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New Bedford Harbor Superfund Site

U.S. Army Corps of Engineers New England District

Final East Zone 4 and East Zone 5 Remedial Action Report

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New Bedford Harbor Superfund Site

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Acronyms and Abbreviations

CDE	Cornell Dubilier Electronic, Inc.
cy	cubic yards
DDA	debris disposal area
EPA	U.S. Environmental Protection Agency
GPS	global positioning system
Jacobs	Jacobs Engineering Group, Inc.
LH	Lower Harbor
mg/kg	milligrams per kilogram
NAE	U.S. Army Corps of Engineers – New England District
NBH	New Bedford Harbor
NPL	Superfund National Priorities List
OH	Outer Harbor
PCB	polychlorinated biphenyl
PCPT	Pre-Excavation Confirmatory Pilot Test
ppm	parts per million
RBG	risk-based goals
ROD	Record of Decision
RTK	real-time kinematic
Sevenson	Sevenson Environmental Services, Inc.
TCL	target cleanup level
TSCA	Toxic Substances Control Act
UH	Upper Harbor

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1. Introduction

Remediation and restoration of the East Zone 4 and East Zone 5 intertidal zones were conducted by Jacobs Engineering Group, Inc. (Jacobs) under U.S. Army Corps of Engineers – New England District (NAE) Remediation Action Contract No. W912WJ-15-D-0001 from March 2021 through June 2021 for the U.S. Environmental Protection Agency (EPA). The primary objective of remedial action at East Zone 4 and East Zone 5 was to remove soil and sediment with polychlorinated biphenyl (PCB) concentrations greater than the site-specific target cleanup level (TCL) of 50 milligrams per kilogram (mg/kg) for remote wetlands, 10 mg/kg for mudflats, and 1 mg/kg for residential areas, as established in the *1998 Record of Decision for the New Bedford Harbor Superfund Site* (EPA 1998), and to restore the site to baseline or comparable conditions. The East Zone 4 and East Zone 5 remediation areas are adjacent to one another. The designated remediation areas in East Zone 5 have limited accessibility and are close to Veranda Inlet residential neighborhoods; therefore, the two areas were coupled together as a single remedial action. Collectively, the East Zone 4 and East Zone 5 areas incorporate 14 tax parcels of land[1]. The proposed excavation areas are presented on Figures 1-1a and 1-1b. It should be noted that Veranda Inlet was originally planned to be remediated during the subtidal dredging program, but the draft of the dredge and time constraints did not allow its completion with that method, thus it was decided to remediate the un-dredged portion of the inlet during the intertidal action, this area is identified on Figure 1-1b as Veranda Inlet and is shaded a different color than the rest of East Zone 5. The excavation areas in total comprised approximately 205,000 square feet (4.7 acres). Approximately 10,571 cubic yards (cy) of soil were excavated.

The purpose of this Remedial Action Report is to document the remediation activity and final disposition of the restored East Zone 4 and East Zone 5 areas. Contaminated sediments were removed and disposed off-site, and the area was restored in accordance with the *Draft Final Intertidal Work Plan for East Zone 4* (Jacobs 2019a), the *Draft Final Intertidal Work Plan for East Zone 5* (Jacobs 2020a), and the *Draft Final Addendum to Draft Final Intertidal Work Plan for East Zone 5* (Jacobs 2020b).

1.1 Site History

New Bedford Harbor (NBH) was proposed for the Superfund National Priorities List (NPL) in 1982 and finalized on the NPL in 1983. Pursuant to 40 CFR 300.425 (c)(2), the Commonwealth of Massachusetts nominated the harbor as its priority site for listing on the NPL. The Site is located approximately 55 miles south of Boston, in Bristol County, Massachusetts and is bounded to the east by the Town of Acushnet and Town of Fairhaven; and bounded to the west by the City of New Bedford and the Town of Dartmouth. The Site covers approximately 18,000 acres, extending from the shallow northern reaches of the Acushnet River Estuary, southward through the commercial harbor of New Bedford and into the adjacent section of Buzzards Bay. Based on the different geographic, environmental, and man-made features in the harbor, it has been subdivided into three sections identified as the Upper Harbor (UH), Lower Harbor (LH), and the Outer Harbor (OH) (Figure 1-2).

[1] Parcel numbers changed for two East Zone 5 parcels between publication of the East Zone 5 Work Plan (Jacobs 2020a) and completion of work. For consistency, the parcel number designations in the Work Plan were retained in this Remedial Action Report. Note that Parcel 20-36 is now 20-29, and Parcel 20-41 is now 20-30.

The subtidal area and impacted intertidal zones of the UH comprise approximately 236 acres and are bounded to the North by the Wood Street Bridge area and to the South by the Coggeshall Street Bridge. The LH comprises approximately 750 acres and is bounded to the north by the Coggeshall Street Bridge and to the south by the New Bedford Hurricane Barrier. The OH (approximately 17,000 acres) begins at the Hurricane Barrier and extends southward into Buzzards Bay to an imaginary line extending from Rocky Point (the southern tip of West Island in Fairhaven) southwesterly to a New Bedford Harbor navigational channel buoy, Buoy C3 and then southwesterly to Mishaum Point in Dartmouth.

PCB contamination of the sediments and seafood in and around New Bedford Harbor was first identified in the mid-1970s. Site-specific investigations by the EPA began in 1983 and 1984 and included pilot dredging and disposal studies and extensive physical and chemical computer modeling. These early studies are summarized in the 1990 Feasibility Study for the Site (Ebasco 1990), and in the 1998 Record of Decision (ROD) for OU1/UH and LH.

Based on the results of these investigations and knowledge of the operations at the former Aerovox Site at 740 Belleville Avenue in New Bedford, the Aerovox Site was identified as the principal source of PCB contamination in the UH. During operations at this facility (1940s – 1970s), PCB wastes were discharged directly to the UH through open trenches/spills and direct dumping, and indirectly via the City's sewerage system. During the same general time period, inputs of PCBs were also contributed to the Site by operations at the Cornell Dubilier Electronics, Inc. (CDE) facility, located just south of the New Bedford Hurricane Barrier in the OH.

Operations at the Aerovox Site resulted in significantly elevated PCB concentrations in UH sediments that generally decreased from north to south across the Site. Prior to the completion of remedial efforts, UH sediments contained PCB concentrations that ranged from below detection to more than 100,000 parts per million (ppm) in localized areas. As a tidal embayment with diurnal 4-foot tides, intertidal mudflats and vegetated saltmarshes became contaminated with PCBs in the UH and in certain, localized shoreline areas of the LH. This report documents the Remedial Action that occurred during 2021 in two of these UH shoreline areas, East Zone 4, and East Zone 5, in Fairhaven, Massachusetts located across the Acushnet River and approximately 0.75 miles south from the former Aerovox mill (Figure 1-2).

2. Remedial Activities

The methods used to complete the remedial activities at the Site are presented below.

2.1 Site Preparation

Sampling of sediment and soil from the subtidal, intertidal, and upland areas around East Zone 4 and East Zone 5 was conducted in 1999, 2000, and 2001. These data allowed estimation of the horizontal and vertical boundaries of the areas requiring remediation. Additional characterization sampling was conducted in 2015 through 2019 to further refine excavation boundaries. The large mudflat area in Veranda Inlet was not accessible by the subtidal dredge methods. As a result, the Veranda Inlet mudflat remediation was added to the East Zone 5 intertidal remediation area. Figures 2-1a through 2-1d and Tables 2-1a and 2-1b present characterization sample locations and data used to determine the final remedial boundaries. The Veranda Inlet portion of the excavation prism was characterized similarly to the adjacent areas described above, figures and tables within the Draft *Final Addendum to Draft Final Intertidal Work Plan for*

East Zone 5 (Jacobs 2020b) present the sample locations and analytical data used to determine the final remedial boundaries of the Inlet.

Pre-existing conditions at East Zone 4 and East Zone 5 were documented prior to the initiation of remedial activities to establish baseline conditions for backfill, contouring, re-establishment of native vegetation, and deterrence of invasive species. This included a pre-excavation elevation survey and mapping of wetland cover type within the intertidal area (Figures 2-2a through 2-2c). A thorough photo-documentation survey of areas with the potential to be impacted by remedial activities was performed prior to excavation, the purpose of this survey was to document the locations and conditions of man-made features such as outfalls, retaining walls, stone walls, fences, road surfaces, drainage swales or ditches and landscaping. Other pre-excavation preparation activities included notification of residents, clearing of trees and removal of debris, construction of access roads and staging areas, and mobilization of equipment.

Coupling of the East Zone 4 and East Zone 5 remediation areas during excavation operations minimized redundant mobilization and demobilization costs, consolidated one stabilization pad with access to off-site disposal by road trucks, minimized the footprint within residential properties, and provided more flexibility to work within the tide cycles.

2.2 Removal of Contaminated Sediments

Excavation was conducted by Sevenson Environmental Services, Inc. (Sevenson) with track-mounted amphibious excavators operated in the intertidal zone and guided by real-time kinematic global positioning system (RTK GPS) which also records the actual horizontal and vertical extents of excavation. Target elevations were guided by the cut depth figures presented in the work plans (Jacobs 2019a, 2020a).

Excavated material was loaded into Hydrema all-terrain dump trucks and moved to the staging areas for stabilization with Portland cement and transported to the Debris Disposal Area (DDA) in Area C for further stabilization and load out. See Section 3 below for disposal details. Concrete pieces and boulders found within the excavation areas were removed, cleaned, and used to stabilize slopes around deeper excavations, such as the storm outfall located at the intersection of Sycamore Street and Magnolia Avenue.

A total of 10,571 cy of contaminated sediment was removed from the East Zone 4 and East Zone 5 intertidal zones. This value is based on estimates derived from the pre-excavation and post-excavation survey data. The as-built limits of excavation are presented on Figure 2-4a for East Zone 4, and on Figure 2-4b for East Zone 5.

2.3 Environmental Sampling

As documented in the *Final Pre-Excavation Confirmatory Pilot Test Technical Memorandum*, elevation was used for establishing compliance that applicable TCLs were met (Jacobs 2020c). The pre- and post-excavation compliance survey data are shown in Table 2-2a for East Zone 4, and in Table 2-2b for East Zone 5.

Ambient air monitoring was conducted by an independent party, Cashins & Associates, Inc., at fixed monitoring locations during East Zone 4 and East Zone 5 remedial activities in accordance with the *Draft Final Ambient Air Monitoring Plan for Remediation Activities* (Jacobs 2020d). One additional location, #80

Sycamore, was set up at the construction entrance of East Zone 4 to monitor local concentrations during the excavation work. No exceedances to Risk-Based Goals (RBGs) were identified (EPA 2021).

2.4 Site Restoration

Backfill of excavated areas was performed by Sevenson using fill material as specified in the *Draft Final Generic Upper Harbor Intertidal Work Plan* (2019b). Proposed and as-built restoration elevations are listed in Tables 2-2a and 2-2b. All topsoil was tested for quality requirements identified in the *Draft Final Topsoil Acceptance Plan* (Jacobs 2019c). A summary of the topsoil analysis results by vendor batch is provided in Attachment A.

Site restoration activities were completed following the removal of contaminated sediments according to the methods defined in the work plans (Jacobs 2019a, 2020a, 2020b) and final planting plans (CR Environmental 2021a, 2021b). Restoration activities included placement of backfill, installation of coir logs, gravel and stone for erosion protection, planting of native shrubs, trees and saltmarsh grasses. Following installation of upland plants, grass seed was placed by broadcasting the planting plan specified seed mixes in upland areas to provide soil stabilization until the 2022 spring growing season arrives. A Planting Summary is presented in Table 2-3.

A post-excavation drone survey was conducted by Green Seal Environmental, LLC on September 30, 2021 to document post-restoration topography. Some of the proposed tree and shrub plantings from the work plans were substituted with species recommended by CR Environmental as more suitable for the as-built elevations (see Attachment B).

A pre-final inspection of the restored parcels was performed by Jacobs and NAE, accompanied by EPA and SES, on September 1, 2021. A final inspection was performed following the completion of upland plantings on October 28, 2021, the final inspection was performed by Jacobs and NAE accompanied by EPA, SES and AECOM.

The following field changes were made to the work plan specifications.

- Two streams at the southern end of East Zone 4 were extended inland past the termination point shown in the work plan drawings and connected to existing mosquito ditches. This was done to provide better marsh drainage during the tide cycles.
- A stone swale was constructed through the intertidal restoration at the West end of Veranda Avenue, connecting it to an existing stone swale. The new swale directed road runoff from an upslope stone drainage swale into Veranda inlet.
- A small earthen berm within Parcel 20-23 was excavated and replaced with an earthen berm with higher elevation, suitable to prevent inundation of the adjacent property during moon-tides.
- A support area was created at the west end of Newbury Avenue to stockpile materials, load-out excavated sediment, and construct the East Zone 5 earthen berm at the end of Veranda Inlet. The support area was restored following the completion of East Zone 5 backfilling.
- Restoration of the Newbury Avenue property was coordinated with the property owner and accommodated Newbury Avenue stormwater drainage through a bioswale.

The ecological habitat compositions at East Zone 4 and East Zone 5 were restored on an approximate 1:1 basis, as compared between the pre-excavation (Figures 2-2a, 2-2b and 2-2c) and post-excavation (Figures 2-5a, 2-5b and 2-5c) wetland distribution. The exception to this restoration ratio is mudflat. In most cases, excavated mudflat areas were not backfilled and restored, except to establish a stable slope near the low marsh border. Within East Zone 5, a former mudflat area adjacent to a storm outfall was converted to low marsh by creating a continuous band of low marsh, reinforcing the slope with stone, and filling the stone with soil. The storm outfall is located at the intersection of Sycamore Street and Magnolia Avenue.

Site monitoring and maintenance will continue through the first five full growing seasons (Fall 2026) to document the extent to which the wetland restoration and, where applicable, upland restoration goals of the project are being met. The monitoring and maintenance protocols are described in the *Draft Final Generic Upper Harbor Intertidal Work Plan* (Jacobs 2019b).

3. Waste Management

Sediment generated from East Zone 4 and East Zone 5 Intertidal Remediation was disposed in accordance with the Toxic Substances Control Act (TSCA). Approximately 13,833 tons of stabilized sediment generated during remediation were transported via truck from the Sawyer Street facility to Worcester, Massachusetts where it was transloaded to rail cars for ultimate disposal at the Wayne Disposal, Inc. Site #2 Landfill, operated by US Ecology, Inc. in Belleville, MI.

4. References

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Figures

Upper Harbor

Veranda Inlet

East Zone 4

North Fairhaven

Upper Harbor

Oxford

Site Location

USGS, MassGIS

Legend

- MLLW (-1.97 ft. NAVD88 Pre-Excavation)
- MHHW (-1.99 ft. NAVD88 Pre-Excavation)
- Proposed Limits of Excavation

0 150 300 Feet

Basemap Data Source: MassGIS, ESRI

November 2021

East Zone 4 Pre-Excavation Site Location and Features

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Figure 1-1a

Path: Y:\NBH\Projects\35BG1001\20211026_EZ4_EZ5_RA_Report_Final\ArcGIS\EZ4\Figure 1-1a East Zone 4_RA_Site_Location_20211026.mxd

Veranda Inlet

Upper Harbor

USGS, MassGIS

Legend

- MLLW (-1.97 ft NAVD88 Pre-Excavation)
- MHHW (1.99 ft. NAVD88 Pre-Excavation)
- Proposed Limits of Excavation
- Proposed Limits of Excavation (Veranda Inlet)

0 150 300 Feet

Basemap Data Source: MassGIS, ESRI

November 2021

East Zone 5 Pre-Excavation Site Location and Features

New Bedford Harbor Superfund Site

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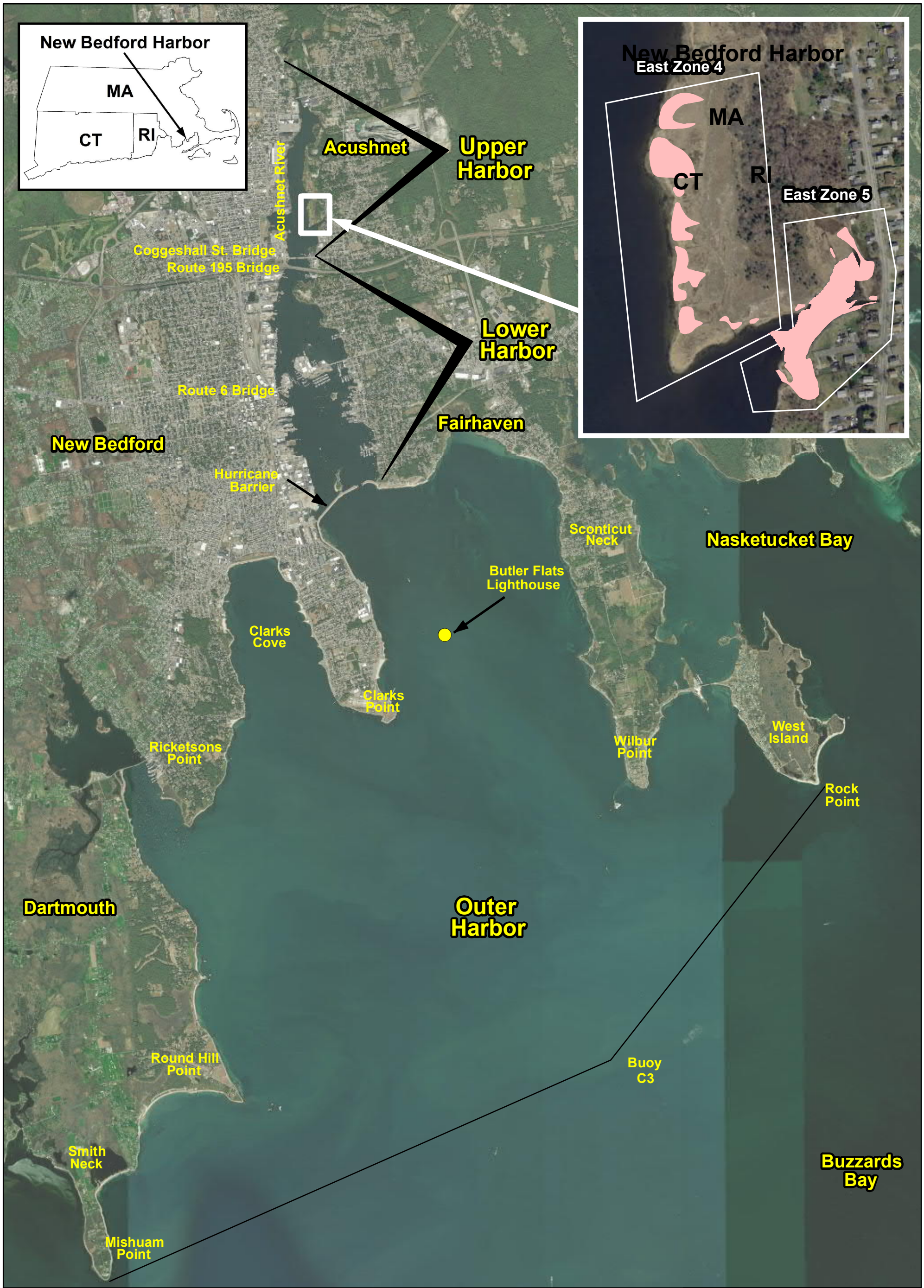
Figure 1-1b

Path: Y:\NBH\Projects\35BG1001\20211026_EZ4_EZ5_RA_Report_Final\ArcGIS\EZ5\Figure 1-1b East_Zone_5_RA_Site_Location_20211026.mxd



Legend

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

N

0 1 Miles

1:54,000

Basemap Reference: Bing Maps Aerial

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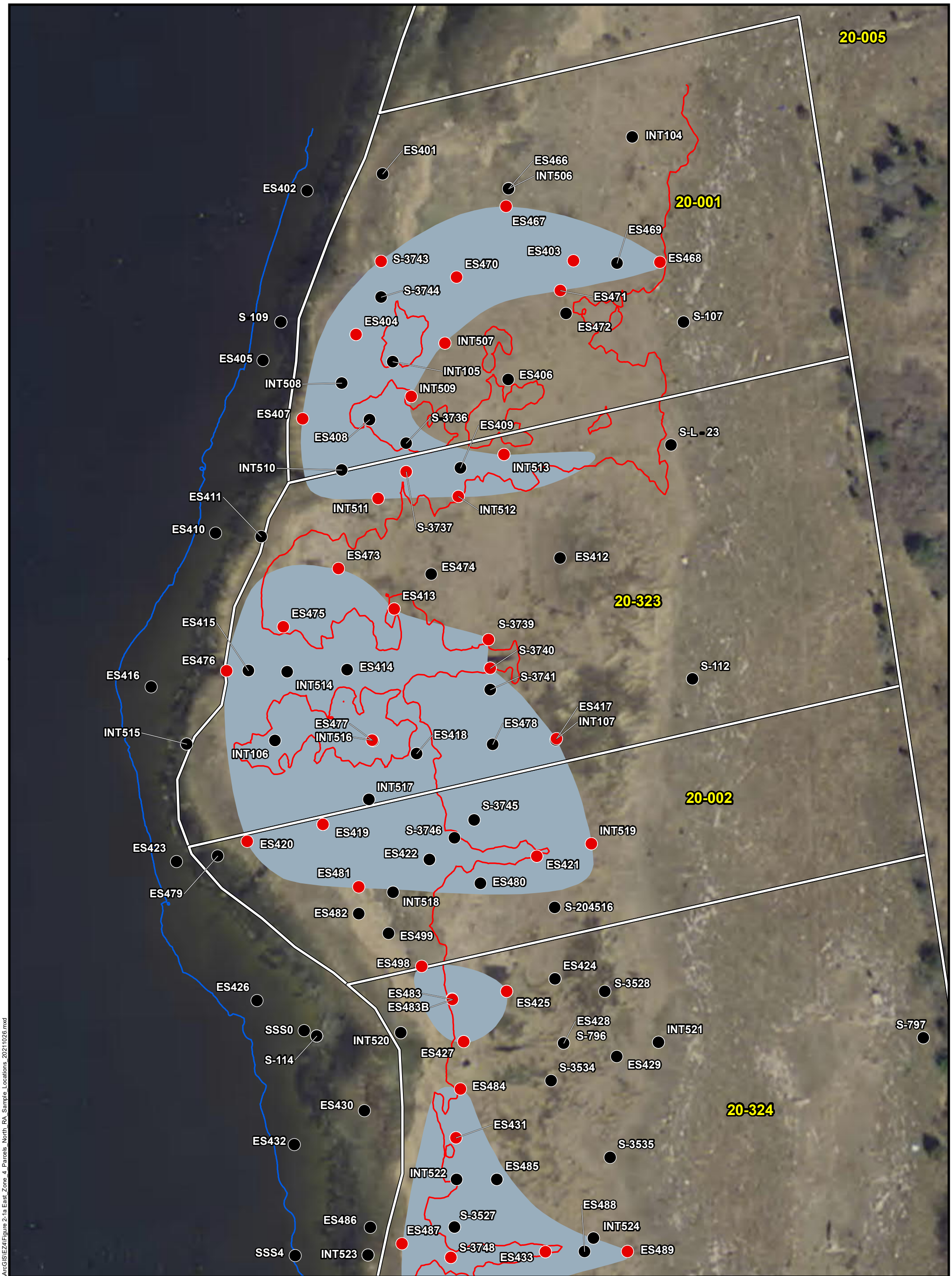
Site Location Map

New Bedford Harbor Superfund Site

NAME: jpiccuito Date: 11/3/2021

Figure 1-2

Path: Y:\NBH\Projects\35BG10011\20211026_EZ4_EZ5_RA_Report_Final\ArcGIS\Figure 1-2 NBH_Site_Map_EZ4_EZ5_RA_Report_20211026.mxd



Legend

- PCB Characterization and Survey Compliance Location
- PCB Characterization Sample Location
- Parcel Boundary
- MHHW (1.99ft)
- MLLW (-1.97ft)
- Proposed Limits of Excavation

Basemap Source: MassGIS 2014 and Nearview 2018

0 50 100 Feet

MHHW Elevations NAVD88 ft. (Nearview, 2018);
MLLW Elevations NADV88 ft. (USACE, Battelle, 2016)

