EXPANDED ENVIRONMENTAL NOTIFICATION FORM

MWRA Contract 7155—Section 22 and Section 21 Rehabilitation

Boston, Milton, and Quincy, Massachusetts

PREPARED FOR

Massachusetts Water Resources Authority
2 Griffin Way
Chelsea, Massachusetts 02150

PREPARED BY

101 Walnut Street
PO Box 9151
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NOVEMBER 2022

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Commonwealth of Massachusetts

Executive Office of Energy and Environmental Affairs
Massachusetts Environmental Policy Act (MEPA) Office

Environmental Notification Form

For Office Use Only

EEA#: _____

MEPA Analyst: _____

The information requested on this form must be completed in order to submit a document electronically for review under the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: MWRA Section 22 and 21 Water Pipeline Rehabilitation Project		
Street Address: Multiple locations		
Municipality: Boston, Milton, Quincy	**Watershed**: Boston Harbor	
Universal Transverse Mercator Coordinates: 19T 331499.96m E 4681398.27m N	**Latitude**: 42.2666 **Longitude**: -71.0431	
Estimated commencement date: June 2025	**Estimated completion date**: December 2027	
Project Type: Water Supply – Distribution	**Status of project design**: 25 **%complete**	
Proponent: Massachusetts Water Resources Authority		
Street Address: 100 First Avenue		
Municipality: Boston	**State**: MA	**Zip Code**: 02129
Name of Contact Person: Katherine Ronan		
Firm/Agency: MWRA	**Street Address**: 100 First Avenue	
Municipality: Boston	**State**: MA	**Zip Code**: 02129
Phone: 617-788-1177	**Fax**:	**E-mail**: Katherine.ronan@mwra.com

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
☒ Yes ☐ No

If this is an Expanded Environmental Notification Form (ENF) (see 301 CMR 11.05(7)) or a Notice of Project Change (NPC), are you requesting:

a Single EIR? (see 301 CMR 11.06(8))	☒ Yes	☐ No
a Rollover EIR? (see 301 CMR 11.06(13))	☐ Yes	☒ No
a Special Review Procedure? (see 301CMR 11.09)	☐ Yes	☒ No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	☐ Yes	☒ No
a Phase I Waiver? (see 301 CMR 11.11)	☐ Yes	☒ No

(Note: Greenhouse Gas Emissions analysis must be included in the Expanded ENF.)

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?
301 CMR 11.03(3)(a)1. a. alteration of one or more acres of salt marsh or bordering vegetating wetlands
301 CMR 11.03(11)(b) Any Project within a designated ACEC, unless the Project consists solely of one single family dwelling.

Which State Agency Permits will the project require?
Massachusetts Department of Transportation Highway Access Permit
Massachusetts Department of Conservation and Recreation Construction Access Permit

Massachusetts Bay Transportation Authority License to Enter
Massachusetts Department of Environmental Protection (MassDEP) Section 401 Water Quality Certification
MassDEP/Milton, Boston, and Quincy Conservation Commissions Orders of Conditions

Identify any financial assistance or land transfer from an Agency of the Commonwealth, including the Agency name and the amount of funding or land area in acres: N/A

Summary of Project Size & Environmental Impacts	• **Existing**	**Change**	**Total**
LAND			
Total site acreage	17.2		
New acres of land altered		0	
Acres of impervious area	12.9	0	12.9
Square feet of new bordering vegetated wetlands alteration		0	
Square feet of new other wetland alteration		55,860	
Acres of new non-water dependent use of tidelands or waterways			
STRUCTURES			
Gross square footage	0	0	0
Number of housing units	0	0	0
Maximum height (feet)	0	0	0
TRANSPORTATION			
Vehicle trips per day	0	0	0
Parking spaces	0	0	0
WASTEWATER			
Water Use (Gallons per day)	0	0	0
Water withdrawal (GPD)	0	0	0
Wastewater generation/treatment (GPD)	0	0	0
Length of water mains (miles)	3.2	0	3.2
Length of sewer mains (miles)	0	0	0

Has this project been filed with MEPA before?
☐ Yes (EEA #_____) ☒No

Has any project on this site been filed with MEPA before?
☐ Yes (EEA #_____) ☒No

GENERAL PROJECT INFORMATION – all proponents must fill out this section

PROJECT DESCRIPTION:

MWRA's existing Section 22 and Section 21 are critical water pipelines that delivers drinking water to, and is located in, Boston, Milton, and Quincy, Massachusetts. Originally constructed in 1950, Section 22 is approximately 16,000 feet long and composed primarily of 48-inch-diameter unlined steel pipe with dresser coupling joints. The 650-foot-long portion of Section 22 that runs under the Neponset River is constructed of 52-inch-diameter concrete-lined steel pipe with welded joints. Section 21 is composed of an approximately 3,600-foot-long, 24-inch-diameter cast iron pipe in Milton and Quincy that was originally constructed in the early 1900s.

Over the years Section 22 has required numerous repairs, and the pipeline interior of Section 21 is heavily corroded. The Massachusetts Water Resources Authority (MWRA) proposes to rehabilitate portions of Section 22 and Section 21 to restore them to full function.

Section 21

As shown in Figures 1 and 8 in Attachment C, Section 21 begins at the intersection of Granite Avenue and Adams Street in Milton, and follows Adams Street to Beale Street. The pipeline turns north onto Beale Street and continues northeast to end at the intersection with Summit Avenue in Quincy. Section 21 is located entirely within existing roadways amongst residential and commercial land uses.

Section 22

As shown in Figures 1 and 2 in Attachment C, the segments of Section 22 under review for rehabilitation begin in Dorchester Lower Mills in Boston, continue across the Neponset River State Reservation into Milton, then travel southeast toward Hope Avenue. From there, Section 22 continues primarily in public roadways, crossing in and out of Quincy and Milton, somewhat following the municipal boundary, and ends near the intersection of Furnace Brook Parkway and Adams Street.

For ease of discussion, the existing alignment of Section 22 was divided into four segments (see Figure 2 and Figure 3 in Attachment C):

- Segment 1: *Dorchester Lower Mills to MBTA Tracks*. This segment begins at station 10+80 (stationing identifies a location along the alignment as shown in the figures), at the intersection of Washington Street and Adams Street in Dorchester, Boston. It travels east along Adams Street, where it runs through residential, commercial, and mixed-use properties, then turns southeast onto Butler Street. From Butler, this segment leaves the public roadway just northwest of the entrance to the Cedar Grove Cemetery, continues east across the entry driveway of the cemetery, and ends just west of the Neponset Trail and the rail for the Massachusetts Bay Transportation Authority's Mattapan Trolley. This portion of Segment 1 is located within developed open space and some forested land.
- Segment 2: *ACEC Marsh to MassDOT Yard*. This segment continues east across the trail and rail, and into the Neponset River Reservation. It crosses through salt marshes and under the Neponset River, and near the ramp for I-93 southbound turns southeast along the ramp for approximately 400 feet then crosses under the ramp and I-93 itself to a point just west of a MassDOT storage yard.
- Segment 3: *MassDOT Yard to Hope Avenue*. From the corner of the MassDOT yard, Segment 3 travels southeast along the edge of the yard and adjacent parking lot, past the American Legion Heritage Hall, and through a salt marsh to reach the intersection of Granite Avenue and Hope Avenue. The segment passes between I-93 and the MassDOT Yard, and through

forested areas and salt marsh.

- Segment 4: *Hope Avenue to Furnace Brook Parkway*. From the intersection of Granite Avenue and Hope Avenue, this segment of Section 22 turns east onto Hope Avenue, crosses a corner of an undeveloped parcel near Squantum Street, then continues across Squantum Street onto Amsterdam Avenue. At the end of Amsterdam Avenue, Segment 4 turns southeast across undeveloped land east of Alvin Avenue. This segment then turns south onto Elliot Avenue, southeast onto Alvin Avenue, and then crosses between residential properties onto Elmwood Avenue. Segment 4 follows Elmwood Avenue to the intersection with Milton Street, where it turns southeast onto Milton, crosses Beale Street, and continues onto Forbes Hill Road. It follows Forbes Hill Road to Stoney Brae Road, turns southeast onto Stoney Brae, then continues east onto Myopia Road. From Myopia Road, this segment turns southeast across the edge of the Furnace Brook Golf Club, turns southwest across undeveloped land behind some residential properties, and ends at the intersection of Furnace Brook Parkway and Adams Street. The majority of this segment is located within residential areas, with a few locations in forested areas or developed open space.

Proposed Work

The Project proposes to rehabilitate portions of Section 22 and Section 21 to restore them to full function. Three construction methods are proposed for different sections of pipeline along the alignment:

- Remove and replace: This method will excavate a 10-foot-wide trench and remove the existing pipeline, then install a new pipe of the same diameter in the same alignment. At appurtenances such as valves and manholes, the excavation will widen to approximately 12 feet by 12 feet. Once the new pipe is installed, all excavations will be backfilled and restored to existing grades. Please refer to Figure 3 in Attachment C, which depicts what this method would look like along certain segments of Section 22.
- Clean and line: This method will require approximately 12-foot-by-12-foot access pits at bends in the existing pipeline or at appurtenances. A scraper will be pulled through the existing pipe to clean the interior, then another machine will travel through the pipe from access pit to access pit to line the pipe with a thin layer of cement mortar. Once lining is complete, the excavation will be backfilled and restored to existing grades. Please refer to Figure 4 in Attachment C, which depicts what this method would look like along certain segments of Section 22, and Figure 8 in Attachment C for Section 21.
- Slipline: This method will require approximately 12-foot-by-30-foot access pits at bends in the existing pipeline or at appurtenances. Like cleaning and lining, a scraper will be pulled through the existing pipe. Then short segments of new steel pipe will be inserted into the existing pipe and joined by welding the pipe joints internally. The annular space between the new pipe and the host pipe will be filled with a grout mixture to secure the new pipe in place and provide corrosion protection and the interior of the pipe will also be cement mortar lined to provide corrosion protection. Once grouting and cement mortar lining is complete, the excavation will be backfilled and restored to existing grades. Please refer to Figure 5 in Attachment C, which depicts what this method would look like along certain segments of Section 22.

Depending on the condition of the existing pipe and to minimize potential environmental impacts in each segment, different construction methods are proposed to be used for different segments of pipeline.

- Section 21: This pipeline was found to be in good condition and structurally sound, but heavily corroded on the interior of the pipe. To minimize impacts and cost and maximize hydraulic performance, this pipe will be cleaned and lined.
- Section 22:
    - Segment 1: This segment is located within existing roadways. Due to its extensive leak history, this segment will be removed and replaced.

- Segment 2: This segment is located within salt marsh and the ACEC. With the exception of the crossing under the Neponset River, this segment will be sliplined with a 40-inch steel pipe. The approximately 600-linear-foot subsegment under the Neponset River was determined to be in good condition and no work is proposed. Two alternative alignments were considered for this segment and are described in the Narrative in Attachment A. Please refer to Figures 6 and 7 in Attachment C to view Alternative Segments 2A and 2B.
- Segment 3: The existing pipe in this segment is located partially within salt marsh. To minimize wetland impacts during construction and future maintenance, the Project proposes to install a new 48-inch-diameter pipe along a new alignment within the existing roadway layout of Granite Avenue (described further in the Narrative in Attachment A as Alternative Segment 3A and part of the proposed project) which is previously disturbed and contains other existing utilities. Impacts within the limits of construction from this installation will be the same as the "remove and replace" method. The existing pipe that runs through wetlands behind the Massachusetts Highway Department (MassDOT) storage yard and the salt marsh between Granite Ave. and I-93 will be capped, filled with grout, and left in place, avoiding all potential wetland impacts for this segment. The new alignment in Granite Avenue will allow for better maintenance access and avoids wetland impacts for any future work, and is discussed in further detail in the alternatives analysis that follows.
- Segment 4: This segment is located primarily within existing roadways and is proposed to be cleaned and lined. Upon further internal inspection by the contractor after the pipe has been cleaned, if significant corrosion is found, short subsegments may be removed and replaced in lieu of cement mortar lining.

Project Impacts

As part of the preparation of this EENF, MWRA conducted a GIS- and field-based analysis to calculate project impacts to environmental resources including wetlands (Salt Marsh, Bordering Land Subject to Flooding, Land Subject to Coastal Storm Flowage, and Riverfront Area), and cultural resources. A town-by-town and segment-by-segment breakdown of these impacts is provided in this EENF and the relevant attachments. Figures 1, 2, and 8 (Attachment C) depict the location of the Project and the locations of potential areas of impact to environmental resources.

Over the entire 3.7-mile length of the Project, avoidance of all impacts to environmental resources is not possible due to the length, linear nature of the Project, and the location of the existing pipelines. However, there will be no permanent impacts to environmental resources—all impacts will be temporary, and restored upon construction completion. For a full description of environmental resources affected by the Project, see the narrative in Attachment A.

Project Phasing

MWRA anticipates that the Project will be constructed in multiple phases between 2025 and 2027. The specific phasing and construction sequence has not been identified at this time.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN:

Is the project within or adjacent to an Area of Critical Environmental Concern?

☒ Yes (Specify: Neponset River Estuary) ☐ No

if yes, does the ACEC have an approved Resource Management Plan? ☒ Yes ☐ No;

If yes, describe how the project complies with this plan: The Project proposes to rehabilitate the existing pipeline within the ACEC and the MWRA has worked to avoid permanent impacts and minimize temporary impacts to the salt marsh. The Project will have no impact on the ability of the ACEC to protect the habitat, wetlands, and water quality conditions of the Neponset River Estuary, nor its ability to provide publicly owned open space for recreation and education.

Will there be stormwater runoff or discharge to the designated ACEC? ☐ Yes ☒ No;
If yes, describe and assess the potential impacts of such stormwater runoff/discharge to the designated ACEC: _____

RARE SPECIES:
Does the project site include Estimated and/or Priority Habitat of State-Listed Rare Species? (see http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/priority_habitat/priority_habitat_home.htm)
☐ Yes (Specify: _____) ☒No

HISTORICAL /ARCHAEOLOGICAL RESOURCES:
Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?
☒Yes (Specify: See Historical/Archaeological Resources Section of EENF and Attachment A Narrative)
☐ No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? ☐ Yes (Specify: _____) ☒No

WATER RESOURCES:
Is there an Outstanding Resource Water (ORW) on or within a half-mile radius of the project site?
☐ Yes ☒No;
if yes, identify the ORW and its location: _____

(NOTE: Outstanding Resource Waters include Class A public water supplies, their tributaries, and bordering wetlands; active and inactive reservoirs approved by MassDEP; certain waters within Areas of Critical Environmental Concern, and certified vernal pools. Outstanding resource waters are listed in the Surface Water Quality Standards, 314 CMR 4.00.)

Are there any impaired water bodies on or within a half-mile radius of the project site?
☒Yes ☐ No;
if yes, identify the water body and pollutant(s) causing the impairment:
Neponset River: Bacteria and Other Microbes; Impaired, Other Cause; Low Oxygen; Murky Water; PCBs; Trash.

Is the project within a medium or high stress basin, as established by the Massachusetts Water Resources Commission? ☐ Yes ☒No

STORMWATER MANAGEMENT:

Generally describe the project's stormwater impacts and measures that the project will take to comply with the standards found in MassDEP's Stormwater Management Regulations:

Temporary construction impacts will be associated with the installation of new pipe along Segments 1 and 3A of Section 22, sliplining the existing pipe along Segment 2 of Section 22, and cleaning and lining the existing pipe along Section 21 and Segment 4 of Section 22. There will be no creation of new impervious area. Any construction-phase runoff will be managed in accordance with the Massachusetts Stormwater Management Standards in Section 310 CMR 10.05(6)(k) of the Wetlands Protection Act (WPA). The Program will require a specific Stormwater Pollution Prevention Plan in accordance with the Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activities.

MASSACHUSETTS CONTINGENCY PLAN:
Has the project site been, or is it currently being, regulated under M.G.L.c.21E or the Massachusetts Contingency Plan? ☒Yes ☐ No ;

if yes, please describe the current status of the site (including Release Tracking Number (RTN), cleanup phase, and Response Action Outcome classification):

Section 22: RTN 3-0018465 is located within the Neponset Trail. The release achieved regulatory closure through the submittal of a Class A-2 Response Action Outcome (RAO) Statement in June 2000 indicating a Condition of No Significant Risk was achieved; however, residual concentrations of arsenic remain in soil. Although not required for public rights-of-way (ROWs), an Activity and Use Limitation (AUL) was recorded for the Neponset River Trail.

Section 21: RTN 3-0027149 is located at the intersection of Adam and Franklin Street in Milton. The release achieved regulatory closure through the submittal of a Class A-2 RAO Statement in October 2007 indicating a Condition of No Significant Risk was achieved; however, residual concentrations of petroleum constituents and polycyclic aromatic hydrocarbons (PAHs) remain in soil.

Is there an Activity and Use Limitation (AUL) on any portion of the project site? ☒ Yes ☐No
if yes, describe which portion of the site and how the project will be consistent with the AUL:
As discussed above, an AUL is present within Section 22, Segment 1, associated with the Neponset River Trail. Any construction activities within the AUL boundary would be conducted under a Utility Related Abatement Measure (URAM) Plan per 310 CMR 40.0460. Following construction activities, the protective barrier layer will be restored to restrict access to the underlying arsenic- and PAH-impacted soils.

Are you aware of any Reportable Conditions at the property that have not yet been assigned an RTN?
☒ Yes ☐ No
if yes, please describe:
Based on preliminary soil and groundwater investigations, elevated concentrations of PAHs, lead, arsenic, and petroleum constituents were detected in portions of Segment 4 of Section 22. Work in this area will require notification to MassDEP and will be conducted under a URAM in accordance with 310 CMR 40.0460.

SOLID AND HAZARDOUS WASTE:

If the project will generate solid waste during demolition or construction, describe alternatives considered for re-use, recycling, and disposal of, e.g., asphalt, brick, concrete, gypsum, metal, wood:
(NOTE: Asphalt pavement, brick, concrete and metal are banned from disposal at Massachusetts landfills and waste combustion facilities and wood is banned from disposal at Massachusetts landfills. See 310 CMR 19.017 for the complete list of banned materials.)

Temporary construction impacts will be associated with the installation of new pipe along Segments 1 and 3A of Section 22, sliplining the existing pipe along Segment 2 of Section 22, and cleaning and lining the existing pipe along Section 21 and Segment 4 of Section 22. All pipe removal waste will be segregated and legally disposed of in regional landfills. Any material which cannot be separated and recycled will be sorted and disposed of in accordance with applicable regulations. During construction, any wood, metals, gypsum, cardboard and plastic will be segregated and sent to recycling facilities to the extent practicable. All construction debris will be sent to a solid waste sorting facility for separation of any recyclable materials.

Will your project disturb asbestos containing materials? ☐ Yes ☒ No
if yes, please consult state asbestos requirements at http://mass.gov/MassDEP/air/asbhom01.htm

Describe anti-idling and other measures to limit emissions from construction equipment:
Construction contractors will be contractually required to adhere to all applicable regulations, including those related to the control of noise, dust, and emissions. Emissions from construction activities are anticipated to result from engines associated with the construction equipment and fugitive dust from earthwork. Construction vehicles will idle only when necessary. The contractors will comply with the Massachusetts anti-idling regulations (M.G.L. c. 90, § 16A; M.G.L. c. 111, §§ 142A-142M, and 310 C.M.R. 7.11) with regard to the amount of time the vehicles will idle. These regulations prohibit unnecessary idling for more than five minutes, and then list certain exemptions to that rule. There may be other times when idling is permitted as long as the idling is absolutely necessary (e.g., as a matter of safety).

All diesel-powered non-road construction equipment with engine horsepower ratings of 50 and above to be used for 30 or more days over the course of Project construction will have United States Environmental Protection Agency verified (or equivalent) emission control devices, such as oxidation catalysts or other comparable

technologies (to the extent that they are commercially available) installed on the exhaust system side of the diesel combustion engine.

DESIGNATED WILD AND SCENIC RIVER:

Is this project site located wholly or partially within a defined river corridor of a federally designated Wild and Scenic River or a state designated Scenic River? ☐ Yes ☒ No
if yes, specify name of river and designation:

If yes, does the project have the potential to impact any of the "outstandingly remarkable" resources of a federally Wild and Scenic River or the stated purpose of a state designated Scenic River? ☐ Yes ☐ No

if yes, specify name of river and designation: _____

if yes, will the project result in any impacts to any of the designated "outstandingly remarkable" resources of the Wild and Scenic River or the stated purposes of a Scenic River. ☐ Yes ☐ No

if yes, describe the potential impacts to one or more of the "outstandingly remarkable" resources or stated purposes and mitigation measures proposed: _____

ATTACHMENTS:

1. **List of all attachments to this document.**
   Attachment A – Narrative
   Attachment B – Distribution List
   Attachment C – Figures
   Attachment D – Public Notice
   Attachment E – RMAT Climate Resilience Design Standards Tool Output Report
   Attachment F - Advance Notification Environmental Justice Screening Form and Distribution List
2. **U.S.G.S. map (good quality color copy, 8-½ x 11 inches or larger, at a scale of 1:24,000) indicating the project location and boundaries.**
   See Attachment C, Figure 1.
3. **Plan, at an appropriate scale, of existing conditions on the project site and its immediate environs, showing all known structures, roadways and parking lots, railroad rights-of-way, wetlands and water bodies, wooded areas, farmland, steep slopes, public open spaces, and major utilities.**
   See Attachment C, Figure 2.
4. **Plan, at an appropriate scale, depicting environmental constraints on or adjacent to the project site such as Priority and/or Estimated Habitat of state-listed rare species, Areas of Critical Environmental Concern, Chapter 91 jurisdictional areas, Article 97 lands, wetland resource area delineations, water supply protection areas, and historic resources and/or districts.**
   See Attachment C, Figure 2.
5. **Plan, at an appropriate scale, of proposed conditions upon completion of project (if construction of the project is proposed to be phased, there should be a site plan showing conditions upon the completion of each phase).**
   See Attachment C, Figure 2.
6. **List of all agencies and persons to whom the proponent circulated the ENF, in accordance with 301 CMR 11.16(2).**
   See Attachment B.
7. **List of municipal and federal permits and reviews required by the project, as applicable.**

Regulatory Agency	Program/Permit	Jurisdictional Trigger
Federal		
U.S. Army Corps of Engineers	Section 404, Clean Water Act: Pre-Construction Notification	Discharge of 3,580 square feet of temporary fill material (not counting construction mats) within salt marsh
Massachusetts Office of Coastal Zone Management	Federal Consistency Review, Coastal Zone Management Act	Project located within Massachusetts Coastal Zone and subject to federal permits
U.S. Environmental Protection Agency	National Pollutant Discharge Elimination System General Permit for Storm Water Discharges from Construction activities	Greater than one acre of land disturbance
State		
Massachusetts Department of Environmental Protection (MassDEP)	Section 401, Clean Water Act: Water Quality Certification, 314 CMR 9.00	Discharge of 43,910 square feet of temporary fill material (including construction mats) within salt marsh
MassDEP	Chapter 91, Massachusetts Public Waterfront Act (310 CMR 9.00)	Work within flowed tidelands below the Marsh Boundary and below High Water mark; new crossing of tidal creek in Granite Avenue
Massachusetts Historical Commission	Determination of effect on historic and archaeological properties, G.L. c. 9, § 27C Project Notification Form	Project located near known historic and archaeological cultural resources and subject to state permits
Massachusetts Bay Transportation Authority (MBTA)	Right of Entry License Agreement	Pipeline crossing of MBTA Red Line (Mattapan Trolley)
Massachusetts Department of Conservation and Recreation (DCR)	Construction Access Permit	Work within land under the care and control of DCR
Massachusetts Department of Transportation (MassDOT)	Highway Access Permit	Pipeline crossing of I-93 and MassDOT Maintenance Facility
Local		
Conservation Commissions (Boston, Milton, Quincy)	Massachusetts Wetlands Protection Act (310 CMR 10.00) (Notification to Boston and Quincy; potential Notice of Intent to Milton)	Alteration of jurisdictional wetland resource areas along Section 22 pipeline alignment.

8. **Printout of output report from RMAT Climate Resilience Design Standards Tool, available here.**
   See Attachment E.
9. **Printout from the EEA EJ Maps Viewer showing the project location relative to Environmental Justice (EJ) Populations located in whole or in part within a 1-mile and 5-mile radius of the project site.**
   See Attachment C, Figure 9.

LAND SECTION – all proponents must fill out this section

I. Thresholds / Permits

A. Does the project meet or exceed any review thresholds related to land (see 301 CMR 11.03(1)
☐ Yes ☒ No
if yes, specify each threshold:

II. Impacts and Permits

A. Describe, in acres, the current and proposed character of the project site, as follows:

	Existing	Change	Total
Footprint of buildings	0	0	0
Internal roadways	10.98	0	10.98
Parking and other paved areas	1.91	0	1.91
Other altered areas	2.08	0	2.08
Undeveloped areas	2.23	0	2.23
Total: Project Site Acreage	17.2	0	17.2

B. Has any part of the project site been in active agricultural use in the last five years?
☐ Yes ☒ No;
if yes, how many acres of land in agricultural use (with prime state or locally important agricultural soils) will be converted to nonagricultural use?

C. Is any part of the project site currently or proposed to be in active forestry use?
☐ Yes ☒ No;
if yes, please describe current and proposed forestry activities and indicate whether any part of the site is the subject of a forest management plan approved by the Department of Conservation and Recreation:

D. Does any part of the project involve conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97? ☐ Yes ☒ No;
if yes, describe:

E. Is any part of the project site currently subject to a conservation restriction, preservation restriction, agricultural preservation restriction or watershed preservation restriction?
☐ Yes ☒ No;
if yes, does the project involve the release or modification of such restriction?
☐ Yes ☒ No;
if yes, describe:

F. Does the project require approval of a new urban redevelopment project or a fundamental change in an existing urban redevelopment project under M.G.L.c.121A? ☐ Yes ☒ No;
if yes, describe:

G. Does the project require approval of a new urban renewal plan or a major modification of an existing urban renewal plan under M.G.L.c.121B? ☐ Yes ☒No
if yes, describe:

III. Consistency

A. Identify the current municipal comprehensive land use plan:
Title: Imagine Boston 2030 **Date:** July 2017

B. Describe the project's consistency with that plan with regard to:

1) **economic development**: Ensuring reliable access to safe drinking water addresses a basic need on which economic development can be built.

2) **adequacy of infrastructure**: Rehabilitating the existing pipes will ensure that the water supply infrastructure is adequate to support the City's growth.
3) **open space impacts**: The Project will not result in any impacts to open space, nor will it prevent future investment in open space.
4) **compatibility with adjacent land uses**: With the exception of Segment 3A, the Project will remain within its existing alignment and will not result in any changes to compatibility with adjacent land uses. Segment 3A will locate a new section of pipe within the existing roadway layout of Granite Avenue, alongside existing infrastructure and with no permanent impacts to adjacent land uses.

C. Identify the current Regional Policy Plan of the applicable Regional Planning Agency (RPA)

RPA: Metropolitan Area Planning Council
Title: MetroFuture **Date:** 2008

D. Describe the project's consistency with that plan with regard to:
1) **economic development**: Rehabilitating the pipelines is crucial to ensure that clean water is available for appropriate uses and development.
2) **adequacy of infrastructure**: The Quabbin Reservoir has adequate supply to meet projected demand into the foreseeable future; the Project will ensure that this supply is delivered safely and efficiently to MWRA's customers in the area.
3) **open space impacts**: The Project is partially located within the Neponset River Reservation but will not result in any impacts to open space.

RARE SPECIES SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to rare species or habitat (see 301 CMR 11.03(2))? ☐ Yes ☒ No;
if yes, specify, in quantitative terms:
(NOTE: If you are uncertain, it is recommended that you consult with the Natural Heritage and Endangered Species Program (NHESP) prior to submitting the ENF.)

B. Does the project require any state permits related to rare species or habitat? ☐ Yes ☒ No

C. Does the project site fall within mapped rare species habitat (Priority or Estimated Habitat?) in the current Massachusetts Natural Heritage Atlas (attach relevant page)
☐ Yes ☒ No

D. If you answered "No" to all questions A, B and C, proceed to the Wetlands, Waterways, and Tidelands Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Rare Species section below.

II. Impacts and Permits

A. Does the project site fall within Priority or Estimated Habitat in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes ___ No. If yes,

i. Have you consulted with the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP)? ___Yes ___No; if yes, have you received a determination as to whether the project will result in the "take" of a rare species? ___ Yes ___ No; if yes, attach the letter of determination to this submission.

ii. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes ___ No; if yes, provide a summary of proposed measures to minimize and mitigate rare species impacts:

iii. Which rare species are known to occur within the Priority or Estimated Habitat?

iv. Has the site been surveyed for rare species in accordance with the Massachusetts Endangered Species Act? ___ Yes ___ No

v. If your project is within Estimated Habitat, have you filed a Notice of Intent or received an Order of Conditions for this project? ___ Yes ___ No; if yes, did you send a copy of the Notice of Intent to the Natural Heritage and Endangered Species Program, in accordance with the Wetlands Protection Act regulations? ___ Yes ___ No

B. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes ___ No; if yes, provide a summary of proposed measures to minimize and mitigate impacts to significant habitat:

WETLANDS, WATERWAYS, AND TIDELANDS SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to wetlands, waterways, and tidelands (see 301 CMR 11.03(3))? ☒ Yes ☐ No;
if yes, specify, in quantitative terms:
Alteration of one or more acres of salt marsh or bordering vegetating wetlands

B. Does the project require any state permits (or a local Order of Conditions) related to wetlands, waterways, or tidelands? ☒ Yes ☐ No;
if yes, specify which permit:
MassDEP - Section 401 Water Quality Certification
MassDEP/Local Conservation Commissions - Massachusetts Wetlands Protection Act
(Note: The majority of the project, with the exception of Segment 3A, is exempt from regulation per 310 CMR 10.02(a)2 as an activity conducted to maintain, repair, or replace, but not substantially change or enlarge, an existing and lawfully located facility used in the service of the public to provide water services.)

C. If you answered "No" to both questions A and B, proceed to the Water Supply Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Wetlands, Waterways, and Tidelands Section below.

II. Wetlands Impacts and Permits

A. Does the project require a new or amended Order of Conditions under the Wetlands Protection Act (M.G.L. c.131A)? ☒ Yes ☐ No;
if yes, has a Notice of Intent been filed? ☐ Yes ☒ No;
if yes, list the date and MassDEP file number: _____;
if yes, has a local Order of Conditions been issued? ☐ Yes ☐ No;
Was the Order of Conditions appealed? ☐ Yes ☐ No.
Will the project require a Variance from the Wetlands regulations? ☐ Yes ☐ No.

B. Describe any proposed permanent or temporary impacts to wetland resource areas located on the project site:

There will be no permanent impacts from the Project. There will be temporary impacts to wetland resource areas located on the project site from placement of construction matting and excavation of access pits. Within salt marsh, the subsoil removed from access pits will be set aside at a designated staging area with layers in separate piles. Piles will be laid on geotextile fabric or a polyethylene barrier, erosion controls such as straw bales or silt fence will be placed around the perimeter of the piles, and the piles will be covered with plastic to prevent erosion. Upon completion of the work, the subsoil will be put back with layers intact. Salt marsh vegetation such as saltmeadow cordgrass (*Spartina patens*) and smooth cordgrass (*Spartina alterniflora*) will be planted to restore the vegetative surface.

Groundwater in the trench excavation or access pits will be pumped into a dewatering filter bag laid upon filter fabric and stone and surrounded by straw wattles, or if necessary, into a sedimentation tank which will then discharge to the filter bag depending on conditions in the field.

Construction mats will be anchored in place to avoid displacement during high tide. Upon their removal, the native salt marsh vegetation and seed bank will be allowed to regenerate. If any areas of rutting occur, these areas will be restored by hand-raking to pre-existing conditions.

C. Estimate the extent and type of impact that the project will have on wetland resources, and indicate whether the impacts are temporary or permanent:

Coastal Wetlands	Area (square feet) or Length (linear feet)	Temporary or Permanent Impact?
Land Under the Ocean	-	-
Designated Port Areas	-	-
Coastal Beaches	-	-
Coastal Dunes	-	-
Barrier Beaches	-	-
Coastal Banks	-	-
Rocky Intertidal Shores	-	-
Salt Marshes	43,910	Temporary
Land Under Salt Ponds	-	-
Land Containing Shellfish	-	-
Fish Runs	-	-
Land Subject to Coastal Storm Flowage	6,460	Temporary

Inland Wetlands	Area (square feet) or Length (linear feet)	Temporary or Permanent Impact?
Bank (lf)	-	-
Bordering Vegetated Wetlands	-	-
Isolated Vegetated Wetlands	-	-
Land under Water	-	-
Isolated Land Subject to Flooding	-	-
Bordering Land Subject to Flooding	8,070	Temporary
Riverfront Area	510	Temporary

D. Is any part of the project:

1. **proposed as a limited project?** ☒ Yes ___ No;
   if yes, what is the area (in sf)? Entire project
2. **the construction or alteration of a dam?** ☐ Yes ☒ No;
   if yes, describe:
3. **fill or structure in a velocity zone or regulatory floodway?** ☒ Yes ☐ No
4. **dredging or disposal of dredged material?** ☒ Yes ☐ No;
   if yes, describe the volume of dredged material and the proposed disposal site: 1,410 cubic yards; all dredged material will be backfilled into the excavation.
5. **a discharge to an Outstanding Resource Water (ORW) or an Area of Critical Environmental Concern (ACEC)?** ☒ Yes ☐ No
6. **subject to a wetlands restriction order?** ☐ Yes ☒ No;
   if yes, identify the area (in sf):
7. **located in buffer zones?** ☒ Yes ☐ No;
   if yes, how much (in sf): 11,560

E. Will the project:

1. **be subject to a local wetlands ordinance or bylaw?** ☐ Yes ☒ No
2. **alter any federally-protected wetlands not regulated under state law?** ☐ Yes ☒ No;
   if yes, what is the area (sf)?_____

III. Waterways and Tidelands Impacts and Permits

A. Does the project site contain waterways or tidelands (including filled former tidelands) that are subject to the Waterways Act, M.G.L.c.91? ☒ Yes ☐ No;
if yes, is there a current Chapter 91 License or Permit affecting the project site?
☐ Yes ☒ No;
if yes, list the date and license or permit number and provide a copy of the historic map used to determine extent of filled tidelands: _____

B. Does the project require a new or modified license or permit under M.G.L.c.91?
☒ Yes ☐ No;
if yes, how many acres of the project site subject to M.G.L.c.91 will be for non-water-dependent use?
Current 0 Change 0 Total 0
If yes, how many square feet of solid fill or pile-supported structures (in sf)?

C. For non-water-dependent use projects, indicate the following:
Area of filled tidelands on the site:_____
Area of filled tidelands covered by buildings:_____
For portions of site on filled tidelands, list ground floor uses and area of each use:
_____
Does the project include new non-water-dependent uses located over flowed tidelands?
☐ Yes ☐ No
Height of building on filled tidelands: _____

Also show the following on a site plan: Mean High Water, Mean Low Water, Water-dependent Use Zone, location of uses within buildings on tidelands, and interior and exterior areas and facilities dedicated for public use, and historic high and historic low water marks.

D. Is the project located on landlocked tidelands? ☐ Yes ☒ No;
if yes, describe the project's impact on the public's right to access, use and enjoy jurisdictional tidelands and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

E. Is the project located in an area where low groundwater levels have been identified by a municipality or by a state or federal agency as a threat to building foundations?
☐ Yes ☒ No;
if yes, describe the project's impact on groundwater levels and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:_____

F. Is the project non-water-dependent and located on landlocked tidelands or waterways or tidelands subject to the Waterways Act and subject to a mandatory EIR? ☐ Yes ☒ No;
(NOTE: If yes, then the project will be subject to Public Benefit Review and Determination.)

G. Does the project include dredging? ☒ Yes ☐ No;
if yes, answer the following questions:
What type of dredging? ☐ Improvement ☒ Maintenance ☐ Both
What is the proposed dredge volume, in cubic yards (cys) 1410
What is the proposed dredge footprint?
Length (ft) 200 Width (ft) 20 Depth (ft) 10-15
Will dredging impact the following resource areas?
Intertidal ☒ Yes ☐ No
if yes, 3100 sq ft salt marsh
Outstanding Resource Waters ☐ Yes ☒ No
if yes, ___ sq ft

Other resource area (i.e., shellfish beds, eel grass beds) ☐ Yes ☒ No__;
if yes, __ sq ft
If yes to any of the above, have you evaluated appropriate and practicable steps to: 1) avoidance; 2) if avoidance is not possible, minimization; 3) if either avoidance or minimize is not possible, mitigation?
The Project has minimized impacts by proposing to slipline the existing pipe, which requires only excavation pits at select locations, rather than removing and replacing the entire alignment which would require excavation of the entire pipe length.
If no to any of the above, what information or documentation was used to support this determination?
In addition to consulting available MassGIS data, proposed work areas were assessed on site.

Provide a comprehensive analysis of practicable alternatives for improvement dredging in accordance with 314 CMR 9.07(1)(b). Physical and chemical data of the sediment shall be included in the comprehensive analysis.
The Project does not propose improvement dredging.

Sediment Characterization

Existing gradation analysis results? ☐ Yes ☒ No
if yes, provide results.
Existing chemical results for parameters listed in 314 CMR 9.07(2)(b)6?
☐ Yes ☒ No;
if yes, provide results.

Do you have sufficient information to evaluate feasibility of the following management options for dredged sediment? If yes, check the appropriate option.
Dredged sediment will be backfilled within the excavation.

☐ Beach Nourishment
☐ Unconfined Ocean Disposal
Confined Disposal:
☐ Confined Aquatic Disposal (CAD)
☐ Confined Disposal Facility (CDF)
☐ Landfill Reuse in accordance with COMM-97-001
☐ Shoreline Placement
☐ Upland Material Reuse
☐ In-State landfill disposal
☐ Out-of-state landfill disposal
(NOTE: This information is required for a 401 Water Quality Certification.)

IV. Consistency:

A. Does the project have effects on the coastal resources or uses, and/or is the project located within the Coastal Zone? ☒ Yes ☐ No;
if yes, describe these effects and the projects consistency with the policies of the Office of Coastal Zone Management:
The MWRA has worked to avoid permanent impacts and minimize temporary impacts to coastal resources. The Project will not create or exacerbate any coastal hazards, nor will it affect the coastal resources' ability to provide storm damage prevention and flood control. Restoration of the salt marsh will minimize interference with water circulation and sediment transport, and preserve critical wildlife habitat and other important functions and services within the Coastal Zone and associated Area of Critical Environmental Concern. There will be no impact on the public's access to or use of the area.

B. Is the project located within an area subject to a Municipal Harbor Plan? ☐ Yes ☒ No;
if yes, identify the Municipal Harbor Plan and describe the project's consistency with that plan: ___

WATER SUPPLY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to water supply (see 301 CMR 11.03(4))? ☐ Yes ☒ No;
if yes, specify, in quantitative terms: _____

B. Does the project require any state permits related to water supply? ☐ Yes ☒ No;
if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the Wastewater Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Water Supply Section below.

II. Impacts and Permits

A. Describe, in gallons per day (gpd), the volume and source of water use for existing and proposed activities at the project site:

	Existing	Change	Total
Municipal or regional water supply			
Withdrawal from groundwater			
Withdrawal from surface water			
Interbasin transfer			

(NOTE: Interbasin Transfer approval will be required if the basin and community where the proposed water supply source is located is different from the basin and community where the wastewater from the source will be discharged.)

B. If the source is a municipal or regional supply, has the municipality or region indicated that there is adequate capacity in the system to accommodate the project? ☐ Yes ☐ No

C. If the project involves a new or expanded withdrawal from a groundwater or surface water source, has a pumping test been conducted? ☐ Yes ☐ No;
if yes, attach a map of the drilling sites and a summary of the alternatives considered and the results.

D. What is the currently permitted withdrawal at the proposed water supply source (in gallons per day)? _____
Will the project require an increase in that withdrawal? ☐ Yes ☐ No;
if yes, then how much of an increase (gpd)? _____

E. Does the project site currently contain a water supply well, a drinking water treatment facility, water main, or other water supply facility, or will the project involve construction of a new facility? ☐ Yes ☐No.
If yes, describe existing and proposed water supply facilities at the project site:

	Permitted Flow	Existing Avg Daily Flow	Project Flow	Total
Capacity of water supply well(s) (gpd)				
Capacity of water treatment plant (gpd)				

F. If the project involves a new interbasin transfer of water, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or proposed?

G. Does the project involve:

1. new water service by the Massachusetts Water Resources Authority or other agency of the Commonwealth to a municipality or water district? ☐ Yes ☐ No

2. **a Watershed Protection Act variance? ☐ Yes ☐ No;**
   if yes, how many acres of alteration?
3. **a non-bridged stream crossing 1,000 or less feet upstream of a public surface drinking water supply for purpose of forest harvesting activities? ☐ Yes ☐ No**

III. Consistency

Describe the project's consistency with water conservation plans or other plans to enhance water resources, quality, facilities and services:

WASTEWATER SECTION

I. Thresholds **/ Permits**

A. Will the project meet or exceed any review thresholds related to wastewater (see 301 CMR 11.03(5))? ☐ Yes ☒ No;
if yes, specify, in quantitative terms:

B. Does the project require any state permits related to wastewater? ☐ Yes ☒ No;
if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the Transportation -- Traffic Generation Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Wastewater Section below.

II. Impacts and Permits

A. Describe the volume (in gallons per day) and type of disposal of wastewater generation for existing and proposed activities at the project site (calculate according to 310 CMR 15.00 for septic systems or 314 CMR 7.00 for sewer systems):

	Existing	Change	Total
Discharge of sanitary wastewater			
Discharge of industrial wastewater			
TOTAL			

	Existing	Change	Total
Discharge to groundwater			
Discharge to outstanding resource water			
Discharge to surface water			
Discharge to municipal or regional wastewater facility			
TOTAL			

B. Is the existing collection system at or near its capacity? ☐ Yes ☐ No;
if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

C. Is the existing wastewater disposal facility at or near its permitted capacity? ☐ Yes☐ No;
if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

D. Does the project site currently contain a wastewater treatment facility, sewer main, or other wastewater disposal facility, or will the project involve construction of a new facility?
☐ Yes ☐ No;
if yes, describe as follows:

	Permitted	Existing Avg Daily Flow	Project Flow	Total
Wastewater treatment plant capacity (in gallons per day)				

E. If the project requires an interbasin transfer of wastewater, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or new?

_____

(NOTE: Interbasin Transfer approval may be needed if the basin and community where wastewater will be discharged is different from the basin and community where the source of water supply is located.)

F. Does the project involve new sewer service by the Massachusetts Water Resources Authority (MWRA) or other Agency of the Commonwealth to a municipality or sewer district? ☐ Yes ☐ No

G. Is there an existing facility, or is a new facility proposed at the project site for the storage, treatment, processing, combustion or disposal of sewage sludge, sludge ash, grit, screenings, wastewater reuse (gray water) or other sewage residual materials?
☐ Yes ☐ No;
if yes, what is the capacity (tons per day):

	Existing	Change	Total
Storage			
Treatment			
Processing			
Combustion			
Disposal			

H. Describe the water conservation measures to be undertaken by the project, and other wastewater mitigation, such as infiltration and inflow removal.

III. Consistency

A. Describe measures that the proponent will take to comply with applicable state, regional, and local plans and policies related to wastewater management:

B. If the project requires a sewer extension permit, is that extension included in a comprehensive wastewater management plan? ☐ Yes ☐ No;
if yes, indicate the EEA number for the plan and whether the project site is within a sewer service area recommended or approved in that plan: _____

TRANSPORTATION SECTION (TRAFFIC GENERATION)

I. Thresholds / Permit

A. Will the project meet or exceed any review thresholds related to traffic generation (see 301 CMR 11.03(6))? ☐ Yes ☒ No;
if yes, specify, in quantitative terms:

B. Does the project require any state permits related to state-controlled roadways?
☐ Yes ☒ No;
if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the Roadways and Other Transportation Facilities Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Traffic Generation Section below.

II. Traffic Impacts and Permits

A. Describe existing and proposed vehicular traffic generated by activities at the project site:

	Existing	Change	Total
Number of parking spaces			
Number of vehicle trips per day			
ITE Land Use Code(s):			

B. What is the estimated average daily traffic on roadways serving the site?

	Roadway	Existing	Change	Total
1.				
2.				
3.				

C. If applicable, describe proposed mitigation measures on state-controlled roadways that the project proponent will implement:

D. How will the project implement and/or promote the use of transit, pedestrian and bicycle facilities and services to provide access to and from the project site?

E. Is there a Transportation Management Association (TMA) that provides transportation demand management (TDM) services in the area of the project site? ☐ Yes ☐ No;
if yes, describe if and how will the project will participate in the TMA:

F. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation facilities? ☐ Yes ☐ No;
if yes, generally describe:

G. If the project will penetrate approach airspace of a nearby airport, has the proponent filed a Massachusetts Aeronautics Commission Airspace Review Form (780 CMR 111.7) and a Notice of Proposed Construction or Alteration with the Federal Aviation Administration (FAA) (CFR Title 14 Part 77.13, forms 7460-1 and 7460-2)?

III. Consistency

Describe measures that the proponent will take to comply with municipal, regional, state, and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services:

TRANSPORTATION SECTION (ROADWAYS AND OTHER TRANSPORTATION FACILITIES)

I. Thresholds

A. Will the project meet or exceed any review thresholds related to roadways or other transportation facilities (see 301 CMR 11.03(6))? ☐ Yes ☒ No;
if yes, specify, in quantitative terms:

B. Does the project require any state permits related to roadways or other transportation facilities?
☒ Yes ☐ No;
if yes, specify which permit:

MassDOT Highway Access Permit
MBTA License to Enter

C. If you answered "No" to both questions A and B, proceed to the Energy Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Roadways Section below.

II. Transportation Facility Impacts

A. Describe existing and proposed transportation facilities in the immediate vicinity of the project site: The Project will cross under the MBTA's Red Line (Mattapan Trolley) rail as well as I-93. The Project will also involve installation of a new pipe within Granite Avenue. There are no new transportation facilities proposed.

B. Will the project involve any
1. **Alteration of bank or terrain (in linear feet)?** No
2. **Cutting of living public shade trees (number)?** No
3. **Elimination of stone wall (in linear feet)?** No

III. **Consistency -- Describe the project's consistency with other federal, state, regional, and local plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services, including consistency with the applicable regional transportation plan and the Transportation Improvements Plan (TIP), the State Bicycle Plan, and the State Pedestrian Plan:**
The Project does not propose any new traffic, transit, pedestrian, or bicycle transportation facilities or services.

ENERGY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to energy (see 301 CMR 11.03(7))? ☐ Yes ☒ No;
if yes, specify, in quantitative terms:

B. Does the project require any state permits related to energy? ☐ Yes ☒ No;
if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the Air Quality Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Energy Section below.

II. Impacts and Permits

A. Describe existing and proposed energy generation and transmission facilities at the project site:

	Existing	Change	Total
Capacity of electric generating facility (megawatts)			
Length of fuel line (in miles)			
Length of transmission lines (in miles)			
Capacity of transmission lines (in kilovolts)			

B. If the project involves construction or expansion of an electric generating facility, what are:
1. the facility's current and proposed fuel source(s)?
2. the facility's current and proposed cooling source(s)?

C. If the project involves construction of an electrical transmission line, will it be located on a new, unused, or abandoned right of way? ☐Yes ☐ No;
if yes, please describe:

D. Describe the project's other impacts on energy facilities and services:

III. Consistency

Describe the project's consistency with state, municipal, regional, and federal plans and policies for enhancing energy facilities and services:

AIR QUALITY SECTION

I. Thresholds

A. Will the project meet or exceed any review thresholds related to air quality (see 301 CMR 11.03(8))? ☐ Yes ☒ No;
if yes, specify, in quantitative terms:

B. Does the project require any state permits related to air quality? ☐ Yes ☒ No;
if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the Solid and Hazardous Waste Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Air Quality Section below.

II. Impacts and Permits

A. Does the project involve construction or modification of a major stationary source (see 310 CMR 7.00, Appendix A)? ☐ Yes ☐ No;
if yes, describe existing and proposed emissions (in tons per day) of:

	Existing	Change	Total
Particulate matter			
Carbon monoxide			
Sulfur dioxide			
Volatile organic compounds			
Oxides of nitrogen			
Lead			
Any hazardous air pollutant			
Carbon dioxide			

B. Describe the project's other impacts on air resources and air quality, including noise impacts:

III. Consistency

A. Describe the project's consistency with the State Implementation Plan:

B. Describe measures that the proponent will take to comply with other federal, state, regional, and local plans and policies related to air resources and air quality:

SOLID AND HAZARDOUS WASTE SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to solid or hazardous waste (see 301 CMR 11.03(9))? ☐ Yes ☒ No;
if yes, specify, in quantitative terms:

B. Does the project require any state permits related to solid and hazardous waste?
☐ Yes ☒ No;
if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the Historical and Archaeological Resources Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Solid and Hazardous Waste Section below.

II. Impacts and Permits

A. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of solid waste? ☐ Yes ☐ No;
if yes, what is the volume (in tons per day) of the capacity:

	Existing	Change	Total
Storage			
Treatment, processing			
Combustion			
Disposal			

B. Is there any current or proposed facility at the project site for the storage, recycling, treatment or disposal of hazardous waste? ☐ Yes ☐ No;
if yes, what is the volume (in tons or gallons per day) of the capacity:

	Existing	Change	Total
Storage			
Recycling			
Treatment			
Disposal			

C. If the project will generate solid waste (for example, during demolition or construction), describe alternatives considered for re-use, recycling, and disposal:

D. If the project involves demolition, do any buildings to be demolished contain asbestos?
☐ Yes ☐ No

E. Describe the project's other solid and hazardous waste impacts (including indirect impacts):

III. Consistency
Describe measures that the proponent will take to comply with the State Solid Waste Master Plan:

HISTORICAL AND ARCHAEOLOGICAL RESOURCES SECTION

I. Thresholds / Impacts

A. Have you consulted with the Massachusetts Historical Commission? ☐ Yes ☒ No;
if yes, attach correspondence.
For project sites involving lands under water, have you consulted with the Massachusetts Board of Underwater Archaeological Resources? ☐ Yes ☒ No;
if yes, attach correspondence

B. Is any part of the project site a historic structure, or a structure within a historic district, in either case listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ☒ Yes ☐ No;
if yes, does the project involve the demolition of all or any exterior part of such historic structure? ☐ Yes ☒ No;
if yes, please describe:

C. Is any part of the project site an archaeological site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth?
☒ Yes ☐ No;
if yes, does the project involve the destruction of all or any part of such archaeological site?
☐ Yes ☒ No;
if yes, please describe:

D. If you answered "No" to all parts of both questions A, B and C, proceed to the Attachments and Certifications Sections. If you answered "Yes" to any part of either question A or question B, fill out the remainder of the Historical and Archaeological Resources Section below.

II. Impacts

Describe and assess the project's impacts, direct and indirect, on listed or inventoried historical and archaeological resources:

Section 21

Based on the Massachusetts Historical Commission's (MHC) Massachusetts Cultural Resources Information System (MACRIS) database and mapping system, there are four known above-ground historic resources along Section 21:

- Milton:
  - MLT.E, Railway Village Historic District, National Register Historic District (2000)—overlaps Project alignment
  - MLT.F, East Milton Square Area, Inventoried District—overlaps Project alignment
  - MLT.440, 6 Washington St., Severance-Tarbox House, Inventoried Property—adjacent to Project alignment
- Quincy: QUI.511, 707 Adams St., Ezra Beale House, Inventoried Property—adjacent to Project alignment

There are no known archaeological sites along Section 21.

Impacts

No impacts are anticipated to the aboveground resources along Section 21, given the underground nature of this pipeline rehabilitation Project. The Railway Village Historic District (MLT.E) is a residential neighborhood with contributing features such as stone walls and granite posts. No impacts to these features are anticipated as the pipeline is located within the existing road layout and will remain in the existing previously disturbed alignment. The use of sliplining along Section 21 also limits excavation and minimizes disturbance during construction.

Section 22

There are seven known above-ground historic resources along Section 22 mapped in MACRIS:

- Boston:
    - BOS.EN, Lower Mills East, Inventoried Area—overlaps Segment 1
    - BOS.GX, Pierce Square, Inventoried Area—adjacent to Segment 1
    - BOS.IL, Dorchester-Milton Lower Mills Industrial District, National Register Historic District (1980)—adjacent to Segment 1
    - BOS.TD, Dorchester-Milton Lower Mills Industrial District Ext., National Register Historic District (2001)—adjacent to Segment 1
    - BOS.FC, 1-16 Butler St., Inventoried Area—adjacent to Segment 1
- Milton: BOS.5639, 1203 Adams St., John Bussey House, Inventoried Property—adjacent to Segment 1
- Quincy: QUI.AS, Furnace Brook Parkway, National Register Historic District (2004)—overlaps Segment 4

MACRIS mapping indicates that there are three known archaeological sites in the vicinity of Section 22.

