

333 Adelaide Avenue
Providence, RI



Site Location Map

Project 3650-11-0222

Figure 1.1

Document: P:\old_wakefield_data\projects\TEXTORNGORHAM\GIS\MapDocuments\SIR 2012\RAWIP_11x17_P.mxd PDF: P:\old_wakefield_data\projects\652130029 - Texton Gorham Updated Cove SIR\4.0 Project Deliverables\4.1 Reports\SIR\FIGURES\Figure 1.2 Site Plan.pdf



Legend

Approximate Parcel Boundary

Note: 2011 Ortho photo obtained from Rhode Island Geographic Information System (RGIS)

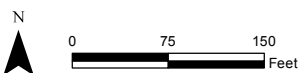
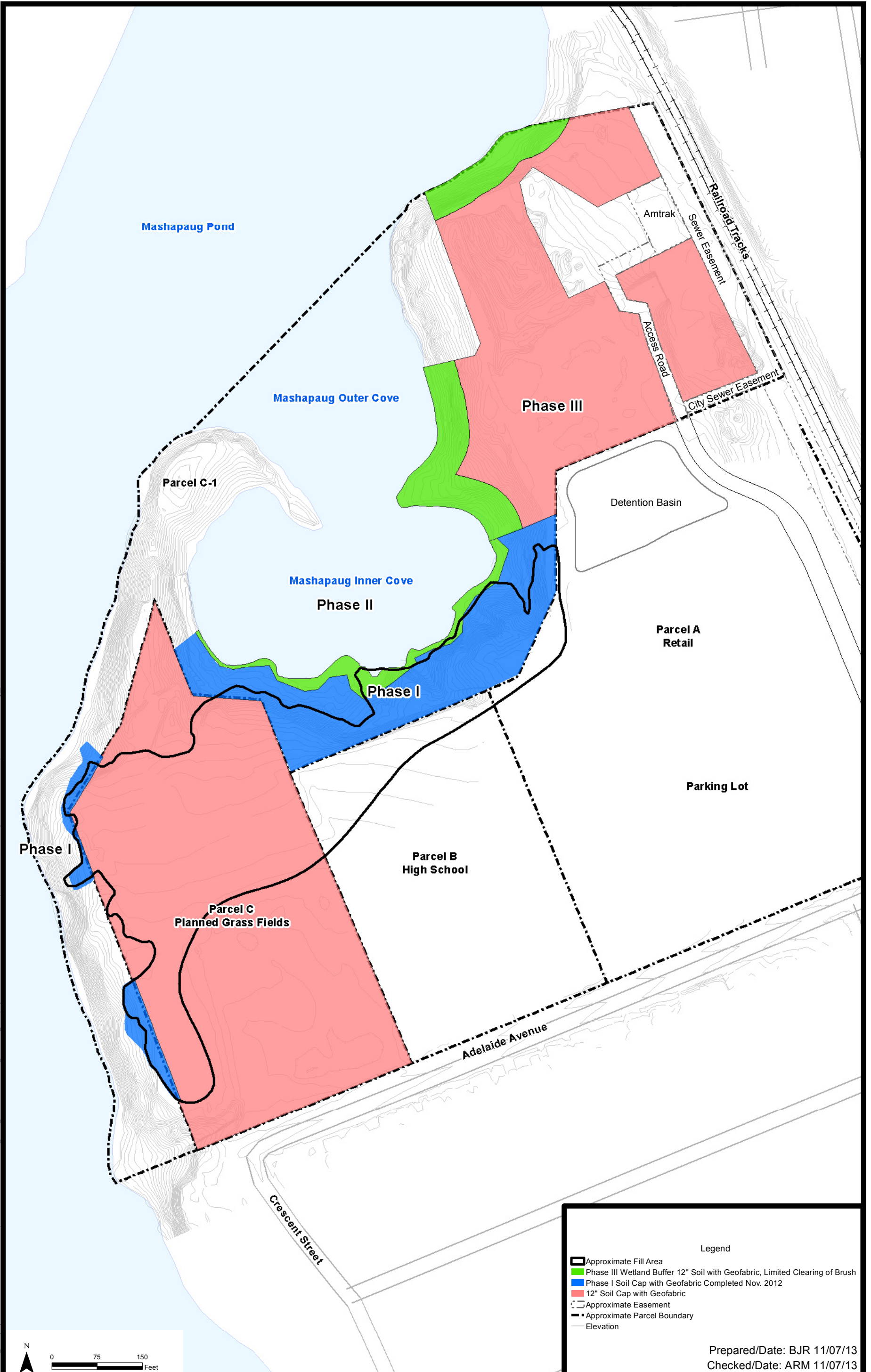
Prepared/Date: BJR 10/17/13
Checked/Date: ARM 10/17/13

Former Gorham Manufacturing Site
333 Adelaide Avenue
Providence, RI



Site Plan
Project 3650-11-0222
Figure 1.2

Document: P:\old_wakefield_Data\projects\TEXT\GORHAM\GIS\MapDocuments\SIR 2012\RAWP_11x17_P.mxd PDF: P:\old_wakefield_Data\projects\6652130029 - Texton_Gorham_Updated_Cove_SIR\4.0 Project Deliverables\4.1 Reports\SIR\FIGURES\Figure 1.3 Parcel C-1 and Parcel C Remediation.pdf



Legend

- Approximate Fill Area
- Phase III Wetland Buffer 12" Soil with Geofabric, Limited Clearing of Brush
- Phase I Soil Cap with Geofabric Completed Nov. 2012
- 12" Soil Cap with Geofabric
- Approximate Easement
- Approximate Parcel Boundary
- Elevation

Prepared/Date: BJR 11/07/13
Checked/Date: ARM 11/07/13

Former Gorham Manufacturing Site
333 Adelaide Avenue
Providence, RI



Parcel C-1 and Parcel C Remediation
Project 3650-11-0222 Figure 1.3

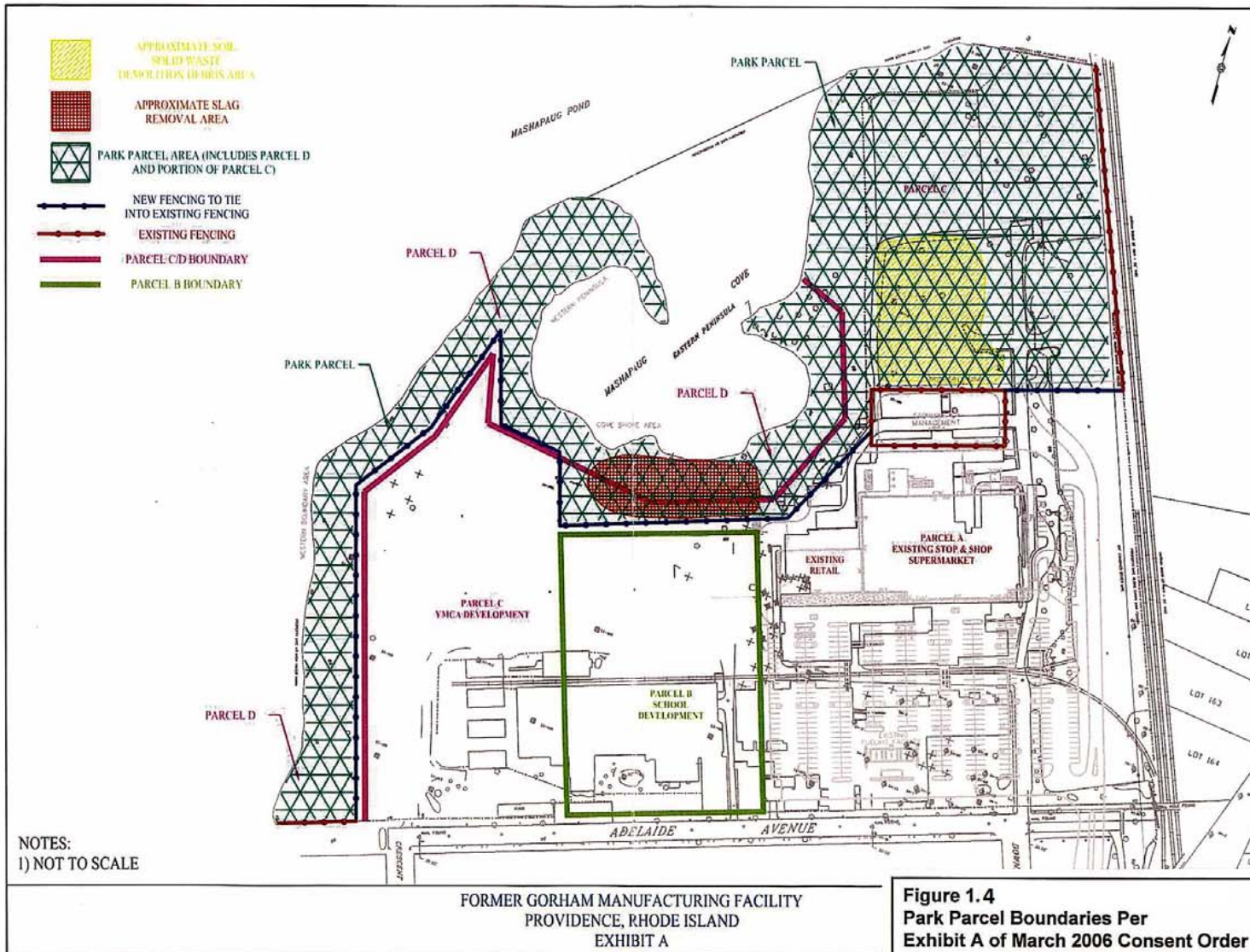


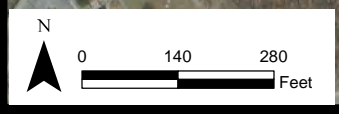
Figure 1.4
Park Parcel Boundaries Per
Exhibit A of March 2006 Consent Order