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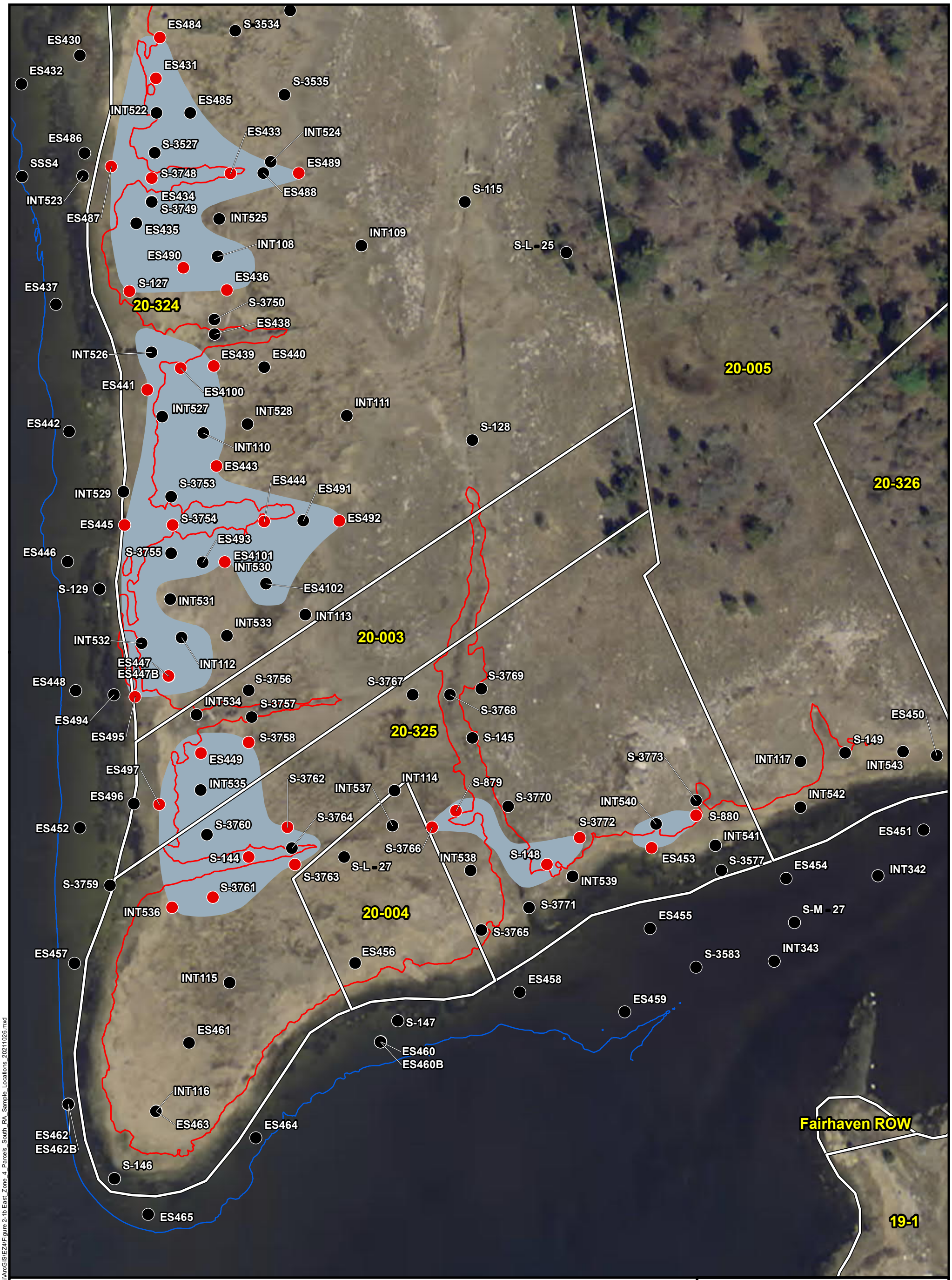
East Zone 4 North
Proposed Excavation Boundaries and PCB Sample Locations

New Bedford Harbor Superfund Site

November 2021 **Figure 2-1a**

Path: Y:\NBH\Projects\35BG1001\20211026_EZ4_EZ5_RA_Report_Final\ArcGIS\EZ4\Figure 2-1a East_Zone_4_Parcels_North_RA_Sample_Locations_20211026.mxd



Legend

- PCB Characterization and Survey Compliance Location
- PCB Characterization Sample Location
- Parcel Boundary
- MHHW (1.99ft)
- MLLW (-1.97ft)
- Proposed Limits of Excavation

ROW = Right of Way

Basemap Source: MassGIS 2014 and Nearview 2018

USGS, MassGIS

0 60 120 Feet

MHHW Elevations NAVD88 ft. (Nearview, 2018);
MLLW Elevations NADV88 ft. (USACE, Battelle, 2016)

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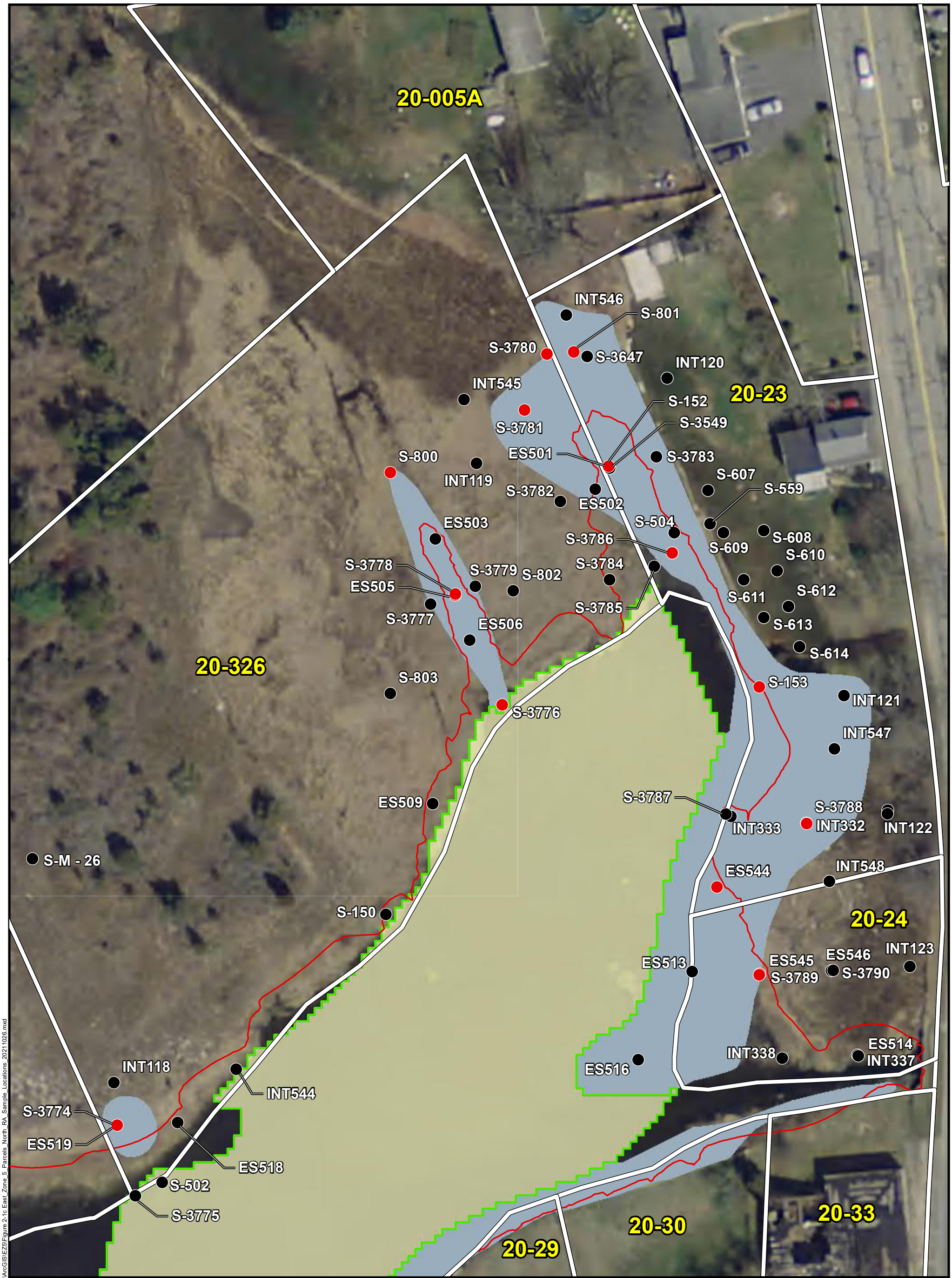
East Zone 4 South
Proposed Excavation Boundaries and PCB Sample Locations

New Bedford Harbor Superfund Site

November 2021 **Figure 2-1b**

Path: Y:\NBH\Projects\35BG100\20211026_EZ4_EZ5_RA_Report_Final\ArcGIS\EZ4\Figure 2-1b East_Zone_4_Parcels_South_RA_Sample_Locations_20211026.mxd



Legend

- PCB Characterization and Survey Compliance Location
- PCB Characterization Sample Location
- Parcel Boundary
- MHHW (1.99ft)
- MLLW (-1.97ft)
- Veranda Inlet
- Proposed Limits of Excavation

MHHW and MLLW Elevations NAVD88 ft. (CEI 2019)

Basemap Source: MassGIS 2014 and CEI 2019

0 40 80 Feet

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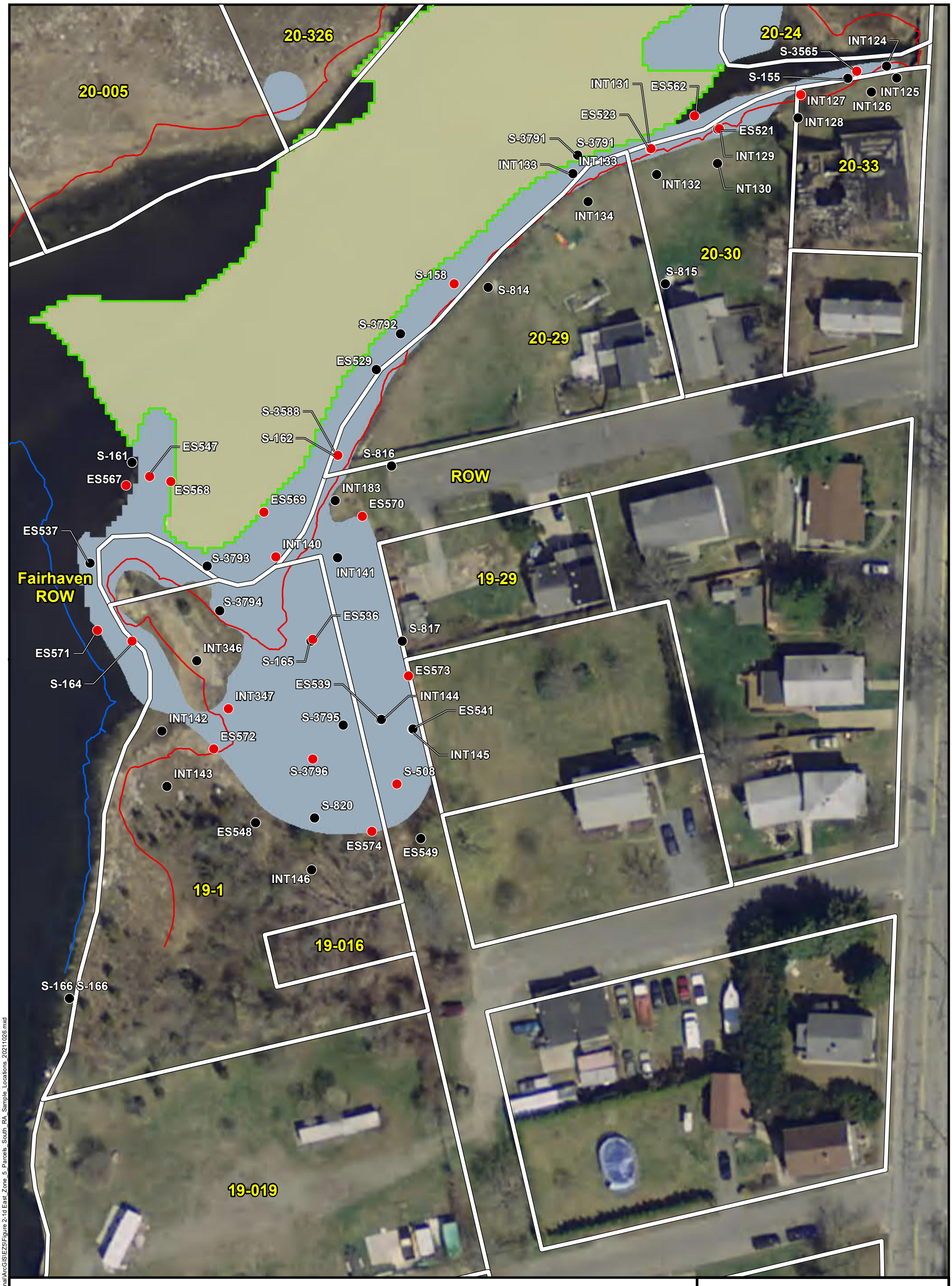
East Zone 5 North
Proposed Excavation Boundaries and PCB Sample Locations

New Bedford Harbor Superfund Site

November 2021

Figure 2-1c

Path: Y:\NBH\Projects\35BG1001\20211026_EZ4_EZ5_RA_Report_Final\ArcGIS\EZ5\Figure 2-1c East_Zone_5_Parcels_North_RA_Sample_Locations_20211026.mxd



Legend

- PCB Characterization and Survey Compliance Location
- PCB Characterization Sample Location
- Proposed Limits of Excavation
- Veranda Inlet
- MHHW (1.99ft)
- MLLW (-1.97ft)
- Parcel Boundary

ROW = Right of Way

MHHW and MLLW Elevations NAVD88 ft. (CEI 2019)

Basemap Source: MassGIS 2014 and CEI 2019

0 40 80 Feet

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East Zone 5 South
Proposed Excavation Boundaries and PCB Sample Locations

New Bedford Harbor Superfund Site

November 2021 **Figure 2-1d**

Path: Y:\NBH\Projects\35BG100\20211026_EZ4_EZ5_RA_Report_Final\ArcGIS\EZ5\Figure 2-1d East_Zone_5_Parcels_South_RA_Sample_Locations_20211026.mxd

Notes:

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

20-001

20-323

20-002

20-324

20-003

20-004

20-325

2

1

0

-1

Legend

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

0 50 100 Feet

November 2021

Basemap Data Source:
Nearview, LLC, MassGIS

Vertical Datum:
NAVD88

East Zone 4 Pre-Excavation Wetland Cover and Topography in Excavation Areas

New Bedford Harbor Superfund Site

Figure 2-2a

Notes:

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

20-005A

20-23

20-326

20-24

20-30

20-33

20-29

Legend

- MHHW (1.99ft)
- MLLW (-1.97ft)
- Veranda Inlet
- 1-foot Contour
- Parcel Boundary
- 0-1' Excavation Depth
- 1-2' Excavation Depth
- 2-3' Excavation Depth
- 3-4' Excavation Depth
- Low Marsh
- Mudflat
- Upland
- High Marsh
- Phragmites

0 40 80 Feet

Basemap Source: MassGIS 2014 and CEI 2019

MHHW and MLLW Elevations NAVD88 ft. (CEI 2019)

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East Zone 5 North
Pre-Excavation Wetland Cover and Topography in Excavation Areas

New Bedford Harbor Superfund Site

November 2021 **Figure 2-2b**

Path: Y:\NBH\Projects\35BG1001\20211026_EZ4_EZ5_RA_Report_Final\ArcGIS\EZ5\Figure 2-2b East_Zone_5_Parcels_North_RA_Wetland_Cover_20211026.mxd

20-326
20-24
20-005
20-33
20-30
20-29
ROW
19-29
Fairhaven ROW
19-1
19-016
19-019

Legend

- MHHW (1.99ft)
- MLLW (-1.97ft)
- Veranda Inlet
- 1-foot Contour
- Parcel Boundary
- 0-1' Excavation Depth
- 1-2' Excavation Depth
- 2-3' Excavation Depth
- Low Marsh
- Mudflat
- Upland
- High Marsh
- Phragmites

Basemap Source: MassGIS 2014 and CEI 2019

0 40 80 Feet

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East Zone 5 South
Pre-Excavation Wetland Cover and Topography in Excavation Areas

New Bedford Harbor Superfund Site

November 2021 **Figure 2-2c**

Path: Y:\NBH\Projects\35BG1001\20211026_EZ4_EZ5_RA_Report_Final\ArcGIS\EZ5\Figure 2-2c East_Zone_5_Parcels_South_RA_Wetland_Cover_20211026.mxd

Legend

- MHHW (1.99 ft. Post-Restoration)
- MLLW (-1.97 ft. Post-Restoration)
- Parcel Boundary
- As-built Limits of Excavation

Compliance Location

- Sidewall Survey Compliance Location
- Floor Survey Compliance Location

0 50 100 Feet

Basemap Data Source: MassGIS, ESRI and Green Seal (Oct. 2021)

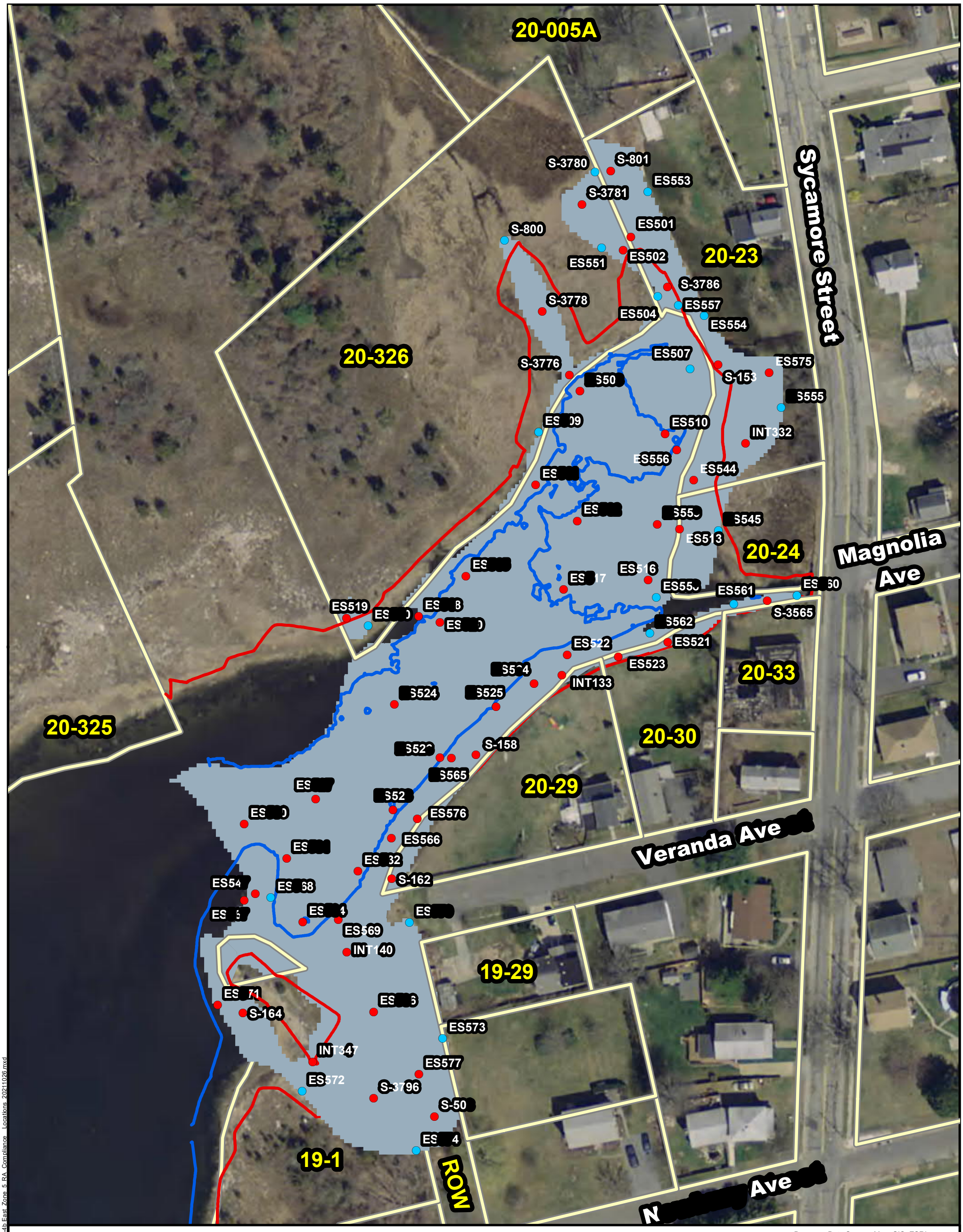
November 2021

Vertical Datum: NAVD88

East Zone 4 Compliance Locations

New Bedford Harbor Superfund Site

Figure 2-4a



Legend

- MHHW (1.99 ft. Post-Restoration)
- MLLW (-1.97 ft. Post-Restoration)
- Parcel Boundary
- As-built Limits of Excavation

Compliance Location

- Sidewall Survey Compliance Location
- Floor Survey Compliance Location

ROW = Right of Way

Basemap Data Source: MassGIS, ESRI

N

0 35 70 Feet

1:840

Basemap Data Source:
Green Seal Oct. 2021, MassGIS

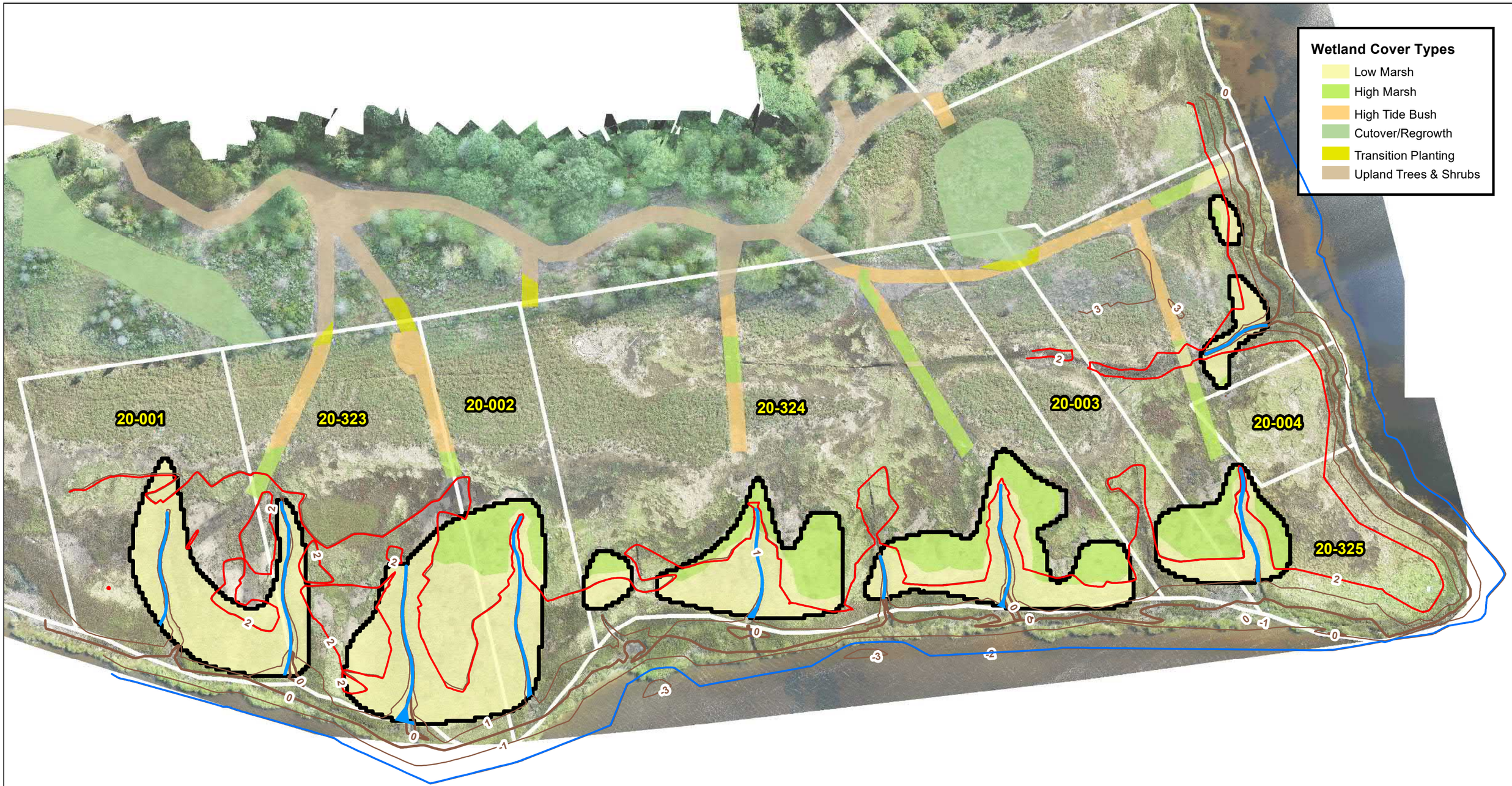
JACOBS®

East Zone 5
Compliance Locations

New Bedford Harbor Superfund Site

November 2021 | Figure 2-4b

Path: Y:\NBH\Projects\35BG1001\202111026_EZ4_EZ5_RA_Report_Final\ArcGIS\EZ5\Figure 2-4b East_Zone_5_RA_Compliance_Locations_20211026.mxd



