Street, Suite 20
East Hartford, CT 06108
Tel: (860) 529-7615

CIVIL DETAILS I

C-24

Link to Response 3 Attachments:

<https://www.bristolct.gov/DocumentCenter/View/46660/Response-3-Attachments>

Response 3 – Attachments

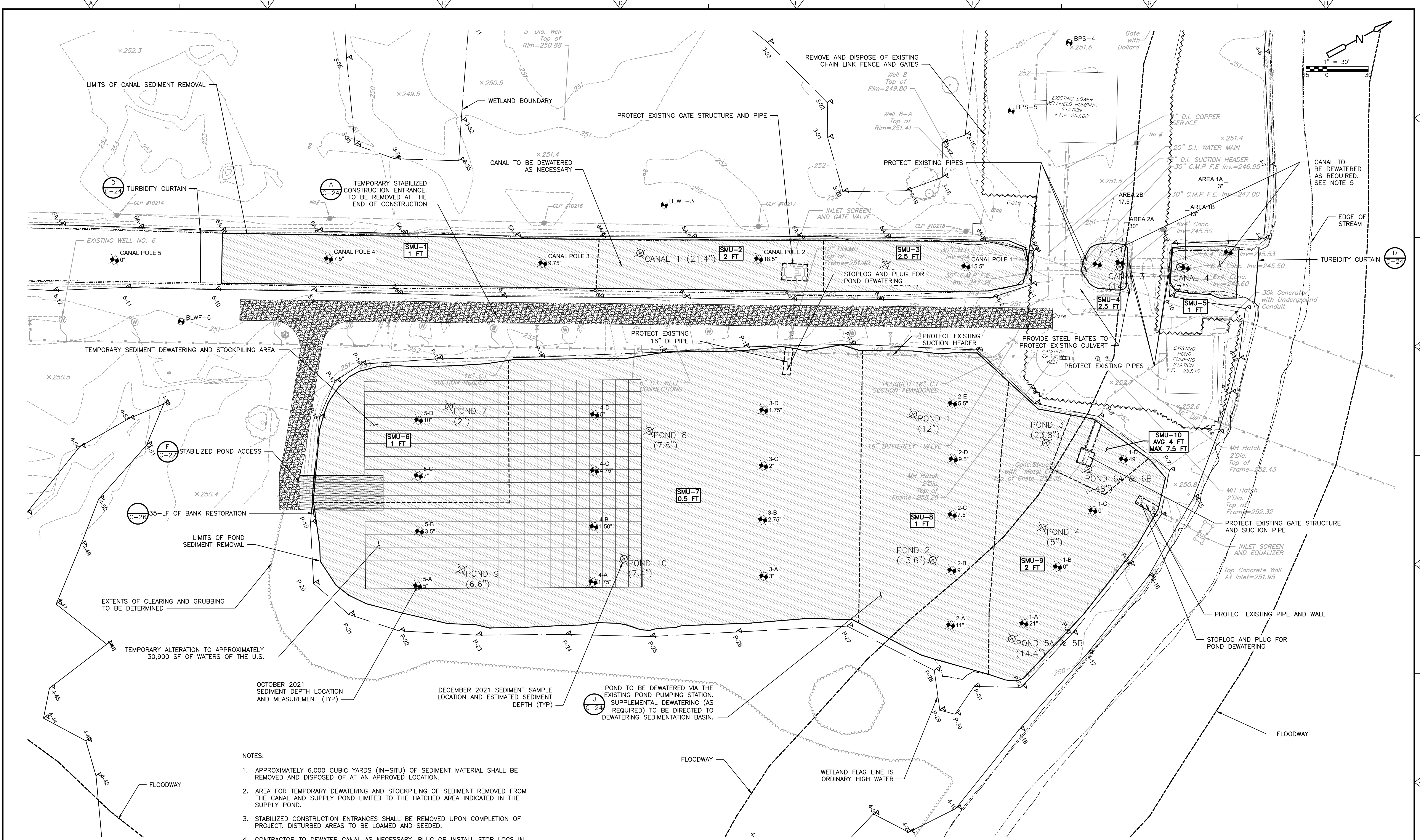
3.A. Proposed Construction Sequence Memorandum

3.B. Drawings: C-1 and C-7; C-20, C-21, and C-22

Response 4 – Attachment

4. Drawing: C-23

XREFs: [TEST HOLE POINTS, CDMS 2436, XSVRLO40, 2022-17, BORING LOCATIONS, Floodway_Floodplain] Images: []
Last saved by: ENGELS.B, Time: 3/1/2024 3:37:31 PM
C:\Users\engelsb\Documents\CDM Smith Inc\10739-264571 - New Britain CT White Bridge Well Fields and PS\Project Files\02 Civil (C)\10 CADD\C023SDRM.dwg
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PLAN
1" = 30'

- NOTES:
- APPROXIMATELY 6,000 CUBIC YARDS (IN-SITU) OF SEDIMENT MATERIAL SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION.
 - AREA FOR TEMPORARY DEWATERING AND STOCKPILING OF SEDIMENT REMOVED FROM THE CANAL AND SUPPLY POND LIMITED TO THE HATCHED AREA INDICATED IN THE SUPPLY POND.
 - STABILIZED CONSTRUCTION ENTRANCES SHALL BE REMOVED UPON COMPLETION OF PROJECT. DISTURBED AREAS TO BE LOAMED AND SEEDED.
 - CONTRACTOR TO DEWATER CANAL AS NECESSARY. PLUG OR INSTALL STOP LOGS IN EXISTING CULVERTS OR INSTALL COFFERDAM. SUPPLEMENTAL DEWATERING (AS REQUIRED) TO BE DIRECTED TO DEWATERING SEDIMENTATION BASINS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	T. BURKE
DRAWN BY:	S. ENGEL
SHEET CHK'D BY:	K. GERLACH
CROSS CHK'D BY:	T. BURKE
APPROVED BY:	K. WAGNER
DATE:	JANUARY 2024

CDM Smith
101 East River Drive, Suite 1A
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

SUPPLY POND AND CANAL
SEDIMENT REMOVAL PLAN

PROJECT NO.	10739-264571
FILE NAME:	C023SDRM.DWG
SHEET NO.	C-23

Link to Response 5 Attachments:
<https://www.bristolct.gov/DocumentCenter/View/46664/Response-5-Attachments>

Response 5 – Attachment

5. Drawings: C-1, C-6, C-7, C-8, C-13, C-14, C-14A

Link to Response 9 Attachments:
<https://www.bristolct.gov/DocumentCenter/View/46661/Response-9-Attachments>

Response 9 – Attachment

9. No Rise Certification

Attachment 10

10. CT DEEP Permit Need Determination



Mr. Sebastian Amenta, P.E.
Comprehensive Environmental, Inc.
1 Hartford Square, Suite 227
New Britain, CT 06052
samenta@ceiengineers.com

RE: Request for Diversion Permit Need Determination
Whites Bridge Wellfield Improvements
New Britain Water Department
Bristol, CT

Dear Mr. Amenta:

This letter is in response to your November 8, 2023 request for Water Diversion permit need determination regarding your proposal to modify certain registered water diversions. The proposed activities are documented in the report you submitted on behalf of the New Britain Water Department (NBWD) entitled “Negative Declaration of Diversion / White Bridge Wellfield Improvements / Bristol, Connecticut,” dated November 2023 (“the report”), as well as other information provided in a subsequent email dated December 5, 2023. The project involves the replacement of several public water supply wells that make up two separate, but nearby wellfields registered to the NBWD pursuant to Section 22a-368 Connecticut General Statutes (CGS) as described in the table below.

REGISTRATION NUMBER	NAME OF DIVERSION	REGISTERED WITHDRAWAL (million gallons per day)	BASIN NAME
4314-007-PWS-GR	Upper White Bridge Wells	2.1600	Copper Mine River
4314-008-PWS-GR	Lower White Bridge Wells	6.6240	Copper Mine River

The report states that these “wellfields are unable to be used in accordance with their original design intent and drastic improvements are needed due to poor groundwater well performance caused by clogged well screens and an antiquated suction withdrawal system.” The proposed redevelopment includes the abandonment of all existing wells in these two wellfields, replacing them with new wells, all within the extent of the existing wellfields as registered. The proposed wells, as described in the report, will be withdrawing from the same stratified drift aquifer wherein the existing wells are located.

Based on our review of your submittal, it has been determined that this proposal as presented in the submitted materials conforms with Section 22a-377(c)-1(c)(1) of the Regulations of Connecticut State Agencies (RCSA) included below in its entirety:

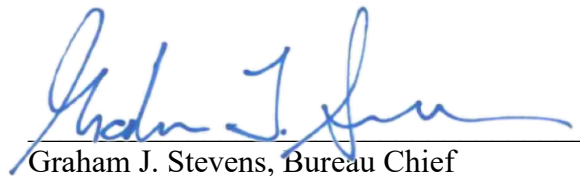
Any person or municipality which registered a diversion pursuant to section 22a-368 of the General Statutes may maintain such diversion only in accordance with the information provided in the registration form filed with the Commissioner. Any person or municipality which registered a diversion pursuant to section 22a-368 of the General Statutes may not cause or allow any modification of such diversion, including but not limited to an increase in withdrawal capacity, without having first obtained a permit under sections 22a-365 to 22a-378, inclusive, of the General Statutes and 22a-377(c)-2 of the Regulations of Connecticut State Agencies, unless such modification is exempt under section 22a-377 of the General Statutes or section 22a-377 (b)-1 of the Regulations of Connecticut State Agencies.

As such, this department finds that the proposed diversion modifications, comprising of the wellfields identified on page 1 of this determination, **will not** require a water diversion permit pursuant to Section 22a-368(a) CGS, provided the total combined withdrawal from the respective wellfields does not exceed the registered withdrawal as indicated in the above table. However, it is requested that you keep us informed as the project develops, particularly on matters relating to aquifer response modeling and induced infiltration studies.

If you should have any additional questions regarding this matter, please contact Doug Hoskins at 860-424-4192 or douglas.hoskins@ct.gov.

February 21, 2024

Date



Graham J. Stevens, Bureau Chief
Water Protection and Land Resources

GS/dh

Cc:

Ray Esponda, New Britain Water Dept., Ray.Esponds@NewBritainCT.gov

Raul Tejada, CT DPH, raul.tejada@ct.gov

Lori Mathieu, CT DPH, Lori.Mathieu@ct.gov

Brendan Schain, CT DEEP brendan.schain@ct.gov

Shalyn Zappulla, CT DEEP shalyn.zappulla@ct.org

Alicia Charamut, Rivers Alliance, alicea@riversalliance.org

Link to Attachment 11:

<https://www.bristolct.gov/DocumentCenter/View/46662/Response-11-Attachments>

Attachment 11

11. Detailed Groundwater and Stream Flow Monitoring Plan

Attachment 12

12. Letter confirming hydrogeologic information for project site remains valid



COMPREHENSIVE
ENVIRONMENTAL
INCORPORATED

Gateway Crossing
1 Hartford Square East, Suite 227
New Britain, CT 06052
860.224.0442

April 30, 2024

Robert Flanigan, City Planner
City Hall
111 North Main Street
Bristol, CT 06010

**RE: White Bridge Wellfield Improvements -Applications #2019, #2020 & #23-458F-305
Confirmation of Hydrogeologic Report**

Pursuant to City Staff request Comprehensive Environmental Inc. is confirming by way of this letter that the hydrogeologic studies and report (*Hydrogeology Report of Upper and Lower White Bridge Wellfield Bristol, Connecticut* dated April 6, 2020) submitted to CT DPH for the above project site is still valid and relevant for the intended use.

Feel free to contact me with any questions or comments at 860-620-3673 or samenta@ceiengineers.com.

Sincerely,

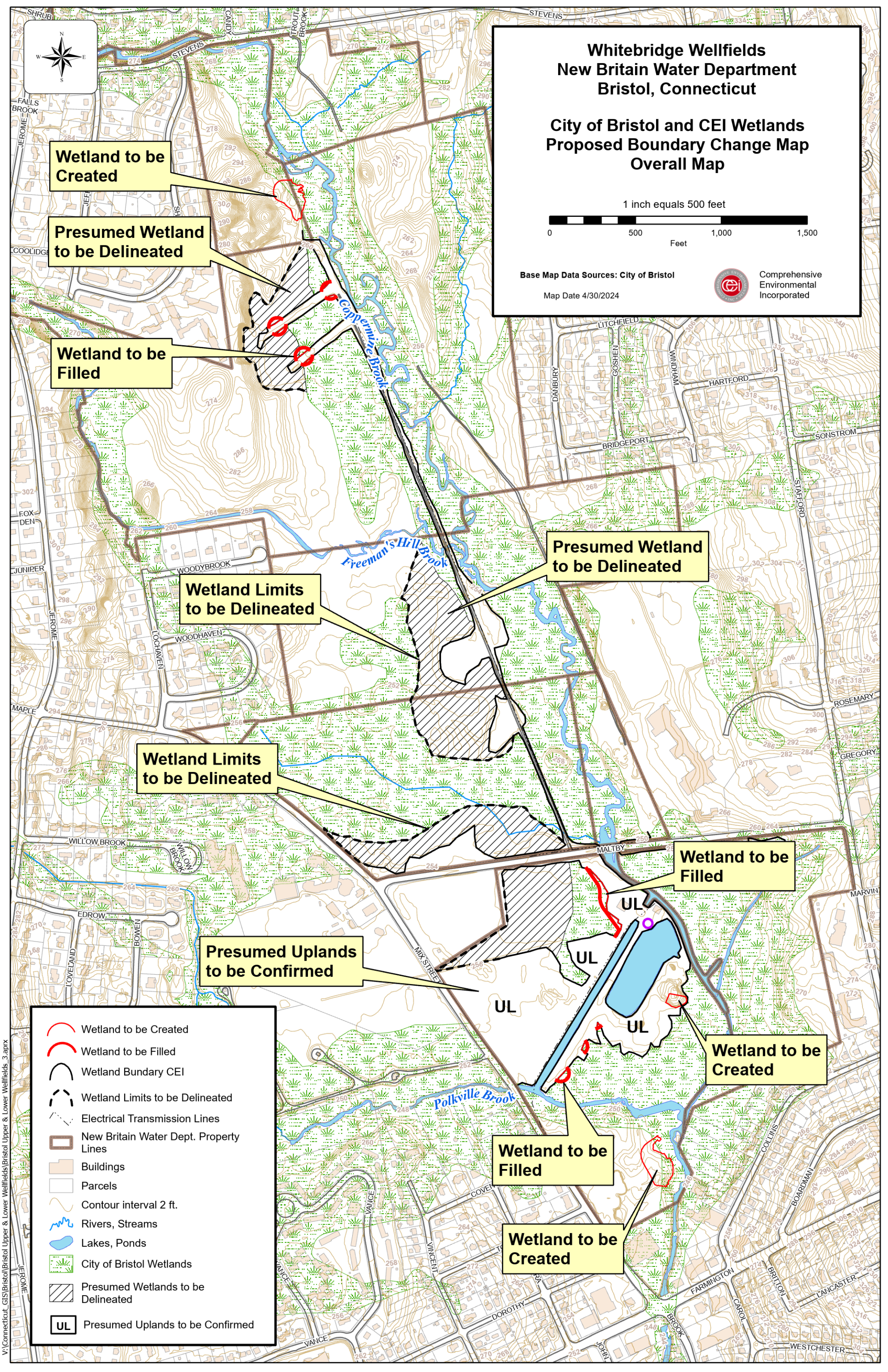
COMPREHENSIVE ENVIRONMENTAL INC.

A handwritten signature in blue ink that reads "Sebastian A. Amenta". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Sebastian A Amenta, P.E.
Northeast Program Manager

Attachment 13

13. Proposed wetlands boundary line change map



Whitebridge Wellfields

New Britain Water Department

Bristol, Connecticut

City of Bristol and CEI Wetlands

Proposed Boundary Change Map

Overall Map

1 inch equals 500 feet

0 500 1,000 1,500

Feet

Base Map Data Sources: City of Bristol

Map Date 4/30/2024



Comprehensive
Environmental
Incorporated

V:\Connecticut_GIS\Bristol\Bristol Upper & Lower Wellfields\Bristol Upper & Lower Wellfields_3.aprx

Link to Attachment 14:

<https://www.bristolct.gov/DocumentCenter/View/46663/Response-14-Attachments>

Attachment 14

14. Resumes of Engineers and Soil Scientist



AVON ▪ BLOOMFIELD ▪ BOLTON ▪ BRISTOL ▪ BURLINGTON ▪ CANTON ▪ COVENTRY ▪ EAST GRANBY ▪ EAST WINDSOR ▪ EAST HARTFORD ▪ ELLINGTON
ENFIELD ▪ FARMINGTON ▪ GLASTONBURY ▪ GRANBY ▪ HARTFORD ▪ MANCHESTER ▪ PLAINVILLE ▪ SIMSBURY ▪ SOMERS ▪ SOUTH WINDSOR
STAFFORD ▪ SUFFIELD ▪ WEST HARTFORD ▪ WETHERSFIELD ▪ TOLLAND ▪ VERNON ▪ WILLINGTON ▪ WINDSOR ▪ WINDSOR LOCKS

Date: March 28, 2024

To: Nancy Levesque, Bristol City Engineer
Bristol Inland Wetlands and Watercourses Commission

From: Covill, Natural Resources Specialist *Cameron J. Covill*
Joanna Shapiro, Executive Director *Joanna Shapiro*

Re: Review of Wetland Application, New Britain Water

This review is limited to a desktop review of the wetland application and related materials, with general recommendations based on the proposed activities. A site walk and wetland boundary review were not completed within the given timeframe.

If the Commission still deems it necessary following their site walk, a limited wetland boundary review can be performed before a subsequent meeting. Based on the size of the site and time limitations, a field review of all wetland boundaries on site by our staff is not feasible, but rather the Commission can direct the District to specific areas they feel require further review.

Background

District staff reviewed the 10-sheet site plan entitled “White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station” prepared by CDM Smith dated December 2022, as well as Attachment 3, “Project Drawings” and Attachment 4, “Floodway and Flood Fringe Encroachment Areas” (hereto forth referred to as “the Plans”). Staff also reviewed the materials submitted for applications #23-458F-305, #2019 and #2020 along with previous meeting minutes, relevant imagery, topographic, soil, and other maps.

The Plans propose construction of a new single building to house surface water pumping facilities with space for future groundwater treatment facilities, well replacement at Lower and Upper Wellfields, dewatering and sediment removal from the existing pond and canal, new utility connections, culvert replacement, paving an existing gravel access road, and associated work to ultimately bring an aging facility up to current requirements. In order to become a potable water supply, any new wells must be located 50 feet from any water bodies or wetland limits per CT Department of Public Health requirements. The wells must be raised 2’ above the one-hundred-year flood elevation. Due to these requirements, existing wells cannot be used and the new wells are proposed. Wetland resources are proposed to be filled in order to comply with these DPH regulations. Wetland replication, replacement, and enhancements are proposed to mitigate or offset the loss of these wetland areas, and compensatory flood storage areas are proposed to offset the activities which may raise the flood elevation, per FEMA requirements.

Comments/Recommendations

Withdrawals/Flow Calculations

Discussion on the record has included concern related to groundwater withdrawals. While groundwater withdrawals are regulated by CT DEEP and are not explicitly in the purview of the Inland Wetlands and Watercourses Commission, they may be considered if the Commission has reason to believe that such withdrawal may impact wetlands or watercourses. Review of aquifer withdrawals, resiliency, and recharge, and their impacts to wetlands and watercourses are outside the area of expertise of the North Central Conservation District.

- The Commission may request additional information from the applicant or intervenor regarding the potential impact of withdrawals on wetlands and watercourses, including their functions and values, if deemed a concern of the Commission necessary to render a decision and/or to rule on the claims of the petition to intervene.
- If additional information from the applicant or intervenor is deemed insufficient to make these rulings, the Town may consider further 3rd party review from a hydrogeologist or similarly qualified individual or firm, to review the proposed withdrawals from the aquifer as it pertains to impacts to the wetlands and watercourses in the project area.

In the comments submitted by Rivers Alliance on February 5th, 2024, they note that for diversions registered prior to 1983, registrants have rights to divert the amount of water originally registered in perpetuity, and that they were never and are not currently subject to any environmental review.

- Recommend that the Town request information from the applicant and CT DEEP on the accuracy of this statement, and whether any environmental review or impact analysis has ever been completed for this project location.

In Application #2020, the applicant states in the Additional Comments/Information section, “No flow calculations are provided due to zero impact as a result of the proposed work”.

- If the Commission has concerns about potential wetland/watercourse impacts related to potential flow alteration as a result of this application, recommend requesting flow calculations from the applicant to determine the average and seasonal flows of the brook, the average and/or seasonal withdrawals proposed, and any historical withdrawal information the applicant can provide.
- Recommend that the Commission require the applicant to develop an action plan to be submitted to and approved by the Commission, outlining under which circumstances withdrawals would be limited or stopped to ensure adequate flows, both for the benefit of future withdrawals and to reduce or prevent negative impacts to wetlands, watercourses, and dependent flora and fauna. To develop this action plan, recommend that the applicant use historical flow data from stream gauges or similar methods, predicted future flow calculations, and average rainfall data, contrasted with proposed withdrawal amounts and frequencies. This action plan can be required as part of the application, or this can potentially be a condition of approval of a Wetland Permit.

Functions and Values Assessment

Functions and values were assessed within the applicant’s soil scientist’s report, and replication/replacement of wetlands is proposed. However, it was not made clear in the application materials or the meeting minutes whether those functions and values of the existing wetlands will be preserved or replicated.

- Recommend that the Commission request testimony from the project soil scientist regarding whether functions and values assessed for existing wetlands will be preserved and/or replicated through proposed wetland replications, replacements, or enhancements.

Alternatives Analysis

Per section 10.3 of the Bristol Inland Wetlands and Watercourses Regulations, “In the case of an application which received a public hearing pursuant to a finding by the Inland Wetlands Agency that the proposed activity may have a significant impact on wetlands or watercourses, a permit shall not be issued unless the Agency finds on the basis of the record that a feasible and prudent alternative does not exist. In making the finding, the Agency shall consider the facts and circumstances set forth in subsection 10.2. The finding and the reasons therefore shall be stated on the record in writing”. Section 10.2 outlines the considerations for assessment by the Commission of Prudent and Feasible alternatives.

- While alternatives assessments were discussed upon the record of the March 4, 2024 meeting minutes, the District recommends that the Commissioners review Sections 10.2 and 10.3 of the Bristol Inland Wetlands and Watercourses Regulations, and state upon the record in their decision whether alternatives were adequately assessed to the extent required by the regulations.

Thank you for the opportunity to comment.

HYDROGEOLOGIC STUDY

**UPPER AND LOWER WHITE BRIDGE
WELL FIELDS CITY OF NEW BRITAIN
WATER DEPARTMENT AND MIX STREET
WELL FIELD (WELLS 3, 4, & 5) CITY OF
BRISTOL WATER DEPARTMENT**

PREPARED FOR:

**CITY OF NEW BRITAIN WATER
DEPARTMENT AND CITY OF BRISTOL
WATER DEPARTMENT**

DECEMBER 2007

Prepared by:

LENARD ENGINEERING, INC.

CIVIL, ENVIRONMENTAL & HYDROGEOLOGICAL CONSULTANTS

1768 STORRS ROAD, P.O. BOX 580

STORRS, CT 06268-0580

Executive Summary

In accordance with Level "A" Mapping Regulations, Lenard Engineering, Inc. (LEI) conducted a Level "A" study of The City of New Britain's Lower White Bridge and Upper White Bridge, and The City Bristol's Mix Street well fields, the purpose of delineating the aquifer protection area. The White Bridge Upper well field consists of six well points which travel to a common pump station in the Upper well field. The White Bridge Lower well field consists of 17 gravel packed wells and a caisson well. All of the Lower well field well points travel to a common pump station located in the Lower well field. The Mix Street well field consists of three gravel packed wells (#3, #4, and #5).

Prior to initiating the Level "A" study, LEI prepared a Plan for Data Collection detailing the methodologies to be used during the aquifer testing and ground water modeling portions of the study. The Plan for Data Collection was submitted to and subsequently approved by the DEP.

Between October 21 and October 24, 2004, LEI conducted a 3 day aquifer parameter pump test on the New Britain Upper White Bridge well field. New Britain's Upper White Bridge well field was pumped at 400 gpm. During this test, Bristol's Mix Street well field was pumped at 850 gpm, and New Britain's Lower White Bridge and surface water pumping station (the pond station) were turned off during this pumping test.

Between November 1 and November 8, 2004, LEI conducted a 7 day induced infiltration pump test of the New Britain Upper and Lower White Bridge well fields and on Bristol's Mix Street well field. New Britain's Upper White Bridge and Lower White Bridge well fields were pumped at 400 gpm and 600 gpm, respectively. While, Bristol's Mix Street well field was pumped at 1,240 gpm. New Britain's White Bridge surface water pumping station (the pond station) was turned off during the pumping test.

The above information was reduced, and input to create a 3-D aquifer model. Waterloo Hydrogeologic, Inc. Visual Modflow Version 4.1 software was used to create a 3-D model of the aquifer. The information collected from the pump tests conducted in the fall of 2004 was used to create and calibrate the aquifer model for transient flow conditions. Ground water and surface water elevations and stream flows were entered, and the model calibrated to Level "A" aquifer mapping standards. A sensitivity analysis was conducted on the resulting data.

To verify the accuracy of our aquifer model two previous pump tests were simulated.

The first verification test was a pump test conducted by LEI between June 24 and June 27, 2002, simultaneously pumping the New Britain Upper and Lower White Bridge well field, and the White Bridge surface water pumping station (the pond station). New Britain's Upper White Bridge well field, Lower White Bridge well field and Lower White Bridge pond station were pumped at 600 gpm, 400 gpm and 5.0 MGD, respectively.

White Bridge pond station were pumped at 600 gpm, 400 gpm and 5.0 MGD, respectively.

The second verification test was a pump test conducted by the Center for Engineering between September 11, 1992 and September 18, 1992, pumping the Bristol Mix Street well field well field.

The calibrated model was then used to delineate the aquifer protection area to the well fields. A steady state aquifer model simulation was created using fifty percent duration stream flow rates and mean annual recharge rates for the drainage basin. During the steady state simulation it was determined that the aquifer could not support the maximum registered diversions of the New Britain Upper White Bridge, New Britain Lower White Bridge and Bristol Mix Street well fields. Lenard Engineering, Inc., the City of New Britain Water Department and the City of Bristol Water Department agreed upon pumping rates which would best suit the needs of both water departments. Based on this it was determined to model the aquifer using the maximum pumping rates of the New Britain Upper White Bridge, New Britain Lower White Bridge and Bristol Mix Street well fields as follows:

New Britain Upper White Bridge well field: 840 gpm

New Britain Lower White Bridge well field: 2,190 gpm

Bristol Mix Street well field: 900 gpm

Using these pumping rates, a particle tracking simulation was applied to the aquifer model and groundwater contours were generated. The particle tracking simulation helped to delineate the area of contributions and the groundwater contours were used to determine the recharge areas of the well fields. Based upon these results **Figures 1-3** were generated which depict the area of contributions, recharge areas and indirect recharge areas within a 5 mile radius of the well fields.

Link to Application #2020

Letters, Emails & Correspondence:

<https://www.bristolct.gov/DocumentCenter/View/46561/App-2020-Correspondence-Extracted>



February 26, 2024

Mr. Robert M. Flanagan, AICP-City Planner
City Hall
111 North Main Street
Bristol, CT 06010

RE: UPDATES TO PERMIT APPLICATIONS
#2019, #2020, AND #23-458F-305
FOR THE NEW BRITAIN WATER DEPARTMENT

Dear Mr. Flanagan

The following correspondence is provided to make corrections to the above applications and provide supplemental information for each application.

The attached summary details the documents submitted and the relative application location for submitted correction. Some of this information was previously submitted, but we wish to formally send it for clarity.

- The major items include correcting the text in Application #2020 to make clear that water withdrawals will remain within the registered diversion volumes. In addition CT DEEP has confirmed the registrations will remain in effect and no diversion permits are required. A letter from CT DEEP is included in the information.
- The Flood Plain permit application has been revised to reflect the updated fill and compensatory storage numbers presented at the February 5th hearing, along with a supporting spreadsheet.

We are working with the NBWD to formalize an operations and maintenance plan for canal/pond and related activities which will be submitted shortly.

We will also be contacting FEMA as to the protocol in submitting a certificate of no rise in flood elevation to the commission.

Please contact me if you have any questions at 860 224 0442 or 860 620 3673.

Sincerely,

COMPREHENSIVE ENVIRONMENTAL INC

Sebastian A Amenta, P.E.
Regional Program Director

CC. Nancy Levesque, City Engineer
Andrew Armstrong, Assistant Planner
Ray Esponda, Deputy Director NBWD
Joseph Hammer, Esquire
Vinta Varghese, CDM Smith

Enclosures: Summary of Attachments-#2019, #2020, and #23-458F-305

Summary of Updates
to
Applications #2019, #2020 and #23-458F-305

#2019-1) Please add the attached map to Attachment 4. It is an overlay of scientist wetlands flagging on the City's wetlands map for the project area.

#2020-1) Please insert the corrected page and substitute it for the page on file.

2) Please add the NDDB and SHPO documents to the filing

3) Map showing Monitor well locations and stream gauge locations.

4) Please add the CT DEEP letter which confirms the Diversion Registrations will remain in force and no permit is required.

#23-458F-305-1) Please insert substitute page 2 of the Application PDF which indicates updated volumes for fill and compensatory storage.

2) Please insert page 9 of the PDF which indicates the revised volumes.

3) Please add the attached spreadsheet summary for cut/fill and compensatory storage volume.

CT DEEP Letter

May 6, 2022

May 6, 2022

Magdalena Lofstedt
CDM Smith Inc
77 Hartland St, Suite 201
East Hartford, CT 06108
LOFSTEDTMH@CDMSMITH.COM

NDDB DETERMINATION NUMBER: 202205409

Project: (City of New Britain) Replace existing groundwater wells, Upper & Lower Wellfields, White Bridge Waterworks Facility, off Maltby St, Bristol

Expiration: May 6, 2024

I have reviewed Natural Diversity Database (NDDB) maps and files regarding this project. According to our records, there are State-listed species (RCSA Sec. 26-306) documented nearby and within the watershed of your project area. Recommendations to minimize impacts are included below.

- **Spotted turtle (*Clemmys guttata*) State Special Concern**
- **Wood turtle (*Glyptemys insculpta*) State Special Concern**

Spotted turtle: Individuals of this species are associated with wetlands and vernal pools. Over the course of a season and lifetime, individuals will travel large distances (up to 1km) over upland forest and fields between multiple wetlands. They overwinter burrowed into the mud in wetlands between Nov 1-March 15. They do not begin to reproduce until 7-10 years old and adults can live at least 30 years. This species is threatened most by any activities that reduce adult survivorship including road kills, commercial and casual collection, increased predation in areas around commercial and residential development, mortality and injury from agricultural equipment or other mechanical equipment.

Wood turtle: Individuals of this species are riverine and riparian obligates, overwintering and mating in clear, cold, primarily sand-gravel and rock bottomed streams and foraging in riparian zones, fields and upland forests during the late spring and summer. They hibernate in the banks of the river in submerged tree roots between November 1 and March 31. Their summer habitat focuses within 90m (300ft of rivers) and they regularly travel 300m (0.2 mile) from rivers during this time. During summer they seek out early successional habitat: pastures, old fields, woodlands, powerline cuts and railroad beds bordering or adjacent to streams and rivers. Their habitat in Connecticut is already severely threatened by fragmentation of riverine, instream, riparian, and upland habitats, but is exacerbated by heavy adult mortality from machinery, cars, and collection. This is compounded by the species late maturity, low reproductive potential, and high nest and hatchling depredation rates.

Land disturbance activities that will crush active turtles or unearth/or crush hibernating turtles or nests need to consider local habitat features and apply fencing and/or time of year restrictions as appropriate. We recommend you consult with a herpetologist familiar with preferred habitats to assist you with proper techniques to ensure the best protection strategies are employed for your site.

- Land disturbance and excavation confined to the upland (greater than 10 meters from a wetland) can be done without risk for impact if it is restricted to the dormant season (November 1- March 15).

If land disturbance activity will include significant areas within and around wetlands, you will need to take precautions to avoid crushing or killing hibernating adults.

- Do not conduct land disturbance activities within a wetland during the turtle's dormant period (November 1- March 15).

Additionally, when working in the upland between March 15- November 1:

- Exclusionary practices will be required to prevent any turtle access into construction areas. These measures will need to be installed at the limits of disturbance as shown on the plans.
- Exclusionary fencing be at least 20 inches tall and must be secured to and remain in contact with the ground and be regularly maintained (at least bi-weekly and after major weather events) to secure any gaps or openings at ground level that may let animal pass through.
- Prior to construction, all turtles occurring within fencing work area will be relocated to suitable habitat outside disturbance area. This should be performed by a qualified professional familiar with habitat requirements and behavior of the species.
- The Contractor must search the work area each morning prior to any work being done.
- All construction personnel working within the turtle habitat must be apprised of the species description and the possible presence of a listed species.
- Any turtles encountered within the immediate work area shall be carefully moved to an adjacent area outside of the excluded area and fencing should be inspected to identify and remove access point. These animals are protected by law and no turtles should be relocated from the site.
- In areas where silt fence is used for exclusion, it shall be removed as soon as the area is stable to allow for reptile and amphibian passage to resume.
- No heavy machinery or vehicles may be parked in any turtle habitat.
- Special precautions must be taken to avoid degradation of wetland habitats including any wet meadows and seasonal vernal pools.

Natural Diversity Database information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Bureau of Natural Resources and cooperating units of DEEP, independent conservation groups, and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDDB should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated in the NDDDB as it becomes available.

Please contact me if you have any questions (shannon.kearney@ct.gov). Thank you for consulting with the Natural Diversity Database and continuing to work with us to protect State-listed species.

Sincerely,

/s/ Shannon B. Kearney
Wildlife Biologist



Mr. Sebastian Amenta, P.E.
Comprehensive Environmental, Inc.
1 Hartford Square, Suite 227
New Britain, CT 06052
samenta@ceiengineers.com

RE: Request for Diversion Permit Need Determination
Whites Bridge Wellfield Improvements
New Britain Water Department
Bristol, CT

Dear Mr. Amenta:

This letter is in response to your November 8, 2023 request for Water Diversion permit need determination regarding your proposal to modify certain registered water diversions. The proposed activities are documented in the report you submitted on behalf of the New Britain Water Department (NBWD) entitled “Negative Declaration of Diversion / White Bridge Wellfield Improvements / Bristol, Connecticut,” dated November 2023 (“the report”), as well as other information provided in a subsequent email dated December 5, 2023. The project involves the replacement of several public water supply wells that make up two separate, but nearby wellfields registered to the NBWD pursuant to Section 22a-368 Connecticut General Statutes (CGS) as described in the table below.

REGISTRATION NUMBER	NAME OF DIVERSION	REGISTERED WITHDRAWAL (million gallons per day)	BASIN NAME
4314-007-PWS-GR	Upper White Bridge Wells	2.1600	Copper Mine River
4314-008-PWS-GR	Lower White Bridge Wells	6.6240	Copper Mine River

The report states that these “wellfields are unable to be used in accordance with their original design intent and drastic improvements are needed due to poor groundwater well performance caused by clogged well screens and an antiquated suction withdrawal system.” The proposed redevelopment includes the abandonment of all existing wells in these two wellfields, replacing them with new wells, all within the extent of the existing wellfields as registered. The proposed wells, as described in the report, will be withdrawing from the same stratified drift aquifer wherein the existing wells are located.

Based on our review of your submittal, it has been determined that this proposal as presented in the submitted materials conforms with Section 22a-377(c)-1(c)(1) of the Regulations of Connecticut State Agencies (RCSA) included below in its entirety:

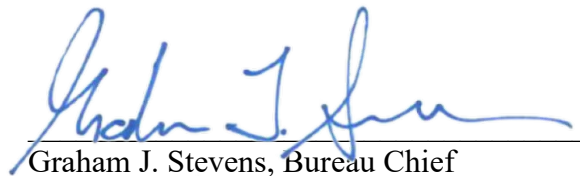
Any person or municipality which registered a diversion pursuant to section 22a-368 of the General Statutes may maintain such diversion only in accordance with the information provided in the registration form filed with the Commissioner. Any person or municipality which registered a diversion pursuant to section 22a-368 of the General Statutes may not cause or allow any modification of such diversion, including but not limited to an increase in withdrawal capacity, without having first obtained a permit under sections 22a-365 to 22a-378, inclusive, of the General Statutes and 22a-377(c)-2 of the Regulations of Connecticut State Agencies, unless such modification is exempt under section 22a-377 of the General Statutes or section 22a-377 (b)-1 of the Regulations of Connecticut State Agencies.

As such, this department finds that the proposed diversion modifications, comprising of the wellfields identified on page 1 of this determination, **will not** require a water diversion permit pursuant to Section 22a-368(a) CGS, provided the total combined withdrawal from the respective wellfields does not exceed the registered withdrawal as indicated in the above table. However, it is requested that you keep us informed as the project develops, particularly on matters relating to aquifer response modeling and induced infiltration studies.

If you should have any additional questions regarding this matter, please contact Doug Hoskins at 860-424-4192 or douglas.hoskins@ct.gov.

February 21, 2024

Date



Graham J. Stevens, Bureau Chief
Water Protection and Land Resources

GS/dh

Cc:

Ray Esponda, New Britain Water Dept., Ray.Esponds@NewBritainCT.gov

Raul Tejada, CT DPH, raul.tejada@ct.gov

Lori Mathieu, CT DPH, Lori.Mathieu@ct.gov

Brendan Schain, CT DEEP brendan.schain@ct.gov

Shalyn Zappulla, CT DEEP shalyn.zappulla@ct.org

Alicia Charamut, Rivers Alliance, alicea@riversalliance.org



PROJECT REVIEW COVER FORM

This is: ☒ a new submittal ☐ supplemental information ☐ other

Date Submitted: April 27, 2022

PROJECT INFORMATION

Project Name: White Bridge Waterworks Facilities

Project Proponent: City of Bristol

The individual or group sponsoring, organizing, or proposing the project.

Project Street Address: off Maltby Street

Include street number, street name, and or Route Number. If no street address exists give closest intersection.

City or Town: Bristol

Please use the municipality name and **not** the village or hamlet.

County: Hartford

PROJECT DESCRIPTION (REQUIRED)

Please summarize the project below. In a separate attachment, describe the project in detail. As applicable, provide any information regarding past land use, project area size, renovation plans, demolitions, and/or new construction.

Replace existing groundwater wells, demolish three existing pumping stations (Upper Wellfield, Lower Wellfield, and Pond),

construct new pumping station and new access road at the Lower Wellfield (see attached letter).

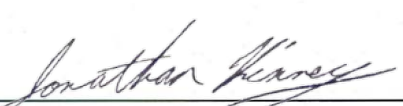
List all state and federal agencies involved in the project and indicate the funding, permit, license or approval program pertaining to the proposed project:

Agency Type	Agency Name	Program Name
☒ State ☐ Federal	CT DEEP, Div. of Land Resources	401 Water Quality Certification
☒ State ☐ Federal	CT Dept. Public Health	Drinking State Revolving Funding (DWSRF)
☐ State ☒ Federal	U.S. Army Corps of Engineers	PreConstruction Notification (PCN)
☐ State ☐ Federal		

If there is no state or federal agency involvement, please state the reason for your review request:

FOR SHPO USE ONLY

Based on the information submitted to our office for the above named property and project, it is the opinion of the Connecticut State Historic Preservation Office that no historic properties will be affected by the proposed activities.*


Jonathan Kinney
Deputy State Historic Preservation Officer

June 14, 2022

Date

*All other determinations of effect will result in a formal letter from this office

PROJECT REVIEW COVER FORM

CULTURAL RESOURCES IDENTIFICATION

Background research for previously identified historic properties within a project area may be undertaken at the SHPO's office. To schedule an appointment, please contact Catherine Labadia, 860-500-2329 or Catherine.labadia@ct.gov. Some applicants may find it advantageous to hire a qualified historic preservation professional to complete the identification and evaluation of historic properties.

Are there any historic properties listed on the State or National Register of Historic Places within the project area? (Select one)

☐ Yes ☐ No ☒ Do Not Know

If yes, please identify: _____

Architecture

Are there any buildings, structures, or objects within the Area of Potential Effects (houses, bridges, barns, walls, etc.)? The area of potential effects means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. If you're not sure, check "I don't know."

- ☐ Yes (attach clearly labeled photographs of each resource and applicable property cards from the municipality assessor)
☐ No (proceed to next section)
☒ I don't know (proceed to next section)

Date the existing building/structures/objects were constructed: 1923

If the project involves rehabilitation, demolition, or alterations to existing buildings older than 50 years, provide a work plan (If window replacements are proposed, provide representative photographs of existing windows).

Archeology

Does the proposed project involve ground disturbing activities?

- ☒ Yes (provide below or attach a description of current and prior land use and disturbances. Attach an excerpt of the soil survey map for the project area. These can be created for free at: <https://websoilsurvey.nrcs.usda.gov>

Soil survey attached.

☐ No

CHECKLIST (Did you attach the following information?)

Required for all Projects	Required for Projects with architectural resources
☒ Completed Form	☐ Work plans for rehabilitation or renovation
☒ Map clearly labelled depicting project area	☐ Assessor's Property Card
☒ Photographs of current site conditions	Required for Projects with ground disturbing activities
☒ Site or project plans for new construction	☒ Soil survey map
Suggested Attachments, as needed	
☒ Supporting documents needed to explain project	☐ Supporting documents identifying historic properties
☐ Historic maps or aerials (available at http://magic.lib.uconn.edu or https://www.historicaerials.com/)	

PROJECT CONTACT

Name: Magdalena Lofstedt

Firm/Agency: CDM Smith Inc.

Address: 75 State Street, Suite 701

City: Boston

State: MA

Zip: 02109

Phone: 617-452-6597

Email: lofstedtmh@cdmsmith.com

Federal and state laws exist to ensure that agencies, or their designated applicants, consider the impacts of their projects on historic resources. At a minimum, submission of this completed form with its attachments constitutes a request for review by the Connecticut SHPO. The responsibility for preparing documentation, including the identification of historic properties and the assessment of potential effects resulting from the project, rests with the federal or state agency, or its designated applicant. The role of SHPO is to review, comment, and consult. SHPO's ability to complete a timely project review largely depends on the quality of the materials submitted. Please mail the completed form with all attachments to the attention of: Environmental Review, State Historic Preservation Office, 450 Columbus Boulevard, Suite 5, Hartford, CT. **Electronic submissions are not accepted at this time.**



77 Hartland Street, Suite 201
East Hartford, CT 06108
tel: 860-529-7615

April 27, 2022

CT State Historic Preservation Office
Attn: Environmental Review
450 Columbus Boulevard, Suite 5
Hartford, CT 06103

Subject: Section 106 Review
Replacement of White Bridge Waterworks Facilities
Applicant: City of New Britain

Dear Mr. Kinney:

On behalf of the City of New Britain, CDM Smith Inc. (CDM Smith) is requesting your review of significant historical and archeological resources within the Phase 1 project limits of the White Bridge Waterworks Facilities Replacement Project. The proposed project is a 2 Phase project to replace existing groundwater wells at both the Upper and Lower Wellfields. Phase 1 is described in detail in this letter. Phase 2 consists of modifications to the new Pond Pumping Station to be constructed in Phase 1.

There are approximately 30 total wells in the Lower Wellfield, but only five are online and the maximum pumping capability of the wellfield is currently approximately 1.8 million gallons per day (mgd). The existing Diversion Registration for the Lower Wellfield is 6.624 mgd. Similar to the Lower Wellfield, the Upper Wellfield is not currently performing at its intended capacity. There are approximately six total wells in the Upper Wellfield, but only one is operational. The maximum pumping capability of the Upper Wellfield is currently approximately 0.3 mgd. The existing Diversion Registration for the Upper Wellfield is 2.16 mgd.

Existing Facilities

The White Bridge Facilities currently consist of pumping systems for groundwater and surface water supplies including the Lower Wellfield, Upper Wellfield, and Pond Pumping Station. These facilities are located off Maltby Street in the city of Bristol, Connecticut and are shown on **Figure 1: USGS Location Map**. Currently, both of the Upper and Lower Wellfields and the Pond Pumping Station convey raw water to the Shuttle Meadow Reservoir for treatment at the City of New Britain (City)'s Shuttle Meadow Water Treatment Plant (WTP). The total Diversion Registration for the White Bridge Facilities is 23.784 mgd, including registrations for up to 6.624 mgd from the Lower Wellfield, 2.16 mgd from the Upper Wellfield, and 15.0 mgd from the Pond Pumping Station (surface water).



Lower Wellfield

The original White Bridge Facilities consisted of one pumping station, which drew water from approximately 22 8-inch-diameter groundwater wells and from one 50-foot-diameter caisson well. This system was constructed between 1920 and 1923 and featured suction lift pumps located at the eastern end of the system. The original building from 1923 still exists today but was reworked to become a surface water pumping station in the 1950s. In the 1940s, a new building was constructed to provide electric power to all on-site facilities and to draw water from the Lower Wellfield wells. In the 1950s, seven additional gravel-packed wells were drilled to expand the capacity of the facility. In the 1980s, new suction lift pumps were installed at the Lower Wellfield and piping adjustments were made so that the pumps took supply directly from the wells and not from the caisson.



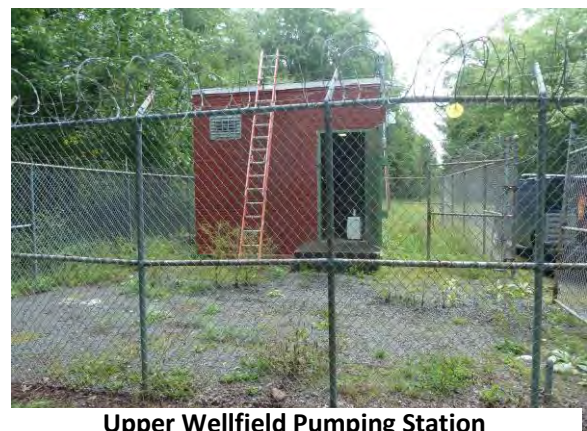
Lower Wellfield Pumping Station lower level

The Lower Wellfield pumping system was intended to deliver approximately 3 mgd, less than the Diversion Registration of 6.624 mgd. However, currently there is generally only one pump in operation at a time because of issues with loss of prime and the difficulty in obtaining repair parts. Currently the system can pump up to approximately 1.5 to 1.8 mgd from up to five wells before loss of prime. There has been no redevelopment of any well screens, so it is likely all the wells are heavily encrusted.

Upper Wellfield

In the 1940s, the White Bridge groundwater supply system was expanded to include the Upper Wellfield. It originally included 66 driven wells, each 2.5 inches in diameter and connected in series. The wells originally yielded about 1 mgd, less than the diversion registration of 2.16 mgd, but the production declined because of clogging. In 1955, six 8-inch-diameter drilled wells about 25 feet deep were constructed. In the 1980s, the Upper Wellfield facilities were updated to provide six new wells in the Upper Wellfield and upgrade the piping and the suction lift pumping system.

The existing facilities at the Upper Wellfield remain essentially unchanged from the 1980s, except for



Upper Wellfield Pumping Station

SHPO

April 27, 2022

Page 3

pump and motor replacement and equipment upkeep. Historical records indicate that there has been a degradation of flow quantities from the Upper Wellfield over time; a recent test indicated a capacity of approximately 0.3 mgd and only one well able to be pumped at a time. This degradation is likely from clogging of well screens, piping system air entrainment, and possible collapse of one or more well screens.

Pond Supply and Pumping Station

In the 1950s, the original Lower Wellfield Pumping Station from 1923 was converted into a surface water pumping station (now termed the Pond Pumping Station) that takes its water from an adjacent man-made pond via suction lift. This pond features a 24-inch screened intake structure and two interconnecting piping systems that allow water to flow freely from the Copper Mine Brook or from the canal adjacent to the wells. This canal is also hydraulically connected to Copper Mine Brook on the east and Polkville Avenue Brook on the west, so that the canal and pond are supplemented by brook flows. There are weir structures in both the Copper Mine Brook and Polkville Avenue Brook to hinder water flow and direct flow to the canal. The Pond Pumping Station, with a Diversion Registration of up to 15 mgd, typically pumps approximately 5 mgd when in operation.



Pond Pumping Station internal pump and piping

Supply Pond and Canal

The Supply Pond is located adjacent to the Lower Wellfield, south of Maltby Road. The Supply Pond, which is man-made and approximately 2.56 acres, serves as a raw surface water source. The Canal, also man-made, is 1,120 feet long and connects the Copper Mine Brook to the Polkville Avenue Brook; the Canal is hydraulically connected to the Supply Pond. Over the many decades of operation, both the Canal and Supply Pond have experienced accumulation of sediment associated with pumping operations.



Pond Intake Structure Rehabilitation

There is an existing concrete Pond Intake Structure located near the eastern end of the Supply Pond. Water enters the Pond Intake Structure through sides and is conveyed to the Pond Pumping Station via a 24-inch-diameter cast iron pipe. The structure includes stationary steel mesh screen panels on two sides to keep debris out of the flow to the Pond Pumping Station. Each of the steel screen panels is 9-feet wide and 9.5-feet high. The screens are manually cleaned by operators in place using rakes and other handheld tools; the need for screen cleaning is infrequent.

Phase 1 Proposed Work

Under Phase 1, the New Britain Water Department is proposing to:

- Replace six (6) water supply wells at the Lower Wellfield and three (3) water supply wells at the Upper Wellfield; all wells will include submersible well pumps with variable frequency drives (VFDs). Wells will be connected directly to the raw water conveyance system. Install new yard piping as required for the new facilities and remove/abandon some existing piping (see Sheets C-6 and C-7).
- Construct new Pond Pumping Station building including flood protection (lowest floor elevation elevated at least 1 foot above the 100-yr flood elevation), modern electrical and control systems, sampling space, standby power, operator restroom, and space for a designated chemical room with provisions for potential future chemical addition (see Sheet C-5)
- Demolish the three existing pumping stations including appropriate disposal of hazardous materials and abandon the existing wells and caisson (see Sheets C-5 and C-6). Some hazardous materials including asbestos, lead paint, and polychlorinated biphenyls are present in certain locations of the existing buildings. The demolition will be completed in accordance with applicable state and federal removal and disposal requirements.
- New driveway to the Lower Wellfield and new Pond Pumping Station graded to be above the 100-year flood elevation of 256 feet (NAVD 88).
- Remove sediment from both the Supply Pond and Canal to restore their operating capacity as well as provide for unhindered flow into the Pond Intake Structure.
- Repair concrete cracks in the Pond Intake Structure, replace existing screens with stainless steel screens, and add a 6-ft wide riprap protection at the Supply Pond Intake Structure.



SHPO

April 27, 2022

Page 5

Please review the enclosed USGS Location Map and Project Plans of the proposed water works replacement project and advise us in writing of any significant historical or archeological resources within the project areas.

You may contact me at (617) 452-6597 if you have any questions regarding this correspondence.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Magdalena Lofstedt'.

Magdalena Lofstedt, PWS
Environmental Scientist
CDM Smith Inc.

Enclosures:

Project Notification Form
Figure 1: USGS Project Location Map
Soil Survey
Project Plans Sheets C-2, C-3, C-4, C-5, C-6, C-7, and C-8

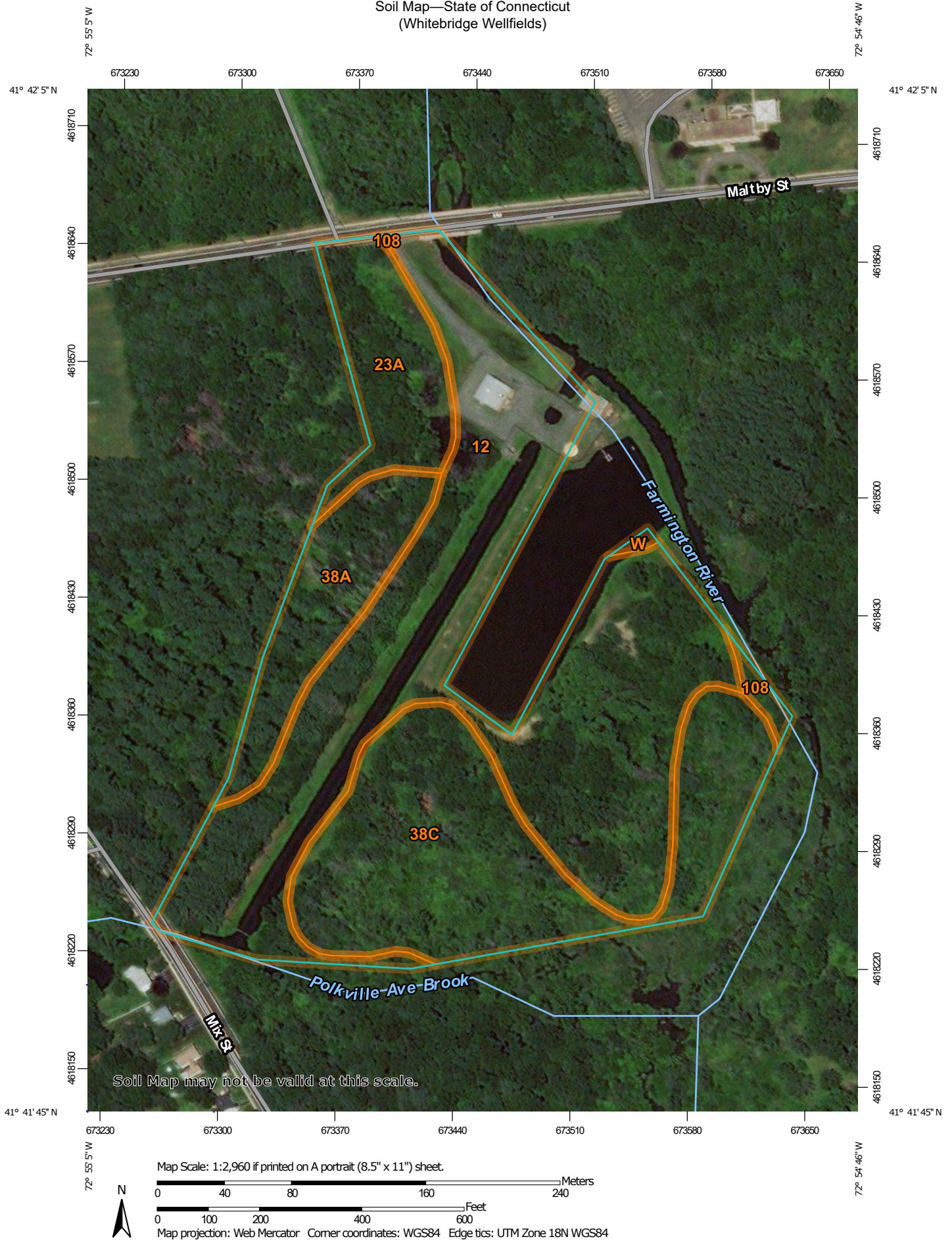
cc: V. Varghese, CDM Smith Inc.
K. Wagner, CDM Smith Inc.



Soil Map—State of Connecticut (Upper Well-Fields)



Soil Map—State of Connecticut
(Whitebridge Wellfields)



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

8/12/2018
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: State of Connecticut

Survey Area Data: Version 16, Sep 15, 2017

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

Date(s) aerial images were photographed: Sep 29, 2013—Oct 16, 2016

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 Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
12	Raypol silt loam	0.3	2.9%
15	Scarboro muck, 0 to 3 percent slopes	8.6	76.5%
21A	Ninigret and Tisbury soils, 0 to 5 percent slopes	0.4	3.5%
37C	Manchester gravelly sandy loam, 3 to 15 percent slopes	0.1	0.6%
37E	Manchester gravelly sandy loam, 15 to 45 percent slopes	1.2	10.4%
108	Saco silt loam	0.7	6.1%
Totals for Area of Interest		11.3	100.0%

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	G. HOWARD
DRAWN BY:	J. BRONENKANT
SHEET CHK'D BY:	
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	MARCH 2022

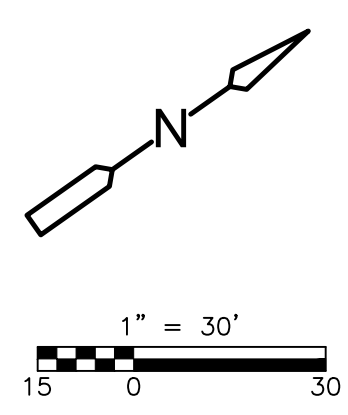
CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

OVERALL SITE PLAN

SHEET NO.
C-2

PROJECT NO.	10739-264571
FILE NAME:	C002STPL.DWG
SHEET NO.	C-2



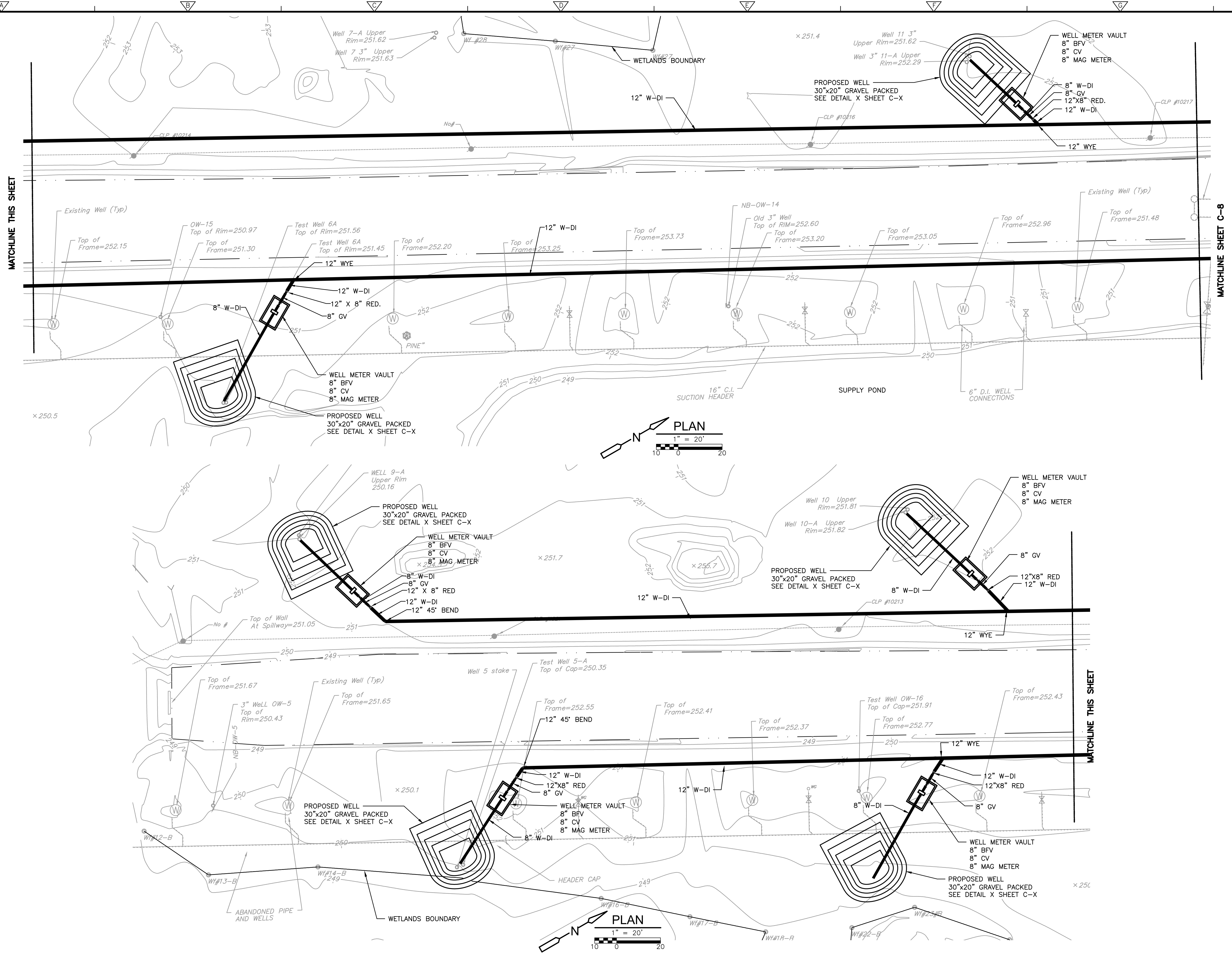
DESIGNED BY: _____ G. HOWARD
DRAWN BY: _____ J. BRONENKANT
SHEET CHK'D BY: _____
CROSS CHK'D BY: _____
APPROVED BY: _____
DATE: _____ MARCH 2022

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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION SITE PLAN & GRADING

PROJECT NO.	10739-264571
FILE NAME:	C005GDPL.DWG
SHEET NO.	
C-5	



					DESIGNED BY: <u>K. GERLACH</u>
					DRAWN BY: <u>S. ENGEL</u>
					SHEET CHK'D BY: <u>K. WAGNER</u>
					CROSS CHK'D BY:
					APPROVED BY:
REV. NO.	DATE	DRWN	CHKD	REMARKS	DATE: <u>MARCH 2022</u>

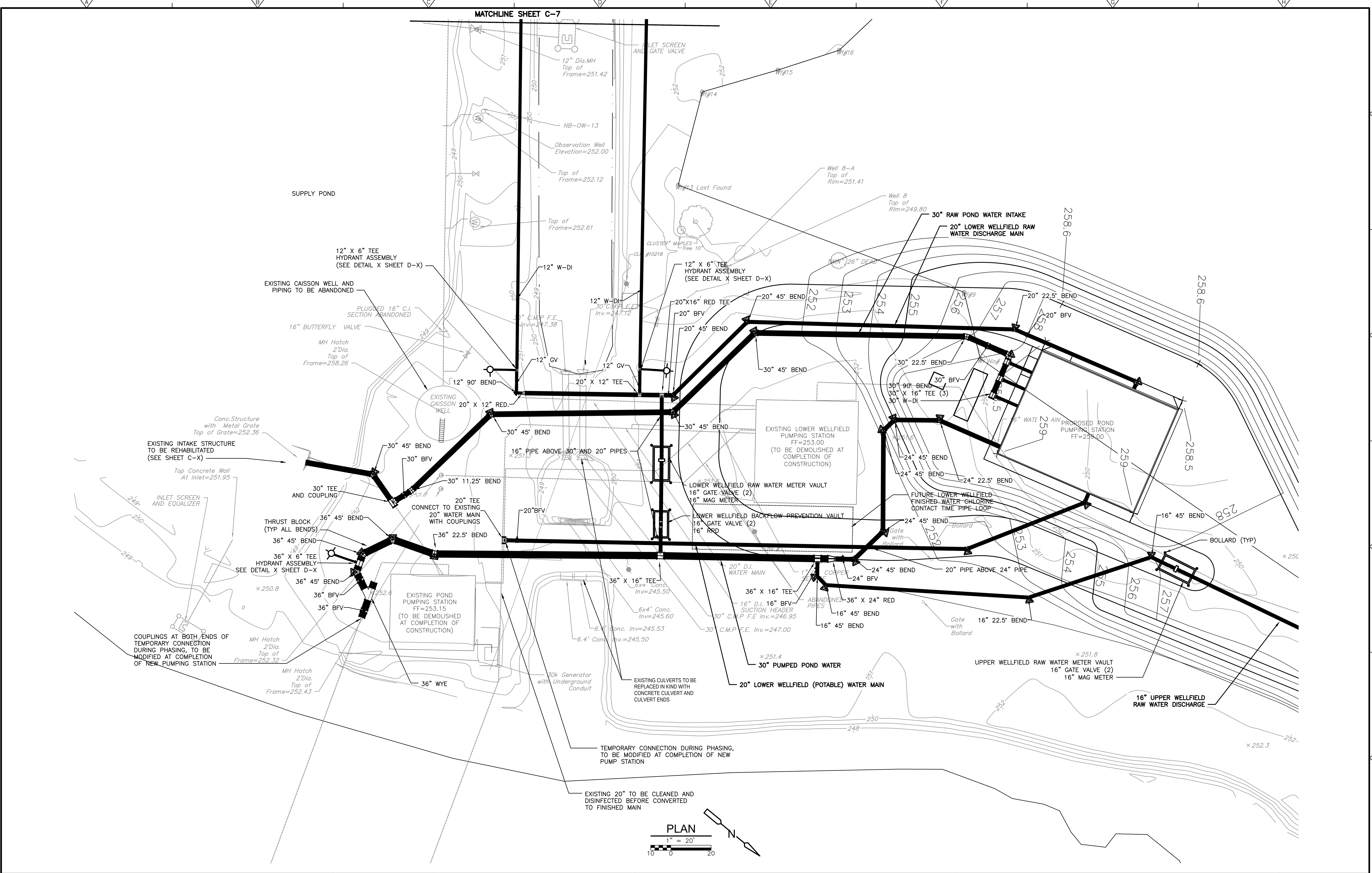
**CDM
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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

LOWER WELLFIELD YARD PIPING PLAN

PROJECT NO.	10739-264571
FILE NAME:	C007YPPL.DWG
SHEET NO.	
C-7	

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	K. GERLACH
DRAWN BY:	S. ENGEL
SHEET CHK'D BY:	K. WAGNER
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	MARCH 2022

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CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES

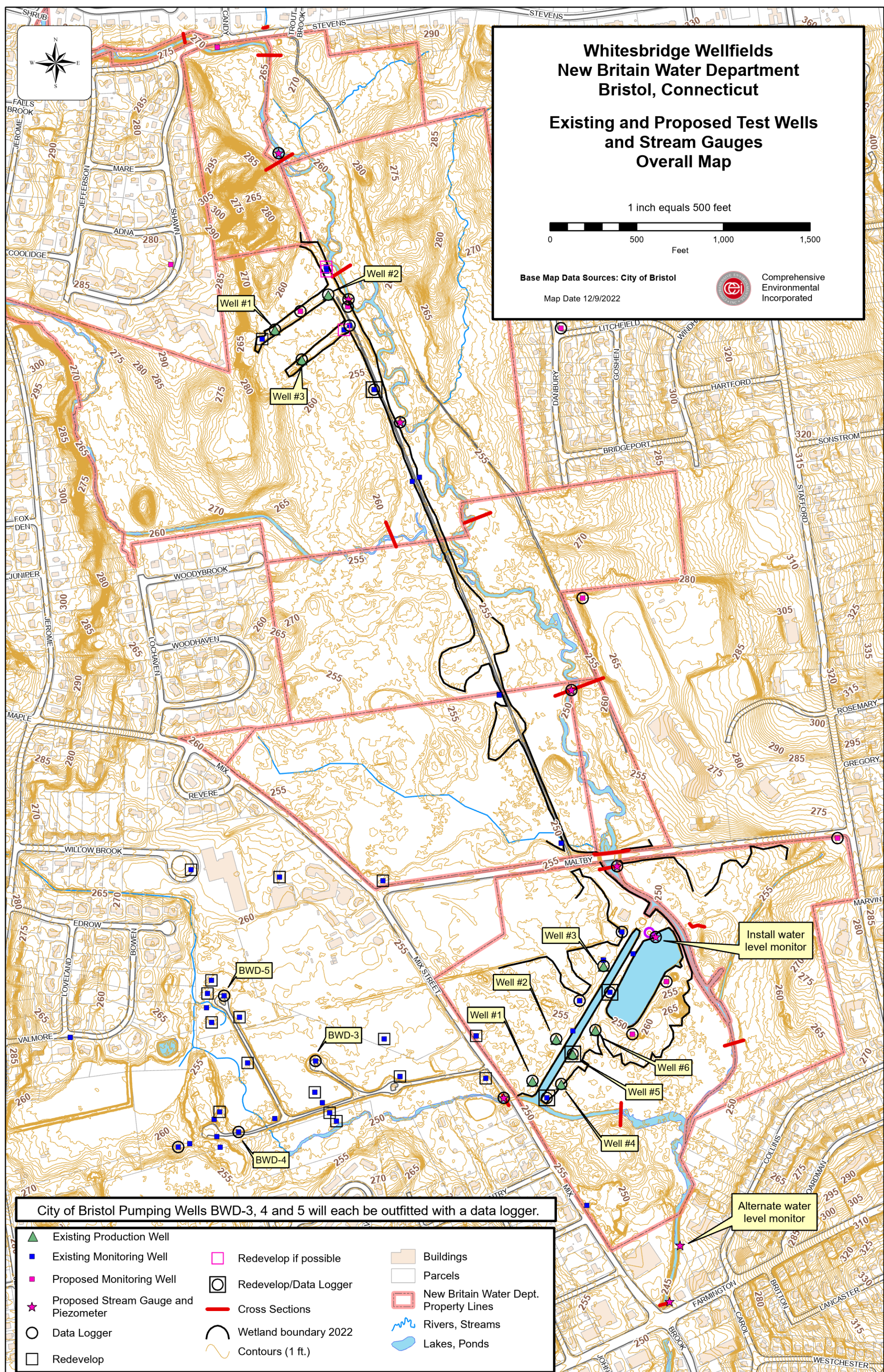
UPPER AND LOWER WELLFIELDS

AND POND PUMPING STATION

POND PUMPING STATION

YARD PIPING PLAN

PROJECT NO.	10739-264571
FILE NAME:	CO08YPPL.DWG
SHEET NO.	C-8



Verified Petition to Intervene

February 5, 2024

**BRISTOL INLAND WETLANDS AND WATERCOURSES AGENCY/CONSERVATION
COMMISSION**

Application #2019 - Wetlands boundary change application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.

Application #2020 – Wetlands application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.

Application #23-458F-305 – Floodplain application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.

