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New Bedford Harbor Superfund Site

U.S. Army Corps of Engineers New England District

Draft Final Intertidal Work Plan for East Zone 3

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New Bedford Harbor Superfund Site

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Document history and status

Revision	Date	Description	By	Review	Approved

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Figures

Tables

Appendix

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Acronyms and Abbreviations

cy	cubic yards
EPA	U.S. Environmental Protection Agency
ft	foot/feet
Generic Work Plan	*Draft Final Generic Upper Harbor Intertidal Work Plan Revision 1*
GPS	global positioning system
mg/kg	milligrams per kilogram
NAE	U.S. Army Corps of Engineers, New England District
NBHSS	New Bedford Harbor Superfund Site
PCB	polychlorinated biphenyl
PECC	pre-excavation confirmatory congener
ROD	Record of Decision
ROW	right of way
RTK	real time kinematic
sf	square feet
TCL	target cleanup level
TSCA	Toxic Substances Control Act

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1.0 Introduction

This Work Plan for Intertidal East Zone 3 provides information concerning shoreline remediation and restoration pursuant to the New Bedford Harbor Superfund Site (NBHSS), including maps and figures of the excavation areas, equipment access plans, sample locations, and existing and proposed wetland cover and topography. The *Draft Final Generic Upper Harbor Intertidal Work Plan Revision 1* (Generic Work Plan; Jacobs 2019a) describes the means and methods for intertidal excavation, material stabilization, drainage water management, transport and disposal of polychlorinated biphenyl (PCB)-contaminated intertidal sediments, restoration of excavated areas and post-remediation monitoring and maintenance. This parcel-specific Work Plan provides additional detail and documents any deviations from the procedures in the Generic Work Plan.

As described herein, certain areas of the sediment and soil on the East Zone 3 parcels contain PCB contamination that exceeds the established target cleanup levels (TCLs) for intertidal sediment. The PCB TCLs are provided in the 1998 U.S. Environmental Protection Agency (EPA) Record of Decision (ROD) for the NBHSS (EPA 1998). The TCL for sediment and soil in saltmarshes and shoreline areas with little or no public access is 50 milligrams per kilogram (mg/kg), which is a not-to-exceed value. The TCL for Upper Harbor mudflats and subtidal areas is 10 mg/kg, which must be attained as an average on an Upper Harbor-wide basis. Sediment and soil with PCB concentrations in exceedance of the TCLs will be removed and disposed of in an off-site Toxic Substances Control Act (TSCA) permitted landfill. Following contaminated sediment removal, areas that originally supported vegetative cover will be backfilled with clean topsoil to the approximate original elevation and restored with a similar vegetation type.

2.0 Parcel Description

The intertidal management area referred to as East Zone 3 is located on the eastern shore of the Upper New Bedford Harbor in Acushnet and Fairhaven, MA. East Zone 3 consists of six parcels (25-49, 25-356, 25-358, 25-56, 25-55Y in Acushnet and the northern portion of Parcel 20-005 in Fairhaven). Portions of each parcel will be remediated. A site location map showing the East Zone 3 parcels and the limits of the planned excavations is provided in Figure 2-1.

Parcels 25-356 and 25-358 are comprised of undeveloped land consisting of vegetative cover, primarily saltmarsh with scattered trees and shrubs. Man-made mosquito control ditches traverse both parcels. Parcel 25-356 is bounded to the north by Parcel 25-49, to the east by Parcel 25-355, to the south by a right of way (ROW), and to the east by Parcel 25-357. Parcel 25-358 is bounded to the north by a ROW, to the east by Parcel 25-359, to the south by Parcel 25-56, and to the west by New Bedford Harbor.

Parcels 25-49, 25-56, and 20-005 are comprised of undeveloped land consisting of vegetative cover, primarily saltmarsh with a few scattered trees and shrubs. Man-made mosquito control ditches traverse all three parcels. Parcel 25-49 is bounded to the north by a ROW, to the east by Parcels 25-338, 25-339, 25-353 and several ROWs, to the south by parcels 25-356 and 25-357, and to the west by New Bedford Harbor. Parcel 25-56 is bounded to the north by Parcels 25-358 and 25-359, to the east by Parcels 25-360 and 25-55Z and a ROW, to the south by Parcel 25-55Y, and to the west by New Bedford Harbor. The northern portion of Parcel 20-005 is bounded to the north by Parcel 25-55Y, to the east by Parcel 20-007, to the south by Parcel 20-001, and to the west by New Bedford Harbor.

Parcel 25-55Y is privately owned and is comprised of undeveloped land consisting of vegetative cover, primarily saltmarsh with scattered trees and shrubs. Man-made mosquito control ditches and traverse the parcel and an area of gravel fill abuts the saltmarsh. The parcel is bounded to the north by Parcels 25-56 and 25-55Z, to the east by South Main St. parcel, to the south by Parcels 20-005 and 20-007, and to the west by New Bedford Harbor.

The existing wetland vegetation was surveyed by Jacobs in 2017. The mapped survey results and the outlines of the excavation areas are provided in Figures 2-2a through 2-2e. The excavation areas include low marsh, high marsh, scrub-shrub marsh and panne. Sediment and soil samples collected during the site investigation/characterization phase were analyzed for total PCBs. The analytical results summarized in Tables 2-1a through 2-1c were used to support remediation planning. The sample locations used to delineate the extent of PCB contamination within East Zone 3 are shown in Figures 2-3a through 2-3e.

3.0 Excavation

3.1 Site Preparation

Access to the portions of the parcels requiring remediation will be through property that is currently under an access agreement obtained by EPA. Temporary roads will be built to create equipment access to the remediation areas. A construction site plan showing the excavation areas, staging area, containment area and temporary access roads is provided as Figure 3-1. The dimensions and final locations of the staging areas may be altered based on field conditions. As described in the Generic Work Plan, the access road will be constructed using a layer of geotextile fabric covered by either 12 inches of dense-grade aggregate or construction mats.

Prior to any site clearing or grubbing necessary to build the access roads to the excavation areas, mature, non-invasive tree and shrub species will be marked in the field and preserved wherever possible during construction. Native tree and shrub inventories are included in Appendix A. Other vegetation will be cleared from the site as necessary to permit access road construction and remedial excavation. Disturbance of the property will be minimized and all impacted areas will be restored upon completion of remedial activities.

Sections 4.3.2 and 4.3.3 of the Generic Work Plan describe on-site materials management procedures for the east side of the Upper Harbor, including collection, treatment and discharge of wastewater from the containment cell(s) in the staging area of each east-side intertidal management zone to the Upper Harbor. Alternatively, wastewater may be containerized and transported to Area C in New Bedford for treatment and disposal as described in the Generic Work Plan for the west side of the Upper Harbor.

3.2 Excavation Plan

Using PCB data collected through multiple rounds of sampling, a 3-dimensional excavation model was developed as depicted in the excavation plans shown in Figures 3-2a through 3-2f. The cut depth, areal extent of contamination and pre-excavation surface elevations for the excavation areas are shown in Figures 3-2a and 3-2b for Parcel 25-49 and a ROW; Figure 3-2c for Parcels 25-356, 25-358 and a ROW; Figure 3-2d for Parcel 25-56; Figure 3-2e for Parcel 25-55Y; and Figure 3-2f for Parcel 20-005. The total area to be excavated is approximately 178,119 square feet (sf) and has a corresponding volume of 7,121 cubic yards (cy).

All excavation areas are in saltmarsh with no planned removal of mudflat sediments. The amphibious excavator will remove contaminated sediment in the saltmarsh areas. Following excavation, the area will be smoothed with the excavator as needed to create an even surface prior to placement of backfill.

3.3 Post Excavation Compliance

Confirmation of compliance with the TCLs will be based on pre-excavation confirmatory congener (PECC) sampling and collection of post-excavation survey data to demonstrate that the excavation achieved the horizontal and vertical design limits. The PECC sample locations shown in Figures 3-3a through 3-3e include excavation sidewall and floor locations where PCB congener concentrations were previously determined to be below the TCL. PECC sample results are shown in Tables 2-1a through 2-1c.

Compliance survey locations are spaced at approximate 100-foot (ft) intervals along the excavation sidewalls and in an approximate 100-ft grid pattern on the excavation floors as shown in Figures 3-3a through 3-3e. Design elevation compliance measurements at the compliance survey locations will be made using a real-time kinematic (RTK) global positioning system (GPS) with vertical and horizontal accuracies of less than 0.1 ft. Compaction by heavy equipment after excavation will be avoided until target elevations are confirmed by RTK survey. Tables 3-1a through 3-1c provide survey control tables to document the pre- and post-excavation compliance measurements. Additional removal will be performed if a post-excavation elevation survey indicates that a compliance survey location was not excavated to the target elevation or horizontal extent. Any additional removal will be performed as described in Section 4.5 of the Generic Work Plan.

If the PECC approach is proven to be ineffective in the pre-confirmatory pilot test, then post-excavation confirmatory samples will be collected at the PECC locations, and the excavation will not be backfilled until it is confirmed to be below TCLs. Confirmatory samples will be analyzed for PCB congeners with a 5-day turnaround time for the analysis.

4.0 Backfill

Upon verification that compliance with the TCL has been met, the excavations will be backfilled with clean manufactured topsoil. The topsoil will meet the quality requirements identified in the *Draft Final Topsoil Acceptance Plan* (Jacobs 2019b). Backfill will consist of 12 inches of topsoil to support vegetation regrowth and achieve the restoration design provided in Section 7.0. Where excavation depth exceeds 1 ft, a 3-inch minus clean gravel substrate will be placed to within 1 ft of the target grade and topsoil will be placed on top of the substrate to bring the surface to the target elevation. A specification for the gravel backfill is provided in the Generic Work Plan. The gravel substrate and topsoil will be delivered to the restoration areas by over-the-road dump trucks and offloaded into stockpiles near the excavation area. A clean, decontaminated all-terrain dump truck or tracked excavator will transport the topsoil for spreading. Post-backfill saltmarsh topography will match the restoration surface described in Section 7.0 with a tolerance of +/- 0.3 ft. The surface may be restored to an elevation of 0.1 to 0.2 ft above the planned grade to allow for natural soil compaction. During the restoration process, the elevation of the placed topsoil will be checked periodically with the GPS Rover and with the excavator bucket. Elevation measurements will be taken after each area is backfilled, prior to relocating the excavator.

5.0 Schedule

The durations of the remedial activities included in this Work Plan are listed below. A more detailed construction planning schedule will be developed prior to field activities and will be attached to this Work Plan as Appendix C.

Activity	Anticipated Duration
Excavation	4 months
Restoration	4.5 months
After Action Report	3 months

6.0 Air Monitoring

The evaluation of existing PCB congener data (Tables 2-1a, 2-1b, and 2-1c) indicates that the maximum concentration at East Zone 3 is 832 mg/kg. Particulate and airborne PCB monitoring will be conducted in accordance with the guidelines provided in the *NBHSS Draft Final Ambient Air Monitoring Plan for Remediation Activities Revision 2* (Ambient Air Monitoring Plan; Jacobs 2018a).

7.0 Restoration

All excavated areas will be backfilled, regraded, and revegetated to best replicate the pre-remediation conditions. On Parcels 25-49, 25-56 and 20-005, the excavation areas will be restored as high marsh to the extent possible at the request of the property owner for resiliency against future sea level rise. Pre-construction tree and shrub inventories of plants within the excavation and access road areas are included in Appendix A. Restored vegetation types within the remediation area are shown in plan view in Figures 7-1a through 7-1e. A conceptual as-built cross section is provided in Figure 7-2 and construction cross sections are provided in Appendix B. The existing and proposed post-restoration acreages of each cover type are provided in Tables 7-1a through 7-1e. Shrub species identified for restoration are included in Tables 7-2a through 7-2d and plantings notes are included in Figures 7-1a through 7-1e (no shrub restoration is planned on Parcels 25-356 or 25-358).

Planting of trees, shrubs, and 2-inch bare-root salt grass plugs will be conducted after excavation and backfill in accordance with favorable weather conditions and within the planting season from approximately April 15 to June 30, or potentially in the early fall after discussion with the U.S. Army Corps of Engineers, New England District (NAE)/EPA. Salt grass plants will be obtained from a nursery that can provide plugs grown from a Northeastern U.S. genotype seed stock.

The temporary access roads (i.e., geotextile and dense-grade aggregate or construction mats) will be removed and the underlying areas will be restored to pre-existing conditions. Portions of the access roads traverse scrub shrub marsh and high marsh areas. The access roads are expected to compact saltmarsh soils to some degree. Details regarding access road restoration measures will be determined in the field based on the amount of soil compaction and vegetation impacts observed. Areas with relatively minor impacts (i.e., no more than about 4 inches of soil compaction) may be allowed to recover naturally or may require only localized spot restoration. Areas with more significant impacts (i.e., more than about 4 inches of soil compaction) may require backfilling to grade with topsoil and replanting with appropriate saltmarsh species. Access road restoration may lag behind

access road removal by several days to allow for rebound prior to restoration. Restored access roads will be included in the saltmarsh restoration monitoring program described in Section 8.1 of the Generic Work Plan. Figure 7-2 is a conceptual drawing of potential access road restoration measures.

Herbivory deterrents will be used to protect the seedlings during the establishment period. A combination fence and rope grid system similar to the one installed at the Pierce Mill Cove intertidal restoration area will be constructed (Jacobs 2018b). If unforeseen conditions are identified that could affect the ability of the restoration to achieve the success standards adopted for the program, appropriate adaptive management measures will be developed and implemented in coordination with the NAE and EPA.

At the conclusion of all restoration activities, final vegetation and topographic surveys will be conducted to document the as-built elevations and vegetative cover conditions. The After Action Report will include these surveys, including the cross-section drawings in Appendix B with updated elevations. In addition, Tables 3-1a through 3-1c will be updated with the post-excavation compliance survey elevations, as well as the differences between the post-excavation and design elevations.

8.0 References

U.S. Environmental Protection Agency (EPA). 1998 (September). *Record of Decision for the Upper and Lower Harbor Operable Unit, New Bedford Harbor Superfund Site*. USEPA Region 1 – New England.

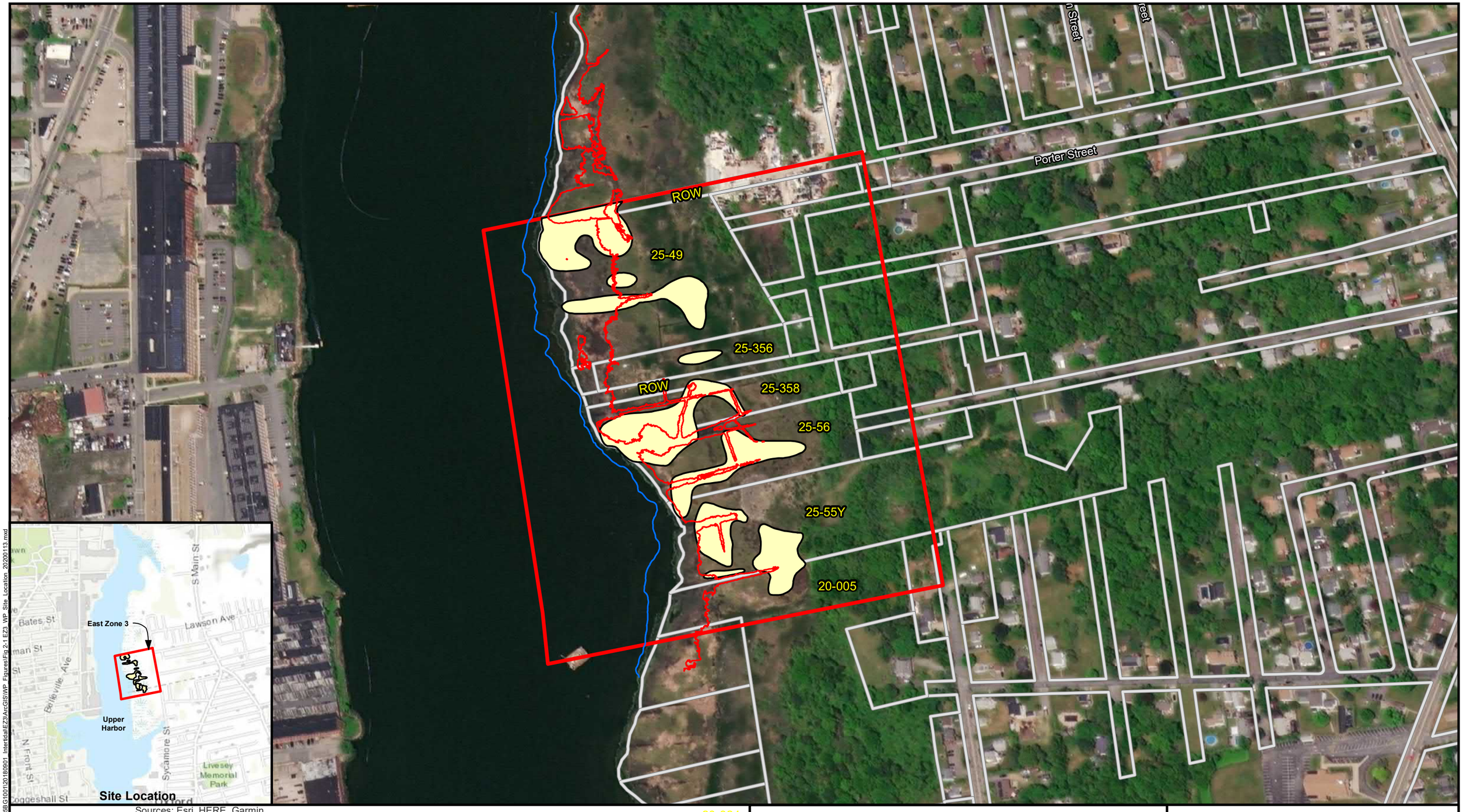
Jacobs. 2019a (May). *Draft Final Generic Upper Harbor Intertidal Work Plan Revision 1*. ACE J23 35BG2000 M1-0109.

——— 2019b (January). *Draft Final Topsoil Acceptance Plan*. ACE J23 35BG2000 M1-0076.

——— 2018a (April). *Draft Final Ambient Air Monitoring Plan for Remediation Activities Revision 2*. ACE-J23-35BG2000-M17-0016.

——— 2018b (November). *NBHSS Draft Final Pierce Mill Cove Herbivory Control Plan.* ACE-J23-35BG2000-M17-0040.

Figures



Legend

- Proposed Limits of Excavation
- East Zone 3 Management Area
- Parcel Boundary
- MHHW (1.99 ft)
- MLLW (-1.97 ft)

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors,

20-324

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

0 250 500 Feet

Basemap Data Source: MassGIS, ESRI

January 2020

Intertidal East Zone 3
Site Location and Features

New Bedford Harbor Superfund Site

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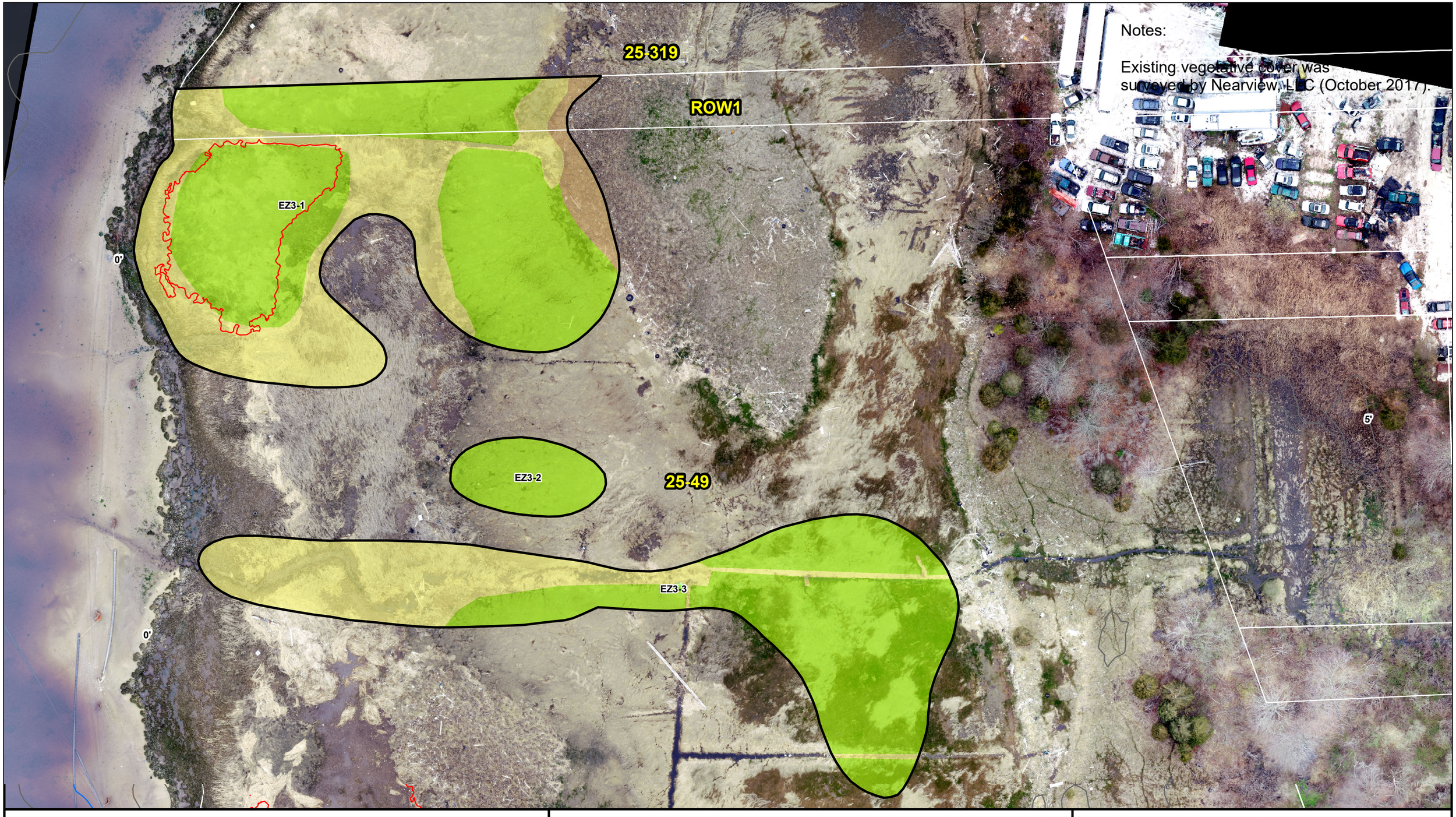
Figure 2-1

Path: C:\Users\ScottGA\Documents\NBH\35BG1001\20180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 2-1 EZ3_WP_Site_Location_20200113.mxd



Legend

- Mean Lower Low Water
- Mean Higher High Water
- 0-1' Excavation Depth
- 1-foot Contour
- Parcel Boundary
- High Marsh
- Low Marsh
- Scrub-Shrub Marsh

0 50 100 Feet

January 2020

Basemap Data Source:
Nearview, LLC, MassGIS

Vertical Datum:
NAVD88

Intertidal East Zone 3
Parcel 25-49 and ROW
Existing Vegetation and Topography

New Bedford Harbor Superfund Site

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Figure 2-2a

Notes:

Existing vegetative cover was surveyed by Nearview, LLC (October 2017).

EZ3-4

EZ3-5

25-356

ROW

25-358

0'

0'

0'

-5'

Legend

- Mean Lower Low Water
- Mean Higher High Water
- 1-foot Contour
- Parcel Boundary
- 0-1' Excavation Depth
- Low Marsh
- High Marsh

0 50 100 Feet

August 2019

Basemap Data Source:
Nearview, LLC, MassGIS

Vertical Datum:
NAVD88

Intertidal East Zone 3
Parcels 25-356, 25-358, and ROW
Existing Vegetation and Topography

New Bedford Harbor Superfund Site

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Figure 2-2b

Notes:

Existing vegetative cover was surveyed by Nearview, LLC (October 2017).

25-358

25-56

25-55Y

EZ3-5

EZ3-7

0'

0'

-5'

5

5'

Legend

- 0-1' Excavation Depth
- 1-2' Excavation Depth
- 2-3' Excavation Depth
- Mean Lower Low Water
- Mean Higher High Water
- 1-foot Contour
- High Marsh
- Low Marsh
- Parcel Boundary

0 50 100 Feet

August 2019

Basemap Data Source:
Nearview, LLC, MassGIS

Vertical Datum:
NAVD88

Intertidal East Zone 3
Parcel 25-56
Existing Vegetation and Topography
New Bedford Harbor Superfund Site

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Figure 2-2c

Notes:

Existing vegetative cover was surveyed by Nearview, LLC (October 2017).

25-56

25-55Y

20-005

0'

5'

EZ3-8

EZ3-9

EZ3-10

Legend

- 0-1' Excavation Depth
- 1-2' Excavation Depth
- Mean Lower Low Water
- Mean Higher High Water
- 1-foot Contour
- Parcel Boundary
- Low Marsh
- Pannes
- High Marsh

0 50 100 Feet

August 2019

Basemap Data Source: Nearview, LLC, MassGIS

Vertical Datum: NAVD88

Intertidal East Zone 3
Parcel 25-55Y
Existing Vegetation and Topography

New Bedford Harbor Superfund Site

JACOBS

Figure 2-2d

Legend

- 0-1' Excavation Depth
- 1-2' Excavation Depth
- Mean Lower Low Water
- Mean Higher High Water
- 1-foot Contour
- Parcel Boundary
- High Marsh
- Low Marsh
- Pannes

0 50 100 Feet

July 2019

Basemap Data Source:
Nearview, LLC, MassGIS

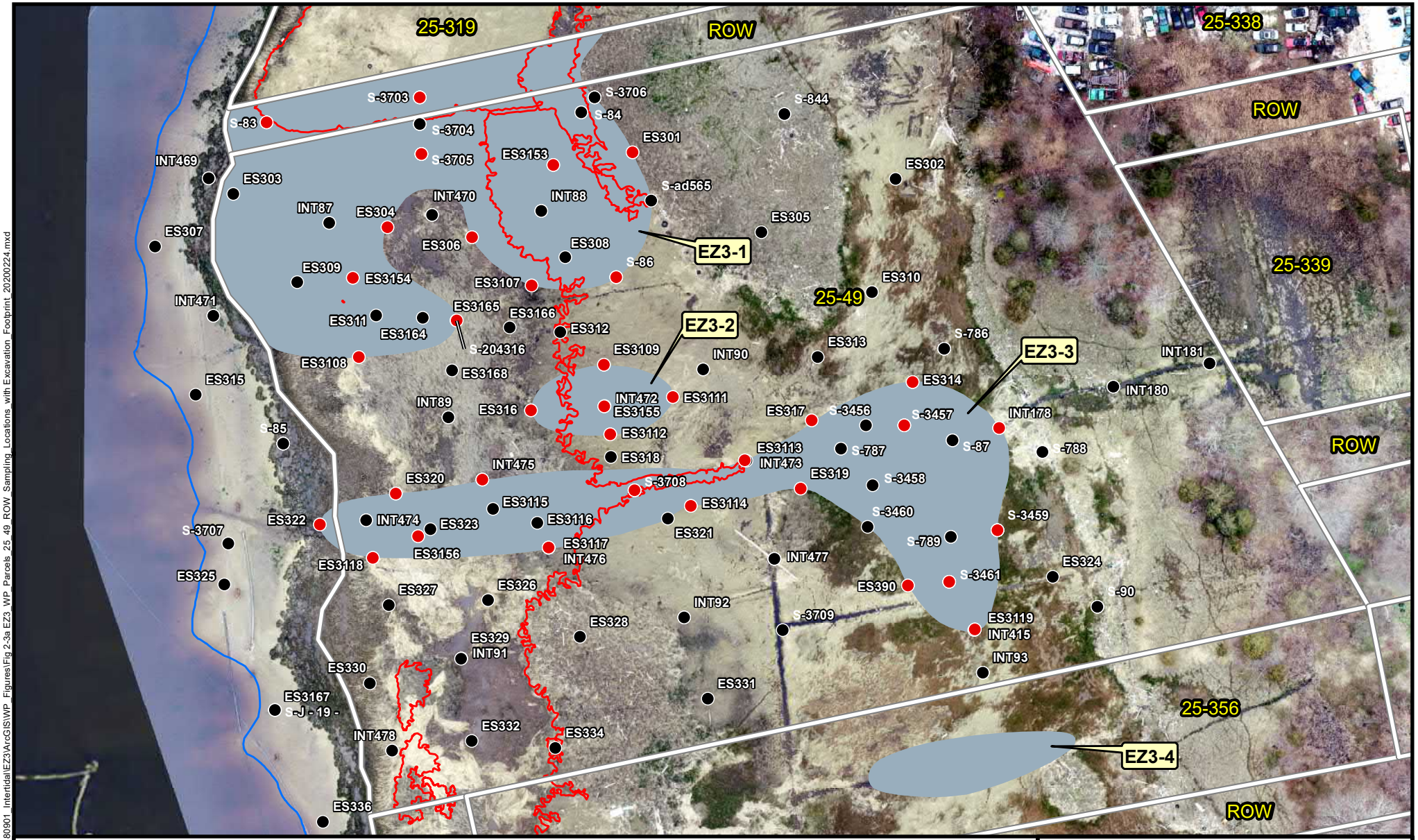
Vertical Datum:
NAVD88

Intertidal East Zone 3
Parcel 20-005
Existing Vegetation and Topography

New Bedford Harbor Superfund Site

JACOBS

Figure 2-2e



Legend

25-357

- PCB Characterization and PECC Sample Location
- PCB Characterization Sample Location
- Proposed Limits of Excavation
- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Property Boundary

MHHW and MLLW Elevations NAVD88 ft. (Nearview, 2018)

Basemap Photography: Nearview 2018 and MassGIS 2014

0 40 80 120 Feet

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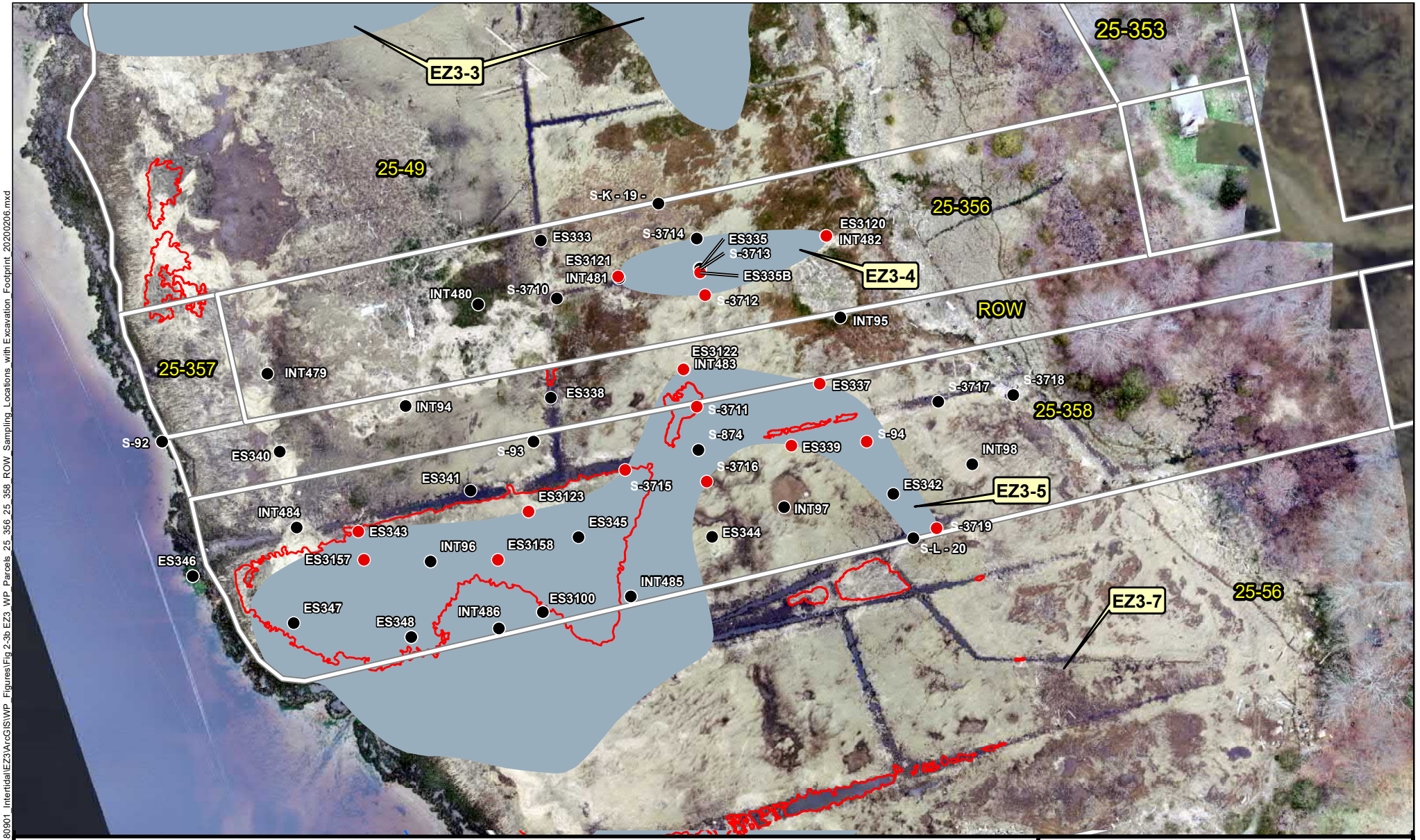
USGS, MassGIS