Legend

- Post-Restoration 1-foot Contours
- Post-Restoration 5-foot Contours
- MHHW (1.99 ft. Post-Restoration)
- MLLW (-1.97 ft. Post-Restoration)
- As-built Limits of Excavation
- Parcel Boundary
- Stream

Restoration Aerial: Green Seal October 2021

Basemap Data Source: MassGIS, ESRI and Green Seal (Oct. 2021)

0 50 100 Feet

November 2021

Vertical Datum: NAVD88

East Zone 4
Post-Excavation and Restoration Record Drawing

New Bedford Harbor Superfund Site

Figure 2-5a

Wetland Cover Types

- Low Marsh
- High Marsh
- High Tide Bush
- Transition Planting
- Upland Trees & Shrubs

20-005A

20-23

20-326

20-24

Storm Outfall

20-30

20-33

20-29

Legend

- Post-Restoration 1-foot Contours
- Post-Restoration 5-foot Contours
- MHHW (1.99 ft. Post-Restoration)
- MLLW (-1.97 ft. Post-Restoration)
- As-built Limits of Excavation
- Parcel Boundary
- Stream

Basemap Source: MassGIS 2014 and Green Seal Oct. 2021

0 40 80 Feet

MHHW and MLLW Elevations NAVD88 ft. (Green Seal 2021)

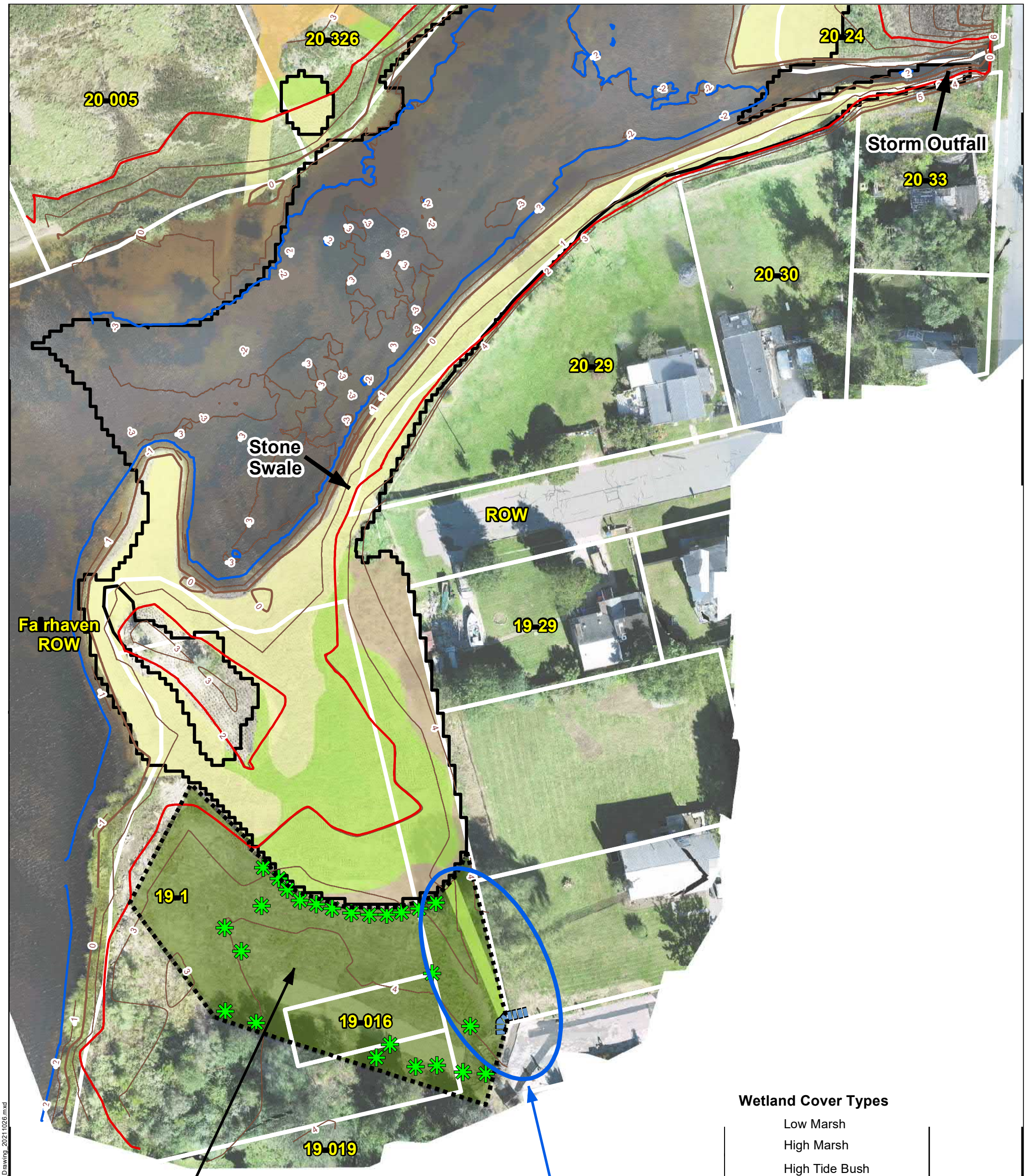
JACOBS™

East Zone 5 North Post-Excavation and Restoration Record Drawing

New Bedford Harbor Superfund Site

November 2021 **Figure 2-5b**

Path: Y:\NBH\Projects\35BG100\20211026_EZ4_EZ5_RA_Report_Final\ArcGIS\EZ5\Figure 2-5b East_Zone_5_Parcels_North_RA_Record_Drawing_20211026.mxd



Wetland Cover Types

- Low Marsh
- High Marsh
- High Tide Bush
- Transition Planting
- Upland Trees & Shrubs

Legend

- Post-Restoration 1-foot Contours
- Post-Restoration 5-foot Contours
- MHHW (1.99 ft. Post-Restoration)
- MLLW (-1.97 ft. Post-Restoration)
- **ROW = Right of Way**
- As-built Limits of Excavation
- Parcel Boundary
- Landscape Tree and Shrub Planting
- Bioswale

MHHW and MLLW Elevations NAVD88 ft. (Green Seal 2021)

Basemap Source: MassGIS 2014 and Green Seal Oct. 2021

0 40 80 Feet

JACOBS™

East Zone 5 South
Post-Excavation and Restoration Record Drawing

New Bedford Harbor Superfund Site

November 2021 **Figure 2-5c**

Path: Y:\NBH\Projects\35BG1001\20211026_EZ4_EZ5_RA_Report_Final\ArcGIS\EZ5\Figure 2-5c East_Zone_5_Parcels_South_RA_Record_Drawing_20211026.mxd

Tables

Table 2-1a
East Zone 4 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-001	S-ES401-18FSP14-00-10	ES401	0.0	1.0	11/15/2018	Aroclor 1254 - Immunoassay	5.8	J
20-001	S-ES402-18FSP14-00-10	ES402	0.0	1.0	11/14/2018	Aroclor 1254 - Immunoassay	1	J
20-001	S-ES403-18FSP14-00-10	ES403	0.0	1.0	11/15/2018	Aroclor 1254 - Immunoassay	97	JD
20-001	S-ES403-18FSP14-10-20	ES403	1.0	2.0	11/15/2018	Total 209 PCB cong (excl non-detects)	18.7	
20-001	S-ES404-18FSP14-00-10	ES404	0.0	1.0	11/16/2018	Total 209 PCB cong (excl non-detects)	105	
20-001	S-ES404-18FSP14-10-20	ES404	1.0	2.0	11/16/2018	Total 209 PCB cong (excl non-detects)	4.52	
20-001	S-ES405-18FSP14-00-10	ES405	0.0	1.0	11/14/2018	Aroclor 1254 - Immunoassay	0.96	J
20-001	S-ES406-18FSP14-00-10	ES406	0.0	1.0	11/16/2018	Aroclor 1254 - Immunoassay	22	JD
20-001	S-ES407-18FSP14-00-10	ES407	0.0	1.0	11/28/2018	Total 209 PCB cong (excl non-detects)	19.7	
20-001	S-ES408-18FSP14-00-10	ES408	0.0	1.0	11/16/2018	Total 209 PCB cong (excl non-detects)	86.9	
20-001	S-ES408-18FSP14-10-20	ES408	1.0	2.0	11/16/2018	Aroclor 1254 - Immunoassay	5.6	
20-001	S-ES466-18FSP14-00-10	ES466	0.0	1.0	1/10/2019	Aroclor 1254 - Immunoassay	9.7	J
20-001	S-ES467-18FSP14-00-10	ES467	0.0	1.0	1/10/2019	Total 209 PCB cong (excl non-detects)	36.6	
20-001	S-ES468-18FSP14-00-10	ES468	0.0	1.0	1/10/2019	Total 209 PCB cong (excl non-detects)	6.76	
20-001	S-ES469-18FSP14-00-10	ES469	0.0	1.0	1/10/2019	Total 209 PCB cong (excl non-detects)	162	
20-001	S-ES470-18FSP14-10-20	ES470	1.0	2.0	1/31/2019	Total 209 PCB cong (excl non-detects)	7.28	
20-001	S-ES471-18FSP14-00-10	ES471	0.0	1.0	1/10/2019	Total 209 PCB cong (excl non-detects)	41	
20-001	S-ES472-18FSP14-00-10	ES472	0.0	1.0	1/10/2019	Aroclor 1254 - Immunoassay	2.8	J
20-001	S-15Y-INT104-00-10	INT104	0.0	1.0	5/1/2015	Aroclor 1254 - Immunoassay	6.50	D
20-001	S-15Y-INT104-10-20	INT104	1.0	2.0	5/1/2015	Aroclor 1254 - Immunoassay	0.50	U
20-001	S-15Y-INT105-00-10	INT105	0.0	1.0	5/1/2015	Aroclor 1254 - Immunoassay	81.7	D
20-001	S-15Y-INT105-10-20	INT105	1.0	2.0	5/1/2015	Aroclor 1254 - Immunoassay	0.50	U
20-001	S-17Y-INT506-10-20	INT506	1.0	2.0	5/12/2017	Aroclor 1254 - Immunoassay	0.5	U
20-001	S-17Y-INT507-00-10	INT507	0.0	1.0	5/12/2017	Total 139 PCB cong (excl non-detects)	37	
20-001	S-17Y-INT507-10-20	INT507	1.0	2.0	5/12/2017	Aroclor 1254 - Immunoassay	0.5	U
20-001	S-17Y-INT508-00-10	INT508	0.0	1.0	5/12/2017	Aroclor 1254 - Immunoassay	327	D
20-001	S-17Y-INT508-10-20	INT508	1.0	2.0	5/12/2017	Aroclor 1254 - Immunoassay	0.5	U
20-001	S-17Y-INT509-00-10	INT509	0.0	1.0	5/12/2017	Total 139 PCB cong (excl non-detects)	44	
20-001	S-17Y-INT509-10-20	INT509	1.0	2.0	5/12/2017	Aroclor 1254 - Immunoassay	0.5	U
20-001	S-17Y-INT510-00-10	INT510	0.0	1.0	5/12/2017	Aroclor 1254 - Immunoassay	129	D
20-001	S-17Y-INT510-10-20	INT510	1.0	2.0	5/12/2017	Aroclor 1254 - Immunoassay	0.7	
20-001	S-0107-1	S-107	0.0	1.0	9/22/1999	Total 18 NOAA PCB cong (excl non-detects)	0.068	
20-001	S-0107-2	S-107	1.0	2.0	9/22/1999	Total 18 NOAA PCB cong (excl non-detects)	0	U

Table 2-1a
East Zone 4 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-001	S-0109-1	S-109	0.0	1.0	9/22/1999	Total 18 NOAA PCB cong (excl non-detects)	0.78	
20-001	S-0109-2	S-109	1.0	2.0	9/22/1999	Total 18 NOAA PCB cong (excl non-detects)	0.39	
20-001	S-0109-3	S-109	2.0	3.0	9/22/1999	Total 18 NOAA PCB cong (excl non-detects)	0.22	
20-001	S-3736-1.0-1.5	S-3736	1.0	1.5	11/8/2001	Total 18 NOAA PCB cong (excl non-detects)	1.53	
20-001	S-3743-0.0-.5	S-3743	0.0	0.5	11/8/2001	Total 18 NOAA PCB cong (excl non-detects)	10.4	
20-001	S-3743-.5-1.0	S-3743	0.5	1.0	11/8/2001	Total 18 NOAA PCB cong (excl non-detects)	6.50	
20-001	S-3744-1.0-1.5	S-3744	1.0	1.5	11/8/2001	Total 18 NOAA PCB cong (excl non-detects)	11.7	
20-002	S-ES419-18FSP14-00-10	ES419	0.0	1.0	12/4/2018	Total 209 PCB cong (excl non-detects)	58.7	
20-002	S-ES419-18FSP14-10-20	ES419	1.0	2.0	12/4/2018	Total 209 PCB cong (excl non-detects)	2.21	
20-002	S-ES419-18FSP14-20-30	ES419	2.0	3.0	12/4/2018	Aroclor 1254 - Immunoassay	0.6	JB
20-002	S-ES420-18FSP14-00-10	ES420	0.0	1.0	12/4/2018	Total 209 PCB cong (excl non-detects)	15.8	
20-002	S-ES421-18FSP14-00-10	ES421	0.0	1.0	11/28/2018	Total 209 PCB cong (excl non-detects)	186	
20-002	S-ES421-18FSP14-10-20	ES421	1.0	2.0	11/28/2018	Total 209 PCB cong (excl non-detects)	31.1	
20-002	S-ES421-18FSP14-20-30	ES421	2.0	3.0	11/28/2018	Aroclor 1254 - Immunoassay	0.84	J
20-002	S-ES422-18FSP14-00-10	ES422	0.0	1.0	11/29/2018	Aroclor 1254 - Immunoassay	100	JD
20-002	S-ES422-18FSP14-10-20	ES422	1.0	2.0	11/29/2018	Aroclor 1254 - Immunoassay	5.6	J
20-002	S-ES422-18FSP14-20-30	ES422	2.0	3.0	11/29/2018	Aroclor 1254 - Immunoassay	1.5	J
20-002	S-ES423-18FSP14-00-10	ES423	0.0	1.0	12/4/2018	Aroclor 1254 - Immunoassay	0.82	J
20-002	S-ES426-18FSP14-00-10	ES426	0.0	1.0	11/14/2018	Aroclor 1254 - Immunoassay	0.64	J
20-002	S-ES479-18FSP14-00-10	ES479	0.0	1.0	1/31/2019	Total 209 PCB cong (excl non-detects)	13.4	
20-002	S-ES479R-18FSP14-00-10-REP	ES479	0.0	1.0	1/31/2019	Total 209 PCB cong (excl non-detects)	14.6	
20-002	S-ES480-18FSP14-00-10	ES480	0.0	1.0	1/16/2019	Total 209 PCB cong (excl non-detects)	107	
20-002	S-ES481-18FSP14-00-10	ES481	0.0	1.0	1/16/2019	Total 209 PCB cong (excl non-detects)	7.76	
20-002	S-ES482-18FSP14-00-10	ES482	0.0	1.0	1/16/2019	Aroclor 1254 - Immunoassay	7.4	J
20-002	S-ES498-18FSP14-00-10	ES498	0.0	1.0	3/19/2019	Total 209 PCB cong (excl non-detects)	6.24	
20-002	S-ES499-18FSP14-00-10	ES499	0.0	1.0	3/19/2019	Total 209 PCB cong (excl non-detects)	4.88	
20-002	S-17Y-INT518-00-10	INT518	0.0	1.0	5/11/2017	Aroclor 1254 - Immunoassay	2.18	
20-002	S-17Y-INT518-10-20	INT518	1.0	2.0	5/11/2017	Aroclor 1254 - Immunoassay	0.5	U
20-002	S-17Y-INT519-00-10	INT519	0.0	1.0	5/11/2017	Total 139 PCB cong (excl non-detects)	38	
20-002	S-17Y-INT519-10-20	INT519	1.0	2.0	5/11/2017	Aroclor 1254 - Immunoassay	0.5	U
20-002	S-204516	S-204516	0.0	1.0	pre-ROD	Total PCB Congeners (sum CONG x factor)[1]	3.00	
20-002	S-3745-0.0-1.0	S-3745	0.0	1.0	11/12/2001	Total 18 NOAA PCB cong (excl non-detects)	442	

Table 2-1a
East Zone 4 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-002	S-3745-1.0-2.0	S-3745	1.0	2.0	11/9/2001	Total 18 NOAA PCB cong (excl non-detects)	1.20	
20-002	S-3746-1.5-2.0	S-3746	1.5	2.0	11/9/2001	Total 18 NOAA PCB cong (excl non-detects)	4.42	
20-003	S-ES449-18FSP14-00-10	ES449	0.0	1.0	11/30/2018	Total 209 PCB cong (excl non-detects)	58.7	
20-003	S-ES449-18FSP14-10-20	ES449	1.0	2.0	11/30/2018	Total 209 PCB cong (excl non-detects)	6.07	
20-003	S-ES452-18FSP14-00-10	ES452	0.0	1.0	11/14/2018	Aroclor 1254 - Immunoassay	0.3	J
20-003	S-ES496-18FSP14-00-10	ES496	0.0	1.0	1/31/2019	Total 209 PCB cong (excl non-detects)	1.51	
20-003	S-ES497-18FSP14-00-10	ES497	0.0	1.0	1/24/2019	Total 209 PCB cong (excl non-detects)	19.2	
20-003	S-17Y-INT534-00-10	INT534	0.0	1.0	5/10/2017	Aroclor 1254 - Immunoassay	9.80	
20-003	S-17Y-INT534-10-20	INT534	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-003	S-17Y-INT535-00-10	INT535	0.0	1.0	5/10/2017	Total 139 PCB cong (excl non-detects)	160	
20-003	S-17Y-INT535-10-20	INT535	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-003	S-3756-0.0-1.0	S-3756	0.0	1.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	13.8	
20-003	S-3757-1.0-1.5	S-3757	1.0	1.5	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	6.24	
20-003	S-3758-0.0-1.0	S-3758	0.0	1.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	24.7	
20-003	S-3758-1.0-2.0	S-3758	1.0	2.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	0.36	
20-003	S-3758-2.0-2.3	S-3758	2.0	2.3	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	0.06	
20-004	S-ES456-18FSP14-00-10	ES456	0.0	1.0	12/6/2018	Total 209 PCB cong (excl non-detects)	28.8	
20-004	S-ES456-18FSP14-10-20	ES456	1.0	2.0	12/6/2018	Aroclor 1254 - Immunoassay	1.52	
20-004	S-ES460-18FSP14-00-10	ES460	0.0	1.0	11/15/2018	Aroclor 1254 - Immunoassay	0.82	J
20-004	S-ES460B-18FSP14-00-10	ES460B	0.0	1.0	12/11/2018	Aroclor 1254 - Immunoassay	0.79	JB
20-004	S-ES460B-18FSP14-10-20	ES460B	1.0	2.0	12/11/2018	Aroclor 1254 - Immunoassay	0.5	JB
20-004	S-ES460B-18FSP14-20-30	ES460B	2.0	3.0	12/11/2018	Aroclor 1254 - Immunoassay	0.41	J
20-004	S-ES460B-18FSP14-30-31	ES460B	3.0	3.1	12/11/2018	Aroclor 1254 - Immunoassay	0.51	JB
20-004	S-17Y-INT537-00-10	INT537	0.0	1.0	5/10/2017	Aroclor 1254 - Immunoassay	18.9	D
20-004	S-17Y-INT537-10-20	INT537	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-004	S-0147-1	S-147	0.0	1.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	0.416	
20-004	S-0147-2	S-147	1.0	2.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-004	S-0147-3	S-147	2.0	3.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-004	S-L - 27	S-L - 27	0.0	1.0	pre-ROD	Total PCB Congeners (sum CONG x factor)[1]	26.0	
20-005	S-ES450-18FSP14-00-10	ES450	0.0	1.0	12/6/2018	Total 209 PCB cong (excl non-detects)	10.8	
20-005	S-ES451-18FSP14-00-10	ES451	0.0	1.0	12/4/2018	Aroclor 1254 - Immunoassay	9.4	J
20-005	S-ES454-18FSP14-00-10	ES454	0.0	1.0	12/4/2018	Aroclor 1254 - Immunoassay	4.2	J

Table 2-1a
East Zone 4 Pre-Excavation PCB Characterization Sample Results

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-15Y-INT117-00-10	INT117	0.0	1.0	5/4/2015	Total 139 PCB cong (excl non-detects)	18	
20-005	S-15Y-INT117-10-20	INT117	1.0	2.0	5/4/2015	Aroclor 1254 - Immunoassay	0.50	U
20-005	S-16U-INT342-00-10	INT342	0.0	1.0	6/2/2016	Aroclor 1254 - Immunoassay	8.20	D
20-005	S-16U-INT342-10-20	INT342	1.0	2.0	6/2/2016	Aroclor 1254 - Immunoassay	0.50	U
20-005	S-17Y-INT542-00-10	INT542	0.0	1.0	5/9/2017	Aroclor 1254 - Immunoassay	3.10	
20-005	S-17Y-INT542-10-20	INT542	1.0	2.0	5/9/2017	Aroclor 1254 - Immunoassay	0.5	U
20-005	S-17Y-INT543-00-10	INT543	0.0	1.0	5/9/2017	Total 139 PCB cong (excl non-detects)	38	
20-005	S-17Y-INT543-10-20	INT543	1.0	2.0	5/9/2017	Aroclor 1254 - Immunoassay	0.5	U
20-005	S-0149-1	S-149	0.0	1.0	9/10/1999	Total 18 NOAA PCB cong (excl non-detects)	2.50	
20-005	S-0149-2	S-149	1.0	2.0	9/10/1999	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-323	S-ES409-18FSP14-00-10	ES409	0.0	1.0	11/30/2018	Total 209 PCB cong (excl non-detects)	57.8	J+
20-323	S-ES409-18FSP14-10-18	ES409	1.0	1.8	11/30/2018	Aroclor 1254 - Immunoassay	0.5	U
20-323	S-ES410-18FSP14-00-10	ES410	0.0	1.0	11/14/2018	Aroclor 1254 - Immunoassay	1.9	J
20-323	S-ES411-18FSP14-00-10	ES411	0.0	1.0	11/28/2018	Total 209 PCB cong (excl non-detects)	12.4	
20-323	S-ES412-18FSP14-00-10	ES412	0.0	1.0	11/16/2018	Aroclor 1254 - Immunoassay	6.5	J
20-323	S-ES413-18FSP14-00-10	ES413	0.0	1.0	11/16/2018	Total 209 PCB cong (excl non-detects)	36.8	
20-323	S-ES413-18FSP14-10-20	ES413	1.0	2.0	11/16/2018	Total 209 PCB cong (excl non-detects)	1.34	
20-323	S-ES414-18FSP14-00-10	ES414	0.0	1.0	11/30/2018	Total 209 PCB cong (excl non-detects)	424	J+
20-323	S-ES414-18FSP14-10-18	ES414	1.0	1.8	11/30/2018	Aroclor 1254 - Immunoassay	1.4	
20-323	S-ES415-18FSP14-00-10	ES415	0.0	1.0	11/30/2018	Total 209 PCB cong (excl non-detects)	100	J+
20-323	S-ES415-18FSP14-10-20	ES415	1.0	2.0	11/30/2018	Aroclor 1254 - Immunoassay	0.5	U
20-323	S-ES416-18FSP14-00-10	ES416	0.0	1.0	11/14/2018	Aroclor 1254 - Immunoassay	1.4	J
20-323	S-ES417-18FSP14-00-10	ES417	0.0	1.0	11/16/2018	Total 209 PCB cong (excl non-detects)	16.6	
20-323	S-ES418-18FSP14-00-10	ES418	0.0	1.0	11/16/2018	Total 209 PCB cong (excl non-detects)	64.1	
20-323	S-ES418-18FSP14-10-20	ES418	1.0	2.0	11/16/2018	Aroclor 1254 - Immunoassay	0.75	
20-323	S-ES473-18FSP14-00-10	ES473	0.0	1.0	1/10/2019	Total 209 PCB cong (excl non-detects)	25	
20-323	S-ES474-18FSP14-00-10	ES474	0.0	1.0	1/10/2019	Aroclor 1254 - Immunoassay	9.7	J
20-323	S-ES475-18FSP14-10-20	ES475	1.0	2.0	1/31/2019	Total 209 PCB cong (excl non-detects)	13.1	
20-323	S-ES476-18FSP14-00-10	ES476	0.0	1.0	1/31/2019	Total 209 PCB cong (excl non-detects)	7.16	
20-323	S-ES477-18FSP14-10-20	ES477	1.0	2.0	1/31/2019	Total 209 PCB cong (excl non-detects)	1.78	
20-323	S-ES478-18FSP14-00-10	ES478	0.0	1.0	1/16/2019	Total 209 PCB cong (excl non-detects)	75.2	J+
20-323	S-15Y-INT106-00-10	INT106	0.0	1.0	5/1/2015	Aroclor 1254 - Immunoassay	79.6	D
20-323	S-15Y-INT106-10-20	INT106	1.0	2.0	5/1/2015	Aroclor 1254 - Immunoassay	0.50	U