Legend

- ▲ URI Sediment Sample Location 1986
- ▼ URI Surface Water Sample Location 1986
- ▼ GZA Surface Water Sample Location 1986
- ▲ RIDEM Sediment Sample Location 1987
- ▼ RIDEM Surface Water Sample Location 1987
- ▲ RIDEM Sediment Sample Location 2005
- ▼ USEPA Water Column Station Surface Water Sampling 2001
- ▼ Surface Water Sample SW-1 through SW-4 were collected on April 15, 1999 by Harding Lawson Associates.
- ▲ Sediment Samples Cove-1 through Cove-3 were collected by R. Dorr on September 5, 2005
- Approximate Site Boundary

Prepared/Date: BJR 10/11/12
 Checked/Date: DEH 10/11/12



333 Adelaide Avenue Site
 Providence, Rhode Island



Historic Surface Water
 and Sediment Sample Locations
 Project 3650-11-0222 Figure 2.1

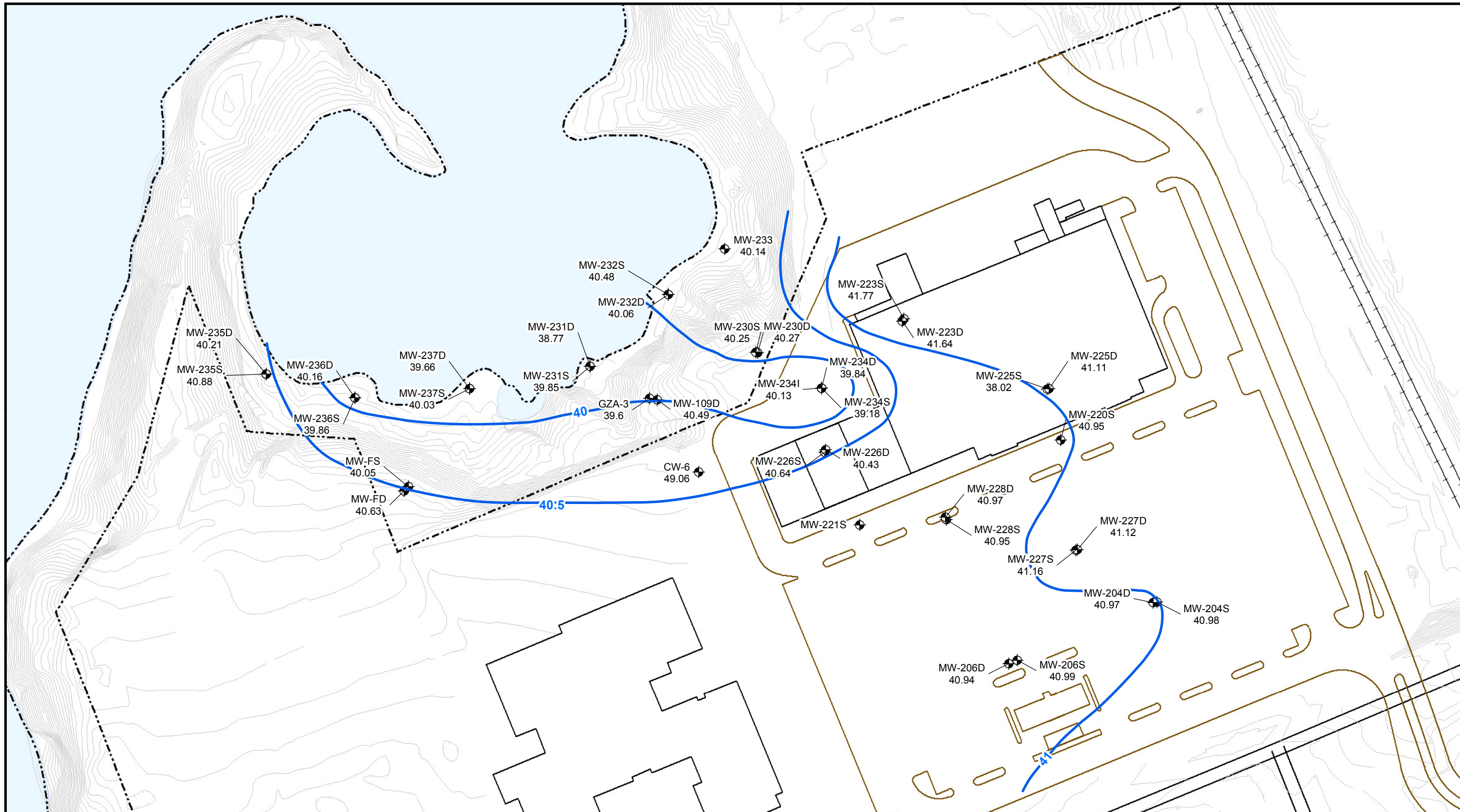
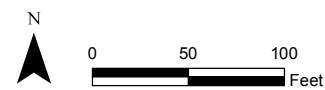


Figure 2.2
Groundwater Elevation Contour Map
December 2009

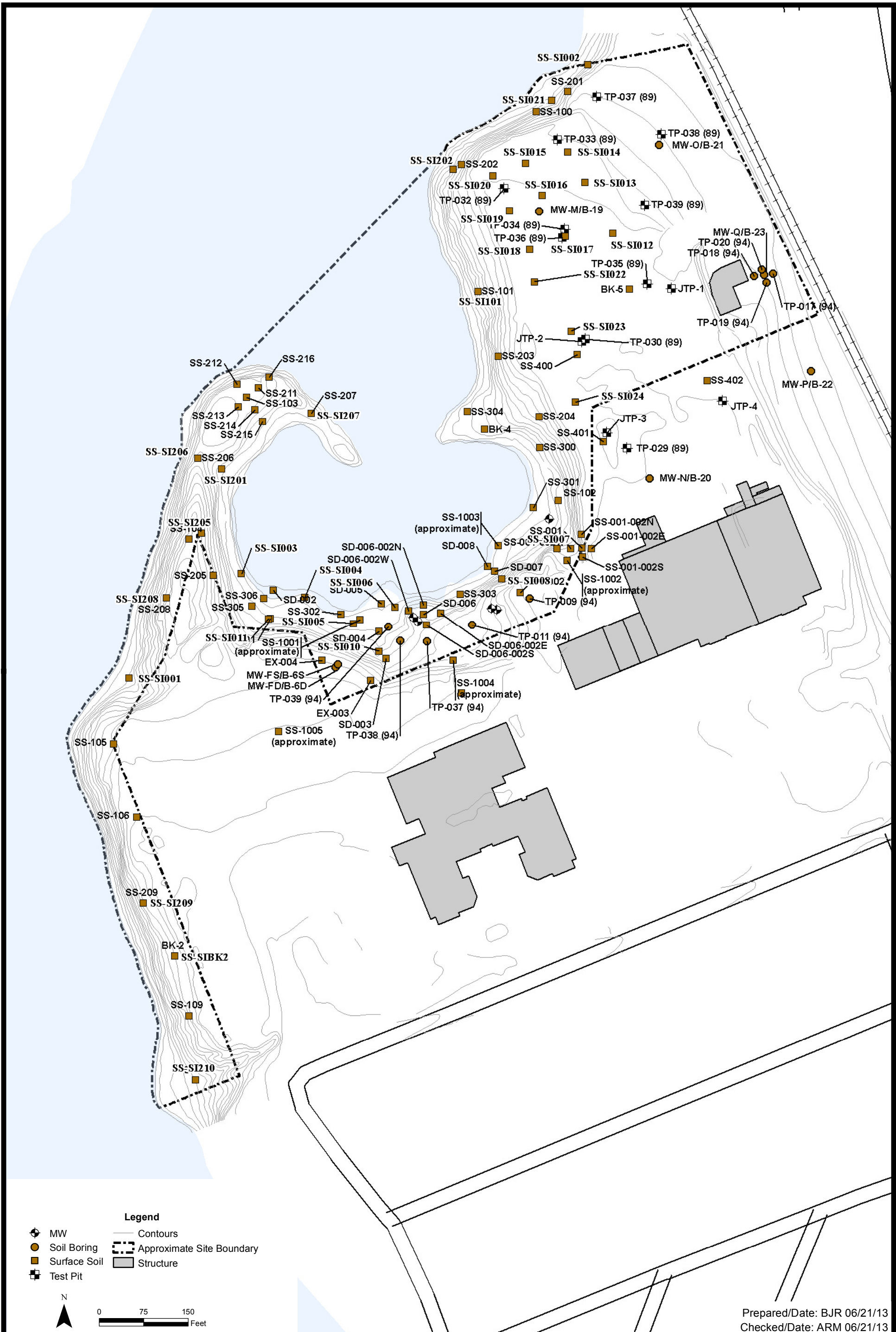
Legend

- Monitoring Well
- Groundwater Elevation Contour
- Pavement
- Railroad



Prepared/Date: BJR 10/11/12 | Checked/Date: DEH 10/11/12

333 Adelaide Avenue
Providence, Rhode Island
amec
AMEC Environment & Infrastructure
107 Audubon Rd, Suite 301
Wakefield, Massachusetts 01880