Impacts

No impacts are anticipated to the above-ground resources along Section 22. The Dorchester-Milton Lower Mills Industrial District (BOS.IL/BOS.TD) was first listed in the National Register in 1980, with an expansion to the district added in 2001. The Project follows the north boundary of the district along Adams Street in Boston. Furnace Brook Parkway (QUI.AS) is an approximately four-mile stretch of parkway that was established in the early twentieth century as part of the greater Boston Metropolitan Park System; the entire parkway network was listed in the National Register in 2004. Documentation indicates that tree cover, roadway alignment, and granite curbing may be contributing features. The Project will not result in changes to tree cover or roadway alignment. Disturbance to the existing granite curbing will be avoided to the maximum extent possible. If necessary, curbing will be temporarily removed and re-installed in kind post-construction..

There are no anticipated impacts to archaeological sites. Work in Boston and Quincy will be limited to sliplining of the existing pipeline and therefore does not have the potential to impact these sites.The proposed work in Milton includes ground disturbance to lay a new alignment; however, this work is expected to be fairly shallow and will occur within the existing Granite Avenue roadway, which includes other utilities and is previously disturbed. If the areas of ground disturbance change in later stages of the Project design, MWRA will coordinate with the MHC to assess potential archaeological sensitivity.

III. Consistency

Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to preserving historical and archaeological resources:

The Massachusetts Historical Commission will receive a copy of this ENF, which will also initiate review of the Project under State Register Review (M.G.L. c. 9 §§ 27-27c, as amended by Chapter 254 of the Acts of 1988). If it is determined the Project will result in an adverse effect to historic properties, consultation with MHC will continue to identify ways to avoid, minimize, or mitigate these adverse effects. Similarly, compliance with Section 106 of the National Historic Preservation Act will be addressed through the Section 404 permitting process under the Clean Water Act, through the U.S. Army Corps of Engineers.

CLIMATE CHANGE ADAPTATION AND RESILIENCY SECTION

This section of the Environmental Notification Form (ENF) solicits information and disclosures related to climate change adaptation and resiliency, in accordance with the MEPA Interim Protocol on Climate Change Adaptation and Resiliency (the "MEPA Interim Protocol"), effective October 1, 2021. The Interim Protocol builds on the analysis and recommendations of the 2018 Massachusetts Integrated State Hazard Mitigation and Climate Adaptation Plan (SHMCAP), and incorporates the efforts of the Resilient Massachusetts Action Team (RMAT), the inter-agency steering committee responsible for implementation, monitoring, and maintenance of the SHMCAP, including the "Climate Resilience Design Standards and Guidelines" project. The RMAT team recently released the RMAT Climate Resilience Design Standards Tool, which is available here.

The MEPA Interim Protocol is intended to gather project-level data in a standardized manner that will both inform the MEPA review process and assist the RMAT team in evaluating the accuracy and effectiveness of the RMAT Climate Resilience Design Standards Tool. Once this testing process is completed, the MEPA Office anticipates developing a formal Climate Change Adaptation and Resiliency Policy through a public stakeholder process. Questions about the RMAT Climate Resilience Design Standards Tool can be directed to rmat@mass.gov.

All Proponents must complete the following section, referencing as appropriate the results of the output report generated by the RMAT Climate Resilience Design Standards Tool and attached to the ENF. In completing this section, Proponents are encouraged, but not required at this time, to utilize the recommended design standards and associated Tier 1/2/3 methodologies outlined in the RMAT Climate Resilience Design Standards Tool to analyze the project design. However, Proponents are requested to respond to a respond to a user feedback survey on the RMAT website or to provide feedback to rmat@mass.gov, which will be used by the RMAT team to further refine the tool. Proponents are also encouraged to consult general guidance and best practices as described in the RMAT Climate Resilience Design Guidelines.

Climate Change Adaptation and Resiliency Strategies

I. Has the project taken measures to adapt to climate change for all of the climate parameters analyzed in the RMAT Climate Resilience Design Standards Tool (sea level rise/storm surge, extreme precipitation (urban or riverine flooding), extreme heat)? ☐ Yes ☒ No

Note: Climate adaptation and resiliency strategies include actions that seek to reduce vulnerability to anticipated climate risks and improve resiliency for future climate conditions. Examples of climate adaptation and resiliency strategies include flood barriers, increased stormwater infiltration, living shorelines, elevated infrastructure, increased tree canopy, etc. Projects should address any planning priorities identified by the affected municipality through the Municipal Vulnerability Preparedness (MVP) program or other planning efforts, and should consider a flexible adaptive pathways approach, an adaptation best practice that encourages design strategies that adapt over time to respond to changing climate conditions. General guidance and best practices for designing for climate risk are described in the RMAT Climate Resilience Design Guidelines.

A. If no, explain why.

The Project will replace the existing Section 21 and 22 water pipelines. Over the years, Section 22 has required numerous repairs and the interior of Section 21 is heavily corroded. The Project proposes to rehabilitate and replace portions of Section 21 and Section 22 to restore them to full function. The infrastructure is currently below ground and will remain so. Projected climate change impacts are not anticipated to affect this infrastructure. Please see Attachment E for the full RMAT report.

B. If yes, describe the measures the project will take, including identifying the planning horizon and climate data used in designing project components. If applicable, specify the return period and design storm used (e.g., 100-year, 24-hour storm).

C. Is the project contributing to regional adaptation strategies? ☐ Yes ☒ No;
If yes, describe.

II. **Has the Proponent considered alternative locations for the project in light of climate change risks? ☐ Yes ☒ No**

A. If no, explain why.

The Project will replace the existing Section 21 and 22 water pipelines. Sections 21 and 22 are critical water pipelines that deliver drinking water to, and are located in, Boston, Milton, and Quincy Massachusetts. An alternative location would not meet the purpose and need of the project.

B. If yes, describe alternatives considered.

III. **Is the project located in Land Subject to Coastal Storm Flowage (LSCSF) or Bordering Land Subject to Flooding (BLSF) as defined in the Wetlands Protection Act? ☒ Yes ☐ No**
If yes, describe how/whether proposed changes to the site's topography (including the addition of fill) will result in changes to floodwater flow paths and/or velocities that could impact adjacent properties or the functioning of the floodplain. General guidance on providing this analysis can be found in the CZM/MassDEP Coastal Wetlands Manual, available here.

There will be no creation of new impervious area. The Project will not result in changes to floodwater flow paths and/or velocities that could impact adjacent properties of the functioning of the floodplain.

ENVIRONMENTAL JUSTICE SECTION

I. Identifying Characteristics of EJ Populations

A. If an Environmental Justice (EJ) population has been identified as located in whole or in part within 5 miles of the project site, describe the characteristics of each EJ populations as identified in the EJ Maps Viewer (i.e., the census block group identification number and EJ characteristics of "Minority," "Minority and Income," etc.). Provide a breakdown of those EJ populations within 1 mile of the project site, and those within 5 miles of the site.

The Project is located within one mile of 62 census tracts in Boston and Quincy identified as Environmental Justice communities on the Massachusetts 2020 Environmental Justice Populations map viewer. Please refer to Figure 9 in Attachment B for a map showing these communities.

B. Identify all languages identified in the "Languages Spoken in Massachusetts" tab of the EJ Maps Viewer as spoken by 5 percent or more of the EJ population who also identify as not speaking English "very well." The languages should be identified for each census tract located in whole or in part within 1 mile and 5 miles of the project site, regardless of whether such census tract contains any designated EJ populations.

The languages spoken by 5 percent or more of the EJ population who also identify as not speaking English "very well" are listed below, for each census tract in whole or in part within 1 mile and 5 miles of the Project, regardless of whether such census tract contains any designated EJ populations. Overall, the languages spoken within 1 mile of the Project include Chinese, French Creole, Spanish or Spanish Creole, and Vietnamese. Within 5 miles of the Project, the languages include African languages, Chinese, French Creole, Portuguese or Portuguese Creole, Russian, Spanish or Spanish Creole, and Vietnamese.

1-Mile Radius

Municipality	Census Tract	Language	% of Population who Speak the Language
Boston	1008	Vietnamese	6.6%
Boston	1010.02	Spanish or Spanish Creole	9.0%
Boston	1010.02	French Creole	10.1%
Boston	1006.03	Vietnamese	5.5%
Boston	1005	Spanish or Spanish Creole	7.6%
Boston	1005	French Creole	5.7%
Boston	1005	Vietnamese	5.3%
Boston	1003	French Creole	5.2%
Boston	1009	Vietnamese	6.1%
Quincy	4172	Chinese	19.6%
Quincy	4173	Chinese	6.5%
Quincy	4175.01	Chinese	23.4%
Quincy	4175.02	Chinese	36.5%
Quincy	4176.01	Chinese	19.1%
Quincy	4176.02	Chinese	21.8%
Quincy	4171	Chinese	15.0%
Quincy	4177.01	Chinese	11.6%
Quincy	4181.01	Chinese	11.2%
Quincy	4181.02	Chinese	5.9%
Quincy	4182	Chinese	6.2%
Quincy	4180.03	Chinese	6.2%
Quincy	4180.04	Chinese	12.6%

5-Mile Radius

Municipality	Census Tract	Language	% of Population who Speak the Language
Boston	607	Spanish or Spanish Creole	14.9%
Boston	607	Chinese	9.1%
Boston	610	Spanish or Spanish Creole	11.2%
Boston	610	Chinese	5.7%
Boston	611.01	Spanish or Spanish Creole	20.6%
Boston	611.01	Chinese	11.4%

Municipality	Census Tract	Language	% of Population who Speak the Language
Boston	701.01	Chinese	9.8%
Boston	703	Chinese	8.0%
Boston	704.02	Chinese	50.5%
Boston	712.01	Spanish or Spanish Creole	9.5%
Boston	712.01	Chinese	10.3%
Boston	801	Spanish or Spanish Creole	10.0%
Boston	803	Spanish or Spanish Creole	14.7%
Boston	804.01	Spanish or Spanish Creole	10.2%
Boston	805	Spanish or Spanish Creole	22.9%
Boston	808.01	Spanish or Spanish Creole	8.6%
Boston	810.01	Russian	4.9%
Boston	810.01	Chinese	10.1%
Boston	811	Spanish or Spanish Creole	8.2%
Boston	811	Chinese	4.6%
Boston	811	Spanish or Spanish Creole	8.2%
Boston	811	Chinese	4.6%
Boston	812	Spanish or Spanish Creole	19.8%
Boston	813	Spanish or Spanish Creole	20.3%
Boston	815	Spanish or Spanish Creole	10.8%
Boston	817	Spanish or Spanish Creole	5.3%
Boston	818	Spanish or Spanish Creole	12.2%
Boston	819	Spanish or Spanish Creole	11.9%
Boston	821	Spanish or Spanish Creole	13.7%
Boston	901	Spanish or Spanish Creole	11.2%
Boston	901	French Creole	6.3%
Boston	904	Spanish or Spanish Creole	14.3%
Boston	904	French Creole	7.0%
Boston	906	Spanish or Spanish Creole	12.6%
Boston	906	French Creole	12.8%
Boston	906	Portuguese or Portuguese Creole	5.1%
Boston	907	Spanish or Spanish Creole	7.3%
Boston	907	Vietnamese	7.8%
Boston	909.01	Spanish or Spanish Creole	5.1%
Boston	909.01	Chinese	14.4%
Boston	910.01	Portuguese or Portuguese Creole	4.9%
Boston	910.01	Vietnamese	17.4%
Boston	911	Vietnamese	17.8%
Boston	913	Spanish or Spanish Creole	16.8%
Boston	913	French Creole	13.8%
Boston	913	Portuguese or Portuguese Creole	6.4%
Boston	914	Spanish or Spanish Creole	13.1%
Boston	914	French Creole	6.0%
Boston	914	Portuguese or Portuguese Creole	7.1%
Boston	915	Spanish or Spanish Creole	8.7%
Boston	915	French Creole	14.5%
Boston	915	Portuguese or Portuguese Creole	5.0%
Boston	916	Spanish or Spanish Creole	5.6%
Boston	916	Vietnamese	16.5%
Boston	919	Spanish or Spanish Creole	10.4%
Boston	919	French Creole	6.5%
Boston	920	Spanish or Spanish Creole	13.0%
Boston	920	French Creole	5.5%
Boston	920	Portuguese or Portuguese Creole	4.5%
Boston	920	Vietnamese	6.8%
Boston	921.01	Vietnamese	27.2%
Boston	922	Vietnamese	10.2%
Boston	923	Spanish or Spanish Creole	5.2%
Boston	923	French Creole	7.5%
Boston	924	Spanish or Spanish Creole	8.4%
Boston	924	French Creole	5.6%
Boston	1001	Spanish or Spanish Creole	9.8%
Boston	1001	French Creole	5.4%

Municipality	Census Tract	Language	% of Population who Speak the Language
Boston	1005	Spanish or Spanish Creole	7.6%
Boston	1005	French Creole	5.7%
Boston	1005	Vietnamese	5.3%
Boston	1006.01	Vietnamese	13.8%
Boston	1006.01	Vietnamese	13.8%
Boston	1010.01	French Creole	15.5%
Boston	1011.02	Spanish or Spanish Creole	5.4.%
Boston	1011.02	French Creole	11.7%
Boston	1101.03	Spanish or Spanish Creole	12.4%
Boston	1102.01	Spanish or Spanish Creole	9.2%
Boston	1103.01	Spanish or Spanish Creole	13.6%
Boston	1104.01	Spanish or Spanish Creole	9.8%
Boston	1104.01	French Creole	5.1%
Boston	1104.03	Spanish or Spanish Creole	9.1%
Boston	1104.03	French Creole	7.2%
Boston	1105.02	Spanish or Spanish Creole	6.6%
Boston	1202.01	Spanish or Spanish Creole	14.6%
Boston	1203.01	Spanish or Spanish Creole	17.6%
Boston	1205	Spanish or Spanish Creole	16.0%
Boston	1207	Spanish or Spanish Creole	10.1%
Boston	1207	Spanish or Spanish Creole	10.1%
Boston	1304.04	Spanish or Spanish Creole	5.5%
Boston	1304.06	Spanish or Spanish Creole	11.2%
Boston	1304.06	French Creole	6.4%
Boston	1401.02	French Creole	7.2%
Boston	1401.05	Spanish or Spanish Creole	8.1%
Boston	1401.05	French Creole	5.7%
Boston	1401.06	Spanish or Spanish Creole	10.1%
Boston	1401.06	French Creole	5.7%
Boston	1401.06	African languages	6.1%
Boston	1401.07	Spanish or Spanish Creole	13.5%
Boston	1401.07	French Creole	6.8%
Boston	1304.06	Spanish or Spanish Creole	11.2%
Boston	1304.06	French Creole	6.4%
Boston	1401.02	French Creole	7.2%
Boston	1402.01	French Creole	7.7%
Boston	1402.02	Spanish or Spanish Creole	7.2%
Boston	1403	Spanish or Spanish Creole	8.5%
Boston	1403	French Creole	10.0%
Boston	1404	French Creole	7.0%
Brookline	4009	Chinese	6.6%
Quincy	4178.02	Chinese	25.6%
Quincy	4179.01	Chinese	6.2%
Quincy	4179.01	Vietnamese	4.6%
Quincy	4179.02	Chinese	5.6%
Quincy	4180.02	Chinese	6.8%
Randolph	4202.02	French Creole	6.8%
Boston	9801.01	Spanish or Spanish Creole	6.4%
Boston	9803	Spanish or Spanish Creole	18.3%
Boston	9811	Spanish or Spanish Creole	9.8%

C. If the list of languages identified under Section I.B. has been modified with approval of the EEA EJ Director, provide a list of approved languages that the project will use to provide public involvement opportunities during the course of MEPA review. If the list has been expanded by the Proponent (without input from the EEA EJ Director), provide a list of the additional languages that will be used to provide public involvement opportunities during the course of MEPA review as required by Part II of the MEPA Public Involvement Protocol for Environmental Justice Populations ("MEPA EJ Public Involvement Protocol"). If the project is exempt from Part II of the protocol, please specify.

The list of languages has not been modified or expanded.

II. Potential Effects on EJ Populations

A. If an EJ population has been identified using the EJ Maps Viewer within 1 mile of the project site, describe the likely effects of the project (both adverse and beneficial) on the identified EJ population(s).

Impacts to Environmental Justice populations would be limited to the construction phase of the Project and would be similar in nature to the impacts experienced by non–Environmental Justice communities along the pipeline route. There would not be disproportionately high and adverse impacts to Environmental Justice communities, and the Project would provide a reliable source of clean drinking water.

B. If an EJ population has been identified using the EJ Maps Viewer within 5 miles of the project site, will the project: (i) meet or exceed MEPA review thresholds under 301 CMR 11.03(8)(a)-(b) ☐ Yes ☒ No;
or (ii) generate150 or more new average daily trips (adt) of diesel vehicle traffic, excluding public transit trips, over a duration of 1 year or more. ☐ Yes ☒ No

C. If you answered "Yes" to either question in Section II.B., describe the likely effects of the project (both adverse and beneficial) on the identified EJ population(s).

III. Public Involvement Activities

A. Provide a description of activities conducted prior to filing to promote public involvement by EJ populations, in accordance with Part II of the MEPA EJ Public Involvement Protocol. In particular:

1. **If advance notification was provided under Part II.A., attach a copy of the Environmental Justice Screening Form and provide list of CBOs/tribes contacted (with dates). Copies of email correspondence can be attached in lieu of a separate list.**
   An Advance Notification Environmental Justice Screening Form (the EJ Screening Form) was distributed via email on Friday September 30, 2022, to the list of Community Based Organizations provided by the MEPA EJ Office, based on the Project location in Boston, Quincy, and Milton. Translated versions of the EJ Screening Form in Chinese, French Creole, Spanish, and Vietnamese were attached to the email. MWRA also created a Project webpage where Project information including the EJ Screening Form, and translated versions, can be found. The EJ Screening Form and list of CBOs/tribes that were contacted is provided in Attachment F.

2. **State how CBOs and tribes were informed of ways to request a community meeting, and if any meeting was requested. If public meetings were held, describe any issues of concern that were raised at such meetings, and any steps taken (including modifications to the project design) to address such concerns.**
   The EJ Screening Form provided contact information and instructions for requesting a meeting and for requesting oral language interpretation services at a meeting. Contact information is also provided on the Project webpage.

3. **If the project is exempt from Part II of the protocol, please specify.**

B. Provide below (or attach) a distribution list (if different from the list in Section III.A. above) of CBOs and tribes, or other individuals or entities the Proponent intends to maintain for the notice of the MEPA Site Visit and circulation of other materials and notices during the course of MEPA review.

This distribution list will be the same as the one identified in Section III.A. above.

C. Describe (or submit as a separate document) the Proponent's plan to maintain the same level of community engagement throughout the MEPA review process, as conducted prior to filing.
MWRA will maintain and update the project webpage throughout the project, including as design progresses and during construction. Key project documents will be translated and posted on the webpage. MWRA will incorporate and respond to any comments received at public meetings and throughout the MEPA review process.

CERTIFICATIONS:

1. The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

   (Name) Boston Globe, Patriot Ledger, El Mundo & Sampan (Date) 11/16/2022

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

Signatures:

11/14/22	John Colbert	11/15/22	
Date	Signature of Responsible Officer or Proponent	Date	Signature of person preparing ENF (if different from above)
John Colbert		Lars Carlson	
Name (print or type)		Name (print or type)	
MWRA		VHB	
Firm/Agency		Firm/Agency	
2 Griffin Way		101 Walnut Street, P.O. Box 9151	
Street		Street	
Chelsea, MA, 02150		Watertown, MA 02471	
Municipality/State/Zip		Municipality/State/Zip	
617-799-5447		617-607-6237	
Phone		Phone	

Attachment A: Narrative

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MWRA Contract 7155—Section 22 and Section 21 Rehabilitation

Boston, Milton, and Quincy, Massachusetts

PREPARED FOR

Massachusetts Water Resources Authority
2 Griffin Way
Chelsea, Massachusetts 02150

PREPARED BY

101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

NOVEMBER 2022

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Introduction

Section 22 is a critical water pipeline that delivers drinking water to, and is located in, Boston, Milton, and Quincy, Massachusetts. Section 22 was originally constructed in 1950 and is approximately 16,000 feet long and composed primarily of 48-inch-diameter unlined steel pipe with dresser coupling joints. A 650-foot-long portion of Section 22 that runs under the Neponset River is constructed of 52-inch-diameter concrete-lined steel pipe with welded joints. Section 21 is composed of an approximately 3,600-foot-long, 24-inch-diameter cast iron pipe in Milton and Quincy that was originally constructed in the early 1900s.

Over the years Section 22 has required numerous repairs, and the interior of Section 21 is heavily corroded. The Massachusetts Water Resources Authority (MWRA) proposes to rehabilitate portions of Section 22 and Section 21 to restore them to full function and ensure continued reliability.

1.1 MEPA Review

The Project exceeds the following threshold requiring the preparation of an Environmental Notification Form (ENF) through the Massachusetts Environmental Policy Act (MEPA):

› 301 CMR 11.03(11)(b). Any Project within a designated ACEC, unless the Project consists solely of one single family dwelling

The Project also exceeds the following threshold requiring the preparation of an Environmental Impact Report (EIR):

› 301 CMR 11.03(3)(a)1. a. alteration of one or more acres of salt marsh or bordering vegetating wetlands

In addition, the Project is located within a Designated Geographic Area around an Environmental Justice Population, and therefore an EIR is required per 301 CMR 11.06(7)(b).

The Project would not result in any permanent alteration of the above resource areas nor exacerbate any existing environmental burdens or public health impacts.

Due to the temporary nature of the impacts and overall public benefits of the Project, MWRA respectfully requests the Secretary of Environmental Affairs allow the MEPA process for this project to proceed with an Expanded Environmental Notification Form (EENF) and a Single EIR in accordance with 301 CMR 11.06(8).

1.2 Proposed Project

Section 21

As shown in Figures 1 and 8 in Attachment C, Section 21 begins at the intersection of Granite Avenue and Adams Street in Milton, and follows Adams Street to Beale Street. The pipeline turns north onto Beale Street and continues northeast to end at the intersection with Summit Avenue.

Section 22

As shown in Figures 1 and 2 in Attachment C, the segments of Section 22 under review for rehabilitation begin in Dorchester Lower Mills in Boston, continue across the Neponset River State Reservation into Milton, then travel southeast toward Hope Avenue. From there, Section 22 continues primarily in public roadways, crossing in and out of Quincy and Milton, somewhat following the municipal boundary, and ends near the intersection of Furnace Brook Parkway and Adams Street.

For ease of discussion, the existing alignment of Section 22 was divided into four segments (see Figure 2 and Figure 3 in Attachment C):

- Segment 1: *Dorchester Lower Mills to MBTA Tracks*. This segment begins at station 10+80, at the intersection of Washington Street and Adams Street in Dorchester, Boston. It travels east along Adams Street, then turns southeast onto Butler Street. From Butler, this segment leaves the public roadway just northwest of the entrance to the Cedar Grove Cemetery, continues east across the entry driveway of the cemetery, and ends just west of the Neponset Trail and the rail for the Massachusetts Bay Transportation Authority's Mattapan Trolley.
- Segment 2: *ACEC Marsh to MassDOT Yard*. This segment continues east across the trail and rail, and into the Neponset River Reservation. It crosses through salt marshes and under the Neponset River, and near the ramp for I-93 southbound turns southeast along the ramp for approximately 400 feet then crosses under the ramp and I-93 itself to a point just west of a MassDOT storage yard.
- Segment 3: *MassDOT Yard to Hope Avenue*. From the corner of the MassDOT yard, Segment 3 travels southeast between I-93 and the edge of the yard and adjacent parking lot, past the American Legion Heritage Hall, and through a salt marsh to reach the intersection of Granite Avenue and Hope Avenue.
- Segment 4: *Hope Avenue to Furnace Brook Parkway*. From the intersection of Granite Avenue and Hope Avenue, this segment of Section 22 turns east onto Hope Avenue, crosses a corner of an undeveloped parcel near Squantum Street, then continues across Squantum Street onto Amsterdam Avenue. At the end of Amsterdam Avenue, Segment 4 turns southeast across undeveloped land east of Alvin Avenue. This segment then turns south onto Elliot Avenue, southeast onto Alvin Avenue, and then crosses between residential properties onto Elmwood Avenue. Segment 4 follows Elmwood Avenue to the intersection with Milton Street, where it turns southeast onto Milton, crosses Beale Street, and continues onto Forbes Hill Road. It follows Forbes Hill Road to Stoney Brae Road, turns southeast onto Stoney Brae, then continues east onto Myopia Road. From Myopia Road, this segment turns southeast across the edge of the Furnace Brook Golf Club, turns southwest across undeveloped land behind some residential properties, and ends at the intersection of Furnace Brook Parkway and Adams Street.

1.3 Required Permits and Approvals

The Project will trigger federal, state, and local environmental permits that will need to be obtained prior to construction. Approximately 3,580 square feet of temporary impacts from pipe access pits within salt marsh will require a Pre-Construction Notification to the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act (CWA), and all activities (including temporary construction matting) within salt marsh will require an Individual Water Quality Certification from the Massachusetts Department of Environmental Protection (MassDEP) under Section 401 of the CWA. At the federal level the Project will also require coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Construction activities (also known as the Construction General Permit, or CGP) for greater than one acre of land disturbance. These federal permits, along with the project's location within the Massachusetts Coastal Zone, also trigger Federal Consistency Review under the Coastal Zone Management Act by the Massachusetts Office of Coastal Zone Management.

Approval by MassDEP under Chapter 91, the Massachusetts Public Waterfront Act, is required for pipe access pits and construction matting within flowed tidelands below the Marsh Boundary and below the High Water mark. Since the proposed work within Wetland B1, Wetland M1, and Unnamed Creek 1 is for repair and alterations to an existing public service project, it may be approved as a Minor Modification. Installation of a new pipe within Granite Avenue may require a license; this will be determined upon consultation with MassDEP.

State approvals, along with the Project's location near known historic and archaeological resources, also trigger review by the Massachusetts Historical Commission (MHC) in accordance with G.L. c. 9, § 27C. This EENF will serve as notification to MHC to begin the consultation process.

The Project will involve work within areas jurisdictional to the Massachusetts Wetlands Protection Act, including Salt Marsh, Riverfront Area, Land Subject to Coastal Storm Flowage and Bordering Land Subject to Flooding. The Project largely involves repair and replacement of an existing and lawfully located facility used in the service of the public and used to provide water services, and therefore may not require filing a Notice of Intent with the Boston and Quincy Conservation Commissions (310 CMR 10.02(2)(a)2). However, the MWRA intends to file Notices of Intent in all three municipalities for the activities along the pipeline alignment. The work will utilize best practical measures to avoid and minimize impacts to wetland resource areas outside the footprint of said facility. While as a state agency, the MWRA is not subject to local bylaws/ordinances, the MWRA is committed to avoiding and minimizing impacts to wetland resource areas and intends to work with local Conservation Commissions to ensure that the project is designed and constructed in a manner that minimizes wetland impacts to the maximum extent feasible.

Table 1 provides a summary of the required permits and approvals needed for the Project.

Table 1 Required Permits and Approvals for Section 21 and Section 22

Regulatory Agency	Program/Permit	Jurisdictional Trigger
Federal		
U.S. Army Corps of Engineers	Section 404, Clean Water Act: Pre-Construction Notification	Discharge of 3,580 square feet of temporary fill material (not counting construction mats) within salt marsh
Massachusetts Office of Coastal Zone Management	Federal Consistency Review, Coastal Zone Management Act	Project located within Massachusetts Coastal Zone and subject to federal permits
U.S. Environmental Protection Agency	National Pollutant Discharge Elimination System General Permit for Storm Water Discharges from Construction activities	Greater than one acre of land disturbance
State		
Massachusetts Department of Environmental Protection (MassDEP)	Section 401, Clean Water Act: Water Quality Certification, 314 CMR 9.00	Discharge of 43,910 square feet of temporary fill material (including construction mats) within salt marsh
MassDEP	Chapter 91, Massachusetts Public Waterfront Act (310 CMR 9.00)	Work within flowed tidelands below the Marsh Boundary and below High Water mark; new crossing of tidal creek in Granite Avenue
Massachusetts Historical Commission	Determination of effect on historic and archaeological properties, G.L. c. 9, § 27C	Project located near known historic and archaeological cultural resources and subject to state permits
Local		
Conservation Commissions (Boston, Milton, Quincy)	Massachusetts Wetlands Protection Act (310 CMR 10.00)	Alteration of jurisdictional wetland resource areas along pipeline alignment

2

Proposed Project

This section describes the existing conditions along each segment of the Section 21 and Section 22 pipelines, proposed work, and alternatives evaluated.

2.1 Existing Conditions

Section 21

Section 21 is located entirely within existing roadways amongst residential and commercial land uses. It is not located in ACEC, ORW, or Priority or Estimated Habitat, and there are no waterways, wetland resource areas, or open space or recreational resources adjacent to the pipeline. The entire state of Massachusetts is mapped by the US Fish and Wildlife Service as potential habitat for the northern long-eared bat, which is listed as Threatened under the federal Endangered Species Act; however, according to the latest mapping from the Massachusetts Natural Heritage & Endangered Species Program (NHESP), there are no known maternity roost trees or hibernacula within 0.25 miles of the Project.

Section 22

- Segment 1: *Dorchester Lower Mills to MBTA Tracks*. Along Adams Street, this segment runs through residential, commercial, and mixed-use properties. On Butler Street and eastward, this segment crosses the Cedar Grove Cemetery and is located within developed open space and some forested land.
- Segment 2: *ACEC Marsh to MassDOT Yard*. This segment crosses the Neponset Trail and the right-of-way for the Massachusetts Bay Transportation Authority's Mattapan Trolley, and enters the Neponset River Reservation. It crosses through salt marshes and under the Neponset River, then travels along the ramp for I-93 southbound. It crosses the ramp and I-93 itself, and ends near a MassDOT storage yard.
- Segment 3: *MassDOT Yard to Hope Avenue*. Segment 3 travels along the edge of the MassDOT yard and adjacent parking lot, and past the American Legion Heritage Hall. This segment passes through salt marsh and forested areas and behind industrial land uses.

- Segment 4: *Hope Avenue to Furnace Brook Parkway*. This segment of Section 22 travels across the edge of the Furnace Brook Golf Club, and is located primarily within residential areas, with a few locations in forested areas or developed open space.

Section 22 is not located in ORW or any Priority or Estimated Habitat. As previously noted, the entire Project is located within habitat for the northern long-eared bat, but based on the latest NHESP mapping there are no known hibernacula or maternity roost trees within 0.25 miles of the Project.

2.2 Proposed Conditions

The Project proposes to rehabilitate portions of Section 22 and Section 21 to restore them to full function and continued reliability. Three construction methods are proposed, which will be used for different sections of pipeline:

- Remove and replace: This method will excavate a 10-foot-wide trench and remove the existing pipeline, then install a new pipe of the same diameter in the same alignment. At appurtenances such as valves and manholes, the excavation will widen to approximately 12 feet by 12 feet. Once the new pipe is installed, all excavations will be backfilled and restored to existing grades. Please refer to Figure 3 in Attachment C, which depicts what this method would look like along all segments of Section 22.
- Clean and line: This method will require approximately 12-foot-by-12-foot access pits at bends in the existing pipeline or at appurtenances. A scraper will be pulled through the existing pipe to clean it, then another machine will travel through the pipe from access pit to access pit to line the pipe with a thin layer of cement mortar. Once lining is complete, the excavation will be backfilled and restored to existing grades. Please refer to Figure 4 in Attachment C, which depicts what this method would look like along all segments of Section 22, and Figure 8 in attachment C for Section 21.
- Slipline: This method will require approximately 12-foot-by-30-foot access pits at bends in the existing pipeline or at appurtenances. Like cleaning and lining, a scraper will be pulled through the existing pipe. Then short segments of new steel pipe will be inserted into the existing pipe and joined by welding the pipe joints internally. The annular space between the new pipe and the host pipe will be filled with a grout mixture to secure the new pipe in place and provide corrosion protection and the interior of the pipe will also be cement mortar lined to provide corrosion protection. Once grouting and cement mortar lining is complete, the excavation will be backfilled and restored to existing grades. Please refer to Figure 5 in Attachment C, which depicts what this method would look like along all segments of Section 22.

Depending on the condition of the existing pipe and potential for environmental impacts in each segment, one of the three construction methods described above will be used.

- Section 21: This pipeline was found to be structurally sound but heavily corroded on the interior of the pipe. To minimize impacts and cost and maximize hydraulic performance, this pipe will be cleaned and lined.
- Section 22:
  - Segment 1: This segment is located within existing roadways. Due to its extensive leak history, this segment will be removed and replaced.

- Segment 2: This segment is located within salt marsh and the ACEC. With the exception of the crossing under the Neponset River, this segment will be sliplined with a 40-inch steel pipe. The approximately 600-linear-foot subsegment under the Neponset River was determined to be in good condition and no work is proposed.
- Segment 3: The existing pipe in this segment is located partially within salt marsh. To minimize wetland impacts during construction and future maintenance, the Project proposes to install a new 48-inch-diameter pipe along a new alignment within the existing roadway layout of Granite Avenue which includes other utilities and is predisturbed. Impacts within the limits of construction from this installation will be the same as the "remove and replace" method. The existing pipe that runs through wetlands behind the MassDOT storage yard and the salt marsh between Granite Ave. and I-93 will be capped, filled with grout, and left in place, avoiding all potential wetland impacts for this segment. The new alignment in Granite Avenue will allow for better maintenance access and avoids wetland impacts for any future work, and is discussed in further detail in the alternatives analysis that follows.
- Segment 4: This segment is located primarily within existing roadways and is proposed to be cleaned and lined. Upon further internal inspection by the contractor after the pipe has been cleaned, if significant corrosion is found, short subsegments may be removed and replaced in lieu of cement mortar lining.

2.3 Alternatives

The MWRA considered several alternative locations and construction alternatives. For Section 21 and each segment of Section 22, each of the construction methods identified above was considered (remove and replace, slipline, and clean and line).

In general, remove and replace creates the most disturbance as it requires excavation of the entire length of the pipe, and was therefore avoided where possible. However, in Segment 1 of Section 22, the pipeline has a history of multiple leaks and the condition of the pipe warrants a full replacement. The alternatives considered in each location are described further below.

2.3.1 Section 21

Since the original pipe is structurally sound with no substantial pipe corrosion, it is the least disruptive and most cost effective to clean and line the existing pipe, leaving it in place. Sliplining would result in a reduced pipe size and the resulting hydraulic capacity would not meet the MWRA's requirements for this pipeline, and relocating or replacing the entire pipeline would result in new disturbance along a new corridor and/or excavation along the entire length of the current alignment.

2.3.2 Section 22

2.3.2.1 Segment 1

As noted above, this segment has an extensive leak history. Simply cleaning and lining the pipe would not provide sufficient service life for this segment of pipeline; replacement or a structural rehabilitation is necessary. Structural rehabilitation by sliplining was considered; however, the reduced pipe size and hydraulic capacity would not meet MWRA's requirements and therefore a full replacement is required.

Although this will involve excavation along the entire length of the pipe, there are no natural resource impacts and all social environment impacts will be temporary from construction activities.

There is a short section under the MBTA tracks where it will not be feasible to remove and replace the existing pipe without significant disturbance to MBTA's operations; in this location MWRA will slipline this section of pipe.

The option to install a fully new pipe in an alternative alignment was dismissed because it would result in new impacts in new locations, and would require substantially more design work and a potentially longer construction timeframe to identify existing utilities and design and construct around them.

2.3.2.2 Segment 2

Cleaning and lining the existing pipeline in Segment 2 was ruled out due to the pipe not being structurally sound, and removing and replacing the pipeline would involve extensive impacts to salt marsh. Sliplining was found to be hydraulically adequate and would minimize impacts to the marsh because excavation would only be required at periodic access pits. As noted previously, the portion of the pipe under the Neponset River was found to be in good condition and no work is proposed for that subsegment.

Alternative Segment 2A, DCR Bikeway Alternative

MWRA considered an alternative alignment that would involve the installation of a new buried pipe beginning at the existing shaft east of the Mattapan Trolley rail line, and traveling north across the salt marsh and under the rail line to meet the Neponset River Greenway. It would then follow the Greenway northeast to Granite Avenue. At Granite Avenue this alternative would cross under the Neponset River, installed by jacking and boring. Once across the river, the route would continue along Granite Avenue to the intersection with Hope Avenue. This Alternative Segment 2A is shown in Figure 6 in Attachment C.

This alternative could reduce the impacts within salt marsh but would not avoid them entirely; the new pipe would need to be installed within the salt marsh between the shaft and the Greenway. In addition, the installation of a new pipe would require a 10-foot-wide trench along the entire length of the new alignment, resulting significantly more ground disturbance within 100 feet of the salt marsh and disruption to use of the Greenway and the Neponset River Reservation and ACEC. This Alternative would also add a new crossing of the Neponset River which would be costly to construct and would require a new Chapter 91 license, in addition to work within Chapter 91 jurisdiction along the Greenway. Furthermore, the Neponset River Reservation is protected under Article 97 and the new pipeline could be considered a change in use that would require review by the Executive Office of Energy and Environmental Affairs and an act of state legislature.

Alternative Segment 2B, HDD Alternative

This alternative segment would involve the installation of a new pipe via Horizontal Directional Drilling (HDD), beginning at the existing shaft east of the Mattapan Trolley rail line and traveling southeast, under the salt marsh, Neponset River, and I-93, to meet the existing pipeline at a point behind the American Legion Heritage Hall off Granite Avenue. This Alternative Segment 2B is shown in Figure 7 in Attachment C.

The HDD alternative was dismissed because it does not provide adequate hydraulic capacity. In addition, it would be costly to construct and, as shown in the figure, would require an extensive pipe layout area across multiple sections of salt marsh, which would increase impacts within the ACEC.

2.3.2.3 Segment 3

MWRA considered cleaning and lining this segment; however, there was historically a major leak on the expressway and that subsegment would need to be sliplined instead. Sliplining the entire pipe was also considered but this would reduce the service life of the pipeline in comparison to replacing the pipe, and would still incur salt marsh impacts. Removal and replacement of the existing pipe was avoided as approximately 915 linear feet of this segment is located within salt marsh. In this case, Alternative Segment 3A was selected as the preferred alternative, because it does not involve work within the salt marsh and reduces impacts within the ACEC.

Alternative Segment 3A, Granite Avenue Alternative

This alternative segment would involve the installation of a new pipe beginning at the northwest corner of the MassDOT Yard and traveling northeast across the MassDOT Yard to Granite Avenue. At Granite Avenue this alternative would turn southeast to follow the road to the intersection with Hope Avenue.

By capping and abandoning Segment 3 of the existing pipeline that runs through Wetland M3 and instead installing a new pipe within Granite Avenue, the Project will avoid approximately 5,100 square feet of potential impacts to Wetland M3 during construction for this project as well as any future wetland impacts from necessary maintenance. The new alignment will cross Unnamed Creek 2 where it is culverted under Granite Avenue; however, this will be designed to avoid and minimize impacts to the existing culvert to the maximum extent practicable and no stream impacts are anticipated. In addition, relocating the pipe along Granite Avenue will provide better access for future pipe operation and maintenance and repair.

2.3.2.4 Segment 4

This segment of pipeline has reached the end of its projected lifespan but was found to be in reasonable condition. The cost and construction impacts of full removal and replacement, or installation along a new alignment, would not be warranted. Similarly, sliplining the existing pipe is not necessary to address pipe deficiencies, would cost significantly more than cleaning and lining, and hydraulically would perform more poorly. MWRA therefore determined that this segment should be cleaned and lined to restore the pipe to full function.

3

Affected Environment and Environmental and Public Health Consequences

This section describes the methodology used to determine environmental and public health impacts associated with the Project, the existing environmental resources in the area, estimated and potential impacts to these resources, and possible mitigation efforts that could be implemented.

The environmental analysis performed for this EENF included an evaluation of wetlands, historic and cultural resources, and other water resources. The methodology used to perform this work is described below in Section 3.1. The following table and sections provide a summary of the potential environmental impacts associated with the Project.

Table 2 Potential Environmental Resource Impacts by Municipality

Municipality	Wetlands (square feet)	Riverfront (square feet)	LSCSF (square feet)	BLSF (square feet)
Boston	36,590	-	4,720	-
Milton	7,320	4,360	5,230	7,580
Quincy	-	-	-	490
Total	**43,910**	**4,360**	**9,950**	**8,070**

LSCSF=Land Subject to Coastal Storm Flowage
BLSF=Bordering Land Subject to Flooding

3.1 Methodology

Review of environmental and cultural resources along the Project was conducted using publicly available data sources (Massachusetts Geographic Information Systems [MassGIS]), aerial topographic mapping, and field investigation/verification. The initial effort consisted of obtaining the MassGIS data layers for wetlands and waterways, floodplains, historic districts and properties, state-listed protected species habitats, potential and certified vernal pools and impaired waters. These data layers were added to aerial topographic mapping to identify where the Project crosses these resources.

Wetland boundaries were enhanced by combining the MassGIS wetlands data layer with field delineation where the Project crosses a wetland, and field verification where the Project travels within

100 feet of a wetland. Field delineated wetland boundaries were located by ground survey and were incorporated into project GIS wetland layers.

The project alignment also crosses a number of waterways. The banks of the unnamed tidal creeks were identified in the field. The banks of the Neponset River were identified based on aerial topographic mapping. Furnace Brook is culverted where it crosses the Project.

After the resource area data layers were revised, the GIS analysis was completed to identify impacts from the Project. Along Segment 1 (to be removed and replaced), impacts were calculated using a 10-foot-wide trench with 12-foot-by-12-foot excavations at appurtenances such as valves and manholes. Similarly, a 10-foot-wide trench was used to calculate impacts for Segment 3A (the new pipe in Granite Avenue). Along Segment 2 (to be sliplined), impacts were calculated using 12-foot-by-30-foot access pits at appurtenances; at bends in the existing pipe alignment, impacts were calculated using an access pit 12 feet wide and extending 30 feet in each direction from the bend. Impacts for Segment 4 (to be cleaned and lined) were calculated using 12-foot-by-12-foot access pits at appurtenances. At bends in the existing pipe alignment, access pits 12 feet wide and extending 12 feet in each direction from the bend were used.

3.2 Wetlands and Waterways

Wetland resource areas were delineated in November and December 2019 following methodologies described in the 1987 USACE *Wetlands Delineation Manual* and the 2012 *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Northcentral and Northeast Region* as well as the MassDEP wetland delineation guidance document entitled *Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act* (March 1995). Additional field data collection occurred in May 2021. Data regarding vegetation, soils, and hydrology were collected in the field using the USACE Northcentral and Northeast Data Forms. Wetland boundaries were field-located by instrument survey, and all delineated wetlands and waterways were classified in accordance with the *Classification of Wetlands and Deepwater Habitats of the United States*, 2nd Edition, commonly referred to as the "Cowardin" classifications (Federal Geographic Data Committee, 2013). Table 3 below lists the wetland resource areas identified on or near the Project Site. Section 22 crosses eight wetlands, four waterways, and five locations jurisdictional under Chapter 91. No wetland resource areas are present in Segment 1 of Section 22 or Section 21.

Table 3 Wetlands and Waterways along Section 22

Municipality	Figure 2 Page	Resource ID	Resource Type	Location
Wetlands				
Boston	2-4	Wetland B1	Salt Marsh Ch. 91: Marsh Boundary	East of Adams Street, west of Neponset River crossing
Milton	4	Wetland M1	Salt Marsh Ch. 91: Marsh Boundary	East of Neponset River crossing, west of I-93
	5	Wetland 12	Bordering Vegetated Wetland (BVW)	Between I-93 and parking lot at 41-87 Granite Avenue

Municipality	Figure 2 Page	Resource ID	Resource Type	Location
	5-6	Wetland M3	Salt Marsh Ch. 91: Marsh Boundary	Between I-93 and Granite Avenue south of Heritage Hall
	6-7	Wetland M4	BVW	On the Presidents' Golf Course property north of Hope Avenue
Quincy	7	Wetland Q1 and Q2	Isolated Vegetated Wetlands (IVW)	Between Alvin and Elliot Avenues northeast of the Milton/Quincy municipal border
	8	Wetland Q3	IVW	Just north of the Milton/Quincy municipal border and Andrews Park
	11	Wetland Q4	BVW	West of Furnace Brook Parkway near the intersection with Adams Street
Waterways				
Boston	3	Unnamed Creek 1	Tidal creek/ditch, originates as stormwater outfall near MBTA ROW and discharges into Neponset River Ch. 91: Marsh Boundary	West of Neponset River crossing
Boston/Milton	4	Neponset River	Perennial River	Between Adams Street in Boston and I-93 in Milton
Milton	6	Unnamed Creek 2	Tidal creek, originates at Presidents' Golf Course and discharges to Gulliver Creek Ch. 91: Inferred High Water (under Granite Ave.)	Between I-93 and Granite Avenue south of Heritage Hall
Quincy	11	Furnace Brook	Perennial Stream (culverted)	Adams Street and Furnace Brook Pkwy

Salt Marshes

Wetlands B1, M1, 12, and M3 are salt marshes dominated by common reed (*Phragmites australis*). Other plants present include saltmarsh hay (*Spartina patens*), smooth cordgrass (*Spartina alterniflora*), maritime marsh-elder (*Iva frutescens*), and eastern false willow (*Baccharis halimifolia*).

Bordering and Isolated Vegetated Wetlands

Wetlands M4, Q3, and Q4 are Bordering Vegetated Wetlands (BVWs) with dominant vegetation including skunk cabbage (*Symplocarpus foetidus*), maple-leaved viburnum (*Viburnum acerifolium*), Japanese knotweed (*Fallopia japonica*), sensitive fern (*Onoclea sensibilis*), broad-leaved cat-tail (*Typha latifolia*), and red maple (*Acer rubrum*). Other species present included jewelweed (*Impatiens capensis*), multiflora rose (*Rosa multiflora*), slippery elm (*Ulmus rubra*), blue iris (*Iris versicolor*), elderberry (*Sambucus nigra*), and arrowwood viburnum (*Viburnum dentatum*).

Wetlands Q1 and Q2 are Isolated Vegetated Wetlands (IVWs) with dominant vegetation including red maple, slippery elm, glossy false buckthorn (*Frangula alnus*), common soft rush (*Juncus effusus*), sensitive fern, poison ivy (*Toxicodendron radicans*), oriental bittersweet (*Celastrus orbiculatus*), and multiflora rose.

Waterways and Tidelands

Section 22 crosses four waterways:

- There is an unnamed tidal creek/ditch within wetland B1 west of the Neponset River, which appears to originate as a stormwater outfall near the MBTA ROW and discharges into the Neponset River.
- The Neponset River itself is a large perennial waterway at the border of Boston and Milton.
- There is a second unnamed tidal creek within wetland M3 that crosses under Granite Avenue and connects to a large wetland system on the property of the Presidents' Golf Course.
- Segment 4 crosses Furnace Brook in Quincy, between Adams Street and the Furnace Brook Parkway; however, the brook is completely culverted in this location.

3.2.1 Proposed Work in Salt Marsh and Waterways

The Project will result in temporary impacts to salt marsh at several locations: at access pit locations, and locations where crane mats and other matting will be installed for construction vehicle access and support. All of these impacts are located within the existing pipe alignment or within an existing pipeline access road. In addition to the 12-foot-by-30-foot pipe access pits, 16-foot-wide crane mats will be placed at each edge of a pit located within a wetland and along an existing access way through the salt marsh in Segment 2. As needed, the mats may be held down by anchors in areas of heavy equipment travel in salt marsh and around access pit excavation areas. This proposed work will result in impacts to Wetlands B1 and M1 and Unnamed Stream 1. Impact calculations are shown in the table below.

At access pit locations within the salt marsh, trench boxes and shoring will be used to minimize the limits of excavation. The vegetation layer at the surface will be removed and set aside, and subsoil removed from the test pit will be set aside with layers in separate piles. Piles will be laid on geotextile fabric or a polyethylene barrier, erosion controls such as straw bales or silt fence will be placed around the perimeter of the piles, and the piles will be covered with plastic to prevent erosion. Upon

completion of the work, the subsoil will be put back with layers intact and the vegetation layer will be reestablished using plug plantings of saltmarsh hay and smooth cordgrass as appropriate.

No permanent wetland or waterways impacts are anticipated. By capping and abandoning Segment 3 of the existing pipeline that runs through Wetland M3 and instead installing a new pipe within Granite Avenue, the Project will avoid approximately 5,100 square feet of potential impacts to Wetland M3 during construction for this project as well as any future wetland impacts from necessary maintenance. The new alignment will cross Unnamed Stream 2 where it is culverted under Granite Avenue; however, this will be designed to avoid and minimize impacts to the existing culvert to the maximum extent practicable and no stream impacts are anticipated.

Table 4 Temporary Wetland and Waterway Impacts

Project Section	Resource ID	Temporary Impact Area (sf)	Proposed Activity
Segment 2	Wetland B1	2,010	Pipe Access Pits
	(salt marsh)	34,070	Construction Mats
	Wetland M1	1,060	Pipe Access Pits
	(salt marsh)	6,260	Construction Mats
	Unnamed Creek 1	510	Pipe Access Pit
Total		**43,910**	

3.2.2 Proposed Work in Chapter 91 Jurisdiction

Work within Wetland B1, Wetland M1, and Unnamed Creek 1, and across Unnamed Creek 2 are potentially within Chapter 91 jurisdiction. Since the proposed work within Wetland B1, Wetland M1, and Unnamed Creek 1 is for repair and alterations to an existing public service project, it may be approved as a Minor Modification. Installation of a new pipe within Granite Avenue may require a license; this will be determined upon consultation with MassDEP. As noted above, the new alignment would avoid work within Wetland M3, which would also be subject to Ch. 91 jurisdiction.

3.2.3 Proposed Work in Floodplain and Riverfront Area

Other regulated resource areas in the vicinity of the Project include floodplain and Riverfront Area. Floodplain includes the area of land inundated during a 100-year storm event (1 percent chance occurrence in any year) as determined by the Federal Emergency Management Agency (FEMA). This is regulated by the Massachusetts Wetlands Protection Act as Bordering Land Subject to Flooding (BLSF), or along the coast, as Land Subject to Coastal Storm Flowage. Perennial rivers have a 200-foot Riverfront Area regulated by the Massachusetts Wetlands Protection Act, except in Boston, where it is a 25-foot Riverfront Area. Riverfront Area extends from the bank of the perennial river and encompasses uplands and wetlands.

The Project will result in temporary impacts within floodplain (Bordering Land Subject to Flooding (BLSF) and Land Subject to Coastal Storm Flowage (LSCSF)) and Riverfront Area (RFA) from access pits, pipe replacement locations, and locations where crane mats and other matting will be installed for construction vehicle access and support. Impact calculations are shown in the table below.

Table 5 Temporary Impacts in Floodplain and Riverfront Area

Resource	Segment	Temporary Impact Area (sf)	Proposed Activity
LSCSF	2	3,490	Pipe Access Pits
		1,230	Trench
		0[1]	Construction Mats
	3A	0	Pipe Access Pits
		5,080	Trench
	4	150	Pipe Access Pit
	Total	**6,460**	
BLSF	3A	1,200	Pipe Access Pits
		6,380	Trench
		0	Construction Mats
	4	490	Pipe Access Pits
	Total	**8,070**	
RFA[1]	2	510	Pipe Access Pit

1 All matting within LSCSF and RFA is within salt marsh and is not double counted here.

3.2.4 Proposed Mitigation Measures

Prior to the start of construction, the boundaries of wetlands will be clearly marked to prevent unauthorized encroachment, and environmental compliance training and copies of all applicable permits will be provided to construction crews. Appropriate soil erosion and sedimentation controls such as straw bales, silt fence, and/or straw wattles will be installed between the work area and wetland resource areas, and will be maintained in effective operating condition during construction. This will serve to separate the work zone from the salt marsh, prevent material migration, and minimize the disturbed area. As needed, the use of temporary construction matting within wetland areas will prevent rutting and provide stable pads for equipment to operate safely. Sediment control during dewatering will be completed by pumping water to a sediment filter bag located on top of stone and geotextile fabric, surrounded by erosion controls.

As noted above, at access pit locations within salt marsh, the vegetation layer and subsoil will be set aside with layers in separate piles, and upon completion of work the subsoils will be put back with layers intact and the vegetation layer reestablished by plantings. Environmental monitors will regularly review construction areas to confirm that the work is being completed in accordance with applicable permit conditions.