February 5, 2024

VERIFIED PETITION TO INTERVENE UNDER CGS §22a-19

Rivers Alliance of Connecticut, Inc. (RA) requests that the Bristol Inland Wetlands and Watercourses Agency/Conservation Commission (Agency) grant it intervenor status in the above captioned proceedings, pursuant to the Connecticut Environmental Protection Act, CGS section 22a-19(a)(1) (CEPA). RA does not oppose the work that is proposed by New Britain Water Department (NBWD) in the above-referenced applications to purportedly rehabilitate its wellfields and to come into compliance with Connecticut Department of Public Health (DPH) and Federal Emergency Management Agency (FEMA) requirements, so long as the reasonably foreseeable environmental threats posed by these activities are appropriately conditioned to protect the important natural resources comprised of waters of the State under the stewardship of

the City of Bristol. RA's participation in this matter is in the interests of justice and will not impair the orderly conduct of the proceedings.

In support of its petition, RA represents the following:

1. CEPA provides in pertinent part at General Statutes Section 22a-19(a) that

In any administrative, . . . proceeding, and in any judicial review thereof made available by law, . . . any person, . . . corporation . . . or other legal entity may intervene as a party on the filing of a verified pleading asserting that the proceeding or action for judicial review involves conduct which has, or which is reasonably likely to have, the effect of unreasonably polluting, impairing or destroying the public trust in the air, water or other natural resources of the state.

2. The Agency is the town agency authorized to administer the statutory provisions regulating the use of inland wetlands and watercourses pursuant to General Statutes Section 22a-36, et seq., and of its own duly enacted Inland Wetlands and Watercourses Regulations of the City of Bristol (Regulations).

3. RA is a 501(c)(3) non-profit environmental organization, founded in 1992, and dedicated to the protection and preservation of the water resources of the State. Its membership includes, primarily, river and watershed groups in the state, civic and business groups, municipal commissions, and individuals concerned with water health, thus representing a network of thousands of members statewide. RA's mission is to protect the quality and availability of surface and ground waters of Connecticut and Long Island Sound and associated recreational uses and habitat values. RA advocates for the protection of ample, healthy sources of water for drinking and other vital societal uses. RA brings expertise in policy, law, and science to participation in policy-making entities and to its extensive educational program. RA's goal is to bring people together to protect our state waters for current and future generations. Numerous

RA members are residents of Bristol or customers of NBWD. RA's offices are located at 28 Russel Street, P.O. Box 1797, Litchfield, Connecticut, 06759.

4. The Agency's decision in this matter will specifically affect RA, its members, and important natural resources of the State. NBWD owns or manages water supply facilities in the City of Bristol. Pursuant to CGS §22a-365 through 22a-379 as well as Sections 22a-372-1, 22a-377(b)-1 and 22a-377(c)-1 to 22a-377(c)-2 of the Regulations of Connecticut State Agencies, NBWD is authorized to divert 23.78 million gallons of water per day (mgd) in perpetuity.

5. Bristol Water Department (BWD) also owns or manages water supply facilities within the same drainage basin as the White Bridge Waterworks Facility. Pursuant to CGS §22a-365 through 22a-379 as well as Sections 22a-372-1, 22a-377(b)-1 and 22a-377(c)-1 to 22a-377(c)-2 of the Regulations of Connecticut State Agencies, BWD is authorized to divert 3.87 million gallons of water per day (mgd) in perpetuity.

6. Coppermine Brook is listed in Connecticut Department of Energy and Environmental Protection's (DEEP) 2022 Integrated Water Quality Report to Congress under Nonpollutant Impairments (EPA Category 4c) for Flow Regime Modification. DEEP has developed a methodology for assessing flow impairments when sufficient information is available. The term "flow regime modification" is used to reflect the impairments which are predominantly due to flow alterations that serve public needs and safety.

7. Sections of Coppermine Brook below and adjacent to the NBWD and BWD were effectively dry during the 2016-2017 drought and DEEP has documented impairment due to low flow for periods following the 2016-2017 drought. Due to decreased well performance, NBWD has been able to withdraw only a portion of the 23.78 mgd it is authorized pursuant to

CGS §22a-365 through 22a-379 as well as Sections 22a-372-1, 22a-377(b)-1 and 22a-377(c)-1 to 22a-377(c)-2 of the Regulations of Connecticut State Agencies.

8. NBWD has stated in Application #2020 that “The NBWD has registered diversions and those withdrawals will be increased.” It also stated that “The proposed wetland disturbances activity will not affect the nearby watercourse flow rate.”

9. RA seeks to intervene in this proceeding for the purposes of assuring that Coppermine Brook is not further impaired for regime flow modification due to an increase in withdrawals by the NBWD. The potential for such further impairment is not adequately addressed in the Application. RA further seeks to ensure that the Agency has a complete record on which to make an informed decision on all aspects of this complicated proceeding. As DEEP cannot intervene on impairments from low flow (as this activity is purportedly in compliance with CGS §22a-365 through 22a-379 as well as Sections 22a-372-1, 22a-377(b)-1 and 22a-377(c)-1 to 22a-377(c)-2 of the Regulations of Connecticut State Agencies), it is reasonable for the Agency to inquire into potential impacts to downstream flow from NBWD withdrawals. In addition, impacts on streams from groundwater withdrawals are not included in DEEP’s Streamflow Standards and Regulations pursuant to CGS §26-141(a) and (b) and §26-141b-7(a) of the Regulations of Connecticut State Agencies. Appropriate regulation and oversight of potential impacts to downstream flow can be accomplished by requiring monitoring of streamflow above and below the wellfields and requiring that NBWD work with DEEP to determine a threshold at which NBWD would have to work with DEEP to find an operational mode that would not impair Coppermine Brook, as per the NBWD agreement with DPH for funds procured through DPH’s Drinking Water State Revolving Fund for the project. This regulation and oversight clearly falls

within the Agency's jurisdiction in this proceeding pursuant to CGS section 22a-41, 22a-42, and the city's Inland Wetlands and Watercourses Regulations.

10. It is RA's position that prudent conditions to protect critical natural resources of the State, which are threatened by the increased uncertainty of climate change, are necessary and appropriate. RA is focused on a narrow but important set of natural resources that receive limited, but critical, protections under state statute. RA's intervention in this matter is in the interests of justice and will not impair the orderly conduct of the proceedings.

11. RA is not aware of any other intervening party to this proceeding whose focus is to ensure that the water resources of the state under the care of the City of Bristol are protected from undue impairment.

12. RA intends to offer brief and pertinent direct testimony from Connecticut water conservation experts with personal knowledge of wetlands and hydrology, as it applies to the Applications.

13. RA requests that the following individuals be listed on the Service List in this proceeding:

Alicea Charamut, Executive Director
Rivers Alliance of Connecticut, Inc.
28 Russel Street, P.O. Box 1797
Litchfield, CT 06759
(860) 416-7859
alicea@riversalliance.org

and

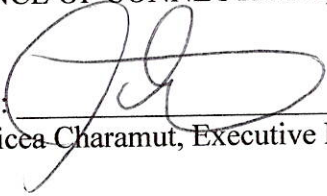
Mary Ridingsward, Executive Director
Pequabuck River Watershed Association
PO Box 1461
Bristol, CT 06011-1461
pequabuckriverct@gmail.com

Copies of filings and notices should be sent to alicea.@riversalliance.org.

WHEREFORE, Rivers Alliance of Connecticut, Inc. respectfully requests intervention status in this proceeding pursuant to CEPA upon the filing of this verified pleading for intervention.

Respectfully submitted,

INTERVENOR
RIVERS ALLIANCE OF CONNECTICUT, INC.

By: 
Alicea Charamut, Executive Director

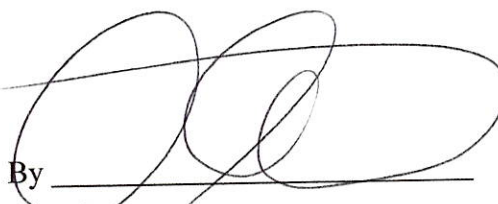
VERIFICATION OF PETITION FOR INTERVENTION
UNDER GENERAL STATUTES SECTION 22a-19(a)

I, the undersigned, being duly sworn, depose and say that (i) I am the Executive Director of Rivers Alliance of Connecticut; (ii) I have the authority to execute this Petition for Intervention on behalf of Rivers Alliance of Connecticut; and (iii) I have read the foregoing Petition for Intervention and verify that the facts stated therein are true and correct to the best of my knowledge, information and belief based on my personal knowledge, and the records which I have reviewed in this matter.

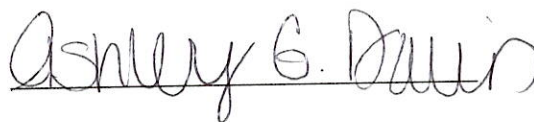
Dated at Newington Connecticut, this 5th day of February, 2024.

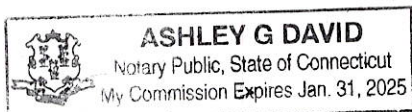
INTERVENOR

RIVERS ALLIANCE OF CONNECTICUT

By 
Alicea Charamut, Executive Director

Subscribed and sworn to before me the undersigned this 5th day of February, 2024.





Notary Public: Ashley G. David
My Commission Expires: 01/31/2025

Link to State Historic Preservation Office Application, Letter, Response (April 2022)

Link to Document:

https://www.bristolct.gov/DocumentCenter/View/45992/NBWD-SHPO_Letter_Response-and-Application-April-27-2022



Photos submitted by Daniel Sutula - 3/11/24

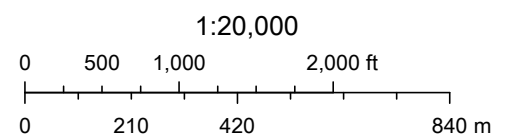
ATTACHMENT 1

PROJECT SITE MAP

White Bridge Waterworks Facility



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USGS The National Map: Orthoimagery and US Topo. Data refreshed December, 2022.

ATTACHMENT 2

ADDITIONAL INFORMATION

Wetlands Permit Application – IW-1

This attachment to the IW-1 application serves to provide the additional information required for significant activity application submittals, including:

- Site plans
- Proposed project activities
- Description and delineation of wetlands (Wetland Delineation Report)
- Impact on watercourse & flowrate
- Project alternatives
- Measures to mitigate the impact of the proposed activity

Proposed Project Activities:

A rehabilitative project will be conducted at the Upper and Lower Wellfields of the White Bridge Waterworks Facility owned by the New Britain Water Department (NBWD) accessed via Maltby Street. The purpose of this project is to redevelop the existing Upper and Lower Wellfields, which were constructed in the 1940s and 1921, respectively. Presently, these wellfields serve as a raw water supply only and cannot serve as a backup in their present condition. The age of the wellfields is such that they have come to the end of their useful life and repair and replacement equipment is no longer available. The NBWD needs to upgrade the facilities and modernize the equipment.

To become a potable water supply, any new wells must be located 50 feet from any water bodies or wetland limits per Department of Public Health (DPH) requirements. In addition, the wells must be raised 2' above the one-hundred-year flood plain elevation. Because of these requirements, the existing wells cannot be redrilled or rehabilitated in their present location. All currently existing wells will be abandoned in accordance with DPH requirements. The Lower Wellfield may but suitable as a public water supply subject to the ground water under the direct influence of surface water testing which will be done once the project is completed in a future phase of construction.

Numerous studies have been performed in preparation for this project including:

- A detailed test well program
- A seismic refraction study
- Wetlands mapping

The project will be executed according to a predetermined schedule prepared by the design consultant (CDM Smith) in coordination with the contractor (TBD). A 2-year duration from start of construction to completion is anticipated. A total of nine wells will be installed at the Upper and Lower Wellfields (three at the Upper Wellfield and six at the Lower Wellfield). A new pumphouse will be constructed at the Lower Wellfield along with all the necessary underground piping related to the new wells and pump house. The new pump house will house chemical treatment facilities. The pump house will be constructed 2' above the 100-year flood elevation per DPH regulation.

Compensatory flood storage areas will be created so as to not increase the current flood elevation levels as given by FEMA guidelines. These compensatory storage areas will also create additional wetland

areas and, as such, an IW-2 permit application has been submitted for review. See the attached maps for further information on the locations of these affected areas.

The proposed project also includes the removal of sediment from both the existing supply pond and canal located to the north. See a detailed drawing of the sediment removal attached. Over the years sediment has accumulated significantly in these water bodies and has decreased the capacity of both. The benefit of sediment removal will be an increased capacity of readily available surface water.

Description of Property and Wetlands:

This property spans a total of 303.7 acres, which includes the following parcels (by Map/Lot number): 52-15, 52-16B16A, 52-17, 52-11, 53-149, 53-150, 53-151, 53-145 and 53-147. Copper Mine Brook travels through the entirety of the property from north to south. The Upper Wellfield is located on parcel 52-17, which is 104.6 acres and has PFO1E and PEM1E wetland areas. PFO1E areas are seasonally flooded/saturated broad-leaved deciduous wetlands. PEM1E areas are seasonally flood/saturated persistent emergent wetlands. Soils in this project area consist mostly of Scarboro muck, with some Saco silt loam located closer to Copper Mine Brook. Soil scientist Ian Cole located all the wetland boundaries in the vicinity of the test well explorations. These boundaries are shown on the plans provided.

The Lower Wellfield is located on parcel 53-145, which is 50.3 acres and also has PFO1E and PEM1E wetland areas. Polkville Brook travels west to east, then southerly through this parcel before flowing into Copper Mine Brook. Onsite vehicular transport, between the Upper and Lower Wellfield areas will use existing travel ways on the site not within any wetland boundaries. Soils in the Lower Wellfield project area consist mostly of Raypol silt loam, with some Hinckley loamy sand located closer to Polkville Brook. Detailed wetlands mapping is provided on the plans.

Impact on Watercourse & Flowrate:

The proposed wetland disturbances activity will not affect the nearby watercourse flow rate.

The subject project includes the following watercourses that flow through the project site:

- Copper Mine Brook
- Polkville Ave Brook
- Freeman's Brook

The NBWD has registered diversions and those withdrawals will be increased.

Project Alternatives:

The following project alternatives were considered in selecting the preferred option for this project:

- Alternative 1 – No Action – The City would continue to run the existing White Bridge facilities at their current capacity without capital improvements.
- Alternative 2 – Purchasing water from The Metropolitan District (MDC) supply – Multiple alternatives were established to purchase raw or finished water from the MDC.
 - Alternative 2A – Raw Water to WTP/Shuttle Meadow Reservoir – Through existing agreements with MDC, the City has the ability to pump up to 7.5 mgd of raw water from MDC's Nepaug Reservoir, through the City's Nepaug pumping station, to the City's WTP or Shuttle Meadow Reservoir.
 - Alternative 2B – Raw Water to a new treatment plant – This alternative is similar to 2A, but would pump raw water to a new treatment facility near the existing White Bridge facilities to provide a redundant finished water source for New Britain customers.
 - Alternative 2C – Finished Water - There are also two existing interconnections with MDC's potable water distribution system. At the intersection of Fienemann and Farm Springs Road in Farmington, there is a hydrant-to-hydrant connection and at Hartford Road, just south of Westfarms Mall, there is a 12-inch meter pit connection. These are emergency-only interconnections and would need to be upgraded to become regularly-utilized sources. Once upgraded, these interconnections would provide up to 3 mgd of finished water to the City's distribution system.
- Alternative 3 – New Pond Pump Station Phased Approach – A new Pond Pump Station providing pumping of the surface water and Upper Wellfield water to the Shuttle Meadow Reservoir as raw water, as is currently the case for those supply sources. The facility will also include space for chemical addition, installed under a subsequent phase, to treat the Lower Wellfield water. A conceptual plan for the chemical addition would be included in this alternative. All wells would be replaced, and new pumps installed. The foregoing work constitutes Phase 1. Design and construction of the chemical addition for the subsequent Phase 2 would be dependent on the results of GWUDI (groundwater under the direct influence of surface water) testing.
- Alternative 4 - New Pond Pump Station / Lower Wellfield Chemical Addition Building - A combined facility providing pumping of the surface water and Upper Wellfield water to the Shuttle Meadow Reservoir as raw water, as is currently the case for those supply sources. The facility would also include chemical treatment facilities for sequestering manganese in the Lower Wellfield water. The finished Lower Wellfield water would be pumped directly to the City's water distribution system. Treatment of the Lower Wellfield water is dependent on the results of a GWUDI study. All wells would be replaced, and new pumps installed. Alternative 4 differs from Alternative 3 only in the timing of construction of the chemical addition facilities. In Alternative 4, they would be built at the same time as the rest of the facilities, not in a subsequent phase.

The following improvements were identified to be common to Alternatives 3 and 4:

- New wells at the Lower and Upper Wellfields to increase their production to levels closer to the Diversion Registrations.
- Supply Pond and Canal Restoration to remove sediment and restore these facilities back to their original intent.
- Intake Upgrade to replace the existing screens and piping up to the intake structure. The bridge from the bank of the supply pond to the intake structure would be repaired as well.
- Abandonment of the existing wells, caisson, and associated piping.

An initial screening of alternatives was performed, which eliminated Alternatives 1, 2A, 2B, and 2C as these alternatives did not meet the needs of the project or had high capital cost. Alternatives 3 and 4 were carried forward to additional evaluation and represent the proposed activity for this permit application.

Measures to Mitigate Project Impact – Erosion Control Measures:

The erosion and sedimentation control measures at the White Bridge facility focus on the protection of wetlands and waterways during and following construction since the work includes land disturbances, excavation dewatering, supply pond and canal sediment removal activities, and other associated construction activities. Several methods are included on the Drawings to slow the flow of runoff and protect disturbed land during construction activities. Please refer to the project plans for typical details of measures to protect wetlands and waterways during and after construction. The following summary presents typical mitigation measures that will be implemented to avoid and minimize wetland impacts during construction.

Construction Period

- During construction, the limit of land disturbances will be kept to a minimum, where possible, and the construction will be sequenced so the entire site will not be disturbed at the same time.
- Clearing and grubbing will be limited to only the areas necessary for work to be performed, specifically in areas at the Upper and Lower Wellfields (Sheet C-9 and C-11) where wells and piping will be installed, at the Maltby Street 16" pipe crossing (Sheet C-18), at areas where wetlands and compensatory storage will be created (Sheet C-13 and C-14), and areas around the Supply Pond for access during sediment removal activities (Sheet C-23).
- Sedimentation barriers (i.e., silt fence and/or compost logs/straw wattles installed per industry standards) will be installed at the down gradient limits of work and construction access roadways prior to the commencement of work to prevent the transport of sediment to the downgradient wetlands and waterways during construction (see Sheets C-6 thru C-8). Specifically, at the Upper Wellfield this includes compost logs/straw wattles along the facility driveway from Maltby Street to the existing Pumping Station and down each of the well field laterals. At the Lower Wellfield, this includes along the wetlands to the north and west of proposed work, along the Coppermine

Brook to the east, around the Supply Pond, and along both sides of the Canal to the Polkville Avenue Brook. These barriers will be inspected at least once per week and within 24 hours of rainfall events ½-inch or greater and repaired as needed. These barriers will remain in place until all disturbed soils are stabilized. A stockpile of compost logs/straw wattles and silt fence will be maintained on site for routine maintenance and emergency repairs. Barriers will be replaced as necessary due to sediment build-up and degradation.

- Sedimentation barriers (i.e., silt fence and/or compost logs/straw wattles installed per industry standards) will be installed surrounding temporary stockpile areas.
- For all slopes 4:1 or steeper, an erosion control blanket will be required, including at the Upper and Lower Wellfield wells (see Sheet C-9 and C-11). Temporary erosion control blankets will be inspected at least once per week and within 24 hours of rainfall events.
- A turbidity curtain will be installed to prevent sedimentation and turbidity disturbances in the Coppermine Brook during canal and supply pond sediment removal activities (see Sheet C-23 and Detail Sheet C-24). Turbidity curtains will be inspected daily during Supply Pond and canal sediment removal activities. The turbidity curtain will not be removed before sediment removal activities have ended and clarity of water has returned.
- Catch basin filters will be installed on catch basins near all excavation work on Maltby Street, Stafford Avenue, and Mix Street (See Sheet C-18 and Detail Sheet C-24).
- In the event that excavation dewatering is necessary, water will be pumped and discharged to one of the temporary sedimentation basins in designated areas of the site (see Sheet C-6 thru C-8 and Detail Sheet C-24). Temporary sedimentation basins will be inspected at least once per week and cleaned as needed to remove accumulated sediments. Temporary portable sediment tanks may also be used to handle significant amounts of excavation dewatering. All water to be discharged from dewatering activities will be filtered or otherwise treated prior to discharge to prevent siltation to adjacent areas. Best management practices will be used by the Contractor in order to prevent siltation to adjacent areas during dewatering activities.
- A temporary sediment dewatering and stockpiling area has been designated within the Supply Pond to dewater removed sediments during restoration activities (see Sheet C-23 and Detail Sheet C-24). Stockpiled materials and containment area will be inspected daily during dewatering activities, weekly during non-dewatering activities, and within 24 hours of rainfall events of ½-inch or greater.
- A stabilized construction entrance is also being required for the site to prevent tire tracked soils to onsite and offsite locations (see Sheet C-23 and Detail Sheet C-24). The stabilized construction entrance will be inspected periodically and additional top dressing or length will be added, as necessary, to continue capturing sediment tracked on vehicles.
- The silt fence and/or compost log/straw wattle barrier will not be removed until the site areas are vegetated, paved or otherwise permanently stabilized to prevent erosion of exposed soils. Work

will proceed as rapidly as possible, limiting the exposure time of disturbed soils to wind and precipitation.

- The sedimentation barriers will not be removed until the site areas are vegetated, paved or otherwise permanently stabilized to prevent erosion of exposed soils. Work will proceed as rapidly as possible, limiting the exposure time of disturbed soils to wind and precipitation.
- Periodic inspections will be made by the applicant to ensure compliance with the permit conditions.

Spill Control Measures

- Spill containment equipment (e.g. oil absorbent pads, oil absorbent materials, containment booms, shovels, etc.) will be stored in the equipment storage and refueling area in an easily accessible manner for use in the clean-up of accidental releases of fuel or other hazardous materials. Should there be an accidental release the proper authorities will be notified in accordance with all applicable federal, state, and local laws; and
- To minimize the possibility of leakage of hydraulic fluid, all hydraulic lines on all construction equipment and vehicles will be inspected at the end of each workday. If any excessive wear or leakage is observed, the line will be repaired prior to further use. In addition, a supply of oil absorbent materials (i.e. pads, "speedy dry," and/or booms) will be maintained with the equipment at the work area for immediate deployment in the event of an accidental release of fuel, hydraulic fluid, oil, etc.

Post-Construction Period

The following summary of mitigation measures will be implemented to restore any areas affected by short-term impacts that occur in or adjacent to wetlands.

- The final site is designed to have a 3-foot wide gravel infiltration trench with 1.5"-3" diameter washed aggregate covered with 6" pea gravel running along the facility driveway to collect and slow the flow of runoff from impervious surfaces (see Sheet C-10 and Detail Sheet C-26).
- All areas disturbed during construction activities are to be loamed and seeded to provide vegetated soil cover protection against sheet runoff and wind erosion (see Sheet C-9 thru C-12). Seeded areas will be inspected at least once per week and within 24 hours of rainfall events of ½-inch or greater.
- Once established, seeded areas will be mowed and maintained as appropriate.
- The Pond Pumping Station building roof drain leader will outlet to a riprap apron (See Sheet C-10 and Detail Sheet C-26). Riprap used in the roof drain apron will be inspected periodically to determine if high flows have caused scour beneath riprap or if vegetation removal is required. On the northeast side of the Pond Pumping Station building, a retaining wall will be utilized to prevent steep slopes.

- The wetland replication and restoration areas will be planted with trees and shrubs per the planting plans, and seeded with a wetland seed mixture.
- If seeding occurs outside of the growing season, temporary stabilization measures (i.e., mulching or erosion control blankets) will be used to prevent erosion until the area can be seeded during the following growing season.
- Reseeding and mulching disturbed areas. These areas will be maintained and re-seeded to ensure that grass cover is adequate to stabilize the exposed soil, and
- Sedimentation and erosion control barriers will not be removed until a vegetative cover dense enough to prevent erosion is established.

Selections from Figure 3-2 of the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control:

Figure 3-2 Measure Selection Matrix					
Identify Problem Areas	Identify Control Problems	Identify Strategy	Select Specific Measure		Plan Key
			Functional Group	Measure	
Disturbed Areas	Control Soil Detachment	Preserve and Conserve Existing Site Resources	Protect Vegetation	Tree Protection	TP
			Preserve and Conserve Soil	Topsoiling	TO
Short or Shallow Slopes	Raindrop Splash	Protect Surface	Vegetative Soil Cover	Land Grading	LG
				Surface Roughening	SR
Steep Slopes	Sheet & Rill Erosion	Protect Surface	Vegetative Soil Cover	Dust Control	DC
				Temporary Seeding	TS
Long Slopes	Wind Erosion	Protect Surface	Vegetative Soil Cover	Permanent Seeding	PS
				Sodding	SO
Stockpile Areas	Control Water Movement	Protect Surface and/or Convey Runoff	Non-Living Soil Protection	Landscape Planting	LP
				Temporary Soil Protection	TSP
Borrow Areas	Gully Erosion	Protect Surface and/or Convey Runoff	Non-Living Soil Protection	Mulch for Seed	MS
			Non-Living Soil Protection	Landscape Mulch	LM
Drainage Ways	Channel & Stream Erosion	Convey Runoff	Stabilization Structures	Temporary Erosion Control Blanket	ECB
			Stabilization Structures	Permanent Turf Reinforcement Mat	TRM
Wetlands and Watercourses	Channel & Stream Erosion	Convey Runoff	Stabilization Structures	Stone Slope Protection	SSP
	Channel & Stream Erosion	Convey Runoff	Stabilization Structures	Retaining Walls	RW
Waterbodies	Natural Resource Degradation	Diffuse Runoff	Energy Dissipators	Riprap	RR
	Natural Resource Degradation	Diffuse Runoff	Energy Dissipators	Logjams	G
Areas of Flooding and Existing Erosion	Control Sediment Deposition	Detain Sediments	Sediment Impoundments, Barriers, and Filters	Permanent Slope Drain	PSD
	Control Sediment Deposition	Detain Sediments	Sediment Impoundments, Barriers, and Filters	Channel Grade Stabilization Structure	CSS
Drainage Outlets	Protect Onsite and Offsite Areas	Control Mechanically Moved Waters and Soils	Dewatering	Temporary Lined Chute	TC
	Protect Onsite and Offsite Areas	Control Mechanically Moved Waters and Soils	Dewatering	Temporary Pipe Slope Drain	TSD
Travel Areas	Control Mechanically Moved Waters and Soils	Control Mechanically Moved Waters and Soils	Dewatering	Vegetated Waterway	VW
	Control Mechanically Moved Waters and Soils	Control Mechanically Moved Waters and Soils	Dewatering	Temporary Lined Channel	TLC
Dewatering	Control Mechanically Moved Waters and Soils	Control Mechanically Moved Waters and Soils	Dewatering	Permanent Lined Waterway	PW
	Control Mechanically Moved Waters and Soils	Control Mechanically Moved Waters and Soils	Dewatering	Temporary Stream Crossing	TSC
				Temporary Fill Berm	TFB
				Water Bar	WB
				Temporary Diversion	TD
				Permanent Diversion	PD
				Subsurface Drains	SD
				Detention Structures	DB
				Level Spreader	LS
				Outlet Protection	OP
				Stone Check Dam	SCD
				Temporary Sediment Basin	SB
				Temporary Sediment Trap	TST
				Hay Bale Barrier	HB
				Geotextile Silt Fence	GSF
				Turbidity Curtain	TC
				Vegetative Filter	VF
				Construction Entrance	CE
				Pump Intake and Outlet Protection	PuP
				Pumping Settling Basin	PSB
				Portable Sediment Tank	PST
				Dewatering of Earth Materials	DWM

LINK TO PROJECT PLAN SET:

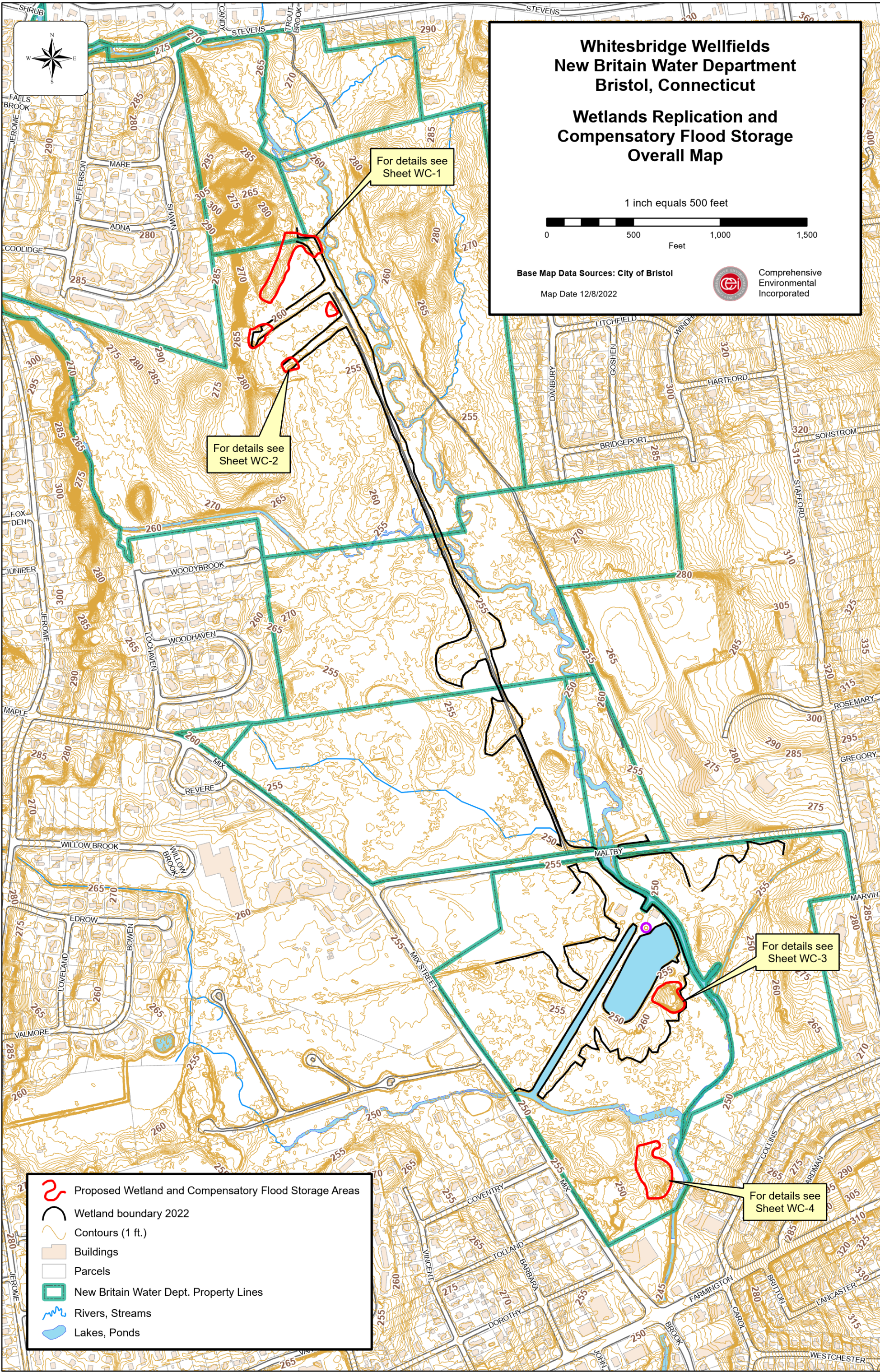
<https://www.bristolct.gov/DocumentCenter/View/44645/202-Plan-Set-Extracted>

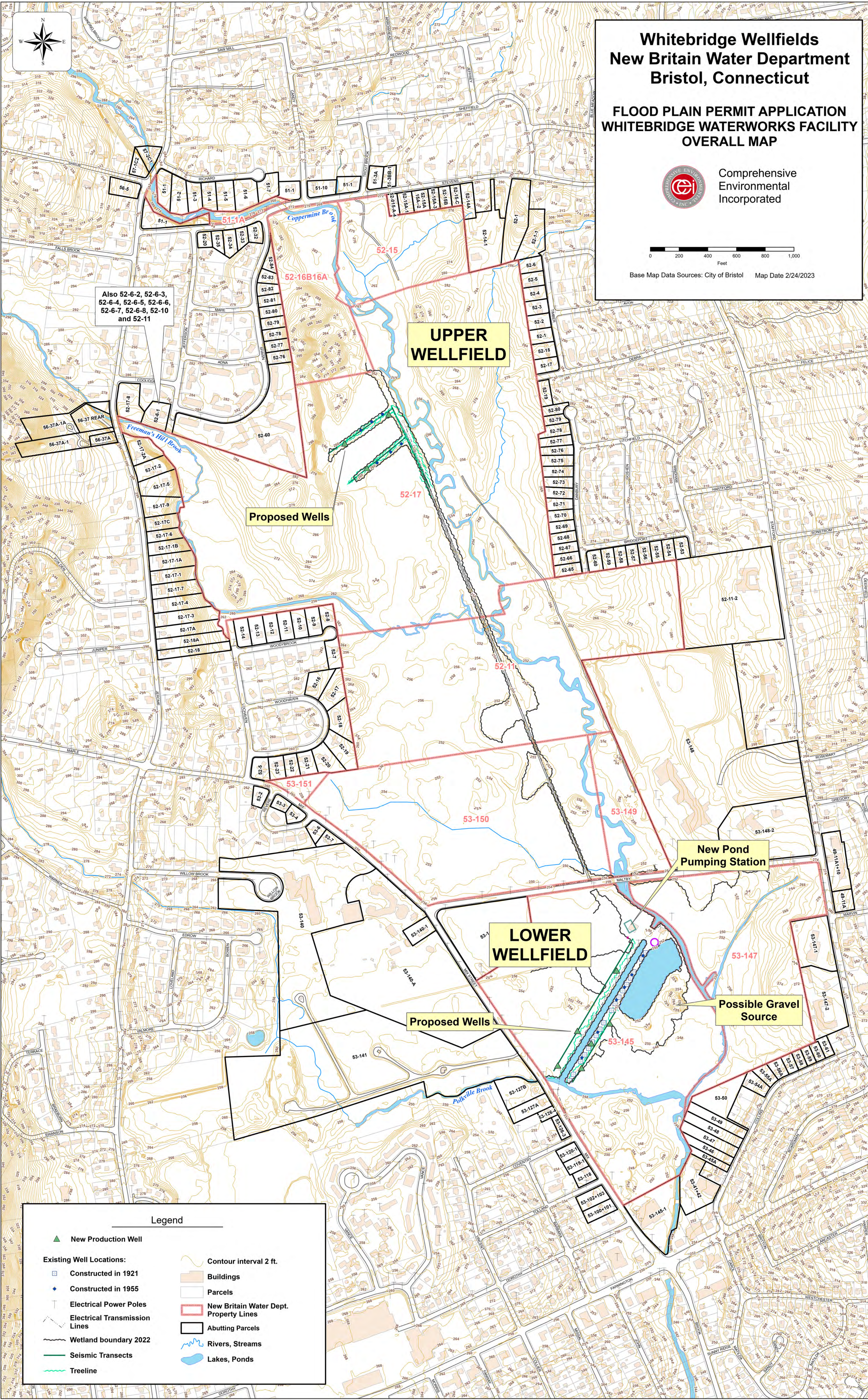
ATTACHMENT 3

PROJECT DRAWINGS

ATTACHMENT 4

PROPERTY MAP



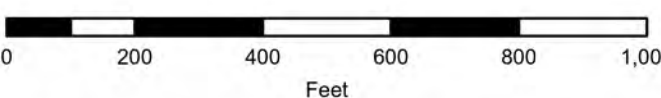


Whitebridge Wellfields
New Britain Water Department
Bristol, Connecticut

FLOOD PLAIN PERMIT APPLICATION
WHITEBRIDGE WATERWORKS FACILITY
OVERALL MAP



Comprehensive
Environmental
Incorporated



Base Map Data Sources: City of Bristol Map Date 2/24/2023

Also 52-6-2, 52-6-3,
52-6-4, 52-6-5, 52-6-6,
52-6-7, 52-6-8, 52-10
and 52-11

**UPPER
WELLFIELD**

Proposed Wells

**LOWER
WELLFIELD**

**New Pond
Pumping Station**

Proposed Wells

**Possible Gravel
Source**

Legend

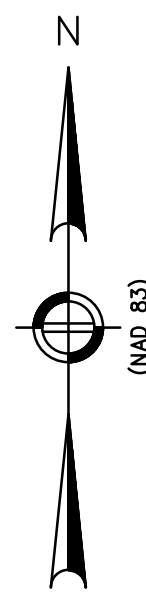
- New Production Well
- Existing Well Locations:**
 - Constructed in 1921
 - Constructed in 1955
- Electrical Power Poles
- Electrical Transmission Lines
- Wetland boundary 2022
- Seismic Transects
- Treeline
- Contour interval 2 ft.
- Buildings
- Parcels
- New Britain Water Dept. Property Lines
- Abutting Parcels
- Rivers, Streams
- Lakes, Ponds

ABUTTING PROPERTY OWNERS

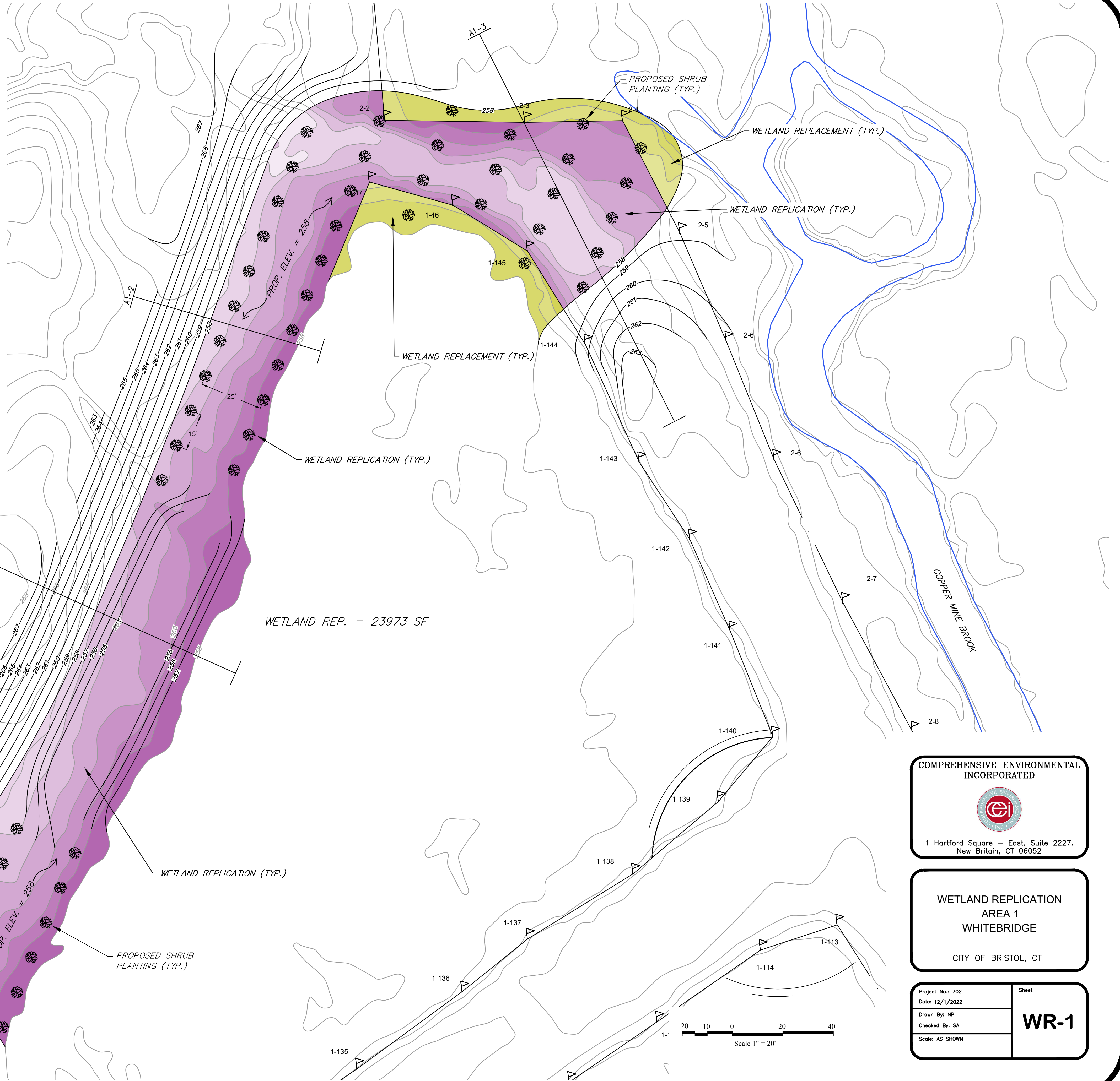
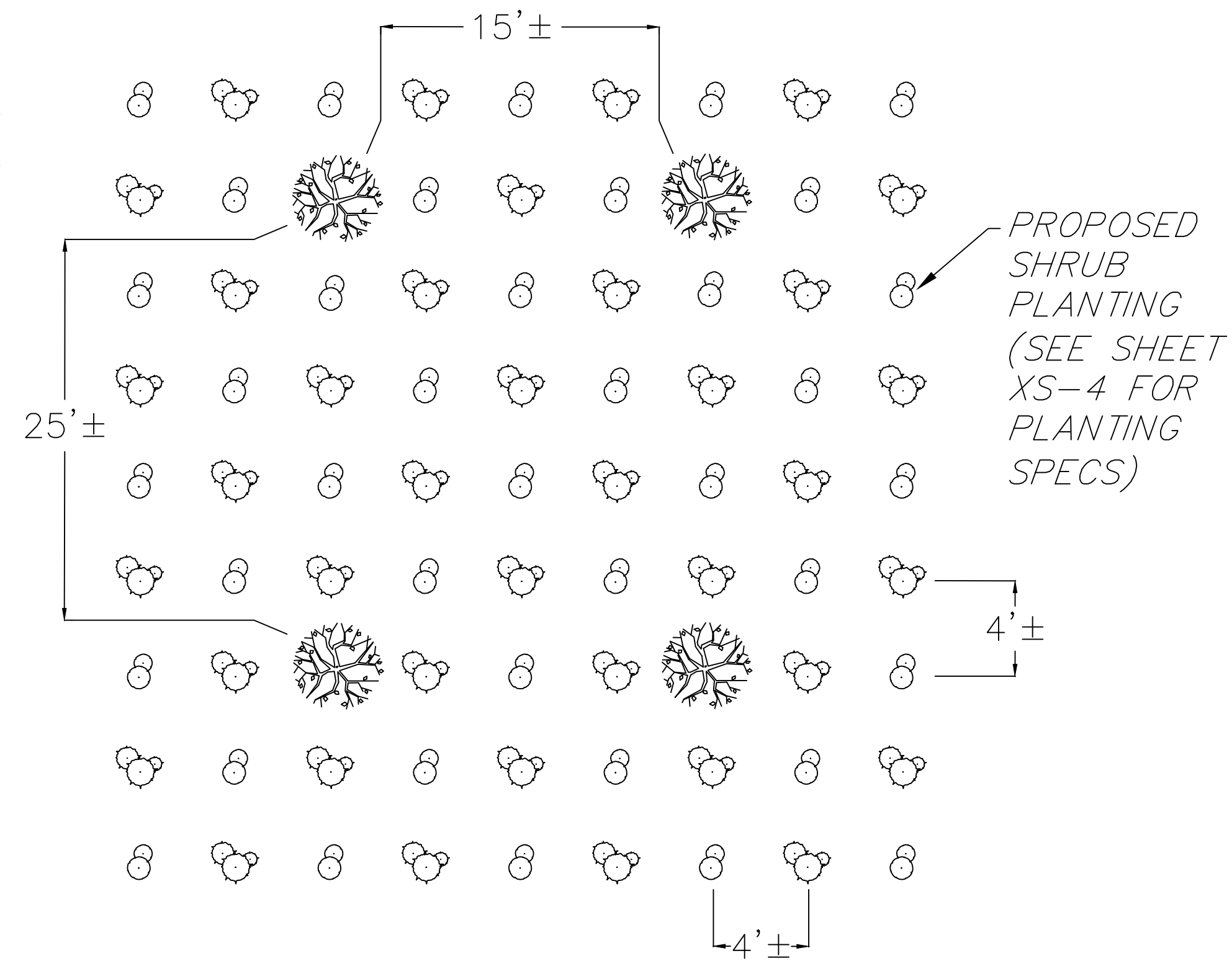
PARENT ID	MAP	BLOCK	LOT	UNIT	OWNER NAME	LOCATION	MUNI	ACRES	ZONING	LAND USE	COMMENT	MAIL ADDR	MAIL CITY	MAIL STATE	MAIL ZIP
49-11A	49	11A-10			STARFORD COMMONS LLC	916 STARFORD AVE	BRISTOL	0.32 R-15		Single Family		1253 BURNINGHAM AVE	BRISTOL	CT	06010
49-11A-10	49	11A-10			STARFORD COMMONS LLC	916 STARFORD AVE	BRISTOL	1.33 BN		Single Family		200 SUMNER ST	BRISTOL	CT	06010
51-1	51	1			ORRIN CRISTAL	3 STEVENS ST	BRISTOL	0.72 R-15		Single Family		3 STEVENS ST	BRISTOL	CT	06010
51-1	51	1			ROCKON RICHARD	108 CANDY LA	BRISTOL	0.28 R-15		Single Family		108 CANDY LA	BRISTOL	CT	06010
51-1	51	1			BENSTON JANICE	135 STEVENS ST	BRISTOL	0.39 R-15		Single Family		135 STEVENS ST	BRISTOL	CT	06010
51-1	51	1			HARRIS BIRECCA C	8 RICHARD CT	BRISTOL	0.34 R-15		Single Family		8 RICHARD CT	BRISTOL	CT	06010
51-10	51	10			STUART WILLIAM G + RITA M INT TENANTS	107 CANDY LA	BRISTOL	0.49 R-15		Single Family		107 CANDY LA	BRISTOL	CT	06010
51-2	51	2			DONAHOWA FRANK G + CARRIE M	16 RICHARD CT	BRISTOL	0.66 R-15		Single Family		16 RICHARD CT	BRISTOL	CT	06010
51-3	51	3			BARTLEY DAVID + ANANDA SURV	26 RICHARD CT	BRISTOL	0.46 R-15		Single Family		26 RICHARD CT	BRISTOL	CT	06010
51-3A	51	3A			CALLAHAN JOSHUA	165 STEVENS ST	BRISTOL	0.37 R-15		Single Family		15 PINNACLE RIDGE FARM CANTON	BRISTOL	CT	06019
51-3B-1	51	3B-1			COMBS CAMERON	167 STEVENS ST	BRISTOL	0.35 R-15		Single Family		167 STEVENS ST	BRISTOL	CT	06010
51-4	51	4			REBEZ JESY + WIOLETA	36 RICHARD CT	BRISTOL	0.43 R-15		Single Family		36 RICHARD CT	BRISTOL	CT	06010
51-5	51	5			HARVEY BEATA + MATTHEW J	46 RICHARD CT	BRISTOL	0.6 R-15		Single Family		46 RICHARD CT	BRISTOL	CT	06010
51-6	51	6			LAPLANTE ZACHARY C	60 RICHARD CT	BRISTOL	0.76 R-15		Single Family		60 RICHARD CT	BRISTOL	CT	06010
51-7	51	7			MCGLOULIN WILLIAM E + GRACE	72 RICHARD CT	BRISTOL	0.49 R-15		Single Family		72 RICHARD CT	BRISTOL	CT	06010
51-015-A-4	52	015-A-4			D'AMATO MICHAEL + LISA SURV	176 STEVENS ST	BRISTOL	0.25 R-15		Single Family		176 STEVENS ST	BRISTOL	CT	06010
52-1	52	1			SIMONE JOSEPH WILLIAM	25 TIMBER LA	BRISTOL	0.39 R-15		Single Family		25 TIMBER LA	BRISTOL	CT	06010
52-1	52	1			CONTINUUM OF CARE INC	276 STEVENS ST	BRISTOL	2.1 R-15		Single Family		109 LEGION AVE	NEW HAVEN	CT	06519
52-10	52	10			DEFLUO SHERI L	45 WOODBROOK RD	BRISTOL	0.46 R-15		Single Family		45 WOODBROOK RD	BRISTOL	CT	06010
52-10	52	10			CURRENT OWNER	76 JEFFERSON AVE	BRISTOL	0.32							
52-11	52	11			MORELLI MICHAEL + MICHELLE L	35 WOODBROOK RD	BRISTOL	0.46 R-15		Single Family		35 WOODBROOK RD	BRISTOL	CT	06010
52-11	52	11			CURRENT OWNER	68 JEFFERSON AVE	BRISTOL	0.31							
52-11	52	1-1			NEWMAN KAREN E	87 TIMBER LA	BRISTOL	1 R-15		Single Family		87 TIMBER LA	BRISTOL	CT	06010
52-12	52	1-2			ST ANDREW EVANGELICAL LUTHERAN	1125 STARFORD AVE	BRISTOL	10.40	Church 34			1125 STARFORD AVE	BRISTOL	CT	06010
52-12	52	12			AKADOWN ESSE	25 WOODBROOK RD	BRISTOL	0.46 R-15		Single Family		25 WOODBROOK RD	BRISTOL	CT	06010
52-13	52	13			MADONN ALLEN E AND CATHERINE M	15 WOODBROOK RD	BRISTOL	0.46 R-15		Single Family		15 WOODBROOK RD	BRISTOL	CT	06010
52-14	52	14			RUGHTON SUSAN M	5 WOODBROOK RD	BRISTOL	0.44 R-15		Single Family		5 WOODBROOK RD	BRISTOL	CT	06010
52-14-1	52	14-1			RAMSEY JASON M + STEPHANIE	250 STEVENS ST	BRISTOL	2.41 R-15		Single Family		250 STEVENS ST	BRISTOL	CT	06010
52-14A	52	14A			LOHME ANDREW + LUMLEY LISA TRUSTEES	236 STEVENS ST	BRISTOL	0.5 R-15		Single Family		236 STEVENS ST	BRISTOL	CT	06010
52-15A-10A-2	52	15A-10A-2			SCHNEIDER ERNEST W JR	186 STEVENS ST	BRISTOL	0.39 R-15		Single Family	MERGED BY USE IN ORDER TO MATCH ASSESSOR RECORDS	186 STEVENS ST	BRISTOL	CT	06010
52-15A	52	15A-1			BYRNE SABRINA	186 STEVENS ST	BRISTOL	0.35 R-15		Single Family		186 STEVENS ST	BRISTOL	CT	06010
52-15A-3	52	15A-3			CASTONGUAY BERNARD D	206 STEVENS ST	BRISTOL	0.26 R-15		Single Family		206 STEVENS ST	BRISTOL	CT	06010
52-15B	52	15B			BROUSSAL DAVID R	134 STEVENS ST	BRISTOL	0.28 R-15		Single Family		134 STEVENS ST	BRISTOL	CT	06010
52-15-C	52	15-C			WASKO PAMELA D	222 STEVENS ST	BRISTOL	0.28 R-15		Single Family		222 STEVENS ST	BRISTOL	CT	06010
52-16	52	16			WHEELER MARGARET R + JOHN H SR	84 WOODHAVEN RD	BRISTOL	0.61 R-15		Single Family		84 WOODHAVEN RD	BRISTOL	CT	06010
52-17	52	17			JANE STEVEN + SHARON M	64 WOODHAVEN RD	BRISTOL	0.71 R-15		Single Family		64 WOODHAVEN RD	BRISTOL	CT	06010
52-17	52	17			ZIGHE ANDREW + LUMLEY LISA TRUSTEES	5 TIMBER LA	BRISTOL	0.37 R-15		Single Family		112 MADISON DR	BRISTOL	CT	06010
52-17-1	52	17-1			NEUMANN DAVID LIFE USE	634 JEROME AVE	BRISTOL	0.56 R-15		Single Family		634 JEROME AVE	BRISTOL	CT	06010
52-17-1A	52	17-1A			BENTLEY HENRY G JR + TAFFIE A SURV LIFE	624 JEROME AVE	BRISTOL	0.46 R-15		Single Family		624 JEROME AVE	BRISTOL	CT	06010
52-17-1B	52	17-1B			RUCHAS JOSEPH A + JOAN M	636 JEROME AVE	BRISTOL	0.38 R-15		Single Family		636 JEROME AVE	BRISTOL	CT	06010
52-17-2	52	17-2			BAILEY BARBARA L	602 JEROME AVE	BRISTOL	0.19 R-15		Single Family		602 JEROME AVE	BRISTOL	CT	06010
52-17-2A	52	17-2A			OLSON DIANE M	690 JEROME AVE	BRISTOL	0.5 R-15		Single Family		690 JEROME AVE	BRISTOL	CT	06010
52-17-3	52	17-3			JOHNSON JEREMIAH R + ROY LINDA L	326 JEROME AVE	BRISTOL	0.32 R-15		Single Family		326 JEROME AVE	BRISTOL	CT	06010
52-17-4	52	17-4			HATCHCOCK CHARLES + MARISA L SURV	588 JEROME AVE	BRISTOL	0.48 R-15		Single Family		588 JEROME AVE	BRISTOL	CT	06010
52-17-5	52	17-5			LOMBARD ANTHONY G + MARCIA M	682 JEROME AVE	BRISTOL	0.88 R-15		Single Family		682 JEROME AVE	BRISTOL	CT	06010
52-17-6	52	17-6			WILLIAMS THOMAS D + KASE	644 JEROME AVE	BRISTOL	0.21 R-15		Single Family		644 JEROME AVE	BRISTOL	CT	06010
52-17-7	52	17-7			KIRSCHNER JAMES R +	606 JEROME AVE	BRISTOL	0.78 R-15		Single Family		606 JEROME AVE	BRISTOL	CT	06010
52-17-8	52	17-8			PALMISTO CORY JAMES + ABRAMS EDEN P +	746 JEROME AVE	BRISTOL	0.5 R-15		Single Family		746 JEROME AVE	BRISTOL	CT	06010
52-17-9	52	17-9			LOMBARD ANTHONY G + MARCIA M SURV	636 JEROME AVE	BRISTOL	0.78 R-15		Single Family		636 JEROME AVE	BRISTOL	CT	06010
52-17A	52	17A			RICH VICTOR SEAN B	578 JEROME AVE	BRISTOL	0.41 R-15		Single Family		578 JEROME AVE	BRISTOL	CT	06010
52-17C	52	17C			MURPHY MICHAEL	636 JEROME AVE	BRISTOL	0.46 R-15		Single Family		636 JEROME AVE	BRISTOL	CT	06010
52-18	52	18			BUCK JENNIFER J	56 WOODHAVEN RD	BRISTOL	0.72 R-15		Single Family		56 WOODHAVEN RD	BRISTOL	CT	06010
52-18	52	18			HIGGINS LAMAR F	562 JEROME AVE	BRISTOL	0.41 R-15		Single Family		562 JEROME AVE	BRISTOL	CT	06010
52-18	52	18			MICCICI BARBARA	15 TIMBER LA	BRISTOL	0.36 R-15		Single Family		15 FAULKNR RD	FORESTVILLE	CT	06010
52-18A	52	18A			568 JEROME AVE LLC	568 JEROME AVE	BRISTOL	0.41 R-15	Retail			133 CHESTNUT RD	NEWINGTON	CT	06111
52-19	52	19			MCDONOUGH JEFFREY T + MARCIA B SURV	48 WOODHAVEN RD	BRISTOL	0.81 R-15		Single Family		48 WOODHAVEN RD	BRISTOL	CT	06010
52-19	52	19			SUTULA DANIEL P	135 DEBRA LA	BRISTOL	0.13 R-15		Single Family		135 DEBRA LA	BRISTOL	CT	06010
52-2	52	2			GIANNINI JOHN D JR	35 TIMBER LA	BRISTOL	0.35 R-15		Single Family		35 TIMBER LA	BRISTOL	CT	06010
52-20	52	20			MARRAS SAM J	42 WOODHAVEN RD	BRISTOL	0.32 R-15		Single Family		42 WOODHAVEN RD	BRISTOL	CT	06010
52-21	52	21			SELEDONIA BRIAN J + JENNIFER J	44 STEVENS ST	BRISTOL	0.28 R-10		Single Family		44 STEVENS ST	BRISTOL	CT	06010
52-21	52	21			NORMAN JOHN + ANNE SURV	34 WOODHAVEN RD	BRISTOL	0.4 R-15		Single Family		34 WOODHAVEN RD	BRISTOL	CT	06010
52-22	52	22			LEWANDOWSKI EDWARD +	24 WOODHAVEN RD	BRISTOL	0.36 R-15		Single Family		24 WOODHAVEN RD	BRISTOL	CT	06010
52-23	52	23			BEATON STEPHEN W	14 WOODHAVEN RD	BRISTOL	0.38 R-15		Single Family		14 WOODHAVEN RD	BRISTOL	CT	06010
52-3	52	3			CURRENT RESIDENT	45 TIMBER LA	BRISTOL	0.34 R-15		Single Family		45 TIMBER LA	BRISTOL	CT	06010
52-32	52	32			DOODY MAREE B	6 SHAWN DR	BRISTOL	0.22 R-10		Single Family		6 SHAWN DR	BRISTOL	CT	06010
52-33	52	33			TRUDEL KEVIN F	68 STEVENS ST	BRISTOL	0.24 R-10		Single Family		68 STEVENS ST	BRISTOL	CT	06010
52-34	52	34			ARCHAMBAULT RYAN + TABARA	60 STEVENS ST	BRISTOL	0.32 R-10		Single Family		60 STEVENS ST	BRISTOL	CT	06010
52-35	52	35			VARRONE JOSEPH L	52 STEVENS ST	BRISTOL	0.27 R-10		Single Family		52 STEVENS ST	BRISTOL	CT	06010
52-4	52	4			DECARDO MARY L	55 TIMBER LA	BRISTOL	0.34 R-15		Single Family		55 TIMBER LA	BRISTOL	CT	06010
52-5	52	5			MARTINELLI LINDA S	81 WOODHAVEN RD	BRISTOL	0.36 R-15		Single Family		81 WOODHAVEN RD	BRISTOL	CT	06010
52-5	52	5			ANGELLO DAVID + MOTTASAMANTHA JOINT	165 TIMBER LA	BRISTOL	0.34 R-15		Single Family		165 TIMBER LA	BRISTOL	CT	06010
52-5	52	5			HARRINGTON CAROLE D	5 BRIDGEPORT AVE	BRISTOL	0.36 R-15		Single Family		5 BRIDGEPORT AVE	BRISTOL	CT	06010
52-54	52	54			CLARK DA + TODD R	13 BRIDGEPORT AVE	BRISTOL	0.29 R-15		Single Family		13 BRIDGEPORT AVE	BRISTOL	CT	06010
52-55	52	55			RAVIA JOSEPH + ELIZABETH W TRUSTEES LUT	21 BRIDGEPORT AVE	BRISTOL	0.29 R-15		Single Family		21 BRIDGEPORT AVE	BRISTOL	CT	06010
52-56	52	56			COSTELLO GREGORY	31 BRIDGEPORT AVE	BRISTOL	0.29 R-15		Single Family		31 BRIDGEPORT AVE	BRISTOL	CT	06010
52-57	52	57			CARPENTER NANCY P	39 BRIDGEPORT AVE	BRISTOL	0.29 R-15		Single Family		39 BRIDGEPORT AVE	BRISTOL	CT	06010
52-58	52	58			DAKES VERNIE A JR ESTATE OF + BETTY L	47 BRIDGEPORT AVE	BRISTOL	0.28 R-15		Single Family		47 BRIDGEPORT AVE	BRISTOL	CT	06010
52-59	52	59			WIMAN JEFFREY + KATHLEEN M SURV	45 BRIDGEPORT AVE	BRISTOL	0.28 R-15		Single Family		45 BRIDGEPORT AVE	BRISTOL	CT	06010
52-6	52	6			ANDERSON DAVID G + SHARON S SURV	75 TIMBER LA	BRISTOL	0.34 R-15		Single Family		75 TIMBER LA	BRISTOL	CT	06010
52-60	52	60			AUGUST BENJAMIN	67 BRIDGEPORT AVE	BRISTOL	0.36 R-15		Single Family		67 BRIDGEPORT AVE	BRISTOL	CT	06010
52-61	52	61			COPPERHINE HOUSING ASSOCIATES LLC	135 SHAWN DR	BRISTOL	7.1 A	Apartments		2 CENTER PLAZA SUITE 700 BOSTON	MA	02108		
52-62	52	62			CURRENT OWNER	130 JEFFERSON AVE #1	BRISTOL	0 A		Condo Res.					
52-63	52	63			CURRENT OWNER	130 JEFFERSON AVE #2	BRISTOL	0 A							
52-64	52	64			CURRENT OWNER	130 JEFFERSON AVE #3	BRISTOL	0							
52-65	52	65			CURRENT OWNER	130 JEFFERSON AVE #4	BRISTOL	0.27 R-15		Single Family		102 DANBURY LA	BRISTOL	CT	06010
52-65	52	65			CURRENT OWNER	102 DANBURY LA	BRISTOL	0							
52-66	52	66			CURRENT OWNER	130 JEFFERSON AVE #5	BRISTOL	0							
52-67	52	67			CURRENT OWNER	92 DANBURY LA	BRISTOL	0.28 R-15		Single Family		92 DANBURY LA	BRISTOL	CT	06010
52-68	52	68			CURRENT OWNER	130 JEFFERSON AVE #6	BRISTOL	0							
52-69	52	69			CURRENT OWNER	84 DANBURY LA	BRISTOL	0.28 R-15		Single Family		84 DANBURY LA	BRISTOL	CT	06010
52-7	52	7			CURRENT OWNER	130 JEFFERSON AVE #7	BRISTOL	0							
52-71	52	71			PICARO ANNA MAE	76 DANBURY LA	BRISTOL	0.29 R-15		Single Family		76 DANBURY LA	BRISTOL</		

ATTACHMENT 5

WETLAND REPLICATION AREAS



PLANTING PLAN



COMPREHENSIVE ENVIRONMENTAL
INCORPORATED

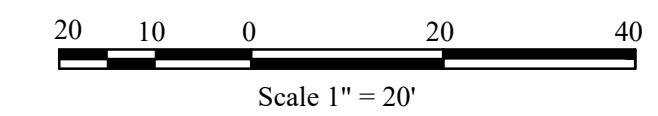
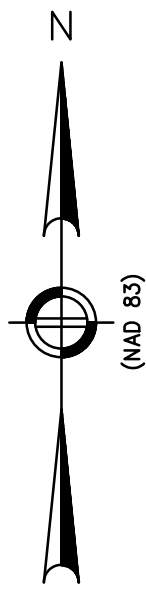


1 Hartford Square — East, Suite 2227.
New Britain, CT 06052

WETLAND REPLACEMENT
AREA 1
WHITEBRIDGE
CITY OF BRISTOL, CT

Project No.: 702	Sheet
Date: 12/1/2022	WR-1
Drawn By: NP	
Checked By: SA	
Scale: AS SHOWN	





COMPREHENSIVE ENVIRONMENTAL
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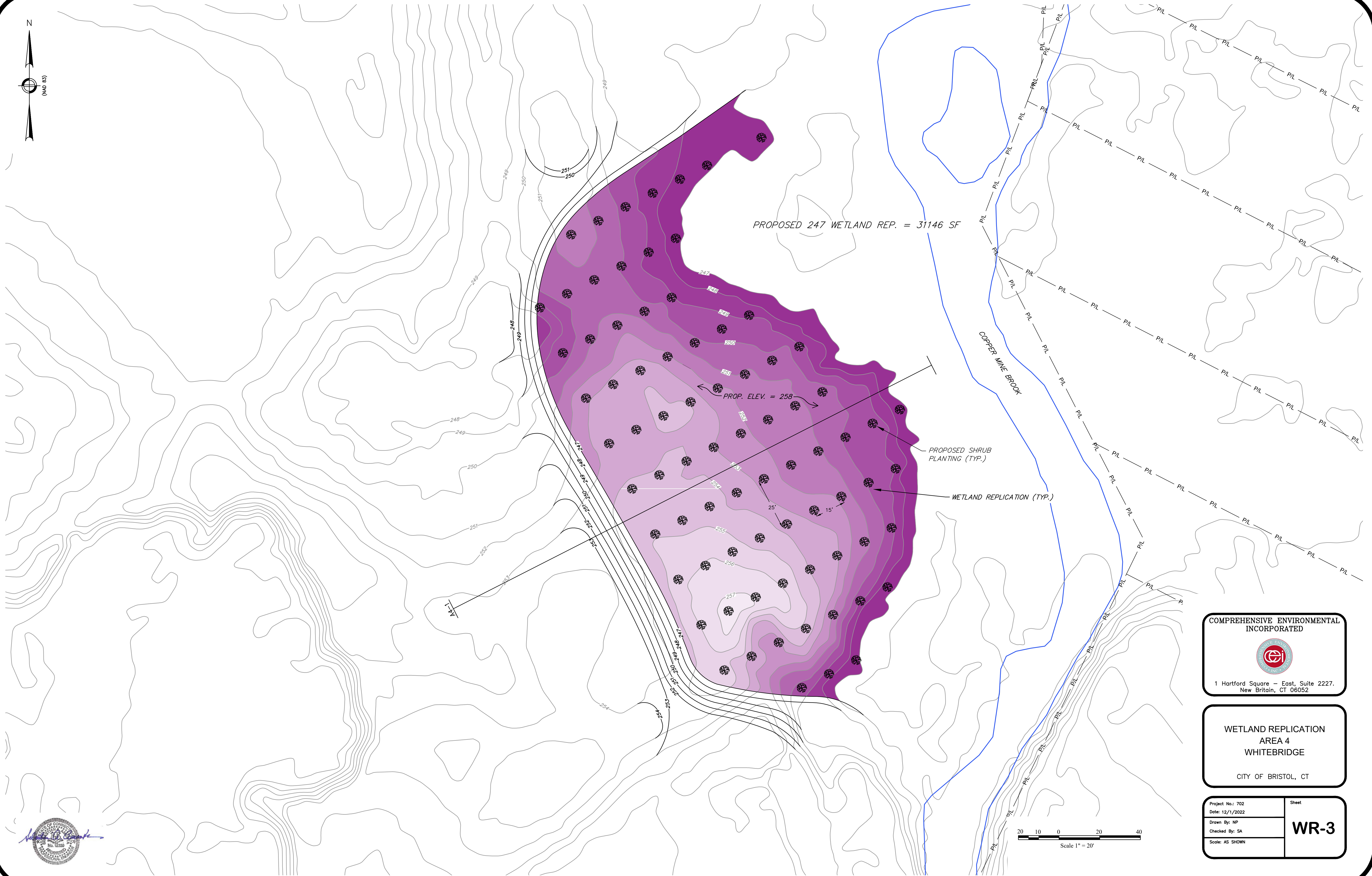
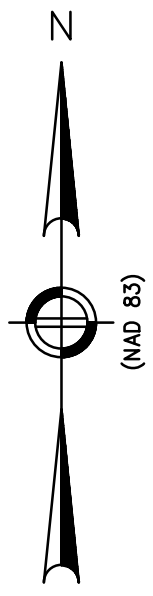
1 Hartford Square — East, Suite 2227.
New Britain, CT 06052

WETLAND REPLICATION
AREA 2
WHITEBRIDGE

CITY OF BRISTOL, CT

Project No.: 702
Date: 12/1/2022
Drawn By: NP
Checked By: SA
Scale: AS SHOWN

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WR-2



COMPREHENSIVE ENVIRONMENTAL
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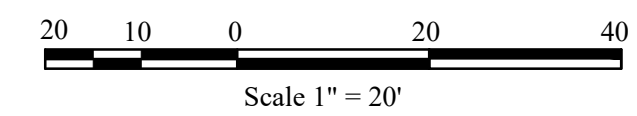


1 Hartford Square — East, Suite 2227.
New Britain, CT 06052

WETLAND REPLICATION
AREA 4
WHITEBRIDGE

CITY OF BRISTOL, CT

Project No.: 702	Sheet
Date: 12/1/2022	WR-3
Drawn By: NP	
Checked By: SA	
Scale: AS SHOWN	



LINK TO SOIL SCIENTIST REPORT:

<https://www.bristolct.gov/DocumentCenter/View/45918/Soil-Scientist-Report-Extracted>

ATTACHMENT 6
SOIL SCIENTIST
REPORT

LINK TO STORMWATER MANAGEMENT REPORT:

<https://www.bristolct.gov/DocumentCenter/View/45917/SW-Report-Extracted>

ATTACHMENT 7

STORMWATER MANAGEMENT REPORT

23-458F-305

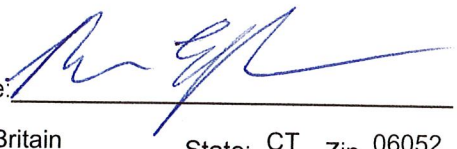
APPLICATION NO. _____

DATE FILED: 12-28-23

APPROVED: _____

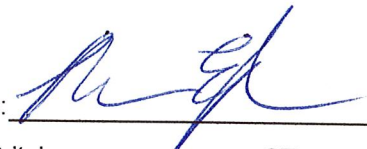
DENIED: _____

**BRISTOL FLOOD & EROSION COMMISSION
FLOOD PLAIN APPLICATION
PERMIT FOR FLOOD PLAIN DEVELOPMENT**

1. APPLICANT:Name: New Britain Water Department, Ramon Esponda Signature: 

Address: 1000 Shuttle Meadow Ave City: New Britain State: CT Zip 06052

Telephone No.: (860) 826-3535 [] home [X] work

2. PROPERTY OWNER(S):Name: New Britain Water Department, Ramon Esponda Signature: 

Address: 1000 Shuttle Meadow Ave City: New Britain State: CT Zip 06052

Telephone No.: (860) 826-3535 [] home [X] work

3. DESCRIBE THE SUBJECT PROPERTY:

Address or Location: Upper and Lower Wellfields via Maltby Street

Assessor's Map No.: 52, 53 Assessor's Lot No.(s): 11, 15, 16B16A, 17, 145, 147, 149, 150, 151

Street of Access: Maltby Street

Name of Watercourse or Water Body: Copper Mine Brook, Polkville Ave Brook

FIRM Panel Number: 458 of 675 Total Area of Lot(s): 303.7 acres

4. PROJECT DESCRIPTION:

Flood Plain use for which the applicant is seeking a permit. (check one)

[] a. Permitted Use [X] b. Regulated Use [] c. Special Exception

Describe the proposed activity and its purpose: The White Bridge Wellfield Rehabilitation project includes the replacement and restoration of the White Bridge Waterworks Facility located in Bristol, CT. This project involves the demolition and removal of existing structures in addition to the construction of new groundwater wells, a new pump house and underground piping.