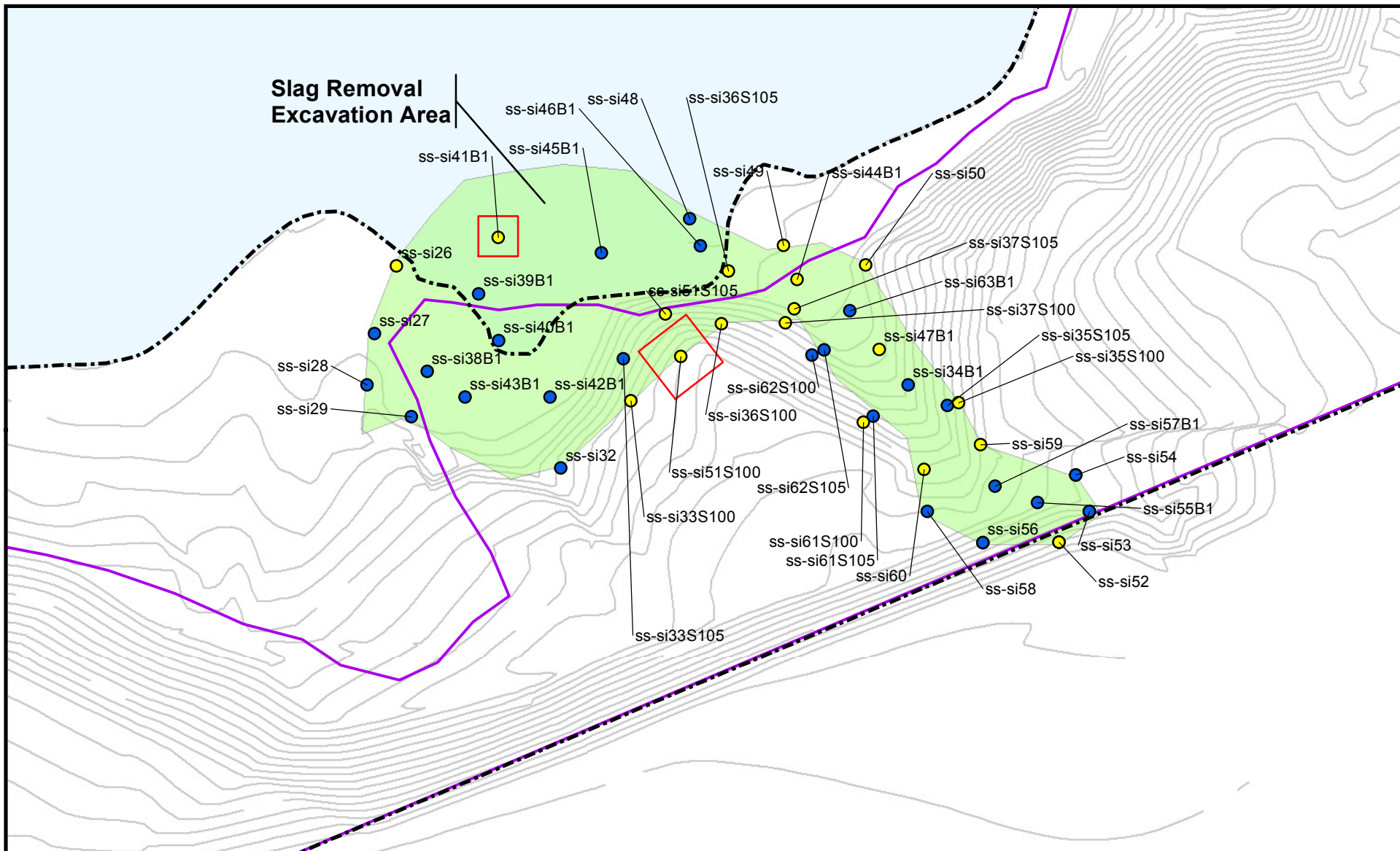
Prepared/Date: BJR 06/21/13
 Checked/Date: ARM 06/21/13

333 Adelaide Avenue Site
 Providence, Rhode Island



Summary of 1994-2007 Soil
 Investigation Locations
 Project 3650-11-0222

Figure 3.1



**Slag Removal
Excavation Area**

Legend

- Lead > 500 mg/kg
- Lead < 500 mg/kg
- Approximate Site Boundary
- Mashapaug Cove
- Approximate Fill Area
- Additional Soil Removal Area
- Former Slag Pile Area
- Elevation_CADD2011

N
 0 17.5 35
 Feet
 Prepared by BJR | Checked by DEH

Figure 3.2
 Supplemental Soil Excavation
 Former Slag Pile

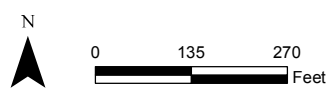
333 Adelaide Avenue
 Providence, Rhode Island





Legend

- ▲ Sediment Sample Location (2005-2006)
- ▼▲ Surface Water and Sediment Sample Location (2006)
- ▲ Sediment Sample Location (2011)
- ▼▲ Surface Water and Sediment Sample Location (2011)
- Approximate Site Boundary
- Approximate Pond



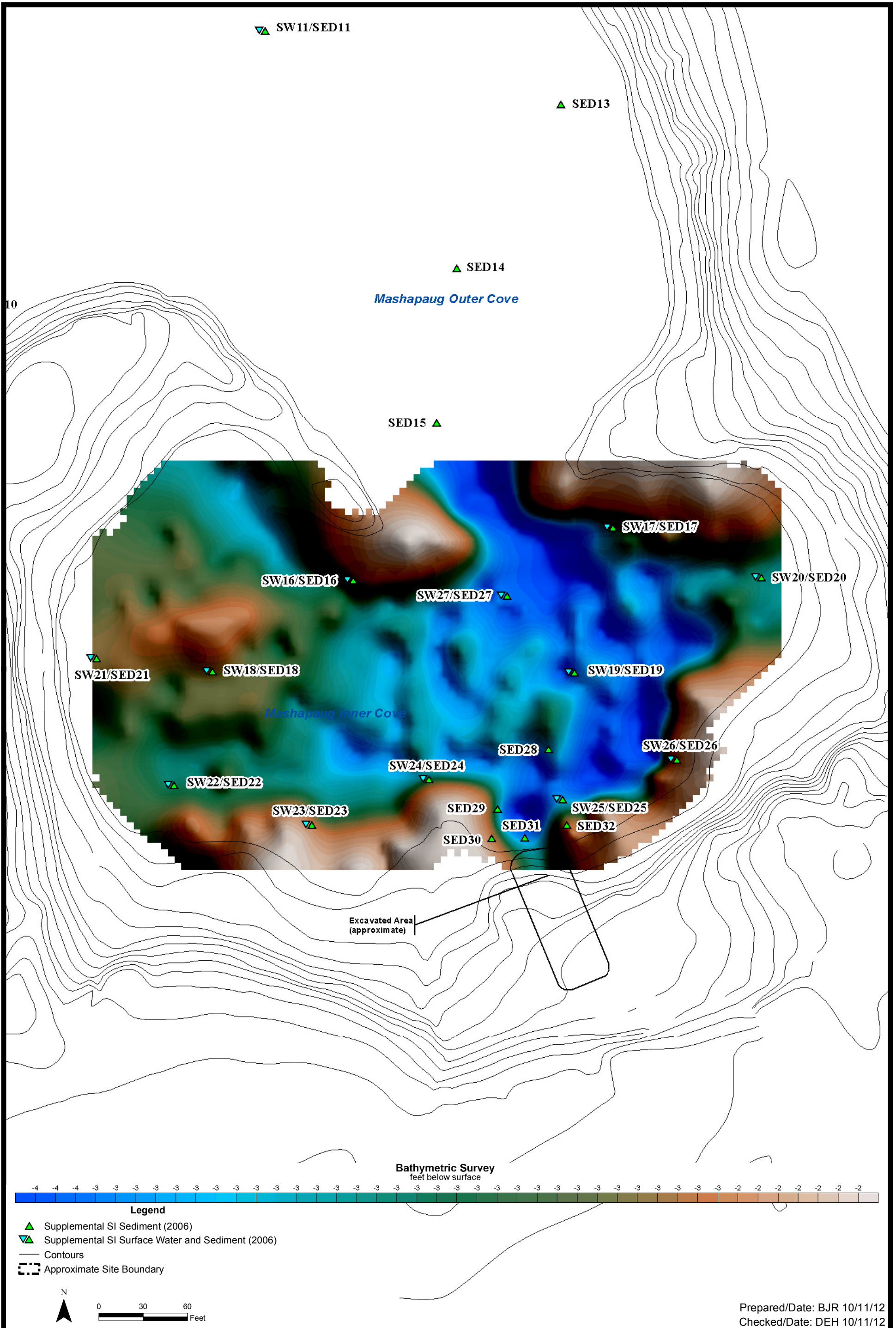
Prepared/Date: BJR 12/06/12
 Checked/Date: MJM 12/06/12