At the completion of the Project, temporary impact areas will be restored and permanently stabilized at the earliest practicable date. Appropriate plantings will be provided in the salt marsh and other areas disturbed by construction as necessary to restore native vegetation. All equipment and construction debris will be removed from the work site and temporary erosion and sedimentation control measures will be removed when site stabilization is achieved. The work areas within salt marsh will be monitored for a minimum of two growing seasons and/or as required by project permits to confirm that all areas have been fully restored.

3.3 Areas of Critical Environmental Concern (ACECs), Open Space, and Recreational Resources

Areas of Critical Environmental Concern

Portions of Section 22 are located within the Neponset River Estuary ACEC. It was designated as an ACEC on March 27, 1995, and encompasses approximately 1,300 acres of land within the municipalities of Boston, Milton, and Quincy. The 1995 Neponset River Estuary ACEC designation document defines the legal boundary of the ACEC. Approximately 6,400 linear feet of the Section 22 pipeline is located within the Neponset River Estuary. The 48-inch-diameter Section 22 steel pipeline was installed in the 1950s, more than 40 years prior to the ACEC designation.

The Neponset River Estuary is bounded by heavily urbanized land uses and is therefore recognized as a highly valuable estuarine ecosystem. The ACEC lies within the northeast portion of the Neponset River Watershed. According to the *1996 Neponset River Estuary ACEC Resource Management Plan*, the resources of critical importance within this ACEC include tributaries, salt marshes, estuary, floodplains, and diverse habitat for wildlife and fish.

Open Space and Recreational Resources

There are four open space and recreational resources along Section 22:

- Boston and Milton (Segments 2 and 3): Neponset River Reservation
- Milton (Segment 3): Presidents Golf Course
- Milton (Segment 4): Andrews Park
- Quincy (Segment 4): Furnace Brook Golf Club

The Neponset River Reservation is both a recreational resource open for public use and conservation land protected under Article 97. The Neponset River Reservation is managed by the Massachusetts Department of Conservation and Recreation (DCR), Division of State Parks and Recreation. The designated primary purpose of the reservation is for conservation. The Neponset River Reservation provides the public with open space areas and a variety of recreational opportunities.

The Furnace Brook Golf Club is owned and operated by the City of Quincy and is considered a recreational resource. This recreational facility, located at 20 Reservoir Road in Quincy, is accessible to the public, including residents and non-residents of the City. The Furnace Brook Golf Club is therefore considered Article 97 land.

Andrews Park is protected in perpetuity and is Article 97 land. Andrews Park is a 9-acre recreational park owned by the Town of Milton. Located off of Belcher Circle, the park offers playground equipment, tennis courts, a basketball court, little league baseball diamonds, soccer fields, a softball field, and pickleball court. The park is located to the north of the existing pipeline, and no work is planned within the park boundaries.

Potential Impacts

Approximately 6,400 linear feet of Segment 2 of Section 22 passes through the Neponset River Estuary Area of Critical Environmental Concern (ACEC). In addition, Section 22 passes through the Neponset River Reservation (Segment 2), as well as the town-owned Presidents Golf Course (Segment 4) and

near Andrews Park in Milton (Segment 4), and the City-owned Furnace Brook Golf Club in Quincy (Segment 4).

There will be temporary wetland impacts within the Neponset River Estuary ACEC as described further in the Section 3.2 (Wetlands and Waterways). However, these impacts will be limited to the existing alignment of the pipeline and will be restored upon completion of work. There will be no expansion or increase in impacts from the existing pipeline.

There will be construction in Granite Avenue adjacent to the Presidents Golf Course, and there will be one access pit located in the property at the corner of Hope Avenue and Squantum Street. Noise, dust, and emissions impacts during construction will be controlled as described in Section 3.7 (Air Quality). The access pit will result in a temporary disturbance at the far edge of the property (outside of the limits of play) within the existing pipe alignment and will be restored upon completion of construction.

The Project passes Andrews Park but there are existing buffers of vegetation and residential homes between the pipeline and the Park. Any potential noise, dust, or emissions will be mitigated by these buffers and through the use of best management practices described in Section 3.7. The entrance to the park is on the other side of the block on Howe Street; therefore, no direct traffic impacts are anticipated.

There will be one access pit located in the southernmost corner of the Furnace Brook Golf Club property (outside of the limits of play) within the existing pipe alignment. As with the Presidents Golf Course, any air quality impacts will be minimized as described in Section 3.7, and the temporary disturbance from the access pit will be restored to existing conditions. The entrance to the golf course is off the north end of Reservoir Road and no direct traffic impacts are anticipated.

3.4 Historic and Archaeological Resources

VHB consulted the Massachusetts Historical Commission's (MHC) Massachusetts Cultural Resources Information System (MACRIS) database and mapping system to identify previously recorded above ground and archaeological resources that overlap or are directly adjacent to the pipeline segment alternatives. These online tools include properties listed in the National and State Registers of Historic Places, as well as properties listed in the Inventory of Historic and Archaeological Assets of the Commonwealth ("Inventory"), the latter of which have been documented, but have no official historic designation.

The results of the MACRIS search are described in the sections that follow. Only three of the Project segments have recorded resources that overlap or are directly adjacent to the Project: Section 22, Segment 1; Section 22, Segment 4; and Section 21. Most of the results have no current designation, meaning they are not currently listed in the National or State Registers nor have they been determined eligible for listing.

The majority of historic and archaeological resources identified through the MACRIS review are not anticipated to be impacted by the Project. The underground nature of the Project suggests that adjacent resources will not be susceptible to permanent effects. Strategies being utilized to complete the Project, such as the rehabilitation of current pipes, utilizing existing alignment for new utilities, and sliplining under existing MBTA tracks are minimally intrusive and virtually imperceptible after construction. The need for blasting is not anticipated. These adjacent resources are located along busy traffic thoroughfares and any temporary construction-related disruptions are unlikely to cause physical

harm or result in non-physical impacts that would affect their historic integrity or character-defining features.

Only two resources contain historic features within or along the pipeline alignments that have the potential to be impacted by the Project, and we anticipate that proper planning can avoid or minimize any adverse effects to these features. Designated properties and their relationship to the Project segments are discussed below.

Section 21

Based on the Massachusetts Historical Commission's (MHC) Massachusetts Cultural Resources Information System (MACRIS) database and mapping system, there are four known above-ground historic resources along Section 21. There are no known archaeological resources along Section 21.

- Railway Village Historic District (MLT.E), Milton: National Register District, 2000
- Severance-Tarbox House (MLT.440), Milton: Inventoried
- Ezra Beale House (QUI.511), Quincy: Inventoried
- East Milton Square Area (MLT.F), Milton: Inventoried

The Railway Village Historic District (MLT.E) is a residential neighborhood listed in the National Register in 2000. Comprising nearly 200 historic resources, the district contains some eighteenth-century buildings but is most reflective of the population boom that resulted from the establishment of the industrial railway by Gridley Bryant at the nearby Quincy granite quarries. The neighborhood continued to develop even after the quarries closed, well into the mid- and late twentieth century. The contributing resources to the district mainly consist of houses and commercial and institutional buildings; however, in a stretch along Adams Street that overlaps with Section 21, historic stone walls and granite posts along the road are listed as contributing features. These features are largely located on the interior of the sidewalk boundary and at the entrances to property driveways. The MHC may require additional information demonstrating that these features are outside the limits of work (including construction laydown and access areas), and/or reconstruction plans if limited areas of physical impacts to these resources are possible during construction. The underground nature of the Project suggests that adjacent resources will not be susceptible to permanent effects as the pipeline is located within the existing road layout and will remain in the existing previously disturbed pipeline alignment.

Section 22

Based on MHC's MACRIS database and mapping system, there are seven known above-ground historic resources along Section 22. There are three known archaeological site that are mapped by MACRIS as overlapping Segment 1 and Segment 3A of Section 22, in Boston, Milton and Quincy.

- Above-ground
  - Lower Mills East (BOS.EN), Boston: Inventoried
  - Pierce Square (BOS.GX), Boston: Inventoried
  - Dorchester-Milton Lower Mills Industrial District (BOS.IL), Boston: National Register District, 1980
  - Dorchester-Milton Lower Mills Industrial District Ext. (BOS.TD), Boston: National Register District, 2001
  - 1-16 Butler St. (BOS.FC), Boston: Inventoried

- John Bussey House (BOS.5639), Milton: Inventoried
- Furnace Brook Parkway (QUI.AS), Quincy: National Register District, 2004

› Archaeological

- Three previously-recorded sites (locations are confidential)

No impacts are anticipated to the above-ground resources.

The Dorchester-Milton Lower Mills Industrial District (BOS.IL/BOS.TD) was first listed in the National Register in 1980, with an expansion to the district added in 2001. The district nearly entirely comprises brick industrial buildings sited along the Neponset River at Lower Falls and associated with the Baker Chocolate Company during the late nineteenth and early twentieth centuries. Segment 1 follows the north boundary of the district along Adams Street in Boston.

Furnace Brook Parkway (QUI.AS) is an approximately four-mile stretch of parkway that was established in the early twentieth century as part of the greater Boston Metropolitan Park System; the entire parkway network was listed in the National Register in 2004. The parkways include several small-scale physical features as key historic characteristics, often including medians, lighting, curbing, landscape strips, trees, and other features that contribute to the scenic feel of these roadways, as well as structures like bridges, islands, and major interchanges. Segment 4 ends within the boundaries of this historic district, where Furnace Brook Parkway crosses Adams Street in Quincy. The National Register form does not describe individual features in detail at this spot but notes that contributing features like a tree canopy and both vertical granite and Belgian block curbing are extant in the general area of the intersection. Since roadway features are often impacted during construction within or near a road ROW, the MHC may request additional details or plans (when available) to ensure the protection of extant historic features. This information may demonstrate the avoidance of these features during construction or contain details of how impacted features will be re-installed following construction, as appropriate. The Project will not result in changes to tree cover or roadway alignment, and disturbance to the existing curbing will be avoided to the maximum extent possible. If this is not possible, the curbing would be removed and re-installed post-construction in coordination with the Massachusetts Historical Commission.

In Boston and Quincy, the proposed work utilizes the existing alignment and will slipline the existing pipe under the MBTA tracks. The work is not anticipated to extend into undisturbed soils and would not impact any archaeological resources if present.

In Milton, the proposed work includes ground disturbance to lay a new alignment within Granite Avenue. However, this work is expected to be fairly shallow and located within the previously disturbed roadway alongside other utilities, and no impacts to archaeological resources, if extant, are anticipated. If the extent of the ground disturbance changes in later design to include previously undisturbed soil, the MWRA will coordinate with MHC to identify present archaeological resources in the new area. If present, MWRA will and assess solutions to avoid and minimize impacts to the resource as appropriate.

3.5 Solid and Hazardous Waste

The Project may generate solid waste including old pipe, pavement, and minor amounts of construction waste such as wood pallets. All such material will be recycled as required by regulations.

Soil stockpiles will be located outside sensitive areas to the extent practical and managed to prevent erosion and sedimentation of adjacent areas. Typical measures include the installation of protective measures (e.g., siltation fence and/or straw bales) around the perimeter of the stockpile.

This section also discusses the potential presence of hazardous materials in relation to the proposed Project. The term hazardous materials is a broader term collectively used to describe: hazardous wastes, hazardous substances, asbestos, petroleum products, substances/chemicals that present a health hazard or are a risk to the public and safety of the environment including oil, chemicals and hazardous waste and are defined as those substances that that may constitute a present or potential threat to human health, safety, welfare, or the environment. Solid waste includes both hazardous and non-hazardous wastes. This can include garbage or refuse, sludge, and other discarded material, resulting from industrial, commercial, mining, and agricultural operations, and from community activities. Hazardous wastes are certain solid wastes that require additional regulation because they are dangerous or known to be harmful to human health or the environment. Solid waste also includes construction debris and excavated soils.

Notification to the Massachusetts Department of Environmental Protection will be required if a reporting condition is identified per the Massachusetts Contingency Plan, such as when oil and/or hazardous material is detected in soil and/or groundwater above the applicable standards, referred to as the Reportable Concentrations that has not otherwise been reported. Any soil encountered during construction with oil and/or hazardous material above the Massachusetts Contingency Plan Reportable Concentrations would be managed appropriately in accordance with the applicable state and federal regulations. The elevated concentrations of PAHs, lead, arsenic, and petroleum constituents detected in Section 22, Segment 3 and 4 during the July 2020 limited soil and groundwater investigation as discussed in Section 3.5.1 would require notification to MassDEP and work within these Segments would need to be conducted under a Utility Related Abatement Measure (URAM) in accordance with 310 CMR 40.0440. As necessary, a Licensed Site Professional (LSP) will be contracted consistent with the requirements of the MCP at 310 CMR 40.0460 et seq.

Should additional impacted soil not previously identified during the July 2020 limited investigation be encountered during Project-related excavation that requires export or on-site reuse, this material would be properly characterized and managed in accordance with applicable regulations. Proper management would ensure appropriate reuse within the Project areas to prevent exposure to contaminants or if the soil cannot be reused, export to appropriate destinations. Contaminated soil and groundwater handling and management during construction will be conducted in accordance with the appropriate submittals (i.e., Release Abatement Measures and/or Immediate Response Actions), including appropriate permits and permissions as appropriate.

Mitigation measures during construction will include special handling, dust control, and management of contaminated soil and groundwater in order to prevent construction delays and to provide adequate protection to workers and any nearby sensitive receptors. All response actions must ensure that any nearby or adjacent receptors are adequately protected. In the event that a proposed Project generates hazardous waste and/or waste oil, a permanent identification number would be obtained in accordance with 310 CMR 30.000.

3.5.1 Limited Soil and Groundwater Investigation – July 2020

A limited soil and groundwater investigation was conducted by PEER Consultants, P.C. (PEER) in July 2020. No soil samples were collected within Section 22, Segments 1 or 3A. The purpose of the

investigation was to pre-characterize soil and groundwater prior to construction phases of the Project and included the advancement of 23 soil borings within the Section 22 Segments and six borings within Section 21. Soil samples were collected at discrete locations as opposed to a composite of the total depth of excavation and therefore analytical results may not be representative of soil to be exported as part of the Project.

Based on the soil analytical results, elevated concentrations of PAHs and lead were detected in excess of the applicable MassDEP reportable concentration (RCS-1) in soil samples collected from with Section 22, Segment 3 (the existing alignment in the salt marsh between Granite Avenue and I-93). Additionally, elevated concentrations of poly aromatic hydrocarbons (PAHs), lead, arsenic, and petroleum constituents were detected in excess of the RCS-1 standards within the northern and southern portions of Section 22, Segment 4. No concentrations of oil and hazardous materials (OHM) were detected above the applicable reporting threshold for the remaining Section 22 Segments or Section 21.

It should be noted that soil pre-characterization samples were submitted for Priority Pollutant 12 (PP13) as opposed to MCP 14 metals as required by most Massachusetts disposal facilities. Additionally, two soil samples (B22-12 and B22-8 N1) had concentrations of lead above the theoretical "20 times" rule that requires supplemental lead toxicity characteristic leading procedure (TCLP) to determine if soil is characteristic of hazardous waste.

Three groundwater samples were collected from Section 22 Segment 3 and Segment 4. No concentrations of OHM were detected in groundwater above the applicable reportable concentrations for Groundwater Category 2 (RCGW-2) within these Segments. Groundwater conditions for the remainder of the Project locations is unknown. Groundwater was not sampled for all of the applicable Remediation General Permit (RGP) parameters.

3.5.2 MassDEP Disposal Sites

In Massachusetts, the management of hazardous substance and petroleum products when released into the environment is generally governed at the state level by the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000). Based on a review of the MassDEP Bureau of Waste Site Cleanup (BWSC) online database of hazardous waste sites (i.e., "disposal sites"), 35 disposal sites were identified in the vicinity (i.e., 500-foot radius) of the proposed Project segments. The presence of a state-listed disposal site indicates that a release of hazardous materials has been reported to the MassDEP. A summary of the MassDEP disposal sites with the potential for impact relative to each alternative is provided in the following summary table:

Table 6 Summary of MassDEP Disposal Sites

Project Section	Disposal Site(s) with Potential to Impact	Disposal Site(s) Unlikely to Impact	Total Disposal Sites
Section 21	**10**	**0**	**10**
Section 22			
Segment 1	6	3	9
Segment 2	3	1	4
Segment 3A	5	2	7
Segment 4	5	0	5

Project Section	Disposal Site(s) with Potential to Impact	Disposal Site(s) Unlikely to Impact	Total Disposal Sites
Subtotal	*19*	*6*	*25*
Total	**29**	**6**	**35**

Source: Energy & Environmental Affairs Data Portal, Waste Site & Reportable Releases Energy & Environmental Affairs Data Portal (state.ma.us).

Section 21

There are 10 MassDEP Disposal Sites within a 500-foot radius of Section 21 that have the potential for impacts to environmental conditions along the pipeline.

One disposal site is located within the Section 21 alignment, at the intersection of Adams and Franklin Streets in Milton (Drip Pot at Intersection, RTN 3-27149). In October 2007, elevated concentrations of polycyclic aromatic hydrocarbons (PAHs) and petroleum constituents were detected in soil above the reportable concentrations and RTN 3-27149 was assigned to the release. No documentation was available for this disposal site; however, a Class A-2 RAO Statement was reportedly submitted for the disposal site in October 2007 indicating a Condition of No Significant Risk was achieved, and residual concentrations of contaminants remain in soil at the disposal site. Due to the limited information available regarding this release, there is the potential that impacted soil associated with RTN 3-27149 remains within this portion of Section 21.

Section 22

There are 19 MassDEP Disposal Sites within a 500-foot radius of Section 22 that have the potential for impacts to environmental conditions along the pipeline. None are located directly within the Section 22 alignment with the exception of RTNs 3-11300 and 3-18465. Based on the regulatory closure status of RTN 3-11300, concentrations of OHM were reduced to background conditions and are unlikely to impact environmental conditions within Section 22.

RTN 3-27149 was assigned to the Neponset River Trail in June 1999 due to the detection of arsenic and PAHs in soil. The release achieved regulatory closure in June 2000 through the submittal of a Class A-2 RAO Statement; however, an Activity and Use Limitation (AUL) was recorded for the Neponset River Trail due to the presence of a protective barrier overlaying arsenic and PAH-impacted soils. Therefore, any construction activities within the AUL boundary associated with RTN 3-27149 would be conducted under a Utility-Related Abatement Measure (URAM) Plan per 310 CMR 40.0460.

3.5.3 EPA Superfund Site

At the federal level, hazardous materials are managed by Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) by the Environmental Protection Agency (EPA) under the Superfund program. Based on VHB's review of the EPA hazardous waste cleanup locations, one EPA Superfund Site is located in the vicinity of Section 22 associated with the Lower Neponset River. A summary of the Superfund Site is provided below:

- Lower Neponset River, Boston/Milton, MA: The EPA added approximately 3.7 miles of the Lower Neponset River to the Superfund National Priorities List (NPL) in March 2022. Based on preliminary studies, this portion of the river contains sediment, surface water, and fish that are contaminated with elevated levels of polychlorinated biphenyls (PCBs). Although the Superfund Site is located approximately 400 feet south of Section 22, Segment 1, assessment activities are ongoing. Due to

the portion of Section 22, Segment 2, being located within salt marshes and under the Neponset River directly north and downstream of the Superfund Site, the latest Superfund reports will be reviewed prior to construction for updates regarding the extents of the PCB impacts.

3.6 Sensitive Receptors

Sensitive receptors are land uses that may be especially affected by temporary construction period impacts such as traffic, an increase in ambient noise levels, or fugitive dust. These land uses include hospitals, elder care facilities, schools, cemeteries, daycares, district courts, nursing homes, police stations, fire stations, religious facilities, and recreational facilities. However, these sensitive receptors will be protected from traffic, noise, dust, and emissions impacts during construction through the use of best management practices as described in Sections 3.7 (Air Quality) and 3.8 (Traffic). Typical work hours will be between 7 a.m. and 5 p.m. Monday through Friday. Pipeline rehabilitation will have no permanent adverse effects on sensitive receptors.

Section 21

Based on data available from MassGIS and Boston Open Data, there are two sensitive receptors along Section 21:

- East Congregational Church, 610 Adams St., Milton, MA 02186
- Milton Fire Department – East Milton Station, 525 Adams St., Milton, MA 02186

East Congregational Church is of the United Church of Christ. Due to the ongoing COVID-19 pandemic, the church's worship services have been held virtually until recently.

The Milton Fire Department's East Milton Station is adjacent to East Milton Square in a small commercial area of Milton. The firehouse was constructed in 1953.

Section 22

There are six sensitive receptors along Section 22:

- Segment 1:
  - Standish Village Assisted Living and Compass Memory Support Community, Elder Care Facility, 1190 Adams St., Boston, MA 02124
  - Kids First Daycare and Learning, Daycare, 1190 Adams St., Boston, MA 02124
  - Cedar Grove Cemetery, Cemetery, 920 Adams St., Dorchester, MA 02124
- Segment 2: Neponset River Reservation – Greenway Multi-Use Path, Recreational Facility, 76 Hill Top St., Boston, MA 02124
- Segment 4:
  - Andrews Park, Recreational Facility, Andrews Rd., Milton, MA 02186
  - Furnace Brook Golf Club, Recreational Facility, 20 Reservoir Rd., Quincy, MA 02170

Standish Village Assisted Living and Compass Memory Support Community is an assisted living retirement community located at 1190 Adams Street. The facility is in the Lower Mills neighborhood and offers supportive services for senior residents.

Also located at 1190 Adams Street is the daycare center Kids First Daycare and Learning, Inc. The center provides childcare and programs for infants, toddlers and pre-school aged children.

The Cedar Grove Cemetery was established in 1867 and is located at 920 Adams Street in Dorchester. There is a gated entrance to the cemetery off of Butler Street. In the vicinity of the Project area, the cemetery is bordered by residential properties to the north, and MBTA ROW, state-owned land, and the Neponset River Reservation to the south. Cedar Grove Cemetery is owned by Proprietors of Cedar Grove, a non-profit organization. The cemetery is described as a "place for quiet contemplation amidst the surrounding bustle and tumult".

Within the Project area, the Neponset River Reservation's Greenway multi-use path runs generally north to south, along the north of the MBTA Red Line ROW. The Neponset River Greenway is owned and managed by the Massachusetts Department of Conservation and Recreation (DCR), and open to the public for recreational use. As discussed in Section 3.3 (ACECs, Open Space, and Recreational Resources), the entire Neponset River Reservation, including the Greenway multi-use path, is protected in perpetuity and is Article 97 land.

Andrews Park is a 9-acre recreational park owned by the Town of Milton. Located off of Belcher Circle, the park offers playground equipment, tennis courts, a basketball court, little league baseball diamonds, soccer fields, a softball field, and pickleball court. As discussed in Section 3.3, Andrews Park is protected in perpetuity and is Article 97 land.

The Furnace Brook Golf Club is a privately owned golf course located at 20 Reservoir Road in Quincy. Notably, this recreational facility is accessible to members only and is therefore not a publicly accessible recreational resource.

3.7 Air Quality

The Project will not involve construction of a new stationary source of noise or emissions, nor will the Project involve modification of an existing stationary source. Temporary air quality impacts could result from construction activities associated with excavation, such as noise, dust, and emissions. Construction contractors will be contractually required to adhere to all applicable regulations, including those related to the control of noise, dust, and emissions. Emissions from construction activities are anticipated to result from engines associated with the construction equipment and fugitive dust from earthwork. Construction vehicles will idle only when necessary. The contractors will comply with the Massachusetts anti-idling regulations (M.G.L. c. 90, § 16A; M.G.L. c. 111, §§ 142A-142M, and 310 C.M.R. 7.11) with regard to the amount of time the vehicles will idle. These regulations prohibit unnecessary idling for more than five minutes, and then list certain exemptions to that rule. There may be other times when idling is permitted as long as the idling is absolutely necessary (e.g., as a matter of safety).

All diesel-powered non-road construction equipment with engine horsepower ratings of 50 and above to be used for 30 or more days over the course of Project construction will have United States Environmental Protection Agency verified (or equivalent) emission control devices, such as oxidation catalysts or other comparable technologies (to the extent that they are commercially available) installed on the exhaust system side of the diesel combustion engine.

Dust will be controlled at the construction sites by use of appropriate best management practices (e.g., maintaining reasonable construction vehicle speeds during dry conditions, application of water, etc.). At this time, it is anticipated that soils excavated within roadways will be stockpiled next to the work

area for each excavated pipe trench or access pit and backfilled at the end of each workday. In Segment 2 within salt marsh, soils removed from the access pits will be stockpiled at a staging area and backfilled in association with final site restoration. Any dust generated from earthwork and other construction activities, such as stockpiled soils, may be controlled by spraying with water to mitigate wind erosion on open soil areas. Other dust suppression methods may be implemented to ensure minimization of the off-site transport of dust. Regular sweeping of the pavement of adjacent roadway surfaces will be required during the construction period to minimize the potential for vehicular traffic to create airborne dust and particulate matter. If deemed necessary, stone tracking pads will be installed to help remove soil from the truck tires prior to accessing public roads.

Construction activities will result in localized, short-term increases in ambient noise levels in the vicinity of the work sites along each of the Project segments. Construction-related noise will occur as a result of the operation of equipment and vehicles, particularly during excavation of pipe trenches and access pits. Construction practices would be used to minimize construction noise as feasible and reasonable (e.g., assuring that equipment is functioning properly and is equipped with mufflers and other noise-reducing features).

As the Project design advances, details of the construction duration, staging, machinery, etc., will be determined and measures to keep air quality impacts to a minimum will be encouraged.

3.8 Traffic

Construction of the Project will involve trenching along the segments being removed and replaced, and excavations at access pit locations. Where this work will occur in public roadways, construction will be carefully coordinated to minimize impacts to adjacent residences and businesses and others relying on these transportation corridors. These impacts will be temporary in nature and confined to the amount of time necessary for construction. A construction Traffic Management Plan (TMP) will be developed in close consultation with the municipalities to minimize impacts of construction on the traveling public. Items that may be identified in the TMP include:

- Ongoing coordination with police and fire departments;
- Provisions for emergency vehicle access;
- Timing and delivery of equipment and materials;
- Lane location and width within the work zone to minimize impacts to vehicular traffic movement and promote safe passage;
- Work schedule and duration of any proposed lane closures, alternating traffic flow patterns, road closures, and/or detours where necessary;
- Traffic-control devices such as barricades, reflective barriers, advance warning signs, traffic regulation signs, traffic control drums, flashers, detour signs, and other protective devices as approved by the various towns;
- Locations where temporary provisions may be made to maintain access to homes and businesses;
- Routing and safeguarding of pedestrian and bicycle traffic;
- Continuity plans along school bus and private motor coach routes;
- Method of communication with adjacent businesses to avoid interruptions to critical product deliveries;

- Roadway level of service effects due to short-term lane closure(s); and
- Development of a system to notify municipal officials, local businesses, and the public of the timing and duration of travel restrictions.

The TMP will be submitted for municipal review and approval as part of the permit process by appropriate Boston, Milton, and Quincy authorities prior to the start of in-street construction. Traffic control plans will be developed consistent with the Federal Highway Administration's *Manual on Uniform Traffic Control Devices for Streets and Highways* and MassDOT's publication, *Work Zone Safety*.

3.9 Environmental Justice

The Executive Office of Energy and Environmental Affairs (EEA) defines environmental justice (EJ) as "the equal protection and meaningful involvement of all people and communities" regarding environmental issues, including the equitable allocation of benefits and burdens. This policy builds upon Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations that "directs federal agencies to identify and address the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable and permitted by law."

In accordance with EEA's Environmental Justice Policy, VHB consulted the Massachusetts 2020 Environmental Justice Populations mapping system to identify the presence of Environmental Justice populations. This data layer serves as an initial screening tool for identifying potential environmental justice populations under the Environmental Justice Policy. It derives from the 2020 U.S. Census (for the minority criterion) and 2015-2019 American Community Survey 5-Year Estimates (for the state median income and English isolation criteria).

Environmental justice populations in Massachusetts are determined by neighborhoods where one or more of the following criteria are true:

1. the annual median household income is 65 percent or less of the statewide annual median household income
2. minorities make up 40 percent or more of the population
3. 25 percent or more of households identify as speaking English less than "very well"
4. minorities make up 25 percent or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150 percent of the statewide annual median household income

The Project is located within one mile of 62 census tracts in Boston and Quincy identified as Environmental Justice communities on the Massachusetts 2020 Environmental Justice Populations map viewer. Please refer to Figure 9 in Attachment C for a map showing these communities.

Impacts to Environmental Justice populations would be limited to the construction phase of the Project and would be similar in nature to the impacts experienced by non–Environmental Justice communities along the pipeline route. There would not be disproportionately high and adverse impacts to Environmental Justice communities, and the Project would provide a reliable source of clean drinking water.

3.9.1 Languages Spoken by Five Percent or more of the EJ Population

The "Languages Spoken in Massachusetts" tab of the EJ Maps Viewer was reviewed to identify languages spoken by five percent or more of the EJ population who also identify as not speaking English "very well," for each census tract in whole or in part within one mile and five miles of the Project, regardless of whether such census tract contains any designated EJ populations. The languages spoken within one mile of the Project include Chinese, French Creole, Spanish or Spanish Creole, and Vietnamese. Within five miles of the Project, the languages include African languages, Chinese, French Creole, Portuguese or Portuguese Creole, Russian, Spanish or Spanish Creole, and Vietnamese.

3.9.2 Assessment of Existing Unfair or Inequitable Environmental Burden

The Massachusetts Department of Public Health (DPH) EJ Tool was consulted to identify whether any municipality or census tract along the Project that includes any of the identified EJ populations exhibits one or more of four specific "vulnerable health criteria," which are environmentally related health indicators that are measured to be 110% above statewide averages in the DPH EJ Tool. These vulnerable health criteria are:

- Heart attack hospitalization: None of the municipalities in which the Project is located meet this vulnerable health EJ criterion.
- Childhood asthma: Boston meets this vulnerable health EJ criterion.
- Childhood blood lead: Boston meets this vulnerable health EJ criterion.
- Low birth weight: Boston meets this vulnerable health EJ criterion.

Based on this assessment, the EJ populations in Boston could be viewed as potentially bearing an "unfair or inequitable" environmental burden and related public health consequences. Additional layers within the DPH EJ Tool were consulted to survey other potential sources of pollution within the boundaries of the EJ population. The estimated number and type of mapped facilities/infrastructure in the area and enforcement histories of any facilities permitted by MassDEP are described below.

Table 7 Other Potential Sources of Pollution

Municipality	Estimated Number	Enforcement History
Large Quantity Generators (Major Air & Waste Facilities)		
Boston	3	None
Milton	0	N/A
Quincy	4	None
MGL c. 21E Sites		
Boston	6	One site has received a Notice of Non-Compliance
Milton	0	N/A

Municipality	Estimated Number	Enforcement History
Quincy	8	Five sites have received Administrative Consent Orders, Notices of Non-Compliance, Penalty Assessment Notices, and Reporting Penalty Assessments
"Tier II" toxics use reporting facilities		
Boston	4	One site has received an Administrative Consent Order and Notices of Non-Compliance
Milton	0	N/A
Quincy	13	Two sites have received Notices of Non-Compliance
MassDEP sites with AULs		
Boston	18	Three sites have received Administrative Consent Orders, Notices of Non-Compliance, Penalty Assessment Notices, and Reporting Penalty Assessments
Milton	0	N/A
Quincy	25	Three sites have received Administrative Consent Orders and Notices of Non-Compliance
MassDEP groundwater discharge permits		
Boston	None	N/A
Milton	None	N/A
Quincy	None	N/A
Wastewater treatment plants		
Boston	None	N/A
Milton	None	N/A
Quincy	None	N/A
MassDEP public water suppliers		
Boston	MWRA	N/A
Milton	Milton Water Dept. (MWRA)	N/A
Quincy	Quincy Water Dept. (MWRA)	N/A
Underground storage tanks		

Municipality	Estimated Number	Enforcement History
Boston	8	Seven sites have received Administrative Consent Orders, Notices of Non-Compliance, Penalty Assessment Notices, and Reporting Penalty Assessments
Milton	None	N/A
Quincy	21	Sixteen sites have received Administrative Consent Orders, Notices of Non-Compliance, Penalty Assessment Notices, and Reporting Penalty Assessments
EPA facilities		
Boston	None	N/A
Milton	None	N/A
Quincy	None	N/A
Road infrastructure		
Boston	1 - State Routes	N/A
Milton	None	N/A
Quincy	1 - State Routes	N/A
MBTA bus and rapid transit		
Boston	1 Rapid Transit, 1 Commuter Rail, 7 Buses	N/A
Milton	None	N/A
Quincy	1 Rapid Transit, 1 Commuter Rail, 5 Buses	N/A
Other transportation infrastructure		
Boston	Railroad	N/A
Milton	None	N/A
Quincy	Railroad	N/A
Regional transit agencies		
Boston	MBTA, Brockton Area RTA	N/A
Milton	None	N/A
Quincy	None	N/A
Energy generation and supply		
Boston	None	N/A
Milton	None	N/A
Quincy	1 Biomass Plant	N/A

The RMAT Climate Resilience Design Standards Tool was also consulted (see Attachment E), and it identified the Project area as having High Exposure to sea level rise/storm surge, extreme precipitation (urban and riverine flooding), and extreme heat. A "High" ranking for these parameters could be an indicator of elevated climate risks for EJ populations (census block groups) in which the project site is located.

Based on the analysis provided above, these factors appear to indicate that the identified EJ populations currently bear an existing "unfair or inequitable" environmental burden and related public health consequences as compared to the general population.

An Advance Notification Environmental Justice Screening Form (the EJ Screening Form) was distributed via email on Friday, September 30, 2022, to the list of Community Based Organizations (CBOs) provided by the MEPA EJ Office, based on the Project location in Boston, Quincy, and Milton. Translated versions of the EJ Screening Form in Chinese, French Creole, Spanish, and Vietnamese were attached to the email. MWRA will maintain this list of CBOs and add additional contacts both as requested and based on research.

MWRA created a Project webpage where Project information including the EJ Screening Form, and translated versions, can be found. MWRA will continue to maintain and update the project webpage throughout the project, including as design progresses and during the construction phase. Key project documents will be translated and posted on the webpage. MWRA will notify CBOs and any additional contacts when project documents are noticed in the MEPA *Environmental Monitor* and provide links to these documents on the Project webpage. MWRA will incorporate and respond to any comments received at public meetings, in response to project documents or otherwise received throughout the MEPA review process.

3.9.3 Analysis of Project Impacts to Determine Disproportionate Adverse Effect

Project impacts will be temporary in nature and related to active construction. As these impacts will be intermittent and will not be in front of any single location for an extended period of time, they will not result in severe environmental or public health impacts nor will they exacerbate any existing burdens for the identified EJ populations. As described in Section 3.7, construction contractors will comply with anti-idling regulations and all diesel-powered non-road construction equipment will have EPA-verified (or equivalent) emission control devices to limit construction-phase air quality impacts. Construction noise will be minimized by ensuring that equipment is functioning properly and equipped with noise-reducing features. Typical work hours will be between 7 a.m. and 5 p.m. Monday through Friday.

These impacts will be the same across the entire footprint of the project and will not disproportionately affect EJ populations compared to non-EJ populations within the Project area. The Project is specifically intended to ensure continued access to safe drinking water and will improve the public health of the communities served by these pipelines, many of which are EJ populations.

3.10 Climate Change Adaptation and Resiliency

The Resilient Massachusetts Action Team Climate Resilience Design Standards Tool (RMAT Tool) was consulted to analyze the Project's exposure and risk for impacts from climate change. As shown in the full Report in Attachment E, the Project received the following scores:

- Ecosystem Benefits: Low
- Sea Level Rise/Storm Surge: High Exposure
- Extreme Precipitation – Urban Flooding: High Exposure
- Extreme Precipitation – Riverine Flooding: High Exposure
- Extreme Heat: High Exposure

The Project was also identified as having High Risk for all of the Asset Risk Scoring categories.

Although the RMAT Tool identified the Project as having high exposure due to its location near the coast, and as High Risk due to its criticality as water supply infrastructure, projected climate change impacts are not anticipated to affect this infrastructure. The infrastructure is currently below ground and will remain so, minimizing any potential impacts. Moving it into areas with lower climate risks is not necessary, and would not meet the purpose and need of the Project, which is to deliver drinking water to populations located in Boston, Milton, and Quincy. The Project will not result in any changes to site topography or floodwater flow paths or velocities that could impact adjacent properties or the functioning of the floodplain. There will be no creation of new impervious area.

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Attachment B: Distribution List

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B

Distribution List

State Agencies

Massachusetts Environmental Policy Act (MEPA) Office
100 Cambridge Street, Suite 900
Boston, MA 02144
MEPA@mass.gov

Department of Environmental Protection, Boston Office
Commissioner's Office
One Winter Street
Boston, MA 02108
helena.boccadoro@mass.gov

Department of Environmental Protection, Northeast Regional Office
Attn: MEPA Coordinator
205B Lowell Street
Wilmington, MA 01887
john.d.viola@mass.gov

Massachusetts Department of Transportation – Boston
Public/Private Development Unit
10 Park Plaza, Suite #4150
Boston, MA 02116
MassDOTPPDU@dot.state.ma.us

Massachusetts Department of Transportation – District #6
Attn: MEPA Coordinator
185 Kneeland Street
Boston, MA 02111
michael.garrity@dot.state.ma.us

Massachusetts Historical Commission
The MA Archives Building
220 Morrissey Boulevard
Boston, MA 02125

Boston Region Metropolitan Planning Organization
State Transportation Building
10 Park Plaza, Suite 2150
Boston, MA 02116
ctps@ctps.org

Coastal Zone Management
Attn: Project Review Coordinator
251 Causeway Street, Suite 800
Boston, MA 02114
robert.boeri@mass.gov
patrice.bordonaro@mass.gov

Division of Marine Fisheries – North Shore
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
DMF.EnvReview-North@mass.gov

Department of Conservation and Recreation
Attn: MEPA Coordinator
251 Causeway St. Suite 600
Boston MA 02114
andy.backman@mass.gov

Massachusetts Water Resource Authority
Attn: MEPA Coordinator
100 First Avenue
Charlestown Navy Yard
Boston, MA 02129
katherine.ronan@mwra.com

Massachusetts Bay Transit Authority
Attn: MEPA Coordinator
10 Park Plaza, 6th Fl.
Boston, MA 02116-3966
MEPAcoordinator@mbta.com

Municipal Agencies

Boston

Boston City Council
city.council@boston.gov
1 City Hall Square
Room 550
Boston, MA 02201-2043

Boston Planning & Development Agency
One City Hall Square
Boston, MA 02201

Boston Conservation Commission
cc@boston.gov
1 City Hall Square, Room 709
Boston, MA 02201

Boston Public Health Commission
info@bphc.org
1010 Massachusetts Ave, 6th Floor
Boston, MA 02118

Milton

Milton Select Board
Town Office Building
525 Canton Avenue
Milton, MA 02186

Milton Planning Board
Town Office Building
525 Canton Avenue
Milton, MA 02186

Milton Conservation Commission
629 Randolph Avenue
Milton, MA 02186

Milton Board of Health
525 Canton Avenue
First floor
Milton, MA 02186

Quincy

Quincy City Council
1305 Hancock St.
Quincy, MA 02169

Quincy Planning Board
1305 Hancock St.
Quincy, MA 02169

Quincy Conservation Commission
1305 Hancock St.
Quincy, MA 02169

Quincy Health Department
440 East Squantum Street
Quincy, MA 02171

Attachment C: Figures

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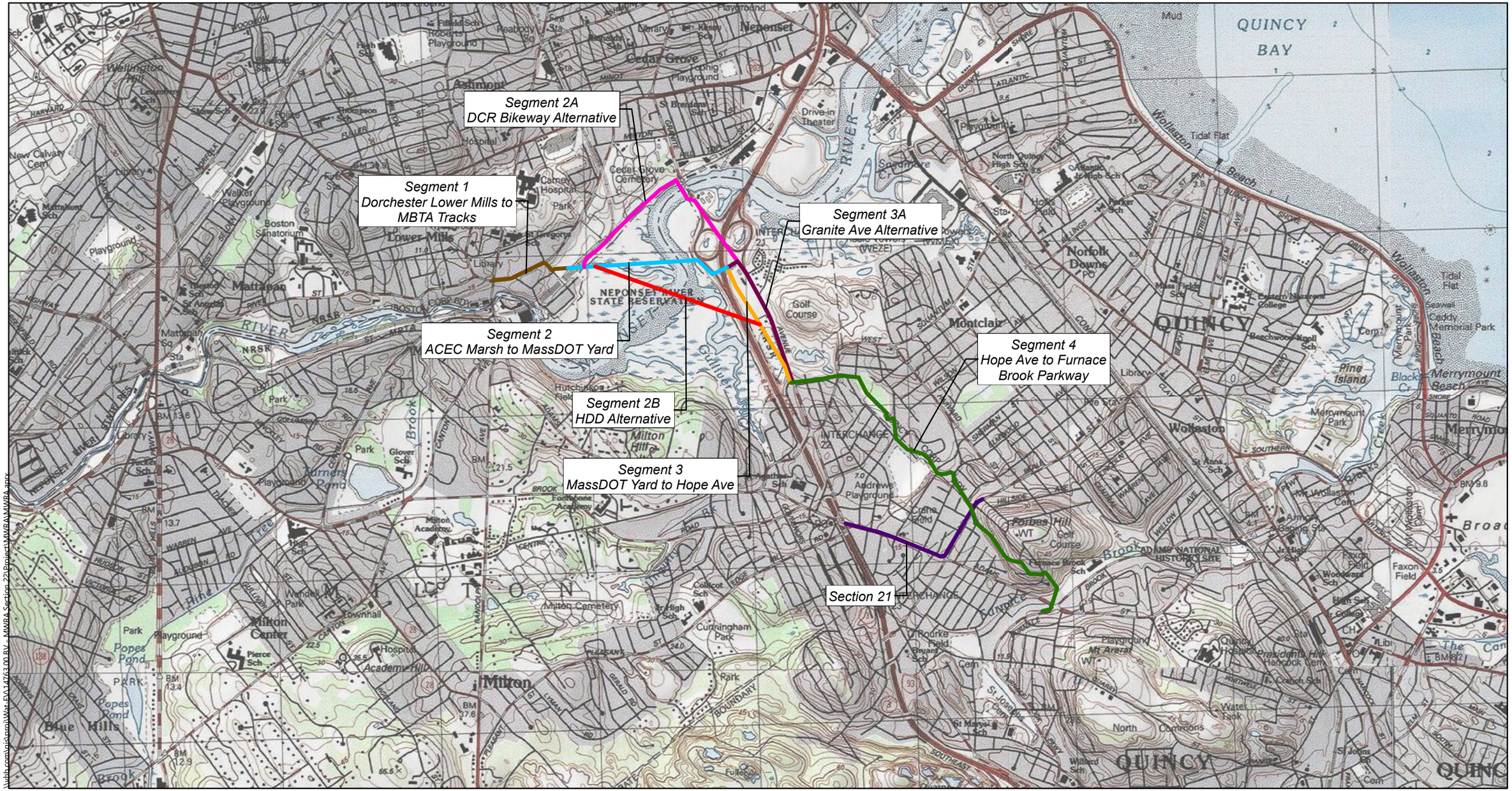

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0 1000 2000 4000 Feet

Project Segment

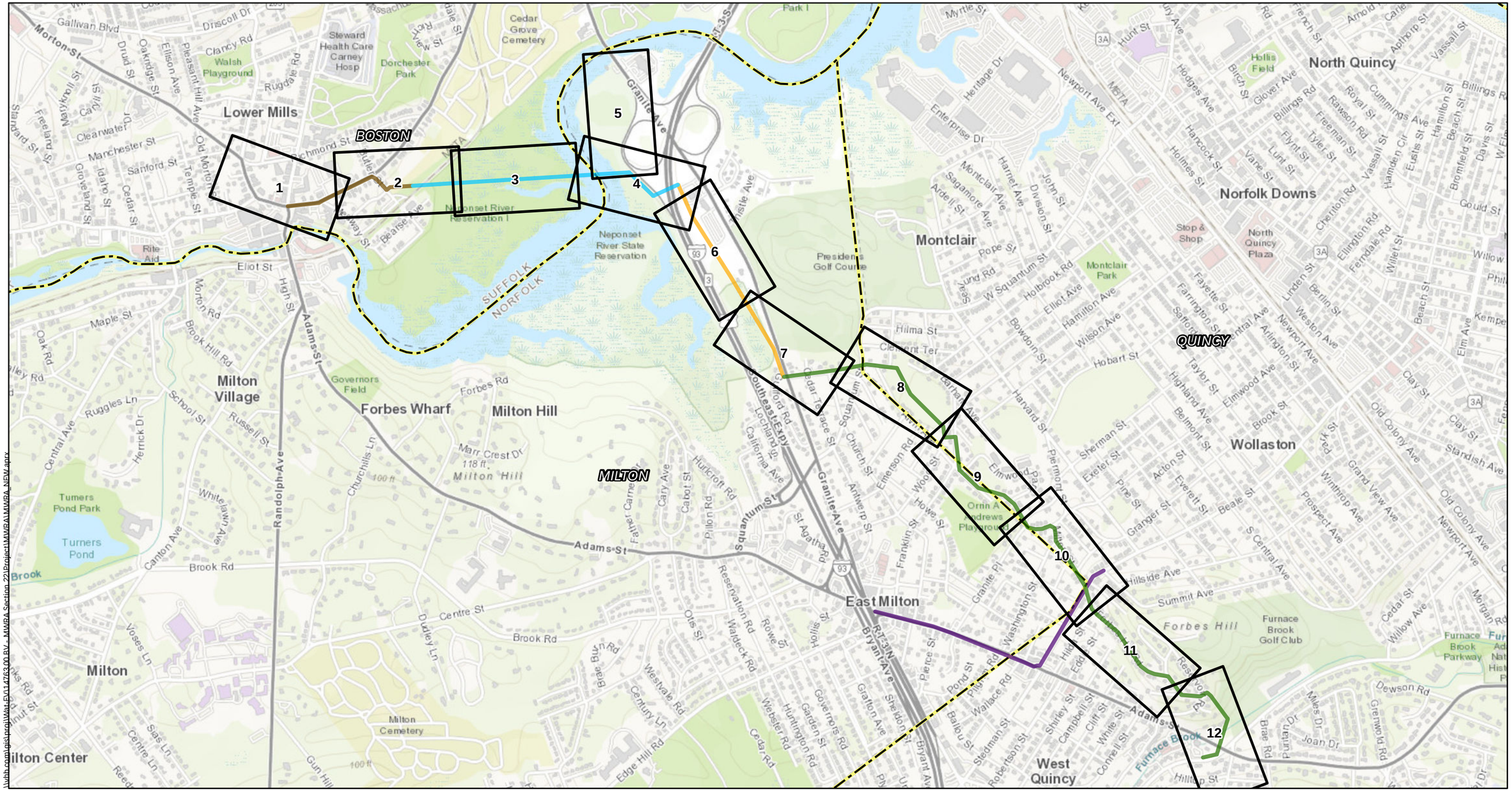
- Section 22 Segment 1
- Section 22 Segment 2
- Section 22 Alt Segment 2A
- Section 22 Alt Segment 2B
- Section 22 Segment 3
- Section 22 Alt Segment 3A
- Section 22 Segment 4
- Section 21 Pipeline

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting

Boston to Quincy, Massachusetts

USGS Project Location Map

Source: VHB, MassGIS, Black & Veatch



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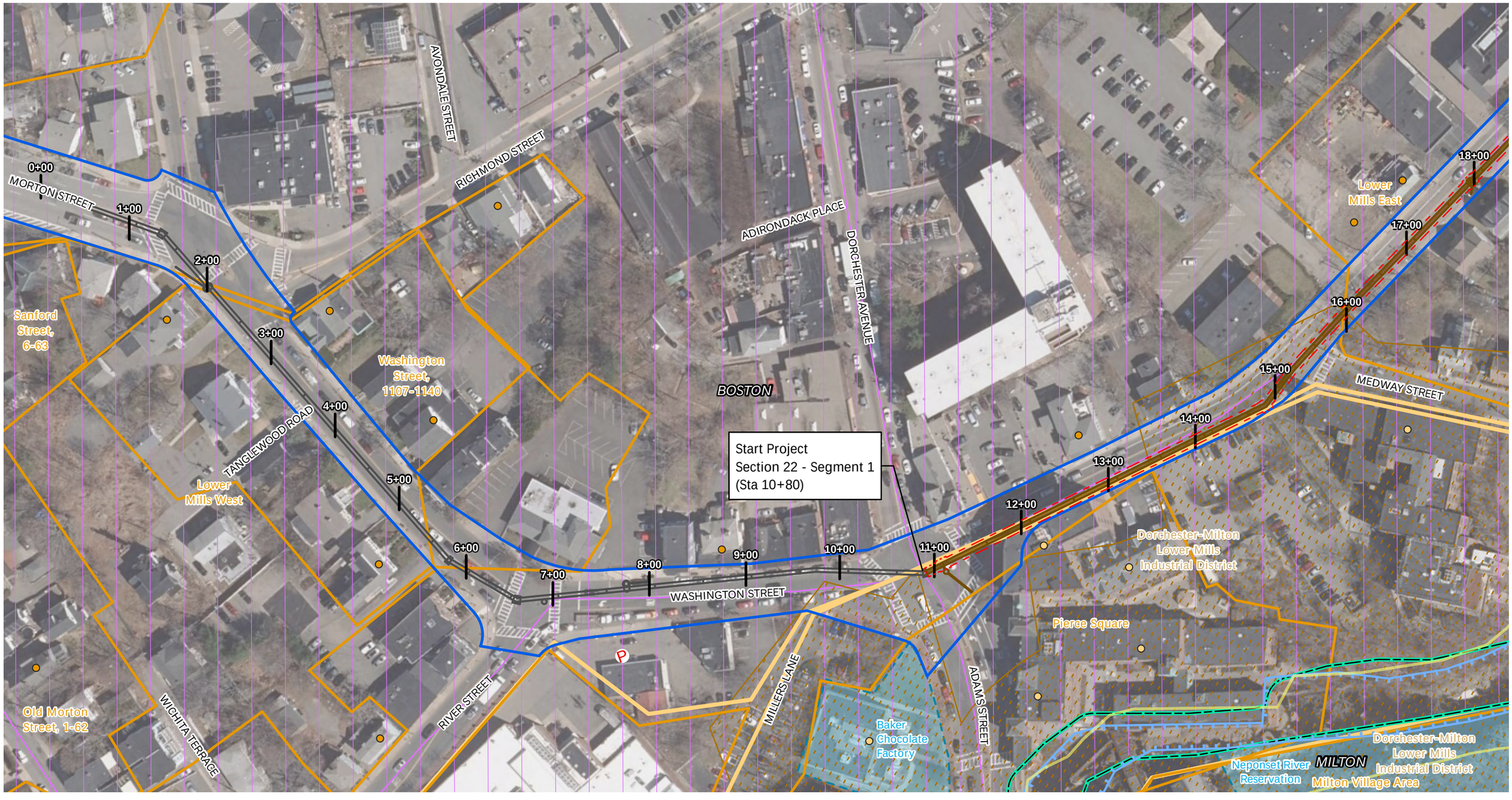
0 600 1200 2400 Feet

Project Segment

- Section 22 Segment 1 (Remove and Replace)
- Section 22 Segment 2 (Slipline)
- Section 22 Segment 3 (Slipline)
- Section 22 Segment 4 (Clean and Line)
- Section 21 Pipeline
- Page Index

MWRA Contract 7155, Section 22 Rehabilitation
Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for
Preferred Alternative
Section 22 Segments 1-4
Key Plan
Source: VHB, MassGIS, Black & Veatch, MWRA



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MWRA Contract 7155, Section 22 Rehabilitation
Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