Intertidal East Zone 3
Parcel 25-49 and ROW
Sampling Locations with
Excavation Footprint
(0-1 ft Depth Interval)

New Bedford Harbor Superfund Site

February 2020 **Figure 2-3a**

Path: C:\Users\ScottGA\Documents\NBH\35BG100\120180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 2-3a EZ3_WP_Parcels_25_49_ROW_Sampling_Locations_with Excavation_Footprint_20200224.mxd



Legend

- PCB Characterization and PECC Sample Location
- PCB Characterization Sample Location
- Proposed Limits of Excavation
- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Property Boundary

MHHW and MLLW Elevations NAVD88 ft. (Nearview, 2018)

Basemap Photography: Nearview 2018 and MassGIS 2014

0 40 80 120 Feet

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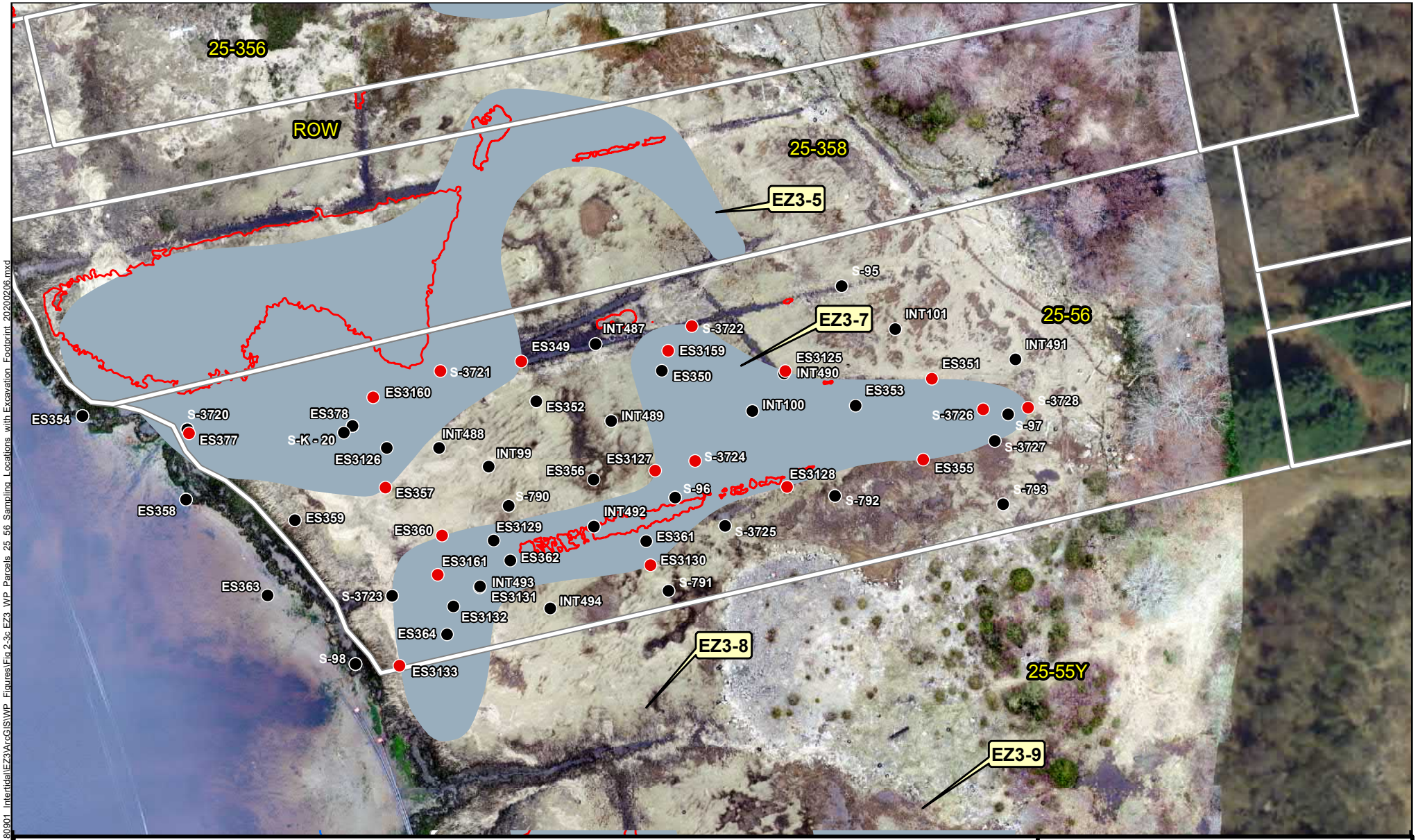
Intertidal East Zone 3
Parcel 25-356, 25-358 and ROW
Sampling Locations with
Excavation Footprint
(0-1 ft Depth Interval)

New Bedford Harbor Superfund Site

February 2019 **Figure 2-3b**

Path: C:\Users\ScottGA\Documents\NBH\35BG100\120180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 2-3b EZ3_WP_Parcels_25_356_25_358_ROW_Sampling_Locations_with Excavation_Footprint_20200206.mxd



Legend

- PCB Characterization and PECC Sample Location
- PCB Characterization Sample Location
- Proposed Limits of Excavation
- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Property Boundary

MHHW and MLLW Elevations NAVD88 ft. (Nearview, 2018)

Basemap Photography: Nearview 2018 and MassGIS 2014

0 40 80 120 Feet

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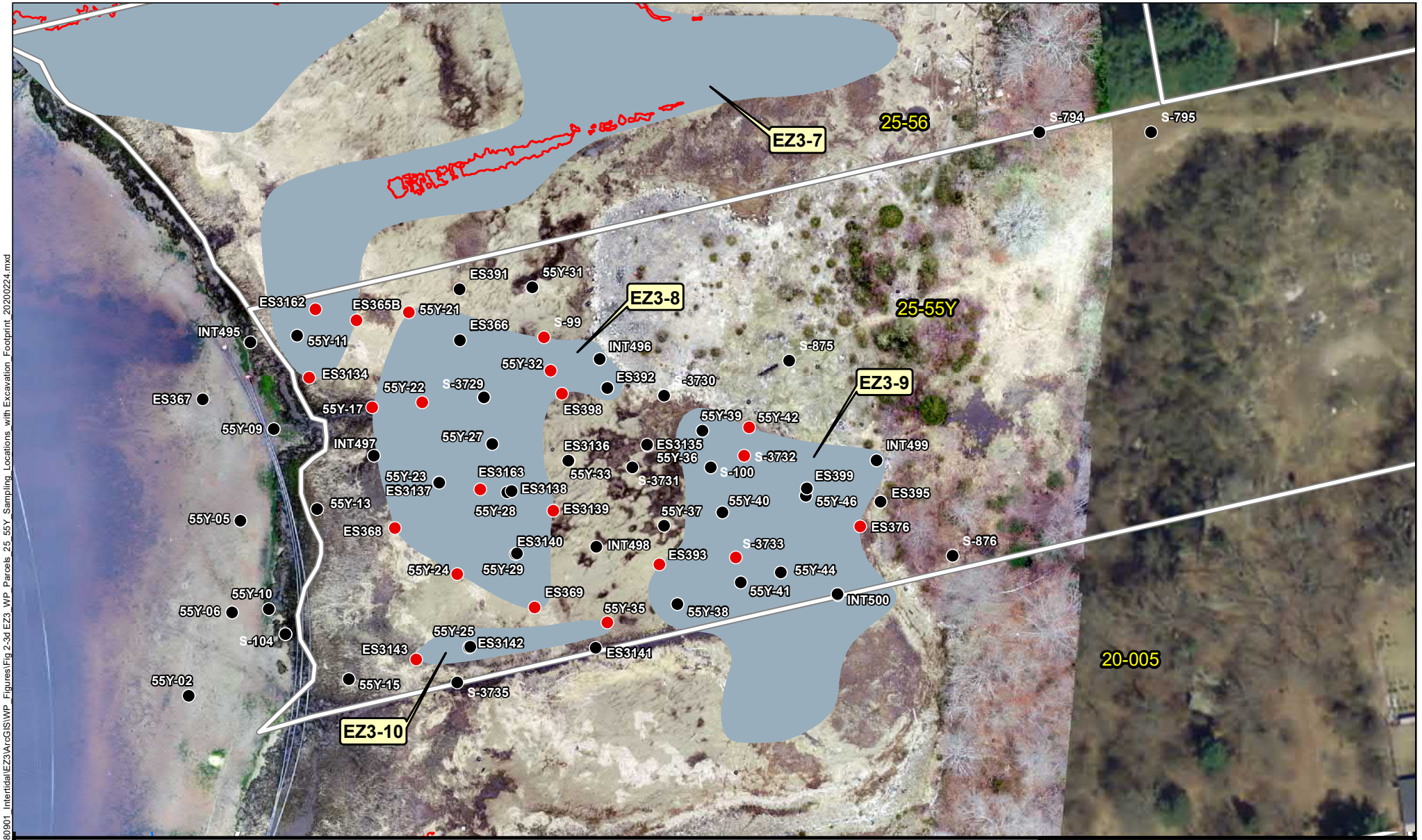
Intertidal East Zone 3
Parcel 25-56
Sampling Locations with Excavation Footprint
(0-1 ft Depth Interval)

New Bedford Harbor Superfund Site

February 2019 **Figure 2-3c**

Path: C:\Users\ScottGA\Documents\NBH\35BG10012018090l Intertidal\EZ3\ArcGIS\WP Figures\Fig 2-3c EZ3 WP Parcels 25 56 Sampling Locations with Excavation Footprint 20200206.mxd



Legend

- PCB Characterization and PECC Sample Location
- PCB Characterization Sample Location
- Proposed Limits of Excavation
- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Property Boundary

MHHW and MLLW Elevations NAVD88 ft. (Nearview, 2018)

Basemap Photography: Nearview 2018 and MassGIS 2014

N

0 40 80 120 Feet

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Intertidal East Zone 3
Parcel 25-55Y
Sampling Locations with Excavation Footprint
(0-1 ft Depth Interval)

New Bedford Harbor Superfund Site

February 2019 **Figure 2-3d**

Path: C:\Users\ScottGA\Documents\NBH\35BG100\120180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 2-3d EZ3_WP_Parcels_25_55Y_Sampling_Locations_with Excavation_Footprint_20200224.mxd

Legend

- PCB Characterization and PECC Sample Location
- PCB Characterization Sample Location
- Proposed Limits of Excavation
- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Property Boundary

Basemap Photography: Nearview 2018 and MassGIS 2014

0 40 80 120 Feet

MHHW and MLLW Elevations NAVD88 ft. (Nearview, 2018)

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Intertidal East Zone 3
Parcel 20-005
Sampling Locations with Excavation Footprint
(0-1 ft Depth Interval)

New Bedford Harbor Superfund Site

February 2019 **Figure 2-3e**

Path: C:\Users\ScottGA\Documents\NBH\35BG100\120180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 2-3e EZ3_WP_Parcels_20_005_Sampling_Locations_with Excavation_Footprint_20200206.mxd

Legend

- Proposed Limits of Excavation
- Proposed Staging Area / Containment Cell
- Approximate Treated Wastewater Discharge Point
- 15 ft Temporary Gravel Access Road
- Existing Access Road
- MHHW (1.99 ft NAVD88)
- MLLW (-1.97 ft NAVD88)
- Parcel Boundary

Pre-Excavation MHHW and MLLW Elevations NAVD88 ft. Nearview 2018

N

Basemap Photography Nearview 2018 and MassGIS 2014 USGS,

0 70 140 Feet

1:1,680

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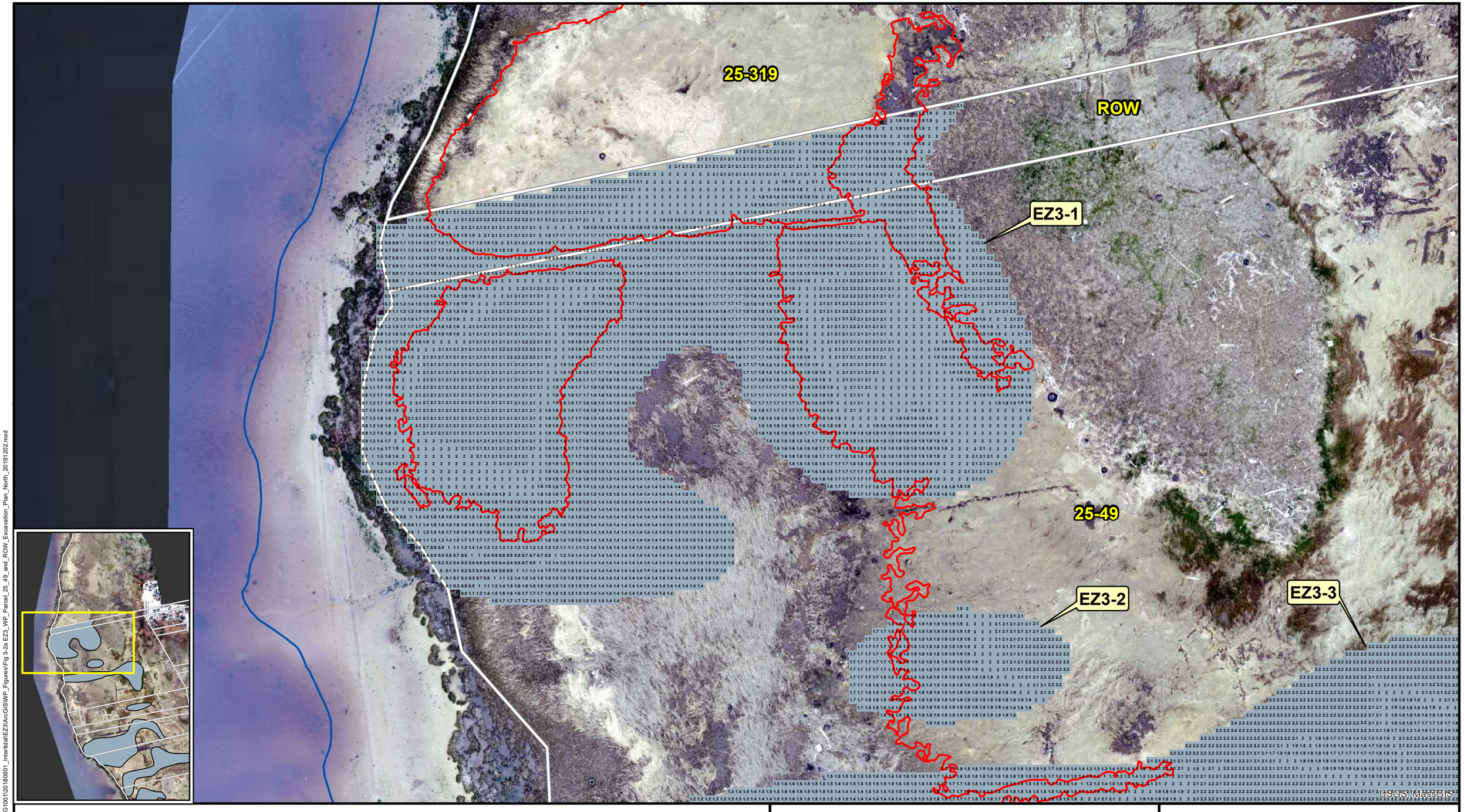
Intertidal East Zone 3 Construction Site Plan

New Bedford Harbor Superfund Site

December 2019 | Figure 3-1

Path: C:\Users\ScottGA\Documents\NBH\35BG100\120180901 Intertidal\EZ3\ArcGIS\WP Figures\Fig 3-1 EZ3 WP Construction Site Plan 20191204.mxd



Legend

- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Parcel Boundary

Feet of Sediment to Remove

- 1

2.1 Pre-Excavation Elevations NAVD88 ft. (Green Seal, May, 2018)

Pre-Excavation MHHW and MLLW Elevations NAVD88 ft. (Green Seal, May, 2018)

0 30 60 Feet

Basemap Data Source: MassGIS, ESRI

December 2019

Intertidal East Zone 3
ROW and Northern Portion of Parcel 25-49
Excavation Plan
Showing Cut Depths and Pre-Excavation Elevations

New Bedford Harbor Superfund Site

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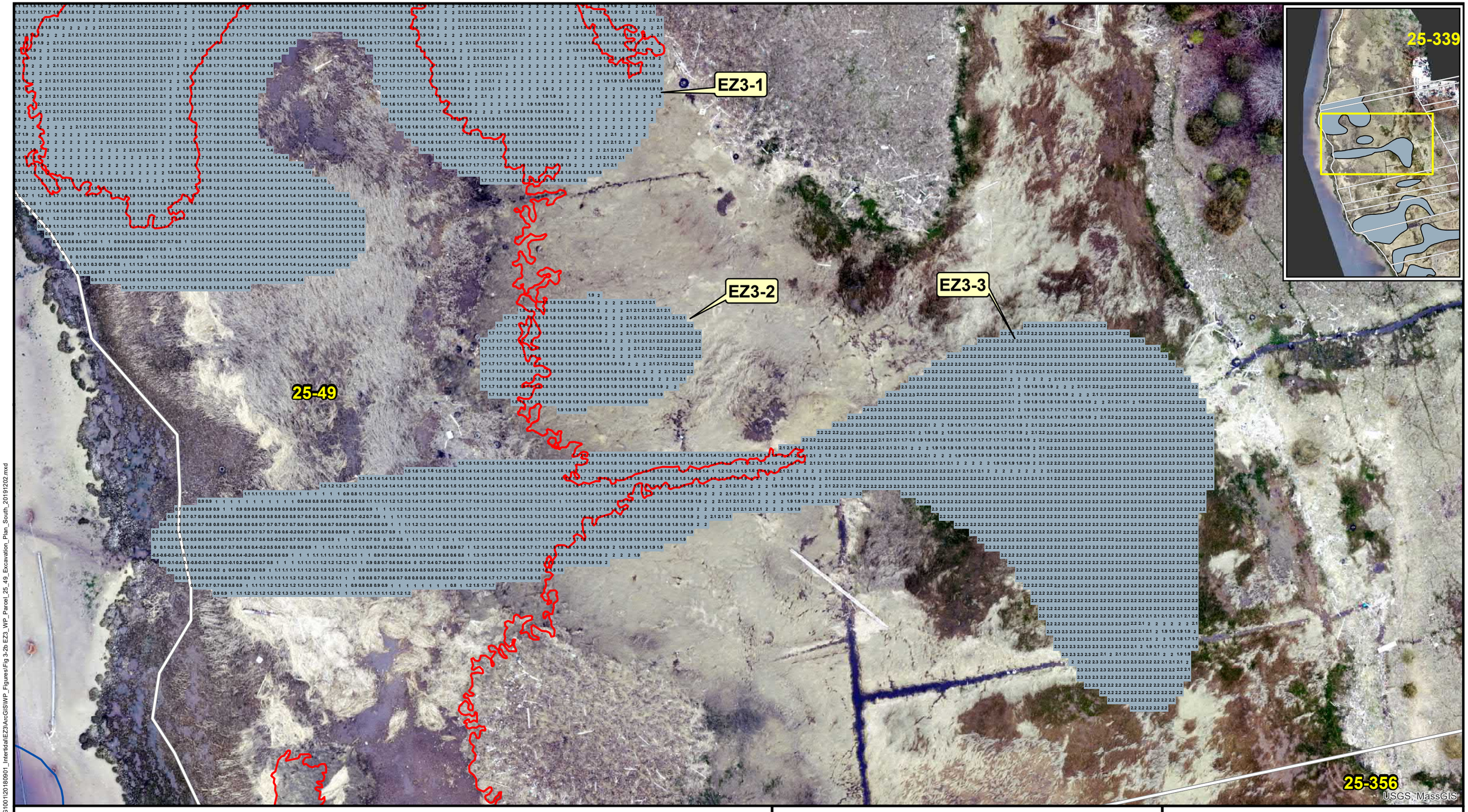
Figure 3-2a

Path: C:\Users\ScottGA\Documents\NBH\35BG100\120180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 3-2a EZ3_WP_Parcel_25_49_and_ROW_Excavation_Plan_North_20191202.mxd



Legend

- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Parcel Boundary

Feet of Sediment to Remove

- 1

2.1 Pre-Excavation Elevations NAVD88 ft. (Green Seal, May, 2018)

Pre-Excavation MHHW and MLLW Elevations NAVD88 ft. (Green Seal, May, 2018)

0 30 60 Feet

Basemap Data Source: MassGIS, ESRI

December 2019

Intertidal East Zone 3
Southern Portion of Parcel 25-49
Excavation Plan
Showing Cut Depths and Pre-Excavation Elevations

New Bedford Harbor Superfund Site

JACOBS

Figure 3-2b

Path: C:\Users\ScottGA\Documents\NBH\35BG100\20180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 3-2b EZ3_WP_Parcel_25_49_Excavation_Plan_South_20191202.mxd

25-49

25-356

25-357

EZ3-4

ROW

EZ3-5

25-358

EZ3-7

25-56

Legend

- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Parcel Boundary

Feet of Sediment to Remove

- 3
- 2
- 1

2.1 Pre-Excavation Elevations NAVD88 ft. (Green Seal, May, 2018)

Pre-Excavation MHHW and MLLW Elevations NAVD88 ft. (Green Seal, May, 2018)

0 30 60 Feet

N

Basemap Data Source: MassGIS, ESRI

December 2019

Intertidal East Zone 3 Parcels 25-356, 25-358 and ROW Excavation Plan Showing Cut Depths and Pre-Excavation Elevations

New Bedford Harbor Superfund Site

JACOBS

Figure 3-2c

Path: C:\Users\ScottGA\Documents\NBH\35BG10011200\180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 3-2c EZ3_WP_Parcel_25_356_25_358_ROW_Excavation_Plan_20191202.mxd

USGS, MassGIS

25-358

25-56

25-55Y

EZ3-5

EZ3-7

EZ3-8

Legend

- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Parcel Boundary

Feet of Sediment to Remove

- 3
- 2
- 1

2.1 Pre-Excavation Elevations NAVD88 ft. (Green Seal, May, 2018)

Pre-Excavation MHHW and MLLW Elevations NAVD88 ft. (Green Seal, May, 2018)

0 30 60 Feet

N

Basemap Data Source: MassGIS, ESRI

December 2019

Intertidal East Zone 3
Parcel 25-56
Excavation Plan
Showing Cut Depths and Pre-Excavation Elevations

New Bedford Harbor Superfund Site

JACOBS

Figure 3-2d

Path: C:\Users\ScottGA\Documents\NBH\35BG100\20180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 3-2d EZ3_WP_Parcel_25_56_Excavation_Plan_20191202.mxd

Legend

- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Parcel Boundary

Feet of Sediment to Remove

- 2
- 1

2.1 Pre-Excavation Elevations NAVD88 ft. (Green Seal, May, 2018)

Pre-Excavation MHHW and MLLW Elevations NAVD88 ft. (Green Seal, May, 2018)

0 30 60 Feet

Basemap Data Source: MassGIS, ESRI

December 2019

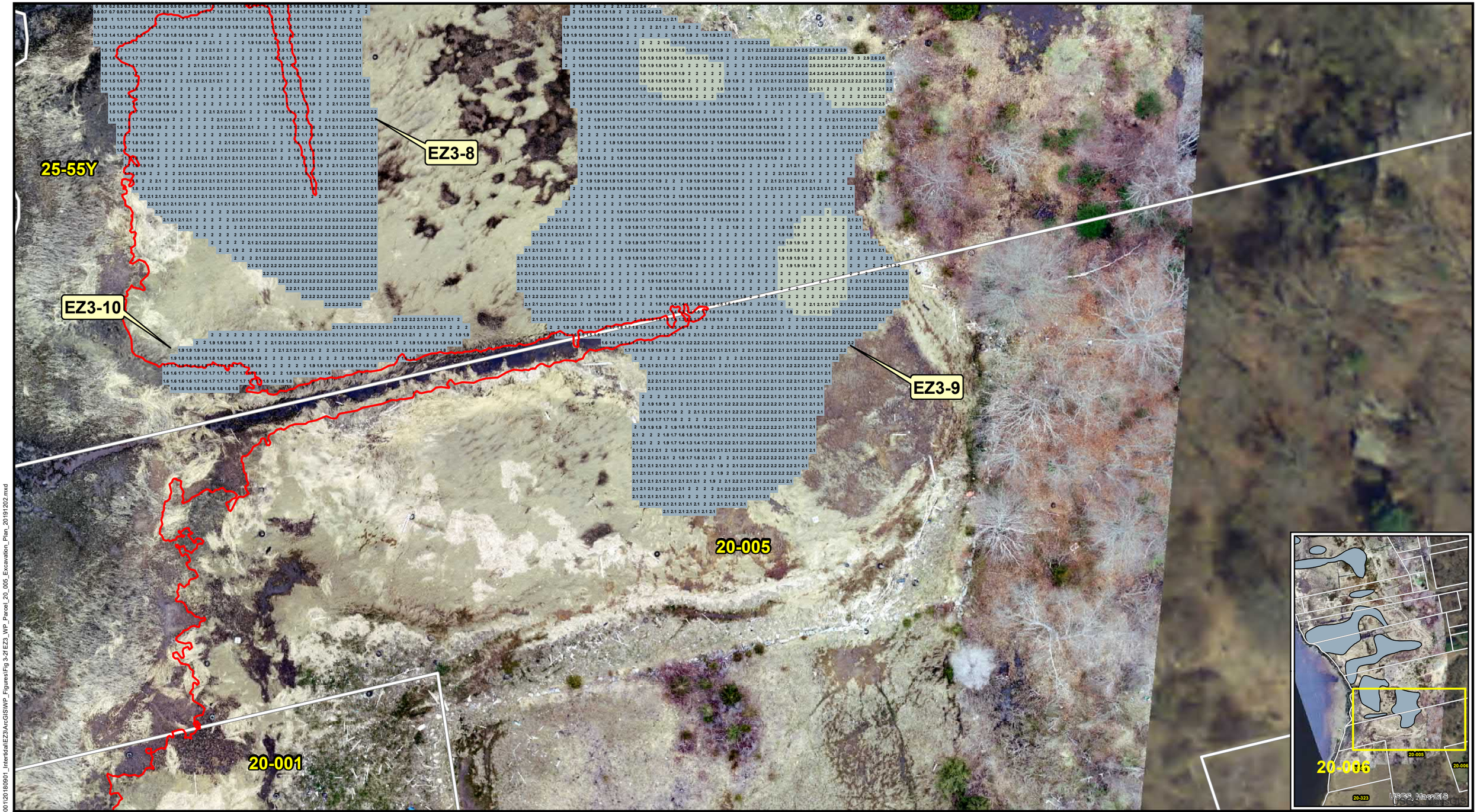
Intertidal East Zone 3 Parcel 25-55Y Excavation Plan Showing Cut Depths and Pre-Excavation Elevations

New Bedford Harbor Superfund Site

JACOBS

Figure 3-2e

Path: C:\Users\ScottGA\Documents\NBH\35BG1001\20180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 3-2e EZ3_WP_Parcel_25_55Y_Excavation_Plan_20191202.mxd



Legend

- MHHW (1.99 ft)
- Parcel Boundary

Feet of Sediment to Remove

- 2
- 1

2.1 Pre-Excavation Elevations NAVD88 ft. (Green Seal, May, 2018)

Pre-Excavation MHHW and MLLW Elevations NAVD88 ft. (Green Seal, May, 2018)

0 30 60 Feet

Basemap Data Source: MassGIS, ESRI

December 2019

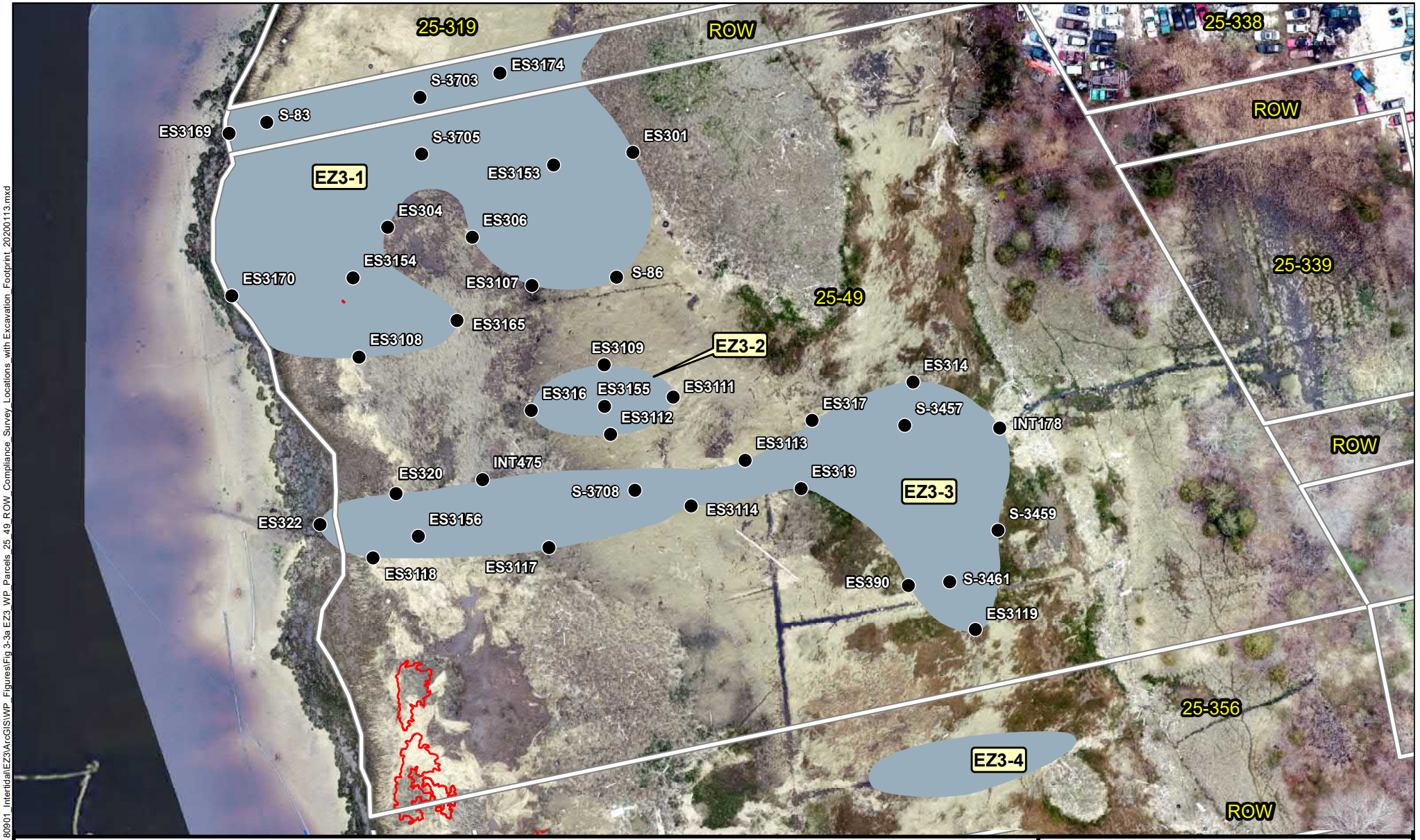
Intertidal East Zone 3
Parcel 20-005
Excavation Plan
Showing Cut Depths and Pre-Excavation Elevations

New Bedford Harbor Superfund Site

JACOBS

Figure 3-2f

Path: C:\Users\ScottGA\Documents\NBH\35BG\10012018\0901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 3-2f EZ3_WP_Parcel_20_005_Excavation_Plan_20191202.mxd



Legend

- Compliance Survey Location
- Proposed Limits of Excavation
- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Property Boundary

Basemap Photography: Nearview 2018 and MassGIS 2014

0 40 80 120 Feet

MHHW and MLLW Elevations NAVD88 ft. (Nearview, 2018)

JACOBS™

Intertidal East Zone 3
Parcel 25-49 and ROW
Compliance Survey Locations with Excavation Footprint
(0-1 ft Depth Interval)

New Bedford Harbor Superfund Site

January 2020 **Figure 3-3a**

Path: C:\Users\ScottGA\Documents\NBH35BG100120180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 3-3a EZ3_WP_Parcels_25_49_ROW_Compliance_Survey_Locations_with Excavation_Footprint_20200113.mxd

Path: C:\Users\ScottGA\Documents\NBH35BG100120180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 3-3b EZ3_WP_Parcels_25_356_25_358_ROW_Compliance_Survey_Locations_with Excavation_Footprint_20191202.mxd

Legend

- Compliance Survey Location
- Proposed Limits of Excavation
- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Property Boundary

Basemap Photography: Nearview 2018 and MassGIS 2014

0 40 80 120 Feet

MHHW and MLLW Elevations NAVD88 ft. (Nearview, 2018)