333 Adelaide Avenue Site
 Providence, Rhode Island



Surface Water and Sediment Sample
 Locations 2005-2012
 Project 3650-11-0222

Figure 3.3

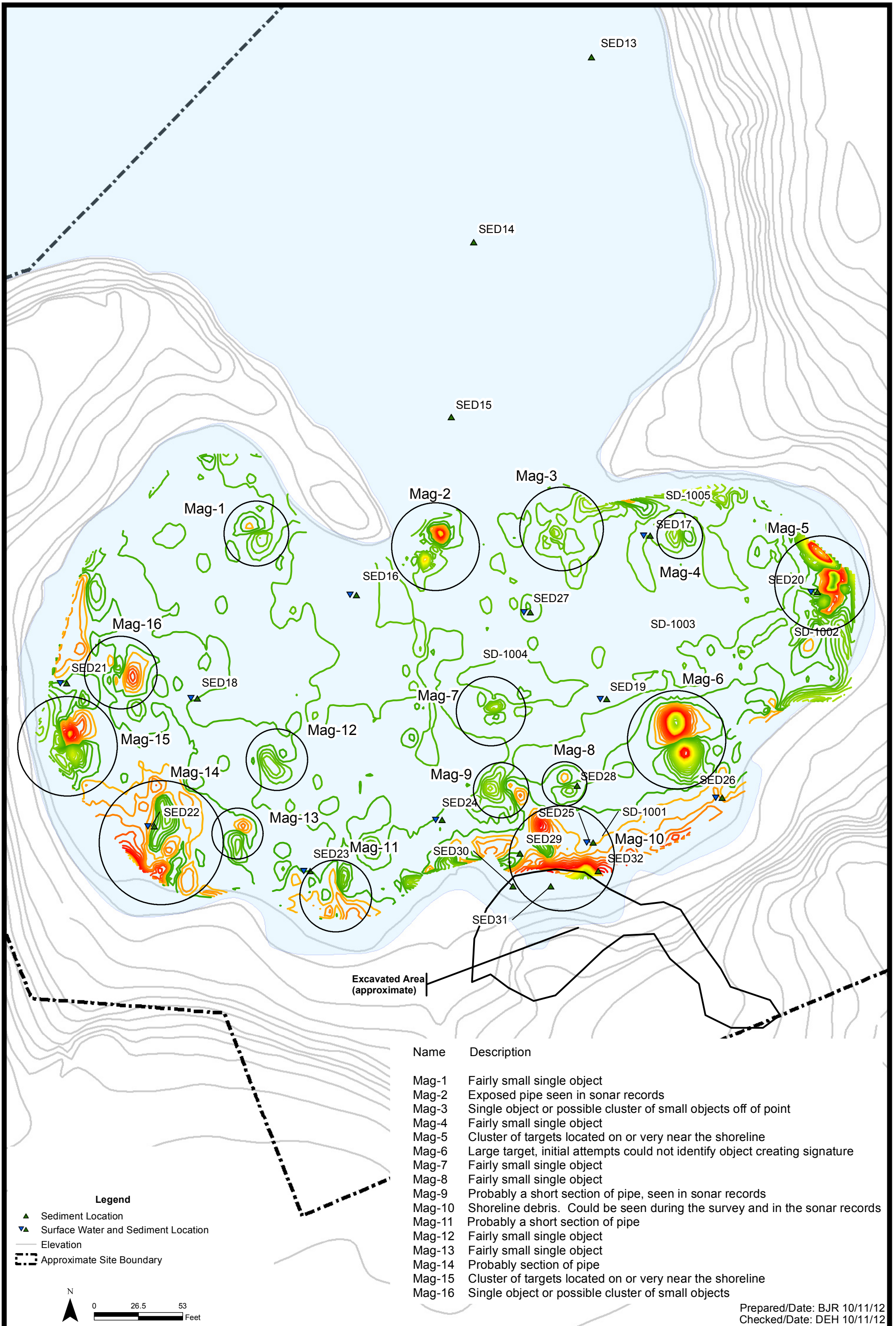


333 Adelaide Avenue
Providence, Rhode Island



2006 Bathymetric Contours
Mashapaug Inner Cove
Project 3650-11-0222

Figure 3.4



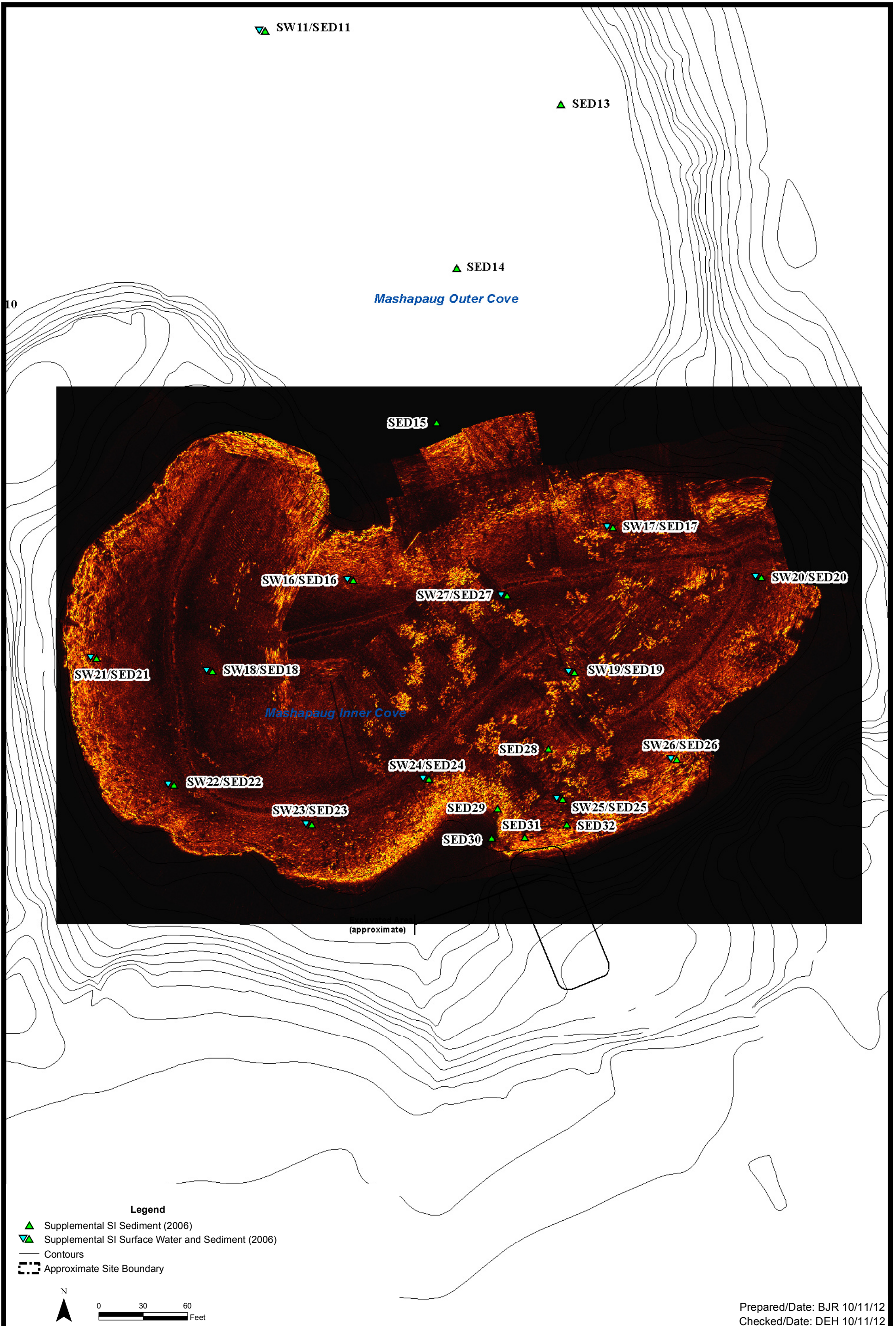
Name	Description
Mag-1	Fairly small single object
Mag-2	Exposed pipe seen in sonar records
Mag-3	Single object or possible cluster of small objects off of point
Mag-4	Fairly small single object
Mag-5	Cluster of targets located on or very near the shoreline
Mag-6	Large target, initial attempts could not identify object creating signature
Mag-7	Fairly small single object
Mag-8	Fairly small single object
Mag-9	Probably a short section of pipe, seen in sonar records
Mag-10	Shoreline debris. Could be seen during the survey and in the sonar records
Mag-11	Probably a short section of pipe
Mag-12	Fairly small single object
Mag-13	Fairly small single object
Mag-14	Probably section of pipe
Mag-15	Cluster of targets located on or very near the shoreline
Mag-16	Single object or possible cluster of small objects

Prepared/Date: BJR 10/11/12
 Checked/Date: DEH 10/11/12

333 Adelaide Avenue
 Providence, RI



2006 Magnetic Survey Results
 Mashapaug Inner Cove
 Project 3650-11-0222
 Figure 3.5



333 Adelaide Avenue
Providence, Rhode Island



2006 Side Scan Sonar Mosaic
Mashapaug Inner Cove
Project 3650-11-0222

Figure 3.6



333 Adelaide Avenue Site
Providence, Rhode Island



2011 Bathymetric Contours
Mashapaug Pond
Project 3650-11-0222

Figure 3.7

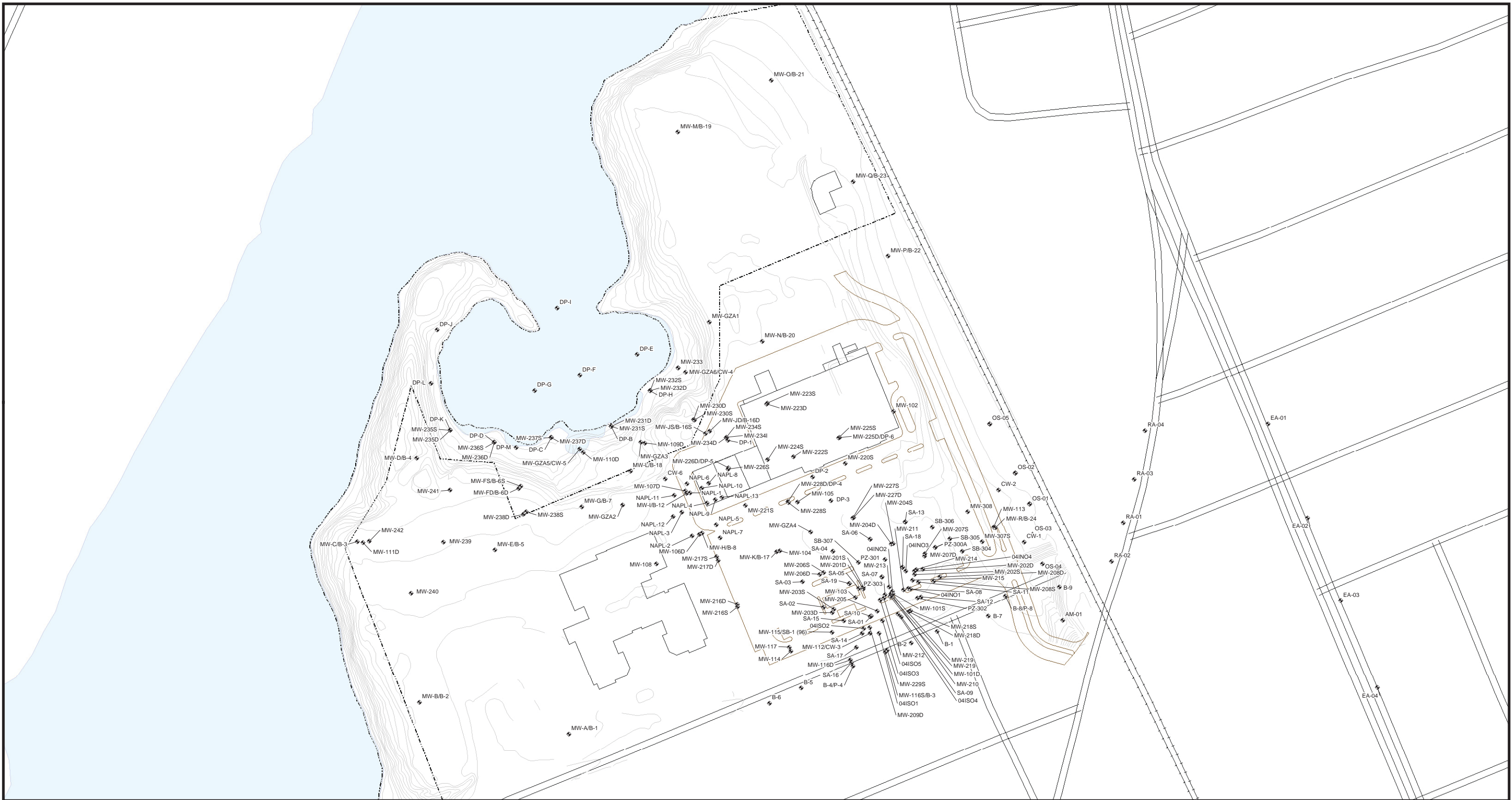


Figure 3.8
Groundwater Sample Locations

Legend

- ◆ Groundwater Sample Location
- Elevation Contour
- +—+—+ Railroad
- Pavement
- ⋯⋯⋯ Park Parcel Boundary