Proposed encroachment of Flood fringe area (S.F. or acres): 94,660 SQ. FT.

Proposed encroachment of Regulated Floodway (S.F. or acres): 28,619 SF

Proposed alteration of Watercourse (L.F., S.F. or acres): 0 SF

Flood proofing techniques proposed: Wellheads and New Structures built 2 feet above 100yr flood elevation.

Disturbance of designated wetland area: [] No [X] Yes: Permit Number: Pending

Date applied for: 12/28/2023 Disposition: Pending

BRISTOL FLOOD & EROSION COMMISSION FLOOD PLAIN APPLICATION PERMIT FOR FLOOD PLAIN DEVELOPMENT

5. TECHNICAL & PLANNING DATA:

Project Specifics: Provide the following information from official sources or submitted documentation.

All elevations are to be relative to mean sea level.

Existing base flood flow rate:	2710 CFS & 4230 CFS	Source:	StreamStats 1%, Upper and Lower Wellfields
Existing base flood elevation:	259.0' & 255.9' NAVD88	Source:	FEMA FIRM, Upper and Lower Wellfields
Lowest floor elevation of existing buildings including garage or basements:	253' @ Lower Wellfield		
Lowest floor elevation of proposed building including garage or basements:	258' @ Lower Wellfield		
Will there be dry access to the structure(s) during the 100 year flood?	Yes		

Floodplain Alterations Proposed:

Volume of displaced Flood Plain:	7,305-CU. YDS.		6,643 Cubic Yards
Volume of mitigated Flood Plain:	17,616-CU. YDS.		14,198 Cubic Yards

Floodway Alterations Proposed:

Length of reconstructed or altered floodway:	85 FT & 325 FT; Upper and Lower		
Proposed base flood flow rate:	2710 CFS & 4230 CFS; Upper and Lower		
Proposed base flood elevation:	259.0' & 255.9' NAVD88; Upper and Lower		

6. AUTHORIZATIONS AND CERTIFICATIONS:

- a. I/we hereby authorize the commissioners and agents of the Bristol Flood and Erosion Agency to inspect the subject property at reasonable times, both before and after a final decision has been made regarding this application or request.
- b. I/we hereby certify that I/we am/are familiar with the information included in this application and am/are aware that the law provides that any person who commits, takes part in, or assists in any violation of any provision of the Connecticut General Statutes, including regulations adopted by the Commissioner of Environmental Protection and ordinances and regulations of the City of Bristol through its Flood and Erosion Agency and Inland Wetlands Agency, shall be assessed a civil penalty of not more than one thousand dollars for each offense. I/we further certify that I/we am/are aware that it is a violation of law to obtain a flood plain permit or ruling through deception or through inaccurate or misleading information.
- c. I/we hereby certify that this application shall be considered complete only when all information and documents required by the Administrator have been submitted.

7. SUBMISSION REQUIREMENTS:

The following shall be included as part of this application:

- filing fee – make checks payable to "City of Bristol,"
\$5.00 Permitted Use, \$50.00 for Regulated Use, and \$100.00 for Special Exception
- ten copies of a Site Plan showing existing and proposed conditions in relation to the flood plain, floodway, watercourses, and/or wetlands prepared in accordance with the Regulations,
- any other information as may be required by the Agency

☐ Site Plans	☐ Detail Plans	☐ Construction Specifications
☐ Drainage Computations	☐ Flood Proofing Details	☐ Flood Proofing Certification

BRISTOL FLOOD & EROSION COMMISSION FLOOD PLAIN APPLICATION PERMIT FOR FLOOD PLAIN DEVELOPMENT

Page 2

5. TECHNICAL & PLANNING DATA:

Project Specifics: Provide the following information from official sources or submitted documentation.

All elevations are to be relative to mean sea level.

Existing base flood flow rate: 2710 CFS & 4230 CFS Source: StreamStats 1%, Upper and Lower Wellfields
Existing base flood elevation: 259.0' & 255.9' NAVD88 Source: FEMA FIRM, Upper and Lower Wellfields
Lowest floor elevation of existing buildings including garage or basements: 253' @ Lower Wellfield
Lowest floor elevation of proposed building including garage or basements: 258' @ Lower Wellfield
Will there be dry access to the structure(s) during the 100 year flood? Yes

Floodplain Alterations Proposed:

Volume of displaced Flood Plain: 7,305 CU. YDS.

Volume of mitigated Flood Plain: 17,616 CU. YDS.

Floodway Alterations Proposed:

Length of reconstructed or altered floodway: 85 FT & 325 FT; Upper and Lower

Proposed base flood flow rate: 2710 CFS & 4230 CFS; Upper and Lower

Proposed base flood elevation: 259.0' & 255.9' NAVD88; Upper and Lower

6. AUTHORIZATIONS AND CERTIFICATIONS:

- I/we hereby authorize the commissioners and agents of the Bristol Flood and Erosion Agency to inspect the subject property at reasonable times, both before and after a final decision has been made regarding this application or request.
- I/we hereby certify that I/we am/are familiar with the information included in this application and am/are aware that the law provides that any person who commits, takes part in, or assists in any violation of any provision of the Connecticut General Statutes, including regulations adopted by the Commissioner of Environmental Protection and ordinances and regulations of the City of Bristol through its Flood and Erosion Agency and Inland Wetlands Agency, shall be assessed a civil penalty of not more than one thousand dollars for each offense. I/we further certify that I/we am/are aware that it is a violation of law to obtain a flood plain permit or ruling through deception or through inaccurate or misleading information.
- I/we hereby certify that this application shall be considered complete only when all information and documents required by the Administrator have been submitted.

7. SUBMISSION REQUIREMENTS:

The following shall be included as part of this application:

- filing fee – make checks payable to "City of Bristol,"
\$5.00 Permitted Use, \$50.00 for Regulated Use, and \$100.00 for Special Exception
- ten copies of a Site Plan showing existing and proposed conditions in relation to the flood plain, floodway, watercourses, and/or wetlands prepared in accordance with the Regulations,
- any other information as may be required by the Agency
 - ☐ Site Plans ☐ Detail Plans ☐ Construction Specifications
 - ☐ Drainage Computations ☐ Flood Proofing Details ☐ Flood Proofing Certification

BFEC-12/01

Wetlands Permit Application – Flood & Erosion Control

Project Narrative:

A rehabilitative project will be conducted at the Upper and Lower Wellfields of the White Bridge Waterworks Facility owned by the New Britain Water Department (NBWD) accessed via Maltby Street. The purpose of this project is to redevelop the existing Upper and Lower Wellfields, which were constructed in the 1940s and 1921, respectively. Presently, these wellfields serve as a raw water supply only. The age of the wellfields is such that they have come to the end of their useful life and repair and replacement equipment is no longer available. The NBWD needs to upgrade the facilities and modernize the equipment.

To become a potable water supply, any new wells must be located 50 feet from any water body or wetlands boundary per Department of Public Health (DPH) requirements. In addition, the wells must be raised 2' above the one-hundred-year flood plain elevation. The majority of the NBWD owned property related to this project is within the 100-year floodplain. Because of these requirements, the existing wells cannot be redrilled or rehabilitated in their present location. All currently existing wells will be abandoned in accordance with DPH requirements. The Lower Wellfield may but suitable as a public water supply subject to the ground water under the direct influence of surface water testing which will be done once the project is completed in a future phase of construction.

Proposed activities for the project include the demolition of pre-existing structures in addition to the construction of new groundwater wells, a pump house and underground piping. Pre-existing structures include the Upper Wellfield pump station, Pond pump station and Well pump station. Two of those pre-existing buildings are within the floodway. The new pump house structure will be outside of the floodway. Compensatory flood storage areas will be created so as to not increase the current flood elevation levels as given by FEMA guidelines. These compensatory storage areas will also create additional wetland areas.

The project will impact approximately 31,000 square feet of wetlands. As part of the project, wetlands replication will be done at a ratio of greater than two to one. The new structure and facilities will add approximately ~~7,000~~ 6,543 cubic yards of fill within the floodplain. As part of the project, over ~~17,000~~ 14,198 cubic yards of material will be removed from the flood plain.

As part of the scope of work of this project various areas within both the flood fringe and floodway will be encroached upon. See attached maps for the extent of the encroachment within both areas.

Erosion & Sedimentation Control:

The erosion and sedimentation control measures at the White Bridge facility focus on the protection of wetlands and waterways during and following construction since the work includes land disturbances, excavation dewatering, supply pond and canal sediment removal activities, and other associated construction activities. Several methods are included on the Drawings to slow the flow of runoff and protect disturbed land during construction activities. Please refer to the project plans for typical details of measures to protect wetlands and waterways during and after construction. The following summary

Pumping Station					
Fill			Cut		
Contour	Volume C.F.		Contour	Volume C.F.	Net C.F.
250	8,622		250	0	8,622
251	17,313		251	183	17,130
252	29,777		252	4,202	25,575
253	28,376		253	4,202	24,175
254	25,800		254	4,202	21,598
255	23,466		255	4,202	19,264
256	21,270		256	4,202	17,069
257	14,512		257	4,202	10,311

143,745 Fill C.F.

Upper Wellfield					
Fill			Cut		
Contour	Volume C.F.		Contour	Volume C.F.	Net C.F.
256	2,257		256	0	2,257
257	3,806		257	0	3,806
258	5,733		258	0	5,733
259	2,045		259	0	2,045

13,840 Fill C.F.

Lower Wellfield					
Fill			Cut		
Contour	Volume C.F.		Contour	Volume C.F.	Net C.F.
248	914		248	0	914
249	3,932		249	0	3,932
250	0		250	0	0
251	0		251	112	-112
252	6,011		252	635	5,376
253	4,374		253	416	3,958
254	2,994		254	324	2,670
255	1,859		255	251	1,609
256	991		256	151	840
257	0		257	107	-107

19,077 Fill C.F.

Total Project Fill 176,662 Fill C.F.
6,543 Fill C.Y.

Complying Quantity Reference Sheet	UWF Total Needed (C.F.)
CS-1/2	2,257
CS-1/2	3,806
CS-1/2	5,733
CS-1/2	2,045

Complying Quantity Reference Sheet	LWF Total Needed Including Pumping Station (C.F.)
CS-4	914
CS-4	3,932
CS-4	8,622
CS-4	17,019
CS-3/4	30,951
CS-3/4	28,132
CS-3/4	24,268
CS-1/3/4	20,873
CS-3/4	17,908
CS-3/4	10,204

Contour	CS-1	CS-2	CS-3	CS-4	Total (C.F.)	Difference (C.F.)	Over or Need
256	3,903	1,493			5,396	3,139	OVER
257	4,859	6,077			10,936	7,130	OVER
258	23,973	3,689	11,977		39,639	33,906	OVER
259	21,846	1,469	10,447		33,762	31,717	OVER

89,733 C.F. Storage

Note: 1,397 C.F. of this total applied to the Lower Wellfield at contour 256'.

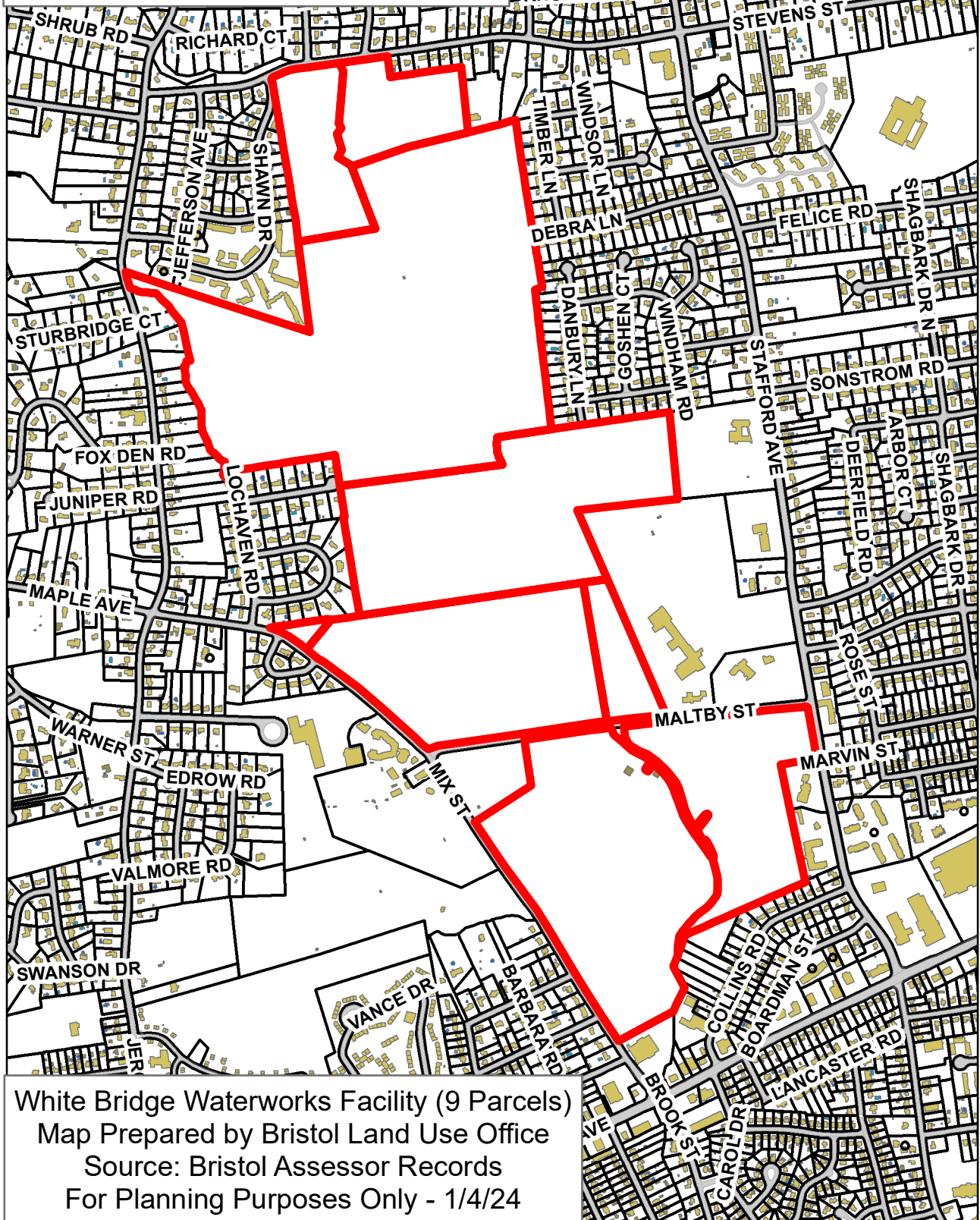
Contour	CS-1	CS-2	CS-3	CS-4	Total (C.F.)	Difference (C.F.)	Over or Need
248				29,192	29,192	28,278	OVER
249				27,921	27,921	23,989	OVER
250				24,902	24,902	16,280	OVER
251				20,309	20,309	3,290	OVER
252			32,168	16,115	48,283	17,332	OVER
253			47,369	13,469	60,838	32,706	OVER
254			20,100	7,973	28,073	3,805	OVER
255	3,004		17,436	3,387	23,827	2,954	OVER
256			15,162	1,349	16,511	-1,397	EVEN
257			13,541	205	13,746	3,542	OVER

293,602 C.F. Storage

Note: Short fall of 1,397 C.F. has been applied from compensatory storage contour 256' at Upper Wellfield.

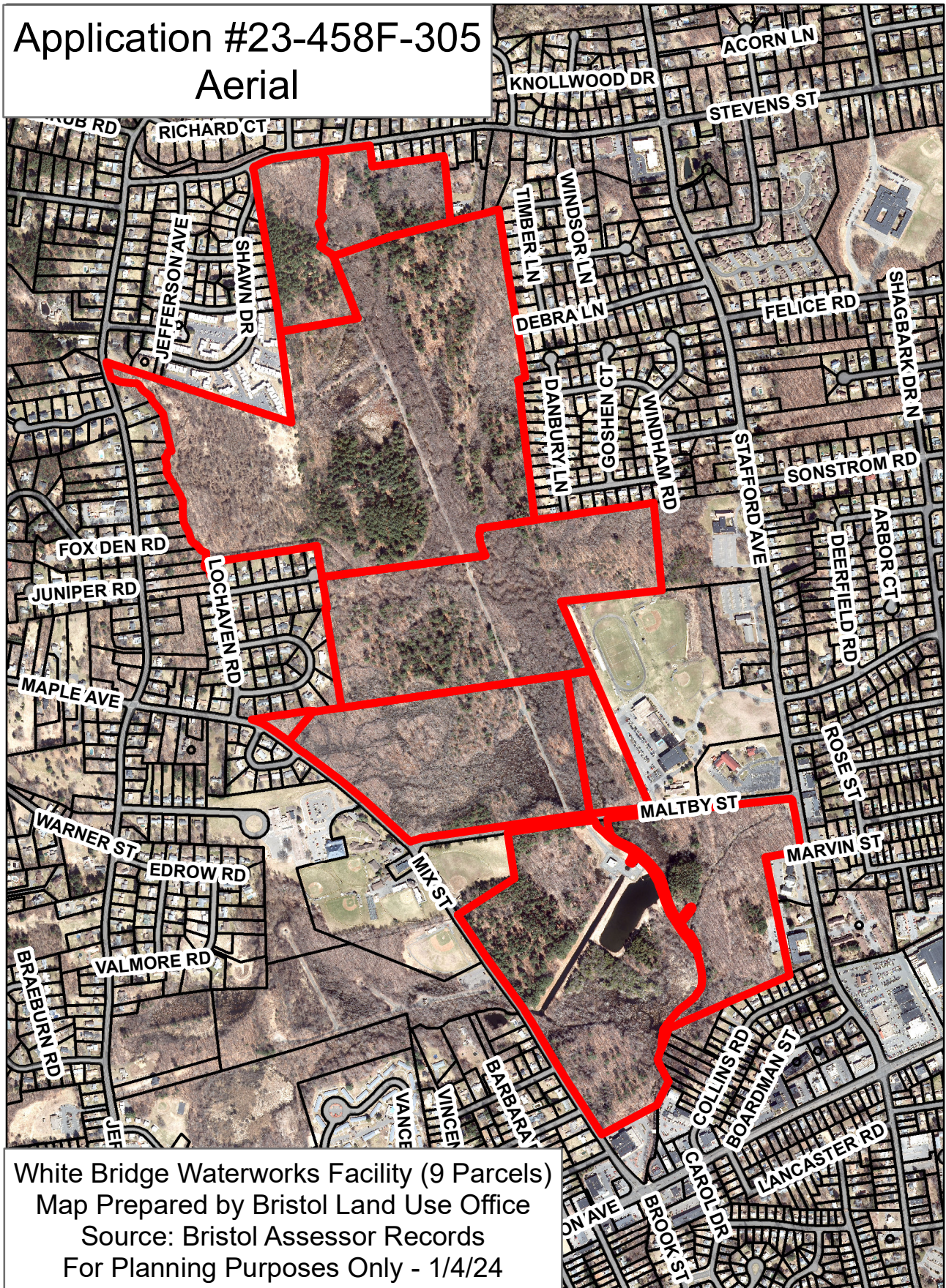
Total Project CS 383,335 C.F. Storage
14,198 C.Y. Storage

Application #23-458F-305 Location

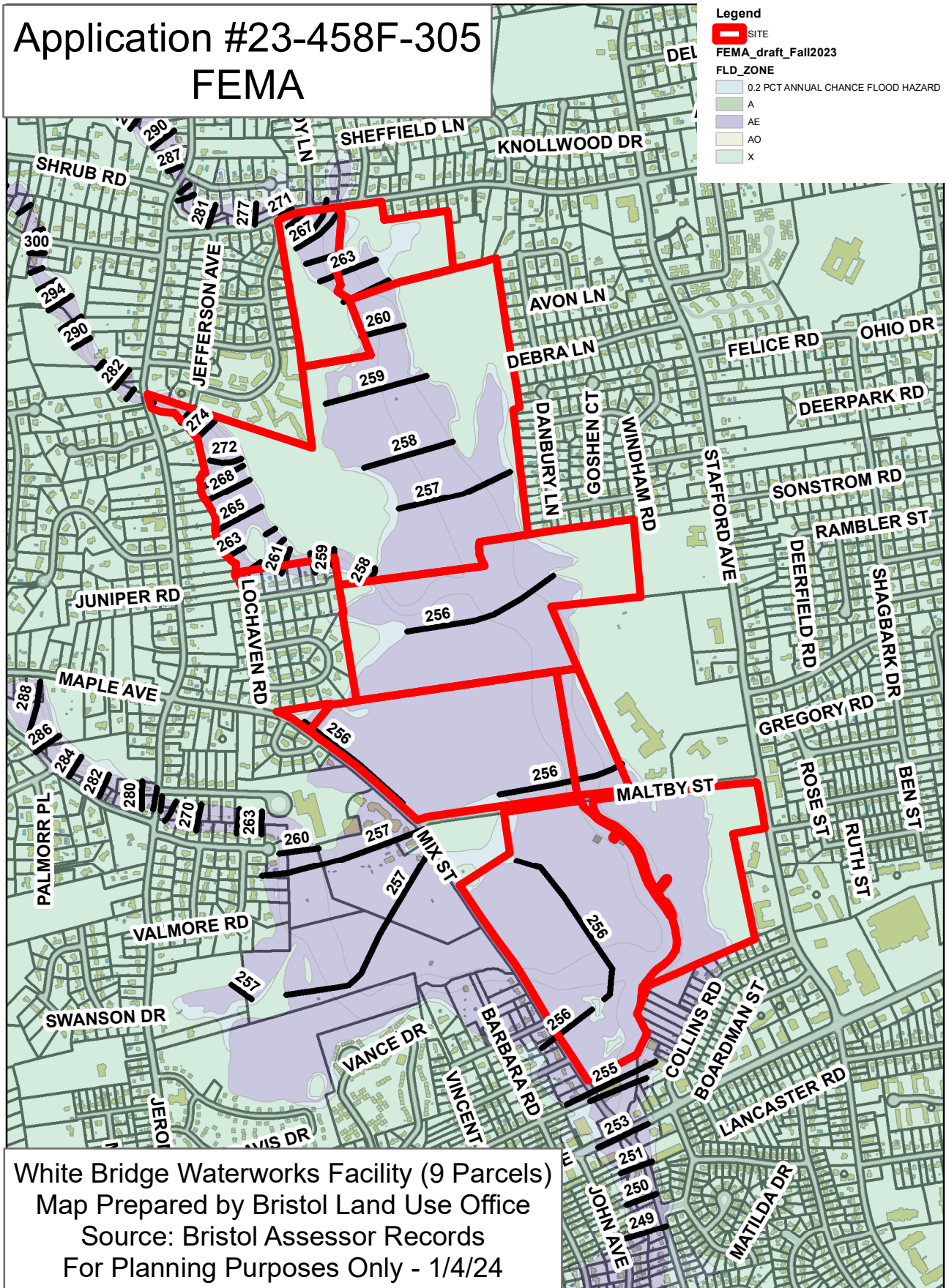


Application #23-458F-305

Aerial



Application #23-458F-305 FEMA





COMPREHENSIVE
ENVIRONMENTAL
INCORPORATED

Gateway Crossing
1 Hartford Square East, Suite 227
New Britain, CT 06052
860.224.0442

May 1, 2024

Mr. Robert Flanagan, City Planner
City Hall
111 North Main Street
Bristol, CT 06010

**RE: Wetlands and Flood Commission Permits- Applications #2019, #2020 & #23-458F-305
Submission of Response to Staff Comments and Supplemental Information**

Dear Mr. Flanagan,

On behalf of the Applicant, the New Britain Water Department, Comprehensive Environmental Inc. (CEI) is providing in this document responses to comments and supplemental information regarding the above referenced applications.

Responses to City Staff Comments:

Comment #1. *Proposed construction wetland “replication” appears to consist of excavation adjacent to existing wetland and installation of 3 inches of hydrophilic soil. Provide additional information associated with the hydrophilic soil specification and post development groundwater depth to support wetland “replication” areas. DPW Engineering Division proposes a min of 12-inch depth of hydrophilic soil within wetland “replication” area. On adjacent 2:1 slopes 6 inches of hydrophilic soil is sufficient. Detail/document short and long term monitoring and wetland “replication” area management plan to ensure long-term viability of area.*

Response #1. The wetland replication and compensatory storage plans and sections have been revised to address the above comments. Please note that due to the presence of a vernal pool in the upper wellfield area the compensatory storage and wetland replication area was moved further north. In addition, the United States Army Corp of Engineers (USACE) has requested a 3:1 wetlands replication as part of their permit review. These changes are reflected in revised sheets WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 and C-14A which are attached herein as **Attachment 1.A**. Also attached as **Attachment 1.B**. are the calculations for the compensatory storage. More information about the vernal pool can be found in the NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC., which is also attached to this document as **Attachment 1.C**. Sheet XS-5 and Section 4 of the NBWD Supplemental Environmental/Wetlands Permit Information detail the short term and long term monitoring for wetland replication.

Comment #2. *Plan indicates dewater sedimentation basin, however provide anticipated/ proposed discharge rates with sizing of sedimentation basins. In addition, indicate controls / monitoring of turbidity discharge from sedimentation basin.*

Response #2. Temporary dewatering sedimentation basins are intended to be used in the event high groundwater is encountered during excavation activities. Anticipated/proposed discharges will vary depending on the required amount of excavation dewatering but typically can range from 20-50 gpm, intermittently. As shown in Detail J of Drawing Sheet C-24 (included herein as **Attachment 2**), the dewatering sedimentation basin size may vary depending on necessity with a 5-foot diameter being the minimum diameter of the basin. Sedimentation basins will be inspected at least once per week and cleaned as needed to remove accumulated sediments. The Contractor may also elect to install permeable geotextile dewatering bags in addition to the dewatering sedimentation basins for sediment filtration.

Comment #3. *Provide construction sequence with durations along with staging plan, areas of stockpile storage and refueling areas.*

Response #3. See the Proposed Construction Sequence Memorandum included in **Attachment 3.A.** for more information, and the associated Drawing Sheets C-20, C-21, and C-22 in Attachment 3.B. Additionally, see Sheet C-1 and C-7 of **Attachment 3.B.** for notes and depiction of Contractor staging, stockpiling, and refueling areas.

Comment #4. *Clarify proposed location of floating turbidity curtain.*

Response #4. Floating turbidity curtains are to be located within the canal, east and west of the proposed sediment removal areas. See revised Sheet C-23 in **Attachment 4.**

Comment #5. *Include installation line of silt fence along the toe of ALL proposed slopes. Silt fence shall be installed prior to construction, be monitored during construction and removed once slopes are stabilized.*

Response #5. Notes requiring the installation of silt fence has been included throughout drawings. See revised sheets C-1, C-6, C-7, C-8, C-13, C-14, C-14A in **Attachment 5.**

Comment #6. *Provide additional detail associated with compensation storage area 3. The plans indicate excavation to elevation 252, however indicate proposed access to area, erosion control and restoration.*

Response #6. The revised plans referenced in Comment Response #1 address these comments.

Comment #7. *Provide additional detail associated with compensation area 4, including additional elevation east of the area between the compensation area and the Coppermine. Detail cross section AA-1 and indicate erosion control measures and proposed access to area.*

Response #7. The revised plans referenced in Comment Response #1 address this comment.

Comment #8. *The Storm Water Management Report is prepared in accordance with the CT Storm Water Quality Manual. As indicated in your report the manual requires maintaining the pre-*

development annual groundwater recharge volume. The report indicates recharge is achieved through reduction in impervious area; however, please indicate impact of additional well withdrawal will have on wetlands.

Response #8. See Section 3 of the NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC., which is included in **Attachment 1.C.**

Comment #9. *Proposed plans indicate flood plain mitigation measures (excavation within flood plain to offset the placement of fill within flood plain). However, Bristol DPW recommends a CLOMR prior to work and will require a LOMR as condition of approval (if approved).*

Response #9. See No Rise Certification included in **Attachment 9.** No objection to coordinating with FEMA for CLOMR/LOMR as a condition of approval.

Responses to North Central Conservation District (Letter Dated March 28, 2024):

1. See the Letter from CT DEEP in **Attachment 10**, which confirms the continued applicability of the Diversion Registration to the facilities and that no diversion permit is required for continued operation of the facilities as proposed with this project.
2. See Section 3 of the NBWD Supplemental Environmental/Wetlands Permit Information, included in **Attachment 1.C.**, concluding no permanent impacts from withdrawals.
3. See Section 5 of the NBWD Supplemental Environmental/Wetlands Permit Information and the related Supplemental Alternatives Evaluation contained therein, detailing alternatives considered for this project. There are no feasible and prudent alternatives to the proposed plan.
4. See Section 5 of the NBWD Supplemental Environmental/Wetlands Permit Information concluding no permanent impacts to wetlands functions and values.

Additional Information Submitted:

1. Detailed Groundwater and Stream Flow Monitoring Plan, as required by CT DPH, is included in **Attachment 11.**
2. Letter confirming hydrogeologic information for project site remains valid. See **Attachment 12.**
3. Proposed wetlands boundary line change map is submitted for consideration. See **Attachment 13.**
4. Resumes of Engineers and Soil Scientist are included in **Attachment 14.**

Attachments Includes:

- Response 1 – Attachments
 - 1.A. Drawings: WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 to and C-14A
 - 1.B. Calculations: Compensatory Storage
 - 1.C. NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC
- Response 2 – Attachment
 - 2. Drawing: C-24
- Response 3 – Attachments
 - 3.A. Proposed Construction Sequence Memorandum
 - 3.B. Drawings: C-1 and C-7; C-20, C-21, and C-22
- Response 4 – Attachment

- 4. Drawing: C-23
- Response 5 – Attachment
 - 5. Drawings: C-1, C-6, C-7, C-8, C-13, C-14, C-14A
- Response 9 – Attachment
 - 9. No Rise Certification
- Attachment 10
 - 10. CT DEEP Permit Need Determination
- Attachment 11
 - 11. Detailed Groundwater and Stream Flow Monitoring Plan
- Attachment 12
 - 12. Letter confirming hydrogeologic information for project site remains valid
- Attachment 13
 - 13. Proposed wetlands boundary line change map
- Attachment 14
 - 14. Resumes of Engineers and Soil Scientist
 - Sebastian Amenta, P.E.
 - Ian T. Cole - Professional Soil Scientist
 - Joseph L. Laliberte, PE, BCEE, PM
 - Clinton L. Webb Jr. – Senior Environmental Scientist/Ecologist

If you have any questions or require any additional information, please do not hesitate to contact me at 860.224.0442 or samenta@ceiengineers.com.

Sincerely,
Comprehensive Environmental Inc.



Sebastian Amenta, PE
Regional Program Director

May 6, 2024

Zach Fisk, Chair
Bristol Inland Wetland Commission
c/o Bristol Land Use Division via email

RE: **Application #2019, Application #2020, Application #23-458F-305** Application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessors Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.

Dear Chair Fisk and Bristol IWW Commissioners:

This letter is written in response to the recent submittal (dated May 1, 2024) of additional information regarding subject applications. This additional submittal information includes revisions made to the proposed plans in response to the discovery of a vernal pool at the north wellfield site, as well as revisions made to address staff comments, and revisions made to the plans as a result of the comments from the Army Corps of Engineers to address the federal requirements for wetland mitigation for the impacts to wetlands as a result of the proposed improvements. Also, the Streamflow monitoring plan, prepared for the Department of Public Health, was presented in Attachment 11.

Additionally, since the last public hearing, third party review letter from the North Central Conservation District desktop review (dated March 28, 2024, 3 pp) has been available. Further third party review for wetland/floodplain environmental services has not yet been made available.

The following comments are made in response to the May 1, 2024 additional information submittal.

1. Regarding the Supplemental information/vernal pool discovery in the vicinity of the north wellfield:
 - a. Was the Commission able to review the vernal pool extents during the site walk to confirm limits and conditions? (According to sheet WR-1, the proposed access road to the modified mitigation area north of the pool impacts the 100' review area of the vernal pool.)
 - b. Where is the vernal pool location compared to the well drawdown contours presented in the hydrogeologic report? These contours appear to extend into the vernal pool protection area, and the drawdown contours were presented for operations at Well 5A, (pumping at approximately 1/7 of the north wellfield proposed rate). What drawdown data was provided to the wetland scientists to respond to the surface water drawdown impacts to the ecological systems? What protections will be proposed to protect the existing natural systems (wetlands and stream) from impact due to increase well water withdrawals?
2. Regarding the revised wetland mitigation / floodplain compensation areas:
 - a. Sheet WR-1 shows a wetland replication area (represented by section A1-1) to excavate up to 8' in depth from an area of approximately 28,726 SF in size (to el 261). This area is located immediately adjacent to brook. The proposed transition slope areas to the north and west of this area add additional significant area of

disturbance. How close is the proposed replication area to the brook and what riparian impacts will result from the clearing? What is the total disturbance of the mitigation area, including the transition slope areas and haul road? What portions of the disturbed areas are located in regulated wetlands/upland review areas? What is the existing land cover in the proposed impacted areas, i.e. what kind of land cover will be cleared to accommodate the wetland replication area (and how much is considered brook riparian area)? What is the estimated time period for the mitigation area to restore to land cover conditions similar to the mature conditions (similar to the existing condition)? Will the perimeter fringe areas be more subject to invasive species (and if managed, chemical treatment) than the existing conditions (presumably with no current chemical use and less potential for introduction of invasives)? Are there seasonal restrictions in specifications to help minimize impacts related to clearing, dewatering and removal of the substantial proposed excavation materials? What is the proposed time period required and any seasonal restrictions for the proposed grading and planting? Will mitigation work be completed before the proposed impacts? Have any borings been performed to determine the need for access road stabilization and wetland material reuse? Will the haul/access road remain through Growing Seasons 2-5. Quantify the areas of haul/access road for clearing, grading, and stabilization and whether these areas occur in regulated wetlands or regulated floodplain. Has any road fill been computed in the floodplain impacts? Will any stabilized road work be removed and restored?

- b. On sheet WR-2, will any grading and stabilization be done for the haul/construction/access road? (The south road shows “dips” of 3’ - 4’ in the vicinity of the road narrowing for the south longitudinal section of mitigation). What is the tabulated area of impact for wetlands/upland review for these areas, including slope transitions, with a discussion of the existing land cover? Please discuss periods for invasive management and any proposed chemical use that may be needed to manage invasives in these proposed mitigation area. Due to the proximity of the wells, will chemical use be restricted? The plan calls for wetland replication of 3,057 SF to el 257 and 2,008 SF to el 256. The third area of impact/replication is not called out. What is the quantity of temporary impacts in regulated wetlands for each area’s construction? What is the anticipated surface water fluctuation to the adjacent wetlands and brook resulting from the new wells?

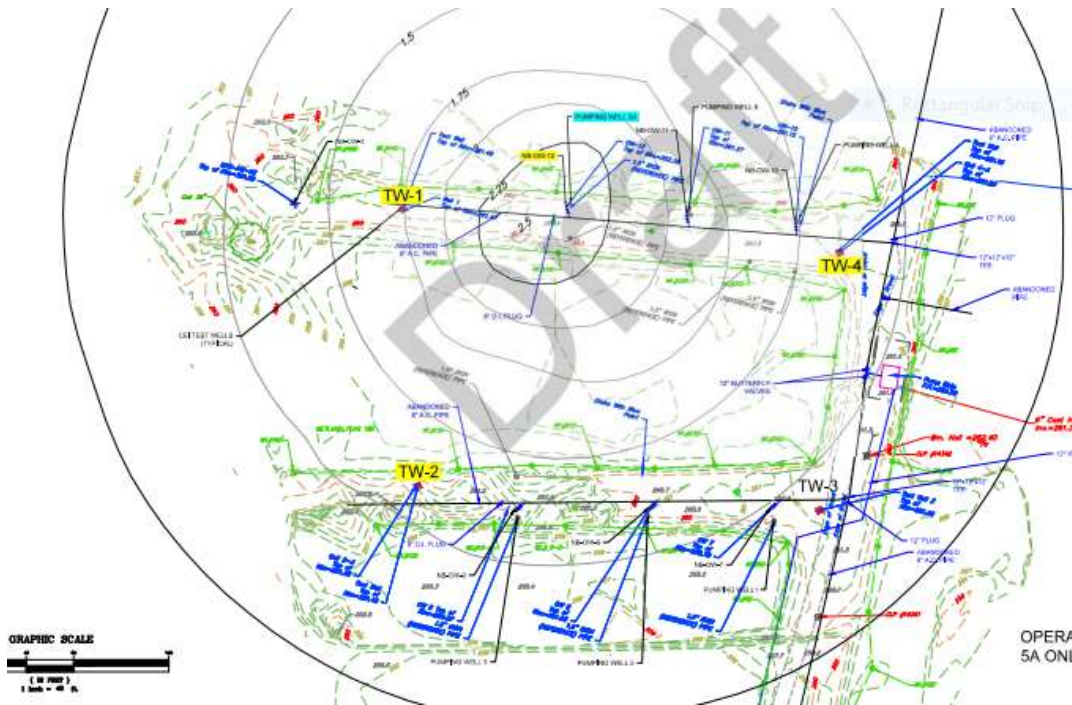


Exhibit taken from Hydrogeologic report, Figure 2

- c. On sheet WR-3, the wetland replication area (represented by Section A3-1) is tabulated at 31,146 SF by excavating the area immediately adjacent to the Coppermine to depths up to 10' (to el 247). This area is shown to be located immediately adjacent to brook. Contours on the northwest of the proposed replication area indicate an existing adjacent area of bottom contour 248. Was this area investigated as a potential pool or wetland? Where are the wetland limits in this area? The proposed transition slope areas to the north and west and southwest of this area add additional significant area of disturbance to this area. What is the total disturbance of this mitigation area construction, including the transition slopes and haul/access road areas? What portions of these areas are located in regulated wetlands/upland review areas? What is the land cover in the proposed impacted areas, i.e. how much and what kind of land cover will be cleared to accommodate the wetland replication area, slope and access road areas? What is the estimated time period for the mitigation area to restore to land cover conditions similar to the existing conditions? Will the perimeter fringe areas be more subject to invasive species (and if managed, chemical treatment) than the existing conditions? What is the proposed time period required and any seasonal restrictions for removal of the substantial proposed excavation materials to minimize disturbance? What is the proposed time period required and any seasonal restrictions for the proposed grading and planting? How long will the silt fences and haul/access road remain for management of the wetland replication area? Will it be removed/restored? Have any borings been performed to determine the need for haul road stabilization and wetland material reuse?

- d. On Sheet WR-4, the proposed replication area 7,000 SF graded to el 249 with an unidentified quantity of area graded to 252 and grassed (represented by Section A4-1). Please describe the existing and replacement land covers, label contours and tabulate the impacted areas, including slopes and access road, in the regulated wetland areas.
 - e. On Sheet WR-5, the proposed replication area, excavated up to 10' in depth is proposed to be graded to el 250 (represented by Section A5-1), immediately adjacent to the Coppermine. Similarly, please similarly address land use cover, identify contours and slope transitions, limits of impact, similar to previous comments.
3. With respect to investigation into project alternatives with less wetland/watercourse impact, the applicant can consider; **propose less pump capacity withdrawals for each of the wellfields and the pond.** This request is further supported by past studies that indicate the state registration withdrawal quantities cannot be supported. It's obvious from past and more recent pump testing that the shallow aquifer is of limited capacity and influenced by infiltration (and therefore drawdown) of the adjacent surface waters and wetlands. The well testing report by S.B Church (Sept 2019), based on test wells approved in the previous wetland application), suggests 2 wells in the south wellfield, and (report summary as clipped below) estimates yields considerably below the proposed six wells at 470 gpm in the south wellfield.

yields do not reflect the influence that the wells may have on each other and they do not reflect the influence of the drainage basin supplying water to each well throughout the year.

Well Number	Estimated Yield GPM
5	400
6	68
7	250
8	80
9	148
10	220
11	374
12	180
Estimated Total 1721 GPM of 1.54 MGD	

Handwritten notes:
 - Assume 8' drawdown?
 2 45
 5, 7, 9, 10, 11, 12

We suggest that two 30 inch large diameter wells be constructed at the sites of 5 and 11. We suggest that these wells be constructed as 30 inch diameter by 24 inch diameter gravel packed wells. The wells may be drilled a permanent production wells or as test wells with the plan to later permit them as permanent production wells.

We suggest that 72 hour pump tests be conducted on each of the wells to determine their influence on the other potential well sites. We also suggest that both wells be pumped simultaneously at approximately one million gallons per day to determine their influence on other potential well sites. This data could be used to determine where other future production wells should be drilled.

The applicant has not addressed the drawdown impacts for the proposed well withdrawals and for the adjacent south wellfield pond/surface water pump withdrawals, **except to recognize that brook impacts have and will occur.** Portions of the current Hydrogeology report states:

- Surface water elevations recorded by Lenard both before and during pump testing revealed a total water surface elevation decrease of 1 ft. for both the Copper Mine and Polkville Brook, strongly implying a hydraulic connection between surface water bodies within the wellfield. CEI observed a decrease in canal water levels of 1 ft, with near complete dewatering and drying of the canal observed within approximately 7 days of wellfield operation (primarily impact do to operation of the pond pump), implying the canal and unconsolidated wellfield formation are hydraulically well connected.
- The 2007 Lenard report implied that several brooks, including The Copper Mine, Polkville, Negro Hill, Wildcat, Whigville, and several unnamed tributaries are part of the Copper Mine drainage basin, and directly supply both the upper and Lower Wellfields with significant amounts of surface water, with the Upper Wellfield likely receiving the most recharge.
- Following observations made of historic data collected by Maguire during the Summer 1985 Lower Wellfield performance evaluation, it appears that operation of the 1985 wellfield at 2 MGD was unsustainable due to limitations imposed by the close proximity of installed wells and the unaccounted-for principal of well interference. 1 MGD was reported to be sustainable but is significantly lower than the permitted 4 MGD pumping limit. It is the opinion of CEI that due to this unaccounted-for phenomenon, the Lower Wellfield will be able to sustainably produce approximately 2 MGD should a more optimal wellfield configuration be installed accounting for the phenomena of well interference and nearby vertical recharge sources.

Recall that these statements were observations after the most recent pump test monitoring of pump discharges that were much, much lower than the proposed application pump rates. No clear documentation has been provided on the influence of the proposed simultaneous pond surface water pumps and well pumps on regulated wetlands and watercourses.

The applicant has the capability and the responsibility to test, model, and evaluate safe sub-surface and surface withdrawals to reduce impact to the adjacent wetlands/surface waters. Further evaluation, considering simultaneous well withdrawals and surface water withdrawals, is needed to realize a practical solution.

The applicant should also consider options to increase redundancy of its existing treatment system, located central to its main customer base. Considering that the proposed water capacity upgrades are presented as emergency supply for New Britain Water customers, it's hard to understand why these substantial upgrades are proposed in mapped floodplain and regulated wetland areas in the City of Bristol, making them subject to natural disaster and potentially unavailable.

4. The Streamflow monitoring plan (Attachment 11 of the May 1, 2024 submittal materials) was prepared for the Department of Public Health and does not address wetlands protections. It's noted that while monitoring is crucial, but it does not protect wetlands and streamflow unless protective management measures are developed and implemented.

5. The proposed re-fueling area located in the floodplain/regulated wetlands adjacent to Coppermine should be examined.
6. The Bristol Inland Wetland Commission follows local and state guidelines for wetlands and watercourse protections that differ from state health or federal requirements. Clear tabulation of the Bristol regulated wetland areas needs to be presented.
7. Due to review time constraints, portions of past comments are repeated below.

How can the Bristol Inland Wetland Commission protect the flow-impaired Coppermine and surrounding wetlands? Please consider the following:

- a. North wellfield: Applicant should model the effects of the groundwater and surface water drawdown resulting from proposed wells' pump rate capacities, operating simultaneously. Clearly show the extents of the estimated drawdown relative to regulated wetlands and surface waters and evaluate protective pump rates. Tabulate the impacted area and provide a flora and fauna assessment of the impacts. Address surface water fluctuations relative to operational and seasonal changes. Address operational management protocols to protect Copper Mine and associated wetland areas. Address mitigation plan, including monitoring, for all unavoidable impacts.
- b. South wellfield/pond: Applicant should model the effects of the groundwater and surface water withdrawal capacities simultaneously to clearly show the extents of the drawdown relative to regulated wetlands and surface waters. Evaluate protective pump rates. Tabulate the impacted area and provide a flora and fauna assessment of the impacts. Address surface water fluctuations relative to operational and seasonal changes. Address operational protocols to protect Coppermine and associated wetland areas. Address mitigation plan, including monitoring, for all unavoidable impacts.

The well and pond withdrawals have been documented to affect and to rely on the adjacent surface water natural system. These surface water sources and wetland storage areas serve valuable water quality, quantity and wildlife functions. Thank you for your consideration.

Carol Noble, P.E., CFM (ret)

Attachment 1:

Tables of the rates and the study references are compiled below for informational purposes.

White Bridge Upper Wellfield:

	DEEP Diversion Registration (2)	Existing Withdrawal (3)	Proposed Withdrawal (2)	Level A Study Withdrawal (4)	Safe Yield Ave (4)	Safe Yield Drought (4)	Pump test (2, 3)
gpm	1,500	~200	3@470=1,400	840	694	600	200 (Well 5A)
MGD (1)	2.16	~0.3	2.0	1.2	1.0	0.86	0.3

Notes:

(1) Conversion 1 MGD = 694.44 gpm

(2) Preliminary Engineering Study, CEI CDE Smith, Feb 2021

(3) Existing withdrawal assumed from the April 2020 CEI Hydrogeologic report estimating the most current working well pump

(4) Level A Study Withdrawal taken from Dec 2007 Lenard Hydrogeologic Level A Study Executive Summary. Note the Lenard Study states ““It was determined that the aquifer could not support the maximum registered diversion of the New Britain upper, lower and Bristol Mix Street wellfields”. The study reassigned “agreed upon” reduced flow rates to simulate a safe yield for each of the wellfields.

White Bridge Lower Wellfield:

	DEEP Diversion Registration (2)	Existing Withdrawal (3)	Proposed Withdrawal (2)	Level A Study Withdrawal (4)	Safe Yield Ave (4)	Safe Yield Drought (4)	Pump test (2, 3)
gpm	4,333	700 - 1250	6@470=2,800	2,190	1,958	611	850-1080 (meas at caisson (3,4))
MGD ⁽¹⁾	6.24	1 - 1.8	4.0	3.15	2.82	0.88	1.2 – 1.6 (meas at caisson ^(3,4))

Notes:

(1) Conversion 1 MGD = 694.44 gpm

(2) Preliminary Engineering Study, CEI CDE Smith, Feb 2021

(3) Existing withdrawal taken from the April 2020 CEI Hydrogeologic report inferring test well pump rates based on 1985 pump test.

(4) Level A Study Withdrawal taken from Dec 2007 Lenard Hydrogeologic Level A Study Executive Summary. Note the Lenard Study states ““It was determined that the aquifer could not support the maximum registered diversion of the New Britain upper, lower and Bristol Mix Street wellfields”. The study reassigned “agreed upon” reduced flow rates to simulate a safe yield for each of the wellfields. No pond pump withdrawal was considered in the evaluation.

White Bridge Pond System:

	DEEP Diversion Registration (2)	Existing Withdrawal	Proposed Withdrawal	Level A Study Withdrawal (4)	Safe Yield Ave (4)	Safe Yield Drought (4)	Pump test (4)
gpm	10,400	~2,000	3@3,500=10,500	NSE	NSE	NSE	NSE
MGD ⁽¹⁾	15	~3	20.2 (4 pumps) 15 (3 pumps)	NSE	NSE	NSE	NSE

Notes:

(1) 1 MGD = 694.44 gpm

(2) Preliminary Engineering Study, CEI CDE Smith, Feb 2021

(3) Existing withdrawal assumed from the April 2020 CEI Hydrogeologic report reference

(4) NSE = Not Specifically evaluated

Although the engineering reports document the influence of the pond pumping on the lower wellfield pump tests, simultaneous pond pumping influence was not evaluated.

Ray Rogozinski Review Comments

April 22, 2024

&

Applicant Responses

May 2, 2024

Bristol Department of Public Works has completed the review of the following materials submitted as part of Applications #2019, #2020 & #23-458F-305.

- i. Central Conservation District review letter, dated March 28, 2024.
- ii. CDM Smith Stormwater Management Report for the White Bridge Waterworks Facilities Pond Pumping Station.
- iii. C. Webb & Associates, LLC Wetland Delineation Report, dated September 29, 2022. iv. CDM Smith Plan Set, dated December 2022: Existing Conditions sheets 1-3, Wetlands replication areas sheets 1-3, Cross-Sections sheets 1-4.
- v. Freeman Companies Existing Conditions Survey Upper & Lower Wellfield, topography survey.
- vi. CDM Smith Plan Set: C-2,6-10, 10B, 11-17, 18A, 18B, 2, 19, 23-29, 9, 11-14, 18 A, 18 B. vii. CDM Smith Plan Set: Attachment 4: Floodway & Flood Fringe Encroachment Areas 60% Submittal C9, 5, 11, 13, 14, 9, 9, 9, 9, 11 (10 sheets), 5 (8 sheets), CS1-CS4. Based on the review the following comments are provided:

1. Proposed construction wetland “replication” appears to consist of excavation adjacent to existing wetland and installation of 3 inches of hydrophic soil. Provide additional information associated with the hydrophic soil specification and post development groundwater depth to support wetland “replication” areas. DPW Engineering Division proposes a min of 12 inch depth of hydrophic soil within wetland “replication” area. On adjacent 2:1 slopes 6 inches of hydrophic soil is sufficient. Detail/document short and long term monitoring and wetland “replication” area management plan to ensure long-term viability of area.

4/22/24 Applicant Response: The wetland replication and compensatory storage plans and sections have been revised to address the above comments. Please note that due to the presence of a vernal pool in the upper wellfield area the compensatory storage and wetland replication area was moved further north. In addition, the United States Army Corp of Engineers (USACE) has requested a 3:1 wetlands replication as part of their permit review. These changes are reflected in revised sheets WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 and C-14A which are attached herein as Attachment 1.A. Also attached as Attachment 1.B. are the calculations for the compensatory storage. More information about the vernal pool can be found in the NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC., which is also attached to this document as Attachment 1.C. Sheet XS-5 and Section 4 of the NBWD Supplemental Environmental/Wetlands Permit Information detail the short term and long term monitoring for wetland replication.

5/2/24 City Response: Depth of hydrophilic soil revised in wetland “replication” detail”. Please have the Cert Soil Scientist available to address the Commission with the post development groundwater depth to support the wetland “replication”, the additional wetland replication requested by the USACE and specification for the hydrophilic soil.

2. Plan indicates dewater sedimentation basin, however provide anticipated/ proposed discharge rates with sizing of sedimentation basins. In addition, indicate controls / monitoring of turbidity discharge from sedimentation basin.

4/22/24 Applicant Response: Temporary dewatering sedimentation basins are intended to be used in the event high groundwater is encountered during excavation activities. Anticipated/proposed discharges will vary depending on the required amount of excavation dewatering but typically can range from 20-50 gpm, intermittently. As shown in Detail J of Drawing Sheet C-24 (included herein as Attachment 2), the dewatering sedimentation basin size may vary depending on necessity with a 5-foot diameter being the minimum diameter of the basin. Sedimentation basins will be inspected at least once per week and cleaned as needed to remove accumulated sediments. The Contractor may also elect to install permeable geotextile dewatering bags in addition to the dewatering sedimentation basins for sediment filtration.

5/2/24 City Response: Please provide additional details/procedures to prevent sediment/ discharge of dewatering water from being discharges with a high turbidity.

3. Provide construction sequence with durations along with staging plan, areas of stockpile storage and refueling areas.

4/22/24 Applicant Response: See the Proposed Construction Sequence Memorandum included in Attachment 3.A. for more information, and the associated Drawing Sheets C-20, C-21, and C-22 in Attachment 3.B. Additionally, see Sheet C-1 and C-7 of Attachment 3.B. for notes and depiction of Contractor staging, stockpiling, and refueling areas.

5/2/24 City Response: Construction sequence provided. Please have a representative available to review the sequence and anticipated duration of construction with the Commission.

4. Clarify proposed location of floating turbidity curtain.

4/22/24 Applicant Response: Floating turbidity curtains are to be located within the canal, east and west of the proposed sediment removal areas. See revised Sheet C-23 in Attachment 4.

5/2/24 City Response: Turbidity curtain location clarified.

5. Include installation line of silt fence along the toe of ALL proposed slopes. Silt fence shall be installed prior to construction, be monitored during construction and removed once slopes are stabilized.

4/22/24 Applicant Response: Notes requiring the installation of silt fence has been included throughout drawings. See revised sheets C-1, C-6, C-7, C-8, C-13, C-14, C-14A in Attachment 5.

5/2/24 City Response: No additional comments.

6. Provide additional detail associated with compensation storage area 3. The plans indicate excavation to elevation 252, however indicate proposed access to area, erosion control and restoration.

4/22/24 Applicant Response: The revised plans referenced in Comment Response #1 address these comments.

5/2/24 City Response: No additional comments, please be prepared to address any questions the commission may have at the meeting.

7. Provide additional detail associated with compensation area 4, including additional elevation east of the area between the compensation area and the Coppermine. Detail cross section AA-1 and indicate erosion control measures and proposed access to area.

4/22/24 Applicant Response: The revised plans referenced in Comment Response #1 address this comment.

5/2/24 City Response: 9. No additional comments, please be prepared to address any questions the commission may have at the meeting.

8. The Storm Water Management Report is prepared in accordance with the CT Storm Water Quality Manual. As indicated in your report the manual requires maintaining the pre- development annual groundwater recharge volume. The report indicates recharge is achieved through reduction in impervious area, however please indicate impact of additional well withdrawal will have a wetlands.

4/22/24 Applicant Response: See Section 3 of the NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC., which is included in Attachment 1.C.

5/2/24 City Response: Please have a representative available address any questions the Commission may have regarding section 3 and 4 (Impact to Wetlands Associated with Well Drawdown & Wetland Creation) of the Supplemental Env/Wetland Permit Information.

9. Proposed plans indicate flood plain mitigation measures (excavation within flood plain to offset the placement of fill within flood plain). However, Bristol DPW recommends a CLOMR prior to work and will require a LOMR as condition of approval (if approved).

4/22/24 Applicant Response: See No Rise Certification included in **Attachment 9**. No objection to coordinating with FEMA for CLOMR/LOMR as a condition of approval.

5/2/24 City Response: Comment received, please plan on submitting a LOMAR to FEMA.

Responses to North Central Conservation District (Letter Dated March 28, 2024):

1. See the Letter from CT DEEP in **Attachment 10**, which confirms the continued applicability of the Diversion Registration to the facilities and that no diversion permit is required for continued operation of the facilities as proposed with this project.
2. See Section 3 of the NBWD Supplemental Environmental/Wetlands Permit Information, included in **Attachment 1.C.**, concluding no permanent impacts from withdrawals.
3. See Section 5 of the NBWD Supplemental Environmental/Wetlands Permit Information and the related Supplemental Alternatives Evaluation contained therein, detailing alternatives considered for this project. There are no feasible and prudent alternatives to the proposed plan.
4. See Section 5 of the NBWD Supplemental Environmental/Wetlands Permit Information concluding no permanent impacts to wetlands functions and values.

Additional Information Submitted:

1. Detailed Groundwater and Stream Flow Monitoring Plan, as required by CT DPH, is included in **Attachment 11**.
2. Letter confirming hydrogeologic information for project site remains valid. See **Attachment 12**.
3. Proposed wetlands boundary line change map is submitted for consideration. See **Attachment 13**.
4. Resumes of Engineers and Soil Scientist are included in **Attachment 14**.

Attachments Includes:

Response 1 – Attachments

- 1.A. Drawings: WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 to and C-14A
- 1.B. Calculations: Compensatory Storage
- 1.C. NBWD Supplemental Environmental/Wetlands Permit Information prepared by C. Webb and Associates, LLC

Response 2 – Attachment

- 2. Drawing: C-24

Response 3 – Attachments

- 3.A. Proposed Construction Sequence Memorandum
- 3.B. Drawings: C-1 and C-7; C-20, C-21, and C-22

Response 4 – Attachment

- 4. Drawing: C-23

Response 5 – Attachment

- 5. Drawings: C-1, C-6, C-7, C-8, C-13, C-14, C-14A

Response 9 – Attachment

- 9. No Rise Certification

Attachment 10

- 10. CT DEEP Permit Need Determination

Attachment 11

- 11. Detailed Groundwater and Stream Flow Monitoring Plan

Attachment 12

- 12. Letter confirming hydrogeologic information for project site remains valid

Attachment 13

- 13. Proposed wetlands boundary line change map

Attachment 14

- 14. Resumes of Engineers and Soil Scientist
 - Sebastian Amenta, P.E.
 - Ian T. Cole - Professional Soil Scientist
 - Joseph L. Laliberte, PE, BCEE, PM
 - Clinton L. Webb Jr. – Senior Environmental Scientist/Ecologist

If you have any questions or require any additional information, please do not hesitate to contact me at 860.224.0442 or samenta@ceiengineers.com.

Link to City of Bristol 3rd Party Environmental Review Agreement:

[https://www.bristolct.gov/DocumentCenter/View/46665
/N-PRP-2401017-City-of-Bristol-WhiteBridge-Well-Field-
Review--04162024](https://www.bristolct.gov/DocumentCenter/View/46665/N-PRP-2401017-City-of-Bristol-WhiteBridge-Well-Field-Review--04162024)

Link to Response 1 - Attachments:
<https://www.bristolct.gov/DocumentCenter/View/46659/Response-1-Attachments>

Response 1 – Attachments

1.A. Drawings: WR-1 to WR-5, CS-1 to CS-5, XS-1 to XS-5, C-14 to and C-14A

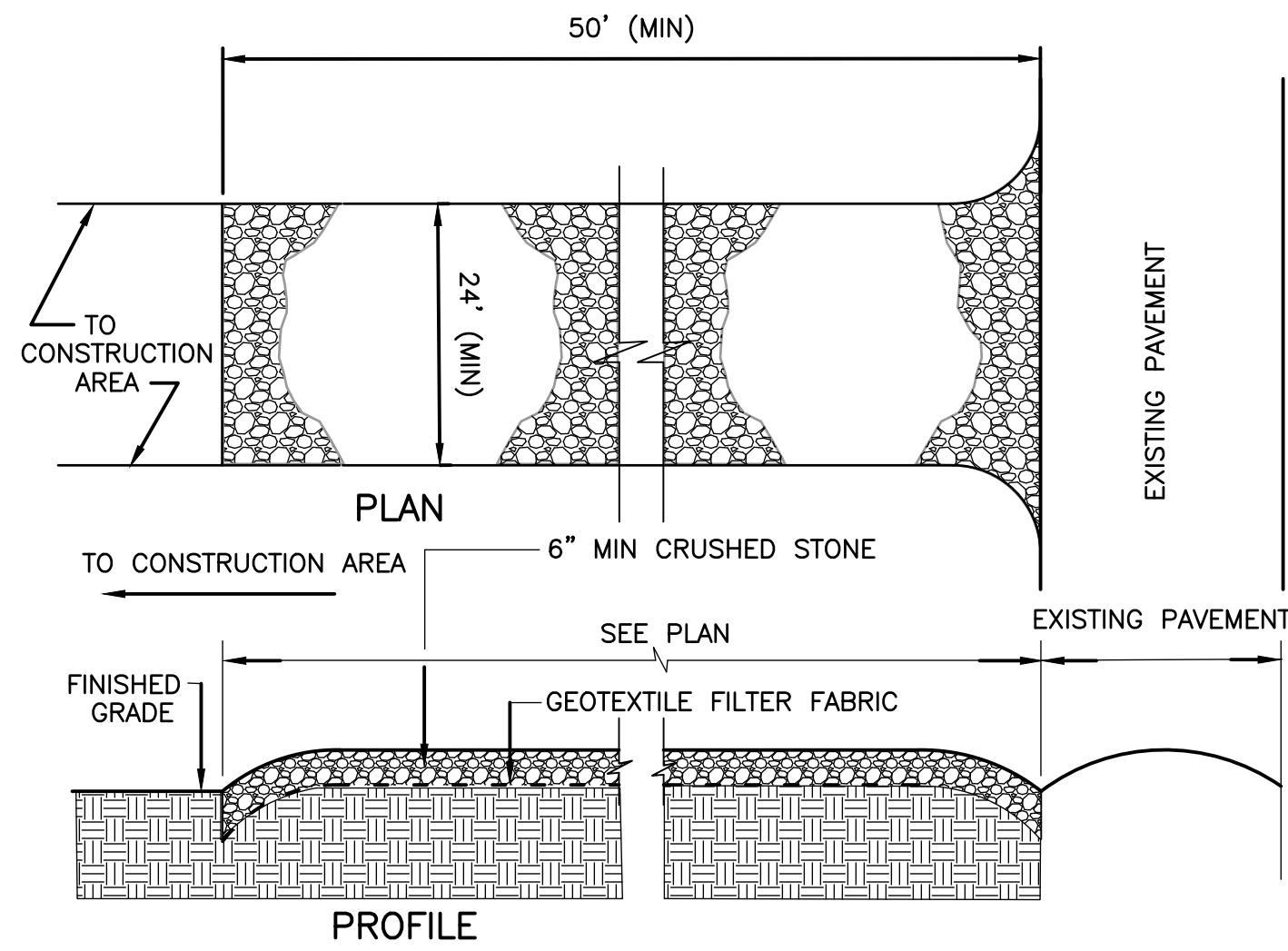
1.B. Calculations: Compensatory Storage

1.C. NBWD Supplemental Environmental/Wetlands Permit Information prepared by C.Webb and Associates, LLC

Response 2 – Attachment

2. Drawing: C-24

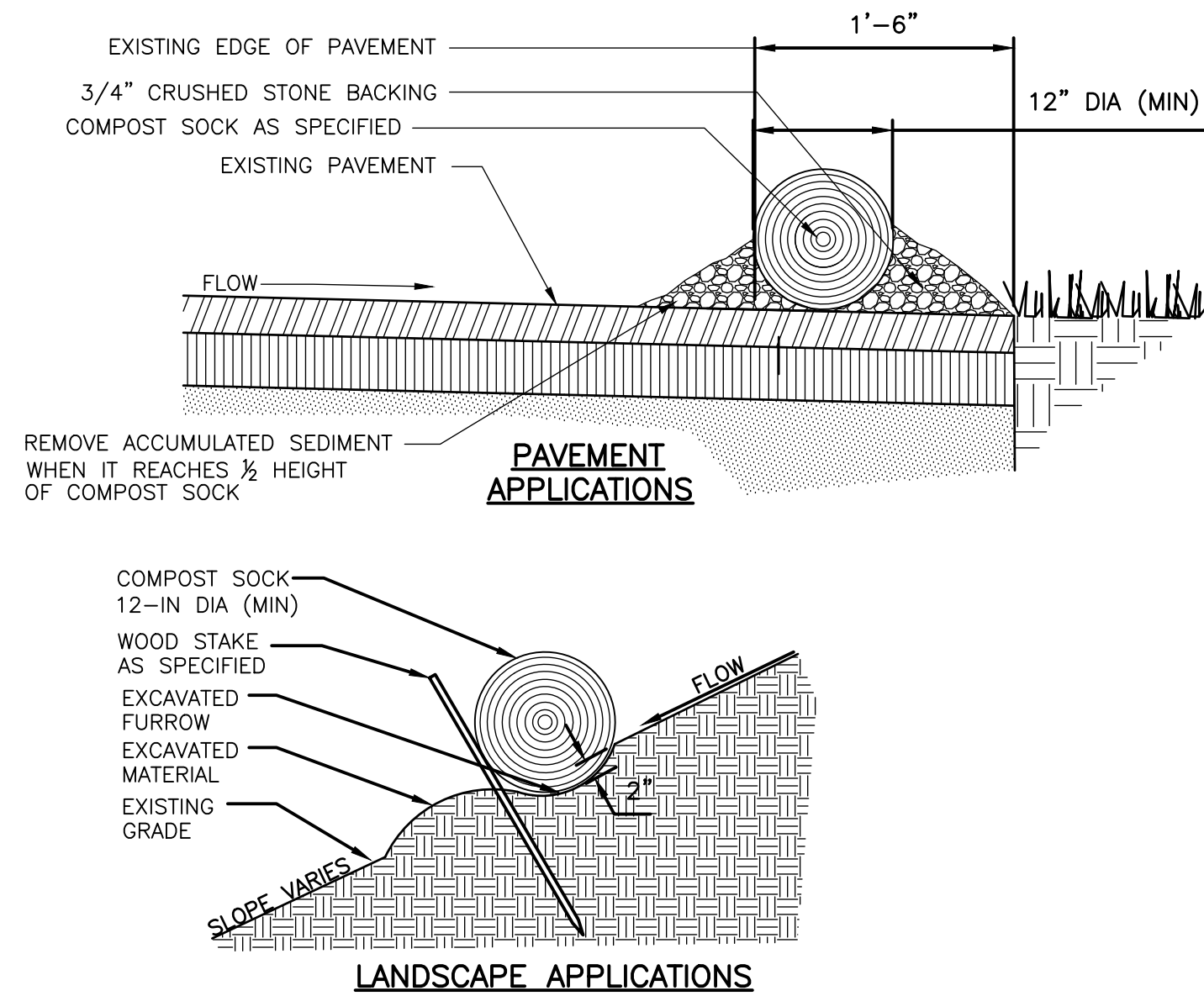
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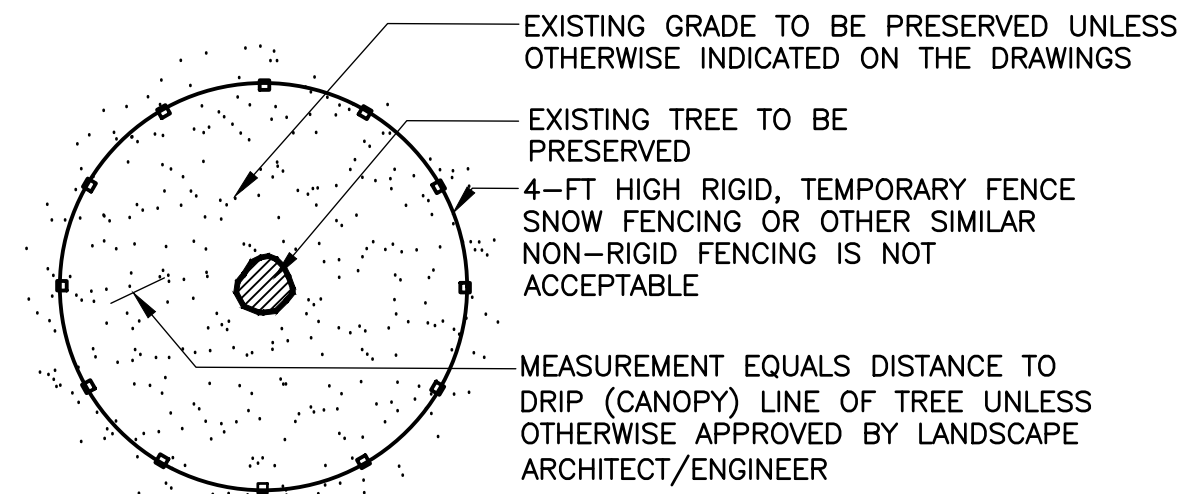
STABILIZED CONSTRUCTION ENTRANCE
DETAIL A
NOT TO SCALE

NOTES:

- 1.) PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND EXISTING PAVEMENT.
- 2.) LIMITS OF STABILIZED CONSTRUCTION ENTRANCE SHALL BE AS DIRECTED BY THE ENGINEER.
- 3.) THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDING STONE TO THE LENGTH OF THE ENTRANCE.
- 4.) REPAIR AND CLEANOUT MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO EXISTING PAVEMENT SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.