- Section 22 Easement
- Section 22 Segment 1 (Remove and Replace)
- Section 22 Segment 2 (Slipline)
- Section 22 Alt Segment 3A (Cut and Cover)
- Section 22 Segment 4 (Clean and Line)
- Section 22 Existing Segment 3
- Section 21 Pipeline
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- Stockpile and Staging Area
- Temporary Construction Matting
- Protected and Recreational Open Space
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- Chapter 91 Jurisdiction
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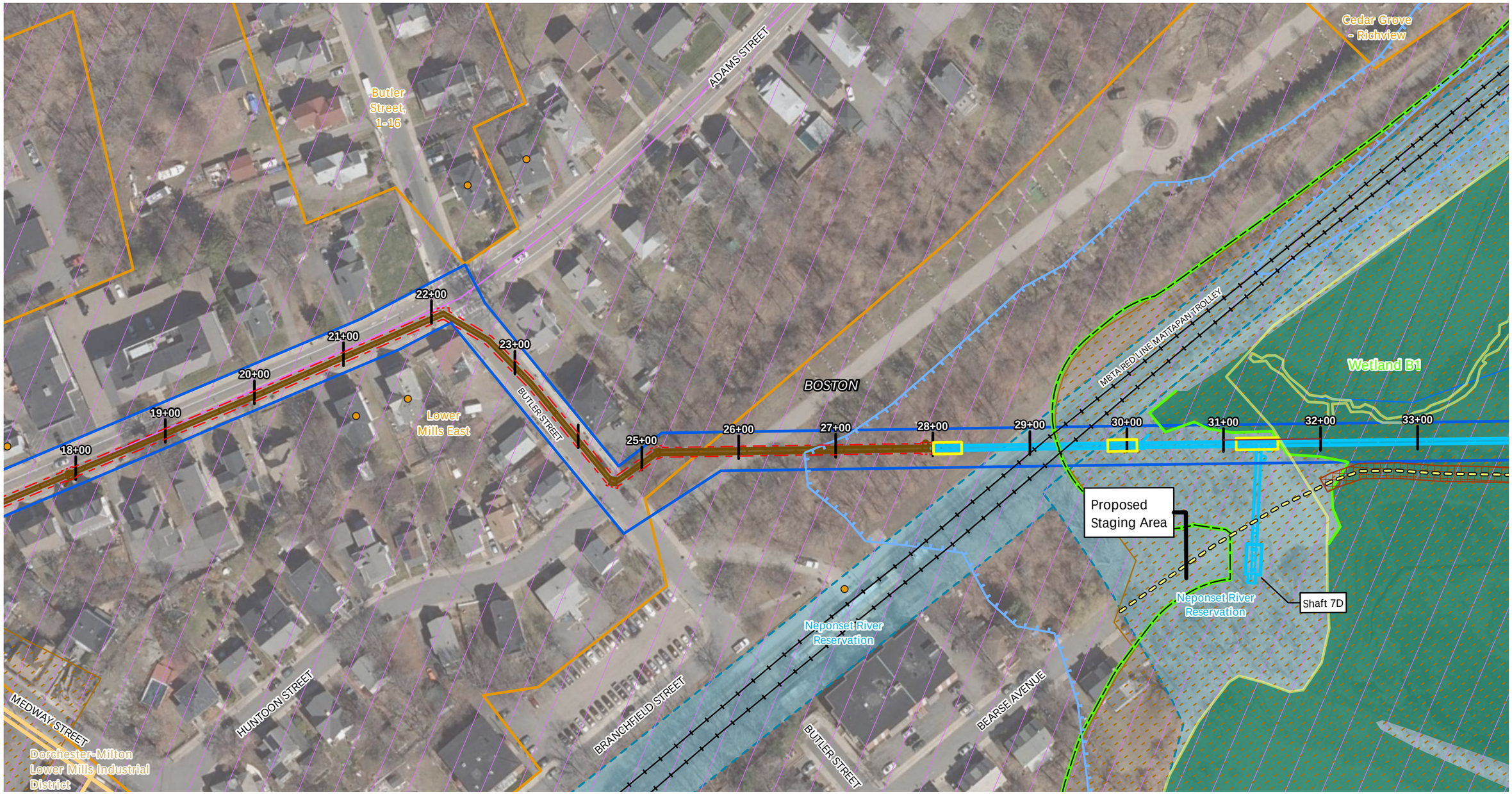
- DEP BWP Major Facilities Large Quantity Generators of Hazardous Waste (EPA-RCRA Regulated and MA Regulated)
- MADEP Tier Classified Chapter 21

Existing Resource Mapping for Preferred Alternative
Section 22 Segments 1-4

Source: VHB, MassGIS, Black & Veatch, MWRA



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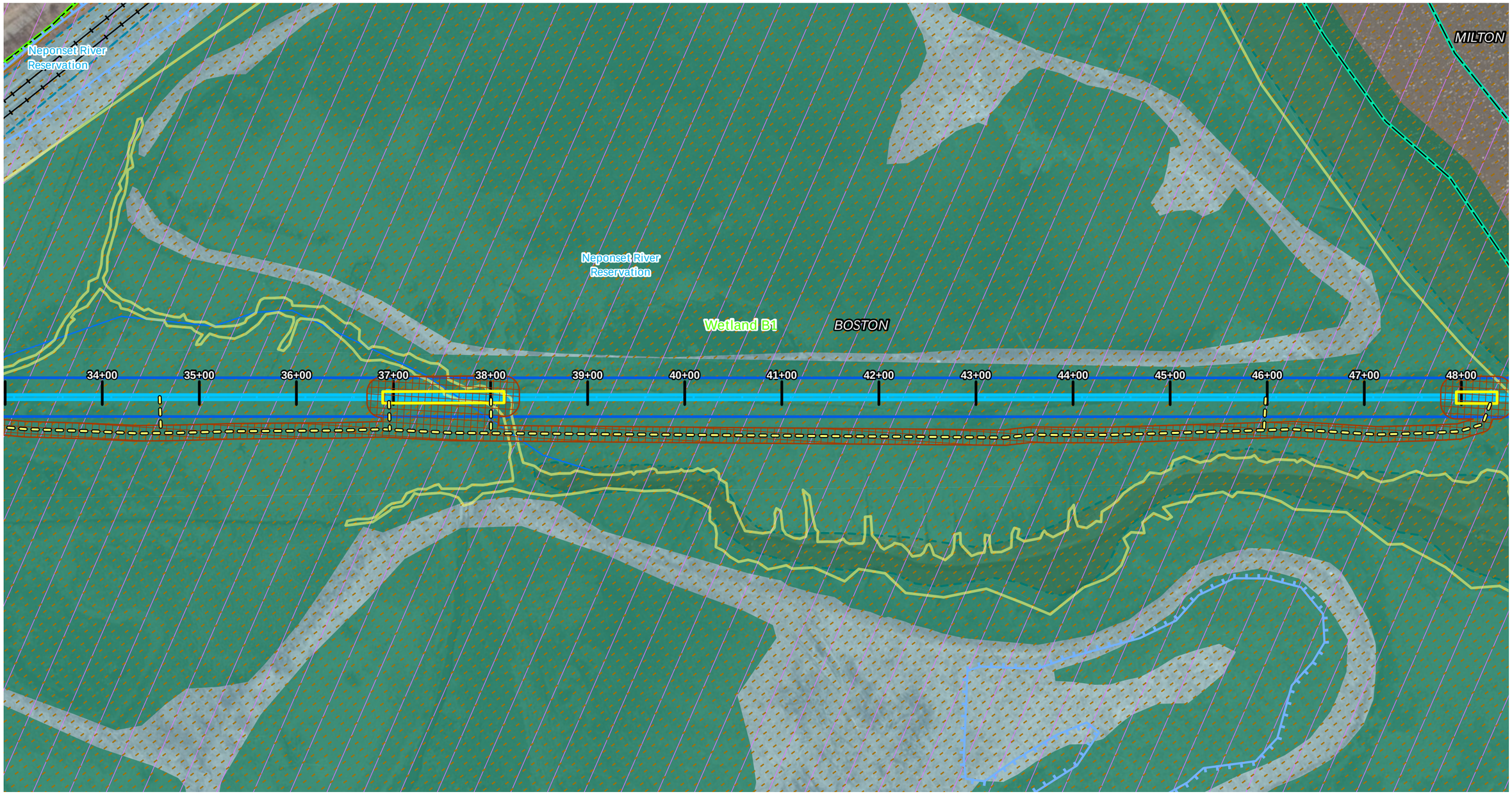
MWRA Contract 7155, Section 22 Rehabilitation
Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Preferred Alternative
Section 22 Segments 1-4
Page 2 of 12
Source: VHB, MassGIS, Black & Veatch, MWRA



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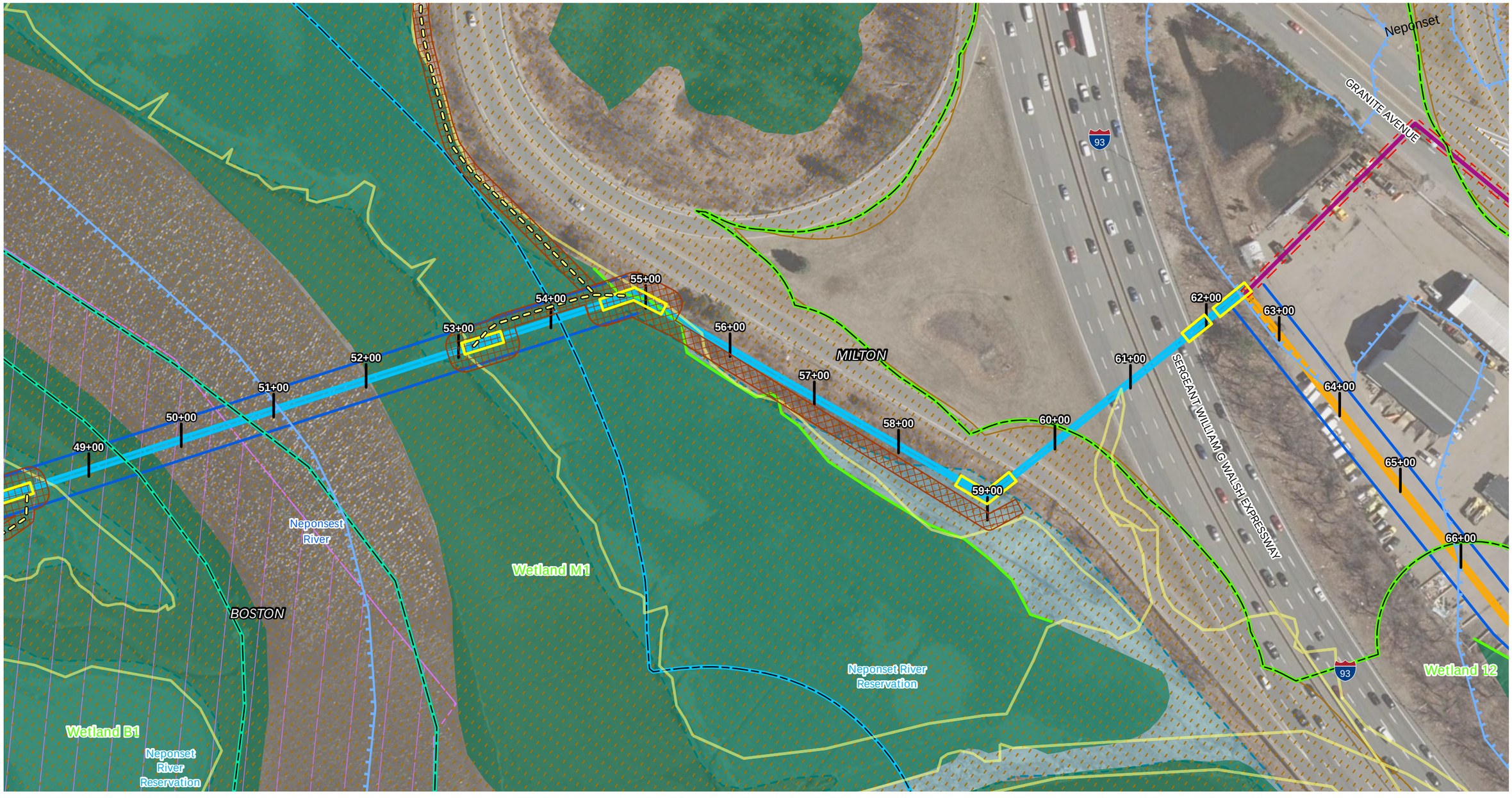
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Preferred Alternative
Section 22 Segments 1-4

Source: VHB, MassGIS, Black & Veatch, MWRA



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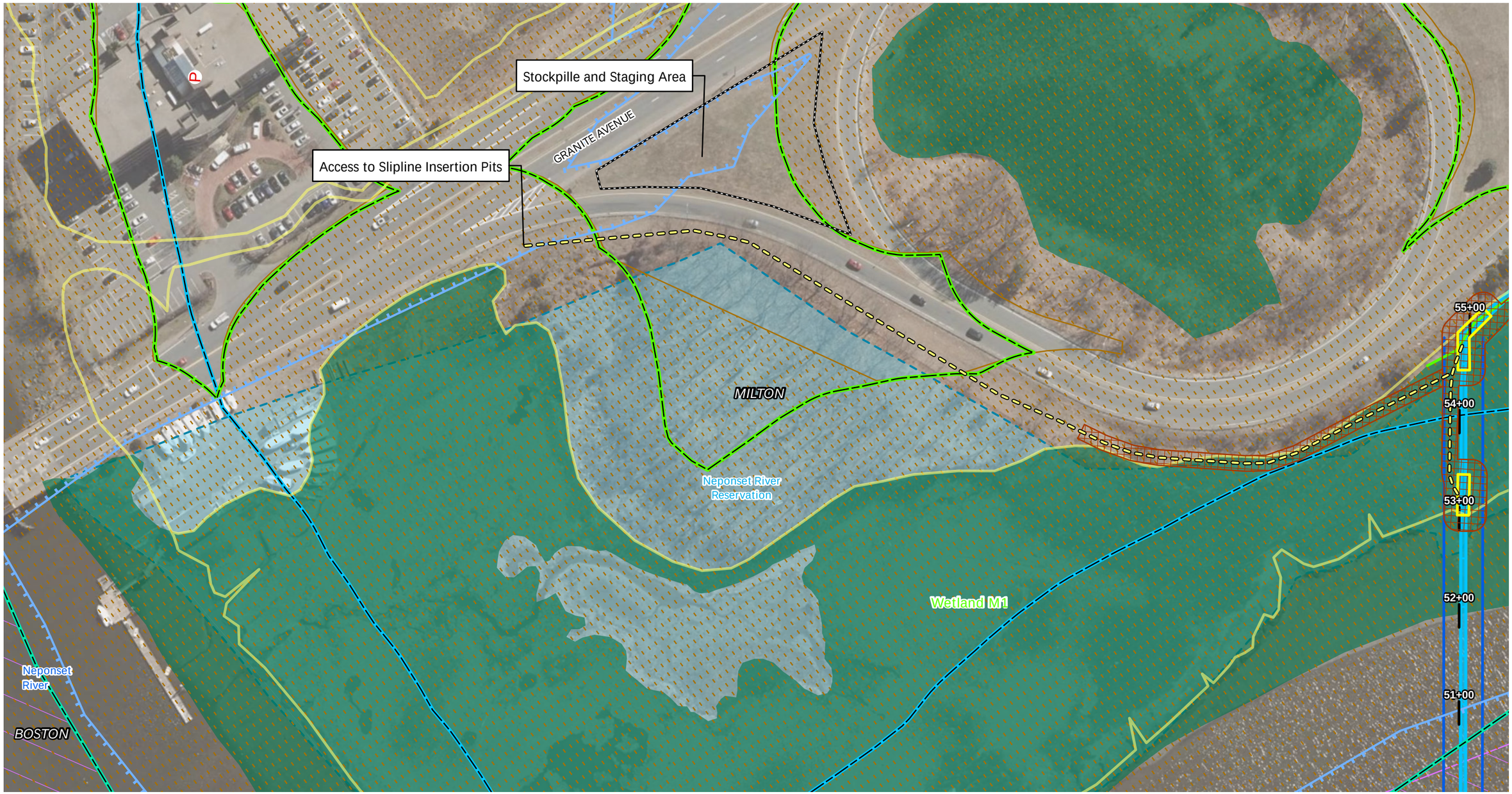
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Preferred Alternative
Section 22 Segments 1-4

Source: VHB, MassGIS, Black & Veatch, MWRA



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MWRA Contract 7155, Section 22 Rehabilitation
Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Preferred Alternative
Section 22 Segments 1-4
Page 5 of 12
Source: VHB, MassGIS, Black & Veatch, MWRA

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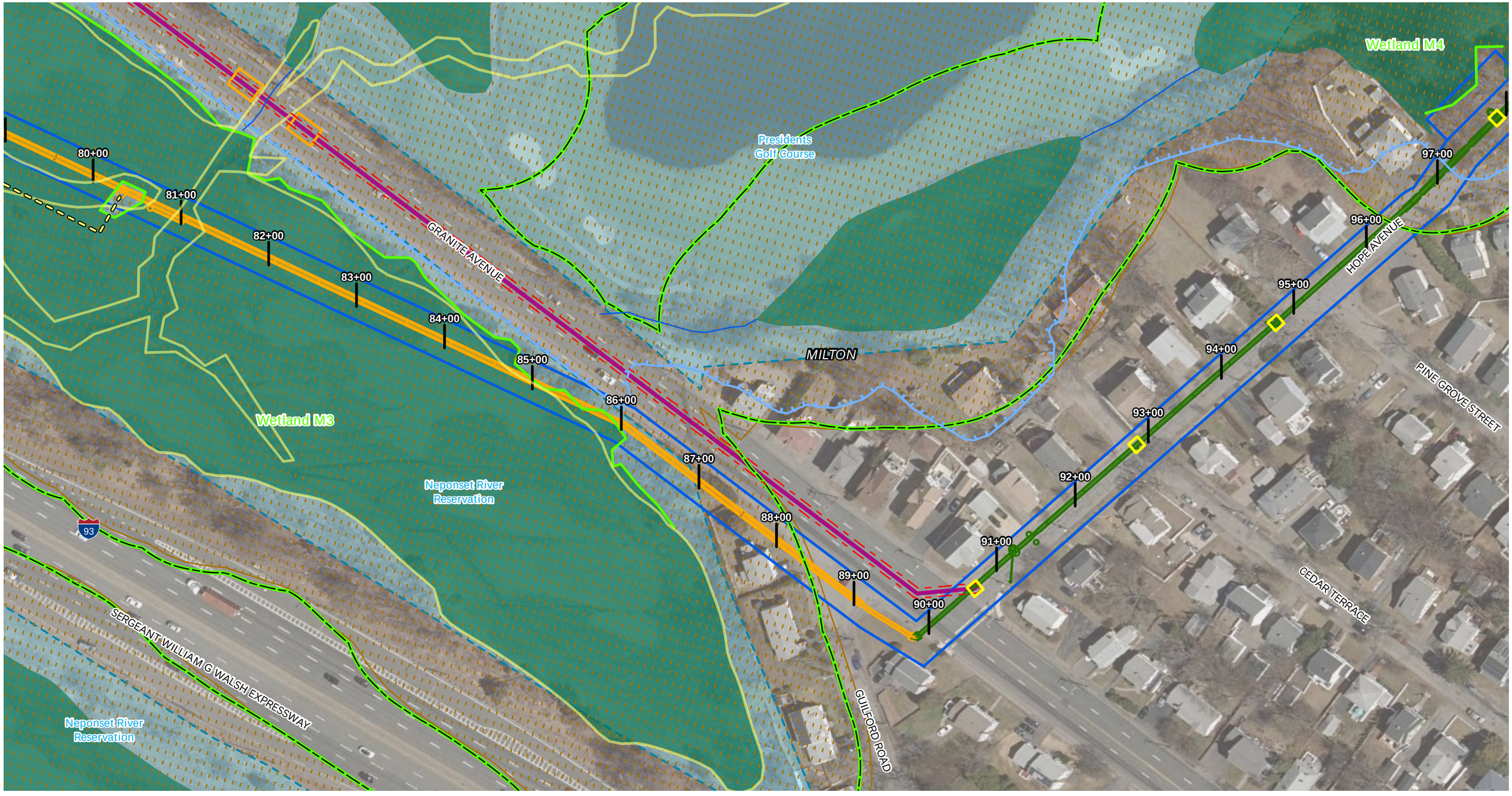
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Preferred Alternative
Section 22 Segments 1-4

Source: VHB, MassGIS, Black & Veatch, MWRA



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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Preferred Alternative
Section 22 Segments 1-4

Source: VHB, MassGIS, Black & Veatch, MWRA

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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Preferred Alternative
Section 22 Segments 1-4

Source: VHB, MassGIS, Black & Veatch, MWRA

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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

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Source: VHB, MassGIS, Black & Veatch, MWRA

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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Preferred Alternative
Section 22 Segments 1-4

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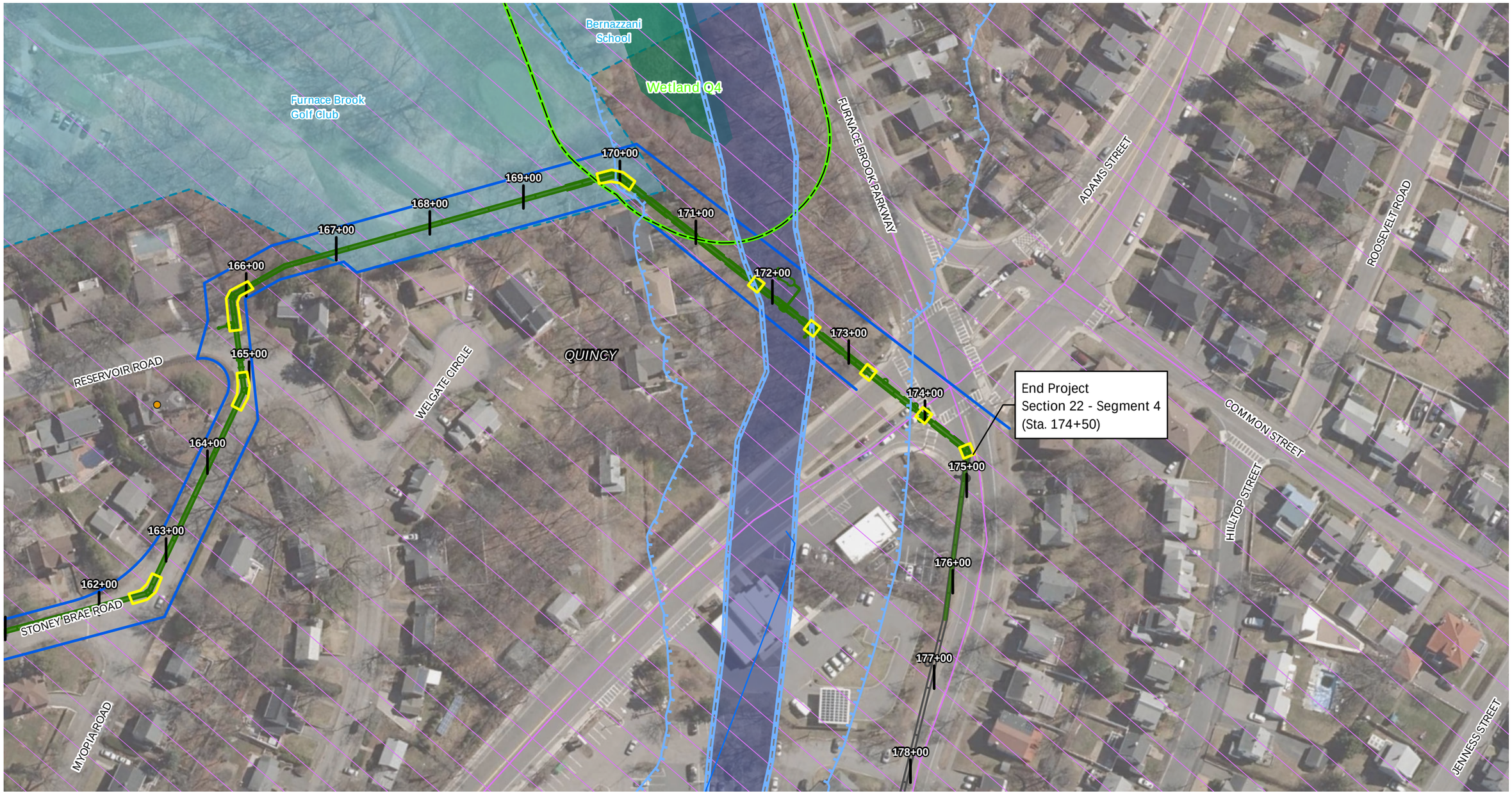
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Preferred Alternative
Section 22 Segments 1-4

Source: VHB, MassGIS, Black & Veatch, MWRA



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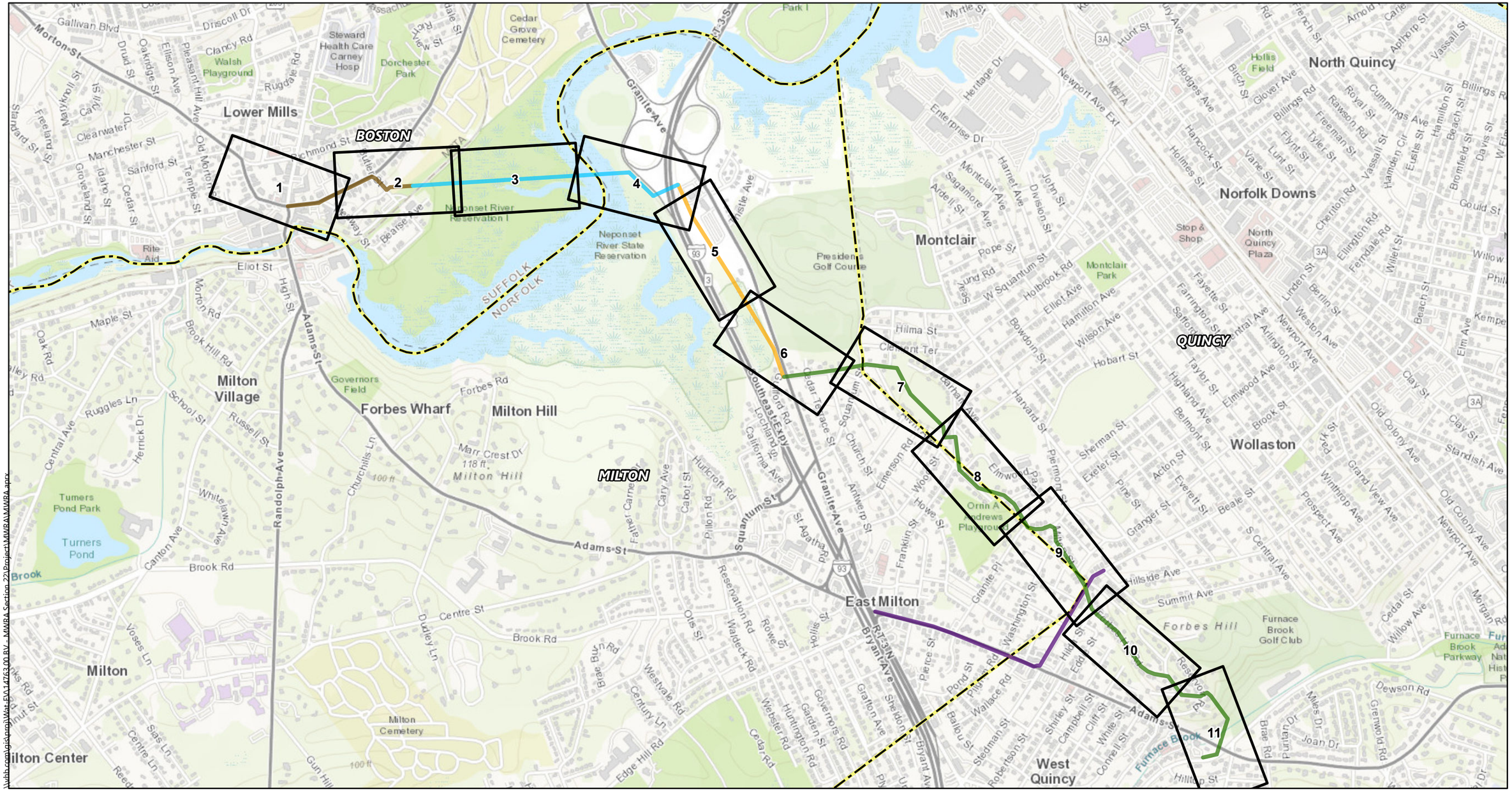
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Preferred Alternative
Section 22 Segments 1-4
Page 12 of 12
Source: VHB, MassGIS, Black & Veatch, MWRA



MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Remove & Replace Alternative Section 22 Segments 1-4 Key Plan

Source: VHB, MassGIS, Black & Veatch, MWRA

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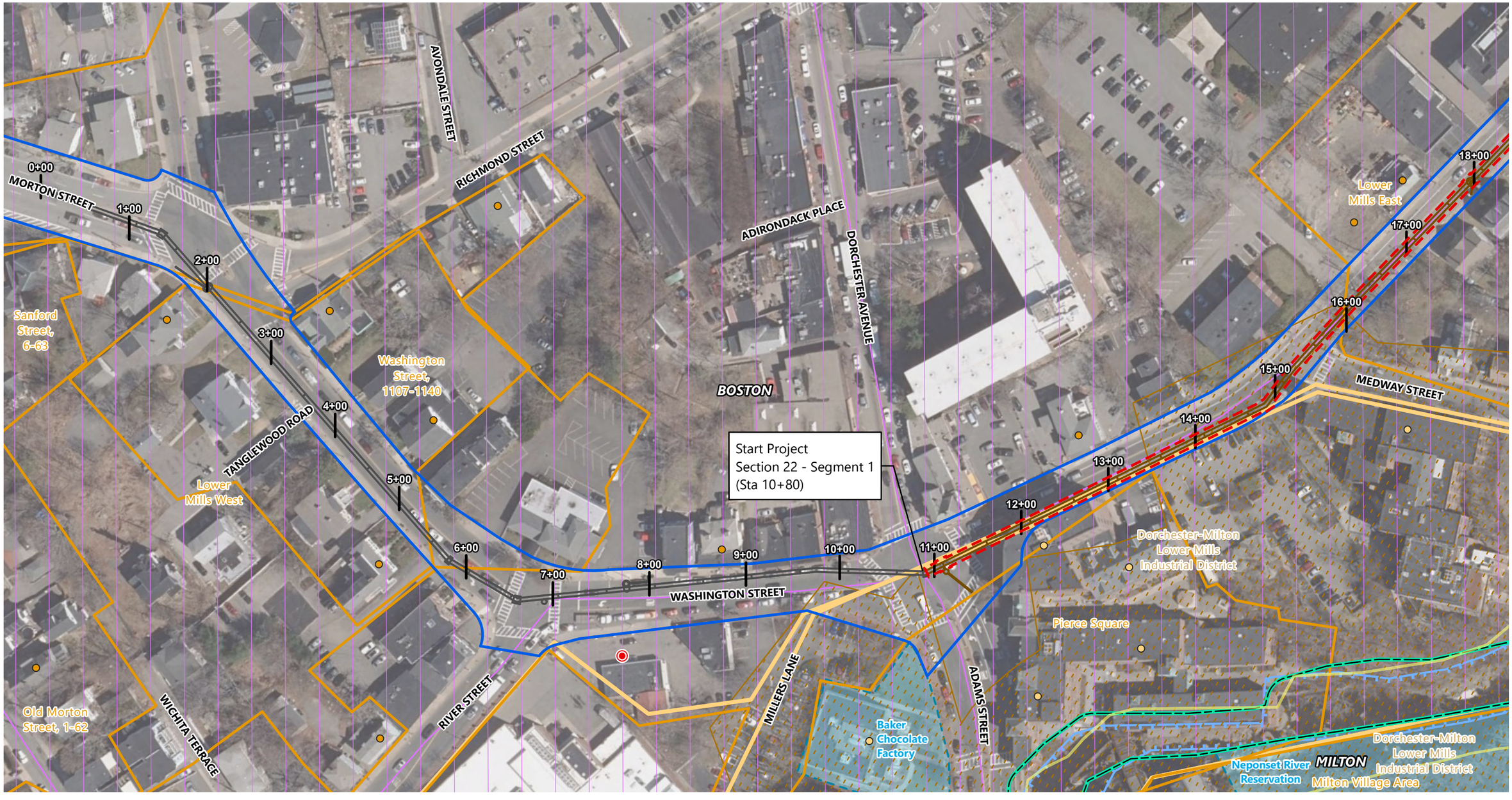

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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Remove & Replace Alternative Section 22 Segments 1-4

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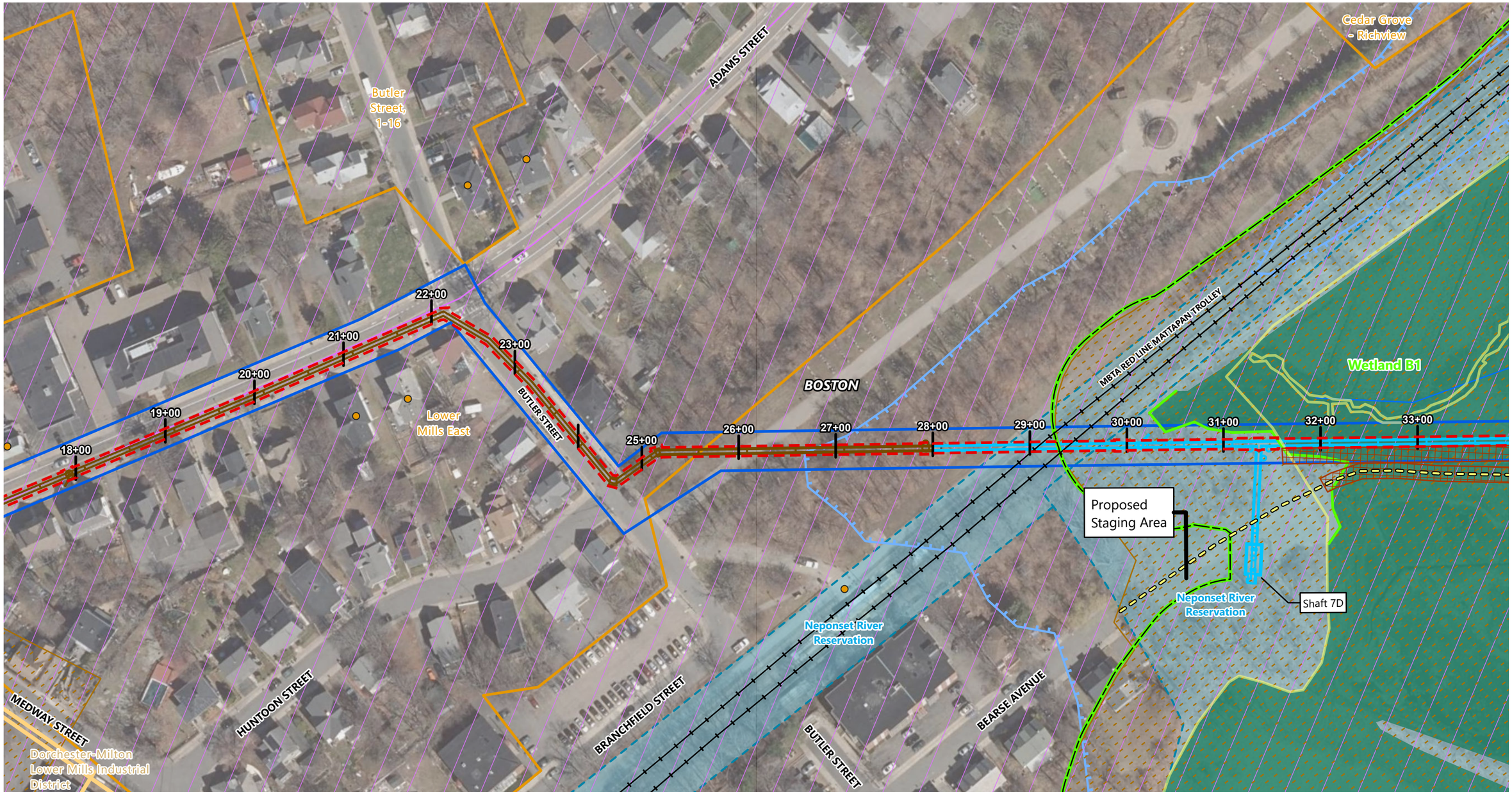

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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Remove & Replace Alternative Section 22 Segments 1-4

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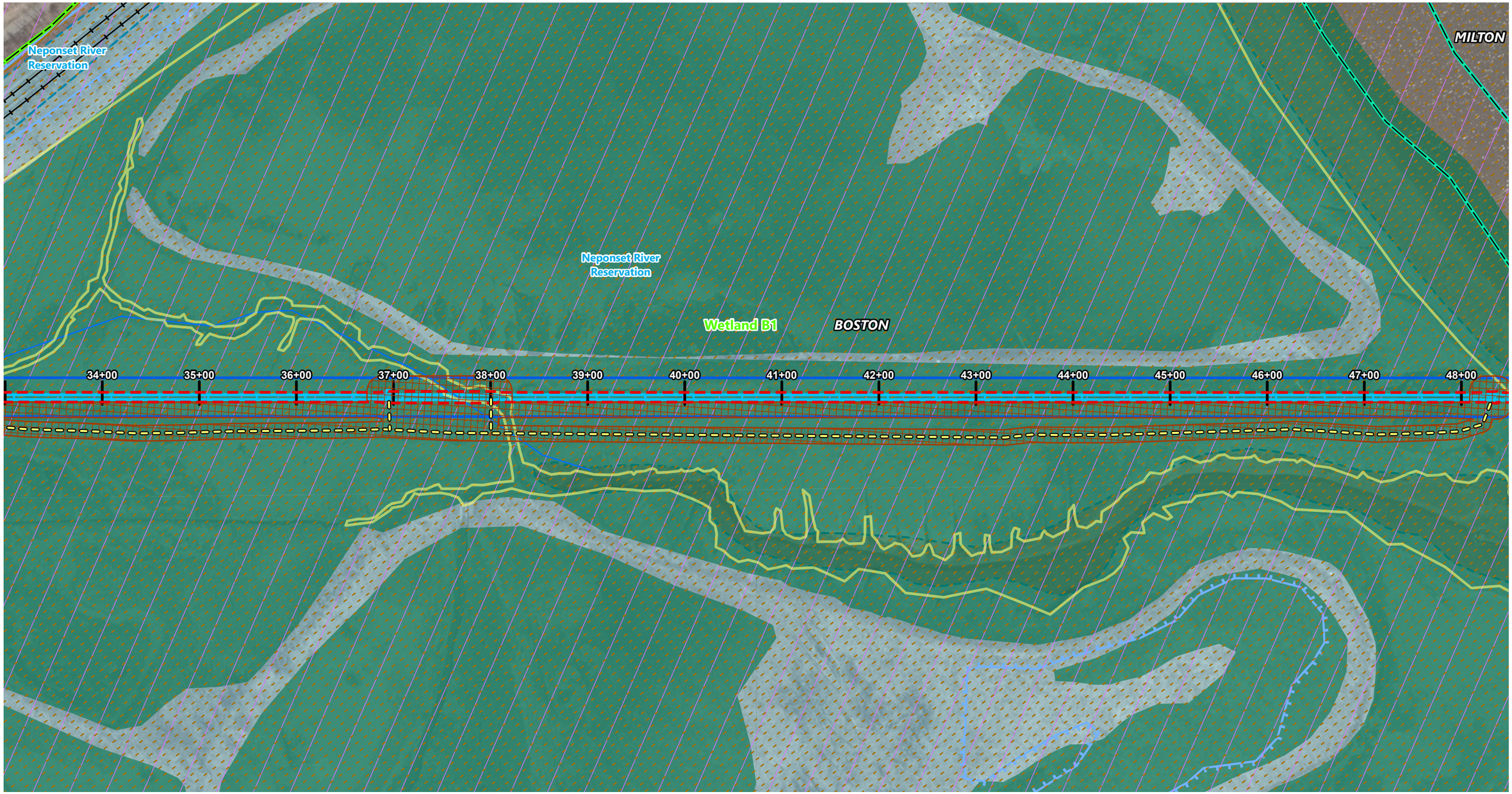
Source: VHB, MassGIS, Black & Veatch, MWRA



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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Remove & Replace Alternative Section 22 Segments 1-4

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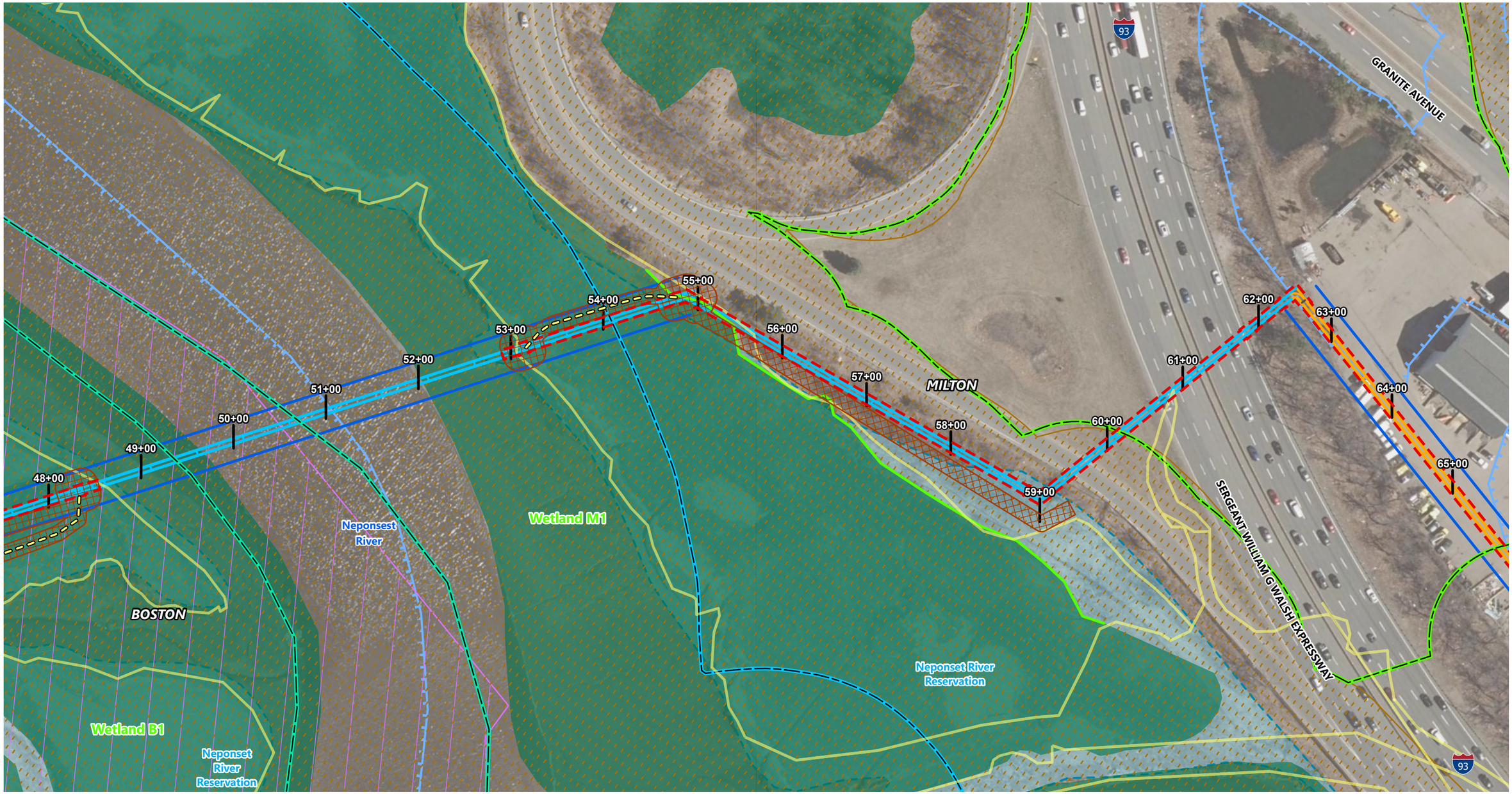
Source: VHB, MassGIS, Black & Veatch, MWRA



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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Remove & Replace Alternative Section 22 Segments 1-4

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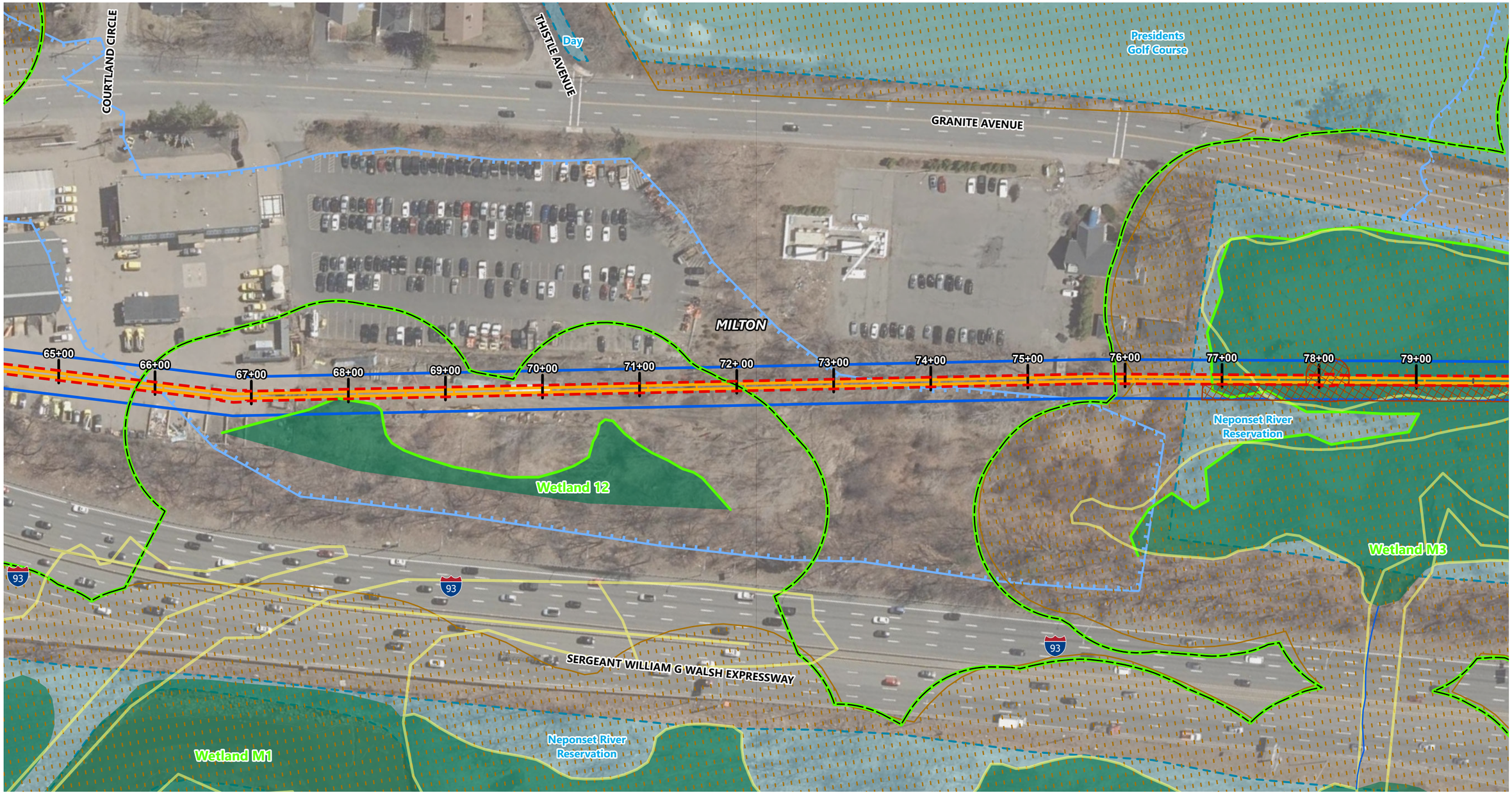

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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Remove & Replace Alternative Section 22 Segments 1-4

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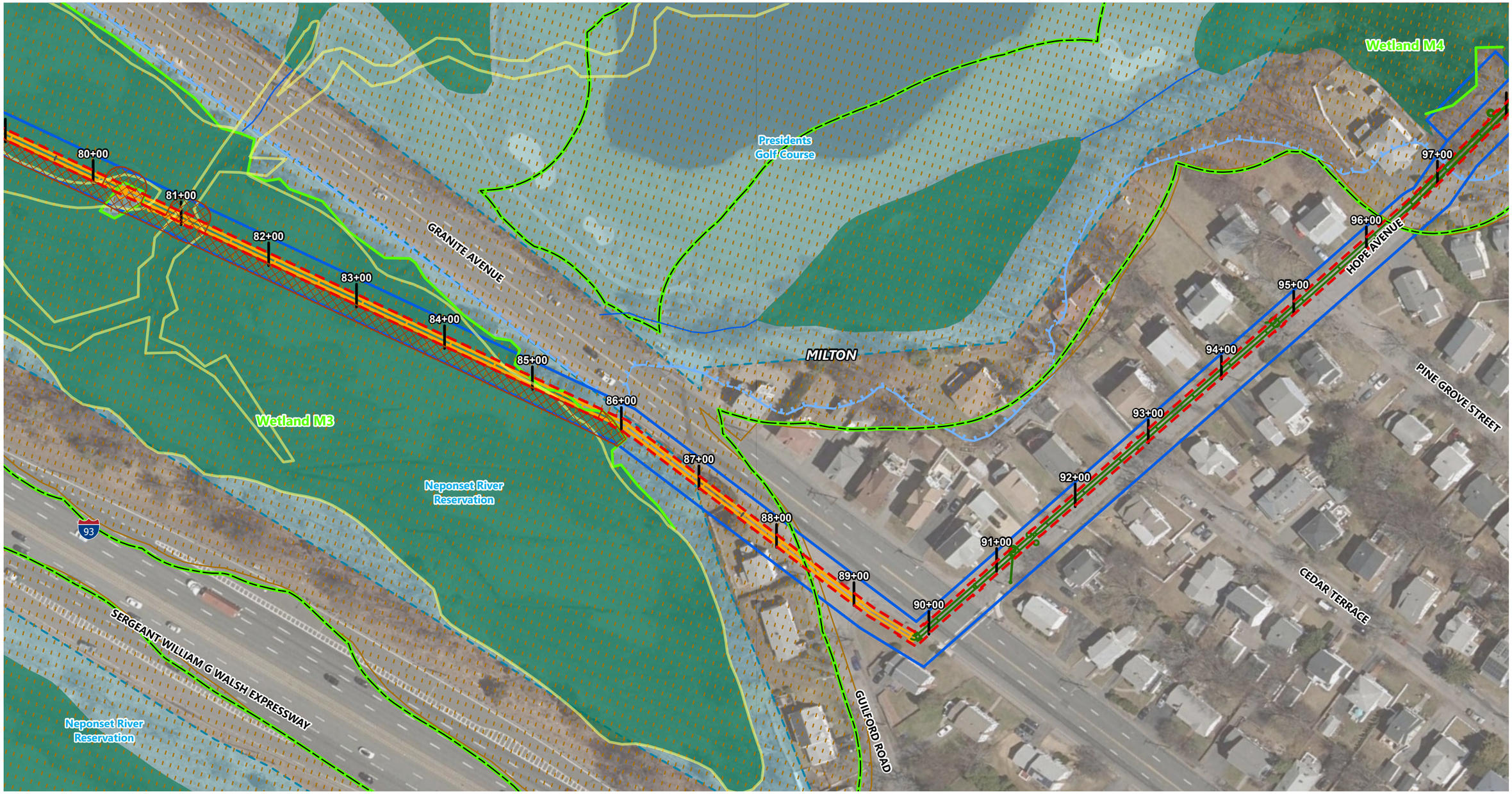

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Existing Resource Mapping for Remove & Replace Alternative Section 22 Segments 1-4