0 50 100
Feet

N

Prepared by BJR Checked by DEH

333 Adelaide Avenue
Providence, Rhode Island

amec AMEC Environment & Infrastructure
107 Audubon Road, Suite 301
Wakefield, MA 01880

MXD: P:\TEXTROW\GORHAM\GIS\MapDocuments\Textrow\Gorham_DS\Site.mxd PDF: P:\3650050041 - Textrow\Gorham\3.0 Field and Site Characterization\3.8 GIS\Cove Groundwater Sediment Jan 2010\Site Plan.pdf



**Figure 4.1 - Sediment Core SED50 – Inner Cove
Sample Interval 0-8 feet
December 2011 Sediment Sampling Program**



**Figure 4.2 - Sediment Core SED50 – Inner Cove
Sample Interval 0-8 feet
December 2011 Sediment Sampling Program**



Figure 4.3 - Sediment Core SED50 – Inner Cove
Sample Interval 0-8 feet
December 2011 Sediment Sampling Program



**Figure 4.4 - Sediment Core SED36 –
Outer Cove in Channel
Sample Interval 0-1 foot
December 2011 Sediment Sampling Program**



**Figure 4.5 - Sediment Core SED36 –
Outer Cove in Channel
Sample Interval 1-8 feet
December 2011 Sediment Sampling Program**



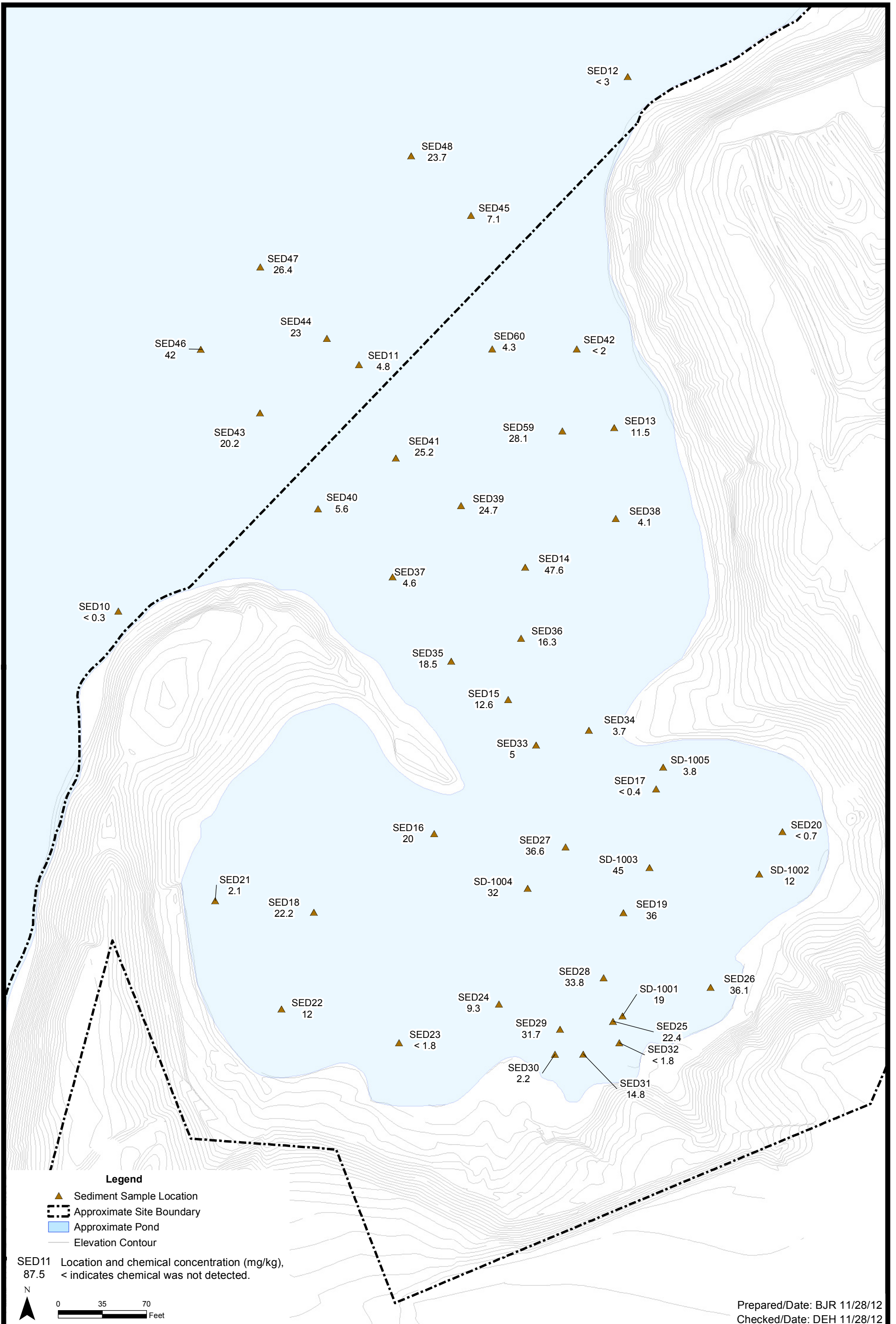
**Figure 4.6 - Sediment Core SED 36 –
Outer Cove in Channel
Sample Interval 1-8 feet
December 2011 Sediment Sampling Program**



**Figure 4.7 - Sediment Core SED52 - Mashapaug Pond
Sample Interval 0-1 foot
December 2011 Sediment Sampling Program**



**Figure 4.8 - Sediment Core SED52 - Mashapaug Pond
Sample Interval 1-4 feet
December 2011 Sediment Sampling Program**

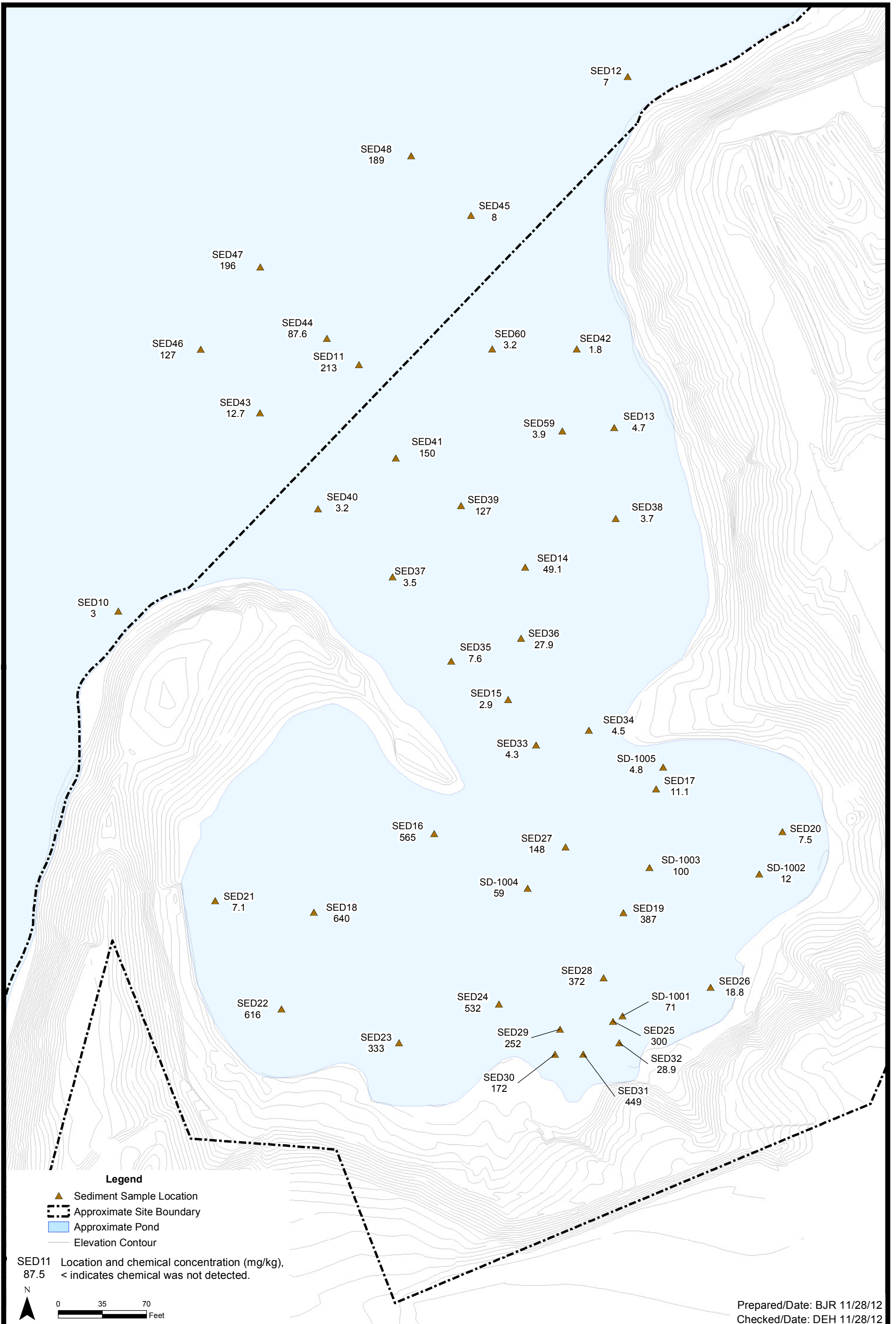


333 Adelaide Avenue Site
Providence, Rhode Island



Concentrations of Arsenic in Surficial
Sediment (0-1 ft or 0-2 ft)
Project 3650-11-0222