Table 2-1a
East Zone 4 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-323	S-15Y-INT107-10-20	INT107	1.0	2.0	5/1/2015	Aroclor 1254 - Immunoassay	0.50	U
20-323	S-17Y-INT511-00-10	INT511	0.0	1.0	5/12/2017	Total 139 PCB cong (excl non-detects)	36	
20-323	S-17Y-INT511-10-20	INT511	1.0	2.0	5/12/2017	Aroclor 1254 - Immunoassay	0.5	U
20-323	S-17Y-INT512-00-10	INT512	0.0	1.0	5/12/2017	Total 139 PCB cong (excl non-detects)	18	
20-323	S-17Y-INT512-10-20	INT512	1.0	2.0	5/12/2017	Aroclor 1254 - Immunoassay	0.6	
20-323	S-17Y-INT513-00-10	INT513	0.0	1.0	5/12/2017	Total 139 PCB cong (excl non-detects)	27	
20-323	S-17Y-INT513-10-20	INT513	1.0	2.0	5/12/2017	Aroclor 1254 - Immunoassay	0.5	U
20-323	S-17Y-INT514-00-10	INT514	0.0	1.0	5/12/2017	Aroclor 1254 - Immunoassay	221	D
20-323	S-17Y-INT514-10-20	INT514	1.0	2.0	5/12/2017	Aroclor 1254 - Immunoassay	1.12	
20-323	S-17Y-INT515-00-10	INT515	0.0	1.0	5/11/2017	Aroclor 1254 - Immunoassay	3.00	J
20-323	S-17Y-INT515-00-10-REP	INT515	0.0	1.0	5/11/2017	Aroclor 1254 - Immunoassay	9.68	J
20-323	S-17Y-INT515-10-20	INT515	1.0	2.0	5/11/2017	Aroclor 1254 - Immunoassay	0.5	U
20-323	S-17Y-INT515-10-20-REP	INT515	1.0	2.0	5/11/2017	Aroclor 1254 - Immunoassay	0.5	U
20-323	S-17Y-INT516-00-10	INT516	0.0	1.0	5/11/2017	Aroclor 1254 - Immunoassay	126	D
20-323	S-17Y-INT517-00-10	INT517	0.0	1.0	5/11/2017	Total 139 PCB cong (excl non-detects)	74	
20-323	S-17Y-INT517-10-20	INT517	1.0	2.0	5/11/2017	Aroclor 1254 - Immunoassay	0.5	U
20-323	S-0112-1	S-112	0.0	1.0	9/22/1999	Total 18 NOAA PCB cong (excl non-detects)	0.088	
20-323	S-0112-2	S-112	1.0	2.0	9/22/1999	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-323	S-3737-0.0-1.0	S-3737	0.0	1.0	11/15/2001	Total 18 NOAA PCB cong (excl non-detects)	624	
20-323	S-3737-1.0-2.0	S-3737	1.0	2.0	11/15/2001	Total 18 NOAA PCB cong (excl non-detects)	12.7	
20-323	S-3737-2.0-3.0	S-3737	2.0	3.0	11/15/2001	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-323	S-3739-0.0-1.0	S-3739	0.0	1.0	11/12/2001	Total 18 NOAA PCB cong (excl non-detects)	49.4	
20-323	S-3739-1.0-2.0	S-3739	1.0	2.0	11/9/2001	Total 18 NOAA PCB cong (excl non-detects)	2.44	
20-323	S-3740-0.0-1.0	S-3740	0.0	1.0	11/16/2001	Total 18 NOAA PCB cong (excl non-detects)	8.84	
20-323	S-3740-1.0-2.0	S-3740	1.0	2.0	11/15/2001	Total 18 NOAA PCB cong (excl non-detects)	2.24	
20-323	S-3740-2.0-3.0	S-3740	2.0	3.0	11/15/2001	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-323	S-3741-1.5-2.0	S-3741	1.5	2.0	11/9/2001	Total 18 NOAA PCB cong (excl non-detects)	2.86	
20-323	S-3741-2.0-2.5	S-3741	2.0	2.5	11/9/2001	Total 18 NOAA PCB cong (excl non-detects)	0.86	
20-323	S-L - 23	S-L - 23	0.0	1.0	pre-ROD	Total PCB Congeners (sum CONG x factor)[1]	18.0	
20-324	S-ES4100-18FSP14-10-20	ES4100	1.0	2.0	3/19/2019	Total 209 PCB cong (excl non-detects)	3.05	
20-324	S-ES4101-18FSP14-00-10	ES4101	0.0	1.0	3/19/2019	Total 209 PCB cong (excl non-detects)	12.3	
20-324	S-ES4102-18FSP14-00-10	ES4102	0.0	1.0	3/19/2019	Total 209 PCB cong (excl non-detects)	76	

Table 2-1a
East Zone 4 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-324	S-ES424-18FSP14-00-10	ES424	0.0	1.0	11/30/2018	Total 209 PCB cong (excl non-detects)	46	J+
20-324	S-ES424-18FSP14-10-20	ES424	1.0	2.0	11/30/2018	Aroclor 1254 - Immunoassay	2.7	J
20-324	S-ES424-18FSP14-20-30	ES424	2.0	3.0	11/30/2018	Aroclor 1254 - Immunoassay	0.52	J
20-324	S-ES425-18FSP14-00-10	ES425	0.0	1.0	11/29/2018	Total 209 PCB cong (excl non-detects)	29.5	
20-324	S-ES425-18FSP14-10-20	ES425	1.0	2.0	11/29/2018	Total 209 PCB cong (excl non-detects)	3.13	
20-324	S-ES425-18FSP14-20-30	ES425	2.0	3.0	11/29/2018	Aroclor 1254 - Immunoassay	0.78	J
20-324	S-ES427-18FSP14-00-10	ES427	0.0	1.0	11/30/2018	Total 209 PCB cong (excl non-detects)	33.7	J+
20-324	S-ES427-18FSP14-10-20	ES427	1.0	2.0	11/30/2018	Aroclor 1254 - Immunoassay	6.7	J
20-324	S-ES427-18FSP14-20-30	ES427	2.0	3.0	11/30/2018	Aroclor 1254 - Immunoassay	0.92	J
20-324	S-ES428-18FSP14-00-10	ES428	0.0	1.0	11/28/2018	Total 209 PCB cong (excl non-detects)	49.6	
20-324	S-ES429-18FSP14-00-10	ES429	0.0	1.0	11/28/2018	Total 209 PCB cong (excl non-detects)	0.391	
20-324	S-ES430-18FSP14-00-10	ES430	0.0	1.0	12/6/2018	Aroclor 1254 - Immunoassay	24	JD
20-324	S-ES431-18FSP14-00-10	ES431	0.0	1.0	11/28/2018	Total 209 PCB cong (excl non-detects)	73.6	
20-324	S-ES431-18FSP14-10-20	ES431	1.0	2.0	11/28/2018	Total 209 PCB cong (excl non-detects)	3.27	
20-324	S-ES432-18FSP14-00-10	ES432	0.0	1.0	11/14/2018	Aroclor 1254 - Immunoassay	0.34	J
20-324	S-ES433-18FSP14-00-10	ES433	0.0	1.0	11/30/2018	Total 209 PCB cong (excl non-detects)	208	J+
20-324	S-ES433-18FSP14-10-20	ES433	1.0	2.0	11/30/2018	Total 209 PCB cong (excl non-detects)	13.1	
20-324	S-ES433-18FSP14-20-30	ES433	2.0	3.0	11/30/2018	Aroclor 1254 - Immunoassay	0.7	J
20-324	S-ES434-18FSP14-10-20	ES434	1.0	2.0	11/30/2018	Total 209 PCB cong (excl non-detects)	7.01	
20-324	S-ES434-18FSP14-20-30	ES434	2.0	3.0	11/30/2018	Total 209 PCB cong (excl non-detects)	37.4	
20-324	S-ES434-18FSP14-30-40	ES434	3.0	4.0	11/30/2018	Aroclor 1254 - Immunoassay	0.5	U
20-324	S-ES435-18FSP14-00-10	ES435	0.0	1.0	12/6/2018	Total 209 PCB cong (excl non-detects)	68.8	
20-324	S-ES435-18FSP14-10-20	ES435	1.0	2.0	12/6/2018	Aroclor 1254 - Immunoassay	2.1	J
20-324	S-ES435-18FSP14-20-30	ES435	2.0	3.0	12/6/2018	Aroclor 1254 - Immunoassay	3.5	J
20-324	S-ES436-18FSP14-00-10	ES436	0.0	1.0	11/28/2018	Total 209 PCB cong (excl non-detects)	23	
20-324	S-ES437-18FSP14-00-10	ES437	0.0	1.0	12/11/2018	Aroclor 1254 - Immunoassay	0.56	JB
20-324	S-ES438-18FSP14-00-10	ES438	0.0	1.0	12/5/2018	Aroclor 1254 - Immunoassay	13	J
20-324	S-ES438-18FSP14-10-20	ES438	1.0	2.0	12/5/2018	Aroclor 1254 - Immunoassay	3.5	J
20-324	S-ES438-18FSP14-20-30	ES438	2.0	3.0	12/5/2018	Aroclor 1254 - Immunoassay	0.82	J
20-324	S-ES439-18FSP14-00-10	ES439	0.0	1.0	12/5/2018	Total 209 PCB cong (excl non-detects)	32.6	
20-324	S-ES439-18FSP14-10-20	ES439	1.0	2.0	12/5/2018	Total 209 PCB cong (excl non-detects)	6.62	
20-324	S-ES439-18FSP14-20-30	ES439	2.0	3.0	12/5/2018	Aroclor 1254 - Immunoassay	0.82	J
20-324	S-ES440-18FSP14-00-10	ES440	0.0	1.0	11/30/2018	Total 209 PCB cong (excl non-detects)	13.3	J+

Table 2-1a
East Zone 4 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-324	S-ES440-18FSP14-10-20	ES440	1.0	2.0	11/30/2018	Aroclor 1254 - Immunoassay	2.7	J
20-324	S-ES440-18FSP14-20-30	ES440	2.0	3.0	11/30/2018	Aroclor 1254 - Immunoassay	0.6	JB
20-324	S-ES441-18FSP14-00-10	ES441	0.0	1.0	11/30/2018	Total 209 PCB cong (excl non-detects)	15	
20-324	S-ES442-18FSP14-00-10	ES442	0.0	1.0	12/4/2018	Aroclor 1254 - Immunoassay	0.86	J
20-324	S-ES443-18FSP14-00-10	ES443	0.0	1.0	11/28/2018	Total 209 PCB cong (excl non-detects)	35.4	
20-324	S-ES444-18FSP14-00-10	ES444	0.0	1.0	11/29/2018	Total 209 PCB cong (excl non-detects)	152	J+
20-324	S-ES444-18FSP14-10-20	ES444	1.0	2.0	11/29/2018	Total 209 PCB cong (excl non-detects)	15.2	
20-324	S-ES444-18FSP14-20-30	ES444	2.0	3.0	11/29/2018	Aroclor 1254 - Immunoassay	0.98	J
20-324	S-ES445-18FSP14-00-10	ES445	0.0	1.0	12/6/2018	Total 209 PCB cong (excl non-detects)	39.9	
20-324	S-ES446-18FSP14-00-10	ES446	0.0	1.0	12/11/2018	Aroclor 1254 - Immunoassay	0.26	J
20-324	S-ES447-18FSP14-00-10	ES447	0.0	1.0	11/29/2018	Total 209 PCB cong (excl non-detects)	175	J+
20-324	S-ES447-18FSP14-10-20	ES447	1.0	2.0	11/29/2018	Total 209 PCB cong (excl non-detects)	59.6	
20-324	S-ES447B-18FSP14-20-30	ES447B	2.0	3.0	3/19/2019	Total 209 PCB cong (excl non-detects)	0.0801	
20-324	S-ES448-18FSP14-00-10	ES448	0.0	1.0	12/11/2018	Aroclor 1254 - Immunoassay	0.64	JB
20-324	S-ES483-18FSP14-00-10	ES483	0.0	1.0	1/16/2019	Total 209 PCB cong (excl non-detects)	58	J+
20-324	S-ES483B-18FSP14-10-20	ES483B	1.0	2.0	3/19/2019	Total 209 PCB cong (excl non-detects)	1.92	
20-324	S-ES484-18FSP14-00-10	ES484	0.0	1.0	1/16/2019	Total 209 PCB cong (excl non-detects)	47.4	J+
20-324	S-ES485-18FSP14-10-20	ES485	1.0	2.0	1/31/2019	Total 209 PCB cong (excl non-detects)	1.35	
20-324	S-ES485-18FSP14-20-30	ES485	2.0	3.0	1/31/2019	Total 209 PCB cong (excl non-detects)	0.124	
20-324	S-ES485-18FSP14-30-40	ES485	3.0	4.0	1/31/2019	Total 209 PCB cong (excl non-detects)	0.022	
20-324	S-ES486-18FSP14-00-10	ES486	0.0	1.0	1/31/2019	Aroclor 1254 - Immunoassay	5.8	J
20-324	S-ES487-18FSP14-00-10	ES487	0.0	1.0	1/16/2019	Total 209 PCB cong (excl non-detects)	4.74	
20-324	S-ES488-18FSP14-00-10	ES488	0.0	1.0	1/16/2019	Total 209 PCB cong (excl non-detects)	139	
20-324	S-ES489-18FSP14-00-10	ES489	0.0	1.0	1/16/2019	Total 209 PCB cong (excl non-detects)	11.9	
20-324	S-ES490-18FSP14-10-20	ES490	1.0	2.0	1/31/2019	Total 209 PCB cong (excl non-detects)	0.66	
20-324	S-ES491-18FSP14-00-10	ES491	0.0	1.0	1/16/2019	Total 209 PCB cong (excl non-detects)	109	
20-324	S-ES492-18FSP14-00-10	ES492	0.0	1.0	1/16/2019	Total 209 PCB cong (excl non-detects)	2.94	
20-324	S-ES493-18FSP14-00-10	ES493	0.0	1.0	1/16/2019	Total 209 PCB cong (excl non-detects)	53.2	
20-324	S-ES494-18FSP14-00-10	ES494	0.0	1.0	1/31/2019	Aroclor 1254 - Immunoassay	0.93	JB
20-324	S-ES495-18FSP14-00-10	ES495	0.0	1.0	1/31/2019	Total 209 PCB cong (excl non-detects)	11.9	
20-324	S-15Y-INT108-00-10	INT108	0.0	1.0	5/13/2015	Aroclor 1254 - Immunoassay	62.0	D
20-324	S-15Y-INT108-10-20	INT108	1.0	2.0	5/13/2015	Aroclor 1254 - Immunoassay	0.90	
20-324	S-15Y-INT109-00-10	INT109	0.0	1.0	5/13/2015	Aroclor 1254 - Immunoassay	5.50	D

Table 2-1a
East Zone 4 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-324	S-15Y-INT109-10-20	INT109	1.0	2.0	5/13/2015	Aroclor 1254 - Immunoassay	0.70	
20-324	S-15Y-INT110-00-10	INT110	0.0	1.0	5/13/2015	Aroclor 1254 - Immunoassay	97.8	D
20-324	S-15Y-INT110-10-20	INT110	1.0	2.0	5/13/2015	Aroclor 1254 - Immunoassay	0.50	U
20-324	S-15Y-INT111-00-10	INT111	0.0	1.0	5/13/2015	Total 139 PCB cong (excl non-detects)	3.6	
20-324	S-15Y-INT111-10-20	INT111	1.0	2.0	5/13/2015	Aroclor 1254 - Immunoassay	0.60	
20-324	S-15Y-INT112-00-10	INT112	0.0	1.0	5/13/2015	Aroclor 1254 - Immunoassay	70.3	D
20-324	S-15Y-INT112-10-20	INT112	1.0	2.0	5/13/2015	Aroclor 1254 - Immunoassay	0.50	U
20-324	S-15Y-INT113-00-10	INT113	0.0	1.0	5/13/2015	Aroclor 1254 - Immunoassay	1.30	
20-324	S-15Y-INT113-10-20	INT113	1.0	2.0	5/13/2015	Aroclor 1254 - Immunoassay	0.50	U
20-324	S-17Y-INT520-00-10	INT520	0.0	1.0	5/11/2017	Aroclor 1254 - Immunoassay	14.1	D
20-324	S-17Y-INT520-10-20	INT520	1.0	2.0	5/11/2017	Aroclor 1254 - Immunoassay	0.8	
20-324	S-17Y-INT521-00-10	INT521	0.0	1.0	5/11/2017	Aroclor 1254 - Immunoassay	7.07	
20-324	S-17Y-INT521-10-20	INT521	1.0	2.0	5/11/2017	Aroclor 1254 - Immunoassay	0.5	U
20-324	S-17Y-INT522-00-10	INT522	0.0	1.0	5/11/2017	Aroclor 1254 - Immunoassay	51.9	D
20-324	S-17Y-INT522-00-10-REP	INT522	0.0	1.0	5/11/2017	Aroclor 1254 - Immunoassay	81.5	D
20-324	S-17Y-INT522-10-20	INT522	1.0	2.0	5/11/2017	Aroclor 1254 - Immunoassay	0.5	U
20-324	S-17Y-INT522-10-20-REP	INT522	1.0	2.0	5/11/2017	Aroclor 1254 - Immunoassay	0.8	
20-324	S-17Y-INT523-00-10	INT523	0.0	1.0	5/11/2017	Aroclor 1254 - Immunoassay	3.37	
20-324	S-17Y-INT523-10-20	INT523	1.0	2.0	5/11/2017	Aroclor 1254 - Immunoassay	0.5	U
20-324	S-17Y-INT524-00-10	INT524	0.0	1.0	5/10/2017	Aroclor 1254 - Immunoassay	18.1	D
20-324	S-17Y-INT524-10-20	INT524	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-324	S-17Y-INT525-00-10	INT525	0.0	1.0	5/10/2017	Aroclor 1254 - Immunoassay	4.02	
20-324	S-17Y-INT525-10-20	INT525	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-324	S-17Y-INT526-00-10	INT526	0.0	1.0	5/10/2017	Total 139 PCB cong (excl non-detects)	240	
20-324	S-17Y-INT526-10-20	INT526	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-324	S-17Y-INT527-00-10	INT527	0.0	1.0	5/10/2017	Total 139 PCB cong (excl non-detects)	140	
20-324	S-17Y-INT527-00-10-REP	INT527	0.0	1.0	5/10/2017	Total 139 PCB cong (excl non-detects)	170	
20-324	S-17Y-INT527-10-20	INT527	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-324	S-17Y-INT527-10-20-REP	INT527	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-324	S-17Y-INT528-00-10	INT528	0.0	1.0	5/10/2017	Aroclor 1254 - Immunoassay	7.34	
20-324	S-17Y-INT528-10-20	INT528	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.7	
20-324	S-17Y-INT529-00-10	INT529	0.0	1.0	5/10/2017	Aroclor 1254 - Immunoassay	7.43	
20-324	S-17Y-INT529-10-20	INT529	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U

Table 2-1a
East Zone 4 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-324	S-17Y-INT530-10-20	INT530	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-324	S-17Y-INT531-00-10	INT531	0.0	1.0	5/10/2017	Aroclor 1254 - Immunoassay	22.7	D
20-324	S-17Y-INT531-10-20	INT531	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-324	S-17Y-INT532-00-10	INT532	0.0	1.0	5/10/2017	Total 139 PCB cong (excl non-detects)	250	
20-324	S-17Y-INT532-10-20	INT532	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-324	S-17Y-INT533-00-10	INT533	0.0	1.0	5/10/2017	Aroclor 1254 - Immunoassay	9.91	
20-324	S-17Y-INT533-10-20	INT533	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-324	S-0114-1	S-114	0.0	1.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	0.231	
20-324	S-0114-2	S-114	1.0	2.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-324	S-0114-3	S-114	2.0	3.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	0.023	
20-324	S-0115-1	S-115	0.0	1.0	9/10/1999	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-324	S-0115-2	S-115	1.0	2.0	9/10/1999	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-324	S-0127-1	S-127	0.0	1.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	3.12	
20-324	S-0127-2	S-127	1.0	2.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	0.34	
20-324	S-0128-1	S-128	0.0	1.0	9/10/1999	Total 18 NOAA PCB cong (excl non-detects)	0.24	
20-324	S-0128-2	S-128	1.0	2.0	9/10/1999	Total 18 NOAA PCB cong (excl non-detects)	0.73	
20-324	S-0129-1	S-129	0.0	1.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	0.14	
20-324	S-0129-2	S-129	1.0	2.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	0.006	
20-324	S-0129-3	S-129	2.0	3.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-324	S-3527-0.0-1.0	S-3527	0.0	1.0	11/15/2001	Total 18 NOAA PCB cong (excl non-detects)	148	
20-324	S-3527-1.0-2.0	S-3527	1.0	2.0	11/15/2001	Total 18 NOAA PCB cong (excl non-detects)	22.4	
20-324	S-3527-2.0-3.0	S-3527	2.0	3.0	11/15/2001	Total 18 NOAA PCB cong (excl non-detects)	0.62	
20-324	S-3528-0.0-1.0	S-3528	0.0	1.0	11/12/2001	Total 18 NOAA PCB cong (excl non-detects)	5.20	
20-324	S-3534-0.0-1.0	S-3534	0.0	1.0	11/9/2001	Total 18 NOAA PCB cong (excl non-detects)	16.4	
20-324	S-3535-0.0-.5	S-3535	0.0	0.5	11/12/2001	Total 18 NOAA PCB cong (excl non-detects)	3.38	
20-324	S-3535-.5-1.0	S-3535	0.5	1.0	11/9/2001	Total 18 NOAA PCB cong (excl non-detects)	0.25	
20-324	S-3748-0.0-1.0	S-3748	0.0	1.0	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	218	
20-324	S-3748-1.0-2.0	S-3748	1.0	2.0	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	1.72	
20-324	S-3748-2.0-3.0	S-3748	2.0	3.0	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	4.42	
20-324	S-3749-0.0-1.0	S-3749	0.0	1.0	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	143	
20-324	S-3750-0.0-1.0	S-3750	0.0	1.0	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	0.22	
20-324	S-3750-1.0-2.0	S-3750	1.0	2.0	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	11.2	
20-324	S-3753-0.0-1.0	S-3753	0.0	1.0	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	52.0	