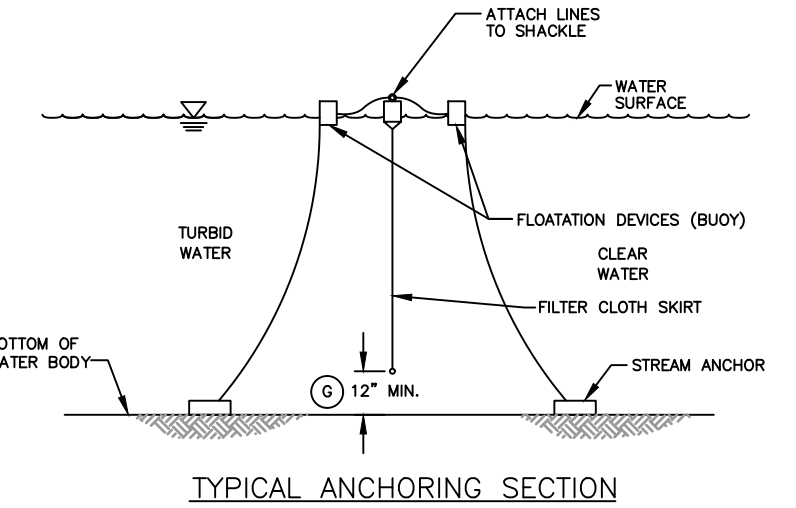
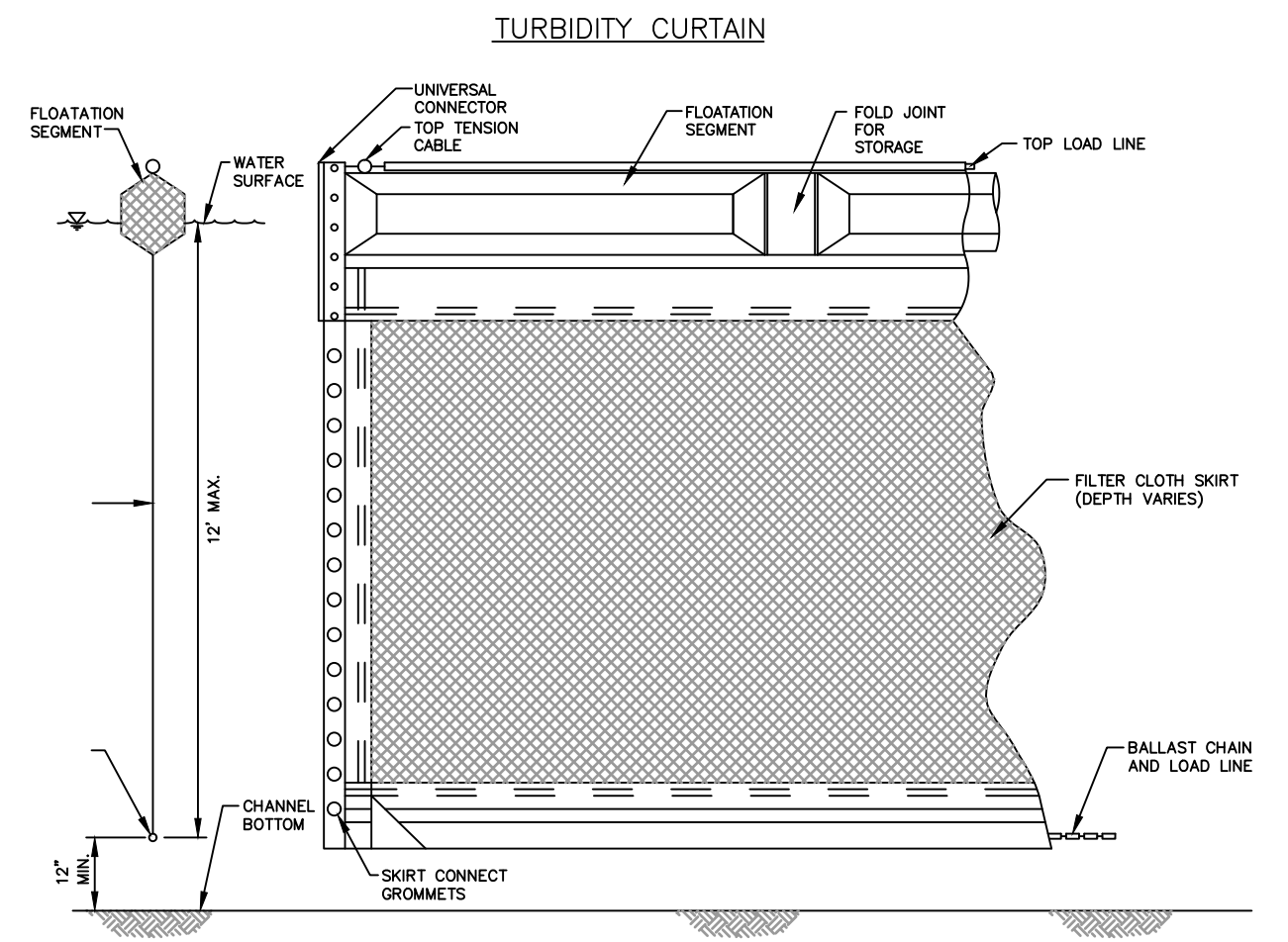
COMPOST SOCK
DETAIL B
SCALE: NTS



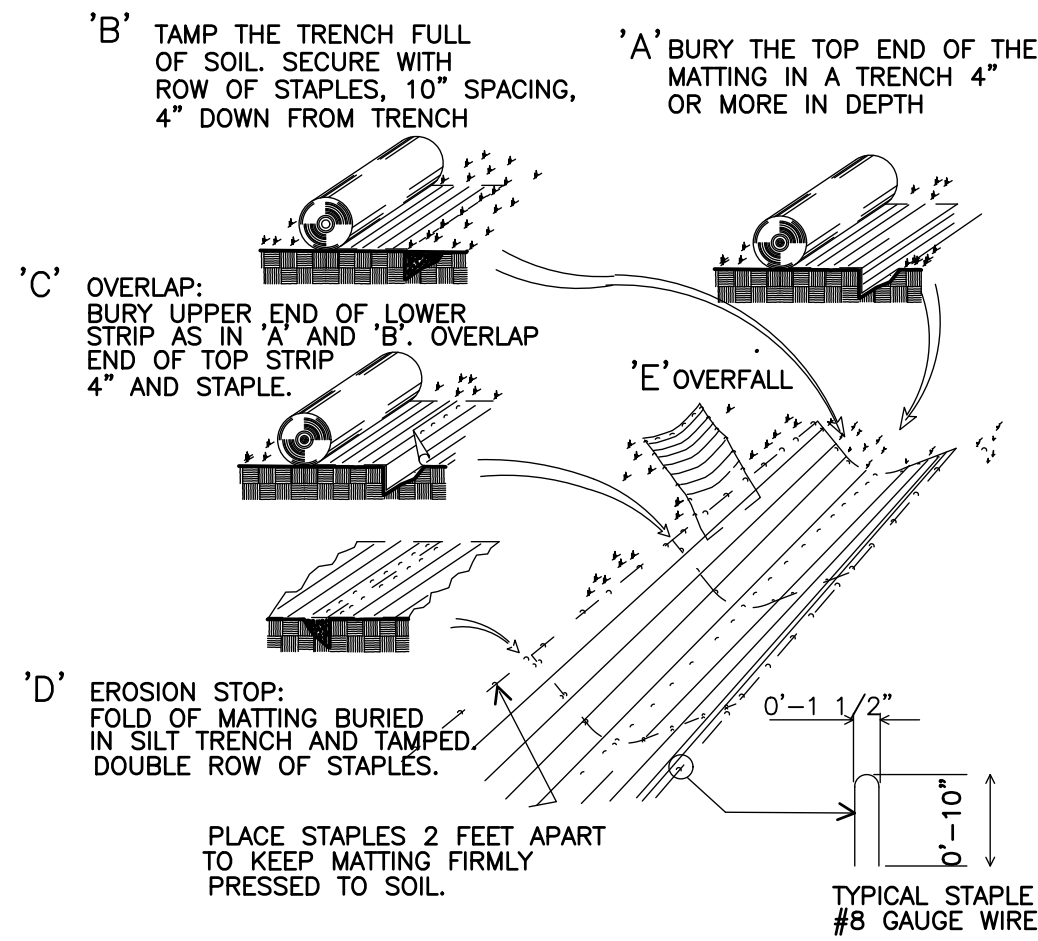
NOTES:

1. FENCING SHALL BE INSTALLED AROUND PERIMETER OF ALL EXISTING TREES TO BE PRESERVED WITHIN THE LIMIT OF WORK.
2. FENCING MAY BE REMOVED TEMPORARILY, ONLY AS REQUIRED TO PERFORM THE WORK SHOWN ON THE DRAWINGS.
3. FENCING SHALL REMAIN IN PLACE & BE MAINTAINED THROUGHOUT CONSTRUCTION AND THEN REMOVED COMPLETELY.

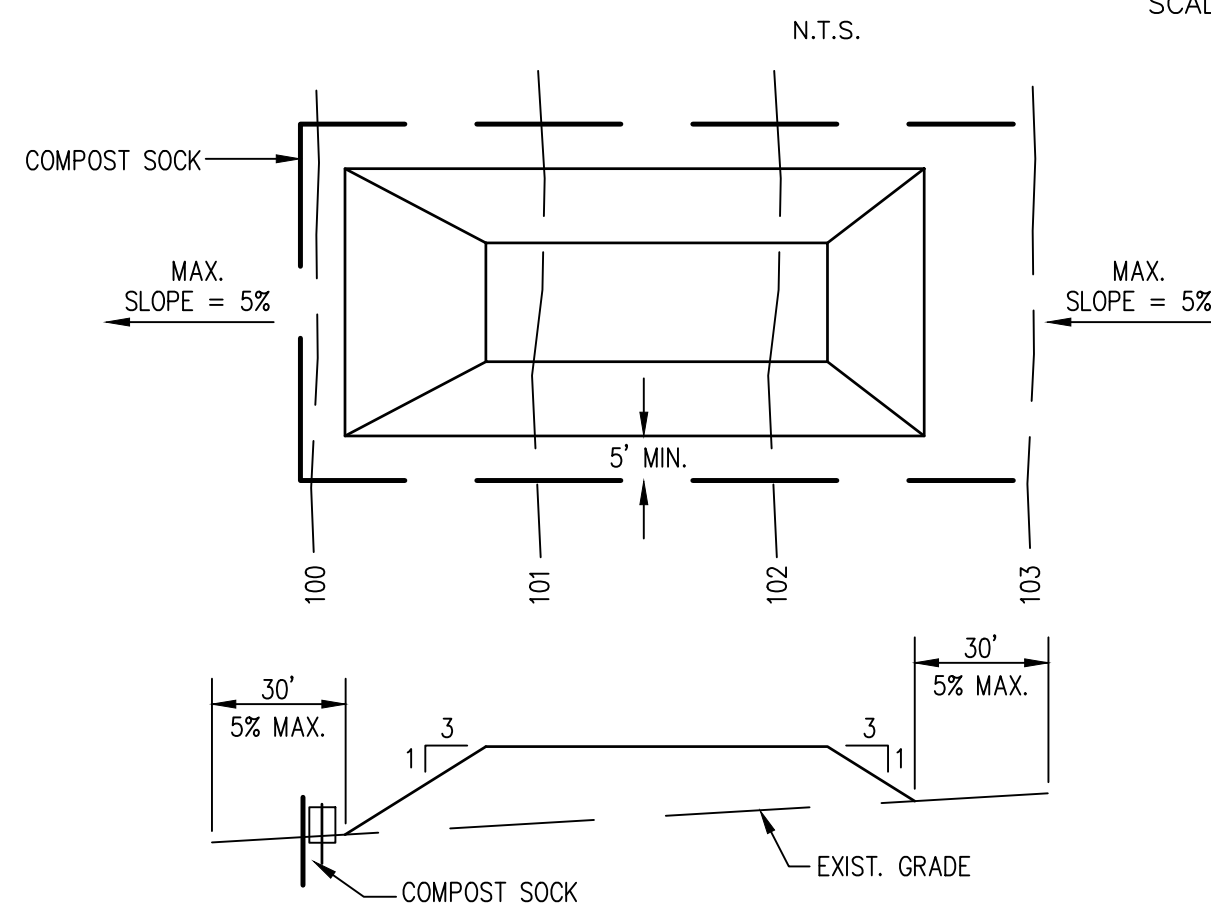
TREE PROTECTION
DETAIL C
NOT TO SCALE



TURBIDITY CURTAIN
DETAIL D
NOT TO SCALE



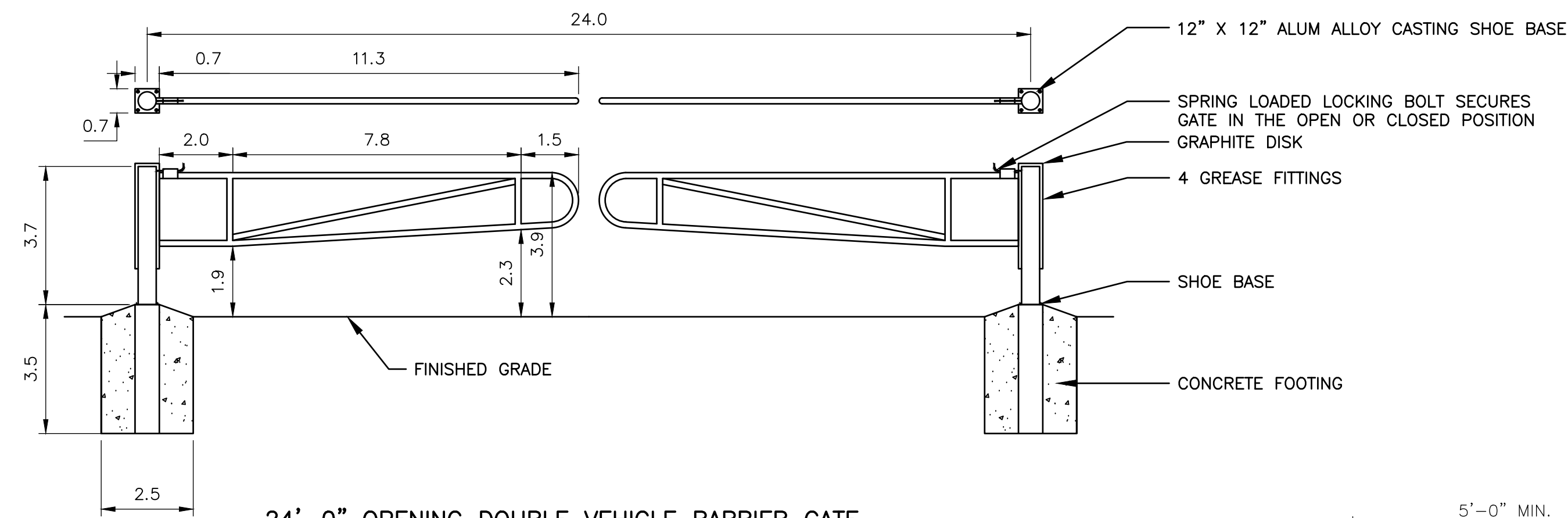
EROSION CONTROL BLANKET
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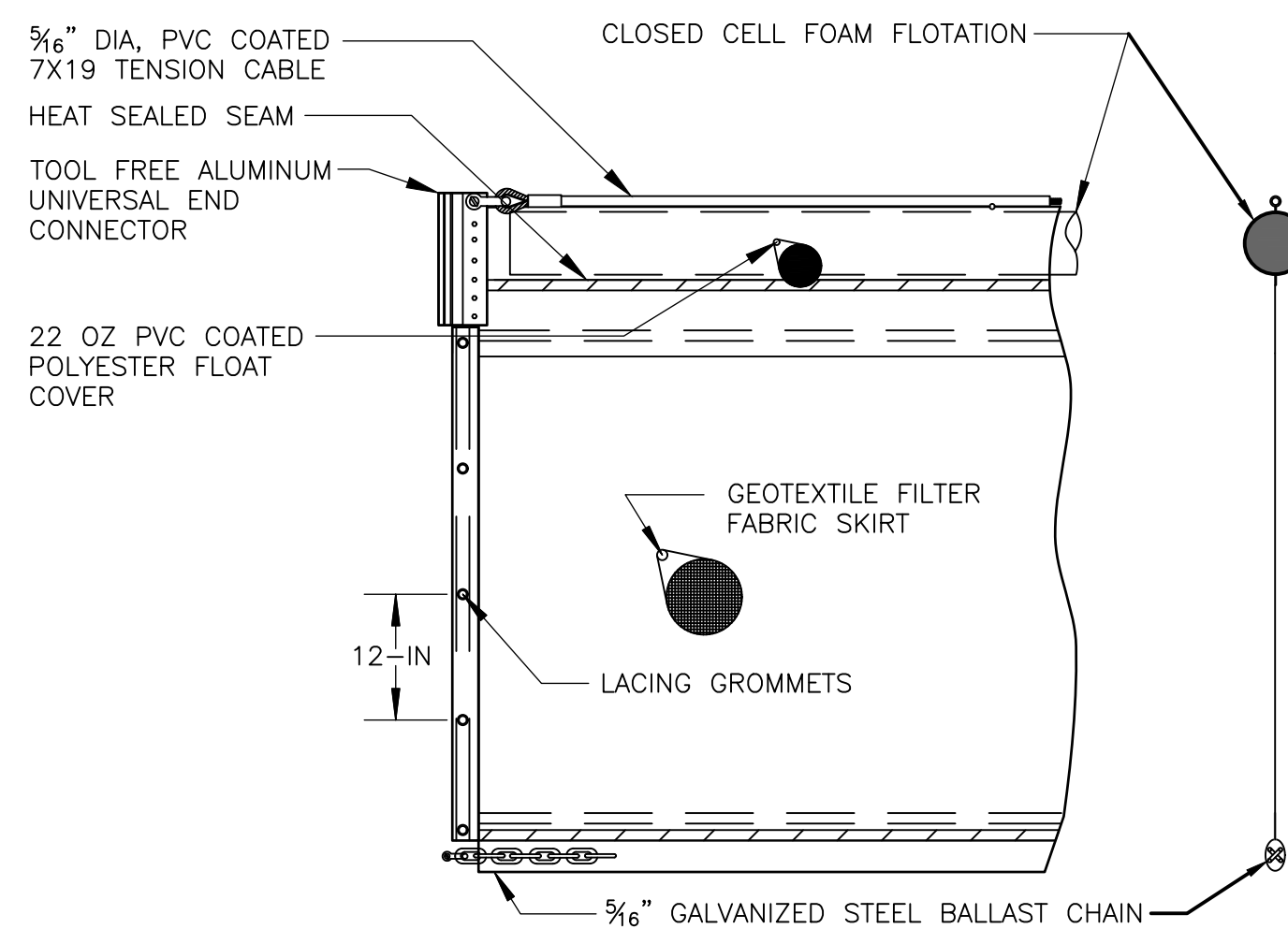
NOTES:

1. PLACE STOCKPILES AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
2. ALL SIDE SLOPES SHALL BE 3 TO 1 OR FLATTER.
3. STOCKPILE SHALL RECEIVE A VEGETATIVE COVER IN ACCORDANCE WITH MINIMUM STABILIZATION REQ.
4. COMPOST SHALL BE INSTALLED AS DETAILED HEREON.

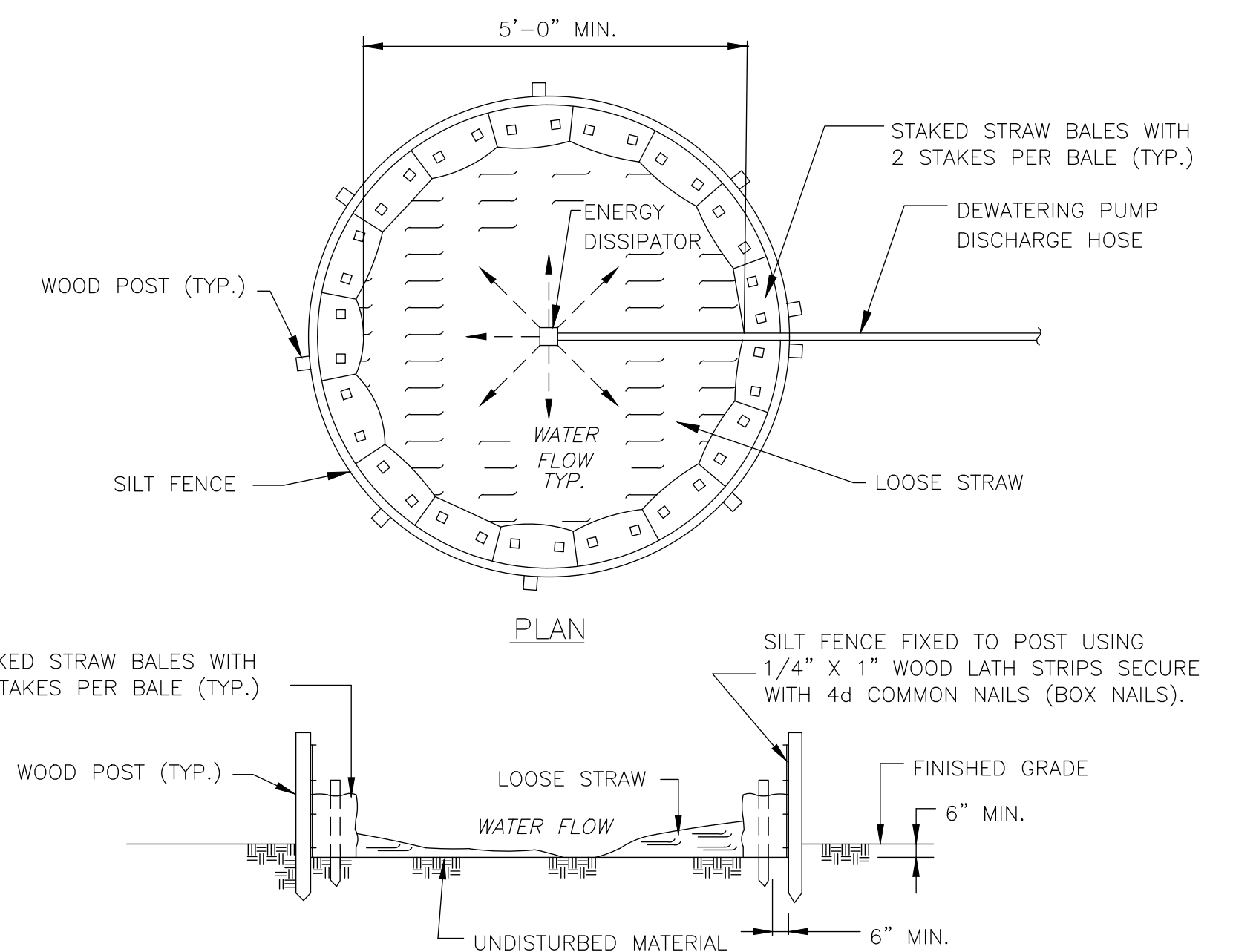
SOIL STOCKPILE
DETAIL F
NOT TO SCALE



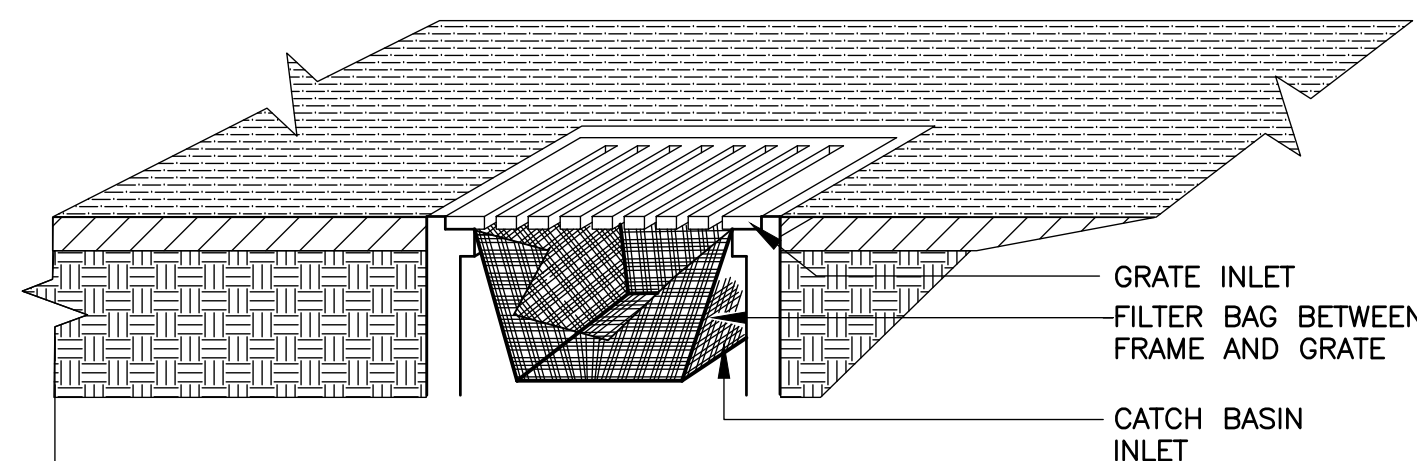
24'-0" OPENING DOUBLE VEHICLE BARRIER GATE
DETAIL G
NOT TO SCALE



FLOATING TURBIDITY BARRIER
DETAIL I
NOT TO SCALE



DEWATERING SEDIMENTATION BASIN
DETAIL J
NOT TO SCALE



CATCH BASIN FILTER
DETAIL H
NOT TO SCALE

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	K. GERLACH
DRAWN BY:	J. BRONENKANT
SHEET CHK'D BY:	K. WAGNER
CROSS CHK'D BY:	K. GERLACH
APPROVED BY:	K. WAGNER
DATE:	APRIL 2023

CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

CIVIL DETAILS I

PROJECT NO. 10739-264571 FILE NAME: CD001CSDT.DWG
SHEET NO. C-24

Link to Response 3 Attachments:

<https://www.bristolct.gov/DocumentCenter/View/46660/Response-3-Attachments>

Response 3 – Attachments

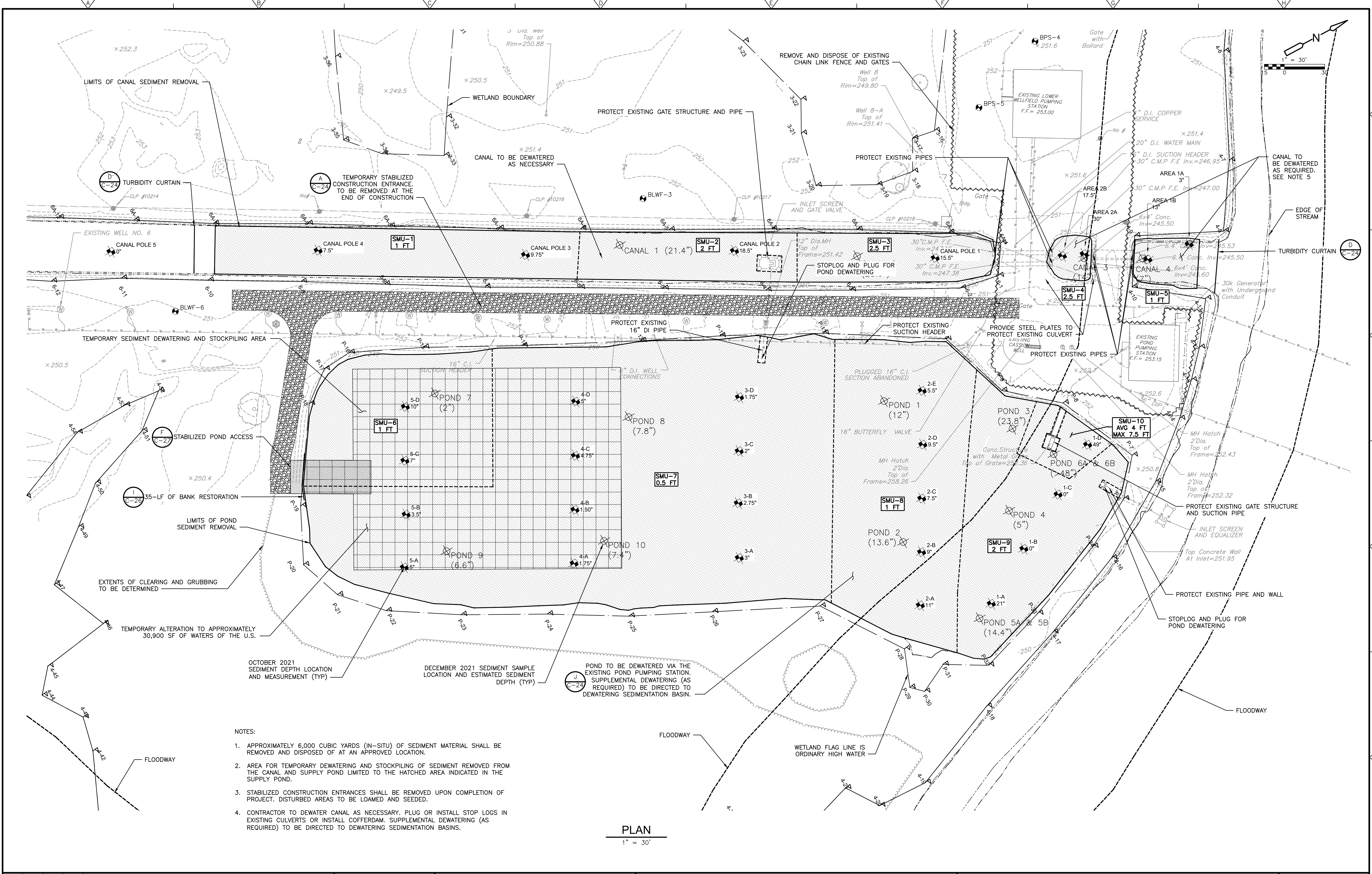
3.A. Proposed Construction Sequence Memorandum

3.B. Drawings: C-1 and C-7; C-20, C-21, and C-22

Response 4 – Attachment

4. Drawing: C-23

XREFs: [TEST HOLE POINTS, CDMS 2436, XSVRLO40, 2022-17, BORING LOCATIONS, Floodway_Floodplain] Images: []
Last saved by: ENGELS.B, Time: 3/1/2024 3:37:31 PM
C:\Users\engelsb\Documents\CDM Smith Inc\10739-264571 - New Britain CT White Bridge Well Fields and PS\Project Files\02 Civil (C)\10 CADD\C023SDRM.dwg
© 2024 CDM SMITH. ALL RIGHTS RESERVED. THESE DOCUMENTS AND DESIGNS PROVIDED BY PROFESSIONAL SERVICE, INCORPORATED HEREIN, ARE THE PROPERTY OF CDM SMITH AND ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CDM SMITH.



					DESIGNED BY: T. BURKE	CDM Smith 101 East River Drive, Suite 1A East Hartford, CT 06108 Tel: (860) 529-7615	CITY OF NEW BRITAIN, CONNECTICUT WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION	SUPPLY POND AND CANAL SEDIMENT REMOVAL PLAN	PROJECT NO. 10739-264571
					DRAWN BY: S. ENGEL				FILE NAME: C023SDRM.DWG
					SHEET CHK'D BY: K. GERLACH				SHEET NO.
					CROSS CHK'D BY: T. BURKE				C-23
					APPROVED BY: K. WAGNER				
REV. NO.	DATE	DRWN	CHKD	REMARKS	DATE: JANUARY 2024	REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION			

Link to Response 5 Attachments:
<https://www.bristolct.gov/DocumentCenter/View/46664/Response-5-Attachments>

Response 5 – Attachment

5. Drawings: C-1, C-6, C-7, C-8, C-13, C-14, C-14A

Link to Response 9 Attachments:
<https://www.bristolct.gov/DocumentCenter/View/46661/Response-9-Attachments>

Response 9 – Attachment

9. No Rise Certification

Attachment 10

10. CT DEEP Permit Need Determination



Mr. Sebastian Amenta, P.E.
Comprehensive Environmental, Inc.
1 Hartford Square, Suite 227
New Britain, CT 06052
samenta@ceiengineers.com

RE: Request for Diversion Permit Need Determination
Whites Bridge Wellfield Improvements
New Britain Water Department
Bristol, CT

Dear Mr. Amenta:

This letter is in response to your November 8, 2023 request for Water Diversion permit need determination regarding your proposal to modify certain registered water diversions. The proposed activities are documented in the report you submitted on behalf of the New Britain Water Department (NBWD) entitled “Negative Declaration of Diversion / White Bridge Wellfield Improvements / Bristol, Connecticut,” dated November 2023 (“the report”), as well as other information provided in a subsequent email dated December 5, 2023. The project involves the replacement of several public water supply wells that make up two separate, but nearby wellfields registered to the NBWD pursuant to Section 22a-368 Connecticut General Statutes (CGS) as described in the table below.

REGISTRATION NUMBER	NAME OF DIVERSION	REGISTERED WITHDRAWAL (million gallons per day)	BASIN NAME
4314-007-PWS-GR	Upper White Bridge Wells	2.1600	Copper Mine River
4314-008-PWS-GR	Lower White Bridge Wells	6.6240	Copper Mine River

The report states that these “wellfields are unable to be used in accordance with their original design intent and drastic improvements are needed due to poor groundwater well performance caused by clogged well screens and an antiquated suction withdrawal system.” The proposed redevelopment includes the abandonment of all existing wells in these two wellfields, replacing them with new wells, all within the extent of the existing wellfields as registered. The proposed wells, as described in the report, will be withdrawing from the same stratified drift aquifer wherein the existing wells are located.

Based on our review of your submittal, it has been determined that this proposal as presented in the submitted materials conforms with Section 22a-377(c)-1(c)(1) of the Regulations of Connecticut State Agencies (RCSA) included below in its entirety:

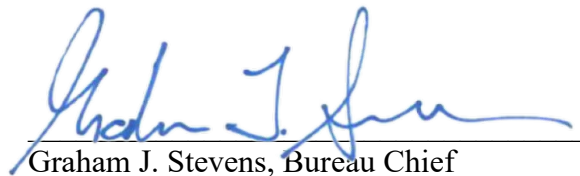
Any person or municipality which registered a diversion pursuant to section 22a-368 of the General Statutes may maintain such diversion only in accordance with the information provided in the registration form filed with the Commissioner. Any person or municipality which registered a diversion pursuant to section 22a-368 of the General Statutes may not cause or allow any modification of such diversion, including but not limited to an increase in withdrawal capacity, without having first obtained a permit under sections 22a-365 to 22a-378, inclusive, of the General Statutes and 22a-377(c)-2 of the Regulations of Connecticut State Agencies, unless such modification is exempt under section 22a-377 of the General Statutes or section 22a-377 (b)-1 of the Regulations of Connecticut State Agencies.

As such, this department finds that the proposed diversion modifications, comprising of the wellfields identified on page 1 of this determination, **will not** require a water diversion permit pursuant to Section 22a-368(a) CGS, provided the total combined withdrawal from the respective wellfields does not exceed the registered withdrawal as indicated in the above table. However, it is requested that you keep us informed as the project develops, particularly on matters relating to aquifer response modeling and induced infiltration studies.

If you should have any additional questions regarding this matter, please contact Doug Hoskins at 860-424-4192 or douglas.hoskins@ct.gov.

February 21, 2024

Date



Graham J. Stevens, Bureau Chief
Water Protection and Land Resources

GS/dh

Cc:

Ray Esponda, New Britain Water Dept., Ray.Esponds@NewBritainCT.gov

Raul Tejada, CT DPH, raul.tejada@ct.gov

Lori Mathieu, CT DPH, Lori.Mathieu@ct.gov

Brendan Schain, CT DEEP brendan.schain@ct.gov

Shalyn Zappulla, CT DEEP shalyn.zappulla@ct.org

Alicia Charamut, Rivers Alliance, alicea@riversalliance.org

Link to Attachment 11:

<https://www.bristolct.gov/DocumentCenter/View/46662/Response-11-Attachments>

Attachment 11

11. Detailed Groundwater and Stream Flow Monitoring Plan

Attachment 12

12. Letter confirming hydrogeologic information for project site remains valid



COMPREHENSIVE
ENVIRONMENTAL
INCORPORATED

Gateway Crossing
1 Hartford Square East, Suite 227
New Britain, CT 06052
860.224.0442

April 30, 2024

Robert Flanigan, City Planner
City Hall
111 North Main Street
Bristol, CT 06010

**RE: White Bridge Wellfield Improvements -Applications #2019, #2020 & #23-458F-305
Confirmation of Hydrogeologic Report**

Pursuant to City Staff request Comprehensive Environmental Inc. is confirming by way of this letter that the hydrogeologic studies and report (*Hydrogeology Report of Upper and Lower White Bridge Wellfield Bristol, Connecticut* dated April 6, 2020) submitted to CT DPH for the above project site is still valid and relevant for the intended use.

Feel free to contact me with any questions or comments at 860-620-3673 or samenta@ceiengineers.com.

Sincerely,

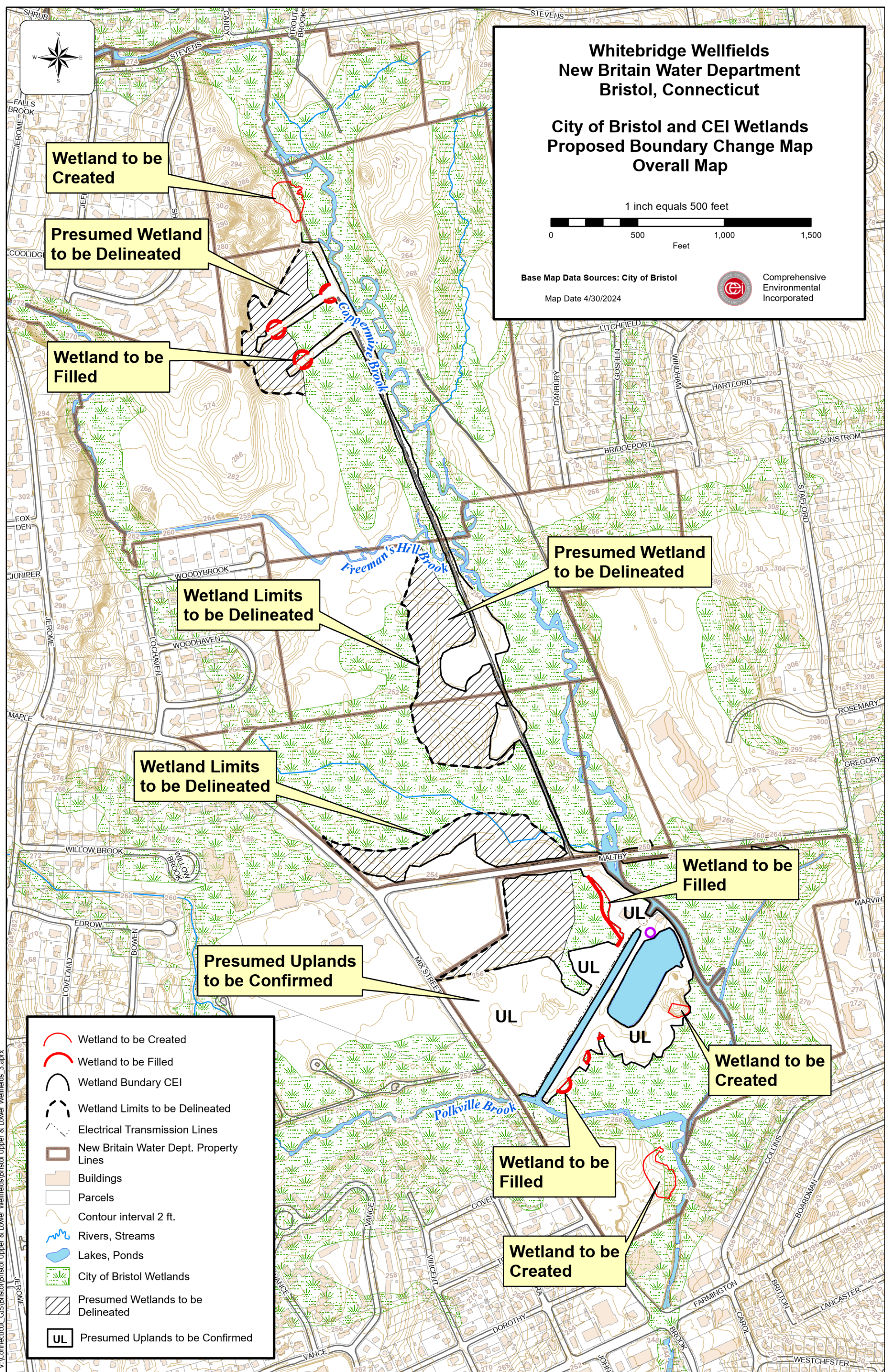
COMPREHENSIVE ENVIRONMENTAL INC.

A handwritten signature in blue ink, reading "Sebastian A. Amenta". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Sebastian A Amenta, P.E.
Northeast Program Manager

Attachment 13

13. Proposed wetlands boundary line change map



Link to Attachment 14:

<https://www.bristolct.gov/DocumentCenter/View/46663/Response-14-Attachments>

Attachment 14

14. Resumes of Engineers and Soil Scientist



AVON ▪ BLOOMFIELD ▪ BOLTON ▪ BRISTOL ▪ BURLINGTON ▪ CANTON ▪ COVENTRY ▪ EAST GRANBY ▪ EAST WINDSOR ▪ EAST HARTFORD ▪ ELLINGTON
ENFIELD ▪ FARMINGTON ▪ GLASTONBURY ▪ GRANBY ▪ HARTFORD ▪ MANCHESTER ▪ PLAINVILLE ▪ SIMSBURY ▪ SOMERS ▪ SOUTH WINDSOR
STAFFORD ▪ SUFFIELD ▪ WEST HARTFORD ▪ WETHERSFIELD ▪ TOLLAND ▪ VERNON ▪ WILLINGTON ▪ WINDSOR ▪ WINDSOR LOCKS

Date: March 28, 2024

To: Nancy Levesque, Bristol City Engineer
Bristol Inland Wetlands and Watercourses Commission

From: Covill, Natural Resources Specialist *Cameron J. Covill*
Joanna Shapiro, Executive Director *Joanna Shapiro*

Re: Review of Wetland Application, New Britain Water

This review is limited to a desktop review of the wetland application and related materials, with general recommendations based on the proposed activities. A site walk and wetland boundary review were not completed within the given timeframe.

If the Commission still deems it necessary following their site walk, a limited wetland boundary review can be performed before a subsequent meeting. Based on the size of the site and time limitations, a field review of all wetland boundaries on site by our staff is not feasible, but rather the Commission can direct the District to specific areas they feel require further review.

Background

District staff reviewed the 10-sheet site plan entitled “White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station” prepared by CDM Smith dated December 2022, as well as Attachment 3, “Project Drawings” and Attachment 4, “Floodway and Flood Fringe Encroachment Areas” (hereto forth referred to as “the Plans”). Staff also reviewed the materials submitted for applications #23-458F-305, #2019 and #2020 along with previous meeting minutes, relevant imagery, topographic, soil, and other maps.

The Plans propose construction of a new single building to house surface water pumping facilities with space for future groundwater treatment facilities, well replacement at Lower and Upper Wellfields, dewatering and sediment removal from the existing pond and canal, new utility connections, culvert replacement, paving an existing gravel access road, and associated work to ultimately bring an aging facility up to current requirements. In order to become a potable water supply, any new wells must be located 50 feet from any water bodies or wetland limits per CT Department of Public Health requirements. The wells must be raised 2’ above the one-hundred-year flood elevation. Due to these requirements, existing wells cannot be used and the new wells are proposed. Wetland resources are proposed to be filled in order to comply with these DPH regulations. Wetland replication, replacement, and enhancements are proposed to mitigate or offset the loss of these wetland areas, and compensatory flood storage areas are proposed to offset the activities which may raise the flood elevation, per FEMA requirements.

Comments/Recommendations

Withdrawals/Flow Calculations

Discussion on the record has included concern related to groundwater withdrawals. While groundwater withdrawals are regulated by CT DEEP and are not explicitly in the purview of the Inland Wetlands and Watercourses Commission, they may be considered if the Commission has reason to believe that such withdrawal may impact wetlands or watercourses. Review of aquifer withdrawals, resiliency, and recharge, and their impacts to wetlands and watercourses are outside the area of expertise of the North Central Conservation District.

- The Commission may request additional information from the applicant or intervenor regarding the potential impact of withdrawals on wetlands and watercourses, including their functions and values, if deemed a concern of the Commission necessary to render a decision and/or to rule on the claims of the petition to intervene.
- If additional information from the applicant or intervenor is deemed insufficient to make these rulings, the Town may consider further 3rd party review from a hydrogeologist or similarly qualified individual or firm, to review the proposed withdrawals from the aquifer as it pertains to impacts to the wetlands and watercourses in the project area.

In the comments submitted by Rivers Alliance on February 5th, 2024, they note that for diversions registered prior to 1983, registrants have rights to divert the amount of water originally registered in perpetuity, and that they were never and are not currently subject to any environmental review.

- Recommend that the Town request information from the applicant and CT DEEP on the accuracy of this statement, and whether any environmental review or impact analysis has ever been completed for this project location.

In Application #2020, the applicant states in the Additional Comments/Information section, “No flow calculations are provided due to zero impact as a result of the proposed work”.

- If the Commission has concerns about potential wetland/watercourse impacts related to potential flow alteration as a result of this application, recommend requesting flow calculations from the applicant to determine the average and seasonal flows of the brook, the average and/or seasonal withdrawals proposed, and any historical withdrawal information the applicant can provide.
- Recommend that the Commission require the applicant to develop an action plan to be submitted to and approved by the Commission, outlining under which circumstances withdrawals would be limited or stopped to ensure adequate flows, both for the benefit of future withdrawals and to reduce or prevent negative impacts to wetlands, watercourses, and dependent flora and fauna. To develop this action plan, recommend that the applicant use historical flow data from stream gauges or similar methods, predicted future flow calculations, and average rainfall data, contrasted with proposed withdrawal amounts and frequencies. This action plan can be required as part of the application, or this can potentially be a condition of approval of a Wetland Permit.

Functions and Values Assessment

Functions and values were assessed within the applicant’s soil scientist’s report, and replication/replacement of wetlands is proposed. However, it was not made clear in the application materials or the meeting minutes whether those functions and values of the existing wetlands will be preserved or replicated.

- Recommend that the Commission request testimony from the project soil scientist regarding whether functions and values assessed for existing wetlands will be preserved and/or replicated through proposed wetland replications, replacements, or enhancements.

Alternatives Analysis

Per section 10.3 of the Bristol Inland Wetlands and Watercourses Regulations, “In the case of an application which received a public hearing pursuant to a finding by the Inland Wetlands Agency that the proposed activity may have a significant impact on wetlands or watercourses, a permit shall not be issued unless the Agency finds on the basis of the record that a feasible and prudent alternative does not exist. In making the finding, the Agency shall consider the facts and circumstances set forth in subsection 10.2. The finding and the reasons therefore shall be stated on the record in writing”. Section 10.2 outlines the considerations for assessment by the Commission of Prudent and Feasible alternatives.

- While alternatives assessments were discussed upon the record of the March 4, 2024 meeting minutes, the District recommends that the Commissioners review Sections 10.2 and 10.3 of the Bristol Inland Wetlands and Watercourses Regulations, and state upon the record in their decision whether alternatives were adequately assessed to the extent required by the regulations.

Thank you for the opportunity to comment.

HYDROGEOLOGIC STUDY

**UPPER AND LOWER WHITE BRIDGE
WELL FIELDS CITY OF NEW BRITAIN
WATER DEPARTMENT AND MIX STREET
WELL FIELD (WELLS 3, 4, & 5) CITY OF
BRISTOL WATER DEPARTMENT**

PREPARED FOR:

**CITY OF NEW BRITAIN WATER
DEPARTMENT AND CITY OF BRISTOL
WATER DEPARTMENT**

DECEMBER 2007

Prepared by:

LENARD ENGINEERING, INC.

CIVIL, ENVIRONMENTAL & HYDROGEOLOGICAL CONSULTANTS

1768 STORRS ROAD, P.O. BOX 580

STORRS, CT 06268-0580

Executive Summary

In accordance with Level "A" Mapping Regulations, Lenard Engineering, Inc. (LEI) conducted a Level "A" study of The City of New Britain's Lower White Bridge and Upper White Bridge, and The City Bristol's Mix Street well fields, the purpose of delineating the aquifer protection area. The White Bridge Upper well field consists of six well points which travel to a common pump station in the Upper well field. The White Bridge Lower well field consists of 17 gravel packed wells and a caisson well. All of the Lower well field well points travel to a common pump station located in the Lower well field. The Mix Street well field consists of three gravel packed wells (#3, #4, and #5).

Prior to initiating the Level "A" study, LEI prepared a Plan for Data Collection detailing the methodologies to be used during the aquifer testing and ground water modeling portions of the study. The Plan for Data Collection was submitted to and subsequently approved by the DEP.

Between October 21 and October 24, 2004, LEI conducted a 3 day aquifer parameter pump test on the New Britain Upper White Bridge well field. New Britain's Upper White Bridge well field was pumped at 400 gpm. During this test, Bristol's Mix Street well field was pumped at 850 gpm, and New Britain's Lower White Bridge and surface water pumping station (the pond station) were turned off during this pumping test.

Between November 1 and November 8, 2004, LEI conducted a 7 day induced infiltration pump test of the New Britain Upper and Lower White Bridge well fields and on Bristol's Mix Street well field. New Britain's Upper White Bridge and Lower White Bridge well fields were pumped at 400 gpm and 600 gpm, respectively. While, Bristol's Mix Street well field was pumped at 1,240 gpm. New Britain's White Bridge surface water pumping station (the pond station) was turned off during the pumping test.

The above information was reduced, and input to create a 3-D aquifer model. Waterloo Hydrogeologic, Inc. Visual Modflow Version 4.1 software was used to create a 3-D model of the aquifer. The information collected from the pump tests conducted in the fall of 2004 was used to create and calibrate the aquifer model for transient flow conditions. Ground water and surface water elevations and stream flows were entered, and the model calibrated to Level "A" aquifer mapping standards. A sensitivity analysis was conducted on the resulting data.

To verify the accuracy of our aquifer model two previous pump tests were simulated.

The first verification test was a pump test conducted by LEI between June 24 and June 27, 2002, simultaneously pumping the New Britain Upper and Lower White Bridge well field, and the White Bridge surface water pumping station (the pond station). New Britain's Upper White Bridge well field, Lower White Bridge well field and Lower White Bridge pond station were pumped at 600 gpm, 400 gpm and 5.0 MGD, respectively.

White Bridge pond station were pumped at 600 gpm, 400 gpm and 5.0 MGD, respectively.

The second verification test was a pump test conducted by the Center for Engineering between September 11, 1992 and September 18, 1992, pumping the Bristol Mix Street well field well field.

The calibrated model was then used to delineate the aquifer protection area to the well fields. A steady state aquifer model simulation was created using fifty percent duration stream flow rates and mean annual recharge rates for the drainage basin. During the steady state simulation it was determined that the aquifer could not support the maximum registered diversions of the New Britain Upper White Bridge, New Britain Lower White Bridge and Bristol Mix Street well fields. Lenard Engineering, Inc., the City of New Britain Water Department and the City of Bristol Water Department agreed upon pumping rates which would best suit the needs of both water departments. Based on this it was determined to model the aquifer using the maximum pumping rates of the New Britain Upper White Bridge, New Britain Lower White Bridge and Bristol Mix Street well fields as follows:

New Britain Upper White Bridge well field: 840 gpm

New Britain Lower White Bridge well field: 2,190 gpm

Bristol Mix Street well field: 900 gpm

Using these pumping rates, a particle tracking simulation was applied to the aquifer model and groundwater contours were generated. The particle tracking simulation helped to delineate the area of contributions and the groundwater contours were used to determine the recharge areas of the well fields. Based upon these results **Figures 1-3** were generated which depict the area of contributions, recharge areas and indirect recharge areas within a 5 mile radius of the well fields.

Link to Application #23-458F-305

Letters, Emails & Correspondence:

<https://www.bristolct.gov/DocumentCenter/View/46565/NB-Floodplain-App-Extracted-Correspondence>



February 26, 2024

Mr. Robert M. Flanagan, AICP-City Planner
City Hall
111 North Main Street
Bristol, CT 06010

RE: UPDATES TO PERMIT APPLICATIONS
#2019, #2020, AND #23-458F-305
FOR THE NEW BRITAIN WATER DEPARTMENT

Dear Mr. Flanagan

The following correspondence is provided to make corrections to the above applications and provide supplemental information for each application.

The attached summary details the documents submitted and the relative application location for submitted correction.

Some of this information was previously submitted, but we wish to formally send it for clarity.

- The major items include correcting the text in Application #2020 to make clear that water withdrawals will remain within the registered diversion volumes. In addition CT DEEP has confirmed the registrations will remain in effect and no diversion permits are required. A letter from CT DEEP is included in the information.
- The Flood Plain permit application has been revised to reflect the updated fill and compensatory storage numbers presented at the February 5th hearing, along with a supporting spreadsheet.

We are working with the NBWD to formalize an operations and maintenance plan for canal/pond and related activities which will be submitted shortly.

We will also be contacting FEMA as to the protocol in submitting a certificate of no rise in flood elevation to the commission.

Please contact me if you have any questions at 860 224 0442 or 860 620 3673.

Sincerely,

COMPREHENSIVE ENVIRONMENTAL INC

Sebastian A Amenta, P.E.
Regional Program Director

CC. Nancy Levesque, City Engineer
Andrew Armstrong, Assistant Planner
Ray Esponda, Deputy Director NBWD
Joseph Hammer, Esquire
Vinta Varghese, CDM Smith

Enclosures: Summary of Attachments-#2019, #2020, and #23-458F-305

Summary of Updates
to
Applications #2019, #2020 and #23-458F-305

#2019-1) Please add the attached map to Attachment 4. It is an overlay of scientist wetlands flagging on the City's wetlands map for the project area.

#2020-1) Please insert the corrected page and substitute it for the page on file.

2) Please add the NDDB and SHPO documents to the filing

3) Map showing Monitor well locations and stream gauge locations.

4) Please add the CT DEEP letter which confirms the Diversion Registrations will remain in force and no permit is required.

#23-458F-305-1) Please insert substitute page 2 of the Application PDF which indicates updated volumes for fill and compensatory storage.

2) Please insert page 9 of the PDF which indicates the revised volumes.

3) Please add the attached spreadsheet summary for cut/fill and compensatory storage volume.

#23-458F-305 Update



Mr. Sebastian Amenta, P.E.
Comprehensive Environmental, Inc.
1 Hartford Square, Suite 227
New Britain, CT 06052
samenta@ceiengineers.com

RE: Request for Diversion Permit Need Determination
Whites Bridge Wellfield Improvements
New Britain Water Department
Bristol, CT

Dear Mr. Amenta:

This letter is in response to your November 8, 2023 request for Water Diversion permit need determination regarding your proposal to modify certain registered water diversions. The proposed activities are documented in the report you submitted on behalf of the New Britain Water Department (NBWD) entitled “Negative Declaration of Diversion / White Bridge Wellfield Improvements / Bristol, Connecticut,” dated November 2023 (“the report”), as well as other information provided in a subsequent email dated December 5, 2023. The project involves the replacement of several public water supply wells that make up two separate, but nearby wellfields registered to the NBWD pursuant to Section 22a-368 Connecticut General Statutes (CGS) as described in the table below.

REGISTRATION NUMBER	NAME OF DIVERSION	REGISTERED WITHDRAWAL (million gallons per day)	BASIN NAME
4314-007-PWS-GR	Upper White Bridge Wells	2.1600	Copper Mine River
4314-008-PWS-GR	Lower White Bridge Wells	6.6240	Copper Mine River

The report states that these “wellfields are unable to be used in accordance with their original design intent and drastic improvements are needed due to poor groundwater well performance caused by clogged well screens and an antiquated suction withdrawal system.” The proposed redevelopment includes the abandonment of all existing wells in these two wellfields, replacing them with new wells, all within the extent of the existing wellfields as registered. The proposed wells, as described in the report, will be withdrawing from the same stratified drift aquifer wherein the existing wells are located.

Based on our review of your submittal, it has been determined that this proposal as presented in the submitted materials conforms with Section 22a-377(c)-1(c)(1) of the Regulations of Connecticut State Agencies (RCSA) included below in its entirety:

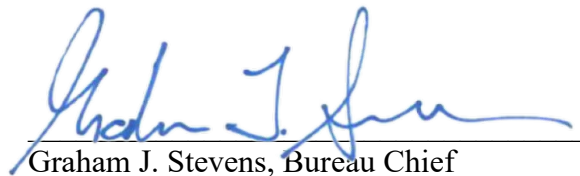
Any person or municipality which registered a diversion pursuant to section 22a-368 of the General Statutes may maintain such diversion only in accordance with the information provided in the registration form filed with the Commissioner. Any person or municipality which registered a diversion pursuant to section 22a-368 of the General Statutes may not cause or allow any modification of such diversion, including but not limited to an increase in withdrawal capacity, without having first obtained a permit under sections 22a-365 to 22a-378, inclusive, of the General Statutes and 22a-377(c)-2 of the Regulations of Connecticut State Agencies, unless such modification is exempt under section 22a-377 of the General Statutes or section 22a-377 (b)-1 of the Regulations of Connecticut State Agencies.

As such, this department finds that the proposed diversion modifications, comprising of the wellfields identified on page 1 of this determination, **will not** require a water diversion permit pursuant to Section 22a-368(a) CGS, provided the total combined withdrawal from the respective wellfields does not exceed the registered withdrawal as indicated in the above table. However, it is requested that you keep us informed as the project develops, particularly on matters relating to aquifer response modeling and induced infiltration studies.

If you should have any additional questions regarding this matter, please contact Doug Hoskins at 860-424-4192 or douglas.hoskins@ct.gov.

February 21, 2024

Date



Graham J. Stevens, Bureau Chief
Water Protection and Land Resources

GS/dh

Cc:

Ray Esponda, New Britain Water Dept., Ray.Esponds@NewBritainCT.gov

Raul Tejada, CT DPH, raul.tejada@ct.gov

Lori Mathieu, CT DPH, Lori.Mathieu@ct.gov

Brendan Schain, CT DEEP brendan.schain@ct.gov

Shalyn Zappulla, CT DEEP shalyn.zappulla@ct.org

Alicia Charamut, Rivers Alliance, alicea@riversalliance.org

CT DEEP Letter

May 6, 2022

May 6, 2022

Magdalena Lofstedt
CDM Smith Inc
77 Hartland St, Suite 201
East Hartford, CT 06108
LOFSTEDTMH@CDMSMITH.COM

NDDB DETERMINATION NUMBER: 202205409

Project: (City of New Britain) Replace existing groundwater wells, Upper & Lower Wellfields, White Bridge Waterworks Facility, off Maltby St, Bristol

Expiration: May 6, 2024

I have reviewed Natural Diversity Database (NDDB) maps and files regarding this project. According to our records, there are State-listed species (RCSA Sec. 26-306) documented nearby and within the watershed of your project area. Recommendations to minimize impacts are included below.

- **Spotted turtle (*Clemmys guttata*) State Special Concern**
- **Wood turtle (*Glyptemys insculpta*) State Special Concern**

Spotted turtle: Individuals of this species are associated with wetlands and vernal pools. Over the course of a season and lifetime, individuals will travel large distances (up to 1km) over upland forest and fields between multiple wetlands. They overwinter burrowed into the mud in wetlands between Nov 1-March 15. They do not begin to reproduce until 7-10 years old and adults can live at least 30 years. This species is threatened most by any activities that reduce adult survivorship including road kills, commercial and casual collection, increased predation in areas around commercial and residential development, mortality and injury from agricultural equipment or other mechanical equipment.

Wood turtle: Individuals of this species are riverine and riparian obligates, overwintering and mating in clear, cold, primarily sand-gravel and rock bottomed streams and foraging in riparian zones, fields and upland forests during the late spring and summer. They hibernate in the banks of the river in submerged tree roots between November 1 and March 31. Their summer habitat focuses within 90m (300ft of rivers) and they regularly travel 300m (0.2 mile) from rivers during this time. During summer they seek out early successional habitat: pastures, old fields, woodlands, powerline cuts and railroad beds bordering or adjacent to streams and rivers. Their habitat in Connecticut is already severely threatened by fragmentation of riverine, instream, riparian, and upland habitats, but is exacerbated by heavy adult mortality from machinery, cars, and collection. This is compounded by the species late maturity, low reproductive potential, and high nest and hatchling depredation rates.

Land disturbance activities that will crush active turtles or unearth/or crush hibernating turtles or nests need to consider local habitat features and apply fencing and/or time of year restrictions as appropriate. We recommend you consult with a herpetologist familiar with preferred habitats to assist you with proper techniques to ensure the best protection strategies are employed for your site.

- Land disturbance and excavation confined to the upland (greater than 10 meters from a wetland) can be done without risk for impact if it is restricted to the dormant season (November 1- March 15).

If land disturbance activity will include significant areas within and around wetlands, you will need to take precautions to avoid crushing or killing hibernating adults.

- Do not conduct land disturbance activities within a wetland during the turtle's dormant period (November 1- March 15).

Additionally, when working in the upland between March 15- November 1:

- Exclusionary practices will be required to prevent any turtle access into construction areas. These measures will need to be installed at the limits of disturbance as shown on the plans.
- Exclusionary fencing be at least 20 inches tall and must be secured to and remain in contact with the ground and be regularly maintained (at least bi-weekly and after major weather events) to secure any gaps or openings at ground level that may let animal pass through.
- Prior to construction, all turtles occurring within fencing work area will be relocated to suitable habitat outside disturbance area. This should be performed by a qualified professional familiar with habitat requirements and behavior of the species.
- The Contractor must search the work area each morning prior to any work being done.
- All construction personnel working within the turtle habitat must be apprised of the species description and the possible presence of a listed species.
- Any turtles encountered within the immediate work area shall be carefully moved to an adjacent area outside of the excluded area and fencing should be inspected to identify and remove access point. These animals are protected by law and no turtles should be relocated from the site.
- In areas where silt fence is used for exclusion, it shall be removed as soon as the area is stable to allow for reptile and amphibian passage to resume.
- No heavy machinery or vehicles may be parked in any turtle habitat.
- Special precautions must be taken to avoid degradation of wetland habitats including any wet meadows and seasonal vernal pools.

Natural Diversity Database information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Bureau of Natural Resources and cooperating units of DEEP, independent conservation groups, and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDB should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated in the NDDB as it becomes available.

Please contact me if you have any questions (shannon.kearney@ct.gov). Thank you for consulting with the Natural Diversity Database and continuing to work with us to protect State-listed species.

Sincerely,

/s/ Shannon B. Kearney
Wildlife Biologist

Verified Petition to Intervene

February 5, 2024

**BRISTOL INLAND WETLANDS AND WATERCOURSES AGENCY/CONSERVATION
COMMISSION**

Application #2019 - Wetlands boundary change application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.

Application #2020 – Wetlands application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.

Application #23-458F-305 – Floodplain application for the restoration of the White Bridge Waterworks facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; New Britain Water Department, Ramon Esponda, Deputy Director, applicant.

February 5, 2024

VERIFIED PETITION TO INTERVENE UNDER CGS §22a-19

Rivers Alliance of Connecticut, Inc. (RA) requests that the Bristol Inland Wetlands and Watercourses Agency/Conservation Commission (Agency) grant it intervenor status in the above captioned proceedings, pursuant to the Connecticut Environmental Protection Act, CGS section 22a-19(a)(1) (CEPA). RA does not oppose the work that is proposed by New Britain Water Department (NBWD) in the above-referenced applications to purportedly rehabilitate its wellfields and to come into compliance with Connecticut Department of Public Health (DPH) and Federal Emergency Management Agency (FEMA) requirements, so long as the reasonably foreseeable environmental threats posed by these activities are appropriately conditioned to protect the important natural resources comprised of waters of the State under the stewardship of

the City of Bristol. RA's participation in this matter is in the interests of justice and will not impair the orderly conduct of the proceedings.

In support of its petition, RA represents the following:

1. CEPA provides in pertinent part at General Statutes Section 22a-19(a) that

In any administrative, . . . proceeding, and in any judicial review thereof made available by law, . . . any person, . . . corporation . . . or other legal entity may intervene as a party on the filing of a verified pleading asserting that the proceeding or action for judicial review involves conduct which has, or which is reasonably likely to have, the effect of unreasonably polluting, impairing or destroying the public trust in the air, water or other natural resources of the state.

2. The Agency is the town agency authorized to administer the statutory provisions regulating the use of inland wetlands and watercourses pursuant to General Statutes Section 22a-36, et seq., and of its own duly enacted Inland Wetlands and Watercourses Regulations of the City of Bristol (Regulations).

3. RA is a 501(c)(3) non-profit environmental organization, founded in 1992, and dedicated to the protection and preservation of the water resources of the State. Its membership includes, primarily, river and watershed groups in the state, civic and business groups, municipal commissions, and individuals concerned with water health, thus representing a network of thousands of members statewide. RA's mission is to protect the quality and availability of surface and ground waters of Connecticut and Long Island Sound and associated recreational uses and habitat values. RA advocates for the protection of ample, healthy sources of water for drinking and other vital societal uses. RA brings expertise in policy, law, and science to participation in policy-making entities and to its extensive educational program. RA's goal is to bring people together to protect our state waters for current and future generations. Numerous

RA members are residents of Bristol or customers of NBWD. RA's offices are located at 28 Russel Street, P.O. Box 1797, Litchfield, Connecticut, 06759.

4. The Agency's decision in this matter will specifically affect RA, its members, and important natural resources of the State. NBWD owns or manages water supply facilities in the City of Bristol. Pursuant to CGS §22a-365 through 22a-379 as well as Sections 22a-372-1, 22a-377(b)-1 and 22a-377(c)-1 to 22a-377(c)-2 of the Regulations of Connecticut State Agencies, NBWD is authorized to divert 23.78 million gallons of water per day (mgd) in perpetuity.

5. Bristol Water Department (BWD) also owns or manages water supply facilities within the same drainage basin as the White Bridge Waterworks Facility. Pursuant to CGS §22a-365 through 22a-379 as well as Sections 22a-372-1, 22a-377(b)-1 and 22a-377(c)-1 to 22a-377(c)-2 of the Regulations of Connecticut State Agencies, BWD is authorized to divert 3.87 million gallons of water per day (mgd) in perpetuity.

6. Coppermine Brook is listed in Connecticut Department of Energy and Environmental Protection's (DEEP) 2022 Integrated Water Quality Report to Congress under Nonpollutant Impairments (EPA Category 4c) for Flow Regime Modification. DEEP has developed a methodology for assessing flow impairments when sufficient information is available. The term "flow regime modification" is used to reflect the impairments which are predominantly due to flow alterations that serve public needs and safety.

7. Sections of Coppermine Brook below and adjacent to the NBWD and BWD were effectively dry during the 2016-2017 drought and DEEP has documented impairment due to low flow for periods following the 2016-2017 drought. Due to decreased well performance, NBWD has been able to withdraw only a portion of the 23.78 mgd it is authorized pursuant to

CGS §22a-365 through 22a-379 as well as Sections 22a-372-1, 22a-377(b)-1 and 22a-377(c)-1 to 22a-377(c)-2 of the Regulations of Connecticut State Agencies.

8. NBWD has stated in Application #2020 that “The NBWD has registered diversions and those withdrawals will be increased.” It also stated that “The proposed wetland disturbances activity will not affect the nearby watercourse flow rate.”

9. RA seeks to intervene in this proceeding for the purposes of assuring that Coppermine Brook is not further impaired for regime flow modification due to an increase in withdrawals by the NBWD. The potential for such further impairment is not adequately addressed in the Application. RA further seeks to ensure that the Agency has a complete record on which to make an informed decision on all aspects of this complicated proceeding. As DEEP cannot intervene on impairments from low flow (as this activity is purportedly in compliance with CGS §22a-365 through 22a-379 as well as Sections 22a-372-1, 22a-377(b)-1 and 22a-377(c)-1 to 22a-377(c)-2 of the Regulations of Connecticut State Agencies), it is reasonable for the Agency to inquire into potential impacts to downstream flow from NBWD withdrawals. In addition, impacts on streams from groundwater withdrawals are not included in DEEP’s Streamflow Standards and Regulations pursuant to CGS §26-141(a) and (b) and §26-141b-7(a) of the Regulations of Connecticut State Agencies. Appropriate regulation and oversight of potential impacts to downstream flow can be accomplished by requiring monitoring of streamflow above and below the wellfields and requiring that NBWD work with DEEP to determine a threshold at which NBWD would have to work with DEEP to find an operational mode that would not impair Coppermine Brook, as per the NBWD agreement with DPH for funds procured through DPH’s Drinking Water State Revolving Fund for the project. This regulation and oversight clearly falls

within the Agency's jurisdiction in this proceeding pursuant to CGS section 22a-41, 22a-42, and the city's Inland Wetlands and Watercourses Regulations.

10. It is RA's position that prudent conditions to protect critical natural resources of the State, which are threatened by the increased uncertainty of climate change, are necessary and appropriate. RA is focused on a narrow but important set of natural resources that receive limited, but critical, protections under state statute. RA's intervention in this matter is in the interests of justice and will not impair the orderly conduct of the proceedings.

11. RA is not aware of any other intervening party to this proceeding whose focus is to ensure that the water resources of the state under the care of the City of Bristol are protected from undue impairment.

12. RA intends to offer brief and pertinent direct testimony from Connecticut water conservation experts with personal knowledge of wetlands and hydrology, as it applies to the Applications.

13. RA requests that the following individuals be listed on the Service List in this proceeding:

Alicea Charamut, Executive Director
Rivers Alliance of Connecticut, Inc.
28 Russel Street, P.O. Box 1797
Litchfield, CT 06759
(860) 416-7859
alicea@riversalliance.org

and

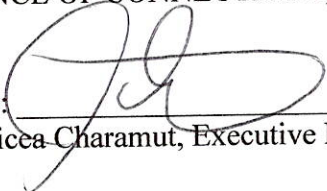
Mary Ridingsward, Executive Director
Pequabuck River Watershed Association
PO Box 1461
Bristol, CT 06011-1461
pequabuckriverct@gmail.com

Copies of filings and notices should be sent to alicea.@riversalliance.org.

WHEREFORE, Rivers Alliance of Connecticut, Inc. respectfully requests intervention status in this proceeding pursuant to CEPA upon the filing of this verified pleading for intervention.

Respectfully submitted,

INTERVENOR
RIVERS ALLIANCE OF CONNECTICUT, INC.

By: 
Alicea Charamut, Executive Director

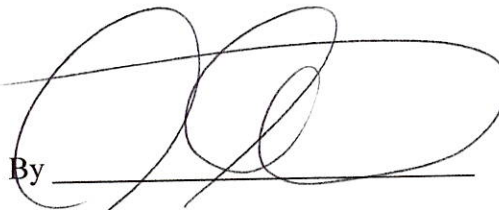
VERIFICATION OF PETITION FOR INTERVENTION
UNDER GENERAL STATUTES SECTION 22a-19(a)

I, the undersigned, being duly sworn, depose and say that (i) I am the Executive Director of Rivers Alliance of Connecticut; (ii) I have the authority to execute this Petition for Intervention on behalf of Rivers Alliance of Connecticut; and (iii) I have read the foregoing Petition for Intervention and verify that the facts stated therein are true and correct to the best of my knowledge, information and belief based on my personal knowledge, and the records which I have reviewed in this matter.