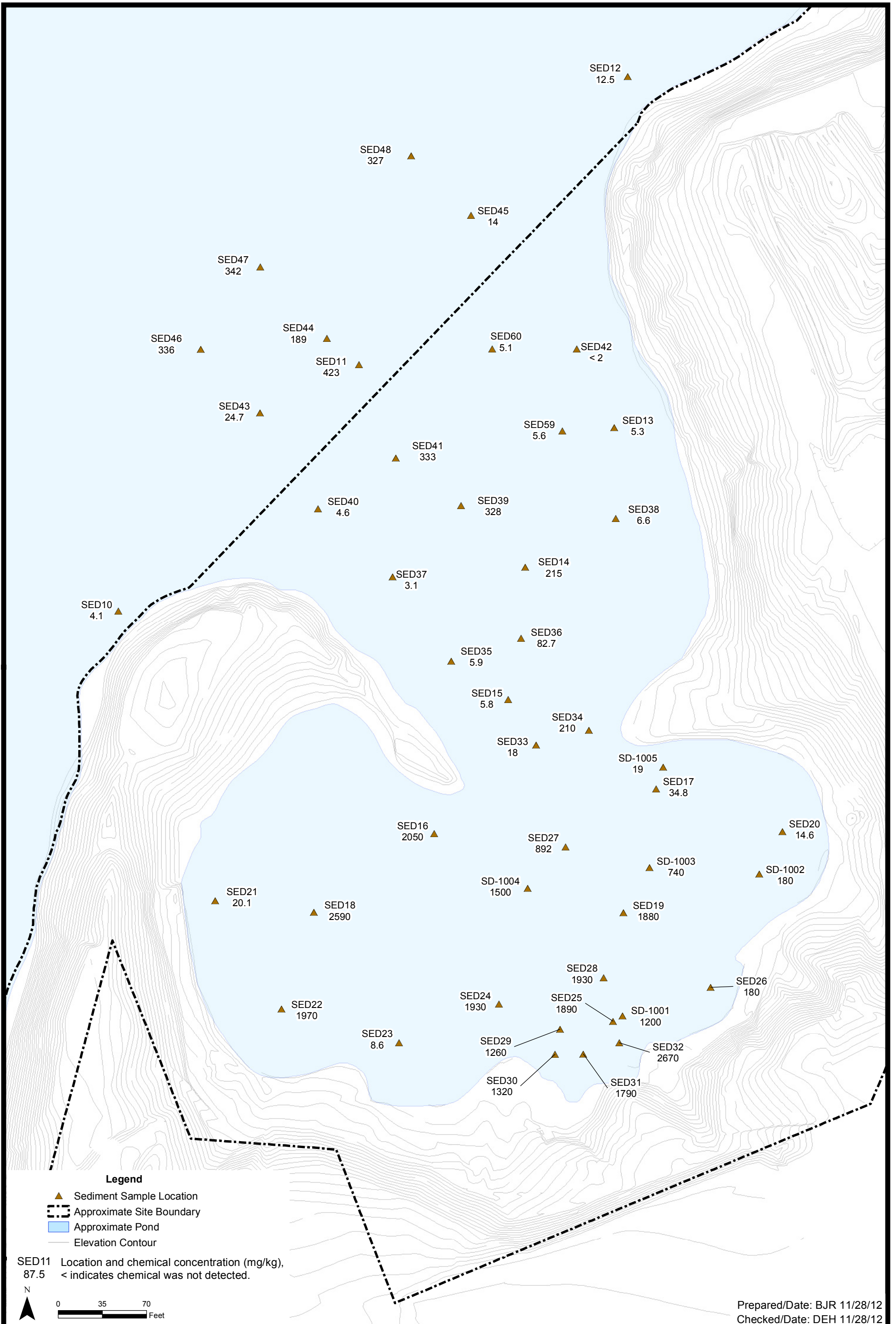
Figure 4.9



333 Adelaide Avenue Site
Providence, Rhode Island



Concentrations of Chromium in Surficial
Sediment (0-1 ft or 0-2 ft)
Project 3650-11-0222
Figure 4.10

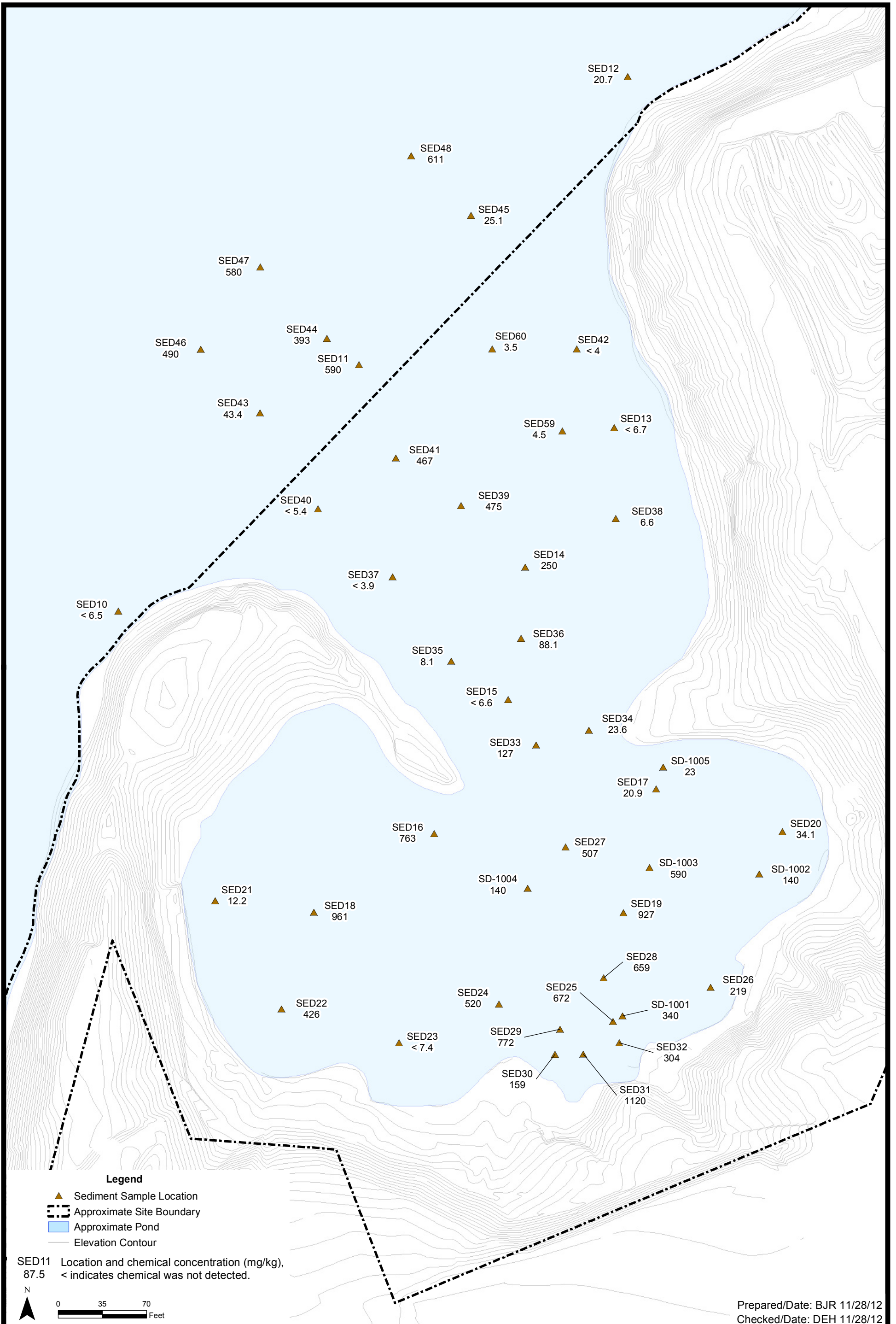


333 Adelaide Avenue Site
 Providence, Rhode Island



Concentrations of Copper in Surficial
 Sediment (0-1 ft or 0-2 ft)
 Project 3650-11-0222