Table 2-1a
East Zone 4 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-324	S-3753-1.0-2.0	S-3753	1.0	2.0	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	3.12	
20-324	S-3753-2.5-3.0	S-3753	2.5	3.0	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-324	S-3754-0.0-1.0	S-3754	0.0	1.0	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	0.65	
20-324	S-3754-1.0-2.0	S-3754	1.0	2.0	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	2444	
20-324	S-3754-2.0-3.0	S-3754	2.0	3.0	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	4.42	
20-324	S-3755-0.0-1.0	S-3755	0.0	1.0	11/15/2001	Total 18 NOAA PCB cong (excl non-detects)	70.2	
20-324	S-3755-1.0-2.0	S-3755	1.0	2.0	11/15/2001	Total 18 NOAA PCB cong (excl non-detects)	3.64	
20-324	S-3755-2.0-3.0	S-3755	2.0	3.0	11/15/2001	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-324	S-0796-2	S-796	1.0	2.0	10/20/2000	Total 18 NOAA PCB cong (excl non-detects)	0.11	
20-324	S-0797-1	S-797	0.0	1.0	10/20/2000	Total 18 NOAA PCB cong (excl non-detects)	0.26	
20-324	S-0797-2	S-797	1.0	2.0	10/20/2000	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-324	S-L - 25	S-L - 25	0.0	1.0	pre-ROD	Total PCB Congeners (sum CONG x factor)[1]	2.00	
20-324	S-15L-SSS0-00-05	SSS0	0.0	0.5	7/20/2015	Aroclor 1254 - Immunoassay	1.30	
20-324	S-15L-SSS4-00-05	SSS4	0.0	0.5	7/20/2015	Aroclor 1254 - Immunoassay	0.84	
20-325	S-ES453-18FSP14-00-10	ES453	0.0	1.0	12/6/2018	Total 209 PCB cong (excl non-detects)	1.26	
20-325	S-ES455-18FSP14-00-10	ES455	0.0	1.0	12/4/2018	Aroclor 1254 - Immunoassay	3.9	J
20-325	S-ES457-18FSP14-00-10	ES457	0.0	1.0	11/14/2018	Aroclor 1254 - Immunoassay	0.56	J
20-325	S-ES458-18FSP14-00-10	ES458	0.0	1.0	11/15/2018	Aroclor 1254 - Immunoassay	4.1	J
20-325	S-ES459-18FSP14-00-10	ES459	0.0	1.0	11/15/2018	Aroclor 1254 - Immunoassay	4.6	J
20-325	S-ES461-18FSP14-00-10	ES461	0.0	1.0	12/4/2018	Aroclor 1254 - Immunoassay	17	J
20-325	S-ES462-18FSP14-00-10	ES462	0.0	1.0	11/15/2018	Aroclor 1254 - Immunoassay	0.56	J
20-325	S-ES462B-18FSP14-00-10	ES462B	0.0	1.0	12/11/2018	Aroclor 1254 - Immunoassay	0.5	JB
20-325	S-ES462B-18FSP14-10-20	ES462B	1.0	2.0	12/11/2018	Aroclor 1254 - Immunoassay	0.26	J
20-325	S-ES462B-18FSP14-20-29	ES462B	2.0	2.9	12/11/2018	Aroclor 1254 - Immunoassay	0.5	JB
20-325	S-ES463-18FSP14-00-10	ES463	0.0	1.0	12/4/2018	Total 209 PCB cong (excl non-detects)	38.3	
20-325	S-ES464-18FSP14-00-10	ES464	0.0	1.0	11/15/2018	Aroclor 1254 - Immunoassay	2.9	J
20-325	S-ES465-18FSP14-00-10	ES465	0.0	1.0	12/4/2018	Aroclor 1254 - Immunoassay	1.2	J
20-325	S-15Y-INT114-00-10	INT114	0.0	1.0	5/4/2015	Total 139 PCB cong (excl non-detects)	12	
20-325	S-15Y-INT114-10-20	INT114	1.0	2.0	5/4/2015	Aroclor 1254 - Immunoassay	0.50	U
20-325	S-15Y-INT115-00-10	INT115	0.0	1.0	5/4/2015	Aroclor 1254 - Immunoassay	9.50	D
20-325	S-15Y-INT115-10-20	INT115	1.0	2.0	5/4/2015	Aroclor 1254 - Immunoassay	0.50	U
20-325	S-15Y-INT116-10-20	INT116	1.0	2.0	5/4/2015	Aroclor 1254 - Immunoassay	0.50	U

Table 2-1a
East Zone 4 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-325	S-16U-INT343-00-10	INT343	0.0	1.0	6/2/2016	Aroclor 1254 - Immunoassay	34.7	D
20-325	S-16U-INT343-10-20	INT343	1.0	2.0	6/2/2016	Aroclor 1254 - Immunoassay	0.54	
20-325	S-17Y-INT536-00-10	INT536	0.0	1.0	5/10/2017	Total 139 PCB cong (excl non-detects)	50	
20-325	S-17Y-INT536-10-20	INT536	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-325	S-17Y-INT538-00-10	INT538	0.0	1.0	5/10/2017	Aroclor 1254 - Immunoassay	11.2	JD
20-325	S-17Y-INT538-00-10-REP	INT538	0.0	1.0	5/10/2017	Aroclor 1254 - Immunoassay	21.1	JD
20-325	S-17Y-INT538-10-20	INT538	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-325	S-17Y-INT538-10-20-REP	INT538	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-325	S-17Y-INT539-00-10	INT539	0.0	1.0	5/10/2017	Aroclor 1254 - Immunoassay	9.79	
20-325	S-17Y-INT539-10-20	INT539	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-325	S-17Y-INT540-00-10	INT540	0.0	1.0	5/10/2017	Aroclor 1254 - Immunoassay	189	D
20-325	S-17Y-INT540-10-20	INT540	1.0	2.0	5/10/2017	Aroclor 1254 - Immunoassay	0.5	U
20-325	S-17Y-INT541-00-10	INT541	0.0	1.0	5/9/2017	Aroclor 1254 - Immunoassay	4.09	
20-325	S-17Y-INT541-10-20	INT541	1.0	2.0	5/9/2017	Aroclor 1254 - Immunoassay	0.5	U
20-325	S-0144-1	S-144	0.0	1.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	1014	
20-325	S-0144-2	S-144	1.0	2.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	15.1	
20-325	S-0145-1	S-145	0.0	1.0	9/10/1999	Total 18 NOAA PCB cong (excl non-detects)	3.38	
20-325	S-0145-2	S-145	1.0	2.0	9/10/1999	Total 18 NOAA PCB cong (excl non-detects)	0.86	
20-325	S-0146-1	S-146	0.0	1.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	4.42	
20-325	S-0146-2	S-146	1.0	2.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	0.099	
20-325	S-0146-3	S-146	2.0	3.0	9/23/1999	Total 18 NOAA PCB cong (excl non-detects)	0.416	
20-325	S-0148-1	S-148	0.0	1.0	9/10/1999	Total 18 NOAA PCB cong (excl non-detects)	156	
20-325	S-0148-2	S-148	1.0	2.0	9/10/1999	Total 18 NOAA PCB cong (excl non-detects)	1.40	
20-325	S-3577-1.5-2.0	S-3577	1.5	2.0	9/17/2001	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-325	S-3583-1.6-2.1	S-3583	1.6	2.1	9/17/2001	Total 18 NOAA PCB cong (excl non-detects)	2.34	
20-325	S-3759-0.0-1.0	S-3759	0.0	1.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	0.88	
20-325	S-3759-0.0-1.0REP	S-3759	0.0	1.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	1.27	
20-325	S-3760-0.0-1.0	S-3760	0.0	1.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	143	
20-325	S-3760-1.0-2.0	S-3760	1.0	2.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	1.14	
20-325	S-3761-0.0-1.0	S-3761	0.0	1.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	54.6	
20-325	S-3761-1.0-2.0	S-3761	1.0	2.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	3.12	
20-325	S-3761-2.0-3.0	S-3761	2.0	3.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	1.85	
20-325	S-3762-.0-1.0	S-3762	0.0	1.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	44.2	

Table 2-1a
East Zone 4 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-325	S-3762-1.0-2.0	S-3762	1.0	2.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	0.65	
20-325	S-3763-0.0-1.0	S-3763	0.0	1.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	41.6	
20-325	S-3763-1.0-2.0	S-3763	1.0	2.0	10/15/2001	Total 18 NOAA PCB cong (excl non-detects)	0.13	
20-325	S-3764-0.0-.5	S-3764	0.0	0.5	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	286	
20-325	S-3764-2.5-3.0	S-3764	2.5	3.0	10/16/2001	Total 18 NOAA PCB cong (excl non-detects)	14.8	
20-325	S-3765-0.0-1.0	S-3765	0.0	1.0	10/11/2001	Total 18 NOAA PCB cong (excl non-detects)	4.68	
20-325	S-3765-1.0-2.0	S-3765	1.0	2.0	10/11/2001	Total 18 NOAA PCB cong (excl non-detects)	5.98	
20-325	S-3766-0.0-1.0	S-3766	0.0	1.0	10/11/2001	Total 18 NOAA PCB cong (excl non-detects)	31.2	
20-325	S-3766-1.0-2.0	S-3766	1.0	2.0	10/11/2001	Total 18 NOAA PCB cong (excl non-detects)	7.80	
20-325	S-3767-0.0-1.0	S-3767	0.0	1.0	10/11/2001	Total 18 NOAA PCB cong (excl non-detects)	0.34	
20-325	S-3768-0.0-1.0	S-3768	0.0	1.0	10/11/2001	Total 18 NOAA PCB cong (excl non-detects)	5.46	
20-325	S-3769-0.0-1.0	S-3769	0.0	1.0	10/11/2001	Total 18 NOAA PCB cong (excl non-detects)	0.06	
20-325	S-3770-0.0-1.0	S-3770	0.0	1.0	10/11/2001	Total 18 NOAA PCB cong (excl non-detects)	0.42	
20-325	S-3771-0.0-1.0	S-3771	0.0	1.0	10/11/2001	Total 18 NOAA PCB cong (excl non-detects)	1.64	
20-325	S-3771-2.0-3.0	S-3771	2.0	3.0	10/11/2001	Total 18 NOAA PCB cong (excl non-detects)	0.20	
20-325	S-3772-0.0-1.0	S-3772	0.0	1.0	10/11/2001	Total 18 NOAA PCB cong (excl non-detects)	6.24	
20-325	S-3773-0.0-1.0	S-3773	0.0	1.0	10/11/2001	Total 18 NOAA PCB cong (excl non-detects)	19.8	
20-325	S-0879-1	S-879	0.0	1.0	10/25/2000	Total 18 NOAA PCB cong (excl non-detects)	96.2	
20-325	S-0879-2	S-879	1.0	2.0	10/25/2000	Total 18 NOAA PCB cong (excl non-detects)	0	U
20-325	S-0880-1	S-880	0.0	1.0	10/25/2000	Total 18 NOAA PCB cong (excl non-detects)	28.6	
20-325	S-0880-2	S-880	1.0	2.0	10/25/2000	Total 18 NOAA PCB cong (excl non-detects)	0.14	
20-325	S-M - 27 - 1	S-M - 27	0.0	1.0	pre-ROD	Total PCB Congeners (sum CONG x factor)[1]	52.0	
20-325	S-M - 27 - 2	S-M - 27	1.0	2.0	pre-ROD	Total PCB Congeners (sum CONG x factor)[1]	0	U

Notes:
D - reported value is from a dilution; J - estimated value; U - not detected; J+ - high bias estimate; B - contaminant detected in blank.
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
East Zone 5 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-326	S-ES502-18FSP16-00-10	ES502	0.0	1.0	12/21/2018	Total 209 PCB cong (excl non-detects)	57.3	
20-326	S-ES502-18FSP16-10-20	ES502	1.0	2.0	12/21/2018	PCB from Immunoassay (Aroclor 1254)	13.9	
20-326	S-ES503-18FSP16-00-10	ES503	0.0	1.0	1/2/2019	Total 209 PCB cong (excl non-detects)	80.7	
20-326	S-ES503-18FSP16-10-20	ES503	1.0	2.0	1/2/2019	PCB from Immunoassay (Aroclor 1254)	8.30	J
20-326	S-ES505-18FSP16-20-30	ES505	2.0	3.0	1/2/2019	PCB from Immunoassay (Aroclor 1254)	5.60	J
20-326	S-ES505-18FSP16-30-40	ES505	3.0	4.0	1/2/2019	PCB from Immunoassay (Aroclor 1254)	1.70	J
20-326	S-ES505-18FSP16-40-50	ES505	4.0	5.0	1/2/2019	PCB from Immunoassay (Aroclor 1254)	1.90	J
20-326	S-ES505-18FSP16-50-56	ES505	5.0	5.6	1/2/2019	PCB from Immunoassay (Aroclor 1254)	1.70	J
20-326	S-ES506-18FSP16-00-10	ES506	0.0	1.0	1/2/2019	Total 209 PCB cong (excl non-detects)	137	
20-326	S-ES506R-18FSP16-00-10-REP	ES506	0.0	1.0	1/2/2019	Total 209 PCB cong (excl non-detects)	84.6	
20-326	S-ES506-18FSP16-10-20	ES506	1.0	2.0	1/2/2019	PCB from Immunoassay (Aroclor 1254)	6.00	J
20-326	S-ES506R-18FSP16-10-20-REP	ES506	1.0	2.0	1/2/2019	PCB from Immunoassay (Aroclor 1254)	9.80	J
20-326	S-ES509-18FSP16-00-10	ES509	0.0	1.0	1/3/2019	Total 209 PCB cong (excl non-detects)	15.0	
20-326	S-ES518-18FSP16-00-10	ES518	0.0	1.0	12/21/2018	Total 209 PCB cong (excl non-detects)	2.19	
20-326	S-ES519-18FSP16-10-20	ES519	1.0	2.0	12/21/2018	Total 209 PCB cong (excl non-detects)	0.45	
20-326	S-15Y-INT118-00-10	INT118	0.0	1.0	5/4/2015	Aroclor 1254 - Immunoassay	6.50	D
20-326	S-15Y-INT119-00-10	INT119	0.0	1.0	5/4/2015	Total 139 PCB cong (excl non-detects)	6.20	
20-326	S-17Y-INT544-00-10	INT544	0.0	1.0	5/9/2017	PCB from Immunoassay (Aroclor 1254)	8.90	
20-326	S-17Y-INT544-10-20	INT544	1.0	2.0	5/9/2017	PCB from Immunoassay (Aroclor 1254)	1.13	
20-326	S-17Y-INT545-00-10	INT545	0.0	1.0	5/9/2017	Total 139 PCB cong (excl non-detects)	13.7	
20-326	S-17Y-INT545-10-20	INT545	1.0	2.0	5/9/2017	PCB from Immunoassay (Aroclor 1254)	0.50	U
20-326	S-0150-1	S-150	0.0	1.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	8.58	
20-326	S-0150-2	S-150	1.0	2.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	0.44	
20-326	S-3774-0.0-1.0	S-3774	0.0	1.0	10/11/2001	Total 18 NOAA PCB cong (excl non-detects)	93.6	
20-326	S-3775-3.0-3.5	S-3775	3.0	3.5	10/3/2001	Total 18 NOAA PCB cong (excl non-detects)	0.12	
20-326	S-3776-0.0-1.0	S-3776	0.0	1.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	5.20	
20-326	S-3776-1.0-2.0	S-3776	1.0	2.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	8.32	
20-326	S-3776-2.0-3.0	S-3776	2.0	3.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	2.11	
20-326	S-3777-0.0-1.0	S-3777	0.0	1.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	12.5	
20-326	S-3777-1.0-2.0	S-3777	1.0	2.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	1.48	
20-326	S-3777-2.0-3.0	S-3777	2.0	3.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
20-326	S-3778-0.0-1.0	S-3778	0.0	1.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	242	
20-326	S-3778-1.0-2.0	S-3778	1.0	2.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	36.4	

Table 2-1b
East Zone 5 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-326	S-3779-0.0-1.0	S-3779	0.0	1.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	10.1	
20-326	S-3779-1.0-2.0	S-3779	1.0	2.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	2.16	
20-326	S-3780-0.0-1.0	S-3780	0.0	1.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	1.22	
20-326	S-3780-1.5-2.0	S-3780	1.5	2.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
20-326	S-3781-0.0-1.0	S-3781	0.0	1.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	59.8	
20-326	S-3781-1.0-2.0	S-3781	1.0	2.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	0.99	
20-326	S-3781-2.0-2.5	S-3781	2.0	2.5	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
20-326	S-3782-0.0-1.0	S-3782	0.0	1.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	15.1	
20-326	S-3782-1.0-2.0	S-3782	1.0	2.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
20-326	S-3784-0.0-1.0	S-3784	0.0	1.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	23.1	
20-326	S-3784-1.0-2.0	S-3784	1.0	2.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	3.64	
20-326	S-3784-2.0-3.0	S-3784	2.0	3.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	0.62	
20-326	S-0502-1	S-502	0.0	1.0	9/21/1999	Total 18 NOAA PCB cong (excl non-detects)	19.5	
20-326	S-0502-2	S-502	1.0	2.0	9/21/1999	Total 18 NOAA PCB cong (excl non-detects)	2.86	
20-326	S-0800-1	S-800	0.0	1.0	10/30/2000	Total 18 NOAA PCB cong (excl non-detects)	26.0	
20-326	S-0800-2	S-800	1.0	2.0	10/30/2000	Total 18 NOAA PCB cong (excl non-detects)	1.20	
20-326	S-0802-1	S-802	0.0	1.0	10/30/2000	Total 18 NOAA PCB cong (excl non-detects)	31.2	
20-326	S-0802-2	S-802	1.0	2.0	10/30/2000	Total 18 NOAA PCB cong (excl non-detects)	0.60	
20-326	S-0803-1	S-803	0.0	1.0	10/30/2000	Total 18 NOAA PCB cong (excl non-detects)	2.24	
20-326	S-0803-2	S-803	1.0	2.0	10/30/2000	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
20-326	S-M - 26	S-M - 26	0.0	1.0	Pre-ROD	Total 18 NOAA PCB cong (excl non-detects)[1]	0.00	U
20-23	S-ES501-18FSP16-20-30	ES501	2.0	3.0	12/21/2018	Total 209 PCB cong (excl non-detects)	723	
20-23	S-ES501-18FSP16-30-40	ES501	3.0	4.0	12/21/2018	Total 209 PCB cong (excl non-detects)	84.4	
20-23	S-ES501-18FSP16-40-50	ES501	4.0	5.0	12/21/2018	Total 209 PCB cong (excl non-detects)	0.22	
20-23	S-ES544-18FSP16-00-10	ES544	0.0	1.0	12/21/2018	Total 209 PCB cong (excl non-detects)	13.7	
20-23	S-ES544-18FSP16-10-20	ES544	1.0	2.0	12/21/2018	Total 209 PCB cong (excl non-detects)	0.28	
20-23	S-15Y-INT120-00-10	INT120	0.0	1.0	5/1/2015	Aroclor 1254 - Immunoassay	0.50	U
20-23	S-15Y-INT120-10-20	INT120	1.0	2.0	5/1/2015	Aroclor 1254 - Immunoassay	0.70	
20-23	S-15Y-INT121-00-10	INT121	0.0	1.0	5/1/2015	Total 139 PCB cong (excl non-detects)	0.29	
20-23	S-15Y-INT121-10-20	INT121	1.0	2.0	5/1/2015	Total 139 PCB cong (excl non-detects)	16.0	
20-23	S-15A-INT122-00-10	INT122	0.0	1.0	4/30/2015	Total 139 PCB cong (excl non-detects)	1.10	
20-23	S-15A-INT122-00-10-REP	INT122	0.0	1.0	4/30/2015	Total 139 PCB cong (excl non-detects)	0.95	

Table 2-1b
East Zone 5 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-23	S-15A-INT122-10-20	INT122	1.0	2.0	4/30/2015	Aroclor 1254 - Immunoassay	0.80	
20-23	S-15A-INT122-10-20-REP	INT122	1.0	2.0	4/30/2015	Aroclor 1254 - Immunoassay	0.50	U
20-23	S-16U-INT332-00-10	INT332	0.0	1.0	6/6/2016	Total 139 PCB cong (excl non-detects)	63.0	
20-23	S-16U-INT332-10-20	INT332	1.0	2.0	6/6/2016	Total 139 PCB cong (excl non-detects)	0.027	
20-23	S-16U-INT333-00-10	INT333	0.0	1.0	6/6/2016	Total 139 PCB cong (excl non-detects)	41.0	
20-23	S-16U-INT333-00-10-REP	INT333	0.0	1.0	6/6/2016	Total 139 PCB cong (excl non-detects)	37.0	
20-23	S-16U-INT333-10-20	INT333	1.0	2.0	6/6/2016	Total 139 PCB cong (excl non-detects)	0.14	
20-23	S-16U-INT333-10-20-REP	INT333	1.0	2.0	6/6/2016	Total 139 PCB cong (excl non-detects)	0.11	
20-23	S-17Y-INT546-00-10	INT546	0.0	1.0	5/9/2017	PCB from Immunoassay (Aroclor 1254)	11.0	
20-23	S-17Y-INT546-10-20	INT546	1.0	2.0	5/9/2017	PCB from Immunoassay (Aroclor 1254)	0.50	U
20-23	S-17Y-INT547-00-10	INT547	0.0	1.0	5/9/2017	PCB from Immunoassay (Aroclor 1254)	48.5	
20-23	S-17Y-INT547-10-20	INT547	1.0	2.0	5/9/2017	PCB from Immunoassay (Aroclor 1254)	0.50	U
20-23	S-17Y-INT548-00-10	INT548	0.0	1.0	5/9/2017	PCB from Immunoassay (Aroclor 1254)	4.55	
20-23	S-17Y-INT548-10-20	INT548	1.0	2.0	5/9/2017	PCB from Immunoassay (Aroclor 1254)	0.50	U
20-23	S-0152-1	S-152	0.0	1.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	286	
20-23	S-0152-2	S-152	1.0	2.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	416	
20-23	S-0153-1	S-153	0.0	1.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	49.4	
20-23	S-0153-2	S-153	1.0	2.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	23.4	
20-23	S-3549-0.0-1.0	S-3549	0.0	1.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	286	
20-23	S-3549-1.0-2.0	S-3549	1.0	2.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	832	
20-23	S-3647-0.0-1.0	S-3647	0.0	1.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	49.4	
20-23	S-3647-1.5-2.0	S-3647	1.5	2.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	1.82	
20-23	S-3647-3.0-3.5	S-3647	3.0	3.5	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	3.38	
20-23	S-3647-3.5-4.0	S-3647	3.5	4.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	0.26	
20-23	S-3647-3.5-4.0REP	S-3647	3.5	4.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	0.62	
20-23	S-3783-0.0-1.0	S-3783	0.0	1.0	10/10/2001	Total 18 NOAA PCB cong (excl non-detects)	14.6	
20-23	S-3785-2.4-2.9	S-3785	2.4	2.9	10/3/2001	Total 18 NOAA PCB cong (excl non-detects)	4.16	
20-23	S-3786-1.5-2.0	S-3786	1.5	2.0	10/3/2001	Total 18 NOAA PCB cong (excl non-detects)	104	
20-23	S-3786-2.0-2.5	S-3786	2.0	2.5	10/3/2001	Total 18 NOAA PCB cong (excl non-detects)	7.80	
20-23	S-3786-2.5-3.0	S-3786	2.5	3.0	10/3/2001	Total 18 NOAA PCB cong (excl non-detects)	8.32	
20-23	S-3787-1.8-2.3	S-3787	1.8	2.3	10/3/2001	Total 18 NOAA PCB cong (excl non-detects)	3.12	
20-23	S-3788-2.0-3.0	S-3788	2.0	3.0	10/12/2001	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
20-23	S-0504-1	S-504	0.0	1.0	9/21/1999	Total 18 NOAA PCB cong (excl non-detects)	338	