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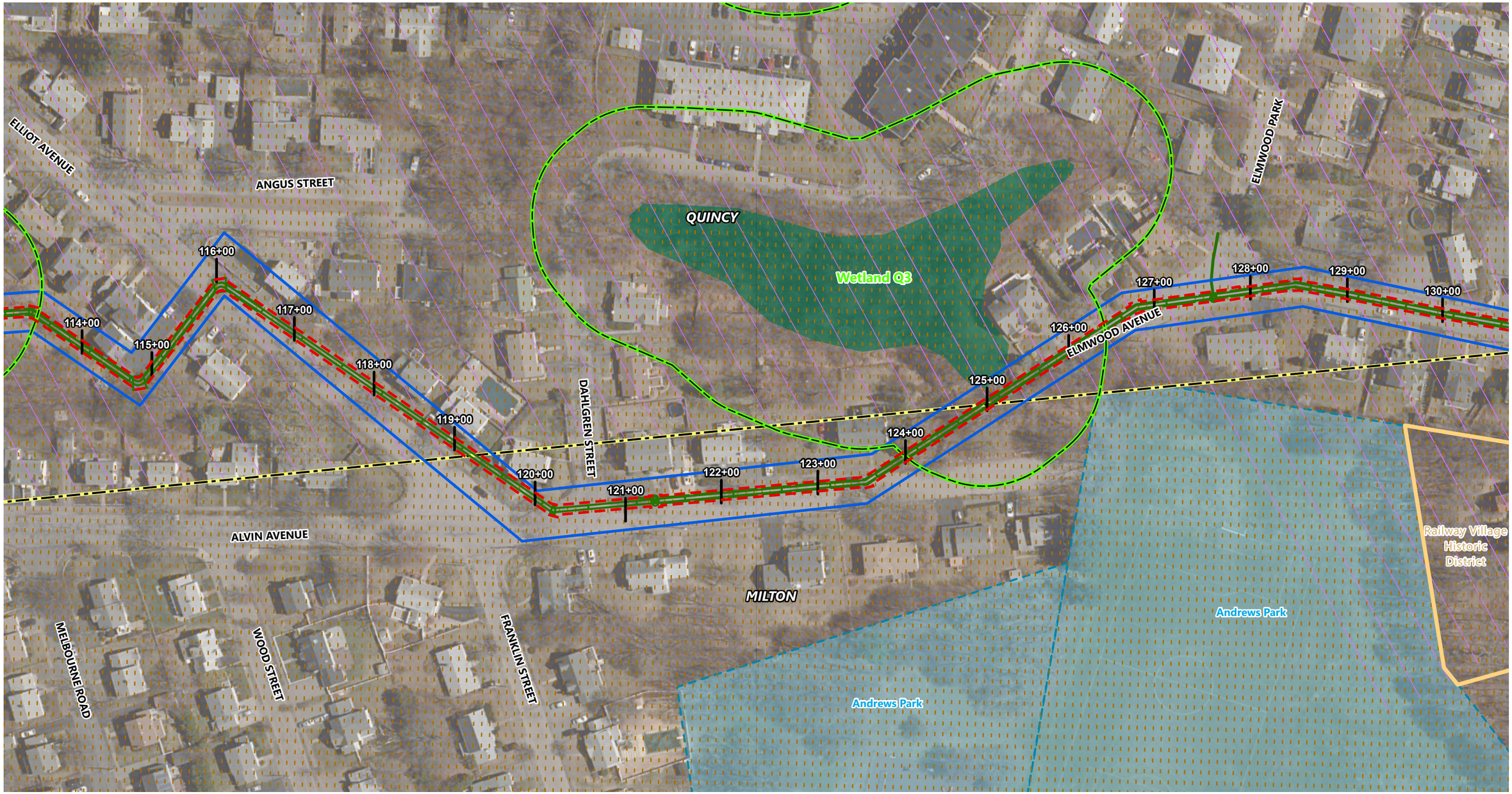

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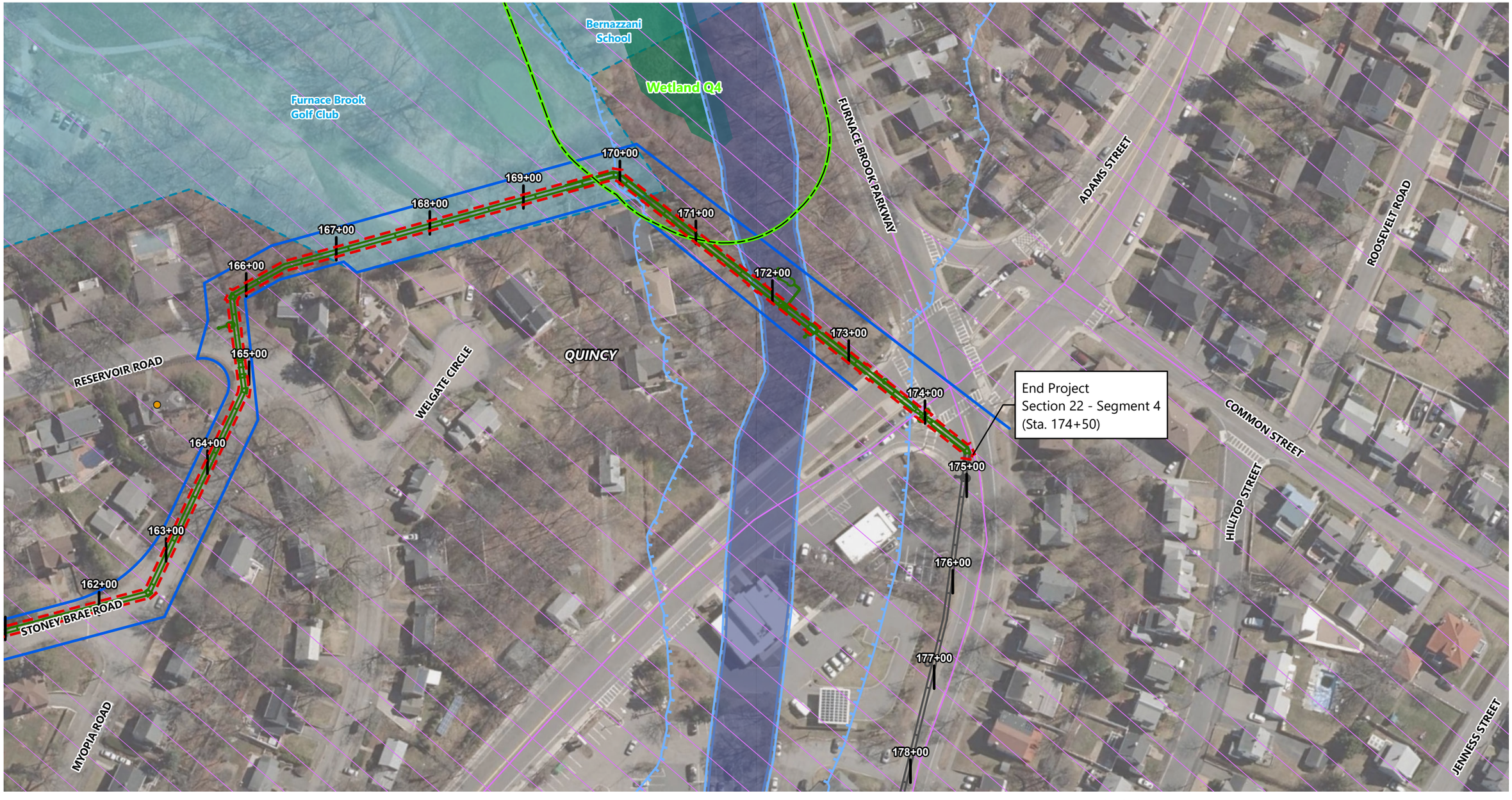

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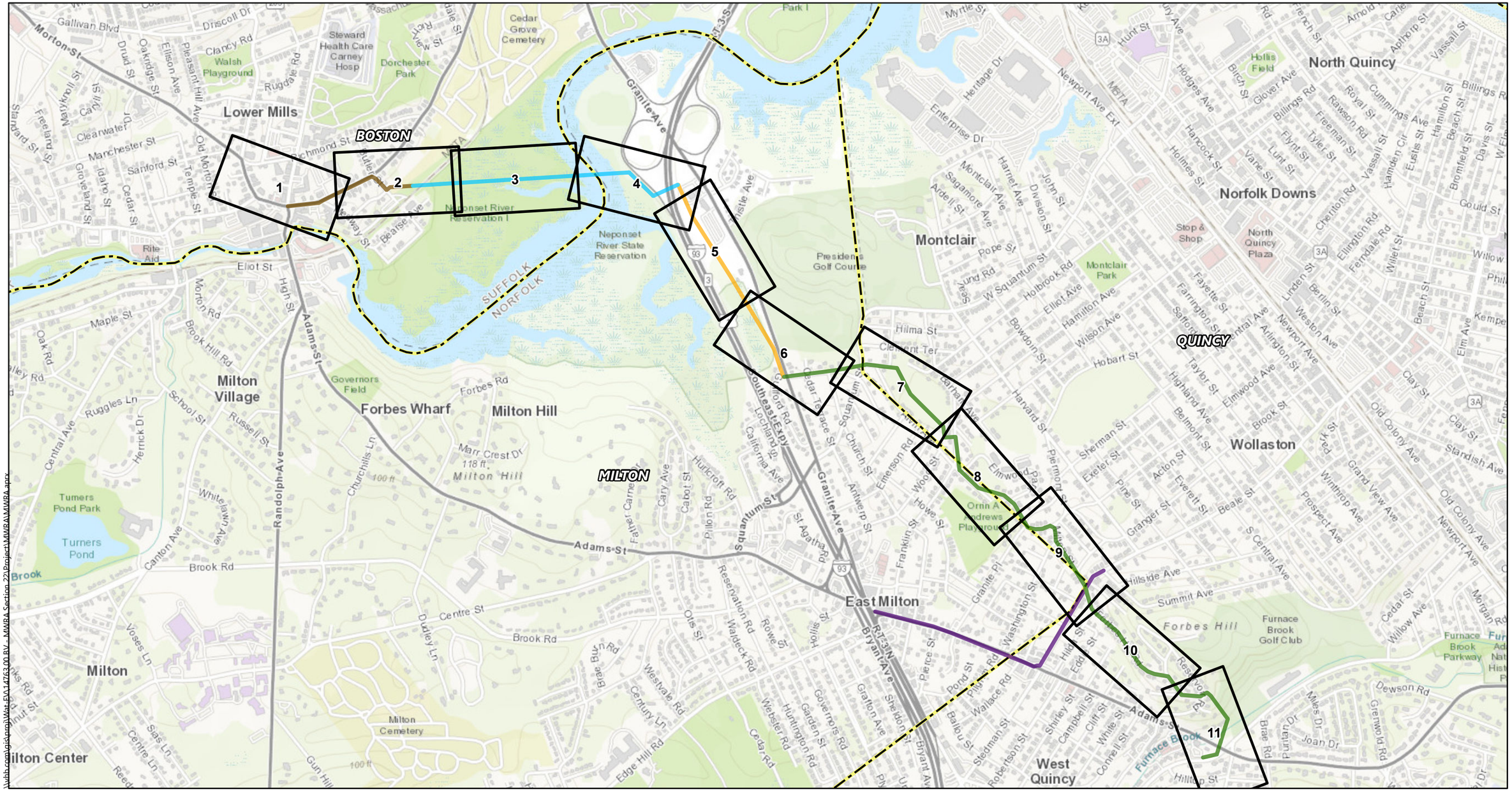
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Remove & Replace Alternative Section 22 Segments 1-4

Source: VHB, MassGIS, Black & Veatch, MWRA



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Project Segment
- Section 22 Segment 1
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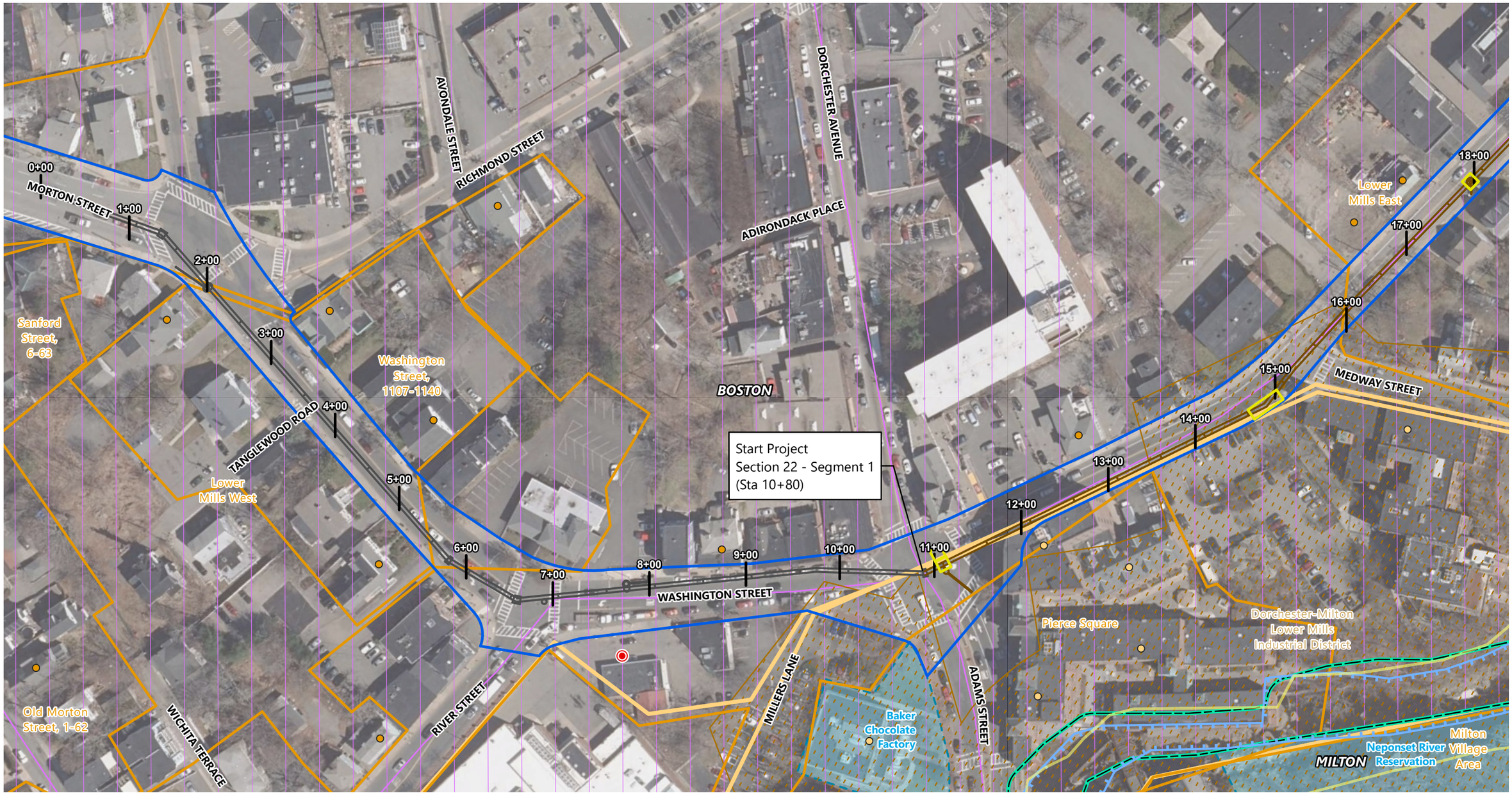
- Page Index

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Clean & Line Alternative Section 22 Segments 1-4 Key Plan

Source: VHB, MassGIS, Black & Veatch, MWRA



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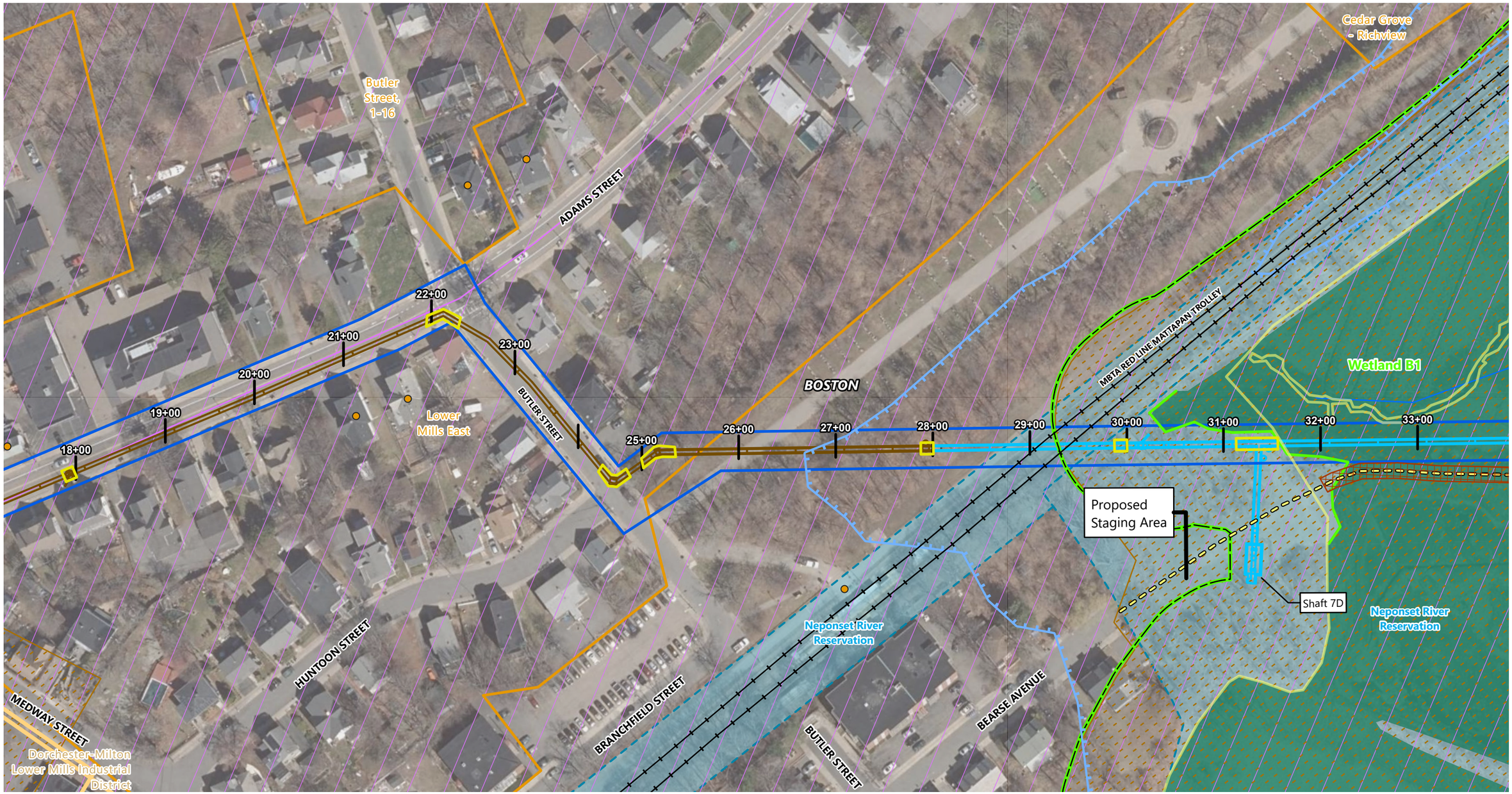
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Clean & Line Alternative Section 22 Segments 1-4
Page 1 of 11
Source: VHB, MassGIS, Black & Veatch, MWRA



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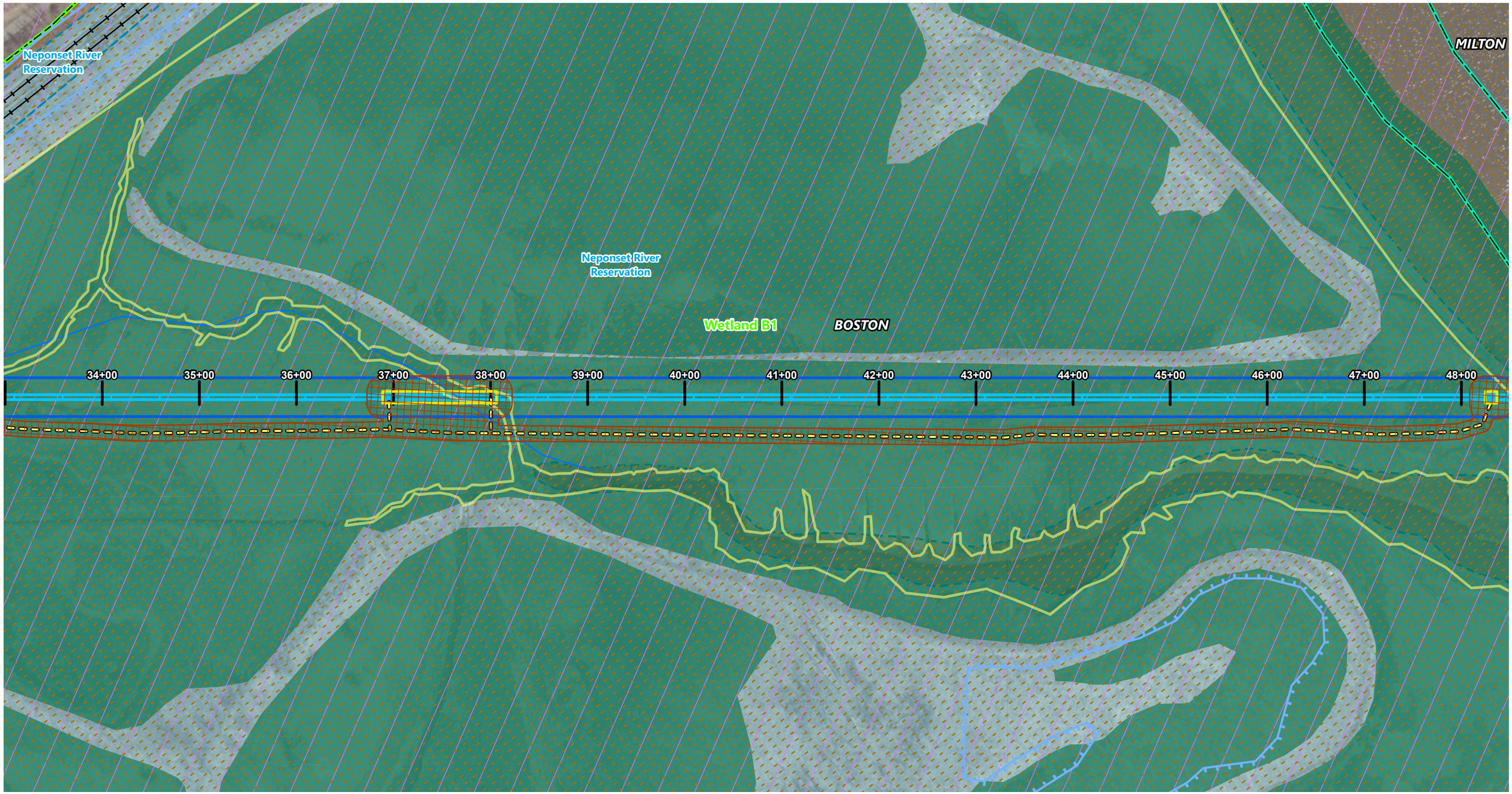

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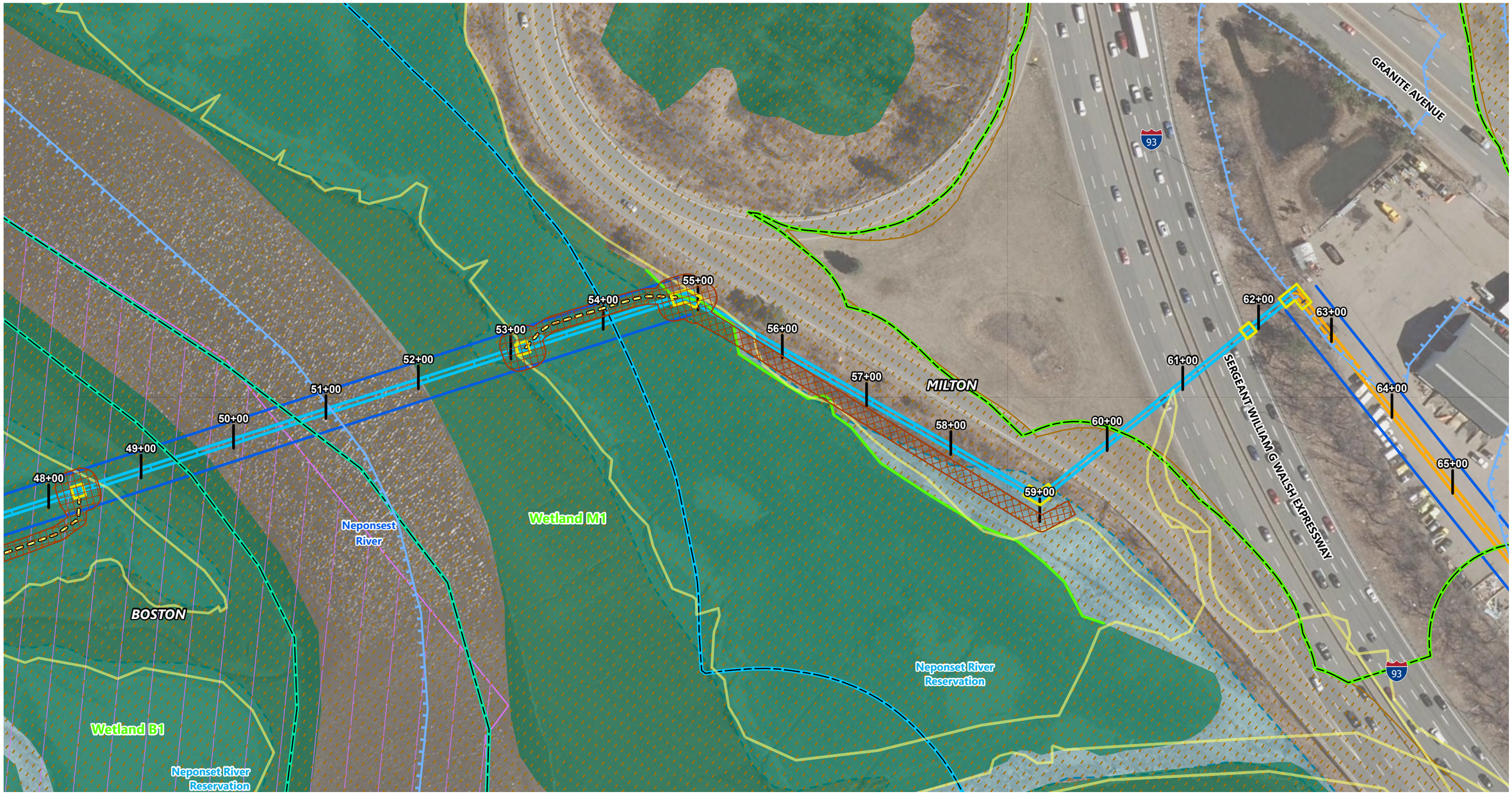

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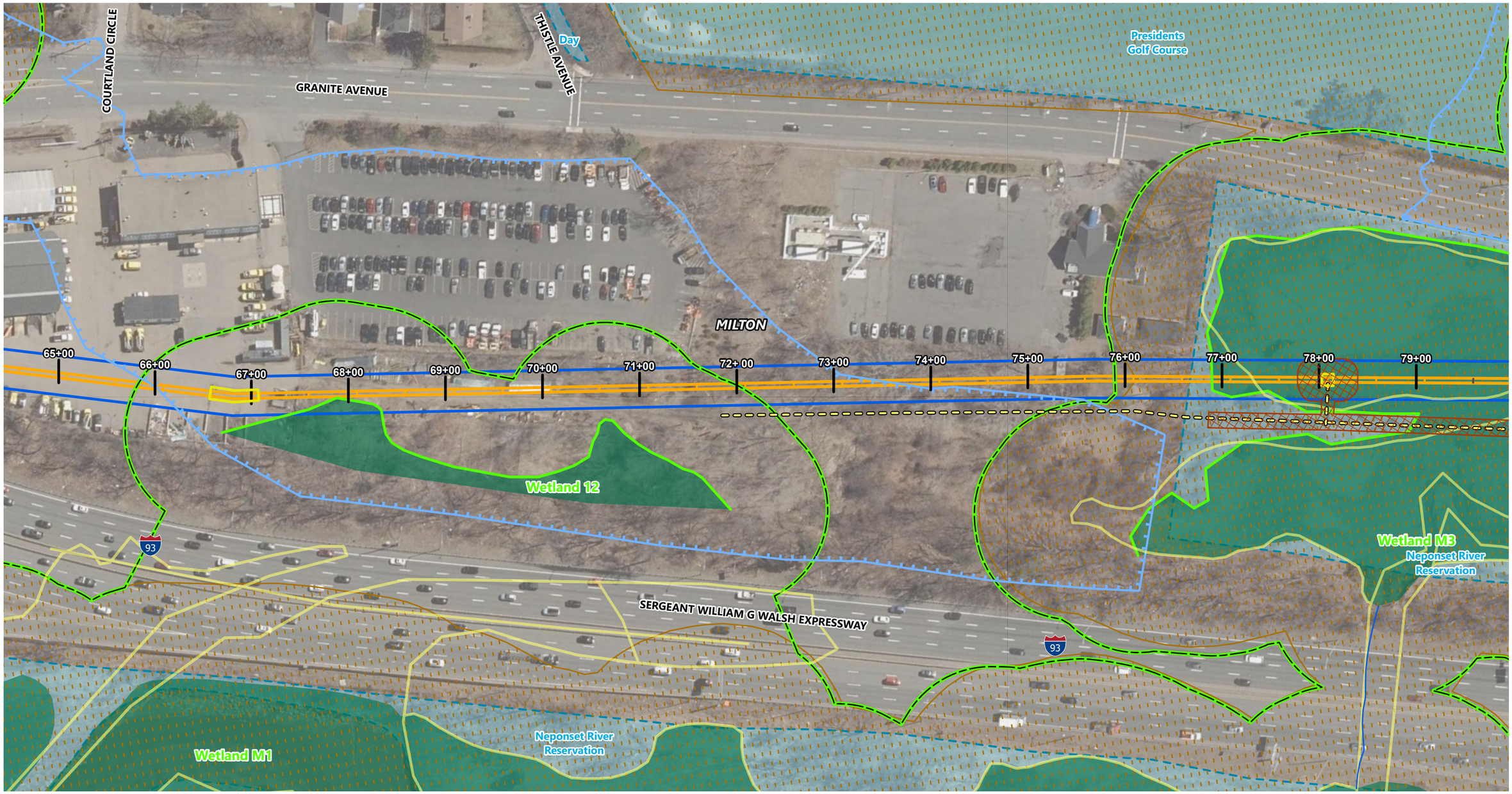

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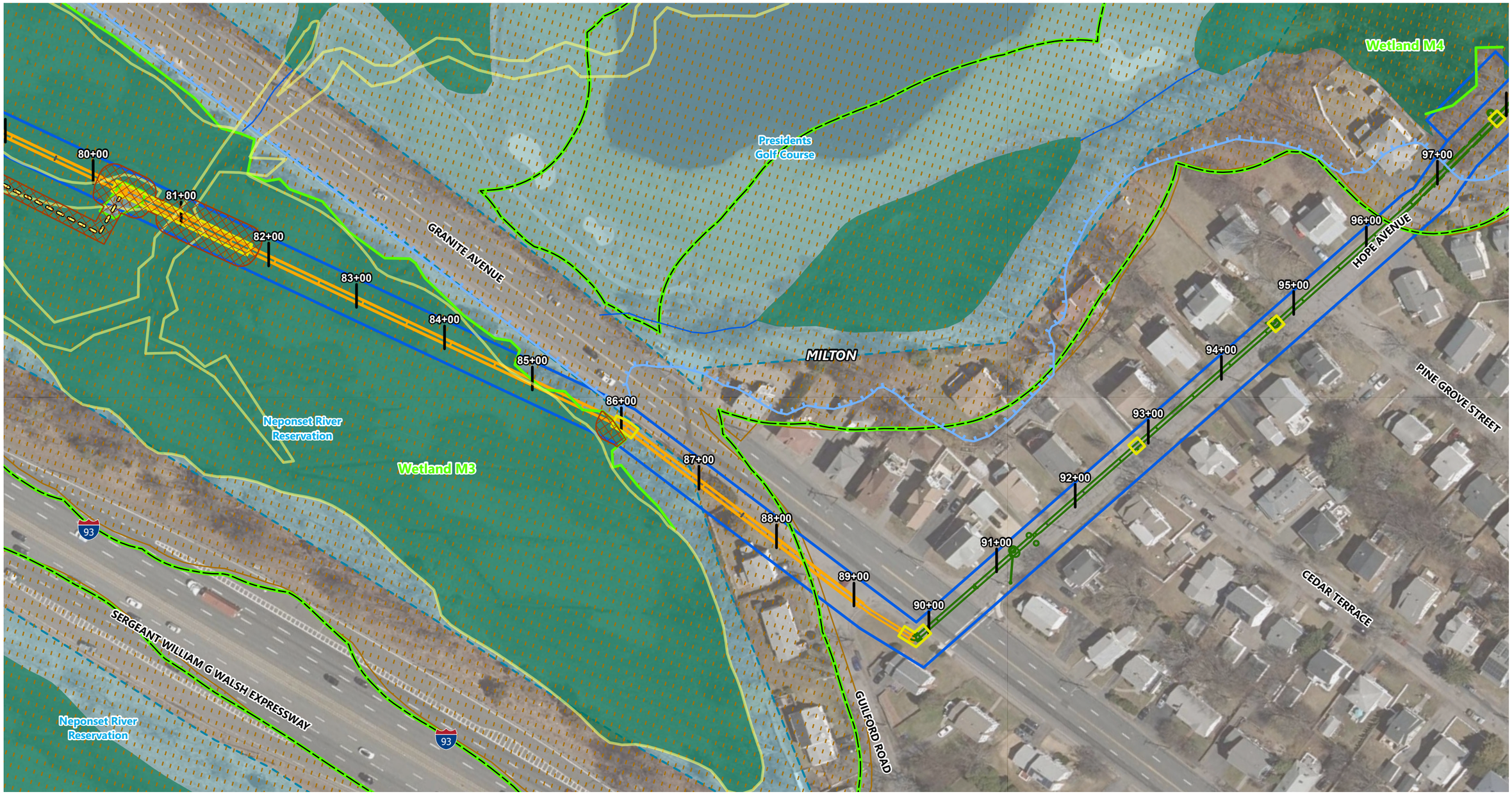

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Existing Resource Mapping for Clean & Line Alternative
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Existing Resource Mapping for Clean & Line Alternative Section 22 Segments 1-4

Source: VHB, MassGIS, Black & Veatch, MWRA

0 50 100 200 Feet

- Section 22 Easement
- Section 22 Segment 1
- Section 22 Segment 2
- Section 22 Segment 3
- Section 22 Segment 4
- Section 21 Pipeline
- Pit Access (12x12)
- Temporary Construction Matting
- Access Road
- Protected and Recreational Open Space
- 100-Year Floodplain
- Areas of Critical Environmental Concern
- Environmental Justice
- FEMA Regulatory Floodway
- MHC Inventoried Property
- National Register of Historic Places
- MHC-Inventoried Area
- Nat'l Register of Historic Places
- Delineated Wetland Edge
- Wetlands
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- MassDEP AUL Sites
- Chapter 91 Jurisdiction
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- Railroad
- Town Boundary

Resource not within Map Extent:
- Outstanding Resource Waters
- Zone I Wellhead Protection Area
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- DEP BWP Major Facilities Large Quantity Generators of Hazardous Waste (EPA-RCRA Regulated and MA Regulated)
- MADEP Tier Classified Chapter 21

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Clean & Line Alternative
Section 22 Segments 1-4
Page 9 of 11
Source: VHB, MassGIS, Black & Veatch, MWRA

0 50 100 200 Feet

- Section 22 Easement
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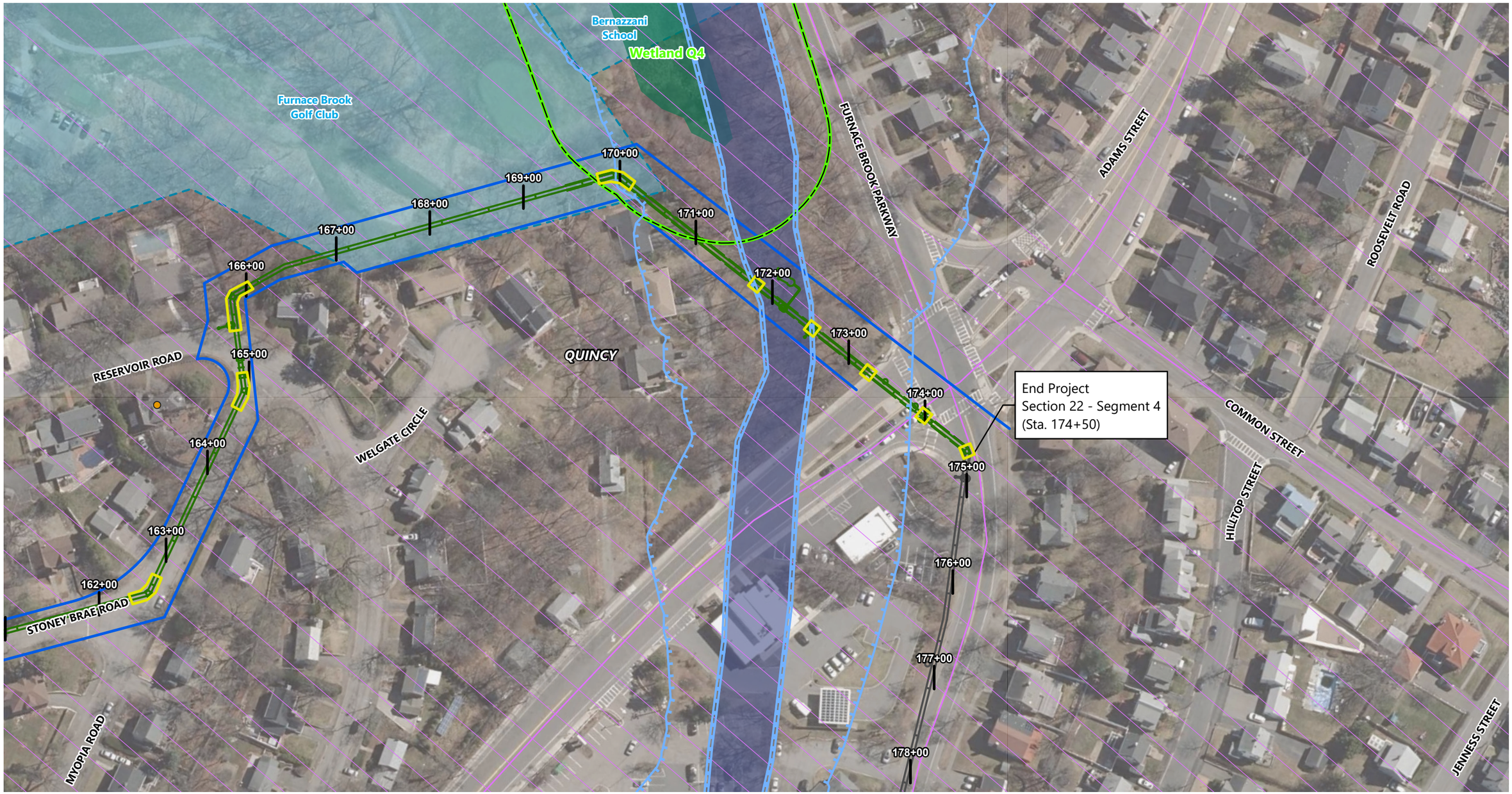
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Clean & Line Alternative Section 22 Segments 1-4

Source: VHB, MassGIS, Black & Veatch, MWRA



0 50 100 200 Feet

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- Section 22 Segment 3
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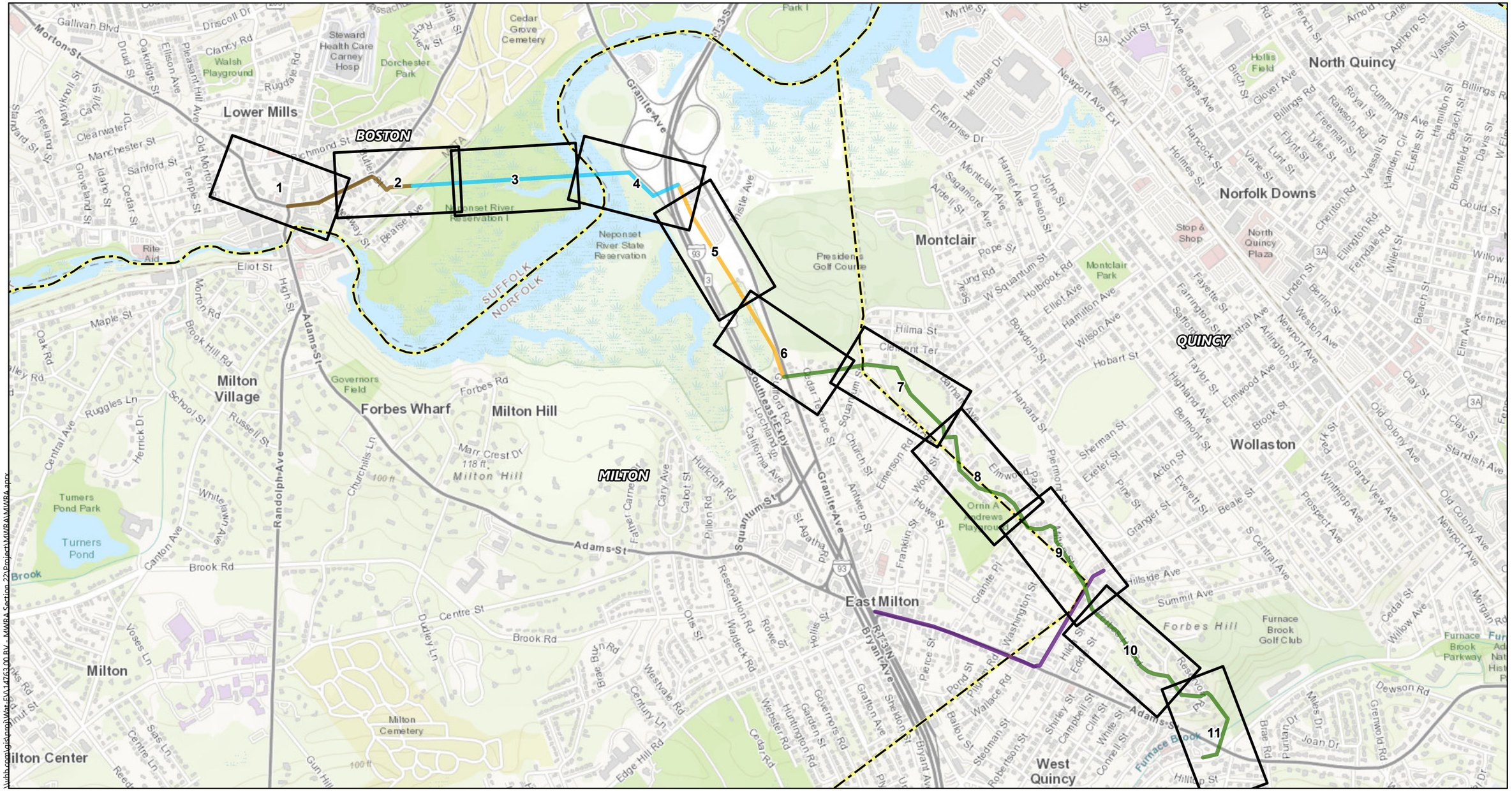
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Clean & Line Alternative
Section 22 Segments 1-4
Page 11 of 11
Source: VHB, MassGIS, Black & Veatch, MWRA



0 600 1200 2400 Feet

Project Segment
- Section 22 Segment 1
- Section 22 Segment 2
- Section 22 Segment 3
- Section 22 Segment 4
- Section 21 Pipeline
- Page Index

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Slipline Alternative
Section 22 Segments 1-4
Key Plan
Source: VHB, MassGIS, Black & Veatch, MWRA

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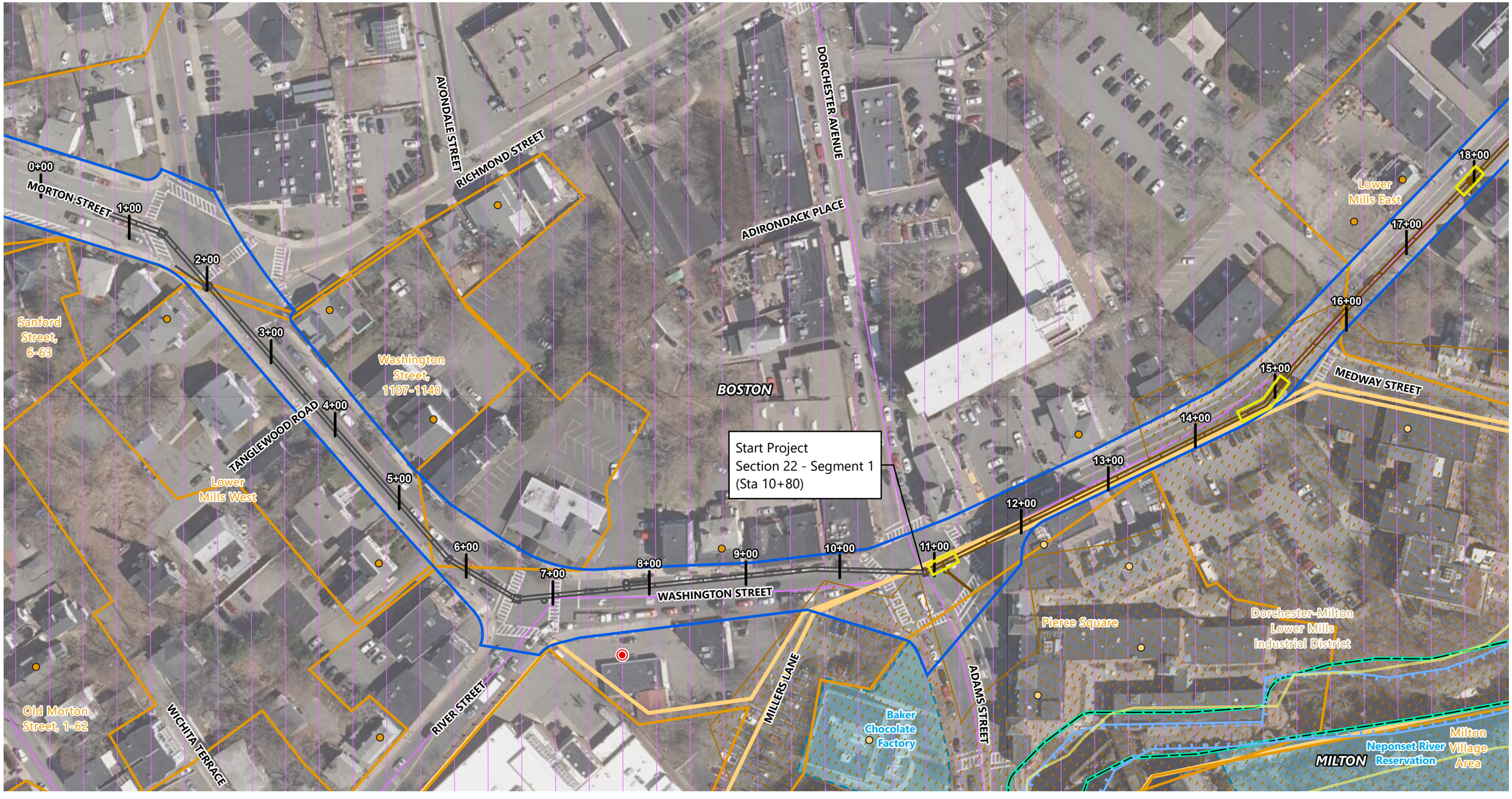

0 50 100 200 Feet

- Section 22 Easement
- Section 22 Segment 1
- Section 22 Segment 2
- Section 22 Segment 3
- Section 22 Segment 4
- Section 21 Pipeline
- Pipe Access Pit (12x30)
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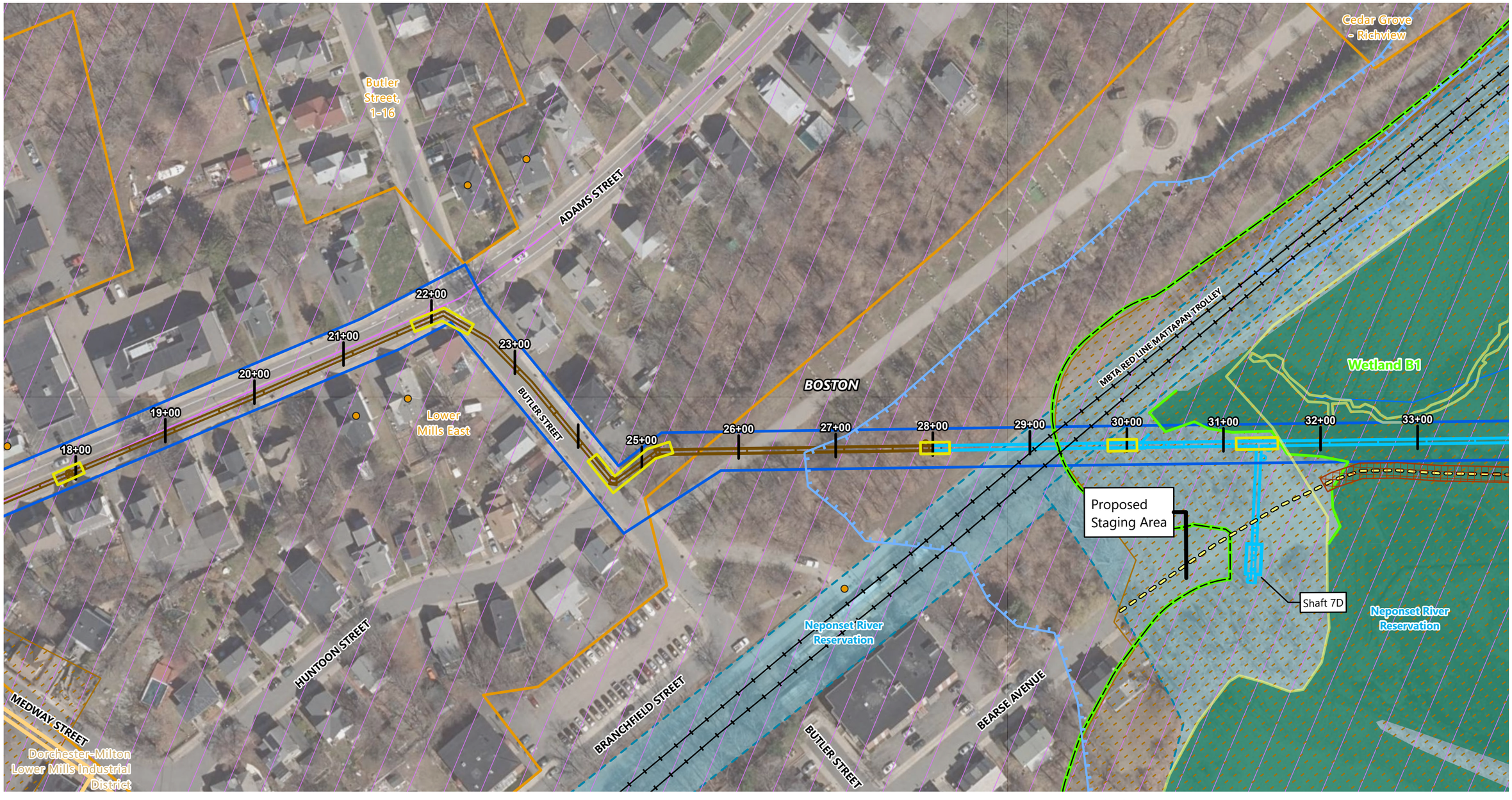
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Slipline Alternative
Section 22 Segments 1-4
Page 1 of 11
Source: VHB, MassGIS, Black & Veatch, MWRA



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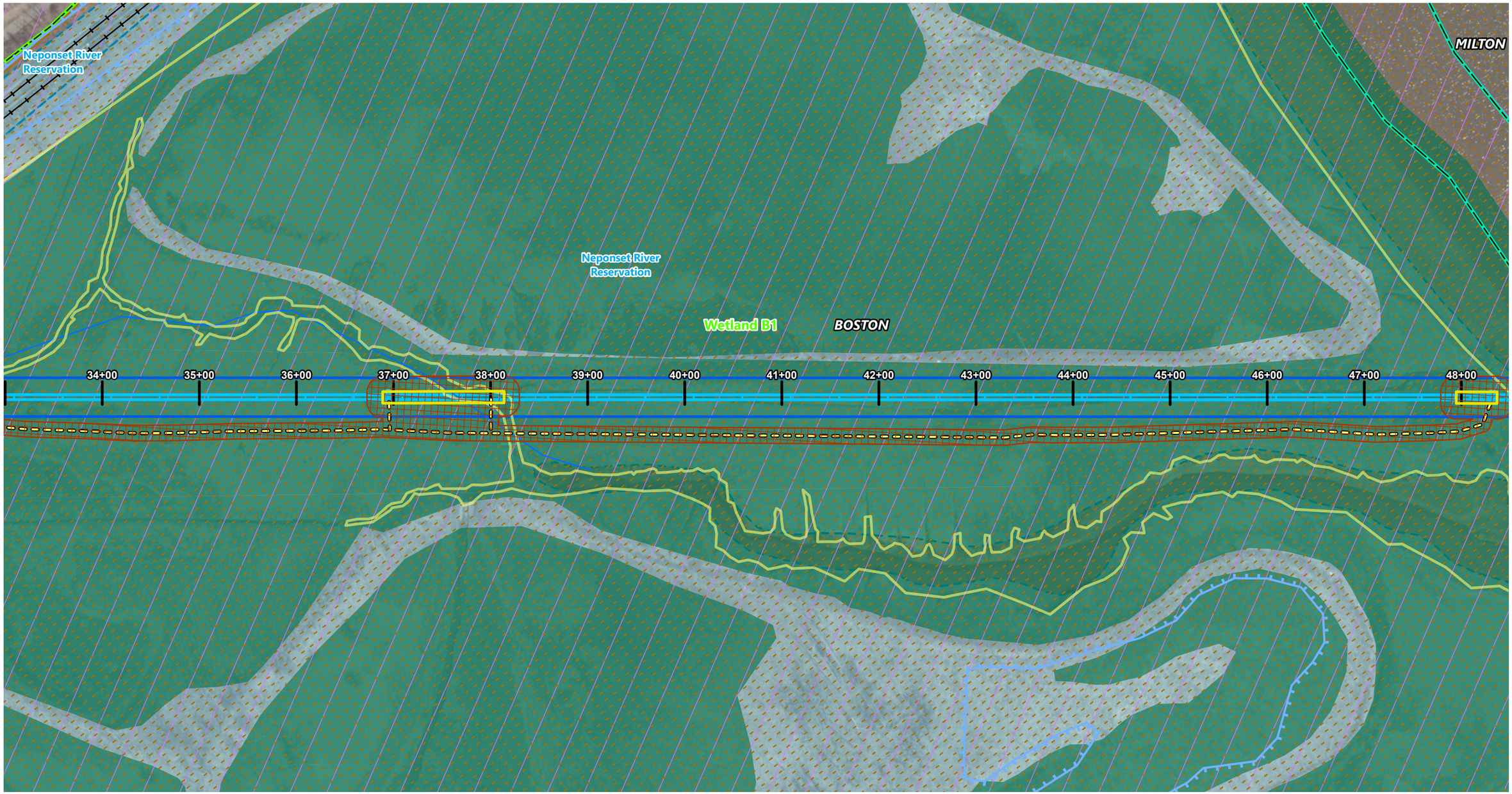
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Slipline Alternative
Section 22 Segments 1-4
Page 2 of 11
Source: VHB, MassGIS, Black & Veatch, MWRA