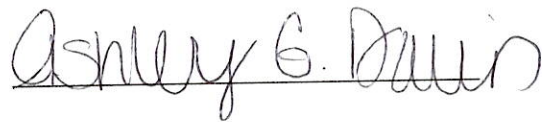
Dated at Newington Connecticut, this 5th day of February, 2024.

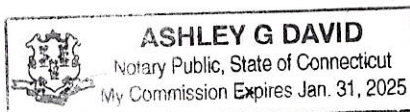
INTERVENOR

RIVERS ALLIANCE OF CONNECTICUT

By 
Alicea Charamut, Executive Director

Subscribed and sworn to before me the undersigned this 5th day of February, 2024.





Notary Public: Ashley G. David
My Commission Expires: 01/31/2025



Photos submitted by Daniel Sutula - 3/11/24

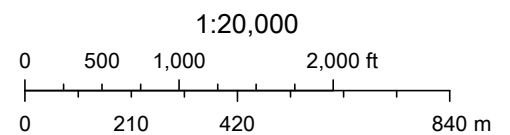
ATTACHMENT 1

PROJECT SITE MAP

White Bridge Waterworks Facility



2/22/2023, 3:28:12 PM



USGS The National Map: Orthoimagery and US Topo. Data refreshed December, 2022.

ATTACHMENT 2
ADDITIONAL INFORMATION
NARRATIVE

Wetlands Permit Application – Flood & Erosion Control

Project Narrative:

A rehabilitative project will be conducted at the Upper and Lower Wellfields of the White Bridge Waterworks Facility owned by the New Britain Water Department (NBWD) accessed via Maltby Street. The purpose of this project is to redevelop the existing Upper and Lower Wellfields, which were constructed in the 1940s and 1921, respectively. Presently, these wellfields serve as a raw water supply only. The age of the wellfields is such that they have come to the end of their useful life and repair and replacement equipment is no longer available. The NBWD needs to upgrade the facilities and modernize the equipment.

To become a potable water supply, any new wells must be located 50 feet from any water body or wetlands boundary per Department of Public Health (DPH) requirements. In addition, the wells must be raised 2' above the one-hundred-year flood plain elevation. The majority of the NBWD owned property related to this project is within the 100-year floodplain. Because of these requirements, the existing wells cannot be redrilled or rehabilitated in their present location. All currently existing wells will be abandoned in accordance with DPH requirements. The Lower Wellfield may but suitable as a public water supply subject to the ground water under the direct influence of surface water testing which will be done once the project is completed in a future phase of construction.

Proposed activities for the project include the demolition of pre-existing structures in addition to the construction of new groundwater wells, a pump house and underground piping. Pre-existing structures include the Upper Wellfield pump station, Pond pump station and Well pump station. Two of those pre-existing buildings are within the floodway. The new pump house structure will be outside of the floodway. Compensatory flood storage areas will be created so as to not increase the current flood elevation levels as given by FEMA guidelines. These compensatory storage areas will also create additional wetland areas.

The project will impact approximately 31,000 square feet of wetlands. As part of the project, wetlands replication will be done at a ratio of greater than two to one. The new structure and facilities will add approximately 7,000 cubic yards of fill within the floodplain. As part of the project, over 17,000 cubic yards of material will be removed from the flood plain.

As part of the scope of work of this project various areas within both the flood fringe and floodway will be encroached upon. See attached maps for the extent of the encroachment within both areas.

Erosion & Sedimentation Control:

The erosion and sedimentation control measures at the White Bridge facility focus on the protection of wetlands and waterways during and following construction since the work includes land disturbances, excavation dewatering, supply pond and canal sediment removal activities, and other associated construction activities. Several methods are included on the Drawings to slow the flow of runoff and protect disturbed land during construction activities. Please refer to the project plans for typical details of measures to protect wetlands and waterways during and after construction. The following summary

presents typical mitigation measures that will be implemented to avoid and minimize wetland impacts during construction.

Construction Period

- During construction, the limit of land disturbances will be kept to a minimum, where possible, and the construction will be sequenced so the entire site will not be disturbed at the same time.
- Clearing and grubbing will be limited to only the areas necessary for work to be performed, specifically in areas at the Upper and Lower Wellfields (Sheet C-9 and C-11) where wells and piping will be installed, at the Maltby Street 16" pipe crossing (Sheet C-18), at areas where wetlands and compensatory storage will be created (Sheet C-13 and C-14), and areas around the Supply Pond for access during sediment removal activities (Sheet C-23).
- Sedimentation barriers (i.e., silt fence and/or compost logs/straw wattles installed per industry standards) will be installed at the down gradient limits of work and construction access roadways prior to the commencement of work to prevent the transport of sediment to the downgradient wetlands and waterways during construction (see Sheets C-6 thru C-8). Specifically, at the Upper Wellfield this includes compost logs/straw wattles along the facility driveway from Maltby Street to the existing Pumping Station and down each of the well field laterals. At the Lower Wellfield, this includes along the wetlands to the north and west of proposed work, along the Coppermine Brook to the east, around the Supply Pond, and along both sides of the Canal to the Polkville Avenue Brook. These barriers will be inspected at least once per week and within 24 hours of rainfall events ½-inch or greater and repaired as needed. These barriers will remain in place until all disturbed soils are stabilized. A stockpile of compost logs/straw wattles and silt fence will be maintained on site for routine maintenance and emergency repairs. Barriers will be replaced as necessary due to sediment build-up and degradation.
- Sedimentation barriers (i.e., silt fence and/or compost logs/straw wattles installed per industry standards) will be installed surrounding temporary stockpile areas.
- For all slopes 4:1 or steeper, an erosion control blanket will be required, including at the Upper and Lower Wellfield wells (see Sheet C-9 and C-11). Temporary erosion control blankets will be inspected at least once per week and within 24 hours of rainfall events.
- A turbidity curtain will be installed to prevent sedimentation and turbidity disturbances in the Coppermine Brook during canal and supply pond sediment removal activities (see Sheet C-23 and Detail Sheet C-24). Turbidity curtains will be inspected daily during Supply Pond and canal sediment removal activities. The turbidity curtain will not be removed before sediment removal activities have ended and clarity of water has returned.
- Catch basin filters will be installed on catch basins near all excavation work on Maltby Street, Stafford Avenue, and Mix Street (See Sheet C-18 and Detail Sheet C-24).
- In the event that excavation dewatering is necessary, water will be pumped and discharged to one of the temporary sedimentation basins in designated areas of the site (see Sheet C-6 thru C-8).

and Detail Sheet C-24). Temporary sedimentation basins will be inspected at least once per week and cleaned as needed to remove accumulated sediments. Temporary portable sediment tanks may also be used to handle significant amounts of excavation dewatering. All water to be discharged from dewatering activities will be filtered or otherwise treated prior to discharge to prevent siltation to adjacent areas. Best management practices will be used by the Contractor in order to prevent siltation to adjacent areas during dewatering activities.

- A temporary sediment dewatering and stockpiling area has been designated within the Supply Pond to dewater removed sediments during restoration activities (see Sheet C-23 and Detail Sheet C-24). Stockpiled materials and containment area will be inspected daily during dewatering activities, weekly during non-dewatering activities, and within 24 hours of rainfall events of ½-inch or greater.
- A stabilized construction entrance is also being required for the site to prevent tire tracked soils to onsite and offsite locations (see Sheet C-23 and Detail Sheet C-24). The stabilized construction entrance will be inspected periodically and additional top dressing or length will be added, as necessary, to continue capturing sediment tracked on vehicles.
- The silt fence and/or compost log/straw wattle barrier will not be removed until the site areas are vegetated, paved or otherwise permanently stabilized to prevent erosion of exposed soils. Work will proceed as rapidly as possible, limiting the exposure time of disturbed soils to wind and precipitation.
- The sedimentation barriers will not be removed until the site areas are vegetated, paved or otherwise permanently stabilized to prevent erosion of exposed soils. Work will proceed as rapidly as possible, limiting the exposure time of disturbed soils to wind and precipitation.
- Periodic inspections will be made by the applicant to ensure compliance with the permit conditions.

Spill Control Measures

- Spill containment equipment (e.g. oil absorbent pads, oil absorbent materials, containment booms, shovels, etc.) will be stored in the equipment storage and refueling area in an easily accessible manner for use in the clean-up of accidental releases of fuel or other hazardous materials. Should there be an accidental release the proper authorities will be notified in accordance with all applicable federal, state, and local laws; and
- To minimize the possibility of leakage of hydraulic fluid, all hydraulic lines on all construction equipment and vehicles will be inspected at the end of each workday. If any excessive wear or leakage is observed, the line will be repaired prior to further use. In addition, a supply of oil absorbent materials (i.e. pads, "speedy dry," and/or booms) will be maintained with the equipment at the work area for immediate deployment in the event of an accidental release of fuel, hydraulic fluid, oil, etc.

Post-Construction Period

The following summary of mitigation measures will be implemented to restore any areas affected by short-term impacts that occur in or adjacent to wetlands.

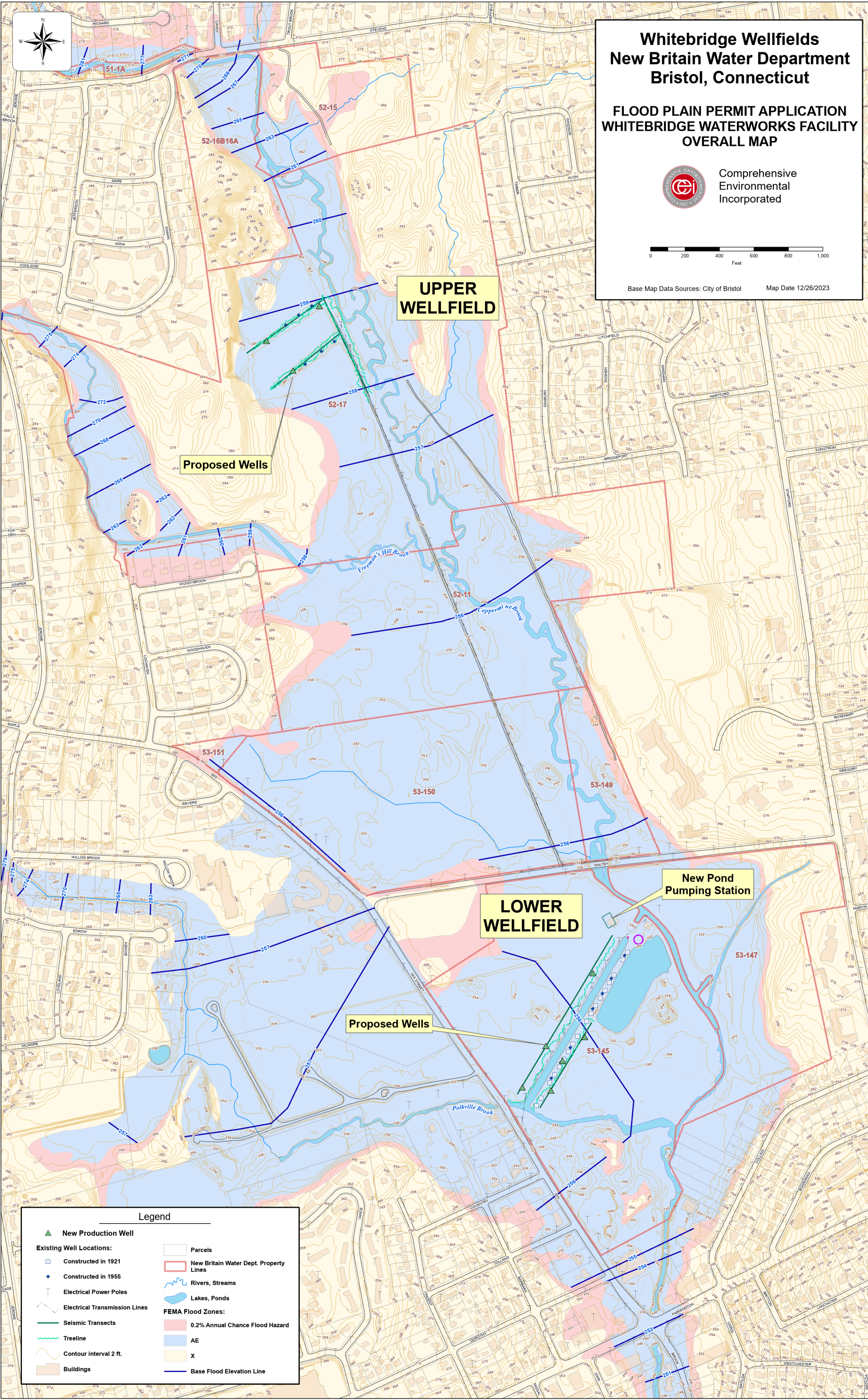
- The final site is designed to have a 3-foot wide gravel infiltration trench with 1.5"-3" diameter washed aggregate covered with 6" pea gravel running along the facility driveway to collect and slow the flow of runoff from impervious surfaces (see Sheet C-10 and Detail Sheet C-26).
- All areas disturbed during construction activities are to be loamed and seeded to provide vegetated soil cover protection against sheet runoff and wind erosion (see Sheet C-9 thru C-12). Seeded areas will be inspected at least once per week and within 24 hours of rainfall events of ½-inch or greater.
- Once established, seeded areas will be mowed and maintained as appropriate.
- The Pond Pumping Station building roof drain leader will outlet to a riprap apron (See Sheet C-10 and Detail Sheet C-26). Riprap used in the roof drain apron will be inspected periodically to determine if high flows have caused scour beneath riprap or if vegetation removal is required. On the northeast side of the Pond Pumping Station building, a retaining wall will be utilized to prevent steep slopes.
- The wetland replication and restoration areas will be planted with trees and shrubs per the planting plans, and seeded with a wetland seed mixture.
- If seeding occurs outside of the growing season, temporary stabilization measures (i.e., mulching or erosion control blankets) will be used to prevent erosion until the area can be seeded during the following growing season.
- Reseeding and mulching disturbed areas. These areas will be maintained and re-seeded to ensure that grass cover is adequate to stabilize the exposed soil, and
- Sedimentation and erosion control barriers will not be removed until a vegetative cover dense enough to prevent erosion is established.

Selections from Figure 3-2 of the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control:

Figure 3-2 Measure Selection Matrix					
Identify Problem Areas	Identify Control Problems	Identify Strategy	Select Specific Measure		Plan Key
			Functional Group	Measure	
Disturbed Areas	Control Soil Detachment	Preserve and Conserve Existing Site Resources	Protect Vegetation	Tree Protection	TP
			Preserve and Conserve Soil	Topsoiling	TO
				Land Grading	LG
				Surface Roughening	SR
Short or Shallow Slopes	Raindrop Splash	Protect Surface		Dust Control	DC
			Vegetative Soil Cover	Temporary Seeding	TS
				Permanent Seeding	PS
				Sodding	SO
Steep Slopes	Sheet & Rill Erosion		Non-Living Soil Protection	Landscape Planting	LP
				Temporary Soil Protection	TSP
				Mulch for Seed	MS
				Landscape Mulch	LM
Long Slopes	Wind Erosion			Temporary Erosion Control Blanket	ECB
				Permanent Lurf Reinforcement Mat	TRM
				Stone Slope Protection	SSP
Stockpile Areas		Protect Surface and/or Convey Runoff	Stabilization Structures	Retaining Walls	RW
				Riprap	RR
				Cabions	G
				Permanent Slope Drain	PSD
Borrow Areas	Control Water Movement			Channel Grade Stabilization Structure	CSS
				Temporary Lined Chute	TC
				Temporary Pipe Slope Drain	TSD
Drainage Ways	Gully Erosion			Vegetated Waterway	VW
				Temporary Lined Channel	TLC
				Permanent Lined Waterway	PW
				Temporary Stream Crossing	TSC
Wetlands and Watercourses	Channel & Stream Erosion	Convey Runoff	Drainageways and Watercourses	Temporary Fill Berm	TFB
				Water Bar	WB
				Temporary Diversion	TD
				Permanent Diversion	PD
Waterbodies		Direct Runoff	Diversions	Subsurface Drain	SD
				Detention Basin	DB
				Level Spreader	LS
				Outlet Protection	OP
Areas of Flooding and Existing Erosion	Natural Resource Degradation	Diffuse Runoff	Energy Dissipators	Stone Check Dam	SCD
				Temporary Sediment Basin	SB
				Temporary Sediment Trap	TST
				Hay Bale Barrier	HB
Drainage Outlets	Control Sediment Deposition	Detain Sediments	Sediment Impoundments, Barriers, and Filters	Geotextile Silt Fence	GSF
				Turbidity Curtain	TC
				Vegetative Filter	VF
				Construction Entrance	CE
Travel Areas	Protect Onsite and Offsite Areas	Control Mechanically Moved Waters and Soils	Dewatering	Pump Intake and Outlet Protection	PuP
				Pumping Settling Basin	PSB
				Portable Sediment Tank	PST
				Dewatering of Earth Materials	DWM
Dewatering					

ATTACHMENT 3

FLOOD MAP



Whitebridge Wellfields
New Britain Water Department
Bristol, Connecticut

FLOOD PLAIN PERMIT APPLICATION
WHITEBRIDGE WATERWORKS FACILITY
OVERALL MAP



Comprehensive
Environmental
Incorporated

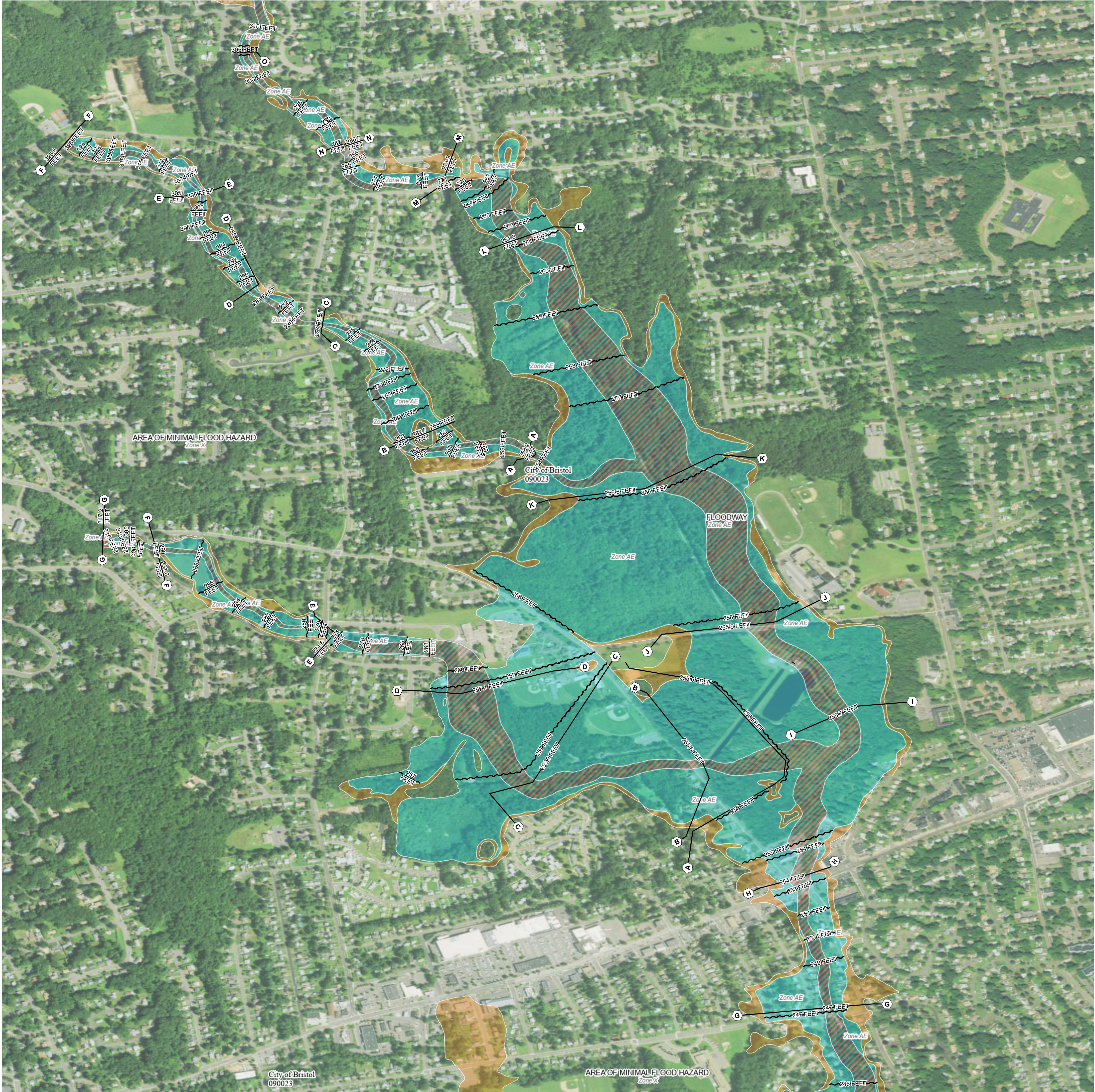
0 200 400 600 800 1,000
Feet

Base Map Data Sources: City of Bristol

Map Date 12/26/2023

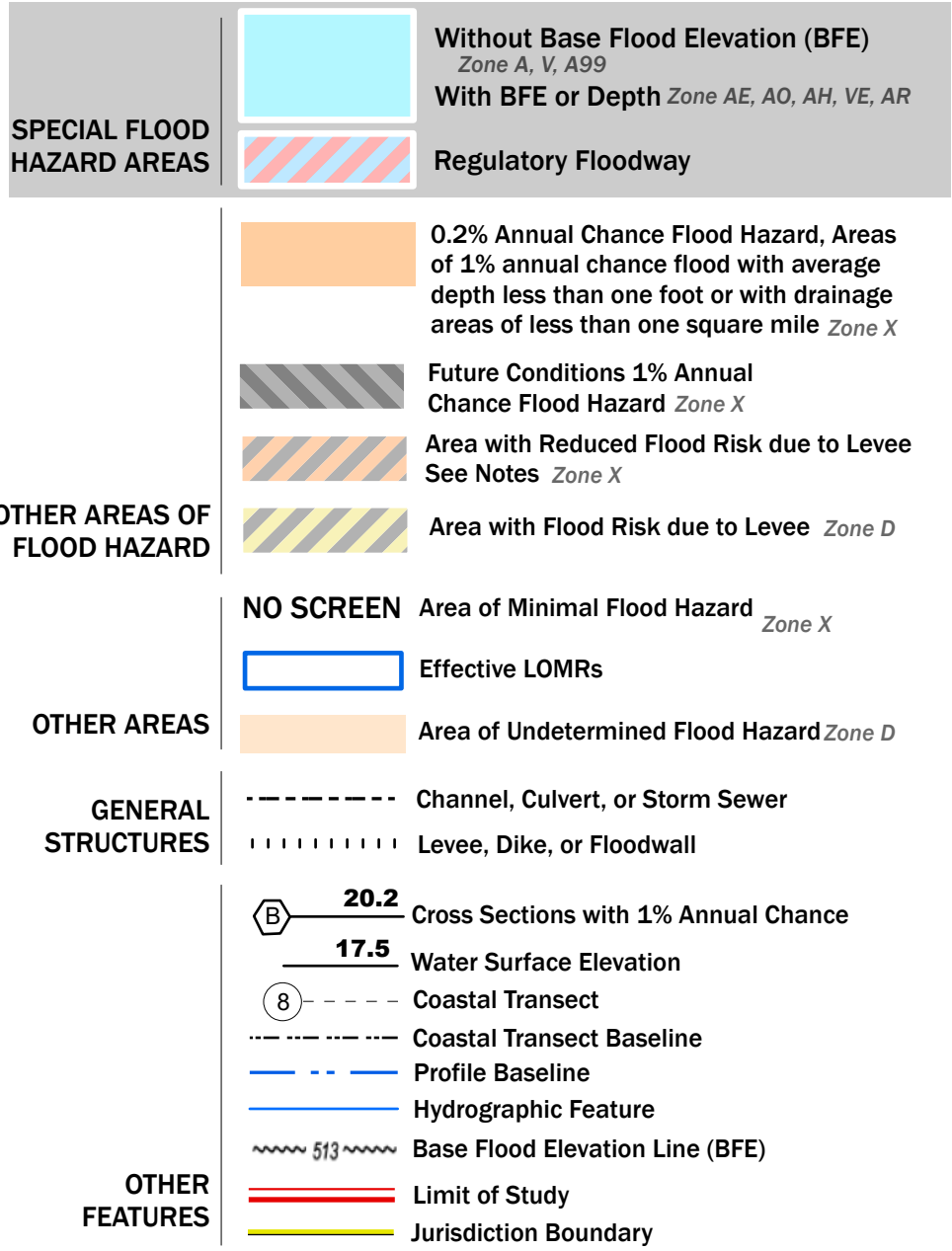
Legend

- New Production Well
- Existing Well Locations:**
 - Constructed in 1921
 - Constructed in 1955
 - Electrical Power Poles
 - Electrical Transmission Lines
 - Seismic Transects
 - Treeline
 - Contour interval 2 ft.
 - Buildings
- 0.2% Annual Chance Flood Hazard
- AE
- X
- Base Flood Elevation Line
- Parcels
- New Britain Water Dept. Property Lines
- Rivers, Streams
- Lakes, Ponds



FLOOD HAZARD INFORMATION

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



NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-6627) or visit the FEMA Flood Map Service Center website at <https://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to the Flood Insurance Study Report for this jurisdiction.

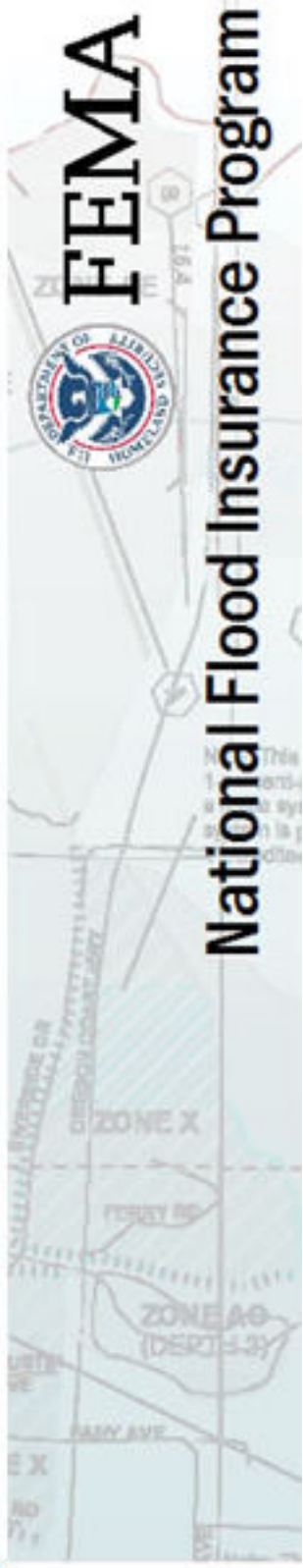
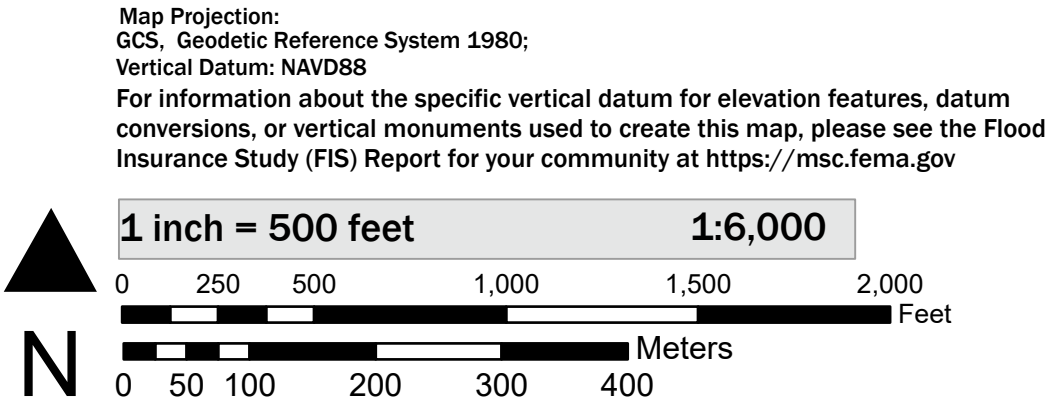
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). The basemap shown is the USGS National Map: Orthoimagery. Last refreshed October, 2020.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on **10/1/2021 10:57 AM** 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. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at <https://www.fema.gov/media-library/assets/documents/118418>

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.

SCALE



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

PANEL 458 OF 658

Panel Contains:	NUMBER	PANEL
COMMUNITY CITY OF BRISTOL	090023	0458

Link to Attachment #4:

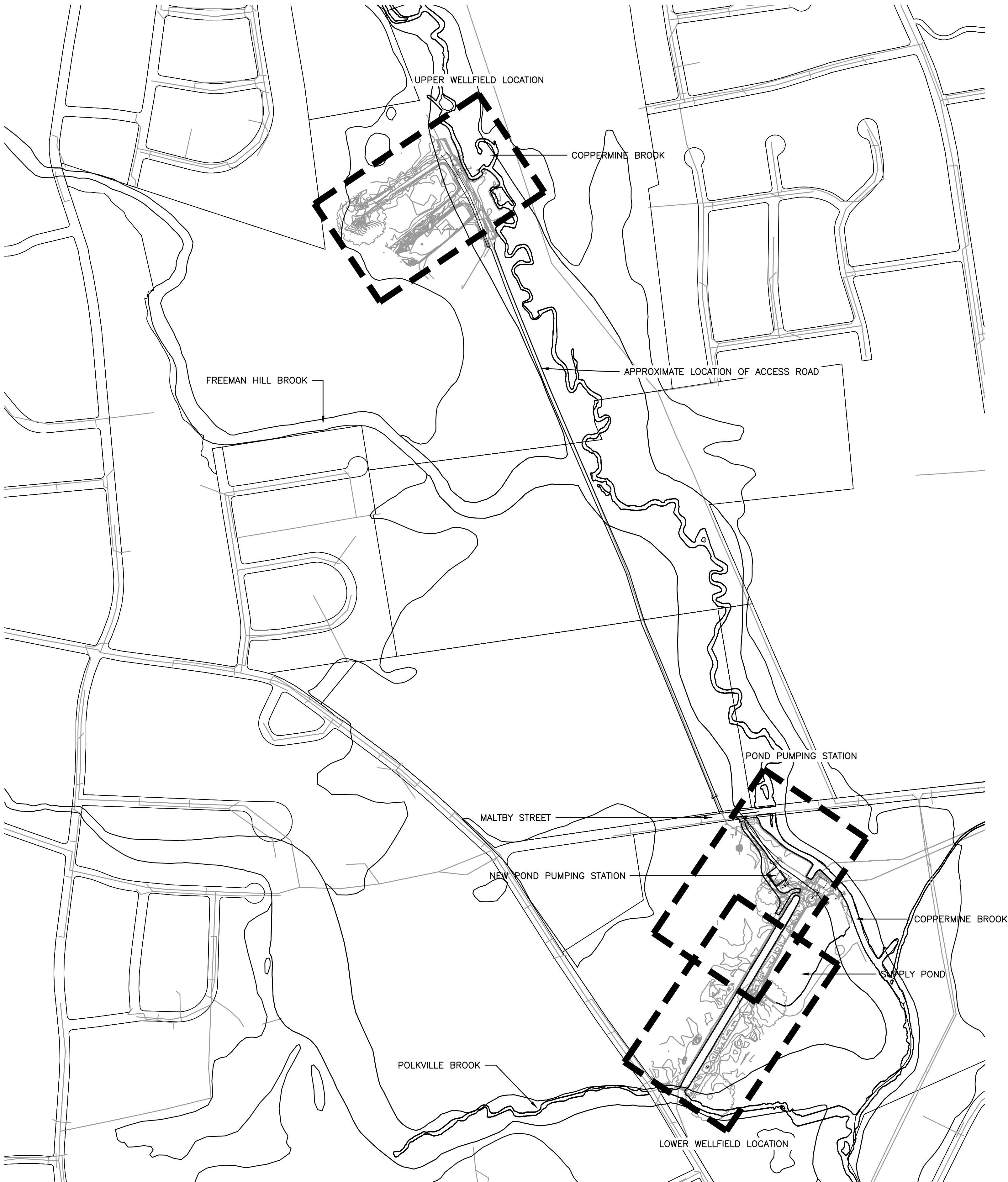
<https://www.bristolct.gov/DocumentCenter/View/45996/Attachment-4-Extracted---Floodway-Areas>

ATTACHMENT 4

FLOODWAY & FLOOD FRINGE ENCROACHMENT AREAS

ATTACHMENT 5
PROJECT DRAWINGS

XREFs: [CDMS-2436_CYPWP001_XSPL000_CWP000ST_Floodway_Floodplain_AWZ001PS - 2D Process Export] Images: [Base Image]
Last saved by: ENGELSB Time: 3/24/2023 11:19:40 AM
C:\Users\engelb\ACCDocs\CDM Smith Inc\10739-264571 - New Britain CT White Bridge Well Fields and PS\Project Files\02 Civil (C)\10 CAD\CD02STPL.dwg
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PLAN
1" = 300'



PLAN
N.T.S.

FLOOD	LOWER WELLFIELD & POND PUMPING STATION	UPPER WELLFIELD
	ELEVATION (ft)	ELEVATION (ft)
0.2% ANNUAL CHANCE FLOOD (500 - YR FLOOD)	256.7	259.7
1% ANNUAL CHANCE FLOOD (100 - YR FLOOD)	255.9	259.0
2% ANNUAL CHANCE FLOOD (50 - YR FLOOD)	255.6	258.6
10% ANNUAL CHANCE FLOOD (10 - YR FLOOD)	253.0	258.0

NOTE: ELEVATIONS SHOWN ARE IN FEET AND ARE REFERENCED
USGS DATUM NAVD88

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: APRIL 2023

CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

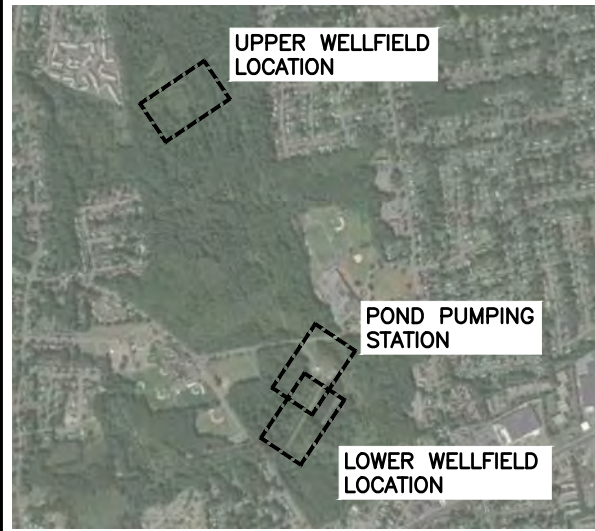


CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

OVERALL SITE PLAN

PROJECT NO. 10739-264571
FILE NAME: CD02STPL.DWG
SHEET NO.
C-2

XREFs: [CDMS-2436_XSWPL000_Floodway_Floodplain_2022-17_BORING LOCATIONS] Images: [Base Image]
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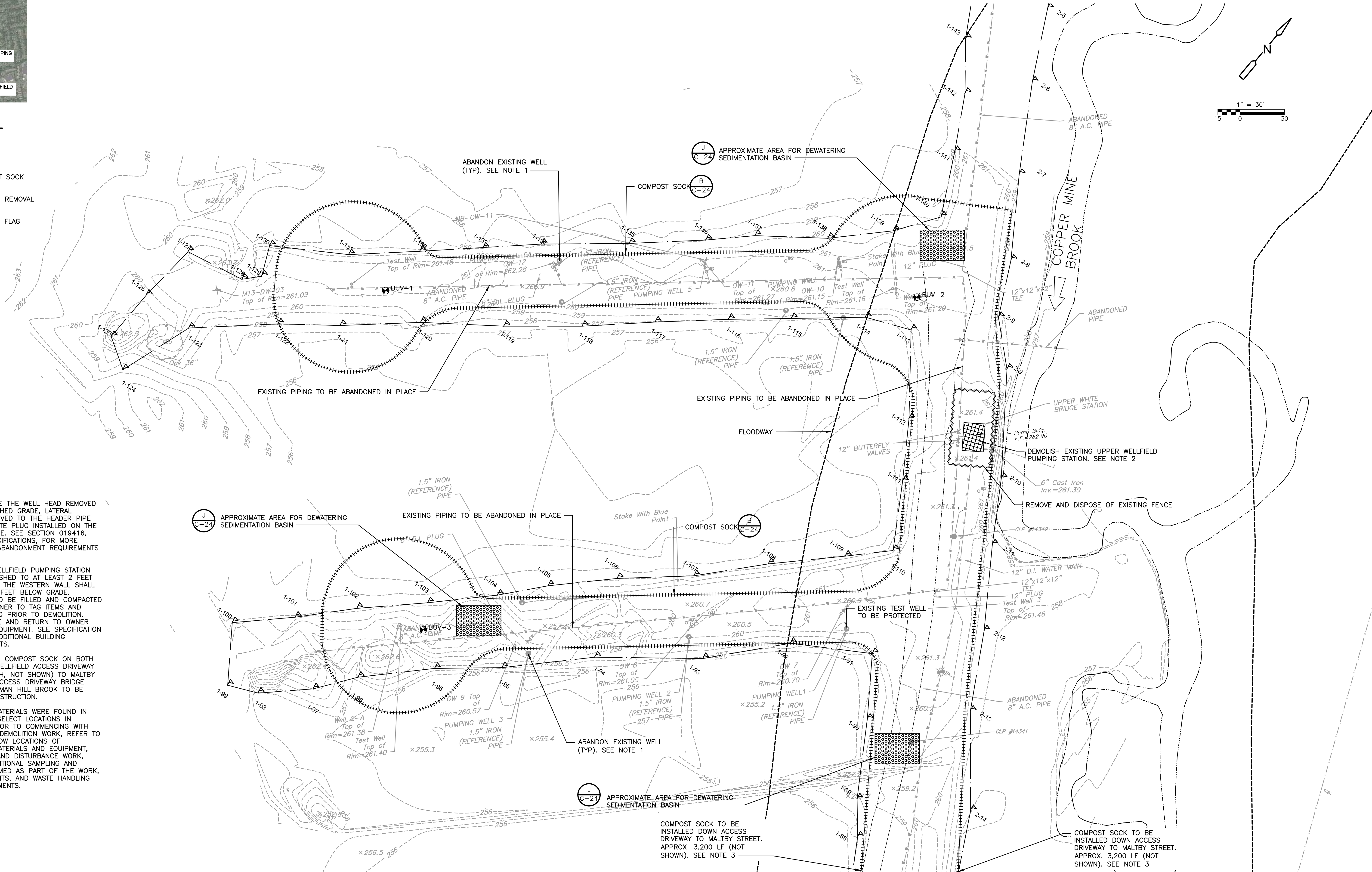
PLAN
N.T.S.

LEGEND

- COMPOST SOCK
- BUILDING REMOVAL
- WETLAND FLAG
- BORING

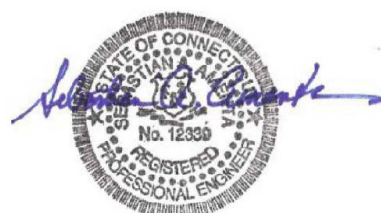
NOTES:

- EXISTING WELLS TO HAVE THE WELL HEAD REMOVED TO 5 FEET BELOW FINISHED GRADE, LATERAL DISCHARGE PIPING REMOVED TO THE HEADER PIPE AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
- THE EXISTING UPPER WELLFIELD PUMPING STATION BUILDING TO BE DEMOLISHED TO AT LEAST 2 FEET BELOW FINISHED GRADE. THE WESTERN WALL SHALL REMAIN TO AT LEAST 2 FEET BELOW GRADE. BUILDING FOUNDATION TO BE FILLED AND COMPACTED TO EXISTING GRADE. OWNER TO TAG ITEMS AND EQUIPMENT TO BE SAVED PRIOR TO DEMOLITION. CONTRACTOR TO REMOVE AND RETURN TO OWNER ANY TAGGED ITEM OR EQUIPMENT. SEE SPECIFICATION SECTION 024116 FOR ADDITIONAL BUILDING DEMOLITION REQUIREMENTS.
- CONTRACTOR TO INSTALL COMPOST SOCK ON BOTH SIDES OF THE UPPER WELLFIELD ACCESS DRIVEWAY (APPROX. 3,200 LF EACH, NOT SHOWN) TO MALTBY STREET. THE EXISTING ACCESS DRIVEWAY BRIDGE CROSSING OF THE FREEMAN HILL BROOK TO BE PROTECTED DURING CONSTRUCTION.
- HAZARDOUS BUILDING MATERIALS WERE FOUND IN SAMPLES TAKEN FROM SELECT LOCATIONS IN EXISTING BUILDINGS. PRIOR TO COMMENCING WITH ANY MODIFICATIONS OR DEMOLITION WORK, REFER TO SPECIFICATIONS FOR KNOW LOCATIONS OF HAZARDOUS BUILDING MATERIALS AND EQUIPMENT, PROPOSED ABATEMENT AND DISTURBANCE WORK, REQUIREMENTS FOR ADDITIONAL SAMPLING AND TESTING TO BE PERFORMED AS PART OF THE WORK, MONITORING REQUIREMENTS, AND WASTE HANDLING AND DISPOSAL REQUIREMENTS.



REV. NO.	DATE	DRWN	CHKD	REMARKS

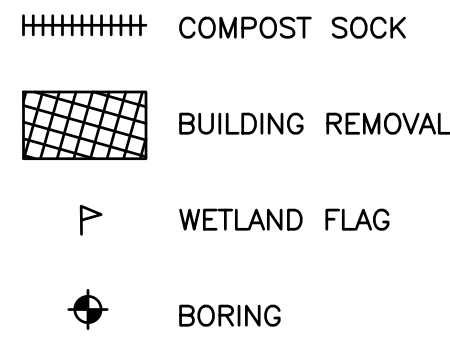
DESIGNED BY:	G. HOWARD
DRAWN BY:	J. BRONENKANT
SHEET CHK'D BY:	G. HOWARD
CROSS CHK'D BY:	K. WAGNER
APPROVED BY:	K. WAGNER
DATE:	APRIL 2023



CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

UPPER WELLFIELD
DEMOLITION AND REMOVALS PLAN

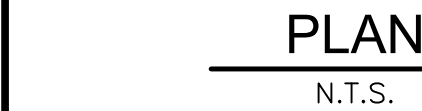
PROJECT NO.	10739-264571
FILE NAME:	C006STPL.DWG
SHEET NO.	C-6



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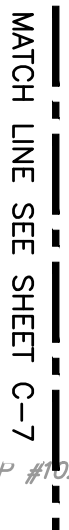
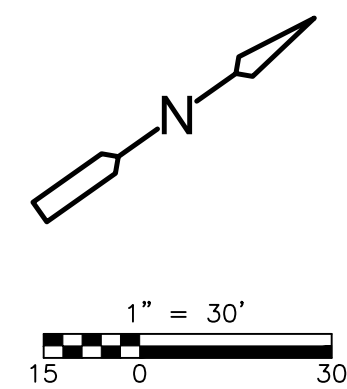


PROJECT NO.	10739-264571
FILE NAME:	C007STPL.DWG
SHEET NO.	
C-7	



 COMPOST SOCK
 BUILDING REMOVAL
 WETLAND FLAG
 BORING

1. EXISTING WELLS TO HAVE THE WELL HEAD REMOVED TO 5 FEET BELOW FINISHED GRADE, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
2. EXISTING WELLS WITH WELL HEAD LOCATED IN A VAULT TO HAVE VAULT DEMOLISHED AND REMOVED, WELL HEAD REMOVED TO 5 FEET BELOW BOTTOM OF VAULT, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS



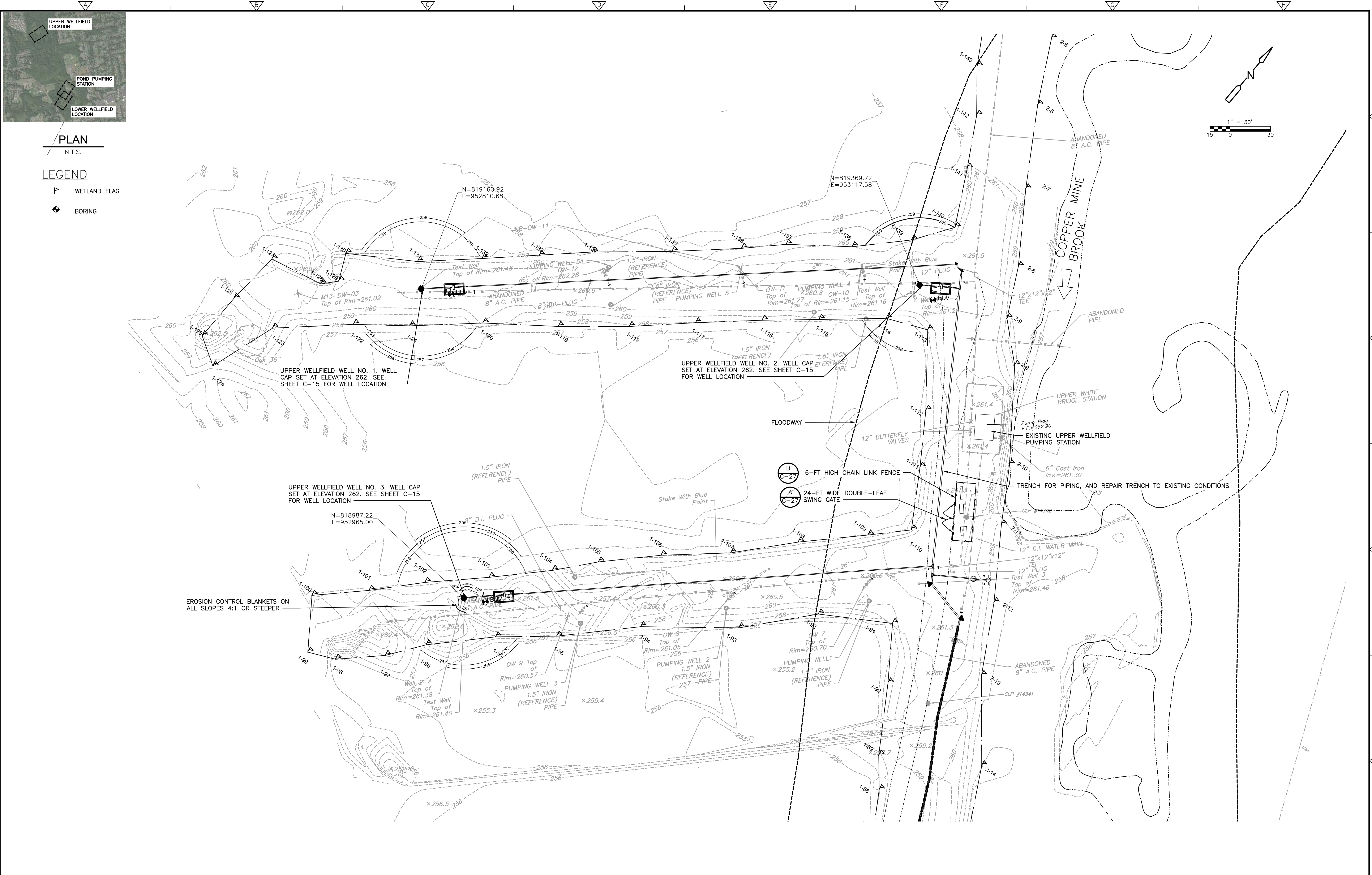
DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: APRIL 2023



LOWER WELLFIELD DEMOLITION AND REMOVALS PLAN

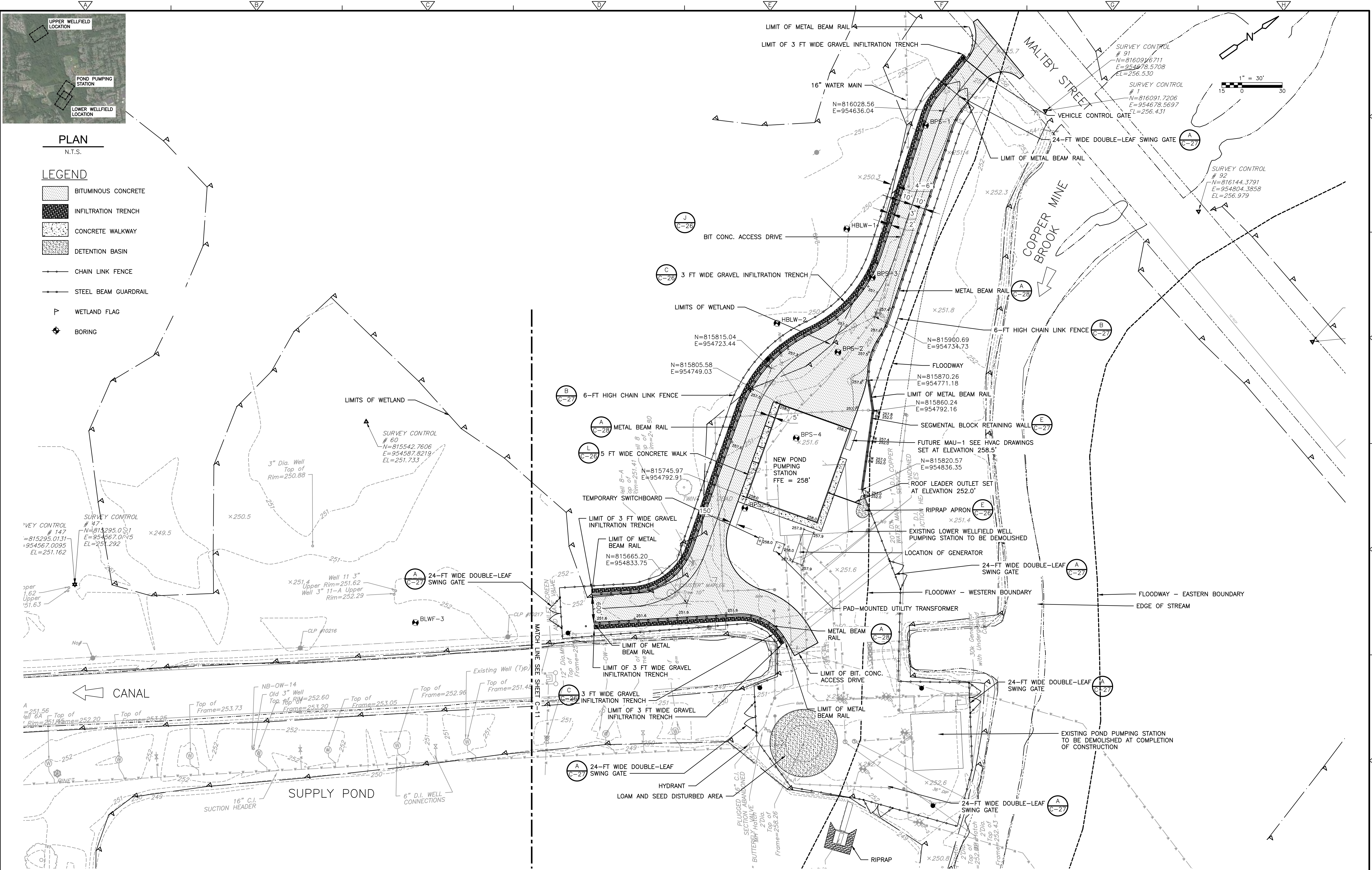
PROJECT NO.	10739-264571
FILE NAME:	C008GDPL.DWG
SHEET NO.	
C-8	

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					DESIGNED BY: G. HOWARD	CDM Smith 77 Hartland Street, Suite 200 East Hartford, CT 06108 Tel: (860) 529-7615	CITY OF NEW BRITAIN, CONNECTICUT WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION	UPPER WELLFIELD LAYOUT, MATERIALS, AND GRADING PLAN	PROJECT NO. 10739-264571 FILE NAME: C009STPL.DWG SHEET NO. C-9
					DRAWN BY: J. BRONENKANT				
					SHEET CHK'D BY: G. HOWARD				
					CROSS CHK'D BY: K. WAGNER				
					APPROVED BY: K. WAGNER				
REV. NO.	DATE	DRWN	CHKD	REMARKS	DATE: APRIL 2023				

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DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: APRIL 2023

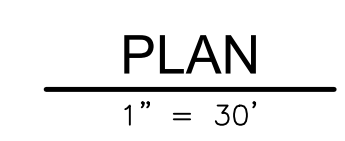
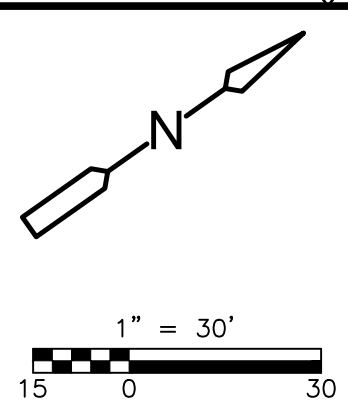
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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
LAYOUT AND MATERIALS PLAN

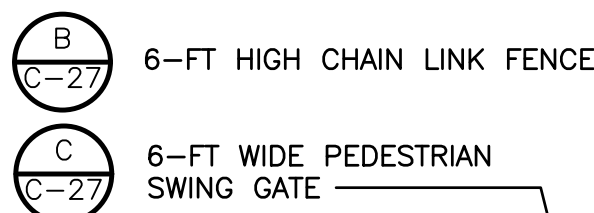
PROJECT NO. 10739-264571
FILE NAME: C010GDP.LDW
SHEET NO.
C-10



DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: DECEMBER 2023

MAILTBY STREET SURFACE RESTORATION

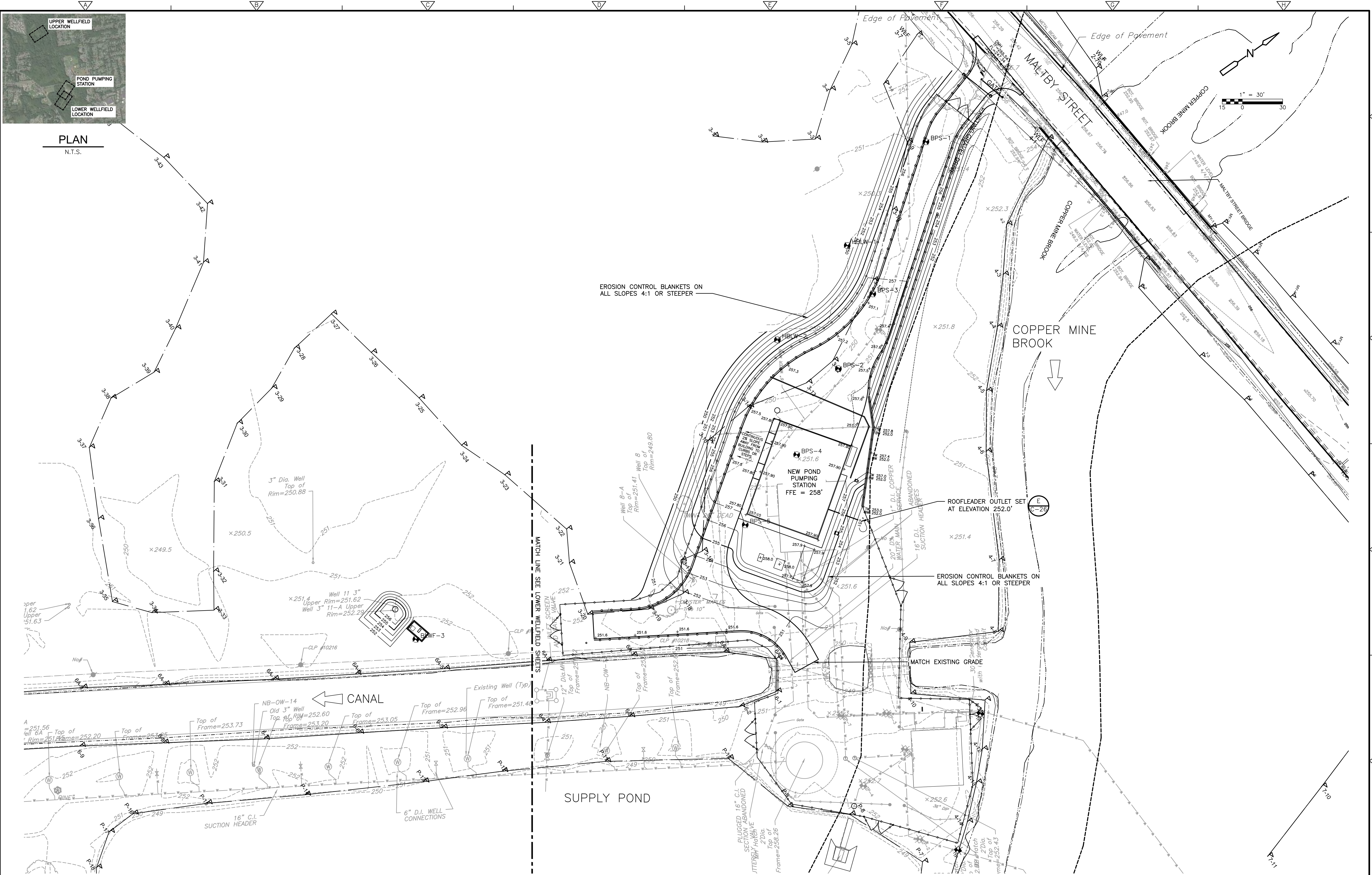
PROJECT NO. 10739-264571
FILE NAME: CO10BGDPL.DWG
SHEET NO.
C-10B



LOWER WELLFIELD LAYOUT, MATERIALS, AND GRADING PLAN

PROJECT NO.	10739-264571
FILE NAME:	C011GDPL.DWG
SHEET NO.	
C-11	

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				DESIGNED BY: <u>G. HOWARD</u>				 	CITY OF NEW BRITAIN, CONNECTICUT WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION	POND PUMPING STATION GRADING AND DRAINAGE PLAN	PROJECT NO. 10739-264571
				DRAWN BY: <u>J. BRONENKANT</u>							FILE NAME: C012GDPL.DWG
				SHEET CHK'D BY: <u>K. GERLACH</u>							SHEET NO.
				CROSS CHK'D BY: <u>K. WAGNER</u>							C-12
				APPROVED BY: <u>K. WAGNER</u>							
REV. NO.	DATE	DRWN	CHKD	REMARKS				DATE: <u>DECEMBER 2023</u>			

XREFs: [CDMS-2436_XSVPLO00_Floodway_Floodplain_CEP0000ST_CWP0001PS - 2D Process Export, 2022-17, BORING LOCATIONS, BristolTops, CYPWP001]
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NOTES:
1. REFER TO SPECIFICATIONS FOR MORE DETAILS AND REQUIREMENTS FOR WETLANDS REPLICATION AND COMPENSATORY FLOOD STORAGE REQUIREMENTS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: K. GARLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: APRIL 2023

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East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

WETLAND REPLICATION PLAN I
C-13

PROJECT NO. 10739-264571
FILE NAME: C013STPL.DWG
SHEET NO.
C-13

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NOTES:

1. REFER TO SPECIFICATIONS FOR MORE DETAILS AND REQUIREMENTS FOR WETLANDS REPLICATION AND COMPENSATORY FLOOD STORAGE REQUIREMENTS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: K. GERLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: APRIL 2023

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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

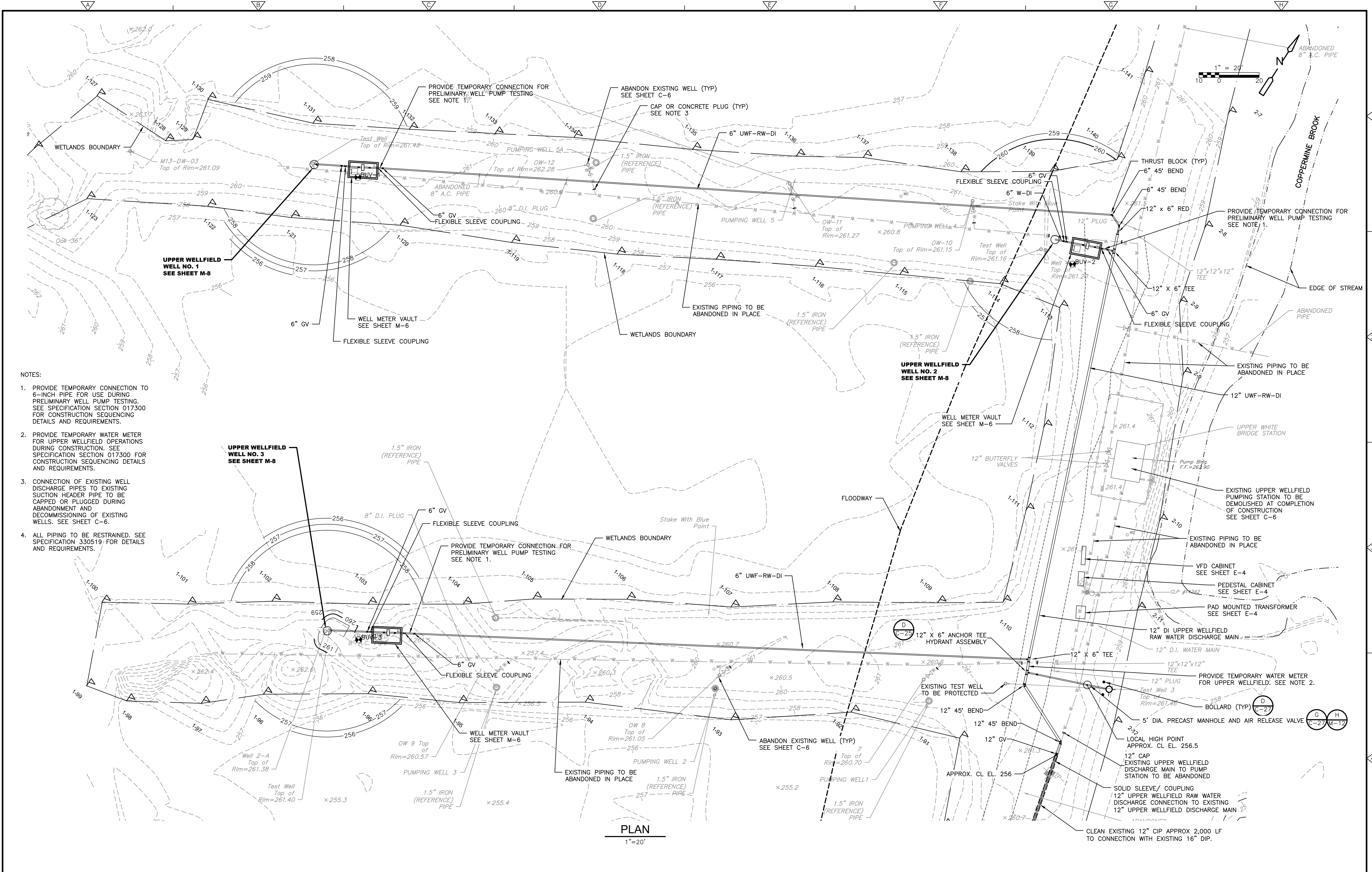
WETLAND REPLICATION PLAN II

PROJECT NO. 10739-264571
FILE NAME: C014STPL.DWG

SHEET NO.