Table 2-1b
East Zone 5 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-23	S-0504-2	S-504	1.0	2.0	9/21/1999	Total 18 NOAA PCB cong (excl non-detects)	10.7	
20-23	S-0559-1	S-559	0.0	1.0	10/4/1999	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
20-23	S-0559-2	S-559	1.0	2.0	10/4/1999	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
20-23	S-0607-1	S-607	0.0	1.0	5/4/2000	Total 18 NOAA PCB cong (excl non-detects)	0.14	
20-23	S-0607-2	S-607	1.0	2.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.00	U
20-23	S-0608-1	S-608	0.0	1.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.44	
20-23	S-0608-2	S-608	1.0	2.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.00	U
20-23	S-0609-1	S-609	0.0	1.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	1.70	
20-23	S-0609-2	S-609	1.0	2.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.088	
20-23	S-0610-1	S-610	0.0	1.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.1	
20-23	S-0610-2	S-610	1.0	2.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.00	U
20-23	S-0611-1	S-611	0.0	1.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.00	U
20-23	S-0611-2	S-611	1.0	2.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.00	U
20-23	S-0612-1	S-612	0.0	1.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.069	
20-23	S-0612-2	S-612	1.0	2.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.00	U
20-23	S-0613-1	S-613	0.0	1.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.35	
20-23	S-0613-2	S-613	1.0	2.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.00	U
20-23	S-0614-1	S-614	0.0	1.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.00	U
20-23	S-0614-2	S-614	1.0	2.0	5/4/2000	Total PCB Congeners (sum CONG x factor)	0.00	U
20-23	S-0801-1	S-801	0.0	1.0	10/30/2000	Total 18 NOAA PCB cong (excl non-detects)	174	
20-23	S-0801-2	S-801	1.0	2.0	10/30/2000	Total 18 NOAA PCB cong (excl non-detects)	0.62	
20-24	S-ES513-18FSP16-00-10	ES513	0.0	1.0	12/21/2018	PCB from Immunoassay (Aroclor 1254)	94.0	JD
20-24	S-ES514-18FSP16-10-20	ES514	1.0	2.0	1/3/2019	Total 209 PCB cong (excl non-detects)	44.3	
20-24	S-ES516-18FSP16-00-10	ES516	0.0	1.0	1/3/2019	PCB from Immunoassay (Aroclor 1254)	93.0	JD
20-24	S-ES516R-18FSP16-00-10-REP	ES516	0.0	1.0	1/3/2019	PCB from Immunoassay (Aroclor 1254)	62.0	JD
20-24	S-ES545-18FSP16-00-10	ES545	0.0	1.0	12/21/2018	Total 209 PCB cong (excl non-detects)	10.4	
20-24	S-ES545R-18FSP16-00-10-REP	ES545	0.0	1.0	12/21/2018	Total 209 PCB cong (excl non-detects)	29.7	
20-24	S-ES546-18FSP16-00-10	ES546	0.0	1.0	12/21/2018	Total 209 PCB cong (excl non-detects)	4.06	
20-24	S-15A-INT123-00-10	INT123	0.0	1.0	4/30/2015	Total 139 PCB cong (excl non-detects)	12.0	
20-24	S-15A-INT123-10-20	INT123	1.0	2.0	4/30/2015	Aroclor 1254 - Immunoassay	0.50	U
20-24	S-16Y-INT337-00-10	INT337	0.0	1.0	5/27/2016	Aroclor 1254 - Immunoassay	1.70	
20-24	S-16Y-INT337-20-30	INT337	2.0	3.0	5/27/2016	Aroclor 1254 - Immunoassay	0.67	
20-24	S-16Y-INT338-00-10	INT338	0.0	1.0	5/27/2016	Aroclor 1254 - Immunoassay	5.20	

Table 2-1b
East Zone 5 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-24	S-16Y-INT338-10-20	INT338	1.0	2.0	5/27/2016	Aroclor 1254 - Immunoassay	0.18	J
20-24	S-3789-1.0-2.0	S-3789	1.0	2.0	10/12/2001	Total 18 NOAA PCB cong (excl non-detects)	3.38	
20-24	S-3790-1.0-2.0	S-3790	1.0	2.0	10/12/2001	Total 18 NOAA PCB cong (excl non-detects)	0.086	
20-33	S-15A-INT124-00-10	INT124	0.0	1.0	4/30/2015	Aroclor 1254 - Immunoassay	3.60	
20-33	S-15A-INT124-10-20	INT124	1.0	2.0	4/30/2015	Aroclor 1254 - Immunoassay	1.10	
20-33	S-15A-INT125-00-10	INT125	0.0	1.0	4/30/2015	Aroclor 1254 - Immunoassay	0.60	
20-33	S-15A-INT125-10-20	INT125	1.0	2.0	4/30/2015	Aroclor 1254 - Immunoassay	0.60	
20-33	S-15A-INT126-00-10	INT126	0.0	1.0	4/30/2015	Aroclor 1254 - Immunoassay	0.70	
20-33	S-15A-INT126-10-18	INT126	1.0	1.8	4/30/2015	Aroclor 1254 - Immunoassay	0.60	
20-33	S-15A-INT127-00-10	INT127	0.0	1.0	4/30/2015	Total 139 PCB cong (excl non-detects)	0.013	
20-33	S-15A-INT127-10-20	INT127	1.0	2.0	4/30/2015	Aroclor 1254 - Immunoassay	8.70	
20-33	S-15A-INT128-00-10	INT128	0.0	1.0	4/30/2015	Aroclor 1254 - Immunoassay	0.50	U
20-33	S-15A-INT128-10-18	INT128	1.0	1.8	4/30/2015	Aroclor 1254 - Immunoassay	0.50	
20-33	S-0155-1	S-155	0.0	1.0	9/21/1999	Total 18 NOAA PCB cong (excl non-detects)	2.18	
20-33	S-0155-2	S-155	1.0	2.0	9/21/1999	Total 18 NOAA PCB cong (excl non-detects)	6.24	
20-33	S-3565-1.0-2.0	S-3565	1.0	2.0	10/12/2001	Total 18 NOAA PCB cong (excl non-detects)	5.46	
20-33	S-3565-1.0-2.0REP	S-3565	1.0	2.0	10/12/2001	Total 18 NOAA PCB cong (excl non-detects)	3.38	
20-30	S-ES521-18FSP16-20-30	ES521	2.0	3.0	1/3/2019	Total 209 PCB cong (excl non-detects)	0.33	
20-30	S-ES521-18FSP16-30-40	ES521	3.0	4.0	1/3/2019	Total 209 PCB cong (excl non-detects)	18.5	
20-30	S-ES523-18FSP16-20-30	ES523	2.0	3.0	1/10/2019	Total 209 PCB cong (excl non-detects)	1.09	
20-30	S-ES523-18FSP16-30-40	ES523	3.0	4.0	1/10/2019	Total 209 PCB cong (excl non-detects)	0.82	
20-30	S-15A-INT129-00-10	INT129	0.0	1.0	4/30/2015	Aroclor 1254 - Immunoassay	53.0	D
20-30	S-15A-INT129-10-20	INT129	1.0	2.0	4/30/2015	Aroclor 1254 - Immunoassay	182	D
20-30	S-15Y-INT130-00-10	INT130	0.0	1.0	5/1/2015	Aroclor 1254 - Immunoassay	0.50	U
20-30	S-15Y-INT130-10-20	INT130	1.0	2.0	5/1/2015	Aroclor 1254 - Immunoassay	0.70	
20-30	S-15A-INT131-00-10	INT131	0.0	1.0	4/30/2015	Aroclor 1254 - Immunoassay	59.2	D
20-30	S-15A-INT131-10-20	INT131	1.0	2.0	4/30/2015	Aroclor 1254 - Immunoassay	83.7	D
20-30	S-15Y-INT132-00-10	INT132	0.0	1.0	5/1/2015	Total 139 PCB cong (excl non-detects)	0.28	
20-30	S-15Y-INT132-10-20	INT132	1.0	2.0	5/1/2015	Aroclor 1254 - Immunoassay	0.70	
20-30	S-0815-1	S-815	0.0	1.0	10/6/2000	Total 18 NOAA PCB cong (excl non-detects)	0.25	
20-30	S-0815-1DUP	S-815	0.0	1.0	10/6/2000	Total 18 NOAA PCB cong (excl non-detects)	0.24	
20-30	S-0815-2	S-815	1.0	2.0	10/6/2000	Total 18 NOAA PCB cong (excl non-detects)	1.38	
20-29	S-ES529-18FSP16-20-30	ES529	2.0	3.0	1/10/2019	Total 209 PCB cong (excl non-detects)	120	

Table 2-1b
East Zone 5 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
20-29	S-ES529-18FSP16-30-40	ES529	3.0	4.0	1/10/2019	Total 209 PCB cong (excl non-detects)	44.7	
20-29	S-15Y-INT133-00-10	INT133	0.0	1.0	5/1/2015	Aroclor 1254 - Immunoassay	47.1	D
20-29	S-15Y-INT133-10-20	INT133	1.0	2.0	5/1/2015	Aroclor 1254 - Immunoassay	0.50	U
20-29	S-15Y-INT134-00-10	INT134	0.0	1.0	5/1/2015	Aroclor 1254 - Immunoassay	0.50	U
20-29	S-15Y-INT134-10-20	INT134	1.0	2.0	5/1/2015	Aroclor 1254 - Immunoassay	0.50	U
20-29	S-0158-1	S-158	0.0	1.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	218	
20-29	S-0158-2	S-158	1.0	2.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	17.2	
20-29	S-0158-3	S-158	2.0	3.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	0.86	
20-29	S-0162-1	S-162	0.0	1.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	26.0	
20-29	S-0162-2	S-162	1.0	2.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	67.6	
20-29	S-0162-3	S-162	2.0	3.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	10.1	
20-29	S-3588-3.0-4.0	S-3588	3.0	4.0	10/12/2001	Total 18 NOAA PCB cong (excl non-detects)	0.75	
20-29	S-3791-1.7-2.2	S-3791	1.7	2.2	10/3/2001	Total 18 NOAA PCB cong (excl non-detects)	0.94	
20-29	S-3792-1.0-1.5	S-3792	1.0	1.5	10/3/2001	Total 18 NOAA PCB cong (excl non-detects)	0.39	
20-29	S-0814-1	S-814	0.0	1.0	10/16/2000	Total 18 NOAA PCB cong (excl non-detects)	0.31	
20-29	S-0814-2	S-814	1.0	2.0	10/16/2000	Total 18 NOAA PCB cong (excl non-detects)	0.44	
ROW	S-ES537-18FSP16-00-10	ES537	0.0	1.0	1/10/2019	Total 209 PCB cong (excl non-detects)	26.9	
ROW	S-ES537-18FSP16-10-20	ES537	1.0	2.0	1/10/2019	Total 209 PCB cong (excl non-detects)	4.86	
ROW	S-ES539-18FSP16-20-30	ES539	2.0	3.0	12/10/2018	PCB from Immunoassay (Aroclor 1254)	82.0	JD
ROW	S-ES539-18FSP16-30-38	ES539	3.0	3.8	12/10/2018	PCB from Immunoassay (Aroclor 1254)	3.10	J
ROW	S-ES541-18FSP16-20-30	ES541	2.0	3.0	12/19/2018	PCB from Immunoassay (Aroclor 1254)	5.10	J
ROW	S-ES541-18FSP16-30-40	ES541	3.0	4.0	12/19/2018	PCB from Immunoassay (Aroclor 1254)	1.90	J
ROW	S-ES547-18FSP16-00-10	ES547	0.0	1.0	1/4/2019	Total 209 PCB cong (excl non-detects)	41.2	
ROW	S-ES547-18FSP16-10-20	ES547	1.0	2.0	1/4/2019	Total 209 PCB cong (excl non-detects)	4.65	
ROW	S-ES549-18FSP16-00-10	ES549	0.0	1.0	12/21/2018	Total 209 PCB cong (excl non-detects)	0.12	
ROW	S-ES549-18FSP16-10-20	ES549	1.0	2.0	12/21/2018	Total 209 PCB cong (excl non-detects)	1.43	
ROW	S-15Y-INT140-00-10	INT140	0.0	1.0	5/15/2015	Total 139 PCB cong (excl non-detects)	15.0	
ROW	S-15Y-INT140-10-20	INT140	1.0	2.0	5/15/2015	Aroclor 1254 - Immunoassay	0.50	U
ROW	S-15Y-INT141-00-10	INT141	0.0	1.0	5/14/2015	Aroclor 1254 - Immunoassay	2.20	
ROW	S-15Y-INT144-00-10	INT144	0.0	1.0	5/14/2015	Aroclor 1254 - Immunoassay	20.3	D
ROW	S-15Y-INT144-10-20	INT144	1.0	2.0	5/14/2015	Aroclor 1254 - Immunoassay	381	D
ROW	S-15Y-INT145-00-10	INT145	0.0	1.0	5/22/2015	Aroclor 1254 - Immunoassay	4.60	D
ROW	S-15Y-INT145-10-20	INT145	1.0	2.0	5/22/2015	Aroclor 1254 - Immunoassay	92.8	D

Table 2-1b
East Zone 5 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
ROW	S-15Y-INT183-00-10	INT183	0.0	1.0	5/22/2015	Aroclor 1254 - Immunoassay	0.50	
ROW	S-15Y-INT183-10-20	INT183	1.0	2.0	5/22/2015	Total 139 PCB cong (excl non-detects)	1.60	
ROW	S-0161-1	S-161	0.0	1.0	10/22/1999	Total 18 NOAA PCB cong (excl non-detects)	0.96	
ROW	S-0161-2	S-161	1.0	2.0	10/22/1999	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
ROW	S-0161-3	S-161	2.0	3.0	10/22/1999	Total 18 NOAA PCB cong (excl non-detects)	0.00	U
ROW	S-3793-.5-1.0	S-3793	0.5	1.0	10/3/2001	Total 18 NOAA PCB cong (excl non-detects)	1.72	
ROW	S-0508-1	S-508	0.0	1.0	9/28/1999	Total 18 NOAA PCB cong (excl non-detects)	18.2	
ROW	S-0508-2	S-508	1.0	2.0	9/28/1999	Total 18 NOAA PCB cong (excl non-detects)	0.24	
ROW	S-0816-1	S-816	0.0	1.0	9/29/2000	Total 18 NOAA PCB cong (excl non-detects)	0.049	
ROW	S-0816-2	S-816	1.0	2.0	9/29/2000	Total 18 NOAA PCB cong (excl non-detects)	0.60	
ROW	S-0817-1	S-817	0.0	1.0	9/29/2000	Total 18 NOAA PCB cong (excl non-detects)	3.38	
ROW	S-0817-2	S-817	1.0	2.0	9/29/2000	Total 18 NOAA PCB cong (excl non-detects)	15.3	
19-1	S-ES536-18FSP16-20-30	ES536	2.0	3.0	1/4/2019	Total 209 PCB cong (excl non-detects)	0.81	
19-1	S-ES536-18FSP16-30-40	ES536	3.0	4.0	1/4/2019	Total 209 PCB cong (excl non-detects)	0.18	
19-1	S-ES548-18FSP16-00-10	ES548	0.0	1.0	12/21/2018	Total 209 PCB cong (excl non-detects)	0.83	
19-1	S-ES548-18FSP16-10-20	ES548	1.0	2.0	12/21/2018	Total 209 PCB cong (excl non-detects)	1.45	
19-1	S-15Y-INT142-00-10	INT142	0.0	1.0	5/15/2015	Total 139 PCB cong (excl non-detects)	0.81	
19-1	S-15Y-INT142-10-20	INT142	1.0	2.0	5/15/2015	Aroclor 1254 - Immunoassay	0.60	
19-1	S-15Y-INT143-00-10	INT143	0.0	1.0	5/15/2015	Aroclor 1254 - Immunoassay	0.50	U
19-1	S-15Y-INT143-10-20	INT143	1.0	2.0	5/15/2015	Aroclor 1254 - Immunoassay	0.50	U
19-1	S-15Y-INT146-00-10	INT146	0.0	1.0	5/15/2015	Aroclor 1254 - Immunoassay	0.60	
19-1	S-15Y-INT146-10-20	INT146	1.0	2.0	5/15/2015	Aroclor 1254 - Immunoassay	0.50	U
19-1	S-16U-INT346-00-10	INT346	0.0	1.0	6/6/2016	Total 139 PCB cong (excl non-detects)	1.00	
19-1	S-16U-INT346-00-10-REP	INT346	0.0	1.0	6/6/2016	Total 139 PCB cong (excl non-detects)	1.40	
19-1	S-16U-INT346-10-20	INT346	1.0	2.0	6/6/2016	Total 139 PCB cong (excl non-detects)	0.051	
19-1	S-16U-INT346-10-20-REP	INT346	1.0	2.0	6/6/2016	Total 139 PCB cong (excl non-detects)	0.011	
19-1	S-16U-INT347-00-10	INT347	0.0	1.0	6/6/2016	Total 139 PCB cong (excl non-detects)	3.00	
19-1	S-16U-INT347-10-20	INT347	1.0	2.0	6/6/2016	Total 139 PCB cong (excl non-detects)	0.008	
19-1	S-0164-1	S-164	0.0	1.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	17.2	
19-1	S-0164-2	S-164	1.0	2.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	1.27	
19-1	S-0164-2DUP	S-164	1.0	2.0	9/13/1999	Total PCB Congeners (sum CONG x factor)	2.20	
19-1	S-0165-1	S-165	0.0	1.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	231	
19-1	S-0165-2	S-165	1.0	2.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	62.4	

Table 2-1b
East Zone 5 Pre-Excavation PCB Characterization Sample Results

Parcel	Sample ID	Station ID	Sample Depth Top (ft)	Sample Depth Bottom (ft)	Sample Date	Description	Total PCB (mg/kg)	Final Qualifier
19-1	S-0166-1	S-166	0.0	1.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	0.065	
19-1	S-0166-2	S-166	1.0	2.0	9/13/1999	Total 18 NOAA PCB cong (excl non-detects)	0.044	
19-1	S-3794-0.0-1.0	S-3794	0.0	1.0	10/12/2001	Total 18 NOAA PCB cong (excl non-detects)	4.68	
19-1	S-3795-3.0-4.0	S-3795	3.0	4.0	10/12/2001	Total 18 NOAA PCB cong (excl non-detects)	0.39	
19-1	S-3796-0.0-1.0	S-3796	0.0	1.0	10/12/2001	Total 18 NOAA PCB cong (excl non-detects)	67.6	
19-1	S-3796-1.0-2.0	S-3796	1.0	2.0	10/12/2001	Total 18 NOAA PCB cong (excl non-detects)	0.81	
19-1	S-0820-1	S-820	0.0	1.0	10/6/2000	Total 18 NOAA PCB cong (excl non-detects)	3.90	
19-1	S-0820-2	S-820	1.0	2.0	10/6/2000	Total 18 NOAA PCB cong (excl non-detects)	0.00	U

Notes:
ROW = Right of Way
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 2-2a
East Zone 4 Compliance Survey Control Table

Parcel	Station ID	Location	Easting	Northing	Design Elevation	Post-Excavation Elevation	Δ (ft)	Date Excavation Surveyed	Restoration Design Elevation	Post-Restoration Elevation	Δ (ft)	Date Restoration Surveyed
			MA State Plane ft, NAD83		NAVD88 ft				NAVD88 ft			
20-001	ES407	Sidewall	815952.2	2702945.8	0.3	0.24	-0.1	3/18/2021	1.32	1.56	0.2	5/19/2021
20-001	ES467	Sidewall	816065.9	2703064.7	0.7	0.58	-0.1	3/17/2021	1.74	1.83	0.1	5/21/2021
20-001	ES468	Sidewall	816151.9	2703033.5	1.0	0.82	-0.2	3/16/2021	2.03	2.32	0.3	5/24/2021
20-001	ES471	Sidewall	816096.3	2703017.6	0.7	0.66	0.0	3/17/2021	1.74	2.04	0.3	5/21/2021
20-001	INT507	Sidewall	816031.7	2702988.1	0.9	0.73	-0.2	3/19/2021	1.91	2.18	0.3	5/24/2021
20-001	INT509	Sidewall	816012.9	2702958.2	1.0	0.84	-0.2	3/19/2021	1.99	2.19	0.2	5/20/2021
20-001	S-3743	Sidewall	815996.0	2703034.0	0.5	0.28	-0.2	3/17/2021	1.46	1.53	0.1	5/21/2021
20-001	ES403	Floor	816103.5	2703034.2	0.7	0.57	-0.1	3/16/2021	1.52	1.63	0.1	5/21/2021
20-001	ES404	Floor	815982.1	2702993.0	0.7	0.58	-0.1	3/18/2021	1.74	1.88	0.1	5/20/2021
20-001	ES470	Floor	816038.2	2703025.1	0.5	0.42	-0.1	3/18/2021	1.5	1.67	0.2	5/24/2021
20-002	ES420	Sidewall	815921.2	2702709.1	0.5	0.22	-0.3	3/24/2021	1.5	1.83	0.3	5/12/2021
20-002	ES481	Sidewall	815983.6	2702683.5	0.5	0.38	-0.1	3/24/2021	1.5	1.65	0.2	5/10/2021
20-002	ES498	Sidewall	816018.7	2702639.0	0.9	0.72	-0.2	3/30/2021	1.87	2.19	0.3	5/6/2021
20-002	ES4104	Sidewall	816053.3	2702679.2	1.3	1.03	-0.3	3/24/2021	2.25	2.44	0.2	5/10/2021
20-002	INT519	Sidewall	816113.6	2702707.7	1.3	1.03	-0.3	3/23/2021	2.25	2.5	0.3	5/7/2021
20-002	ES419	Floor	815963.6	2702718.6	0.7	0.63	-0.1	3/25/2021	1.74	2.03	0.3	5/12/2021
20-002	ES421	Floor	816083.1	2702700.8	1.1	0.95	-0.2	3/23/2021	2.13	2.45	0.3	5/7/2021
20-003	ES497	Sidewall	816040.1	2702055.4	0.7	0.41	-0.3	4/12/2021	1.7	1.86	0.2	4/22/2021
20-003	S-3758	Sidewall	816100.0	2702097.0	1.3	1.13	-0.2	4/12/2021	2.25	2.47	0.2	4/22/2021
20-003	ES449	Floor	816068.1	2702089.7	1.1	0.92	-0.2	4/12/2021	2.25	2.49	0.2	4/26/2021
20-323	ES413	Sidewall	816003.4	2702839.3	1.0	0.88	-0.1	3/23/2021	2	2.16	0.2	5/18/2021
20-323	ES417	Sidewall	816094.1	2702766.5	1.2	1.10	-0.1	3/29/2021	2.25	2.47	0.2	5/18/2021
20-323	ES473	Sidewall	815972.3	2702861.9	1.0	0.91	-0.1	3/23/2021	2	2.29	0.3	5/19/2021
20-323	ES476	Sidewall	815909.7	2702804.6	-1.0	-1.16	-0.2	3/25/2021	-0.4	-0.2	0.2	5/11/2021
20-323	ES4103	Sidewall	816115.8	2702924.6	0.9	0.67	-0.2	3/22/2021	1.2	1.25	0.1	5/19/2021
20-323	INT511	Sidewall	815994.4	2702901.1	0.7	0.56	-0.1	3/19/2021	1.71	1.89	0.2	5/20/2021
20-323	INT512	Sidewall	816039.3	2702902.3	0.9	0.63	-0.3	3/19/2021	2.03	2.32	0.3	5/20/2021
20-323	INT513	Sidewall	816064.7	2702925.8	0.7	0.57	-0.1	3/22/2021	1.75	2.08	0.3	5/19/2021
20-323	S-3739	Sidewall	816056.0	2702822.0	1.1	0.81	-0.3	3/23/2021	2.08	2.33	0.3	5/14/2021
20-323	S-3740	Sidewall	816057.0	2702806.0	0.9	0.66	-0.2	3/23/2021	1.89	2	0.1	5/11/2021
20-323	ES475	Floor	815941.4	2702829.2	1.0	0.74	-0.3	3/19/2021	2	2.23	0.2	5/18/2021
20-323	ES477	Floor	815991.1	2702765.7	1.0	0.85	-0.2	3/25/2021	2	2.29	0.3	5/15/2021
20-323	ES478	Floor	816058.4	2702763.4	1.2	0.95	-0.3	3/29/2021	2.22	2.44	0.2	5/18/2021
20-323	INT106	Floor	815936.7	2702765.5	0.9	0.69	-0.2	3/25/2021	1.89	2.25	0.4	5/14/2021