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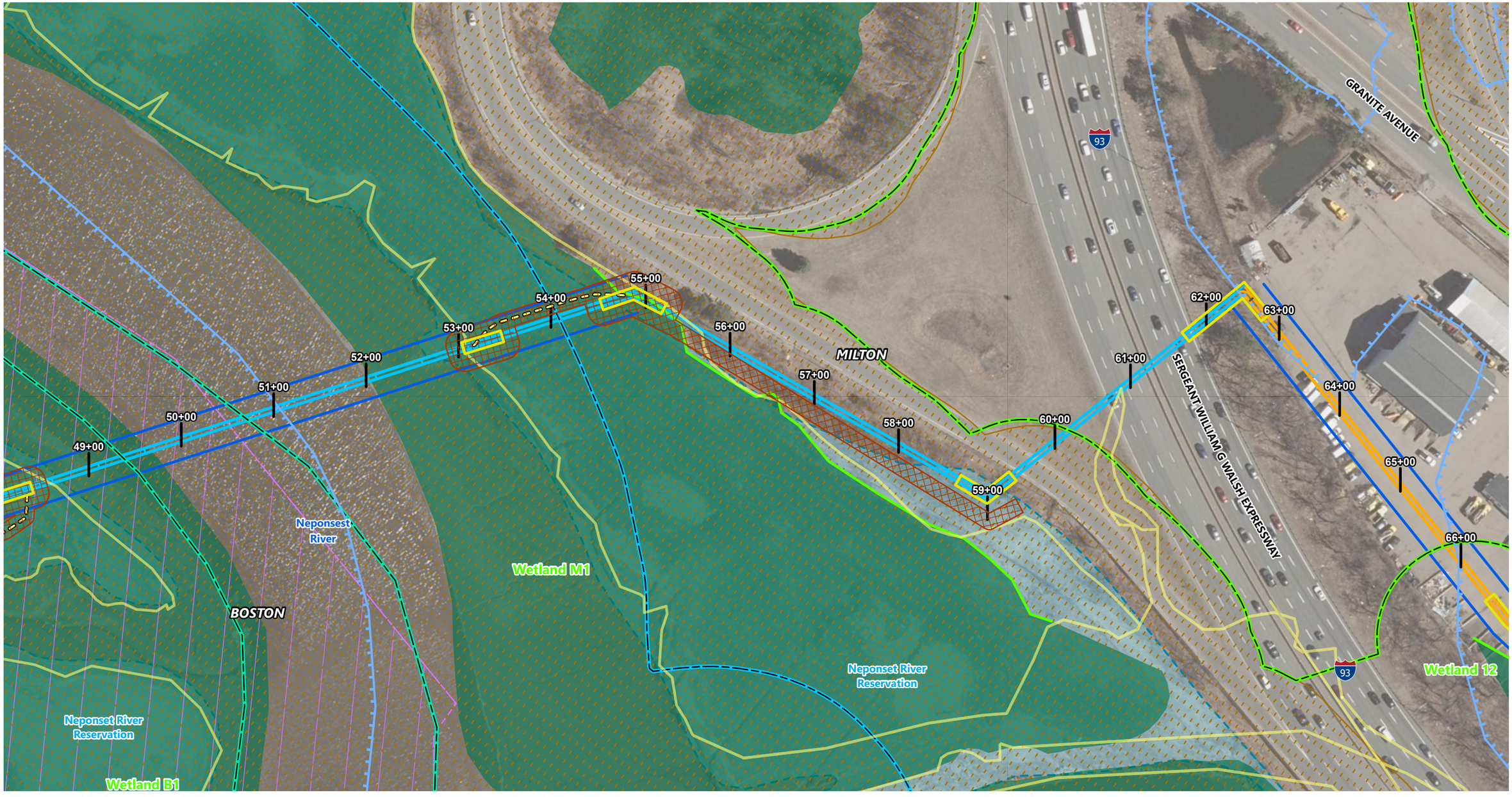
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Slipline Alternative
Section 22 Segments 1-4
Page 3 of 11
Source: VHB, MassGIS, Black & Veatch, MWRA



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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Slipline Alternative
Section 22 Segments 1-4
Page 4 of 11
Source: VHB, MassGIS, Black & Veatch, MWRA

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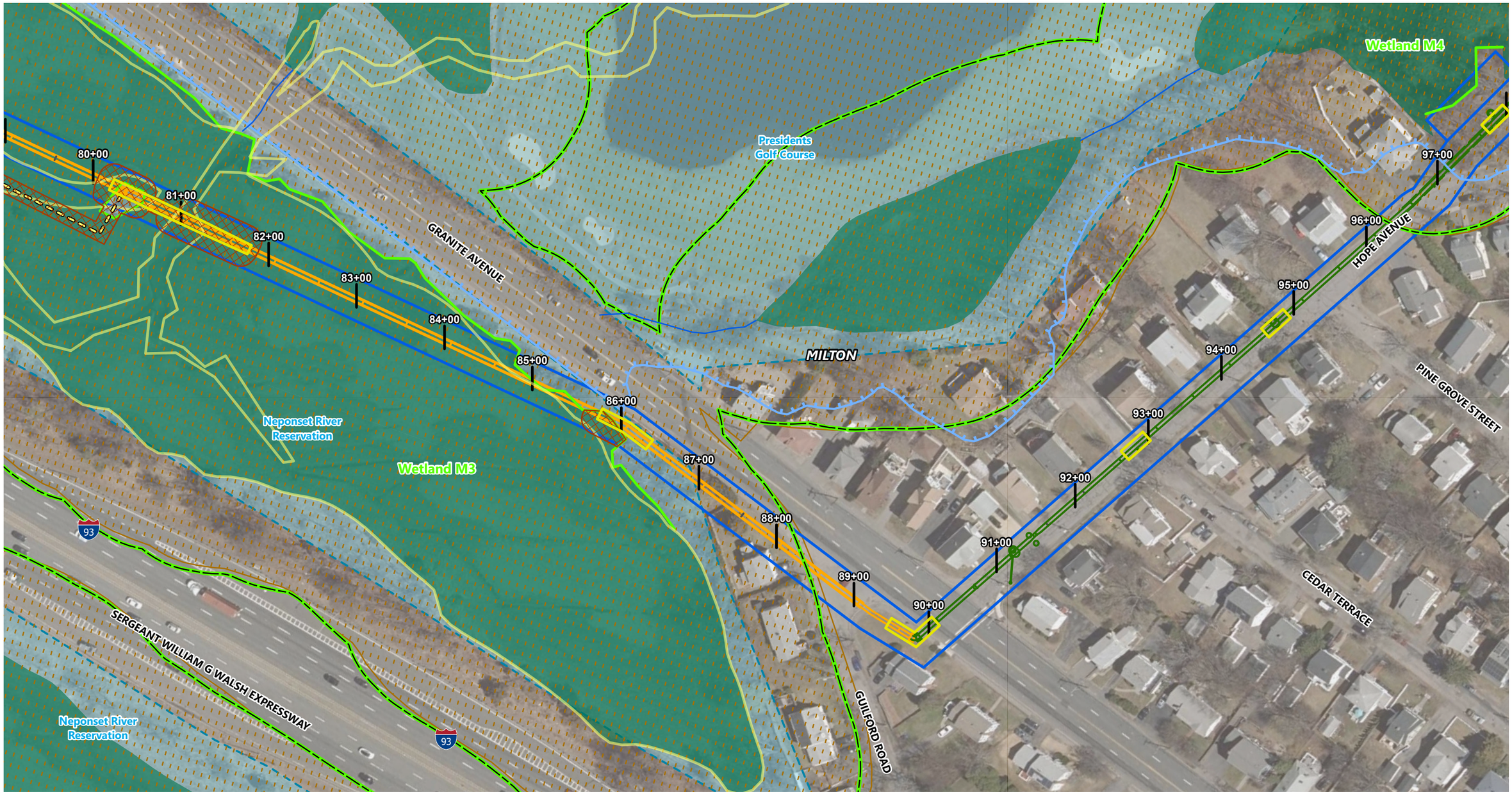
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Slipline Alternative
Section 22 Segments 1-4
Page 5 of 11
Source: VHB, MassGIS, Black & Veatch, MWRA



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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Slipline Alternative
Section 22 Segments 1-4
Page 6 of 11
Source: VHB, MassGIS, Black & Veatch, MWRA

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

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Existing Resource Mapping for Slipline Alternative
Section 22 Segments 1-4
Page 7 of 11

Source: VHB, MassGIS, Black & Veatch, MWRA

0 50 100 200 Feet

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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Slipline Alternative
Section 22 Segments 1-4
Page 8 of 11
Source: VHB, MassGIS, Black & Veatch, MWRA

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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Slipline Alternative
Section 22 Segments 1-4
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Source: VHB, MassGIS, Black & Veatch, MWRA

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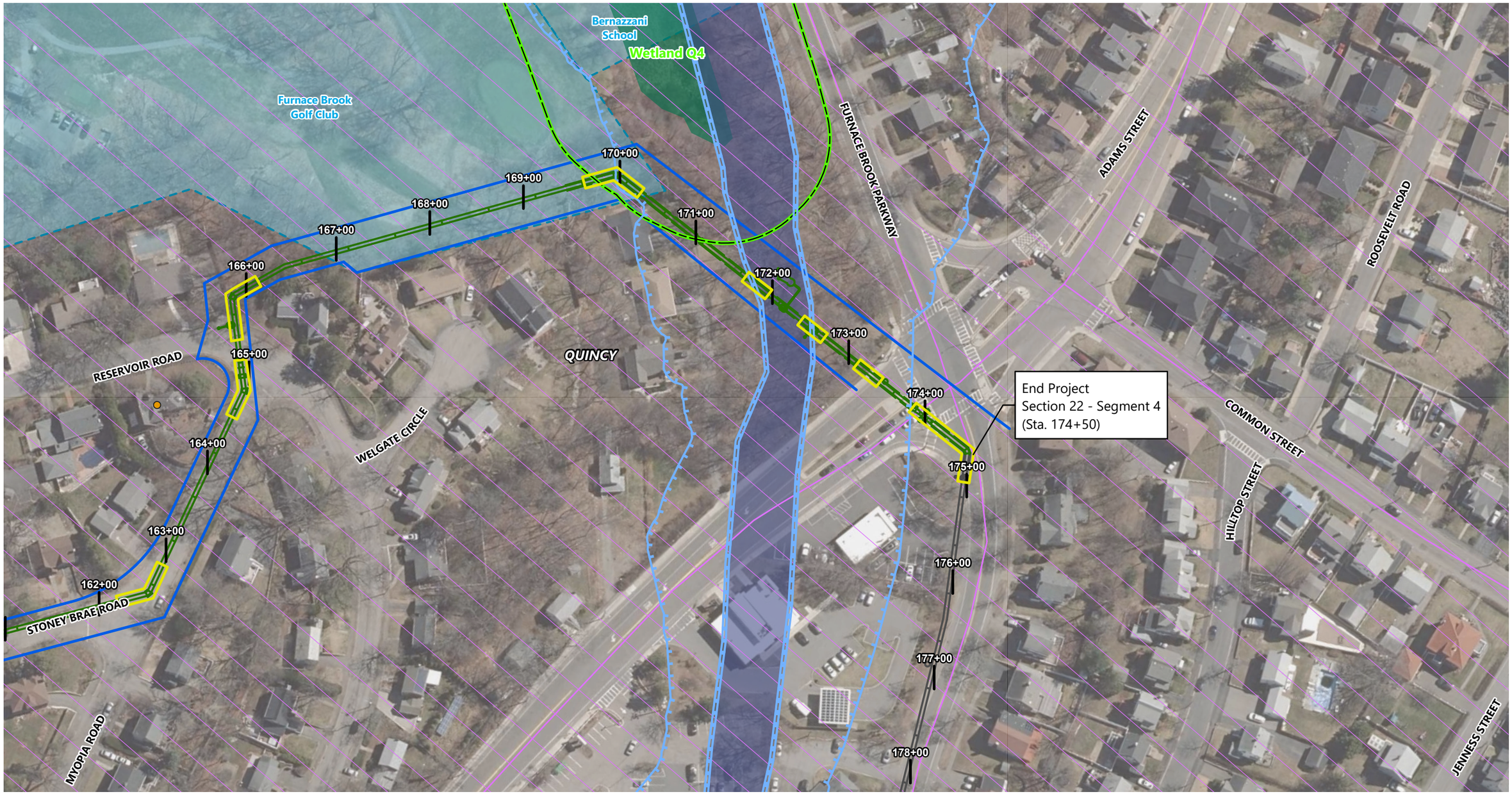
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Slipline Alternative
Section 22 Segments 1-4

Source: VHB, MassGIS, Black & Veatch, MWRA



0 50 100 200 Feet

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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Slipline Alternative
Section 22 Segments 1-4
Page 11 of 11
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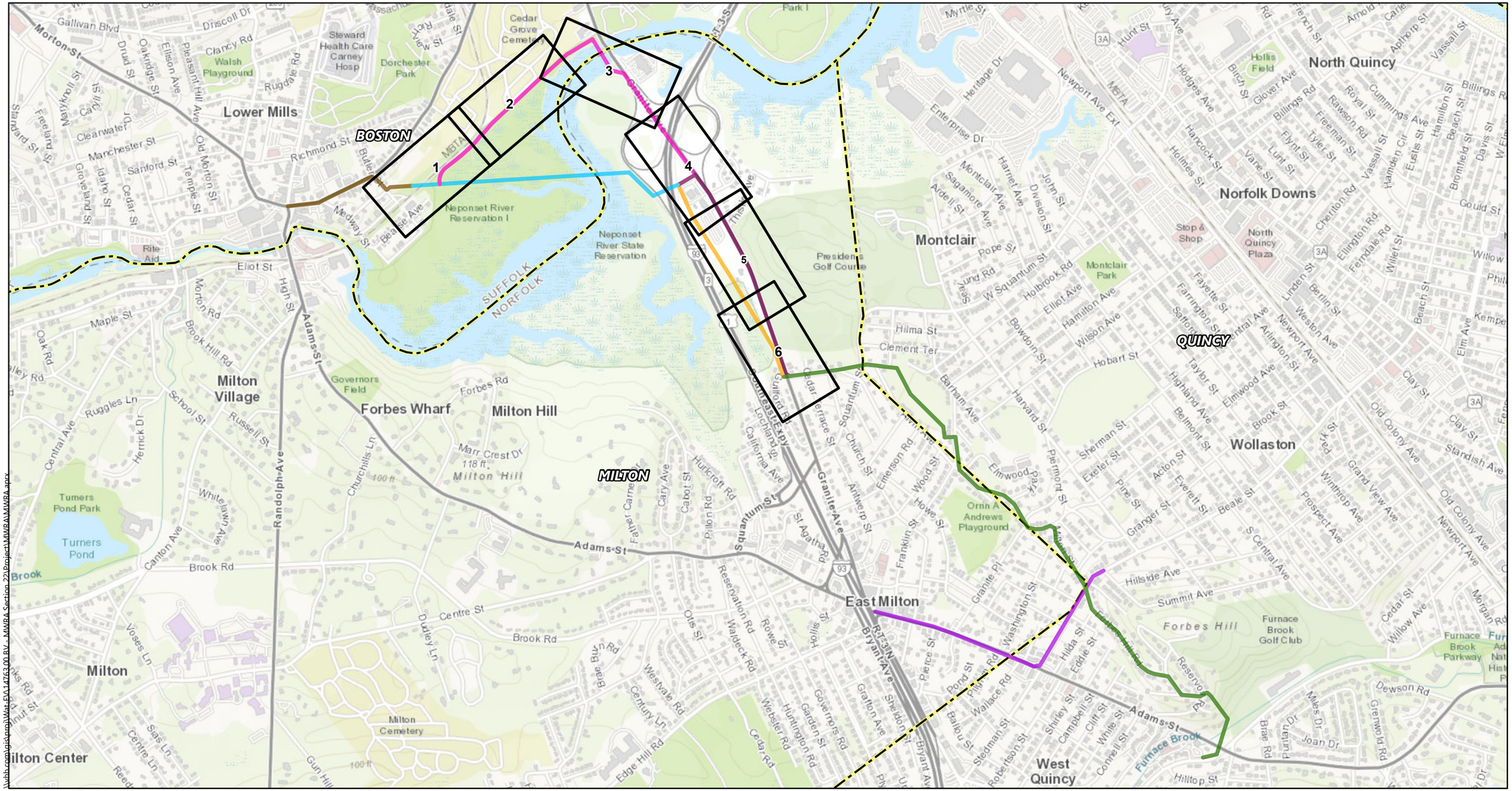

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0 600 1200 2400 Feet

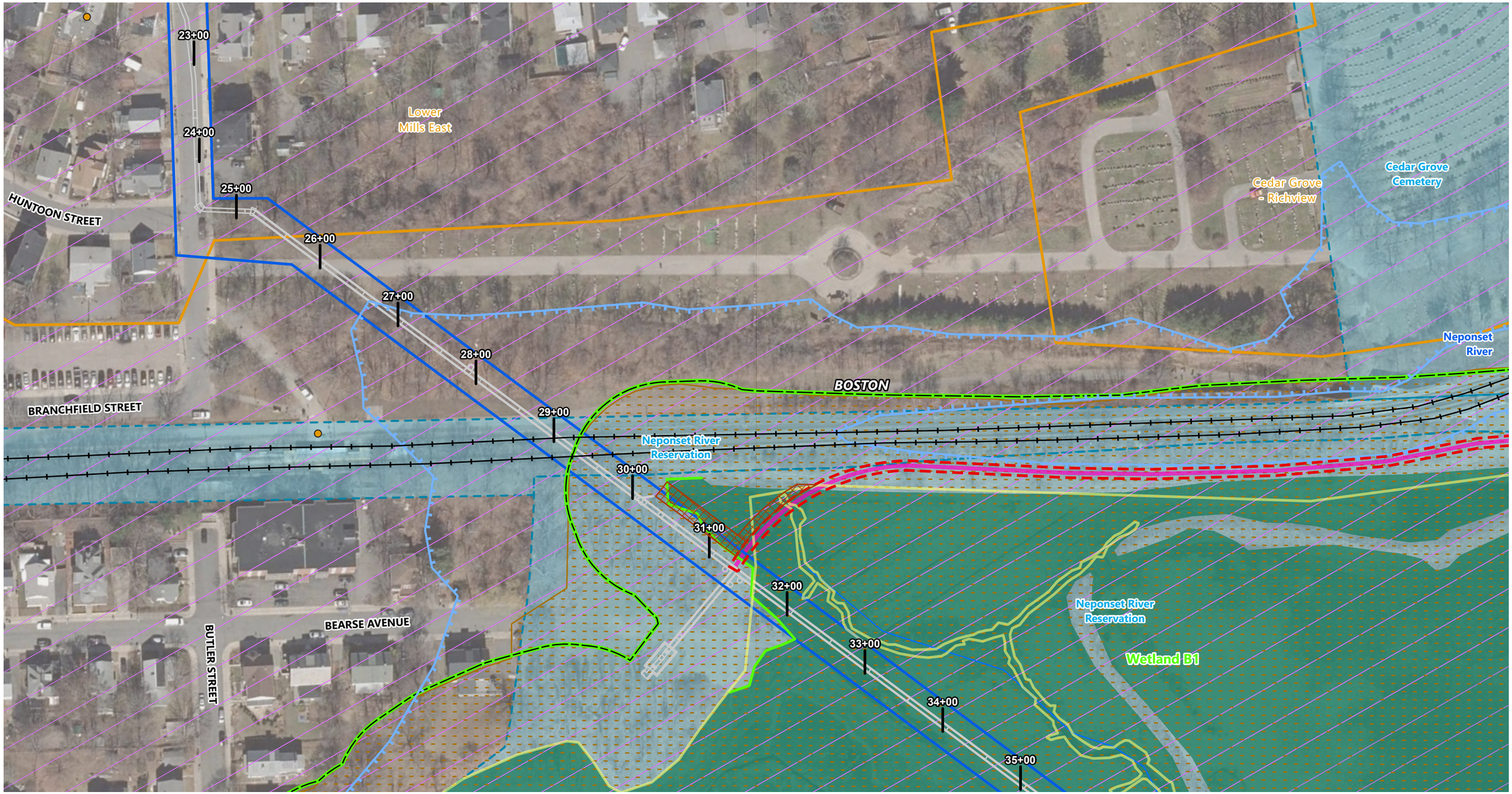
Project Segment

- Section 22 Segment 1
- Section 22 Segment 2
- Section 22 Alt Segment 2A
- Section 22 Segment 3
- Section 22 Alt Segment 3A
- Section 22 Segment 4
- Section 21 Pipeline
- Page Index

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping
Section 22 Alt Segments 2A & 3A
Index Map

Source: VHB, MassGIS, Black & Veatch, ArcGIS Online



0 50 100 200 Feet

- Section 22 Easement
- Section 22 Alt Segment 2A
- Section 22 Alt Segment 3A
- Existing Alignment
- 10-ft Trench
- Temporary Construction Matting
- Jacking Pits
- Protected and Recreational Open Space
- 100-Year Floodplain
- Areas of Critical Environmental Concern
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MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for DCR Bikeway Alternative Section 22 Segments 2A & 3A

Page 1 of 6

Source: VHB, MassGIS, Black & Veatch, MWRA

0 50 100 200 Feet

- Section 22 Easement
- Section 22 Alt Segment 2A
- Section 22 Alt Segment 3A
- Existing Alignment
- 10-ft Trench
- Temporary Construction Matting
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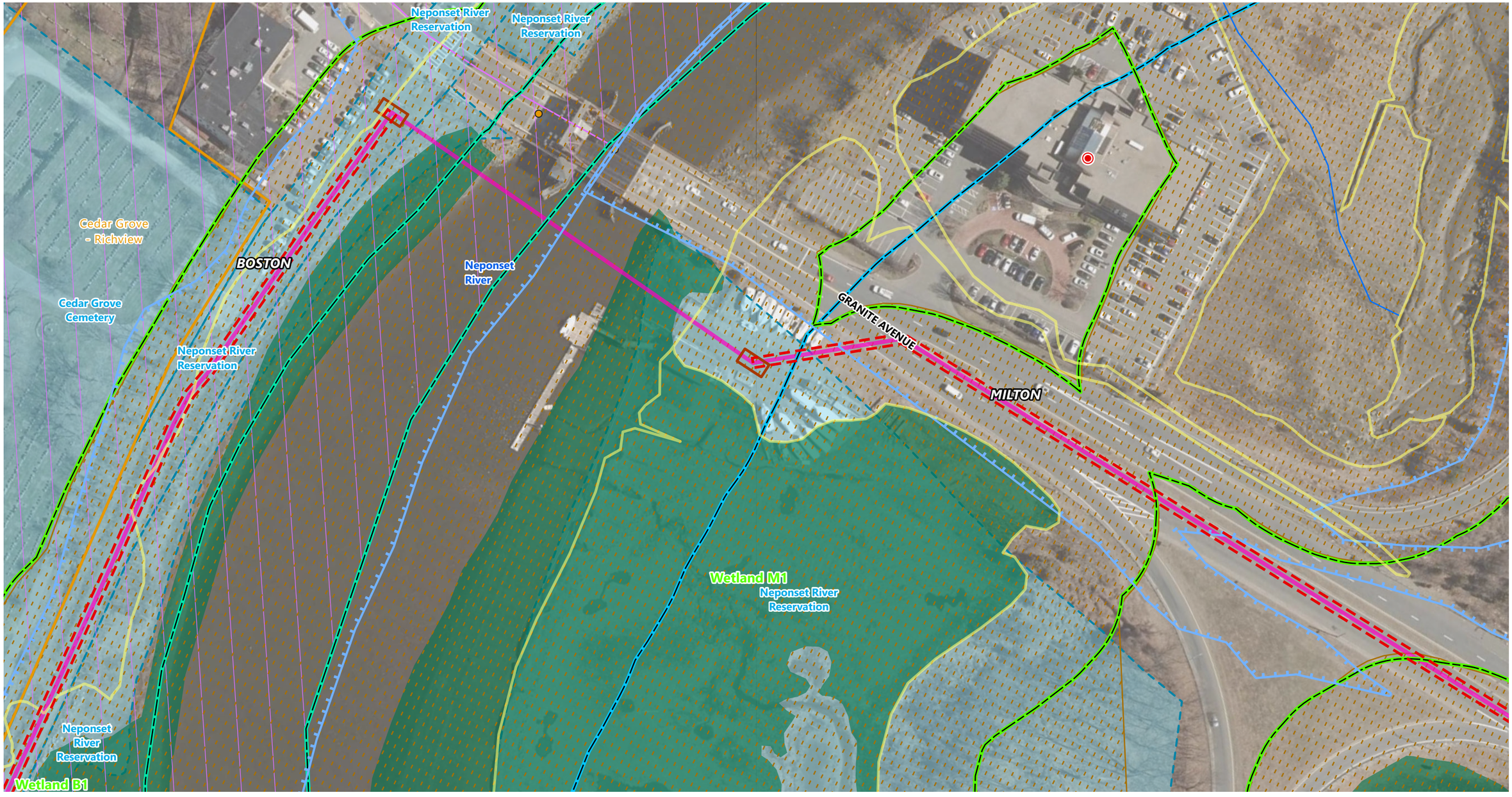
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for DCR Bikeway Alternative Section 22 Segments 2A & 3A

Page 2 of 6

Source: VHB, MassGIS, Black & Veatch, MWRA



0 50 100 200 Feet

- Section 22 Easement
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- Existing Alignment
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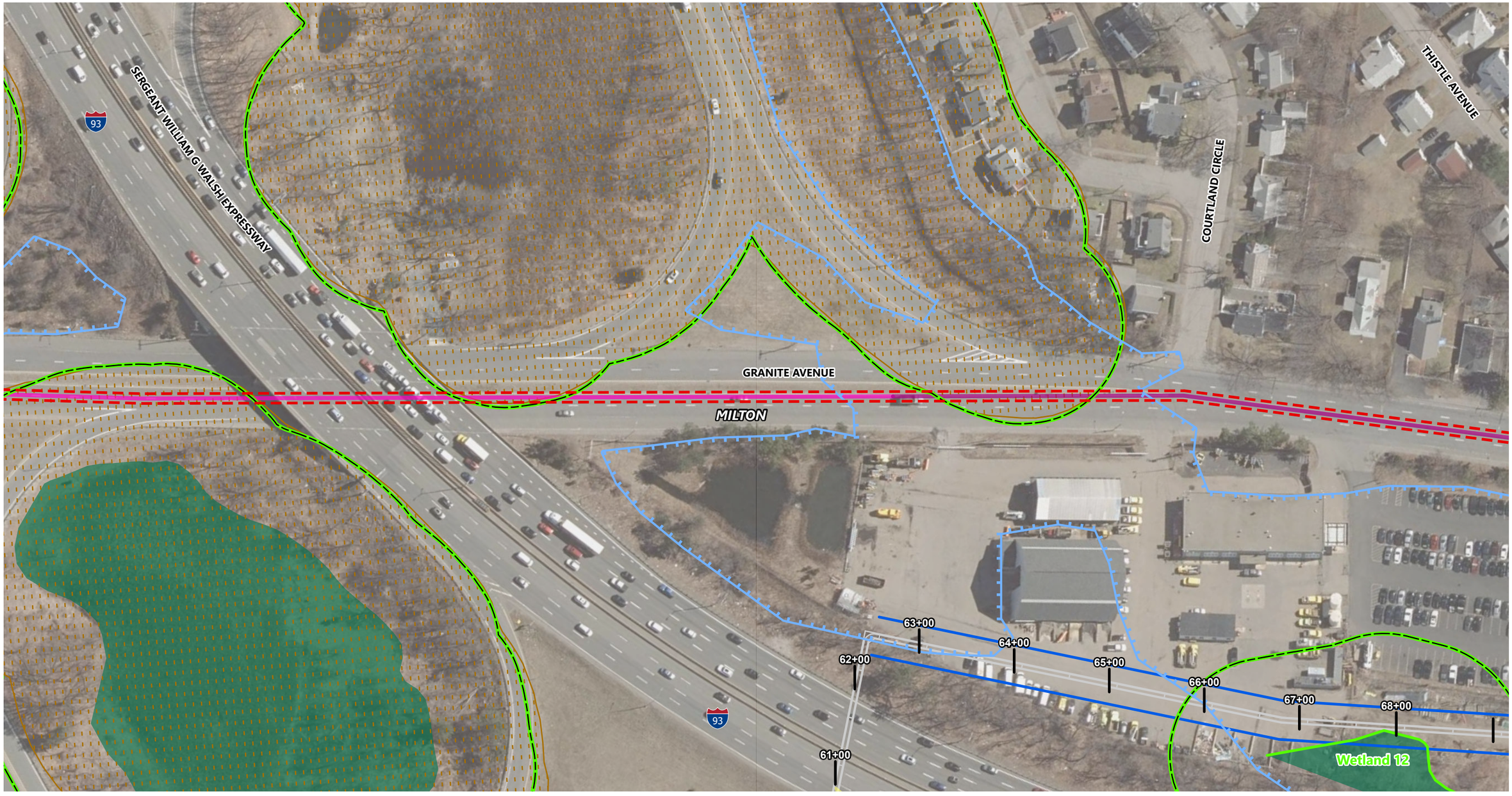
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for DCR Bikeway Alternative Section 22 Segments 2A & 3A

Page 3 of 6

Source: VHB, MassGIS, Black & Veatch, MWRA



0 50 100 200 Feet

- Section 22 Easement
- Section 22 Alt Segment 2A
- Section 22 Alt Segment 3A
- Existing Alignment
- 10-ft Trench
- Temporary Construction Matting
- Jacking Pits
- Protected and Recreational Open Space
- 100-Year Floodplain
- Areas of Critical Environmental Concern
- Environmental Justice
- FEMA Regulatory Floodway
- MHC-Inventoried Area
- Nat'l Register of Historic Places
- MHC Inventoried Property
- National Register of Historic Places
- Delineated Wetland Edge
- Wetlands
- 100' Wetland Buffer
- 200' Riverfront Area
- 25' Riverfront Area (Boston Only)
- MassDEP AUL Sites
- Chapter 91 Jurisdiction
- River/Stream (MassDEP)
- Railroad
- Town Boundary

Resource not within Map Extent:
- Outstanding Resource Waters
- Zone I Wellhead Protection Area
- Zone II Wellhead Protection Area
- NHESP Priority & Estimated Habitat
- DEP BWP Major Facilities Large Quantity Generators of Hazardous Waste (EPA-RCRA Regulated and MA Regulated)
- MADEP Tier Classified Chapter 21

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for DCR Bikeway Alternative Section 22 Segments 2A & 3A

Page 4 of 6

Source: VHB, MassGIS, Black & Veatch, MWRA

0 50 100 200 Feet

- Section 22 Easement
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- Section 22 Alt Segment 3A
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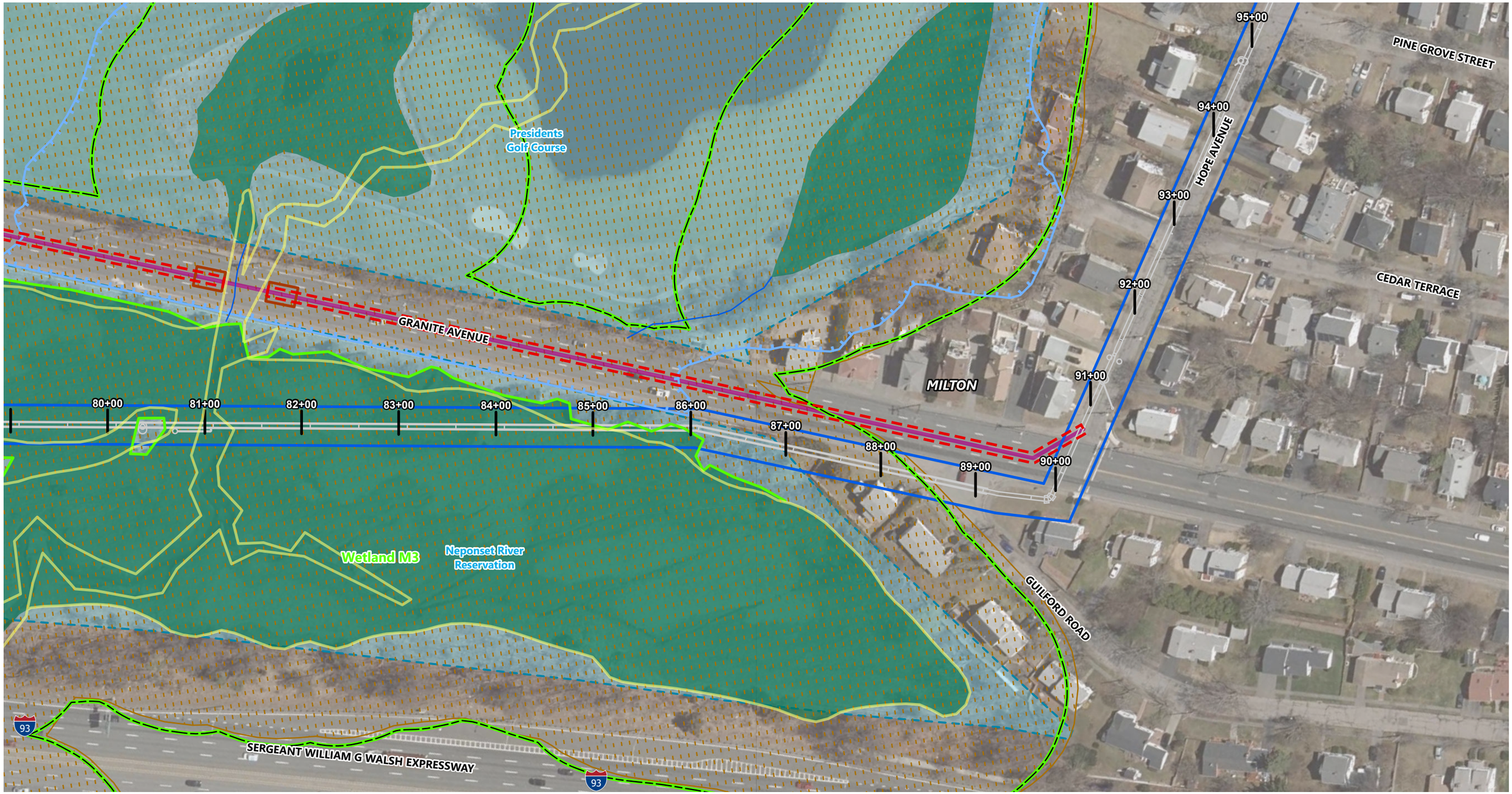
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for DCR Bikeway Alternative Section 22 Segments 2A & 3A
Page 5 of 6
Source: VHB, MassGIS, Black & Veatch, MWRA



0 50 100 200 Feet

- Section 22 Easement
- Section 22 Alt Segment 2A
- Section 22 Alt Segment 3A
- Existing Alignment
- 10-ft Trench
- Temporary Construction Matting
- Jacking Pits
- Protected and Recreational Open Space
- 100-Year Floodplain
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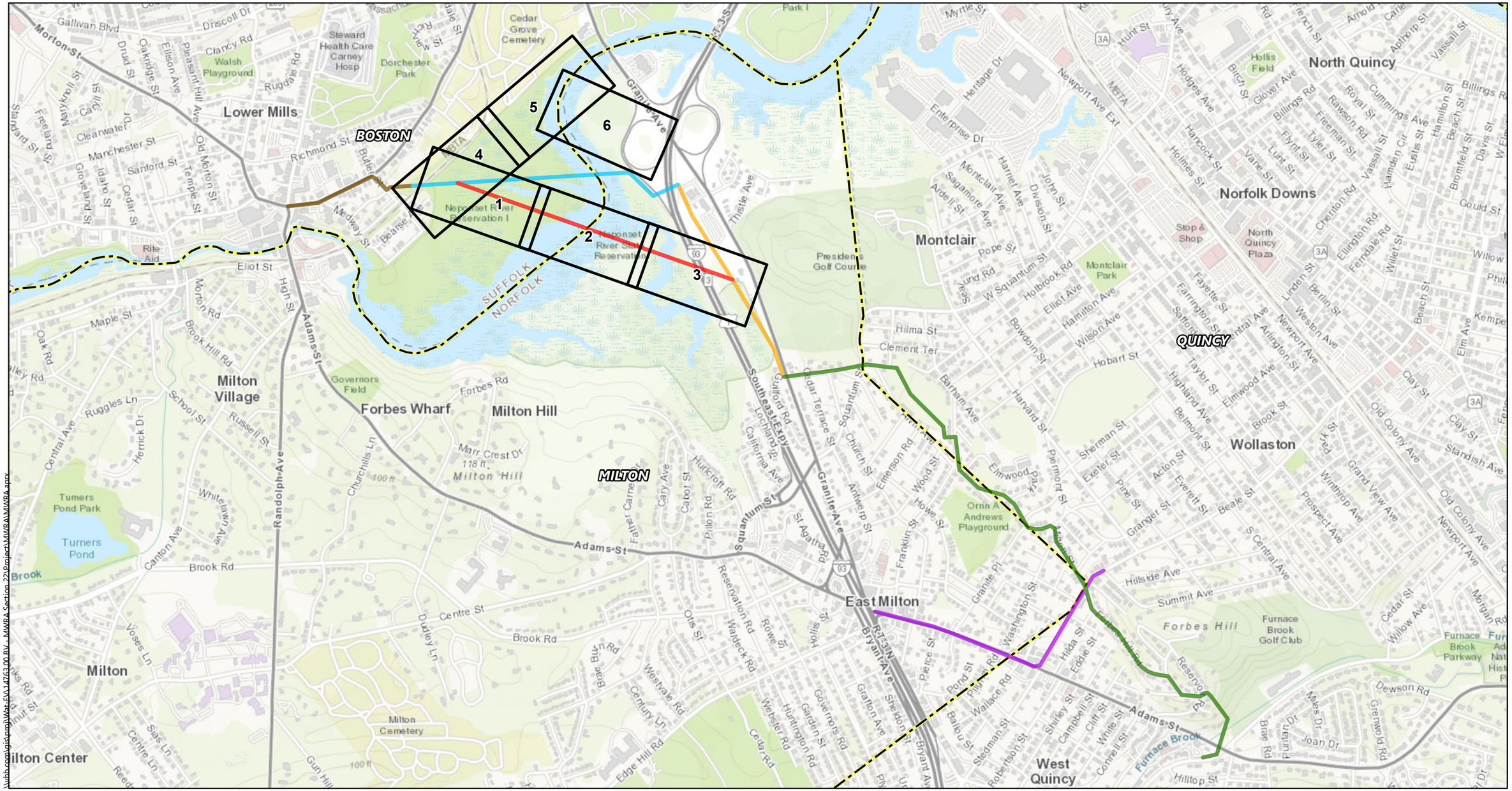
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for DCR Bikeway Alternative Section 22 Segments 2A & 3A
Page 6 of 6
Source: VHB, MassGIS, Black & Veatch, MWRA



0 600 1200 2400 Feet

Project Segment
- Section 22 Segment 1
- Section 22 Segment 2
- Section 22 Alt Segment 2B
- Section 22 Segment 3
- Section 22 Segment 4
- Section 21 Pipeline
- Town Boundary
- Page Index

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for HDD Alternative
Section 22 Segment 2B
Index Map

Source: VHB, MassGIS, Black & Veatch, ArcGIS Online

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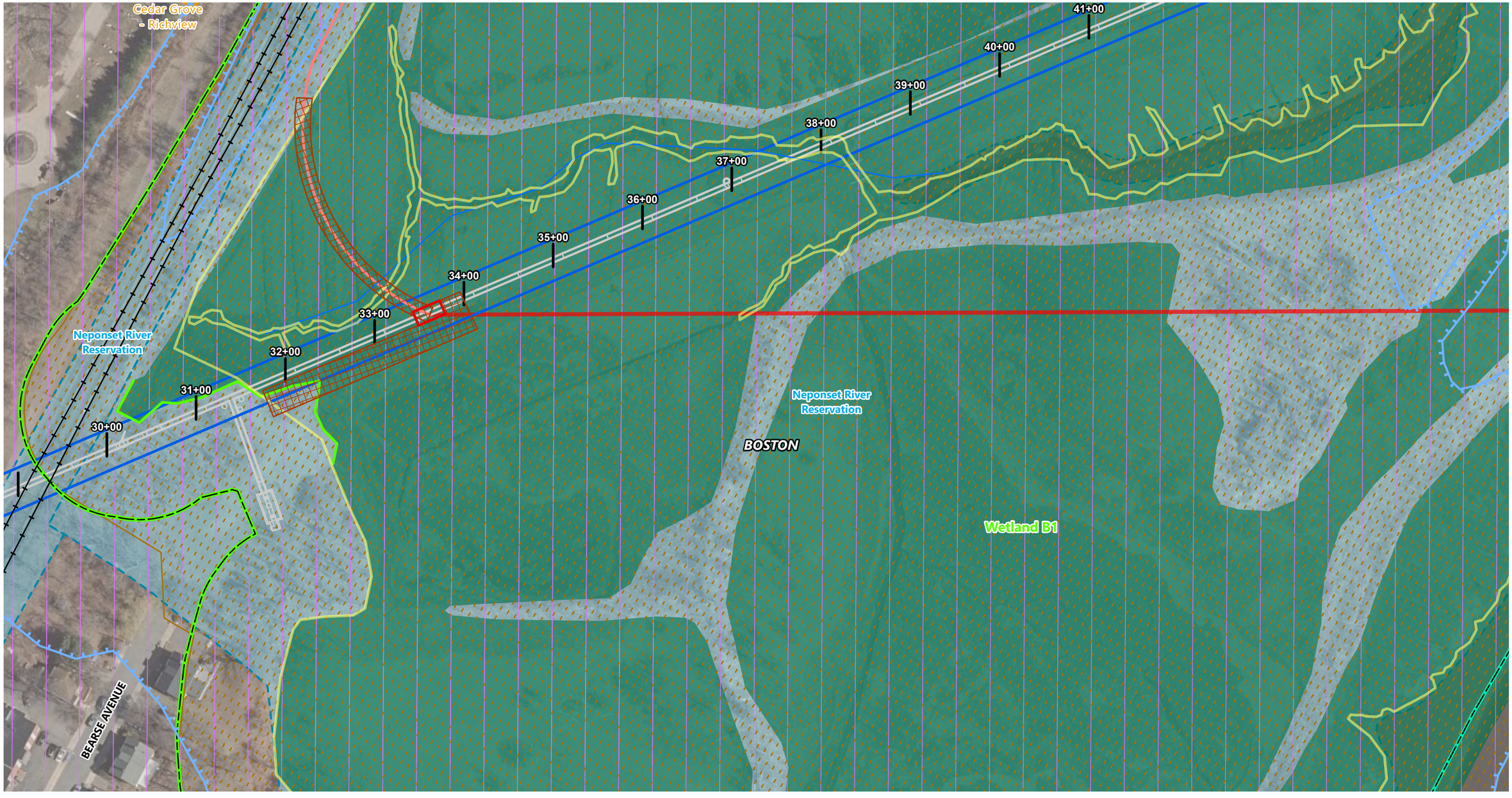
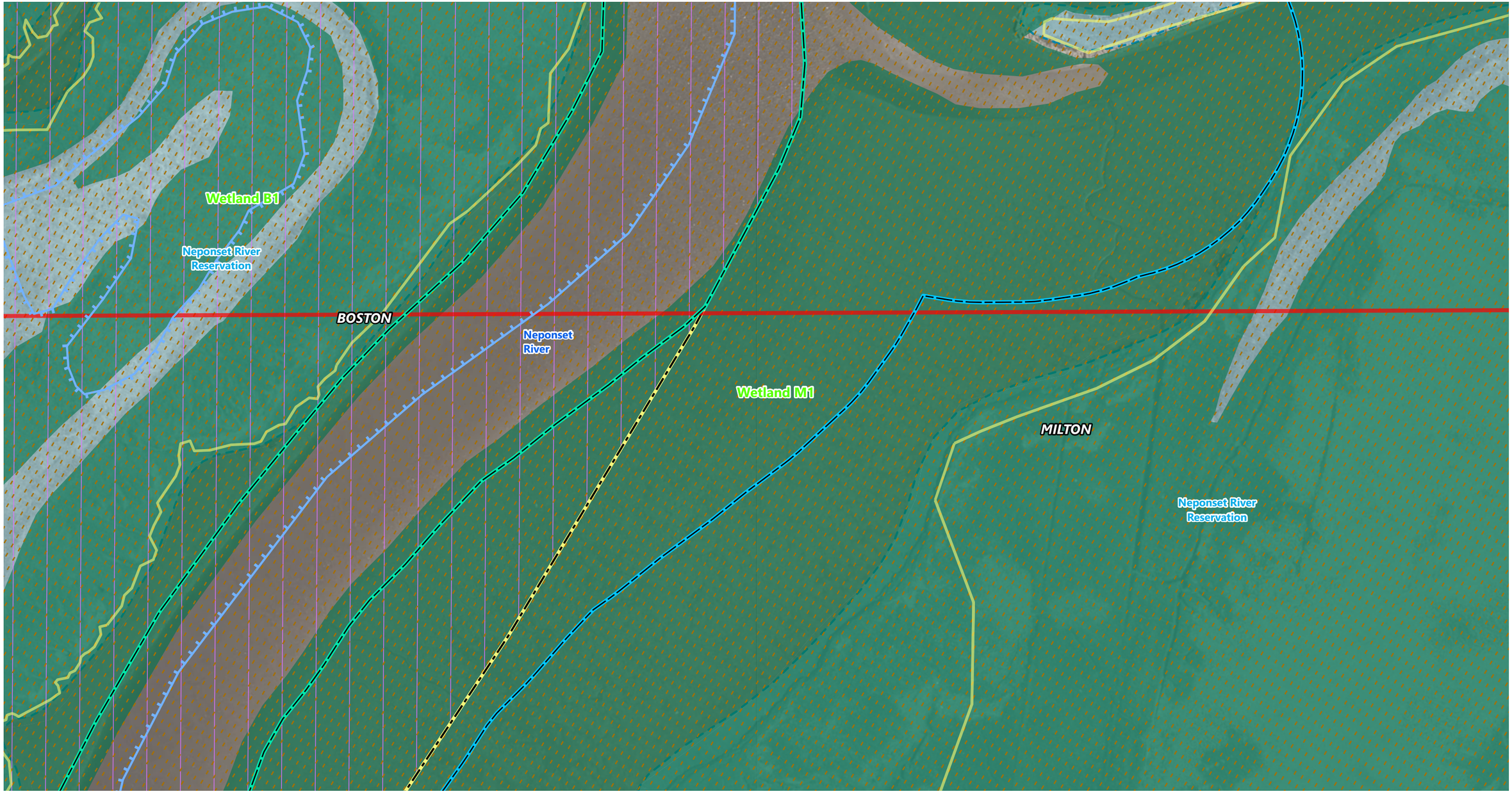


MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for HDD Alternative Section 22 Segment 2B

Page 1 of 6

Source: VHB, MassGIS, Black & Veatch, MWRA



0 50 100 200 Feet

- Section 22 Easement
- Section 22 Alt Segment 2B
- HDD Pipe Layout
- Existing Alignment
- HDD Pit
- Temporary Construction Matting
- Protected and Recreational Open Space
- 100-Year Floodplain
- Areas of Critical Environmental Concern
- Environmental Justice
- FEMA Regulatory Floodway
- MHC-Inventoried Area
- Nat'l Register of Historic Places
- MHC Inventoried Property
- National Register of Historic Places
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- Wetlands
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- Chapter 91 Jurisdiction
- River/Stream (MassDEP)
- Railroad
- Town Boundary

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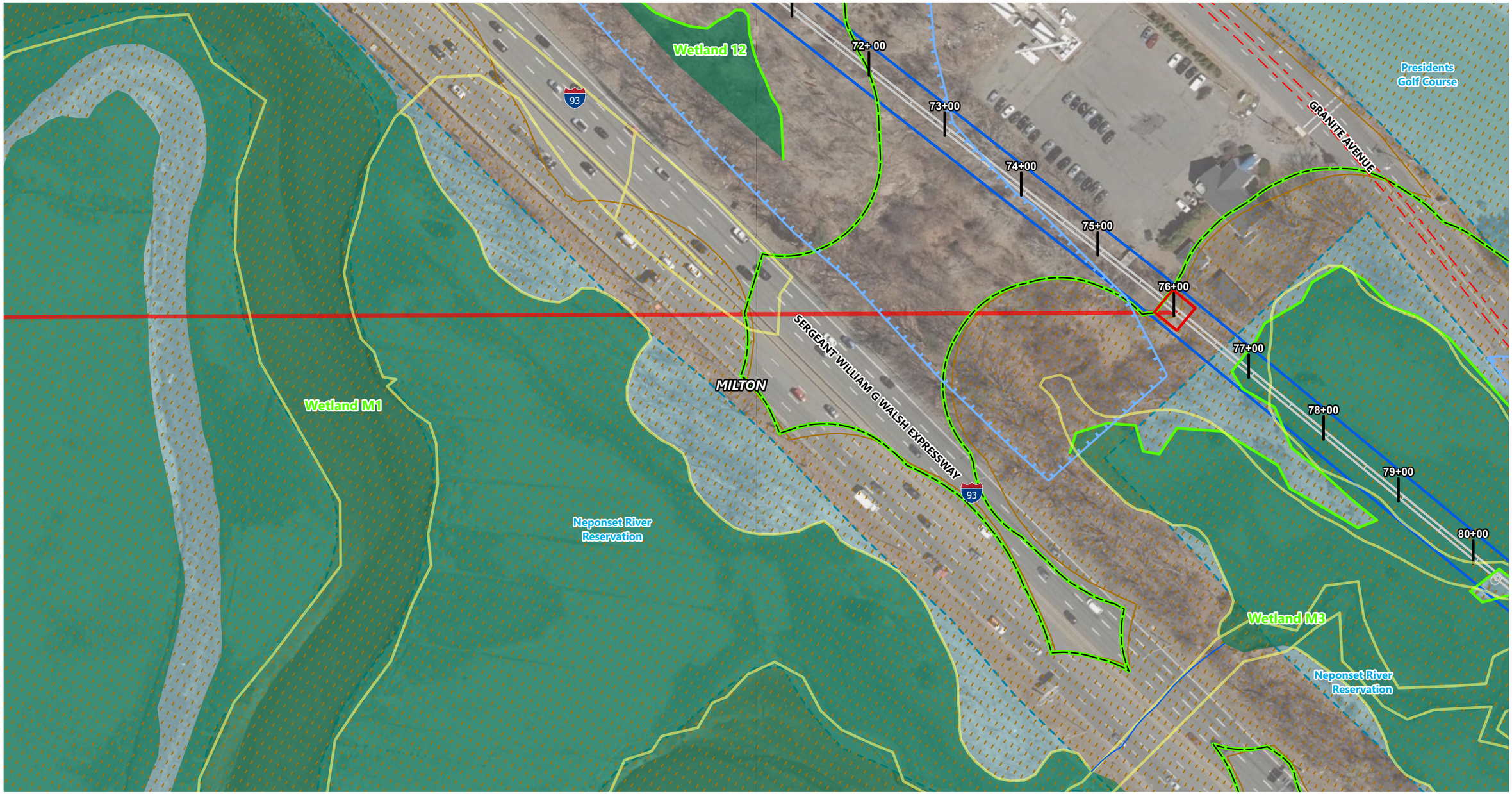
- DEP BWP Major Facilities Large Quantity Generators of Hazardous Waste (EPA-RCRA Regulated and MA Regulated)
- MADEP Tier Classified Chapter 21