C-14

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: APRIL 2023

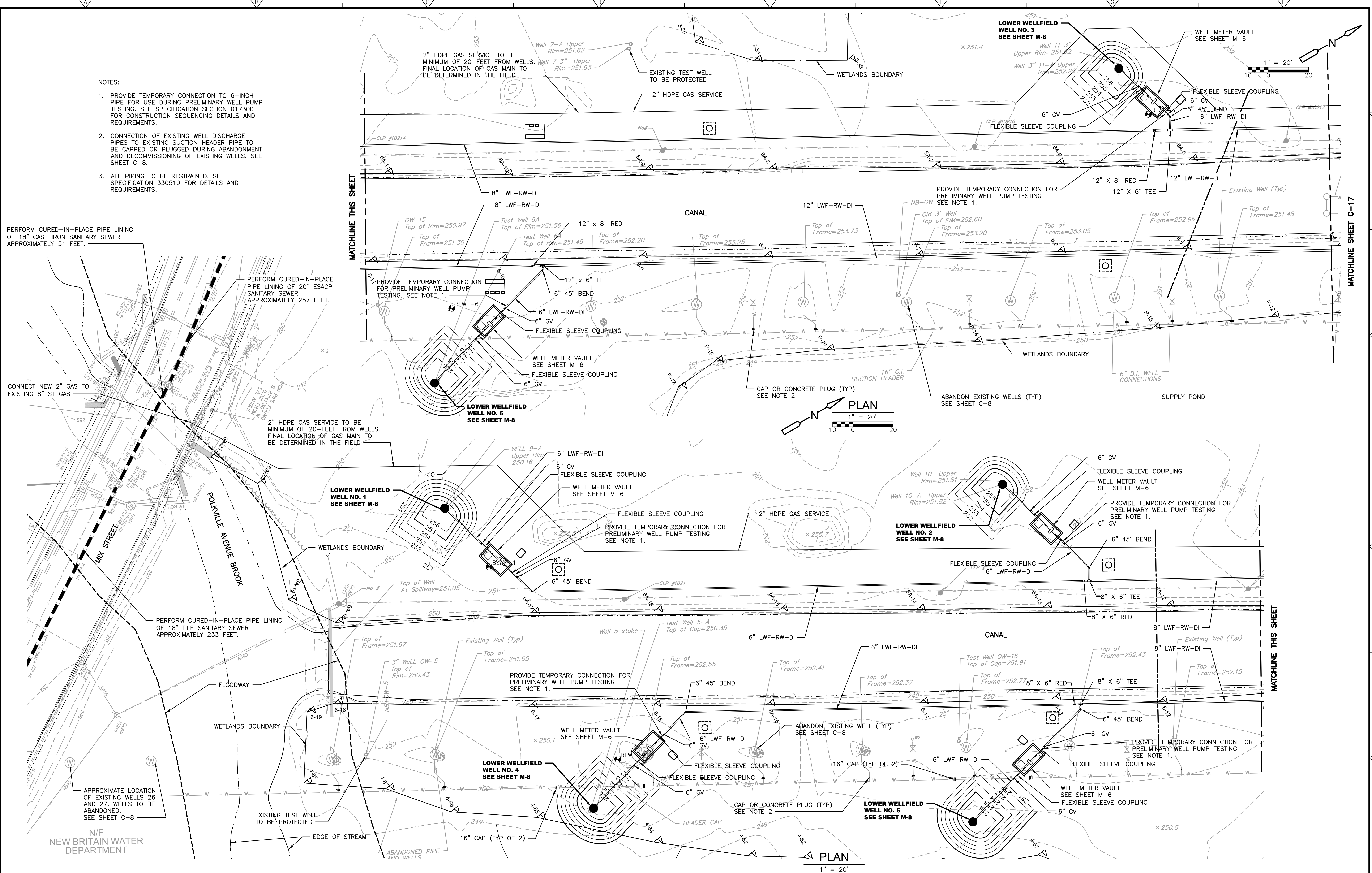
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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

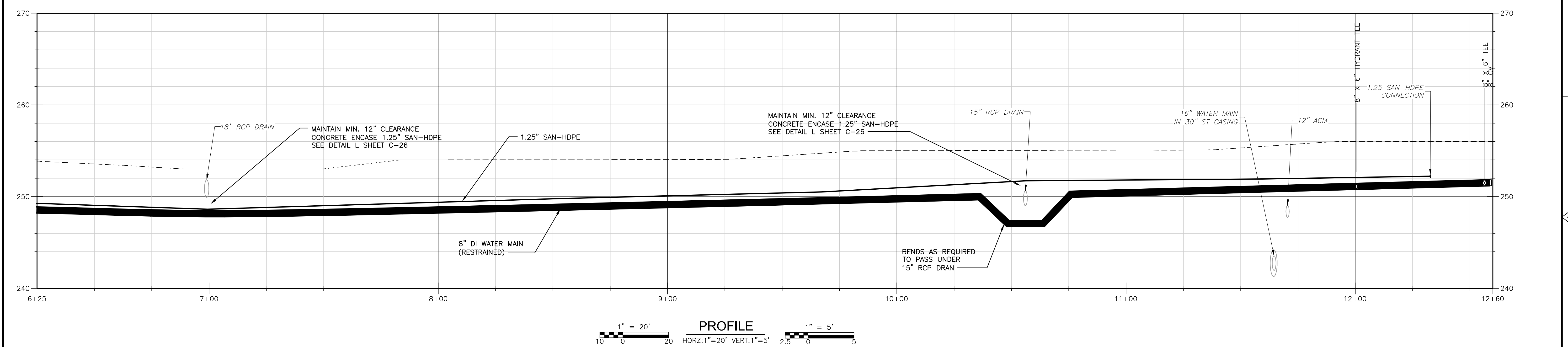
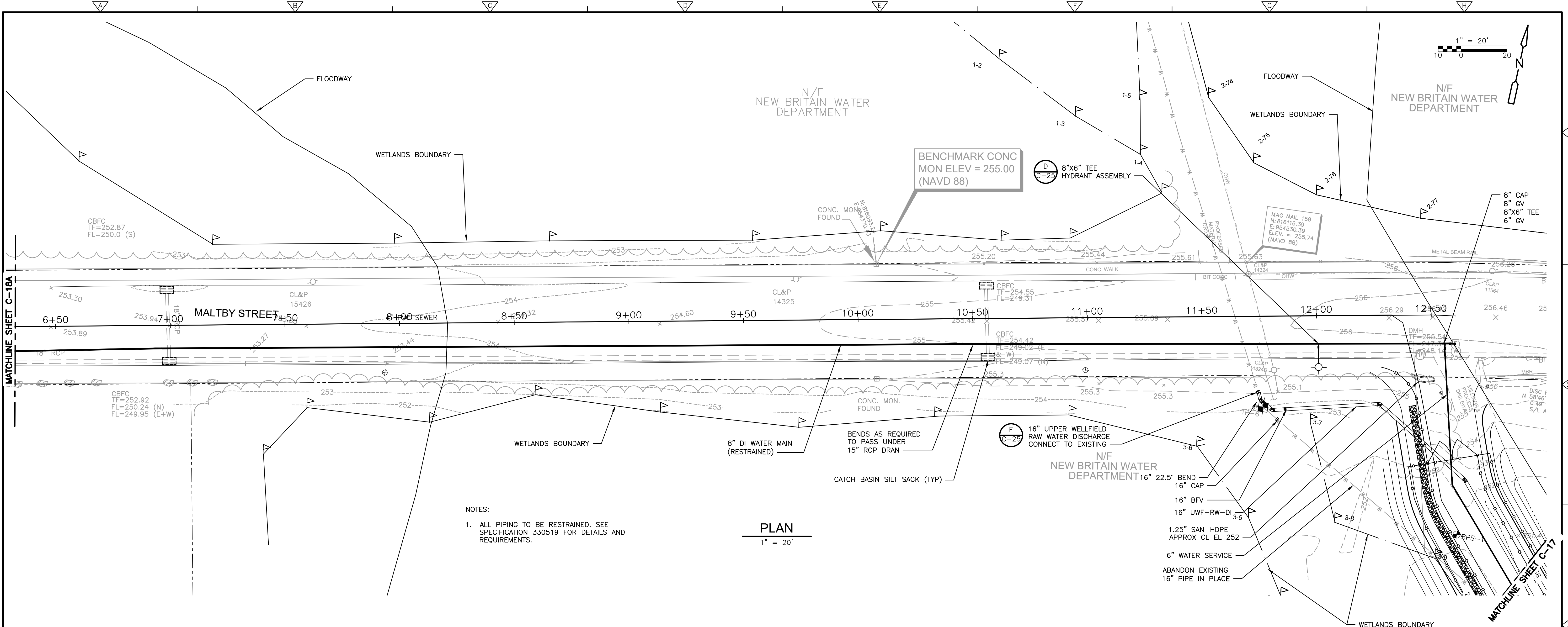
UPPER WELLFIELD
YARD PIPING PLAN

PROJECT NO. 10739-264571 FILE NAME: C015YPPL.DWG
SHEET NO. C-15

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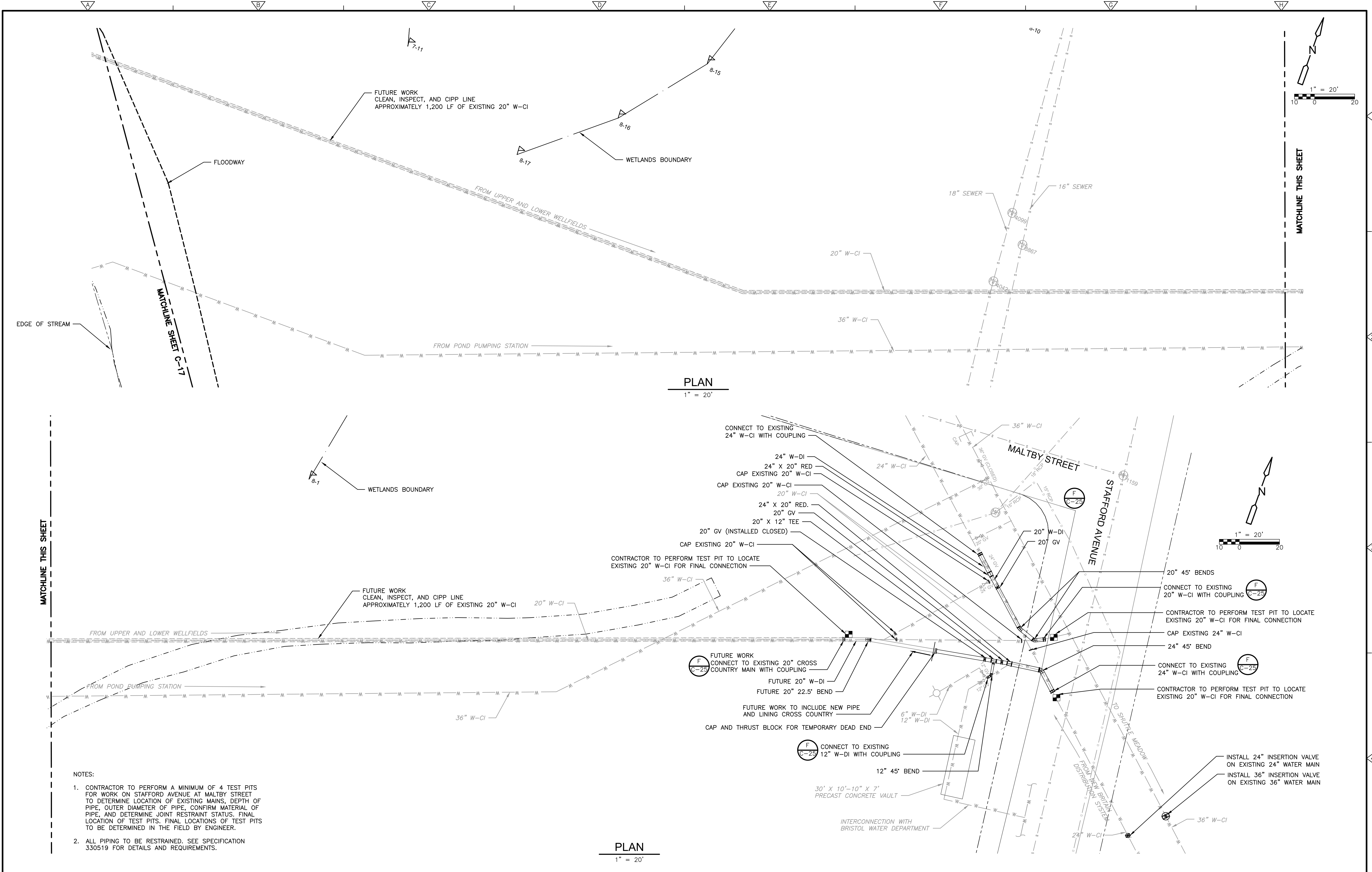


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DESIGNED BY: K. GERLACH	CDM Smith 101 East River Drive, Suite 1A East Hartford, CT 06108 Tel: (860) 529-7615		CITY OF NEW BRITAIN, CONNECTICUT		PROJECT NO. 10739-264571	
DRAWN BY: S. ENGEL			WHITE BRIDGE WATERWORKS FACILITIES		FILE NAME: C018BYPPPL.DWG	
SHEET CHK'D BY: K. WAGNER			UPPER AND LOWER WELLFIELDS		SHEET NO.	
CROSS CHK'D BY: K. GERLACH			AND POND PUMPING STATION		C-18B	
APPROVED BY: K. WAGNER						
DATE: DECEMBER 2023						
REV. NO.	DATE	DRWN	CHKD	REMARKS		

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- NOTES:
- CONTRACTOR TO PERFORM A MINIMUM OF 4 TEST PITS FOR WORK ON STAFFORD AVENUE AT MALTBY STREET TO DETERMINE LOCATION OF EXISTING MAINS, DEPTH OF PIPE, OUTER DIAMETER OF PIPE, CONFIRM MATERIAL OF PIPE, AND DETERMINE JOINT RESTRAINT STATUS. FINAL LOCATION OF TEST PITS, FINAL LOCATIONS OF TEST PITS TO BE DETERMINED IN THE FIELD BY ENGINEER.
 - ALL PIPING TO BE RESTRAINED. SEE SPECIFICATION 330519 FOR DETAILS AND REQUIREMENTS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: DECEMBER 2023

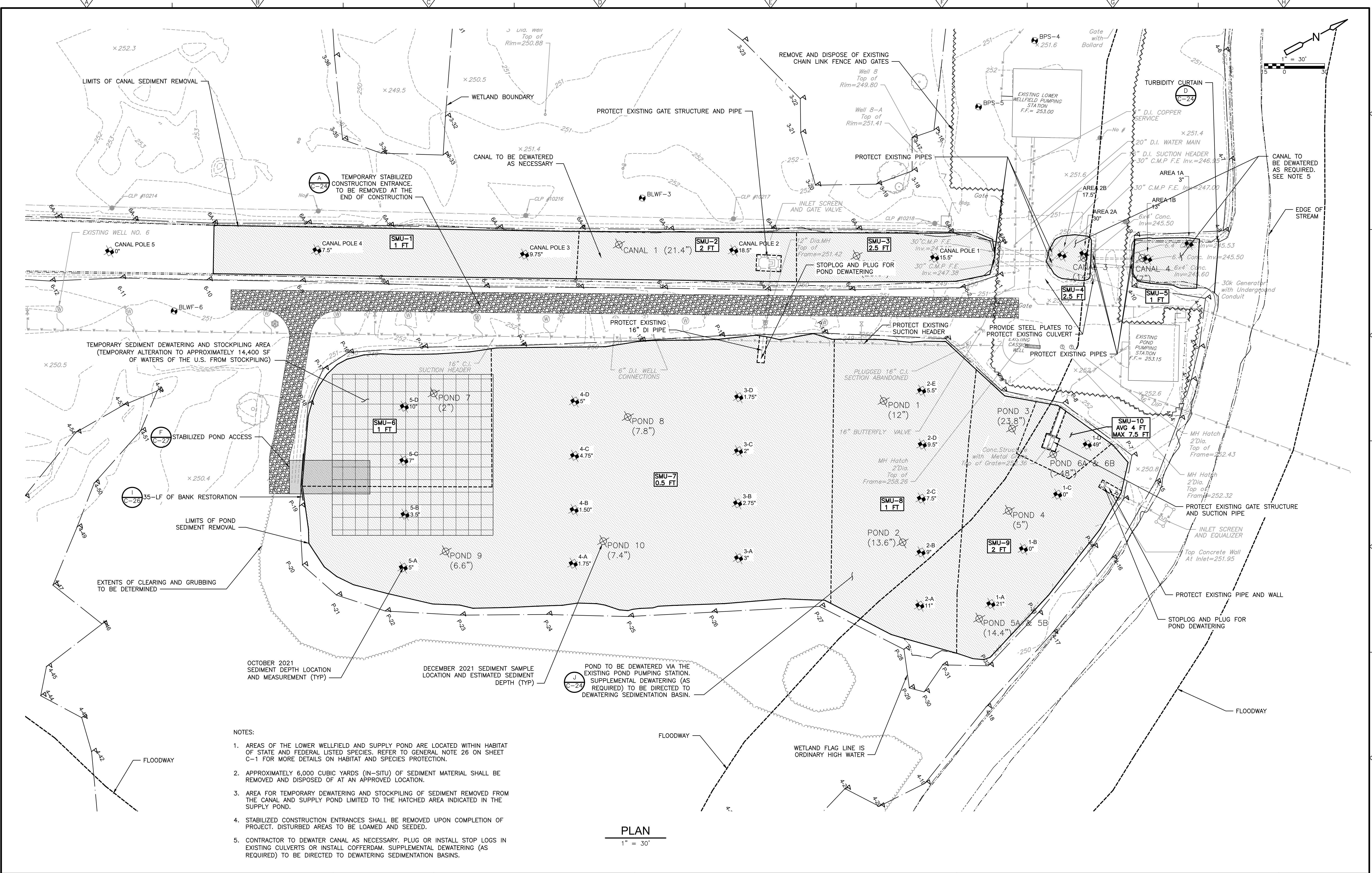


CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

STAFFORD AVENUE
AND CROSS COUNTRY
PLAN
C-19

PROJECT NO. 10739-264571
FILE NAME: C019YPPL.DWG
SHEET NO. C-19

XREFs: [TEST HOLE POINTS, CDMS 2436, XSVRLO40, 2022-17, BORING LOCATIONS, Floodway, Floodplain] Images: []
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NOTES:

- AREAS OF THE LOWER WELLFIELD AND SUPPLY POND ARE LOCATED WITHIN HABITAT OF STATE AND FEDERAL LISTED SPECIES. REFER TO GENERAL NOTE 26 ON SHEET C-1 FOR MORE DETAILS ON HABITAT AND SPECIES PROTECTION.
- APPROXIMATELY 6,000 CUBIC YARDS (IN-SITU) OF SEDIMENT MATERIAL SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION.
- AREA FOR TEMPORARY DEWATERING AND STOCKPILING OF SEDIMENT REMOVED FROM THE CANAL AND SUPPLY POND LIMITED TO THE HATCHED AREA INDICATED IN THE SUPPLY POND.
- STABILIZED CONSTRUCTION ENTRANCES SHALL BE REMOVED UPON COMPLETION OF PROJECT. DISTURBED AREAS TO BE LOAMED AND SEEDED.
- CONTRACTOR TO DEWATER CANAL AS NECESSARY. PLUG OR INSTALL STOP LOGS IN EXISTING CULVERTS OR INSTALL COFFERDAM. SUPPLEMENTAL DEWATERING (AS REQUIRED) TO BE DIRECTED TO DEWATERING SEDIMENTATION BASINS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	T. BURKE
DRAWN BY:	S. ENGEL
SHEET CHK'D BY:	K. GERLACH
CROSS CHK'D BY:	T. BURKE
APPROVED BY:	K. WAGNER
DATE:	APRIL 2023

CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

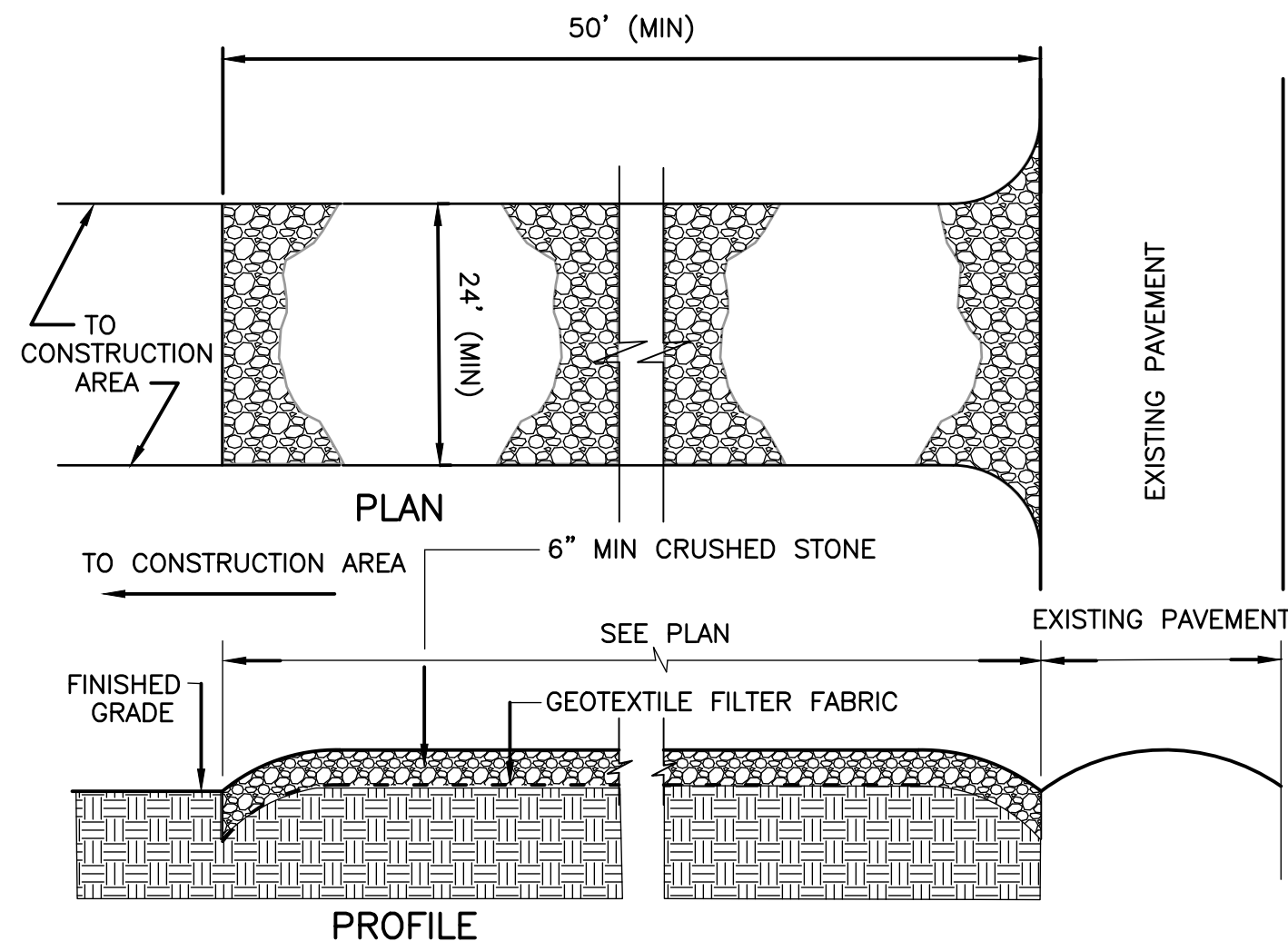


CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

SUPPLY POND AND CANAL
SEDIMENT REMOVAL PLAN

PROJECT NO.	10739-264571
FILE NAME:	C023SDRM.DWG
SHEET NO.	C-23

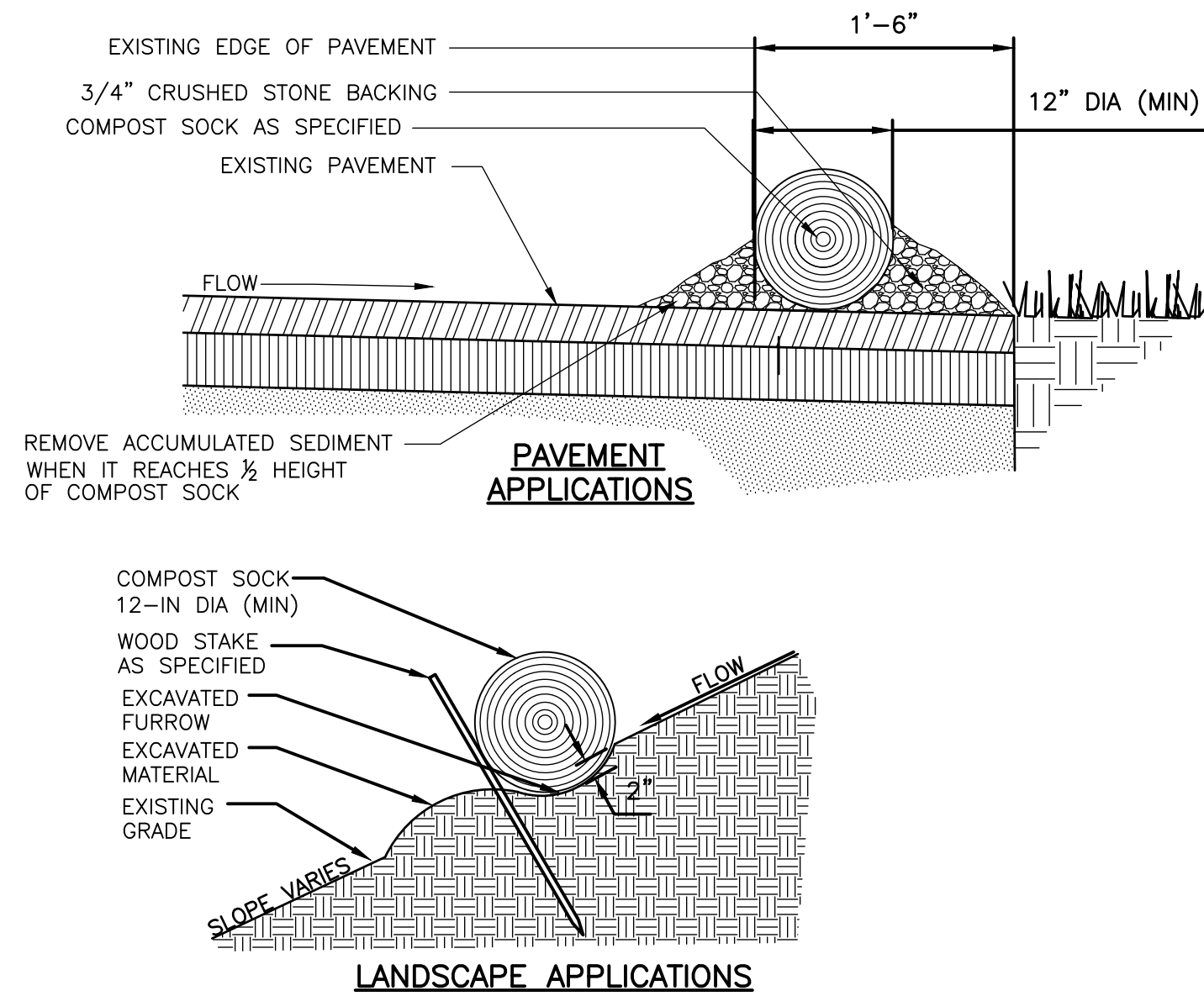
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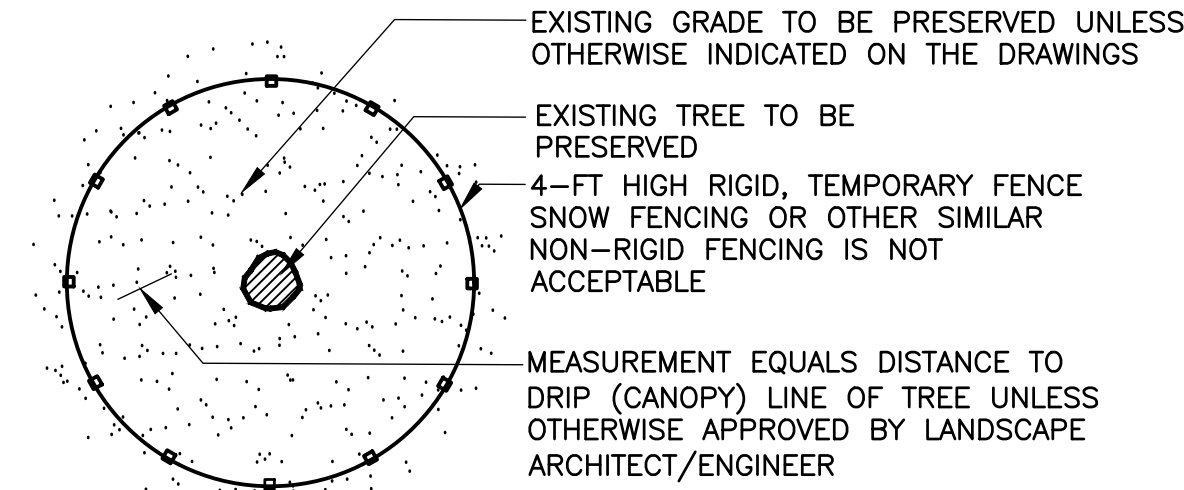
STABILIZED CONSTRUCTION ENTRANCE
DETAIL A
NOT TO SCALE

NOTES:

- 1.) PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND EXISTING PAVEMENT.
- 2.) LIMITS OF STABILIZED CONSTRUCTION ENTRANCE SHALL BE AS DIRECTED BY THE ENGINEER.
- 3.) THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDING STONE TO THE LENGTH OF THE ENTRANCE.
- 4.) REPAIR AND CLEANOUT MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO EXISTING PAVEMENT SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.



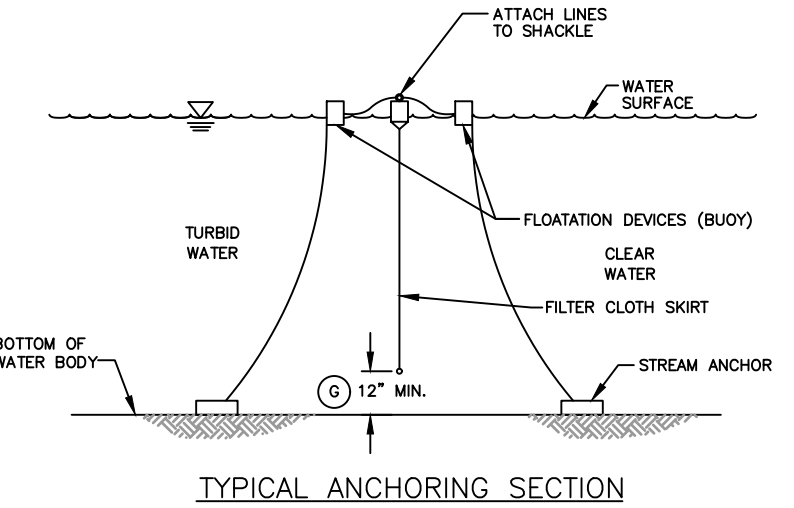
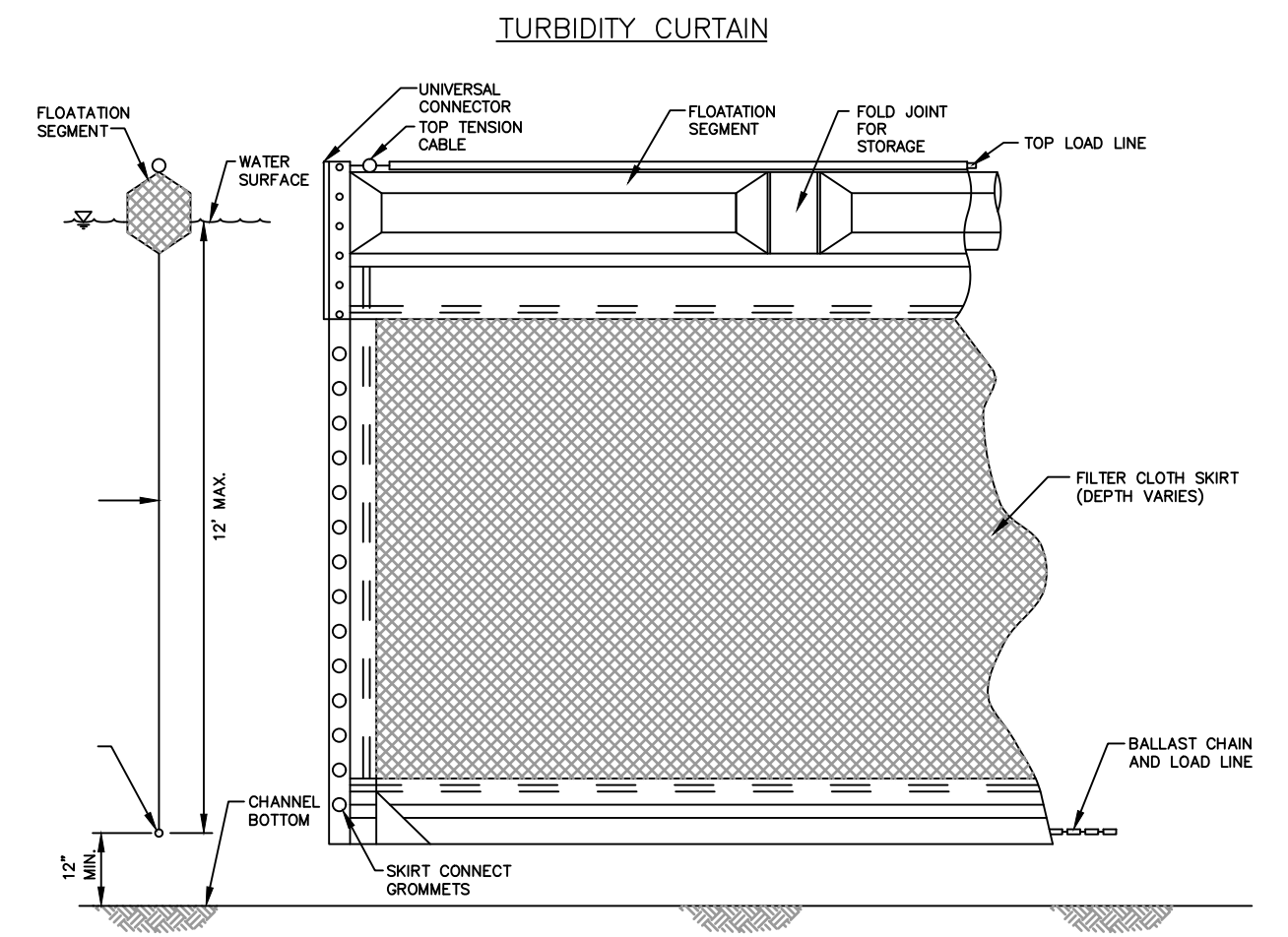
COMPOST SOCK
DETAIL B
SCALE: NTS



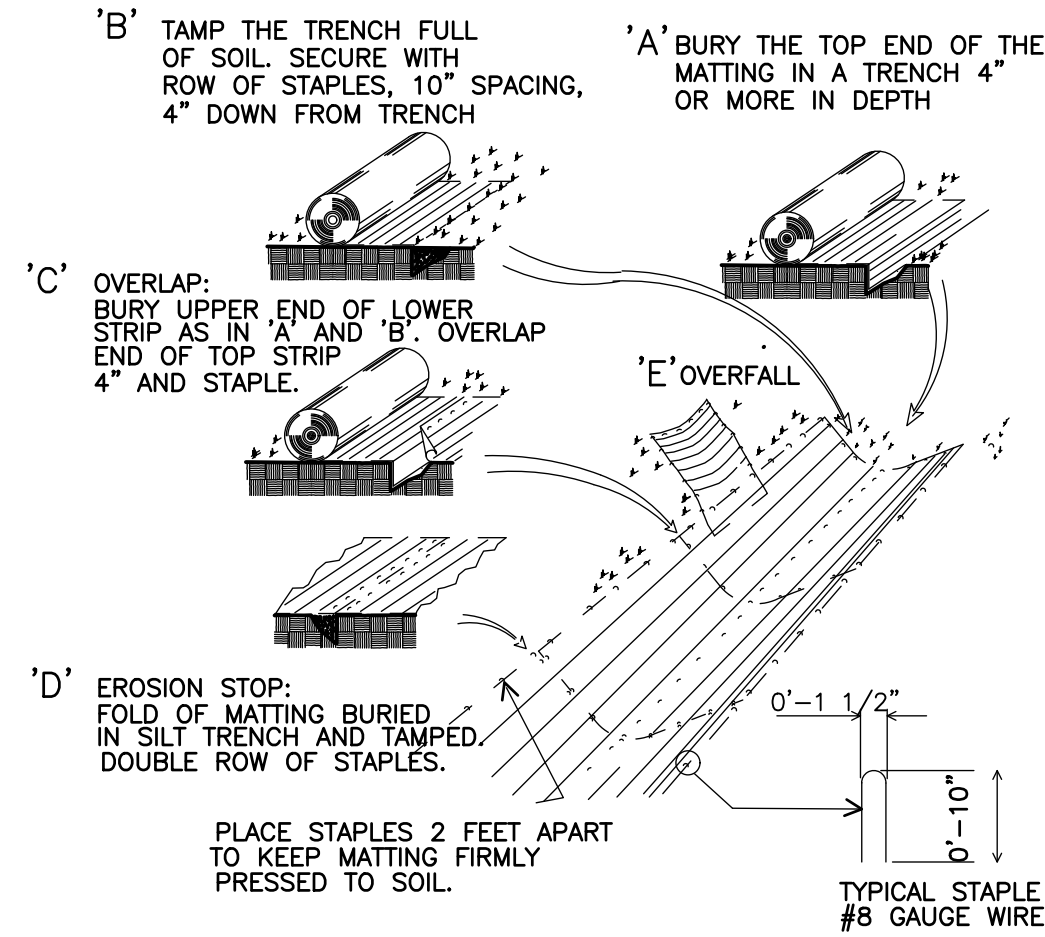
NOTES:

1. FENCING SHALL BE INSTALLED AROUND PERIMETER OF ALL EXISTING TREES TO BE PRESERVED WITHIN THE LIMIT OF WORK.
2. FENCING MAY BE REMOVED TEMPORARILY, ONLY AS REQUIRED TO PERFORM THE WORK SHOWN ON THE DRAWINGS.
3. FENCING SHALL REMAIN IN PLACE & BE MAINTAINED THROUGHOUT CONSTRUCTION AND THEN REMOVED COMPLETELY.

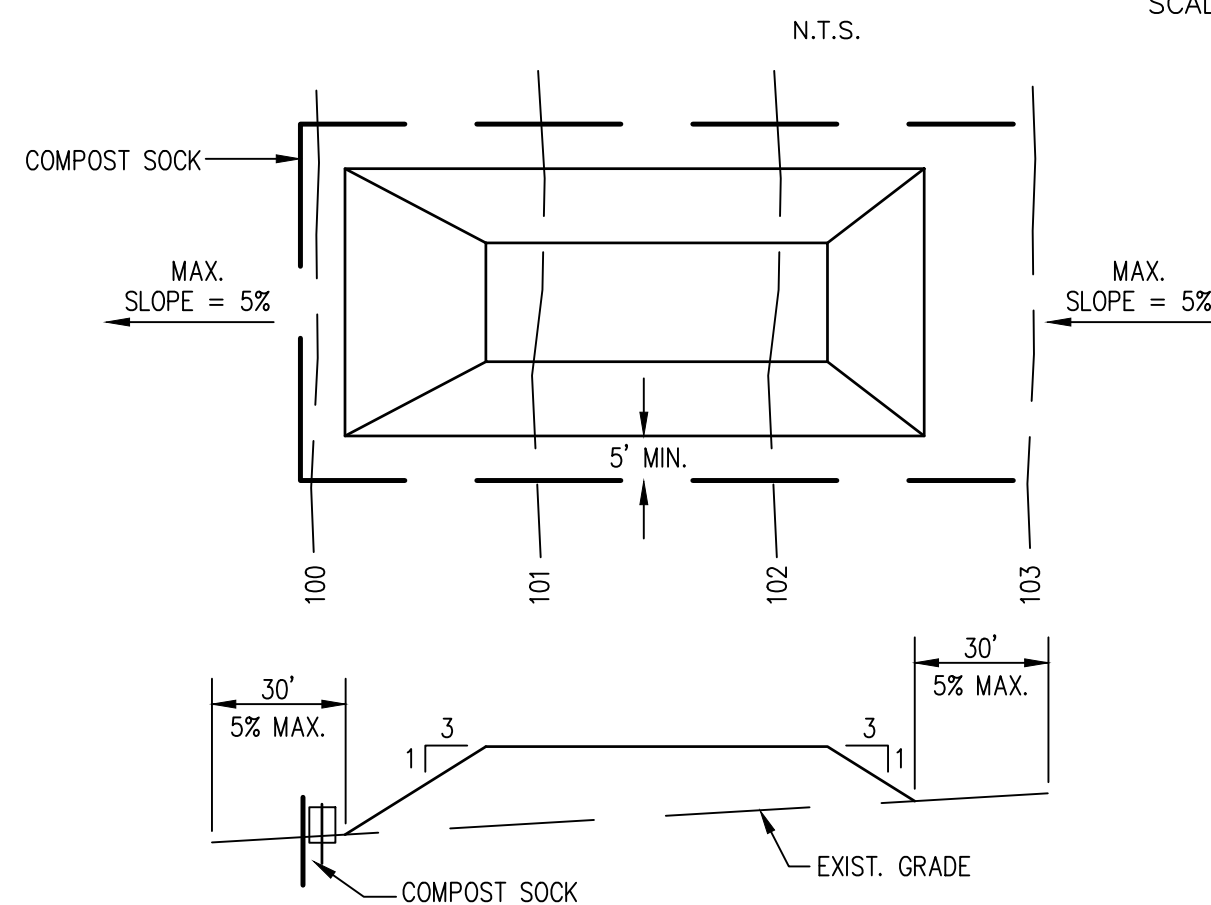
TREE PROTECTION
DETAIL C
NOT TO SCALE



TURBIDITY CURTAIN
DETAIL D
NOT TO SCALE



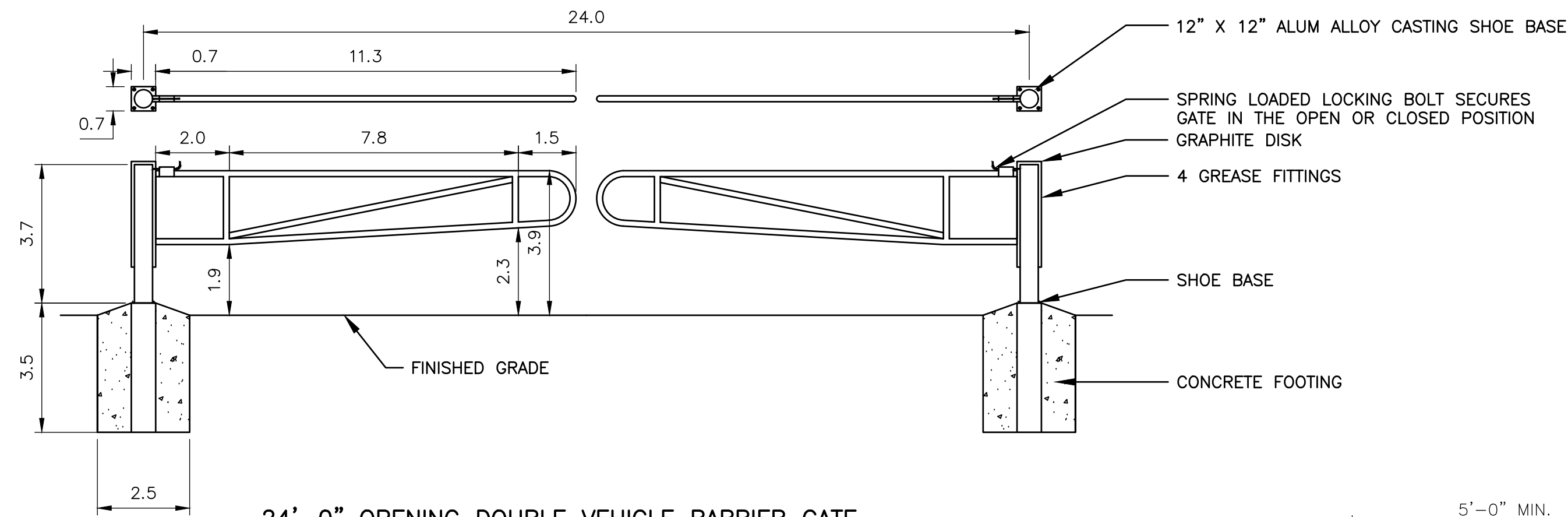
EROSION CONTROL BLANKET
DETAIL E
NOT TO SCALE



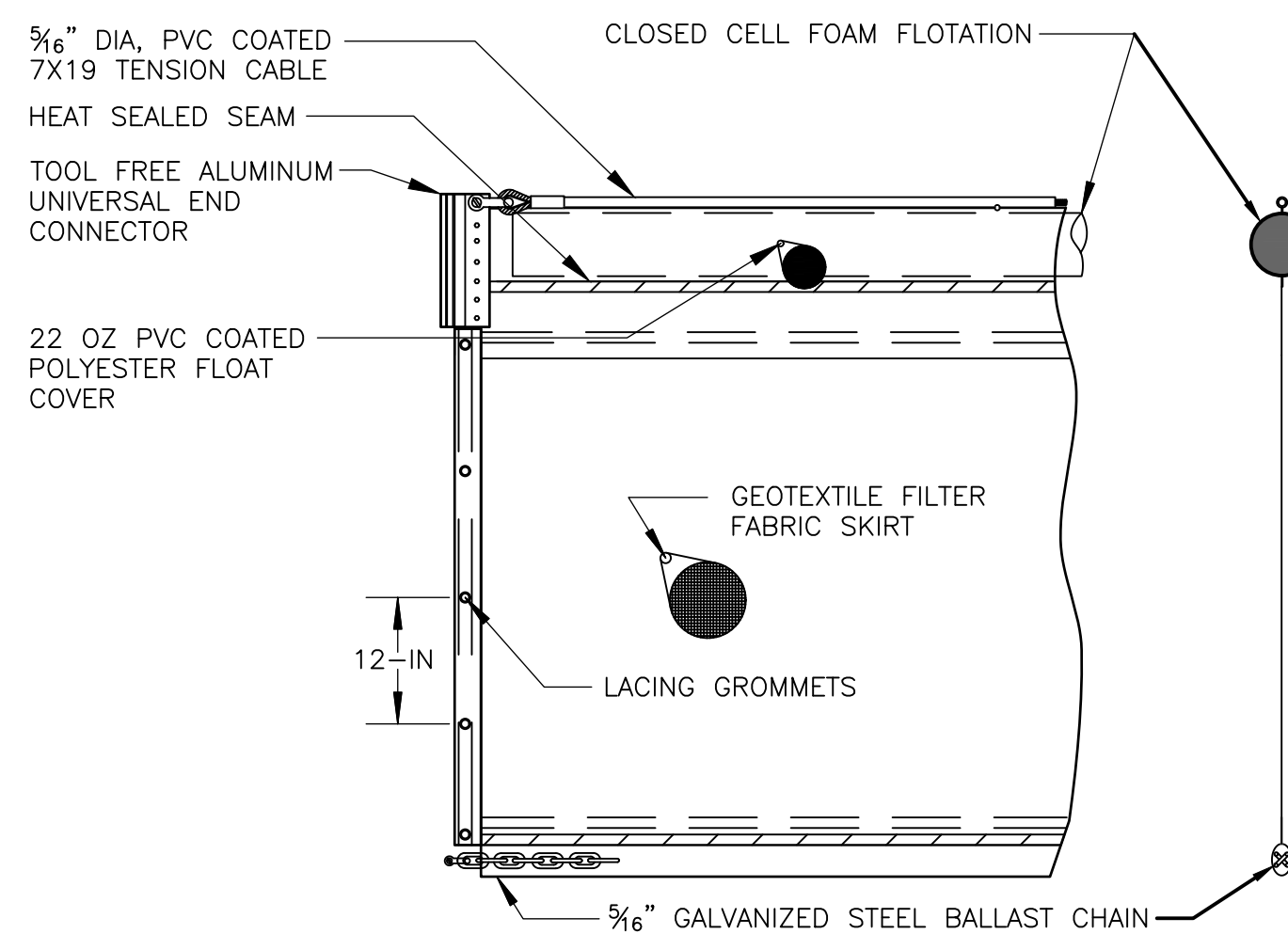
NOTES:

1. PLACE STOCKPILES AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
2. ALL SIDE SLOPES SHALL BE 3 TO 1 OR FLATTER.
3. STOCKPILE SHALL RECEIVE A VEGETATIVE COVER IN ACCORDANCE WITH MINIMUM STABILIZATION REQ.
4. COMPOST SHALL BE INSTALLED AS DETAILED HEREON.

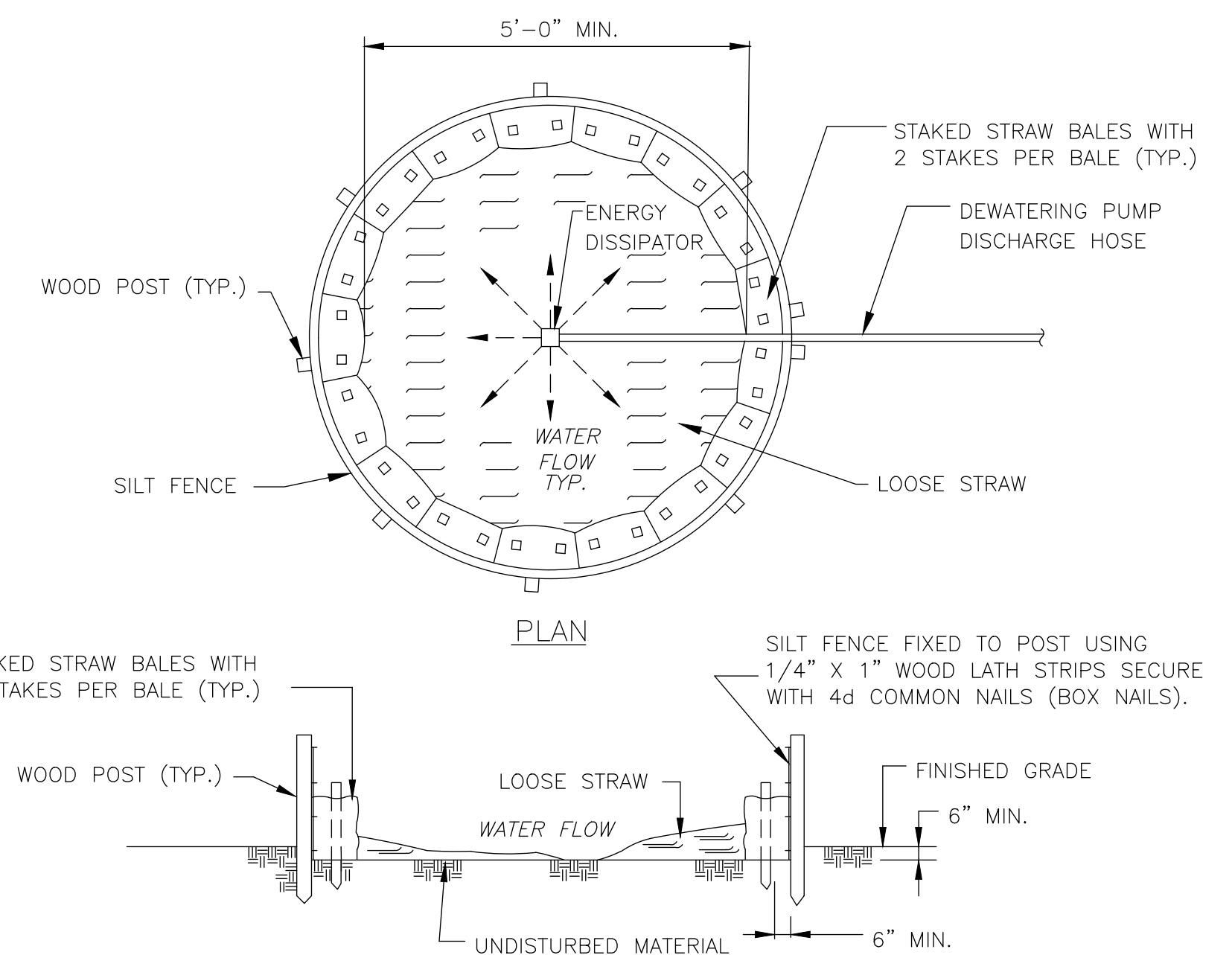
SOIL STOCKPILE
DETAIL F
NOT TO SCALE



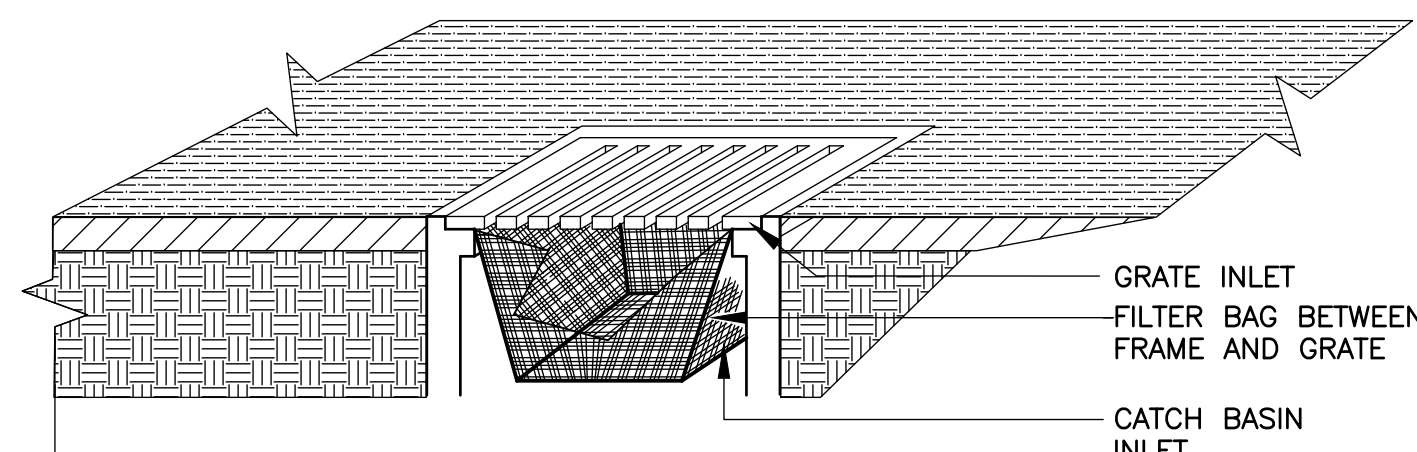
24'-0" OPENING DOUBLE VEHICLE BARRIER GATE
DETAIL G
NOT TO SCALE



FLOATING TURBIDITY BARRIER
DETAIL I
NOT TO SCALE



DEWATERING SEDIMENTATION BASIN
DETAIL J
NOT TO SCALE



CATCH BASIN FILTER
DETAIL H
NOT TO SCALE

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	K. GERLACH
DRAWN BY:	J. BRONENKANT
SHEET CHK'D BY:	K. WAGNER
CROSS CHK'D BY:	K. GERLACH
APPROVED BY:	K. WAGNER
DATE:	APRIL 2023

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77 Hartland Street, Suite 200
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Tel: (860) 529-7615

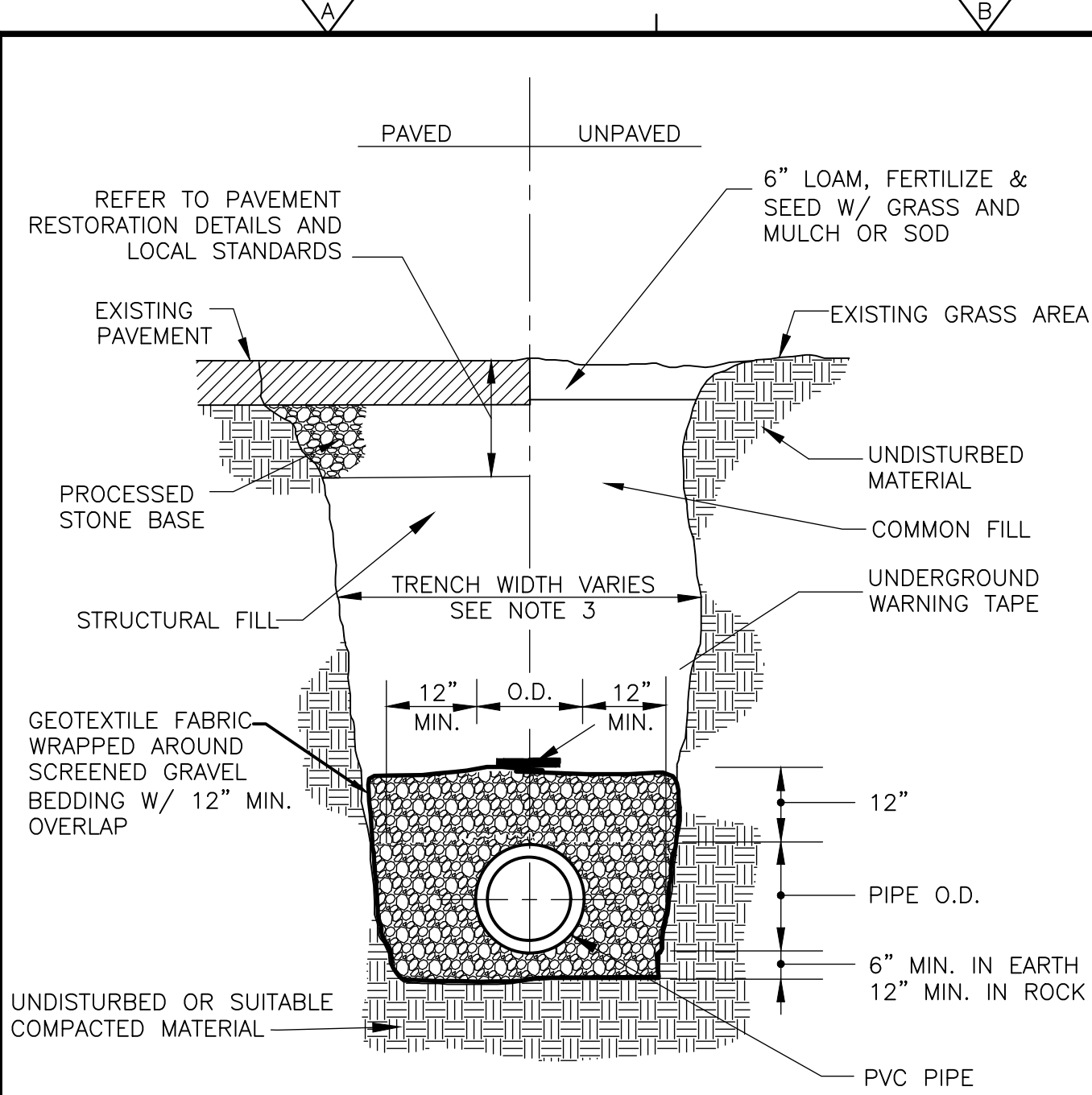


CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

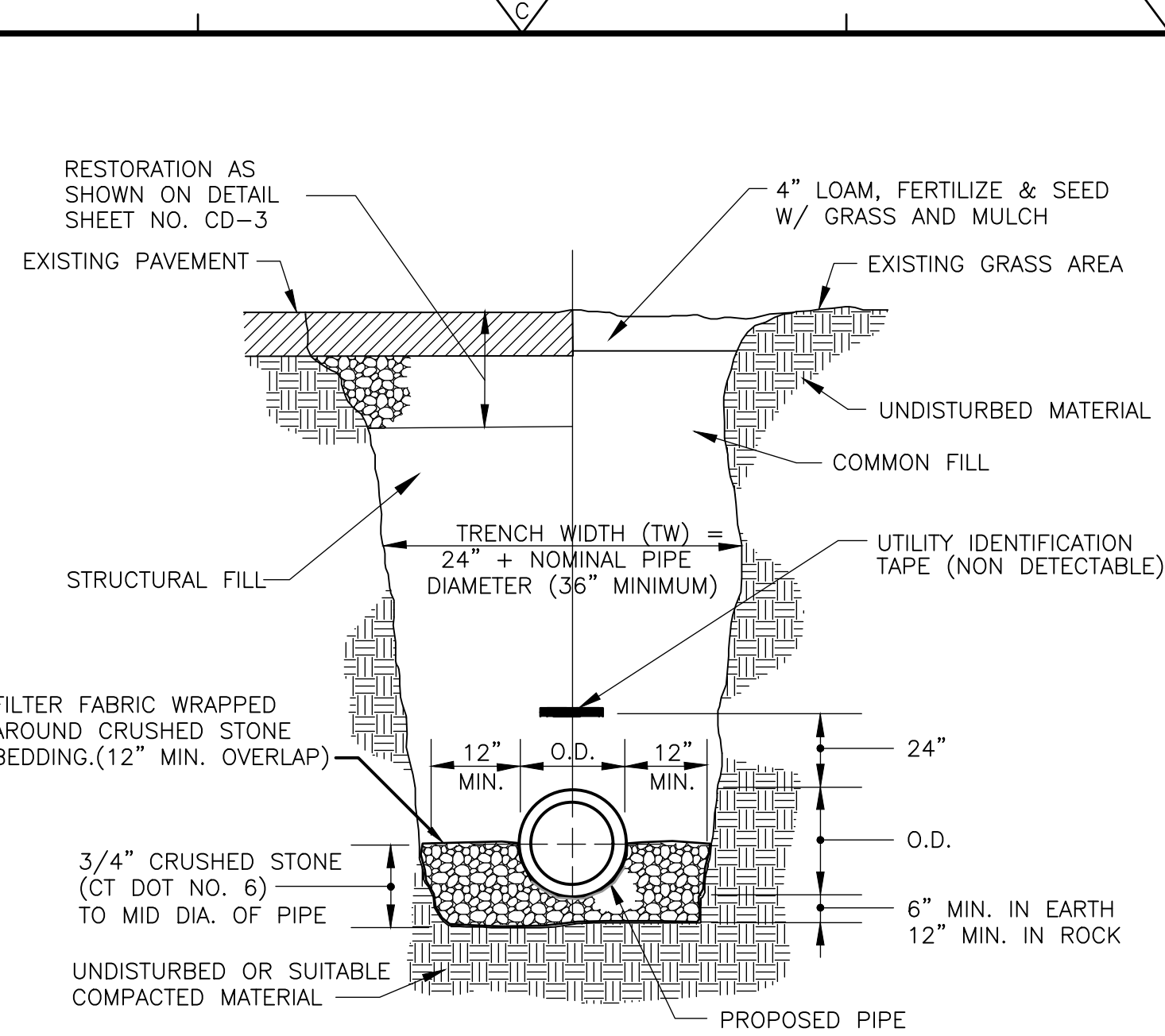
CIVIL DETAILS I

PROJECT NO. 10739-264571
FILE NAME: CD001CSDT.DWG
SHEET NO.
C-24

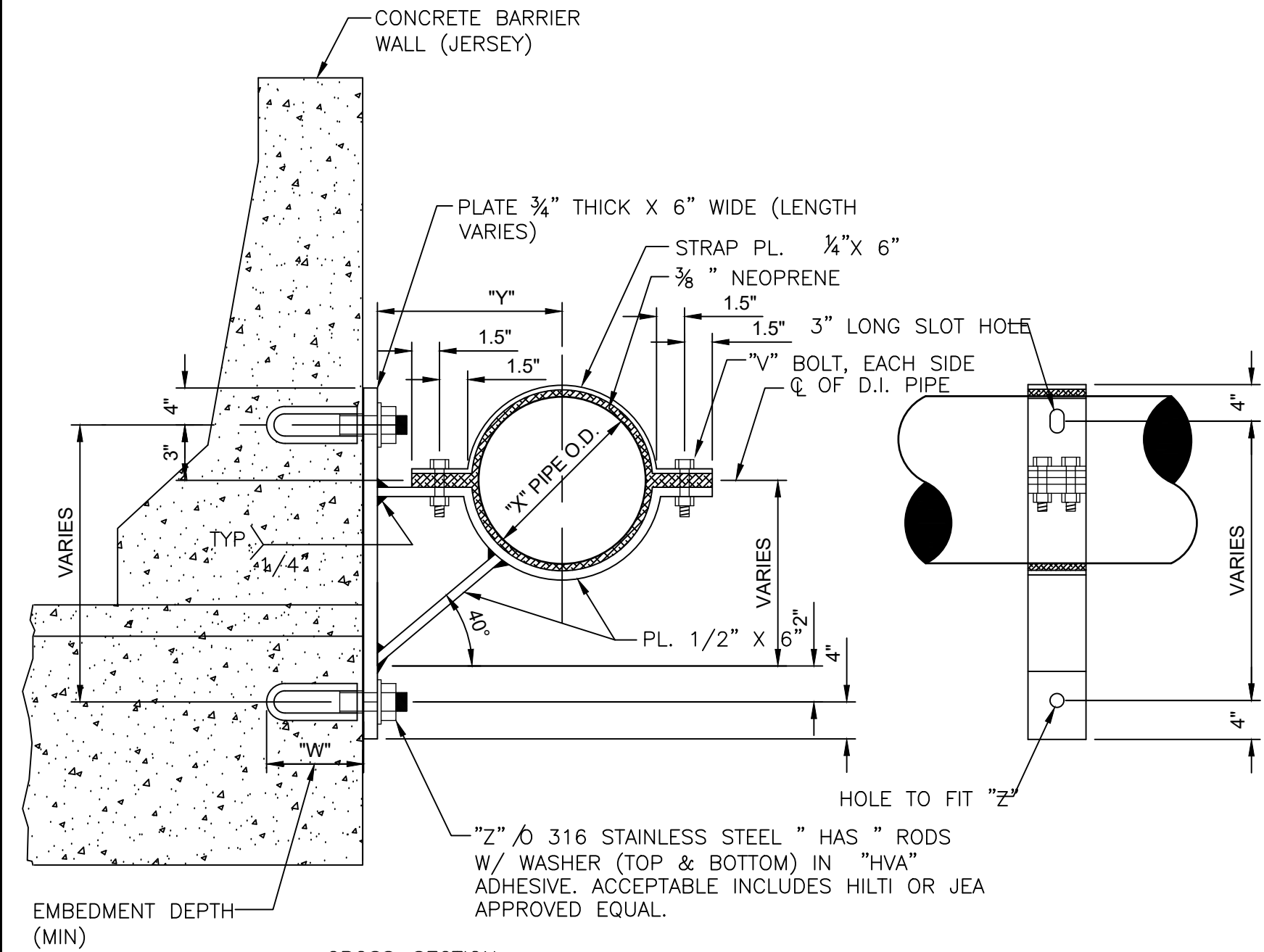
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PVC PIPE TRENCH
DETAIL A
NOT TO SCALE



DI PIPE TRENCH
DETAIL B
NOT TO SCALE

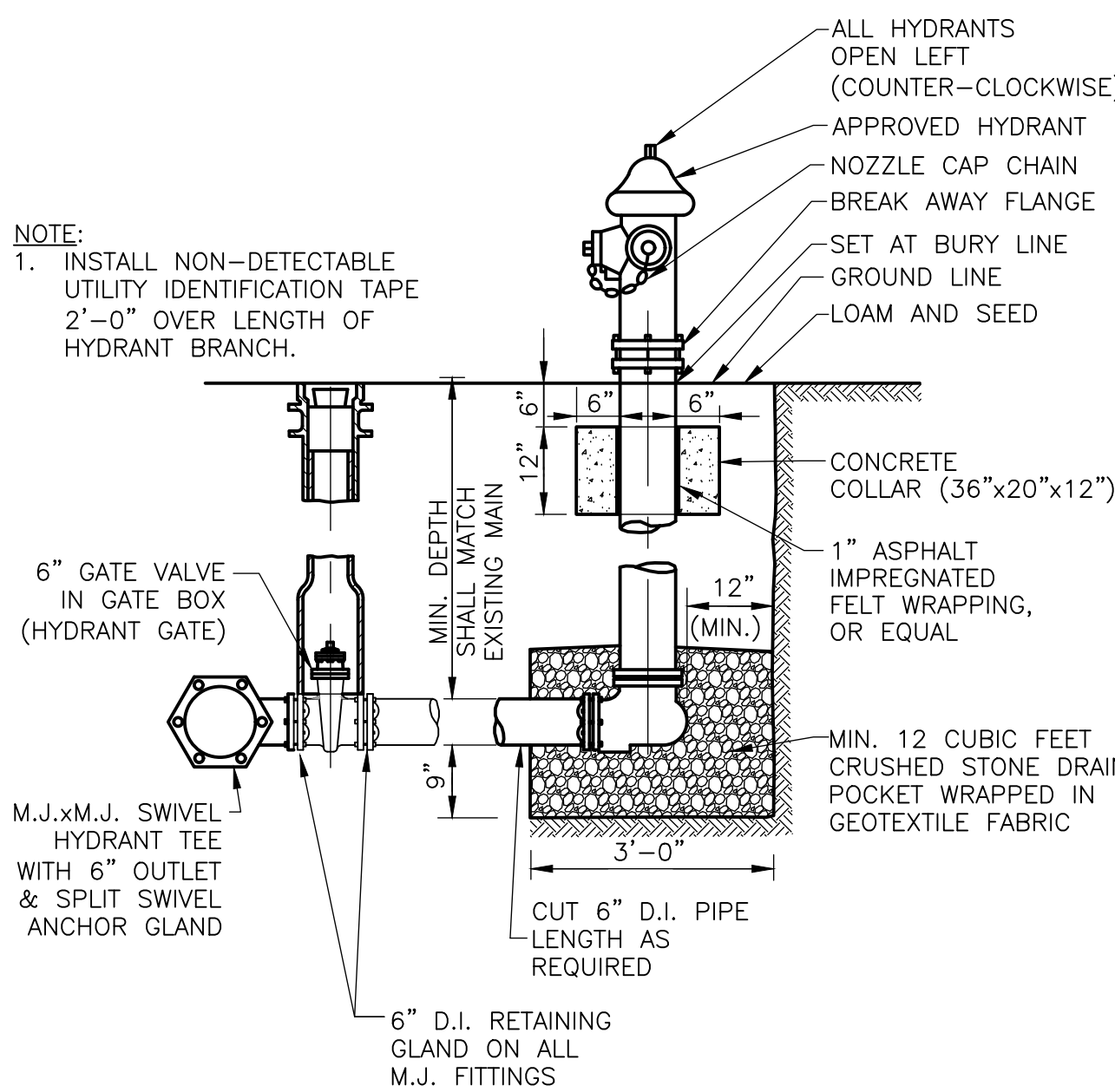


PIPE SIZE	4"	6"	8"	10"	12"	16"	20"	24"
X	4.80"	6.90"	9.05"	11.10"	13.20"	17.40"	21.60"	25.80"
Y	8"	9"	10"	12"	13"	15"	17"	19"
Z	3/4"	3/4"	3/4"	1"	1"	1 1/4"	1 1/4"	1 1/4"
W	6.625"	6.625"	6.625"	8.25"	8.25"	8.25"	12"	12"
V	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"

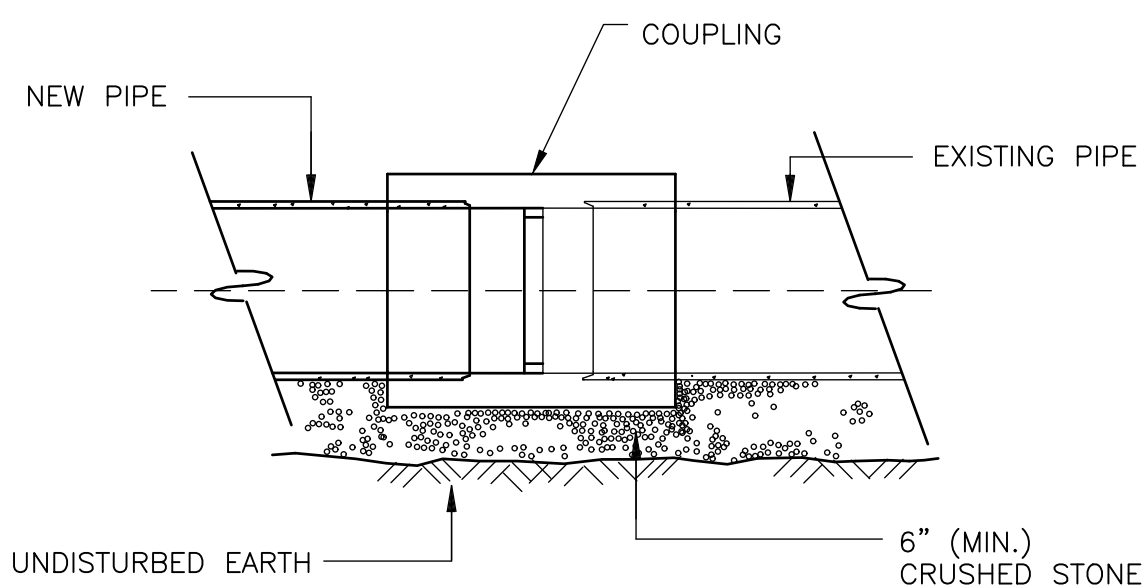
NOTES :

- ALL WELDS TO BE PERFORMED BY A CERTIFIED STRUCTURAL WELDER.
- ALL SUPPORT BRACKET MEMBERS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
- ALL NUTS, BOLTS, AND WASHERS SHALL BE 316 STAINLESS STEEL.
- THE SPACING OF SIDEWALL PIPE SUPPORTS SHALL BE SPECIFICALLY DESIGNED BASED UPON MANY FACTS INCLUDING PIPE SIZE AND MATERIAL EMBEDMENT LIMITATIONS. UNLESS APPROVED OTHERWISE BY THE ENGINEER, IN NO CASE SHALL THE SPACING OF PIPE SUPPORTS EXCEED TWENTY (20) FEET ON-CENTER FOR PIPE SIZES TWELVE (12) INCH AND SMALLER AND TEN (10) FEET ON-CENTER FOR PIPE SIZES GREATER THAN TWELVE (12) INCHES.