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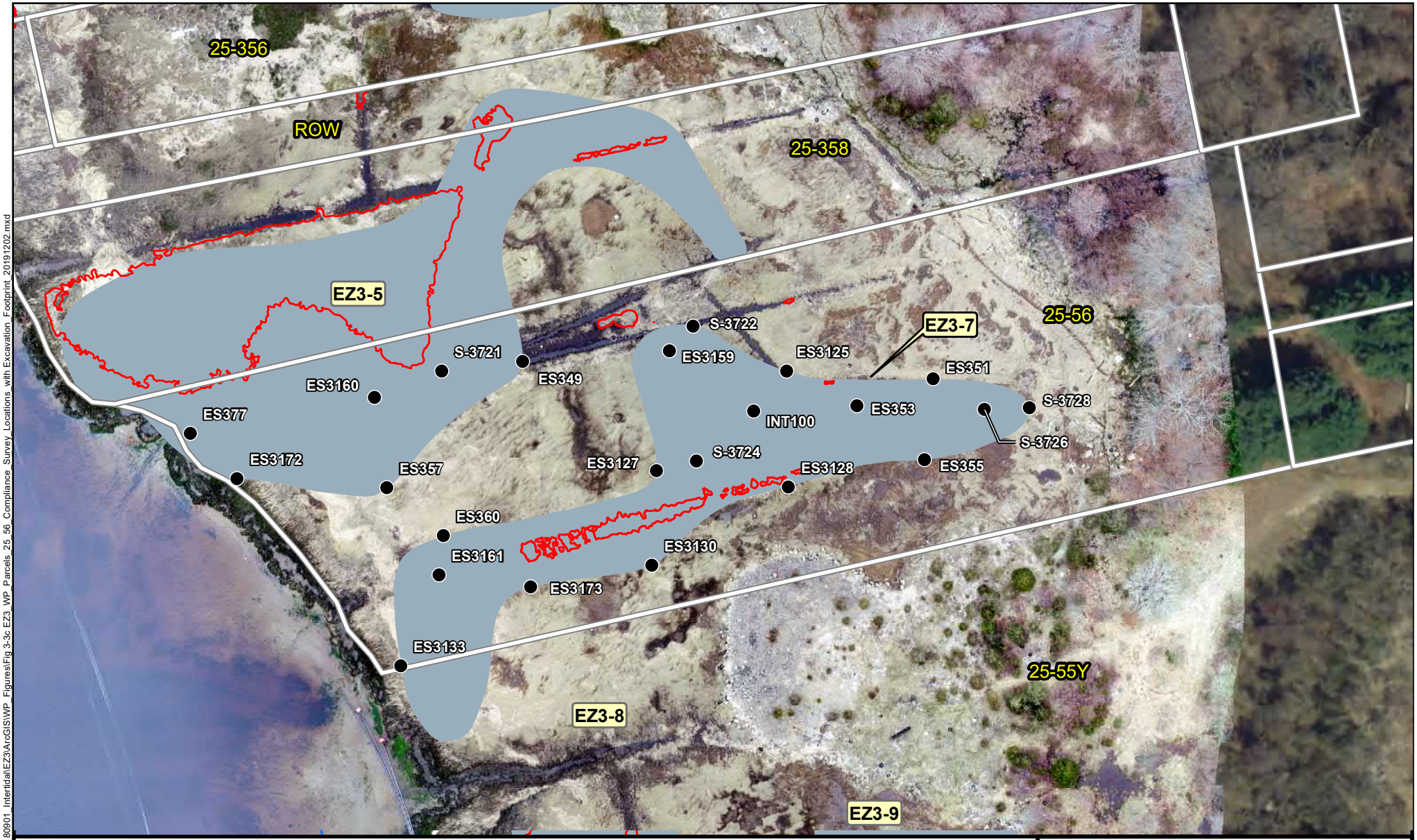
Intertidal East Zone 3
Parcels 25-356, 25-358 and ROW
Compliance Survey Locations with Excavation Footprint
(0-1 ft Depth Interval)

New Bedford Harbor Superfund Site

December 2019 **Figure 3-3b**



Path: C:\Users\ScottGA\Documents\NBH35BG100120180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 3-3c EZ3_WP_Parcels_25_56_Compliance_Survey_Locations_with Excavation_Footprint_20191202.mxd

Legend

- Compliance Survey Location
- Proposed Limits of Excavation
- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Property Boundary

Basemap Photography: Nearview 2018 and MassGIS 2014

0 40 80 120 Feet

MHHW and MLLW Elevations NAVD88 ft. (Nearview, 2018)

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Intertidal East Zone 3
Parcel 25-56
Compliance Survey Locations with Excavation Footprint
(0-1 ft Depth Interval)

New Bedford Harbor Superfund Site

December 2019 **Figure 3-3c**

Path: C:\Users\ScottGA\Documents\NBH35BG100120180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 3-3d EZ3_WP_Parcels_25_55Y_Compliance_Survey_Locations_with Excavation_Footprint_20191202.mxd

Legend

- Compliance Survey Location
- Proposed Limits of Excavation
- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Property Boundary

Basemap Photography: Nearview 2018 and MassGIS 2014

0 40 80 120 Feet

MHHW and MLLW Elevations NAVD88 ft. (Nearview, 2018)

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Intertidal East Zone 3
Parcel 25-55Y
Compliance Survey Locations with Excavation Footprint
(0-1 ft Depth Interval)

New Bedford Harbor Superfund Site

December 2019 **Figure 3-3d**

Path: C:\Users\ScottGA\Documents\NBH35BG100120180901_Intertidal\EZ3\ArcGIS\WP_Figures\Fig 3-3e EZ3_WP_Parcels_20_005_Compliance_Survey_Locations_with Excavation_Footprint_20191202.mxd

Legend

- Compliance Survey Location
- Proposed Limits of Excavation
- MHHW (1.99 ft)
- MLLW (-1.97 ft)
- Property Boundary

Basemap Photography: Nearview 2018 and MassGIS 2014

0 40 80 120 Feet

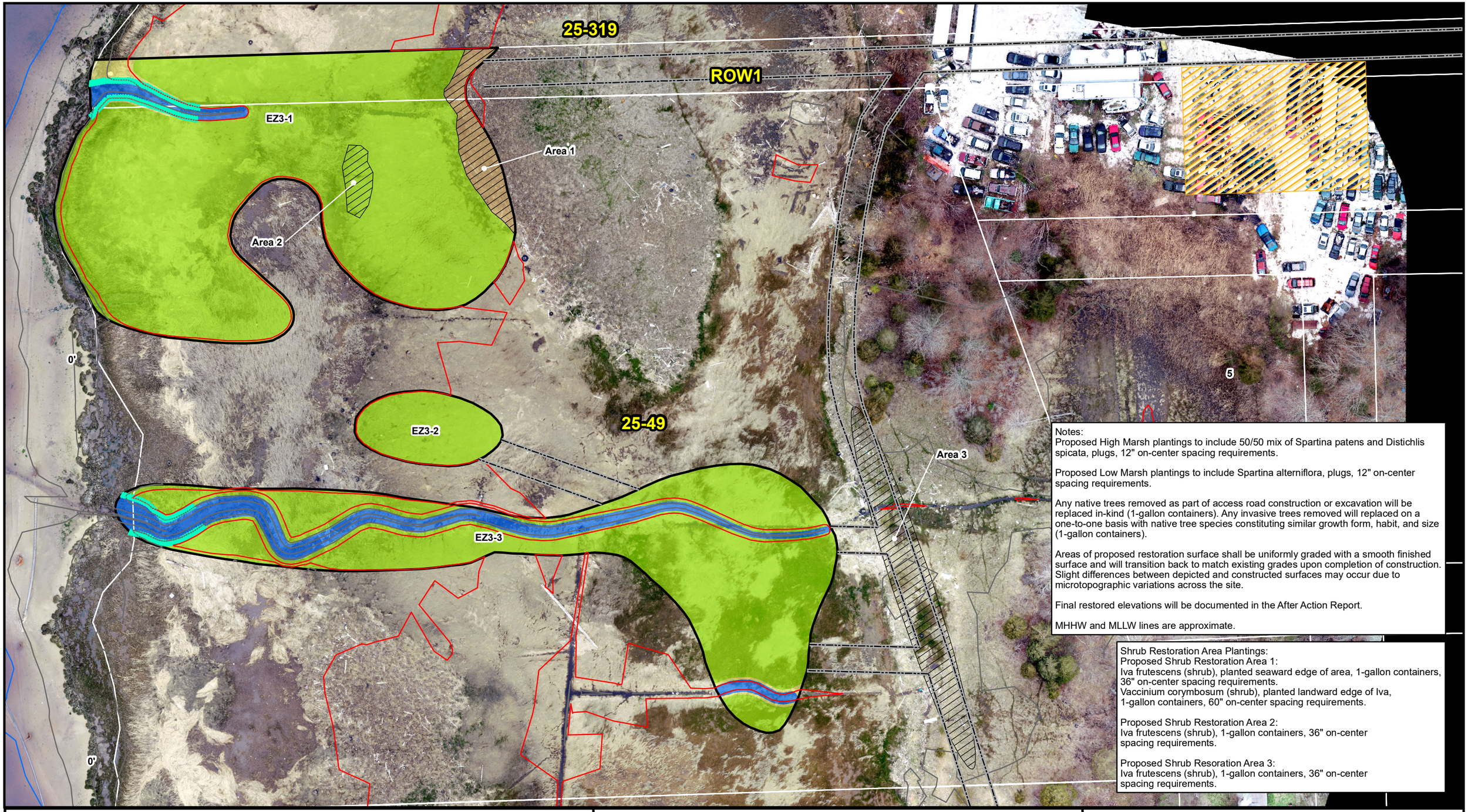
MHHW and MLLW Elevations NAVD88 ft. (Nearview, 2018)

JACOBS™

Intertidal East Zone 3
Parcel 20-005
Compliance Survey Locations with Excavation Footprint
(0-1 ft Depth Interval)

New Bedford Harbor Superfund Site

December 2019 **Figure 3-3e**



Notes:
Proposed High Marsh plantings to include 50/50 mix of Spartina patens and Distichlis spicata, plugs, 12" on-center spacing requirements.

Proposed Low Marsh plantings to include Spartina alterniflora, plugs, 12" on-center spacing requirements.

Any native trees removed as part of access road construction or excavation will be replaced in-kind (1-gallon containers). Any invasive trees removed will replaced on a one-to-one basis with native tree species constituting similar growth form, habit, and size (1-gallon containers).

Areas of proposed restoration surface shall be uniformly graded with a smooth finished surface and will transition back to match existing grades upon completion of construction. Slight differences between depicted and constructed surfaces may occur due to microtopographic variations across the site.

Final restored elevations will be documented in the After Action Report.

MHHW and MLLW lines are approximate.

Shrub Restoration Area Plantings:
Proposed Shrub Restoration Area 1:
Iva frutescens (shrub), planted seaward edge of area, 1-gallon containers, 36" on-center spacing requirements.
Vaccinium corymbosum (shrub), planted landward edge of Iva, 1-gallon containers, 60" on-center spacing requirements.

Proposed Shrub Restoration Area 2:
Iva frutescens (shrub), 1-gallon containers, 36" on-center spacing requirements.

Proposed Shrub Resoration Area 3:
Iva frutescens (shrub), 1-gallon containers, 36" on-center spacing requirements.

Legend

- Proposed Access Road
- Proposed Coir Log
- 1-foot Contour
- Mean Higher High Water
- Mean Lower Low Water
- 0-1' Excavation Depth
- Parcel Boundary
- Proposed Shrub Restoration Area
- Proposed Laydown Area
- Proposed High Marsh
- Proposed Low Marsh
- Proposed Scrub-Shrub Marsh
- Proposed Stream

0 50 100 Feet

February 2020

Basemap Data Source:
Nearview, LLC, MassGIS

Vertical Datum:
NAVD88

Intertidal East Zone 3
Parcel 25-49 and ROW
Proposed Wetland Cover Types

New Bedford Harbor Superfund Site

JACOBS

Figure 7-1a

Notes:

Proposed High Marsh plantings to include 50/50 mix of Spartina patens and Distichlis spicata, plugs, 12" on-center spacing requirements.

Proposed Low Marsh plantings to include Spartina alterniflora, plugs, 12" on-center spacing requirements.

Any native trees removed as part of access road construction or excavation will be replaced in-kind (1-gallon containers). Any invasive trees removed will replaced on a one-to-one basis with native tree species constituting similar growth form, habit, and size (1-gallon containers).

Areas of proposed restoration surface shall be uniformly graded with a smooth finished surface and will transition back to match existing grades upon completion of construction. Slight differences between depicted and constructed surfaces may occur due to microtopographic variations across the site.

Final restored elevations will be documented in the After Action Report.

MHHW and MLLW lines are approximate.

No shrub restoration proposed.

Mosquito ditches, unless otherwise noted, will be replaced with high marsh.

25-49

EZ3-4

25-356

ROW

25-358

EZ3-5

25-56

0

0

-5

Legend

- Proposed Access Road
- 1-foot Contour
- Mean Lower Low Water
- Mean Higher High Water
- 0-1' Excavation Depth
- Parcel Boundary
- Proposed High Marsh
- Proposed Low Marsh
- Proposed Stream

0 50 100 Feet

January 2020

Basemap Data Source:
Nearview, LLC, MassGIS

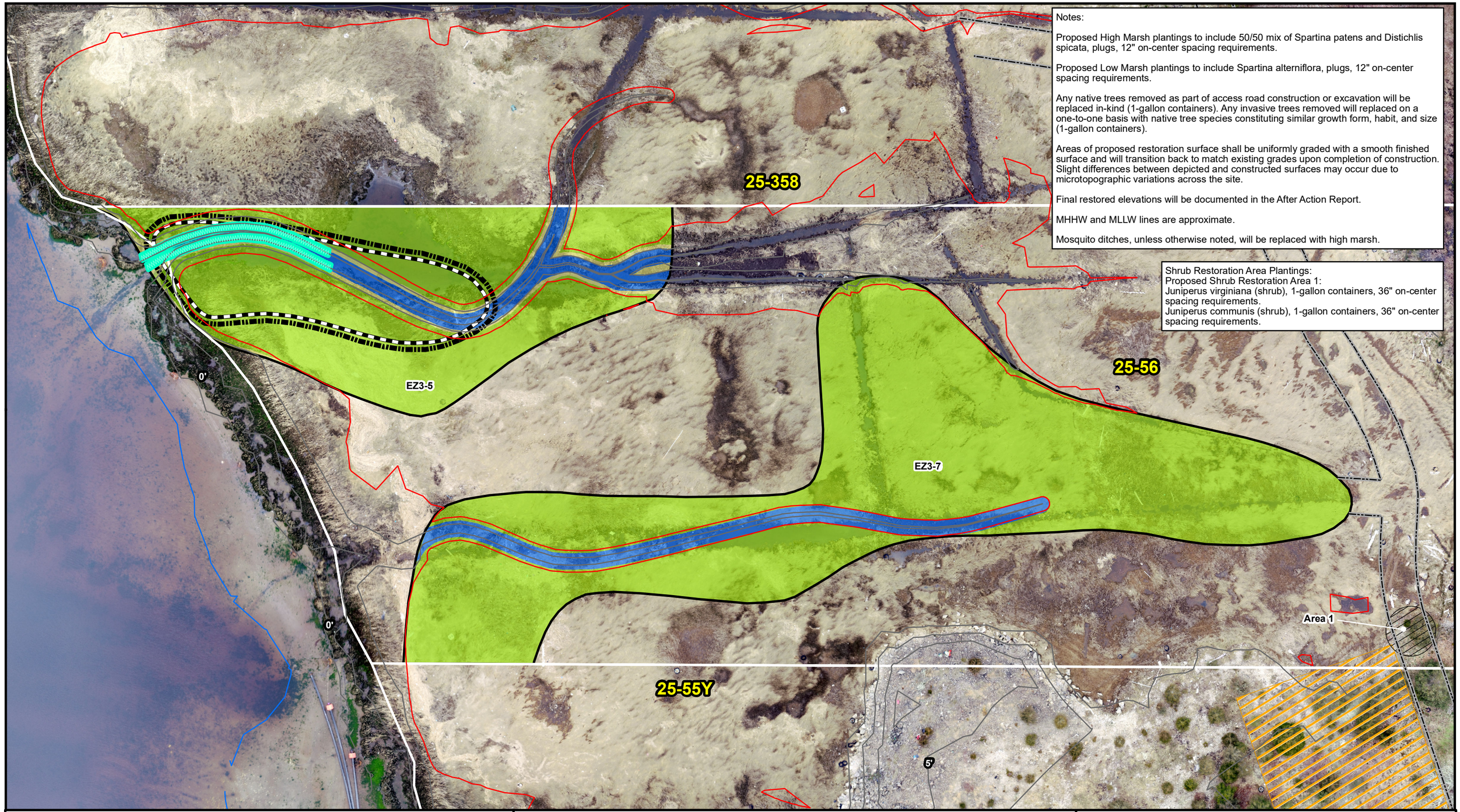
Vertical Datum:
NAVD88

Intertidal East Zone 3
Parcels 25-356, 23-358, and ROW
Proposed Wetland Cover Types

New Bedford Harbor Superfund Site

JACOBS

Figure 7-1b



Notes:

Proposed High Marsh plantings to include 50/50 mix of Spartina patens and Distichlis spicata, plugs, 12" on-center spacing requirements.

Proposed Low Marsh plantings to include Spartina alterniflora, plugs, 12" on-center spacing requirements.

Any native trees removed as part of access road construction or excavation will be replaced in-kind (1-gallon containers). Any invasive trees removed will replaced on a one-to-one basis with native tree species constituting similar growth form, habit, and size (1-gallon containers).

Areas of proposed restoration surface shall be uniformly graded with a smooth finished surface and will transition back to match existing grades upon completion of construction. Slight differences between depicted and constructed surfaces may occur due to microtopographic variations across the site.

Final restored elevations will be documented in the After Action Report.

MHHW and MLLW lines are approximate.

Mosquito ditches, unless otherwise noted, will be replaced with high marsh.

Shrub Restoration Area Plantings:
Proposed Shrub Restoration Area 1:
Juniperus virginiana (shrub), 1-gallon containers, 36" on-center spacing requirements.
Juniperus communis (shrub), 1-gallon containers, 36" on-center spacing requirements.

Legend

- Proposed Access Road
- Proposed Coir Log
- Mean Higher High Water
- Mean Lower Low Water
- 1-foot Contour
- Proposed Shrub Restoration Area
- 0-1' Excavation Depth
- 1-2' Excavation Depth
- 2-3' Excavation Depth
- Parcel Boundary
- Proposed High Marsh
- Proposed Low Marsh
- Proposed Stream
- Proposed Laydown Area

0 50 100 Feet

January 2020

Basemap Data Source:
Nearview, LLC, MassGIS

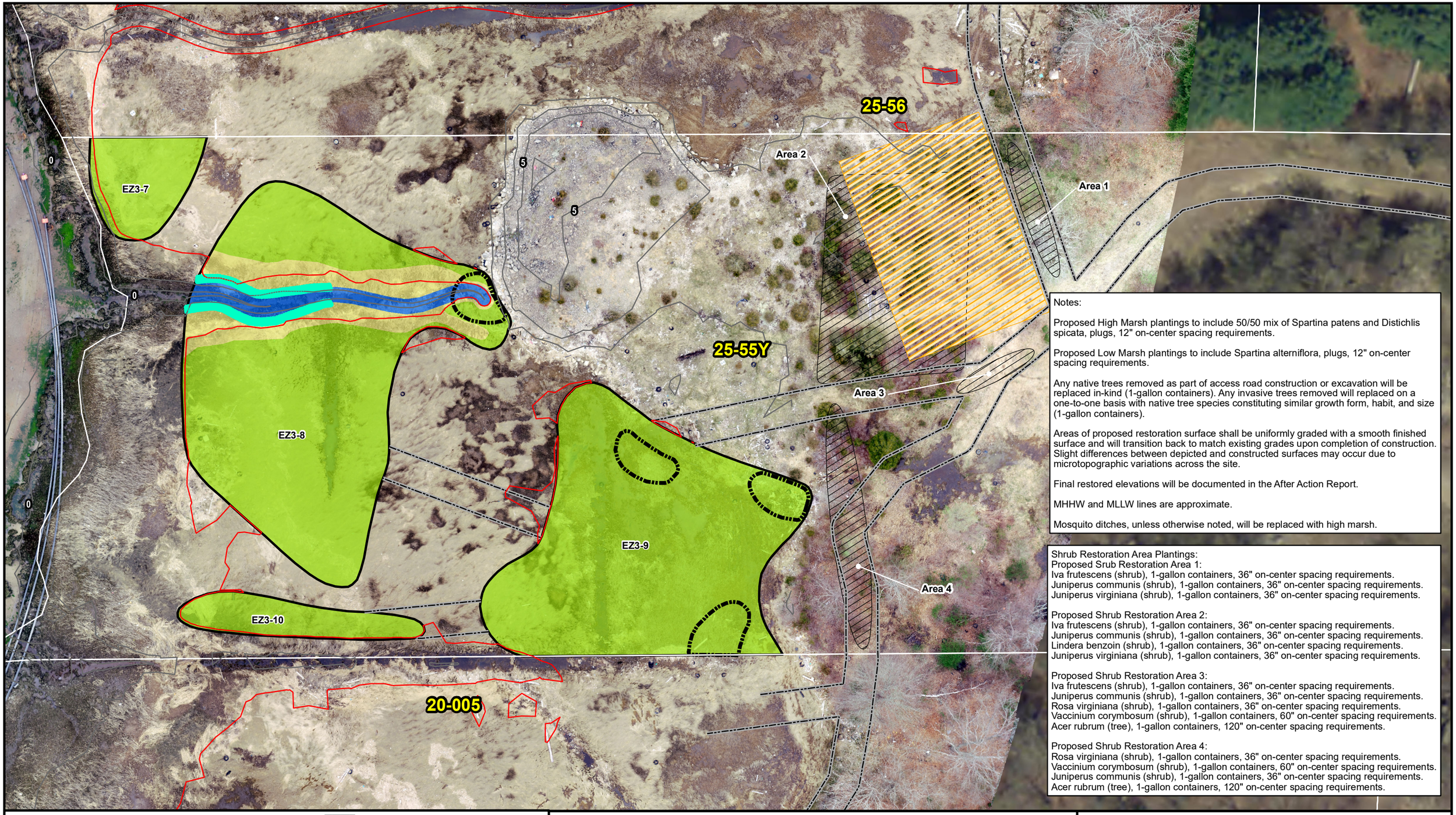
Vertical Datum:
NAVD88

Intertidal East Zone 3
Parcel 25-56
Proposed Wetland Cover Types

New Bedford Harbor Superfund Site

JACOBS

Figure 7-1c



Notes:

Proposed High Marsh plantings to include 50/50 mix of Spartina patens and Distichlis spicata, plugs, 12" on-center spacing requirements.

Proposed Low Marsh plantings to include Spartina alterniflora, plugs, 12" on-center spacing requirements.

Any native trees removed as part of access road construction or excavation will be replaced in-kind (1-gallon containers). Any invasive trees removed will replaced on a one-to-one basis with native tree species constituting similar growth form, habit, and size (1-gallon containers).

Areas of proposed restoration surface shall be uniformly graded with a smooth finished surface and will transition back to match existing grades upon completion of construction. Slight differences between depicted and constructed surfaces may occur due to microtopographic variations across the site.

Final restored elevations will be documented in the After Action Report.

MHHW and MLLW lines are approximate.

Mosquito ditches, unless otherwise noted, will be replaced with high marsh.

Shrub Restoration Area Plantings:
Proposed Srub Restoration Area 1:
Iva frutescens (shrub), 1-gallon containers, 36" on-center spacing requirements.
Juniperus communis (shrub), 1-gallon containers, 36" on-center spacing requirements.
Juniperus virginiana (shrub), 1-gallon containers, 36" on-center spacing requirements.

Proposed Shrub Restoration Area 2:
Iva frutescens (shrub), 1-gallon containers, 36" on-center spacing requirements.
Juniperus communis (shrub), 1-gallon containers, 36" on-center spacing requirements.
Lindera benzoin (shrub), 1-gallon containers, 36" on-center spacing requirements.
Juniperus virginiana (shrub), 1-gallon containers, 36" on-center spacing requirements.

Proposed Shrub Restoration Area 3:
Iva frutescens (shrub), 1-gallon containers, 36" on-center spacing requirements.
Juniperus communis (shrub), 1-gallon containers, 36" on-center spacing requirements.
Rosa virginiana (shrub), 1-gallon containers, 36" on-center spacing requirements.
Vaccinium corymbosum (shrub), 1-gallon containers, 60" on-center spacing requirements.
Acer rubrum (tree), 1-gallon containers, 120" on-center spacing requirements.

Proposed Shrub Restoration Area 4:
Rosa virginiana (shrub), 1-gallon containers, 36" on-center spacing requirements.
Vaccinium corymbosum (shrub), 1-gallon containers, 60" on-center spacing requirements.
Juniperus communis (shrub), 1-gallon containers, 36" on-center spacing requirements.
Acer rubrum (tree), 1-gallon containers, 120" on-center spacing requirements.

Legend

- Proposed Access Road
- Proposed Coir Log
- Mean Higher High Water
- Mean Lower Low Water
- 1-foot Contour
- 0-1' Excavation Depth
- 1-2' Excavation Depth
- Parcel Boundary
- Proposed Shrub Restoration Area
- Proposed Stream
- Proposed High Marsh
- Proposed Low Marsh
- Proposed Laydown Area

0 50 100 Feet

January 2020

Basemap Data Source:
Nearview, LLC, MassGIS

Vertical Datum:
NAVD88

Intertidal East Zone 3
Parcel 25-55Y
Proposed Wetland Cover Types

New Bedford Harbor Superfund Site

JACOBS

Figure 7-1d

Proposed High Marsh plantings to include 50/50 mix of Spartina patens and Distichlis spicata, plugs, 12" on-center spacing requirements.

Any native trees removed as part of access road construction or excavation will be replaced in-kind (1-gallon containers). Any invasive trees removed will replaced on a one-to-one basis with native tree species constituting similar growth form, habit, and size (1-gallon containers).

Areas of proposed restoration surface shall be uniformly graded with a smooth finished surface and will transition back to match existing grades upon completion of construction. Slight differences between depicted and constructed surfaces may occur due to microtopographic variations across the site.

Final restored elevations will be documented in the After Action Report.

MHHW and MLLW lines are approximate.

Mosquito ditches, unless otherwise noted, will be replaced with high marsh.

Shrub Restoration Area Plantings:
Proposed Srub Restoration Area 1:
Iva frutescens (shrub), 1-gallon containers, 36" on-center spacing requirements.
Vaccinium corymbosum (shrub), 1-gallon containers, 60" on-center spacing requirements.
Acer rubrum (tree), 1-gallon containers, 120" on-center spacing requirements.
Rosa virginiana (shrub), 1-gallon containers, 36" on-center spacing requirements.
Juniperus virginiana, 1-gallon containers, 36" on-center spacing requirements.

0'

0'

25-55Y

EZ3 9

Area 1

20 005

20 001

Legend

- Proposed Access Road
- 1-foot Contour
- Mean Lower Low Water
- Mean Higher High Water
- 0-1' Excavation Depth
- 1-2' Excavation Depth
- Parcel Boundary
- Proposed High Marsh
- Proposed Shrub Restoration Area

0 50 100 Feet

January 2020

Basemap Data Source:
Nearview, LLC, MassGIS

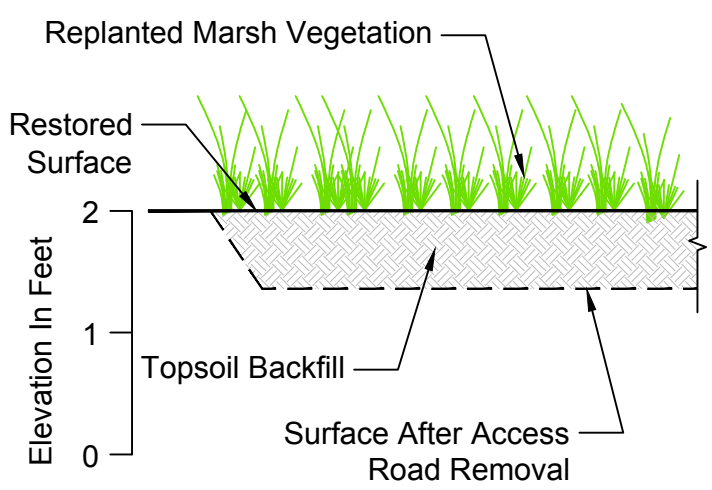
Vertical Datum:
NAVD88

Intertidal East Zone 3
Parcel 20-005
Proposed Wetland Cover Types

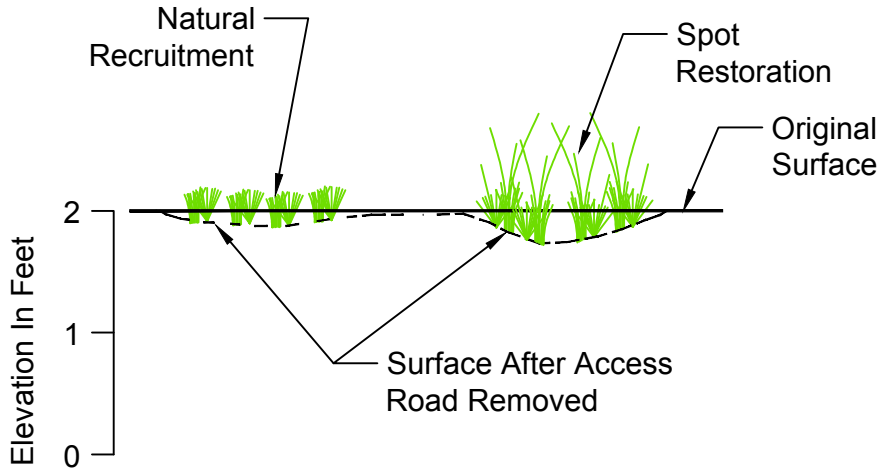
New Bedford Harbor Superfund Site

JACOBS

Figure 7-1e



A. Greater Than About 4 inches Soil Compaction



B. Less Than About 4 inches Soil Compaction

NOT TO SCALE

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Conceptual Cross Sections of Access Road Restoration Approach

New Bedford Harbor Superfund Site

August 2019 | Figure 7-2

Tables

Table 2-1a
Pre-Excavation PCB Characterization Sample Results for Parcels 25-49, 25-56, 20-005, and ROW

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
ROW	S-3703-0.0-1.0	S-3703	0.0	1.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	218	
ROW	S-3703-1.0-2.0	S-3703	1.0	2.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	2.86	
ROW	S-3703-2.0-3.0	S-3703	2.0	3.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	1.69	
ROW	S-0083-1	S-83	0.0	1.0	9/14/1999	Total PCB Congeners (sum cong x factor)	95.0	
ROW	S-0083-2	S-83	1.0	2.0	9/14/1999	Total PCB Congeners (sum cong x factor)	1.20	
25-49	S-ES301-18FSP9-00-10	ES301	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	14.9	
25-49	S-ES302-18FSP9-00-10	ES302	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	25.5	
25-49	S-ES303-18FSP9-00-10	ES303	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	77.7	
25-49	S-ES304-18FSP9-00-10	ES304	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	31.2	
25-49	S-ES305-18FSP9-00-10	ES305	0.0	1.0	4/10/2018	Aroclor 1254 - Immunoassay	3.3	J
25-49	S-ES306-18FSP9-00-10	ES306	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	9.21	
25-49	S-ES307-18FSP9-00-10	ES307	0.0	1.0	4/25/2018	Aroclor 1254 - Immunoassay	8	J
25-49	S-ES308-18FSP9-00-10	ES308	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	96.7	
25-49	S-ES309-18FSP9-00-10	ES309	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	182	
25-49	S-ES310-18FSP9-00-10	ES310	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	22.6	
25-49	S-ES3107-18FSP9-00-10	ES3107	0.0	1.0	6/22/2018	Total 209 PCB cong (excl non-detects)	5.35	
25-49	S-ES3108-18FSP9-00-10	ES3108	0.0	1.0	6/22/2018	Total 209 PCB cong (excl non-detects)	43.2	
25-49	S-ES3109-18FSP9-00-10	ES3109	0.0	1.0	6/22/2018	Total 209 PCB cong (excl non-detects)	8.43	
25-49	S-ES311-18FSP9-00-10	ES311	0.0	1.0	4/10/2018	Aroclor 1254 - Immunoassay	95	DJ
25-49	S-ES3111-18FSP9-00-10	ES3111	0.0	1.0	6/22/2018	Total 209 PCB cong (excl non-detects)	23.9	
25-49	S-ES3112-18FSP9-00-10	ES3112	0.0	1.0	6/22/2018	Total 209 PCB cong (excl non-detects)	9.26	
25-49	S-ES3113-18FSP9-00-10	ES3113	0.0	1.0	6/22/2018	Total 209 PCB cong (excl non-detects)	24.6	
25-49	S-ES3114-18FSP9-00-10	ES3114	0.0	1.0	7/2/2018	Total 209 PCB cong (excl non-detects)	47.7	
25-49	S-ES3115-18FSP9-00-10	ES3115	0.0	1.0	7/2/2018	Total 209 PCB cong (excl non-detects)	487	
25-49	S-ES3116-18FSP9-00-10	ES3116	0.0	1.0	6/29/2018	Total 209 PCB cong (excl non-detects)	120	
25-49	S-ES3116R-18FSP9-00-10-REP	ES3116	0.0	1.0	6/29/2018	Total 209 PCB cong (excl non-detects)	131	
25-49	S-ES3117-18FSP9-00-10	ES3117	0.0	1.0	6/29/2018	Total 209 PCB cong (excl non-detects)	34.6	
25-49	S-ES3118-18FSP9-00-10	ES3118	0.0	1.0	6/29/2018	Total 209 PCB cong (excl non-detects)	13.2	
25-49	S-ES3119-18FSP9-00-10	ES3119	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	5.93	
25-49	S-ES312-18FSP9-00-10	ES312	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	21.6	
25-49	S-ES313-18FSP9-00-10	ES313	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	24.2	
25-49	S-ES314-18FSP9-00-10	ES314	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	14.5	
25-49	S-ES315-18FSP9-00-10	ES315	0.0	1.0	4/25/2018	Aroclor 1254 - Immunoassay	3.7	J
25-49	S-ES3153-18FSP9-10-20	ES3153	1.0	2.0	7/2/2018	Total 209 PCB cong (excl non-detects)	2.26	
25-49	S-ES3154-18FSP9-10-20	ES3154	1.0	2.0	6/22/2018	Total 209 PCB cong (excl non-detects)	5.99	
25-49	S-ES3155-18FSP9-10-20	ES3155	1.0	2.0	6/29/2018	Total 209 PCB cong (excl non-detects)	1.62	