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for HDD Alternative Section 22 Segment 2B

Page 2 of 6

Source: VHB, MassGIS, Black & Veatch, MWRA



0 50 100 200 Feet

- Section 22 Easement
- Section 22 Alt Segment 2B
- HDD Pipe Layout
- Existing Alignment
- HDD Pit
- Temporary Construction Matting
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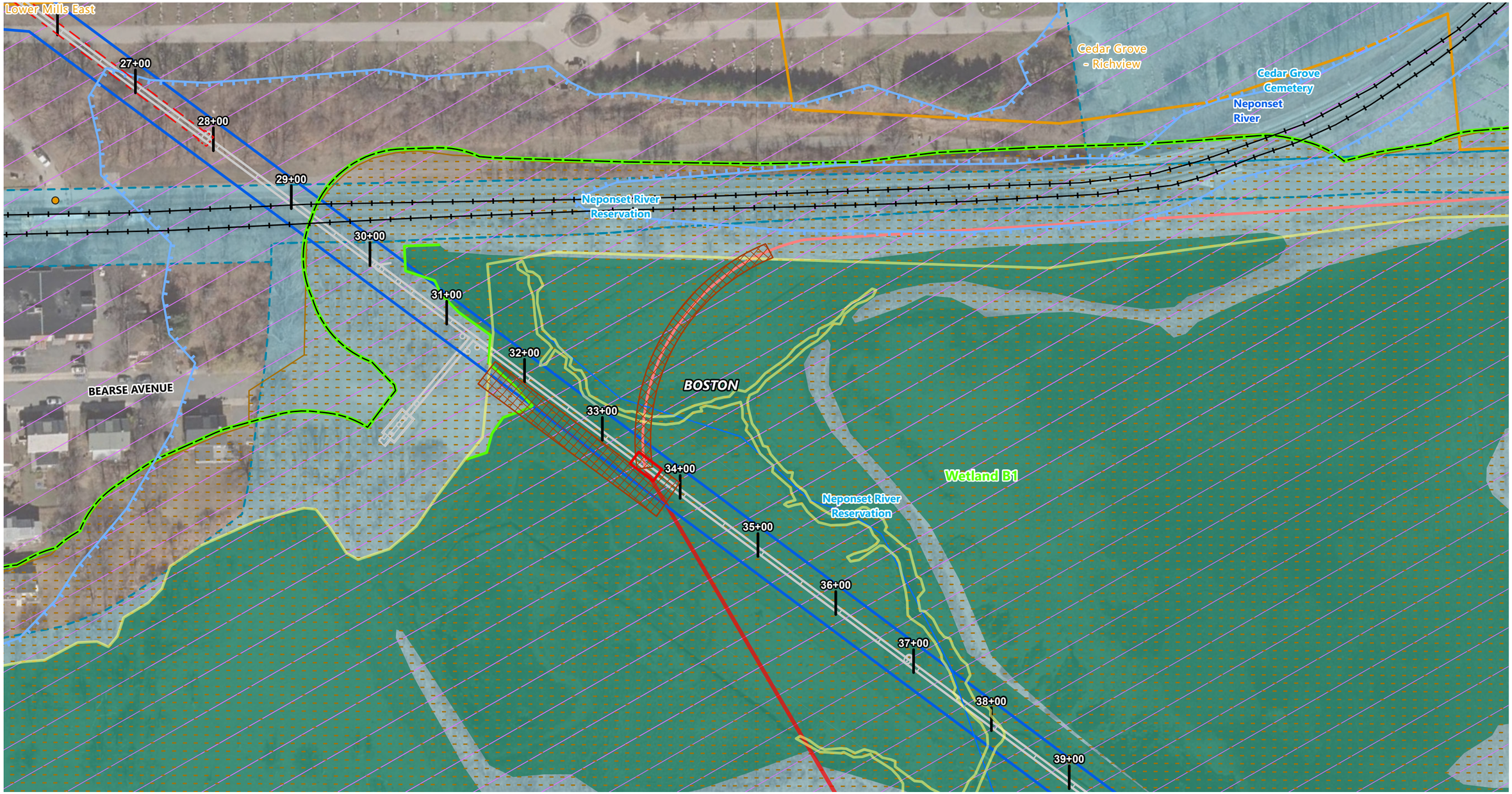
MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for HDD Alternative
Section 22 Segment 2B
Page 3 of 6

Source: VHB, MassGIS, Black & Veatch, MWRA



0 50 100 200 Feet

- Section 22 Easement
- Section 22 Alt Segment 2B
- HDD Pipe Layout
- Existing Alignment
- HDD Pit
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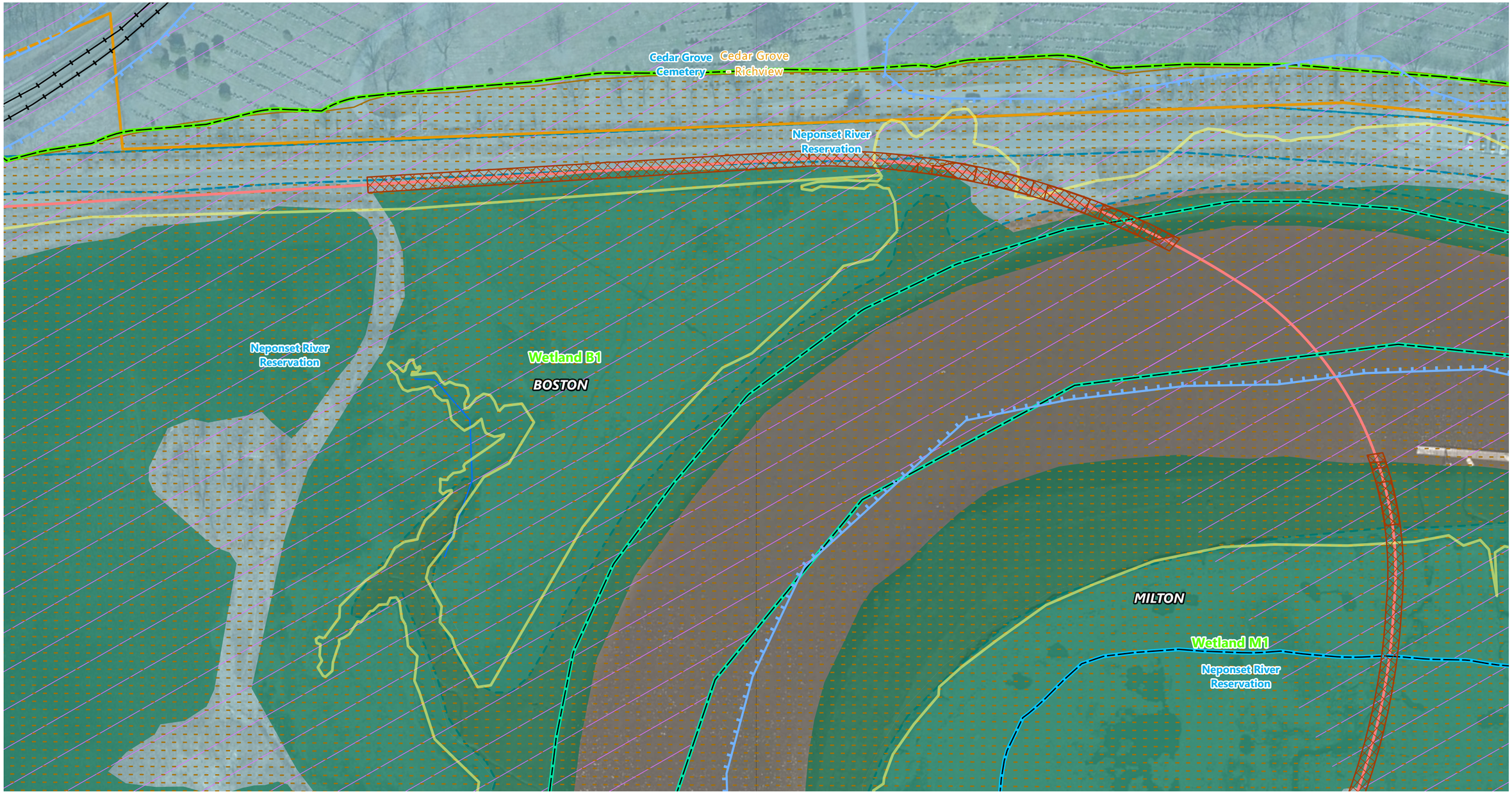
- MADEP Tier Classified Chapter 21

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for HDD Alternative
Section 22 Segment 2B
Page 4 of 6

Source: VHB, MassGIS, Black & Veatch, MWRA



0 50 100 200 Feet

- Section 22 Easement
- Section 22 Alt Segment 2B
- HDD Pipe Layout
- Existing Alignment
- HDD Pit
- Temporary Construction Matting
- Protected and Recreational Open Space
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- DEP BWP Major Facilities Large Quantity Generators of Hazardous Waste (EPA-RCRA Regulated and MA Regulated)
- MADEP Tier Classified Chapter 21

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for HDD Alternative
Section 22 Segment 2B
Page 5 of 6

Source: VHB, MassGIS, Black & Veatch, MWRA

0 50 100 200 Feet

- Section 22 Easement
- Section 22 Alt Segment 2B
- HDD Pipe Layout
- Existing Alignment
- HDD Pit
- Temporary Construction Matting
- Protected and Recreational Open Space
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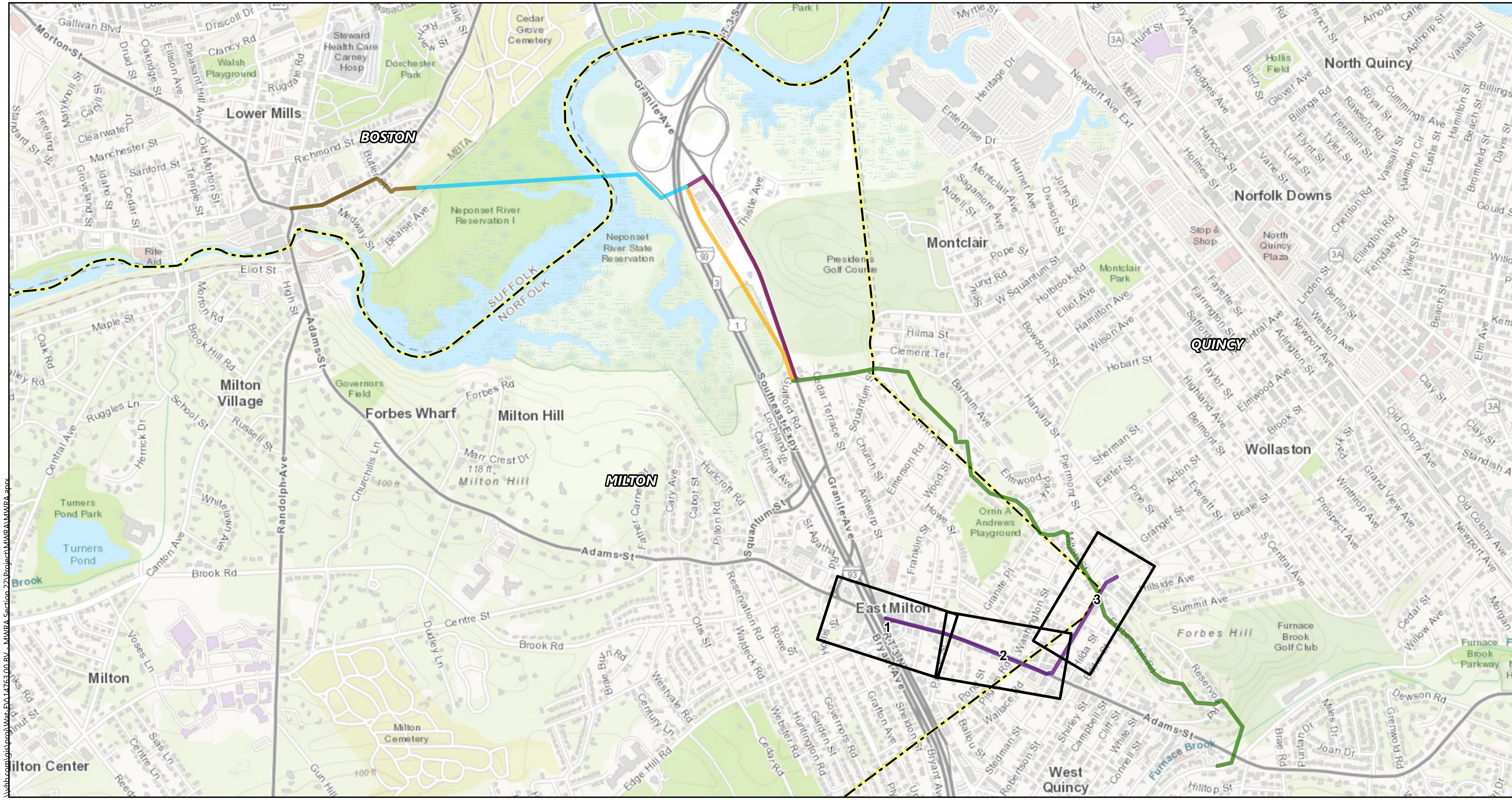
- MADEP Tier Classified Chapter 21

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for HDD Alternative
Section 22 Segment 2B
Page 6 of 6

Source: VHB, MassGIS, Black & Veatch, MWRA

March 16, 2022 | **FIGURE 8**



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0 600 1200 2400 Feet

Project Segment

- Section 22 Segment 1
- Section 22 Segment 2
- Section 22 Segment 3
- Section 22 Alt Segment 3A
- Section 22 Segment 4
- Section 21 Pipeline (Clean & Line)
- Page Index

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Existing Resource Mapping for Preferred Alternative Section 21 Key Plan

Source: VHB, MassGIS, Black & Veatch, MWRA

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Resource not within Map Extent:
- Outstanding Resource Waters
- Zone I Wellhead Protection Area
- Zone II Wellhead Protection Area
- NHESP Priority & Estimated Habitat
- DEP BWP Major Facilities Large Quantity Generators of Hazardous Waste (EPA-RCRA Regulated and MA Regulated)
- MADEP Tier Classified Chapter 21E
- 100-yr Floodplain (BLSF)
- Chapter 91 Jurisdiction
- MassDEP Wetlands

Existing Resource Mapping for Preferred Alternative Section 21
Page 1 of 3

Source: VHB, MassGIS, Black & Veatch, MWRA

0 50 100 200 Feet

- Section 21 Pipeline (Clean & Line)
- Section 22 Easement
- Section 22 Segment 4
- Pipe Access Pit
- MHC Inventoried Property
- National Register of Historic Places
- MHC-Inventoried Area
- Nat'l Register of Historic Places
- Environmental Justice
- Protected and Recreational Open Space
- MassDEP AUL Sites
- Town Boundary

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Resource not within Map Extent:
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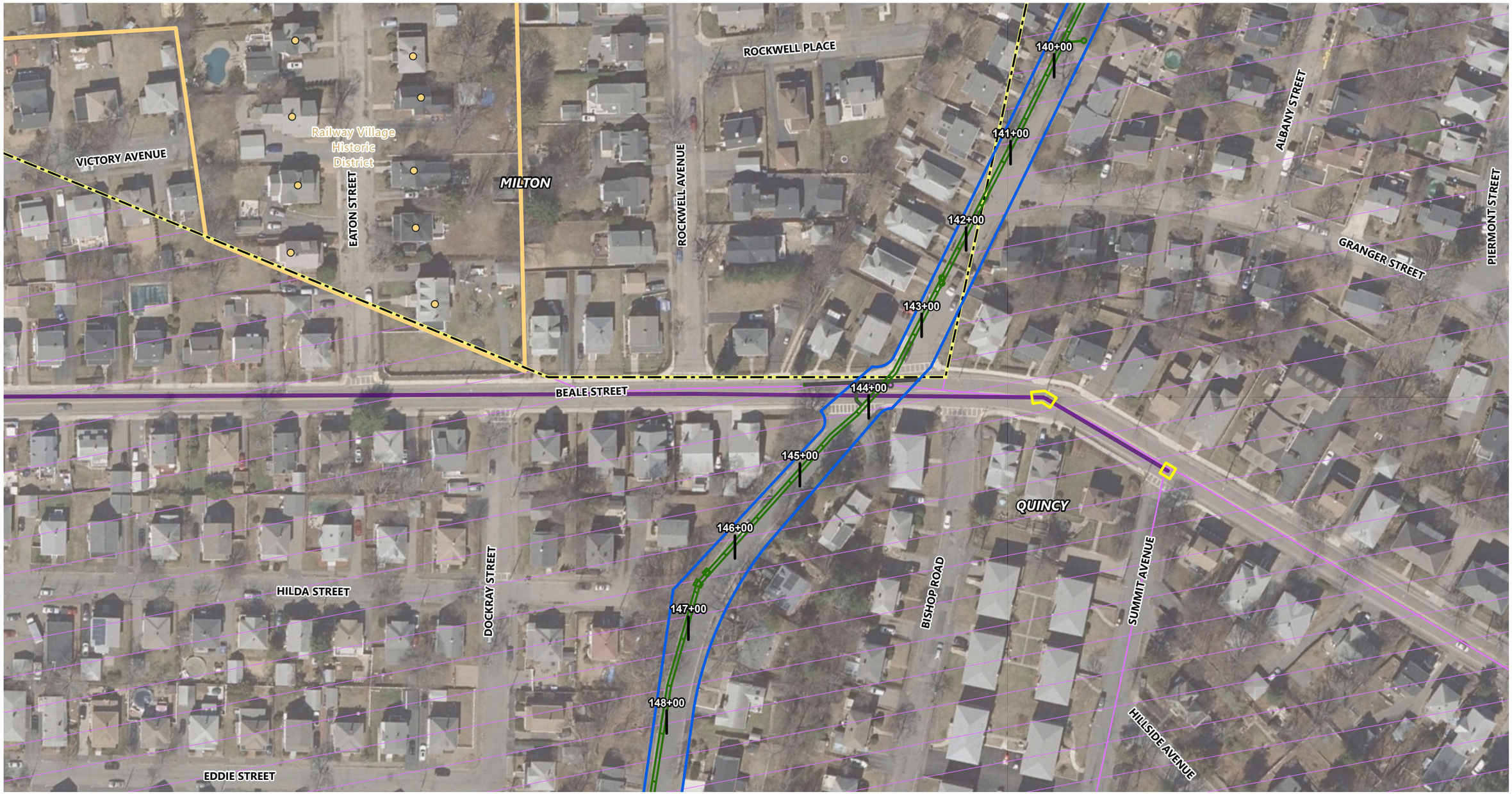
- Zone II Wellhead Protection Area
- NHESP Priority & Estimated Habitat
- DEP BWP Major Facilities Large Quantity Generators of Hazardous Waste (EPA-RCRA Regulated and MA Regulated)
- MADEP Tier Classified Chapter 21E
- 100-yr Floodplain (BLSF)
- Chapter 91 Jurisdiction
- MassDEP Wetlands

Existing Resource Mapping for Preferred Alternative Section 21
Page 2 of 3

Source: VHB, MassGIS, Black & Veatch, MWRA



0 50 100 200 Feet

- Section 21 Pipeline (Clean & Line)
- Section 22 Easement
- Section 22 Segment 4
- Pipe Access Pit
- MHC Inventoried Property
- National Register of Historic Places
- MHC-Inventoried Area
- Nat'l Register of Historic Places
- Environmental Justice
- Protected and Recreational Open Space
- MassDEP AUL Sites
- Town Boundary

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

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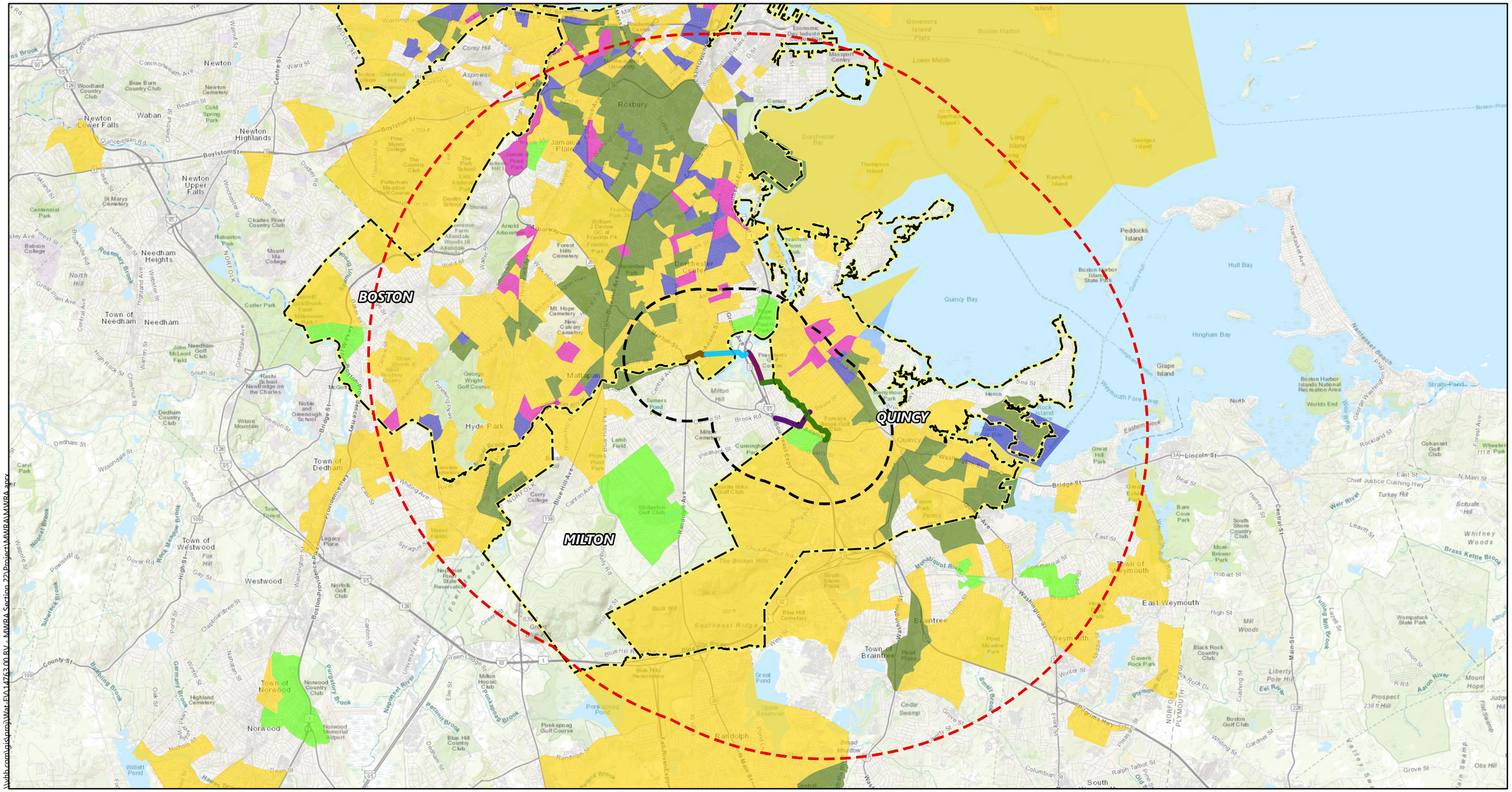
- 100-yr Floodplain (BLSF)
- Chapter 91 Jurisdiction
- MassDEP Wetlands

Existing Resource Mapping for Preferred Alternative Section 21
Page 3 of 3

Source: VHB, MassGIS, Black & Veatch, MWRA



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0 4000 8000 16000 Feet

Project Segment
- Section 22 Segment 1
- Section 22 Segment 2
- Section 22 Alt Segment 3A
- Section 22 Segment 4
- Section 21

Environmental Justice 2020 Populations
- Minority
- Income
- Engllish isolation
- Minority and Income
- Minority and English isolation
- Income and English isolation
- Minority, Income and English isolation
- 1-Mile Environmental Justice Buffer
- 5-Mile Environmental Justice Buffer
- Town Boundary

MWRA Contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting | Boston to Quincy, Massachusetts

Environmental Justice Populations

Source: VHB, MassGIS, Black & Veatch, ArcGIS Online

Attachment D: Public Notice

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Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs

MEPA Office

100 Cambridge St., Suite 900
Boston, MA 02114
Telephone 617-626-1020

The following should be completed and submitted to a local newspaper:

PUBLIC NOTICE OF ENVIRONMENTAL REVIEW

PROJECT: MWRA Section 22 and 21 Water Pipeline Rehabilitation Project

LOCATION: Existing water pipeline alignment, Boston, Milton, Quincy, Massachusetts

PROPONENT: Massachusetts Water Resources Authority (MWRA)

The undersigned is submitting an Environmental Notification Form ("ENF") to the Secretary of Energy & Environmental Affairs on or before
__11/30/2022___ *(date)*

This will initiate review of the above project pursuant to the Massachusetts Environmental Policy Act ("MEPA," M.G.L. c. 30, ss. 61-62L). Copies of the ENF may be obtained from:
__Katie Ronan, katherine.ronan@mwra.com, 617-788-1177_____
(Name, email address, phone number of proponent or proponent's agent)

Electronic copies of the ENF are also being sent to the Conservation Commission and Planning Board of Boston, Milton, and Quincy *(Municipality)***.**

The Secretary of Energy & Environmental Affairs will publish notice of the ENF in the Environmental Monitor, receive public comments on the project, and then decide if an Environmental Impact Report is required. A site visit and/or remote consultation session on the project may also be scheduled. All persons wishing to comment on the project, or to be notified of a site visit and/or remote consultation session, should email MEPA@mass.gov or the MEPA analyst listed in the Environmental Monitor. Requests for language translation or other accommodations should be directed to the same email address. Mail correspondence should be directed to the Secretary of Energy & Environmental Affairs, 100 Cambridge St., Suite 900, Boston, Massachusetts 02114, Attention: MEPA Office, referencing the above project.

By _____Massachusetts Water Resources Authority (MWRA)_____ *(Proponent)*

https://www.mwra.com/projects/water/sec21-22/sec21-22-update.html
English | Español | 中文 | Kreyòl Ayisyen | Tiếng Việt

Mancomunidad de Massachusetts
Oficina Ejecutiva de Energía y Asuntos Ambientales

Oficina de MEPA

100 Cambridge St., Suite 900
Boston, MA 02114
Teléfono 617-626-1020

Lo siguiente debe completarse y enviarse a un periódico local:

AVISO PÚBLICO DE REVISIÓN AMBIENTAL

PROYECTO: MWRA Sección 22 y Sección 21 Proyecto de rehabilitación de tubería de agua

UBICACIÓN: Alineación de las tuberías de agua existentes, Boston, Milton, Quincy, Massachusetts

PROPONENTE: MWRA (Autoridad de recursos hídricos de Massachusetts)

El abajo firmante presentará un formulario de notificación ambiental ("ENF") al Secretario de Energía y Asuntos Ambientales el día
30/nov/2022 *(fecha)* o antes.

Esto iniciará la revisión del proyecto anterior en conformidad con la Ley de Política Ambiental de Massachusetts ("MEPA", Ley General de Massachusetts [M.G.L.], capítulo 30, secciones 61-62L). Se pueden obtener copias del ENF en:
Katie Ronan, katherine.ronan@mwra.com, 617-788-1177
(Nombre, dirección de correo electrónico, número de teléfono del proponente o agente del proponente)

También se enviarán copias electrónicas del ENF a la Comisión de Conservación y la Junta de Planificación de Boston, Milton, Quincy *(Municipio)***.**

El Secretario de Energía y Asuntos Ambientales publicará un aviso del ENF en *Environmental Monitor*, recibirá comentarios públicos sobre el proyecto y luego decidirá si se requiere un informe de impacto ambiental. También se puede programar una visita al sitio o una sesión de consulta remota sobre el proyecto. Todas las personas que deseen hacer comentarios sobre el proyecto, o ser notificados de una visita al sitio o una sesión de consulta remota, deben enviar un correo electrónico a MEPA@mass.gov o al analista de MEPA que figura en *Environmental Monitor.* Las solicitudes de traducción de idiomas u otras adaptaciones deben enviarse a la misma dirección de correo electrónico. La correspondencia por correo debe dirigirse a Secretary of Energy & Environmental Affairs, 100 Cambridge St., Suite 900, Boston, Massachusetts 02114, Attention: MEPA Office, haciendo referencia al proyecto anterior.

Por MWRA (Autoridad de recursos hídricos de Massachusetts) *(Proponente)*

https://www.mwra.com/projects/water/sec21-22/sec21-22-update.html
English | Español | 中文 | Kreyòl Ayisyen | Tiếng Việt

Commonwealth Massachusetts
Biwo Egzekitif Enèji ak Afè Anviwònmantal

Biwo MEPA

100 Cambridge St., Suite 900
Boston, MA 02114
Telefòn 617-626-1020

Enfòmasyon ki annapre yo ta dwe ranpli epi soumèt bay yon jounal lokal:

AVI PIBLIK POU REVIZYON ANVIWÒNMAN

PWOJÈ: __Pwojè Reyabilitasyon Seksyon 22 ak Seksyon 21 Tiyo Dlo MWRA_____

LOKAL:_ Kanalizasyon tiyo dlo ki egziste deja, nan Boston, Milton, Quincy, Massachusetts____

PWOMOTÈ: _ Otorite Resous pou Zafè Dlo nan Massachusetts (MWRA)_____

Moun ki siyen an ap soumèt yon Fòmilè sou Notifikasyon Anviwònman ("ENF") bay Sekretè Enèji ak Afè Anviwònman an oswa anvan.
_____30 novanm 2022_____ *(dat)*

Sa pral kòmanse revizyon pwojè ki anwo a dapre Lwa sou Regleman Anviwònman Massachusetts ("MEPA," M.G.L. c. 30, ss. 61-62L). Ou ka jwenn kopi ENF nan:
__Katie Ronan, katherine.ronan@mwra.com, 617-788-1177_____
(Non, imèl, nimewo telefòn pwopoze a oswa ajan pwopozisyon an)

Yo voye kopi elektwonik ENF tou bay Komisyon Konsèvasyon ak Konsèy Planifikasyon
_____Boston, Milton, Quincy_____ *(Minisipalite)***.**

Sekretè Enèji ak Afè Anviwònman an pral pibliye avi sou ENF nan Siveyans Anviwònman an, y ap resevwa kòmantè piblik sou pwojè a, epi apre sa yo pral deside si yon Rapò Enpak sou Anviwònman an nesesè. Ou ka pwograme yon vizit sou sit ak/oswa sesyon konsiltasyon adistans sou pwojè a. Tout moun ki vle fè kòmantè sou pwojè a, oswa pou yo resevwa enfòmasyon sou yon vizit sou sit ak/oswa sesyon konsiltasyon adistans, ta dwe voye yon imèl. MEPA@mass.gov oswa analis MEPA ki nan lis nan Siveyans Anviwònman an. Demann pou tradiksyon lang oswa lòt aranjman yo ta dwe dirije nan menm adrès imel la. Yo ta dwe voye korespondans pa lapòs bay Sekretè Enèji ak Afè Anviwònman an, 100 Cambridge St., Suite 900, Boston, Massachusetts 02114, Atansyon: Biwo MEPA, fè referans a pwojè ki endike anwo a.

Selon ____ Otorite Resous pou Zafè Dlo nan Massachusetts (MWRA)_____ *(Pwomotè)*

https://www.mwra.com/projects/water/sec21-22/sec21-22-update.html
English | Español | 中文 | Kreyòl Ayisyen | Tiếng Việt

Commonwealth of Massachusetts
Văn Phòng Quản Lý các Vấn Đề về Năng Lượng và Môi Trường Massachusetts

Văn phòng Đạo Luật Chính Sách Môi Trường Massachusetts (MEPA)

100 Cambridge St., Suite 900
Boston, MA 02114
Telephone 617-626-1020

Hoàn thành biểu mẫu sau và gửi cho một tờ báo địa phương:

THÔNG BÁO CÔNG KHAI VỀ ĐÁNH GIÁ MÔI TRƯỜNG

DỰ ÁN: Dự án Cải tạo Đường ống Dẫn nước Đoạn 22 và 21 của MWRA

ĐỊA ĐIỂM: Điều chỉnh đường ống dẫn nước hiện tại ở Boston, Milton, Quincy, Massachusetts

NGƯỜI ĐỀ XUẤT: __Cơ quan Tài nguyên Nước Massachusetts (MWRA)_

Biểu Mẫu Thông Báo Môi Trường ("ENF") được nộp bởi người ký tên dưới đây cho Giám đốc Văn Phòng Quản Lý Các Vấn Đề Về Năng Lượng và Môi Trường vào hoặc trước
__30 tháng 11, 2022____ *(ngày)*

Đây sẽ là tiền đề cho việc xem xét dự án trên theo Đạo Luật Chính Sách Môi Trường Massachusetts ("MEPA," MGL Chương 30, Mục 61-62L). Các bản sao của ENF có sẵn tại:
____Katie Ronan, katherine.ronan@mwra.com, 617-788-1177__
(Tên, địa chỉ email, số điện thoại của người đề xuất hoặc đại diện của người đề xuất)

Các bản sao điện tử của ENF cũng sẽ được gửi tới Ban Bảo Tồn và Ban Kế Hoạch của Boston, Milton, Quincy *(Thành phố)***.**

Giám đốc Văn Phòng Quản Lý Các Vấn Đề Về Năng Lượng và Môi Trường sẽ công bố thông báo của ENF trên tạp chí Environmental Monitor, tiếp nhận ý kiến cộng đồng về dự án và sau đó quyết định xem có cần thực hiện Báo cáo Tác động Môi trường hay không. Một chuyến khảo sát thực địa và/hoặc buổi tư vấn từ xa về dự án cũng có thể được lên lịch. Tất cả những người muốn góp ý về dự án, hoặc được thông báo về một chuyến khảo sát thực địa và/hoặc phiên tư vấn từ xa, nên gửi emailMEPA@mass.gov hoặc nhà phân tích MEPA được liệt kê trong phần Giám Sát Môi Trường. Các yêu cầu về bản dịch ngôn ngữ hoặc các sắp xếp tiện nghi khác phải được gửi đến cùng một địa chỉ email. Thư có thể được gửi đến Bộ Trưởng Năng Lượng & Môi Trường, 100 Cambridge St., Suite 900, Boston, Massachusetts 02114, Người nhận: Văn phòng MEPA, tham khảo dự án trên.

Bởi __ Cơ quan Tài nguyên Nước Massachusetts (MWRA)__ *(Người đề xuất)*

https://www.mwra.com/projects/water/sec21-22/sec21-22-update.html
English | Español | 中文 | Kreyòl Ayisyen | Tiếng Việt

麻萨诸塞州

能源与环境事务执行办公室

MEPA Office

100 Cambridge St., Suite 900
Boston, MA 02114
Telephone 617-626-1020

以下内容应完成并提交给当地报纸：

有关环境需要审查的公示

项目： MWRA 第 22 段和第 21 段水管修复项目

地点： 马萨诸塞州 Boston、Milton、Quincy 的现存水管线

支持者： 马萨诸塞州水资源管理（MWRA）

签署人将在 2022 年 11 月 30 日 *（日期）***当天或之前向能源与环境事务部长提交环境通知表（以下简称“ENF”表）**

根据麻萨诸塞州环境政策法案（“MEPA”，M.G.L. c. 30, ss. 61-62L）本信将开启对上述项目的审查。 有关 ENF 表的副本可从以下渠道获得：
Katie Ronan, katherine.ronan@mwra.com, 617-788-1177
（支持者或支持者代理人的姓名、电子邮件地址、电话号码）

有关 ENF 表的电子副本也将抄送给 Boston、Milton、Quincy *（市政府）***的保护委员会和规划委员会。**

能源与环境事务部长将在环境监测中发布 ENF 通知，该通知将告知有关公众对项目的意见接受，然后决定是否需要环境影响报告。 也可以安排对该项目的实地考察和/或远程咨询会议。 所有希望对项目发表评论或收到现场访谈和/或远程咨询会议通知的人应发送电子邮件至 MEPA@mass.gov 或环境监测中列出的 MEPA 分析师。语言翻译或其他便利的请求应发送至同一电子邮件地址。 所有关于上述项目的邮件应寄至能源与环境事务部长，地址为：100 Cambridge St., Suite 900, Boston, Massachusetts 02114，Attention：MEPA Office。

署名 马萨诸塞州水资源管理（MWRA） *（支持者）*

https://www.mwra.com/projects/water/sec21-22/sec21-22-update.html
English | Español | 中文 | Kreyòl Ayisyen | Tiếng Việt

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Attachment E: RMAT Report

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RMAT Climate Resilience Design Standards Tool Project Report

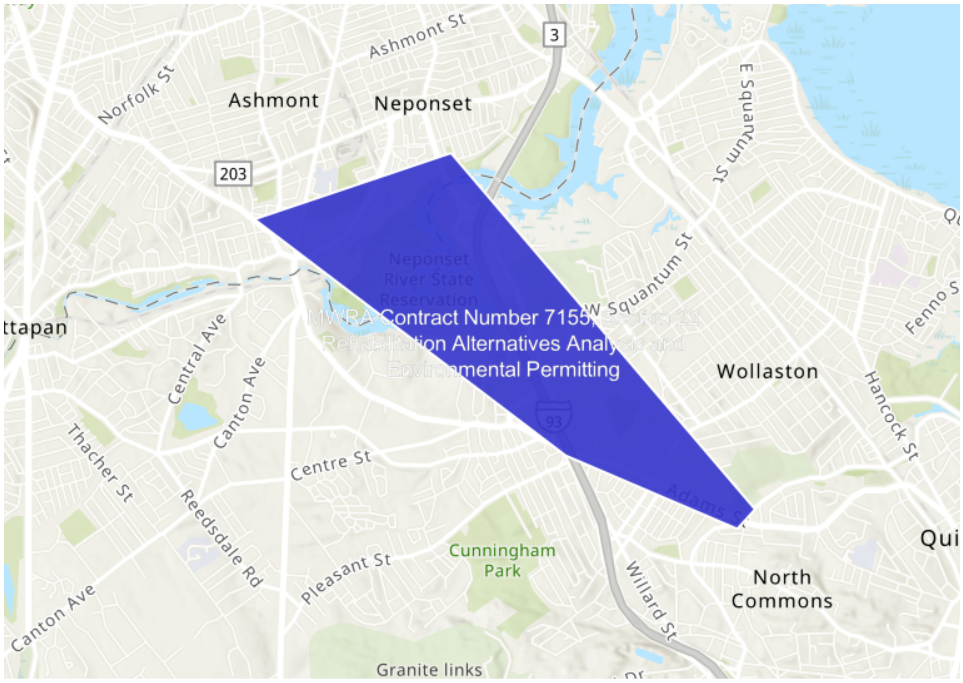
MWRA Contract Number 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting
Date Created: 11/10/2021 8:40:47 AM Created By: lballou

Project Summary

Link to Project

Estimated Construction Cost: $26000000.00
Useful Life: 2070 - 2079

Ecosystem Benefits	Scores
Project Score	Low
Exposure	**Scores**
Sea Level Rise/Storm Surge	High Exposure
Extreme Precipitation - Urban Flooding	High Exposure
Extreme Precipitation - Riverine Flooding	High Exposure
Extreme Heat	High Exposure



Asset Summary

Number of Assets: 2

Asset Risk	Sea Level Rise/Storm Surge	Extreme Precipitation - Urban Flooding	Extreme Precipitation - Riverine Flooding	Extreme Heat
Section 22, Segments 1-4	High Risk	High Risk	High Risk	High Risk
Section 21, Segment 1	High Risk	High Risk	High Risk	High Risk

Project Outputs

	Target Planning Horizon	Intermediate Planning Horizon	Percentile	Return Period	Tier
Sea Level Rise/Storm Surge					
Section 22, Segments 1-4	2070	2050		200-yr (0.5%)	Tier 3
Section 21, Segment 1	2070	2050		200-yr (0.5%)	Tier 3
Extreme Precipitation					
Section 22, Segments 1-4	2070			50-yr (2%)	Tier 3
Section 21, Segment 1	2070			50-yr (2%)	Tier 3
Extreme Heat					
Section 22, Segments 1-4	2070		50th		Tier 3
Section 21, Segment 1	2070		50th		Tier 3

Scoring Rationale - Exposure

Sea Level Rise/Storm Surge

This project received a "High Exposure" because of the following:

- Located within the predicted mean high water shoreline by 2030
- Exposed to the 1% annual coastal flood event as early as 2030
- Historic coastal flooding at project site

Extreme Precipitation - Urban Flooding

This project received a "High Exposure" because of the following:

- Historic flooding at the project site
- Projected increase in rainfall within project's useful life
- No increase to impervious area

Extreme Precipitation - Riverine Flooding

This project received a "High Exposure" because of the following:

- Historic riverine flooding at project site
- Exposed to riverine flooding within the project's useful life

Extreme Heat

This project received a "High Exposure" because of the following:

- 30+ days increase in days over 90 deg. F within project's useful life
- Located within 100 ft of existing water body
- No increase to impervious area

Scoring Rationale - Asset Risk Scoring

Asset - Section 22, Segments 1-4
Primary asset criticality factors influencing risk ratings for this asset:

- Asset must be operable at all times, even during natural hazard event
- Greater than 100,000 people would be directly affected by the loss/inoperability of the asset
- The infrastructure is located in an environmental justice community, and/or does provide services to vulnerable populations
- Inoperability of the asset would be expected to result in minor impacts to people's health, including minor injuries or minor impacts to chronic illnesses
- Cost to replace is between $30 million and $100 million
- There are no hazardous materials in the asset

Asset - Section 21, Segment 1
Primary asset criticality factors influencing risk ratings for this asset:

- Asset must be operable at all times, even during natural hazard event
- Loss/inoperability of the asset would have regional impacts
- The infrastructure is located in an environmental justice community, and/or does provide services to vulnerable populations
- Inoperability of the asset would be expected to result in minor impacts to people's health, including minor injuries or minor impacts to chronic illnesses
- Cost to replace is between $30 million and $100 million
- There are no hazardous materials in the asset

Project Design Standards Output

Asset: Section 22, Segments 1-4 — Infrastructure

Sea Level Rise/Storm Surge — High Risk

Target Planning Horizon: 2070
Intermediate Planning Horizon: 2050
Return Period: 200-yr (0.5%)

Applicable Design Criteria

Tiered Methodology: Tier 3 (Link)

Tidal Benchmarks: Yes
Stillwater Elevation: Yes
Design Flood Elevation (DFE): Yes
Wave Heights: No
Duration of Flooding: Yes
Design Flood Velocity: Yes
Wave Forces: No
Scour or Erosion: Yes

Extreme Precipitation — High Risk

Target Planning Horizon: 2070
Return Period: 50-yr (2%)

Applicable Design Criteria

Tiered Methodology: Tier 3 (Link)

Total Precipitation Depth for 24-hour Design Storms: Yes
Peak Intensity for 24-hour Design Storms: Yes
Riverine Peak Discharge: Yes
Riverine Peak Flood Elevation: Yes
Duration of Flooding for Design Storm: Yes
Flood Pathways: Yes

Extreme Heat — High Risk

Target Planning Horizon: 2070
Percentile: 50th Percentile

Applicable Design Criteria

Tiered Methodology: Tier 3 (Link)

Annual/Summer/Winter Average Temperature: Yes
Heat Index: Yes
Days Per Year With Max Temperature > 95°F: Yes
Days Per Year With Max Temperature > 90°F: Yes
Days Per Year With Max Temperature < 32°F: Yes
Number of Heat Waves Per Year: Yes
Average Heat Wave Duration (Days): Yes
Cooling Degree Days (Base = 65°F): No
Heating Degree Days (Base = 65°F): No
Growing Degree Days: No

Asset: Section 21, Segment 1 — Infrastructure

Sea Level Rise/Storm Surge — High Risk

Target Planning Horizon: 2070
Intermediate Planning Horizon: 2050
Return Period: 200-yr (0.5%)

Applicable Design Criteria

Tiered Methodology: Tier 3 (Link)

Tidal Benchmarks: Yes
Stillwater Elevation: Yes
Design Flood Elevation (DFE): Yes
Wave Heights: No
Duration of Flooding: Yes
Design Flood Velocity: Yes
Wave Forces: No
Scour or Erosion: Yes

Extreme Precipitation — High Risk

Target Planning Horizon: 2070
Return Period: 50-yr (2%)

Applicable Design Criteria

Tiered Methodology: Tier 3 (Link)

Total Precipitation Depth for 24-hour Design Storms: Yes
Peak Intensity for 24-hour Design Storms: Yes
Riverine Peak Discharge: Yes
Riverine Peak Flood Elevation: Yes
Duration of Flooding for Design Storm: Yes
Flood Pathways: Yes

Extreme Heat — High Risk

Target Planning Horizon: 2070
Percentile: 50th Percentile

Applicable Design Criteria

Tiered Methodology: Tier 3 (Link)

Annual/Summer/Winter Average Temperature: Yes
Heat Index: Yes
Days Per Year With Max Temperature > 95°F: Yes
Days Per Year With Max Temperature > 90°F: Yes
Days Per Year With Max Temperature < 32°F: Yes
Number of Heat Waves Per Year: Yes
Average Heat Wave Duration (Days): Yes
Cooling Degree Days (Base = 65°F): No
Heating Degree Days (Base = 65°F): No
Growing Degree Days: No

Project Inputs

Core Project Information	
Name:	MWRA Contract Number 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting
Given the expected useful life of the project, through what year do you estimate the project to last (i.e. before a major reconstruction/renovation)?	2070 - 2079
Location of Project:	Boston
Estimated Capital Cost:	$26,000,000
Entity Submitting Project:	Executive Office of Energy and Environmental Affairs
Is this project being submitted as part of a state grant application?	No
Which grant program?	
Is climate resiliency a core objective of this project?	No
Is this project being submitted as part of the state capital planning process?	No
Is this project being submitted as part of a regulatory review process?	Yes
Brief Project Description:	The Massachusetts Water Resources Authority (MWRA) is submitting an Expanded Environmental Notification Form (ENF) to the Massachusetts Environmental Policy Act Office (MEPA) to initiate the review process for the Section 22 Rehabilitation Project. Section 22 is a critical water pipeline that delivers drinking water to, and is located in, Boston, Milton, and Quincy Massachusetts. This pipeline is composed primarily of 48-inch unlined steel pipe; the 650-foot-long portion under the Neponset River is constructed of 52-inch concrete-lined steel pipe. Section 21 is composed of an approximately 3,600-foot-long, 24-inch cast iron pipe within existing roadways in Milton and Quincy. Over the years Section 22 has required numerous repairs, and Section 21 is heavily corroded. The Project proposes to rehabilitate and replace portions of Section 21 and Section 22 to restore them to full function.
Project Ecosystem Benefits	
Provides flood protection through green infrastructure or nature-based solutions	No
Provides storm damage mitigation	No
Provides groundwater recharge	No
Protects public water supply	Yes
Filters stormwater	No
Improves water quality	No
Promotes decarbonization	No
Enables carbon sequestration	No
Provides oxygen production	No
Improves air quality	No
Prevents pollution	No
Remediates existing sources of pollution	No
Protects fisheries, wildlife, and plant habitat	No
Protects land containing shellfish	No
Provides pollination	No
Provides recreation	No
Provides cultural resources/education	No
Project Climate Exposure	
Does the project site have a history of coastal flooding?	Yes
Does the project site have a history of flooding during extreme precipitation events (unrelated to water/sewer damages)?	Yes
Does the project site have a history of riverine flooding?	Yes
Does the project result in a net increase in impervious area of the site?	No
Are existing trees being removed as part of the proposed project?	No

Project Assets

Asset: Section 22, Segments 1-4
Asset Type: Utility Infrastructure
Asset Sub-Type: Water
Construction Type: Maintenance (critical repair)
Construction Year: 2025
Useful Life: 50

Identify the length of time the asset can be inaccessible/inoperable without significant consequences.
Infrastructure must be accessible/operable at all times, even during natural hazard event.

Identify the geographic area directly affected by permanent loss or significant inoperability of the infrastructure.
Impacts would be regional (more than one municipality and/or surrounding region)

Identify the population directly served that would be affected by the permanent loss or significant inoperability of the infrastructure.
Greater than 100,000 people

Identify if the infrastructure is located within an environmental justice community or provides services to vulnerable populations.
The infrastructure is located in an environmental justice community, and/or provides some services to vulnerable populations (services are not available elsewhere to same population)

Will the infrastructure reduce the risk of flooding?
No

If the infrastructure became inoperable for longer than acceptable in Question 1, how, if at all, would it be expected to impact people's health and safety?
Inoperability of the infrastructure would be expected to result in minor impacts to people's health, including minor injuries or minor impacts to chronic illnesses

If there are hazardous materials in your infrastructure, what are the extents of impacts related to spills/releases of these materials?
There are no hazardous materials in the infrastructure

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the impacts on other facilities, assets, and/or infrastructure?
Moderate – Inoperability may impact other facilities, assets, or buildings, but cascading impacts do not affect the ability of other facilities, assets, or buildings to operate

If the infrastructure was damaged beyond repair, how much would it approximately cost to replace?
Between $30 million and $100 million

Does the infrastructure function as an evacuation route during emergencies? This question only applies to roadway projects.
No

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the environmental impacts related to natural resources?
No impact on surrounding natural resources is expected

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the impacts to government services (i.e. the infrastructure is not able to serve or operate its intended users or function)?
Loss of infrastructure may reduce the ability to maintain some government services, while a majority of services will still exist

What are the impacts to loss of confidence in government resulting from loss of infrastructure functionality (i.e. the infrastructure asset is not able to serve or operate its intended users or function)?
Loss of confidence in government agency

Asset: Section 21, Segment 1
Asset Type: Utility Infrastructure
Asset Sub-Type: Water
Construction Type: Maintenance (critical repair)
Construction Year: 2025
Useful Life: 50

Identify the length of time the asset can be inaccessible/inoperable without significant consequences.
Infrastructure must be accessible/operable at all times, even during natural hazard event.

Identify the geographic area directly affected by permanent loss or significant inoperability of the infrastructure.
Impacts would be regional (more than one municipality and/or surrounding region)

Identify the population directly served that would be affected by the permanent loss or significant inoperability of the infrastructure.
Less than 100,000 people

Identify if the infrastructure is located within an environmental justice community or provides services to vulnerable populations.
The infrastructure is located in an environmental justice community, and/or provides some services to vulnerable populations (services are not available elsewhere to same population)

Will the infrastructure reduce the risk of flooding?
No

If the infrastructure became inoperable for longer than acceptable in Question 1, how, if at all, would it be expected to impact people's health and safety?
Inoperability of the infrastructure would be expected to result in minor impacts to people's health, including minor injuries or minor impacts to chronic illnesses

If there are hazardous materials in your infrastructure, what are the extents of impacts related to spills/releases of these materials?
There are no hazardous materials in the infrastructure

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the impacts on other facilities, assets, and/or infrastructure?
Moderate – Inoperability may impact other facilities, assets, or buildings, but cascading impacts do not affect the ability of other facilities, assets, or buildings to operate

If the infrastructure was damaged beyond repair, how much would it approximately cost to replace?
Between $30 million and $100 million

Does the infrastructure function as an evacuation route during emergencies? This question only applies to roadway projects.
No

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the environmental impacts related to natural resources?
No impact on surrounding natural resources is expected

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the impacts to government services (i.e. the infrastructure is not able to serve or operate its intended users or function)?

Loss of infrastructure may reduce the ability to maintain some government services, while a majority of services will still exist

What are the impacts to loss of confidence in government resulting from loss of infrastructure functionality (i.e. the infrastructure asset is not able to serve or operate its intended users or function)?

Loss of confidence in government agency

Attachment F: Advance Notification Environmental Justice Screening Form and Distribution List

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ADDENDUM: Environmental Justice Screening Form

Project Name	MWRA Section 22 and Section 21 Rehabilitation Project
Anticipated Date of MEPA Filing	December 7, 2022 Environmental Monitor
Proponent Name	Massachusetts Water Resources Authority (MWRA)
Contact Information (e.g., consultant)	Katherine Ronan, MWRA katherine.ronan@mwra.com, 617-788-1177
Public website for project or other physical location where project materials can be obtained (if available)	https://www.mwra.com/projects/water/sec21-22/sec21-22-update.html
Municipality and Zip Code for Project (if known)	Boston, Milton, Quincy
Project Type* (list all that apply)	Water Supply – Treatment/conveyance
Is the project site within a mapped 100-year FEMA flood plain? Y/N/yet unknown	Yes
Estimated GHG emissions of conditioned spaces if known (click **here** for GHG Estimation tool)	N/A – There are no conditioned spaces associated with the Project

Project Description

1. Provide a brief project description, including overall size of the project site and square footage of proposed buildings and structures if known.