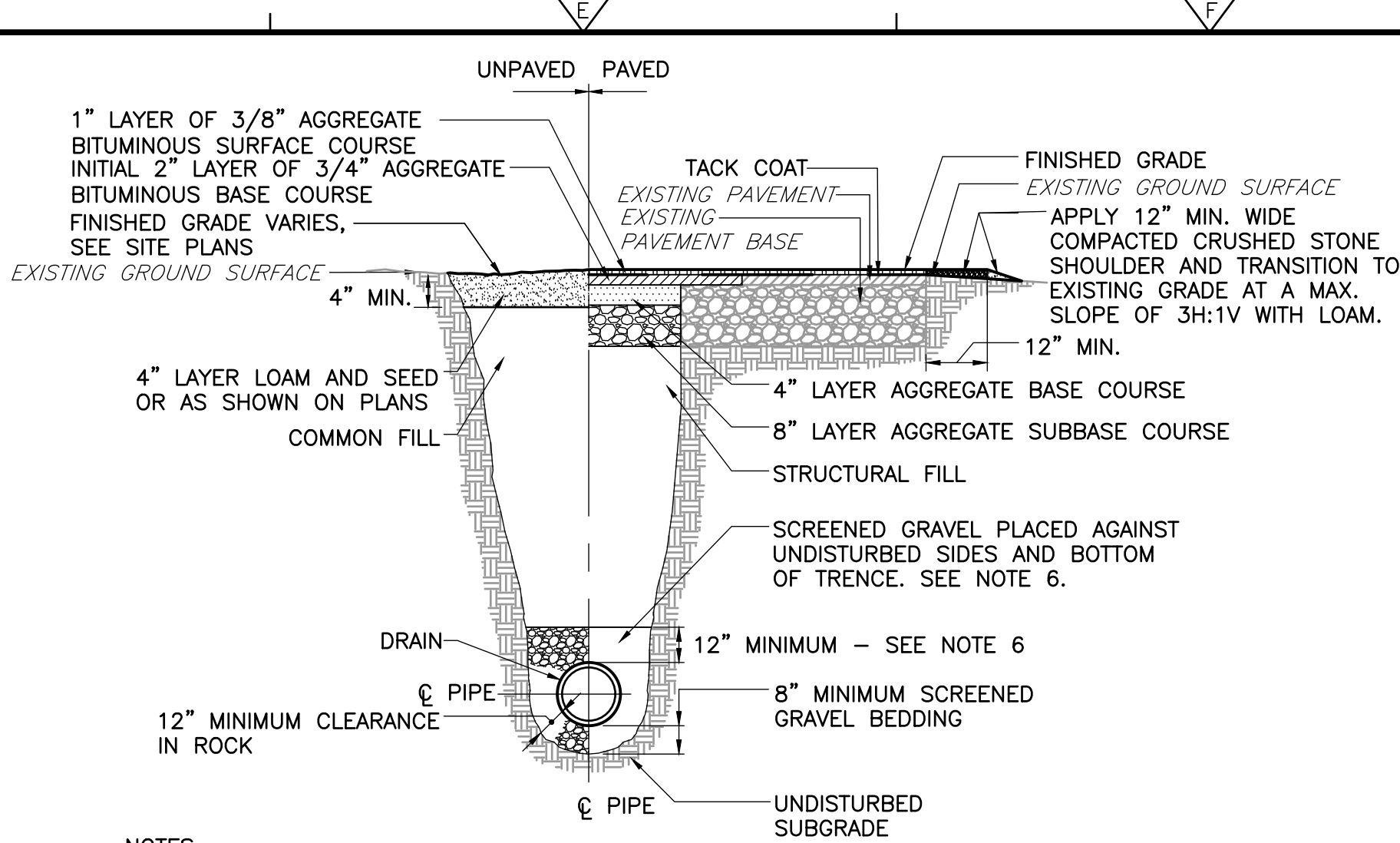
SIDEWALL PIPE HANGER
DETAIL E
NOT TO SCALE



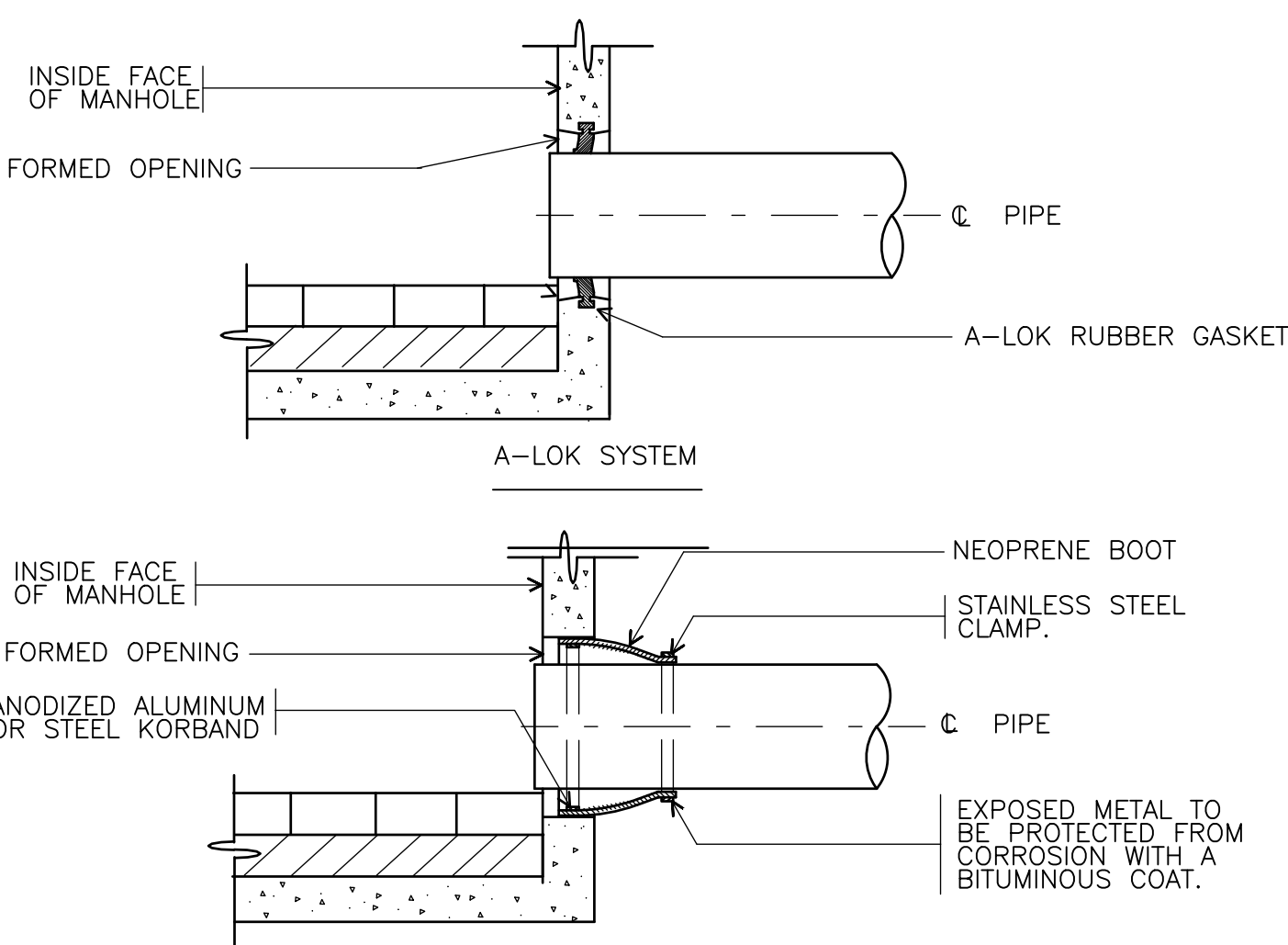
FIRE HYDRANT ASSEMBLY
DETAIL D
NOT TO SCALE



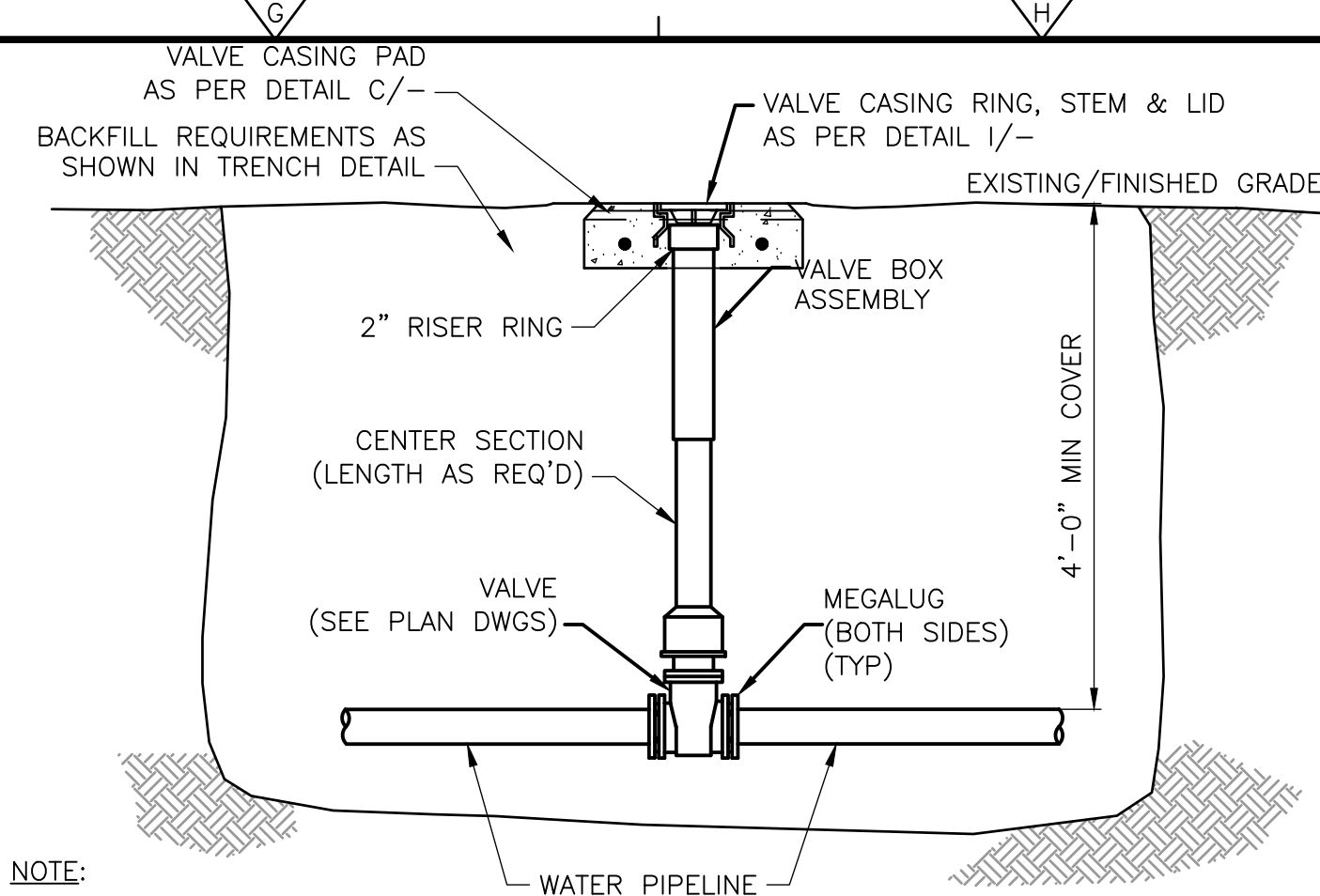
COUPLING CONNECTION TO EXISTING PIPE
DETAIL F
NOT TO SCALE



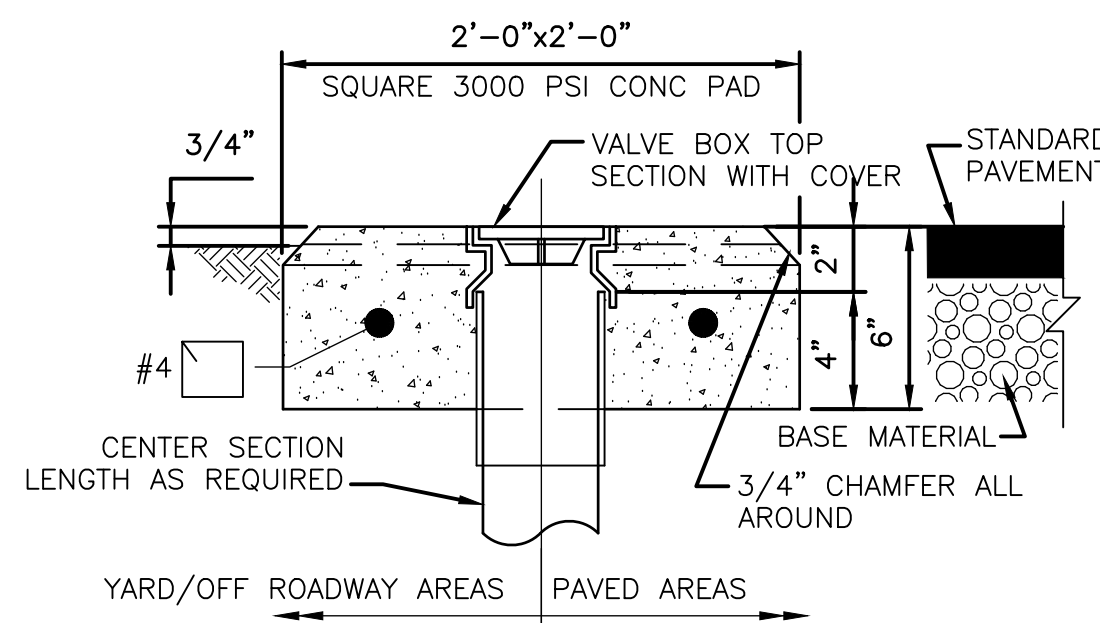
TRENCHING AND REPAIRS
DETAIL C
NTS



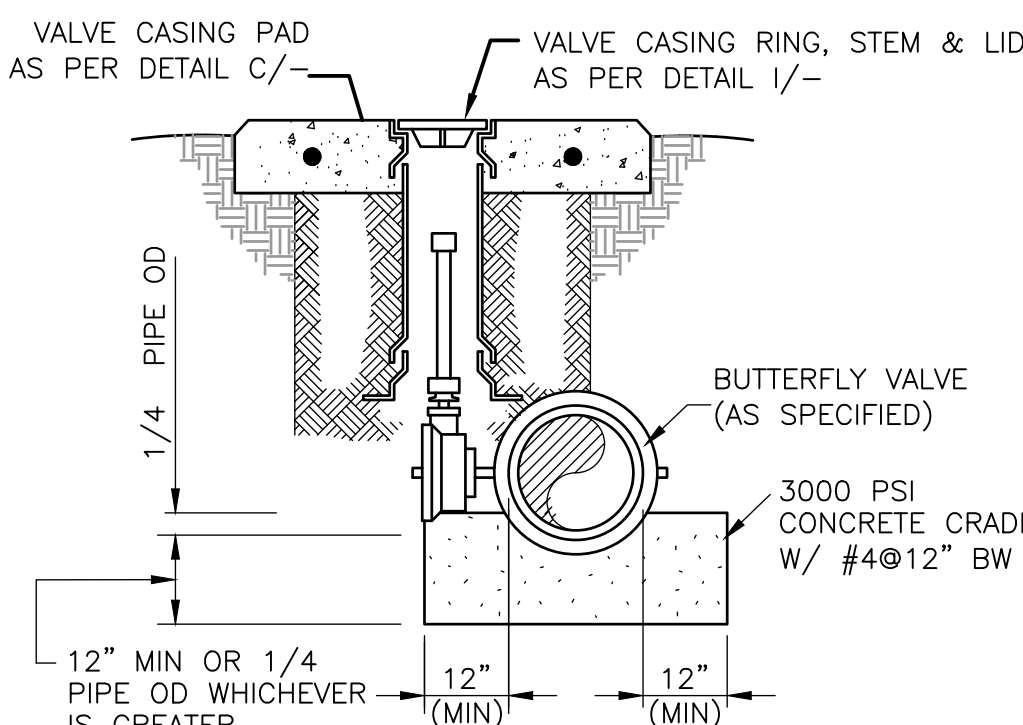
PIPE CONNECTION DETAILS
DETAIL G
NOT TO SCALE



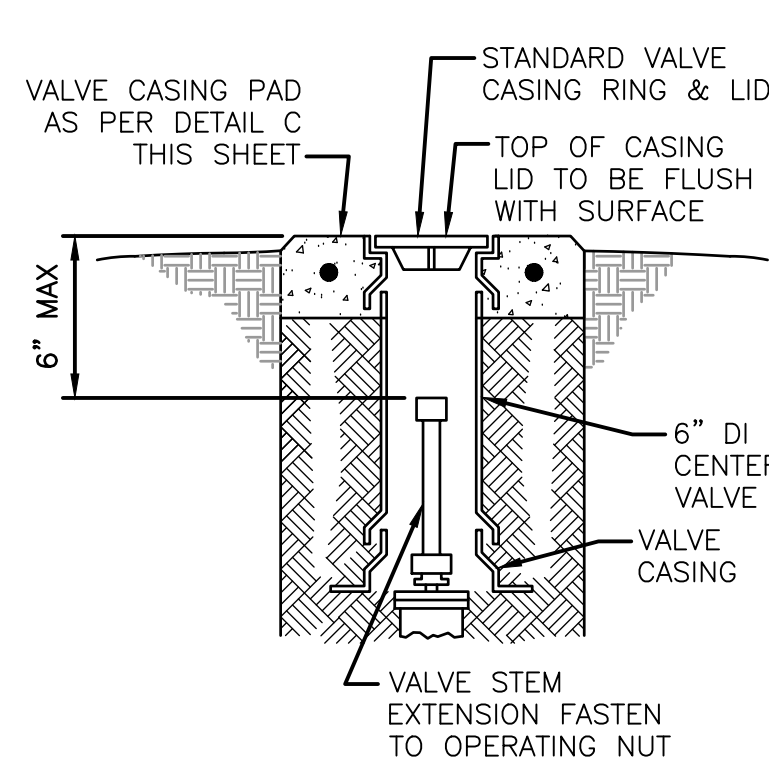
VALVE BOX (PIPE 12" DIAMETER AND SMALLER)
DETAIL H
NTS



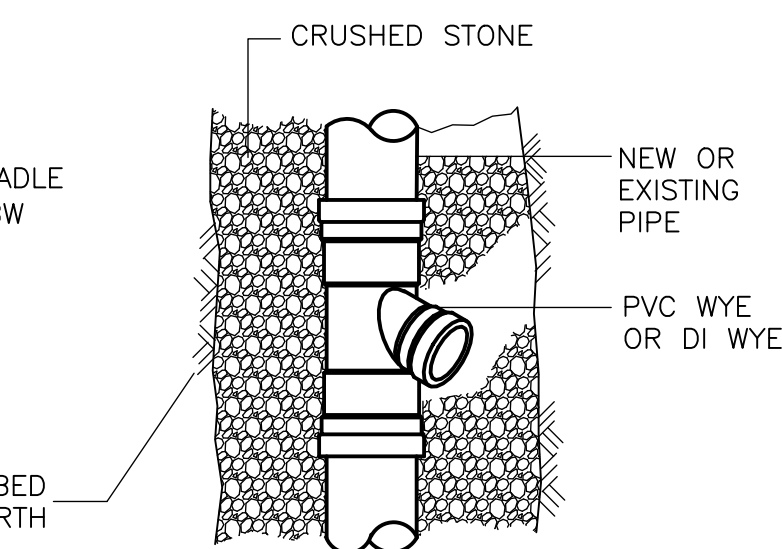
VALVE CASING PAD
DETAIL I
NTS



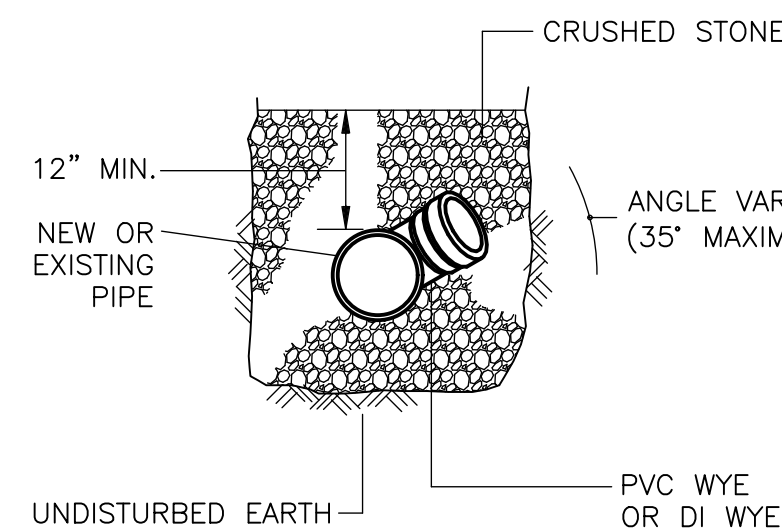
DIRECT BURIED BUTTERFLY VALVE
(FOR 16"-36" BUTTERFLY VALVES)
DETAIL J
NTS



VALVE BOX
DETAIL K
NTS



PLAN



SECTION

PVC OR DI WYE BRANCH
DETAIL L
NTS

REV.	NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	K. GERLACH
DRAWN BY:	J. BRONENKANT
SHEET CHK'D BY:	K. WAGNER
CROSS CHK'D BY:	K. GERLACH
APPROVED BY:	K. WAGNER
DATE:	DECEMBER 2023

CDM Smith
 101 East River Drive, Suite 1A
 East Hartford, CT 06108
 Tel: (860) 529-7615

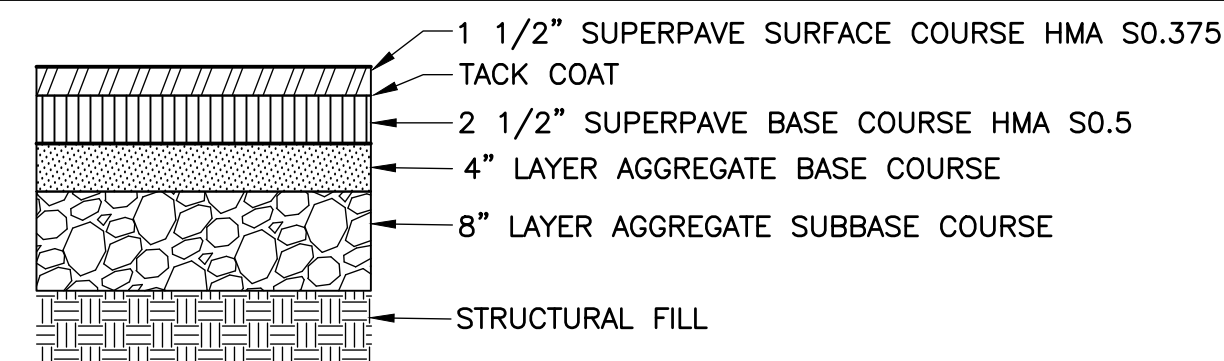
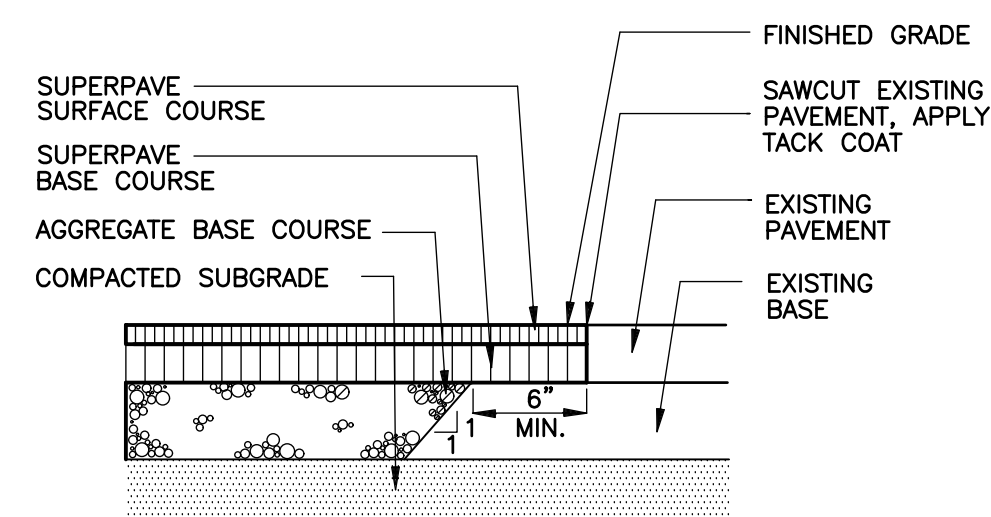
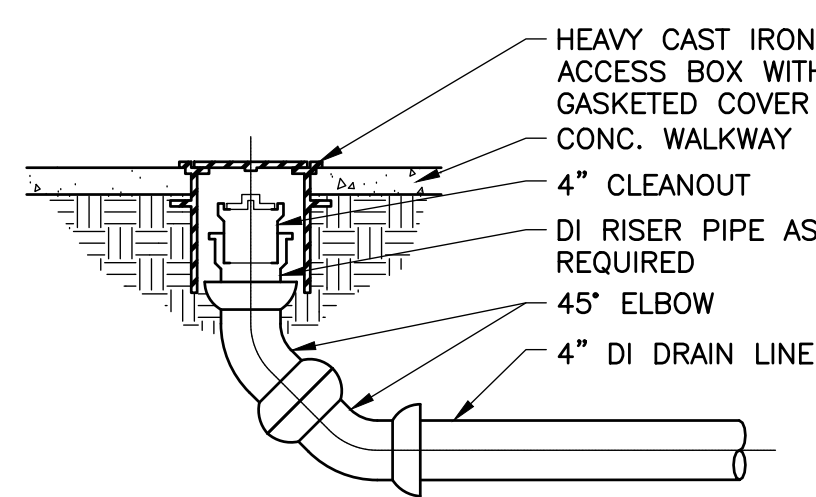
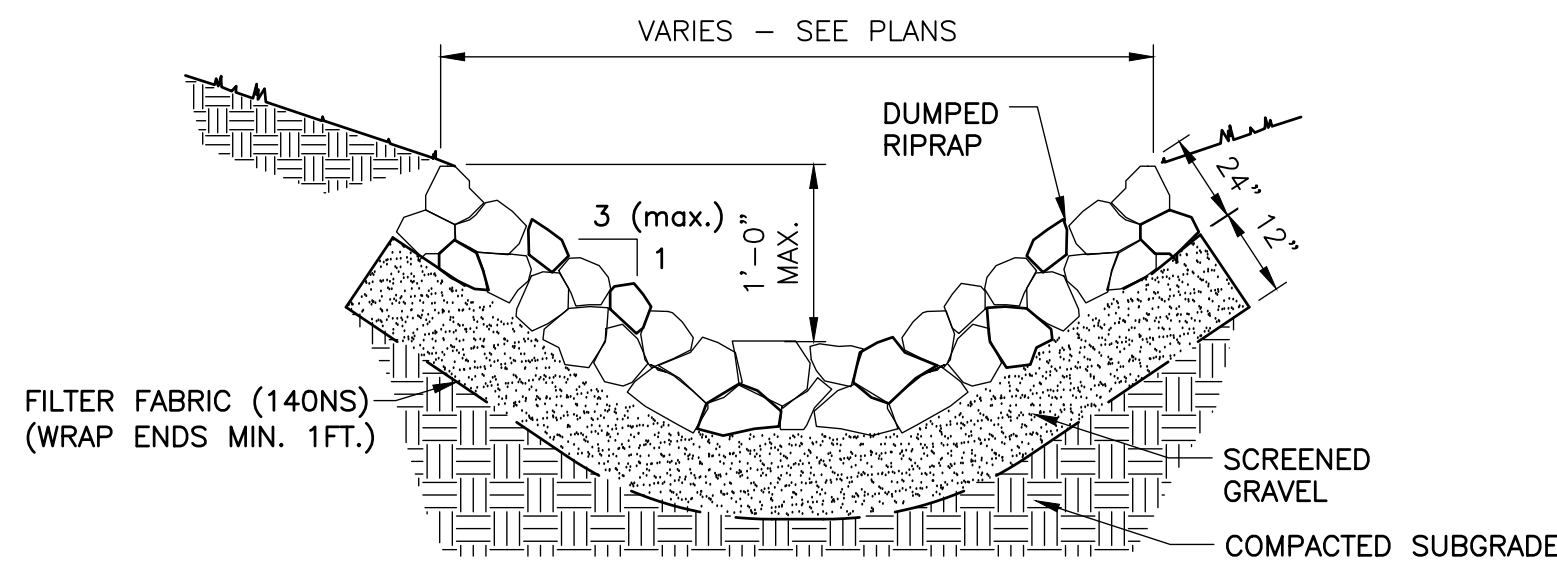


CITY OF NEW BRITAIN, CONNECTICUT
 WHITE BRIDGE WATERWORKS FACILITIES
 UPPER AND LOWER WELLFIELDS
 AND POND PUMPING STATION

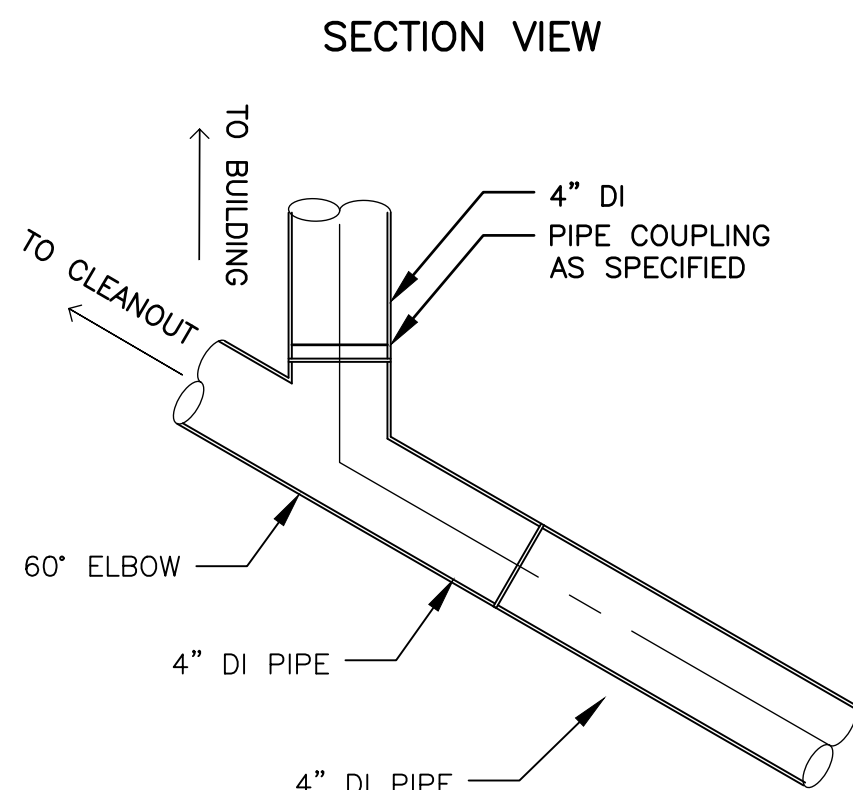
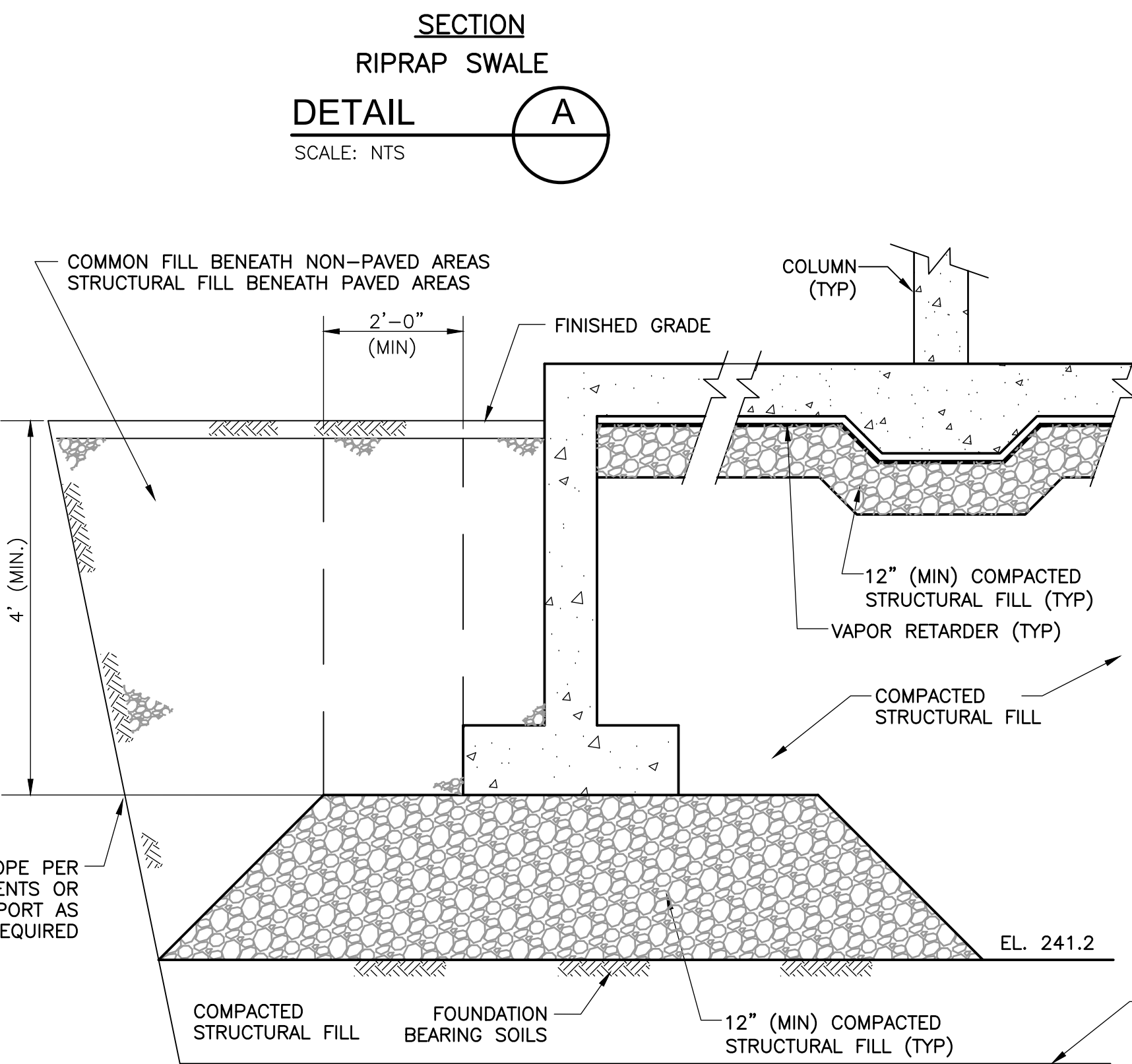
CIVIL DETAILS II

PROJECT NO.	10739-264571
FILE NAME:	CD002CSDT.DWG
SHEET NO.	C-25

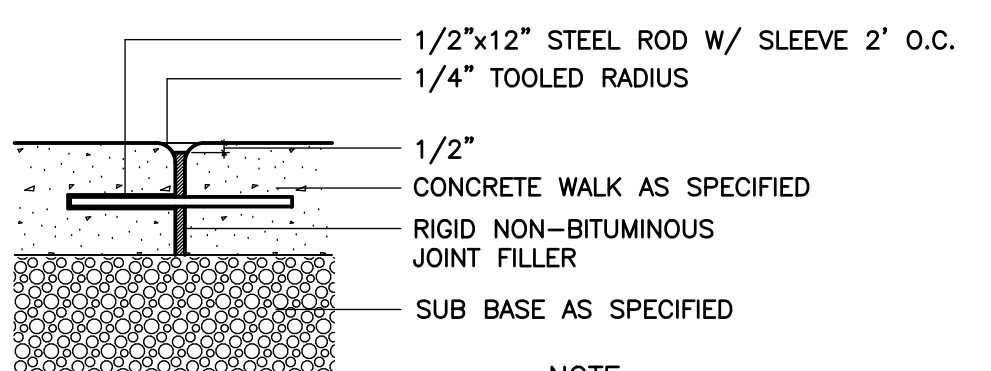
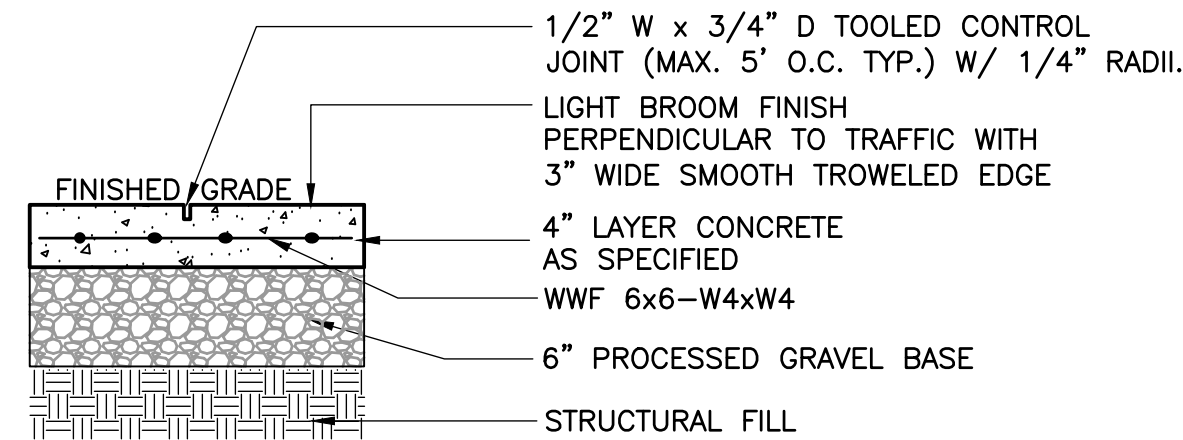
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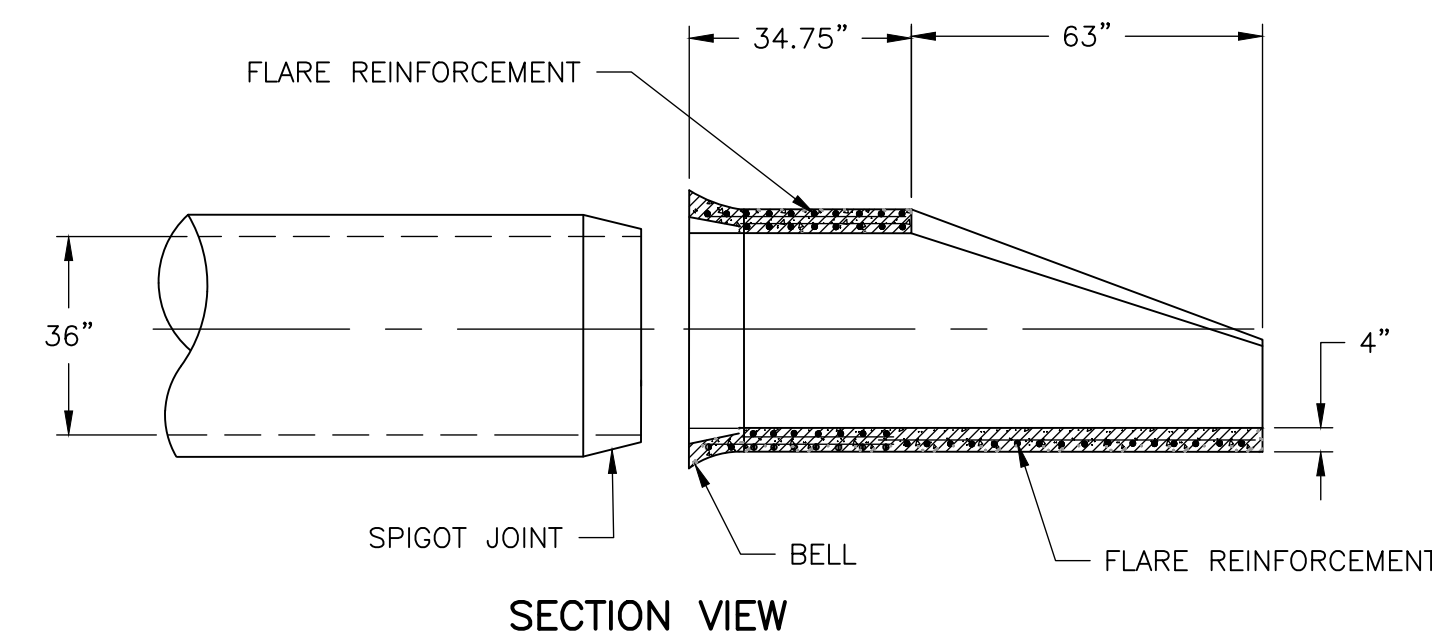
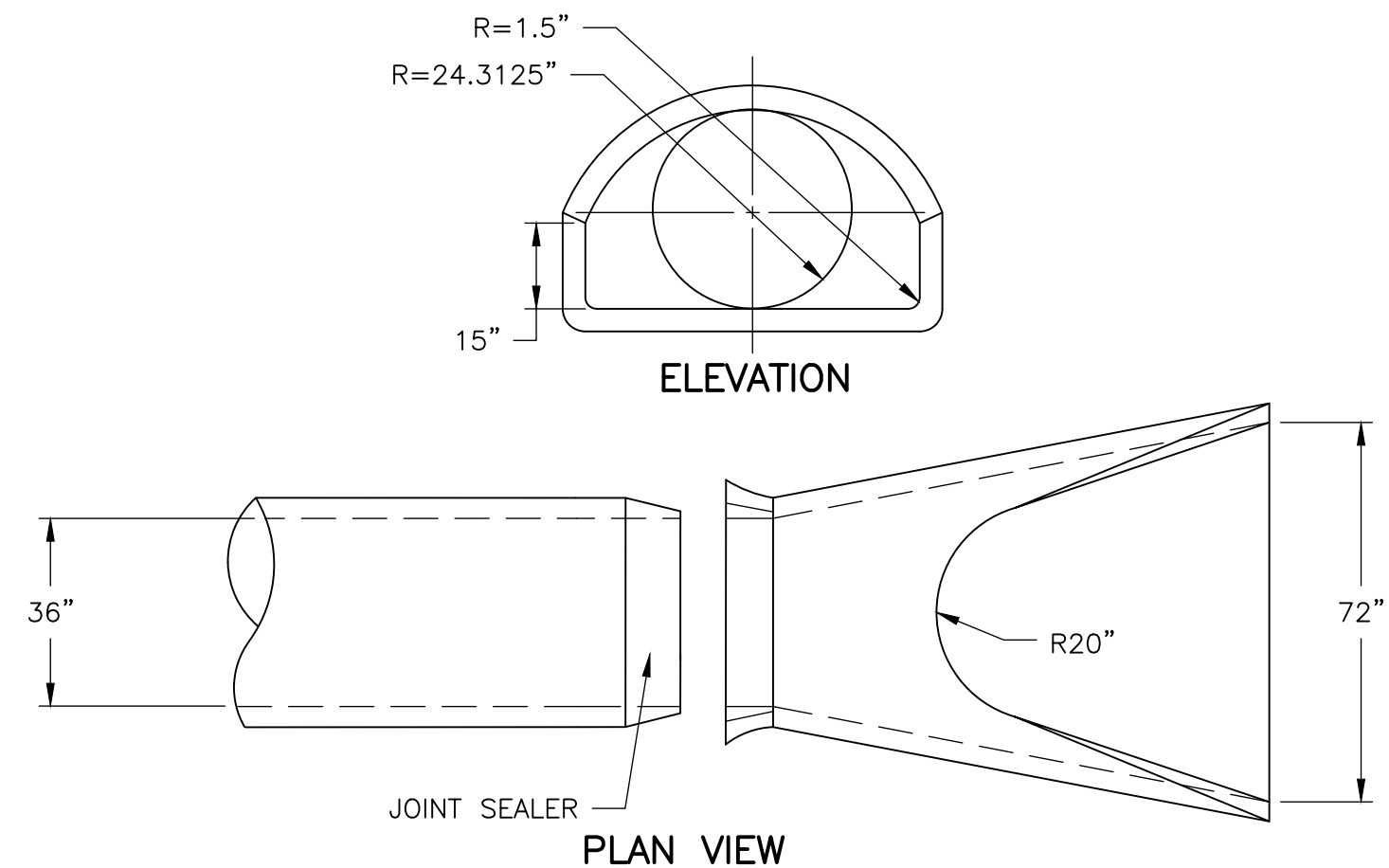
NOTES:
1. BASE COURSE SHALL EXTEND 3" MIN. BEYOND EDGE OF PAVEMENT. DEPTH VARIES SEE GRADING AND DRAINAGE PLAN



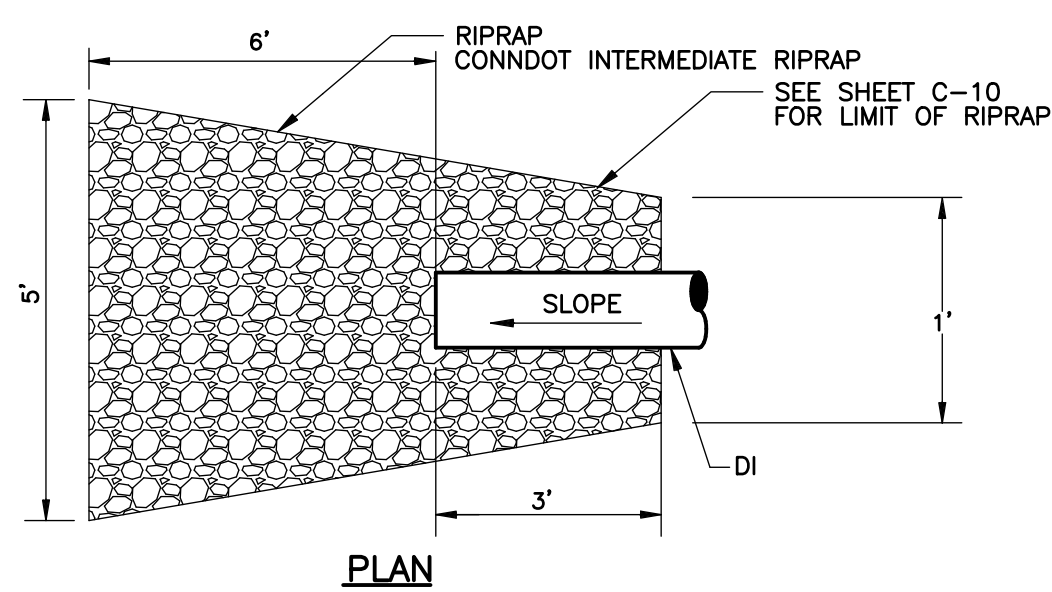
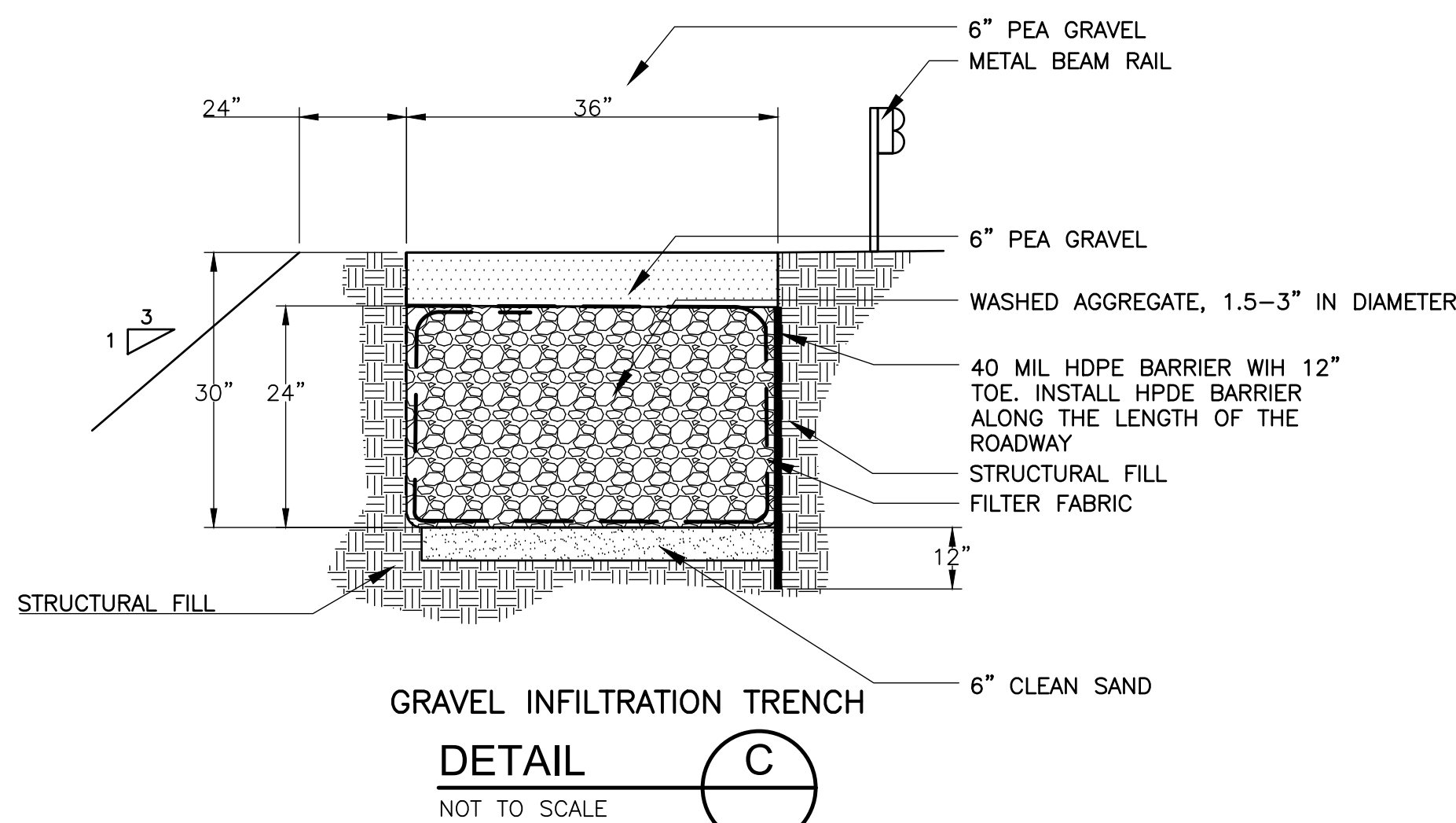
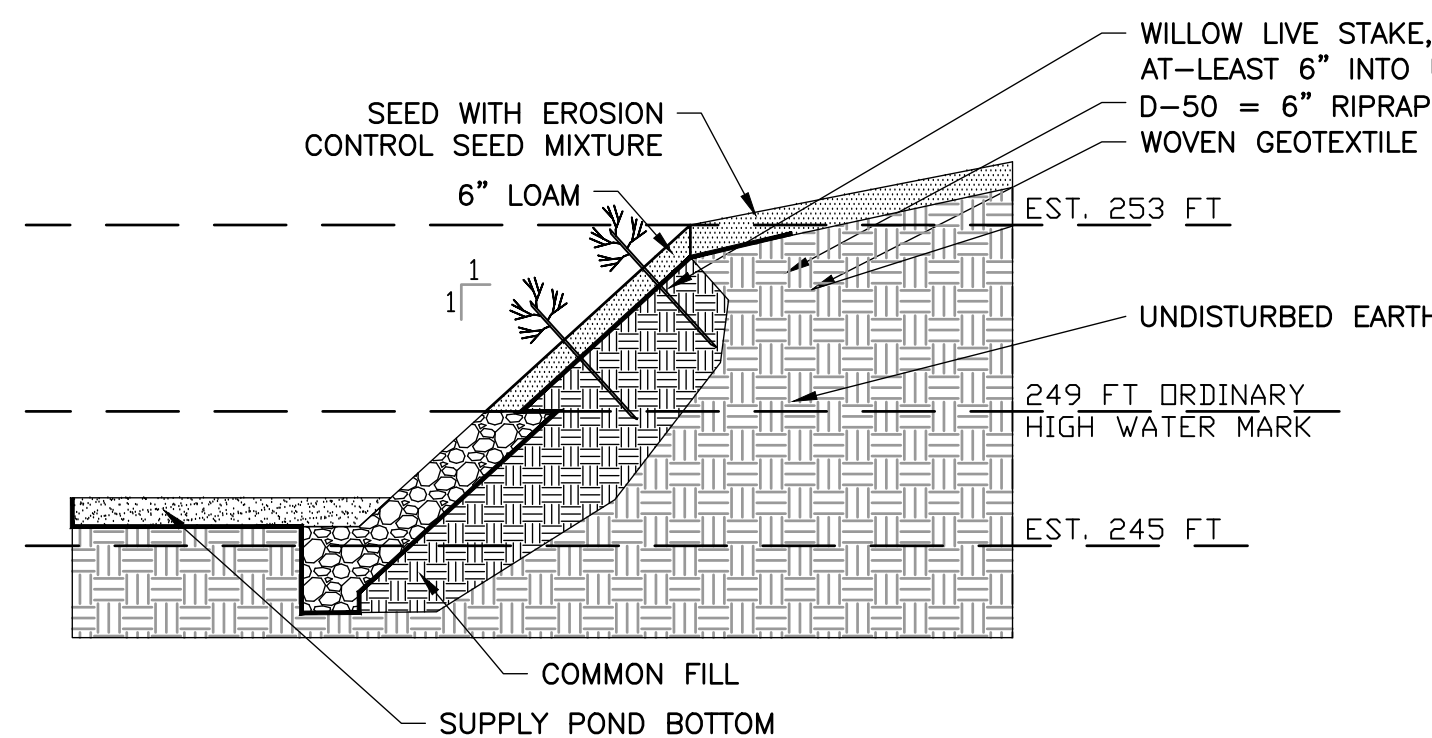
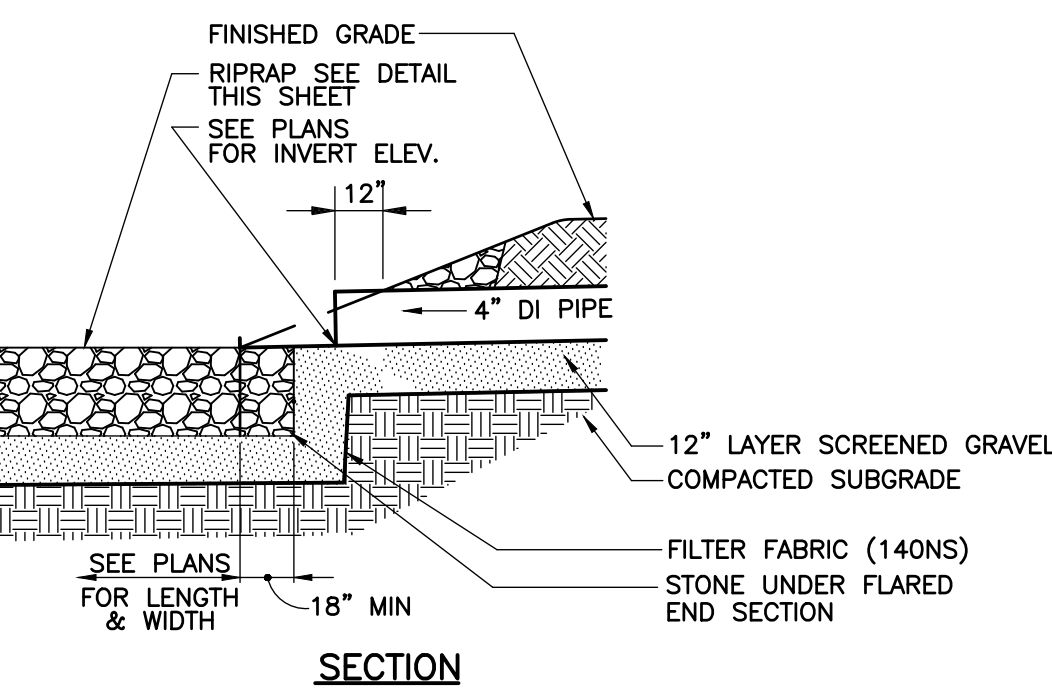
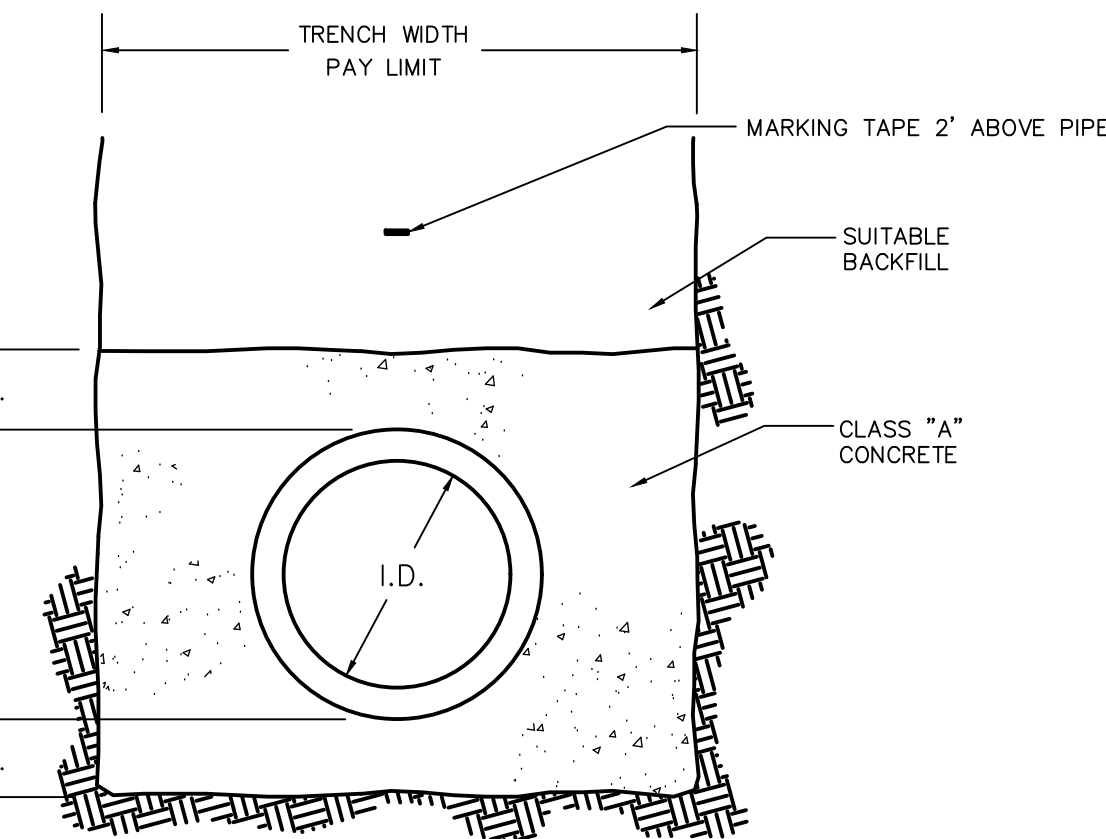
ROOF DRAIN CONNECTION WITH CLEANOUT
DETAIL D
NTS



NOTE:
1. CONC. WALK SHALL HAVE 3 STEEL RODS MIN.
2. EXPANSION JOINTS SHALL BE LOCATED 30 FT. MIN. O.C. AND AT THE END OF EACH DAYS POUR.



CONCRETE ENCASEMENT
DETAIL L
NOT TO SCALE



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: K. GERLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: DECEMBER 2023

CDM Smith
101 East River Drive, Suite 1A
East Hartford, CT 06108
Tel: (860) 529-7615

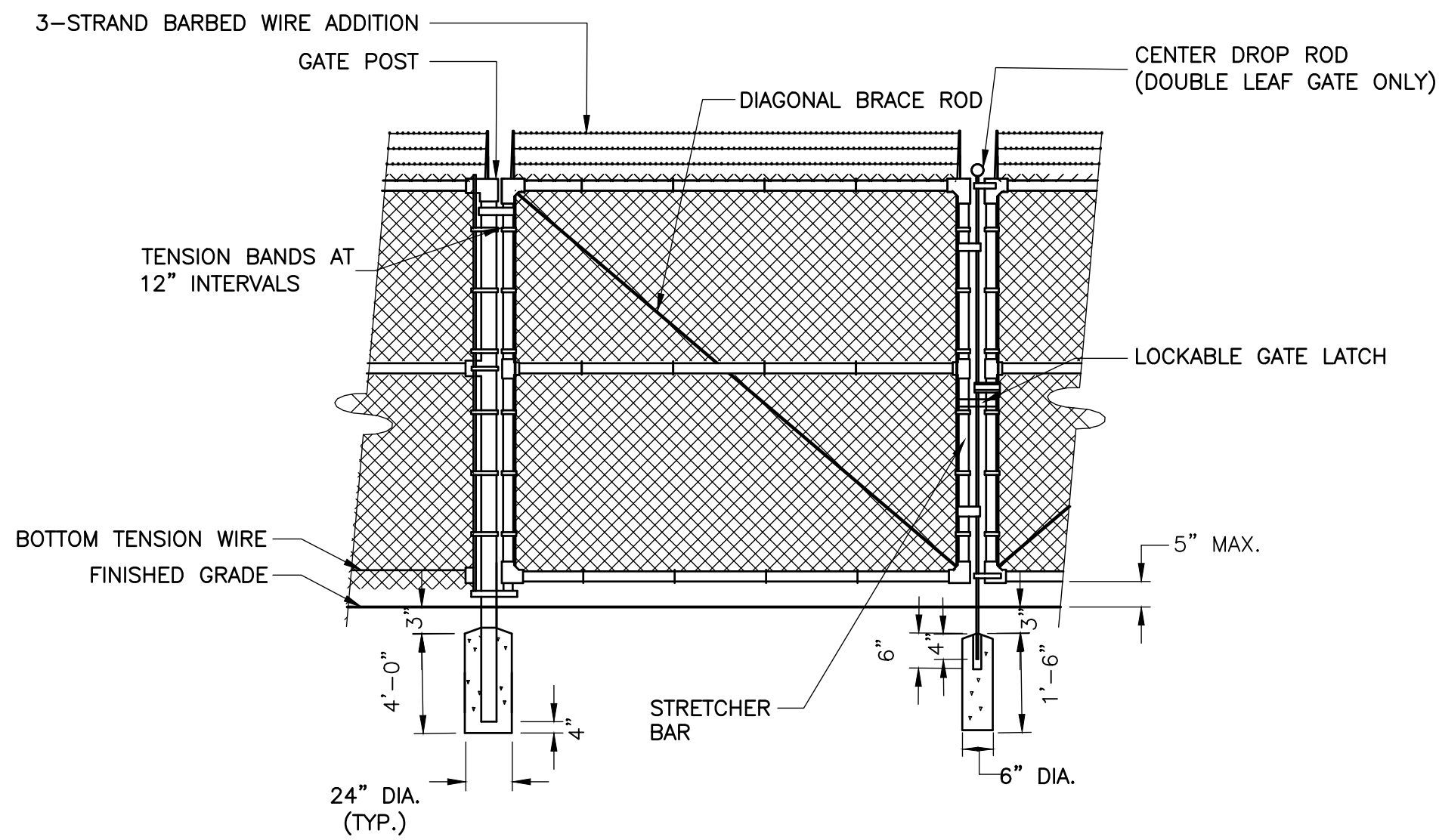


CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

CIVIL DETAILS III

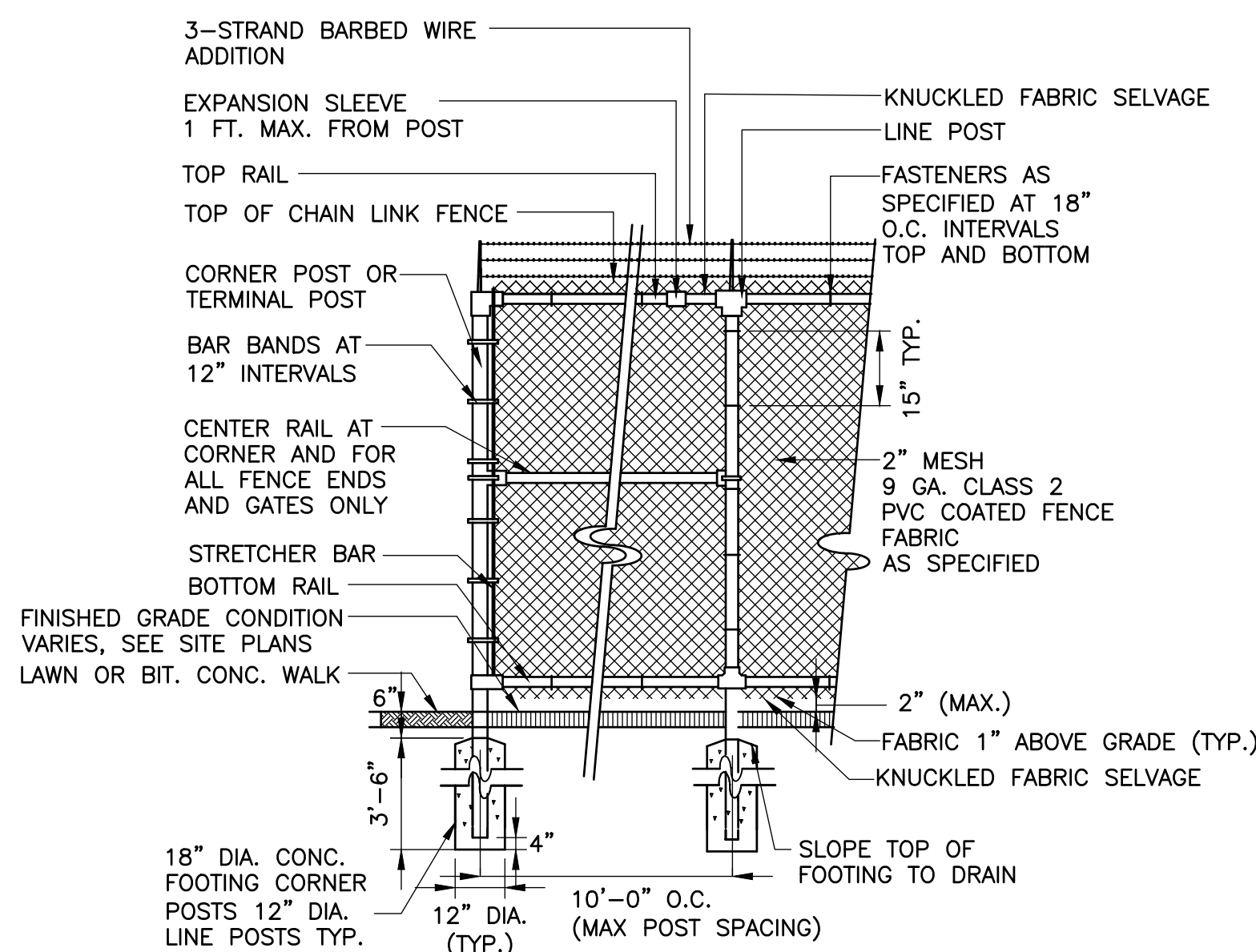
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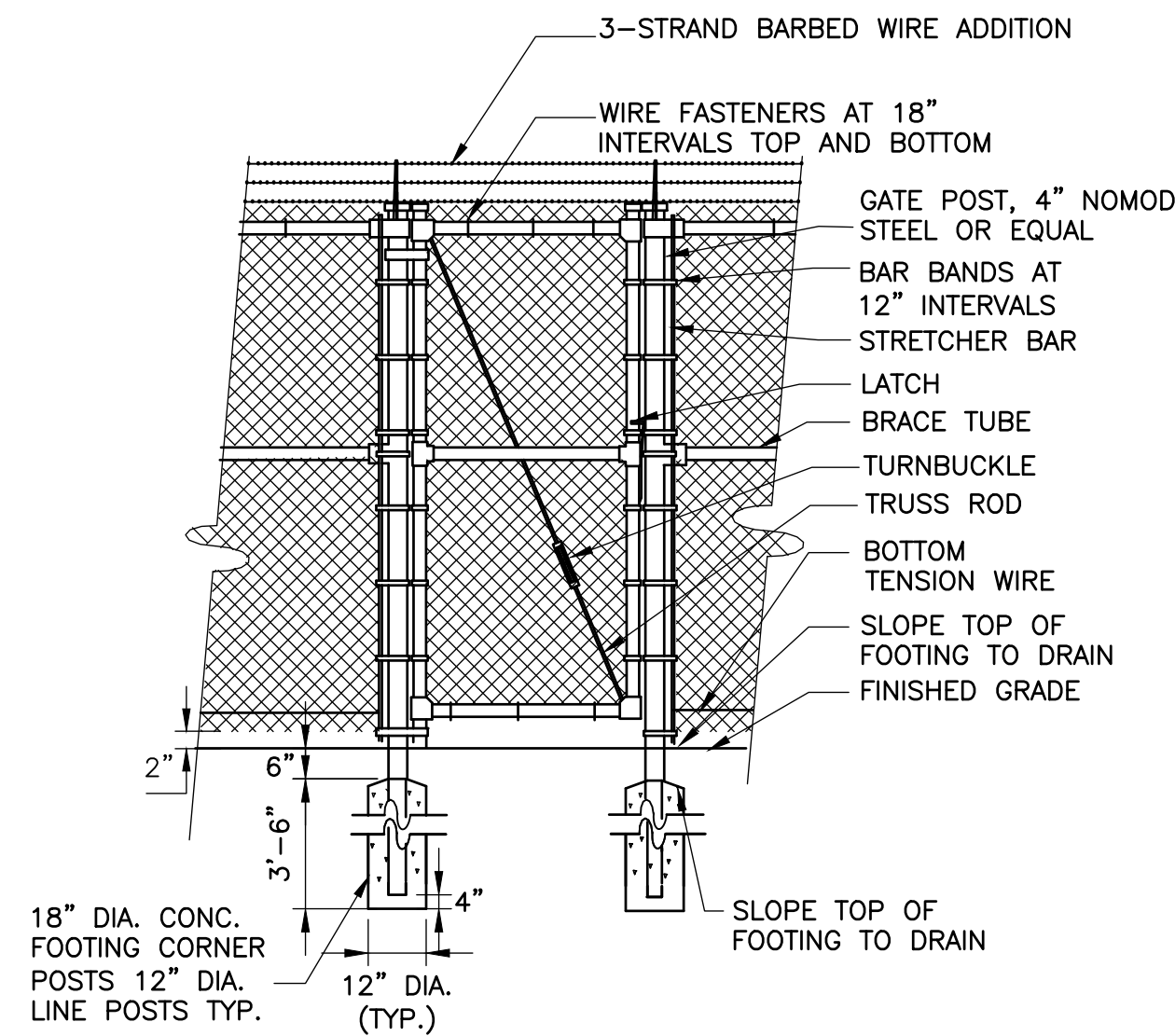
CHAIN LINK DOUBLE LEAF SWING GATE