Table 2-1a
Pre-Excavation PCB Characterization Sample Results for Parcels 25-49, 25-56, 20-005, and ROW

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-49	S-ES3156-18FSP9-10-20	ES3156	1.0	2.0	6/29/2018	Total 209 PCB cong (excl non-detects)	0.642	
25-49	S-ES3164-18FSP9-00-10	ES3164	0.0	1.0	10/25/2019	Total 209 PCB cong (excl non-detects)	403	
25-49	S-ES3164-18FSP9-10-20	ES3164	1.0	2.0	10/25/2019	Aroclor 1254 - Immunoassay	15.3	J
25-49	S-ES3165-18FSP9-00-10	ES3165	0.0	1.0	10/25/2019	Total 209 PCB cong (excl non-detects)	36.6	
25-49	S-ES3166-18FSP9-00-10	ES3166	0.0	1.0	10/25/2019	Total 209 PCB cong (excl non-detects)	8.13	
25-49	S-ES3167-18FSP9-00-10	ES3167	0.0	1.0	10/25/2019	Total 209 PCB cong (excl non-detects)	0.746	
25-49	S-ES3168-18FSP9-00-10	ES3168	0.0	1.0	10/25/2019	Total 209 PCB cong (excl non-detects)	3.9	
25-49	S-ES316-18FSP9-00-10	ES316	0.0	1.0	4/11/2018	Total 209 PCB cong (excl non-detects)	39.3	
25-49	S-ES317-18FSP9-00-10	ES317	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	38.2	
25-49	S-ES318-18FSP9-00-10	ES318	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	10.1	
25-49	S-ES319-18FSP9-00-10	ES319	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	4.85	
25-49	S-ES320-18FSP9-00-10	ES320	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	7.86	
25-49	S-ES321-18FSP9-00-10	ES321	0.0	1.0	4/10/2018	Total 209 PCB cong (excl non-detects)	44.8	
25-49	S-ES322-18FSP9-00-10	ES322	0.0	1.0	4/26/2018	Total 209 PCB cong (excl non-detects)	36.9	
25-49	S-ES323-18FSP9-00-10	ES323	0.0	1.0	4/11/2018	Total 209 PCB cong (excl non-detects)	128	
25-49	S-ES323R-18FSP9-00-10-REP	ES323R	0.0	1.0	4/11/2018	Total 209 PCB cong (excl non-detects)	441	
25-49	S-ES324-18FSP9-00-10	ES324	0.0	1.0	4/11/2018	Aroclor 1254 - Immunoassay	9.6	J
25-49	S-ES325-18FSP9-00-10	ES325	0.0	1.0	4/25/2018	Aroclor 1254 - Immunoassay	0.3	J
25-49	S-ES326-18FSP9-00-10	ES326	0.0	1.0	4/11/2018	Total 209 PCB cong (excl non-detects)	28	
25-49	S-ES326R-18FSP9-00-10-REP	ES326R	0.0	1.0	4/11/2018	Aroclor 1254 - Immunoassay	9.6	DJ
25-49	S-ES327-18FSP9-00-10	ES327	0.0	1.0	4/12/2018	Aroclor 1254 - Immunoassay	4.4	DJ
25-49	S-ES328-18FSP9-00-10	ES328	0.0	1.0	4/13/2018	Aroclor 1254 - Immunoassay	2.5	J
25-49	S-ES329-18FSP9-00-10	ES329	0.0	1.0	4/12/2018	Total 209 PCB cong (excl non-detects)	44.1	
25-49	S-ES330-18FSP9-00-10	ES330	0.0	1.0	4/13/2018	Aroclor 1254 - Immunoassay	14	DJ
25-49	S-ES331-18FSP9-00-10	ES331	0.0	1.0	4/13/2018	Aroclor 1254 - Immunoassay	5.8	J
25-49	S-ES332-18FSP9-00-10	ES332	0.0	1.0	4/13/2018	Aroclor 1254 - Immunoassay	8.3	J
25-49	S-ES334-18FSP9-00-10	ES334	0.0	1.0	4/13/2018	Aroclor 1254 - Immunoassay	3.8	J
25-49	S-ES336-18FSP9-00-10	ES336	0.0	1.0	4/25/2018	Aroclor 1254 - Immunoassay	0.44	J
25-49	S-ES390-18FSP9-00-10	ES390	0.0	1.0	4/13/2018	Total 209 PCB cong (excl non-detects)	19.6	
25-49	S-15Y-INT178-00-10	INT178	0.0	1.0	5/14/2015	Total 139 PCB cong (excl non-detects)	13.0	
25-49	S-15Y-INT178-10-20	INT178	1.0	2.0	5/14/2015	Aroclor 1254 - Immunoassay	0.90	
25-49	S-15Y-INT180-00-10	INT180	0.0	1.0	5/14/2015	Total 139 PCB cong (excl non-detects)	7.10	
25-49	S-15Y-INT180-10-20	INT180	1.0	2.0	5/14/2015	Aroclor 1254 - Immunoassay	0.50	U
25-49	S-15Y-INT181-00-10	INT181	0.0	1.0	5/14/2015	Aroclor 1254 - Immunoassay	6.00	D
25-49	S-15Y-INT181-10-20	INT181	1.0	2.0	5/14/2015	Aroclor 1254 - Immunoassay	0.60	
25-49	S-17Y-INT415-10-20	INT415	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.5	U

Table 2-1a
Pre-Excavation PCB Characterization Sample Results for Parcels 25-49, 25-56, 20-005, and ROW

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-49	S-17Y-INT469-00-10	INT469	0.0	1.0	5/23/2017	Aroclor 1254 - Immunoassay	16.9	D
25-49	S-17Y-INT469-10-20	INT469	1.0	2.0	5/23/2017	Aroclor 1254 - Immunoassay	0.5	U
25-49	S-17Y-INT470-00-10	INT470	0.0	1.0	5/23/2017	Aroclor 1254 - Immunoassay	9.3	D
25-49	S-17Y-INT470-10-20	INT470	1.0	2.0	5/23/2017	Aroclor 1254 - Immunoassay	0.5	U
25-49	S-17Y-INT471-00-10	INT471	0.0	1.0	5/23/2017	Aroclor 1254 - Immunoassay	4.6	
25-49	S-17Y-INT471-10-20	INT471	1.0	2.0	5/23/2017	Aroclor 1254 - Immunoassay	0.5	U
25-49	S-17Y-INT472-00-10	INT472	0.0	1.0	5/23/2017	Aroclor 1254 - Immunoassay	117	D
25-49	S-17Y-INT473-10-20	INT473	1.0	2.0	5/23/2017	Aroclor 1254 - Immunoassay	0.6	
25-49	S-17Y-INT474-00-10	INT474	0.0	1.0	5/23/2017	Aroclor 1254 - Immunoassay	98.6	D
25-49	S-17Y-INT474-10-20	INT474	1.0	2.0	5/23/2017	Aroclor 1254 - Immunoassay	7	
25-49	S-17Y-INT475-00-10	INT475	0.0	1.0	5/23/2017	Total 139 PCB cong (excl non-detects)	35.3	
25-49	S-17Y-INT475-10-20	INT475	1.0	2.0	5/23/2017	Aroclor 1254 - Immunoassay	0.69	
25-49	S-17Y-INT476-10-20	INT476	1.0	2.0	5/23/2017	Aroclor 1254 - Immunoassay	0.7	
25-49	S-17Y-INT477-00-10	INT477	0.0	1.0	5/19/2017	Total 139 PCB cong (excl non-detects)	33.0	
25-49	S-17Y-INT477-10-20	INT477	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	7.8	
25-49	S-17Y-INT477-20-24	INT477	2.0	2.4	5/19/2017	Aroclor 1254 - Immunoassay	0.5	U
25-49	S-17Y-INT478-00-10	INT478	0.0	1.0	5/19/2017	Aroclor 1254 - Immunoassay	10.4	D
25-49	S-17Y-INT478-10-20	INT478	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.6	
25-49	S-15Y-INT87-00-10	INT87	0.0	1.0	5/14/2015	Aroclor 1254 - Immunoassay	95.4	D
25-49	S-15Y-INT87-10-20	INT87	1.0	2.0	5/14/2015	Aroclor 1254 - Immunoassay	0.60	
25-49	S-15Y-INT88-00-10	INT88	0.0	1.0	5/14/2015	Aroclor 1254 - Immunoassay	456	D
25-49	S-15Y-INT88-10-20	INT88	1.0	2.0	5/14/2015	Aroclor 1254 - Immunoassay	0.60	
25-49	S-15Y-INT89-00-10	INT89	0.0	1.0	5/14/2015	Total 139 PCB cong (excl non-detects)	12.0	
25-49	S-15Y-INT89-10-20	INT89	1.0	2.0	5/14/2015	Aroclor 1254 - Immunoassay	0.70	
25-49	S-15Y-INT90-00-10	INT90	0.0	1.0	5/14/2015	Total 139 PCB cong (excl non-detects)	31.0	
25-49	S-15Y-INT90-10-20	INT90	1.0	2.0	5/14/2015	Aroclor 1254 - Immunoassay	0.50	U
25-49	S-15Y-INT91-10-20	INT91	1.0	2.0	5/14/2015	Aroclor 1254 - Immunoassay	0.80	
25-49	S-15Y-INT92-00-10	INT92	0.0	1.0	5/14/2015	Aroclor 1254 - Immunoassay	6.10	D
25-49	S-15Y-INT92-10-20	INT92	1.0	2.0	5/14/2015	Aroclor 1254 - Immunoassay	0.50	U
25-49	S-15Y-INT93-00-10	INT93	0.0	1.0	5/14/2015	Total 139 PCB cong (excl non-detects)	9.50	
25-49	S-15Y-INT93-10-20	INT93	1.0	2.0	5/14/2015	Aroclor 1254 - Immunoassay	0.50	U
25-49	S-204316	S-204316	0.0	1.0	pre-ROD	Total PCB Congeners (sum CONG x factor)[1]	46.0	
25-49	S-3456-.5-1.0	S-3456	0.5	1.0	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	224	
25-49	S-3457-.5-1.0	S-3457	0.5	1.0	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	107	
25-49	S-3457-1.0-1.5	S-3457	1.0	1.5	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	1.12	
25-49	S-3457-1.5-2.0	S-3457	1.5	2.0	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	0.26	

Table 2-1a
Pre-Excavation PCB Characterization Sample Results for Parcels 25-49, 25-56, 20-005, and ROW

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-49	S-3458-.0-.2	S-3458	0.0	0.2	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	101	
25-49	S-3458-.2-.7	S-3458	0.2	0.7	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	36.4	
25-49	S-3459-0.0-1.0	S-3459	0.0	1.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	33.8	
25-49	S-3459-1.0-1.5	S-3459	1.0	1.5	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	0.20	
25-49	S-3459-1.5-2.0	S-3459	1.5	2.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	0.44	
25-49	S-3459-2.0-3.0	S-3459	2.0	3.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	0.24	
25-49	S-3460-0.0-.5	S-3460	0.0	0.5	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	49.4	
25-49	S-3461-0.0-1.0	S-3461	0.0	1.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	57.2	
25-49	S-3461-1.0-2.0	S-3461	1.0	2.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	0.60	
25-49	S-3461-2.0-3.0	S-3461	2.0	3.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
25-49	S-3704-0.0-1.0	S-3704	0.0	1.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	46.8	
25-49	S-3704-1.0-2.0	S-3704	1.0	2.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	3.64	
25-49	S-3704-1.0-2.0REP	S-3704	1.0	2.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	4.16	
25-49	S-3704-2.0-3.0	S-3704	2.0	3.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	5.20	
25-49	S-3705-0.0-1.0	S-3705	0.0	1.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	151	
25-49	S-3705-1.0-2.0	S-3705	1.0	2.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	2.39	
25-49	S-3705-2.0-3.0	S-3705	2.0	3.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	1.22	
25-49	S-3706-0.0-1.0	S-3706	0.0	1.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	44.2	
25-49	S-3706-1.0-2.0	S-3706	1.0	2.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	1.46	
25-49	S-3706-2.0-3.0	S-3706	2.0	3.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	0.55	
25-49	S-3707-1.3-1.8	S-3707	1.3	1.8	10/2/2001	Total 18 NOAA PCB cong (excl non-detects)	11.7	
25-49	S-3708-0.2-.7	S-3708	0.2	0.7	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	832	
25-49	S-3708-1.0-1.5	S-3708	1.0	1.5	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	49.4	
25-49	S-3708-1.0-1.5REP	S-3708	1.0	1.5	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	16.9	
25-49	S-3708-1.5-2.0	S-3708	1.5	2.0	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	1.72	
25-49	S-3709-0.0-.5	S-3709	0.0	0.5	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	33.8	
25-49	S-3709-.5-.7	S-3709	0.5	0.7	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	0.52	
25-49	S-0786-1	S-786	0.0	1.0	9/25/2000	Total 18 NOAA PCB cong (excl non-detects)	4.94	
25-49	S-0786-2	S-786	1.0	2.0	9/25/2000	Total 18 NOAA PCB cong (excl non-detects)	0.62	
25-49	S-0787-1	S-787	0.0	1.0	9/25/2000	Total 18 NOAA PCB cong (excl non-detects)	468	
25-49	S-0787-2	S-787	1.0	2.0	9/25/2000	Total 18 NOAA PCB cong (excl non-detects)	0.20	
25-49	S-0788-1	S-788	0.0	1.0	9/25/2000	Total 18 NOAA PCB cong (excl non-detects)	4.16	
25-49	S-0788-2	S-788	1.0	2.0	9/25/2000	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
25-49	S-0789-1	S-789	0.0	1.0	9/25/2000	Total 18 NOAA PCB cong (excl non-detects)	133	
25-49	S-0789-2	S-789	1.0	2.0	9/25/2000	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
25-49	S-0084-1	S-84	0.0	1.0	9/14/1999	Total PCB Congeners (sum CONG x factor)	250	

Table 2-1a
Pre-Excavation PCB Characterization Sample Results for Parcels 25-49, 25-56, 20-005, and ROW

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-49	S-0084-2	S-84	1.0	2.0	9/14/1999	Total PCB Congeners (sum CONG x factor)	1.40	
25-49	S-0844-1	S-844	0.0	1.0	9/25/2000	Total 18 NOAA PCB cong (excl non-detects)	0.22	
25-49	S-0844-2	S-844	1.0	2.0	9/25/2000	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
25-49	S-0085-1	S-85	0.0	1.0	9/14/1999	Total PCB Congeners (sum CONG x factor)	0.32	
25-49	S-0085-2	S-85	1.0	2.0	9/14/1999	Total PCB Congeners (sum CONG x factor)	0.07	
25-49	S-0085-3	S-85	2.0	3.0	9/14/1999	Total PCB Congeners (sum CONG x factor)	0.00	U
25-49	S-0086-1	S-86	0.0	1.0	9/14/1999	Total PCB Congeners (sum CONG x factor)	23.0	
25-49	S-0086-2	S-86	1.0	2.0	9/14/1999	Total PCB Congeners (sum CONG x factor)	0.72	
25-49	S-0086-2DUP	S-86	1.0	2.0	9/14/1999	Total PCB Congeners (sum CONG x factor)	0.50	
25-49	S-0087-1	S-87	0.0	1.0	9/15/1999	Total PCB Congeners (sum CONG x factor)	110	
25-49	S-0087-2	S-87	1.0	2.0	9/15/1999	Total PCB Congeners (sum CONG x factor)	0.10	
25-49	S-0090-1	S-90	0.0	1.0	9/15/1999	Total PCB Congeners (sum CONG x factor)	0.00	U
25-49	S-0090-2	S-90	1.0	2.0	9/15/1999	Total PCB Congeners (sum CONG x factor)	0.00	U
25-49	S-ad565	S-ad565	0.0	1.0	pre-ROD	Total PCB Congeners (sum CONG x factor)[1]	4.00	
25-49	S-J - 19 - - 1	S-J - 19 -	0.0	1.0	pre-ROD	Total PCB Congeners (sum CONG x factor)[1]	39.0	
25-49	S-J - 19 - - 2	S-J - 19 -	1.0	2.0	pre-ROD	Total PCB Congeners (sum CONG x factor)[1]	0.00	U
25-49	S-J - 19 - - 3	S-J - 19 -	2.0	3.0	pre-ROD	Total PCB Congeners (sum CONG x factor)[1]	1.00	
25-56	S-ES3125-18FSP9-00-10	ES3125	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	31.9	
25-56	S-ES3126-18FSP9-00-10	ES3126	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	143	
25-56	S-ES3126R-18FSP9-00-10-REP	ES3126	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	113	
25-56	S-ES3127-18FSP9-00-10	ES3127	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	46.5	
25-56	S-ES3128-18FSP9-00-10	ES3128	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	1.64	
25-56	S-ES3129-18FSP9-00-10	ES3129	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	101	
25-56	S-ES3130-18FSP9-00-10	ES3130	0.0	1.0	6/29/2018	Total 209 PCB cong (excl non-detects)	26.9	
25-56	S-ES3131-18FSP9-00-10	ES3131	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	51	
25-56	S-ES3132-18FSP9-00-10	ES3132	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	50.4	
25-56	S-ES3133-18FSP9-00-10	ES3133	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	31.3	
25-56	S-ES3159-18FSP9-10-20	ES3159	1.0	2.0	6/25/2018	Total 209 PCB cong (excl non-detects)	8.08	
25-56	S-ES3160-18FSP9-30-40	ES3160	3.0	4.0	6/26/2018	Total 209 PCB cong (excl non-detects)	0.13	
25-56	S-ES3161-18FSP9-10-20	ES3161	1.0	2.0	6/26/2018	Total 209 PCB cong (excl non-detects)	0.299	
25-56	S-ES349-18FSP9-00-10	ES349	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	25.9	
25-56	S-ES350-18FSP9-00-10	ES350	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	119	
25-56	S-ES351-18FSP9-00-10	ES351	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	14.8	
25-56	S-ES352-18FSP9-00-10	ES352	0.0	1.0	4/13/2018	Aroclor 1254 - Immunoassay	5	DJ
25-56	S-ES352-18FSP9-10-20	ES352	1.0	2.0	4/13/2018	Aroclor 1254 - Immunoassay	0.37	J
25-56	S-ES352-18FSP9-20-30	ES352	2.0	3.0	4/13/2018	Aroclor 1254 - Immunoassay	0.57	J

Table 2-1a
Pre-Excavation PCB Characterization Sample Results for Parcels 25-49, 25-56, 20-005, and ROW

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-56	S-ES353-18FSP9-00-10	ES353	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	51.9	
25-56	S-ES354-18FSP9-00-10	ES354	0.0	1.0	4/25/2018	Aroclor 1254 - Immunoassay	0.91	J
25-56	S-ES354-18FSP9-10-20	ES354	1.0	2.0	4/25/2018	Aroclor 1254 - Immunoassay	0.58	J
25-56	S-ES354-18FSP9-20-30	ES354	2.0	3.0	4/25/2018	Aroclor 1254 - Immunoassay	0.23	J
25-56	S-ES355-18FSP9-00-10	ES355	0.0	1.0	4/13/2018	Total 209 PCB cong (excl non-detects)	26.1	
25-56	S-ES355R-18FSP9-00-10-REP	ES355R	0.0	1.0	4/13/2018	Total 209 PCB cong (excl non-detects)	24.8	
25-56	S-ES356-18FSP9-00-10	ES356	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	13.4	
25-56	S-ES357-18FSP9-00-10	ES357	0.0	1.0	4/13/2018	Total 209 PCB cong (excl non-detects)	21.5	
25-56	S-ES357-18FSP9-10-20	ES357	1.0	2.0	4/13/2018	Aroclor 1254 - Immunoassay	1.4	J
25-56	S-ES357-18FSP9-20-30	ES357	2.0	3.0	4/13/2018	Aroclor 1254 - Immunoassay	0.21	J
25-56	S-ES358-18FSP9-00-10	ES358	0.0	1.0	4/25/2018	Aroclor 1254 - Immunoassay	0.38	J
25-56	S-ES358-18FSP9-10-20	ES358	1.0	2.0	4/25/2018	Aroclor 1254 - Immunoassay	0.08	J
25-56	S-ES358-18FSP9-20-30	ES358	2.0	3.0	4/25/2018	Aroclor 1254 - Immunoassay	0.16	J
25-56	S-ES359-18FSP9-00-10	ES359	0.0	1.0	4/13/2018	Aroclor 1254 - Immunoassay	7.2	J
25-56	S-ES359-18FSP9-10-20	ES359	1.0	2.0	4/13/2018	Aroclor 1254 - Immunoassay	0.02	J
25-56	S-ES359-18FSP9-20-30	ES359	2.0	3.0	4/13/2018	Aroclor 1254 - Immunoassay	0.5	UJ
25-56	S-ES360-18FSP9-00-10	ES360	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	40.2	
25-56	S-ES361-18FSP9-00-10	ES361	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	93.0	
25-56	S-ES362-18FSP9-00-10	ES362	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	122	
25-56	S-ES363-18FSP9-00-10	ES363	0.0	1.0	4/26/2018	Aroclor 1254 - Immunoassay	0.46	J
25-56	S-ES364-18FSP9-00-10	ES364	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	188	
25-56	S-ES377-18FSP9-00-10	ES377	0.0	1.0	4/13/2018	Total 209 PCB cong (excl non-detects)	60.8	
25-56	S-ES377-18FSP9-10-20	ES377	1.0	2.0	4/13/2018	Total 209 PCB cong (excl non-detects)	17.7	
25-56	S-ES377-18FSP9-20-30	ES377	2.0	3.0	4/13/2018	Total 209 PCB cong (excl non-detects)	73.3	
25-56	S-ES377-18FSP9-30-40	ES377	3.0	4.0	4/13/2018	Total 209 PCB cong (excl non-detects)	12.8	
25-56	S-ES378-18FSP9-00-10	ES378	0.0	1.0	4/11/2018	Aroclor 1254 - Immunoassay	19	DJ
25-56	S-ES378-18FSP9-10-20	ES378	1.0	2.0	4/11/2018	Aroclor 1254 - Immunoassay	420	DJ
25-56	S-ES378-18FSP9-20-30	ES378	2.0	3.0	4/11/2018	Total 209 PCB cong (excl non-detects)	149	
25-56	S-ES378-18FSP9-30-37	ES378	3.0	3.7	4/11/2018	Aroclor 1254 - Immunoassay	3.5	J
25-56	S-15Y-INT100-00-10	INT100	0.0	1.0	5/4/2015	Aroclor 1254 - Immunoassay	54.1	D
25-56	S-15Y-INT100-10-20	INT100	1.0	2.0	5/4/2015	Aroclor 1254 - Immunoassay	0.50	U
25-56	S-15Y-INT101-00-10	INT101	0.0	1.0	5/4/2015	Aroclor 1254 - Immunoassay	6.40	D
25-56	S-15Y-INT101-10-20	INT101	1.0	2.0	5/4/2015	Aroclor 1254 - Immunoassay	0.50	U
25-56	S-17Y-INT487-00-10	INT487	0.0	1.0	5/19/2017	Aroclor 1254 - Immunoassay	10.4	D
25-56	S-17Y-INT487-10-20	INT487	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.52	
25-56	S-17Y-INT488-00-10	INT488	0.0	1.0	5/19/2017	Aroclor 1254 - Immunoassay	10.9	D

Table 2-1a
Pre-Excavation PCB Characterization Sample Results for Parcels 25-49, 25-56, 20-005, and ROW

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-56	S-17Y-INT488-10-20	INT488	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.6	
25-56	S-17Y-INT489-00-10	INT489	0.0	1.0	5/19/2017	Aroclor 1254 - Immunoassay	13.7	D
25-56	S-17Y-INT489-00-10-REP	INT489	0.0	1.0	5/19/2017	Aroclor 1254 - Immunoassay	9	D
25-56	S-17Y-INT489-10-20	INT489	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.5	U
25-56	S-17Y-INT489-10-20-REP	INT489	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.6	
25-56	S-17Y-INT490-10-20	INT490	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.5	U
25-56	S-17Y-INT491-00-10	INT491	0.0	1.0	5/19/2017	Total 139 PCB cong (excl non-detects)	11	
25-56	S-17Y-INT491-10-20	INT491	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.5	U
25-56	S-17Y-INT492-00-10	INT492	0.0	1.0	5/19/2017	Total 139 PCB cong (excl non-detects)	130	
25-56	S-17Y-INT492-10-20	INT492	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	5.5	
25-56	S-17Y-INT493-10-20	INT493	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.8	
25-56	S-17Y-INT494-00-10	INT494	0.0	1.0	5/19/2017	Aroclor 1254 - Immunoassay	10.6	D
25-56	S-17Y-INT494-10-20	INT494	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.7	
25-56	S-15Y-INT99-00-10	INT99	0.0	1.0	5/4/2015	Aroclor 1254 - Immunoassay	5.90	D
25-56	S-15Y-INT99-10-20	INT99	1.0	2.0	5/4/2015	Aroclor 1254 - Immunoassay	0.5	U
25-56	S-3720-0.0-1.0	S-3720	0.0	1.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	44.2	
25-56	S-3720-1.0-2.0	S-3720	1.0	2.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	44.2	
25-56	S-3720-2.0-3.0	S-3720	2.0	3.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	75.4	
25-56	S-3720-3.0-4.0	S-3720	3.0	4.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	44.2	
25-56	S-3721-0.0-1.0	S-3721	0.0	1.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	832	
25-56	S-3721-1.0-2.0	S-3721	1.0	2.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	28.6	
25-56	S-3721-2.0-2.5	S-3721	2.0	2.5	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	67.6	
25-56	S-3721-2.5-3.0	S-3721	2.5	3.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	5.2	
25-56	S-3722-0.0-1.0	S-3722	0.0	1.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	39.0	
25-56	S-3723-0.0-1.0	S-3723	0.0	1.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	39.0	
25-56	S-3723-1.0-2.0	S-3723	1.0	2.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	0.34	
25-56	S-3723-2.0-3.0	S-3723	2.0	3.0	11/13/2001	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
25-56	S-3724-0.0-1.0	S-3724	0.0	1.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	125	
25-56	S-3724-1.0-2.0	S-3724	1.0	2.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	41.6	
25-56	S-3724-2.0-3.0	S-3724	2.0	3.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	2.60	
25-56	S-3725-0.0-1.0	S-3725	0.0	1.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	41.6	
25-56	S-3725-1.0-2.0	S-3725	1.0	2.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	22.4	
25-56	S-3725-1.0-2.0REP	S-3725	1.0	2.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	0.36	
25-56	S-3726-0.0-1.0	S-3726	0.0	1.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	52.0	
25-56	S-3726-1.0-2.0	S-3726	1.0	2.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	4.16	
25-56	S-3726-2.0-2.5	S-3726	2.0	2.5	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	0.09	

Table 2-1a
Pre-Excavation PCB Characterization Sample Results for Parcels 25-49, 25-56, 20-005, and ROW

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-56	S-3726-2.5-3.0	S-3726	2.5	3.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
25-56	S-3727-0.0-1.0	S-3727	0.0	1.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	46.8	
25-56	S-3727-1.0-2.0	S-3727	1.0	2.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	0.47	
25-56	S-3728-.0-1.0	S-3728	0.0	1.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	3.38	
25-56	S-3728-1.0-2.0	S-3728	1.0	2.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	4.16	
25-56	S-3728-2.0-3.0	S-3728	2.0	3.0	11/5/2001	Total 18 NOAA PCB cong (excl non-detects)	17.9	
25-56	S-0790-1	S-790	0.0	1.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	20.0	
25-56	S-0790-2	S-790	1.0	2.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	0.04	
25-56	S-0791-1	S-791	0.0	1.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	2.86	
25-56	S-0791-2	S-791	1.0	2.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
25-56	S-0792-1	S-792	0.0	1.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	31.2	
25-56	S-0792-2	S-792	1.0	2.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
25-56	S-0792-2DUP	S-792	1.0	2.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
25-56	S-0793-1	S-793	0.0	1.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	28.6	
25-56	S-0793-2	S-793	1.0	2.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	18.5	
25-56	S-0095-1	S-95	0.0	1.0	9/16/1999	Total PCB Congeners (sum cong x factor)	0.00	U
25-56	S-0095-2	S-95	1.0	2.0	9/16/1999	Total PCB Congeners (sum cong x factor)	0.00	U
25-56	S-0096-1	S-96	0.0	1.0	9/16/1999	Total PCB Congeners (sum cong x factor)	100	
25-56	S-0096-2	S-96	1.0	2.0	9/16/1999	Total PCB Congeners (sum cong x factor)	42.0	
25-56	S-0096-3	S-96	2.0	3.0	9/16/1999	Total PCB Congeners (sum cong x factor)	0.12	
25-56	S-0097-1	S-97	0.0	1.0	9/16/1999	Total PCB Congeners (sum cong x factor)	52.0	
25-56	S-0097-2	S-97	1.0	2.0	9/16/1999	Total PCB Congeners (sum cong x factor)	7.20	
25-56	S-0098-1	S-98	0.0	1.0	9/22/1999	Total PCB Congeners (sum cong x factor)	1.60	
25-56	S-0098-1DUP	S-98	0.0	1.0	9/22/1999	Total PCB Congeners (sum cong x factor)	2.90	
25-56	S-0098-2	S-98	1.0	2.0	9/22/1999	Total PCB Congeners (sum cong x factor)	0.00	U
25-56	S-0098-3	S-98	2.0	3.0	9/22/1999	Total PCB Congeners (sum cong x factor)	0.00	U
25-56	S-K - 20	S-K - 20	0.0	1.0	pre-ROD	Total PCB Congeners (sum cong x factor)[1]	60.0	
20-005	S-ES3101-18FSP9-00-10	ES3101	0.0	1.0	4/25/2018	Total 209 PCB cong (excl non-detects)	90.4	
20-005	S-ES3101-18FSP9-10-20	ES3101	1.0	2.0	4/25/2018	Total 209 PCB cong (excl non-detects)	6.48	
20-005	S-ES3101-18FSP9-20-30	ES3101	2.0	3.0	4/25/2018	Aroclor 1254 - Immunoassay	0.3	J
20-005	S-ES3144-18FSP9-00-10	ES3144	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	42.5	
20-005	S-ES3145-18FSP9-00-10	ES3145	0.0	1.0	6/26/2018	Total 209 PCB cong (excl non-detects)	5.15	
20-005	S-ES3146-18FSP9-00-10	ES3146	0.0	1.0	6/26/2018	Total 209 PCB cong (excl non-detects)	6.1	
20-005	S-ES370-18FSP9-00-10	ES370	0.0	1.0	4/16/2018	Total 209 PCB cong (excl non-detects)	69.8	
20-005	S-ES371-18FSP9-00-10	ES371	0.0	1.0	4/26/2018	Total 209 PCB cong (excl non-detects)	6.9	
20-005	S-ES372-18FSP9-00-10	ES372	0.0	1.0	4/26/2018	Total 209 PCB cong (excl non-detects)	10.5	

Table 2-1a
Pre-Excavation PCB Characterization Sample Results for Parcels 25-49, 25-56, 20-005, and ROW

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-005	S-ES373-18FSP9-00-10	ES373	0.0	1.0	4/26/2018	Total 209 PCB cong (excl non-detects)	37.3	
20-005	S-ES374-18FSP9-00-10	ES374	0.0	1.0	4/26/2018	Aroclor 1254 - Immunoassay	7.8	J
20-005	S-ES375-18FSP9-00-10	ES375	0.0	1.0	4/25/2018	Aroclor 1254 - Immunoassay	0.92	J
20-005	S-ES396-18FSP9-00-10	ES396	0.0	1.0	4/26/2018	Total 209 PCB cong (excl non-detects)	24.1	
20-005	S-ES396-18FSP9-10-20	ES396	1.0	2.0	4/26/2018	Aroclor 1254 - Immunoassay	1.2	J
20-005	S-ES396-18FSP9-20-30	ES396	2.0	3.0	4/26/2018	Aroclor 1254 - Immunoassay	0.4	J
20-005	S-ES397-18FSP9-00-10	ES397	0.0	1.0	4/26/2018	Total 209 PCB cong (excl non-detects)	21.6	
20-005	S-15Y-INT102-00-10	INT102	0.0	1.0	5/1/2015	Total 139 PCB cong (excl non-detects)	9.30	
20-005	S-15Y-INT102-10-20	INT102	1.0	2.0	5/1/2015	Aroclor 1254 - Immunoassay	0.50	U
20-005	S-15Y-INT103-00-10	INT103	0.0	1.0	5/1/2015	Aroclor 1254 - Immunoassay	10.3	D
20-005	S-15Y-INT103-10-20	INT103	1.0	2.0	5/1/2015	Aroclor 1254 - Immunoassay	0.50	U
20-005	S-17Y-INT501-00-10	INT501	0.0	1.0	5/18/2017	Total 139 PCB cong (excl non-detects)	21	
20-005	S-17Y-INT501-10-20	INT501	1.0	2.0	5/18/2017	Aroclor 1254 - Immunoassay	0.5	U
20-005	S-17Y-INT502-00-10	INT502	0.0	1.0	5/18/2017	Aroclor 1254 - Immunoassay	19.7	D
20-005	S-17Y-INT502-10-20	INT502	1.0	2.0	5/18/2017	Aroclor 1254 - Immunoassay	0.9	
20-005	S-17Y-INT503-00-10	INT503	0.0	1.0	5/18/2017	Total 139 PCB cong (excl non-detects)	26.0	
20-005	S-17Y-INT503-10-20	INT503	1.0	2.0	5/18/2017	Aroclor 1254 - Immunoassay	0.5	U
20-005	S-17Y-INT504-00-10	INT504	0.0	1.0	5/18/2017	Aroclor 1254 - Immunoassay	0.6	
20-005	S-17Y-INT504-10-20	INT504	1.0	2.0	5/18/2017	Aroclor 1254 - Immunoassay	0.5	U
20-005	S-17Y-INT505-00-10	INT505	0.0	1.0	5/18/2017	Aroclor 1254 - Immunoassay	1.7	
20-005	S-17Y-INT505-10-20	INT505	1.0	2.0	5/18/2017	Aroclor 1254 - Immunoassay	0.5	U
20-005	S-0105-1	S-105	0.0	1.0	9/22/1999	Total PCB Congeners (sum CONG x factor)	5.00	
20-005	S-0105-2	S-105	1.0	2.0	9/22/1999	Total PCB Congeners (sum CONG x factor)	0.02	
20-005	S-0105-3	S-105	2.0	3.0	9/22/1999	Total PCB Congeners (sum CONG x factor)	0.00	U
20-005	S-0106-1	S-106	0.0	1.0	9/22/1999	Total PCB Congeners (sum CONG x factor)	0.03	
20-005	S-0106-2	S-106	1.0	2.0	9/22/1999	Total PCB Congeners (sum CONG x factor)	0.00	U
20-005	S-3734-0.0-1.0	S-3734	0.0	1.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	88.4	
20-005	S-3734-1.0-2.0	S-3734	1.0	2.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	0.68	

Notes:
Pre-excavation confirmatory congener samples are highlighted green.
D - reported value is from a dilution; J - estimated value; U - not detected.
Total 18 NOAA PCB congeners multiplied by a factor of 2.6.
1. Pre-ROD sample result is most likely a total Aroclor value although it is reported in the project database as Sum 18 NOAA PCB congeners X factor.