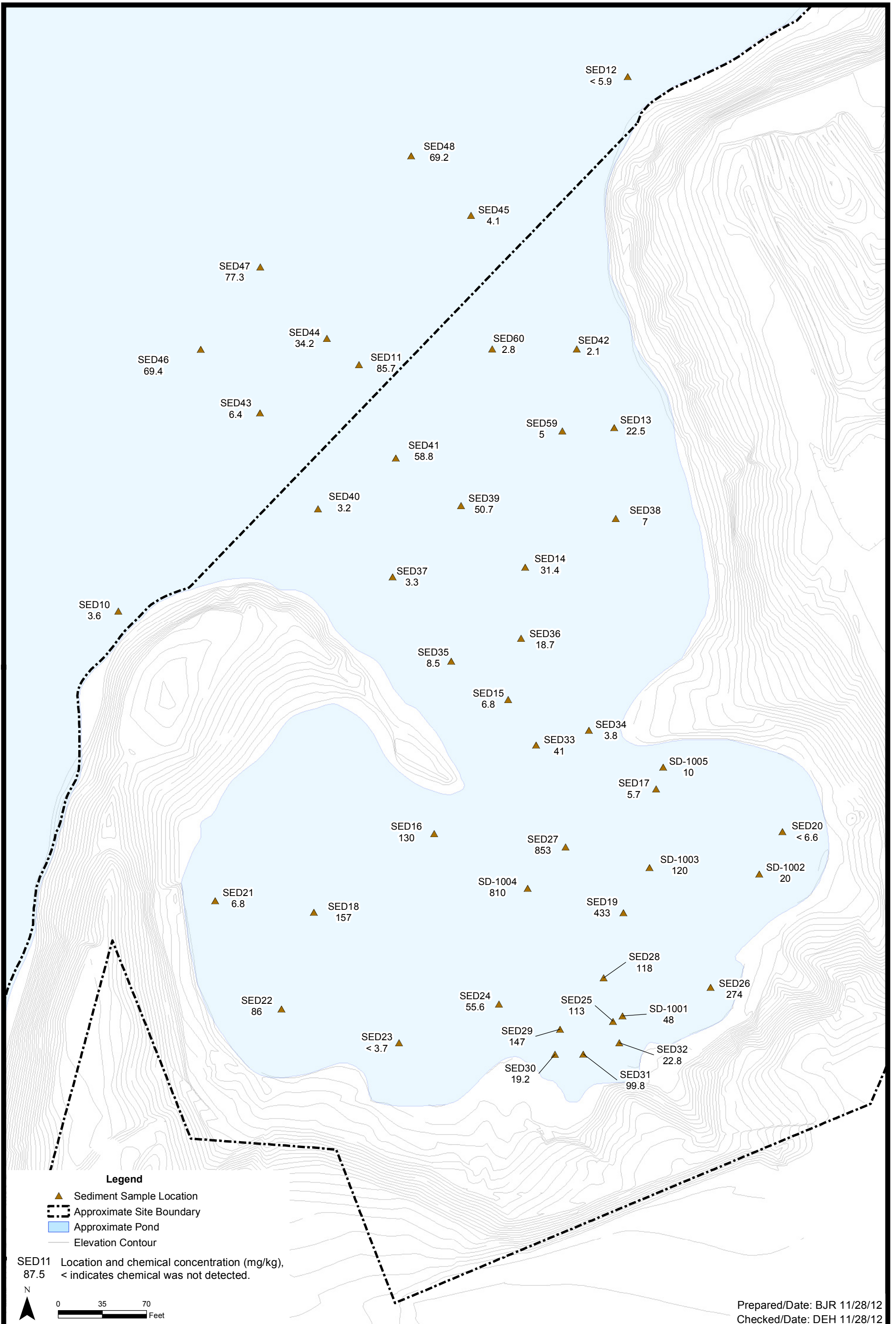
Figure 4.11



333 Adelaide Avenue Site
Providence, Rhode Island



Concentrations of Lead in Surficial
Sediment (0-1 ft or 0-2 ft)
Project 3650-11-0222
Figure 4.12

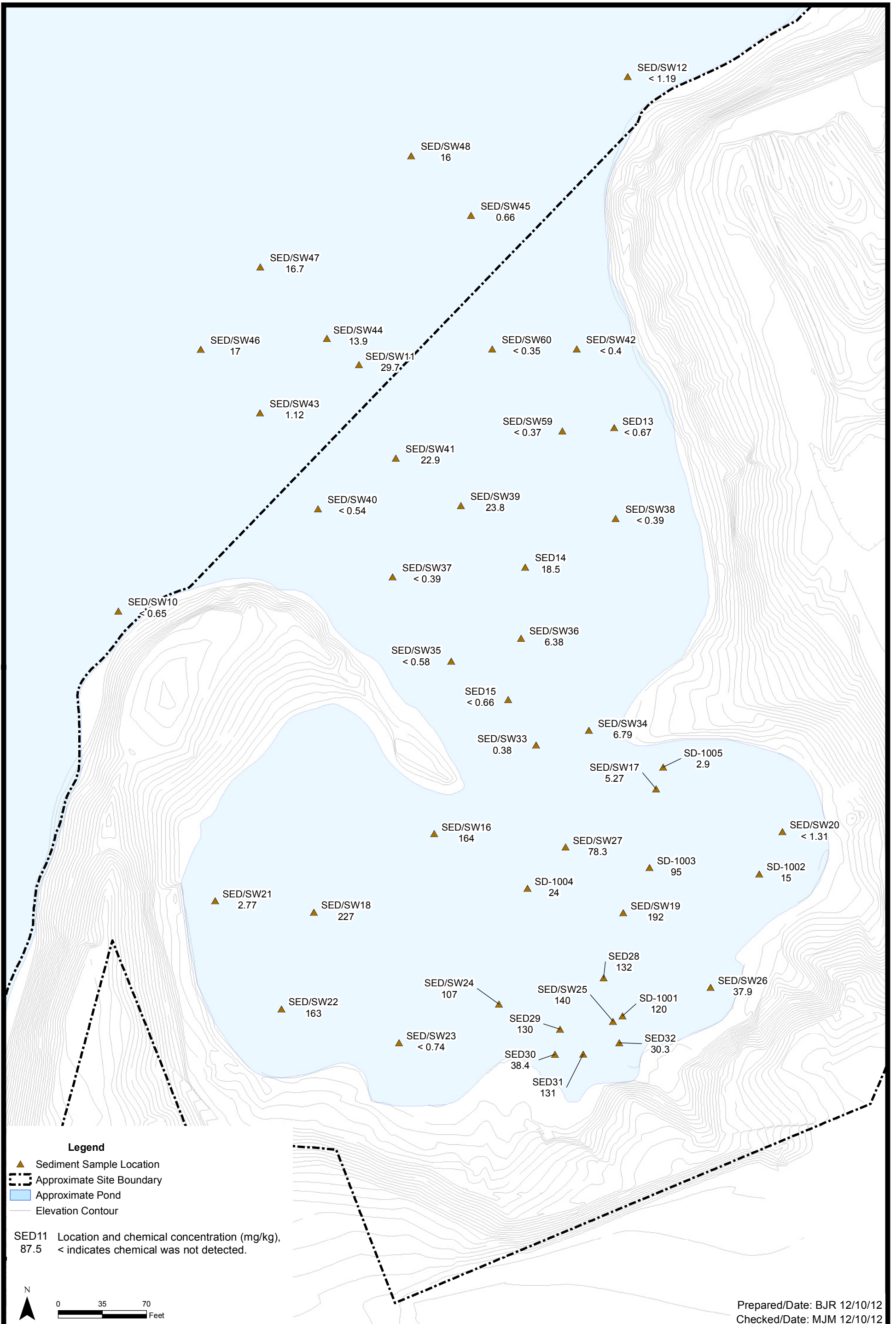


333 Adelaide Avenue Site
Providence, Rhode Island



Concentrations of Nickel in Surficial
Sediment (0-1 ft or 0-2 ft)
Project 3650-11-0222

Figure 4.13



333 Adelaide Avenue Site
Providence, Rhode Island



Concentrations of Silver in Surficial
Sediment (0-1 ft or 0-2 ft)
Project 3650-11-0222 Figure 4.14



333 Adelaide Avenue Site
Providence, Rhode Island



Concentrations of Total Organic Carbon
in Surficial Sediment (0-1 ft or 0-2 ft)
Project 3650-11-0222
Figure 4.15