Table 2-2a
East Zone 4 Compliance Survey Control Table

Parcel	Station ID	Location	Easting	Northing	Design Elevation	Post-Excavation Elevation	Δ (ft)	Date Excavation Surveyed	Restoration Design Elevation	Post-Restoration Elevation	Δ (ft)	Date Restoration Surveyed
			MA State Plane ft, NAD83		NAVD88 ft				NAVD88 ft			
20-323	S-3737	Floor	816010.0	2702916.0	0.7	0.50	-0.2	3/19/2021	1.58	1.71	0.1	5/19/2021
20-324	ES4101	Sidewall	816084.1	2702218.2	1.3	1.03	-0.3	4/8/2021	2.25	2.4	0.2	4/28/2021
20-324	ES425	Sidewall	816066.3	2702625.1	1.3	1.17	-0.1	3/30/2021	2.25	2.5	0.3	5/6/2021
20-324	ES427	Sidewall	816042.2	2702596.9	1.1	0.91	-0.2	3/30/2021	2.07	2.31	0.2	5/6/2021
20-324	ES436	Sidewall	816085.5	2702400.8	1.3	1.14	-0.2	4/1/2021	2.25	2.41	0.2	5/3/2021
20-324	ES439	Sidewall	816076.7	2702349.8	1.3	1.03	-0.3	4/5/2021	2.27	2.32	0.0	5/3/2021
20-324	ES441	Sidewall	816032.1	2702333.7	0.8	0.54	-0.3	4/5/2021	1.82	1.99	0.2	5/3/2021
20-324	ES443	Sidewall	816078.4	2702282.6	1.3	1.18	-0.1	4/9/2021	2.34	2.69	0.4	4/30/2021
20-324	ES445	Sidewall	816016.9	2702242.9	-1.0	-1.14	-0.1	4/7/2021	-0.5	-0.34	0.2	4/26/2021
20-324	ES484	Sidewall	816040.4	2702570.4	1.1	0.85	-0.3	3/30/2021	2.2	2.42	0.2	5/6/2021
20-324	ES487	Sidewall	816007.8	2702483.7	0.5	0.48	0.0	4/1/2021	0.75	0.86	0.1	5/3/2021
20-324	ES489	Sidewall	816133.7	2702479.4	1.2	1.07	-0.1	4/5/2021	2.24	2.43	0.2	5/3/2021
20-324	ES492	Sidewall	816160.8	2702245.7	1.3	1.19	-0.1	4/9/2021	2.25	2.37	0.1	4/29/2021
20-324	ES495	Sidewall	816023.9	2702127.5	0.5	0.20	-0.3	4/6/2021	1.5	1.71	0.2	4/27/2021
20-324	ES4105	Sidewall	816069.4	2702519.1	1.2	1.06	-0.1	3/30/2021	2.25	2.35	0.1	5/6/2021
20-324	ES4106	Sidewall	816068.1	2702448.8	1.2	1.10	-0.1	4/2/2021	2.25	2.57	0.3	5/5/2021
20-324	ES4107	Sidewall	816052.6	2702179.3	1.3	1.16	-0.1	4/7/2021	2.25	2.39	0.1	5/4/2021
20-324	S-127	Sidewall	816020.0	2702400.0	1.0	0.70	-0.3	4/1/2021	2.05	2.29	0.2	5/3/2021
20-324	ES4100	Floor	816054.4	2702348.4	1.1	0.89	-0.2	4/5/2021	2.11	2.48	0.4	4/30/2021
20-324	ES431	Floor	816037.9	2702543.0	1.1	1.04	-0.1	3/30/2021	1.85	2.08	0.2	4/30/2021
20-324	ES433	Floor	816087.9	2702479.2	1.1	1.04	-0.1	4/2/2021	1.25	1.43	0.2	5/3/2021
20-324	ES444	Floor	816110.5	2702245.3	1.1	0.86	-0.2	4/9/2021	2.05	2.34	0.3	4/29/2021
20-324	ES447B	Floor	816046.2	2702141.5	0.3	0.09	-0.2	4/6/2021	2.35	2.51	0.2	4/27/2021
20-324	ES483B	Floor	816035.9	2702620.6	1.1	0.94	-0.2	3/30/2021	2.05	2.3	0.3	5/6/2021
20-324	ES490	Floor	816056.3	2702415.7	1.3	1.06	-0.2	4/1/2021	2.25	2.51	0.3	5/3/2021
20-324	S-3748	Floor	816035.0	2702476.0	1.0	0.80	-0.2	4/2/2021	1.91	2.11	0.2	5/3/2021
20-324	S-3754	Floor	816049.0	2702243.0	-0.3	-0.44	-0.1	4/8/2021	0.15	0.4	0.3	4/26/2021
20-325	ES453	Sidewall	816370.3	2702026.1	0.2	0.07	-0.1	4/15/2021	1	1.28	0.3	4/23/2021
20-325	INT536	Sidewall	816048.7	2701986.1	1.3	1.17	-0.1	4/13/2021	2.3	2.56	0.3	4/22/2021
20-325	S-3762	Sidewall	816126.0	2702040.0	1.3	1.28	0.0	4/14/2021	2.25	2.4	0.2	4/23/2021
20-325	S-3763	Sidewall	816131.0	2702015.0	1.3	1.05	-0.3	4/13/2021	2.36	2.55	0.2	4/23/2021
20-325	S-3766	Sidewall	816223.0	2702040.0	1.2	1.08	-0.1	4/14/2021	2.23	2.36	0.1	4/26/2021
20-325	S-3772	Sidewall	816322.0	2702033.0	1.3	1.17	-0.1	4/14/2021	2.1	2.33	0.2	4/23/2021
20-325	S-880	Sidewall	816400.0	2702048.0	1.3	1.20	-0.1	4/15/2021	2	2.2	0.2	4/23/2021

Table 2-2a
East Zone 4 Compliance Survey Control Table

Parcel	Station ID	Location	Easting	Northing	Design Elevation	Post-Excavation Elevation	Δ (ft)	Date Excavation Surveyed	Restoration Design Elevation	Post-Restoration Elevation	Δ (ft)	Date Restoration Surveyed
			MA State Plane ft, NAD83		NAVD88 ft				NAVD88 ft			
20-325	INT540	Floor	816373.2	2702042.2	1.4	1.26	-0.2	4/15/2021	2.25	2.34	0.1	4/23/2021
20-325	S-144	Floor	816100.0	2702020.0	1.0	0.87	-0.1	4/13/2021	1.9	2.2	0.3	4/23/2021
20-325	S-148	Floor	816300.0	2702015.0	1.2	0.91	-0.3	4/14/2021	1.93	2.17	0.2	4/23/2021
20-325	S-3761	Floor	816076.0	2701993.0	1.4	1.23	-0.2	4/13/2021	2.4	2.5	0.1	4/22/2021
20-325	S-879	Floor	816239.0	2702051.0	1.3	1.08	-0.2	4/14/2021	2.08	2.48	0.4	4/26/2021

Notes:
Elevation measurements at sidewall locations 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
Δ - difference between post-excavation elevation and design elevation or difference between post-restoration elevation and restoration design elevation

Table 2-2b
East Zone 5 Compliance Survey Control Table

Parcel	Station ID	Location	Easting	Northing	Design Elevation	Post-Excavation Elevation	Δ (ft)	Date Excavation Surveyed	Restoration Design Elevation	Post-Restoration Elevation	Δ (ft)	Date Restoration Surveyed
			MA State Plane ft, NAD83		NAVD88 ft				NAVD88 ft			
19-1	ES536	Floor	816601.0	2701800.9	0.3	0.18	-0.1	4/2/2021	2.3	2.46	0.2	6/9/2021
19-1	ES571	Floor	816480.5	2701806.0	-2.1	-2.15	0.0	3/19/2021	0.5	0.61	0.1	6/9/2021
19-1	INT347	Floor	816553.7	2701762.2	1.4	1.20	-0.2	3/18/2021	2.42	2.54	0.1	6/10/2021
19-1	S-164	Floor	816500.0	2701800.0	-0.3	-0.43	-0.1	3/18/2021	1.02	1.19	0.2	6/10/2021
19-1	S-3796	Floor	816601.0	2701734.0	1.2	1.08	-0.1	3/29/2021	2.25	2.4	0.2	6/8/2021
19-1	ES572	Sidewall	816545.5	2701739.6	1.0	0.90	-0.1	3/18/2021	1.99	2.19	0.2	6/10/2021
19-1	ES574	Sidewall	816633.9	2701693.5	2.4	2.25	-0.2	3/22/2021	3.31	3.42	0.1	6/7/2021
20-23	ES501	Floor	816799.7	2702400.7	-2.3	-2.66	-0.4	4/7/2021	1.75	1.93	0.2	5/25/2021
20-23	ES544	Floor	816848.0	2702212.3	0.1	-0.16	-0.3	4/14/2021	1.28	1.46	0.2	5/17/2021
20-23	ES556	Floor	816835.2	2702235.7	-1.1	-1.48	-0.4	4/14/2021	Restoration not required			
20-23	ES575	Floor	816906.3	2702295.6	4.0	3.81	-0.2	4/9/2021	5.38	5.46	0.1	5/25/2021
20-23	INT332	Floor	816888.2	2702240.7	1.5	1.29	-0.2	4/12/2021	2.47	2.76	0.3	5/26/2021
20-23	S-153	Floor	816867.0	2702302.0	0.8	0.73	-0.1	4/12/2021	3.32	3.57	0.3	5/26/2021
20-23	S-3786	Floor	816828.0	2702362.0	-1.0	-1.80	-0.8	4/8/2021	1.16	1.39	0.2	5/25/2021
20-23	S-801	Floor	816784.0	2702452.0	1.5	1.34	-0.2	4/6/2021	2.52	2.56	0.0	5/24/2021
20-23	ES504	Sidewall	816820.5	2702354.6	-1.8	-1.88	-0.1	4/8/2021	0.5	0.76	0.3	5/25/2021
20-23	ES553	Sidewall	816812.7	2702435.6	2.1	1.89	-0.2	4/6/2021	3.6	4.06	0.5	5/24/2021
20-23	ES554	Sidewall	816856.1	2702339.6	1.2	1.07	-0.1	4/8/2021	2.38	2.57	0.2	5/24/2021
20-23	ES555	Sidewall	816915.6	2702268.6	1.8	1.66	-0.1	4/9/2021	2.85	3.09	0.2	5/25/2021
20-23	ES557	Sidewall	816836.0	2702347.8	-2.0	-2.03	0.0	4/8/2021	1.63	1.77	0.1	5/25/2021
20-24	ES513	Floor	816837.0	2702174.4	-0.8	-1.01	-0.2	4/13/2021	0.58	0.69	0.1	5/27/2021
20-24	ES516	Floor	816812.9	2702135.0	-0.7	-1.03	-0.3	4/20/2021	0.62	0.75	0.1	5/27/2021
20-24	ES559	Floor	816820.0	2702178.2	-1.0	-1.04	0.0	4/13/2021	Restoration not required			
20-24	ES545	Sidewall	816867.2	2702173.4	0.7	0.69	0.0	4/12/2021	1.6	1.83	0.2	5/27/2021
20-24	ES558	Sidewall	816819.2	2702121.5	-1.2	-1.52	-0.3	4/20/2021	Restoration not required			
20-29	ES564	Floor	816724.7	2702055.1	-1.7	-1.93	-0.2	4/29/2021	0.5	0.71	0.2	5/28/2021
20-29	ES565	Floor	816661.1	2701997.4	-2.2	-2.79	-0.6	5/12/2021	0.5	0.68	0.2	6/3/2021
20-29	ES566	Floor	816614.7	2701935.4	-2.2	-2.25	-0.1	5/10/2021	0.5	0.59	0.1	6/3/2021
20-29	ES576	Floor	816634.8	2701950.3	-3.4	-3.80	-0.4	5/5/2021	1.14	1.3	0.2	6/3/2021
20-29	INT133	Floor	816746.2	2702061.6	-1.3	-1.69	-0.4	4/29/2021	1.01	1.28	0.3	5/28/2021
20-29	S-158	Floor	816680.0	2702000.0	-1.1	-1.56	-0.5	5/4/2021	1.17	1.4	0.2	6/3/2021
20-29	S-162	Floor	816615.0	2701904.0	-1.4	-1.67	-0.3	5/3/2021	2.17	2.21	0.0	6/7/2021
20-30	ES521	Floor	816828.1	2702086.9	-0.9	-1.52	-0.6	4/20/2021	1.56	1.79	0.2	5/27/2021
20-30	ES523	Floor	816790.0	2702075.7	-1.0	-1.77	-0.8	4/26/2021	1.3	1.39	0.1	5/28/2021

Table 2-2b
East Zone 5 Compliance Survey Control Table

Parcel	Station ID	Location	Easting	Northing	Design Elevation	Post-Excavation Elevation	Δ (ft)	Date Excavation Surveyed	Restoration Design Elevation	Post-Restoration Elevation	Δ (ft)	Date Restoration Surveyed
			MA State Plane ft, NAD83		NAVD88 ft				NAVD88 ft			
20-30	ES562	Sidewall	816814.4	2702094.0	-1.8	-1.95	-0.2	4/20/2021	0.5	0.53	0.0	5/28/2021
20-326	ES502	Floor	816793.6	2702390.5	1.0	0.35	-0.7	4/7/2021	2.06	2.16	0.1	5/25/2021
20-326	ES518	Floor	816635.7	2702107.0	-1.6	-1.76	-0.2	5/7/2021	Restoration not required			
20-326	ES519	Floor	816579.9	2702105.7	1.2	0.99	-0.2	4/15/2021	2.23	2.38	0.2	4/21/2021
20-326	S-3776	Floor	816752.0	2702294.0	-0.8	-1.12	-0.3	4/6/2021	Restoration not required			
20-326	S-3778	Floor	816731.0	2702343.0	0.7	0.58	-0.1	4/5/2021	0.89	1.01	0.1	6/1/2021
20-326	S-3781	Floor	816762.0	2702426.0	1.4	1.27	-0.1	4/6/2021	2.41	2.6	0.2	5/24/2021
20-326	ES509	Sidewall	816728.4	2702249.7	-2.0	-2.06	-0.1	4/29/2021	1.52	1.63	0.1	6/2/2021
20-326	ES550	Sidewall	816596.7	2702099.6	0.9	0.75	-0.2	4/15/2021	1.95	2.1	0.2	4/21/2021
20-326	ES551	Sidewall	816777.1	2702392.1	1.3	1.21	-0.1	4/7/2021	2.25	2.46	0.2	5/25/2021
20-326	S-3780	Sidewall	816772.0	2702451.0	1.6	1.38	-0.2	4/6/2021	2.56	2.64	0.1	5/24/2021
20-326	S-800	Sidewall	816702.0	2702398.0	1.3	1.24	-0.1	4/5/2021	2.29	2.45	0.2	6/1/2021
20-33	S-3565	Floor	816905.0	2702119.0	-0.8	-0.87	-0.1	4/15/2021	0.15	0.3	0.2	5/24/2021
20-33	ES560	Sidewall	816927.9	2702123.2	1.2	0.72	-0.5	4/15/2021	1.9	2.5	0.6	5/24/2021
20-33	ES561	Sidewall	816879.1	2702116.5	-1.5	-1.63	-0.1	4/15/2021	0.5	0.52	0.0	5/21/2021
ROW	ES547	Floor	816509.7	2701892.1	-1.1	-1.26	-0.2	3/19/2021	0.9	1.04	0.1	6/9/2021
ROW	ES567	Floor	816501.0	2701887.0	-1.2	-1.38	-0.2	3/19/2021	0.71	0.87	0.2	6/11/2021
ROW	ES569	Floor	816573.6	2701872.1	-1.8	-2.06	-0.3	5/3/2021	0.5	0.57	0.1	6/8/2021
ROW	ES577	Floor	816636.0	2701752.7	-0.5	-0.59	-0.1	3/30/2021	2.51	2.72	0.2	6/7/2021
ROW	INT140	Floor	816580.2	2701847.2	-0.1	-0.36	-0.3	4/5/2021	1.27	1.38	0.1	6/8/2021
ROW	S-508	Floor	816648.0	2701720.0	1.7	1.34	-0.4	3/19/2021	2.64	2.98	0.3	6/7/2021
ROW	ES568	Sidewall	816521.6	2701889.3	-1.2	-1.58	-0.4	4/1/2021	-0.96	-0.71	0.3	6/8/2021
ROW	ES570	Sidewall	816628.6	2701869.9	4.2	4.05	-0.2	3/22/2021	4.83	5	0.2	6/7/2021
ROW	ES573	Sidewall	816654.4	2701780.4	2.6	2.51	-0.1	3/23/2021	3.75	3.95	0.2	6/4/2021
Veranda	ES508	Floor	816760.3	2702281.4	-2.1	-2.27	-0.2	4/26/2021	Restoration not required			
Veranda	ES510	Floor	816826.1	2702248.2	-3.3	-3.34	-0.1	4/20/2021	Restoration not required			
Veranda	ES511	Floor	816725.9	2702208.9	-1.8	-1.89	-0.1	4/29/2021	Restoration not required			
Veranda	ES512	Floor	816758.1	2702180.9	-1.6	-1.90	-0.3	4/28/2021	Restoration not required			
Veranda	ES515	Floor	816672.3	2702138.2	-2.0	-2.17	-0.2	5/6/2021	Restoration not required			
Veranda	ES517	Floor	816747.7	2702127.6	-1.6	-1.89	-0.3	4/29/2021	Restoration not required			
Veranda	ES520	Floor	816652.3	2702102.1	-2.0	-2.15	-0.2	5/7/2021	Restoration not required			
Veranda	ES522	Floor	816750.4	2702077.3	-2.0	-2.08	-0.1	4/30/2021	Restoration not required			
Veranda	ES524	Floor	816617.0	2702038.7	-3.0	-3.24	-0.2	5/11/2021	Restoration not required			
Veranda	ES525	Floor	816695.3	2702036.8	-2.7	-2.75	0.0	5/10/2021	-2.43	-2.23	0.2	6/3/2021

Table 2-2b
East Zone 5 Compliance Survey Control Table

Parcel	Station ID	Location	Easting	Northing	Design Elevation	Post-Excavation Elevation	Δ (ft)	Date Excavation Surveyed	Restoration Design Elevation	Post-Restoration Elevation	Δ (ft)	Date Restoration Surveyed
			MA State Plane ft, NAD83		NAVD88 ft				NAVD88 ft			
Veranda	ES526	Floor	816652.3	2701997.7	-2.3	-2.67	-0.4	5/12/2021	-1.98	-1.78	0.2	6/3/2021
Veranda	ES527	Floor	816556.2	2701965.5	-3.0	-3.07	-0.1	5/20/2021	Restoration not required			
Veranda	ES528	Floor	816615.8	2701957.3	-2.4	-2.47	-0.1	5/17/2021	Restoration not required			
Veranda	ES530	Floor	816501.1	2701946.3	-3.3	-3.39	-0.1	3/30/2021	Restoration not required			
Veranda	ES531	Floor	816533.8	2701919.8	-2.4	-2.56	-0.2	5/12/2021	Restoration not required			
Veranda	ES532	Floor	816588.8	2701909.6	-3.3	-3.62	-0.3	5/13/2021	Restoration not required			
Veranda	ES534	Floor	816546.1	2701870.4	-3.3	-3.36	-0.1	5/3/2021	Restoration not required			
Veranda	ES507	Sidewall	816845.3	2702298.7	-3.1	-3.23	-0.2	4/20/2021	Restoration not required			

Notes:
Elevation measurements at sidewall locations taken at the base of the sidewall (bottom of the excavation).
Post-restoration design elevations are not available for locations where restoration was not prescribed by the work plan
MA = Massachusetts; NAD83 = North American Datum 1983; NAVD88 = North American Vertical Datum 1988; ft = feet
Δ - difference between post-excavation elevation and design elevation or difference between post-restoration elevation and restoration design elevation

Table 2-3
East Zone 4 and East Zone 5 Planting Summary

DATE	ACTIVITY
5/28/21	Hydroseeding of the berm in Parcel 20-23 and some adjacent uplands to the south and the Magnolia Street outfall area to expedite the grass growth in these areas
6/1/21 - 6/29/21	Marsh plantings installed in East Zone 4
6/18/21 - 6/29/21	Marsh plantings installed in East Zone 5
6/30/21 - 7/16/21	Installed herbivory fencing at East Zone 4 and East Zone 5
10/04//21 - 10/11/21	Upland trees, shrubs and grasses installed at East Zone 4 and East Zone 5

Attachment A

East Zone 4 and East Zone 5

Topsoil Summary

Attachment A
East Zone 4 and East Zone 5 Topsoil Summary

		Acceptable Nutrient Ranges										Geotech (Method D7928)			MCP S-1 Soil Cleanup Standards										
		pH	CEC	Base Saturation	Avail Plant Moisture	Organic Matter Content	Mg	Ca	K	N	P	Sand	Silt	Clay											
Batch #	Supplier	6 - 7	>20 meq/100g	>35%	50 - 70%	5 - 8%	50 - 120 ppm	1000 - 1500 ppm	100 - 160 ppm	>25 ppm	>15 ppm	45 - 85%	0 - 50%	0 - 20%	Metals	Petroleum Hydrocarbons	Target VOCs	Target SVOCs	EDB	1,4-Dioxane	Cyanide	PCBs	Backfill Location	Approved Vol (CY)
001	Read Custom	6.4	8.8	77.3	NA	5.9	127	1038	229	89.5	99	78	13.2	8.8	√	√	√	√	√	√	√	√	EZ4	500
002	Read Custom	6.5	12.1	83.4	NA	5.2	199	1488	376	113.3	123	77.7	17.6	4.7	√	√	√	√	√	√	√	√	EZ4	1000
003	Read Custom	6.5	8.5	76.5	NA	5.9	119	967	266	84.8	86	81.5	11.6	6.9	√	√	√	√	√	√	√	√	EZ4	1500
004	Read Custom	6.5	9	77.9	NA	5.8	135	1043	266	80.8	107	77.2	16.6	6.2	√	√	√	√	√	√	√	√	EZ4	2000
005	Read Custom	6.5	11	81.9	NA	5.8	164	1363	306	75.8	109	76.4	16.4	7.2	√	√	√	√	√	√	√	√	EZ4	2500
006	Read Custom	7.1	7.4	100	NA	5.3	131	1102	314	88.8	117	82.2	8.8	9	√	√	√	√	√	√	√	√	EZ4	3000
007	Read Custom	6.4	10.8	81.4	NA	5.9	153	1357	280	82	108	79.2	13.2	7.7	√	√	√	√	√	√	√	√	EZ4	3500
008	Read Custom	7.3	8.2	100	NA	5.9	144	1231	338	87.3	124	83.3	10.8	5.9	√	√	√	√	√	√	√	√	EZ4	4000
009	Read Custom	7.3	7.4	100	NA	5.7	132	1100	325	95.6	109	82.2	11.7	6.1	√	√	√	√	√	√	√	√	EZ4	4500
010	Read Custom	7.3	7.8	100	NA	6	138	1158	326	87.5	118	78.4	14.6	7	√	√	√	√	√	√	√	√	EZ4/EZ5	5000
011	Read Custom	7.3	9.2	100	NA	6.2	164	1383	361	77.1	142	81.6	12.1	6.3	√	√	√	√	√	√	√	√	EZ5	5500
012	Read Custom	7.4	6.8	100	NA	6	120	1017	293	105.2	117	82.2	8.8	9	√	√	√	√	√	√	√	√	EZ5	6000
013	Read Custom	7.4	7.8	99.9	NA	6	138	1166	320	91.4	123	79.2	13.2	7.7	√	√	√	√	√	√	√	√	EZ5	6500
014	Read Custom	7	7.3	100	NA	5.3	129	1083	296	71	105	77.3	15.8	6.9	√	√	√	√	√	√	√	√	EZ5	7000
015	Read Custom	7.3	6.7	100	NA	6	119	997	275	76.1	104	80.7	13.9	5.4	√	√	√	√	√	√	√	√	EZ5	7500
	Averages	6.9	8.6	91.9	NA	5.8	140.8	1166.2	304.7	87.1	112.7	79.8	13.2	7.0										

Notes

NA Not analyzed

√ Passes Criteria

Soil was analyzed once per 500 CY for nutrients and particle size, and once per 2000 CY for MCP parameters

Attachment B

Final Planting Plans

Attachment B1

East Zone 4 Planting Plan

EZ-4 PLANTING PLAN

New Bedford Harbor Superfund Site

May 2021

Final

20-001

20-323

20-002

20-324

20-003

20-325

20-004

New Bedford Harbor

East Zone 4

Upper Harbor

Bates St

Lawson Ave

Belleville Ave

N Front St

Sycamore St

Livesey Memorial Park

Coggeshall St

Oxford

Riverside

Site Location

Legend

- Proposed Limits of Excavation
- Parcel Boundary
- East Zone 4 Management Area

Basemap Data Source: MassGIS, ESRI

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

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

0 150 300 Feet

Intertidal East Zone 4
Site Location and Features

Figure 1

New Bedford Harbor Superfund Site

August 2019

Path: C:\Users\scottga\Documents\NBH\35BG1001\20180901_Intertidal\EZ4\ArcGIS\WP_Figures\Fig 2-1 EZ4_WP_Site_Location_20190813.mxd

DATE	REVISION	BY
4/29/21	Rev 1	kjt
5/10/21	Final	kjt

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Scale:1"=50 ft

New Bedford Harbor Superfund Site
EZ-4 Mitigation
Figure 2

TABLE 1

EZ-4 PLANTS FOR RESTORATION (reference Figure 2 - New Bedford Harbor Superfund Site EZ-4 Mitigation)

EXCAVATED AREAS		o.c. square spacing	A	B	C	D	E	F	G	H		
HIGH MARSH	23562 sq ft										**TOTAL**	
Distichlis spicata	Spike Grass	1 ft		4716	684	5605	7958	5228	104	156	24451	Plant above elevation 2.2 ft NAVD88
LOW MARSH	663663 sq ft											
Spartina alterniflora	Saltmarsh Cordgrass	1 ft	16380	24232	1345	7303	9778	3966	2569	790	66363	Planting range 0.5 to 2.2 ft NAVD88