Table 2-1b
Pre-Excavation PCB Characterization Sample Results for Parcels 25-356, 25-358, and ROW

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-356	S-ES3120-18FSP9-00-10	ES3120	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	1.17	
25-356	S-ES3121-18FSP9-00-10	ES3121	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	21.2	
25-356	S-ES333-18FSP9-00-10	ES333	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	37.7	
25-356	S-ES335-18FSP9-00-10	ES335	0.0	1.0	4/13/2018	Total 209 PCB cong (excl non-detects)	65.6	
25-356	S-ES335B-18FSP9-10-20	ES335B	1.0	2.0	6/29/2018	Total 209 PCB cong (excl non-detects)	2.27	
25-356	S-17Y-INT479-00-10	INT479	0.0	1.0	5/19/2017	Aroclor 1254 - Immunoassay	4.1	
25-356	S-17Y-INT479-10-20	INT479	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.5	U
25-356	S-17Y-INT480-00-10	INT480	0.0	1.0	5/19/2017	Aroclor 1254 - Immunoassay	0.8	
25-356	S-17Y-INT480-10-20	INT480	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.5	U
25-356	S-17Y-INT481-10-20	INT481	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.5	U
25-356	S-17Y-INT482-10-20	INT482	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.5	U
25-356	S-3710-1.5-2.0	S-3710	1.5	2.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	2.86	
25-356	S-3712-0.0-1.0	S-3712	0.0	1.0	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	14.3	
25-356	S-3712-1.0-2.0	S-3712	1.0	2.0	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	0.36	
25-356	S-3712-2.0-2.3	S-3712	2.0	2.3	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	0.07	
25-356	S-3713-1.5-2.0	S-3713	1.5	2.0	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	7.02	
25-356	S-3713-2.0-2.5	S-3713	2.0	2.5	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	0.07	
25-356	S-3714-0.0-.5	S-3714	0.0	0.5	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	36.4	
25-356	S-3714-1.0-1.5	S-3714	1.0	1.5	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	0.49	
25-356	S-3714-1.5-2.0	S-3714	1.5	2.0	11/1/2001	Total 18 NOAA PCB cong (excl non-detects)	0.02	
25-356	S-K - 19 -	S-K - 19 -	0.0	1.0	Pre-ROD	Total PCB Congeners (sum cong x factor)[1]	1.00	
ROW	S-ES3122-18FSP9-00-10	ES3122	0.0	1.0	6/26/2018	Total 209 PCB cong (excl non-detects)	25.9	
ROW	S-ES338-18FSP9-00-10	ES338	0.0	1.0	4/18/2018	Aroclor 1254 - Immunoassay	6.2	J
ROW	S-ES340-18FSP9-00-10	ES340	0.0	1.0	4/13/2018	Aroclor 1254 - Immunoassay	7.8	J
ROW	S-ES340R-18FSP9-00-10-REP	ES340R	0.0	1.0	4/13/2018	Aroclor 1254 - Immunoassay	7.8	J
ROW	S-17Y-INT483-10-20	INT483	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.8	
ROW	S-15Y-INT94-00-10	INT94	0.0	1.0	5/4/2015	Aroclor 1254 - Immunoassay	6.90	D
ROW	S-15Y-INT94-10-20	INT94	1.0	2.0	5/4/2015	Aroclor 1254 - Immunoassay	0.5	U
ROW	S-15Y-INT95-00-10	INT95	0.0	1.0	5/4/2015	Aroclor 1254 - Immunoassay	0.5	U
ROW	S-15Y-INT95-10-20	INT95	1.0	2.0	5/4/2015	Aroclor 1254 - Immunoassay	0.5	U
ROW	S-0092-1	S-92	0.0	1.0	9/15/1999	Total PCB Congeners (sum cong x factor)	0.28	
ROW	S-0092-2	S-92	1.0	2.0	9/15/1999	Total PCB Congeners (sum cong x factor)	0.00	U
ROW	S-0092-3	S-92	2.0	3.0	9/15/1999	Total PCB Congeners (sum cong x factor)	0.00	U
25-358	S-ES3100-18FSP9-00-10	ES3100	0.0	1.0	4/12/2018	Aroclor 1254 - Immunoassay	85	DJ
25-358	S-ES3100-18FSP9-10-20	ES3100	1.0	2.0	4/12/2018	Aroclor 1254 - Immunoassay	4.1	J
25-358	S-ES3100-18FSP9-20-30	ES3100	2.0	3.0	4/12/2018	Aroclor 1254 - Immunoassay	5.7	J

Table 2-1b
Pre-Excavation PCB Characterization Sample Results for Parcels 25-356, 25-358, and ROW

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-358	S-ES3123-18FSP9-00-10	ES3123	0.0	1.0	6/29/2018	Total 209 PCB cong (excl non-detects)	43.3	
25-358	S-ES3157-18FSP9-10-20	ES3157	1.0	2.0	6/29/2018	Total 209 PCB cong (excl non-detects)	0.899	
25-358	S-ES3158-18FSP9-10-20	ES3158	1.0	2.0	6/29/2018	Total 209 PCB cong (excl non-detects)	22.7	
25-358	S-ES337-18FSP9-00-10	ES337	0.0	1.0	4/13/2018	Total 209 PCB cong (excl non-detects)	18.7	
25-358	S-ES339-18FSP9-00-10	ES339	0.0	1.0	4/13/2018	Total 209 PCB cong (excl non-detects)	25.7	
25-358	S-ES341-18FSP9-00-10	ES341	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	24.7	
25-358	S-ES342-18FSP9-00-10	ES342	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	72.3	
25-358	S-ES343-18FSP9-00-10	ES343	0.0	1.0	4/13/2018	Total 209 PCB cong (excl non-detects)	11.7	
25-358	S-ES344-18FSP9-00-10	ES344	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	13.4	
25-358	S-ES345-18FSP9-00-10	ES345	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	179	
25-358	S-ES346-18FSP9-00-10	ES346	0.0	1.0	4/25/2018	Aroclor 1254 - Immunoassay	25	DJ
25-358	S-ES346-18FSP9-10-20	ES346	1.0	2.0	4/25/2018	Aroclor 1254 - Immunoassay	0.3	J
25-358	S-ES346-18FSP9-20-29	ES346	2.0	2.9	4/25/2018	Aroclor 1254 - Immunoassay	0.22	J
25-358	S-ES347-18FSP9-00-10	ES347	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	73.7	
25-358	S-ES348-18FSP9-00-10	ES348	0.0	1.0	4/13/2018	Total 209 PCB cong (excl non-detects)	142	
25-358	S-ES348-18FSP9-10-20	ES348	1.0	2.0	4/13/2018	Aroclor 1254 - Immunoassay	0.31	J
25-358	S-ES348-18FSP9-20-30	ES348	2.0	3.0	4/13/2018	Aroclor 1254 - Immunoassay	0.44	J
25-358	S-17Y-INT484-00-10	INT484	0.0	1.0	5/23/2017	Aroclor 1254 - Immunoassay	22.6	D
25-358	S-17Y-INT484-10-20	INT484	1.0	2.0	5/23/2017	Aroclor 1254 - Immunoassay	1	
25-358	S-17Y-INT485-00-10	INT485	0.0	1.0	5/23/2017	Aroclor 1254 - Immunoassay	138	D
25-358	S-17Y-INT485-10-20	INT485	1.0	2.0	5/23/2017	Total 139 PCB cong (excl non-detects)	0.4	
25-358	S-17Y-INT485-20-24	INT485	2.0	2.4	5/23/2017	Aroclor 1254 - Immunoassay	2.4	
25-358	S-17Y-INT486-00-10	INT486	0.0	1.0	5/23/2017	Aroclor 1254 - Immunoassay	218	D
25-358	S-17Y-INT486-10-20	INT486	1.0	2.0	5/23/2017	Aroclor 1254 - Immunoassay	3.4	
25-358	S-15Y-INT96-00-10	INT96	0.0	1.0	5/4/2015	Total 139 PCB cong (excl non-detects)	69.0	
25-358	S-15Y-INT96-10-20	INT96	1.0	2.0	5/4/2015	Aroclor 1254 - Immunoassay	0.50	U
25-358	S-15Y-INT97-00-10	INT97	0.0	1.0	5/4/2015	Total 139 PCB cong (excl non-detects)	33.0	
25-358	S-15Y-INT97-10-20	INT97	1.0	2.0	5/4/2015	Aroclor 1254 - Immunoassay	0.50	U
25-358	S-15Y-INT98-00-10	INT98	0.0	1.0	5/4/2015	Total 139 PCB cong (excl non-detects)	1.40	
25-358	S-15Y-INT98-10-20	INT98	1.0	2.0	5/4/2015	Total 139 PCB cong (excl non-detects)	0.00	U
25-358	S-15Y-INT98-00-10-REP	INT98-REP	0.0	1.0	5/4/2015	Total 139 PCB cong (excl non-detects)	35.0	
25-358	S-15Y-INT98-10-20-REP	INT98-REP	1.0	2.0	5/4/2015	Total 139 PCB cong (excl non-detects)	0.00	
25-358	S-3711-0.0-1.0	S-3711	0.0	1.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	88.4	
25-358	S-3711-1.0-2.0	S-3711	1.0	2.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	0.60	
25-358	S-3715-.0-1.0	S-3715	0.0	1.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	46.8	
25-358	S-3715-1.0-2.0	S-3715	1.0	2.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	0.23	

Table 2-1b
Pre-Excavation PCB Characterization Sample Results for Parcels 25-356, 25-358, and ROW

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-358	S-3715-2.0-3.0	S-3715	2.0	3.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	0.22	
25-358	S-3715-2.0-3.0REP	S-3715	2.0	3.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	0.26	
25-358	S-3716-0.0-1.0	S-3716	0.0	1.0	11/8/2001	Total 18 NOAA PCB cong (excl non-detects)	49.4	
25-358	S-3716-1.0-2.0	S-3716	1.0	2.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	0.31	
25-358	S-3716-2.0-3.0	S-3716	2.0	3.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	0.01	
25-358	S-3716-3.0-3.5	S-3716	3.0	3.5	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
25-358	S-3717-0.0-1.0	S-3717	0.0	1.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	14.0	
25-358	S-3717-1.0-1.5	S-3717	1.0	1.5	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	0.68	
25-358	S-3718-0.0-1.0	S-3718	0.0	1.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	36.4	
25-358	S-3719-0.0-1.0	S-3719	0.0	1.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	31.2	
25-358	S-3719-1.0-2.0	S-3719	1.0	2.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	5.46	
25-358	S-0874-1	S-874	0.0	1.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	133	
25-358	S-0874-2	S-874	1.0	2.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	11.2	
25-358	S-0093-1	S-93	0.0	1.0	9/15/1999	Total PCB Congeners (sum cong x factor)	9.80	
25-358	S-0093-2	S-93	1.0	2.0	9/15/1999	Total PCB Congeners (sum cong x factor)	0.10	
25-358	S-0093-3	S-93	2.0	3.0	9/15/1999	Total PCB Congeners (sum cong x factor)	0.00	U
25-358	S-0094-1	S-94	0.0	1.0	9/16/1999	Total PCB Congeners (sum cong x factor)	140	
25-358	S-0094-2	S-94	1.0	2.0	9/16/1999	Total PCB Congeners (sum cong x factor)	0.02	
25-358	S-L - 20	S-L - 20	0.0	1.0	Pre-ROD	Total PCB Congeners (sum cong x factor)[1]	49.0	

Notes:
Pre-excavation confirmatory congener samples are highlighted green.
U - not detected.
Total 18 NOAA PCB congeners multiplied by a factor of 2.6.
1. Pre-ROD sample result is most likely a total Aroclor value although it is reported in the project database as Sum 18 NOAA PCB congeners X factor.

Table 2-1c
Pre-Excavation PCB Characterization Sample Results for Parcel 25-55Y

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-55Y	S-14A-55Y-02-00-10-SA	55Y-02	0.0	1.0	11/7/2014	Aroclor 1254 - Immunoassay	1.40	
25-55Y	S-14A-55Y-02-10-20-SA	55Y-02	1.0	2.0	11/7/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-05-00-10-SA	55Y-05	0.0	1.0	11/7/2014	Aroclor 1254 - Immunoassay	0.90	
25-55Y	S-14A-55Y-05-10-20-SA	55Y-05	1.0	2.0	11/7/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-06-00-10-SA	55Y-06	0.0	1.0	11/7/2014	Aroclor 1254 - Immunoassay	5.80	D
25-55Y	S-14A-55Y-06-10-20-SA	55Y-06	1.0	2.0	11/7/2014	Aroclor 1254 - Immunoassay	0.60	
25-55Y	S-14A-55Y-09-00-10-SA	55Y-09	0.0	1.0	11/7/2014	Aroclor 1254 - Immunoassay	7.10	D
25-55Y	S-14A-55Y-09-10-20-SA	55Y-09	1.0	2.0	11/7/2014	Aroclor 1254 - Immunoassay	0.80	
25-55Y	S-14A-55Y-10-00-10-SA	55Y-10	0.0	1.0	11/10/2014	Total 139 PCB cong (excl non-detects)	11.0	
25-55Y	S-14A-55Y-10-10-20-SA	55Y-10	1.0	2.0	11/10/2014	Aroclor 1254 - Immunoassay	0.70	
25-55Y	S-14A-55Y-11-00-10-SA	55Y-11	0.0	1.0	11/4/2014	Aroclor 1254 - Immunoassay	93.2	D
25-55Y	S-14A-55Y-11-10-20-SA	55Y-11	1.0	2.0	11/4/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-13-00-10-SA	55Y-13	0.0	1.0	11/10/2014	Total 139 PCB cong (excl non-detects)	1.90	
25-55Y	S-14A-55Y-13-10-20-SA	55Y-13	1.0	2.0	11/10/2014	Aroclor 1254 - Immunoassay	0.90	
25-55Y	S-14A-55Y-15-00-10-SA	55Y-15	0.0	1.0	11/6/2014	Total 139 PCB cong (excl non-detects)	2.40	
25-55Y	S-14A-55Y-15-10-20-SA	55Y-15	1.0	2.0	11/6/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-17-00-10-SA	55Y-17	0.0	1.0	11/11/2014	Total 139 PCB cong (excl non-detects)	6.00	
25-55Y	S-14A-55Y-17-10-20-SA	55Y-17	1.0	2.0	11/11/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-21-00-10-SA	55Y-21	0.0	1.0	11/4/2014	Total 139 PCB cong (excl non-detects)	44.0	
25-55Y	S-14A-55Y-21-10-20-SA	55Y-21	1.0	2.0	11/4/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-22-00-10-SA	55Y-22	0.0	1.0	11/11/2014	Aroclor 1254 - Immunoassay	879	D
25-55Y	S-14A-55Y-22-10-20-SA	55Y-22	1.0	2.0	11/11/2014	Total 139 PCB cong (excl non-detects)	0.57	
25-55Y	S-14A-55Y-22-00-10-REP	55Y-22-DUP	0.0	1.0	11/11/2014	Aroclor 1254 - Immunoassay	717	D
25-55Y	S-14A-55Y-23-10-20-SA	55Y-23	1.0	2.0	11/10/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-24-00-10-SA	55Y-24	0.0	1.0	11/10/2014	Total 139 PCB cong (excl non-detects)	16.0	
25-55Y	S-14A-55Y-24-10-20-SA	55Y-24	1.0	2.0	11/10/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-25-10-20-SA	55Y-25	1.0	2.0	11/6/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-27-00-10-SA	55Y-27	0.0	1.0	11/10/2014	Aroclor 1254 - Immunoassay	352	D
25-55Y	S-14A-55Y-27-10-20-SA	55Y-27	1.0	2.0	11/10/2014	Aroclor 1254 - Immunoassay	5.20	
25-55Y	S-14A-55Y-28-10-20-SA	55Y-28	1.0	2.0	11/10/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-29-10-20-SA	55Y-29	1.0	2.0	11/10/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-31-00-10-SA	55Y-31	0.0	1.0	11/4/2014	Aroclor 1254 - Immunoassay	20.9	D
25-55Y	S-14A-55Y-31-10-20-SA	55Y-31	1.0	2.0	11/4/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-32-00-10-SA	55Y-32	0.0	1.0	11/4/2014	Aroclor 1254 - Immunoassay	354	D
25-55Y	S-14A-55Y-32-10-20-SA	55Y-32	1.0	2.0	11/4/2014	Total 139 PCB cong (excl non-detects)	43.0	
25-55Y	S-14A-55Y-32-20-30-SA	55Y-32	2.0	3.0	11/4/2014	Aroclor 1254 - Immunoassay	0.5	U

Table 2-1c
Pre-Excavation PCB Characterization Sample Results for Parcel 25-55Y

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-55Y	S-14A-55Y-33-10-20-SA	55Y-33	1.0	2.0	11/4/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-35-00-10-SA	55Y-35	0.0	1.0	11/4/2014	Total 139 PCB cong (excl non-detects)	31	
25-55Y	S-14A-55Y-35-10-20-SA	55Y-35	1.0	2.0	11/4/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-35-00-10-REP	55Y-35-DUP	0.0	1.0	11/4/2014	Total 139 PCB cong (excl non-detects)	40.0	
25-55Y	S-14A-55Y-35-10-20-REP	55Y-35-DUP	1.0	2.0	11/4/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-36-10-20-SA	55Y-36	1.0	2.0	11/3/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-37-00-10-SA	55Y-37	0.0	1.0	11/4/2014	Total 139 PCB cong (excl non-detects)	5.80	
25-55Y	S-14A-55Y-37-10-20-SA	55Y-37	1.0	2.0	11/4/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-38-00-10-SA	55Y-38	0.0	1.0	11/4/2014	Aroclor 1254 - Immunoassay	88.9	D
25-55Y	S-14A-55Y-38-10-20-SA	55Y-38	1.0	2.0	11/4/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-39-00-10-SA	55Y-39	0.0	1.0	11/3/2014	Aroclor 1254 - Immunoassay	310	D
25-55Y	S-14A-55Y-39-10-20-SA	55Y-39	1.0	2.0	11/3/2014	Aroclor 1254 - Immunoassay	0.70	
25-55Y	S-14A-55Y-40-00-10-SA	55Y-40	0.0	1.0	11/4/2014	Aroclor 1254 - Immunoassay	1703	D
25-55Y	S-14A-55Y-40-10-20-SA	55Y-40	1.0	2.0	11/4/2014	Total 139 PCB cong (excl non-detects)	14.0	
25-55Y	S-14A-55Y-41-00-10-SA	55Y-41	0.0	1.0	11/4/2014	Aroclor 1254 - Immunoassay	355	D
25-55Y	S-14A-55Y-41-10-26-SA	55Y-41	1.0	2.7	11/4/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-42-00-10-SA	55Y-42	0.0	1.0	11/3/2014	Total 139 PCB cong (excl non-detects)	14.0	
25-55Y	S-14A-55Y-42-10-20-SA	55Y-42	1.0	2.0	11/3/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-44-00-10-SA	55Y-44	0.0	1.0	11/3/2014	Total 139 PCB cong (excl non-detects)	57.0	
25-55Y	S-14A-55Y-44-10-20-SA	55Y-44	1.0	2.0	11/3/2014	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-14A-55Y-46-00-10-SA	55Y-46	0.0	1.0	11/3/2014	Aroclor 1254 - Immunoassay	269	D
25-55Y	S-14A-55Y-46-10-20-SA	55Y-46	1.0	2.0	11/3/2014	Aroclor 1254 - Immunoassay	0.50	
25-55Y	S-ES3134-18FSP9-00-10	ES3134	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	9.92	
25-55Y	S-ES3135-18FSP9-00-10	ES3135	0.0	1.0	6/22/2018	Total 209 PCB cong (excl non-detects)	16.4	
25-55Y	S-ES3136-18FSP9-00-10	ES3136	0.0	1.0	6/22/2018	Total 209 PCB cong (excl non-detects)	12.1	
25-55Y	S-ES3137-18FSP9-00-10	ES3137	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	34.1	
25-55Y	S-ES3138-18FSP9-00-10	ES3138	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	44.9	
25-55Y	S-ES3139-18FSP9-00-10	ES3139	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	30	
25-55Y	S-ES3140-18FSP9-00-10	ES3140	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	81.9	
25-55Y	S-ES3141-18FSP9-00-10	ES3141	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	35.0	
25-55Y	S-ES3142-18FSP9-00-10	ES3142	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	62.1	
25-55Y	S-ES3143-18FSP9-00-10	ES3143	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	4.06	
25-55Y	S-ES3162-18FSP9-10-20	ES3162	1.0	2.0	6/25/2018	Total 209 PCB cong (excl non-detects)	0.0722	
25-55Y	S-ES3163-18FSP9-10-20	ES3163	1.0	2.0	6/22/2018	Total 209 PCB cong (excl non-detects)	0.00321	
25-55Y	S-ES365B-18FSP9-00-10	ES365B	0.0	1.0	6/25/2018	Total 209 PCB cong (excl non-detects)	43.3	
25-55Y	S-ES366-18FSP9-00-10	ES366	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	67.8	

Table 2-1c
Pre-Excavation PCB Characterization Sample Results for Parcel 25-55Y

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-55Y	S-ES367-18FSP9-00-10	ES367	0.0	1.0	4/25/2018	Aroclor 1254 - Immunoassay	1.9	J
25-55Y	S-ES368-18FSP9-00-10	ES368	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	3.77	
25-55Y	S-ES369-18FSP9-00-10	ES369	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	46.2	
25-55Y	S-ES376-18FSP9-00-10	ES376	0.0	1.0	4/16/2018	Total 209 PCB cong (excl non-detects)	38.2	
25-55Y	S-ES376-18FSP9-10-20	ES376	1.0	2.0	4/16/2018	Aroclor 1254 - Immunoassay	0.4	J
25-55Y	S-ES376-18FSP9-20-30	ES376	2.0	3.0	4/16/2018	Aroclor 1254 - Immunoassay	0.04	J
25-55Y	S-ES391-18FSP9-00-10	ES391	0.0	1.0	4/18/2018	Total 209 PCB cong (excl non-detects)	9.91	
25-55Y	S-ES392-18FSP9-00-10	ES392	0.0	1.0	4/26/2018	Total 209 PCB cong (excl non-detects)	93	
25-55Y	S-ES392-18FSP9-10-20	ES392	1.0	2.0	4/26/2018	Total 209 PCB cong (excl non-detects)	8.69	
25-55Y	S-ES392-18FSP9-20-30	ES392	2.0	3.0	4/26/2018	Aroclor 1254 - Immunoassay	0.64	J
25-55Y	S-ES393-18FSP9-00-10	ES393	0.0	1.0	4/26/2018	Total 209 PCB cong (excl non-detects)	31.9	
25-55Y	S-ES395-18FSP9-00-10	ES395	0.0	1.0	4/26/2018	Total 209 PCB cong (excl non-detects)	0.649	
25-55Y	S-ES395-18FSP9-10-20	ES395	1.0	2.0	4/26/2018	Total 209 PCB cong (excl non-detects)	0.555	
25-55Y	S-ES395-18FSP9-20-28	ES395	2.0	2.8	4/26/2018	Aroclor 1254 - Immunoassay	1.6	J
25-55Y	S-ES398-18FSP9-00-10	ES398	0.0	1.0	4/26/2018	Total 209 PCB cong (excl non-detects)	39.0	
25-55Y	S-ES398-18FSP9-10-20	ES398	1.0	2.0	4/26/2018	Total 209 PCB cong (excl non-detects)	2.69	
25-55Y	S-ES398-18FSP9-20-30	ES398	2.0	3.0	4/26/2018	Aroclor 1254 - Immunoassay	0.18	J
25-55Y	S-ES399-18FSP9-00-10	ES399	0.0	1.0	4/26/2018	Aroclor 1254 - Immunoassay	45.0	DJ
25-55Y	S-ES399-18FSP9-10-20	ES399	1.0	2.0	4/26/2018	Aroclor 1254 - Immunoassay	6.1	DJ
25-55Y	S-ES399-18FSP9-20-30	ES399	2.0	3.0	4/26/2018	Aroclor 1254 - Immunoassay	1.9	J
25-55Y	S-17Y-INT495-00-10	INT495	0.0	1.0	5/19/2017	Aroclor 1254 - Immunoassay	16.2	D
25-55Y	S-17Y-INT495-10-20	INT495	1.0	2.0	5/19/2017	Aroclor 1254 - Immunoassay	0.9	
25-55Y	S-17Y-INT496-00-10	INT496	0.0	1.0	5/18/2017	Aroclor 1254 - Immunoassay	111	D
25-55Y	S-17Y-INT496-10-20	INT496	1.0	2.0	5/18/2017	Aroclor 1254 - Immunoassay	79.7	D
25-55Y	S-17Y-INT496-20-30	INT496	2.0	3.0	5/18/2017	Aroclor 1254 - Immunoassay	1.6	
25-55Y	S-17Y-INT497-00-10	INT497	0.0	1.0	5/18/2017	Aroclor 1254 - Immunoassay	3.2	
25-55Y	S-17Y-INT497-10-20	INT497	1.0	2.0	5/18/2017	Aroclor 1254 - Immunoassay	0.5	U
25-55Y	S-17Y-INT498-00-10	INT498	0.0	1.0	5/18/2017	Aroclor 1254 - Immunoassay	18.3	
25-55Y	S-17Y-INT498-10-20	INT498	1.0	2.0	5/18/2017	Aroclor 1254 - Immunoassay	4.4	
25-55Y	S-17Y-INT499-00-10	INT499	0.0	1.0	5/18/2017	Aroclor 1254 - Immunoassay	89.8	D
25-55Y	S-17Y-INT499-10-20	INT499	1.0	2.0	5/18/2017	Total 139 PCB cong (excl non-detects)	62.0	
25-55Y	S-17Y-INT500-00-10	INT500	0.0	1.0	5/18/2017	Aroclor 1254 - Immunoassay	431	D
25-55Y	S-17Y-INT500-00-10-REP	INT500	0.0	1.0	5/18/2017	Aroclor 1254 - Immunoassay	415	D
25-55Y	S-17Y-INT500-10-20-REP	INT500	1.0	2.0	5/18/2017	Total 139 PCB cong (excl non-detects)	58.0	
25-55Y	S-17Y-INT500-20-24	INT500	2.0	2.4	5/18/2017	Aroclor 1254 - Immunoassay	4.0	
25-55Y	S-0100-1	S-100	0.0	1.0	9/22/1999	Total PCB Congeners (sum cong x factor)	900	

Table 2-1c
Pre-Excavation PCB Characterization Sample Results for Parcel 25-55Y

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
25-55Y	S-0100-2	S-100	1.0	2.0	9/22/1999	Total PCB Congeners (sum cong x factor)	0.42	
25-55Y	S-0104-1	S-104	0.0	1.0	9/22/1999	Total PCB Congeners (sum cong x factor)	0.32	
25-55Y	S-0104-2	S-104	1.0	2.0	9/22/1999	Total PCB Congeners (sum cong x factor)	0.00	U
25-55Y	S-0104-3	S-104	2.0	3.0	9/22/1999	Total PCB Congeners (sum cong x factor)	0.00	U
25-55Y	S-3729-0.0-1.0	S-3729	0.0	1.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	312	
25-55Y	S-3729-1.0-2.0	S-3729	1.0	2.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	2.05	
25-55Y	S-3729-2.0-2.5	S-3729	2.0	2.5	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	0.08	
25-55Y	S-3729-2.5-3.0	S-3729	2.5	3.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
25-55Y	S-3730-0.0-1.0	S-3730	0.0	1.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	31.2	
25-55Y	S-3730-1.0-2.0	S-3730	1.0	2.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	13.8	
25-55Y	S-3731-0.0-1.0	S-3731	0.0	1.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	11.7	
25-55Y	S-3731-1.0-2.0	S-3731	1.0	2.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	0.14	
25-55Y	S-3732-0.0-1.0	S-3732	0.0	1.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	164	
25-55Y	S-3732-1.0-2.0	S-3732	1.0	2.0	11/7/2001	Total 18 NOAA PCB cong (excl non-detects)	78.0	
25-55Y	S-3732-2.0-3.0	S-3732	2.0	3.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	6.24	
25-55Y	S-3733-0.0-1.0	S-3733	0.0	1.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	224	
25-55Y	S-3733-1.0-2.0	S-3733	1.0	2.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	17.4	
25-55Y	S-3733-2.0-3.0	S-3733	2.0	3.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	0.10	
25-55Y	S-3735-1.0-2.0	S-3735	1.0	2.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	0.14	
25-55Y	S-3735-1.0-2.0REP	S-3735	1.0	2.0	11/6/2001	Total 18 NOAA PCB cong (excl non-detects)	0.22	
25-55Y	S-0794-1	S-794	0.0	1.0	10/16/2000	Total 18 NOAA PCB cong (excl non-detects)	0.02	
25-55Y	S-0795-1	S-795	0.0	1.0	10/16/2000	Total 18 NOAA PCB cong (excl non-detects)	0.12	
25-55Y	S-0875-1	S-875	0.0	1.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	3.12	
25-55Y	S-0875-2	S-875	1.0	2.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	2.86	
25-55Y	S-0876-1	S-876	0.0	1.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	0.16	
25-55Y	S-0876-2	S-876	1.0	2.0	10/12/2000	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
25-55Y	S-0099-1	S-99	0.0	1.0	9/16/1999	Total PCB Congeners (sum cong x factor)	19.0	
25-55Y	S-0099-2	S-99	1.0	2.0	9/16/1999	Total PCB Congeners (sum cong x factor)	0.03	

Notes:
Pre-excavation confirmatory congener samples are highlighted green.
D - reported value is from a dilution; J - estimated value; U - not detected.
Total 18 NOAA PCB congeners multiplied by a factor of 2.6.