DETAIL A
NOT TO SCALE



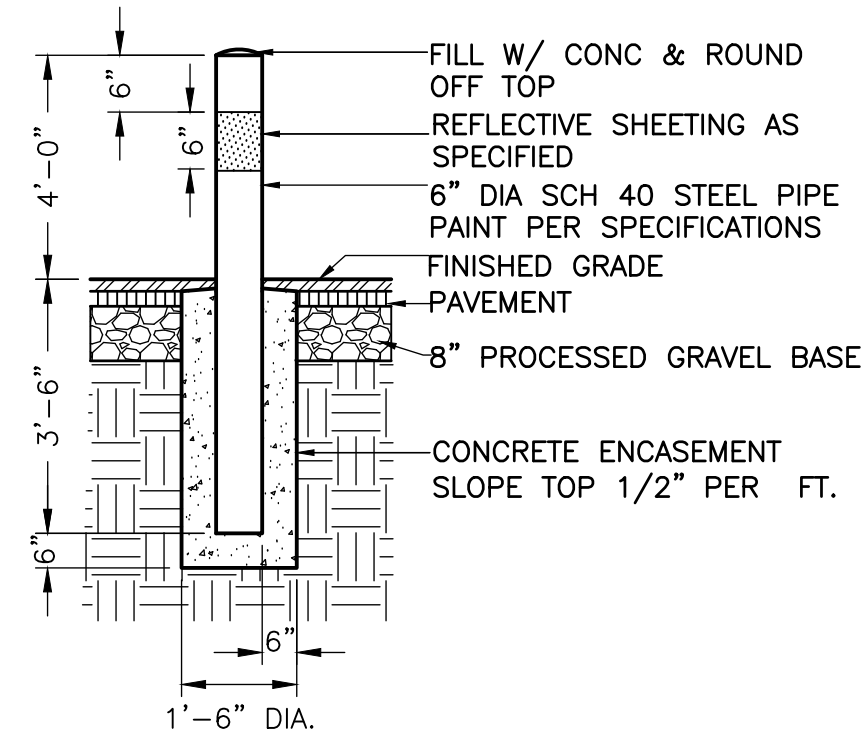
6-FT HIGH CHAIN LINK FENCE

DETAIL B
NOT TO SCALE



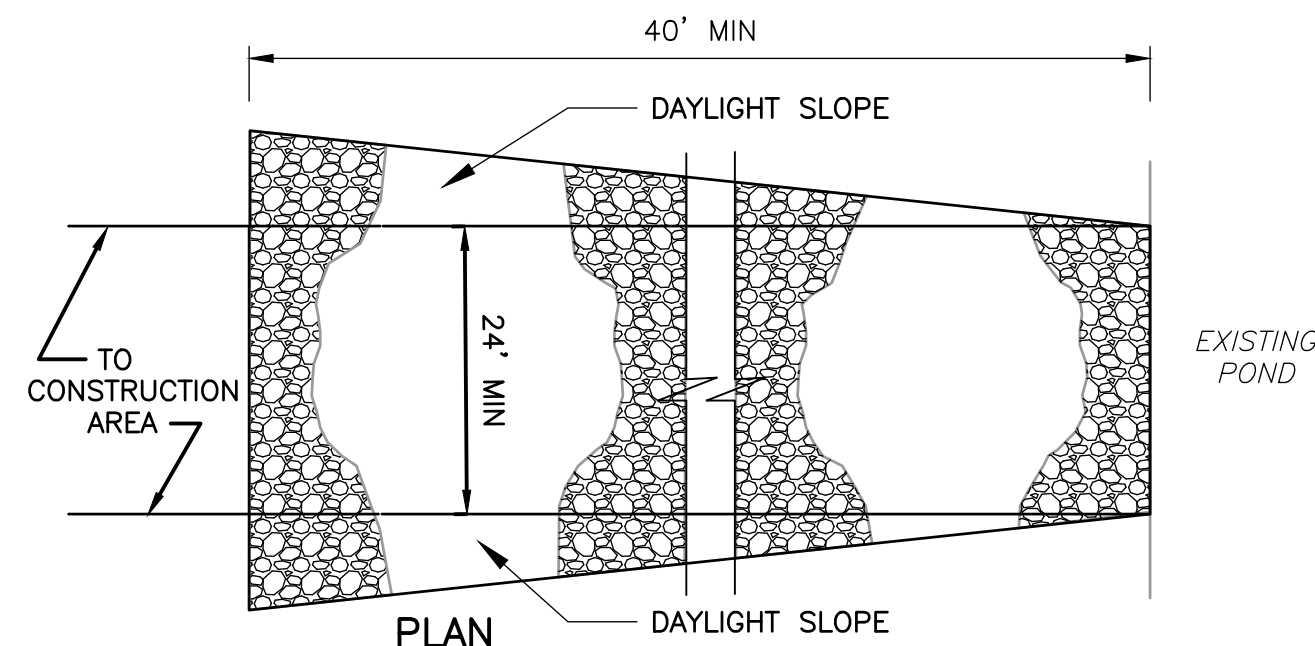
PEDESTRIAN CHAIN LINK FENCE GATE

DETAIL C
NOT TO SCALE

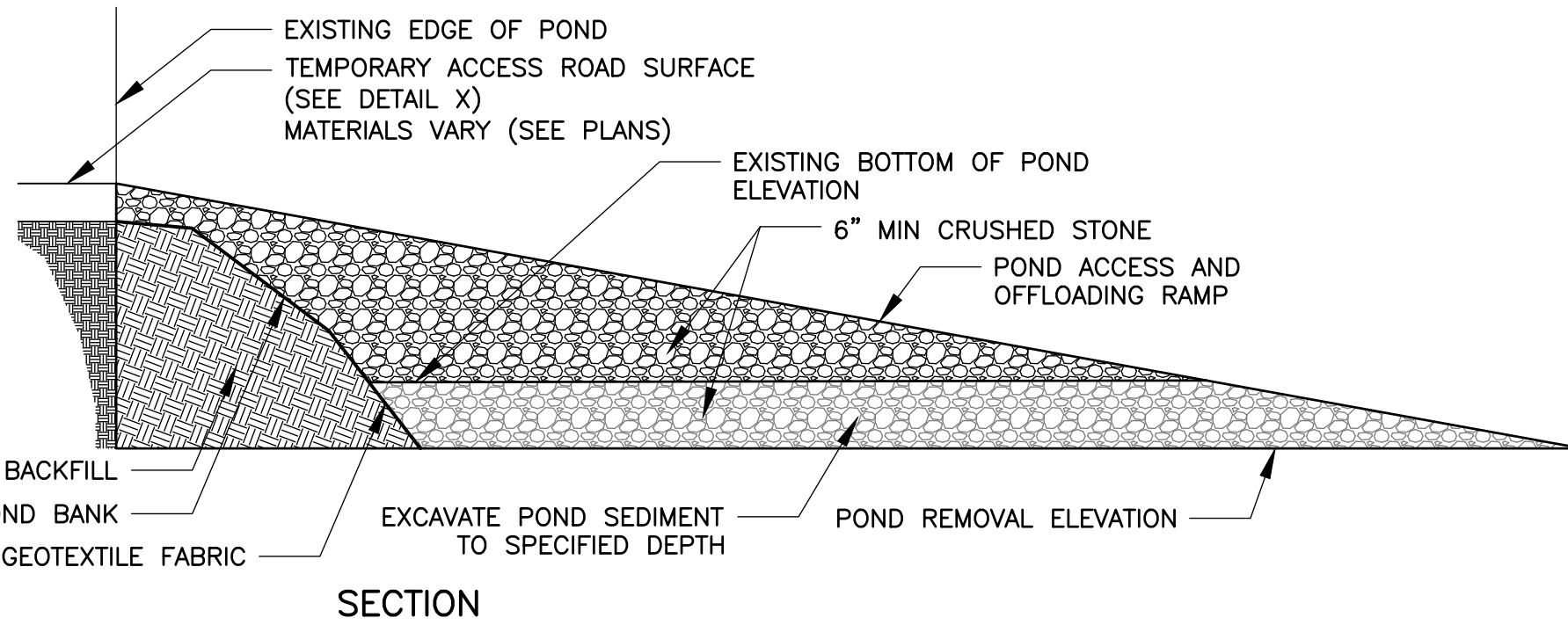


STEEL BOLLARD

DETAIL D
NOT TO SCALE



PLAN



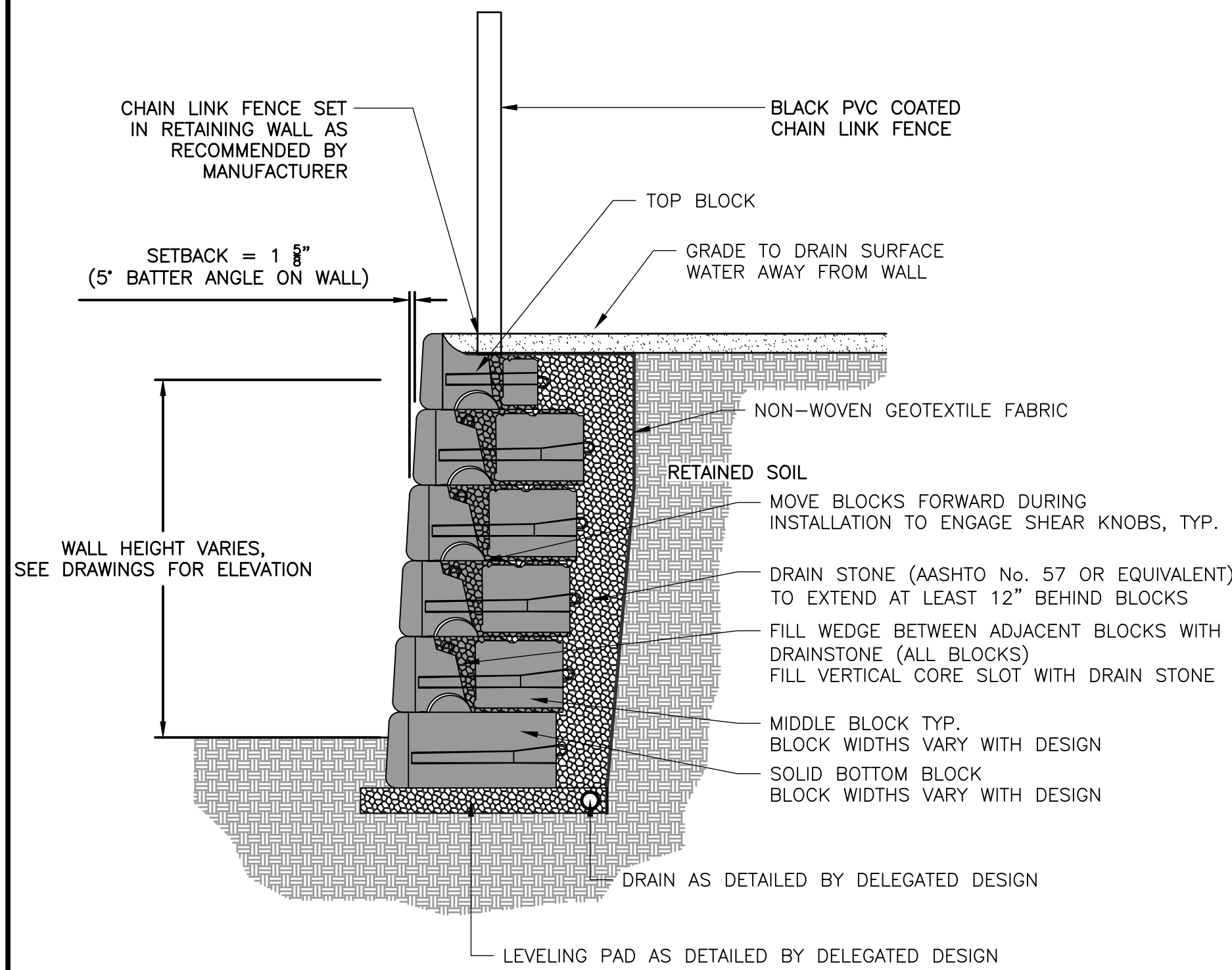
SECTION

NOTES:

1. PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED POND ACCESS/TRUCK OFFLOADING RAMP AND EXISTING GROUND SURFACE
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO GROUND SURFACE.
3. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDING STONE TO THE LENGTH OF THE ENTRANCE.
4. REPAIR AND CLEANOUT MEASURES USED TO TRAP SEDIMENT.
5. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
6. THE SLOPE OF THE POND ACCESS AND OFFLOADING RAMP TO BE DETERMINED BY CONTRACTOR BASED ON SELECTED EQUIPMENT, MEANS AND METHODS, AND APPROVED BY THE ENGINEER.
7. DAYLIGHT SLOPES OF THE RAMP WILL BE INSTALLED AS NEEDED BASED ON THE EXCAVATION DEPTH AND BANK HEIGHT TO MAINTAIN STABILITY OF THE POND ACCESS/OFFLOADING RAMP.
8. ALL MATERIAL FOR POND ACCESS/OFFLOADING RAMP IS TEMPORARY AND WILL BE REMOVED AFTER SEDIMENT REMOVAL COMPLETED. POND BANK TO BE RESTORED PER SPECIFICATIONS.

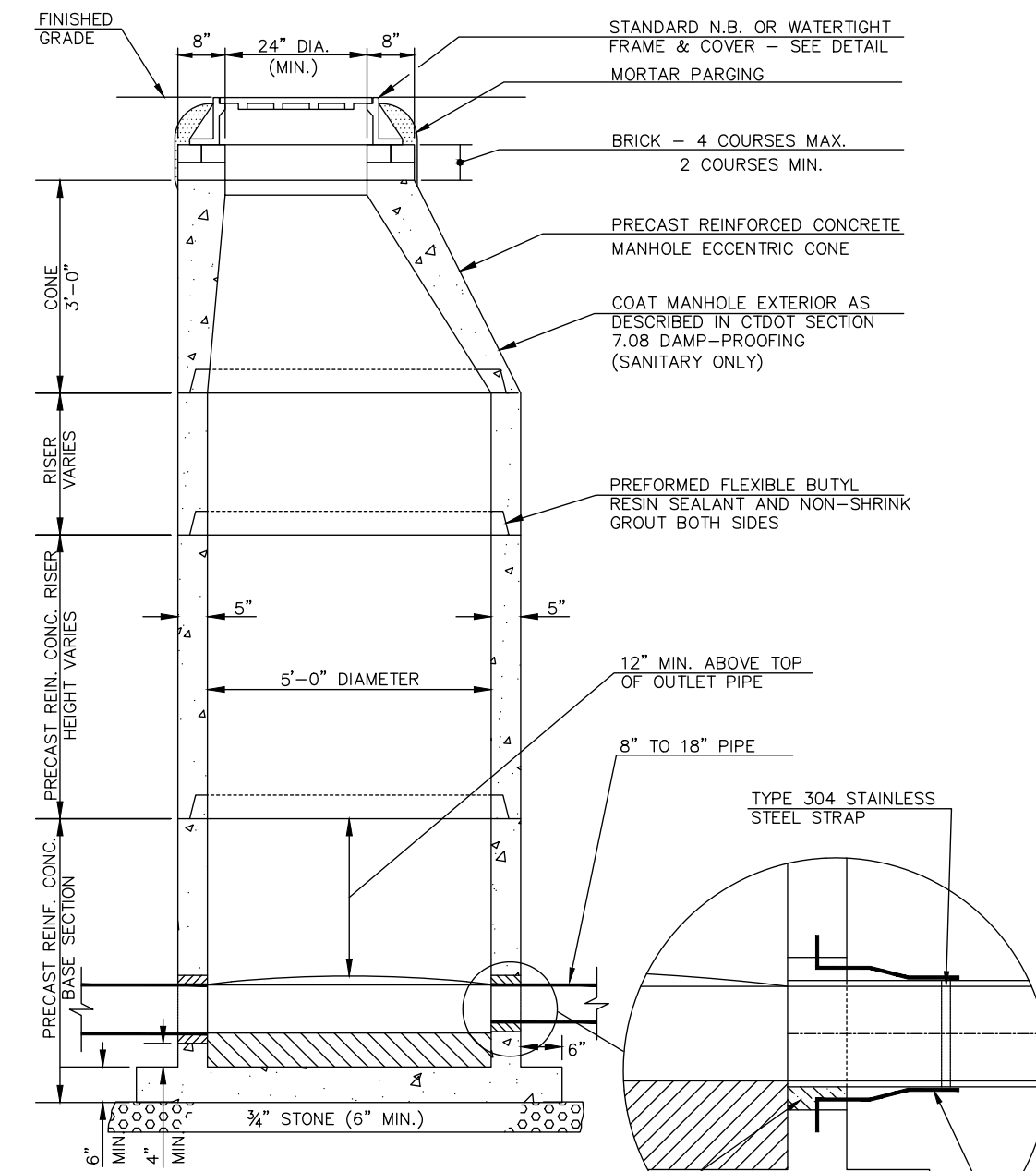
POND ACCESS AND TRUCK OFFLOADING RAMP

DETAIL F
SCALE: NTS

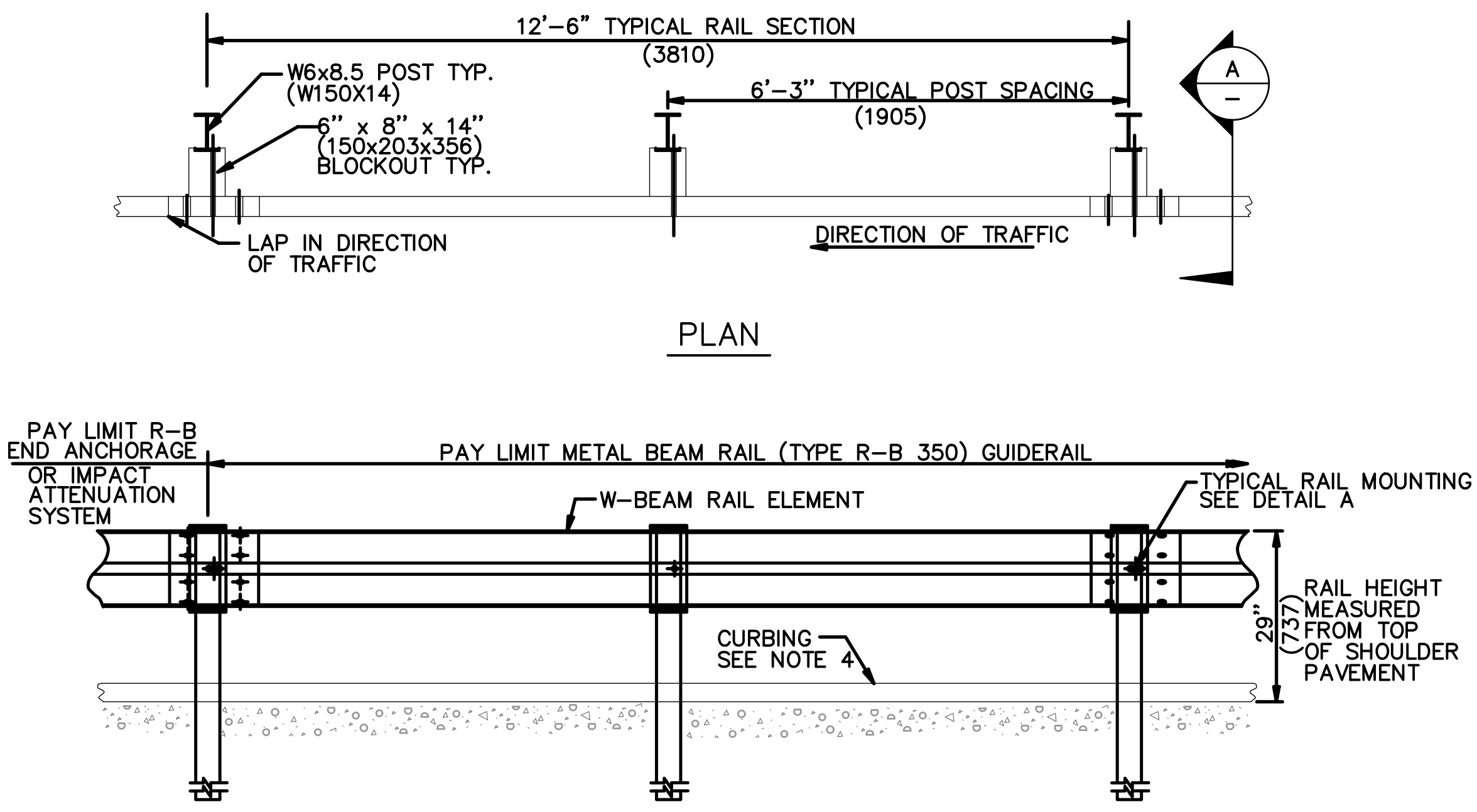


SEGMENTAL UNIT RETAINING WALL

DETAIL E
SCALE: NTS



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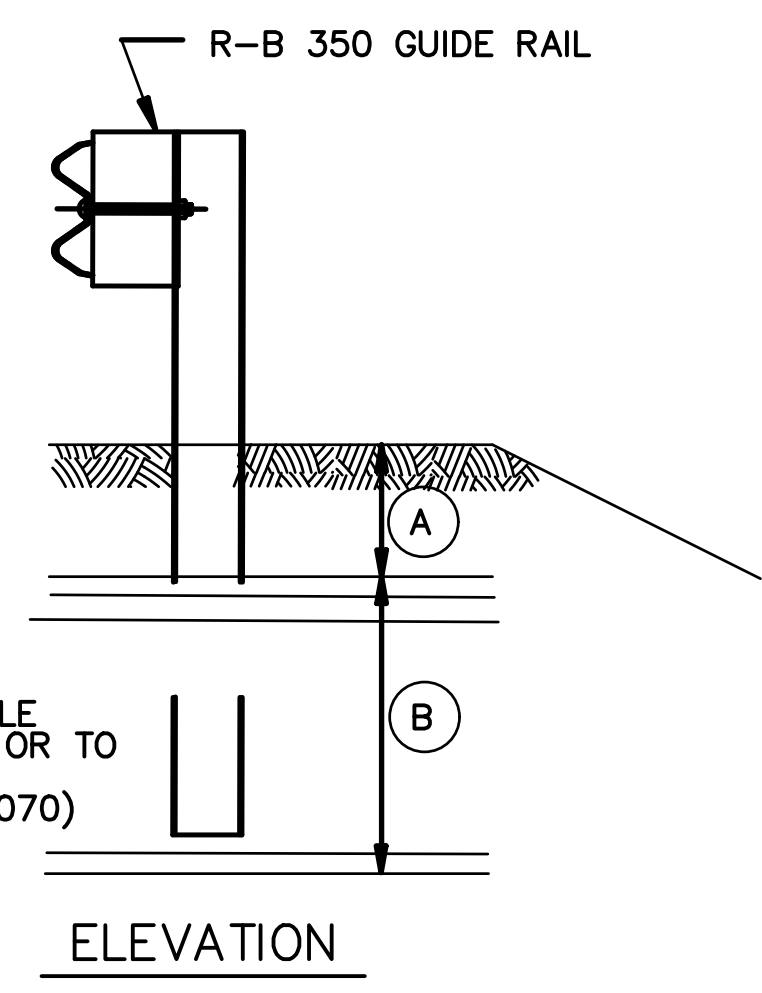


CONDITION 1 :

IF SOIL DEPTH IS < 18" (457) DEEP **A**
DRILL 20" (507) DIA. HOLE 24" (610) INTO LEDGE. **B**

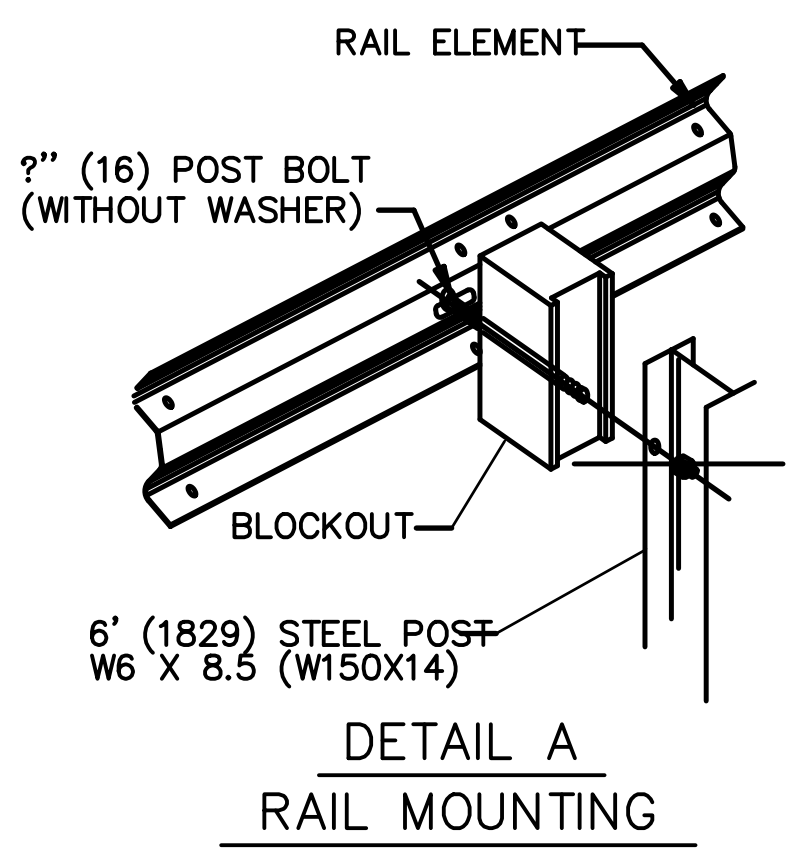
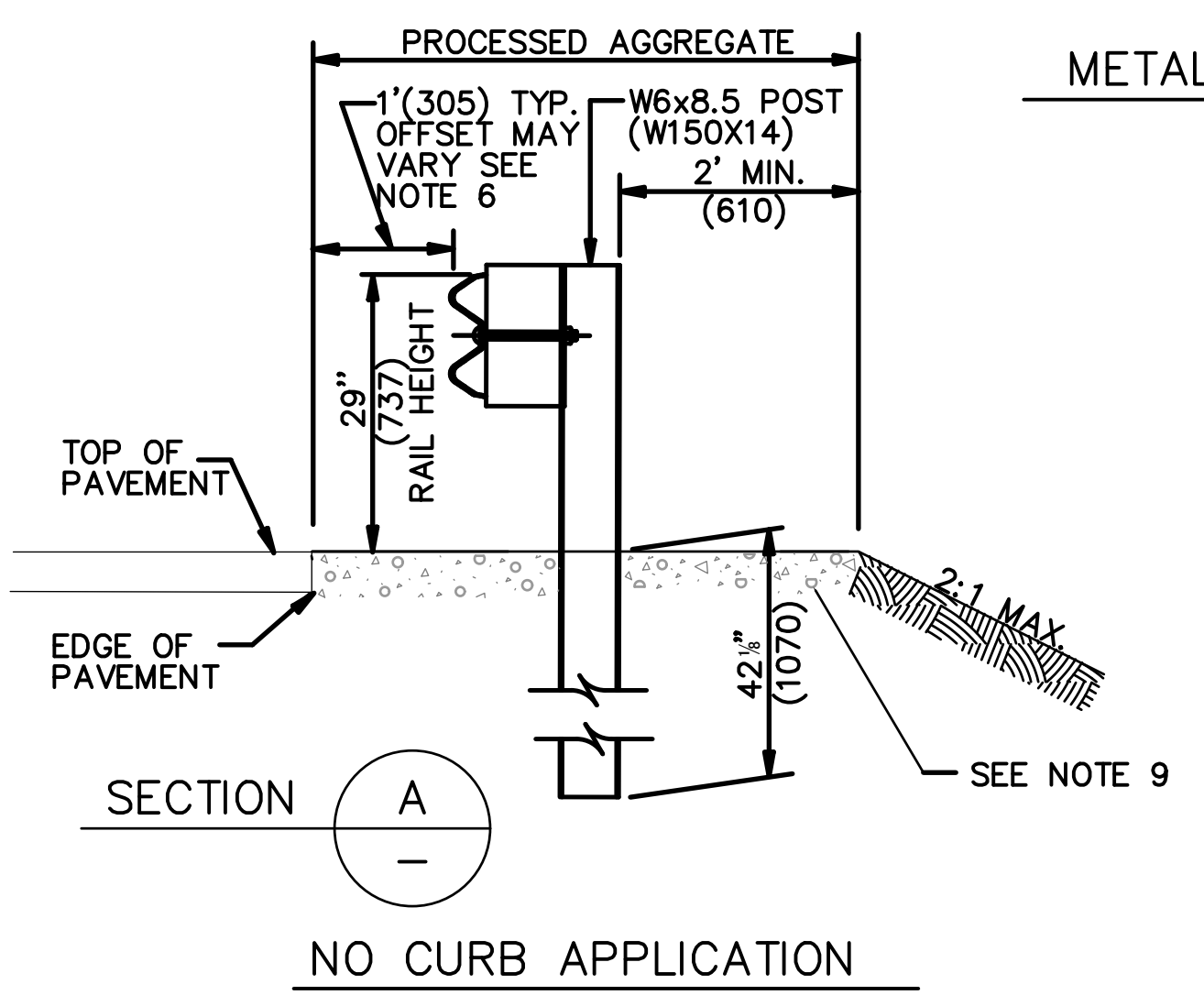
CONDITION 2 :

IF SOIL DEPTH IS > 18" (457) DEEP **A**
DRILL 8" (203) DIA. HOLE 1' (305) INTO LEDGE **B** OR TO THE DEPTH OF FULL EMBEDMENT OF 42" (1070) WHICHEVER IS LESS.

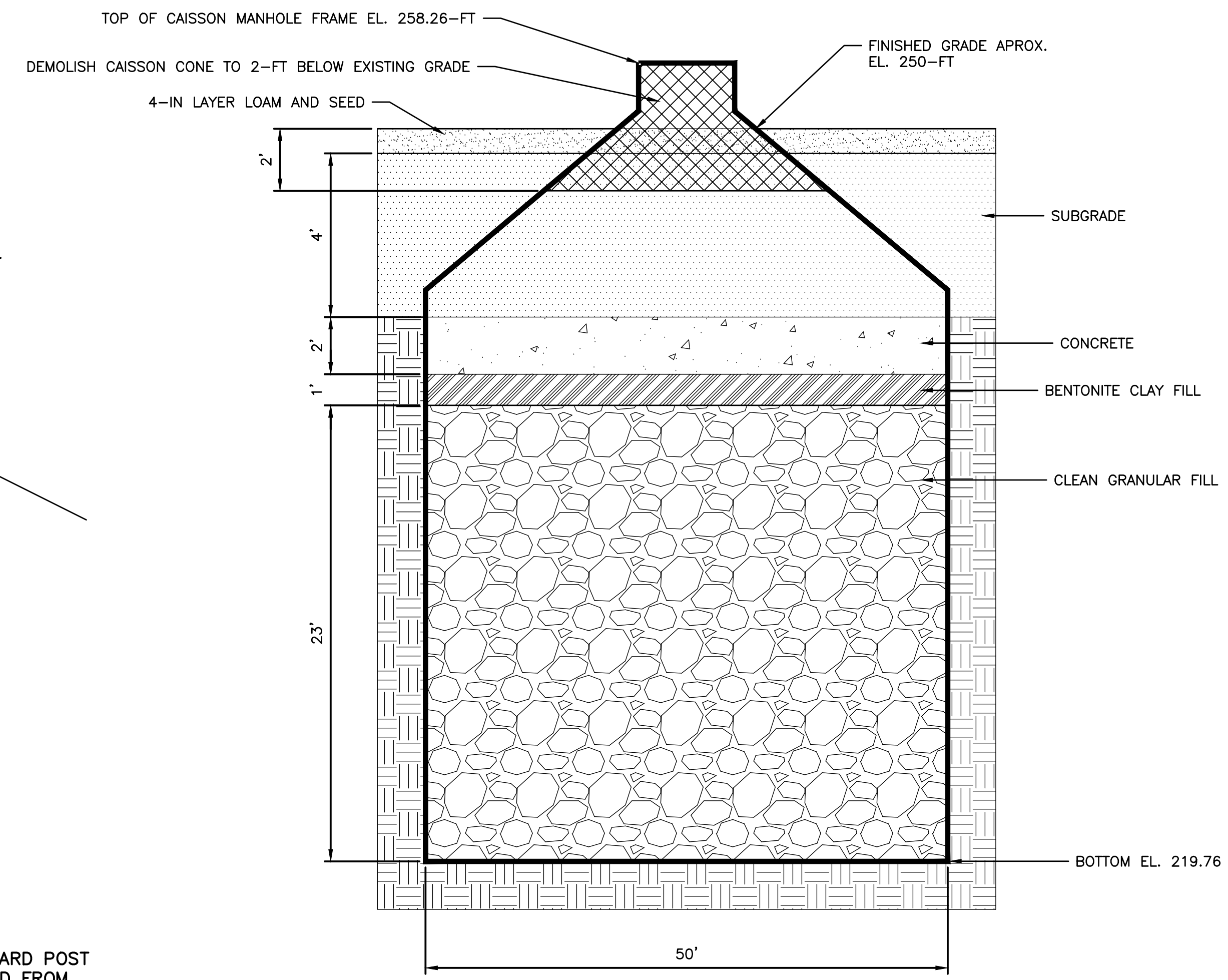


GENERAL NOTES:

1. SEE CTDOT STANDARDS FOR HARDWARE AND DELINEATOR DETAILS.
2. MAXIMUM DESIGN DEFLECTION FOR R-B 350 GUIDERAIL AT THE STANDARD POST SPACING OF 6'-3" IS 4'-3". DEFLECTION REQUIREMENT IS MEASURED FROM THE BACK OF POST TO THE FACE OF OBJECT.
3. FOR CURVES WITH RADII OF 150'(45.7m) OR LESS, ALL RAIL ELEMENTS SHALL BE SHOP FABRICATED TO THE PROPER RADIUS AND GALVANIZED AFTER FABRICATION. RADIUS RAIL WHEN REQUIRED AND NOTED ON THE PLANS, IS INCLUDED IN THE PAY ITEM FOR GUIDERAIL.
4. RAIL HEIGHT WITH CURBING SHALL BE MEASURED FROM THE TOP OF PAVEMENT. ON HIGH SPEED ROADWAYS (>45mph 72.4kph), 4" CURBING MAY BE USED IN CONJUNCTION WITH GUIDERAIL AND THE RAIL ELEMENT SHALL BE PLACED FLUSH WITH THE FACE OF CURB. ON LOW SPEED ROADWAYS (<45mph 72.4kph), 6" CURBING MAY BE USED IN CONJUNCTION WITH GUIDERAIL AND THE RAIL ELEMENT SHALL BE PLACED A MAXIMUM OF 9" BEHIND THE FACE OF CURB.
5. THREE BLOCKOUTS MAY BE USED FOR ONE POST ONLY. TWO BLOCKOUTS MAY BE USED FOR A SERIES OF POSTS. THE COST OF ADDITIONAL BLOCKOUTS AND LONGER BOLTS SHALL BE INCLUDED IN THE BID PRICE PER FOOT OF GUIDERAIL. EXTRA BLOCKOUTS AT TRANSITION TO BRIDGE PARAPETS SHOULD BE AVOIDED.
6. W-BEAM GUIDERAIL MAY BE PLACED 1' OR MORE FROM THE EDGE OF PAVEMENT ONLY ON SLOPES 10:1 OR FLATTER AND WITHOUT CURBING. IF THE RAIL IS INSTALLED WITHIN 2' OF THE EDGE OF PAVEMENT, THE RAIL HEIGHT IS MEASURED FROM THE SHOULDER SLOPE EXTENDED TO THE RAIL. IF THE RAIL IS INSTALLED BEYOND 2' FROM THE EDGE OF PAVEMENT, THE RAIL HEIGHT IS MEASURED FROM THE GROUND DIRECTLY BELOW THE RAIL.
7. ALL R-B 350 GUIDERAIL TYPES INSTALLED ON EXPRESSWAYS AND RAMPS SHALL USE CLASS B, TYPE-II (10 GAUGE) W-BEAM RAIL ELEMENTS.
8. 20" DIA. EXCAVATED HOLE SHALL BE BACKFILLED WITH SUITABLE MATERIAL, OR GRANULAR FILL COMPACTED IN 6" LIFTS BEFORE DRIVING POST OR POSTS MAY BE SET IN EXCAVATED HOLE AND BACKFILLED WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM). 8" DIA. HOLE SHALL BE BACKFILLED WITH SUITABLE MATERIAL.
9. AS DIRECTED BY THE ENGINEER AND WHERE PAVEMENT FOR RAILING IS NOT BEING INSTALLED, A MIN. 6" DEPTH OF PROCESSED AGGREGATE SHALL BE INSTALLED FROM THE PAVEMENT EDGE OR BACK OF CURB TO A MINIMUM OF 2' BEHIND THE GUIDERAIL POST AND COMPACTED IN 6" LIFTS.
10. MINIMUM RAIL HEIGHT FOR NEW CONSTRUCTION SHALL BE 29" + 1".



METAL BEAM RAIL
DETAIL A
NOT TO SCALE



NOTES:

1. EXISTING CAISSON WELL TO BE DECOMMISSIONED AND ABANDONED AS REQUIRED IN SECTION 019416, APPENDED TO THE SPECIFICATIONS.
2. CAISSON TOP CONE TO BE DEMOLISHED TO AT LEAST 2 FEET BELOW FINISH GRADE.

CAISSON DECOMMISSIONING AND ABANDONMENT
DETAIL B
NOT TO SCALE

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: K. GERLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: APRIL 2023

CDM Smith

77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT
**WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION**

CIVIL DETAILS V

C-28

PROJECT NO. 10739-264571
FILE NAME: CD005CSDT.DWG
SHEET NO.

XREFs: [CDWS-2436] Images: []
Last saved by: ENGELSB Time: 12/5/2023 9:42:13 AM
C:\Users\engelsb\Desktop\WHITEBRIDGE CAD FILES\CO29TRFC.dwg
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NOTES FOR TRAFFIC CONTROL PLANS

1. IF A TRAFFIC STOPPAGE OCCURS IN ADVANCE OF SIGN (A), THEN AN ADDITIONAL SIGN (A) SHALL BE INSTALLED IN ADVANCE OF THE STOPPAGE.

2. SIGNS (A), (A), AND (D) SHOULD BE OMITTED WHEN THESE SIGNS HAVE ALREADY BEEN INSTALLED TO DESIGNATE A LARGER WORK ZONE THAN THE WORK ZONE THAT IS ENCOMPASSED ON THIS PLAN.

3. SEE TABLE 1 FOR ADJUSTMENT OF TAPERS IF NECESSARY.

4. IF THIS PLAN REMAINS IN CONTINUOUS OPERATION FOR MORE THAN 36 HOURS, THEN TRAFFIC DRUMS SHALL BE USED IN PLACE OF TRAFFIC CONES.

5. ANY LEGAL SPEED LIMIT SIGNS WITHIN THE LIMITS OF A ROADWAY / LANE CLOSURE AREA SHALL BE COVERED WITH AN OPAQUE MATERIAL WHILE THE CLOSURE IS IN EFFECT, AND UNCOVERED WHEN THE ROADWAY / LANE CLOSURE IS RE-OPENED TO ALL LANES OF TRAFFIC.

6. IF THIS PLAN REMAINS IN CONTINUOUS OPERATION FOR MORE THAN 36 HOURS, THEN ANY EXISTING, CONFLICTING PAVEMENT MARKINGS SHALL BE ERADICATED OR COVERED, AND TEMPORARY PAVED TEMPORARY MARKINGS THAT DELINEATE THE PROPER TRAVELPATHS SHALL BE INSTALLED.

7. DISTANCES BETWEEN SIGNS IN THE ADVANCE WARNING AREA MAY BE REDUCED TO 100' ON LOW-SPEED URBAN ROADS (SPEED LIMIT < 40 MPH).

8. IF THIS PLAN IS TO REMAIN IN OPERATION DURING THE HOURS OF DARKNESS, INSTALL BARRICADE WARNING LIGHTS - HIGH INTENSITY ON ALL POST-MOUNTED DIAMOND SIGNS IN THE ADVANCE WARNING AREA.

9. A CHANGEABLE MESSAGE SIGN SHALL BE INSTALLED ONE HALF TO ONE MILE IN ADVANCE OF THE LANE CLOSURE TAPER.

10. SIGN (P) SHALL BE MOUNTED A MINIMUM OF 7 FEET FROM THE PAVEMENT SURFACE TO THE BOTTOM OF THE SIGN.

TABLE 1 - MINIMUM TAPER LENGTHS

POSTED SPEED LIMIT (MILES PER HOUR)	MINIMUM TAPER LENGTH FOR A SINGLE LANE CLOSURE
30 OR LESS	180' (55m)
35	250' (75m)
40	320' (100m)
45	540' (165m)
50	600' (180m)
55	660' (200m)
65	780' (240m)

METRIC CONVERSION CHART (1" = 25mm)

ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC
12"	300mm	42"	1050mm	72"	1800mm
18"	450mm	48"	1200mm	78"	1950mm
24"	600mm	54"	1350mm	84"	2100mm
30"	750mm	60"	1500mm	90"	2250mm
36"	900mm	66"	1650mm	96"	2400mm

CONSTRUCTION TRAFFIC CONTROL PLAN

NOTES

SCALE: NONE

WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY ALTERNATING ONE-WAY TRAFFIC OPERATIONS

SIGN FACE 108 SQ. FT. (MIN.)

80-9612

END ROAD WORK

80-9950

STOP

80-9803

80-9834

80-9603

31-1906

DENOTES APPROXIMATE LOCATION OF UNIFORMED FLAGGER, TRAFFICPERSON OTHER THAN POLICE OFFICERS SHALL USE SIGN 80-9950 MOUNTED ON A 6' MIN. STAFF.

FROM THE MUTCD (2009 EDITION) Table 6E-1 Stopping Sight Distance as a Function of Speed

Speed (mph)	Distance (ft)
30	115
35	155
40	200
45	250
50	305
55	360
60	425
65	495

TRAFFIC CONE OR TRAFFIC DRUM

OPTIONAL TRAFFIC DRUM

PORTABLE SIGN SUPPORT

HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

CONSTRUCTION TRAFFIC CONTROL PLAN

PLAN 13 - SHEET 1 OF 2

SEE NOTES 1, 2, 4, 6, 7, 8

SCALE: NONE

WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY ALTERNATING ONE-WAY TRAFFIC OPERATIONS

SIGN FACE 108 SQ. FT. (MIN.)

80-9612

END ROAD WORK

80-9950

STOP

80-9803

80-9834

80-9603

31-1906

HAND SIGNAL METHODS TO BE USED BY UNIFORMED FLAGGERS

THE FOLLOWING METHODS FROM SECTION 6E.07, FLAGGER PROCEDURES, IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," SHALL BE USED BY UNIFORMED FLAGGERS WHEN DIRECTING TRAFFIC THROUGH A WORK AREA. THE STOP/SLOW SIGN PADDLE (SIGN NO. 80-9950) SHOWN ON THE TRAFFIC STANDARD SHEET TR-1220 01 ENTITLED, "SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS" SHALL BE USED.

A. TO STOP TRAFFIC

TO STOP ROAD USERS, THE FLAGGER SHALL FACE ROAD USERS AND AIM THE STOP PADDLE FACE TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. THE FREE ARM SHALL BE HELD WITH THE PALM OF THE HAND ABOVE SHOULDER LEVEL TOWARD APPROACHING TRAFFIC.

B. TO DIRECT TRAFFIC TO PROCEED

TO DIRECT STOPPED ROAD USERS TO PROCEED, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. TO FURTHER ALERT OR SLOW TRAFFIC, THE FLAGGER HOLDING THE SLOW PADDLE FACE TOWARD ROAD USERS MAY MOTION UP AND DOWN WITH THE FREE HAND, PALM DOWN.

C. TO ALERT OR SLOW TRAFFIC

TO ALERT OR SLOW TRAFFIC, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. TO FURTHER ALERT OR SLOW TRAFFIC, THE FLAGGER HOLDING THE SLOW PADDLE FACE TOWARD ROAD USERS MAY MOTION UP AND DOWN WITH THE FREE HAND, PALM DOWN.

TRAFFIC CONE OR TRAFFIC DRUM

OPTIONAL TRAFFIC DRUM

PORTABLE SIGN SUPPORT

HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

CONSTRUCTION TRAFFIC CONTROL PLAN

PLAN 13 - SHEET 2 OF 2

SEE NOTES 1, 2, 4, 6, 7, 8

SCALE: NONE

WORK IN SHOULDER - TWO LANE HIGHWAY

SIGN FACE 71 SQ. FT. (MIN.)

80-9612

END ROAD WORK

80-9958

SHOULDER CLOSED

80-9603

ROAD WORK AHEAD

31-1906

ROAD WORK AHEAD FINES DOUBLED

ADVANCE WARNING AREA

SHOULDER

WORK AREA

ACTIVITY AREA

TERMINATION AREA

TRANSITION AREA

ADVANCE WARNING AREA

TRAFFIC CONE OR TRAFFIC DRUM

OPTIONAL TRAFFIC DRUM

PORTABLE SIGN SUPPORT

HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

CONSTRUCTION TRAFFIC CONTROL PLAN

PLAN 14

SEE NOTES 1, 2, 4, 7, 8

SCALE: NONE

WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY

SIGN FACE 62 SQ. FT. (MIN.)

80-9612

END ROAD WORK

80-9603

ROAD WORK AHEAD

31-1906

ROAD WORK AHEAD FINES DOUBLED

ADVANCE WARNING AREA

SHOULDER

WORK AREA

ACTIVITY AREA

TERMINATION AREA

TRANSITION AREA

ADVANCE WARNING AREA

TRAFFIC CONE OR TRAFFIC DRUM

OPTIONAL TRAFFIC DRUM

PORTABLE SIGN SUPPORT

HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

CONSTRUCTION TRAFFIC CONTROL PLAN

PLAN 15

SEE NOTES 1, 2, 4, 6, 7, 8

SCALE: NONE

WORK IN MIDDLE OF ROADWAY TWO LANE HIGHWAY

SIGN FACE 72 SQ. FT. (MIN.)

80-9612

END ROAD WORK

31-1526

80-9603

ROAD WORK AHEAD

31-1906

ROAD WORK AHEAD FINES DOUBLED

ADVANCE WARNING AREA

SHOULDER

WORK AREA

ACTIVITY AREA

TERMINATION AREA

TRANSITION AREA

ADVANCE WARNING AREA

TRAFFIC CONE OR TRAFFIC DRUM

OPTIONAL TRAFFIC DRUM

PORTABLE SIGN SUPPORT

HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

CONSTRUCTION TRAFFIC CONTROL PLAN

PLAN 16

SEE NOTES 1, 2, 4, 6, 7, 8

SCALE: NONE

WORK IN MIDDLE OF ROADWAY AT INTERSECTION

SIGN FACE 144 SQ. FT. (MIN.)

80-9612

END ROAD WORK

31-1526

80-9603

ROAD WORK AHEAD

31-1906

ROAD WORK AHEAD FINES DOUBLED

ADVANCE WARNING AREA

SHOULDER

WORK AREA

ACTIVITY AREA

TERMINATION AREA

TRANSITION AREA

ADVANCE WARNING AREA

TRAFFIC CONE OR TRAFFIC DRUM

OPTIONAL TRAFFIC DRUM

PORTABLE SIGN SUPPORT

HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

CONSTRUCTION TRAFFIC CONTROL PLAN

PLAN 17

SEE NOTES 1, 2, 4, 6, 7, 8

SCALE: NONE

WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY ALTERNATING ONE-WAY TRAFFIC OPERATIONS STOP SIGN CONTROL

SIGN FACE 125 SQ. FT. (MIN.)

80-9612

END ROAD WORK

31-0557

STOP

80-9950

80-9834

ONE LANE ROAD AHEAD

80-9603

ROAD WORK AHEAD

31-1906

ROAD WORK AHEAD FINES DOUBLED

ADVANCE WARNING AREA

SHOULDER

WORK AREA

ACTIVITY AREA

TERMINATION AREA

TRANSITION AREA

ADVANCE WARNING AREA

TRAFFIC CONE OR TRAFFIC DRUM

OPTIONAL TRAFFIC DRUM

PORTABLE SIGN SUPPORT

HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

CONSTRUCTION TRAFFIC CONTROL PLAN

PLAN 18

SEE NOTES 1, 2, 4, 7, 8

SCALE: NONE

REV.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: DECEMBER 2023

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101 East River Drive, Suite 1A
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Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

TRAFFIC CONTROL
NOTES AND PLANS

PROJECT NO. 10739-264571
FILE NAME: CO29TRFC.DWG
SHEET NO.
C-29

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION
Page 433

Pumping Station					
Fill			Cut		
Contour	Volume C.F.		Contour	Volume C.F.	Net C.F.
250	8,622		250	0	8,622
251	17,313		251	183	17,130
252	29,777		252	4,202	25,575
253	28,376		253	4,202	24,175
254	25,800		254	4,202	21,598
255	23,466		255	4,202	19,264
256	21,270		256	4,202	17,069
257	14,512		257	4,202	10,311

143,745 Fill C.F.

Upper Wellfield					
Fill			Cut		
Contour	Volume C.F.		Contour	Volume C.F.	Net C.F.
256	2,257		256	0	2,257
257	3,806		257	0	3,806
258	5,733		258	0	5,733
259	2,045		259	0	2,045

13,840 Fill C.F.

Lower Wellfield					
Fill			Cut		
Contour	Volume C.F.		Contour	Volume C.F.	Net C.F.
248	914		248	0	914
249	3,932		249	0	3,932
250	0		250	0	0
251	0		251	112	-112
252	6,011		252	635	5,376
253	4,374		253	416	3,958
254	2,994		254	324	2,670
255	1,859		255	251	1,609
256	991		256	151	840
257	0		257	107	-107

19,077 Fill C.F.

Total Project Fill
176,662 Fill C.F.
6,543 Fill C.Y.

Complying Quantity Reference Sheet	UWF Total Needed (C.F.)
CS-1/2	2,257
CS-1/2	3,806
CS-1/2	5,733
CS-1/2	2,045

Complying Quantity Reference Sheet	LWF Total Needed Including Pumping Station (C.F.)
CS-4	914
CS-4	3,932
CS-4	8,622
CS-4	17,019
CS-3/4	30,951
CS-3/4	28,132
CS-3/4	24,268
CS-1/3/4	20,873
CS-3/4	17,908
CS-3/4	10,204

Contour	CS-1	CS-2	CS-3	CS-4	Total (C.F.)	Difference (C.F.)	Over or Need
256	3,903	1,493			5,396	3,139	OVER
257	4,859	6,077			10,936	7,130	OVER
258	23,973	3,689	11,977		39,639	33,906	OVER
259	21,846	1,469	10,447		33,762	31,717	OVER

89,733 C.F. Storage

Note: 1,397 C.F. of this total applied to the Lower Wellfield at contour 256'.

Contour	CS-1	CS-2	CS-3	CS-4	Total (C.F.)	Difference (C.F.)	Over or Need
248				29,192	29,192	28,278	OVER
249				27,921	27,921	23,989	OVER
250				24,902	24,902	16,280	OVER
251				20,309	20,309	3,290	OVER
252			32,168	16,115	48,283	17,332	OVER
253			47,369	13,469	60,838	32,706	OVER
254			20,100	7,973	28,073	3,805	OVER
255	3,004		17,436	3,387	23,827	2,954	OVER
256			15,162	1,349	16,511	-1,397	EVEN
257			13,541	205	13,746	3,542	OVER

293,602 C.F. Storage

Note: Short fall of 1,397 C.F. has been applied from compensatory storage contour 256' at Upper Wellfield.

Total Project CS
383,335 C.F. Storage
14,198 C.Y. Storage



City of Bristol
DEPARTMENT OF PUBLIC WORKS
BRISTOL, CONNECTICUT 06010

Inland Wetlands
Environmental Protection Technician
Monthly Report

May 28, 2024

Approved Applications Inspections

No.	Location	Description	Inspection Dates	Status
#1593	Cedar Hill Lots 12-42	Open space subdivision - Residential building lots (Exp. 20270519)	5/1, 5/8, 5/15, 5/22	Act
#1567	Allentown Road (Wood shire)	Wetland crossing with residential community (Exp. 20260919)	5/1, 5/8, 5/15, 5/22	Inact
#1819	Allentown Road (Saddlebrook)	Grading and water lateral installation (Exp. 20270417)	5/1, 5/8, 5/15, 5/22	Inact
#1827	894 Middle Street	Environmental remediation (Exp. 20270717)	4/30, 5/7, 5/14, 5/21	Inact
#1844	208 Jerome Avenue	Construction of driveway and utilities; new home (20230521)	4/30, 5/7, 5/14, 5/21	EXPIRED
#1865	Muzzy Field - Downs Street	Repair sidewalks and ramp upgrades (Exp. 20240501)	5/1, 5/8, 5/15, 5/22	EXPIRED
#1868	Lot 21 Waterbury Road	Maintenance to existing haul road (Exp. 20240610)	5/1, 5/8, 5/15, 5/22	Inact
#1878	134 Terryville Road	Regrade and establish parking area (20241002)	5/1, 5/8, 5/15, 5/22	Inact
#1883	40 Janice Lane	Construct of 2 car garage (20240904)	5/1, 5/8, 5/15, 5/22	Inact
#1889	35 Kory Lane	Remove and replace existing dock (20241106)	5/1, 5/8, 5/15, 5/22	Inact
#1890	20 Beechwood Street	Construct addition, pool, and infiltration system (20250205)	5/1, 5/8, 5/15, 5/22	Inact
#1891	Barnum Road	Clean detention ponds and existing debris piles (20250205)	5/1, 5/8, 5/15, 5/22	Inact
#1893	150 Century Drive	Construct drainage area and parking (20250304)	4/30, 5/7, 5/14, 5/21	Inact
#1894	315 Shrub Road	Reconstruct road for earth removal (20250304)	4/30, 5/7, 5/14, 5/21	Inact

No.	Location	Description	Inspection Dates	Status
#1896	50 Terryville Avenue	Construct Gas Station (20250506)	5/1, 5/8, 5/15, 5/22	Act
#1897	7 Royal Drive	Install shed, basketball court, above ground pool (20251007)	5/1, 5/8, 5/15, 5/22	Inact
#1898	132 Marcia Drive	Grade, install patio, and fence (20250506)	4/30, 5/7, 5/14, 5/21	Inact
#1901	105 Maxine Drive	Install pipe, fence, and bridge (20250902)	4/30, 5/7, 5/14, 5/21	Inact
#1902	44 Nelson Farm Road	Addition 22x12 w/ Bioswale (20250805)	4/30, 5/7, 5/14, 5/21	Inact
#1903	16 Great Pyrenees Way	Construct in ground pool (20250805)	4/30, 5/7, 5/14, 5/21	Inact
#1904	Huntington Woods	Replace 60" CMP with HDPE (20250805)	5/1, 5/8, 5/15, 5/22	Inact
#1905	Pine Lake West Bank	Replace sedimentation basin (20250805)	4/30, 5/7, 5/14, 5/21	Complete
#1907	115 Lakewood Circle	Construct 20x40 addition (20251007)	5/1, 5/8, 5/15, 5/22	Inact
#1908	351 Minor Street	Construct Oil/Propane facility (20251202)	5/1, 5/8, 5/15, 5/22	Act
#1909	21 Sonstrom Road	Construct Garage (20251202)	4/30, 5/7, 5/14, 5/21	Inact
#1910	172-176 East Main Street	Construct new Dunkin Donuts (20260303)	4/30, 5/7, 5/14, 5/21	Complete
#1915	505-545 Redstone Hill Road	18 Lot Subdivision (20260505)	4/30, 5/7, 5/14, 5/21	Act
#1919	258 Brook Street	Demo existing garage, replace with 3 car garage (20260407)	4/30, 5/7, 5/14, 5/21	Inact
#1922	71 Horizon Drive	Parking lot construction. Modification of #1848 (20260505)	4/30, 5/7, 5/14, 5/21	Inact
#1925	66 Vermont Avenue	Removal of smaller trees and grading (20260505)	4/30, 5/7, 5/14, 5/21	Inact
#1927	Lot 44 Valmore Road	Construct house and grade for wetlands mitigation (20260505)	4/30, 5/7, 5/14, 5/21	Complete
#1929	35 Oaken Road	Install in ground swimming pool (20260505)	4/30, 5/7, 5/14, 5/21	Complete
#1933	Lot 2 Business Park Drive	Filling & grading for parking area to new building (20260707)	4/30, 5/7, 5/14, 5/21	Act
#1934	Glenn Street	Harding a section to allow passage of woodland machinery (20260707)	4/30, 5/7, 5/14, 5/21	Inact
#1936	52 Shelia Court	Construct 20 new spaces with related storm water management (20260707)	4/30, 5/7, 5/14, 5/21	Inact
#1937	Lot 18 Donovan Court	Construct new house (20260901)	5/1, 5/8, 5/15, 5/22	Inact
#1940	Lot 42 & 46 Mill Pond Drive	Construct new residential homes (20211006)	4/30, 5/7, 5/14, 5/21	Complete

No.	Location	Description	Inspection Dates	Status
#1944	47 Kory Lane	Addition to existing house (20260901)	5/1, 5/8, 5/15, 5/22	Complete
#1945	Lake Avenue Bridge 017005	Bridge replacement (20261006)	4/30, 5/7, 5/14, 5/21	Inact
#1946	175 Century Drive	28,875 SF addition to existing facility (20261006)	4/30, 5/7, 5/14, 5/21	Inact
#1949	23 Columbus Avenue	Install in-ground pool (20261103)	4/30, 5/7, 5/14, 5/21	Inact
#1950	801 Burlington Avenue	Construct single family home (20261103)	4/30, 5/7, 5/14, 5/21	Inact
#1951	Lot 7B 1-2 Marsh	Construct single family home (20261103)	5/1, 5/8, 5/15, 5/22	Act
#1966	183 Foxden Road	Extend sanitary sewer to service two lots (20270202)	4/30, 5/7, 5/14, 5/21	Act
#1968	175 Shrub Road	One mile Hiking Trail elevated boardwalks (20270202)	4/30, 5/7, 5/14, 5/21	Act
#1970	16 Andrews Street	paved parking lot and area of grading (20270406)	4/30, 5/7, 5/14, 5/21	Inact
#1972	34 Climbing Street	New deck and in-ground swimming pool (20270406)	4/30, 5/7, 5/14, 5/21	Act
#1974	Memorial Blvd	Removal of tennis courts and planting of a new urban garden(20270406)	4/30, 5/7, 5/14, 5/21	Inact
#1977	Wolcott Street	installation of temporary bypass pipe in culvert for repairs (20270406)	5/1, 5/8, 5/15, 5/22	Inact
#1979	27 Cherry Hill Drive	Addition of a 30 x 30 attached garage(20270406)	4/30, 5/7, 5/14, 5/21	Complete
#1982	Lot #13 Village Street	Construct single family home (20270711)	4/30, 5/7, 5/14, 5/21	Complete
#1983	243 Jacobs Street	Regrade River at Rockwell Park (20270801)	5/1, 5/8, 5/15, 5/22	Inact
#1984	Jerome Ave Bridge	Replace Pedestrian Bridge (20270711)	4/30, 5/7, 5/14, 5/21	Act
#1986	85 Buckley Ave	Construct Garage Addition (20270711)	5/1, 5/8, 5/15, 5/22	Inact
#1988	Lot# 7-1 Terryville Road	Commercial Building (20270801)	5/1, 5/8, 5/15, 5/22	Act
#1989	177 Corbin Ridge	Retaining Wall, Above Ground Pool, And Deck (20270711)	5/1, 5/8, 5/15, 5/22	Inact
#1990	29 Woodside Way	Inground Pool (20270711)	4/30, 5/7, 5/14, 5/21	Inact
#1991	62 Litchfield Lane	Inground Pool (20270711)	4/30, 5/7, 5/14, 5/21	Inact
#1993	21 Royal Drive	Grading and Drainage in Rear Yard (20270801)	5/1, 5/8, 5/15, 5/22	Inact
#1998	76 Mountain View Ave	Inground Pool (20270912)	4/30, 5/7, 5/14, 5/21	Inact

No.	Location	Description	Inspection Dates	Status
#1999	724 Wolcott Road	New Home Construction (20271107)	5/1, 5/8, 5/15, 5/22	Complete
#2000	Shrub Rd/ Jerome Ave	Sidewalk Improvement, and pedestrian Bridge (20280109)	4/30, 5/7, 5/14, 5/21	Inact
#2002	1261 & 1265 Farmington Ave	Construct Medical Office, Restaurant, and Car Wash (20280109)	4/30, 5/7, 5/14, 5/21	Act
#2003	50 Terryville Rd	Pond Maintenance (20280109)	5/1, 5/8, 5/15, 5/22	Act
#2004	Mellen Street Bridge	Bridge replacement (20280206)	4/30, 5/7, 5/14, 5/21	Act
#2005	71 Minnesota Lane	Construct a 20x30 Garage (20280306)	5/1, 5/8, 5/15, 5/22	Inact
#2007	109 Moody Street	Construction Of A Plate Arch Spanning The Watercourse (20280501)	4/30, 5/7, 5/14, 5/21	Inact
#2008	205 Pennwood Place	Install 20x40 Inground Pool (20280501)	5/1, 5/8, 5/15, 5/22	Inact
#2010	Clark Ave Lot 271-1A	Mixed use development (20280710)	5/1, 5/8, 5/15, 5/22	Inact
#2011	152 Beths Ave	Construct Single Family House (20280710)	4/30, 5/7, 5/14, 5/21	Complete
#2012	812 Redstone Hill Road	New In-Ground Pool (20280710)	4/30, 5/7, 5/14, 5/21	Inact
#2013	54 Merrill Court	Repair of Septic System (20280710)	5/1, 5/8, 5/15, 5/22	Inact
#2015	Page Park	Park Renovations and Improvements (20281205)	5/1, 5/8, 5/15, 5/22	Inact
#2016	Downs Street Bridge	Replacement of Bridge (20281205)	4/30, 5/7, 5/14, 5/21	Inact

SPECIAL INSPECTION:

Lot 13-1 Waterbury Road- 20220417 - During a drive by of the property, it was discovered that clearing of trees was being done in a regulated area, EPT called the current property owner and set up a meeting. 20220418 - EPT met with the property owners and explained that their property was in a regulated area, P/O agreed to install temporary silt fence at the bottom of the slope, and then immediately stop all work until they obtain a wetlands permit- **Pending**

C. O. INSPECTIONS:

152 Beths Ave

240 Silo Road

2 Gino Drive

NOTICE AND NOTICE OF VIOLATION LETTERS:



Connecticut
**Department of Energy &
Environmental Protection**

79 Elm Street • Hartford, CT 06106-5127
portal.ct.gov/DEEP

STAHL HOLDINGS, LLC
1112 FEDERAL RD
D/B/A THE POND AND LAKE CONNECTION
BROOKFIELD, CT 06804-1122

5/21/2024

1. This permit is hereby issued pursuant to Section 22a-66z of the General Statutes, and regulations adopted thereunder.

2. This permit AQUA-2024-160

Is issued to: STAHL HOLDINGS, LLC

of: 1112 FEDERAL RD

D/B/A THE POND AND LAKE CONNECTION

BROOKFIELD, CT 06804-1122

3. This permit authorizes the application of chemicals at property

located at: Bristol

4. This permit authorizes the application of chemicals by: STAHL HOLDINGS, LLC

5. This permit is issued on 5/21/2024

and will expire on 12/31/2026

6. This permit is subject to the following conditions:

a. Permittee may apply the following chemicals to

Indian Rock Pond

Site ID: 1623208

Chemical	Amount of chemical	Times applied
Copper Ethanolamine Mixture (liquid) 27.8% - 28.2%	40.70 Gallons	3
Copper Sulfate (liquid) 16.2%	29.40 Gallons	3
Diquat (liquid) 37.3%	11.30 Gallons	3
Flumioxazin (granular) 51.0%	5.60 Pounds	3
Imazamox (Liquid) 12.1%	1.00 Gallons	1

b. Permittee may conduct the application described in paragraph 6a, no more than the number times specified above, in each calendar year of the effective term of this permit, and prior to 12/31/2026.

c. The permittee shall follow all restrictions and directions as instructed on the chemical label.

d. The permittee shall also adhere to the following specific conditions:

1. This permit authorizes the use of the permitted chemicals on or before 12/31/2024. There shall be no use of chemicals in 2025 or 2026 until the permittee submits an Application for the Re-Introduction of Pesticides in State Waters with the required application fee and receives a Confirmation of Receipt from the Central Permits Processing Unit. Such application and fee shall be submitted not later than March 1, 2025 for treatment in 2025 and March 1, 2026 for treatment in 2026. If the permittee will not be treating the waterbody in 2025 or 2026, the permittee shall indicate that this permit is being surrendered when submitting the Application for the Re-Introduction of Pesticides in State Waters and no additional fee will be required. Once surrendered, no further use of chemicals will be authorized under this permit.

2. The permittee shall comply with all applicable DEEP Wildlife Division Natural Diversity Data Base (NDDDB) program requirements for the effective term of this permit. Any NDDDB Review Request Form required to be submitted to the DEEP Wildlife Division shall also be submitted to the DEEP Pesticide Program (elizabeth.a.clark@ct.gov) at the same time the review request is submitted to the Wildlife Division.

3. No other copper product shall be applied to the same treatment area at the same time as copper sulfate and there shall be at least 14 days between copper treatments.

4. No chemicals shall be applied within 200 feet of the public supply wells, as indicated on the attached map.

- e. The permittee shall notify the DEEP State Parks and Public Outreach Division and the Water Planning and Management Division (email: deep.aquaticherbicides@ct.gov) at least 72 hours prior to each treatment.
- f. For any permit to apply chemicals on a lake or pond with any public access owned by the state or a municipality: The permittee shall, prior to any chemical application authorized by this permit, publish notice of such application and post signs in accordance with Section 22a-66a(h) of the Connecticut General Statutes and regulations adopted thereunder.
- g. Any pesticide application business prior to making a pesticide application on any private lake or pond with more than one owner of shoreline property shall provide notice of the date of the application to any owner or tenant of such shoreline property that abuts the lake or pond to be treated, in accordance with Section 22a-66a(h) of the Connecticut General Statutes and regulations adopted thereunder.
- h. The permittee shall submit a yearend report using this [form](#). The report shall be submitted to deep.pesticideprogram@ct.gov not later than December 31st of each year this permit is active. If no chemicals were applied in any given year during the active term of this permit, a yearend report must be submitted indicating that no chemicals were applied that year
- i. In evaluating the application for this permit and any other document submitted pursuant to this permit DEEP relies on information and data provided by the applicant and on the applicant's representations. If such information proves to be false, deceptive, incomplete or inaccurate, this permit may be modified, suspended or revoked in accordance with Section 22a-3a-5(d) of the Regulations of Connecticut State Agencies.
- j. Any document which is required to be submitted by the permittee to DEEP under this permit shall be signed by the permittee or applicator and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows:
- "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate, and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, and in accordance with any other applicable statute."

- k. This permit is not transferrable.
- l. Issuance of this permit does not relieve the permittee of the obligation to obtain any other authorizations required by applicable federal, state and local law.
- m. This permit is subject to and does not derogate any present or future rights or powers of the property owner and conveys no rights in real or personal property nor any exclusive privileges, and is subject to any and all public and private rights and to any federal, state or local laws pertinent to the property or activity affected by such permit.
- n. For an applicator who is not a certified commercial applicator, this permit shall be signed below by the registered pesticide dealer at the time of chemical purchase. Once signed, this permit is invalid for further purchase of chemicals.

5/21/2024

Date of Permit Issuance



Gabrielle Frigon, Director
Waste Engineering & Enforcement Division

AQUA-2024-160

Permit Number

Date of Chemical Purchase

Signature of Registered Pesticide Dealer





City of Bristol
Office of Town and City Clerk
111 North Main Street
Bristol, Connecticut 06010
(860)584-6200 ext. 0

May 15, 2024

Greg A. Klimek
218 Castle Road
Bristol, Connecticut 06010

Dear Mr. Klimek:

This is to officially notify you that at a meeting of the City Council on May 14, 2024 you were appointed as an alternate member to the Inland Wetlands Commission for a term to May, 2027.

It is necessary to take your oath of office when you are appointed. Would you kindly stop at the Town Clerk's Office to take your oath.

I have enclosed copies of Section 2-9 of the Bristol Code of Ordinances regarding attendance at meetings, a listing of members, a calendar of meetings and a copy of the Ethics Ordinance. You should read the Ethics Ordinance carefully since it pertains to board members.

Should your address or political affiliation change, or you resign from this appointment, you must notify the Town Clerk's Office.

Congratulations!

Very truly yours,

A handwritten signature in cursive script that reads "Erica Cabiya".

Erica L.N. Cabiya, CCTC
Town and City Clerk

EC/jb

Enclosures

cc: Robert Flanagan



City of Bristol
Office of Town and City Clerk
111 North Main Street
Bristol, Connecticut 06010
(860)584-6200 ext. 0

May 15, 2024

Daniel Massaro Jr.
47 Indian Trail
Bristol, Connecticut 06010

Dear Mr. Massaro:

This is to officially notify you that at a meeting of the City Council on May 14, 2024 you were reappointed as a member to the Inland Wetlands Commission for a term to May, 2027.

It is necessary to take your oath of office when you are reappointed. At your earliest convenience, kindly stop by the Town Clerk's Office to take your oath. **Enclosed is the Conflict of Interest Acknowledgement form that must be filled out** and handed in at the time of your oath.

I have enclosed an updated list of members and a calendar of meetings.

Should you change your address, or resign from this appointment, you must notify the Town Clerk's Office.

Very truly yours,

A handwritten signature in cursive script, reading "Erica Cabiya".

Erica L.N. Cabiya, CCTC
Town and City Clerk

EC/jb

Enclosures

cc: Robert Flanagan



City of Bristol
Office of Town and City Clerk
111 North Main Street
Bristol, Connecticut 06010
(860)584-6200 ext. 0

May 15, 2024

James F. Carros
117 Belridge Road
Bristol, Connecticut 06010

Dear Mr. Carros:

This is to officially notify you that at a meeting of the City Council on May 14, 2024 you were reappointed as a member to the Inland Wetlands Commission for a term to May, 2027.

It is necessary to take your oath of office when you are reappointed. At your earliest convenience, kindly stop by the Town Clerk's Office to take your oath. **Enclosed is the Conflict of Interest Acknowledgement form that must be filled out** and handed in at the time of your oath.

I have enclosed an updated list of members and a calendar of meetings.

Should you change your address, or resign from this appointment, you must notify the Town Clerk's Office.

Very truly yours,

A handwritten signature in cursive script that reads "Erica Cabiya".

Erica L.N. Cabiya, CCTC
Town and City Clerk

EC/jb

Enclosures

cc: Robert Flanagan