The Project involves rehabilitation of portions of MWRA's Section 22 and Section 21 water pipelines in areas of Boston, Milton and Quincy. These pipelines are critical components of MWRA's drinking water system and deliver water to customers in these communities. The purpose of this rehabilitation Project is to restore the pipelines to their full function and ensure reliable delivery of safe and clean drinking water to customers in these communities, now and into the future.

Section 22 was constructed in 1950, is approximately 16,000 feet long, and is composed primarily of 48-inch-diameter unlined steel pipe. Portions of Section 22 are located in the Neponset River Estuary Area of Critical Environmental Concern (ACEC). A 650-foot-long portion of Section 22 runs under the Neponset River, which is composed of 52-inch-diameter concrete-lined steel pipe. Section 21 was constructed in the early 1900s, is approximately 3,600 feet long and is composed of 24-inch-diameter cast iron pipe. Both pipelines are in need of rehabilitation. Section 22 has required numerous repairs over the year and Section 21 is heavily corroded.

Specialized construction methods including "cleaning and lining" and "sliplining" will be used along much of pipeline, which greatly limit areas of excavation and reduce both environmental and public health impacts associated with rehabilitation of the pipelines. Additionally, a portion (approximately 2,800 feet) of the existing Section 22 pipeline which is currently located within a salt marsh and the Neponset River Estuary ACEC, will be relocated into Granite Avenue in Quincy. This will reduce environmental impacts associated with rehabilitation and future maintenance of this segment of pipeline. This Project is tentatively planned in phases between 2025 and 2027.

2. List anticipated MEPA review thresholds (301 CMR 11.03) (if known)

- 301 CMR 11.03(3)(a)1. a. alteration of one or more acres of salt marsh or bordering vegetating wetlands
- 301 CMR 11.03(11)(b) Any Project within a designated ACEC, unless the Project consists solely of one single family dwelling.

3. List all anticipated state, local and federal permits needed for the project (if known)

State

- Massachusetts Department of Transportation (DOT) Access Permit
- Massachusetts Department of Conservation and Recreation (DCR) Construction Access Permit
- Massachusetts Bay Transportation Authority (MBTA) License to Enter
- Massachusetts Department of Environmental Protection (MassDEP) Section 401 Water Quality Certification
- Massachusetts Department of Environmental Protection (MassDEP) Chapter 91 Massachusetts Public Waterfront Act
- Massachusetts Historical Commission Review

Local

- MassDEP/Milton Conservation Commission Order of Conditions

Federal

- U.S. Army Corps of Engineers Section 404 Pre-Construction Notification
- Massachusetts Office of Coastal Zone Management Federal Consistency Review
- U.S. Environmental Protection Agency National Pollutant Discharge Elimination System General Permit for Storm Water Discharges from Construction Activities

4. Identify EJ populations and characteristics (Minority, Income, English Isolation) within 5 miles of project site (can attach map from EJ Maps Viewer in lieu of narrative)

The Project is located within one mile of 62 census tracts in Boston and Quincy identified as Environmental Justice communities on the Massachusetts 2020 Environmental Justice Populations map viewer. As shown on the attached map, the characteristics of EJ populations within 1 mile of the Project site include Minority; Income; Minority and Income; Minority and English Isolation; and Minority, Income and English Isolation. The characteristics EJ Populations with 5 miles of the Project site include Minority; Income; English Isolation; Minority and Income; and Minority, Income and English Isolation.

5. Identify any municipality or census tract meeting the definition of "vulnerable health EJ criteria" in the DPH EJ Tool located in whole or in part within a 1 mile radius of the project site

The EJ populations in Boston exhibit "vulnerable health EJ criteria" related to childhood asthma, childhood blood lead, and low birth weight.

6. Identify potential short-term and long-term environmental and public health impacts that may affect EJ Populations and any anticipated mitigation

Environmental and public health impacts associated with the Project will be temporary in nature and related to active construction. Construction traffic related to delivery of materials has the potential to impact neighborhoods in the immediate vicinity of the Project, which include both EJ and non-EJ populations. However, work will move along the length of the pipeline and will not be in front of any single location for an extended period of time. Other possible temporary impacts include noise, dust and emissions associated with construction. Best management practices will be implemented to mitigate these short-term impacts including dust control, compliance with anti-idling regulations and use of emission control devices. Construction noise will be minimized by ensuring that equipment is functioning properly and equipped with noise reducing features. Typical work hours will be limited to between 7 a.m. and 5 p.m. Monday through Friday.

The Project was designed to entirely avoid permanent wetland impacts and to minimize temporary impacts to wetlands and the Neponset River Estuary ACEC to the maximum extent possible. Best management practices including construction mats and erosion controls will be implemented to avoid impacts to wetlands resources.

7. Identify project benefits, including "Environmental Benefits" as defined in 301 CMR 11.02, that may improve environmental conditions or public health of the EJ population

The goal and purpose of the Project is to ensure continued safe, reliable drinking water and promote public health in the communities served by these pipelines, including Boston, Quincy and Milton, which include both EJ and non-EJ populations.

8. Describe how the community can request a meeting to discuss the project, and how the community can request oral language interpretation services at the meeting . Specify how to request other accommodations, including meetings after business hours and at locations near public transportation.

To request a meeting to discuss the project and request oral language interpretation services at the meeting, please contact Katherine Ronan, MWRA, at 857-289-1742 or katherine.ronan@mwra.com

ANÈKS: Fòmilè Evalyasyon Jistis Anviwònmantal

Non Pwojè a	Pwojè Reyabilitasyon Seksyon 22 ak Seksyon 21 MWRA
Dat ki Prevwa pou Depozisyon yo nan MEPA	7 desanm 2022
Non Pwopozisyon an	Massachusetts Water Resources Authority (Otorite Resous pou Zafè Dlo nan Massachusetts) (MWRA)
Moun pou kontakte (pa egzanp, konsiltan)	Katherine Ronan, MWRA katherine.ronan@mwra.com, 617-788-1177
Sit entènèt piblik pou pwojè a oswa lòt lokalizasyon fizik kote yo ka jwenn materyèl pwojè a (si sa disponib)	https://www.mwra.com/projects/water/sec21-22/sec21-22-update.html
Minisipalite ak Kòd Postal pou Pwojè a (si li koni)	Boston, Milton, Quincy
Kalite Pwojè* (site tout sa ki aplikab)	Distribisyon Dlo - Tretman/Transpòtasyon
Èske sit pwojè a twouve li nan yon plèn inondab ke FEMA katografye sou 100 ane? Wi/Non/ Enkoni pou kounye a	Wi
Estimasyon emisyon GES nan espas kondisyone si yo koni (Klike **isit la** pou zouti estimasyon GES)	Pa gen – Pa gen okenn espas kondisyone ki asosye ak Pwojè a

Deskripsyon Pwojè a

1. Bay yon deskripsyon tou kout sou pwojè a, sa ki gen ladan gwosè jeneral sit pwojè a ak pye kare bilding ak estrikti yo pwopoze, si yo koni.

Pwojè a prevwa reyabilitasyon pòsyon tiyo dlo Seksyon 22 ak Seksyon 21 MWRA nan zòn Boston, Milton ak Quincy. Tiyo sa yo se eleman enpòtan nan sistèm dlo potab MWRA a epi yo pote dlo bay kliyan nan kominote sa yo. Objektif Pwojè reyabilitasyon sa a se retabli tiyo yo nan fonksyònman konplè yo epi asire livrezon dlo potab fyab e pwòp pou kliyan nan kominote sa yo, kounye a ak alavni.

Seksyon 22 te konstwi an 1950, se apeprè 16000 pye longè, epi li konpoze prensipalman ak tiyo asye 48 pous ki pa kouvri. Kèk pati nan Seksyon 22 a sitiye nan zòn preyokipasyon anviwònmantal anbouchi larivyè Neponset la (ACEC). Yon pòsyon 650 pye longè nan Seksyon 22 pase anba Rivyè Neponset, ki fèt avèk tiyo an asye ki kouvri ak beton 52 pous dyamèt. Seksyon 21 te konstwi nan kòmansman ane 1900 yo, li gen apeprè 3600 pye nan longè e li fèt avèk tiyo an fè 24 pous dyamèt. Tou de tiyo yo bezwen reyabilitasyon. Seksyon 22 nesesite anpil reparasyon pandan ane a epi Seksyon 21 te plen wouy.

Metòd konstriksyon espesyalize ki gen ladan "netwayaj ak revètman" ak "tibaj" yo pral itilize anpil sou tiyo yo, sa ki pral limite fouy nan anpil zòn epi redwi tou alafwa enpak sou anviwònman ak sante piblik ki asosye avèk reyabilitasyon tiyo yo. Anplis de sa, yon pòsyon (apeprè 2800 pye) nan tiyo Seksyon 22 ki egziste kounye a ki sitiye nan yon marekaj sèl ak anbouchi larivyè Neponset ACEC, pral deplase nan Granite Avenue nan Quincy. Sa pral redwi enpak anviwonmantal ki asosye avèk reyabilitasyon ak antretyen alavni segman tiyo sa a. Pwojè sa a planifye pwovizwaman pa faz ant 2025 ak 2027.

2. Enimere nivo evalyasyon MEPA prevwa yo (301 CMR 11.03) (si yo koni)

- 301 CMR 11.03(3)(a)1. a. chanjman nan youn oswa plis kawo tè marekaj sale oswa bò kote tè marekaj ki gen vejetasyon yo
- 301 CMR 11.03(11)(b) Nenpòt Pwojè nan yon ACEC deziyen, sof si Pwojè a konsiste inikman nan yon abitasyon familyal.

3. Enimere tout pèmi eta, lokal ak federal ki nesesè pou pwojè a (si yo koni)

Eta

- Pèmi Daksè Depatman Transpò Massachusetts (DOT).
- Pèmi Daksè pou Travay Konstriksyon Depatman Konsèvasyon ak Lwazi nan Massachusetts (DCR)
- Lisans pou Antre Otorite Transpò Massachusetts Bay (MBTA)
- Sètifikasyon Kalite Dlo dapre Seksyon 401 Depatman Pwoteksyon Anviwònman nan Massachusetts (MassDEP).
- Depatman Pwoteksyon Anviwònman nan Massachusetts (MassDEP) Chapit 91 Lwa sou Fwon Lanmè nan Massachusetts
- Evalyasyon Komisyon Istorik Massachusetts la

Lokal

- Lòd Kondisyon Komisyon Konsèvasyon MassDEP/Milton

Federal

- Notifikasyon Pre-Konstriksyon Seksyon 404 Kò Jeni Lame Amerikèn
- Evalyasyon Koyerans Federal Biwo Jesyon Zòn Kòt Massachusetts yo
- Otorizasyon jeneral Sistèm Eliminasyon Nasyonal Dechaj Polisyon Ajans Pwoteksyon Anviwònman Ozetazini pou Dechaj Dlo lapli ki soti nan Aktivite Konstriksyon

4. Idantifye popilasyon ak karakteristik EJ yo (minorite, revni,Mank Metriz Anglè) nan yon reyon 5 km sit pwojè a (ka jwenn yon kat jeyografik apati Vizyalizè Kat EJ a olye tèks)

Pwojè a sitiye nan mwens pase lkm avèk 62 zòn resansman nan Boston ak Quincy ki te idantifye kòm Kominote Jistis Anviwònmantal sou vizyalizè kat popilasyon Jistis Anviwònmantal Massachusetts ane 2020. Jan kat jeyografik ki atache a montre sa, karakteristik popilasyon EJ ki nan yon distans mwens pase 1km sit pwojè a gen ladan Minorite; Revni; Minorite ak Revni; Minorite ak Mank Metriz Anglè; ak Minorite, Revni ak Mank Metriz Anglè. Karakteristik Popilasyon EJ ki nan yon distans ki mwens pase 5 km avèk sit Pwojè a gen ladan Minorite; Revni; Mank Metriz Anglè; Minorite ak Revni; ak Minorite, Revni ak Mank Metriz Anglè.

5. Idantifye tout minisipalite oswa zòn resansman ki koresponn definisyon "kritè EJ pou sante vilnerab" nan Zouti EJ DPH ki sitiye an antye oswa an pati nan yon reyon 1km avèk sit pwojè a.

Popilasyon EJ nan Boston prezante "kritè EJ pou sante vilnerab" lye avèk timoun ki fè opresyon, plon nan san timoun, ak timoun ki gen ti pwa nan moman nesans.

6. Idantifye potansyèl enpak sou anviwonman ak sante piblik akoutèm ak alontèm ki ka afekte Popilasyon EJ yo ak tout mezi alèjman ki prevwa yo.

Enpak anviwònman ak sante piblik ki asosye avèk Pwojè a pral gen yon nati tanporè epi lye avèk konstriksyon aktiv. Trafik pou konstriksyon ki gen rapò avèk livrezon materyèl gen posiblite pou gen enpak sou katye ki nan vwazinaj imedya Pwojè a, sa ki gen ladan popilasyon EJ ak popilasyon ki pa EJ. Sepandan, travay yo pral dewoule sou longè tiyo a epi yo p ap twouve yo devan yon sèl kote pandan yon peryòd tan pwolonje. Lòt enpak tanporè posib yo enkli bri, pousyè ak emisyon ki asosye avèk konstriksyon. Pi bon pratik jesyon yo pral aplike pou bese enpak akoutèm sa yo ki gen ladan kontwòl pousyè, respekte règlemantasyon anti-ralenti ak itilizasyon aparèy kontwòl emisyon. Bri konstriksyon yo pral redui nan asire ke ekipman yo fonksyone byen epi ekipe ak dispozitif pou diminye bri. Orè travay abityèl yo pral limite ant 7 a.m. rive 5 p.m. Lendi jiska Vandredi.

Pwojè a te fèt pou evite totalman enpak pèmanan sou zòn marekaj epi pou redui omaksimòm enpak tanporè sou zòn marekaj ak anbouchi larivyè Neponset ACEC la plis ke posib. Meyè pratik jesyon ki gen ladan tapi konstriksyon ak kontwòl ewozyon yo pral aplike pou evite enpak sou resous marekaj yo.

7. Idantifye avantaj pwojè a, sa ki gen ladan "Benefis Anviwònmantal" jan sa defini nan 301 CMR 11.02, ki ka amelyore kondisyon anviwònmantal oswa sante piblik popilasyon EJ a.

Bi ak objektif Pwojè a se pou asire kontinite dlo potab san danje epi fyab ak fè pwomosyon pou sante piblik nan kominote tiyo sa yo desèvi yo, tankou Boston, Quincy ak Milton, ki gen ladan tou alafwa popilasyon EJ ak popilasyon ki pa EJ.

8. Dekri kijan kominote a ka mande yon reyinyon pou diskite sou pwojè a, epi kijan kominote a ka mande sèvis entèpretasyon nan lang oral nan reyinyon an. Espesifye kijan pou mande lòt aranjman, tankou reyinyon apre lè travay yo ak nan lye ki toupre transpò piblik.

Pou mande yon reyinyon pou diskite sou pwojè a epi mande sèvis entèpretasyon nan lang oral nan reyinyon an, tanpri kontakte Katherine Ronan, MWRA, at 857-289-1742 oswa katherine.ronan@mwra.com

附录：环境正义筛查表

项目名称	MWRA第22段和第21段修复项目
MEPA提交申请的预计日期	2022年12月7日
支持方名称	Massachusetts Water Resources Authority (马萨诸塞州水资源管理局)（MWRA）
联络信息（例如顾问）	Katherine Ronan，MWRA katherine.ronan@mwra.com，617-788-1177
项目的公共网站或可获取项目材料的其他实际位置（如果可用）	https://www.mwra.com/projects/water/sec21-22/sec21-22-update.html
项目的市政当局和邮政编码（如果已知）	Boston、Milton、Quincy
项目类型*（列出所有适用类型）	供水系统-处理/输送
项目位置是否位于联邦应急管理局（FEMA）绘制的100年洪泛区内？是/否/未知	是
空调空间的估算温室气体（GHG）排放量（如果已知）（点击**此处**查看GHG估算工具）	不适用 – 没有与项目相关的空调空间

项目描述

1.提供项目简介，包括项目场地的总体面积，以及已知的拟建建筑物和构筑物的建筑面积。 该项目涉及Boston、Milton和Quincy地区MWRA的第22段和第21段水管的部分修复。这些管道是MWRA饮用水系统的关键组成部分，将水输送给这些社区中的客户。该修复项目的目的是恢复这些管道的全部功能，并确保现在和将来向这些社区的客户提供可靠、安全和清洁的饮用水。 第22段建于1950年，长约16000英尺，主要由直径48英寸的无衬里钢管组成。第22段的部分区域位于Neponset River河口的关键环境问题区（ACEC）。第22段有一部分通过Neponset River河底，长650英尺，由直径52英寸的混凝土内衬钢管组成。第21段建于20世纪初，长约3600英尺，由直径24英寸的铸铁管组成。这两段管道都需要修复。第22段在过去一年里已经进行了多次维修，而第21段则腐蚀严重。 很多管道沿线将采用“清理和衬砌”以及“拉管”等专业施工方法，这将极大地限制挖掘区域，并减少与管道修复相关的环境和公共卫生影响。此外，现存第22段管道的一部分（约2800英尺），目前位于盐沼和Neponset River河口的ACEC，将迁至Quincy的Granite Avenue。这将减少与该段管道的修复和未来维护相关的环境影响。本项目暂定于2025年至2027年分阶段实施。
2.列出预期的MEPA审查阈值（301 CMR 11.03）（如果已知） - 301 CMR 11.03（3）（a）1.a. 改造一英亩或多英亩盐沼或毗邻的植被湿地 - 301 CMR 11.03(11)(b) 指定ACEC内的任何项目，除非该项目仅由一个家庭住宅组成。

3.列出项目所需的所有预期州、地方和联邦许可证（如果已知）

州

-马萨诸塞州交通部（DOT）通行许可证
-马萨诸塞州保护与游憩部（DCR）施工通行证
-马萨诸塞湾交通局（MBTA）进入许可证
-马萨诸塞州环境保护部（MassDEP）第401节水质证明
-马萨诸塞州环境保护部（MassDEP）《马萨诸塞州公共滨水区法案》第91章
-马萨诸塞州历史委员会审查

地方

-MassDEP/Milton Conservation Commission（米尔顿环境保护委员会）的Order of Conditions（《环境法令》）

联邦

-美国陆军工程兵团第404节《施工前通知》
-马萨诸塞州Office of Coastal Zone Management （海岸地区管理办公室）的联邦一致性审查
-U.S. Environmental Protection Agency（美国环境保护局）国家污染物排放消除系统、施工活动雨水排放通用许可证

4.确定项目现场5英里范围内的环境正义（EJ）人口和特征（少数民族、收入、英语孤立）（可附上EJ Maps Viewer（地图查看器）中的地图代替叙述）

该项目位于Boston和Quincy的62个人口普查区的1英里范围内，在马萨诸塞州2020年环境正义人口地图查看器中，这里被确定为环境正义社区。如所附地图所示，项目现场1英里范围内的EJ人口特征包括少数民族；收入；少数民族与收入；少数民族与英语孤立；以及少数民族、收入和英语孤立。项目现场5英里范围内的EJ人口特征包括少数民族；收入；英语孤立；少数民族与收入；以及少数民族、收入和英语孤立。

5.确定全部或部分位于项目现场1英里半径范内的符合公共卫生部（DPH）EJ工具中“脆弱健康EJ标准”定义的任何市政当局或人口普查区

Boston的EJ人口表现出与儿童哮喘、儿童血铅和低出生体重相关的“脆弱健康EJ标准”。

6.确定可能影响EJ人口的潜在的短期和长期环境和公共卫生影响以及任何预期缓解措施。

与本项目相关的环境和公共卫生影响将是临时性的，与正在进行的施工相关。与材料运输相关的施工交通可能会影响项目附近的街区，包括EJ和非EJ人口。不过，工程将沿着管道长度移动，不会长期地在某个地点前施工。其他可能存在的临时影响包括与施工相关的噪音、粉尘和排放物。为减轻这些短期影响，我们将实施最佳管理措施，包括粉尘控制、遵守反空转法规和使用排放控制装置。确保设备正常运行并配备降噪装置，将施工噪音降至最低。工作时间一般限制在周一至周五的上午7点至下午5点。

本项目旨在完全避免永久性的湿地影响，并最大限度地减少对湿地和Neponset River河口ACEC的临时影响。我们将实施最佳管理措施，包括采用施工垫和侵蚀控制，以避免对湿地资源的影响。

7.确定项目效益，包括301 CMR 11.02中定义的“环境效益”，这可能会改善EJ人口的环境条件或公共卫生。

本项目的目标和目的是确保提供持续安全、可靠的饮用水，并提高这些管道所服务社区（包括Boston、Quincy和Milton）的公共卫生，其中包括EJ和非EJ人口。

8.描述社区如何申请召开会议讨论该项目，以及社区如何申请会议口译服务。具体说明如何申请其他辅助服务，包括在工作时间之后和在靠近公共交通工具的地点开会。

若要申请召开会议讨论本项目并申请会议口译服务，请联络MWRA的Katherine Ronan，电话：857-289-1742或发送电子邮件至katherine.ronan@mwra.com。

APÉNDICE: Formulario de revisión de justicia ambiental

Nombre del proyecto	MWRA (Autoridad de recursos hídricos de Massachusetts) Sección 22 y Sección 21 Proyecto de rehabilitación
Fecha anticipada de la declaración de MEPA (Acta de política ambiental de Massachusetts)	7/dic/2022
Nombre del defensor	Massachusetts Water Resources Authority (Autoridad de recursos hídricos de Massachusetts) (MWRA)
Información de contacto (es decir, asesor)	Katherine Ronan, MWRA (Autoridad de recursos hídricos de Massachusetts) katherine.ronan@mwra.com, 617-788-1177
Sitio web público del proyecto u otra localidad física en donde los materiales del proyecto pueden obtenerse (si está disponible).	https://www.mwra.com/projects/water/sec21-22/sec21-22-update.html
Municipalidad y código postal para el proyecto (si se conoce)	Boston, Milton, Quincy
Tipo de proyecto * (enumere todo lo que aplique)	Suministro de agua - Tratamiento/suministro
¿Se encuentra el sitio del proyecto dentro de una llanura de inundación mapeada por FEMA (Agencia Federal para el Manejo de Emergencias) de 100 años? Sí/NO/aún desconocido	Sí
Emisiones estimadas de gases de efecto invernadero de espacios condicionados si se conocen (haga clic **aquí** para la herramienta de estimación de gases por efecto invernadero)	N/A – No hay espacios condicionados asociados con el Proyecto.

Descripción del proyecto

1. Proporcione una descripción breve, incluyendo el tamaño total del sitio del proyecto y los pies cuadrados de los edificios propuestos y las estructuras si se conoce.

El proyecto implica la rehabilitación de partes de las tuberías de agua de la Sección 22 y la Sección 21 de MWRA (Autoridad de recursos hídricos de Massachusetts) en áreas de Boston, Milton y Quincy. Estas tuberías son componentes críticos del sistema de agua potable de MWRA y dan el agua a los clientes en estas comunidades. El propósito de este proyecto de rehabilitación es restaurar las tuberías a su plena función y garantizar la entrega confiable de agua potable segura y limpia a los clientes en estas comunidades, ahora y en el futuro.

La Sección 22 se construyó en 1950, tiene cerca de 16,000 pies de largo y se constituye principalmente de una tubería de acero sin revestimiento de 48 pulgadas de diámetro. Partes de la Sección 22 están en el Área de Preocupación Ambiental Crítica (ACEC) del Estuario del Río Neponset. Una porción de 650 pies de largo de la Sección 22 corre bajo el río Neponset, que se compone de una tubería de acero revestida de concreto de 52 pulgadas de diámetro. La Sección 21 fue construida a principios de 1900, tiene aproximadamente 3,600 pies de largo y está compuesta por una tubería de hierro fundido de 24 pulgadas

de diámetro. Ambos oleoductos necesitan rehabilitación. La Sección 22 ha requerido numerosas reparaciones a lo largo del año y la Sección 21 está muy corroída.

Se usarán métodos de construcción especializados, incluyendo "la limpieza y revestimiento" y "deslizamiento" a lo largo de gran parte de la tubería, lo que limita en gran medida las áreas de excavación y reduce los impactos ambientales y de salud pública asociados con la rehabilitación de las tuberías. Además, una porción (de cerca de 2,800 pies) de la tubería existente de la Sección 22 que actualmente se encuentra dentro de una marisma salada y el Estuario del río Neponset ACEC (Área de Preocupación Ambiental Crítica), se reubicará en Granite Avenue en Quincy. Esto reducirá los impactos ambientales asociados con la rehabilitación y el mantenimiento futuro de estas partes de las tuberías. Este proyecto está tentativamente planificado en fases entre 2025 y 2027.

2. Enumere los umbrales de revisión de MEPA (Acta de política ambiental de Massachusetts) que se anticipan (301 CMR 11.03) (si se conocen).

- 301 CMR 11.03(3)(a)1. a. La alteración de uno o más acres de marismas saladas o humedales vegetativos cercanos.
- 301 CMR 11.03(11)(b) Cualquier Proyecto dentro de un ACEC (Área de Preocupación Ambiental Crítica) que se designe, a menos que el Proyecto consista únicamente en una vivienda de una familia.

3. Enumere todos los permisos anticipados estatales, locales y federales que son necesarios para el proyecto (si se conocen).

Estado

- Permiso de acceso al Departamento de Transporte de Massachusetts (DOT)
- Permiso de acceso a la construcción del Departamento de Conservación y Recreación de Massachusetts (DCR)
- Licencia de entrada de la Autoridad de Transporte de la Bahía de Massachusetts (MBTA)
- Certificación de calidad del agua de la Sección 401 del Departamento de Protección Ambiental de Massachusetts (MassDEP)
- Departamento de Protección Ambiental de Massachusetts (MassDEP) Capítulo 91 Ley del Litoral público de Massachusetts
- Revisión de la Comisión Histórica de Massachusetts

Local

- Orden de Condiciones de MassDEP/Comisión de Conservación Milton

Federal

- Notificación previa a la construcción de la Sección 404 del Cuerpo de Ingenieros del Ejército de los Estados Unidos
- Revisión de consistencia federal de la Oficina de la Administración de Zonas Costeras de Massachusetts
- Agencia de Protección Ambiental de los Estados Unidos, Sistema Nacional de Eliminación de Descargas de Contaminantes, Permiso General para Descargas de Aguas Pluviales de Actividades de Construcción

4. Identifique las poblaciones y características de EJ (Justicia Ambiental) (minoría, ingresos, aislamiento del inglés) dentro de las 5 millas del sitio del proyecto (puede adjuntar un mapa desde EJ Maps Viewer en lugar de una narrativa).

El proyecto se ubica a una milla de 62 secciones censales en Boston y Quincy identificadas como Comunidades de Justicia Ambiental en el visor de mapas de Poblaciones de Justicia Ambiental de Massachusetts 2020. Como se muestra en el mapa adjunto, las características de las poblaciones de EJ (Justicia Ambiental) dentro de 1 milla del sitio del Proyecto incluyen Minoría; Ingresos; Minoría e Ingresos; Aislamiento de minorías e inglés; y aislamiento de minorías, ingresos e inglés. Las características de las poblaciones de EJ (Justicia Ambiental) con 5 millas del sitio del proyecto incluyen Minoría; Ingresos; Aislamiento de inglés; Minoría e Ingresos; y aislamiento de minorías, ingresos e inglés.

5. Identifique cualquier municipio o sección censal que cumpla con la definición de "criterios de EJ (Justicia Ambiental) de salud vulnerable" en la Herramienta DPH EJ ubicada en su totalidad o en parte dentro de un radio de 1 milla desde el sitio del proyecto.

Las poblaciones de EJ (Justicia Ambiental) en Boston muestran "criterios vulnerables de salud de EJ (Justicia Ambiental)" relacionados con el asma infantil, el plomo en la sangre infantil y el bajo peso al nacer.

6. Identifique los posibles impactos ambientales y de salud pública a corto y largo plazo que puedan afectar a las poblaciones de EJ (Justicia Ambiental) y cualquier mitigación anticipada.

Los impactos al ambiente y a la salud pública asociados con el Proyecto serán de naturaleza temporal y relacionados con la construcción activa. El tráfico de construcción relacionado con la entrega de materiales tiene el potencial de afectar a los vecindarios en las inmediaciones del Proyecto, que incluyen poblaciones de EJ (Justicia Ambiental) y no EJ (Justicia Ambiental). Sin embargo, el trabajo se moverá a lo largo de la tubería y no estará frente a ninguna ubicación única durante un período prolongado de tiempo. Otros posibles impactos temporales incluyen el ruido, el polvo y las emisiones asociadas con la construcción. Se implementarán las mejores prácticas de gestión para mitigar estos impactos a corto plazo, incluido el control del polvo, el cumplimiento de las regulaciones anti-ralentí y el uso de dispositivos de investigación de emisiones. El ruido de la construcción se minimizará asegurando que el equipo funcione de forma correcta y esté equipado con características de reducción de ruido. Las horas de trabajo típicas se limitarán entre las 7 a.m. y las 5 p.m. de lunes a viernes.

El proyecto fue diseñado para evitar por completo los impactos permanentes en los humedales y minimizar los impactos temporales y el Área de Preocupación Ambiental Crítica (ACEC) del estuario del Río Neponset en la mayor medida de lo posible. Se implementarán las mejores prácticas de manejo, incluidas las alfombras de construcción y los controles de erosión para evitar impactos en los recursos de los humedales.

7. Identifique los beneficios del proyecto, incluidos los "Beneficios ambientales" según se definen en 301 CMR 11.02, que pueden mejorar las condiciones ambientales o la salud pública de la población de EJ (Justicia Ambiental).

El objetivo y el propósito del Proyecto es garantizar la continuidad del agua potable segura y confiable y promover la salud pública en las comunidades atendidas por estas tuberías, incluidas Boston, Quincy y Milton, que incluyen poblaciones de EJ (Justicia Ambiental) y no EJ (Justicia Ambiental).

8. Describa cómo la comunidad puede solicitar una reunión para discutir el proyecto, y cómo la comunidad puede solicitar servicios de interpretación de lenguaje oral en la reunión. Especifique cómo solicitar otras adaptaciones, incluidas las reuniones después del horario comercial y en lugares cercanos al transporte público.

Para solicitar una reunión para discutir el proyecto y solicitar servicios de interpretación de lenguaje oral en la reunión, comuníquese con Katherine Ronan, MWRA, al 857-289-1742 o katherine.ronan@mwra.com

PHỤ LỤC: Biểu Mẫu Sàng Lọc Công Lý Môi Trường

Tên Dự án	MWRA Section 22 and Section 21 Rehabilitation Project (Dự án Cải tạo Đoạn 22 và Đoạn 21 của MWRA)
Ngày dự kiến nộp MEPA (Đạo luật Chính sách Môi trường Massachusetts)	7 tháng 12, 2022
Tên người đề nghị	Massachusetts Water Resources Authority (Cơ quan Tài nguyên Nước Massachusetts) (MWRA)
Thông tin liên hệ (ví dụ: nhà tư vấn)	Katherine Ronan, MWRA katherine.ronan@mwra.com, 617-788-1177
Trang web công khai của Dự án hoặc địa điểm thực tế khác, nơi có thể lấy tài liệu Dự án (nếu có)	https://www.mwra.com/projects/water/sec21-22/sec21-22-update.html
Đô thị và mã bưu chính cho Dự án (nếu biết)	Boston, Milton, Quincy
Loại Dự án* (liệt kê tất cả mục phù hợp)	Cấp nước - Xử lý/vận chuyển
Địa điểm Dự án có nằm trong vùng bãi bồi 100 năm FEMA (Cơ quan Quản lý Khẩn cấp Liên bang) đã lập bản đồ không? Có/Không/chưa biết	Có
GHG (Khí thải Nhà Kính) ước tính của không gian điều hòa nếu biết (nhấp vào **đây** để sử dụng công cụ ước tính GHG)	Không có - Không có không gian điều hòa liên kết với Dự án

Mô tả Dự án

1. Cung cấp mô tả ngắn gọn Dự án, bao gồm kích thước tổng thể địa điểm Dự án và diện tích mặt bằng tòa nhà và cấu trúc đề xuất nếu biết.

Dự án bao gồm cải tạo các phần của đường ống dẫn nước Đoạn 22 và Đoạn 21 của MWRA ở các khu vực Boston, Milton và Quincy. Các đường ống này là thành phần quan trọng trong hệ thống nước uống của MWRA và cung cấp nước cho khách hàng trong những cộng đồng này. Mục đích của Dự án cải tạo này là khôi phục lại chức năng đầy đủ của đường ống và đảm bảo cung cấp nước uống sạch, an toàn đáng tin cậy cho khách hàng trong những cộng đồng này, hiện tại và trong tương lai.

Đoạn 22 xây dựng năm 1950, dài khoảng 16.000 feet và tạo thành chủ yếu từ ống thép không viền có đường kính 48 inch. Các phần của Đoạn 22 nằm trong Khu vực Lo ngại Môi trường Nghiêm trọng (ACEC) - Cửa sông Neponset. Một phần dài 650 foot của Đoạn 22 chạy dưới sông Neponset, tạo thành từ ống thép phủ bê tông có đường kính 52 inch. Đoạn 21 xây dựng đầu những năm 1900, dài khoảng 3.600 feet và làm bằng ống gang có đường kính 24 inch. Cả hai đường ống đều cần được cải tạo. Đoạn 22 đã yêu cầu sửa chữa nhiều lần trong năm và Đoạn 21 bị ăn mòn nặng.

Các phương pháp thi công chuyên dụng bao gồm "làm sạch và phủ" và "trượt ống" sẽ sử dụng dọc theo phần lớn đường ống, giúp hạn chế đáng kể diện tích đào và giảm tác động đến môi trường, sức khỏe cộng đồng liên quan đến việc cải tạo đường ống. Ngoài ra, một phần (khoảng 2.800 feet) của đường ống Đoạn 22 hiện tại nằm trong vùng đắp ngập mặn và Cửa sông Neponset ACEC, sẽ được chuyển đến Đại lộ Granite ở Quincy. Điều này làm giảm tác động môi trường liên quan đến cải tạo và bảo trì trong tương lai của đoạn đường ống này. Dự án này lên kế hoạch dự kiến trong giai đoạn từ năm 2025 đến 2027.

2. Liệt kê các ngưỡng xem xét MEPA dự kiến (301 CMR 11.03) (nếu biết)

- 301 CMR 11.03(3)(a)1. a. thay đổi một hoặc nhiều mẫu Anh vùng đấp ngập mặn hoặc vùng đất ngập nước có thảm thực vật giáp ranh
- 301 CMR 11.03(11)(b) Bất kỳ Dự án nào trong ACEC chỉ định, trừ khi Dự án chỉ bao gồm nơi ở của một gia đình duy nhất.

3. Liệt kê tất cả giấy phép dự kiến của địa phương, tiểu bang và liên bang cần thiết cho Dự án (nếu biết)

Tiểu bang

- Giấy phép Tiếp cận của Bộ Giao thông Vận tải Massachusetts (DOT)
- Giấy phép Tiếp cận Xây dựng của Bộ Bảo tồn và Giải trí Massachusetts (DCR)
- Giấy phép Nhập cảnh của Cơ quan Giao thông Vịnh Massachusetts (MBTA)
- Chứng nhận Chất lượng Nước Mục 401 của Cục Bảo vệ Môi trường Massachusetts (MassDEP)
- Chương 91 Đạo luật Bờ sông Công cộng Massachusetts của Cục Bảo vệ Môi trường Massachusetts (MassDEP)
- Đánh giá của Ủy ban Lịch sử Massachusetts

Địa phương

- Lệnh điều kiện của Ủy ban Bảo tồn MassDEP/Milton

Liên bang

- Thông báo Trước khi Xây dựng Mục 404 của Công binh Lục quân Hoa Kỳ
- Đánh giá Ổn định Liên bang của Văn phòng Quản lý Vùng Duyên hải Massachusetts
- Giấy phép chung cho việc xả nước chống bão từ Hoạt động Xây dựng của Cơ quan Bảo vệ Môi trường Hoa Kỳ - Hệ thống Loại bỏ Chất thải Ô nhiễm Quốc gia

4. Xác định dân cư EJ (Công lý Môi trường) và các đặc trưng (Người thiểu số, Thu nhập, Cách biệt tiếng Anh) trong vòng 5 dặm quanh địa điểm Dự án (có thể đính kèm bản đồ từ EJ Maps Viewer thay cho tường thuật)

Dự án nằm trong vòng một dặm của 62 vùng điều tra dân số ở Boston và Quincy, được xác định là những cộng đồng Công lý Môi trường trên trình xem bản đồ Dân cư Công lý Môi trường Massachusetts 2020. Như thể hiện trên bản đồ đính kèm, các đặc trưng của dân cư EJ trong phạm vi 1 dặm quanh địa điểm Dự án bao gồm Người thiểu số; Thu nhập; Người thiểu số và Thu nhập; Người thiểu số và Cách biệt tiếng Anh; và Người thiểu số, Thu nhập, Cách biệt tiếng Anh. Các đặc trưng Dân cư EJ cách địa điểm Dự án 5 dặm bao gồm Người thiểu số; Thu nhập; Cách biệt tiếng Anh; Người thiểu số và Thu nhập; và Người thiểu số, Thu nhập và Cách biệt tiếng Anh.

5. Xác định bất kỳ đô thị hoặc vùng điều tra dân số nào đáp ứng định nghĩa "tiêu chí EJ về sức khỏe dễ bị tổn thương" trong Công cụ DPH EJ nằm toàn bộ hoặc một phần trong bán kính 1 dặm từ địa điểm Dự án

Dân cư EJ ở Boston thể hiện "tiêu chí EJ về sức khỏe dễ bị tổn thương" liên quan đến bệnh hen suyễn ở trẻ em, nhiễm chì trong máu ở trẻ em và trẻ sơ sinh nhẹ cân.

6. Xác định tác động đến môi trường và sức khỏe cộng đồng tiềm ẩn trong ngắn hạn và dài hạn, có thể ảnh hưởng đến Dân cư EJ và bất kỳ giảm thiểu dự kiến

Tác động đến môi trường và sức khỏe cộng đồng liên quan đến Dự án sẽ chỉ mang tính chất tạm thời và liên quan đến hoạt động xây dựng. Giao thông xây dựng liên quan đến vận chuyển vật liệu có khả năng ảnh hưởng đến các khu dân cư lân cận Dự án, bao gồm cả Dân cư EJ và không EJ. Tuy nhiên, công việc sẽ di chuyển dọc theo chiều dài của đường ống và sẽ không ở trước bất kỳ địa điểm nào trong một thời gian dài. Tác động tạm thời khác có thể có bao gồm tiếng ồn, bụi và khí thải liên quan đến việc xây dựng. Thực tiễn quản lý tốt nhất sẽ được thực hiện để giảm thiểu những tác động ngắn hạn này bao gồm kiểm soát bụi, tuân thủ quy định chống chạy không tải và sử dụng thiết bị kiểm soát khí thải. Tiếng ồn xây dựng sẽ được giảm thiểu bằng cách đảm bảo rằng thiết bị hoạt động bình thường và được trang bị tính năng giảm thiểu tiếng ồn. Giờ làm việc thông thường sẽ được giới hạn trong khoảng từ 7 giờ sáng đến 5 giờ chiều, từ thứ hai đến thứ sáu.

Dự án được thiết kế để tránh hoàn toàn tác động lâu dài đến vùng đất ngập nước và giảm thiểu tác động tạm thời đối với vùng đất ngập nước và Cửa sông Neponset ACEC ở mức tối đa có thể. Thực tiễn quản lý tốt nhất bao gồm thảm xây dựng và kiểm soát xói mòn sẽ được thực hiện để tránh tác động đến tài nguyên đất ngập nước.

7. Xác định lợi ích của Dự án, bao gồm "Lợi ích Môi trường" như được định nghĩa trong 301 CMR 11.02, có thể cải thiện điều kiện môi trường hoặc sức khỏe cộng đồng của dân cư EJ

Mục đích và mục tiêu của Dự án là đảm bảo tiếp tục có nước uống an toàn, đáng tin cậy và thúc đẩy sức khỏe cộng đồng được phục vụ bởi các đường ống này, bao gồm Boston, Quincy và Milton, bao gồm cả dân cư EJ và không EJ.

8. Mô tả cách cộng đồng có thể yêu cầu cuộc họp thảo luận về Dự án và cách cộng đồng có thể yêu cầu dịch vụ thông dịch ngôn ngữ nói tại cuộc họp. Chỉ định cách yêu cầu tiện ích khác, bao gồm cuộc họp sau giờ làm việc và tại địa điểm gần phương tiện giao thông công cộng.

Để yêu cầu cuộc họp thảo luận về Dự án và yêu cầu dịch vụ thông dịch ngôn ngữ nói tại cuộc họp, vui lòng liên hệ Katherine Ronan, MWRA, theo số 857-289-1742 hoặc katherine.ronan@mwra.com

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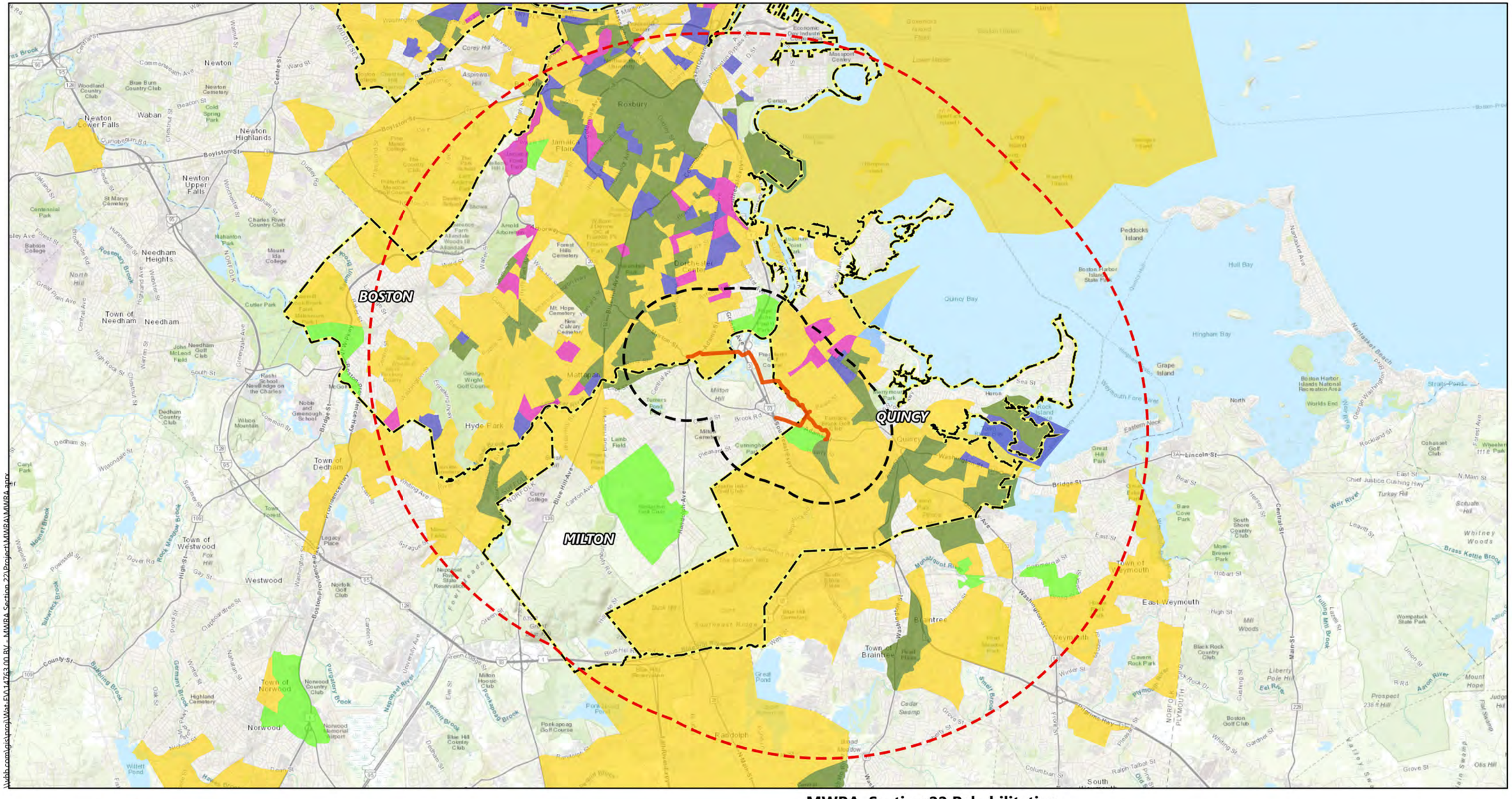

0 4000 8000 16000 Feet

Project Alignment

Environmental Justice 2020 Populations

- Minority
- Income
- English isolation
- Minority and Income
- Minority and English isolation
- Income and English isolation
- Minority, Income and English isolation
- 1-Mile Environmental Justice Buffer
- 5-Mile Environmental Justice Buffer
- Town Boundary

MWRA, Section 22 Rehabilitation
Advance Notification Environmental Justice Screening | Boston, Milton, Quincy, Massachusetts

Environmental Justice Populations

Source: VHB, MassGIS, Black & Veatch, ArcGIS Online

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Statewide Environmental Justice Community Based Organizations

First Name	Last Name	Title	Phone	Email	Affiliation
Julia	Blatt	Executive Director	(617) 714-4272	danielledolan@massriversalliance.org juliablatt@massriversalliance.org	Mass Rivers Alliance
Andrea	Nyamekye	Associate Director	508-505-6748	Andrea@n2nma.org elvis@n2nma.org	Neighbor to Neighbor
Ben	Hellerstein	MA State Director	617-747-4368	ben@environmentmassachusetts.org	Environment Massachusetts
Claire	B.W. Muller	Movement Building Director	508 308-9261	claire@uumassaction.org	Unitarian Universalist Mass Action Network
Cindy	Luppi	New England Director	617-338-8131 x208	cluppi@cleanwater.org	Clean Water Action
Deb	Pasternak	Director, MA Chapter	617-423-5775	deb.pasternak@sierraclub.org	Sierra Club MA
Heather	Clish	Director of Conservation & Recreation Policy	(617) 523-0655	hclish@outdoors.org	Appalachian Mountain Club
Heidi	Ricci	Director of Policy	Not Provided	hricci@massaudubon.org	Mass Audubon
Kelly	Boling	MA & RI State Director	(617) 367-6200	kelly.boling@tpl.org	The Trust for Public Land
Kerry	Bowie	Board President	Not Provided	kerry@msaadapartners.com	Browning the GreenSpace
Nancy	Goodman	Vice President for Policy	Not Provided	ngoodman@environmentalleague.org	Environmental League of MA
Rob	Moir	Executive Director	Not Provided	rob@oceanriver.org	Ocean River Institute
Robb	Johnson	Executive Director	(978) 443-2233	robb@massland.org	Mass Land Trust Coalition
Sarah	Dooling	Executive Director	Not Provided	sarah@massclimateaction.net	Mass Climate Action Network (MCAN)
Staci	Rubin	Senior Attorney	617 350-0990	srubin@clf.org	Conservation Law Foundation
Sylvia	Broude	Executive Director	617 292-4821	sylvia@communityactionworks.org	Community Action Works
Winston	Vaughan	Director of Climate Solutions	Not Provided	wvaughan@hcwh.org	Healthcare without Harm

Indigenous Organizations					
First Name	**Last Name**	**Title**	**Phone**	**Email**	**Affiliation**
Alma	Gordon	President	Not Provided	tribalcouncil@chappaquiddick-wampanoag.org	Chappaquiddick Tribe of the Wampanoag Nation
Cheryll	Toney Holley	Chair	774-317-9138	crwritings@aol.com	Nipmuc Nation (Hassanamisco Nipmucs)
John	Peters, Jr.	Executive Director	617-573-1292	john.peters@mass.gov	Massachusetts Commission on Indian Affairs (MCIA)
Kenneth	White	Council Chairman	508-347-7829	acw1213@verizon.net	Chaubunagungamaug Nipmuck Indian Council
Melissa	Ferretti	Chair	(508) 304-5023	melissa@herringpondtribe.org	Herring Pond Wampanoag Tribe
Patricia	D. Rocker	Council Chair	Not Provided	rockerpatriciad@verizon.net	Chappaquiddick Tribe of the Wampanoag Nation, Whale Clan
Raquel	Halsey	Executive Director	(617) 232-0343	rhalsey@naicob.org	North American Indian Center of Boston
Cora	Pierce	Not Provided	Not Provided	Coradot@yahoo.com	Pocassett Wampanoag Tribe
Elizabth	Soloman	Not Provided	Not Provided	Solomon.Elizabeth@gmail.om	Massachusetts Tribe at Ponkapoag

Federally Recognized Tribes					
First	**Last**	**Title**	**Phone**	**Email**	**Affiliation**
Bettina	Washington	Tribal Historic Preservation Officer	508-560-9014	thpo@wampanoagtribe-nsn.gov	Wampanoag Tribe of Gay Head (Aquinnah)
Bonney	Hartley	Historic Preservation Manager	413-884-6048	bonney.hartley@mohican-nsn.gov	Stockbridge-Munsee Tribe
Brian	Weeden	Chair	774-413-0520	Brian.Weeden@mwtribe-nsn.gov	Mashpee Wampanoag Tribe

Local Organizations

First Name	Last Name	Title	Service Area	Phone Number	Email	Affiliation
May	Lui	Community Outreach Coordinator	Boston Quincy	617-482-2380	may.lui@asiancdc.org	Asian Community Development Corporation
Heather	Miller	Not Provided	Boston	781-788-007	hmiller@crwa.org	Charles River Watershed Assoc.
Joy	Gary	Executive Director	Boston	617-825-3846	joy@bostonfarms.org	Boston Farms Community Land Trust
Alice	Brown	Chief of Planning and Policy	Boston	Not provided	abrown@bostonharbornow.org	Boston Harbor Now
Kathy	Abbott	President and CEO	Boston	617-223-8104	kabbott@bostonharbornow.org	Boston Harbor Now
Karen	Chen	Executive Director	Boston	617-357-4499	karen@cpaboston.org	Chinese Progressive Association
Lee	Matsueda	Executive Director	Boston	617-723-2639	lee@massclu.org	Mass Community Labor United
Bruce	Berman	Not Provided	Boston	(617) 293-6243	Bruce@bostonharbor.com	Save the Harbor/Save the Bay
Lydia	Lowe	Executive Director	Boston	617-259-1503	lydia@chinatownclt.org	Chinatown Community Land Trust
Noemi	Mimi Ramos	Executive Director	Boston	Not provided	mimi.neunited4justice@gmail.com	New England United for Justice
Deb	Fastino	Executive Director	Boston	617-316-0456	dfastino@aol.com	Coalition for Social Justice
Laura	Jasinski	Executive Director	Boston	Not provided	ljasinski@thecharles.org	Charles River Conservancy
Patricia	Alvarez	Not Provided	Boston	Not provided	palvarez@swbcdc.org	Southwest Boston Community Development Corporation
Hin Sang	Yu	Co-Chair	Boston	603-905-9915	chinatownresidents@gmail.com	Chinatown Resident Association
Andres	Ripley	Natural Resource Specialist	Boston Quincy	Not provided	ripley@neponset.org	Neponset River Watershed Association
Maria Belen	Power	Associate Executive Director	Boston	617-466-3076 Ext 2	mariabelenp@greenrootschelsea.org	GreenRoots, Inc.

First Name	Last Name	Title	Service Area	Phone Number	Email	Affiliation
Gail	Latimore	Executive Director	Boston (Dorchester)	Not provided	gail@csndc.com	Codman Square Neighborhood Development Corporation
Orlando	Perilla	Chairman	Boston (Dorchester)	(617) 288-9766	Not provided	Harbor Point Community Task Force
Valeska	Daley	Not Provided	Boston (Dorchester)	Not provided	director@uphamscorner.org	Upham's Corner Main Street
Lisette	Le	Not Provided	Boston (Dorchester)	Not provided	lisette@vietaid.org	Vietnamese American Initiative for Development (VietAID)
Saba	Ijadi	Climate Justice Coordinator	Boston (Dorchester)	617-533-9564	fairmountclimate@dbedc.org	Fairmount/Indigo Line Community Development Corporation (CDC) Collaborative
Lauren	Rexford	Program Director, Energy Programs	Quincy Milton	617-657-5317	lrexford@qcap.org	Quincy Community Action Program