Table 3-1a
Compliance Survey Control Table for East Zone 3 Parcels 25-49, 25-56, 20-005 and ROW

Parcel	Station ID	Location	Easting	Northing	Design Elevation	Post-Excavation Elevation	Δ (ft)
			MA State Plane ft, NAD83		NAVD88 ft		
ROW	ES3169	Sidewall	815667.3	2704286.5	-0.3	TBD	TBD
ROW	S-83	Floor	815690.0	2704293.0	0.8	TBD	TBD
ROW	S-3703	Floor	815782.0	2704308.0	1.0	TBD	TBD
ROW	ES3174	Floor	815829.8	2704322.8	1.1	TBD	TBD
25-49	ES301	Sidewall	815909.8	2704275.0	1.2	TBD	TBD
25-49	ES304	Sidewall	815762.5	2704230.0	0.5	TBD	TBD
25-49	ES306	Sidewall	815813.3	2704224.0	0.6	TBD	TBD
25-49	ES3107	Sidewall	815849.2	2704195.0	0.7	TBD	TBD
25-49	ES3108	Sidewall	815745.4	2704152.1	0.5	TBD	TBD
25-49	ES3109	Sidewall	815892.6	2704147.4	0.9	TBD	TBD
25-49	ES3111	Sidewall	815934.0	2704128.1	1.2	TBD	TBD
25-49	ES3112	Sidewall	815896.3	2704105.6	0.9	TBD	TBD
25-49	ES3113	Sidewall	815977.2	2704090.1	0.9	TBD	TBD
25-49	ES3114	Sidewall	815944.8	2704062.7	1.1	TBD	TBD
25-49	ES3117	Sidewall	815859.3	2704037.6	0.6	TBD	TBD
25-49	ES3118	Sidewall	815753.8	2704031.5	-0.1	TBD	TBD
25-49	ES3119	Sidewall	816115.4	2703988.4	1.2	TBD	TBD
25-49	ES3165	Sidewall	815804.1	2704174.0	0.5	TBD	TBD
25-49	ES3170	Sidewall	815669.0	2704188.8	-0.3	TBD	TBD
25-49	ES314	Sidewall	816077.9	2704137.0	1.3	TBD	TBD
25-49	ES316	Sidewall	815848.8	2704120.0	0.7	TBD	TBD
25-49	ES317	Sidewall	816017.3	2704114.0	1.2	TBD	TBD
25-49	ES319	Sidewall	816010.7	2704073.0	1.3	TBD	TBD
25-49	ES320	Sidewall	815767.6	2704070.0	-0.1	TBD	TBD
25-49	ES322	Sidewall	815721.9	2704051.5	-0.9	TBD	TBD
25-49	ES390	Sidewall	816075.2	2704014.9	1.1	TBD	TBD
25-49	INT178	Sidewall	816129.9	2704109.4	1.2	TBD	TBD
25-49	INT475	Sidewall	815819.5	2704078.5	0.5	TBD	TBD
25-49	S-3459	Sidewall	816129.0	2704048.0	1.2	TBD	TBD
25-49	S-86	Sidewall	815900.0	2704200.0	1.1	TBD	TBD
25-49	ES3153	Floor	815862.2	2704267.5	1.1	TBD	TBD
25-49	ES3154	Floor	815741.8	2704199.7	0.6	TBD	TBD
25-49	ES3155	Floor	815892.8	2704122.5	0.9	TBD	TBD
25-49	ES3156	Floor	815780.9	2704044.4	0.1	TBD	TBD
25-49	S-3457	Floor	816073.0	2704111.0	0.6	TBD	TBD
25-49	S-3461	Floor	816100.0	2704017.0	1.1	TBD	TBD
25-49	S-3705	Floor	815783.0	2704274.0	0.6	TBD	TBD
25-49	S-3708	Floor	815911.0	2704072.0	0.5	TBD	TBD
25-56	ES3125	Sidewall	816266.3	2703675.9	1.0	TBD	TBD
25-56	ES3127	Sidewall	816188.1	2703616.1	1.0	TBD	TBD
25-56	ES3128	Sidewall	816267.3	2703606.4	0.7	TBD	TBD
25-56	ES3130	Sidewall	816185.2	2703559.3	1.1	TBD	TBD
25-56	ES3133	Sidewall	816034.4	2703498.9	0.5	TBD	TBD
25-56	ES3172	Sidewall	815936.1	2703611.4	-0.2	TBD	TBD
25-56	ES3173	Sidewall	816112.4	2703546.4	1.1	TBD	TBD
25-56	ES349	Sidewall	816107.7	2703681.7	-0.2	TBD	TBD
25-56	ES351	Sidewall	816354.3	2703671.3	1.1	TBD	TBD
25-56	ES353	Floor	816308.4	2703655.2	1.0	TBD	TBD
25-56	ES355	Sidewall	816349.0	2703622.8	1.1	TBD	TBD
25-56	ES357	Sidewall	816026.1	2703606.0	1.2	TBD	TBD
25-56	ES360	Sidewall	816060.1	2703577.2	1.2	TBD	TBD
25-56	S-3722	Sidewall	816210.0	2703703.0	0.7	TBD	TBD
25-56	S-3728	Sidewall	816412.0	2703654.0	1.1	TBD	TBD
25-56	ES3159	Floor	816195.8	2703688.2	0.8	TBD	TBD

Table 3-1a
Compliance Survey Control Table for East Zone 3 Parcels 25-49, 25-56, 20-005 and ROW

Parcel	Station ID	Location	Easting	Northing	Design Elevation	Post-Excavation Elevation	Δ (ft)
			MA State Plane ft, NAD83		NAVD88 ft		
25-56	ES3160	Floor	816018.7	2703660.1	-3.4	TBD	TBD
25-56	ES3161	Floor	816057.4	2703553.6	0.2	TBD	TBD
25-56	ES377	Floor	815908.1	2703638.5	-3.4	TBD	TBD
25-56	S-3721	Floor	816059.0	2703676.0	-0.8	TBD	TBD
25-56	S-3724	Floor	816212.0	2703622.0	0.5	TBD	TBD
25-56	S-3726	Floor	816385.0	2703653.0	0.9	TBD	TBD
25-56	INT100	Floor	816246.4	2703651.9	0.9	TBD	TBD
20-005	ES371	Sidewall	816375.7	2703261.6	1.1	TBD	TBD
20-005	ES372	Sidewall	816308.7	2703238.4	1.1	TBD	TBD
20-005	ES396	Sidewall	816410.9	2703322.3	1.3	TBD	TBD
20-005	S-105	Sidewall	816300.0	2703300.0	0.5	TBD	TBD
20-005	ES3101	Floor	816375.5	2703304.0	1.1	TBD	TBD
20-005	S-3734	Floor	816334.0	2703257.0	0.9	TBD	TBD

Notes:
Elevation measurements at sidewall locations will be taken at the base of the sidewall (bottom of the excavation).
Locations ES3169, ES3170, ES3172, ES3173, and ES3174 are compliance survey locations only (no associated PCB sample data).
MA - Massachusetts; NAD83 - North American Datum 1983; NAVD88 - North American Vertical Datum 1988; ft - feet; TBD - to be determined.
Δ - difference between post-excavation elevation and design elevation.

Table 3-1b
Compliance Survey Control Table for East Zone 3 Parcels 25-356, 25-358 and ROW

Parcel	Station ID	Location	Easting	Northing	Design Elevation	Post-Excavation Elevation	Δ (ft)
			MA State Plane ft, NAD83		NAVD88 ft		
25-356	ES3120	Sidewall	816175.7	2703923.5	1.3	TBD	TBD
25-356	ES3121	Sidewall	816050.8	2703899.2	1.1	TBD	TBD
25-356	S-3712	Sidewall	816103.0	2703888.0	1.1	TBD	TBD
25-356	S-3714	Sidewall	816098.0	2703922.0	1.2	TBD	TBD
25-356	ES335B	Floor	816099.9	2703901.5	1.1	TBD	TBD
ROW	ES3122	Sidewall	816089.9	2703843.4	1.3	TBD	TBD
25-358	ES337	Sidewall	816171.7	2703834.7	1.2	TBD	TBD
25-358	ES339	Sidewall	816154.7	2703797.6	1.1	TBD	TBD
25-358	ES343	Sidewall	815894.8	2703746.0	0.7	TBD	TBD
25-358	ES3123	Sidewall	815996.9	2703757.9	1.2	TBD	TBD
25-358	ES3171	Sidewall	815834.6	2703676.1	-0.2	TBD	TBD
25-358	S-3715	Sidewall	816055.0	2703783.0	0.9	TBD	TBD
25-358	S-3716	Sidewall	816104.0	2703776.0	1.2	TBD	TBD
25-358	S-3719	Sidewall	816242.0	2703748.0	0.6	TBD	TBD
25-358	ES3157	Floor	815898.2	2703728.9	1.0	TBD	TBD
25-358	ES3158	Floor	815978.5	2703729.0	1.0	TBD	TBD
25-358	S-3711	Floor	816098.0	2703821.0	0.4	TBD	TBD
25-358	S-94	Floor	816200.0	2703800.0	0.7	TBD	TBD

Notes:
Elevation measurements at sidewall locations will be taken at the base of the sidewall (bottom of the excavation).
Location ES3171 is a compliance survey locations only (no associated PCB sample data).
MA - Massachusetts; NAD83 - North American Datum 1983; NAVD88 - North American Vertical Datum 1988; ft - feet; TBD - to be determined.
Δ - difference between post-excavation elevation and design elevation.

Table 3-1c
Compliance Survey Control Table for East Zone 3 Parcel 25-55Y

Parcel	Station ID	Location	Easting	Northing	Design Elevation	Post-Excavation Elevation	Δ (ft)
			MA State Plane ft, NAD83		NAVD88 ft		
25-55Y	55Y-17	Sidewall	816097.0	2703436.0	-1.2	TBD	TBD
25-55Y	55Y-21	Sidewall	816119.0	2703493.0	1.3	TBD	TBD
25-55Y	55Y-24	Sidewall	816148.0	2703336.0	1.0	TBD	TBD
25-55Y	55Y-35	Sidewall	816238.0	2703307.0	1.0	TBD	TBD
25-55Y	55Y-42	Sidewall	816323.0	2703424.0	1.0	TBD	TBD
25-55Y	ES3134	Sidewall	816059.2	2703453.8	0.3	TBD	TBD
25-55Y	ES3139	Sidewall	816205.5	2703373.9	1.1	TBD	TBD
25-55Y	ES3143	Sidewall	816123.3	2703284.7	0.6	TBD	TBD
25-55Y	ES365B	Sidewall	816087.5	2703488.1	1.3	TBD	TBD
25-55Y	ES368	Sidewall	816110.5	2703363.5	0.8	TBD	TBD
25-55Y	ES369	Sidewall	816194.4	2703315.9	1.2	TBD	TBD
25-55Y	ES376	Sidewall	816389.5	2703364.6	1.0	TBD	TBD
25-55Y	ES393	Sidewall	816269.2	2703341.8	1.1	TBD	TBD
25-55Y	ES398	Sidewall	816210.7	2703444.1	0.9	TBD	TBD
25-55Y	S-99	Sidewall	816200.0	2703478.0	0.9	TBD	TBD
25-55Y	55Y-22	Floor	816127.0	2703439.0	-1.0	TBD	TBD
25-55Y	55Y-32	Floor	816204.0	2703458.0	0.4	TBD	TBD
25-55Y	ES3162	Floor	816063.0	2703494.7	1.3	TBD	TBD
25-55Y	ES3163	Floor	816161.7	2703386.8	1.0	TBD	TBD
25-55Y	S-3732	Floor	816320.0	2703407.0	-0.1	TBD	TBD
25-55Y	S-3733	Floor	816315.0	2703346.0	0.7	TBD	TBD

Notes:
Elevation measurements at sidewall locations will be taken at the base of the sidewall (bottom of the excavation).
MA - Massachusetts; NAD83 - North American Datum 1983; NAVD88 - North American Vertical Datum 1988; ft - feet; TBD - to be determined.
Δ - difference between post-excavation elevation and design elevation.

Table 7-1a
Proposed Restoration Acreages by Cover Type for Parcel 25-49 and ROW

Habitat Type	Existing Pre-Construction Area [acres]	Proposed Area of Restoration [acres]
Low Marsh	0.455	0.017
High Marsh	0.847	1.172
Stream	0.000	0.111
Scrub-Shrub Marsh	0.033	0.035
TOTAL	**1.335**	**1.335**

Table 7-1b
Proposed Restoration Acreages by Cover Type for Parcels 25-356, 25-358, and ROW

Habitat Type	Existing Pre-Construction Area [acres]	Proposed Area of Restoration [acres]
Low Marsh	0.228	0.020
High Marsh	0.486	0.667
Stream	0.000	0.027
TOTAL	**0.714**	**0.714**

Table 7-1c
Proposed Restoration Acreages by Cover Type for Parcel 25-56

Habitat Type	Existing Pre-Construction Area [acres]	Proposed Area of Restoration [acres]
Low Marsh	0.361	0.023
High Marsh	0.525	0.772
Stream	0.000	0.091
TOTAL	**0.886**	**0.886**

Table 7-1d
Proposed Restoration Acreages by Cover Type for Parcel 25-55Y

Habitat Type	Existing Pre-Construction Area [acres]	Proposed Area of Restoration [acres]
Low Marsh	0.377	0.069
High Marsh	0.369	0.664
Stream	0.000	0.031
Pannes	0.018	0.000
TOTAL	**0.764**	**0.764**

Table 7-1e
Proposed Restoration Acreages by Cover Type for Parcel 20-005

Habitat Type	Existing Pre-Construction Area [acres]	Proposed Area of Restoration [acres]
Low Marsh	0.021	0.000
High Marsh	0.103	0.139
Pannes	0.015	0.000
TOTAL	**0.139**	**0.139**

Table 7-2a
Shrub Restoration Summary for Parcel 25-49 and ROW

Scientific Name	Common Name	On-Center Spacing Requirements (inches)	Number of Proposed Plants	Shrub Restoration Area
Iva frutescens	high-tide bush	36"	80	Area 1
Vaccinium corymbosum	highbush blueberry	60"	29	Area 1
Iva frutescens	high-tide bush	36"	78	Area 2
Iva frutescens	high-tide bush	36"	653	Area 3
Total Proposed Trees/Shrubs for Parcel 25-43			840	

Table 7-2b
Shrub Restoration Summary for Parcel 25-56

Scientific Name	Common Name	On-Center Spacing Requirements (inches)	Number of Proposed Plants	Shrub Restoration Area
Juniperus communis	common juniper	36"	25	Area 1
Juniperus virginiana	eastern red cedar	36"	25	Area 1
Total Proposed Trees/Shrubs for Parcel 25-56			50	

Table 7-2c
Shrub Restoration Summary for Parcel 25-55Y

Scientific Name	Common Name	On-Center Spacing Requirements (inches)	Number of Proposed Plants	Shrub Restoration Area
Iva frutescens	high-tide bush	36"	27	Area 1
Juniperus communis	common juniper	36"	27	Area 1
Juniperus virginiana	eastern red cedar	36"	27	Area 1
Iva frutescens	high-tide bush	36"	233	Area 2
Juniperus communis	common juniper	36"	233	Area 2
Lindera benzoin	spicebush	36"	233	Area 2
Juniperus virginiana	eastern red cedar	36"	233	Area 2
Iva frutescens	high-tide bush	36"	9	Area 3
Juniperus virginiana	eastern red cedar	36"	9	Area 3
Rosa virginiana	Virginia rose	36"	9	Area 3
Vaccinium corymbosum	highbush blueberry	60"	3	Area 3
Acer rubrum	red maple	120"	1	Area 3
Rosa virginiana	Virginia rose	36"	54	Area 4
Vaccinium corymbosum	highbush blueberry	60"	19	Area 4
Juniperus communis	common juniper	36"	54	Area 4
Acer rubrum	red maple	120"	4	Area 4
Total Proposed Trees/Shrubs for Parcel 25-55Y			1,175	

Table 7-2d
Shrub Restoration Summary for Parcel 20-005

Scientific Name	Common Name	On-Center Spacing Requirements (inches)	Number of Proposed Plants	Shrub Restoration Area
Iva frutescens	high-tide bush	36"	29	Area 1
Vaccinium corymbosum	highbush blueberry	60"	11	Area 1
Acer rubrum	red maple	120"	3	Area 1
Rosa virginiana	Virginia rose	36"	29	Area 1
Juniperus virginiana	eastern red cedar	36"	29	Area 1
Total Proposed Trees/Shrubs for Parcel 20-005			101	

Appendix A

East Zone 3 Pre-Excavation Tree and Shrub Inventories

Appendix A

Parcels 25-49, 25-56, 20-005 and ROW

JACOBS

Memorandum

Subject	Parcels 25-49, 25-56, 20-005, and ROW Native Tree and Shrub Inventory	**Project Name**	New Bedford Harbor Superfund Site
Attention	Marie Esten, USACE	**Project No.**	35BG2000
From	Jessica Rebholz	**Document Control No.**	ACE-J23-35BG6000-M1-0062
Date	6 August 2019		

Attachments: Figures 1a – 1c Pre-Excavation Tree and Shrub Inventory, Tables 3-1 through 3-8 (inventory results)

1.0 Background

Jacobs conducted an inventory of existing trees and shrubs on Parcels 25-49, 25-56, 20-005 and the adjacent ROW in the intertidal remediation area (Figures 1a – 1c) on 8 August 2018. The purpose of the inventory was to identify existing trees and shrubs that would be removed in association with site remediation activities, including construction of the gravel access road and areas of excavation associated with contaminated sediment and soil removal. The information collected from this inventory is intended to be used to inform selection of proposed native woody species for future restoration plantings.

2.0 Methods

For the purposes of the inventory, trees were defined as any nonclimbing, woody plant that had at least one erect perennial stem (trunk) with a diameter at breast height (DBH) of 3.0 inches or greater, regardless of height. Jacobs' wetland biologists walked the planned remediation portions of Parcels 25-49, 25-56, 20-005 and the adjacent ROW and identified all trees within the proposed excavation area and proposed access road. Tree locations were recorded using a Trimble Geo 7X GPS, capable of sub-meter accuracy.

For the purposes of the inventory, shrubs were defined as any nonclimbing, woody plant with a DBH less than 3.0 inches. Shrubs were inventoried according to dominant shrub types that appeared to constitute similar species diversity and percent areal cover. For purposes of documentation and reference, the results of the tree and shrub inventories are recorded by sub-area in separate tables included in Section 3 below.

3.0 Results

Eastern red cedar (*Juniperus virginiana*) is the dominant tree species within Parcel 25-49 & the ROW. The majority of the trees identified on Parcel 25-49 & the ROW are considered native and non-invasive. A list of the trees identified is provided in Table 3-1. For each species, the number of individual trees noted was calculated as an indication of the relative dominance of the species on-site. A total of six trees were identified.

No trees were identified on Parcel 25-56.

One eastern red cedar (*Juniperus virginiana*) and one red maple (*Acer rubrum*) were identified on Parcel 20-005. Both species are considered native and non-invasive. A list of the trees identified is provided in Table 3-2. For each species, the number of individual trees noted was calculated as an indication of the relative dominance of the species on-site. A total of two trees were identified.

Six shrub areas were inventoried within Parcels 25-49, 25-56, 20-005 and the adjacent ROW. High-tide bush (*Iva frutescens*) was found to be present in five of the six areas, therefore making it the dominant shrub type. High-tide bush is a native, non-invasive upper saltmarsh plant typically found in wetlands. All of the shrubs identified are considered native and non-invasive (Tables 3-3 through 3-8).

Each area where shrubs were identified and inventoried is identified on Figures 1a – 1c. Shrubs were classified by genus and species. Tables 3-3 through 3-8 also identify whether the shrub occurred in upland or wetland, as well as any notes regarding specific species.

4.0 Conclusion

The species makeup of Parcels 25-49, 25-56, 20-005 and the adjacent ROW is comprised almost entirely of native, non-invasive trees and shrubs, with high-tide bush (*Iva frutescens*) being the dominant shrub and eastern red cedar (*Juniperus virginiana*) being the dominant tree.

Legend

- Mean Lower Low Water
- Mean Higher High Water
- 0-1' Excavation Depth
- Proposed Laydown Area
- 1-foot Contour
- Parcel Boundary
- Proposed Access Road
- Eastern red cedar
- Russian olive
- Inventoried Shrub Areas

0 50 100 Feet

August 2019

Basemap Data Source:
Nearview, LLC, MassGI

Vertical Datum:
NAVD88

Parcel 25-49 and ROW
Pre-Excavation Tree and Shrub Inventory

New Bedford Harbor Superfund Site

JACOBS

Figure 1a

Legend

- 0-1' Excavation Depth
- Mean Lower Low Water
- Mean Higher High Water
- Parcel Boundary
- Inventoried Shrub Areas
- 1-foot Contour
- Proposed Access Road
- Proposed Laydown Area

0 50 100 Feet

August 2019

Basemap Data Source:
Nearview, LLC, MassGIS

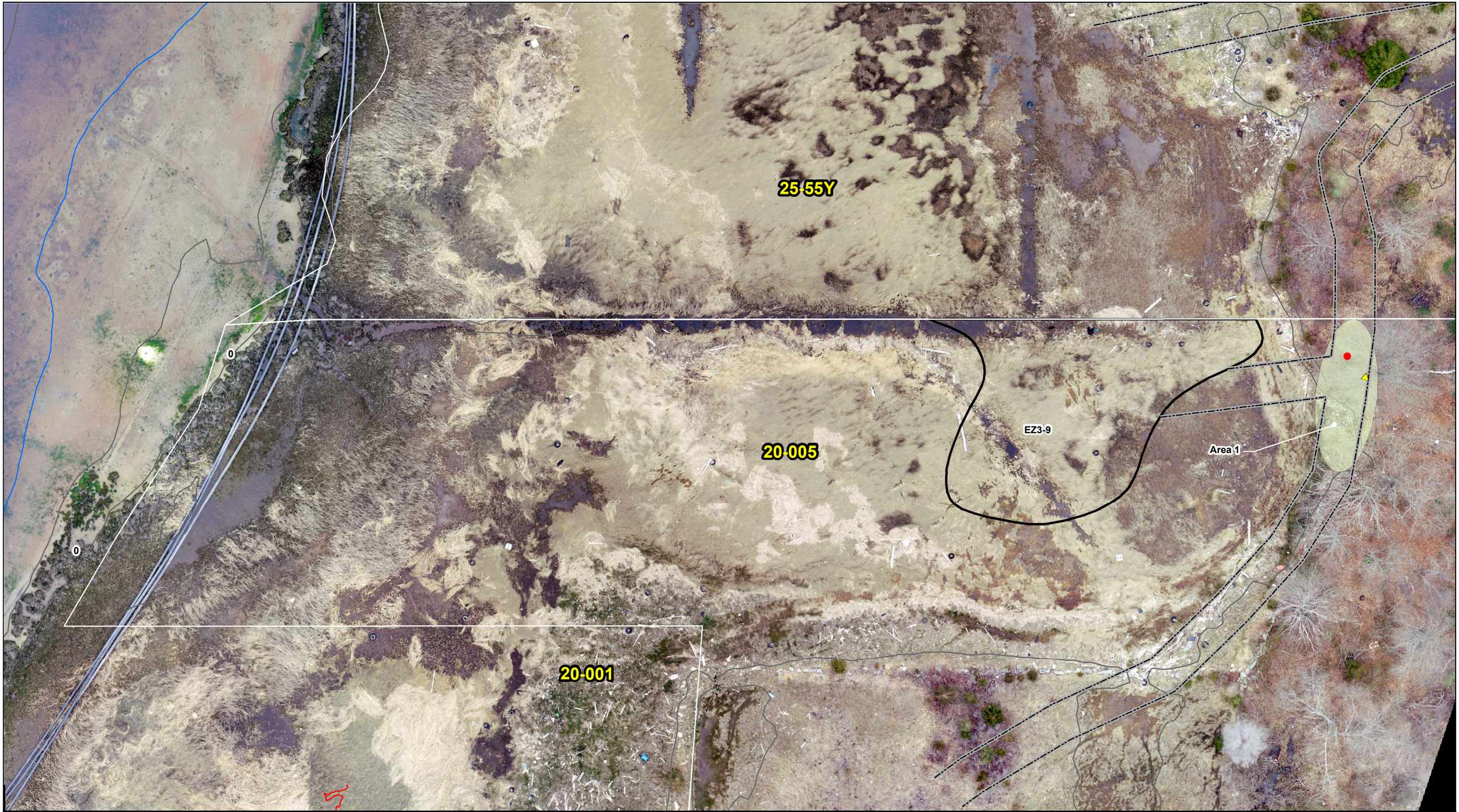
Vertical Datum:
NAVD88

Parcel 25-56 Pre-Excavation Tree and Shrub Inventory

New Bedford Harbor Superfund Site

JACOBS

Figure 1b



Legend

- 0-1' Excavation Depth
- Proposed Access Road
- Mean Lower Low Water
- Inventoried Shrub Area
- Mean Higher High Water
- 1-foot Contour
- Parcel Boundary
- Eastern red cedar
- Red maple

0 50 100 Feet

August 2019

Basemap Data Source:
Nearview, LLC, MassGIS

Vertical Datum:
NAVD88

Parcel 20-005
Pre-Excavation Tree and Shrub Inventory

New Bedford Harbor Superfund Site

JACOBS

Figure 1c

Table 3-1
Existing Tree Inventory for Parcel 25-49 and ROW

Scientific Name	Common Name	Tree Count (≥3" DBH)	Invasive[1]	Native/Non-Native[2]
Elaeagnus angustifolia	Russian olive	1	yes	non-native, county documented
Juniperus virginiana	eastern red cedar	5	no	native, county documented
	Total	**6**		

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Table 3-2
Existing Tree Inventory for Parcel 20-005

Scientific Name	Common Name	Tree Count (≥3" DBH)	Invasive[1]	Native/Non-Native[2]
Acer rubrum	red maple	1	no	native, county documented
Juniperus virginiana	eastern red cedar	1	no	native, county documented
	Total	**2**		

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Table 3-3
Existing Shrub Cover for Parcel 25-49 and ROW, Area 1

Scientific Name	Common Name	Area 1 Percent Areal Cover	Invasive[1]	Native/Non-Native[2]	Upland/Wetland
Iva frutescens	high tide bush	80%	no	native, county documented	wetland

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Table 3-4
Existing Shrub Cover for Parcel 25-49 and ROW, Area 2

Scientific Name	Common Name	Area 2 Percent Areal Cover	Invasive[1]	Native/Non-Native[2]	Upland/Wetland
Iva frutescens	high tide bush	30%	no	native, county documented	wetland

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Table 3-5
Existing Shrub Cover for Parcel 25-49 and ROW, Area 3

Scientific Name	Common Name	Area 3 Percent Areal Cover	Invasive[1]	Native/Non-Native[2]	Upland/Wetland
Juniperus virginiana	eastern red cedar	10%	no	native, county documented	upland
Lindera benzoin	spicebush	20%	no	native, county documented	wetland
Iva frutescens	high tide bush	10%	no	native, county documented	wetland

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Table 3-6
Existing Shrub Cover for Parcel 25-49 and ROW, Area 4

Scientific Name	Common Name	Area 4 Percent Areal Cover	Invasive[1]	Native/Non-Native[2]	Upland/Wetland
Iva frutescens	high tide bush	80%	no	native, county documented	wetland

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Table 3-7
Existing Shrub Cover for Parcel 25-56, Area 1

Scientific Name	Common Name	Area 1 Percent Areal Cover	Invasive[1]	Native/Non-Native[2]	Upland/Wetland
Juniperus virginiana	eastern red cedar	5%	no	native, county documented	upland
Juniperus communis	common juniper	35%	no	native, county documented	upland

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Table 3-8
Existing Shrub Cover for Parcel 20-005, Area 1

Scientific Name	Common Name	Area 1 Percent Areal Cover	Invasive[1]	Native/Non-Native[2]	Upland/Wetland
Iva frutescens	high tide bush	20%	no	native, county documented	wetland
Juniperus communis	common juniper	30%	no	native, county documented	upland
Rosa virginiana	Virginia rose	10%	no	native, county documented	both
Vaccinium corymbosum	highbush blueberry	20%	no	native, county documented	wetland
Acer rubrum	red maple	15%	no	native, county documented	both

[1]According to USDA, NRCS. 2018. The PLANTS Database (http://plants.usda.gov, 3 October 2018). National Plant Data Team, Greensboro, NC 27401-4901 USA.

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Appendix A

Parcels 25-356, 25-358 and ROW

JACOBS

Memorandum

Subject	Parcels 25-356, 25-358, and ROW Native Tree and Shrub Inventory	**Project Name**	New Bedford Harbor Superfund Site
Attention	Marie Esten, USACE	**Project No.**	35BG2000
From	Jessica Rebholz	**Document Control No.**	ACE-J23-35BG6000-M1-0062
Date	6 August 2019		

Attachments: Figure 1 Pre-Excavation Tree and Shrub Inventory, Table 3-1 (inventory results)

1.0 Background

Jacobs conducted an inventory of existing trees and shrubs on Parcels 25-356, 25-358, and the adjacent ROW in the intertidal remediation area (Figure 1) on 8 August 2018. The purpose of the inventory was to identify existing trees and shrubs that would be removed in association with site remediation activities, including construction of the gravel access road and areas of excavation associated with contaminated sediment and soil removal. The information collected from this inventory is intended to be used to inform selection of proposed native woody species for future restoration plantings.

2.0 Methods

For the purposes of the inventory, trees were defined as any nonclimbing, woody plant that had at least one erect perennial stem (trunk) with a diameter at breast height (DBH) of 3.0 inches or greater, regardless of height. Jacobs' wetland biologists walked the planned remediation portions of Parcels 25-356, 25-358, and the adjacent ROW and identified all trees within the proposed excavation area and proposed access road. Tree locations were recorded using a Trimble Geo 7X GPS, capable of sub-meter accuracy.

For the purposes of the inventory, shrubs were defined as any nonclimbing, woody plant with a DBH less than 3.0 inches. However, no shrubs were identified on any of the parcels.

3.0 Results

Eastern red cedar (*Juniperus virginiana*) is the only tree species within Parcel 25-356 and is considered native and non-invasive. A list of the trees identified is provided in Table 3-1. No trees were identified within Parcel 25-358 or the adjacent ROW.

4.0 Conclusion

The species makeup of Parcels 25-356, 25-358, and the adjacent ROW is comprised of native, non-invasive trees, and there are no shrubs located on the parcel or within any of the proposed access roads.

Legend

- Mean Lower Low Water
- Mean Higher High Water
- 1-foot Contour
- Parcel Boundary
- 0-1' Excavation Depth
- Eastern red cedar
- Proposed Access Road

0 50 100 Feet

August 2019

Basemap Data Source:
Nearview, LLC, MassGIS

Vertical Datum:
NAVD88

Parcels 25-356, 25-358, and ROW
Pre-Excavation Tree and Shrub Inventory
New Bedford Harbor Superfund Site

JACOBS

Figure 1

Table 3-1
Existing Tree Inventory for Parcel 25-356, ROW, and 25-358

Scientific Name	Common Name	Tree Count (≥3" DBH)	Invasive[1]	Native/Non-Native[2]
Juniperus virginiana	eastern red cedar	2	no	native, county documented
	Total	**2**		

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Appendix A
Parcel 25-55Y

JACOBS

Memorandum

Subject	Parcel 25-55Y Native Tree and Shrub Inventory	**Project Name**	New Bedford Harbor Superfund Site
Attention	Marie Esten, USACE	**Project No.**	35BG2000
From	Jessica Rebholz	**Document Control No.**	ACE-J23-35BG6000-M1-0062
Date	6 August 2019		

Attachments: Figure 1 Pre-Excavation Tree and Shrub Inventory, Tables 3-1 through 3-7 (inventory results)

1.0 Background

Jacobs conducted an inventory of existing trees and shrubs on Parcel 25-55Y in the intertidal remediation area (Figure 1) on 8 August 2018. The purpose of the inventory was to identify existing trees and shrubs that would be removed in association with site remediation activities, including construction of the gravel access road and areas of excavation associated with contaminated sediment and soil removal. The information collected from this inventory is intended to be used to inform selection of proposed native woody species for future restoration plantings.

2.0 Methods

For the purposes of the inventory, trees were defined as any nonclimbing, woody plant that had at least one erect perennial stem (trunk) with a diameter at breast height (DBH) of 3.0 inches or greater, regardless of height. Jacobs' wetland biologists walked the planned remediation portions of Parcel 25-55Y and identified all trees within the proposed excavation area and proposed access road. Tree locations were recorded using a Trimble Geo 7X GPS, capable of sub-meter accuracy.

For the purposes of the inventory, shrubs were defined as any nonclimbing, woody plant with a DBH less than 3.0 inches. Shrubs were inventoried according to dominant shrub types that appeared to constitute similar species diversity and percent areal cover. For purposes of documentation and reference, the results of the tree and shrub inventories are recorded by sub-area in separate tables included in Section 3 below.