HAUL ROAD BRANCHES		square spacing	Branch A	Branch B	Branch C	Branch D	Branch E	Branch F	S Cutover Branch		
HIGH MARSH	5611 sq ft									**TOTAL**	
Distichlis spicata	Spike Grass	1 ft	751	371		629	1800	1752		5303	
Spartina patens	Saltmeadow Cordgrass	1 ft					362			362	Plant between transition zones
LOW MARSH	1032 sq ft										
Spartina alterniflora	Saltmarsh Cordgrass	1 ft					78	982		1060	Planting range 0.5 to 2.2 ft NAVD88

HIGH TIDE BUSH/HIGH MARSH	10851 sq ft									**TOTAL**	
Spartina patens	Saltmeadow Cordgrass	1 ft	1579	2265		1503	2105	2907	492	10851	
Iva frutescens	High Tide Bush	5 ft	48	68		48	55	87	13	319	
Baccharis halimifolia	Groundsel Bush	5 ft	15	22		15	29	29	7	117	Plant above the high tide bush closer to the transition or upland zone

TRANSITION	1703 sq ft									**TOTAL**	
Panicum virgatum	Switchgrass	2 ft	51	34	100		141			326	
Myrica pensylvanica	Bayberry	5 ft	4	11	8		12			35	
Rhus copallinum	Winged Sumac	5 ft	4	11	8		12			35	
Juniperus virginiana	Eastern Red Cedar	specimen	1	2	1		2			6	
Salt tolerant seed mix	(1 lb per 1250 sq ft)		0.2	0.4	0.3		0.5			1.4 lbs	

MAIN HAUL ROAD		square spacing	
UPLAND	20247 sq ft		
Amelanchier canadensis	Shadbush	10 ft	40
Cornus amomum	Silky Dogwood	10 ft	40
Vaccinium corymbosum	Highbush Blueberry	10 ft	40
Myrica pensylvanica	Bayberry	10 ft	40
Rhus copallinum	Winged Sumac	10 ft	40
		triangular spacing	
Juniperus virginiana	Eastern Red Cedar	22 ft	18
Acer rubrum	Red Maple	22 ft	6
Quercus rubra	Red Oak	22 ft	8
Ilex opaca	American Holly	22 ft	3
Prunus serotina	Black Cherry	22 ft	5
Nyssa sylvatica	Black Tupelo	22 ft	3
Betula populifolia	Gray Birch	22 ft	5
Conservation Seed Mix	(1 lb per 1750 sq ft)		11.6 lbs

CUTOVER AREAS To be determined following observed regrowth

EZ-4 OVERALL SPECIES TOTALS		TOTAL
Tree Species		
Juniperus virginiana	Eastern Red Cedar	24
Acer rubrum	Red Maple	6
Quercus rubra	Red Oak	8
Ilex opaca	American Holly	3
Prunus serotina	Black Cherry	5
Nyssa sylvatica	Black Tupelo	3
Betula populifolia	Gray Birch	5
Shrub Species		
Amelanchier canadensis	Shadbush	40
Cornus amomum	Silky Dogwood	40
Vaccinium corymbosum	Highbush Blueberry	40
Myrica pensylvanica	Bayberry	75
Rhus copallinum	Winged Sumac	75
Baccharis halimifolia	Groundsel Bush	117
Iva frutescens	High Tide Bush	319
Herbaceous Species		
Panicum virgatum	Switchgrass	326
Distichlis spicata	Spike Grass	29754
Spartina alterniflora	Smooth Cordgrass	67423
Spartina patens	Saltmeadow Cordgrass	11213
Salt tolerant seed mix	(1 lb per 1250 sq ft)	1.4 lbs
Conservation seed mix	(1 lb per 1750 sq ft)	11.6 lbs

EAST ZONE -4 (Parcels 20-001, 20-323, 20-002, 20-324, 20-003, 20-004, 20-325)

PROPOSED PLANTINGS (Spring/Early Summer 2021) Shrubs and trees all 1 gallon containers. Herbaceous plugs of salt marsh grasses and switchgrass should be 2" diameter. Slow release fertilizer such as Osmocote for plugs and 1 gallon containers for establishment. Seed mixes are New England/ Wildlife Seed Mix and Coastal Salt Tolerant Grass Mix (Reference Figure 2 - New Bedford Harbor Superfund Site EZ-4 Mitigation) for planting zones, and Table 1 for a tally of Plant Materials).

- **Provide temporary fencing at the upland extent of restoration sites to protect plantings during establishment**
- **Provide herbivore deterrent for salt marsh plantings**

UPLAND Tree and Shrub Zone (trees plant ~22 ft o.c. triangular spacing to replace trees cut during haul road establishment; shrubs plant 10 feet o.c. square)
Overseed with **NE Conservation/Wildlife seed mix (Application rate: 1lb/1750 sq ft)**

TRANSITION Zone (few specimen red cedar on higher ground, shrubs 5 ft o.c. and herbs 2 ft o.c. square spacing)
Overseed entire transition zone with **Coastal Salt Tolerant Grass seed mix (Application rate: 1 lb/1250 sq ft)**

HIGH TIDE BUSH/HIGH MARSH Zone (*Spartina patens* planted throughout 1 ft o.c. square spacing, high tide bush and groundsel bush 5 ft o.c. Plant the groundsel bush closest to the transition zone and the high tide bush closest to the *Distichlis spicata* high marsh.

HIGH MARSH (plant *Distichlis spicata* 1 ft o.c. square spacing for all high marsh areas with one exception; a 362 sq ft area of high marsh along Haul Road Branch E should be planted with *Spartina patens* 1 ft o.c. square spacing)

LOW MARSH (plant Spartina alterniflora 1 ft o.c. square spacing)
Plant plugs with slow release fertilizer

CR ENVIRONMENTAL, INC.
Ecological and Oceanographic Consultants

Date: April 26, 2021

To: Jacobs Engineering

From: E. Ptaszynski, C. Cogswell, CR Environmental, Inc.

Re: EZ-4 Proposed Planting Zones and Elevation Data

On April 23, 2021 CR Environmental assessed existing salt marsh and upland plant species at EZ-4. Vegetation zones were distinguished based upon the species present and hydrologic/topographic features. The coordinates and elevations defining these zones were taken with an RTK GPS.

The UPLAND ZONE through which much of the haul road was located was often demarked by a stone wall running north-south and contained the trees: Eastern red cedar (*Juniperus virginiana)*, red maple (*Acer rubrum*), red oak (*Quercus rubra*), American holly (*Ilex opac*a), black cherry (*Prunus serotina*), black tupelo (*Nyssa sylvatica*), shadbush (*Amelanchier* sp.), and the shrubs highbush blueberry (*Vaccinium corymbosum*), staghorn sumac (*Rhus typhina*), and the invasive autumn olive (*Elaeagnus umbellata*) and tartarian honeysuckle (*Lonicera tartarica*). In order to create the path for the haul road alongside EZ-4, a total of approximately 40 trees were cut down. They were identified as predominantly Eastern red cedar.

Red maple, Eastern red cedar trees and an understory of predominantly highbush blueberry

A TRANSITION ZONE was present between the highest extent of high tide bush and the wooded upland. The most abundant species were scattered red cedars (*J. virginiana*), the shrubs bayberry (*Myrica pensylvanica*) and groundsel bush (*Baccharis halimifolia*), and switchgrass (*Panicum virgatum*).

Down-gradient of the transition zone is a region of HIGH TIDE BUSH (*Iva frutescens*) and salt meadow cordgrass (*Spartina patens*) and to a lesser degree spike grass (*Distichlis spicata).*

Typical haul road branch through TRANSITION ZONE and HIGH TIDE BUSH ZONE

The HIGH MARSH down-gradient of the high tide bush zone was predominantly *D. spicata* with *S.patens* and scattered annual glasswort (*Salicornia demissa*) and sea lavender (*Limonium carolinianum*). *D. spicata* was more abundant in the lower elevations of the high marsh. Some patches of high marsh had abundant crab burrows and lacked vegetation.

Excavated areas of high marsh and low marsh

The LOW MARSH was dominated by salt marsh cordgrass (*Spartina alterniflora*).

Elevation ranges of planting zones from site visit to EZ-4 in feet NAVD88

Upper limit of LOW MARSH range 1.5 to 2.2 feet

Upper limit of HIGH MARSH/ lower limit HIGH TIDE BUSH zone 1.9 to 2.6 feet

Upper limit HIGH TIDE BUSH zone/ lower limit TRANSITION ZONE 2.9 to 3.6 feet (note the high marsh grass *Spartina patens* was found throughout the high tide bush zone)

Upper limit TRANSITION ZONE/ lower limit UPLAND 3.2 to 4.9 feet (some switchgrass *Panicum virgatum* present)

Southern transition zone area cutover with a flail mower as part of the haul road construction but not utilized because the soil surface was too soft. Suggest that the quantity of any plants needed for restoration be determined following observation of any regrowth of remaining vegetation. Eastern red cedar will not stump sprout when no foliage remains. The boundary is outlined in blue and labelled on Figure 2 New Bedford Harbor Superfund Site EZ-4 Mitigation (April 2021).

Regrowth at northern area cut over for potential haul road construction (Jacobs, May 2021)

Spartina patens and cut over high tide bush (Jacobs, May 2021)

Northern cut over area new growth on high tide bush (*Iva frutescens*) (Jacobs, May 2021)

Attachment B2

East Zone 5 Planting Plan

EZ-5 PLANTING PLAN

New Bedford Harbor Superfund Site

June 2021

Final

20-23

20-326

20-24

20-33

20-30

20-29

Fairhaven ROW

19-1

New Bedford Harbor

East Zone 5

North Fairhaven

Upper Harbor

Oxford

Site Location

Legend

- Proposed Limits of Excavation
- Veranda Inlet
- East Zone 5 Management Area
- Parcel Boundary

Basemap Data Source: MassGIS, ESRI

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

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,

0 150 300 Feet

Intertidal East Zone 5
Site Location and Features

New Bedford Harbor Superfund Site

December 2019 **Figure 1**

Path: C:\Users\ScottGA\Documents\NBH\35BG1001\20180901_IntertidalEZ5\ArcGIS\WP_Figures\Fig 2-1 EZ5_WP_Site_Location_20191216.mxd

2699 sf
2517 sf
1010 sf
1610 sf
3195 sf
101 sf
1580 sf
527 sf
461 sf
1715 sf
1030 sf
1529 sf
5759 sf
8907 sf
2251 sf
378 sf
272 sf
230 sf
570 sf
478 sf
482 sf
Veranda Avenue
8444 sf
3355 sf
9615 sf
Eastern Red Cedar
Virginia Rose
Lawn
815 sf
Sweet Birch
BioSwale
Trailer
Wood Chip
Path
Conservation
Seed Mix
11432 sf
Arrow-wood
Newbury Ave Staging Area
Newbury Ave
0'
30'
60'

NOTE: The exact orientation of plantings/lawn at the former Newbury Avenue staging area is to be determined in consultation with the property owner

UPLAND TREES & SHRUBS/
CONSERVATION SEED MIX

TRANSITION PLANTING

HIGH TIDE BUSH / HIGH MARSH

HIGH MARSH

LOW MARSH

TIDAL CREEK

N
W
E
S

DATE	REVISION	BY
6/1/21	Rev 1	kjt
6/14/21	Newbury Street	kjt

CR ENVIRONMENTAL, INC WBE
ECOLOGICAL AND OCEANOGRAPHIC CONSULTANTS
www.crenvironmental.com

DRAWN: kjt | FILE NAME: CR-EZ5_6-14-21 Final.dwg | Figure
Scale:1"=30 ft

New Bedford Harbor Superfund Site
EZ-5 Mitigation
Figure 2

TABLE 1

EZ-5 PLANTS FOR RESTORATION (reference Figure 2 - New Bedford Harbor Superfund Site EZ-5 Mitigation)

EXCAVATED AREAS

			o.c. square spacing	Eastern Excavation	Southern Excavation	Creek Channel	Berm	TOTAL	
HIGH MARSH									
Distichlis spicata	Spike Grass		1 ft	2384	4807			7191	Plant above elevation 2.2 ft to ~ 2.4 ft NAVD88
Spartina patens	Saltmeadow Cordgrass		1 ft	2384	4808			7192	Plant above elevation 2.4 ft to 3.4 NAVD88
LOW MARSH	**19,066 sq ft**								
Spartina alterniflora	Saltmarsh Cordgrass		1 ft	8907	8444	1715		19066	Planting range 0.5 to 2.2 ft NAVD88
UPLAND	**8,079 sq ft**			1529 sq ft	3355 sq ft		3195 sq ft	**TOTAL**	
Shrubs									
Iva frutescens	High Tide Bush		5 ft	15	36			51	plant above high marsh above elevation 3.4 ft NAVD88
Baccharis halimifolia	Groundsel Bush		5 ft	15	36			51	plant groundsel bush above high tide bush to NAVD 4.0
Myrica pensylvanica	Bayberry		5 ft		36			36	plant bayberry above groundsel bush
Rhus copallinum	Winged Sumac		8 ft	15	36			51	E Excavation - sumac on slope above groundsel bush
Herbs/Seed Mixes									S Excavation - sumac on slope above bayberry only on northern 'Veranda Ave.' upland portion
Panicum virgatum plugs	Switchgrass		5 ft	30	67			97	plant in between row of high tide bush and groundsel bush and above groundsel bush
NE Conservation Seed Mix	(1 lb per 1750 sq ft)			0.8	1.4		2.6	4.8	upper slope with winged sumac
NE Salt Tolerant Seed Mix	(1 lb per 1250 sq ft)			0.4	1.3			1.7	lower half of slope with high tide bush and groundsel bush

HAUL ROADS and BRANCHES

Check for regrowth once haul roads removed

		square	TOTAL	
HIGH MARSH	**4,823 sq ft**			
Distichlis spicata	Spike Grass	1 ft	2412	Planting range 2.2 to 2.4 ft NAVD88
Spartina patens	Saltmeadow Cordgrass	1 ft	2411	Planting range 2.2 to 3.4 ft NAVD88
LOW MARSH	**2,326 sq ft**			
Spartina alterniflora	Saltmarsh Cordgrass	1 ft	2326	Planting range 0.5 to 2.2 ft NAVD88
HIGH TIDE BUSH/HIGH MARSH		**square**		
Juncus gerardii	Black Grass	1 ft	5,429	
Shrubs				
Iva frutescens	High Tide Bush	5 ft	115	
Baccharis halimifolia	Groundsel Bush	5 ft	115	Plant above the high tide bush closer to the transition or upland zone

TRANSITION	**1,580 sq ft**		**TOTAL**	
Shrubs		**square**		
Baccharis halimifolia	Groundsel Bush	5 ft	20	
Myrica pensylvanica	Bayberry	5 ft	20	
Rhus copallinum	Winged Sumac	5 ft	20	
Trees		**triangular**		
Juniperus virginiana	Eastern Red Cedar	22 ft	4	
Herbs				
Panicum virgatum	Switchgrass	5 ft	63	plant switchgrass in between shrubs
NE Salt tolerant seed mix	(1 lb per 1250 sq ft)		1.3	overseed area
UPLAND	**2,699 sq ft**			
Shrubs		**square**		
Amelanchier canadensis	Shadbush	10 ft	6	
Cornus amomum	Silky Dogwood	10 ft	6	
Vaccinium corymbosum	Highbush Blueberry	10 ft	6	
Myrica pensylvanica	Bayberry	10 ft	6	
Rhus copallinum	Winged Sumac	10 ft	6	
Trees		**triangular**		
Juniperus virginiana	Eastern Red Cedar	22 ft	2	
Quercus rubra	Red Oak	22 ft	2	
Prunus serotina	Black Cherry	22 ft	2	
Seed Mixes				
NE Conservation Seed Mix	(1 lb per 1750 sq ft)		1.6 lbs	

EZ-5 OVERALL SPECIES TOTALS		**TOTAL**
(Unless otherwise noted herbs are 2"plugs, shrubs and trees 1 gallon)		
Tree Species		
Juniperus virginiana	Eastern Red Cedar	6
Juniperus virginiana	Eastern Red Cedar (3 gallon)	5
Quercus rubra	Red Oak	2
Prunus serotina	Black Cherry	2
Betula lenta	Sweet Birch (3 gallon)	2
Amelanchier canadensis	Shadbush (3 gallon)	1
Shrub Species		
Amelanchier canadensis	Shadbush	6
Cornus amomum	Silky Dogwood	6
Rosa virginiana	Virginia Rose (3 gallon)	12
Myrica pensylvanica	Bayberry	62
Rhus copallinum	Winged Sumac	77
Vaccinium corymbosum	Highbush Blueberry	6
Viburnum dentatum	Arrow-wood (3 gallon)	5
Baccharis halimifolia	Groundsel Bush	186
Iva frutescens	High Tide Bush	166
Herbaceous Species		
Panicum virgatum	Switchgrass (2" plugs)	160
Panicum virgatum	Switchgrass (1 gallon)	33
Distichlis spicata	Spike Grass	9,603
Spartina alterniflora	Smooth Cordgrass	21,392
Spartina patens	Saltmeadow Cordgrass	7,192
Juncus gerardii	Black Grass	5,429
Salt tolerant seed mix	(1 lb per 1250 sq ft)	3 lbs
Conservation seed mix	(1 lb per 1750 sq ft)	13 lbs
Erosion Control/Restoration Mix Moist S	(35 lbs/1250 sq ft)	0.5 lbs
Lawn - Creeping Red Fescue add to Contractor's Mix		0.5 lbs
Lawn - Pennington Northern Contractor's Seed Mix (1lb per 83 sf)		10 lbs

TABLE 1

EZ-5 PLANTS FOR RESTORATION (reference Figure 2 - New Bedford Harbor Superfund Site EZ-5 Mitigation)

NEWBURY STREET FORMER STAGING AREA

UPLAND	**12,247 sq ft**				
Shrubs					
Viburnum dentatum	Arrow-wood	3 gallon		5	plant along southern border. Japanese knotweed needs to be treated.
Rosa virginiana	Virginia Rose	3 gallon		12	plant in hedgerow along northern side
Trees					
Juniperus virginiana	Eastern Red Cedar	3 gallon		5	plant western/ seaward side of area
Betula lenta	Sweet Birch	3 gallon		2	plant eastern side of area
Amelanchier canadensis	Shadbush	3 gallon		1	plant eastern side of area
Herbs					
Panicum virgatum	Switchgrass	1 gallon	8 ft	13	spaced in front of *Rosa virginiana* hedge row
Seed Mixes					
NE Conservation Seed Mix (11,432 sq ft)	(1 lb per 1750 sq ft)			6.5	
Lawn (~815 sf) - Creeping Red Fescue (salt tolerant)	(4-5 lbs per 1,000 sq ft)			0.5 lbs	
Lawn - Pennington Northern Contractor's Seed Mix	(1 lb per 83 sf)			10 lbs	
BIOSWALE	**77 ft long x 7 ft wide = 539 sq ft**				
Panicum virgatum	Switchgrass	1 gallon	8 ft	20	along crest of bioswale
NE Erosion Control/Restoration Mix for Moist Sites	(1 lb/1250 sq ft)			0.5 lbs	seeded on slopes and bottom of bioswale, gravel at discharge from road and outlet, possible check dam in center of swale

INVASIVES ISSUES

Need to control *Phragmites* along eastern and southern excavation

Need to control knotweed and some *Phragmites* end Newbury Street

PLANTS USED FOR NEWBURY STREET FORMER STAGING AREA

SWITCH GRASS along crest bioswale and in front of and staggered between Virginia Rose along northern border

VIRGINIA ROSE along northern border above bayberry shrubs

ARROW-WOOD along southern border in front of existing tree line

EASTERN RED CEDAR along the western/seaward side of the site

SWEET BIRCH fall colors north of the entrance path

NEW ENGLAND WETLAND PLANTS, INC

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New England Conservation/Wildlife Mix

Botanical Name	Common Name	Indicator
Elymus virginicus	Virginia Wild Rye	FACW-
Schizachyrium scoparium	Little Bluestem	FACU
Andropogon gerardii	Big Bluestem	FAC
Festuca rubra	Red Fescue	FACU
Sorghastrum nutans	Indian Grass	UPL
Panicum virgatum	Switch Grass	FAC
Chamaecrista fasciculata	Partridge Pea	FACU
Desmodium canadense	Showy Tick Trefoil	FAC
Asclepias tuberosa	Butterfly Milkweed	NI
Bidens frondosa	Beggar Ticks	FACW
Eupatorium purpureum (Eutrochium maculatum)	Purple Joe Pye Weed	FAC
Rudbeckia hirta	Black Eyed Susan	FACU-
Aster pilosus (Symphyotrichum pilosum)	Heath (or Hairy) Aster	UPL
Solidago juncea	Early Goldenrod	

PRICE PER LB. $39.50 MIN. QUANITY 2 LBS. **TOTAL:** $79.00 APPLY: 25 LBS/ACRE :1750 sq ft/lb

The New England Conservation/Wildlife Mix provides a permanent cover of grasses, wildflowers, and legumes
For both good erosion control and wildlife habitat value. The mix is designed to be a no maintenance seeding, and is appropriate for cut and fill slopes, detention basin side slopes, and disturbed areas adjacent to commercial and residential projects.

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is $/bulk pound, FOB warehouse, Plus SH and applicable taxes.

NEW ENGLAND WETLAND PLANTS, INC

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New England Coastal Salt Tolerant Grass Mix

Botanical Name	Common Name	Indicator
Elymus canadensis	Canada Wild Rye	FACU+
Festuca rubra	Red Fescue	FACU
Panicum amarum	Atlantic Coastal Panic Grass	FACU-
Andropogon gerardii	Big Bluestem	FAC
Sorghastrum nutans	Indian Grass	UPL
Panicum virgatum	Switch Grass	FAC
Juncus tenuis	Path Rush	FAC

PRICE PER LB. $26.00 MIN. QUANITY 4 LBS. **TOTAL:** $104.00 APPLY: 35 LBS/ACRE :1250 sq ft/lb

The New England Coastal Salt Tolerant Seed Mix contains a selection of native grasses that tolerate salty conditions. This mix is appropriate for drier coastal areas that receive salt spray or mist. Always apply on clean bare soil. The mix may be applied by hydro-seeding, by mechanical spreader, or on small sites it can be spread by hand. Lightly rake, or roll to ensure proper seed to soil contact. Best results are obtained with a Spring seeding. Late Spring and early Summer seeding will benefit with a light mulching of weed-free straw to conserve moisture. If conditions are drier than usual, watering may be required. Late Fall and Winter dormant seeding require an increase in the seeding rate. Fertilization is not required unless the soils are particularly infertile. Preparation of a clean weed free soil surface is necessary for optimal results.

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New England Erosion Control/Restoration Mix For Detention Basins and Moist Sites

Botanical Name	Common Name	Indicator
Elymus riparius	Riverbank Wild Rye	FACW
Schizachyrium scoparium	Little Bluestem	FACU
Festuca rubra	Red Fescue	FACU
Andropogon gerardii	Big Bluestem	FAC
Panicum virgatum	Switch Grass	FAC
Vernonia noveboracensis	New York Ironweed	FACW+
Agrostis perennans	Upland Bentgrass	FACU
Bidens frondosa	Beggar Ticks	FACW
Eupatorium maculatum (Eutrochium maculatum)	Spotted Joe Pye Weed	OBL
Eupatorium perfoliatum	Boneset	FACW
Aster novae-angliae (Symphyotrichum novae-anglia	New England Aster	FACW-
Scirpus cyperinus	Wool Grass	FACW
Juncus effusus	Soft Rush	FACW+

PRICE PER LB. $37.00 MIN. QUANITY 3 LBS. **TOTAL:** $111.00 APPLY: 35 LBS/ACRE :1250 sq ft/lb

The New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites contains a selection of native grasses and wildflowers designed to colonize generally moist, recently disturbed sites where quick growth of vegetation is desired to stabilize the soil surface. It is an appropriate seed mix for ecologically sensitive restorations that require stabilization as well as long-term establishment of native vegetation. This mix is particularly appropriate for detention basins that do not hold standing water. Many of the plants in this mix can tolerate infrequent inundation, but not constant flooding. The mix may be applied by hand, by mechanical spreader, or by hydro-seeder. After sowing, lightly rake, roll or cultipack to insure good seed-to-soil contact. Best results are obtained with a Spring or late Summer seeding. Late Fall and Winter dormant seeding requires an increase in the application rate. A light mulching of clean, weed-free straw is recommended

Possible Contractor's Mix for Lawn establishment at the former Newbury Avenue staging area. Contains perennial rye, annual rye and tall fescue. Suggest mixing in 10% Creeping Red Fescue.

This sun-tolerant seed should be planted in the early spring or early fall, and is optimal for areas getting 4 to 6 hours of sun. Once germinated, the grass will grow thick and full. This 7-pound bag covers up to 1,400 square feet for overseeding and 580 square feet for new lawns.