333 Adelaide Avenue Site
Providence, Rhode Island

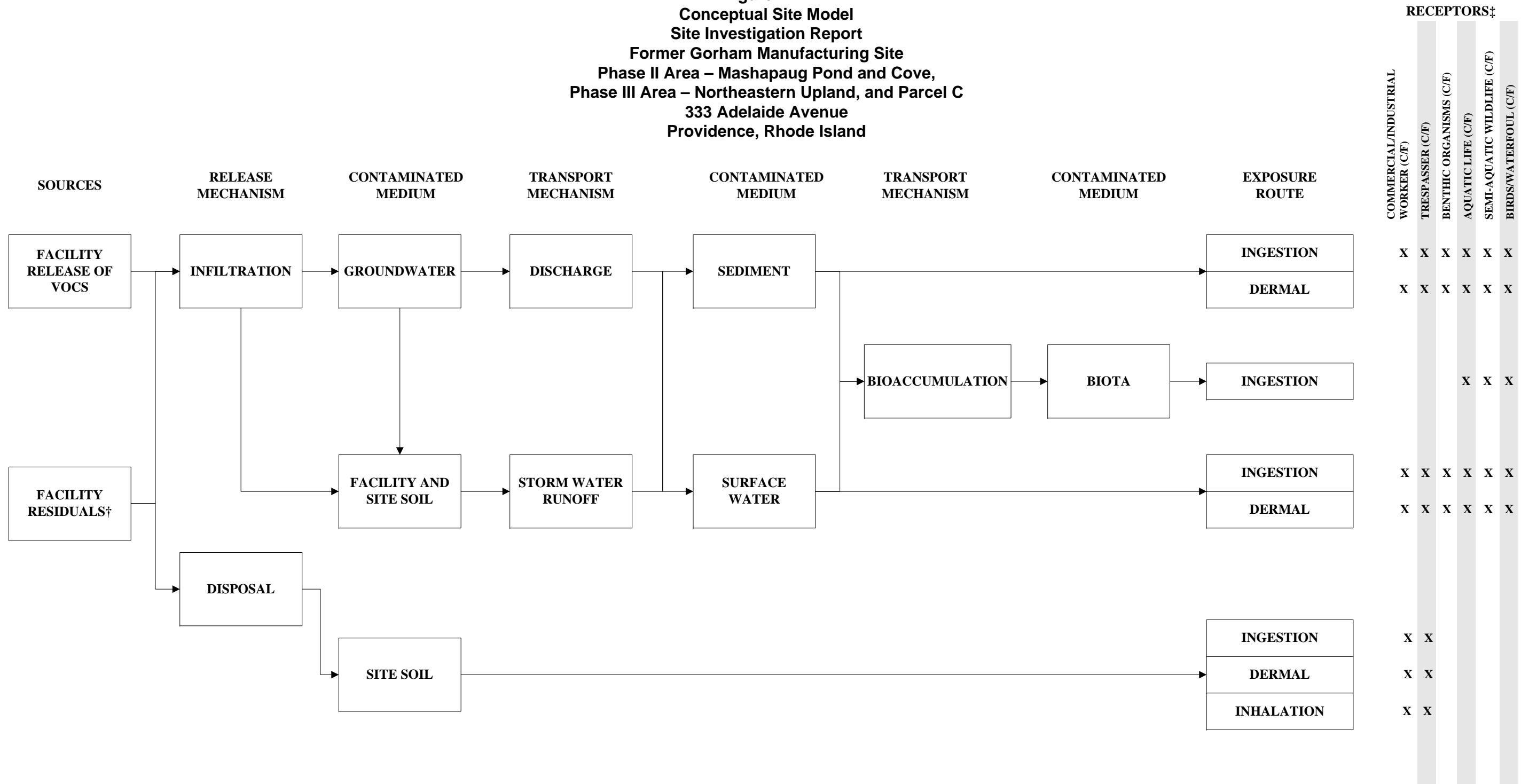


AVS-SEM Results

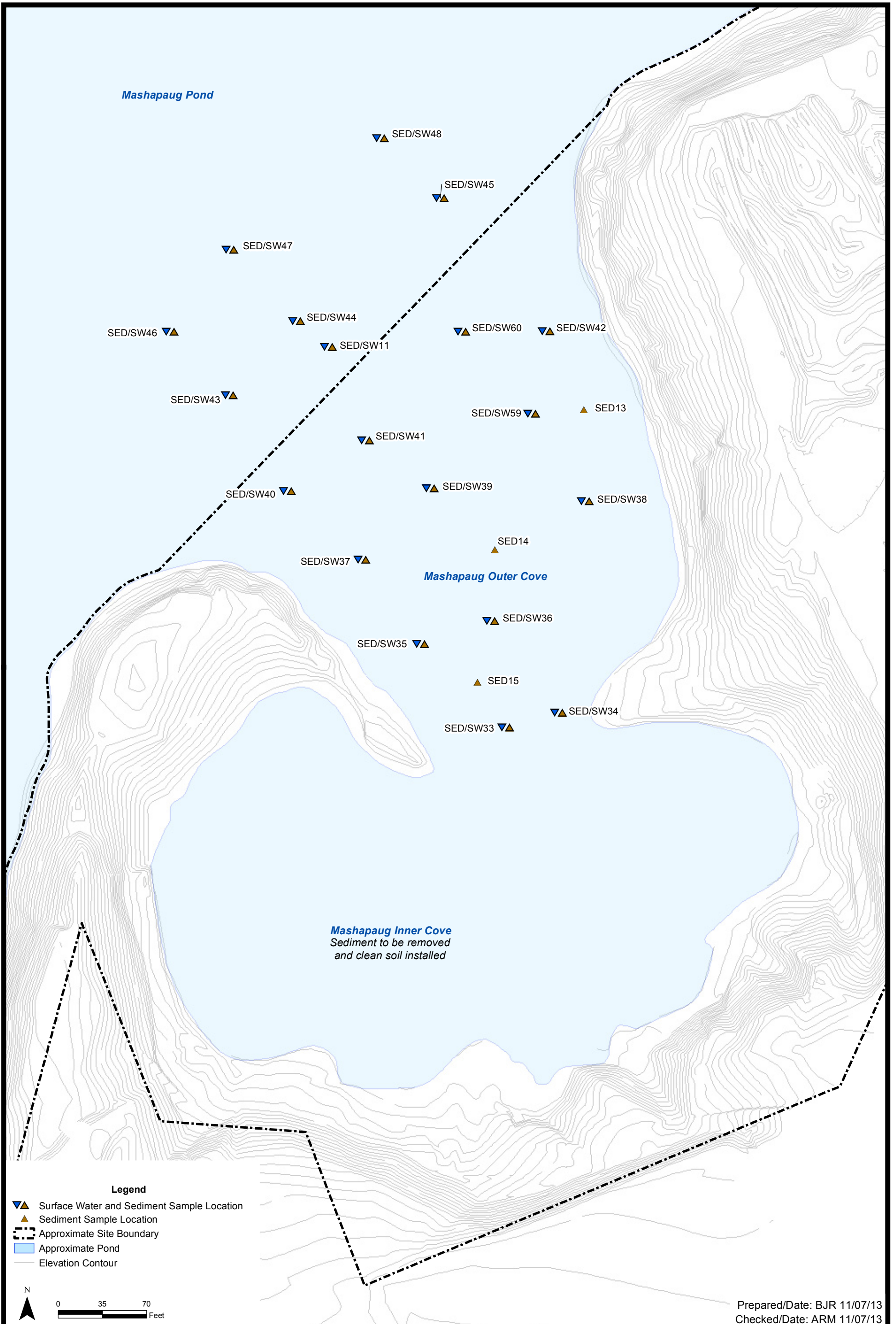
Project 3650-11-0222

Figure 4.16

Figure 4.17
Conceptual Site Model
Site Investigation Report
Former Gorham Manufacturing Site
Phase II Area – Mashapaug Pond and Cove,
Phase III Area – Northeastern Upland, and Parcel C
333 Adelaide Avenue
Providence, Rhode Island



→ POTENTIALLY SIGNIFICANT PATHWAY
 † FACILITY RESIDUALS MAY INCLUDE PAH, METALS AND DIOXINS, RELEASES MAY HAVE BEEN DUE TO SPILLS, LEAKS, OR DISPOSAL.
 ‡ C/F: RECEPTORS UNDER CURRENT AND CONTINUING FUTURE LAND USE



333 Adelaide Avenue Site
Providence, Rhode Island



Figure 5.1
Sample Locations Used for the SLERA

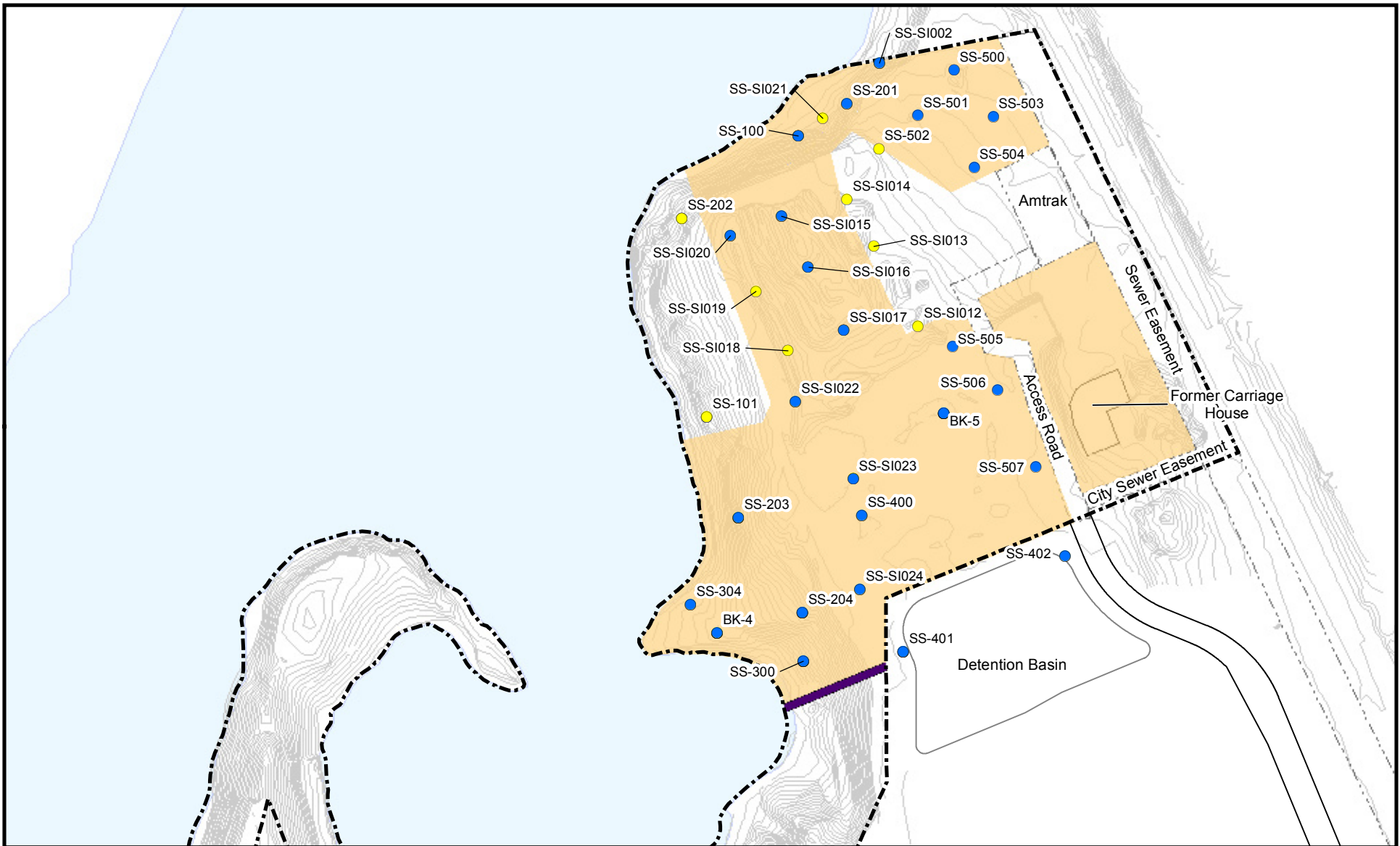


Figure 5.2
Proposed Phase III Cap Area
and Soil Sample Locations

- Legend**
- Soil concentration exceeds RIDEC
 - Soil concentration does not exceeds RIDEC
 - Access Road
 - Detention Basin
 - Division of Phases I and III for access road to cove
 - Proposed Cap Area
 - ⬭ Approximate Park Parcel Boundary
 - ⬭ Approximate Easement



Prepared/Date: BJR 11/07/13

Checked/Date: ARM 11/07/13

333 Adelaide Avenue
Providence, RI