3.0 Results

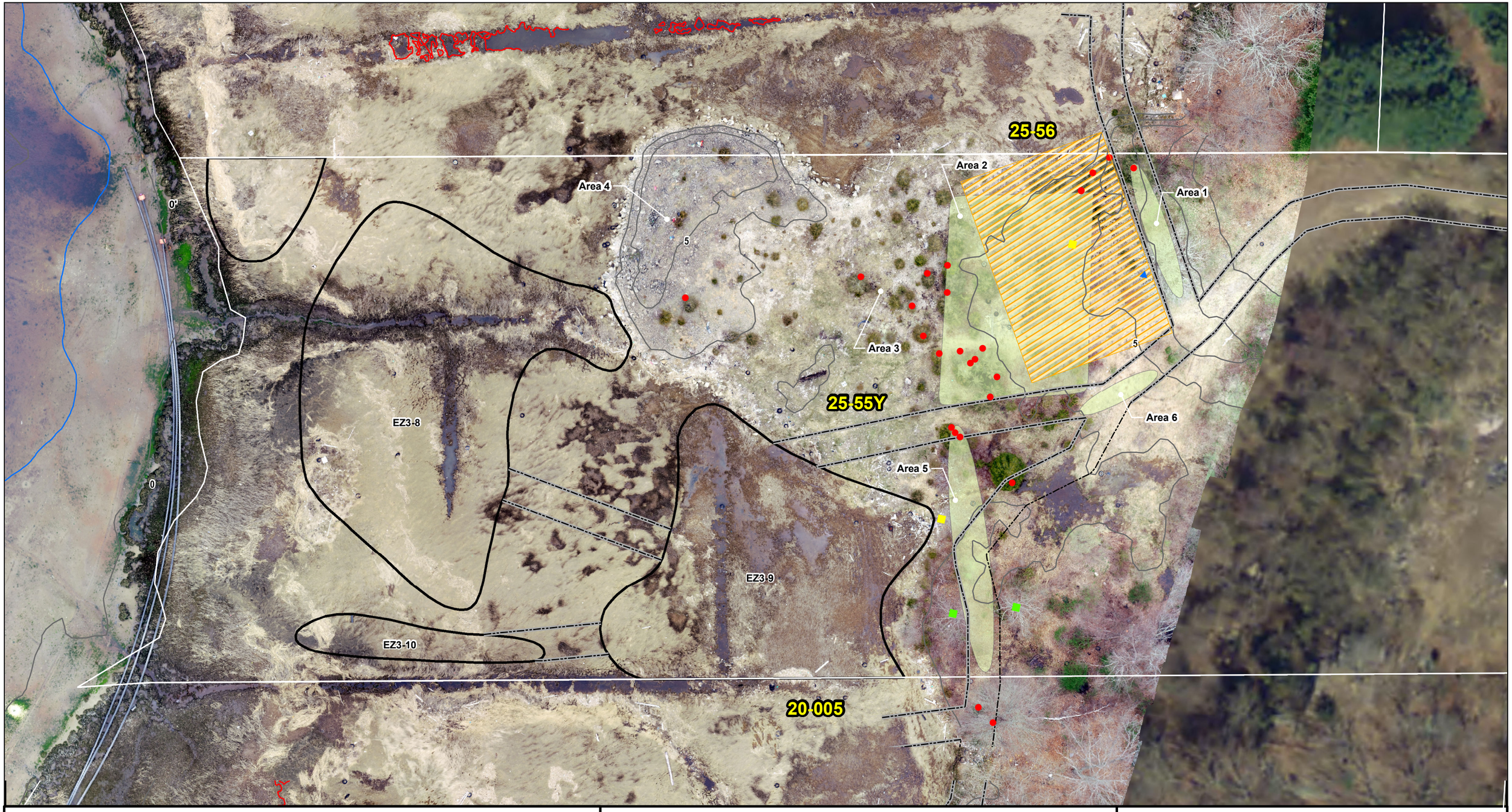
Eastern red cedar (*Juniperus virginiana*) is the dominant tree species within Parcel 25-55Y. The majority of the trees identified on Parcel 25-55Y are considered native and non-invasive. A list of the trees identified is provided in Table 3-1. For each species, the number of individual trees noted was calculated as an indication of the relative dominance of the species on-site. A total of 27 trees were identified.

Six shrub areas were inventoried within Parcel 25-55Y. Common juniper (*Juniperus communis*) was found to be present in all six of the areas, therefore making it the dominant shrub type. Common juniper is a native, non-invasive shrub typically found in disturbed areas and rocky outcrops. The majority of the shrubs identified are considered native and non-invasive (Tables 3-2 through 3-7).

Each area where shrubs were identified and inventoried is identified on Figure 1. Shrubs were classified by genus and species. Tables 3-2 through 3-7 also identify whether the shrub occurred in upland or wetland, as well as any notes regarding specific species.

4.0 Conclusion

The species makeup of Parcel 25-55Y is comprised almost entirely of native, non-invasive trees and shrubs, with common juniper (*Juniperus communis*) being the dominant shrub and eastern red cedar (*Juniperus virginiana*) being the dominant tree.



Legend

- Inventoried Shrub Areas
- 0-1' Excavation Depth
- Mean Higher High Water
- Mean Lower Low Water
- Proposed Laydown Area
- Proposed Access Road
- 1-foot Contour
- Parcel Boundary
- Nothern catalpa
- Eastern red cedar
- White oak
- Northern red oak

0 60 120 Feet

August 2019

Basemap Data Source:
Nearview, LLC, MassGIS

Vertical Datum:
NAVD88

Parcel 25-55Y
Pre-Excavation Tree and Shrub Inventory

New Bedford Harbor Superfund Site

JACOBS

Figure 1

Table 3-1
Existing Tree Inventory for Parcel 25-55Y

Scientific Name	Common Name	Tree Count (≥3" DBH)	Invasive[1]	Native/Non-Native[2]
Quercus rubra	red oak	2	no	native, county documented
Quercus alba	white oak	2	no	native, county documented
Catalpa speciosa	northern catalpa	1	yes	non-native, state documented
Juniperus virginiana	eastern red cedar	22	no	native, county documented
	Total	**27**		

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Table 3-2
Existing Shrub Cover for Parcel 25-55Y, Area 1

Scientific Name	Common Name	Area 1 Areal Cover	Invasive[1]	Native/Non-Native[2]	Upland/Wetland
Juniperus communis	common juniper	5%	no	native, county documented	upland
Juniperus virginiana	eastern red cedar	5%	no	native, county documented	upland
Elaeagnus angustifolia	Russian olive	2%	yes	non-native, county documented	upland

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Table 3-3
Existing Shrub Cover for Parcel 25-55Y, Area 2

Scientific Name	Common Name	Area 2 Percent Areal Cover	Invasive[1]	Native/Non-Native[2]	Upland/Wetland
Juniperus virginiana	eastern red cedar	30%	no	native, county documented	upland
Juniperus communis	common juniper	25%	no	native, county documented	upland
Lindera benzoin	spicebush	15%	no	native, county documented	wetland
Iva frutescens	high tide bush	30%	no	native, county documented	wetland

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Table 3-4
Existing Shrub Cover for Parcel 25-55Y, Area 3

Scientific Name	Common Name	Area 3 Percent Areal Cover	Invasive[1]	Native/Non-Native[2]	Upland/Wetland
Juniperus communis	common juniper	20%	no	native, county documented	upland
Iva frutescens	high tide bush	35%	no	native, county documented	wetland

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Table 3-5
Existing Shrub Cover for Parcel 25-55Y, Area 4

Scientific Name	Common Name	Area 4 Percent Areal Cover	Invasive[1]	Native/Non-Native[2]	Upland/Wetland
Juniperus communis	common juniper	20%	no	native, county documented	upland
Juniperus virginiana	eastern red cedar	10%	no	native, county documented	upland

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Table 3-6
Existing Shrub Cover for Parcel 25-55Y, Area 5

Scientific Name	Common Name	Area 5 Percent Areal Cover	Invasive[1]	Native/Non-Native[2]	Upland/Wetland
Juniperus communis	common juniper	15%	no	native, county documented	upland
Rhus typhina	staghorn sumac	10%	no	native, county documented	upland
Rosa virginiana	Virginia rose	20%	no	native, county documented	both
Vaccinium corymbosum	highbush blueberry	20%	no	native, county documented	wetland
Quercus rubra	northern red oak	5%	no	native, county documented	upland

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

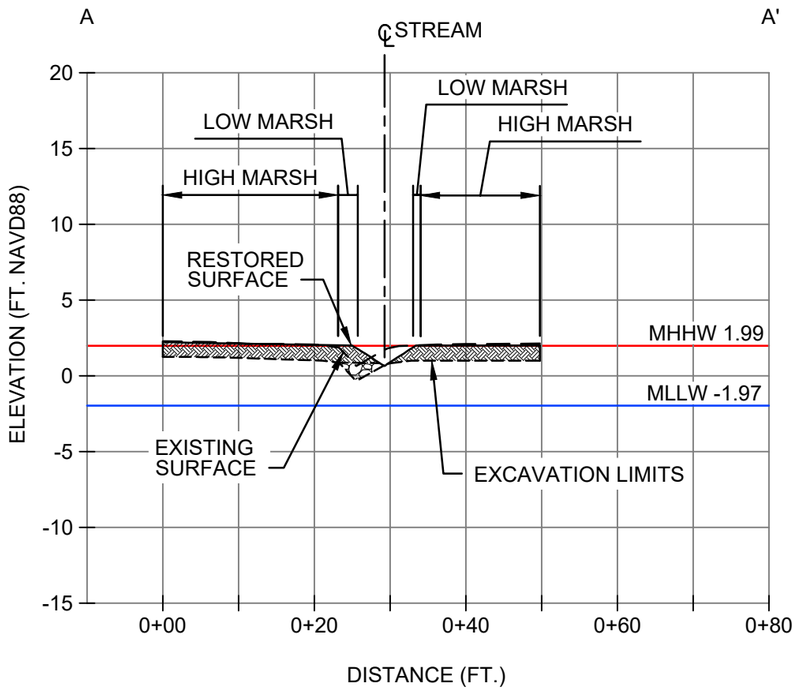
Table 3-7
Existing Shrub Cover for Parcel 25-55Y, Area 6

Scientific Name	Common Name	Area 6 Percent Areal Cover	Invasive[1]	Native/Non-Native[2]	Upland/Wetland
Juniperus communis	common juniper	30%	no	native, county documented	upland
Iva frutescens	high-tide bush	20%	no	native, county documented	wetland
Rosa virginiana	Virginia rose	10%	no	native, county documented	both
Vaccinium corymbosum	highbush blueberry	20%	no	native, county documented	wetland
Acer rubrum	red maple	15%	no	native, county documented	both

[1]According to "The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts": https://www.mass.gov/files/documents/2016/08/tm/invasive-plantlist.pdf

[2]New England Wildflower Society. 2011. Go Botany, 12 April 2018 (https://gobotany.newenglandwild.org/). New England Wildflower Society, Framingham, MA

Appendix B
Cross Sections



LEGEND:

- MHHW 1.99
- MLLW -1.97
- GRAVEL SUBGRADE BACKFILL
- TOPSOIL BACKFILL

NOTE:

1. IN SOME CASES, DEPENDING ON FIELD CONDITIONS, GRAVEL SUBGRADE WILL BE REPLACED BY TOP SOIL AT THE DISCRETION OF THE FIELD TEAM.

JACOBS®

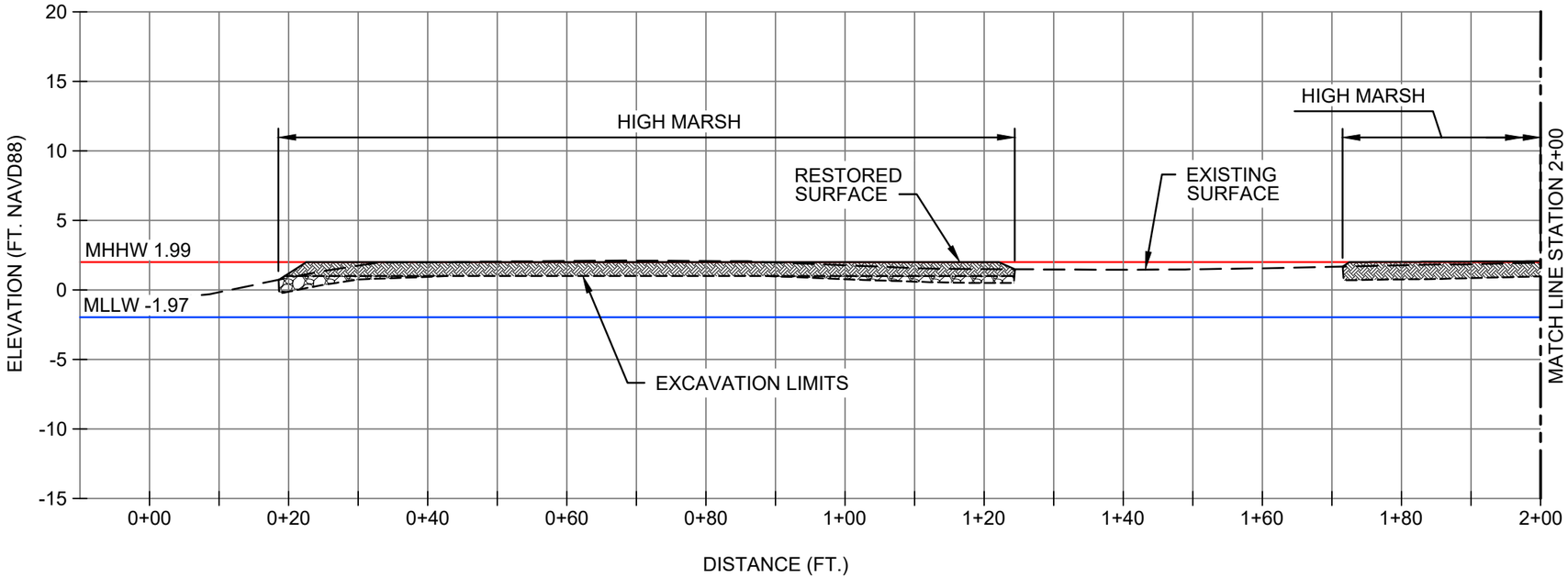
EAST ZONE 3
SECTION A-A'

NEW BEDFORD HARBOR

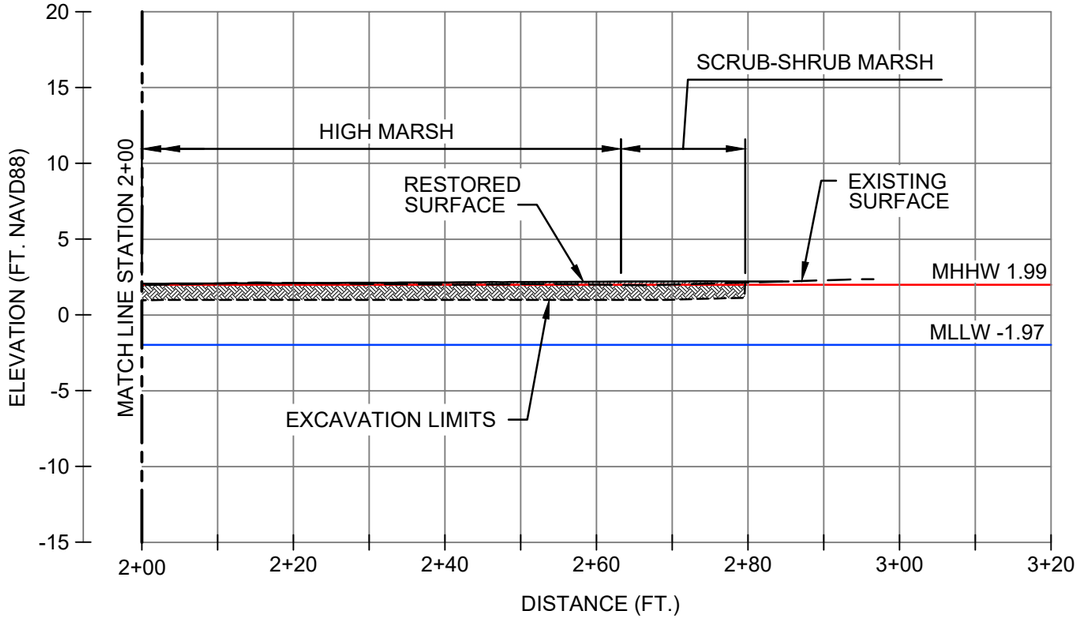
JANUARY 2020 | FIGURE 1

BY:ENGLANLL
LAST SAVED:1/6/2020
CREATED:8/11/2019

B



B'



LEGEND:

- MHHW 1.99
- MLLW -1.97
- GRAVEL SUBGRADE BACKFILL
- TOPSOIL BACKFILL

NOTE:

1. IN SOME CASES, DEPENDING ON FIELD CONDITIONS, GRAVEL SUBGRADE WILL BE REPLACED BY TOP SOIL AT THE DISCRETION OF THE FIELD TEAM.

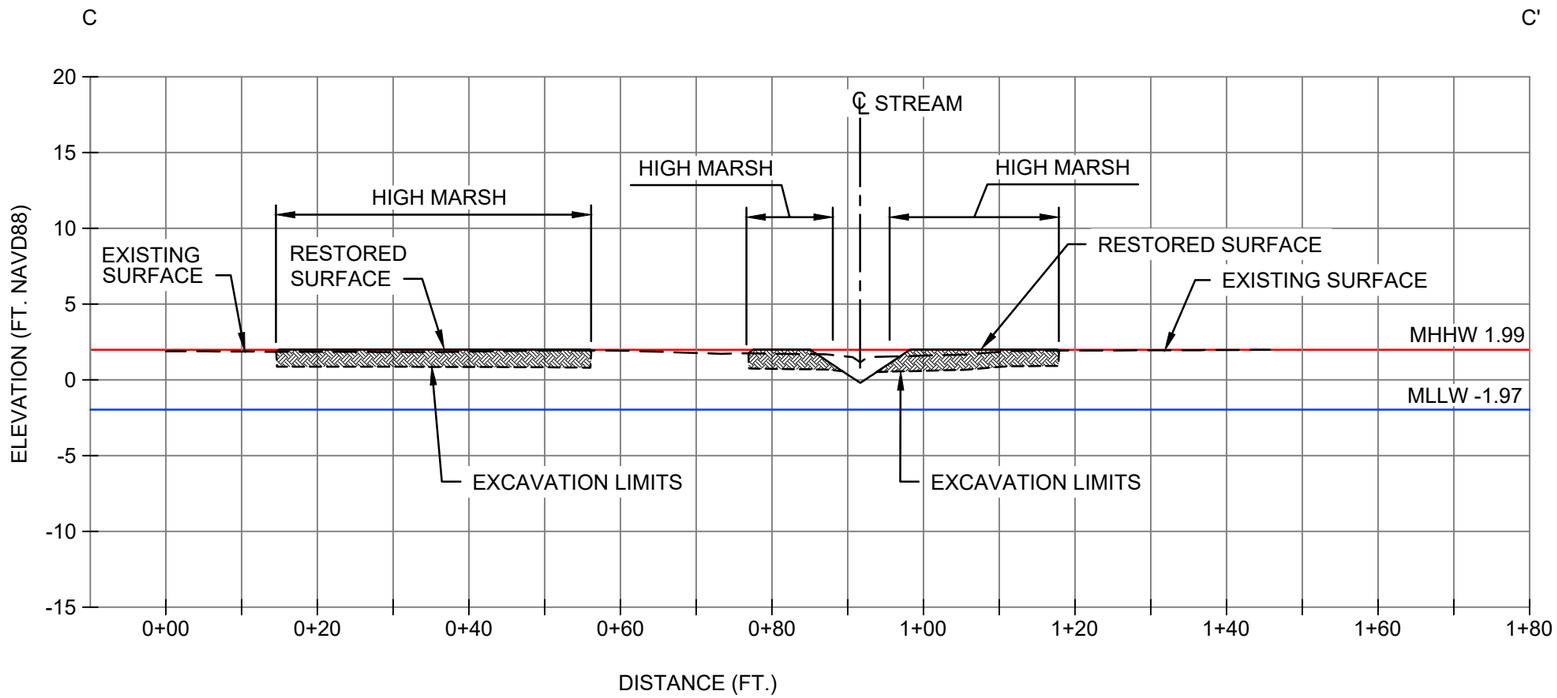
JACOBS®

EAST ZONE 3
SECTION B-B'

NEW BEDFORD HARBOR

JANUARY 2020 | FIGURE 2

CREATED:8/11/2019 LAST SAVED:1/6/2020 BY:ENGLANLL



LEGEND:

- MHHW 1.99
- MLLW -1.97
- TOPSOIL BACKFILL

NOTE:

1. IN SOME CASES, DEPENDING ON FIELD CONDITIONS, GRAVEL SUBGRADE WILL BE REPLACED BY TOP SOIL AT THE DISCRETION OF THE FIELD TEAM.

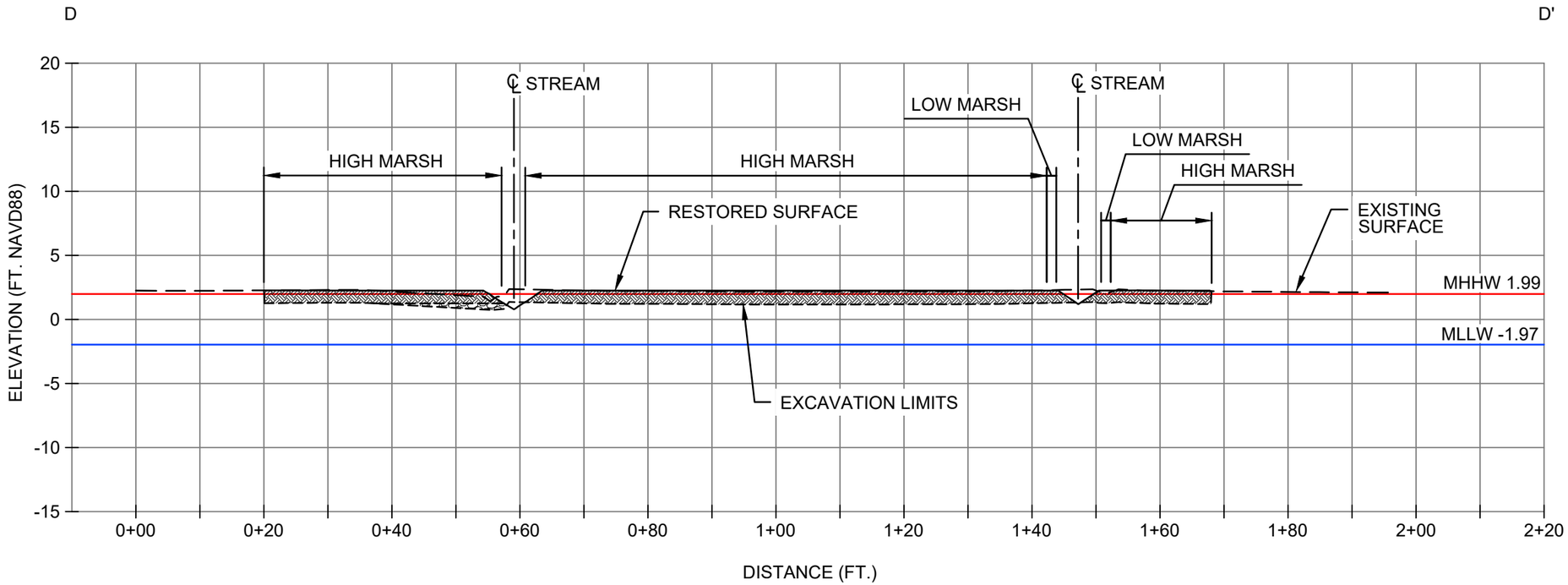
JACOBS®

EAST ZONE 3
SECTION C-C'

NEW BEDFORD HARBOR

JANUARY 2020 | FIGURE 3

BY:ENGLANLL
LAST SAVED:2/6/2020
CREATED:8/11/2019



LEGEND:

- MHHW 1.99
- MLLW -1.97
- GRAVEL SUBGRADE BACKFILL
- TOPSOIL BACKFILL

NOTE:

1. IN SOME CASES, DEPENDING ON FIELD CONDITIONS, GRAVEL SUBGRADE WILL BE REPLACED BY TOP SOIL AT THE DISCRETION OF THE FIELD TEAM.

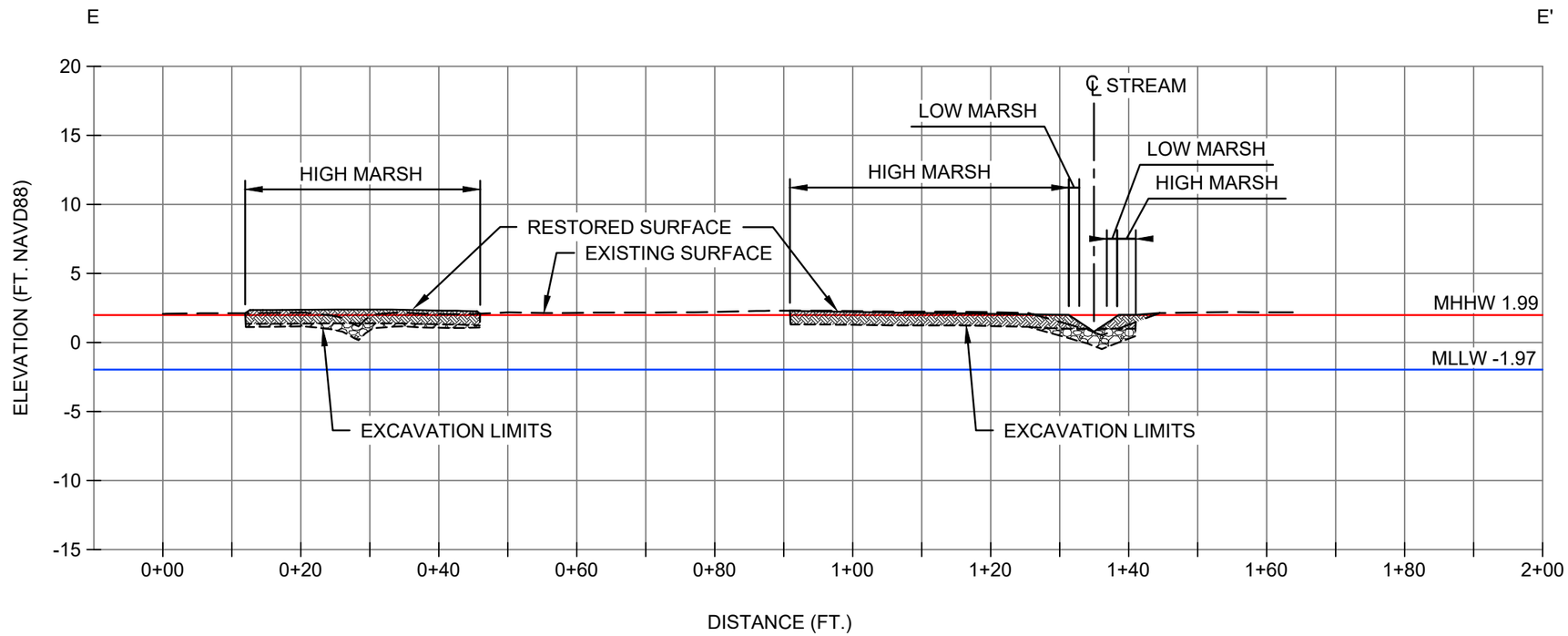
JACOBS®

EAST ZONE 3
SECTION D-D'

NEW BEDFORD HARBOR

JANUARY 2020 | FIGURE 4

BY:ENGLANLL
LAST SAVED:1/6/2020
CREATED:8/11/2019



LEGEND:

- MHHW 1.99
- MLLW -1.97
- GRAVEL SUBGRADE BACKFILL
- TOPSOIL BACKFILL

NOTE:

1. IN SOME CASES, DEPENDING ON FIELD CONDITIONS, GRAVEL SUBGRADE WILL BE REPLACED BY TOP SOIL AT THE DISCRETION OF THE FIELD TEAM.

JACOBS®

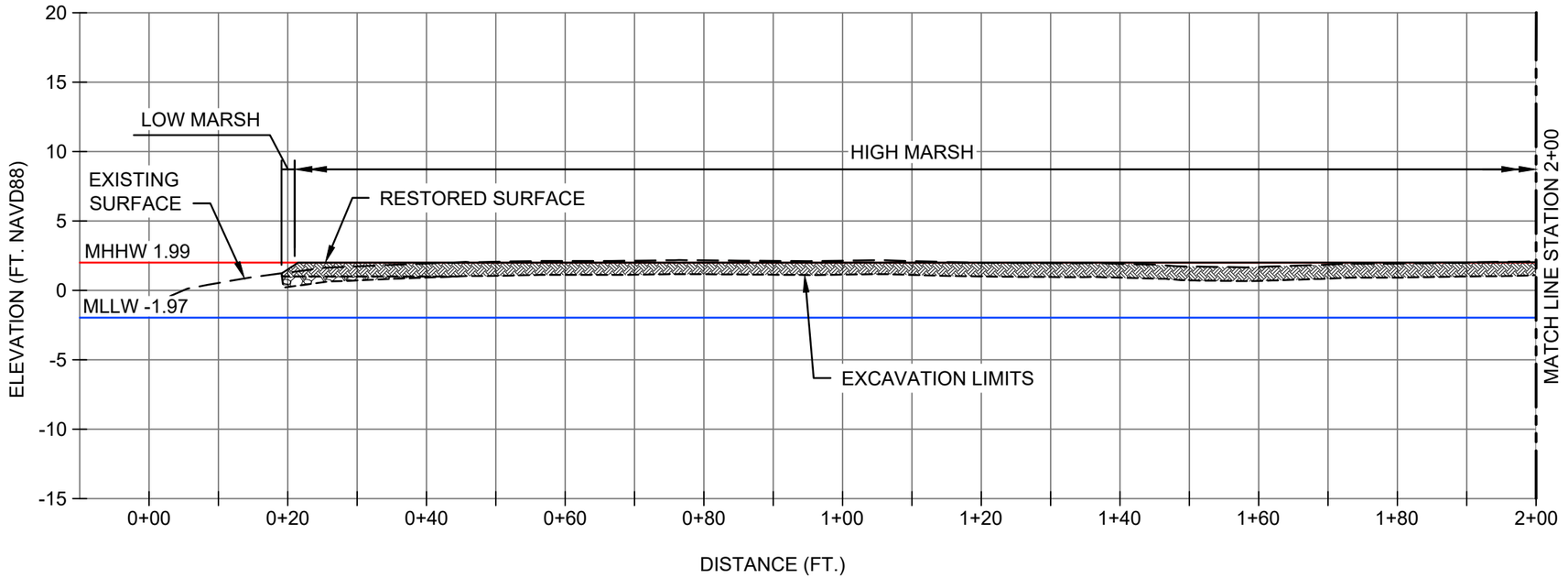
EAST ZONE 3
SECTION E-E'

NEW BEDFORD HARBOR

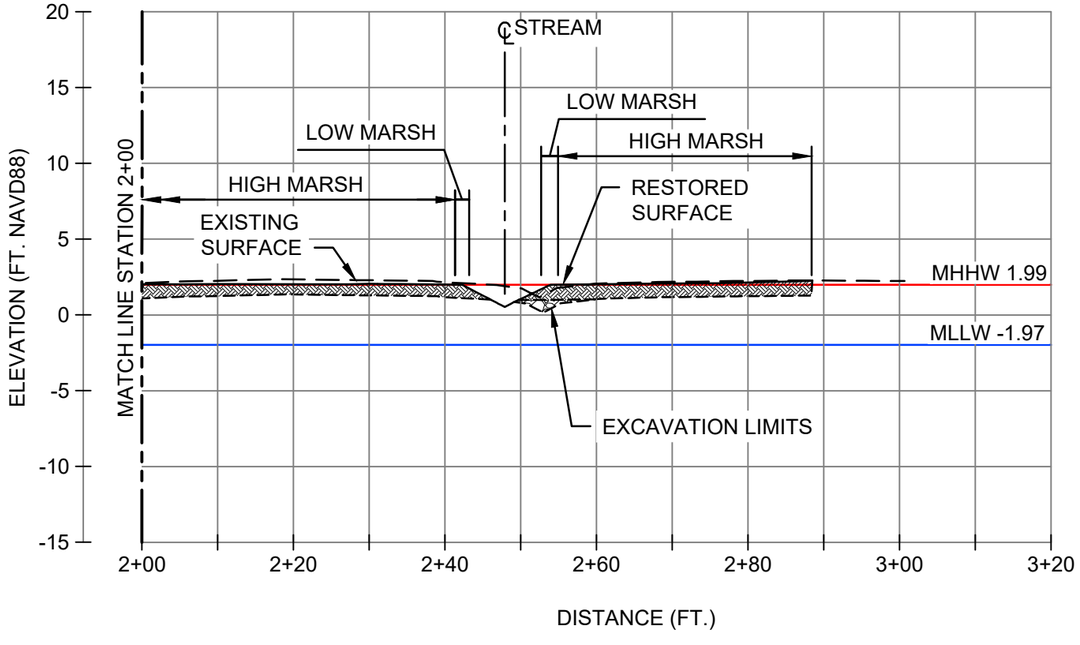
JANUARY 2020 | FIGURE 5

BY:ENGLANLL
LAST SAVED:1/6/2020
CREATED:8/11/2019

F



F'



LEGEND:

- MHHW 1.99
- MLLW -1.97
- GRAVEL SUBGRADE BACKFILL
- TOPSOIL BACKFILL

NOTE:

1. IN SOME CASES, DEPENDING ON FIELD CONDITIONS, GRAVEL SUBGRADE WILL BE REPLACED BY TOP SOIL AT THE DISCRETION OF THE FIELD TEAM.

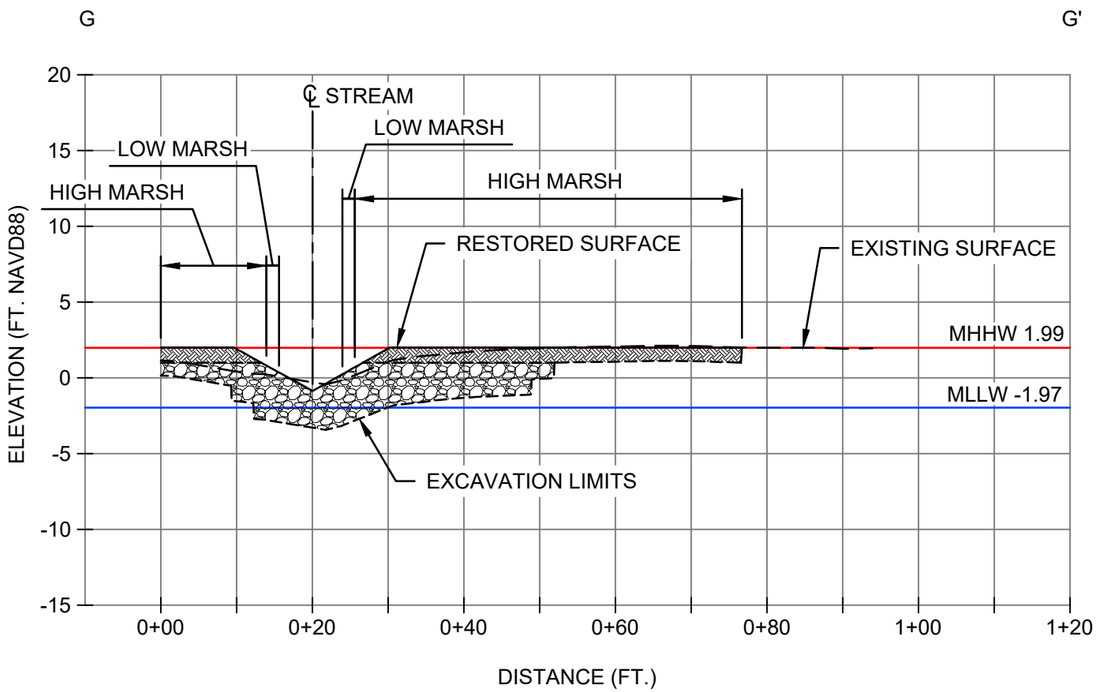
JACOBS®

EAST ZONE 3
SECTION F-F'

NEW BEDFORD HARBOR

JANUARY 2020 | FIGURE 6

CREATED:8/11/2019 LAST SAVED:1/6/2020 BY:ENGLANLL



LEGEND:

- MHHW 1.99
- MLLW -1.97
- GRAVEL SUBGRADE BACKFILL
- TOPSOIL BACKFILL

NOTE:

1. IN SOME CASES, DEPENDING ON FIELD CONDITIONS, GRAVEL SUBGRADE WILL BE REPLACED BY TOP SOIL AT THE DISCRETION OF THE FIELD TEAM.

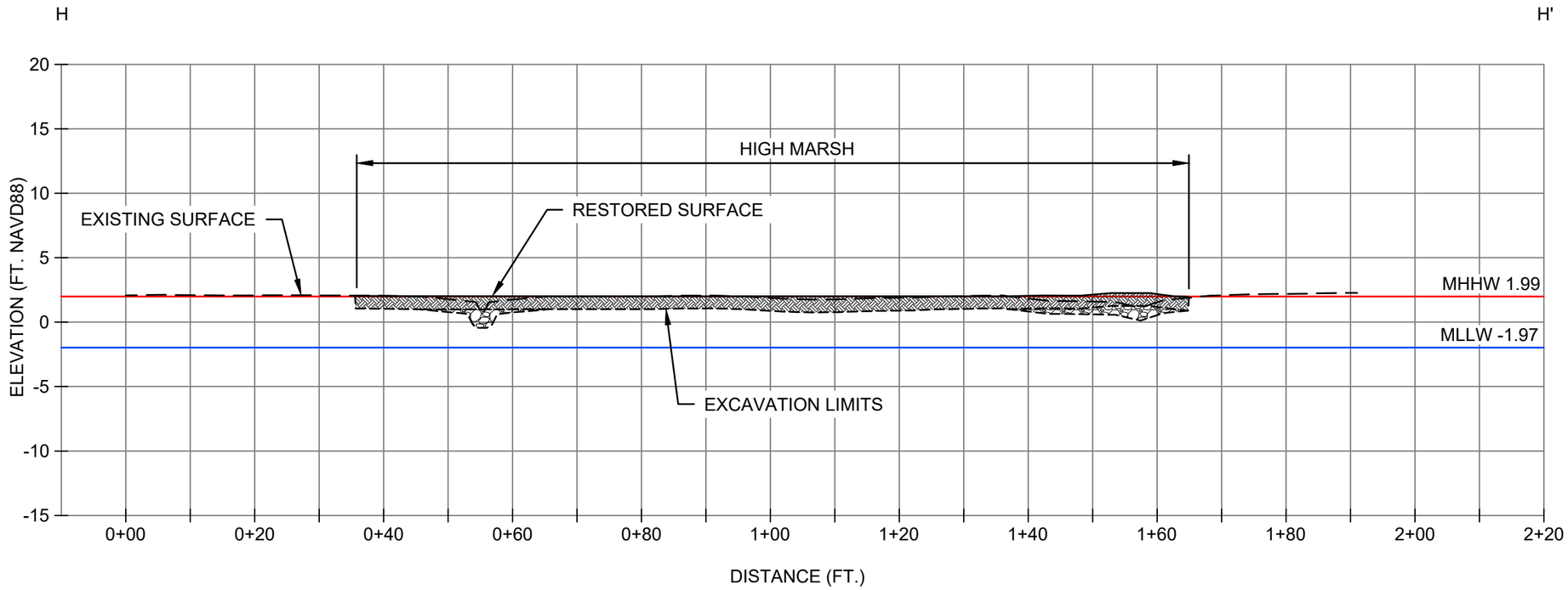
JACOBS®

EAST ZONE 3
SECTION G-G'

NEW BEDFORD HARBOR

JANUARY 2020 | FIGURE 7

BY:ENGLANLL
LAST SAVED:1/6/2020
CREATED:8/11/2019



LEGEND:

- MHHW 1.99
- MLLW -1.97
- GRAVEL SUBGRADE BACKFILL
- TOPSOIL BACKFILL

NOTE:

1. IN SOME CASES, DEPENDING ON FIELD CONDITIONS, GRAVEL SUBGRADE WILL BE REPLACED BY TOP SOIL AT THE DISCRETION OF THE FIELD TEAM.

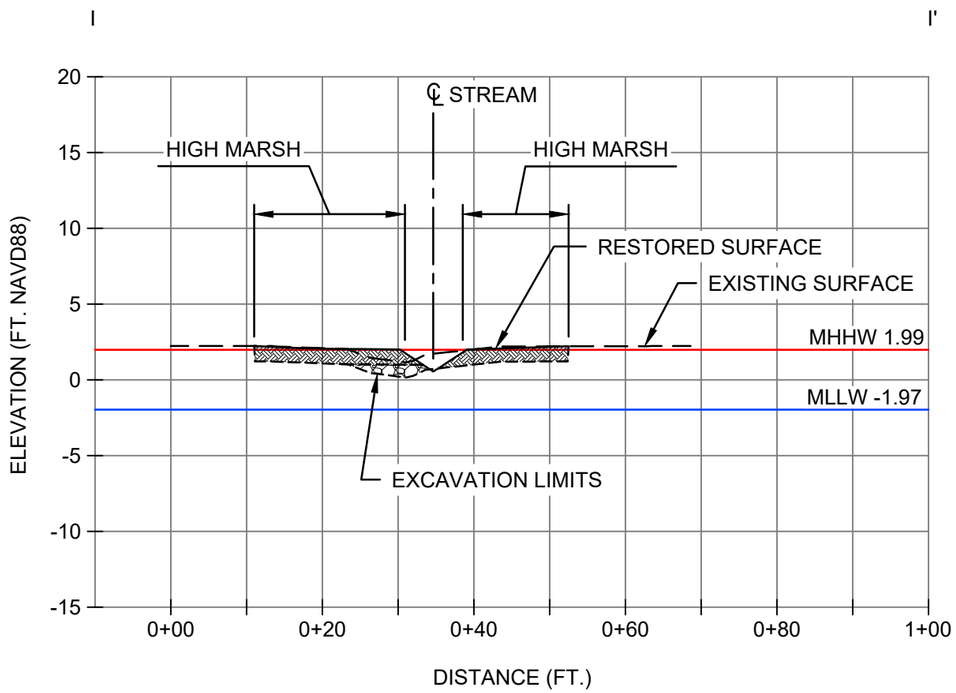
JACOBS®

EAST ZONE 3
SECTION H-H'

NEW BEDFORD HARBOR

JANUARY 2020 | FIGURE 8

BY:ENGLANLL
LAST SAVED:1/6/2020
CREATED:8/11/2019



LEGEND:

- MHHW 1.99
- MLLW -1.97
- GRAVEL SUBGRADE BACKFILL
- TOPSOIL BACKFILL

NOTE:

1. IN SOME CASES, DEPENDING ON FIELD CONDITIONS, GRAVEL SUBGRADE WILL BE REPLACED BY TOP SOIL AT THE DISCRETION OF THE FIELD TEAM.

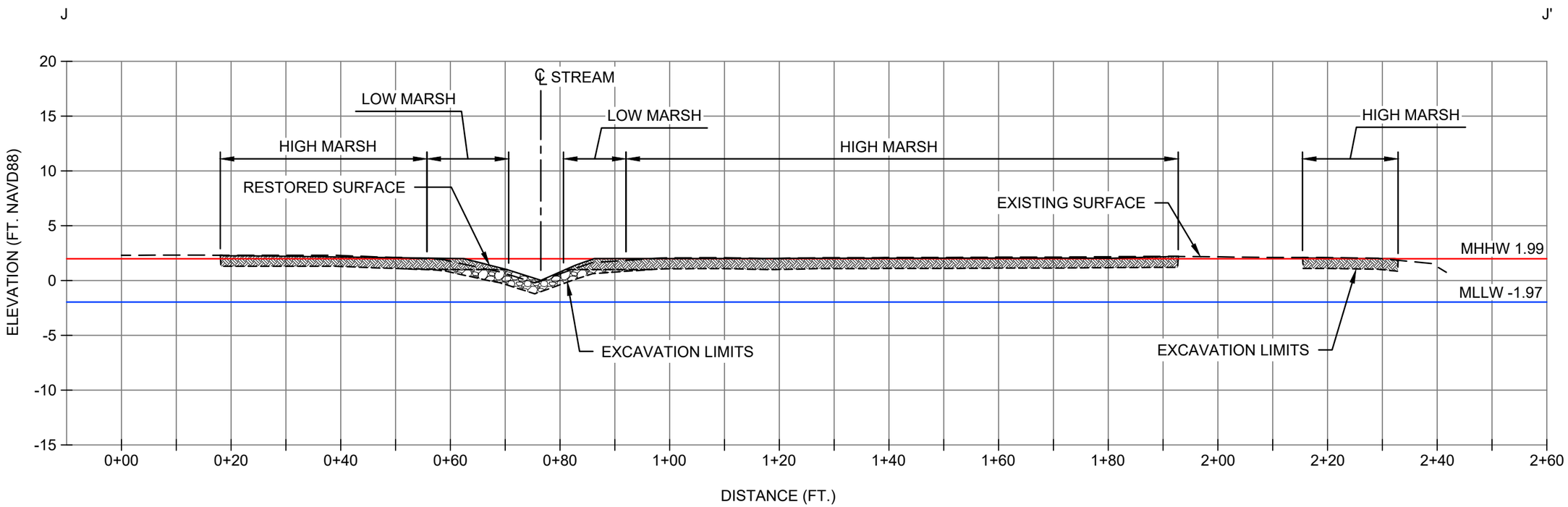
JACOBS®

EAST ZONE 3
SECTION I-I'

NEW BEDFORD HARBOR

JANUARY 2020 | FIGURE 9

BY:ENGLANLL
LAST SAVED:1/6/2020
CREATED:8/11/2019



LEGEND:

- MHHW 1.99
- MLLW -1.97
- GRAVEL SUBGRADE BACKFILL
- TOPSOIL BACKFILL

NOTE:

1. IN SOME CASES, DEPENDING ON FIELD CONDITIONS, GRAVEL SUBGRADE WILL BE REPLACED BY TOP SOIL AT THE DISCRETION OF THE FIELD TEAM.

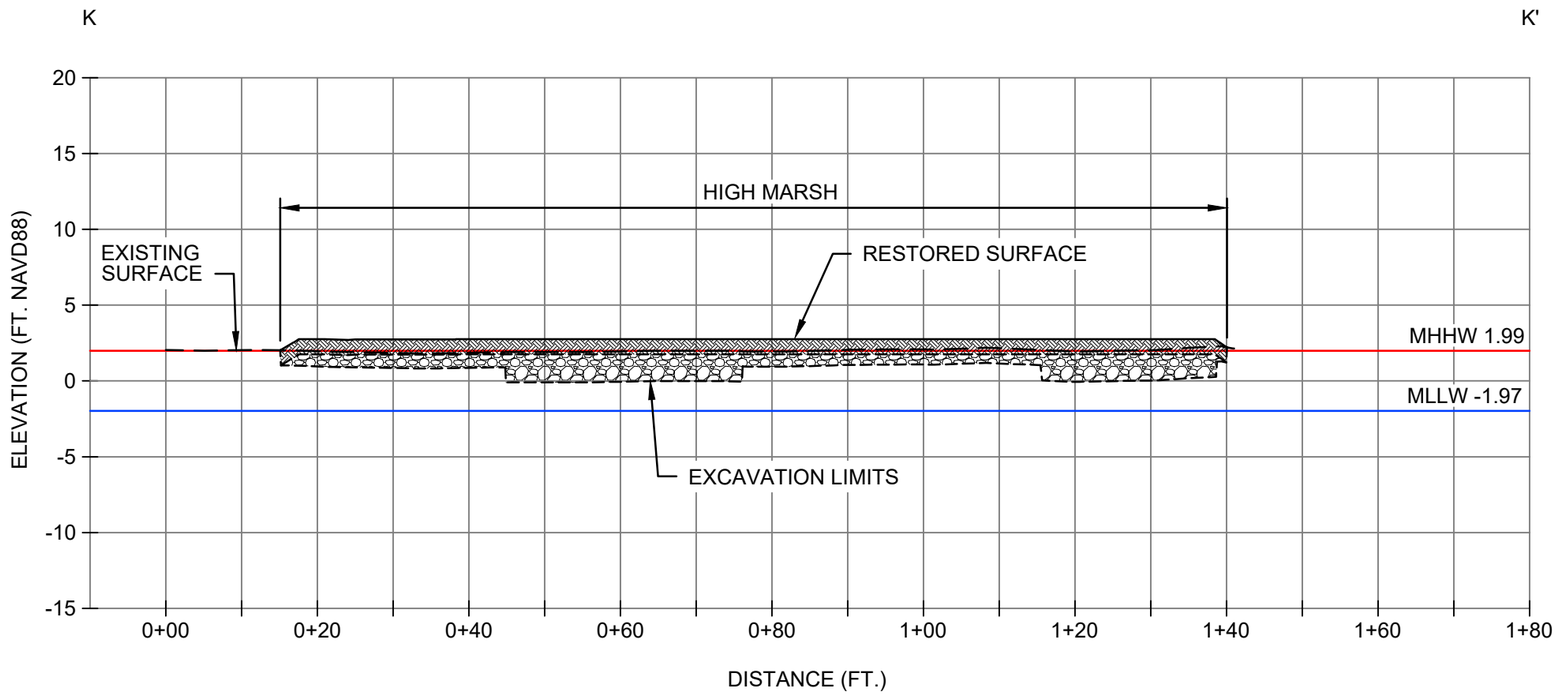
JACOBS®

EAST ZONE 3
SECTION J-J'

NEW BEDFORD HARBOR

JANUARY 2020 | FIGURE 10

BY:ENGLANLL
LAST SAVED:1/6/2020
CREATED:8/11/2019



LEGEND:

- MHHW 1.99
- MLLW -1.97
- GRAVEL SUBGRADE BACKFILL
- TOPSOIL BACKFILL

NOTE:

1. IN SOME CASES, DEPENDING ON FIELD CONDITIONS, GRAVEL SUBGRADE WILL BE REPLACED BY TOP SOIL AT THE DISCRETION OF THE FIELD TEAM.

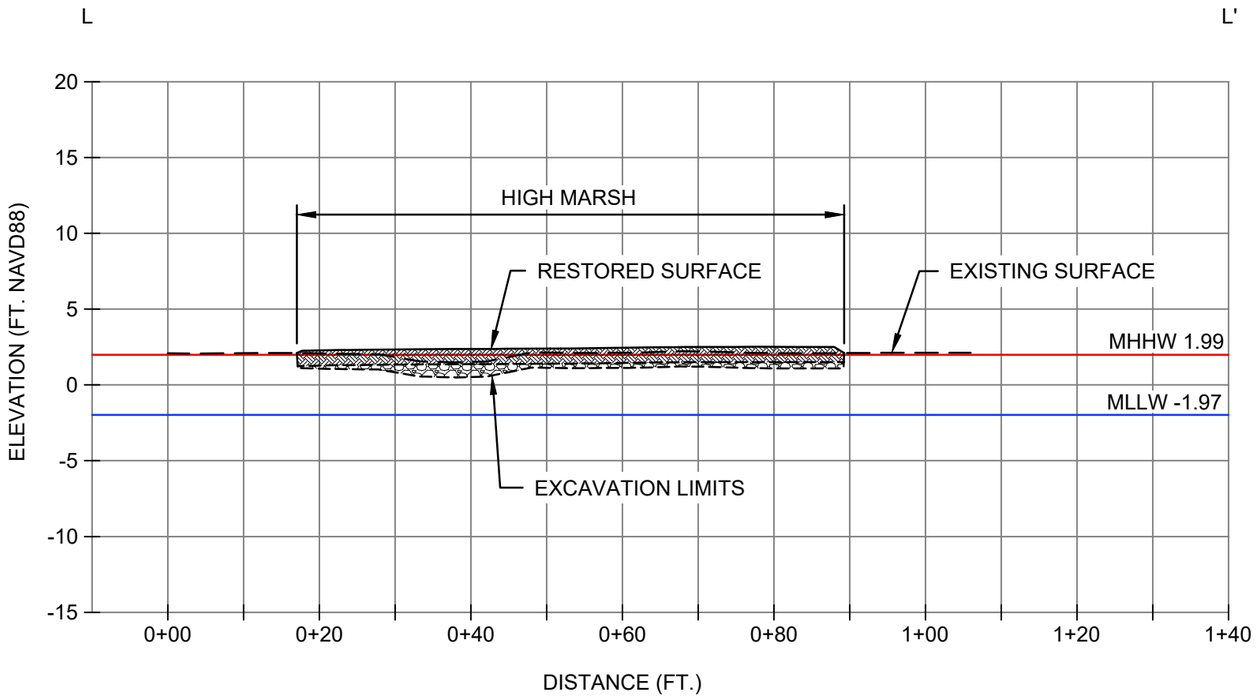
JACOBS®

EAST ZONE 3
SECTION K-K'

NEW BEDFORD HARBOR

JANUARY 2020 | FIGURE 11

BY:ENGLANLL
LAST SAVED:1/6/2020
CREATED:8/11/2019



LEGEND:

- MHHW 1.99
- MLLW -1.97
- GRAVEL SUBGRADE BACKFILL
- TOPSOIL BACKFILL

NOTE:

1. IN SOME CASES, DEPENDING ON FIELD CONDITIONS, GRAVEL SUBGRADE WILL BE REPLACED BY TOP SOIL AT THE DISCRETION OF THE FIELD TEAM.

BY:ENGLANLL

LAST SAVED:1/6/2020

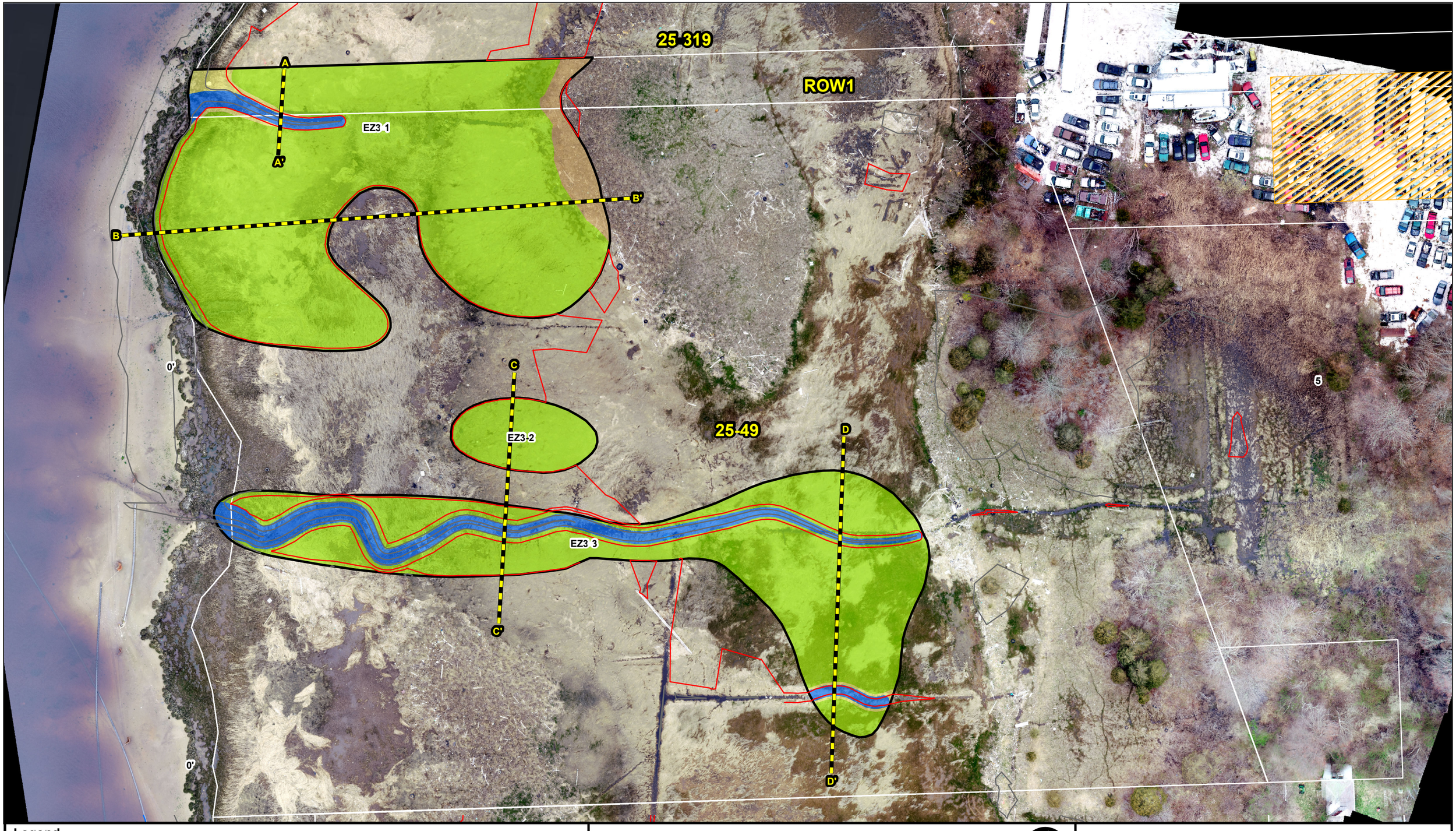
CREATED:8/11/2019

JACOBS®

EAST ZONE 3
SECTION L-L'

NEW BEDFORD HARBOR

JANUARY 2020 | FIGURE 12



Legend

- Cross Section Locations
- 1-foot Contour
- Mean Higher High Water
- Mean Lower Low Water
- 0-1' Excavation Depth
- Parcel Boundary
- Proposed High Marsh
- Proposed Laydown Area
- Proposed Low Marsh
- Proposed Scrub-Shrub Marsh
- Proposed Stream

0 50 100 Feet

January 2020

Basemap Data Source: Nearview, LLC, MassGIS

Vertical Datum: NAVD88

Intertidal East Zone 3
Parcel 25-49 and ROW
Cross Section Locations

New Bedford Harbor Superfund Site

JACOBS

Figure 13

25-49

E

EZ3-4

25-356

ROW

0

0

25-358

E'

EZ3-5

F

F'

-5

25-56

Legend

- Cross Section Locations
- 1-foot Contour
- Mean Lower Low Water
- Mean Higher High Water
- 0-1' Excavation Depth
- Parcel Boundary
- Proposed High Marsh
- Proposed Low Marsh
- Proposed Stream

0 50 100 Feet

January 2020

Basemap Data Source:
Nearview, LLC, MassGIS

Vertical Datum:
NAVD88

Intertidal East Zone 3
Parcels 25-356, 23-358, and ROW
Cross Section Locations

New Bedford Harbor Superfund Site

JACOBS

Figure 14

Legend

- Cross Section Locations
- Mean Higher High Water
- Mean Lower Low Water
- 1-foot Contour
- 0-1' Excavation Depth
- 1-2' Excavation Depth
- 2-3' Excavation Depth
- Parcel Boundary
- Proposed High Marsh
- Proposed Low Marsh
- Proposed Stream
- Proposed Laydown Area

0 50 100 Feet

January 2020

Basemap Data Source:
Nearview, LLC, MassGIS

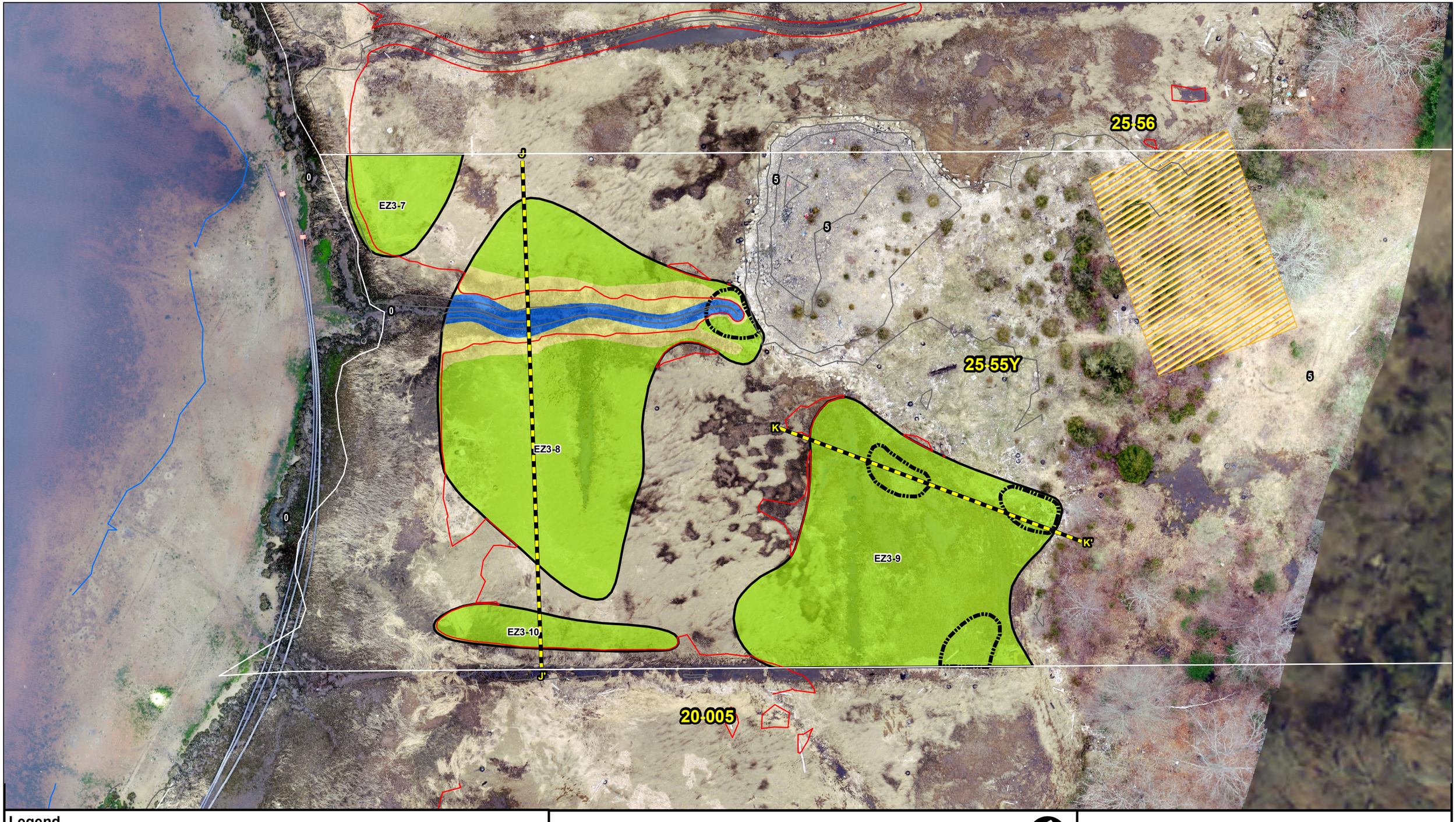
Vertical Datum:
NAVD88

Intertidal East Zone 3
Parcel 25-56
Cross Section Locations

New Bedford Harbor Superfund Site

JACOBS

Figure 15



Legend

- Cross Section Locations
- 1-foot Contour
- Mean Higher High Water
- Mean Lower Low Water
- Proposed Laydown Area
- 0-1' Excavation Depth
- 1-2' Excavation Depth
- Parcel Boundary
- Proposed Stream
- Proposed High Marsh
- Proposed Low Marsh

0 50 100 Feet

January 2020

Basemap Data Source: Nearview, LLC, MassGIS

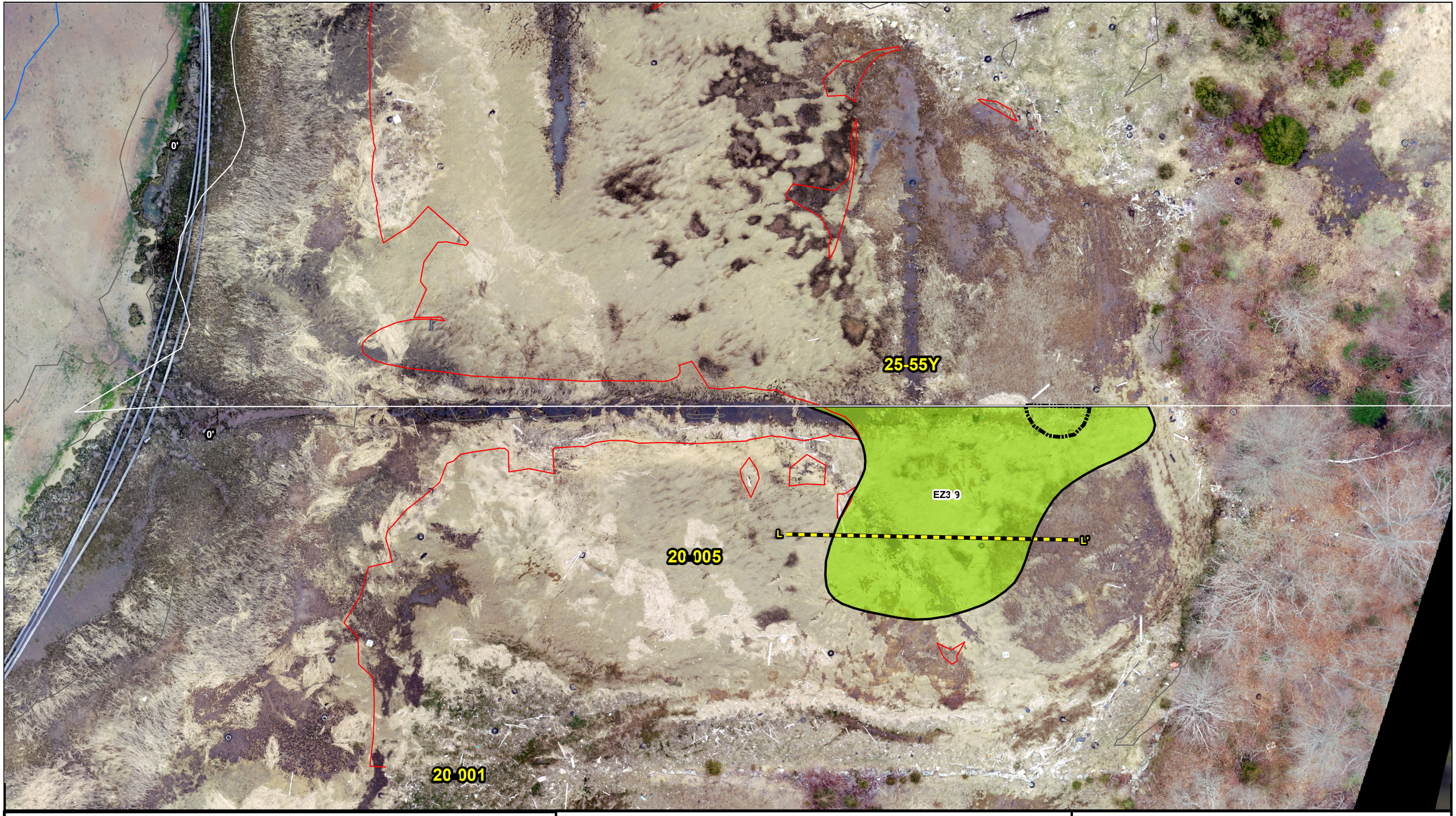
Vertical Datum: NAVD88

Intertidal East Zone 3
Parcel 25-55Y
Cross Section Locations

New Bedford Harbor Superfund Site

JACOBS

Figure 16



Legend

- Cross Section Locations
- 1-foot Contour
- Mean Lower Low Water
- Mean Higher High Water
- 0-1' Excavation Depth
- 1-2' Excavation Depth
- Parcel Boundary
- Proposed High Marsh

0 50 100 Feet

January 2020

Basemap Data Source:
Nearview, LLC, MassGIS

Vertical Datum:
NAVD88

Intertidal East Zone 3
Parcel 20-005
Cross Section Locations

New Bedford Harbor Superfund Site

JACOBS

Figure 17

Appendix C

Schedule

(to be added at a later date)